AIRBUS

A320/A321

nordwind airlines

CABIN CREW OPERATING MANUAL

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AIRBUS S.A.S
CUSTOMER SERVICES DIRECTORATE
31707 BLAGNAC CEDEX
FRANCE

REFERENCE: NWS A320/A321 FLEET CCOM

ISSUE DATE: 24 APR 14

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TRANSMITTAL LETTER

Issue date: 24 APR 14

This is the CABIN CREW OPERATING MANUAL at issue date 24 APR 14 for the A320/A321 and replacing last issue dated 22 JAN 14

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Please incorporate this revision as follow:

Localization Subsection Title	Remove	Insert Rev. Date
PLP-LESS **LIST OF EFFECTIVE SECTIONS/SUBSECTIONS**	ALL	24 APR 14
PLP-LEDU **LIST OF EFFECTIVE DOCUMENTARY UNITS**	ALL	24 APR 14
02-PLP-TOC **TABLE OF CONTENTS**	ALL	24 APR 14
02-PLP-SOH **SUMMARY OF HIGHLIGHTS**	ALL	24 APR 14
02-110 **LAVATORIES**	ALL	24 APR 14

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PRELIMINARY PAGES

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M(1)	Identification	T(2)	Rev. Date	Title
	CCB1 issue 1.0	W	28 SEP 07	Spurious FAP Message - Approval
	Criteria: K8400 **Applicable to: ALL**			
	CCB2 issue 1.0	W	28 SEP 07	Inadvertent FAP Reset - Approval
	Criteria: K8400 **Applicable to: ALL**			
	CCB3 issue 1.0	W	28 SEP 07	Loss Of The I-PRAM Audio Sound - Approval
	Criteria: K8400 **Applicable to: ALL**			
	CCB4 issue 1.0	W	28 SEP 07	Anomalies On The FAP Pages - Approval
	Criteria: K8400 **Applicable to: ALL**			

(1) Evolution code : N=New, R=Revised, E=Effectivity
(2) Ecam Importance Type

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00 INTRODUCTION

01 AIRCRAFT GENERAL

02 CABIN INTERIOR

03 CIDS AND COMMUNICATIONS

04 CABIN INFORMATION AND ENTERTAINMENT SYSTEMS

05 EVACUATION DEVICES

06 OXYGEN

07 EMERGENCY EQUIPMENT

08 STANDARD OPERATING PROCEDURES

09 ABNORMAL/EMERGENCY PROCEDURES

10 CABIN CREW BULLETINS

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M(1)	Localization	Subsection Title	Rev. Date
R	PLP-LESS	LIST OF EFFECTIVE SECTIONS/SUBSECTIONS	24 APR 14
	PLP-LETDU	LIST OF EFFECTIVE TEMPORARY DOCUMENTARY UNITS	05 SEP 12
	00-010	GENERAL INTRODUCTION	28 JAN 14
	00-050	LIST OF ABBREVIATIONS	05 SEP 12
	00-060	UNITS CONVERSION TABLE	05 SEP 12
	01-010	AIRCRAFT PRESENTATION	07 MAR 13
	01-020	AIRCRAFT DIMENSIONS	07 MAR 13
	01-030	PERFORMANCE	07 MAR 13
	01-040	PRESSURIZATION	05 SEP 12
	01-050	FLIGHT CONTROLS	07 MAR 13
	01-060	LANDING GEARS	07 MAR 13
	01-070	CARGO COMPARTMENTS	07 MAR 13
	01-080	CABIN DOORS	07 MAR 13
	02-010	FLIGHT DECK	24 APR 14
	02-030	CABIN LAYOUT	24 APR 14
	02-040	STOWAGE COMPARTMENTS	12 DEC 13
	02-050	CABIN CREW STATIONS	12 DEC 13
	02-060	CONTROL PANELS	07 MAR 13
	02-070	CABIN LIGHTING SYSTEM	07 MAR 13
	02-080	CIRCUIT BREAKER (PANELS)	07 MAR 13
	02-090	AIR CONDITIONING	07 MAR 13
	02-100	WATER AND WASTE	24 APR 14
R	02-110	LAVATORIES	24 APR 14
	02-120	DOORS AND EXITS	12 DEC 13
	02-140	GALLEYS	12 DEC 13
	03-010	CABIN INTERCOMMUNICATION DATA SYSTEM	12 DEC 13
	03-020	CABIN PROGRAMMING	05 SEP 12
	03-030	COMMUNICATION	05 SEP 12
	03-040	PA SYSTEM	07 MAR 13
	03-050	SERVICE INTERPHONE	05 SEP 12
	03-060	CABIN INTERPHONE	12 DEC 13
	03-070	PASSENGER CALL SYSTEM	05 SEP 12
	03-080	PASSENGER LIGHTED SIGNS	05 SEP 12
	03-090	AUDIO	05 SEP 12
	04-010	IN-FLIGHT ENTERTAINMENT SYSTEM	12 DEC 13
	04-020	MUSIC	12 DEC 13
	04-030	VIDEO	12 DEC 13
	04-040	AIRSHOW	07 MAR 13
	04-060	TELEPHONE	07 MAR 13
	04-080	IN-SEAT POWER SUPPLY SYSTEM (ISPSS)	12 DEC 13

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M(1)	Localization	Subsection Title	Rev. Date
	05-010	EVACUATION ALERT SYSTEM	05 SEP 12
	05-020	COCKPIT EMERGENCY EXITS	12 DEC 13
	05-030	ESCAPE SLIDES/ SLIDE RAFTS	07 MAR 13
	05-040	AIRCRAFT CRASH POSITION	07 MAR 13
	06-010	GENERAL	05 SEP 12
	06-020	COCKPIT	07 MAR 13
	06-030	CABIN	12 DEC 13
	06-040	PORTABLE BREATHING EQUIPMENT	07 MAR 13
	07-010	PORTABLE EMERGENCY EQUIPMENT	12 DEC 13
	07-020	FIXED EMERGENCY EQUIPMENT	05 SEP 12
	07-030	SUPPLEMENTARY MEDICAL EQUIPMENT	05 SEP 12
	08-010	INTRODUCTION	05 SEP 12
	08-012-010	EFFECTIVE BRIEFINGS FOR CABINE OPERATIONS	12 DEC 13
	08-012-020	CREW COMMUNICATION	12 DEC 13
	08-015	PHASES OF FLIGHT	05 SEP 12
	08-020	DOOR OPERATION	12 DEC 13
	08-030	COCKPIT DOOR OPERATION	05 SEP 12
	08-040	COCKPIT SLIDING WINDOW OPERATION	05 SEP 12
	08-045	PREFLIGHT BRIEFING	05 SEP 12
	08-050	GROUND CHECK	12 DEC 13
	08-060	DEPARTURE	12 DEC 13
	08-070	ARRIVAL	12 DEC 13
	08-080	CABIN CREW SAFETY-RELATED DUTIES	12 DEC 13
	08-090	PASSENGER SAFETY BRIEFING	05 SEP 12
	08-100	REFUELLING DEFUELING	05 SEP 12
	08-130	DANGEROUS GOODS	12 DEC 13
	09-010	INTRODUCTION	05 SEP 12
	09-020	FIRE PROTECTION	28 JAN 14
	09-025	EMERGENCY COMMUNICATIONS	05 SEP 12
	09-030	EMERGENCY CABIN EVACUATION	07 MAR 13
	09-040	EMERGENCY COCKPIT EVACUATION	05 SEP 12
	09-050	DEPRESSURIZATION	07 MAR 13
	09-055	TURBULENCE MANAGEMENT	05 SEP 12
	09-070	MISCELLANEOUS	07 MAR 13
	09-080-10	EVACUATION AWARENESS	12 DEC 13
	09-080-20	TURBULENCE THREAT AWARENESS	12 DEC 13
	09-080-30	CABIN DEPRESSURIZATION AWARENESS	12 DEC 13
	09-080-40	PLANNED DITCHING - UNPLANNED DITCHING	12 DEC 13
	09-080-50	CABIN SMOKE AWARENESS	12 DEC 13

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M(1)	Localization	Subsection Title	Rev. Date
	09-080-60	**MANAGING IN-FLIGHT FIRES**	12 DEC 13
	10-10	**Introduction**	05 SEP 12
	10-CCB1	**Spurious FAP Message**	05 SEP 12
	10-CCB2	**Inadvertent FAP Reset**	05 SEP 12
	10-CCB3	**Loss Of The I-PRAM Audio Sound**	05 SEP 12
	10-CCB4	**Anomalies On The FAP Pages**	05 SEP 12

(1) Evolution code : N=New, R=Revised, E=Effectivity, M=Moved

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PRELIMINARY PAGES

LIST OF EFFECTIVE TEMPORARY DOCUMENTARY UNITS

M	Localization	DU Title	DU identification	DU date

No Temporary Documentary Unit

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This table gives, for each delivered aircraft, the cross reference between:

- The Manufacturing Serial Number (MSN).
- The Fleet Serial Number (FSN) of the aircraft as known by AIRBUS S.A.S.
- The registration number of the aircraft as known by AIRBUS S.A.S.
- The aircraft model.

M(1)	MSN	FSN	Registration Number	Model
	2649		VP-BJH	320-232
	2927		VQ-BRO	321-231
	2933		VQ-BRU	321-232
	3034		VP-BGH	321-232
	3120		VP-BRD	321-232

(1) Evolution code : N=New, R=Revised

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M(1)	MODIFICATION	Linked SB	Incorp. Date	Title
	P2493		05 SEP 12	EQUIPMENT/FURNISHINGS - COCKPIT SEATS - INTRODUCE TYPE A340 SEATS
	Applicable to: ALL			
	P0006		05 SEP 12	DOORS - PAX DOORS - EMERGENCY EXIT AND CARGO COMPARTMENT DOORS - DEFINE DOORS OF THE BASIC AIRCRAFT -
	Applicable to: ALL			
	P1363		05 SEP 12	FIRE PROTECTION - COCKPIT - INSTALL A MAIP PORTABLE FIRE EXTINGUISHER (SFE) -
	Applicable to: ALL			
	K2113		05 SEP 12	FUSELAGE - REAR FUSELAGE SECTION 16A - DEFINE A321 BASIC STRUCTURE
	Applicable to: MSN 2927-3120			
	K0008		05 SEP 12	EQUIPMENT/FURNISHINGS- DEFINE STANDARD CABIN INTERIOR-
	Applicable to: ALL			
	K2675		05 SEP 12	EQUIPMENT/FURNISHINGS-PAX COMPARTMENT- USE THE DOOR N.2 L/H AS A PASSENGER DOOR.
	Applicable to: MSN 2927-3120			
	K5564		07 MAR 13	E/F-FWD/AFT CARGO COMPARTMENT- -INTRODUCE A MINIMUM PROVISION FOR CLS MECHANISED BULK LOADING SYS(A320)
	Applicable to: MSN 2649			
	K5565		05 SEP 12	E/F-FWD/AFT CARGO COMPARTMENT -INTRODUCE A MINIMUM PROVISION FOR CLS MECHANISED BULK LOADING SYS (A321)
	Applicable to: MSN 2927-3120			
	K8999		07 MAR 13	COMMUNICATION - CIDS: INSTALL A PED-POWER ON/OFF CONTROL SWITCH ON FAP WITH CIDS A318 TYPE
	Applicable to: MSN 2649-2933			
	P7278		05 SEP 12	INDICATING/RECORDING SYSTEM-EIS2- INSTALL MODIFIED EIS2 SOFTWARE
	Applicable to: ALL			
	K10143	23-1293 02	05 SEP 12	EQUIPMENT/FURNISHINGS - MISC. EMERGENCY EQUIPMENT-INSTALL ELT(406AF) WITH PROG. DONGLE AND RCP IN COCKPIT - THALES
	Applicable to: ALL			
	P0160		07 MAR 13	OXYGEN - FLIGHT CREW OXYGEN - INSTALL A 115 CU/FT STEEL OXYGEN CYLINDER -
	Applicable to: MSN 2649			

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M(1)	MODIFICATION	Linked SB	Incorp. Date	Title
	K10188		07 MAR 13	COMMUNICATIONS- INTEGRATED IFE SYSTEM- INSTALL THALES I4000 FOR RJA02 VERSION
	Applicable to: MSN 2649			
	K0151		07 MAR 13	EQUIPMENT/FURNISHINGS-PAX COMPARTMENT- INSTALL SLIDE RAFTS (AIRCRUISER).
	Applicable to: MSN 2649			
	K7847		07 MAR 13	EQUIPMENT/FURNISHINGS-PASSENGER COMPART SEATS - INTRODUCE ISPSS IN CONJUNCTION WITH INTEGRATED IFE/SPSS
	Applicable to: MSN 2649-2933			
	K2100		05 SEP 12	DOORS - EMERGENCY EXITS - DEFINE EMERGENCY EXITS FOR A321
	Applicable to: MSN 2927-3120			
	K0011		05 SEP 12	WATER/WASTE - DEFINE A320 BASIC SYSTEM
	Applicable to: ALL			
	K9459		05 SEP 12	EQUIPMENT/FURNISHINGS - LININGS AND FURNISHINGS- DELETE POSITION FOR SAFETY PIN STOWAGE AT DOOR 2 AND 3 LH/RH
	Applicable to: MSN 2927-3120			
	P0022		07 MAR 13	OXYGEN- FLIGHT CREW SYSTEM- INSTALL A REPLENISHING CONNECTOR-
	Applicable to: MSN 2649			
	K9049		07 MAR 13	COMMUNICATIONS - CIDS - INSTALL ADAPTED ENHANCED CIDS ON A320 A/C
	Applicable to: MSN 2649			
	K2108		05 SEP 12	EQUIPMENT/FURNISHINGS-PAX COMPARTMENT- ADAPT STANDARD INTERIOR ITEMS TO A321 DEFINITION
	Applicable to: MSN 2927-3120			
	K11219		05 SEP 12	EQUIPMENT/ FURNISHING / PAX COMPARTMENT ADAPT CABIN LAYOUT FOR KFR04 VERSION
	Applicable to: MSN 3034-3120			
	K10784		07 MAR 13	COMMUNICATIONS - CIDS - CAM PROGRAMMING FOR THE HEATED FLOOR PANELS ACTIVATION
	Applicable to: MSN 3120			
	P4497		07 MAR 13	OVERPRESS. WARNING SYSTEMS-MODIFY CTRL LOGIC OF THE OVERPRESS. WARNING SYST
	Applicable to: ALL			
	K11459		05 SEP 12	COMMUNICATIONS - ADAPT INTEGRATED IFE SYSTEM THALES FOR KFR04 VERSION DUE TO NON INST. OF SEATS AND MONUMENTS
	Applicable to: MSN 3034			

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M(1)	MODIFICATION	Linked SB	Incorp. Date	Title
	K8400		05 SEP 12	COMMUNICATIONS-CIDS-INTRODUCE ENHANCED CIDS (A318 VERSION) AND RELATED SYSTEMS ON SINGLE AISLE FAMILY
	Applicable to: ALL			
	K7755		05 SEP 12	EQUIPMENT FURNISHINGS-CURTAINS AND PARTITIONS-MODIFIED INTRUSION AND PENETRATION RESISTANT COCKPIT DOOR
	Applicable to: ALL			
	25-1537 01		05 SEP 12	EQUIPMENT/FURNISHINGS - PASSENGER COMPARTMENT - CHANGE CABIN CONFIGURATION TO A 199 TOURIST CLASS SEATS LAYOUT
	Applicable to: MSN 3034			
	K9256		05 SEP 12	COMMUNICATIONS-CABIN INTERCOMMUNICATION DATA SYSTEM (CIDS) - ADAPT ENHANCED CIDS ON A321 A/C
	Applicable to: MSN 2927-3120			
	K2423		05 SEP 12	EQUIPMENT/FURNISHINGS-PAX COMPARTMENT- AFT LAVATORY- DEFINE AND INSTALL LAVATORY "D"
	Applicable to: ALL			
	K10190		07 MAR 13	EQUIPMENT/FURNISHINGS-PAX COMPARTMENT- INSTALL TWO CLASS CABIN LAYOUT FOR RJA02 VERSION
	Applicable to: MSN 2649			
	K8062		05 SEP 12	COMMUNICATION - PASSENGER ENTERTAINMENT SYSTEM (VIDEO) - INSTALL ADDITIONAL POWER SUPPLY FOR SMOKE DETECTION IN VCC
	Applicable to: ALL			
	P7062		05 SEP 12	OXYGEN - CREW OXYGEN - INSTALL ALTERNATIVE 115CU FT FLIGHT CREW OXYGEN CYLINDER COMPOSITE SCOTT P/N 897940-15
	Applicable to: MSN 2927-3120			
	K7790		05 SEP 12	DOORS-PASSENGER COMPARTMENT FIXED INTERIOR DOORS-INSTALL ELECTRICAL COCKPIT DOOR RELEASE SYSTEM
	Applicable to: ALL			
	K11819		05 SEP 12	COMMUNICATIONS - CIDS - ADAPT CIDS FOR KFR04 (D5) VERSION DUE TO NON INSTALLATION OF ISPSS
	Applicable to: MSN 3034			

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M(1)	MODIFICATION	Linked SB	Incorp. Date	Title
	K10189		07 MAR 13	COMMUNICATIONS- CIDS- DEFINE CABIN INTERCOMMUNICATION DATA SYSTEM (CIDS) FOR RJA02 VERSION
	Applicable to: MSN 2649			
	K4453		07 MAR 13	COMMUNICATION - INSTALL AN ALL CABIN ATTENDANTS CALL PUSH BUTTON IN THE FLIGHT COMPARTMENT
	Applicable to: MSN 2649			
	K10368		05 SEP 12	COMMUNICATION - INTEGRATED IFE SYSTEM - INSTALL VCC SMOKE INDICATION LIGHT ON 3700VU
	Applicable to: MSN 2927-3120			
	P4654		07 MAR 13	OXYGEN - INSTALL COCKPIT PROTECTIVE BREATHING EQUIPMENT (PBE) AIR LIQUIDE -SFE-
	Applicable to: MSN 2649			
	P6886		05 SEP 12	EQUIPMENT/FURNISHINGS-COCKPIT-INTRODUCE FLASHLIGHTS P/N MZ112-00-000
	Applicable to: ALL			
	K11400		07 MAR 13	COMMUNICATIONS - INTEGRATED IFE SYSTEM- ADAPT THALES I4000 TO I3000 FOR KFR04 VERSION
	Applicable to: MSN 3120			
	K11401		07 MAR 13	COMMUNICATIONS - CIDS - ADAPT CABIN INTERCOMMUNICATION DATA SYSTEM (CIDS) FOR KFR04 VERSION (I2L*IA)
	Applicable to: MSN 3120			
	K4653		05 SEP 12	LIGHTS-EMERGENCY LIGHTING-INSTALL- A FLOOR PROXIMITY EMERGENCY ESCAPE PATH MARKING-PHOTOLUMINESCENT SYST.LTAG
	Applicable to: MSN 2927-3120			
	K11409		07 MAR 13	COMMUNICATIONS - CIDS - ADAPT CIDS FROM DUAL CLASS TO SINGLE CLASS CABIN CONFIGURATION FOR KFR04 VERSION
	Applicable to: MSN 3120			
	K11390		07 MAR 13	EQUIPMENT/FURNISHINGS-PAX COMPARTMENT - ADAPT CABIN LAYOUT INTO SINGLE CLASS CONFIGURATION FOR KFR04 VERSION
	Applicable to: MSN 3120			
	K11136		05 SEP 12	COMMUNICATIONS-PASSENGER ENTERTAINMENT SYSTEMS-INSTALL INTEGRATED IFE SYSTEM- THALES-ON KFR04 VERSION
	Applicable to: MSN 2927-3120			

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M(1)	MODIFICATION	Linked SB	Incorp. Date	Title
	K11138		05 SEP 12	EQUIPMENT FURNISHINGS-PAX COMPARTMENT- INSTALL A DUAL CLASS CABIN LAYOUT FOR KFR04 VERSION
	Applicable to: MSN 2927-3120			
	K3712		05 SEP 12	EQUIPMENT/FURNISHING -PAX COMPARTMENT- INSTALL SLIDE RAFTS ON A321 A/C
	Applicable to: MSN 2927-3120			
	K11137		05 SEP 12	COMMUNICATION-CIDSDEFINE CABIN INTERCOMMUNICATION DATA SYSTEM (CIDS) FOR KFR04 VERSION
	Applicable to: MSN 2927-3120			
	P0040		05 SEP 12	EQUIPMENT/FURNISHINGS - FLIGHT COMPARTMENT - INSTALL A 4TH OCCUPANT SEAT -
	Applicable to: ALL			
	K5104		07 MAR 13	LIGHTS - EMERGENCY LIGHTING - INSTALL A FLOOR PROXIMITY EMERGENCY ESCAPE PATH MARKING-PHOTOLUMINISCENT SYSTEM LTAG
	Applicable to: MSN 2649			
	P7360		05 SEP 12	OXYGEN - OXYGEN DISTRIBUTION - INSTALL FOURTH OXYGEN MASK EROS WITH ASSOCIATED BOX
	Applicable to: ALL			

(1) Evolution code : N=New, R=Revised, E=Effectivity

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INTRODUCTION

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00-010 GENERAL INTRODUCTION

MAIN CCOM CHANGES....A
FOREWORD....B
COMMENTS AND ENQUIRY....C
GENERAL....D
PRESENTATION....E
PAGINATION....F
REVISION/UPDATING....G
CUSTOMIZATION....H

00-050 LIST OF ABBREVIATIONS

ABBREVIATIONS....A

00-060 UNITS CONVERSION TABLE

UNITS CONVERSION TABLE....A

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MAIN CCOM CHANGES

Applicable to: ALL

INTRODUCTION

PURPOSES

The purpose of the Main CCOM Changes is to provide general information about the CCOM revision and to highlight the main changes for:

- Standard Operating Procedures (Chapter 08)
- Abnormal /Emergency Procedures (Chapter 09)
- System Description affecting a basic cabin system.

Note: *In addition, each Documentary Unit (DU) provides highlights with the reason(s) for change and uses revision bars to indicate the revised sections.*

TIMEFRAME

The subjects in the Main CCOM Changes are categorized by month and, are published regardless of the revision cycle that is applicable to each Operator.

Applicable to: ALL

NOVEMBER 2008

PRECAUTIONARY EVACUATION PROCEDURE

The precautionary evacuation procedure was deleted for the following reasons: In case of obvious rapid disembarkation on the stand initiated by the flight crew, specific airline procedures for both aircraft and on ground activities should apply.

Applicable to: MSN 2927-3120

JUNE 2012

According to the official A321 certification status, the use of the escape slides at doors 2 and 3 were not considered as part of a planned ditching.
In addition, as per Airbus SB 25-1416 and production modification 34989:

- One of the two aspirators on each escape slide at doors 2 and 3 is removed and,
- The quick disconnection coupling of the inflation hose is replaced by a permanent coupling of the inflation hose on each escape slide preventing the slide to be fully detached from the aircraft.

The A321 Cabin procedures (09-30 Cabin preparation for ditching and Evacuation on water) have changed to reflect that , in the case of ditching, doors 2 and 3 must be disarmed during the cabin preparation and prior to an evacuation on water.

Refer to 09-030 CABIN PREPARATION FOR DITCHINGRefer to 09-030 EVACUATION ON WATER

You can also refer to the Airbus FOT 999.0064/12 Dated 12 July 2012

Applicable to: ALL

JANUARY 2014

In the ABNORMAL and EMERGENCY procedures section:

- The OVERHEAD BINS SMOKE/FIRE PROCEDURE is revised to take into account the potential presence of lithium batteries. *Refer to 09-020 OVERHEAD BIN SMOKE/FIRE PROCEDURE*
- New procedures LITHIUM BATTERIES FIRES and STORAGE PROCEDURE AFTER A LITHIUM BATTERY FIRE are added.
  Refer to 09-020 LITHIUM BATTERY FIRES Refer to 09-020 STORAGE PROCEDURE AFTER A LITHIUM BATTERY FIRE

FOREWORD

Applicable to: ALL

The CABIN CREW OPERATING MANUAL (CCOM) provides descriptive information on the standard version of the aircraft, operating instructions and Function Recovery Procedures (FRP) guidelines for items and/or equipment managed by the cabin crew, and operating instructions for normal and/or emergency/abnormal operations.

"Standard aircraft" signifies the aircraft as delivered by Airbus, with all applicable Service Bulletins (SBs) embedded. All airline-specific equipment can be added via the Customer Originated Change (COC) procedure.

In keeping with the philosophy of the FLIGHT CREW OPERATING MANUAL (FCOM), only information unique to this particular aircraft configuration is included.

In case of conflict between this CCOM and the FCOM or the regulations of the Approved Authorities' Procedures, the FCOM and the regulations of the Approved Authorities' Procedures will apply.

COMMENTS AND ENQUIRY

Applicable to: ALL

All manual holders and users are encouraged to forward any questions and suggestions regarding the Cabin Crew Operating Manual (CCOM) to :

AIRBUS
BP 33
1 ROND-POINT MAURICE BELLONTE
31707 BLAGNAC CEDEX - FRANCE
TELEFAX : 33 (0) 561.93.29.68

ATTN. : FLIGHT OPERATIONS SUPPORT - STLC
EMAIL: fltops.cabin@airbus.com

GENERAL

Applicable to: ALL

The CCOM must address the unique requirements dictated by its use in a cabin environment and, possibly, by the conditions associated with abnormal or emergency situations. Some subjects are also included in the FCOM, but each manual is specific to the applicable crew.
The CCOM content and format shall also satisfy the requirements for use as a reference document during cabin crew training.

The CCOM will be available in the following electronic formats :
- Extensible Markup Language (XML, World Wide Web specifications).
- Portable Document Format (PDF, open Adobe specification).

The CCOM is delivered on CD-ROM or, online using Airbus World.
No paper versions will be made available.

WARNINGS, CAUTIONS AND NOTES

WARNING : An operating procedure, technique, etc., which may result in injury or loss of life, if not carefully followed.

CAUTION : An operating procedure, technique, etc., which may result in damage to equipment, if not carefully followed.

NOTE : An operating procedure, technique, etc., considered essential to emphasize.

PRESENTATION

Applicable to: ALL

The CCOM is made up of one volume, which is divided into 10 chapters. Each chapter is divided into pre-defined sections. Optional sections can be added to address, airline-specific requirements (Ex : airline requests...).
Each section is made up of Documentary Units (DU), which are information segments containing technical data. Each DU is assigned an effectivity.

- Chapter 00 : INTRODUCTION
  This chapter provides general information about the manual.
- Chapter 01: AIRCRAFT GENERAL
  This chapter presents an overview of the aircraft.
- Chapter 02 : CABIN INTERIOR
  This chapter provides descriptive and operational information on cabin equipment and systems.

- Chapter 03 : CIDS AND COMMUNICATION
  This chapter provides descriptive and operational information on the communication systems and on the CIDS, in particular.
- Chapter 04 : CABIN INFORMATION AND ENTERTAINMENT SYSTEMS
  This chapter provides descriptive and operational information on the entertainment equipment and systems.
- Chapter 05 : EVACUATION DEVICES
  This chapter provides descriptive and operational information on the evacuation equipment and systems.
- Chapter 06 : OXYGEN
  This chapter provides descriptive and operational information on the oxygen equipment and systems.
- Chapter 07 : EMERGENCY EQUIPMENT
  This chapter provides descriptive and operational information on the EMERGENCY equipment and systems.
- Chapter 08 : STANDARD OPERATING PROCEDURES (SOPs)
  This chapter provides normal procedures for standard aircraft operations by the cabin crew. SOPs consist of inspections, cabin preparations and normal procedures.
- Chapter 09 : ABNORMAL/EMERGENCY PROCEDURES
  This chapter provides Abnormal/Emergency procedures to be applied by cabin crews in case of a failure.
- Chapter 10 : CABIN CREW BULLETINS (CCB)
  This chapter contains Cabin Crew Bulletins (CCB), which supplement the information and procedures given in the different CCOM sections. Each CCB will be managed like a section of the previous chapters.

For chapters 02, 03, 04, whenever possible, a Function Recovery Procedures (FRP) section will be included at the end of the descriptive section. This section should assist the cabin crew in resetting/reactivating cabin systems or functions.

PAGINATION

Applicable to: ALL

FORMAT

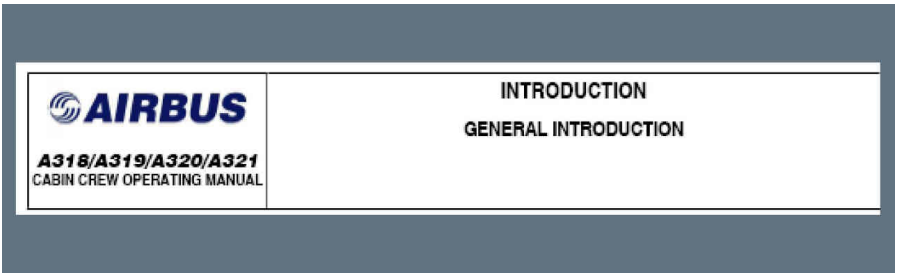
The "PDF" CCOM is designed with the following paper layout :
- Page format and size : A5 (148.5 mm x 210 mm).
- Orientation : Portrait
- Left-Hand/Right-Hand.
- Standard character type and size : Helvetica, 9 points.

The PDF CCOM page is composed of the following three zones :
- A header,
- A footer,
- A body.

HEADER

The header is composed of the following three parts :
- The left side : Includes the manual's title, the applicable aircraft program, and the applicable logo (company logo, or Airbus logo by default).
- The middle : Indicates the title of the current chapter at the top of the zone, and the title of the current section at the bottom of the zone.
- The right side : Provides the sections's identification and revision date.

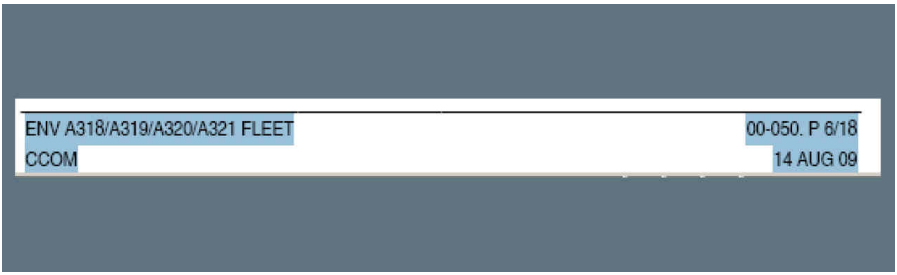
HEADER



FOOTER

The footer contains such remaining Operating Manual identification data, not included in the header, as : The extracted Document IDENT, and page numbering information (that is, the current page number and the total number of pages).

EXAMPLE : FLEET CCOM



REVISION/UPDATING

Applicable to: ALL

REVISION

For the CCOM, there will no longer be General Revisions, Intermediate Revisions, or Temporary Revisions, since it is revised on a continuous, as needed, basis.
The revision IDENT indicated the manual's date of the assembly.
A section is always revised in its entirety, and the changes are indicated in the List Of Effective Section (LOS). Each section is identified by the date of its last revision.
Changes made during a revision are identified by a "revision" mark in the left-hand margin.
The blue numerical index at the top of the left-hand margin refers to the corresponding index of the highlight page, located at the preliminary page of each chapter. The revision mark is located in front of the modified object.
The lines, which indicates effectivity changes, neither have indexes nor "Rs".

UPDATING

In the List Of effective Sections (LOS), each line (section) will have :
- Section identifiers : Chapter (2 digits), and section (3 digits).
- The following codes to describe the update :
  Blank = No change
  N = New section
  R = Revised section
  D = Deleted section
- The revision date.

CUSTOMIZATION

Applicable to: ALL

Several criteria are taken into account for the customization of a CCOM, and can be grouped according to their function :
- Technical criteria : Represents the aircraft's technical definition, including the :
  - Aircraft's identification, or model,
  - Technical definition (Factory Modifications, Service Bulletins, etc.),
  - COC (Customer Originated Changes).
- Operational criteria : Represents the aircraft's operational environment, including the :
  - Operator,
  - Associated authorities.

CCOM customization is specified in the :
- Aircraft Allocation Table (AAT), and
- List of Modifications Table (LOM).

AIRCRAFT ALLOCATION TABLE (AAT)

The Aircraft Allocation Table (AAT) lists fleet characteristics and the relationship between different aircraft identifications.
- The Aircraft Table, which lists the applicable aircraft, along with their associated identification :
  - Manufacter Serial Number (MSN),
  - Fleet Serial Number (FSN),
  - Registration number,
  - Aircraft model.

  This table dedicates one line per aircraft.

LIST OF MODIFICATIONS (LOM)

The List of Modifications Table (LOM) lists the product's applicable Factory Modifications and Service Bulletins, along with their various cross-references. SBs appear when embodied on at least one aircraft within the fleet. The LOM contains the following information :
- Codes describing the update :
  - N = New criteria for this revision
  - E = Effectivity change: SB change for an existing Change Identification Number (CIN), validity change, or title change for the criteria.
- Date corresponding to the revision date for which the criteria was incorporated.
- Validity information is optional, and is expressed the same format as on the manual's technical pages (MSN, or Registration Number). Grouping is applied in the case of an MSN, or FSN.

DU EFFECTIVITY

Each DU is assigned an effectivity :
- Effectivity can either be expressed in terms of MSN, or registration number (tail number), depending on the customer's preference. However, MSN is the default.
- On the PDF CCOM, the effectivity appears above the DU (if different from the previous one), and within a grey background.

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ABBREVIATIONS

Applicable to: ALL

ABBREVIATION	TERM
AA	Airworthiness Authorities
AAP	Additional Attendant Panel
AAT	Aircraft Allocation Table
ABN	Abnormal
ABV	Above
AC	Alternating Current
A/C, AC	Aircraft
ACARS	Aircraft Communication Addressing and Reporting System
ACP	Area Call Panel (Cabin)
ACU	Airshow Control Unit
ADB	Area Distribution Box
ADIRS	Air Data and Inertial Reference System
ADS	Automatic Dependent Surveillance
ADV	Advisory
AEVC	Avionic Equipment ventilation Computer
AIDS	Aircraft Integrated Data System
AIP	Attendant Indication Panel
ALT	Altitude
ALTN	Alternate
AMM	Aircraft Maintenance Manual
AMU	Audio Management Unit
ANT	Antenna
APU	Auxiliary Power Unit
ARINC	Aeronautical Radio Incorporated
ARN	Aircraft Registration Number
ARPT	Airport
A/S	Airspeed
ASAP	As Soon As Possible
ASP	Audio Selector Panel
ATC	Air Traffic Control
ATR	Audio Tape Reproducer
ATSU	Air Traffic Service Unit
ATT	Attitude
AVOD	Audio/Video on Demand
AVNCS	Avionics
AWY	Airway
BARO	Barometric
BAT	Battery
B/C, BC	Business Class
BCL	Battery Charge Limiter
BFE	Buyer Furnished Equipment
BGM	Boarding Music

Continued on the following page

Continued from the previous page

ABBREVIATION	TERM
BITE	Built-In Test Equipment
BMC	Bleed Monitoring Computer
BRK	Brake
BRT	Bright
BTL	Bottle
BTS	Base Transceiver Station
CAB	Cabin
CAPT	Captain
CAM	Cabin Assignment Module
CAT	Category
CAS	Cabin Attendant Seat
CAUT	Caution
C/B	Circuit Breaker
CBMU	Circuit Breaker Monitoring Unit
CC	Cabin Crew
CCB	Cabin Crew Bulletin
CCL	CIDS Caution Light
CCOM	Cabin Crew Operating Manual
CCR	Credit Card Reader
CCS	Cabin Communication System
CDR	Compact Disc Reproducer
CECAM	Centralized Cabin Monitoring
CDU	Control and Display Unit
CFDS	Centralized Fault Display System
CG	Center of Gravity
CHA	Channel
CHG	Change
CHK	Check
CIDS	Cabin intercommunication Data System
CIN	Change Identification Number
CIP	Cabin Interface Plug
CKPT	Cockpit
C/L	Check List
CLB	Climb
CLG	Ceiling
CLR	Clear
CLSD	Closed
CM	Crewmember
CMC	Central Maintenance Computer
CMD	Command
CMS	Central Maintenance System
CMT	Cabin Management Terminal
CNTOR	Contactor
COC	Customer Originated Changes

Continued on the following page

Continued from the previous page

ABBREVIATION	TERM
COMP	Compartment
CPTR	Computer
COM	Communication
CONT	Continuous
CPCU	Cabin Pressure Control Unit
CRC	Continuous Repetitive Chime
CRG	Cargo
CRS	Course
CRSD	Crew Rest Smoke Detection
CRZ	Cruise
CSTR	Constraint
CSU	Cassette Stowage Unit
CTL	Control
CTL PNL	Control Panel
CTLR	Controller
CTR	Center
CTU	Cabin Telecommunication Unit
CVR	Cockpit Voice Recorder
CWS	Central Warning System
Db	Decibel
DCC	Digital Cockpit Controller
DEG	Degree
DES	Descent
DEST	Destination
DET	Detection
DEU	Decoder/Encoder Unit
DFDR	Digital Flight Data Recorder
DIM	Dimming
DIR	Direction
DISC	Disconnect
DISCH	Discharge
DISPL	Display
DIST	Distance
DSCS	Door Slide Control System
DSU	Data Server Unit
DU	Display Unit
DVD	Digital Versatile Disc
E/C	Economy Class
ECAM	Electronic Centralized Aircraft Monitoring
ECAS	Emergency Crew Alerting System
EEPMS	Emergency Escape Path Marking System
ECS	Environmental Control System
EIS	Electronic Instruments System
ELEC	Electricity

Continued on the following page

Continued from the previous page

ABBREVIATION	TERM
ELEV	Elevator, Elevation
EMER	Emergency
EMER EXIT R	Emergency Exit Right (over wing)
ENG	Engine
EOD	Explosive Ordnance Disposal
EPSU	Emergency Power Supply Unit
EVAC	Evacuation
F/A	First Aid
FAIL	Failure
FAP	Flight Attendant Panel
FAR	Federal Aviation Regulations
F/C, FC	First Class
FCOM	Flight Crew Operating Manual
FCU	Flush Control Unit
FDAU	Flight Data Acquisition Unit
FDB	Floor Disconnect Box
FDIU	Flight Data Interface Unit
FES	Fire Extinguishing System
FF	Fast Forward
FL	Flight Level
FLT	Flight
F/O	First Officer
FPEEPMS	Floor-Proximity Emergency Escape Path-Marking System
FRP	Function Recovery Procedure
FRQ	Frequency
FS	Full Size (trolley)
FSB	Fasten Seat Belt (sign)
FSM	Fault System Management
FSN	Fleet Serial Number
FT	Foot, Feet
FT/MN	Feet per Minute
FWC	Flight Warning Computer
FWD	Forward
FWS	Flight Warning System
G5	Galley 5
GEN	Generator
GND	Ground
GPRS	General Packet Radio Service
GRVTY	Gravity
GS	Ground Speed
GSM	Global System for Mobile communication
HI	High
HP	High Pressure
HPV	High Pressure Valve

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ABBREVIATION	TERM
HZ	Hertz
HS	Handset
ICAO	International Civil Aviation organization
IDENT	Identification
IFE	In Flight Entertainment
IFEC	In Flight Entertainment Center
IGN	Ignition
IMM	Immediate
IND	Indication
INOP	Inoperative
INT	Interphone
INTENS	Intensity
IPRAM	Integrated Prerecorded Announcement
IR	Inertial Reference
IRS	Inertial Reference System
ISPSS	In-Seat Power Supply System
JAR	Joint Aviation Requirements
JB	Junction Box
KG	kilogram
KT	Knot
LAV	Lavatory
LAV34	Lavatory 34
LCD	Liquid Crystal Display
LD	Lower Deck
LDG	Landing
LD LAV	Lower Deck Lavatory
LED	Light Emitting Diode
L/G	Landing Gear
LGCIU	Landing Gear Control Interface unit
LIM	Limitation
LH	Left Hand
LO	Low
LOM	List Of Modifications
LONG	Longitude
LOS	List Of Sections
LP	Low Pressure
LRBL	Least Risk Bomb Location
LRU	Line Replaceable Unit
LSU	Lavatory Service Unit
LT	Light
LVL	Level
MAINT	Maintenance
MAN	Manual
MB	Milibar

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ABBREVIATION	TERM
MCDU	Multipurpose Control and Display Unit
MD	Main Deck
MECH	Mechanic, Mechanical
MED	Medium
MEL	Minimum Equipment List
MIC	Microphone
MIN	Minimum
MKR	Marker (radio) Beacon
MLW	Maximum Design Landing Weight
MMEL	Master Minimum Equipment List
MMO	Mach Max Operating Speed
MN	Minute
MRT	Manual Release Tool
MSA	Minimum Safe Altitude
MSG	Message
MSU	Minimum Safe Altitude
MSU	Media Server Unit
MSL	Mean Sea Level
MTOW	Maximum design Takeoff Weight
MWP	Manual Warning Panel
MZFW	Maximum design Zero Fuel Weight
N/A	Not Applicable
NATS	North American Telephone System
NAV	Navigation
ND	Navigation Display
NLG	Nose Landing Gear
NM	Nautical Mile
NORM	Normal
NS	No Smoking
NTPD	Normal Temperature Pressure Dry
NTS	Non Textile Surface
O2	oxygen
OAT	Outside Air Temperature
OBRM	On Board Replaceable Module
OCCPD	Occupied
OFF/R	Off Reset
OFST	Offset
OHSC	Overhead Stowage Compartment
OL	Outboard Left
OMTS	On-Board Mobile Telephony System
O/P	Output
OPP	Opposite
OPS	Operations
OPT	Optional

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ABBREVIATION	TERM
OR	Outboard Right
OVBD	Overboard
OVHD	Overhead
OVHT	Overheat
OVRD	Override
OVSPD	Overspeed
OXY	Oxygen
PA	Passenger Address
PAT	Primary Access Terminal
PAX	Passenger
pb, PB	Pushbutton
pb sw	Pushbutton Switch
PBE	Portable Breathing Equipment
PCB	Passenger Call Button
PCU	Passenger Control Unit
PDF	Portable Document Format
PED	Portable Electronic Devices
PERF	Performance
PES	Passenger Entertainment System
PIM	Programming and Indication Module
P/N	Part Number
PNL	Panel
POS	Position
POXIP	Passenger Oxygen Indication Panel
PR	Pressure
PRAM	Prerecorded Announcement and Music
PREV	Previous
PROC	Procedure
PRV	Pressure Regulation Valve
PSI	Pound per Square Inch
PSIU	Passenger Service Information Unit
PSP	Pre-Selected Passenger
PSU	Passenger Service Unit
PT	Point
PTP	Programming and Test Panel
PTT	Push To Talk
PURS	Purser
PWR	Power
QCCU	Quantity Calculation and Control Unit
QT	Quart (US)
QTY	Quantity
RA	Radio Altitude
RAD	Radio
RADVR	Random Access Digital Video Reproducer

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Continued from the previous page

ABBREVIATION	TERM
RC	Repetitive Chime
RCDR	Recorder
RCL	Recall
RCP	Radio Control Panel
RCVR	Receiver
REG	Regulation
REL	Release
REV	Reverse
REW	Rewind
RH	Right Hand
R/L	Reading Light
RQRD	Required
RS	Reset Restore
RSVR	Reservoir
RTE	Route
RTS	Return To Seat
RVC	Remote Volume Control
RWY	Runway
SAT	Static Air Temperature
SB	Service Bulletin
SC	Single Chime
SCU	System Control Unit
SDCU	Smoke Detection Control Unit
SEB	Seat Electronic Box
SEL	Selector, Select
SELCAL	Selective Calling System
SEU	Seat Electronic Unit
SFE	Seller Furnished Equipment
SMS	Short Message Service
S/N	Serial Number
SPD	Speed
S/R	Seat Row
SSC	Single Stroke Chime
STAT	Static
STBY	Standby
STD	Standard
STS	Status
SVCE INTPH	Service Interphone
SW	Switch
SYS	System
TBC	To Be Confirmed
TBD	To Be Determined
T/C,TC	Tourist Class
TCAS	Traffic-Collision Alert System Avoidance System

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ABBREVIATION	TERM
TEL	Telephone
TEMP	Temperature
TK	Tank
TMR	Timer
T.O.	Take Off
TU	Tapping Unit
TSM	Trouble Shooting Manual
TTL	Taxi, Takeoff and Landing
UP	Upper
USB	Universal Serial Bus
UTC	Universal Coordinated Time
VC	Ventilation controller
VCC	Video Control Center
VCP	Video Cassette Player
VCR	Video Cassette recorder
VCU	Video Control Unit
VENT	Ventilation
VHF	Very High Frequency
VIB	Vibration
VOL	Volume
VLV	Valve
VOD	Video On Demand
VTR	Video Tape Reproducer
WARN	Warning
WBM	Weight and Balance Manual
WDB	Wall Disconnect Box
WDO	Window
WSHLD	Windshield
WT	Weight
WWP	Update of the standard operating procedure to be in accordance with the A380 CCOM. Water Waste Page
XML	Extensible Markup Language
XMTR	Transmitter
YC, Y/C	Economy Class (Yankee Class)
Z	Zone

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UNITS CONVERSION TABLE

Applicable to: ALL

DESIGNATION	METRIC TO US	US TO METRIC
LENGTH	1 millimeter (mm) = 0.0394 inch (in) 1 meter (m) = 3.281 feet (ft) 1 meter (m) = 1.094 yard (yd) 1 kilometer (km) = .540 nautical mile (nm)	1 inch (in) = 25.4 millimeter (mm) 1 foot (ft) = .3048 meter (m) 1 yard (yd) = .914 meter (m) 1 nautical mile (nm) = 1.852 kilometer (km)
SPEED	1 meter/second (m/s) = 3.281 feet/second (ft/s) 1 kilometer/hour (km/h) = .540 knot (kt)	1 foot/second (ft/s) = .03048 meter/second (m/s) 1 knot (kt) = 1.852 kilometer/hour (km/h)
WEIGHT	1 gram (g) = 0.353 ounce (oz) 1 kilogram (kg) = 2.2046 pounds (lb) 1 ton (t) = 2 204.6 pounds (lb)	1 ounce (oz) = 28.35 grams (g) 1 pound (lb) = .4536 kilogram (kg) 1 pound (lb) = 0.0004536 ton (t)
FORCE	1 Newton (N) = .2248 pounds (lb) 1 deca Newton (daN) = 2.248 pounds (lb)	1 pound (lb) = 4.448 Newtons (N) 1 pound (lb) = .448 deca Newton (daN)
PRESSURE	1 BAR = 14.505 pounds per square inch (P.S.I.) 1 millibar (mbar) = 1 hpa = .0145 P.S.I.	1 pound per square inch (P.S.I.) = .0689 bar 1 P.S.I. = 68.92 millibars (mbar) = 68.92 hpa
VOLUME	1 liter (l) = .2642 US Gallons 1 cubic meter (m3) = 264.2 US Gallons 1 liter (l) = 1.0568 Qt 1 cubic meter (m3) = 1056.8 Qts	1 US Gallon = 3.785 liters (l) 1 US Gallon = 0.03785 cubic meter (m3) 1 Qt = 0.94625 liter (l) 1 Qt = 0.000946 cubic meter (m3)
MOMENTUM	1 meter x deca Newton (m. daN) = 88.50 pound x inch (lb. in)	1 pound x inch (lb. in) = .0113 meter x deca Newton (m. DaN)
TEMPERATURE	t (°C) = 5/9 {t (°F) - 32}	t (°F) = t (°C) x 1.8 + 32

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AIRCRAFT GENERAL

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01-010 AIRCRAFT PRESENTATION
GENERALITES ..... A
GENERALITIES ..... B

01-020 AIRCRAFT DIMENSIONS
DIMENSIONS ..... A

01-030 PERFORMANCE
PERFORMANCE ..... A

01-040 PRESSURIZATION
UNPRESSURIZED COMPARTMENTS ..... A

01-050 FLIGHT CONTROLS
GENERAL ..... A

01-060 LANDING GEARS
LANDING GEARS ..... A

01-070 CARGO COMPARTMENTS
CARGO COMPARTMENTS ..... A
CARGO DOORS ..... B

01-080 CABIN DOORS
CABIN DOORS ..... A

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GENERALITES

Criteria: SA
Applicable to: MSN 2649

- General : The A320 is a short to medium range, single-aisle, subsonic, civil transport aircraft.
- Engines : The aircraft has two high bypass, turbofan engines, mounted underneath the wings.
- Cockpit : The cockpit is arranged for a two-member crew. It also has a place for one observer (plus optionally an additional one).
- Cabin :
  - The passenger seating layout may be varied to suit operating requirements, up to a certified maximum of 180 seats.
  - Any combination of cabin crew seats may be provided, with a minimum of 4 imperative seats.

CAUTION	- AS WITH THE FLIGHT CREW PROCEDURES, A TRIPPED CIRCUIT BREAKER MUST NOT BE RE-ENGAGED IN FLIGHT. - ON GROUND, THE CABIN CREW MAY RE-ENGAGE THE CIRCUIT BREAKER, IF THE ACTION IS COORDINATED WITH MAINTENANCE AND THE CAUSE OF THE TRIPPING IS IDENTIFIED.

GENERALITIES

Criteria: K2113, SA
Applicable to: MSN 2927-3120

- General : The A321 is a short to medium range, single-aisle, subsonic, civil transport aircraft.
- Engines : The aircraft has two high bypass, turbofan engines, mounted underneath the wings.
- Cockpit : The cockpit is arranged for a two-member crew. It also has a place for one observer (plus optionally an additional one).
- Cabin :
  - The passenger seating layout may be varied to suit operating requirements, up to a certified maximum of 220 seats.
  - Any combination of cabin crew seats may be provided, with a minimum of 5 imperative seats.

CAUTION	- AS WITH THE FLIGHT CREW PROCEDURES, A TRIPPED CIRCUIT BREAKER MUST NOT BE RE-ENGAGED IN FLIGHT. - ON GROUND, THE CABIN CREW MAY RE-ENGAGE THE CIRCUIT BREAKER, IF THE ACTION IS COORDINATED WITH MAINTENANCE AND THE CAUSE OF THE TRIPPING IS IDENTIFIED.

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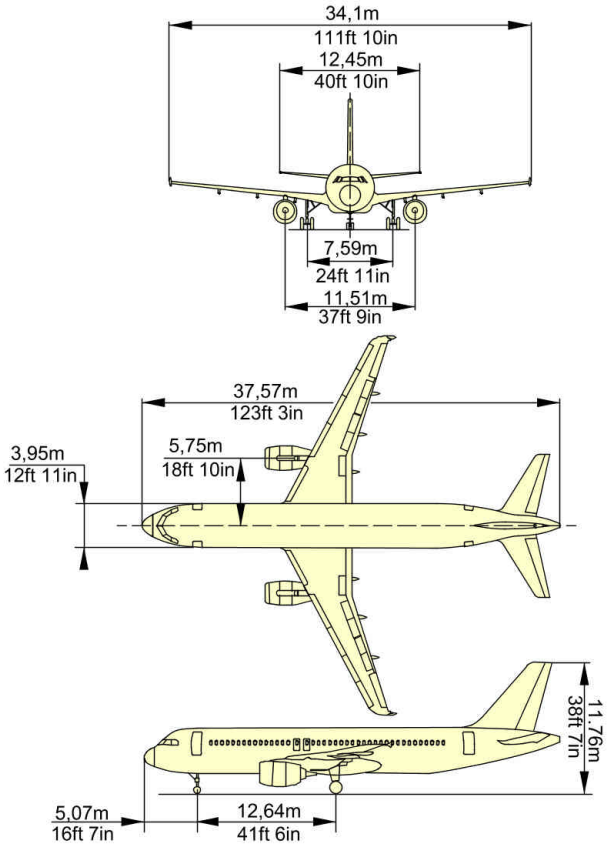
DIMENSIONS

Criteria: SA
Applicable to: MSN 2649

The overall cabin length of the A320 is 27.51 m (90 ft, 3 in).

AIRCRAFT DIMENSIONS

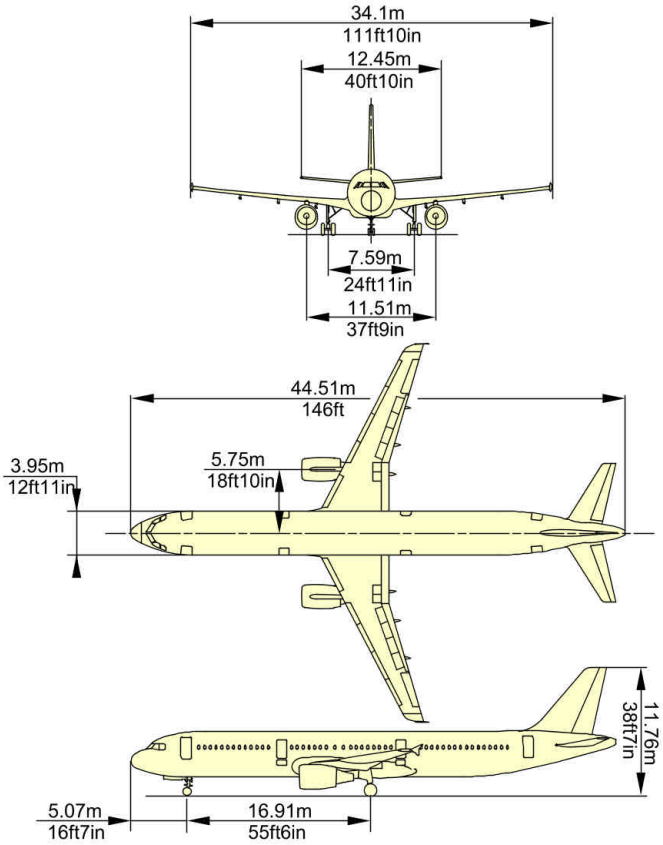


DIMENSIONS

Criteria: K2113, SA
Applicable to: MSN 2927-3120

The overall cabin length of the A321 is 34.37 m (112 ft, 9 in).

AIRCRAFT DIMENSIONS



PERFORMANCE

Criteria: SA
Applicable to: MSN 2649

The design weights of the A320 are as follows :

- MAX operating altitude: between 39 000 ft and 41 000 ft depending on aircraft certification
- MAX design speeds (VMO/MMO): 350 kt ; M 0.82

PERFORMANCE

Criteria: K2113, SA
Applicable to: MSN 2927-3120

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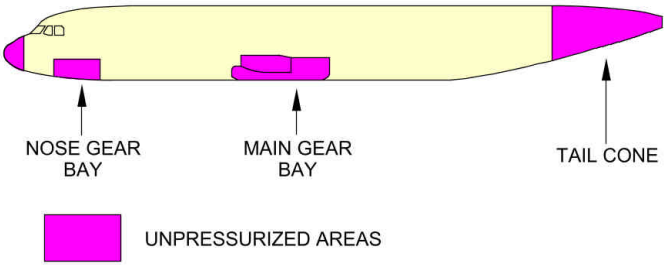
UNPRESSURIZED COMPARTMENTS

Applicable to: ALL

UNPRESSURIZED COMPARTMENTS



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GENERAL

Criteria: SA
Applicable to: MSN 2649

The fly-by-wire control system was designed and certificated to render the new generation of aircraft safer, more cost effective, and more pleasant to fly, or ride in, than a conventional aircraft.

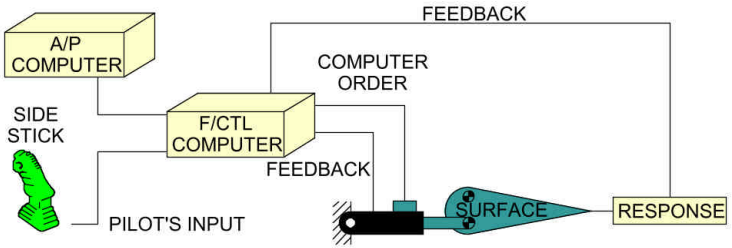
BASIC PRINCIPLE

All flight control surfaces are :
- Electrically controlled,
- Hydraulically activated.

The stabilizer and rudder can also be controlled mechanically.
The pilots use the sidesticks to fly the aircraft in pitch and roll (and in yaw, indirectly, through turn coordination).
Computers interpret pilot inputs and move the flight control surfaces, as necessary, to carry out these orders.

However, regardless of the pilot's inputs, computers prevent :
- Excessive maneuvers,
- Flight outside the safe-flight envelope.

FLIGHT CONTROL BASIC PRINCIPLE



FLIGHT CONTROL SURFACES

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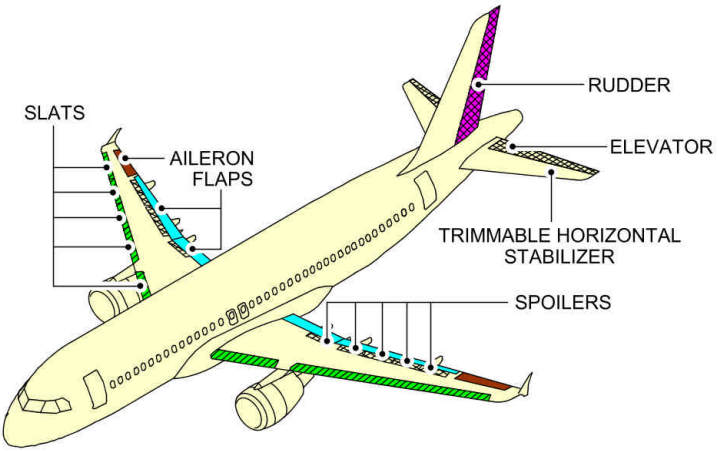

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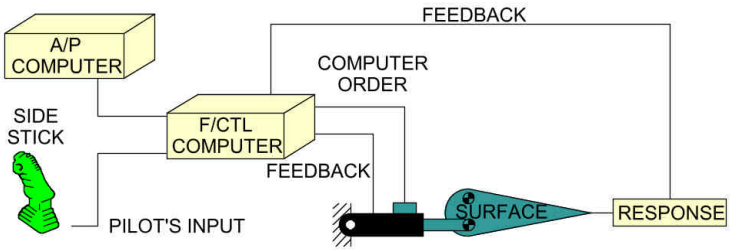
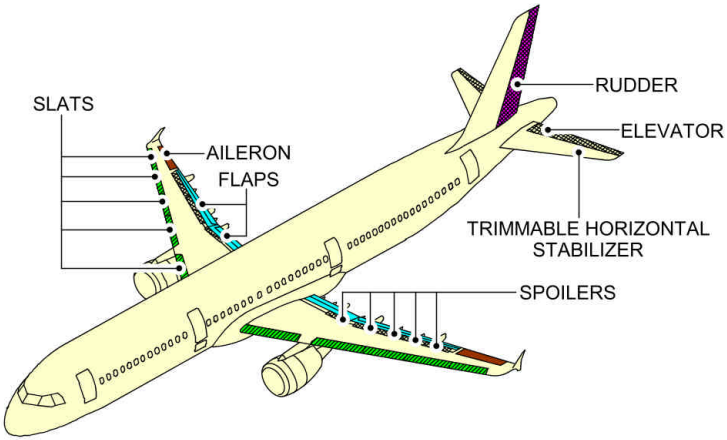


FLIGHT CONTROL SURFACES

FLIGHT CONTROL SURFACES



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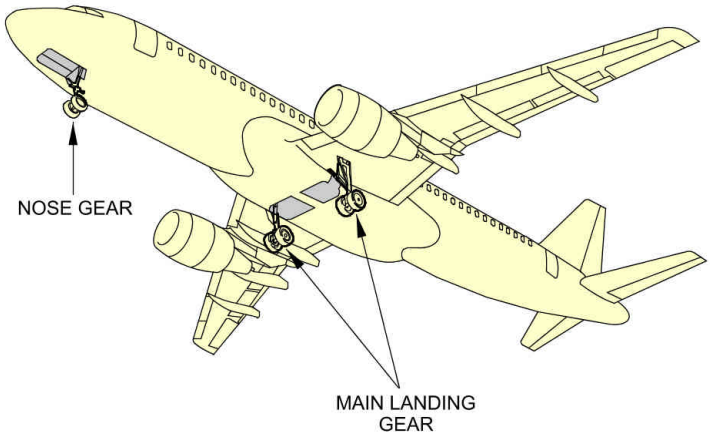
LANDING GEARS

Criteria: SA
Applicable to: MSN 2649

The landing gear of the A320 is comprised of :

- Two main landing gear assemblies, mounted in the wings, and retracting sideways into the fuselage ;
- A nose landing gear, mounted under the nose, and retracting forwards into the fuselage.

LANDING GEARS



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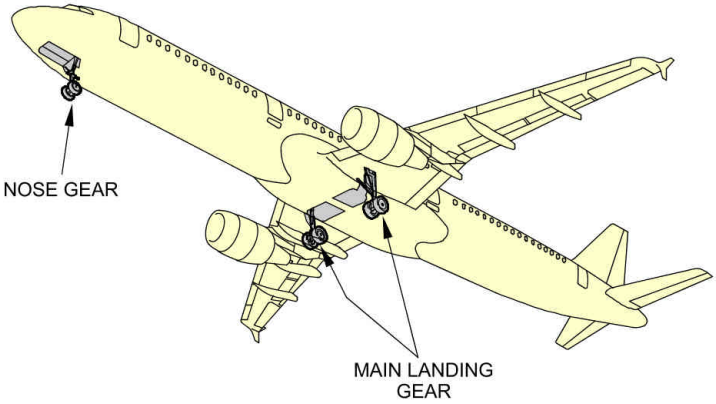
LANDING GEARS

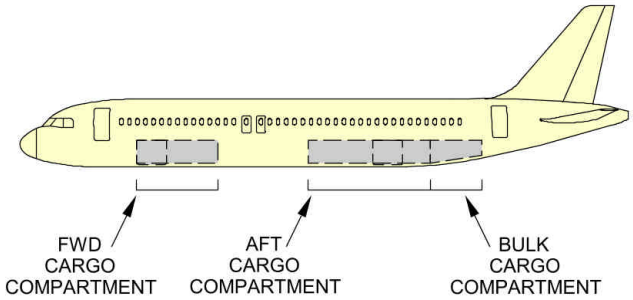


CARGO COMPARTMENTS

Criteria: SA
Applicable to: MSN 2649

Three cargo compartments are installed in the A320's lower deck.

CARGO COMPARTMENTS



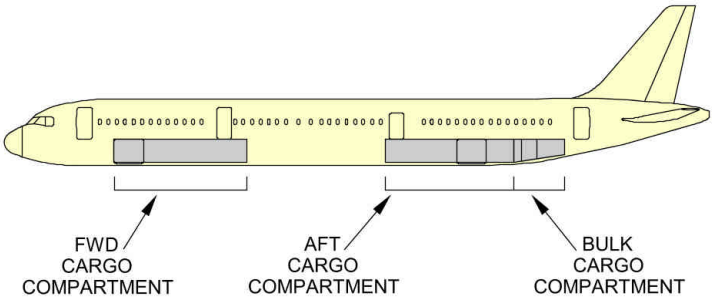
The forward and aft cargo compartments are designed to carry containers and pallets.

CARGO COMPARTMENTS

Criteria: K2113, SA
Applicable to: MSN 2927-3120

Three cargo compartments are installed in the A321's lower deck.

CARGO COMPARTMENTS



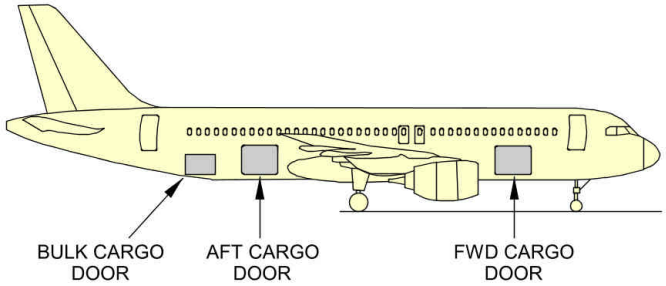
The forward and aft cargo compartments are designed to carry containers and pallets.

CARGO DOORS

Criteria: SA
Applicable to: MSN 2649

There are three cargo compartment doors on the lower right side of the fuselage, below the cabin floor.

CARGO DOORS



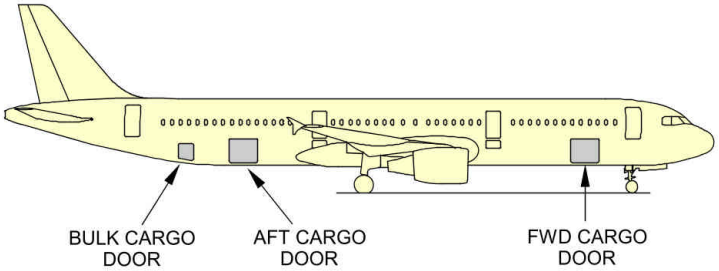
The forward (FWD) and AFT cargo doors open outward and upward, and can only be opened from the outside. They are hydraulically operated and mechanically locked.

CARGO DOORS

Criteria: K2113, SA
Applicable to: MSN 2927-3120

There are three cargo compartment doors on the lower right side of the fuselage, below the cabin floor.

CARGO DOORS



The forward (FWD) and AFT cargo doors open outward and upward, and can only be opened from the outside. They are hydraulically operated and mechanically locked.

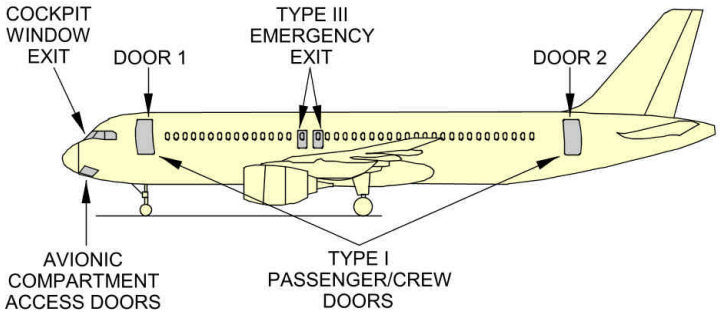
CABIN DOORS

Criteria: SA
Applicable to: MSN 2649

The A320 is equipped with :

- 4 oversized Type "I" passenger/crew doors (2 on each side).
- 4 Type "III" emergency exits (2 on each side).
- 2 cockpit window exits (1 on each side).
- 4 avionic compartment access doors.

CABIN DOORS



DESIGNATION	DIMENSIONS (height x width) in meters LH	DIMENSIONS (height x width) in meters RH	HEIGHT FROM GROUND FLOOR (meters)
Door 1 (oversized Type "I")	1.85 x 0.81	1.85 x 0.81	3.400
Door 2 (oversized Type "I")	1.85 x 0.81	1.85 x 0.81	3.400
Emergency exit (Type "III")	1.02 x 0.51	1.02 x 0.51	3.790

- The passenger crew doors located in the FWD, and AFT sections of the cabin are oversized Type "I" exits. They are normally used to embark/disembark passengers, and to service the aircraft.
- The cabin emergency exits are Type "III" exits, located over the wing. These doors are always in the ARMED position. In emergency situations, opening the doors from the inside leads to automatic deployment of the emergency escape slide, due to the fact that the doors are always in ARMED mode.
- All doors are operated by interior and exterior handles. They are equipped with an evacuation device, and become emergency exits in the event of an evacuation.
- The cockpit window exits are sliding windows. They can only be opened from the inside.
- Four inward opening, manually operated, hinged doors give external access to the avionics compartments. These doors are in the lower fuselage, around the nose landing gear bay.

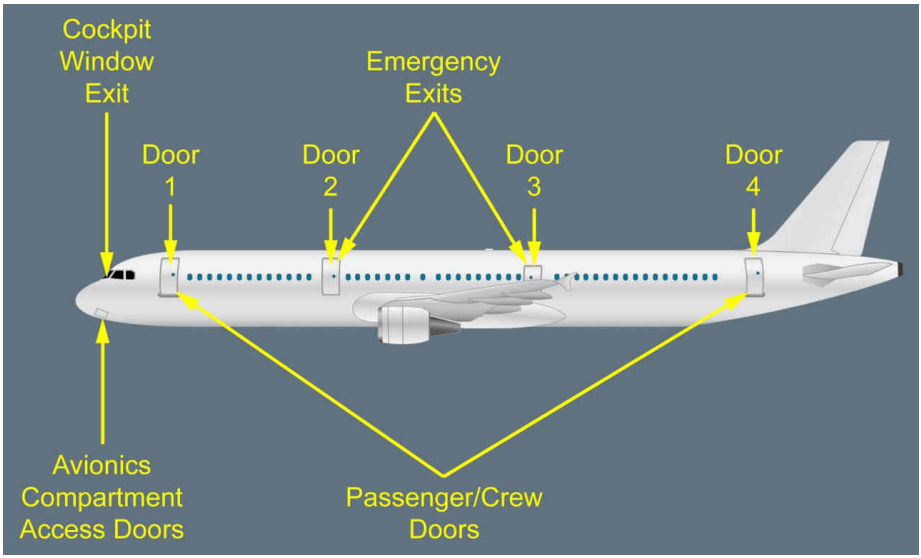
CABIN DOORS

Criteria: K2113, SA
Applicable to: MSN 2927-3120

The A321 is equipped with :

- 2 pairs of oversized Type "I" passenger/crew doors in 1 L/R and 4 L/R (also qualified as type "C" doors)
- 2 pairs of oversized Type "I" emergency exits in 2 L/R and 3 L/R (also qualified as type "C" doors)
- 2 cockpit window exits (1 on each side).
- 4 avionic compartment access doors.

CABIN DOORS



DESIGNATION	DIMENSIONS (height x width) in meter (inch) LH	DIMENSIONS (height x width) in meter (inch) RH	HEIGHT FROM GROUND FLOOR meter (Feet)
Door 1 L/R and 4 L/R (oversized Type "I")	1.85 x 0.81 (73 X 32)	1.85 x 0.81 (73 X 32)	3.400 (11)
Door 2 L (oversized Type "I")	1.85 X 0.76 (73 x 30)		3.400 (11)
Door 2 R and 3 L/R (oversized Type "I")	1.52 x 0.76 (60 x 30)	1.52 x 0.76 (60 x 30)	3.400 (11)

- The passenger crew doors located in the FWD, and AFT sections of the cabin are normally used to embark/disembark passengers, and to service the aircraft.
- All doors are operated by interior and exterior handles. They are equipped with an evacuation device, and become emergency exits in the event of an evacuation.
- The cockpit window exits are sliding windows. They can only be opened from the inside.
- Four inward opening, manually operated, hinged doors give external access to the avionics compartments. These doors are in the lower fuselage, around the nose landing gear bay.

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CABIN INTERIOR

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02-010 FLIGHT DECK

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COCKPIT SEATS....C
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Localization Title	Toc Index	ID	Reason
02-110 Location of Lavatories	A	1	Administrative update: No technical change.

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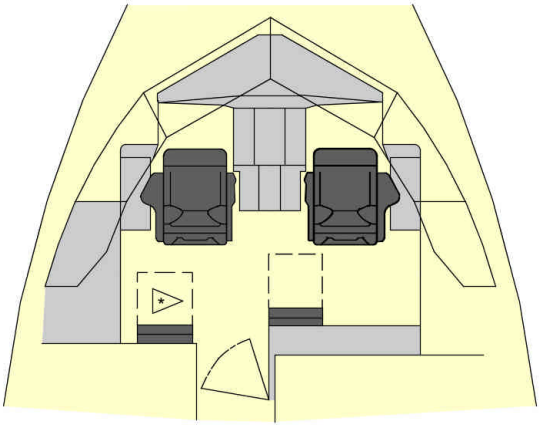
GENERAL ARRANGEMENT

Applicable to: ALL

GENERAL ARRANGEMENT

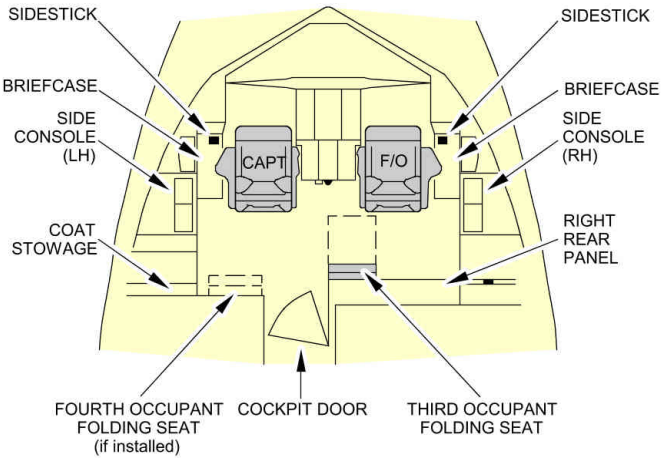


The cockpit is designed for maximum comfort and convenience, providing various types of equipment and stowage possibilities.
In addition, the cockpit is thermally and acoustically insulated.

SEAT LAYOUT

Applicable to: ALL

seat layout

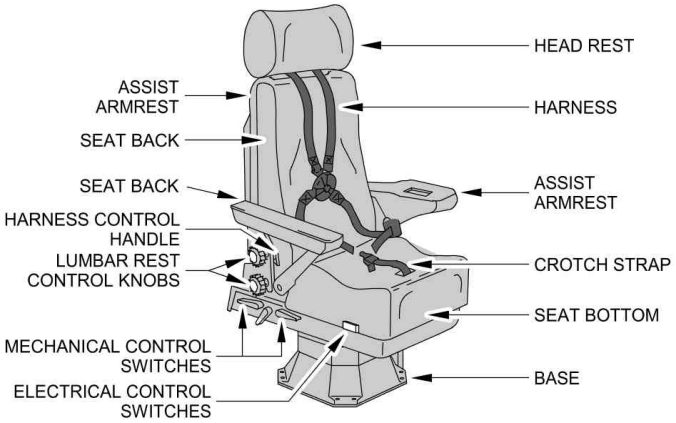


The cockpit is designed to accommodate two crewmembers, plus one or two other occupants (depending on the aircraft configuration).
The two pilot seats are column-mounted.
The third and fourth occupant (if installed) seats are folding seats.
These seats are suitable for use during takeoff and landing.

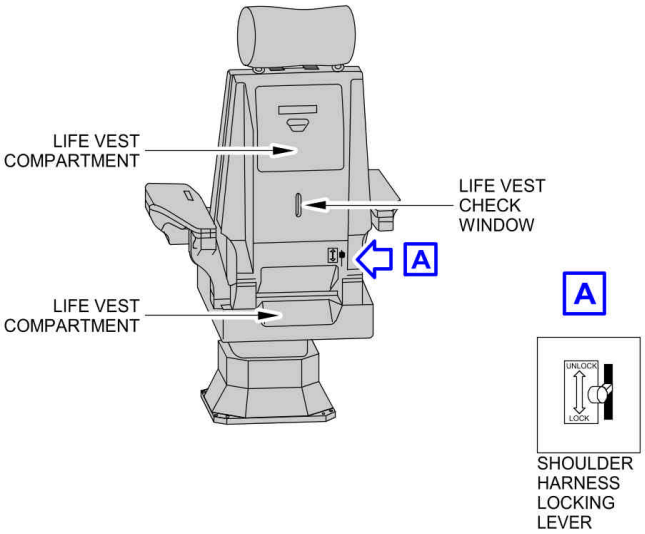
COCKPIT SEATS

Applicable to: ALL

CAPTAIN SEAT



NOTE: THE F/O'S SEAT IS IDENTICAL TO THE CAPTAIN'S SEAT, EXCEPT THAT THE CONTROLS ARE ON THE LEFT-HAND SIDE.

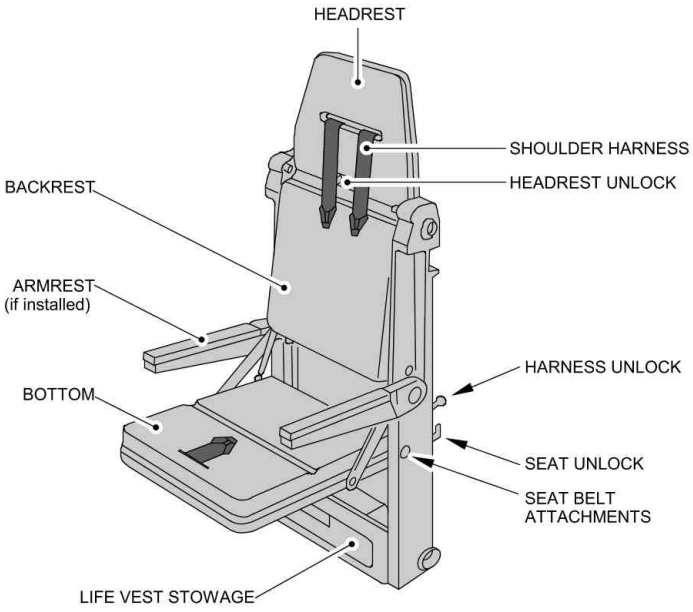


NOTE: THE F/O'S SEAT IS IDENTICAL TO THE CAPTAIN'S SEAT, EXCEPT THAT THE CONTROLS ARE ON THE LEFT-HAND SIDE.

COCKPIT SEATS

Applicable to: ALL

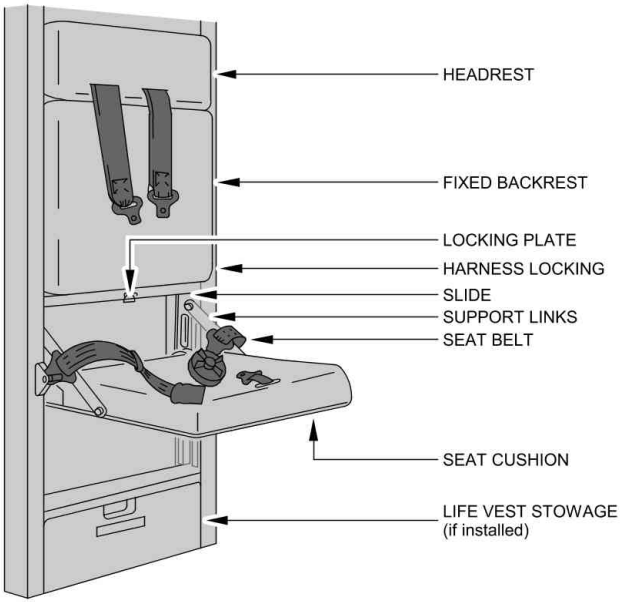
THIRD OCCUPANT SEAT



COCKPIT SEATS

Applicable to: ALL

FOURTH OCCUPANT SEAT



MAIN DECK

Criteria: K10190
Applicable to: MSN 2649

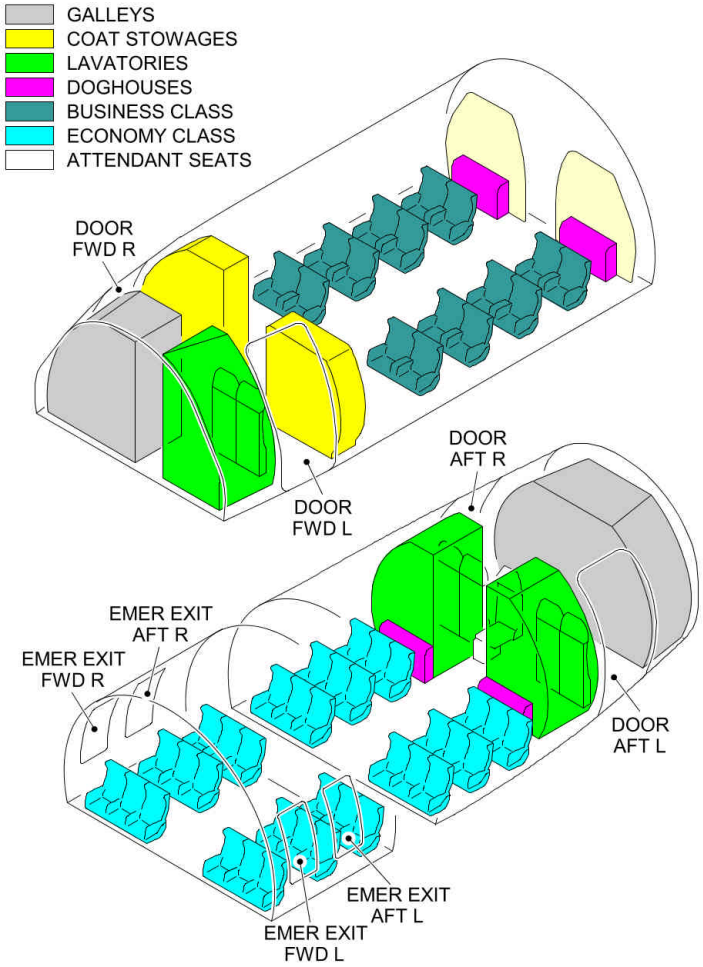
The A/C cabin layout is divided into a main deck and a lower deck layout.

CABIN LAYOUT - MAIN DECK

The aircraft is equipped with a total of 136 passenger seats:
- 16 first class (F/C) seats
- 120 economy class (Y/C) seats

Furthermore the main deck is equipped with:
- 3 galleys (G)
- 3 lavatories (L)
- 1 coat stowage (C)

Cabin Layout - Main Deck



MAIN DECK

Criteria: K11138
Applicable to: MSN 2927-2933

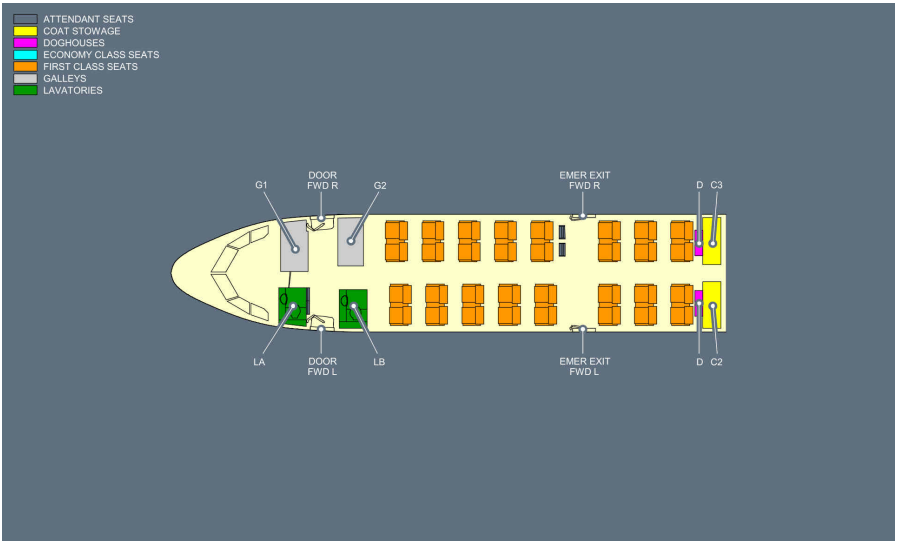
The A/C cabin layout is divided into a main deck and a lower deck layout.

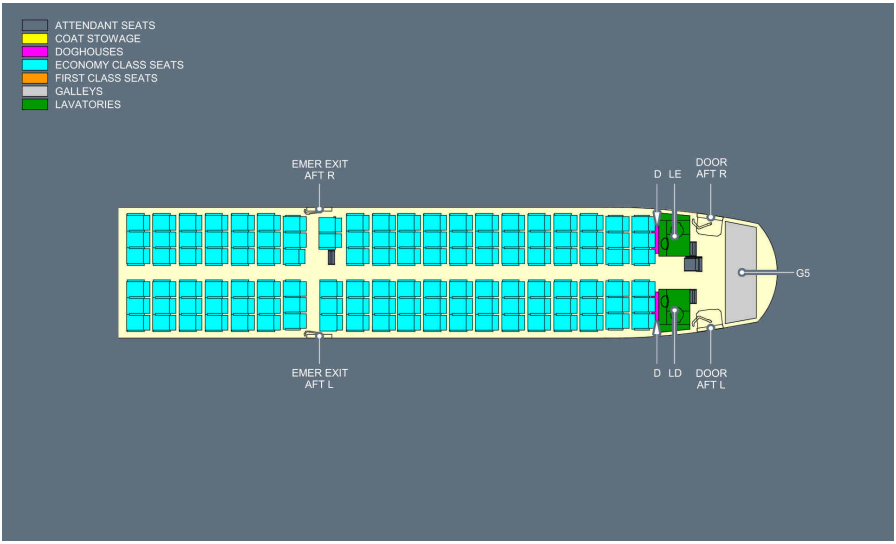
CABIN LAYOUT - MAIN DECK

The aircraft is equipped with a total of 151 passenger seats:
- 32 First class (F/C) seats
- 119 economy class (Y/C) seats

Furthermore the main deck is equipped with:
- 3 galleys (G)
- 4 lavatories (L)
- 2 coat stowage (C)
- 4 doghouses (D)

Cabin Layout - Main Deck





MAIN DECK

Criteria: 25-1537, K11138, K11390
Applicable to: MSN 3034-3120

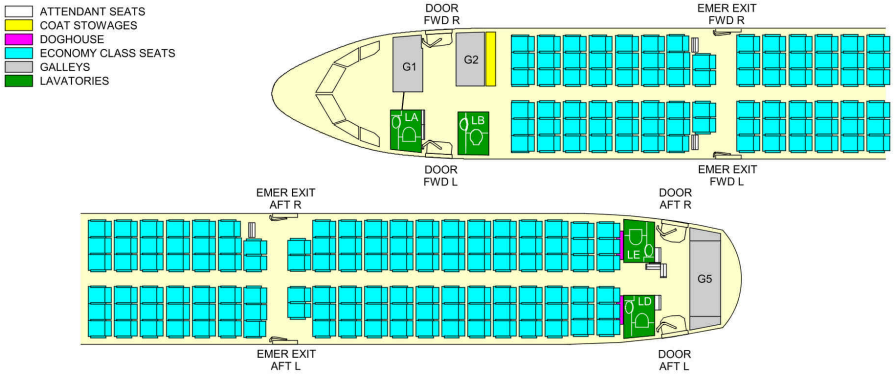
The A/C cabin layout is divided into a main deck and a lower deck layout.

CABIN LAYOUT - MAIN DECK

The aircraft is equipped with a total of 199 economy class (Y/C) passenger seats.

Furthermore the main deck is equipped with:
- 3 galleys (G)
- 4 lavatories (L)
- 1 coat stowage (C)
- 2 doghouses (D)

Cabin Layout - Main Deck



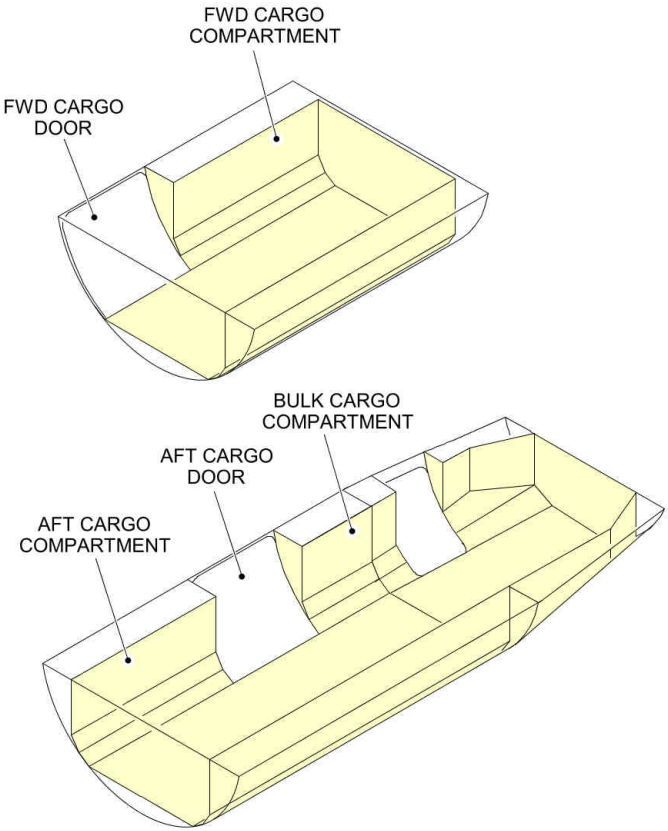
LOWER DECK

Criteria: K5564
Applicable to: MSN 2649

The lower deck is equipped with:

- 3 cargo compartments (FWD, AFT and BULK)

Cabin layout - lower deck



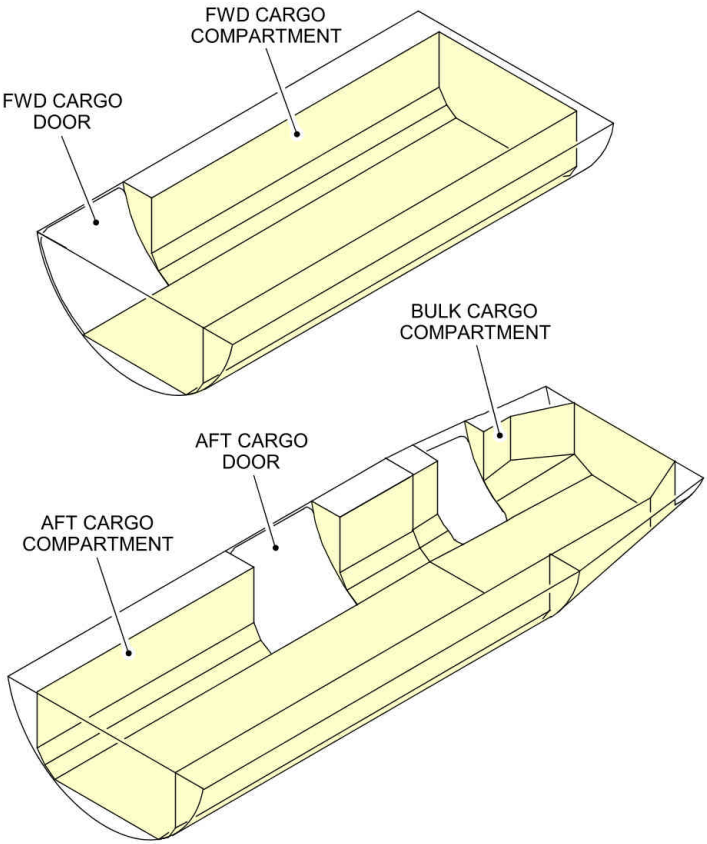
LOWER DECK

Criteria: K5565
Applicable to: MSN 2927-3120

The lower deck is equipped with:

- 3 cargo compartments (FWD, AFT and BULK)

Cabin layout - lower deck



PASSENGER SEATS

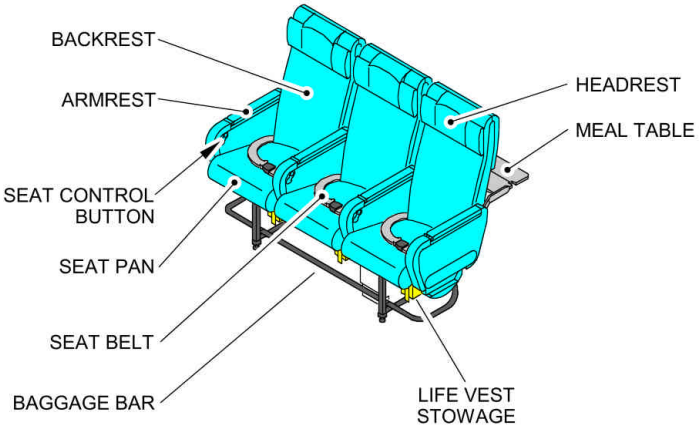
Criteria: K10190, SA
Applicable to: MSN 2649

The following types of passenger seats are installed in the cabin:
- Business class (B/C) seats
- Economy class seats

ECONOMY CLASS SEAT

The equipment of the economy class seat consists of:

Economy class seat (example)



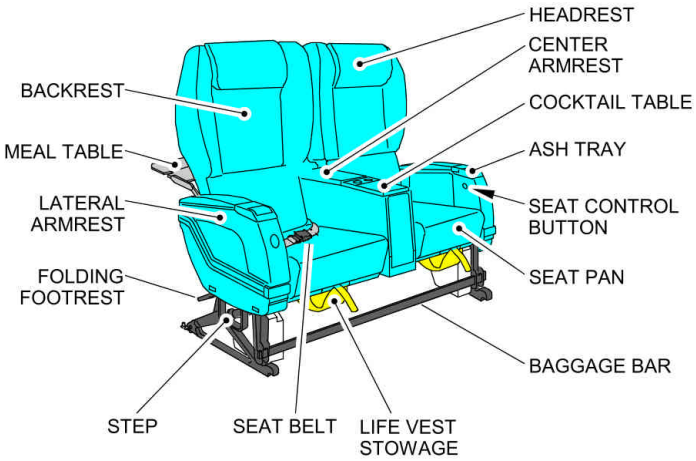
Note: *Ensure that all seats are in upright position and all meal tables as well as cup holders are stowed during Taxi, Take-Off and Landing. This is necessary for a trouble-free evacuation in case of an emergency.*

WARNING	Risk of injury to small children's fingers when operating the movable armrest. Advise passengers travelling with small children of the potential risk related to the armrest movement.

BUSINESS CLASS SEAT

The equipment of the business class seat consists of:

Business class seat (example)



WARNING	Risk of injury to small children's fingers when operating the movable armrest. Advise passengers travelling with small children of the potential risk related to the armrest movement.

SEAT BELT

The seat belt is part of the seat and as an integrated safety feature of the seat it protects the passenger from injury while seated during:

- taxi, takeoff and landing,
- turbulences,
- and emergencies.

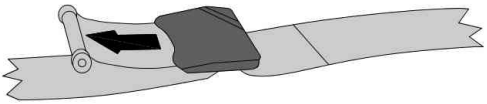
Note: *Seat belts with an integrated airbag (inflatable seat belts) are located - if installed - at seat rows in front of monuments, partitions, lavatories etc. This kind of seat belt improves the passengers protection from serious head-impact injury during an emergency. It has to be used in the same way than the standard seat belt but must not be closed on empty seats. The self-contained seat belt airbag system does not interface to any aircraft system and has built-in safety features to prevent inadvertent deployment.*

WARNING	If using a child safety seat at a seat equipped with a seat belt airbag system, deactivate this system by using the approved belt extender. Adjust the seat belt and belt extender length to hold the child seat securely.

OPERATING THE SEAT BELT

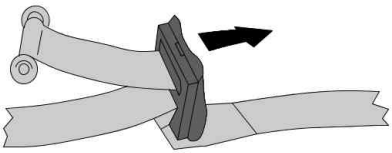
Fasten/loosen the seat belt

FASTEN SEAT BELT



(FIG.1)

LOOSEN SEAT BELT



(FIG.2)

How to fasten the seat belt

See Fig. 1.

WARNING	Ensure that the seat belt is not twisted before or during the fasten procedure. Otherwise it does not protect from injury.

1. Take the belt fastener in one hand and the connector of the opposite belt in the other hand.
2. Move the connector into the belt fastener until it snaps into place.
3. Pull the free strap end until the seat belt is tightened.
4. Check whether the seat belt is correctly locked and tightened.

WARNING	Ensure that the seat belt is correctly locked and tightened. Otherwise it does not protect from injury.

WARNING	Do not use extension girts at seats with inflatable seat belts (belts with an integrated airbag). Although it could be possible to use them, they will not protect passengers from injury due to the following reasons: - The airbag of an extended seat belt will always be at the wrong position - The different seat belt locks will not fit properly - The electrical circuit located inside the belt lock will be interrupted, which will prevent the airbag from releasing. Passengers who do not conform with the requirements of these seats, are required to be relocated by Cabin Crew members to seats with no inflatable seat belts.

How to loosen the seat belt

See Fig. 2.

1. Lift the cap of the belt fastener at the rear end. The belt fastener opens.
2. Take the belt fastener in one hand and the connector in the other hand.
3. Lay down the seat belt and make sure that its position on the seat causes no danger of tripping.

PASSENGER SEATS

Criteria: K11138, SA
Applicable to: MSN 2927-3120

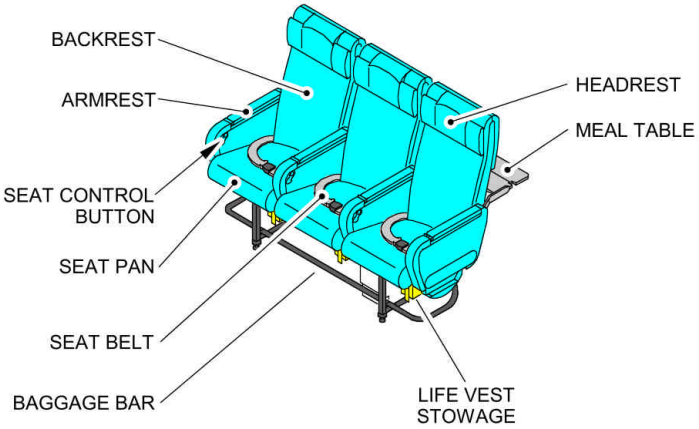
The following types of passenger seats are installed in the cabin:

- Economy class E/Cseats
- First class (F/C) seats

ECONOMY CLASS SEAT

The equipment of the economy class seat consists of:

Economy class seat (example)



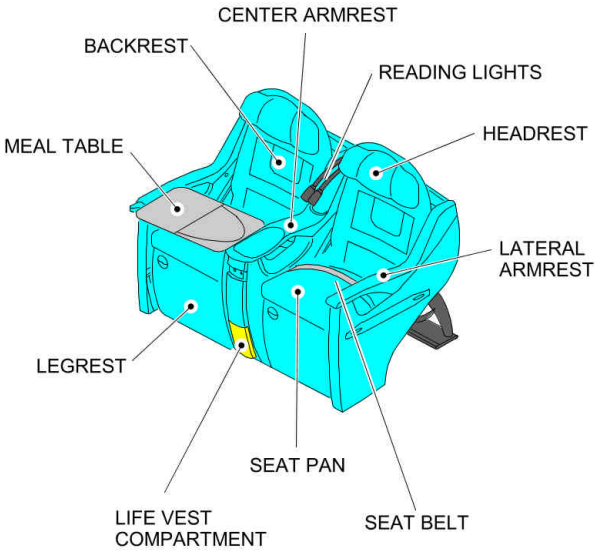
Note: *Ensure that all seats are in upright position and all meal tables as well as cup holders are stowed during Taxi, Take-Off and Landing. This is necessary for a trouble-free evacuation in case of an emergency.*

WARNING	Risk of injury to small children's fingers when operating the movable armrest. Advise passengers travelling with small children of the potential risk related to the armrest movement.

FIRST CLASS SEAT

The equipment of the first class seat consists of:

First Class SEAT (EXAMPLE)



WARNING	Risk of injury to small children's fingers when operating the movable armrest. Advise passengers travelling with small children of the potential risk related to the armrest movement.

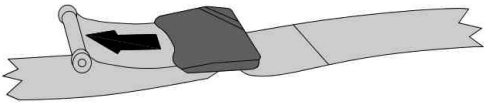
SEAT BELT

The seat belt is part of the seat.

OPERATING THE SEAT BELT

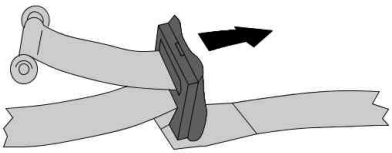
Fasten/loosen the seat belt

FASTEN SEAT BELT



(FIG.1)

LOOSEN SEAT BELT



(FIG.2)

How to fasten the seat belt

See Fig. 1 .

WARNING	Ensure that the seat belt is not twisted before or during the fasten procedure. Otherwise it does not protect from injury.

1. Take the belt fastener in one hand and the connector of the opposite belt in the other hand.
2. Move the connector into the belt fastener until it snaps into place.
3. Pull the free strap end until the seat belt is tightened.
4. Check whether the seat belt is correctly locked and tightened.

WARNING	Ensure that the seat belt is correctly locked and tightened. Otherwise it does not protect from injury.

WARNING	Do not use extension girts at seats with inflatable seat belts (belts with an integrated airbag). Although it could be possible to use them, they will not protect passengers from injury due to the following reasons: - The airbag of an extended seat belt will always be at the wrong position - The different seat belt locks will not fit properly - The electrical circuit located inside the belt lock will be interrupted, which will prevent the airbag from releasing. Passengers who do not conform with the requirements of these seats, are required to be relocated by Cabin Crew members to seats with no inflatable seat belts.

How to loosen the seat belt

See Fig. 2 .

1. Lift the cap of the belt fastener at the rear end. The belt fastener opens.
2. Take the belt fastener in one hand and the connector in the other hand.
3. Lay down the seat belt and make sure that its position on the seat causes no danger of tripping.

ADDITIONAL EQUIPMENT

Applicable to: ALL

BABY BASSINET FROM INNOVINT

Following description is valid for the baby bassinets of the INNOVINT 725X-Series.

GENERAL

Baby bassinets provide passengers travelling with babies with a place for their baby to sleep during the flight. It can be installed on a partition wall, lavatory or galley wall, always in front of the passengers travelling with the baby. Two quick release pins attach the bassinet to the related wall, inserted into special holes.
When not in use, the baby bassinet should be folded to the minimum size and stowed.

LIMITATIONS

To ensure a safe flight to the baby obey the following limitations:
- Do not use the baby bassinet during taxi, take-off, turbulences and landing.
- The zipper must be closed while a baby is lying in the bassinet.

- Do not use the baby bassinet for any other purpose than to lay a baby inside.
- Do not exceed a maximum body weight of 11 kg (24 lbs) or an age above 12 month.

Note: *An overload will not occur if the baby fits smooth into the baby bassinet. A baby aged 9 to 12 month has an average length of 74 cm (29 inch) and a weight between 9.2 kg (20 lbs) and 11.4 kg (25 lbs).*

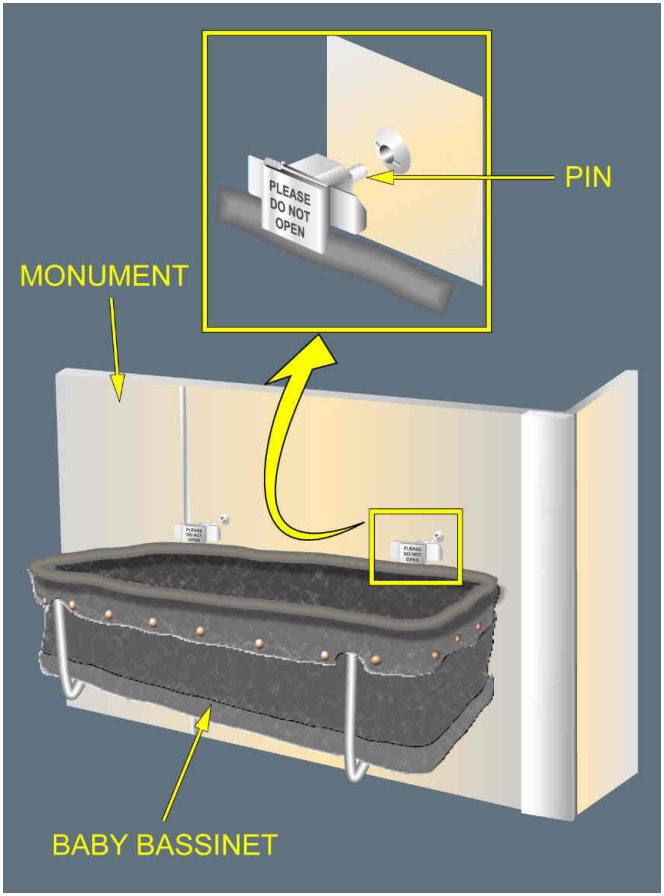
WARNING	When a baby is inside the baby bassinet: - Do not lean against the baby bassinet - Do not hang items on it (overload) - Do not unlock it The baby bassinet may fall from the wall and the baby could be injured.

PREFLIGHT CHECK

Prior to the installation of the baby bassinet:
- Check that the baby bassinet is not damaged and its textile is not torn.
- Check that the pins and the corresponding holes in the related monument are not defective, damaged or blocked.

DESCRIPTION

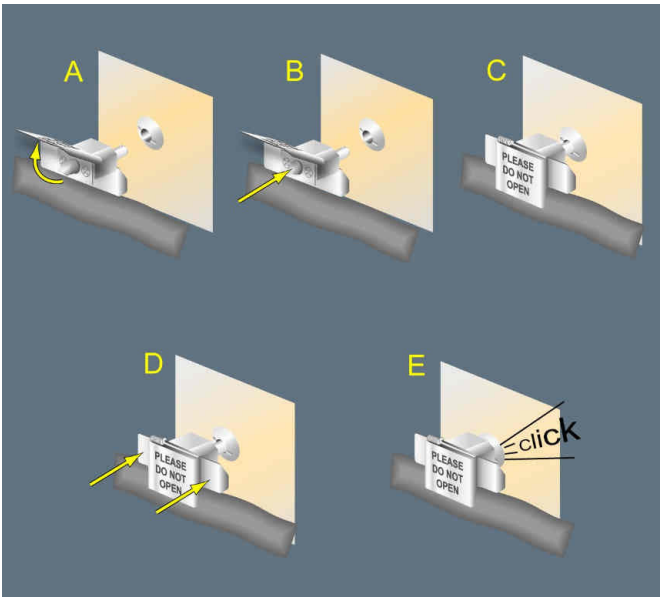
Baby Bassinet with Attach Fitting



OPERATION

How to Install

How to Insert the Pins



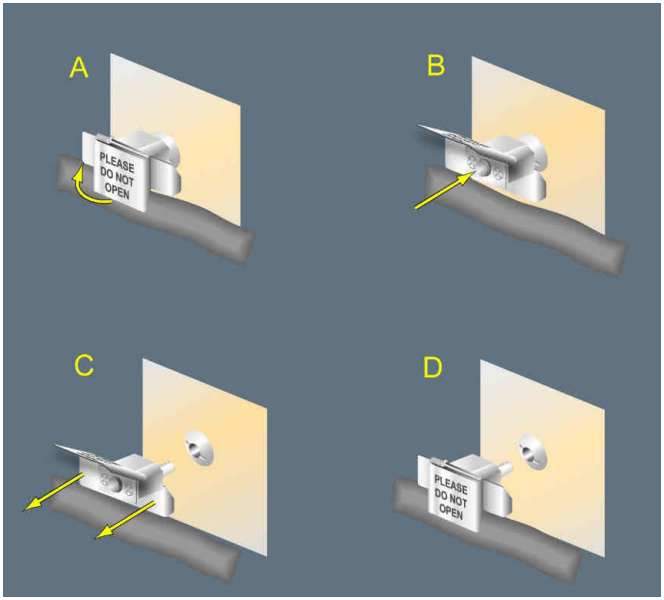
1. Kindly ask the persons in front of the monument where the baby bassinet has to be installed to leave the seats for the time of installation. This allows staying in front of the monument for the installation of the baby bassinet.
2. On both sides, simultaneously open and hold the spring loaded flaps (A), and press and hold the pin release buttons (B).
3. Simultaneously insert the pins in their corresponding holes in the monument and release both pin release buttons and flaps (C).

   Note: *Do not insert the pins **fully** into the corresponding holes.*

4. Continue inserting the pins (D) until it clicks (E). Then check the safe attachment of the baby bassinet by pulling back each pin.

How to Remove

How to Release the Pins



1. Kindly ask the persons in front of the baby bassinet to leave the seats for the time of deinstallation. This allows staying in front of the monument for the deinstallation of the baby bassinet.
2. On both sides, simultaneously open and hold the spring loaded flaps (A) and press and hold the pin release buttons (B).
3. Pull the pins out of the corresponding holes from the monument (C) until they are out, then release both pin release buttons and flaps (D).

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STOWAGE COMPARTMENTS

Applicable to: ALL

Normal purpose of all stowage compartments is to stow emergency equipment, passenger clothing, items for passenger comfort and miscellaneous equipment.

WARNING	Do not use stowage compartments for any unnormal purposes! Otherwise injury to persons is possible.

All stowage compartment doors have a locking mechanism. The locking mechanism prevents the door from opening caused by flight manoeuvres or turbulence.

WARNING	Make sure that the doors of all stowage compartments are closed and correctly latched during - taxi - take-off - turbulence - landing Otherwise injury caused by moving DOORS and/or Falling items is possible.

Depending on the compartment function, the load limit is specific. It is shown on a placard at the inner side of each stowage compartment.

WARNING	Do not overload the stowage compartments! Overload may cause a failure of the locking mechanism (danger of uncontrolled door opening) or damage at the stowage compartment attachment. To avoid passenger injury, distribute some items to other stowage compartments.

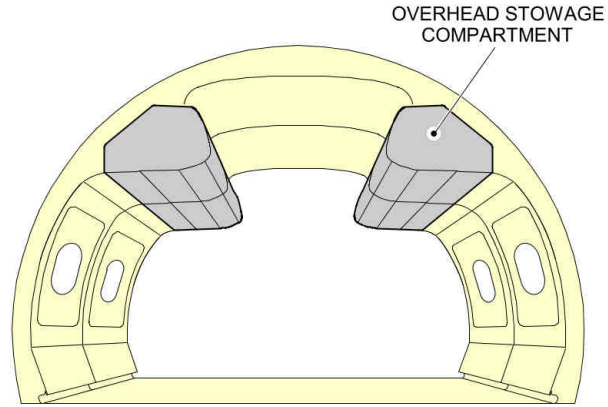
OVERHEAD STOWAGE COMPARTMENTS

Overhead stowage compartments are installed above the seat rows in the cabin. They are attached together to make the overhead stowage compartment rows. At their bottom side, overhead stowage compartments contain oxygen containers and Passenger Service Units (PSU) consisting of:

- Reading lights
- Passenger lighted signs
- Loudspeaker
- Passenger call system

Overhead stowage compartment components

EXAMPLE



Each overhead stowage compartment has one or two doors with a latch on the bottom edge of the door. The overhead stowage compartment doors open upwards and give access to the compartment from the aisle. Special damper hinges control the opening and closing speed of the door. When the door is unlatched, the damper hinges hold the door in the fully open position. Each overhead stowage compartment has a grip rail installed along its length below the compartment door.
Adapted to the cabin configuration, different sizes of the overhead stowage compartments are installed along the cabin sidewalls throughout the entire cabin.

OVERHEAD STOWAGE COMPARTMENTS - DOOR OPERATION

How to open an overhead stowage compartment

1. Lift the latch until the overhead stowage compartment door is unlatched.
2. Keep away the hand from the latch. The overhead stowage compartment door opens automatically.

How to close an overhead stowage compartment

1. Swing in the overhead stowage compartment door.
2. Push the overhead stowage compartment door against the housing until the latch snaps into place.

WARNING	After closing the compartment door, check that the door of the OHSC is locked correctly. Stowed items could fall out of the compartment and cause injury to persons. In the case of an OHSC latching failure: unload, close and identify as inoperative.

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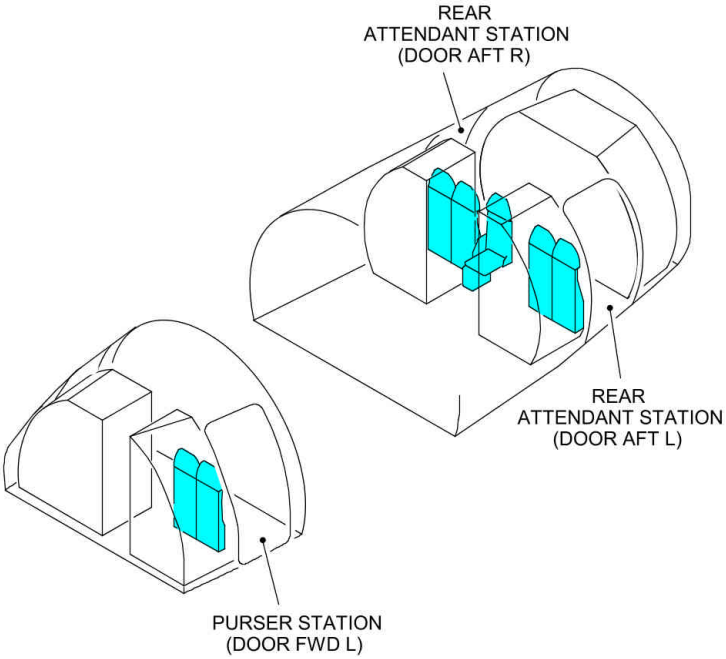
LOCATION

Criteria: K10190
Applicable to: MSN 2649

Cabin attendant stations are located at the FWD and AFT cabin door on the A/C. The cabin attendant seats are part of the attendant stations. During the take-off and landing procedure the cabin crew members must use the attendant seats.
The A/C has a total of 3 cabin attendant stations with together 5 cabin attendant seats installed.

These stations are equipped with:
- single (1) or double (2) cabin attendant seats (CAS)
- Forward Attendant Panel (FAP)
- Attendant Indication Panels (AIP)
- Aft Attendant Panels (AAP)
- Handsets (HS)

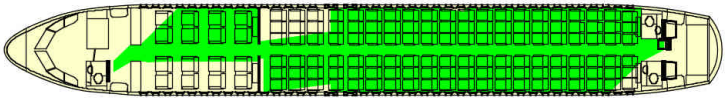
location of Cabin attendant Stations and seats



DIRECT VIEW FROM CABIN ATTENDANT STATIONS

A minimum of the attendant stations must be occupied to comply with the type certification requirements.

Direct View from Cabin Attendant Stations



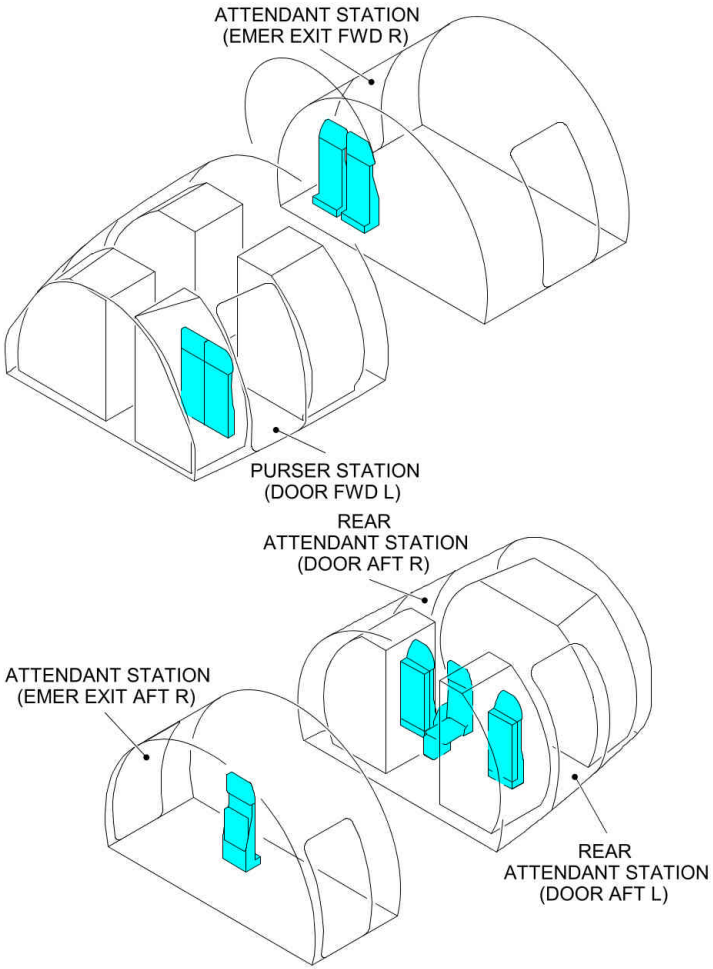
LOCATION

Criteria: K11138
Applicable to: MSN 2927-2933

Cabin attendant stations are located at the FWD and AFT cabin door on the A/C. The cabin attendant seats are part of the attendant stations. During the take-off and landing procedure the cabin crew members must use the attendant seats.
The A/C has a total of 5 cabin attendant stations with together 8 cabin attendant seats installed.

These stations are equipped with:
- single (6) or double (1) cabin attendant seats (CAS)
- Forward Attendant Panel (FAP)
- Attendant Indication Panels (AIP)
- Aft Attendant Panels (AAP)
- Handsets (HS)

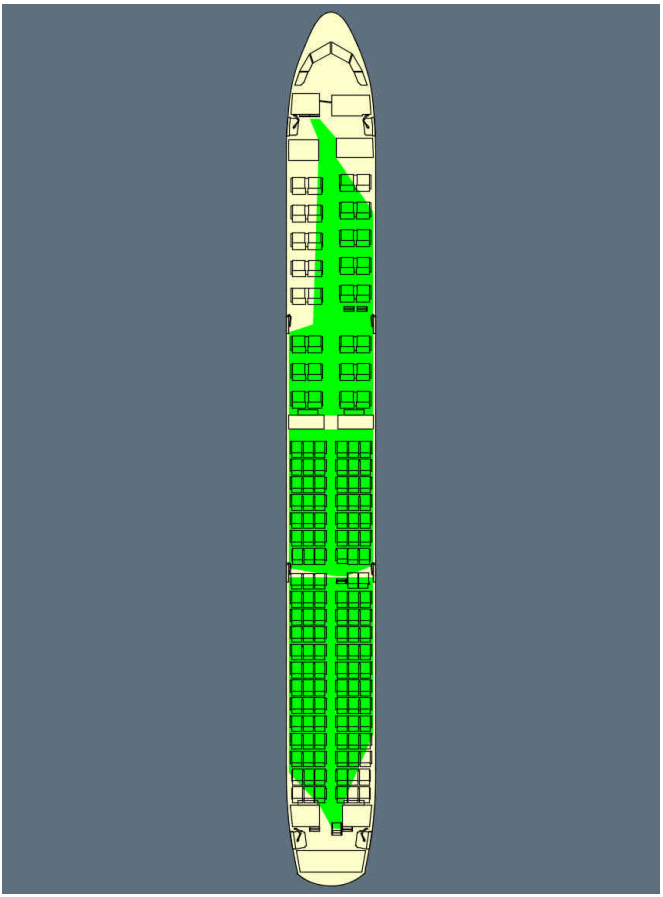
location of Cabin attendant Stations and seats



DIRECT VIEW FROM CABIN ATTENDANT STATIONS

A minimum of the attendant stations must be occupied to comply with the type certification requirements.

Direct View from Cabin Attendant Stations



LOCATION

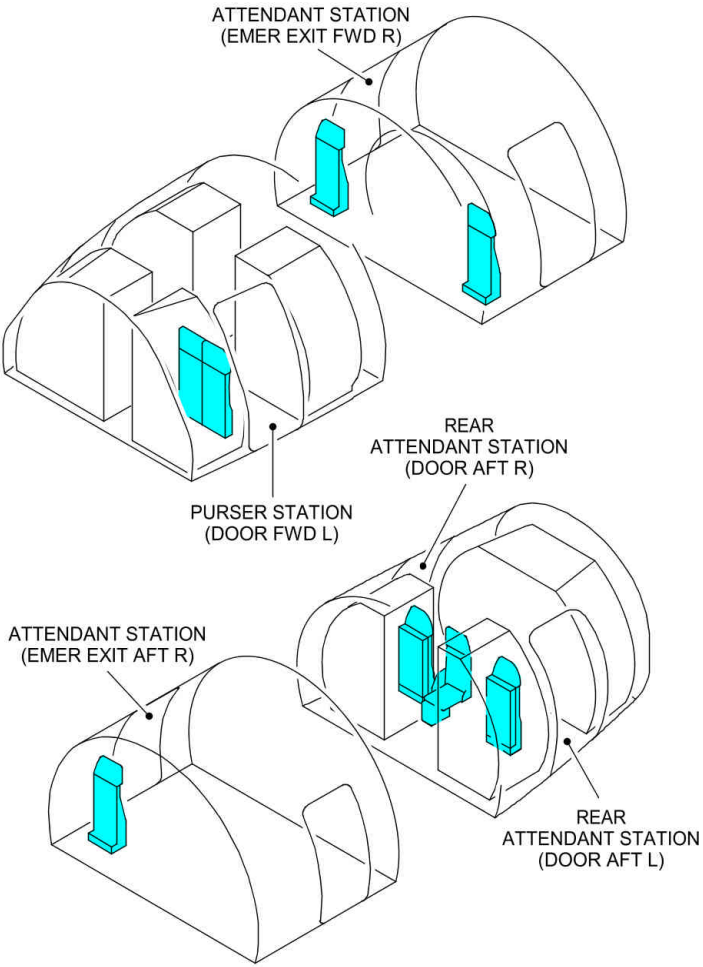
Criteria: 25-1537, K11138, K11390
Applicable to: MSN 3034-3120

Cabin attendant stations are located at the FWD and AFT cabin door on the A/C. The cabin attendant seats are part of the attendant stations. During the take-off and landing procedure the cabin crew members must use the attendant seats.
The A/C has a total of 5 cabin attendant stations with together 8 cabin attendant seats installed.

These stations are equipped with:

- single (6) or double (1) cabin attendant seats (CAS)
- Forward Attendant Panel (FAP)
- Attendant Indication Panels (AIP)
- Aft Attendant Panels (AAP)
- Handsets (HS)

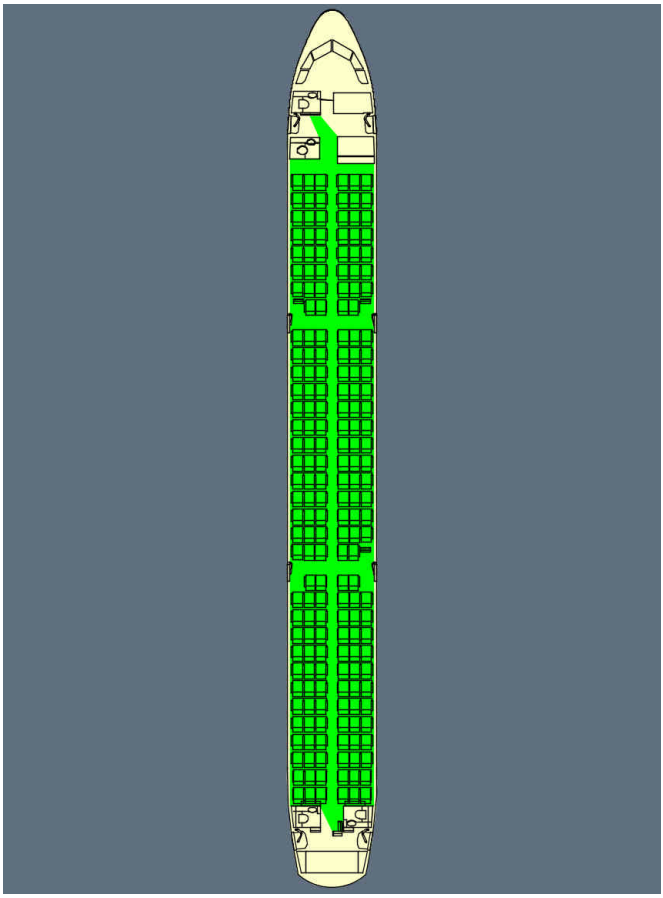
location of Cabin attendant Stations and seats



DIRECT VIEW FROM CABIN ATTENDANT STATIONS

A minimum of the attendant stations must be occupied to comply with the type certification requirements.

Direct View from Cabin Attendant Stations



TYPICAL PURSER STATION

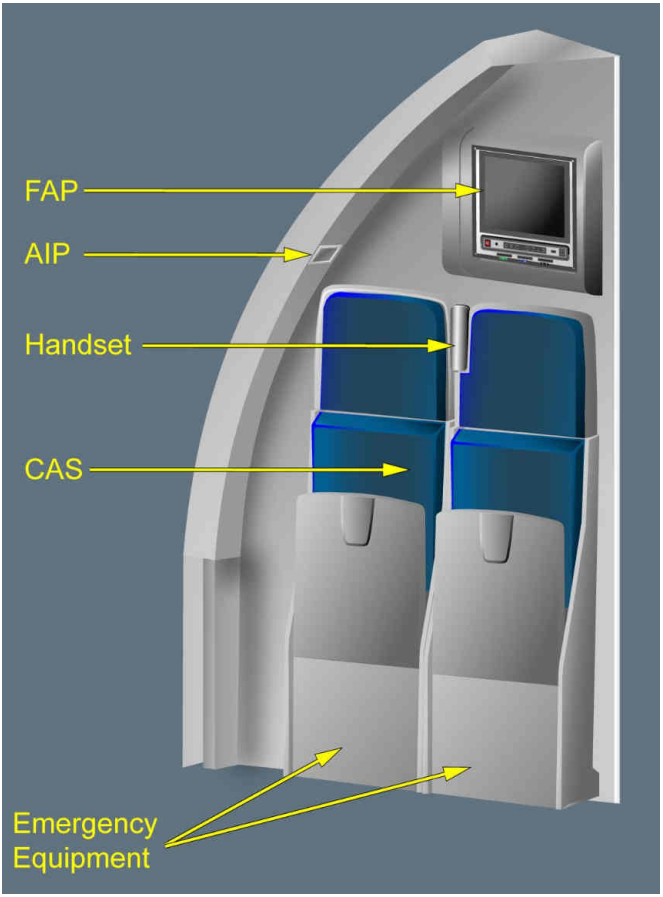
Applicable to: ALL

The typical purser station is equipped as follows:

- 1 FAP located above the Cabin Attendant Seat (CAS)
- 1 AIP located in the door frame

- 1 Handset located between the headrests
- 2 CAS with the relevant emergency equipment

Typical Purser Station



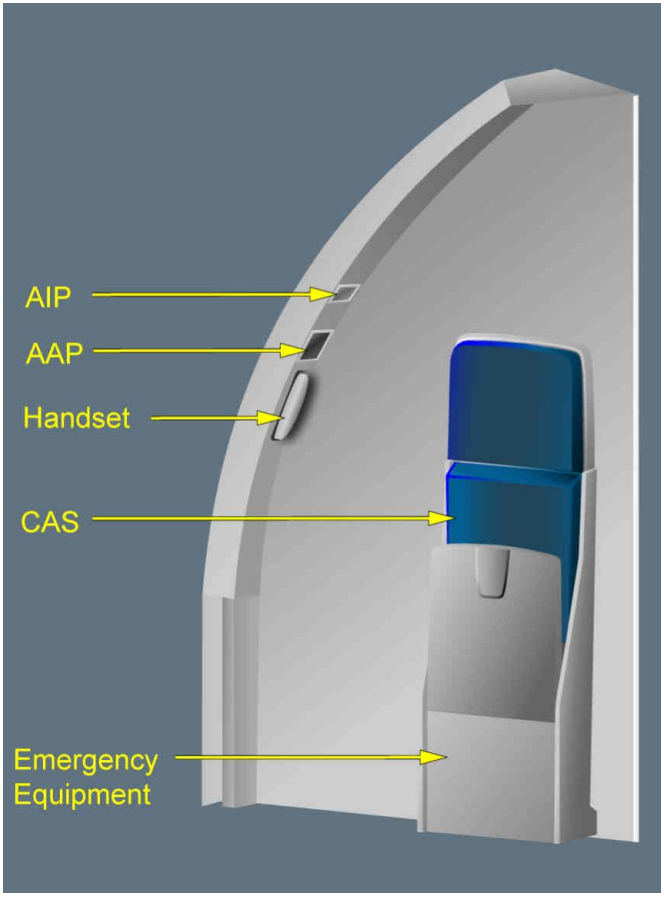
TYPICAL REAR CA STATION LH

Applicable to: ALL

The typical rear CA station LH is equipped as follows:

- 1 AAP located in the door frame
- 1 AIP located in the door frame or above the galley
- 1 Handset located in the door frame
- 1 CAS with the relevant emergency equipment

Typical Rear CA Station LH



TYPICAL REAR CA STATION RH

Applicable to: ALL

The typical rear CA station RH is equipped as follows:

- 1 AIP located above in the overhead panel
- 1 Handset located at the headrest
- 1 CAS with the relevant emergency equipment

Typical Rear CA Station RH

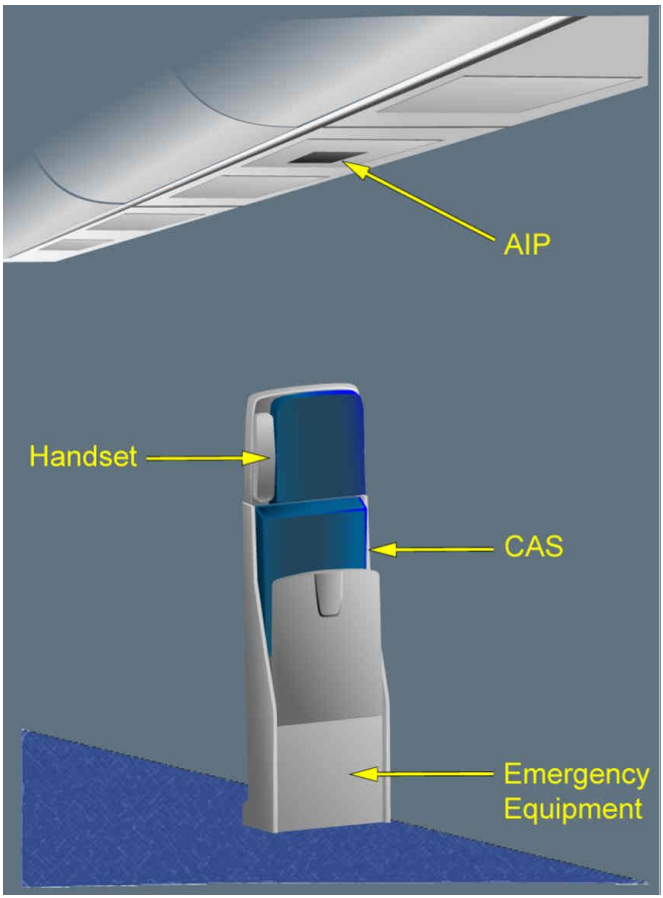
TYPICAL EMERGENCY EXIT CA STATION

Applicable to: MSN 2927-3120

The typical CA station at the emergency exit is equipped as follows:

- 1 AIP located above in the PSU
- 1 Handset located at the headrest
- 1 CAS with the relevant emergency equipment

Typical Emergency Exit CA Station

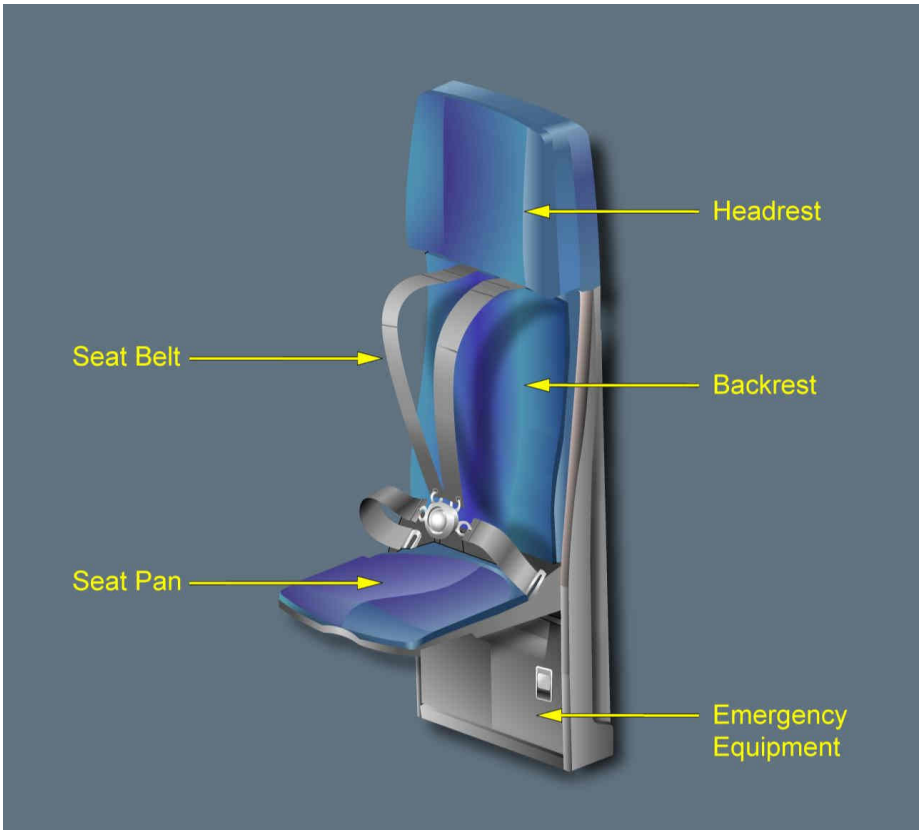


TYPICAL SINGLE CAS

Applicable to: ALL

The equipment of the single cabin attendant seat CAS consist of:

Single CAS



For the location and the quantity of the single CAS, Refer to DU CCOM Location.

CAS OPERATION:

- Pull down the seat pan until it is level
- While holding down the seat pan, apply body weight in the seat pan
- Release of body weight, the seat return to the stowed position.

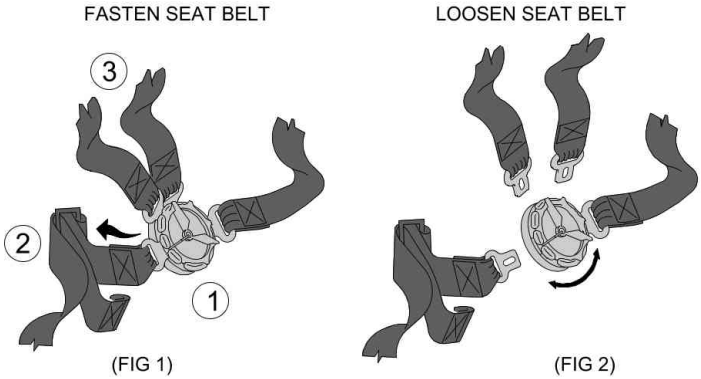
RESTRAINT SYSTEM

The restraint system consist of the seat belt and two shoulder straps integrated in the cabin attendant seat.

Fasten seat-belt procedure:
1. Close the lap belt (1).
2. Pull the unlocked free strap end (2) and tighten the belt.
3. Pull down the shoulder straps (3).
4. Insert the shoulder straps (3) into the lap belt fastener.

Loosen seat-belt procedure:
Open the lap belt fastener through turning the cap of the fastener to the left or right side.

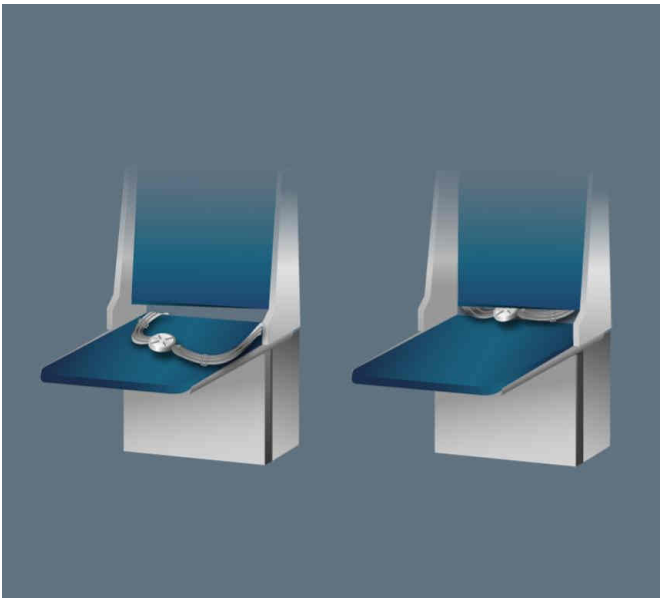
Fasten and Loosen of the Seat Belt



CAUTION	The lap belt must be stowed correctly in the cavity located at the rear of the backrest in order to avoid a Damage of the belt after retraction of the seat pan.

CAUTION	If there is no cavity located at the rear of the backrest , the lap belt must be stowed in the Fasten seat-belt position.

Stowage of the Lap Belt

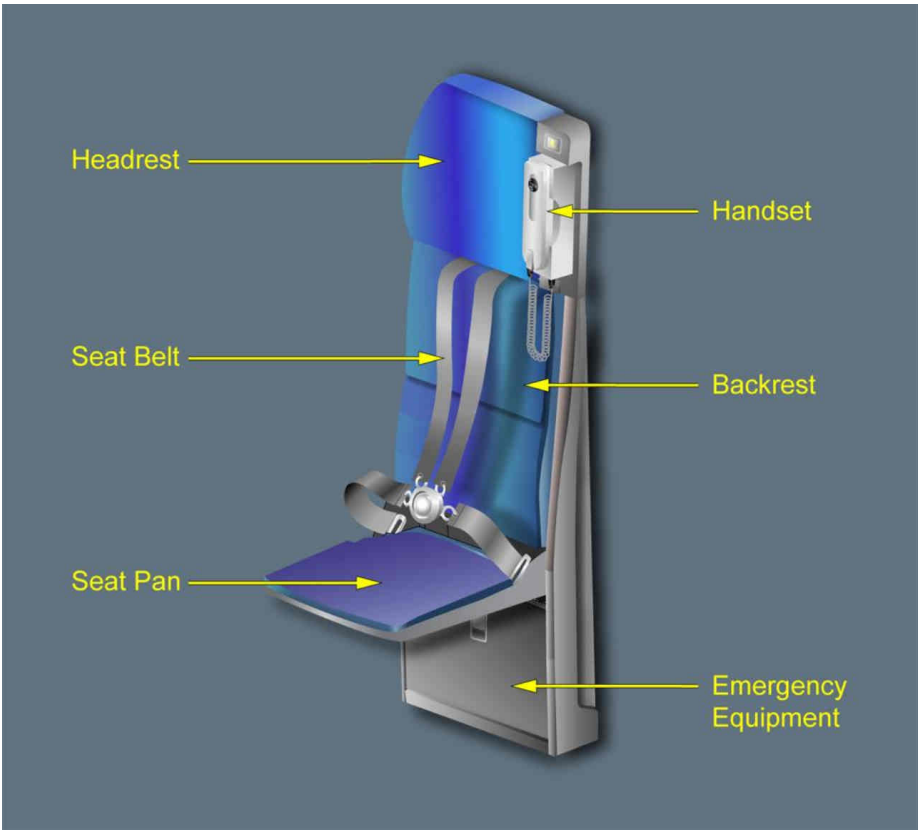


TYPICAL FLOOR - MOUNTED SINGLE CAS

Applicable to: ALL

The equipment of the double CAS consist of:

Floor-Mounted Single CAS



For the location and the quantity of the double CAS, Refer to DU CCOM Location .

CAS OPERATION:

- Pull down the bench until it is level
- While holding down the sat pan, apply body weight in the seat pan
- Release of body weight, the seat return to the stowed position.

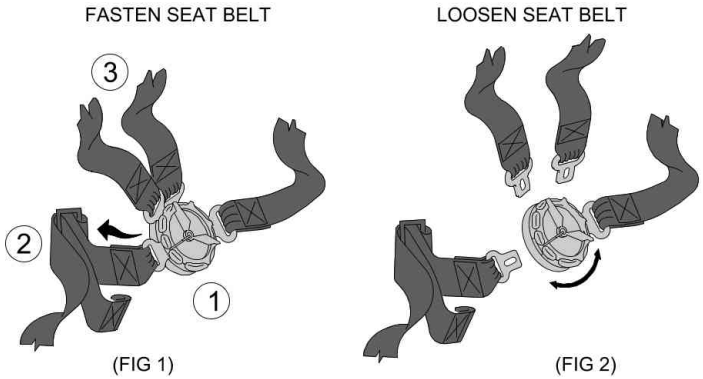
RESTRAINT SYSTEM

The restraint system consist of the seat belt and two shoulder straps integrated in the cabin attendant seat.

Fasten seat-belt procedure:
1. Close the lap belt (1).
2. Pull the unlocked free strap end (2) and tighten the belt.
3. Pull down the shoulder straps (3).
4. Insert the shoulder straps (3) into the lap belt fastener.

Loosen seat-belt procedure:
Open the lap belt fastener through turning the cap of the fastener to the left or right side.

Fasten and Loosen of the Seat Belt

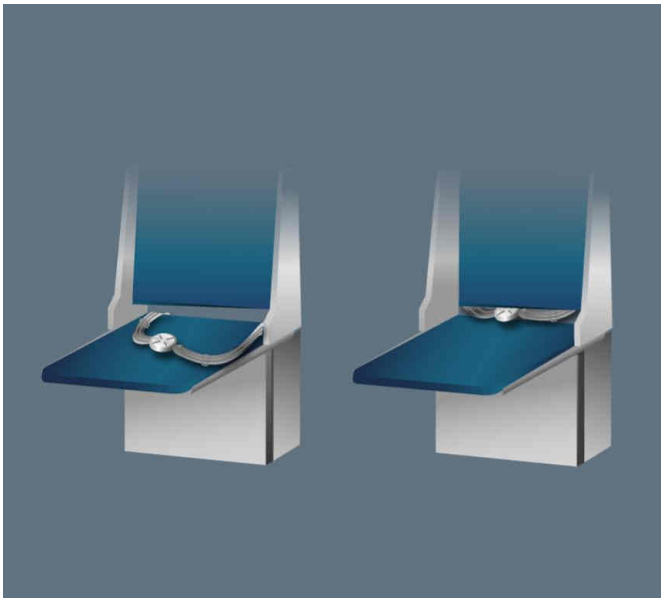


(FIG 1) (FIG 2)

CAUTION	The lap belt must be stowed correctly in the cavity located at the rear of the backrest in order to avoid a Damage of the belt after retraction of the seat pan.

CAUTION	If there is no cavity located at the rear of the backrest , the lap belt must be stowed in the Fasten seat-belt position.

Stowage of the Lap Belt

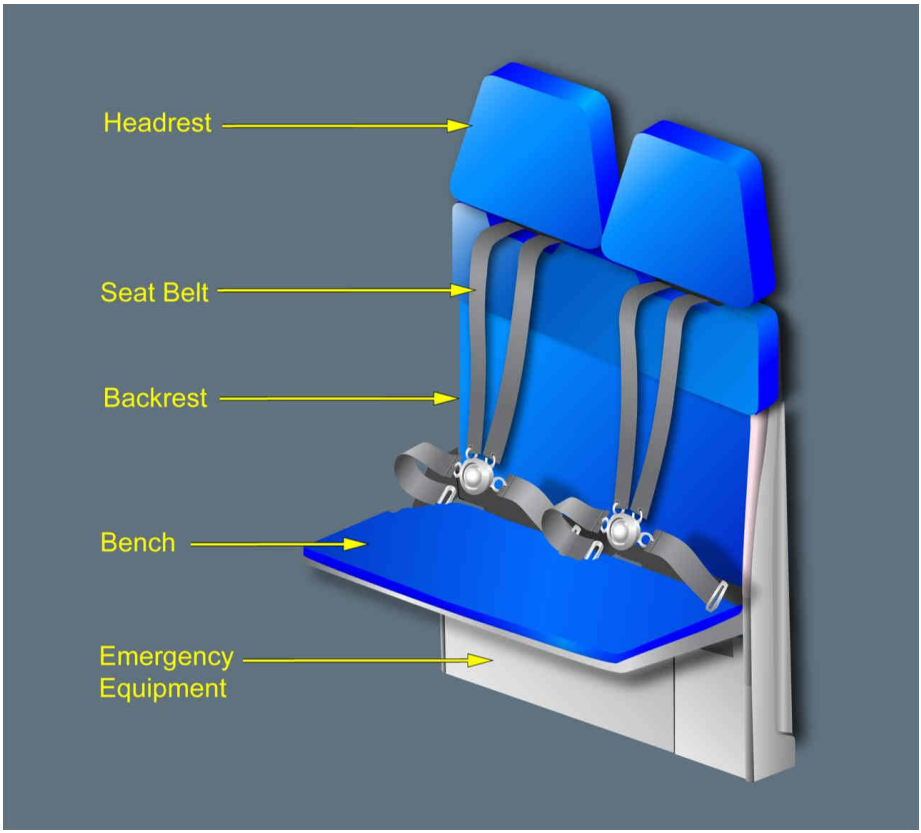


TYPICAL DOUBLE CAS

Applicable to: ALL

The equipment of the double CAS consist of:

Double CAS



For the location and the quantity of the double CAS, Refer to DU CCOM Location.

CAS OPERATION:

- Pull down the bench until it is level
- While holding down the bench, apply body weight in the bench
- Release of body weight, the seat return to the stowed position.

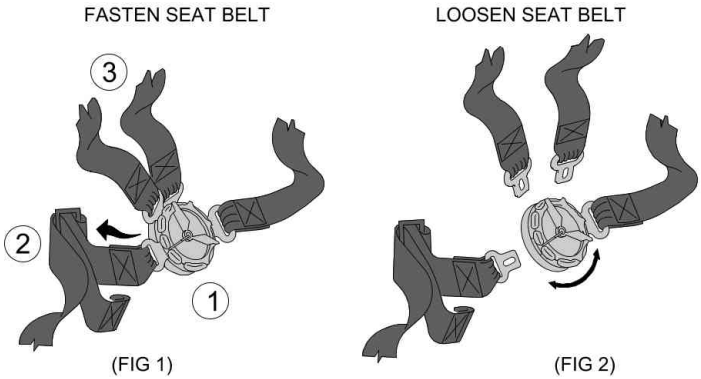
RESTRAINT SYSTEM

The restraint system consist of the seat belt and two shoulder straps integrated in the cabin attendant seat.

Fasten seat-belt procedure:
1. Close the lap belt (1).
2. Pull the unlocked free strap end (2) and tighten the belt.
3. Pull down the shoulder straps (3).
4. Insert the shoulder straps (3) into the lap belt fastener.

Loosen seat-belt procedure:
Open the lap belt fastener through turning the cap of the fastener to the left or right side.

Fasten and Loosen of the Seat Belt

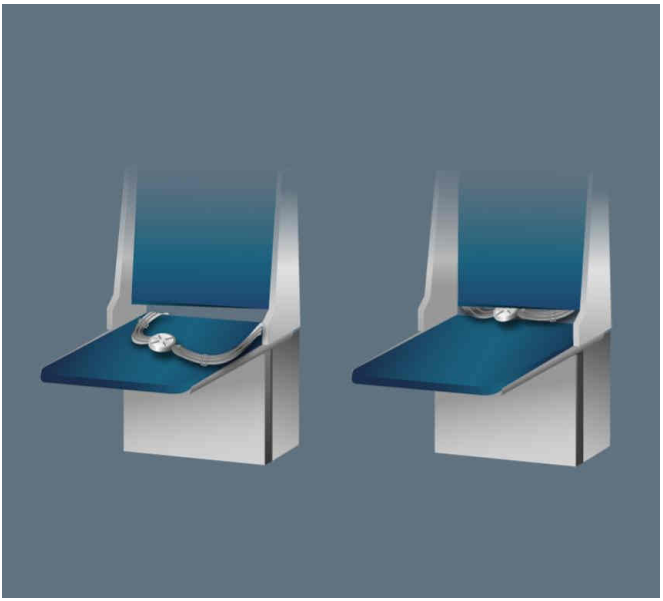


(FIG 1) (FIG 2)

CAUTION	The lap belt must be stowed correctly in the cavity located at the rear of the backrest in order to avoid a Damage of the belt after retraction of the seat pan.

CAUTION	If there is no cavity located at the rear of the backrest , the lap belt must be stowed in the Fasten seat-belt position.

Stowage of the Lap Belt

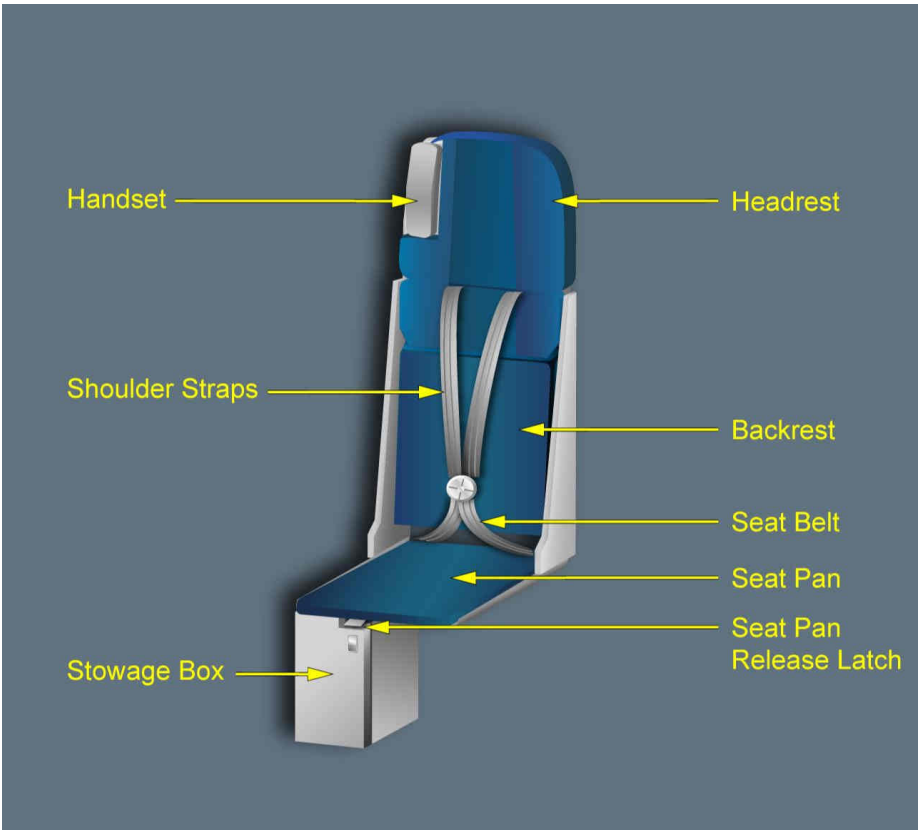


TYPICAL SWIVEL CAS

Applicable to: ALL

The equipment of the swivel seat consist of:

Swivel CAS



For the location and the quantity of the swivel CAS, Refer to DU CCOM Location.

CAS OPERATION:

CAUTION	Always take care when taking up/vacating crew seats to prevent any injury to fingers/arms.

- Lift up the Seat-Pan Release-Latch and turn the seat 90° counterclockwise
- Push down the seat pan into the locking mechanism
- Lifting up the seat-pan release-latch moves the seat automatically to the stowed position.

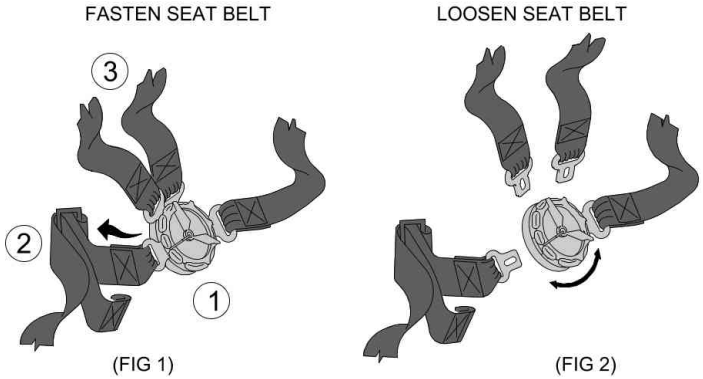
RESTRAINT SYSTEM

The restraint system consist of the seat belt and two shoulder straps integrated in the cabin attendant seat.

Fasten seat-belt procedure:
1. Close the seat belt (1)
2. Pull the unlocked free strap end (2) and tighten the belt
3. Pull down the shoulder straps (3)
4. Insert the shoulder straps (3) into the seat belt fastener.

Loosen seat-belt procedure:
Open the lap belt fastener through turning the cap of the fastener to the left or right side.

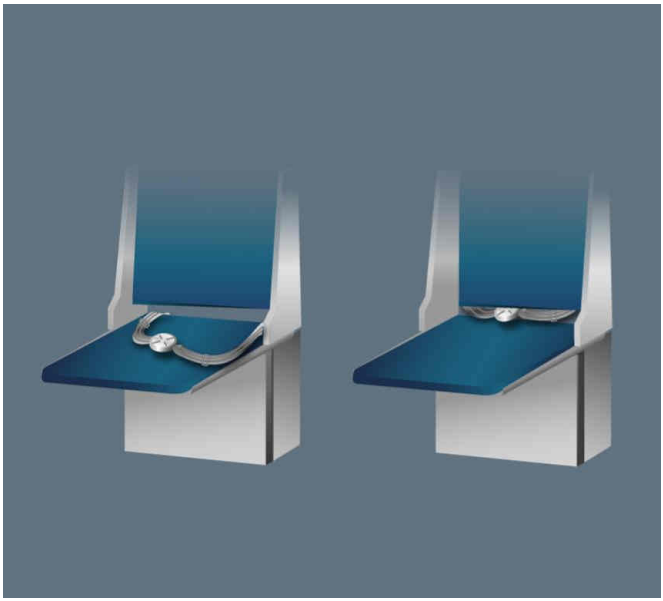
Fasten and Loosen of the Seat Belt



(FIG 1) (FIG 2)

CAUTION	The lap belt must be stowed correctly in the cavity located at the rear of the backrest in order to avoid a Damage of the belt after retraction of the seat pan.

Stowage of the Lap Belt



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FLIGHT ATTENDANT PANEL

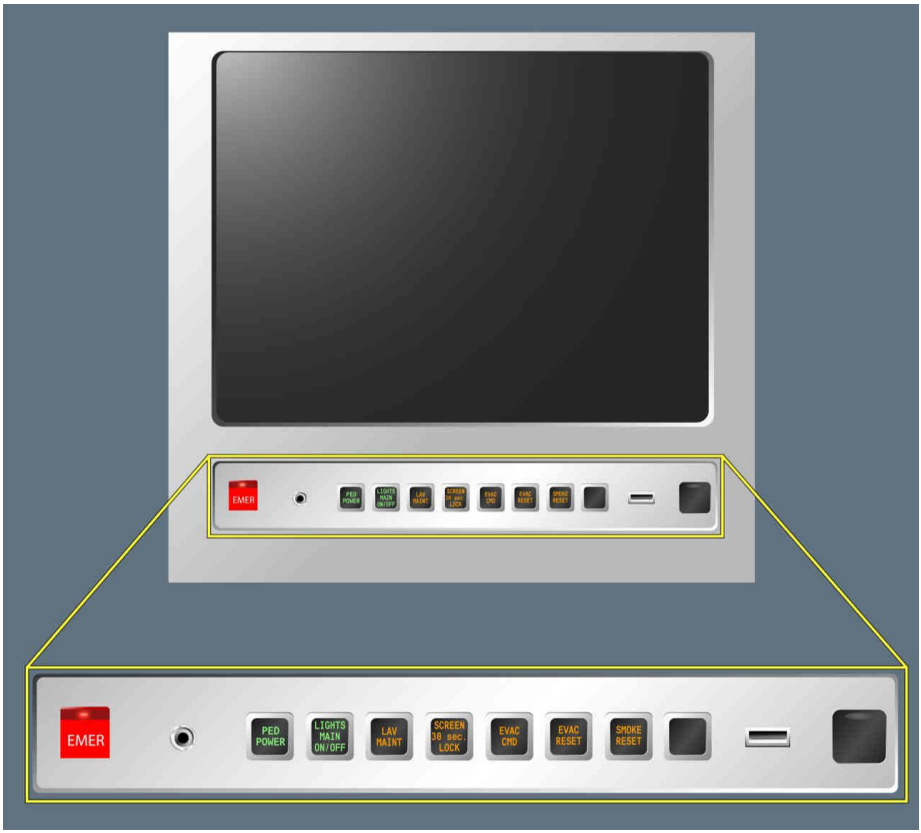
Criteria: K10189, SA
Applicable to: MSN 2649

The main control panel in the cabin is the FAP.
It is located at the FWD attendant station FWD L and is divided into two areas: the touch screen and the sub panel.

The touch screen consists of:
- The header row
- The display area
- The system and function keys.

The sub panel has a row of hard keys, a headphone jack and a USB-port.

Flight Attendant Panel



Operating areas and keys of the FAP:

(1) The header row shows the title of every selected page.

(2) The display area shows every selected page.

(3) The system and function keys are used to select the system pages.

(4) The hard keys are used for major functions which have to operate independently from the FAP touch screen.

They are marked with the related system functions:
- **EMER** (Emergency Lighting System)
- **PED POWER** (In-seat Power Supply System (ISPSS))
- **LIGHTS MAIN ON/OFF** (Cabin Lighting)
- **LAV MAINT** (sets the lavatory lights to full brightness in the case of lavatory maintenance)
- **SCREEN** 30 s **LOCK** (sets the touch screen in a sleep modus for a time period of 30 s for cleaning purposes)
- **EVAC CMD** (activates the Evacuation Alert System)
- **EVAC RESET** (resets the Evacuation Alert System)
- **SMOKE RESET** (resets the Lavatory Smoke System).

FLIGHT ATTENDANT PANEL

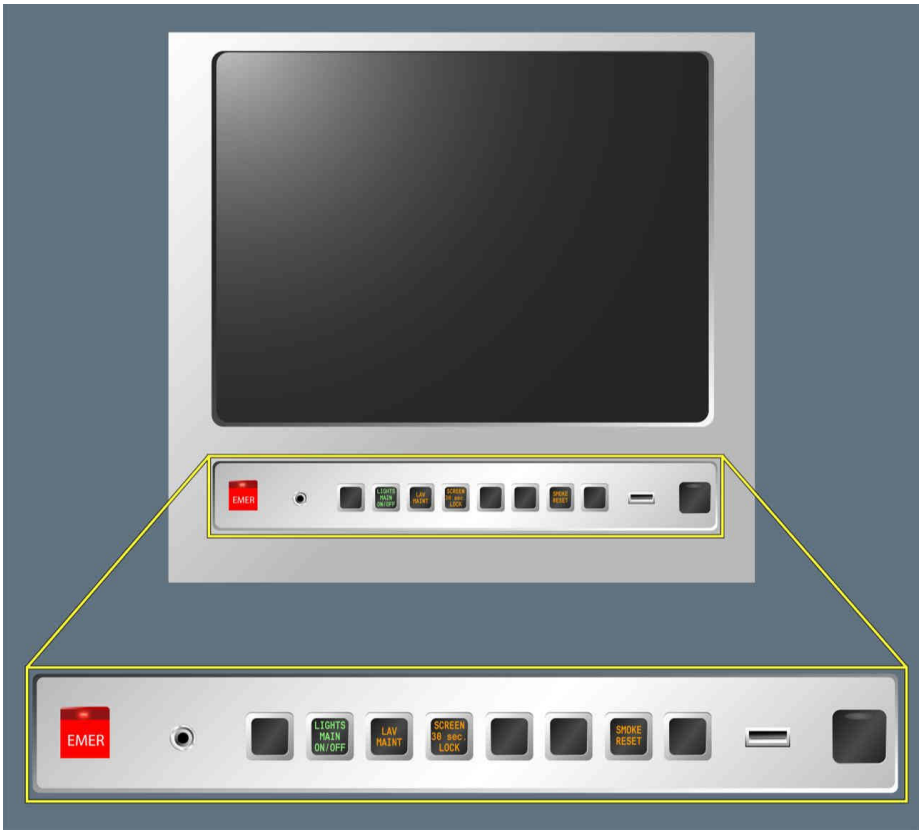
Criteria: K11137, SA
Applicable to: MSN 2927-3120

The main control panel in the cabin is the FAP.
It is located at the FWD attendant station FWD L and is divided into two areas: the touch screen and the sub panel.

The touch screen consists of:
- The header row
- The display area
- The system and function keys.

The sub panel has a row of hard keys, a headphone jack and a USB-port.

Flight Attendant Panel



Operating areas and keys of the FAP:

(1) The heading row shows the title of every selected page.

(2) The display area shows every selected page.

(3) The system and function keys are used to select the system pages.

(4) The hard keys are used for major functions which have to operate independently from the FAP touch screen.

They are marked with the related system functions:
- **EMER** (activates the Emergency Lighting System)
- **LIGHTS MAIN ON/OFF** (activates/de-activates the Cabin Lighting System)
- **LAV MAINT** (sets the lavatory lights to full brightness in the case of lavatory maintenance)
- **SCREEN** 30 s **LOCK** (sets the touch screen in a sleep modus for a time period of 30 s for cleaning purposes)
- **SMOKE RESET** (resets the Lavatory Smoke System).

INDICATION OF CABIN STATUS AND SELECTION OF SYSTEM PAGES

Applicable to: ALL

FAP SYSTEM PAGES

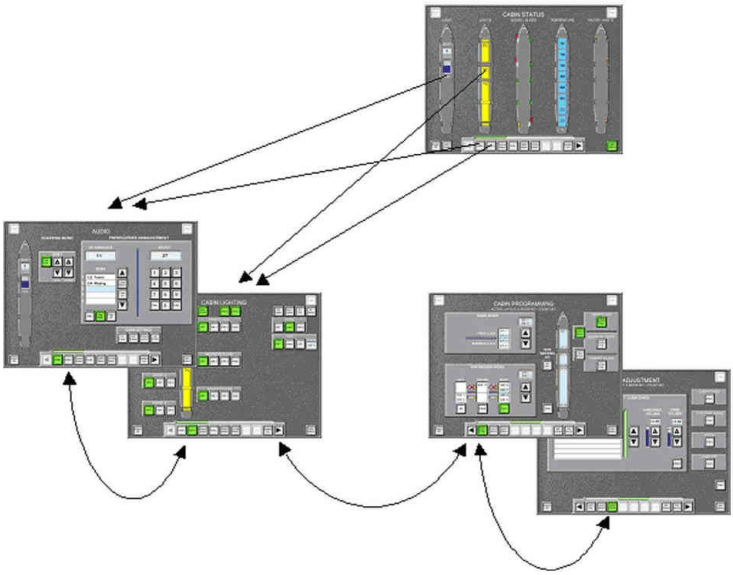
Every cabin system (e.g. cabin lighting) shown on the system pages of the FAP is selectable by the system and function buttons.
Related to the cabin systems there are different sets of system and function keys with a maximum of 9 keys. The next/previous button set can be chosen with the forward/backward button.

System and Function Buttons - First Level

System and Function Buttons - Second Level

In order to select a system page, push the related button (e.g. 1st level) on the screen. The selected page (cabin system) is being shown in the display area.

FAP - Page Selection



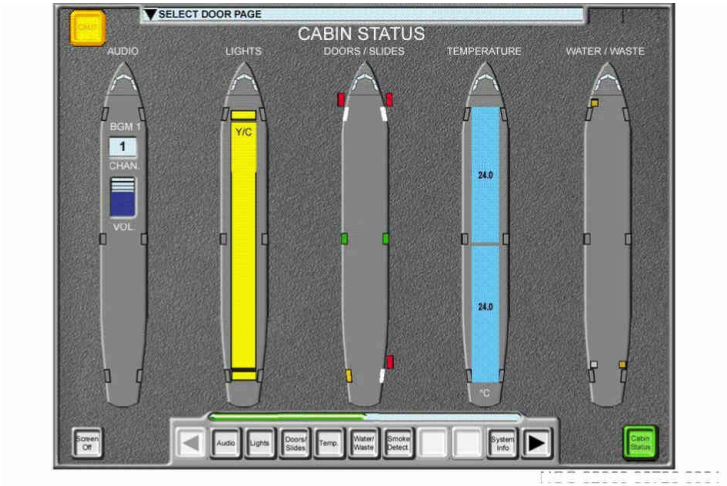
Note: *On the CABIN STATUS page this systems can be selected also by pushing the related aircraft symbol on the touch screen.*

To view the cabin status page push the button in the lower right corner of the touch screen. This page gives an overview of the standard cabin status page including these pages:

- AUDIO
- LIGHTS
- DOORS/SLIDES
- TEMPERATURE (AIR CONDITIONING)
- WATER/WASTE.

Additionally, there are some buttons and indications on the display area: CAUT pb with active info row, heading row, Screen Off pb, Cabin Ready pb, system and function and the active Cabin Status pb.

FAP - Cabin Status



CAUTION BUTTON, ACTIVE INFO AND HEADING ROW

The CAUT pb is always shown in the upper left corner of the touch screen, normally in the de-active mode (OFF). If CIDS receives a message which cannot be indicated the CAUT pb is illuminated in flashing mode and a text message is displayed in the info row. This message will stay as long as the respective page is not shown on the touch screen.
After displaying the page(s) related to the message(s) or after pushing the CAUT pb the illumination of the CAUT pb comes on steady.

Note: *An arrow in front of the actual text message in the INFO ROW shows that more than one message are present.*

The heading row displays the title of the actual selected page below the info row in the middle of the screen.

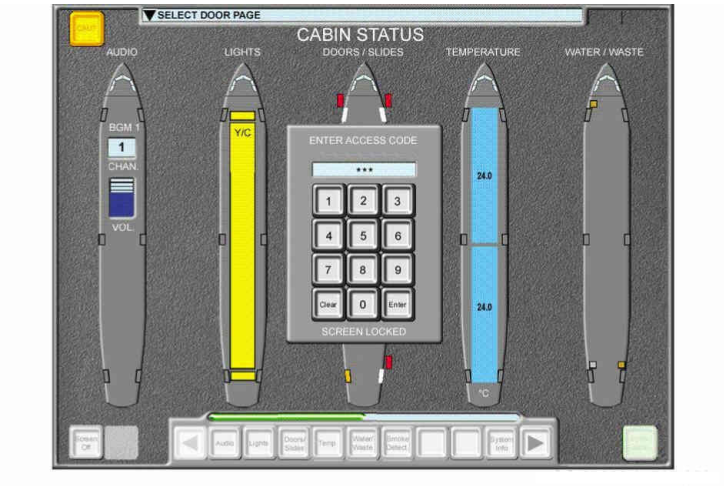
SCREEN OFF BUTTON AND TIME OUT FUNCTION

The Screen Off pb is located in the lower left corner of the display. Pushing that button switches the screen off.
An automatic event (CIDS message) or touching the FAP display reactivates the screen again. This touch does not activate any system function.
As an option it is possible to protect the manual reactivation of the screen through an access code against misuse. Then the screen is locked after it is switched off. Only a SMOKE event is displayed on the screen automatically.

To reactivate the screen it is necessary to enter the following password on the PASSWORD page:
813

Note: *The LAYOUT SELECTION page is also locked and can be entered by typing in the correct access code on the PASSWORD page*

Access Code



The time out function switches the screen off automatically after a time period of 10 min if a page was manually selected or an auto page is quit. During this period the screen is dark or, as an option, shows a screen saver.
The reactivation of the FAP is done by a single touch on the screen without activating any other function unintentionally. The FAP then comes back to the previously selected page.

Note: *If the Screen Off function is in use, the time out function does not work.*

EXTERNAL SYSTEM SELECTION

Optionally it is possible to hand over the display area to an external system (e.g. In-Flight Entertainment, Cabin Logbook).
The external system is selected by the system and function keys as for the CIDS related systems. Only the display area is under control of the respective system.
To operate external systems via the FAP additional and optional PC hardware must be installed.

AUTOMATIC ACTIVATION OF SYSTEM PAGES AND SYSTEM INFO PAGE

Applicable to: ALL

If CIDS receives an important message the related system page comes up automatically. The automatic activated page is displayed as long as the page is quit.
A smoke alert calls up the SMOKE page and overrides any other page.
The following pages come up automatically with these indication priorities:

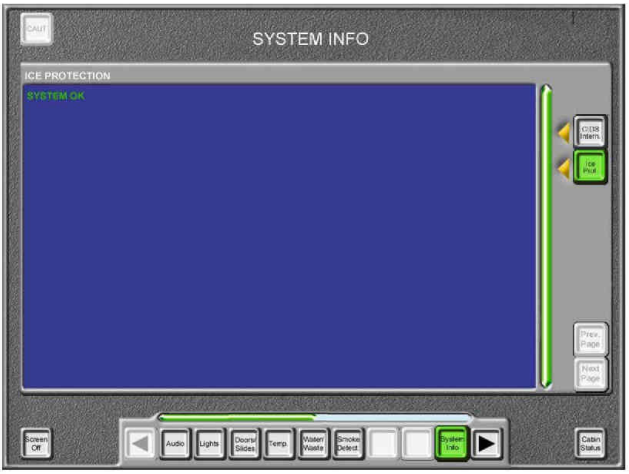
Priority	Title of Page
1	SMOKE
2	DOORS/SLIDES
3	WATER/WASTE
4	SYSTEM INFO
5	AUDIO
6	SOFTWARE DOWNLOAD

SYSTEM INFO PAGE

This menu provides the status information for several cabin systems and could be called up for preflight checks. Additionally this menu appears during all flight phases in the automatic mode if dedicated messages for the cabin crew are available.

The following systems/functions are incorporated in the SYSTEM INFO page:
- CIDS internals
- Ice protection.

System Info



After selecting the system info page, an indicator light next to the respective system button is illuminated in amber color if there is a fault message for any system.
To view the fault message(s) corresponding to the different systems push the related system button on the system info page.
The example above shows the system info page with one of four list box areas. Each area has a heading row and system/function related messages. New main messages will always be shown in the first row.
A scroll bar located on the right hand side of the list box area shows that there are further pages available. To enter this pages use the next/previous button function. An indicator light (amber/green) shows if there is a message on another page.
If no failure for the respective system is present the message system ok will be displayed on the screen.
If the following failure message is displayed (called blue card):

System Info (Blue Card)

In this case CIDS is not supplied with the complete electrical power (from normal and essential bus bar) and the system is not able to detect and collect all necessary data.
To solve this problem it must be ensured that all electrical connections/switches are in the normal mode/position (e.g. all circuit breaker are closed, generators are on etc.).
If there are no further problems in the aircraft electrical circuits, the system should run properly.

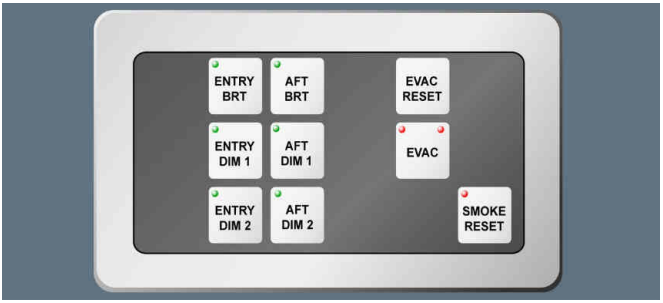
ADDITIONAL ATTENDANT PANEL

Criteria: K11137, SA
Applicable to: MSN 2927-3120

The Additional Attendant Panel (AAP) is located beside door aft L. In general, the cabin systems are controlled from the FAP. Some of these cabin systems can be controlled additionally from the AAP.

CONTROLS ON AAP

Additional Attendant Panel



The following cabin systems can be controlled from this AAP:
- The illumination of the aft entrance area (ENTRY BRT, ENTRY DIM 1, ENTRY DIM 2)
- The illumination of the passenger zone (AFT BRT, AFT DIM 1, AFT DIM 2)
- The reset of the evacuation signaling chime (EVAC RESET)
- The indication of the evacuation signaling (EVAC)
- The reset of the smoke signaling (SMOKE RESET).

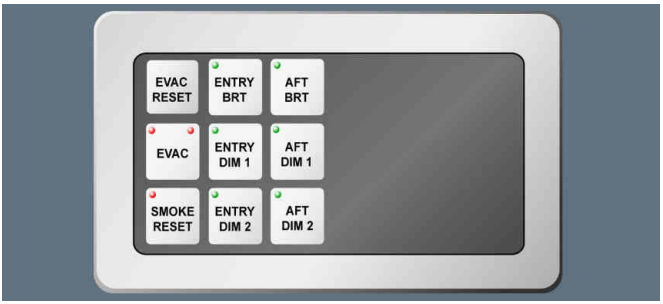
ADDITIONAL ATTENDANT PANEL

Criteria: K10189, SA
Applicable to: MSN 2649

The Additional Attendant Panel (AAP) is located beside Door aft L. In general, the cabin systems are controlled from the FAP. Some of these cabin systems can be additionally controlled from the AAP.

CONTROLS ON AAP AFT L

Additional Attendant Panel



The following cabin systems can be controlled from this AAP:

- The reset of the evacuation signaling chime (EVAC RESET)
- The indication of the evacuation signaling (EVAC)
- The indication and the reset of the lavatory smoke alert (SMOKE RESET)
- The illumination of the aft entrance area (ENTRY BRT, ENTRY DIM 1, ENTRY DIM 2)
- The illumination of the aft passenger zone (AFT BRT, AFT DIM 1, AFT DIM 2).

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GENERAL

Applicable to: ALL

The cabin lights illuminate the cabin and entrance areas, the attendant stations, the lavatories and the galleys. All these lights are controlled by the cabin lighting system, which is a part of the Cabin Intercommunication Data System (CIDS).

The cabin lighting system consists of following sub-systems:
- General illumination
- Lavatory lighting
- Passenger reading lights
- Cabin attendant work lights
- Emergency lighting
- Passenger lighted signs (for location and operation: *Refer to 03-080 General System Information*)

GENERAL ILLUMINATION

Applicable to: ALL

The general illumination system has different light strips, which are located in the ceiling panels above the aisles and windows. Additional lights are installed in the stowage compartments.
Every light strip consists of a row of fluorescent tubes, which are integrated in ballast units.

The system illuminates the following areas:
- Entry areas
- Cabin zones

The cabin crewmembers control these lights from the Flight Attendant Panel (FAP) and from the Additional Attendant Panel (AAP).
After power-up of the CIDS all cabin lights illuminate with full intensity, except the lavatory lights.

Note: *The lights near the cockpit door in the entrance area FWD dim automatically when the cockpit door is opened. This function should avoid glaring in the cockpit and is available, when at least one engine is running.*

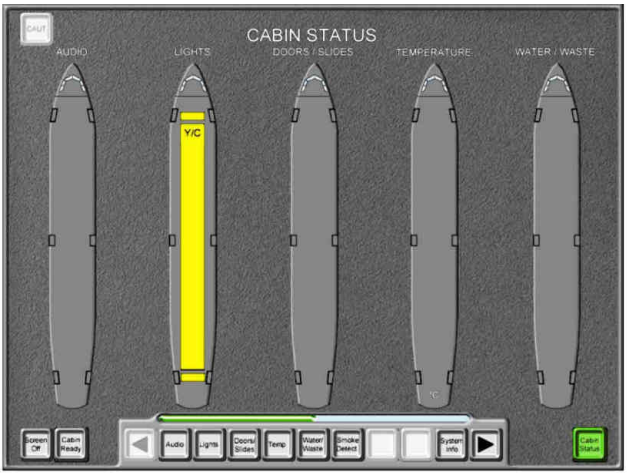
Note: *In case of Low Cabin-Pressure all cabin lights are switched on with full brightness, independent from any selected light volume setting.*

SYSTEM OPERATION FROM THE FAP

Applicable to: ALL

The cabin crew can control the general illumination via the FAP.
The CABIN STATUS page displays the status of the cabin systems on the FAP.

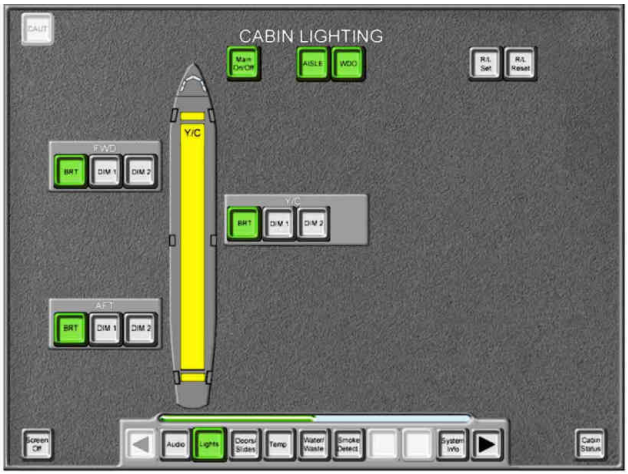
CABIN STATUS Page (Example)



The cabin crew can access the CABIN LIGHTING page by:

- Pushing the LIGHTS button on the function selector at the bottom of the screen.
- Touching the aircraft symbol below the title LIGHTS.

CABIN LIGHTING Page (Example)



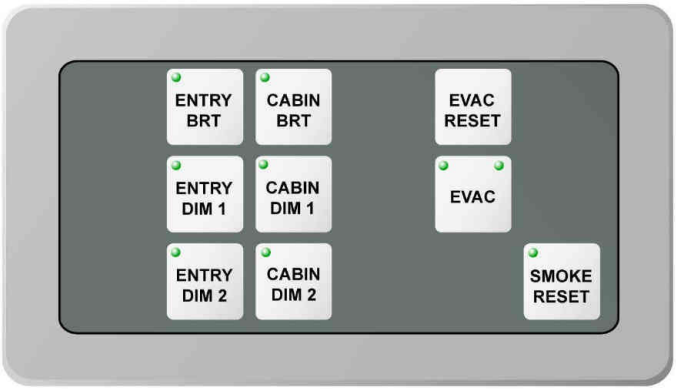
On the CABIN LIGHTING page, next to the aircraft symbol, there are menus for the cabin zones and entry areas.
Each menu has buttons (BRT, DIM 1 and DIM 2).
The background of each button becomes green if activated.
On the aircraft symbol, yellow rectangles show the location and the lighting intensity of the cabin zones and entry areas.
The color of the rectangle changes, when the lighting intensity is decreased or increased for the corresponding zone or area.

SYSTEM OPERATION FROM THE AAP

Applicable to: ALL

The cabin lighting can be controlled from the AAP or from the FAP.
The aft attendant station on the has an AAP. The AAP controls the illumination of its entry area and of the cabin zone.

Typical Additional Attendant Panel



Pushbutton	Description
CABIN BRT	Pushing the Cabin BRT pb illuminates the corresponding cabin zone with 100 % brightness.
CABIN DIM 1	Pushing the DIM 1 pb turns the light in the assigned cabin zone to approximately 50 % visual brightness.

Continued on the following page

Continued from the previous page

Pushbutton	Description
CABIN DIM 2	Pushing the DIM 2 pb turns the light in the assigned cabin zone to approximately 10 % visual brightness.
ENTRY BRT	Pushing an ENTRY BRT pb turns the light in the assigned entry area to 100 % brightness.
ENTRY DIM 1	Pushing the DIM 1 pb turns the light in the assigned entry area to approximately 50 % visual brightness.
ENTRY DIM 2	Pushing the DIM 2 pb turns the light in the assigned entry area to approximately 10 % visual brightness.

To turn off the light the cabin crew must push the illuminated
The pushbuttons are arranged in two columns for cabin zone (CABIN) and entry area (Entry) illumination.
The LED on the pushbutton illuminates, when the pushbutton is pushed and activated.

ENTRY AREA LIGHTING CONTROL FROM THE FAP

Applicable to: ALL

The aircraft has entry areas located between the door pairs.
The lighting of each entry area can be dimmed in three steps with values of 100 %, 50 % and 10 % brightness.
To control the brightness of the entry areas the CABIN LIGHTING page on the FAP must be entered by pushing the LIGHTS button of the 1st level of the SYSTEM AND FUNCTION buttons (*Refer to 02-060 FAP System and Function Buttons*).
The CABIN LIGHTING page appears and on the left side of the touchscreen the entry area menus are visible, one for each entry area.

Entry Area Menu

The inscriptions on the buttons indicate the related level of brightness. The background of each button becomes green when selected.

To set the intensity of the entry area lights, push one of the following buttons:
- BRT to set the entry area lights to 100 % brightness
- DIM 1 to dim the entry area lights to 50 % brightness
- DIM 2 to dim the entry area lights to 10 % brightness

To switch OFF the entry area lights, push the active (green) button a second time.

To switch ON the entry area lights again, push one of the buttons BRT, or DIM 1 or DIM 2 . The entry area lights illuminate with the corresponding brightness.
A yellow rectangle, located between the door pairs on the aircraft symbol, illuminates with the corresponding intensity to indicate the selected brightness of the entry area lighting.

ENTRY AREA LIGHTING CONTROL FROM THE AAP

Applicable to: ALL

The aircraft has entry areas located between the door pairs.
The lighting of each entry area can be dimmed in three steps with values of 100 %, 50 % and 10 % brightness.
To set the intensity of the entry area lights, push one of the following pushbuttons:

- ENTRY pb to set the entry area lights to 100 % brightness
- DIM 1 pb to set the entry area lights to approximately 50 % visual brightness
- DIM 2 pb to set the entry area lights to approximately 10 % visual brightness.

To switch OFF the entry area lights, push the active (illuminated) pushbutton a second time.
To switch ON the entry area lights again, push one of the pushbuttons ENTRY, DIM 1 or DIM 2. The entry area lights illuminate with the corresponding brightness.

CABIN ZONE LIGHTING CONTROL FROM THE FAP

Applicable to: ALL

The cabin zone lighting is divided into different areas (zones).
To control the brightness of the cabin zones the CABIN LIGHTING page on the FAP must be entered by pushing the LIGHTS button of the 1st level of the system and function buttons (*Refer to 02-060 FAP System and Function Buttons*).
Each of the cabin zones can be controlled individually via the related menus on the FAP. The cabin zone menus are on the right side of the aircraft symbol.

Typical Cabin Zone Menu

The inscriptions on the buttons indicate the related level of brightness. The background of each button becomes green when selected.

The cabin zone lighting can be set to three different intensities:
- BRT (full brightness = 100 % intensity)
- DIM1 (50 % brightness)
- DIM2 (10 % brightness).

To switch OFF the cabin zone lights, push the active (green) button a second time.
To switch ON the cabin zone lights again, press one of the buttons BRT, DIM 1 or DIM 2. The cabin zone lights illuminate with the corresponding brightness.
A yellow rectangle on the aircraft symbol, corresponding to the cabin zone, illuminates with the respective intensity to indicate the selected brightness of the cabin zone lighting.

CABIN ZONE LIGHTING CONTROL FROM THE AAP

Applicable to: ALL

In addition to the control from the FAP it is possible to control the cabin zone lighting from the AAP.

Typical Cabin Zone Lighting Control Pushbuttons on the AAP

The following pushbuttons are available to control the lights intensity of the related cabin zone(s):
- BRT pb to set the cabin zone lights to 100 % visual brightness.
- DIM 1 pb to dim the cabin zone lights to 50 % visual brightness.
- DIM 2 pb to dim the cabin zone lights to 10 % visual brightness.
- NIGHT pb to dim the cabin zone lights to 1 % visual brightness.

The LED on the "active" pushbutton illuminates.
To switch OFF the cabin zone lights, push the active (illuminated) pushbutton a second time.

To switch ON the cabin zone lights again, push one of the pushbuttons CABIN, DIM 1 or DIM 2. The cabin zone lights illuminate with the corresponding brightness.

Note: *Only the FAP provides the possibility to switch OFF all cabin zone lights.*

LAVATORY LIGHTING

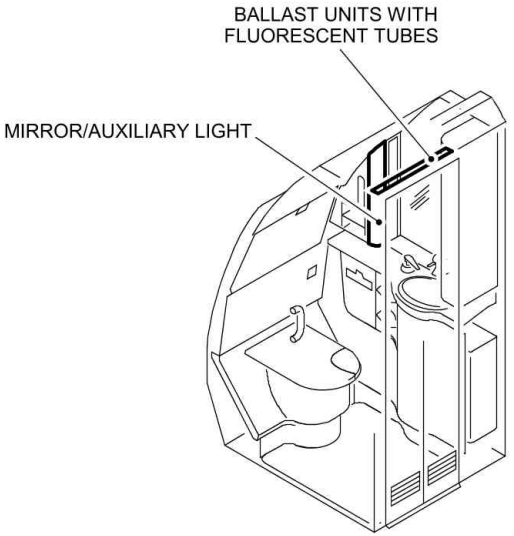
Applicable to: ALL

Each lavatory is equipped with different lighting units, controlled by the lavatory lighting system.

STANDARD TYPE LAVATORY

Standard Type Lavatory

EXAMPLE



The lavatory lighting system has following elements:
- Two ballast units with fluorescent tubes (located above the lavatory door)
- One combined halogen mirror / auxiliary light (located beside the mirror)

SYSTEM OPERATION

The lavatory lighting system is controlled by the CIDS.

A micro-switch in the lavatory door-frame monitors whether the door is UNLOCKED or LOCKED. Depending to these positions, the lavatory lighting system works in different ways.

When the lavatory door is UNLOCKED:
- The fluorescent tubes illuminate with reduced intensity,
- The auxiliary light is ON,
- The mirror light is OFF.

When the lavatory door is LOCKED:
- The fluorescent tubes illuminate with full intensity,
- The auxiliary light stays ON,
- The mirror light comes ON.

PASSENGER READING LIGHTS

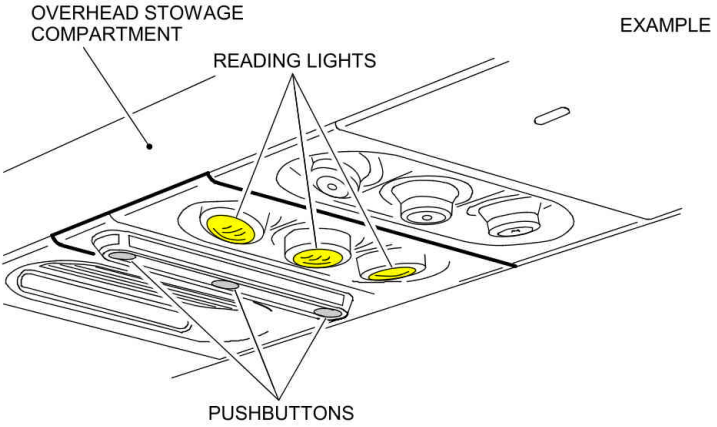
Applicable to: ALL

The passenger reading lights are high intensity LED lights which give additional illumination to the passengers. Each passenger can control his own reading light.

PASSENGER READING LIGHTS (PSU)

The passenger reading lights are installed in the Passenger Service Units (PSUs), which are located above the seat rows. Each reading light has a related pushbutton.

Passenger Reading Lights



SYSTEM OPERATION BY PASSENGERS

Operate the passenger reading lights on the PSU as follows:
1. Push the pushbutton to switch ON the reading light.
2. Push the pushbutton again to switch OFF the reading light.

SET OR RESET READING LIGHTS FROM THE FAP

The cabin crew can set or reset the passenger reading lights
- All at once (only available on ground)
- Individually.

SET OR RESET OF ALL PASSENGER READING LIGHTS

The cabin crew can set or reset all passenger reading lights at the same time via the FAP via the buttons R/L SET and R/L RESET on the CABIN LIGHTING page.
Each button illuminates in green while the button is pushed. *Refer to 02-070 General Illumination* for the location of the buttons.

Operate the passenger reading lights as follows:
- Push R/L SET to switch ON all passenger reading lights at the same time.
- Push R/L RESET to switch OFF all passenger reading lights at the same time.

When either button is released the passengers can switch the passenger light individually again.

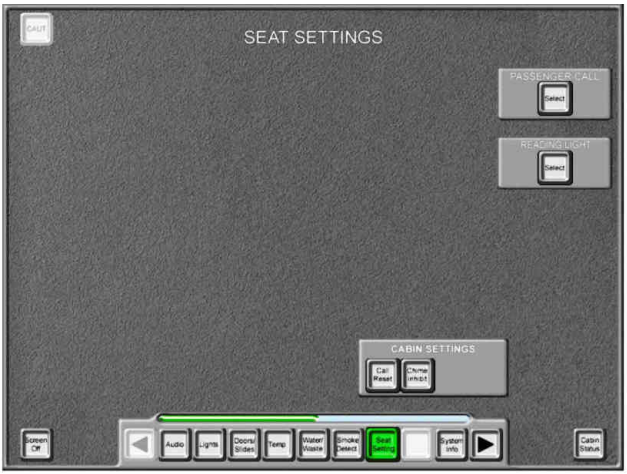
Note: *This function is only available on ground.*

SET OR RESET INDIVIDUAL PASSENGER READING LIGHTS

The cabin crew can set or reset individual passenger reading lights via the SEAT SETTINGS page.
Individual passenger reading lights can be controlled from the FAP. Push the SEAT SETTINGS pushbutton to open the SEAT SETTINGS menu.

There are three control pads available:
- The READING LIGHT control pad with a SELECT pushbutton.
- The PASSENGER CALL control pad with a SELECT pushbutton
- The CABIN SETTINGS control pad with
  - The CALL RESET pushbutton
  - The CHIME INHIBIT pushbutton.

SEAT SETTINGS Start Menu (Chime Functions On The FAP)

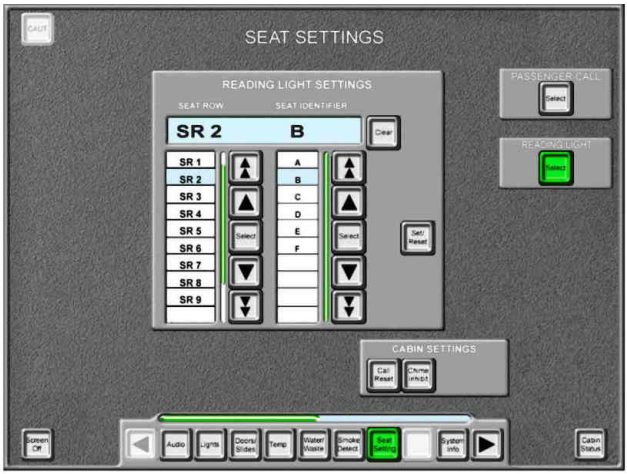


On the SEAT SETTINGS page single individual reading lights can be switched ON and OFF. This procedure is used for single request, e.g. if a reading light switch at a seat is inop.

Operate single passenger reading lights as follows:

1. Select the seat row for the respective reading light with the seat-row-SELECT pushbutton.
2. Select the respective seat with the seat-identifier-SELECT pushbutton.
3. Push either the SET/RESET pushbutton to switch the respective reading light on, then off. The reading light selection will hereafter disappear from the selection row.
4. Or, push the CLEAR pushbutton to erase the current selection.

Reading Lights - Individual Control (SET/RESET Button)



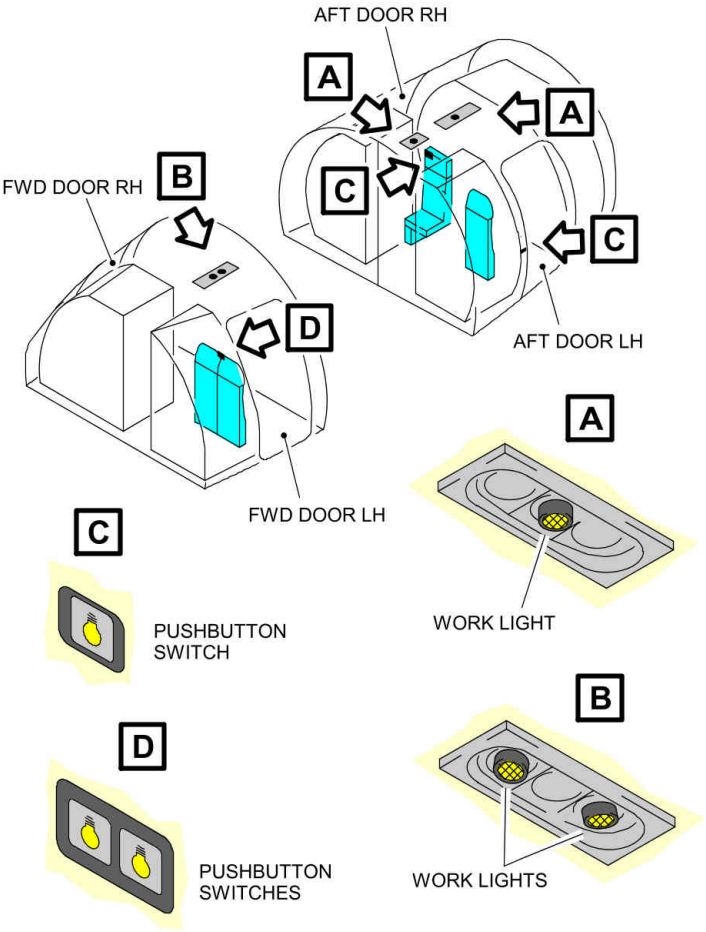
CABIN ATTENDANT WORK LIGHTS

Applicable to: ALL

The cabin attendant work lights are high intensity LED lights. They give additional illumination to the working areas.

The cabin attendant work lights are installed near the cabin attendant seats and galleys, and in the entrance areas (e.g.). They are arranged as single-type lights and combined panels.

Cabin Attendant Work Lights



SYSTEM OPERATION

The cabin attendant work lights can be controlled manually. Operate them as follows:

- Press the related pushbutton to switch ON the selected cabin attendant work light. The illumination of the symbol on the pushbutton comes on.
- Press the related pushbutton again to switch OFF the selected cabin attendant work light. The illumination of the symbol on the pushbutton goes off.

EMERGENCY LIGHTING - GENERAL

Criteria: K9049
Applicable to: MSN 2649

The emergency lighting system is a part of the cabin lighting system. It is integrated in the Cabin Intercommunication Data System (CIDS). If the standard aircraft power supply is not available, the emergency lighting system is able to operate independently from the aircraft systems for at least 10 min.

The emergency lighting system has different functions:

1. In standard operation
   - it shows the way to the exits to leave the aircraft.
2. In an emergency
   - it illuminates the cabin, if the general illumination does not operate,
   - it shows the way to the exits to leave the aircraft, if the cabin is full of smoke,
   - it illuminates the escape paths on the wings,
   - it illuminates the escape slides.

The emergency lighting system consists of following elements:

- Exit signs *Refer to 02-070 Exit Signs*
- Cabin emergency lights *Refer to 02-070 Emergency Lights*
- Emergency Escape Path Marking System (EEPMS) *Refer to 02-070 Emergency Escape Path Marking System (EEPMS)*
- Overwing emergency lights *Refer to 02-070 Overwing Emergency Exit - Emergency Lights*
- Escape slide emergency lights *Refer to 02-070 Escape Slides Emergency Lights*.

EMERGENCY LIGHTING - GENERAL

Criteria: K2675, K9256
Applicable to: MSN 2927-3120

The emergency lighting system is a part of the cabin lighting system. It is integrated in the Cabin Intercommunication Data System (CIDS). If the standard aircraft power supply is not available, the emergency lighting system is able to operate independently from the aircraft systems for at least 10 min.

The emergency lighting system has different functions:

1. In standard operation
   - it shows the way to the exits to leave the aircraft.
2. In an emergency
   - it illuminates the cabin, if the general illumination does not operate,
   - it shows the way to the exits to leave the aircraft, if the cabin is full of smoke,
   - it illuminates the escape slides.

The emergency lighting system consists of following elements:

- Exit signs *Refer to 02-070 Exit Signs*
- Cabin emergency lights *Refer to 02-070 Emergency Lights*
- Emergency Escape Path Marking System (EEPMS) *Refer to 02-070 Emergency Escape Path Marking System (EEPMS)*
- Escape slide emergency lights *Refer to 02-070 Escape Slides Emergency Lights*.

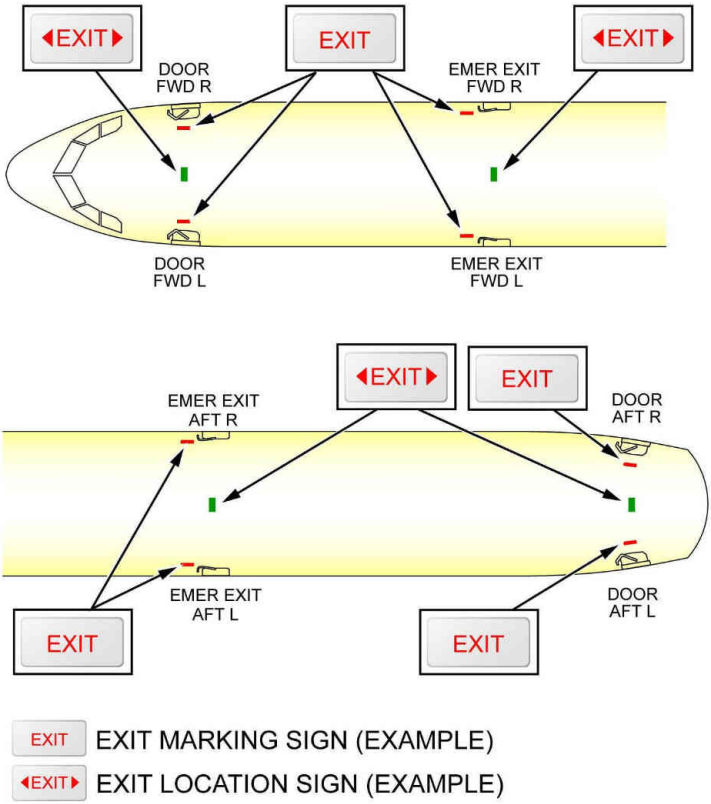
EXIT SIGNS

Criteria: K2675, K9256
Applicable to: MSN 2927-3120

There are two types of exit signs in the cabin:

- Exit location signs
- Exit marking signs.

Exit Signs - Example



The exit location signs are installed in the aisle in an overhead position or next to the doors. They show the direction to the next exit.
The exit marking signs are installed above the doors respectively beside the emergency exit doors. They show the position of the exit.

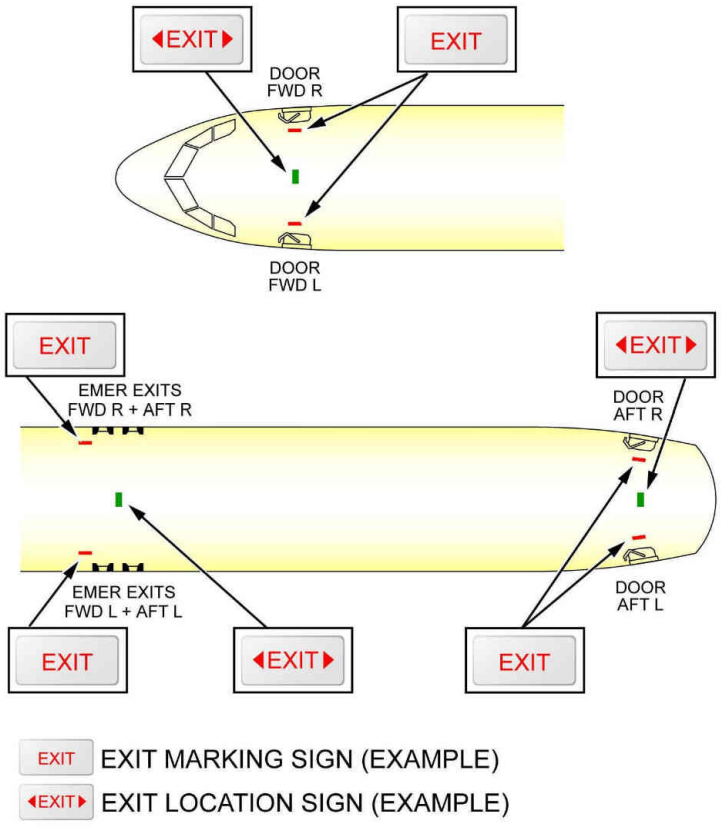
EXIT SIGNS

Criteria: K9049
Applicable to: MSN 2649

There are two types of exit signs in the cabin:

- Exit location signs
- Exit marking signs.

Exit Signs - Example



The exit location signs are installed in the aisle in an overhead position or next to the doors. They show the direction to the next exit.

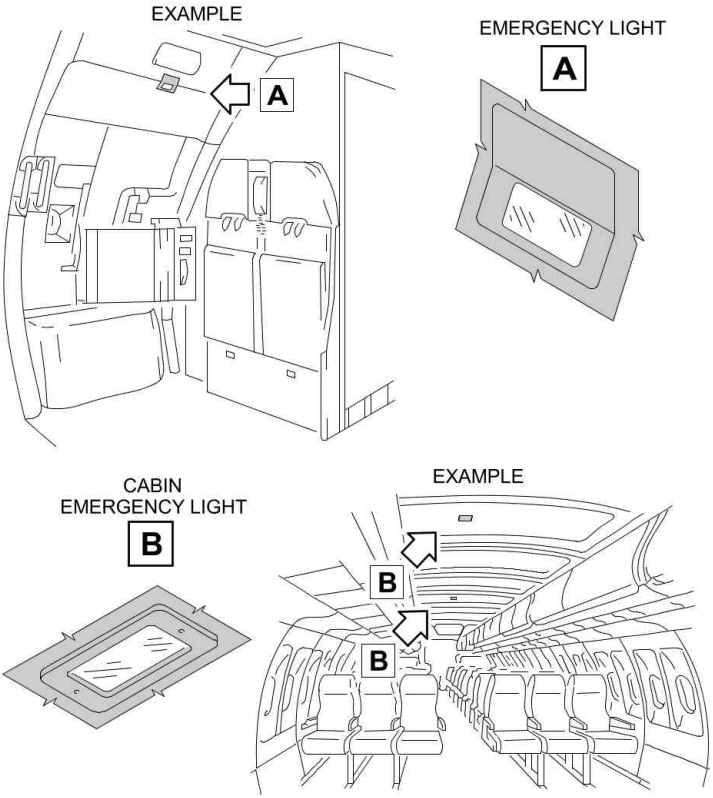
The exit marking signs are installed above the doors respectively beside the emergency exit doors. They show the position of the exit.

EMERGENCY LIGHTS

Applicable to: ALL

There are two types of emergency lights in the cabin:
- Emergency Lights at the doors (A)
- Cabin Emergency Lights (B).

Emergency Lights - Example



(A) Emergency Lights (Doors)

(B) Cabin Emergency Lights

The emergency lights at the doors (A) are installed above the doors or beside the emergency exit doors. They show the position of the exit.
The cabin emergency signs (B) are installed in the aisle in an overhead position. They show the direction to the next exit.

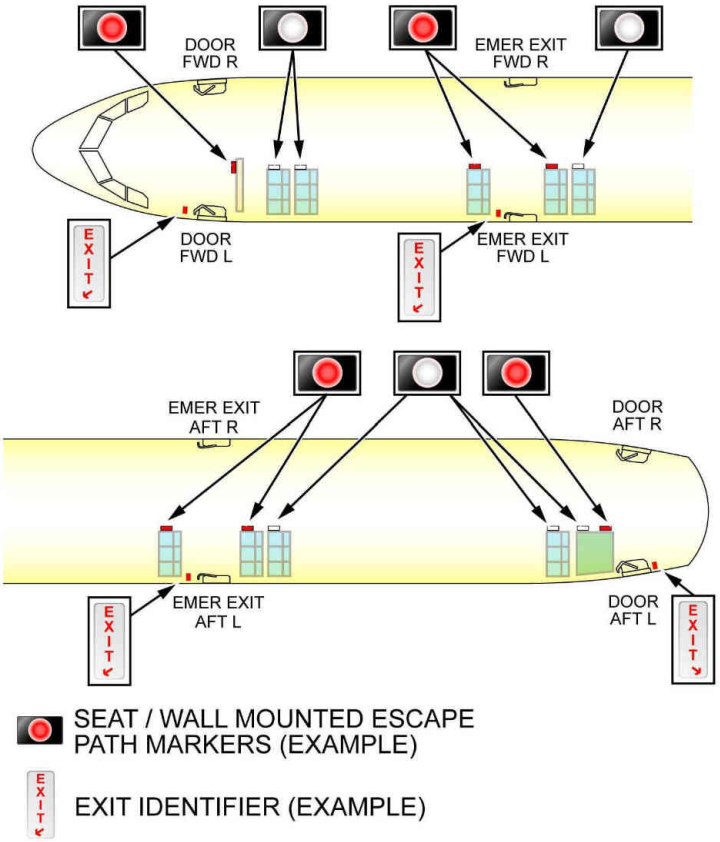
FLOOR PROXIMITY EMERGENCY ESCAPE PATH MARKING SYSTEM (FPEEPMS)

Criteria: K2675, K9256
Applicable to: MSN 2927-3120

The elements of the FPEEPMS show the way to the exits, if the exit signs and the general illumination, i.e. the cabin emergency lights, are no longer visible (e.g. if the cabin is full of smoke).

The FPEEPMS has the following elements
- Seat/wall-mounted emergency lights (red)
- Seat/wall-mounted emergency lights (clear)
- Exit identifiers.

FPEEPMS - Example



All FPEEPMS elements are at floor level. They are installed on seats, galleys, lavatories and cabin dividers on the aisle side, respectively.
The elements next to each exit zone are usually covered with a red lens the others usually have a white lens.
The exits themselves are indicated by the exit identifiers.

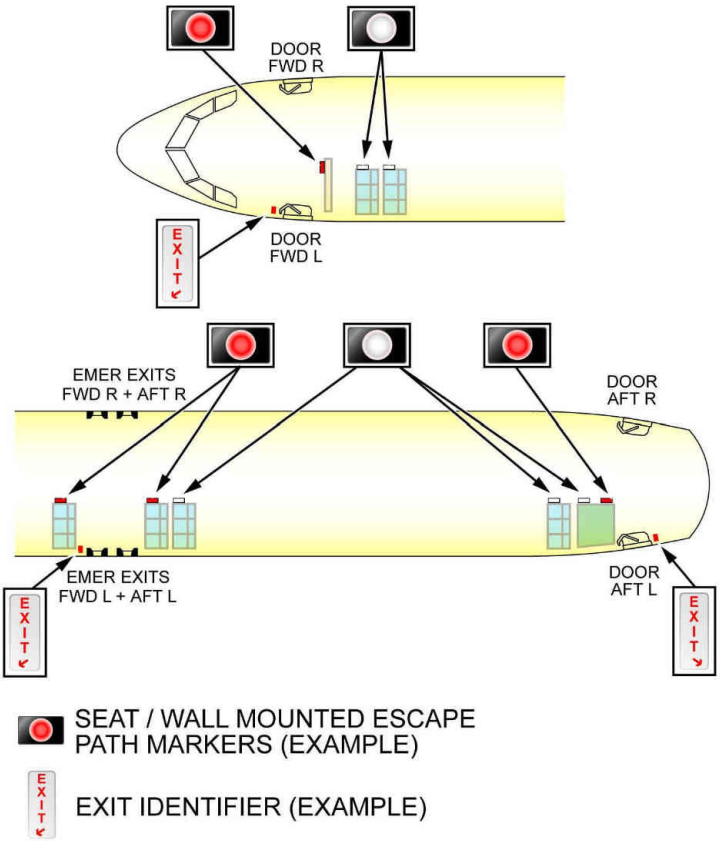
FLOOR PROXIMITY EMERGENCY ESCAPE PATH MARKING SYSTEM (FPEEPMS)

Criteria: K9049
Applicable to: MSN 2649

The elements of the FPEEPMS show the way to the exits, if the exit signs and the general illumination, i.e. the cabin emergency lights, are no longer visible (e.g. if the cabin is full of smoke).

The FPEEPMS has the following elements
- Seat/wall-mounted emergency lights (red)
- Seat/wall-mounted emergency lights (clear)
- Exit identifiers.

FPEEPMS - Example

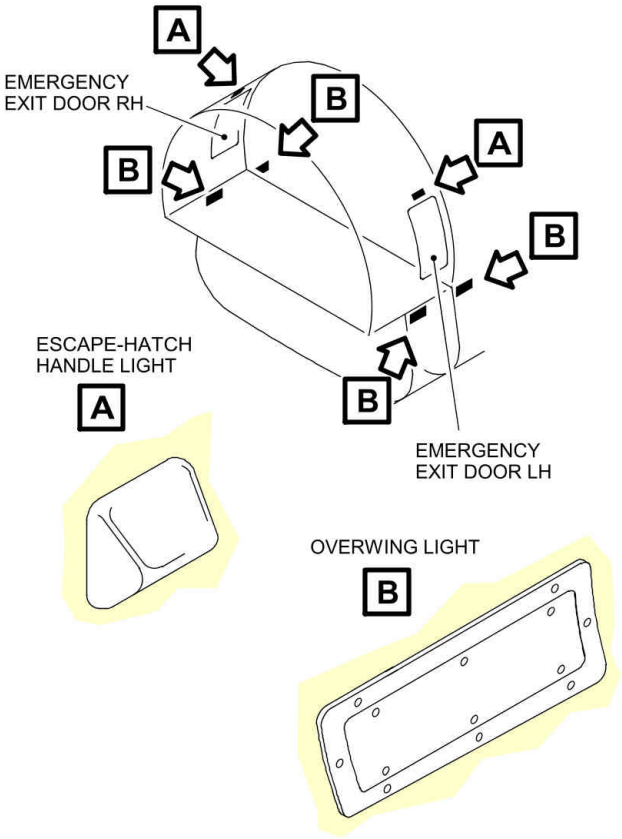


All FPEEPMS elements are at floor level. They are installed on seats, galleys, lavatories and cabin dividers on the aisle side, respectively.
The elements next to each exit zone are usually covered with a red lens the others usually have a white lens.
The exits themselves are indicated by the exit identifiers.

OVERWING EMERGENCY EXIT - EMERGENCY LIGHTS

Applicable to: MSN 2649

Overwing Emergency Exit Emergency Lights - Example



(A) Escape-Hatch Handle Lights

(B) Overwing Lights FWD/AFT.

The escape-hatch handle lights (A) illuminate the areas of the handles inside the cabin.
The overwing lights (B) illuminate the escape path outside the cabin on the wings upper surface.
They are activated only when the escape-hatch handle cover is removed.

ESCAPE SLIDES EMERGENCY LIGHTS

Applicable to: ALL

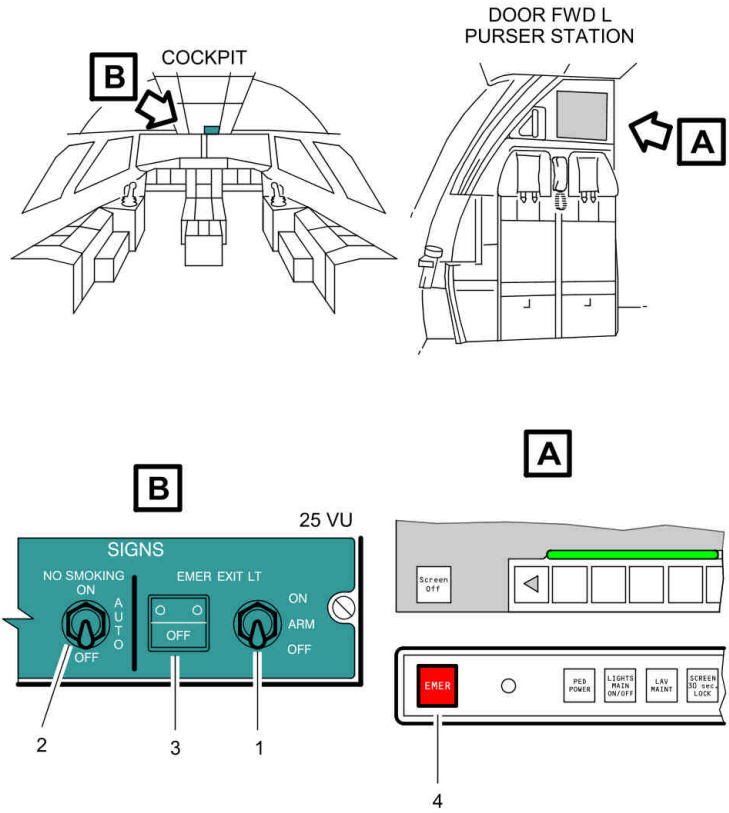
Each escape slide has a row of small emergency lights. They indicate the way out of the aircraft and the borders of the escape slide.
The escape slide emergency lights are activated only when the door or the emergency exit door is opened in position **DOOR ARMED** and the escape slide is released.
Refer to: Escape Slide for information about the location of the escape slide emergency lights.

EMERGENCY LIGHTING OPERATION

Applicable to: ALL

The emergency lighting system is controlled from the cockpit (for standard/emergency) or from the cabin (for emergency only). The control elements are shown in the graphic below:

Cockpit/Cabin Controls



(1) EMER EXIT LT sw ARM-ON-OFF (Cockpit / 25VU)

(2) No Smoking sw ON-AUTO-OFF (Cockpit / 25VU)

(3) Indicator EMER EXIT LT OFF (Cockpit / 25VU)

(4) EMER pb-sw (Cabin / FAP)

SYSTEM OPERATION (STANDARD)

The emergency lighting system is used to illuminate all exit location signs, exit marking signs and escape-hatch handle lights when:

- the EMER EXIT LT sw (1) is in the ARM position,
- the No Smoking sw (2) is in the AUTO position and the landing gear is down.

When the No Smoking sw (2) is in the ON position, the No Smoking signs and the EXIT signs come on.
This enables the passengers to find their way to the exits to leave the aircraft.

SYSTEM OPERATION (EMERGENCY)

The emergency lighting system is also used for different emergencies:

1. The general illumination does not operate
   - When the EMER EXIT LT sw (1) is in the ARM position, and the aircraft power supply for the general illumination is not available, the cabin emergency lights in the ceiling and above each door come on automatically. The system is supplied by the essential DC power supply.
2. The cabin pressure is too low
   - When the EMER EXIT LT sw (1) is in the ARM position, and Cabin Pressure Low is detected, all elements of the emergency lighting system come on automatically (except overwing lights and escape slide emergency lights). The system is supplied by the essential DC power supply.
3. No essential DC power supply is available
   - When the EMER EXIT LT sw (1) is in the ARM position, and the essential DC power supply is not available, all elements of the emergency lighting system come on automatically (except overwing lights and escape slide emergency lights). The system is supplied by integrated batteries from the Emergency Power Supply Units (EPSUs) for at least 10 min. In this case also the lavatory auxiliary lights do not operate.
4. Manual operation from the cockpit
   - When the EMER EXIT LT sw (1) is in the ON position, all elements of the emergency lighting system come on (except overwing lights and escape slide emergency lights).
5. Manual operation from the cabin
   - When the EMER pb-sw (4) is pressed in, all elements of the emergency lighting system come on (except overwing lights and escape slide emergency lights). The EMER pb-sw illuminates to indicate that the manual operation has been selected. If the essential DC power supply is not available, the EMER pb-sw will not illuminate.

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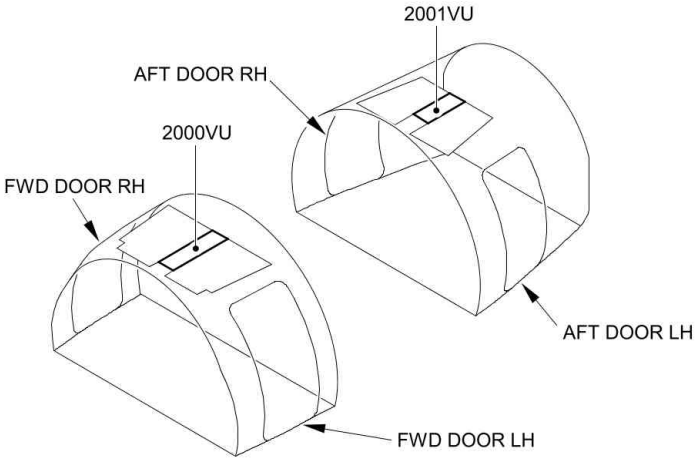
VU PANEL LOCATION

Applicable to: ALL

On the circuit breaker (C/B) panels 2000VU and 2001VU the circuit breakers for the different electrical systems are located. These VU panels have different locations, 2000VU in the FWD and 2001VU in the AFT cabin area.

VU panel location



They are installed to protect the electrical circuits of their related components.
A cover protects each circuit breaker panel to prevent unauthorized access.

C/B DESCRIPTION

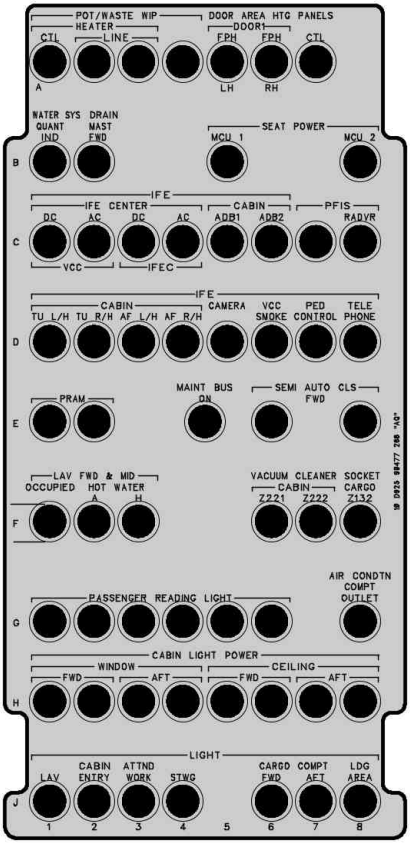
Criteria: K10190
Applicable to: MSN 2649

The VU panels have rows of circuit breakers. The function of each circuit breaker is shown below the related circuit breaker. The location of the circuit breaker is defined through a matrix (Letter x Number):

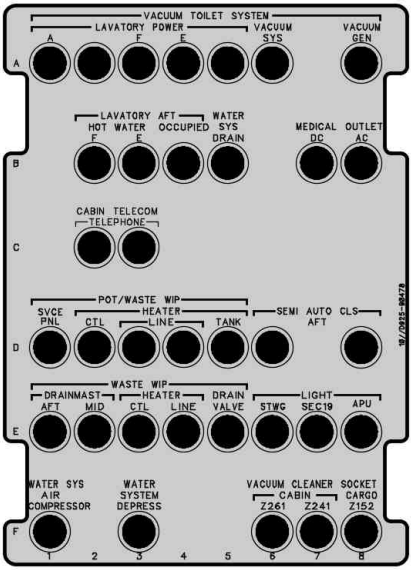
- a letter (A,B,C,...) for the circuit breaker row,
- a number (1,2,3,...) for the circuit breaker column.

Example:
If a circuit breaker is installed in row H on position 3 (column 8) the related location is called H3.
In this case the circuit breaker H3 protects the electrical circuit which is responsible for the cabin light power at the window in the aft of the cabin area.

Circuit breaker panel 2000VU



Circuit breaker panel 2001VU



CAUTION	It is not allowed to reset a tripped C/B. If you reset it, you can cause an overload to another system.

C/B DESCRIPTION

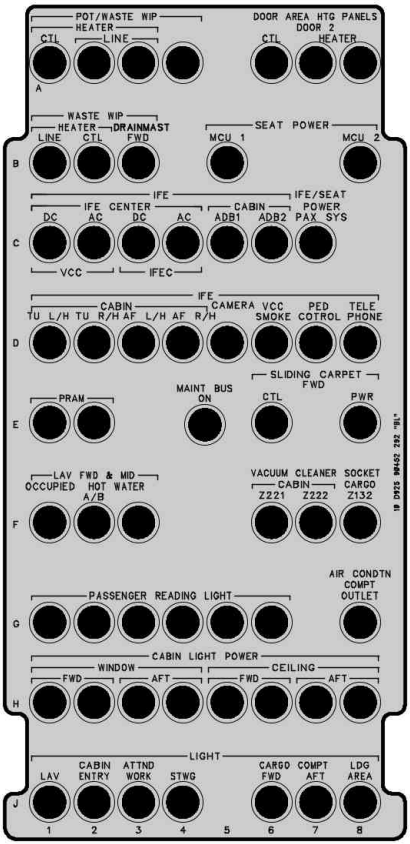
Criteria: K11138
Applicable to: MSN 2927-3034

The VU panels have rows of circuit breakers. The function of each circuit breaker is shown below the related circuit breaker. The location of the circuit breaker is defined through a matrix (Letter x Number):

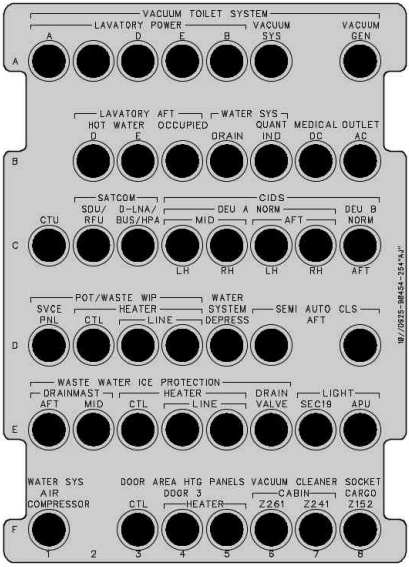
- a letter (A,B,C,...) for the circuit breaker row,
- a number (1,2,3,...) for the circuit breaker column.

Example:
If a circuit breaker is installed in row H on position 3 (column 8) the related location is called H3.
In this case the circuit breaker H3 protects the electrical circuit which is responsible for the cabin light power at the window in the aft of the cabin area.

Circuit breaker panel 2000VU



Circuit breaker panel 2001VU



CAUTION	It is not allowed to reset a tripped C/B. If you reset it, you can cause an overload to another system.

C/B DESCRIPTION

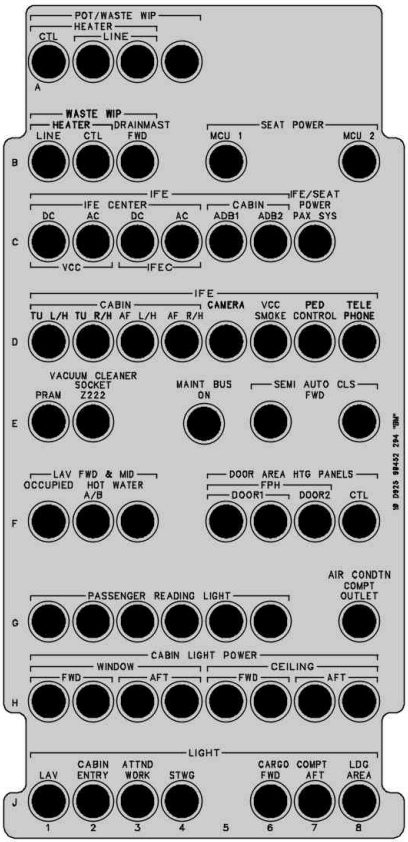
Criteria: K11138, K11390
Applicable to: MSN 3120

The VU panels have rows of circuit breakers. The function of each circuit breaker is shown below the related circuit breaker. The location of the circuit breaker is defined through a matrix (Letter x Number):

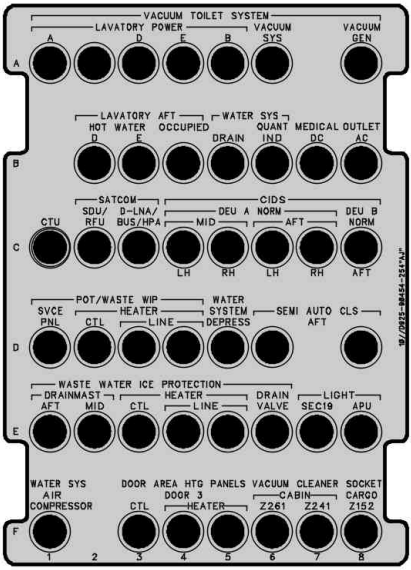
- a letter (A,B,C,...) for the circuit breaker row,
- a number (1,2,3,...) for the circuit breaker column.

Example:
If a circuit breaker is installed in row H on position 3 (column 8) the related location is called H3.
In this case the circuit breaker H3 protects the electrical circuit which is responsible for the cabin light power at the window in the aft of the cabin area.

Circuit breaker panel 2000VU



Circuit breaker panel 2001VU



CAUTION	It is not allowed to reset a tripped C/B. If you reset it, you can cause an overload to another system.

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GENERAL

Applicable to: ALL

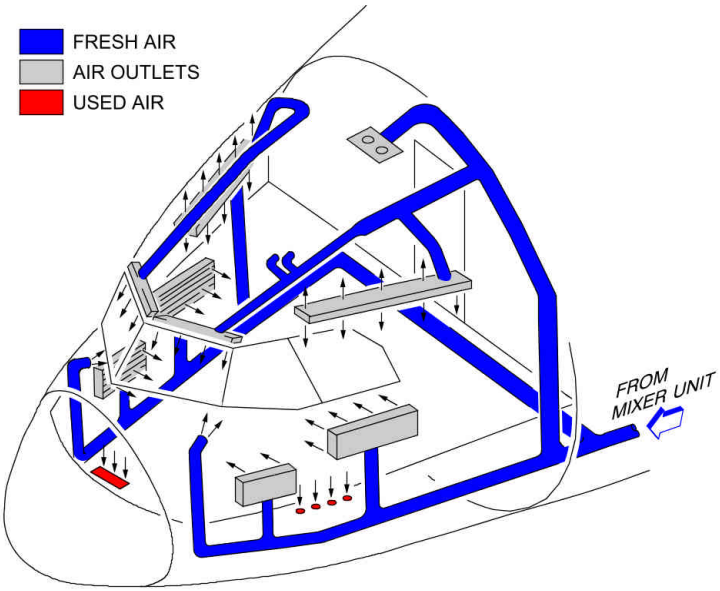
The engines or the APU supply the A/C with fresh air. This air is controlled for pressure, temperature and humidity to ensure the comfort of the passengers. A certain part of the used air is mixed to the fresh air by mixer units. The rest of the used air is discharged overboard.

COCKPIT AIR CONDITIONING

Applicable to: ALL

The air for the cockpit is delivered from the underfloor mixer unit into the cockpit distribution lines, which supply the different cockpit air outlets.
The used air is extracted through grills at the bottom of the cockpit.

Cockpit Air Conditioning Operation

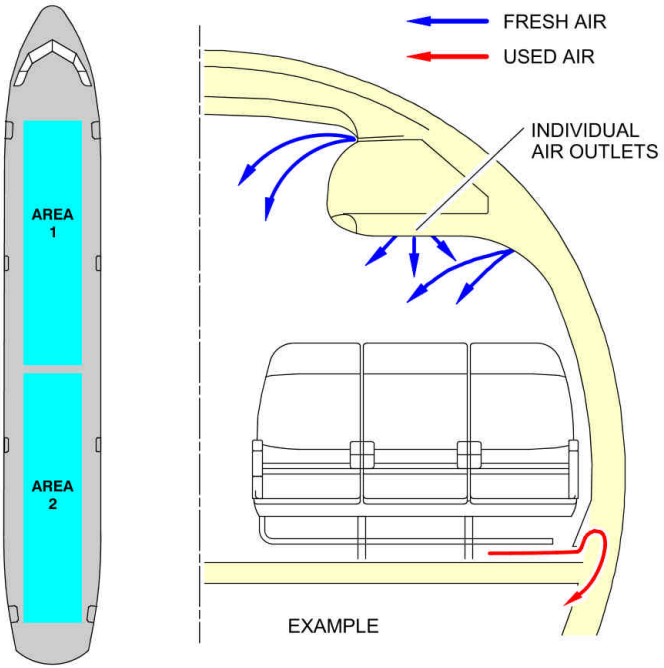


CABIN AIR CONDITIONING

Criteria: K9256, SA
Applicable to: MSN 2927-3120

The air for the passenger cabin is delivered from the underfloor mixer unit into the cabin distribution lines, which supply the different cabin air outlets.
The cabin air is distributed through cabin outlets (above and below the overhead stowage compartments) and passenger individual air outlets.
To control the cabin temperature individually, the cabin is divided into two areas (Area 1 (FWD) and Area 2 (AFT)).
The used air is extracted through panels near the cabin floor.

Cabin Air Conditioning Operation

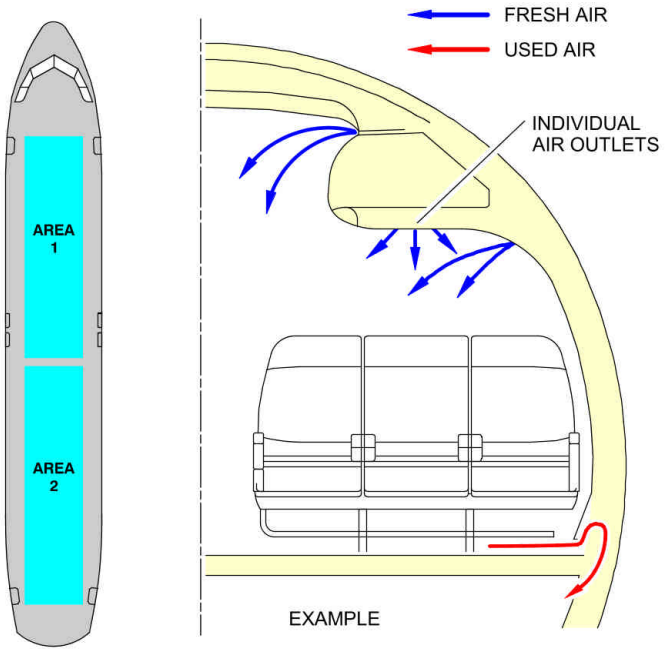


CABIN AIR CONDITIONING

Criteria: K9049, SA
Applicable to: MSN 2649

The air for the passenger cabin is delivered from the underfloor mixer unit into the cabin distribution lines, which supply the different cabin air outlets.
The cabin air is distributed through cabin outlets (above and below the overhead stowage compartments) and passenger individual air outlets.
To control the cabin temperature individually, the cabin is divided into two areas (Area 1 (FWD) and Area 2 (AFT)).
The used air is extracted through panels near the cabin floor.

Cabin Air Conditioning Operation

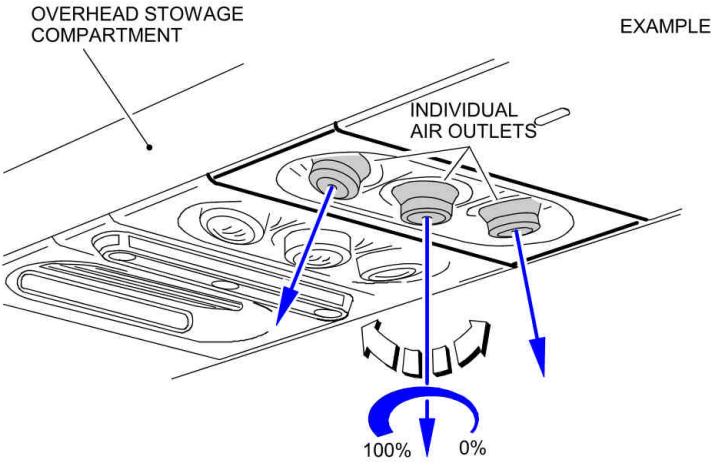


PASSENGER INDIVIDUAL AIR OUTLETS

Applicable to: ALL

The passenger service units (PSUs) below the overhead stowage compartments have passenger individual air outlets. Each air outlet is individually adjustable for flow direction and flow rate (0 % to 100 %).

Passenger Individual Air Outlets

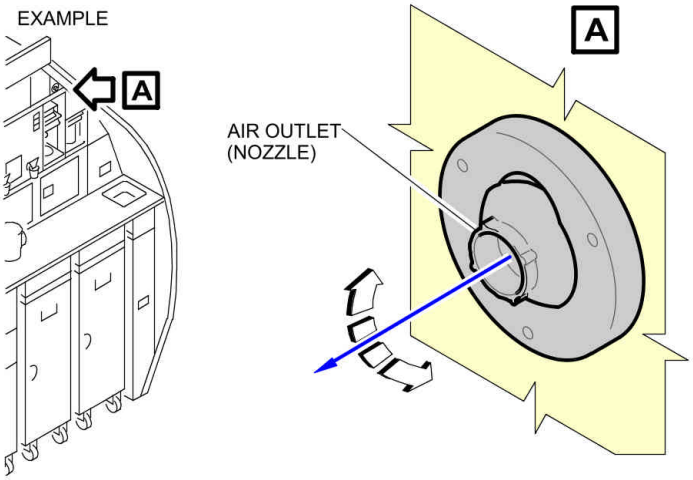


GALLEY VENTILATION

Applicable to: ALL

Some galleys have air outlets in their upper part. The air outlets are connected to the cabin air distribution system.
The air outlets are adjustable for the flow direction, and they are closed by turning them into the closed-position.
Through connections inside of the galley, the used air is extracted and completely discharged overboard.

Galley Ventilation

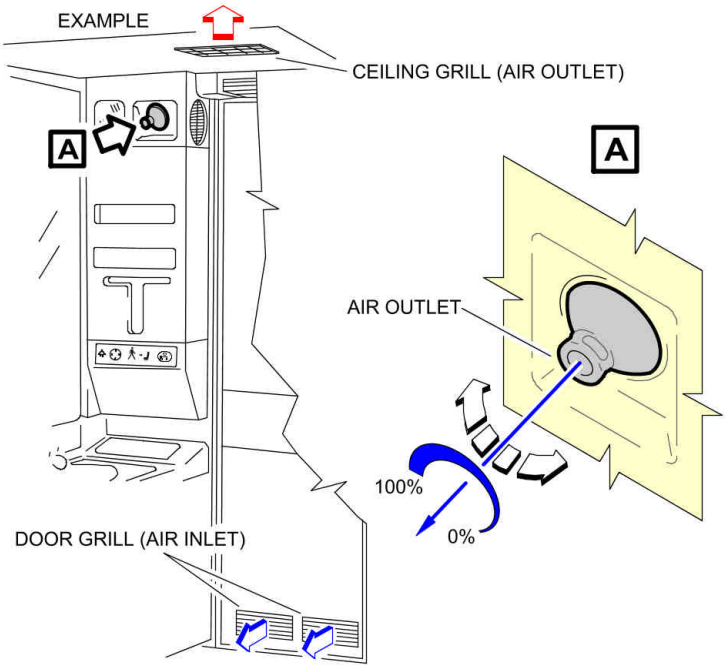


LAVATORY VENTILATION

Applicable to: ALL

Cabin air enters the lavatory through the grills in the door and through the air outlet on the Lavatory Service Unit (LSU).
The air outlet is adjustable for flow direction and flow rate (0 % to 100 %).
Through the grill in the lavatory ceiling, the used air is extracted and completely discharged overboard.
Behind the grill in the lavatory ceiling, a Smoke Detector is installed to monitor the extracted air. If there is smoke in the extracted air, a visual and aural alert comes on.

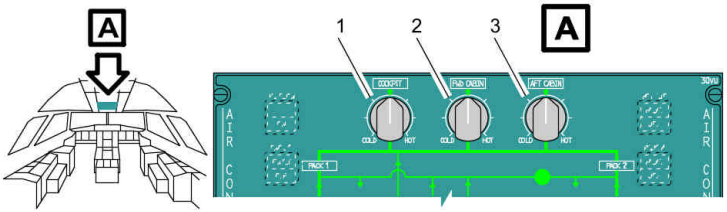
Lavatory Ventilation



TEMPERATURE CONTROL FROM COCKPIT

Applicable to: ALL

Temperature Control from Cockpit



NOC 02090 01043 0001

(1) Temperature Selector Cockpit

(2) Temperature Selector FWD Cabin

(3) Temperature Selector AFT Cabin

COCKPIT TEMPERATURE CONTROL

The cockpit temperature is controlled by the temperature selector cockpit (1) on the cockpit overhead panel (30VU).
The temperature can be controlled between 18 °C (64 °F) (Cold) and 30 °C (86 °F) (Hot). The 12 o'clock position is 24 °C (75 °F).

CABIN TEMPERATURE CONTROL

Basically the cabin areas temperatures are controlled by the temperature selectors FWD cabin (2) and aft cabin (3) on the cockpit overhead panel (30VU).
The temperature can be controlled between 18 °C (64 °F) (Cold) and 30 °C (86 °F) (Hot). The 12 o'clock position is 24 °C (75 °F).

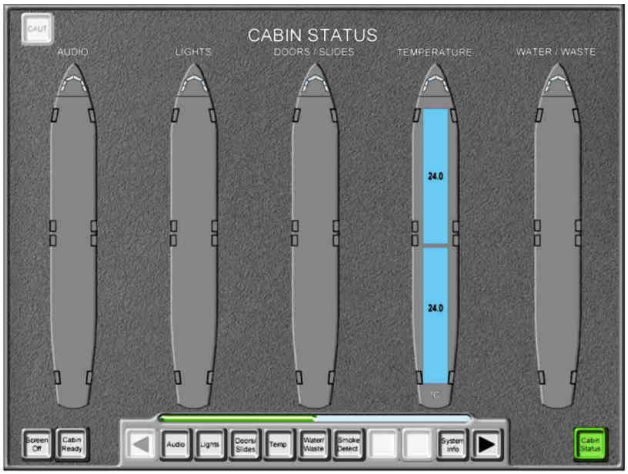
TEMPERATURE CONTROL FROM CABIN

Criteria: K9049, SA
Applicable to: MSN 2649

Additional to the cabin temperature selection in the cockpit, the cabin temperature can be adapted by the FAP. The temperature deviation is limited to plus or minus 2.5 °C (4.5 °F) from the general temperature selection in the cockpit.

SYSTEM OPERATION FROM FAP

Cabin Status Page

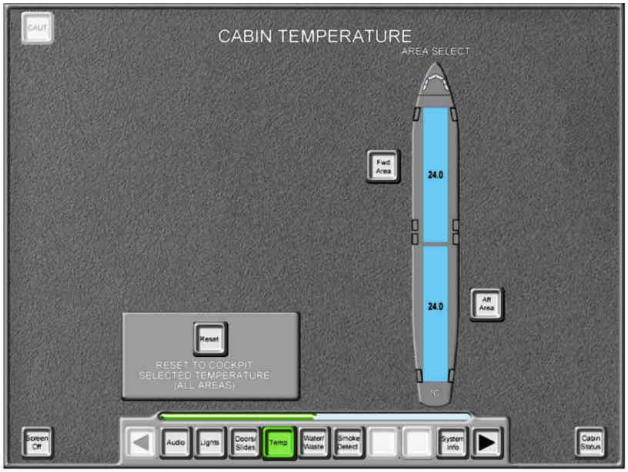


To activate the page Cabin Temperature on the FAP screen:

- On the system and function keys touch the key Temp.
  or
- On the display area touch the aircraft symbol below the title Temperature

The page Cabin Temperature comes on.

Cabin Temperature Page

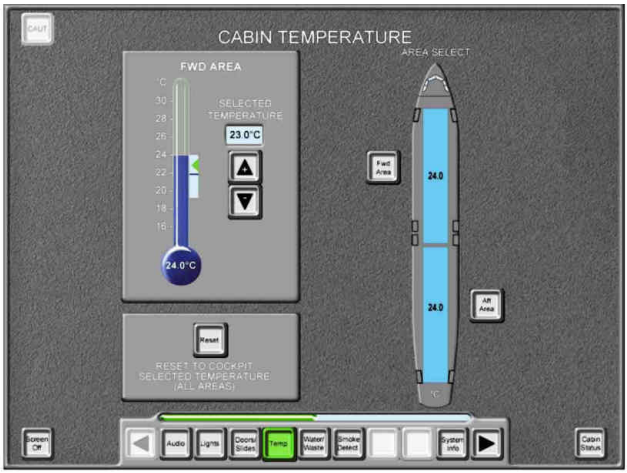


To reset the temperature deviations of the cabin areas back to the pre-selected cabin temperature in the cockpit, touch the key RESET.

To change one cabin area temperature:

- Touch an area key
  (additionally the Area Temperature Control Window of the selected area appears).

Area Temperature Control Window



- Touch the key + to increase or touch the key - to decrease the temperature of the selected cabin area.

The cockpit pre-selection, the cabin selection and the actual cabin temperature are indicated on the virtual thermometer.
The air conditioning system needs a certain time to reach the selected cabin temperature.
To reset the cabin area temperature deviation back to the pre-selected cabin temperature in the cockpit, touch the key RESET.

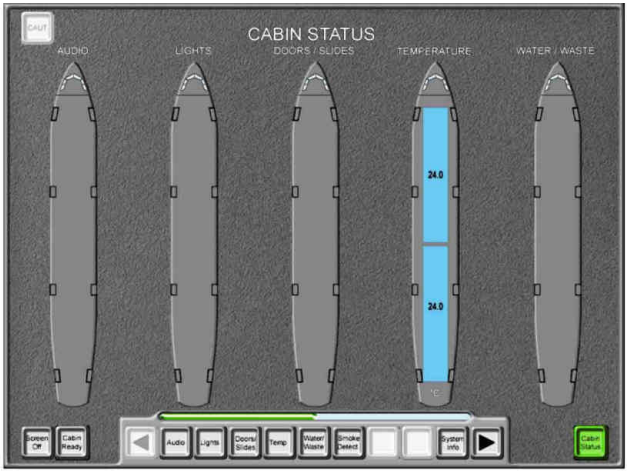
TEMPERATURE CONTROL FROM CABIN

Criteria: K9256, SA
Applicable to: MSN 2927-3120

Additional to the cabin temperature selection in the cockpit, the cabin temperature can be adapted by the FAP.
The temperature deviation is limited to plus or minus 2.5 °C (4.5 °F) from the general temperature selection in the cockpit.

SYSTEM OPERATION FROM FAP

Cabin Status Page



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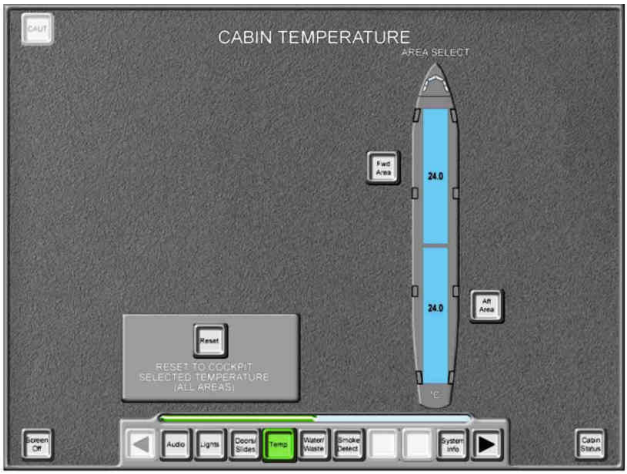
Cabin Temperature Page

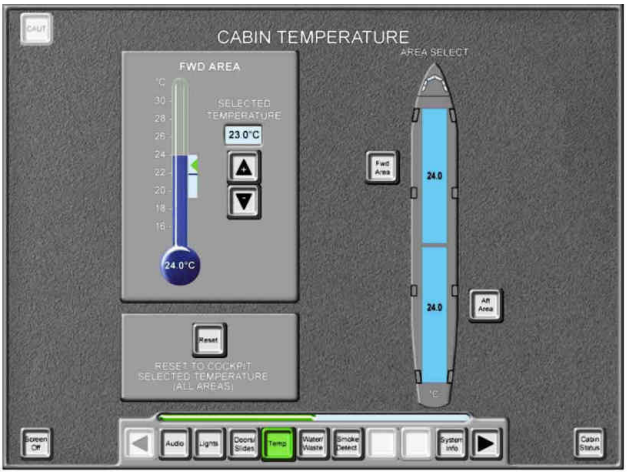


To reset the temperature deviations of the cabin areas back to the pre-selected cabin temperature in the cockpit, touch the key RESET.

To change one cabin area temperature:

- Touch an area key
  (additionally the Area Temperature Control Window of the selected area appears).

Area Temperature Control Window



- Touch the button + to increase or touch the button - to decrease the temperature of the selected cabin area.

The cockpit pre-selection, the cabin selection and the actual cabin temperature are indicated on the virtual thermometer.
The air conditioning system needs a certain time to reach the selected cabin temperature.
To reset the cabin area temperature deviation back to the pre-selected cabin temperature in the cockpit, touch the key RESET.

CABIN TEMPERATURE SELECTION INFORMATION

Applicable to: ALL

The system is designed to minimize flight crew workload. The cockpit and cabin selections should be set only once prior to flight. Throughout the flight the system takes care of cabin temperature regulation and, under normal operating conditions, there is no need to change the selection during flight. It is recommended to follow these guidelines:

Note: *Any change of the temperature selection will cause the system to blow either colder or warmer air into the cabin which may result in a temporary discomfort for the passengers. To reach a stabilized temperature again the system needs about 20 min : 10 min for cabin temperature adjustment plus 10 min to compensate for furniture and lining heat dissipation. After a cabin temperature change, allow the cabin temperature to stabilize before you change the selected temperature again.*

ON GROUND, PRIOR TO FLIGHT

1. Both cabin temperature selectors FWD Cabin and AFT Cabin on the cockpit overhead panel (30VU) should be set to 22 °C (72 °F) (about 10 o'clock position) for ground and flight operation.
2. The cabin temperature on the FAP should be set to the cockpit selected temperature by touching the button RESET on the FAP-page CABIN TEMPERATURE.

This setting provides a comfortable cabin temperature during most operating conditions.

IN FLIGHT

1. Normally the master temperature pre-selection on the cockpit overhead panel (30VU) should not be changed during flight.
   In case a change of the cockpit pre-selection is required, the cabin crew should be informed, because there is no automatic indication in the cabin.
   Any selection on the cabin temperature selector in the cockpit must be validated by touching the button RESET on the FAP-page Cabin Temperature. As a consequence, the FAP-page Cabin Temperature will show the new selected cabin temperature including the altitude correction for each of the cabin areas. Without this validation the new setting in the cockpit would not take affect in the system.
2. If required the cabin crew should adjust the area temperature on the FAP by normally not more than plus or minus 0.5 °C (0.9 °F) per setting.

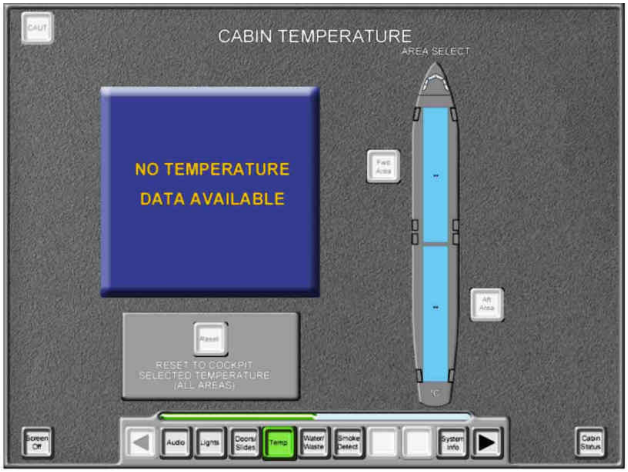
FAP FAILURE MESSAGES

Criteria: K9049, SA
Applicable to: MSN 2649

Three different failure messages can be shown on the FAP.

NO TEMPERATURE DATA AVAILABLE

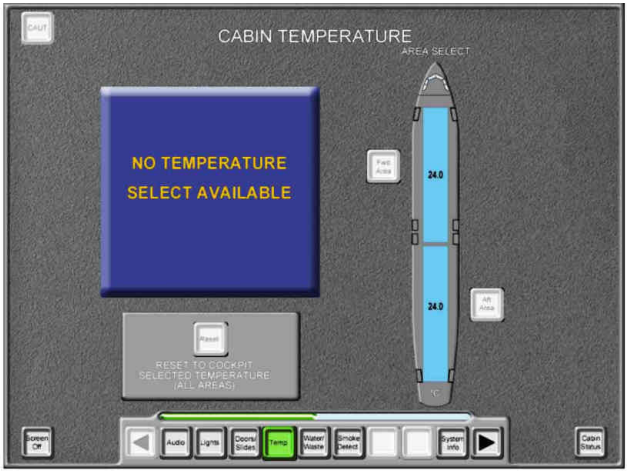
No Temperature Data Available



No temperature control is available on the FAP.
In this case the cabin temperature can be only controlled by using the temperature selectors FWD Cabin and AFT Cabin on the cockpit overhead panel (30VU).

NO TEMPERATURE SELECT AVAILABLE

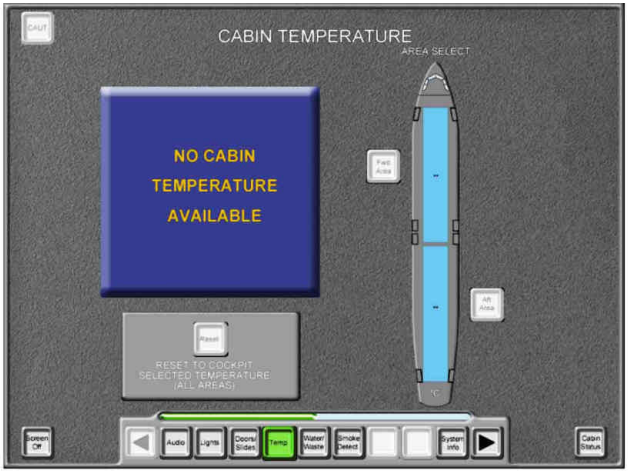
No Temperature Select Available



No temperature control is available on the FAP.
In this case the cabin temperature can be only controlled by using the temperature selectors FWD Cabin and AFT Cabin on the cockpit overhead panel (30VU).

NO CABIN TEMPERATURE AVAILABLE

No Cabin Temperature Available



No temperature control is available on the FAP.
In this case the cabin temperature can be only controlled by using the temperature selectors FWD Cabin and AFT Cabin on the cockpit overhead panel (30VU).

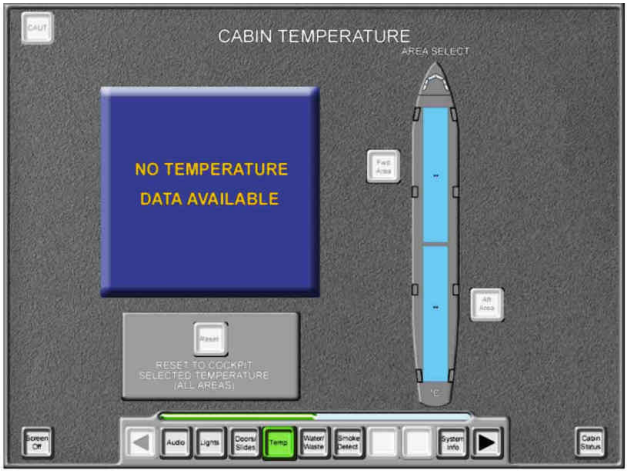
FAP FAILURE MESSAGES

Criteria: K9256, SA
Applicable to: MSN 2927-3120

Three different failure messages can be shown on the FAP.

NO TEMPERATURE DATA AVAILABLE

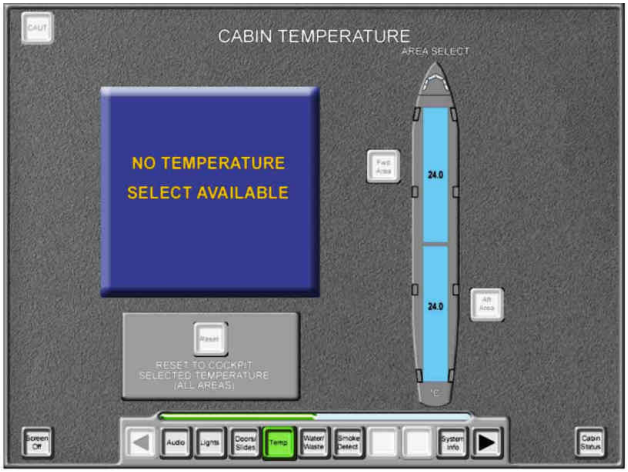
No Temperature Data Available



No temperature control is available on the FAP.
In this case the cabin temperature can be only controlled by using the temperature selectors FWD Cabin and AFT Cabin on the cockpit overhead panel (30VU).

NO TEMPERATURE SELECT AVAILABLE

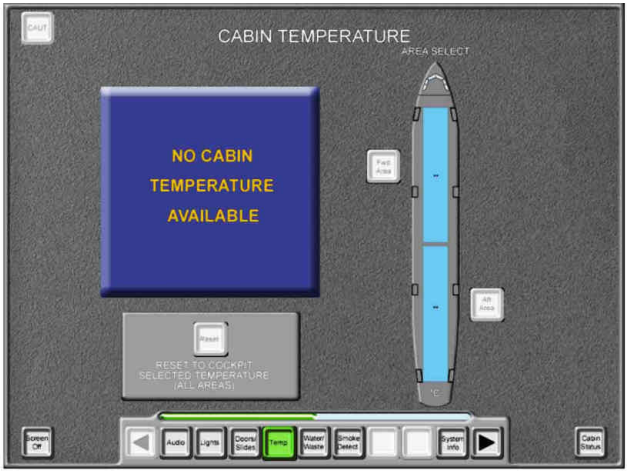
No Temperature Select Available



No temperature control is available on the FAP.
In this case the cabin temperature can be only controlled by using the temperature selectors FWD Cabin and AFT Cabin on the cockpit overhead panel (30VU).

NO CABIN TEMPERATURE AVAILABLE

No Cabin Temperature Available



No temperature control is available on the FAP.
In this case the cabin temperature can be only controlled by using the temperature selectors FWD Cabin and AFT Cabin on the cockpit overhead panel (30VU).

HEATED FLOOR PANELS AT FWD DOOR 1

Applicable to: MSN 3120

Not applicable.

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SYSTEM FUNCTIONS AND COMPONENTS

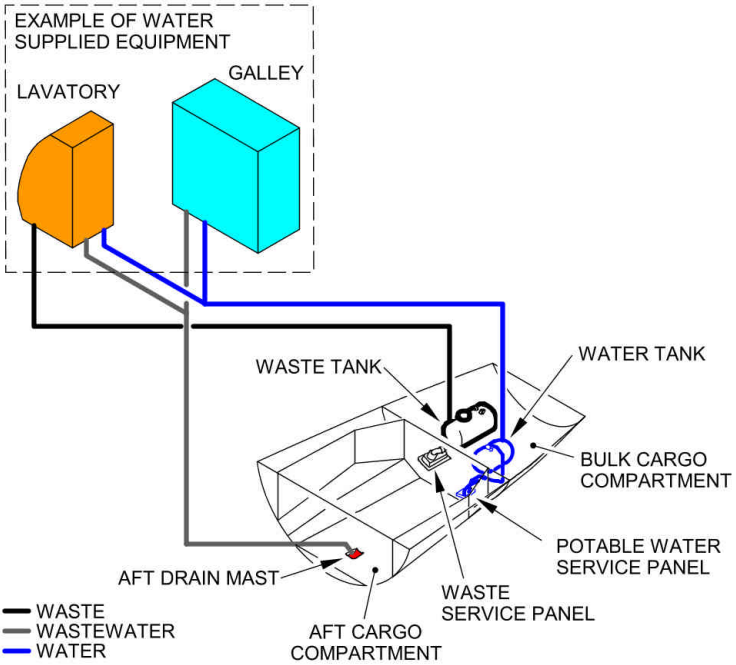
Applicable to: ALL

The function of the water system is to supply water from the water tank to:
- The galleys
- The lavatories.

The function of the waste system is to discard:
- The waste from the toilets in the lavatories to the waste tank
- The wastewater from the lavatory wash-basins and galley sinks through the heated drain masts.

The FAP, located at the FWD purser station is used to indicate the water/waste.

System Components (Example)



WATER TANK

1. One water tank is located:

- LH behind the bulk cargo compartment, near the partition wall, or
- In the underfloor area RH behind the forward cargo compartment.

2. Capacity
   The water tank has a usable capacity of 200 l (52 US Gal).

WATER SUPPLY

The pressurization of the water system is achieved with compressed air. It makes sure that the water flows from the water tank to the galleys and lavatories.

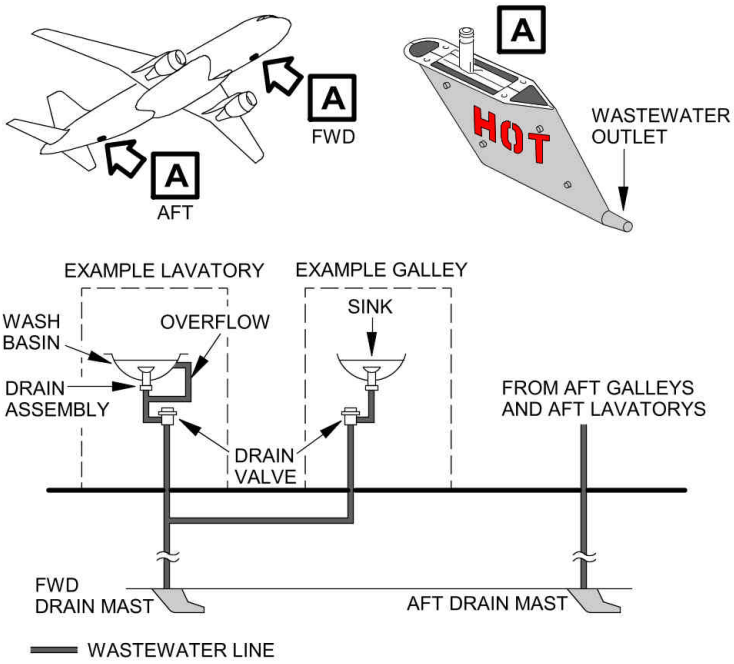
MANUAL WATER SHUT-OFF VALVE

Manual water shut-off valves are installed in each wet galley and lavatory. The water supply stops, when the manual water shut-off valves are closed.

WASTEWATER DRAINAGE

1. General
   The wastewater from the galley and lavatory wash basins is discarded overboard through the FWD and AFT heated drain masts.
2. Description
   - Lavatories
     - Drain-Valve Assembly (Drain Assy)
       The drain assy is installed at the bottom of the wash basin and is connected to its overflow.
     - Drain Valve
       The drain valve is installed below the drain assy in the wastewater line of the lavatory. It lets the wastewater drain to the drain masts and prevents the loss of air pressure through the drain mast.
   - Galleys
     - Drain Valve
       The drain valve is installed below the sink in the wastewater line of the galleys. It enables the wastewater drain to the drain masts and prevents the loss of air pressure through the drain mast.

Wastewater Drainage



WASTE TANK

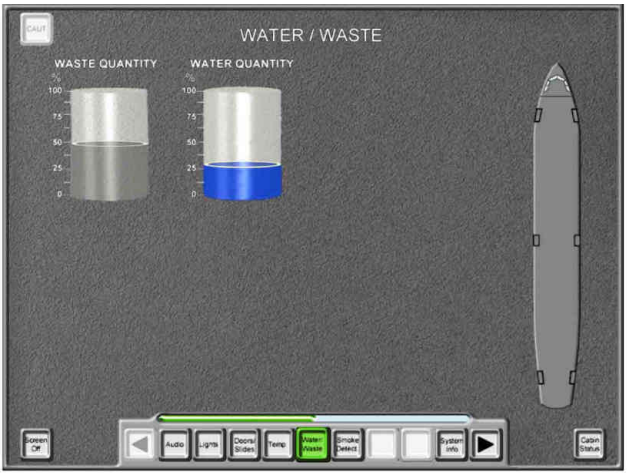
1. Location
   One waste tank is on board the aircraft located RH behind the bulk cargo compartment, near the partition wall.
2. Capacity
   The waste tank has a usable capacity of 200 l (52 US Gal).

WATER AND WASTE QUANTITY INDICATION

On the FAP touch screen, located at the FWD purser station at DOOR 1L the quantity of water and waste is displayed:

ACTION on the FAPTouch Screen	RESULT on the FAPTouch Screen
Touch the Cabin Status soft key.	The CABIN STATUS page is displayed.
Touch the Water/Waste soft key.	The WATER/WASTE page is displayed

Water and Waste Quantity Indication (Example)



The WATER/WASTE page displays:

- In the LH upper part of the FAP-touch-screen the waste quantity in % and a bar. Below the bar the total max. volume is shown
- In the middle of the upper part of the FAP-touch-screen the water quantity in % and a bar. Below the bar the total max. volume is shown.

FAP MESSAGES

Applicable to: ALL

WATER AND WASTE SYSTEM FAP MESSAGES:

Messages shown on FAP WATER/WASTE PAGE.

FAP Message BASELINE DEFINITION	ACTION Cabin Crew	INFORMATION
WWP-list box: VACUUM SYSTEM DISABLED ON GROUND.	Report message to flight deck and make an entry in the logbook.	Indicates a malfunction of the vacuum generator. The toilet will work normally at high altitude with cabin differential pressure.
WWP-list box: VACUUM SYSTEM DISABLED - GROUND SERVICING.	Information	Toilets INOP due to servicing.

Continued on the following page

Continued from the previous page

FAP Message BASELINE DEFINITION	ACTION Cabin Crew	INFORMATION
WWP-list box: CHECK LAVATORY - POWER SUPPLY: LAV XX	C/B CHECK: **CAUTION** It is not allowed to reset a tripped C/B. If you reset it, you can cause an overload to another system. MAKE AN ENTRY IN THE LOGBOOK TO RECORD THE TRIPPED C/B. CHECK PROPER FUNCTION OF THE LAVATORY (e.g. flush cycle, no leak from rinse valve etc.). IF NECESSARY DEACTIVATE THE LAVATORY *Refer to 02-110 Lavatory*	INFO MCDU for maintenance action.
WWP-list box: VACUUM SYSTEM DISABLED - WASTE TANK FULL	DEACTIVATE THE AFFECTED LAVATORIES: *Refer to 02-110 Lavatory*	INFO MCDU for maintenance action.
WWP-list box: VACUUM SYSTEM DISABLED - WASTE TANK FULL blue card: NO WASTE QUANTITY DATA AVAILABLE	Information	INFO MCDU for maintenance action.
WWP-list box: WASTE TANK NOT EMPTY - CHECK LEVEL - GROUND SERVICE REQUIRED	Only on ground: servicing required.	Waste tank not empty (30 %) ground service required.
WWP-list box: MAINTENANCE REQUIRED - WASTE WATER	NO ACTION	INFO MCDU for maintenance action. (Last Leg Report)
WWP-list box: SHUT OFF WATER SUPPLY : LAV X, ...	CHECK LAVATORY FOR CORRECT FUNCTION (RINSE VALVE FAILURE), IF NECESSARY DEACTIVATE THE LAVATORY : *Refer to 02-110 Lavatory*	INFO MCDU for maintenance action.
WWP-list box: VACUUM SYSTEM DISABLED - WATER DEPRESS ACTIVE	Information	Toilets INOP due to water depressurization..

WATER and WASTE SYSTEM FAP Messages

WATER AND WASTE SYSTEM FAP MESSAGES ICE PROTECTION SYSTEM

Messages shown on FAP SYSTEM INFO PAGE under the button 'ice prot.'.

FAP Message (BASELINE DEFINITION) WWP-list box	ACTION Cabin Crew	INFORMATION
DRAINMAST HEATER FWD FAIL.	FWD lavatories and galleys must not be used. Set the lavatories INOP *Refer to 02-110 Lavatory*. Do not discard liquids through the galley sink.	INFO MCDU
DRAINMAST UNIT FWD FAIL	FWD lavatories and galleys must not be used. Set the lavatories INOP *Refer to 02-110 Lavatory*. Do not discard liquids through the galley sink.	INFO MCDU
DRAINMAST HEATER AFT FAIL	AFT lavatories and galleys must not be used. Set the lavatories INOP *Refer to 02-110 Lavatory*. Do not discard liquids through the galley sink.	INFO MCDU
DRAINMAST UNIT AFT FAIL	AFT lavatories and galleys must not be used. Set the lavatories INOP *Refer to 02-110 Lavatory*. Do not discard liquids through the galley sink.	INFO MCDU

WATER and WASTE SYSTEM FAP messages ICE PROTECTION SYSTEM

WATER

Applicable to: ALL

Unexpected waterflow in a lavatory

ACTION		RESULT/SOLUTION YES	NO
1.	Operate the manual shut-off valve.		

	ACTION	RESULT/SOLUTION YES	RESULT/SOLUTION NO
	In the related lavatory, open the access door and turn control handle of the manual shut-off valve to the closed position. **CAUTION** Switch off the water heater after the manual water shut-off valve has been closed. This will prevent the water heater from heating up while empty and will avoid the risk of potential hazards. *Please lock the lavatory for the rest of the flight.* *Make an entry in the logbook to record the deactivation.*	END	END

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LOCATION OF LAVATORIES

Criteria: SA
Applicable to: MSN 2927-3120

1

Varied lavatories can be installed in the cabin area at different positions, normally in the forward and / or in the aft cabin area.
For more information about the location: Refer to chapter 02.30 "Cabin Layout".
Each lavatory has a toilet function and a washroom function.

Following connections are provided:
- A cold and hot water supply.
- A waste and wastewater disposal.
- An air outlet.
- An electrical power supply (razor socket).

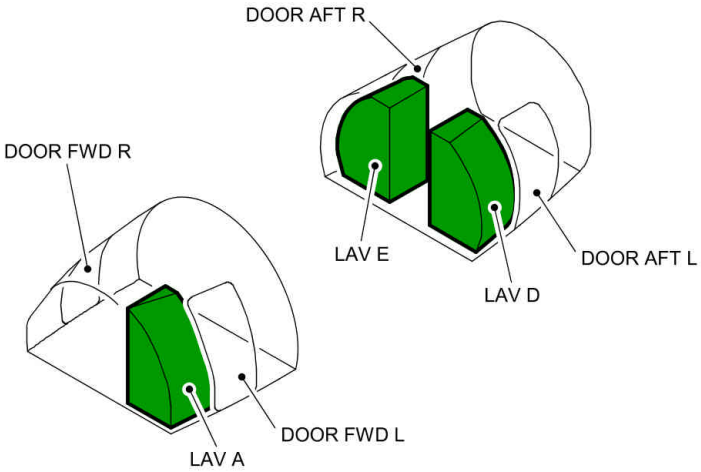
LOCATION OF LAVATORIES A,D AND E

Criteria: K10190, SA
Applicable to: MSN 2649

3 lavatories are installed in the cabin area at position A,D and E.
Each lavatory has a toilet function and a washroom function.

Following connections are provided:
- A cold and hot water supply.
- A waste and wastewater disposal.
- An air outlet.
- An electrical power supply (razor socket).

Location (A, D and E)



LAVATORY DOOR TYPES

Applicable to: ALL

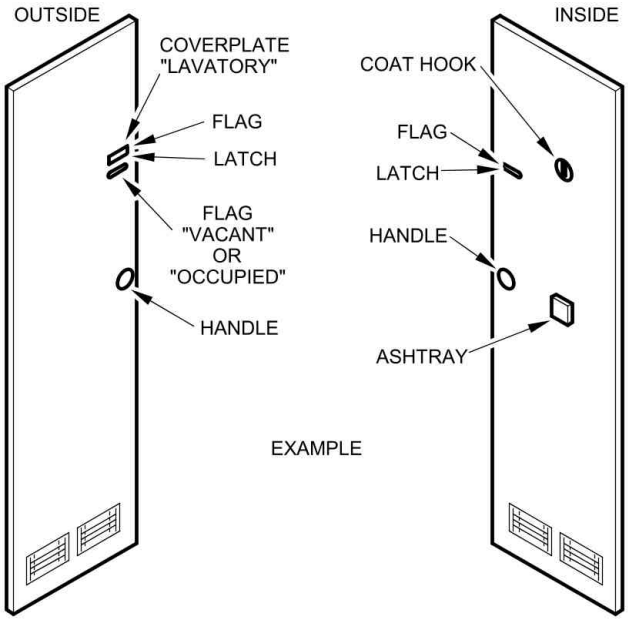
Two different door types can be installed:
- Single blade door (opens outwards).
- Bi-folding door (opens inwards).

All lavatory doors are fitted with:
- A lock including a VACANT (green) or OCCUPIED (red) indicator flag.
-

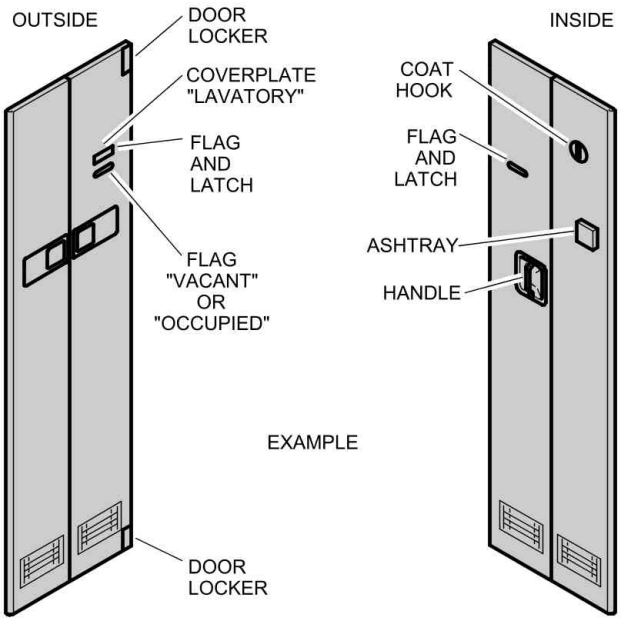
WARNING	Make sure that the ashtray is always in the closed position! Otherwise parts of the ashtray which are not in line with the lavatory door surface can cause injury to crew members or passengers.

  A coat hook.
- An ashtray.

Single Blade Door



Bi-Folding Door



LAVATORY DOOR OPERATION

Applicable to: ALL

DOOR LOCKING MECHANISM

NORMAL OPERATION

In each door is a latch to operate the locking door mechanism.

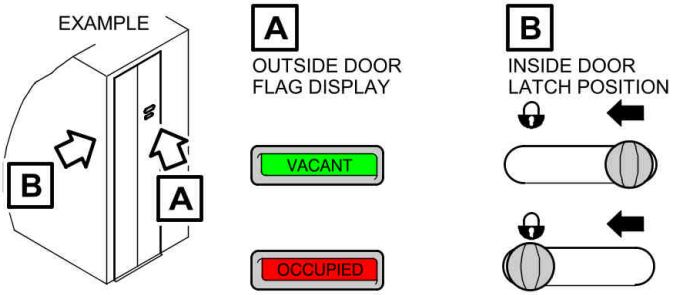
- OUTSIDE LAVATORY:

  If you read OCCUPIED the lavatory door is locked.
  If you read VACANT the lavatory door can be opened.

- INSIDE LAVATORY:

  To lock the door, move the latch toward the left respective to the lock symbol.
  To unlock the door, move the latch toward the right respective to the arrow symbol.

Locking Mechanism - Normal Operation

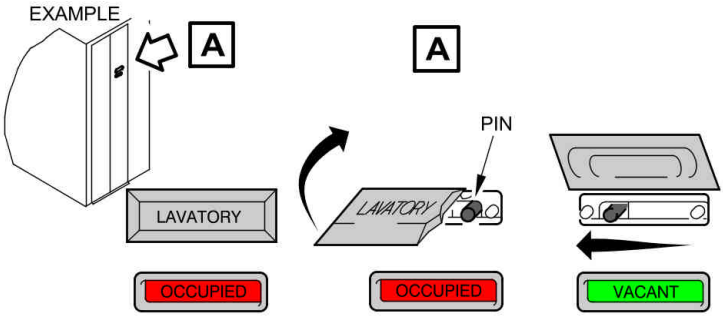


EMERGENCY UNLOCKING

It is possible to unlock a locked door from the passenger compartment side. For this do the following procedure:

- Lift the coverplate LAVATORY above the OCCUPIED flag.
- Then push the unlocking PIN from the right to the left until the flag shows VACANT.

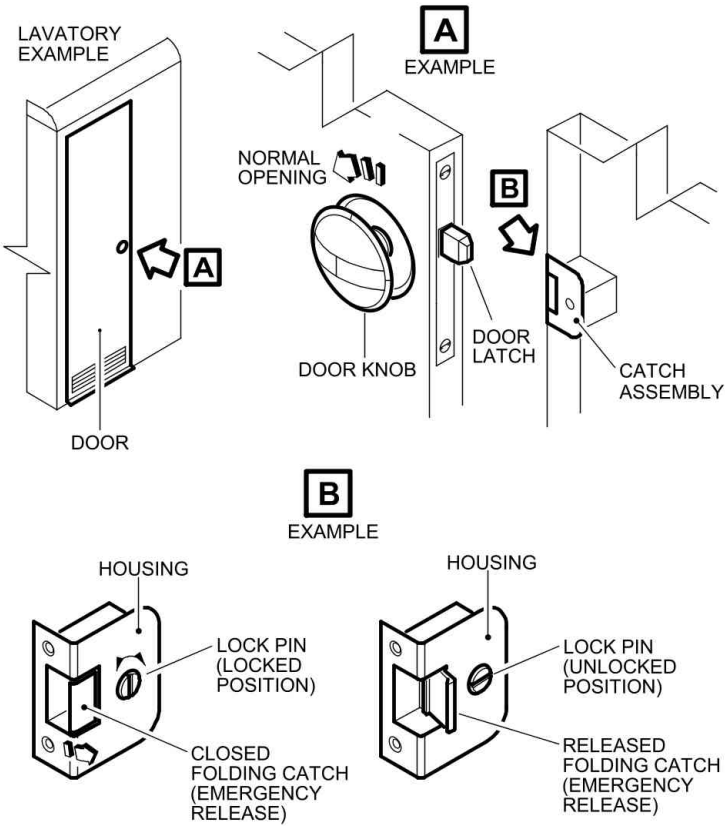
Locking Mechanism - Emergency Unlocking



DOOR LATCH EMERGENCY OPERATION (SINGLE BLADE DOOR)

The catch assembly in the door frame of a single blade door is fitted with a folding catch, that is operated by a lock pin. In an emergency, turn the lock pin to the left or the right with a coin, for example. The latch unlocks. Now pull the knob to open the lavatory door.

Door Latch Lavatory



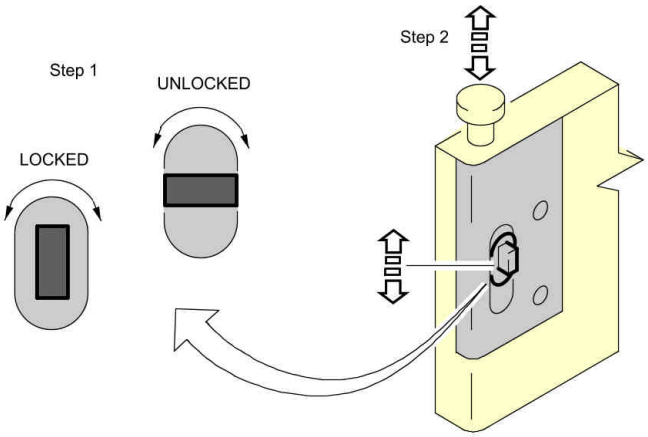
EMERGENCY OPERATION (REMOVAL) OF THE BI-FOLDING DOOR

Operation

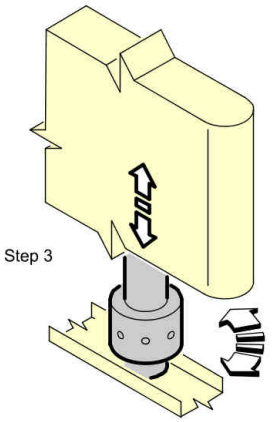
The bi-folding door has three door lockers and one damper.

- Step 1. Turn the safety pin about 90 ° to unlock the door lockers.
- Step 2. Unlock the three door locker. Move the safety pin up to release.
- Step 3. Turn the bi-folding door about 90 ° towards yourself. Then lift the bi-folding door up to release the damper.

Unlocking the BI-FOLDING DOOR Latch



DOOR DAMPER Operation



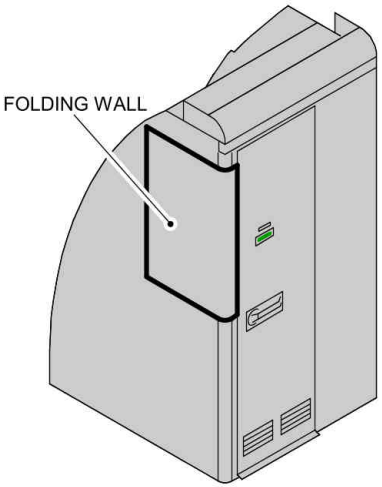
FOLDING WALL AT LAVATORY D FOR STRETCHER TRANSPORT

Applicable to: ALL

A folding wall at lavatory D is an option.
Pull the folding wall (located at lavatory D) inside when using a stretcher to transport an incapacitated person out of the cabin. The stretcher is too large to turn it from the aisle to the door, so the folding wall enlarges the space for the stretcher transport.

If there is a bi-folding door installed, it must be removed first. (*Refer to 02-110 Lavatory Door Operation* Removal of the bi-folding door).

Folding Wall at Lavatory D



WARNING	Pull the folding wall at lavatory D inside each time before using a stretcher for people transport. Otherwise additional injury to the person on the stretcher is possible.

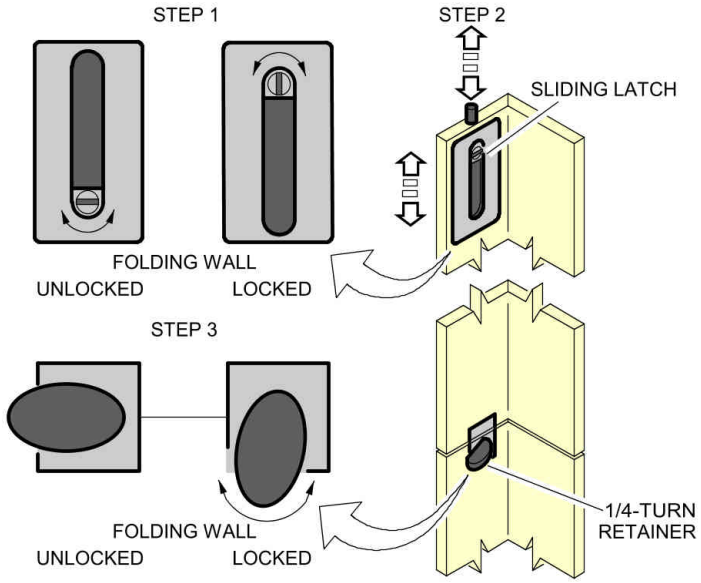
HOW TO OPERATE THE FOLDING WALL

HOW TO OPEN THE FOLDING WALL

Note: *It is possible that there is a CAS installed next to lavatory D (option). Make sure that the CAS does not obstruct the operation of the folding wall as well as the use of the stretcher. Remove the headrest of the related CAS. See Headrest of the CAS.*

1. Fully open the lavatory door and leave it open.
2. Unlock the folding wall from the door frame inside the lavatory.

Operating Elements of the Folding Wall



- Step 1: Unlock the sliding latch with a 1/4 turn from the vertical to the horizontal position.
- Step 2: Move the sliding latch down to release it and then turn it again to the locked (vertical) position. The sliding latch is released and secured.
- Step 3: Turn the handle of the 1/4 turn retainer to the left side. This moves the retainer from the locked to the unlocked position. Then release the folding wall (perhaps it is necessary to find the correct retainer position through turning it a little bit to the left or right before releasing the folding wall).

3. Pull the folding wall inside the lavatory as far as possible.

CAUTION	Do not move the folding wall further if there is a resistance. The correct 1/4 turn retainer position must be found to set the folding wall free. Otherwise damage to the 1/4 turn retainer could happen.

HOW TO CLOSE THE FOLDING WALL

1. Push the folding wall back into the fixed part of the lavatory wall.

   Note: *Make sure that the folding wall aligns with the fixed part of the lavatory wall.*

2. Lock the folding wall to the door frame inside the lavatory.

- Turn the handle of the 1/4 turn retainer to the right side. This moves the retainer from the unlocked to the locked position. (See figure "Operating Elements of the Folding Wall", Step 3)
- Unlock the sliding latch with a 1/4 turn from the vertical to the horizontal position. (See figure "Operating Elements of the Folding Wall", Step 1)
- Move the sliding latch up to lock it and then turn it again to the locked (vertical) position.

Note: To prevent the folding wall from unintended opening during the flight, make sure that the folding wall is locked.

3. Close the lavatory door.

HEADREST OF THE CAS

Depending on the aircraft configuration the CAS has one of the two headrest options:
- Headrest without locking mechanism
- Headrest with locking mechanism.

HOW TO REMOVE THE CAS HEADREST WITHOUT LOCKING MECHANISM

Push the headrest up until it is free.

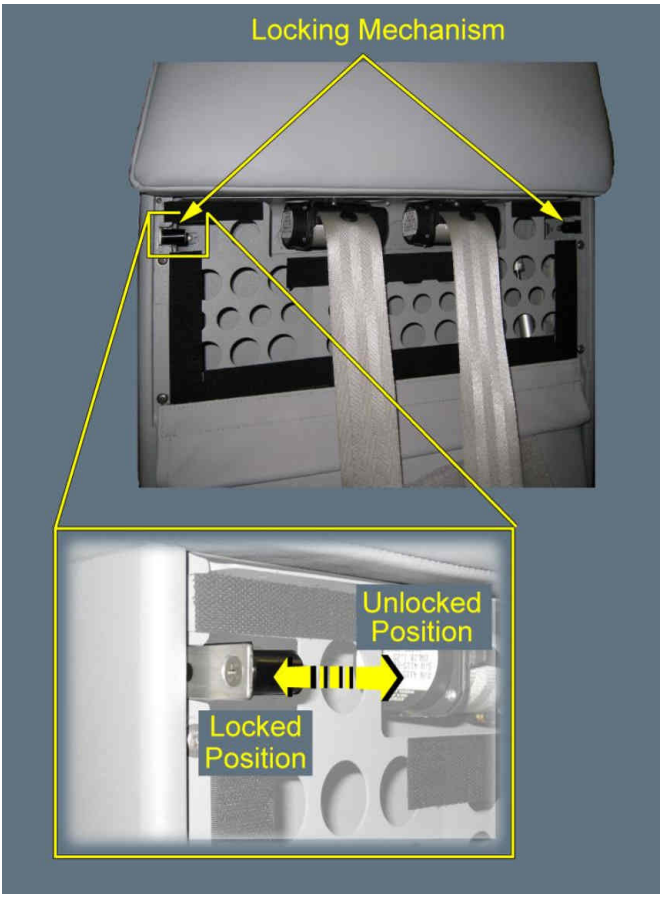
HOW TO REMOVE THE CAS HEADREST WITH LOCKING MECHANISM

1. Turn down the upper part of the backrest.

Upper Part of the Backrest

2. Unlock the headrest by pulling the two locking handles.

Locking Mechanism of the Headrest



3. Push the headrest up until it is free.

INTERIOR

Applicable to: ALL

COMPONENTS

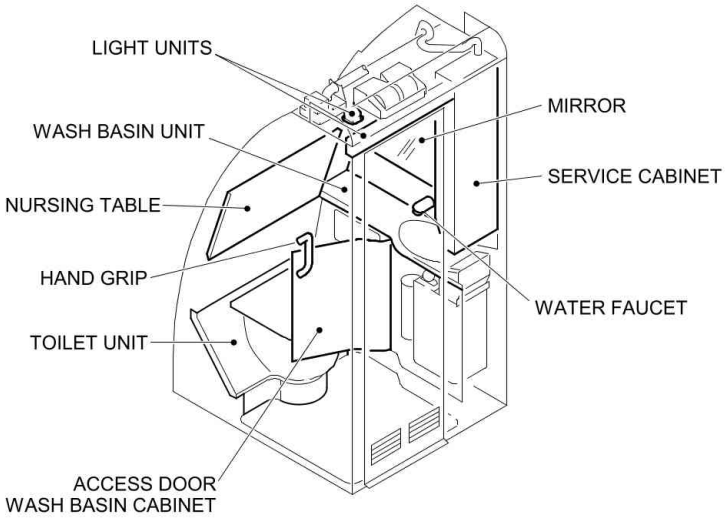
Each toilet has/could have these components:

- A toilet unit with seat and cover
- A wash basin unit with drain valve assembly, water faucet and liquid soap dispenser etc.

- A wash basin cabinet with access door
- A waste container with waste chute and closing flap
- A nursing table: *Refer to 02-110 Nursing Table*
- Light units
- Paper roll holder(s)
- A humid wipe dispenser
- A service cabinet with a box for towels, a Lavatory Service Unit (LSU): *Refer to 02-110 Lavatory Service Unit*, loudspeaker etc.
- A mirror
- Ashtrays
- A coat hook
- A handgrip
- A smoke detector: *Refer to 02-110 Lavatory Smoke Detection*
- A waste-bin fire extinguisher: *Refer to 02-110 Waste-Bin Fire Extinguisher*

Lavatory Interior

EXAMPLE OF LAVATORY



LAVATORY SERVICE UNIT (LSU)

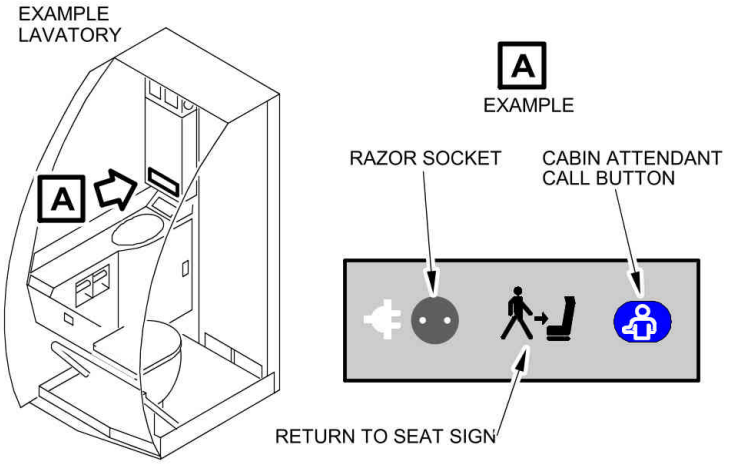
Applicable to: ALL

LAVATORY SERVICE UNIT (LSU)

All lavatories are equipped with an LSU. The LSU is installed below the mirror or at the side of the mirror, next to the door:

- A RETURN TO SEAT sign.
- A CABIN ATTENDANT CALL button.
- A razor socket.

Lavatory Service Unit (LSU)



The RETURN TO SEAT sign lights up when the FASTEN SEAT BELTS signs are switched on: *Refer to 03-080 General System Information*.
With the CABIN ATTENDANT CALL button the cabin crew is called. To reset the call the CABIN ATTENDANT CALL button must be pressed again: *Refer to 03-070 General System Information*.
The razor socket is supplied with 115 V and 60 Hz.
For the lavatory lighting operation: *Refer to 02-070 Passenger Reading Lights*.

LAVATORY SMOKE DETECTION

Applicable to: ALL

LAVATORY SMOKE DETECTION

GENERAL

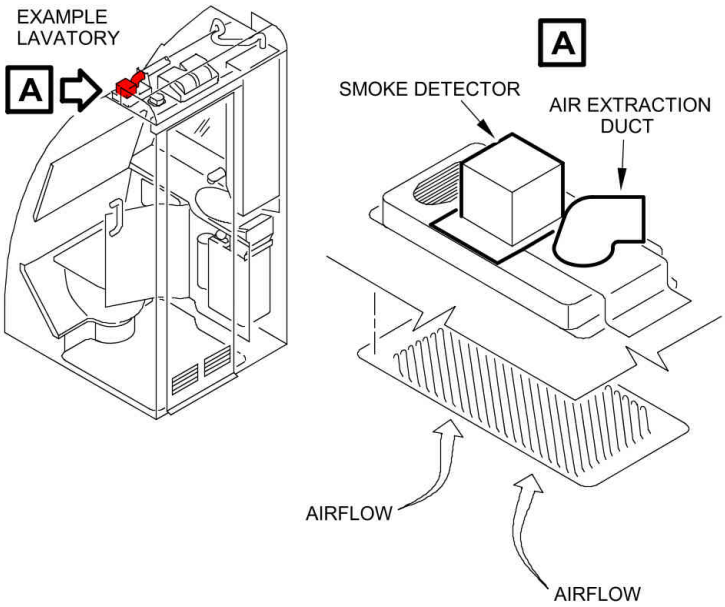
Each lavatory is equipped with a smoke detector:
Refer to 02-110 Waste-Bin Fire Extinguisher and *Refer to 09-020 LAVATORY SMOKE/FIRE PROCEDURE*.

Note: Do not use any spray next to the smoke detector to avoid a smoke alert.

LOCATION

There is a smoke detector installed in every lavatory extraction duct.

Lavatory Smoke Detection



DESCRIPTION

The smoke detection system is installed to detect smoke and/or fire in the lavatories.

The system has:
- One smoke detector for each lavatory.
- Connections to the CIDS (Cabin Intercommunication Data System) with the CIDS-SDF (CIDS Smoke Detection Function) and FWC (Flight Warning Computer).

If smoke is detected, the system gives a visual and aural warning to the flight crew and cabin crew.

The cockpit warnings are:
- A repetitive chime.
- A red master warning light.
- A smoke warning indication on the ECAM upper display unit.

The cabin warning are:
- The cabin loudspeakers give a triple chime, repeated every 30 s.
- A red flashing indicator light and a steady text on all Attendant Indication Panel (AIP).
- An amber flashing light on the related Area Call Panel (ACP).
- An amber flashing call light on the related lavatory wall.
- A red indication SMOKE DETECTED on the FAP together with a location information of the smoke alarm.

OPERATION

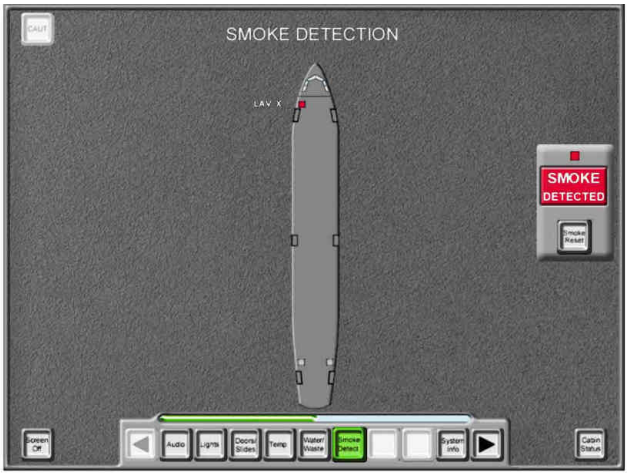
Normal Operation

If smoke enters into the measuring chamber of the detector a warning signal is transmitted to the CIDS and FWC.
The CIDS activates the related indications on FAP, AIP and ACP.
The FWC activates the related indications in the cockpit.
The aural and visual warning reset switch on the FAP stops the warning indications on the ACP and AIP.

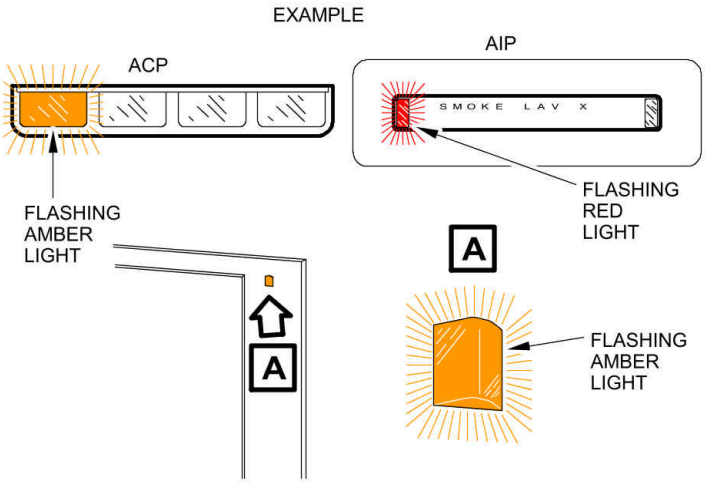
The indications lights of:
- the FAP hardkey "Smoke Reset",
- the FAP symbol "Smoke Detected" on the SMOKE DETECTION page, and
- the AAP pushbutton "Smoke Reset"

go off, when the density of smoke drops below the threshold of the respective smoke detector.

FAP Indication



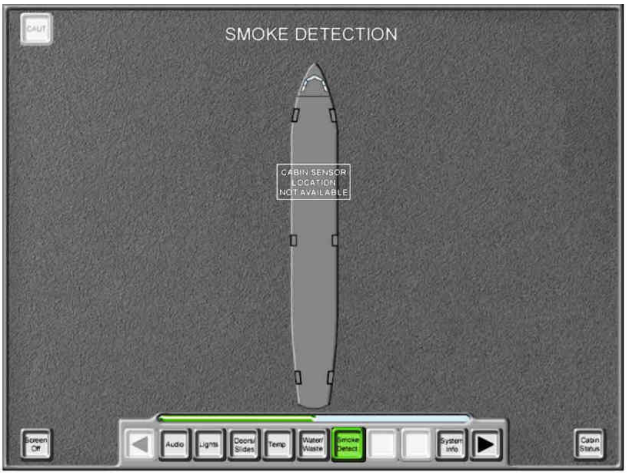
ACP and AIP Indication



Operation with a general cabin sensor configuration

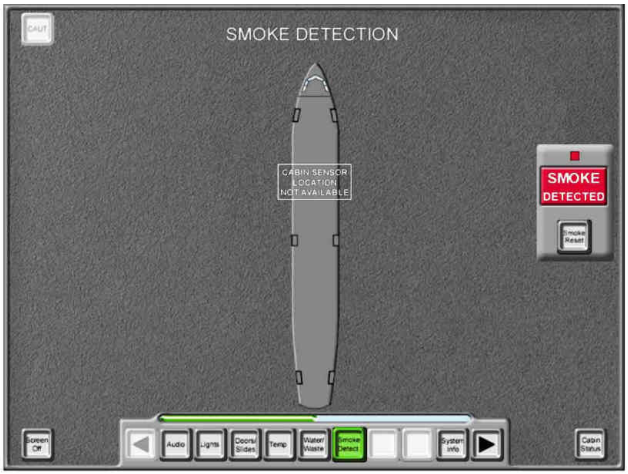
General cabin sensor configuration means that the programming of the smoke detection page does not fit the present cabin sensor configuration. In this case the smoke detection page is displayed on the FAP with a remark 'CABIN SENSOR LOCATION NOT AVAILABLE':

FAP Indication with General Cabin Sensor Configuration



In case of a smoke alert in this condition the following smoke detection page is being displayed:

FAP Indication with General Cabin Sensor Configuration and Smoke Alert



CAUTION	1. Check that all lavatories are clear of smoke. 2. In case there is a fire: Follow the fire fighting procedure. 3. Monitor for the remainder of the flight to ensure that the lavatory remains clear of smoke.

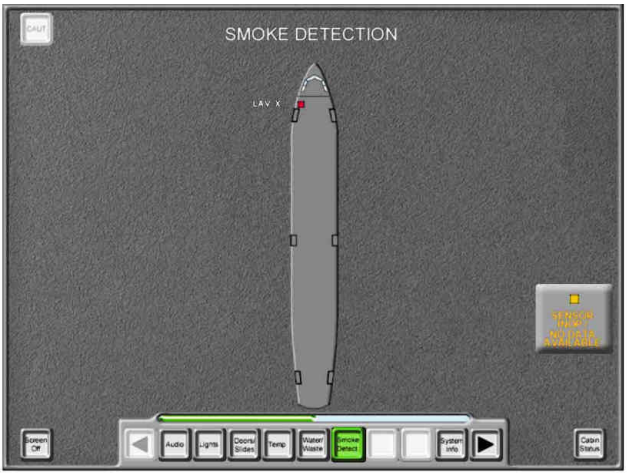
Refer to 09-020 LAVATORY SMOKE/FIRE PROCEDURE

Operation with 'Sensor Faults' / 'No Data Available'

In case of a sensor fault the smoke detection page shows a cushion for the SENSOR INOP / NO DATA AVAILABLE: *Refer to 09-020 LAVATORY SMOKE/FIRE PROCEDURE*.

There are two possibilities for this message:
- The smoke sensor is INOP.
- The data transfer between sensor and the transfer unit (DEU) is interrupted.

FAP Indication - 'Sensor Faults' / 'No Data Available'



WASTE-BIN FIRE EXTINGUISHER

Applicable to: ALL

WASTE-BIN FIRE EXTINGUISHER

1. General
   Each lavatory is equipped with a waste-bin fire extinguisher:
   Refer to 02-110 Lavatory Smoke Detection and *Refer to 09-020 LAVATORY SMOKE/FIRE PROCEDURE*.
2. Location
   A fire extinguisher is installed above the waste bin in each lavatory.

   Note: *The indicator on the gauge must show into the green area to ensure full operation in case of a fire.*

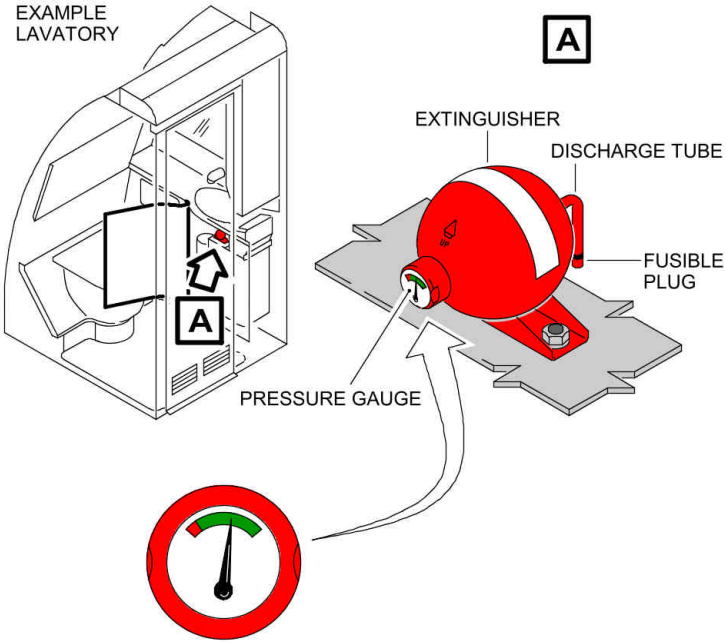
3. Description

   Each fire extinguisher has these main components:
   - A spherical container with a mounting bracket.
   - A discharge tube with a fusible plug.
   - A pressure gauge indicating extinguisher condition.
   - An identification label.

4. Operation

If there is a fire in the waste bin, the fire extinguisher operates automatically. When the temperature in the waste bin increases to approximately 79 °C (174.2 °F), the fusible plug installed in the end of the discharge tube melts and lets the agent flow into the waste bin.

Waste-Bin Fire Extinguisher



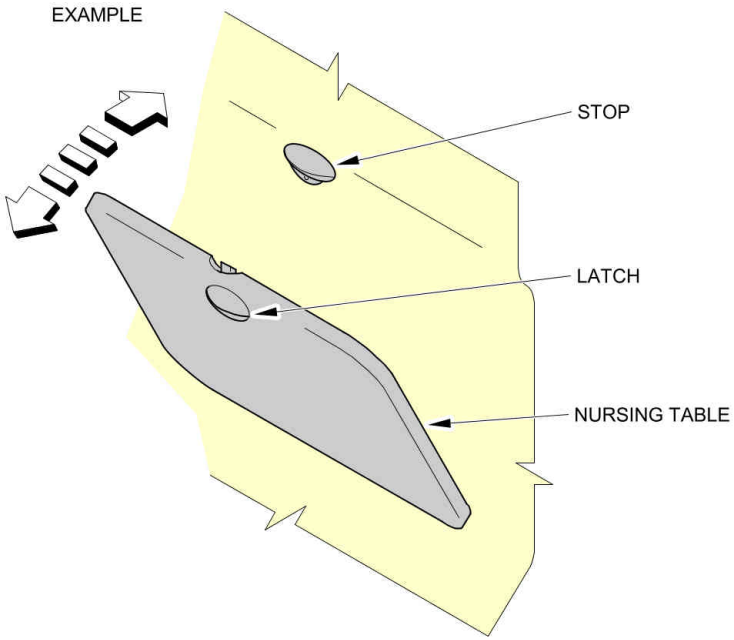
NURSING TABLE

Applicable to: ALL

NURSING TABLE

Some lavatories have a nursing table: *Refer to 02-110 Location*.

Nursing Table



1. DESCRIPTION
   The nursing table is attached to the lavatory wallpanel above the toilet unit.
2. OPERATION
   Make sure that the nursing table is clean, if necessary clean it.

Taking the nursing table into Service

a. Unlock the latch:
   Lift the latch until the nursing table is unlatched from the stop.
b. Using the latch, pull the nursing table from its position.
c. Hold and fold down the nursing table to its support, attached to the sidewall.

Taking the nursing table out of Service

Make sure that the nursing table is clean, if necessary clean it.

a. Fold up the nursing table to the stop.
b. Push the nursing table against the stop until the latch engages with a snap.

TOILET AND WASHROOM FUNCTION

Applicable to: ALL

WATER FAUCET

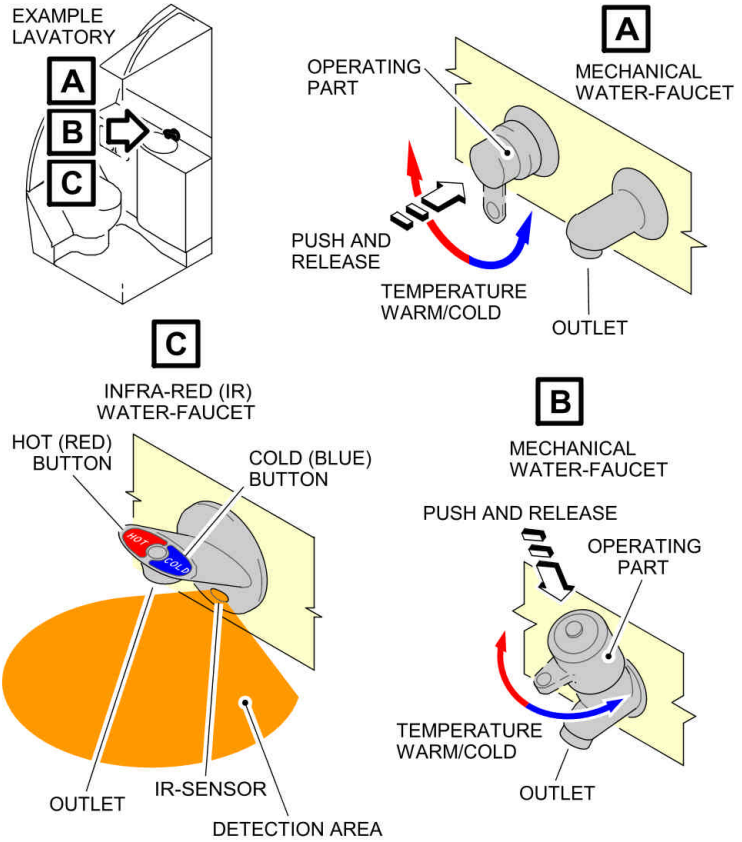
GENERAL

The water faucet is installed in each lavatory.

The water faucet has these main components:
- An outlet.
- An operating part to activate the waterflow.

DESCRIPTION AND OPERATION

Water faucet



These types of water faucet can be installed:

Mechanical Water-Faucet

Push and release the knob of the water faucet. The water flow starts and stops automatically.

On knobs with red and blue indication the temperature of the water can be selected by turning the knob:

- Turning the knob to the blue direction, the water becomes colder.
- Turning the knob to the red direction, the water becomes warmer.

Infra-Red Water-Faucet

Holding the hands within the detection area the water flow starts and stops automatically.
Operating the red or the blue button for the first time, warm water flows out of the outlet.
To get hot water, operate the red button again.
To get cold water, operate the blue button again.

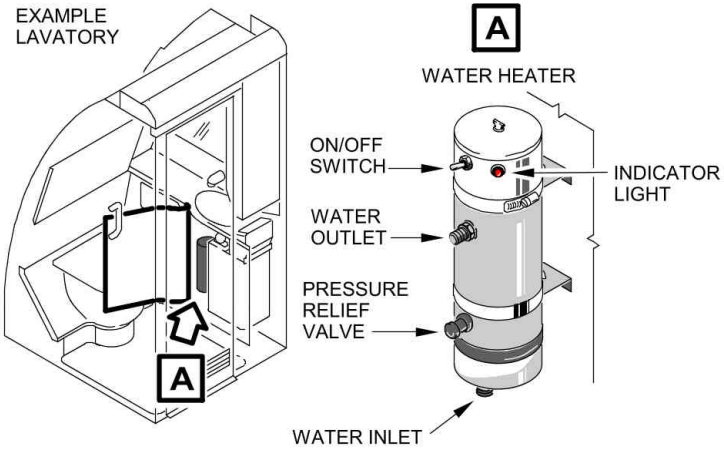
WATER HEATER

1. General
   The water heater is installed in each lavatory below the wash basin to the hot water connection of the water faucet.
2. Description

   The water heater has these main components:
   - Water inlet and water outlet connection.
   - A water tank.
   - An ON/OFF switch.
   - An indicator light.
   - A pressure relief valve.

3. Operation
   A thermoswitch regulates the water temperature between 54 °C (129.2 °F) and 50 °C (122 °F), so that the outlet temperature at the water heater is between 40 °C (104 °F) and 50 °C (122 °F).
   If the thermoswitch has a malfunction, an overheat switch cuts the electrical supply between 72 °C (161.6 °F) and 82 °C (179.6 °F).

Water Heater

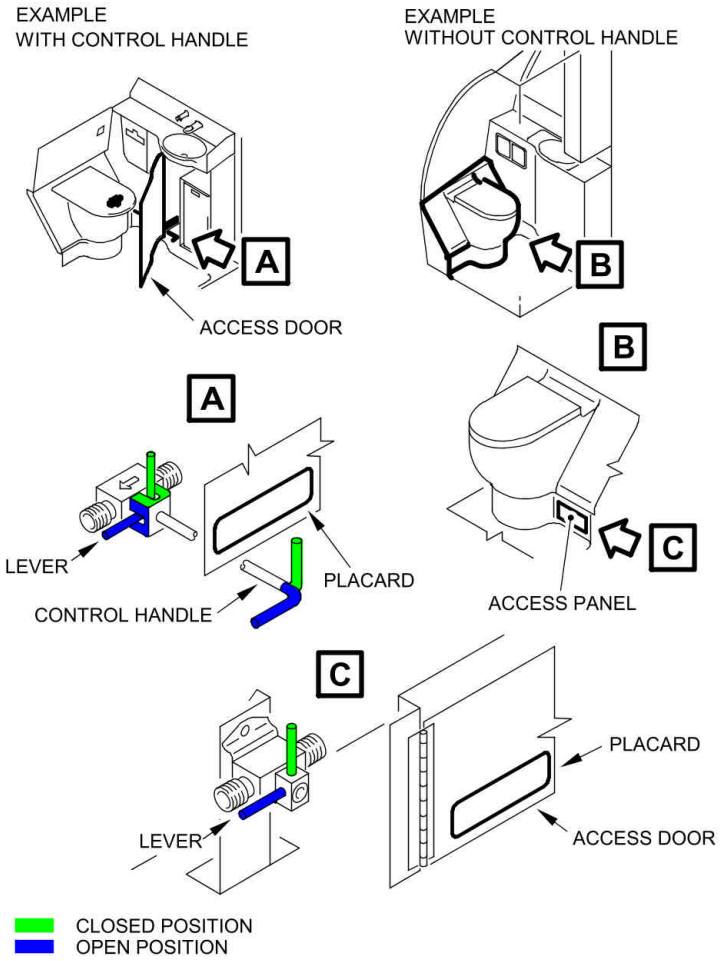


MANUAL WATER SHUT-OFF VALVE

1. Location
   In each lavatory with a right-angle arrangement of toilet and wash basin one manual water shut-off valve is installed.
   In each lavatory with an opposite arrangement of toilet and wash basin two manual water shut-off valves are installed.
2. Description
   Through the manual water shut-off valve you can stop the water supply in the lavatory. A placard shows to the related access door.
3. Operation
   Open the related access door and operate the valve to the closed position.

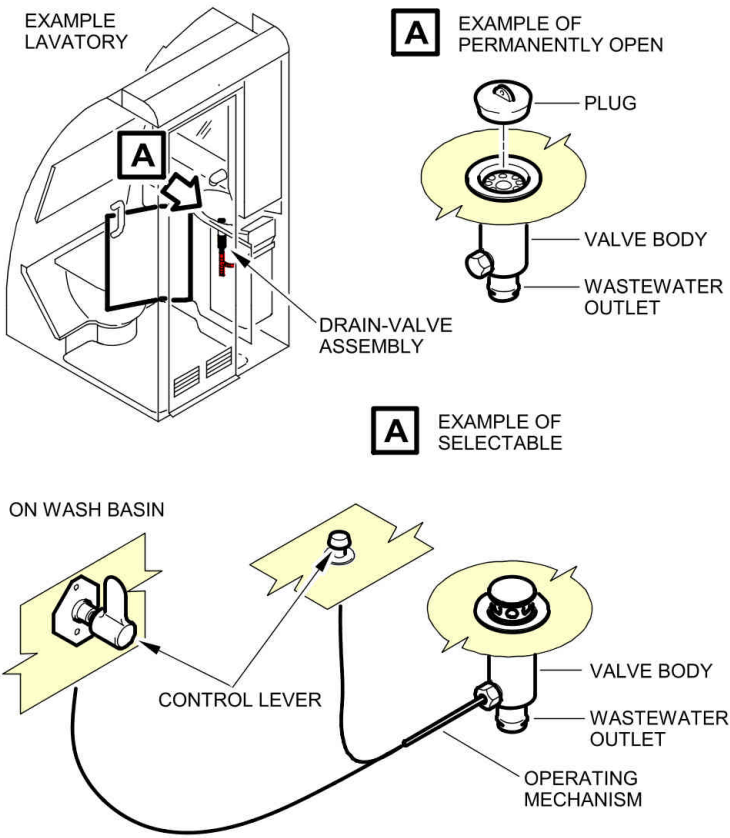
CAUTION	Switch off the water heater after the manual water shut-off valve has been closed. This will prevent the water heater from heating up while empty and will avoid the risk of potential hazards.

Manual Water Shut-Off Valve



DRAIN-VALVE ASSEMBLY

Drain-Valve Assembly



GENERAL

A drain-valve assembly is installed in the wash basin of each lavatory.

DESCRIPTION AND OPERATION

The drain-valve assembly (referred to as the drain assy) lets the wastewater drain from the wash basin. Either a selectable drain assy or permanently open drain assy is installed.

Selectable Drain Assy

With the control lever, the user can open or close the drain assy.

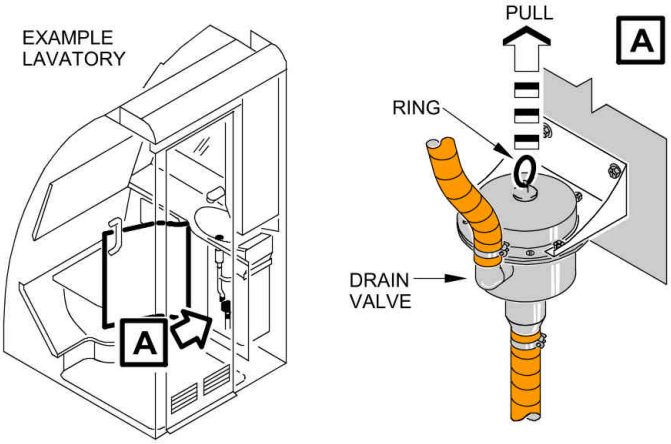
Open to let the water flow out of the wash basin.
Close to keep the water in the wash basin.

Permanently Open Drain Assy

To keep water in the wash basin, use a plug to close inlet of the drain assy.

DRAIN VALVE

Drain Valve

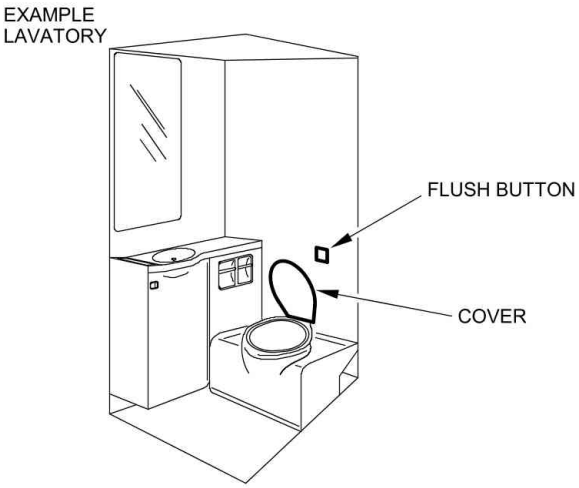


1. Location
   A drain valve is installed in the wastewater line under each wash basin.
2. Description
   The drain valve lets the wastewater drain to the drain masts and stops the leakage of air pressure through the drain mast.
3. Operation
   The drain valve opens only when water flows through the drain masts.
   By pulling the ring located at the top of the valve, it allows to override the wastewater drainage from the wash basin.

TOILET OPERATION

Close the cover of the toilet and push the flush button.

Toilet Operation



LAVATORY

Applicable to: ALL

In the lavatory is an unexpected water flow.

	ACTION	RESULT/SOLUTION YES	NO
1.	Is there an unexpected water flow in the lavatory?	Go to 2.	END
2.	Turn the water off in the lavatory. Open the access door to the manual water shut-off valve. For information on the location: *Refer to 02-110 Toilet and Washroom Function*. Turn the control handle or lever of the manual water shut-off valve into the closed position. *Has the water flow stopped?*	Go to 3.	Go to 2.
3.	To keep passengers from using the lavatory, lock the lavatory until the end of the flight. Lift-up the spring loaded cover.		

	ACTION	RESULT/SOLUTION YES	NO
	Slide the knob to the side until the indicator shows occupied.	Go to 4.	Go to 4.
4.	Log entry: Make an entry in the log about the problem and about the deactivation.	END	END

Excessive noise level due to permanent suction because of an open toilet gate valve.

	ACTION	RESULT/SOLUTION YES	NO
1.	Is there excessive noise in the lavatory?	Go to 2.	END
2.	To reduce the noise: Throw a blanket or cushion into the toilet bowl. Is the noise reduced?	Go to 3.	Go to 2.
3.	To keep passengers from using the lavatory, lock the lavatory until the end of the flight: Lift-up the spring loaded cover. Slide the knob to the side until the indicator shows occupied.	Go to 4.	Go to 3.
4.	Log entry: Make an entry in the log about the problem and about the deactivation.	END	END

The lavatory has to be locked due to other reasons (decision of cabin crew members).

	ACTION	RESULT/SOLUTION YES	NO
1.	To keep passengers from using the lavatory, lock the lavatory until the end of the flight: Lift-up the spring loaded cover. Slide the knob to the side until the indicator shows occupied.	Go to 2.	Go to 2.
2.	Log entry:		

	ACTION	RESULT/SOLUTION YES	NO
	Make an entry in the log about the problem and about the deactivation.	END	END

DOORS AND EXITS IN THE CABIN

Criteria: P0006
Applicable to: MSN 2649

The aircraft has:
- 4 cabin doors
- 4 emergency exits (hatches).

In case of an emergency evacuation all doors and exits are used as emergency exits.

CABIN DOORS

All cabin doors are provided with emergency evacuation equipment (slides / slide-rafts) stowed in a container hinged to the lower part of the cabin doors.
The cabin doors have an initial opening movement to the inside, then they open outwards.

EMERGENCY EXITS (HATCHES)

For emergency exits the emergency evacuation equipment (slides / slide-rafts) is stowed below the cabin floor.
The emergency exits open inward. They are located above the wing box (over-wing exits).

DOORS AND EXITS IN THE CABIN

Criteria: K2113, K2675, P0006
Applicable to: MSN 2927-3120

The aircraft has:
- 4 cabin doors
- 4 emergency exits (door type C).

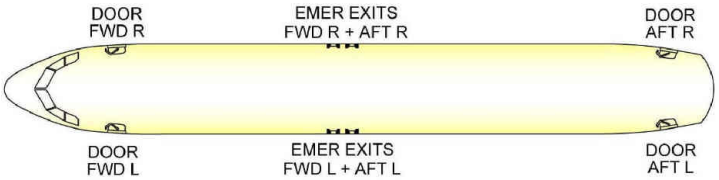
Note: *Optionally door 2 (emergency exit, door type C) on the left hand side can be used for boarding and deplaning.*

In case of an emergency evacuation all doors and exits are used as emergency exits.
All doors / exits are provided with emergency evacuation equipment (slides / slide-rafts).
For the cabin doors the emergency evacuation equipment is stowed in a container hinged to the lower part of the doors. For emergency exits (doors type C) the equipment is stowed below the cabin floor.
All the doors / exits have an initial opening movement to the inside. Then the doors / exits open outwards.

LOCATION OF THE DOORS AND EXITS

Criteria: P0006
Applicable to: MSN 2649

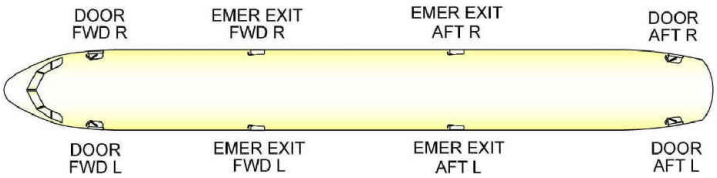
Location of Doors/Exits



LOCATION OF THE DOORS AND EXITS

Criteria: K2113, K2675, P0006
Applicable to: MSN 2927-3120

Location of Doors/Exits

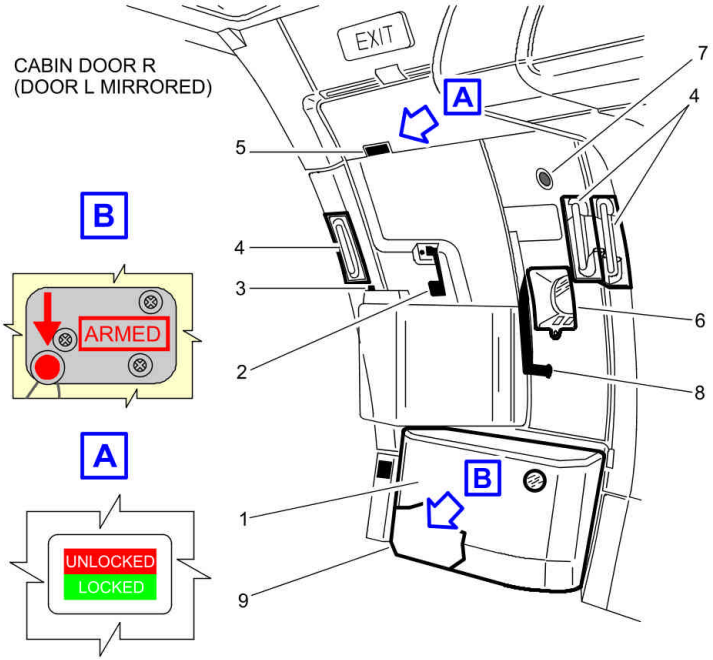


CABIN DOOR DESCRIPTION

Applicable to: ALL

THE CABIN DOOR

The Cabin Door



(1) Escape Slide Container

(2) Arming System

(3) Gust Lock

(4) Assist Handles

(5) Door Locking Indication

(6) Observation Window with:

- SLIDE ARMED Indicator Light
- CABIN PRESSURE WARNING Indicator Light.

(7) Buzzer Signal Horn (option)

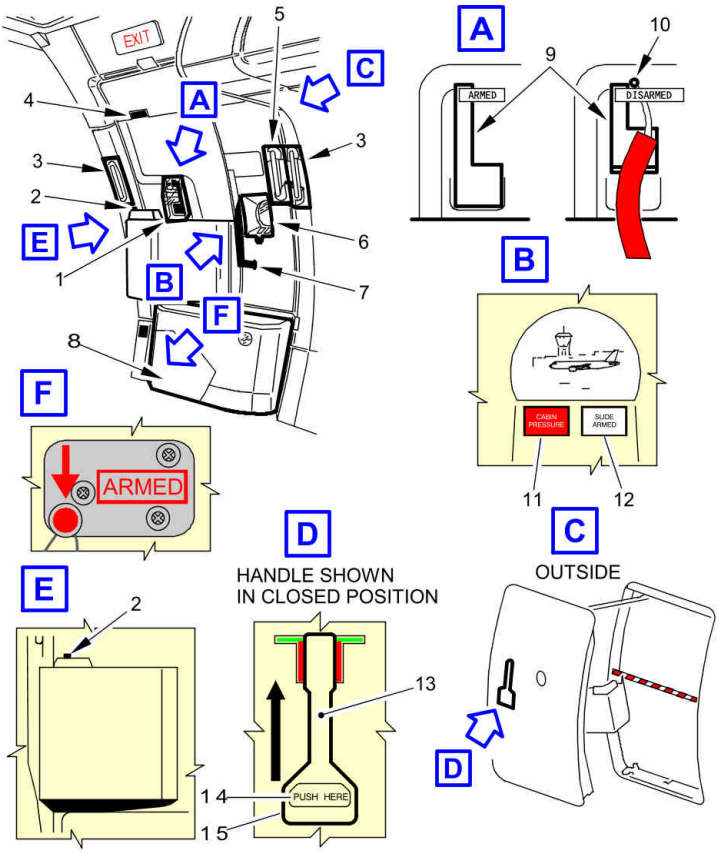
Note: *The buzzer Signal Horn is installed in the cabin doors to avoid inadvertent door opening when the escape slide is armed.*

(8) Door Control Handle

(9) Girt Bar floor visual indication

CONTROLS AND INDICATORS OF THE CABIN DOOR

Controls and Indicators of the Cabin Door



(1) Arming System
The slide ARMING SYSTEM consists of a SLIDE ARMING LEVER (9) and a SAFETY PIN (10).

(2) Gust Lock
The GUST LOCK secures the door in its fully open position.

(3) Assist Handles
The cabin crew can use the ASSIST HANDLEs to hold onto when opening or closing the door from the inside of the cabin.

(4) Locking Indication

The DOOR LOCKING indication indicates the door status.
- When the door is **not** in its closed/locked position the information UNLOCKED is displayed on a red background by the DOOR LOCKING indication.
- When the door is closed and locked the information LOCKED is displayed on a green background by the DOOR LOCKING indication.

(5) Door Assist Handle
The cabin crew can use the DOOR ASSIST HANDLE when opening or closing the door.

(6) Observation Window

The OBSERVATION WINDOW has two indicator lights visible from the inside of the cabin as well as from the outside):
- Red CABIN PRESSURE WARNING indicator light (11)
- White SLIDE ARMED indicator light (12).

(7) Door Control Handle
The cabin crew can use the DOOR CONTROL HANDLE to open and close the door from the inside of the cabin.

(8) Armed Indicator
On the GIRT BAR floor visual indication the cabin crew can read the position of the SLIDE ARMING LEVER: If the door is in the ARMED mode the red arrow points on the indicator.

(9) Slide Arming Lever
The cabin crew can use the SLIDE ARMING LEVER to arm or disarm the door slide/slide-raft.

(10) Safety Pin with Warning Flag
A SAFETY PIN secures the SLIDE ARMING LEVER in the disarmed position.

(11) Cabin Pressure Warning Indicator Light
The red CABIN PRESSURE WARNING indicator light flashes when at least one engine is shut down, the related door is disarmed and the cabin differential pressure is above 2.5 mbar (0.0362 PSI).

(12) Slide Armed Indicator Light
The white SLIDE ARMED indicator light goes ON steadily when the door slide is in ARMED mode and somebody moves the DOOR CONTROL HANDLE (7) up.

(13) Exterior Door Control Handle
The exterior DOOR CONTROL HANDLE consists of a FLAP (14) and a HANDLE (15).

(14) Flap
The cabin crew can use the FLAP to release the HANDLE from its closed position.

(15) Handle
The cabin crew can use the HANDLE to open and close the door from the outside.

CABIN DOOR OPERATION

Applicable to: ALL

CABIN DOOR NORMAL OPENING FROM THE INSIDE

1. Make sure that the SLIDE ARMING LEVER (9) is in the DISARMED position and the SAFETY PIN (10) is installed.
2. Make sure that the red CABIN PRESSURE WARNING indicator light (11) in the observation window is **not** ON and flashing.

Do not open the door if the red CABIN PRESSURE WARNING indicator light is ON and flashes:

- Do not force the handle to open the door.
- Report the indication to the cockpit crew.
- Make sure that the SLIDE ARMING LEVER (9) is in the DISARMED position and the SAFETY PIN (10) is installed.

WARNING	If a cabin crewmember opens the door while the red CABIN PRESSURE WARNING indicator light is flashing, there is a risk that the cabin door will open violently because the cabin is not fully depressurized. The red CABIN PRESSURE WARNING indicator light flashes when at least one engine is shut down, the related door is disarmed and the cabin differential pressure is above 2.5 mbar (0.0362 PSI).

CAUTION	If the SLIDE ARMED indicator light is ON, the SLIDE ARMING LEVER (9) is in the armed position and the slide will be activated automatically by opening the door.

3. Grasp one of the ASSIST HANDLEs (3).
4. Lift the DOOR CONTROL HANDLE (7) fully up.
5. Push the door outwards then move it forward and sideward by using the DOOR ASSIST HANDLE (5) until the door locks in its fully open position.

CABIN DOOR NORMAL CLOSING FROM THE INSIDE

1. Grasp one of the DOOR ASSIST HANDLEs (3).
2. Press the GUST LOCK (2) and simultaneously pull the support arm towards yourself.
3. Move the door towards yourself by using the DOOR ASSIST HANDLE (5).
4. When the door is in front of its frame, pull the door inwards and lower the DOOR CONTROL HANDLE (7).
5. Check whether the door is locked correctly, the DOOR LOCKING indications (4) must indicate LOCKED.

CABIN DOOR NORMAL OPENING FROM THE OUTSIDE

Note: Labels next to the EXTERIOR DOOR CONTROL HANDLE (13) indicate how to operate the door from outside.

1. Look through the OBSERVATION WINDOW (6) and make sure that the red CABIN PRESSURE WARNING indicator light (11) does not flash.
2. Push at the FLAP (14) and grasp the HANDLE (15), lift the handle fully up to the horizontal green line.
3. Pull the door outwards and sideways until it locks in its fully open position.

CABIN DOOR NORMAL CLOSING FROM THE OUTSIDE

1. Push the GUST LOCK (2) to unlock the door.
2. Move the door towards its frame.
3. When the door is in front of its frame push it into it and lower the EXTERIOR DOOR CONTROL HANDLE (13).

The door is locked when the handle is flush with the fuselage.

CABIN DOOR EMERGENCY OPENING

WARNING	When the door is in the ARMED mode, the red CABIN PRESSURE WARNING indicator light (11) does not illuminate to indicate the cabin differential pressure. Indications of cabin differential pressure may be: - Resistance in the DOOR CONTROL HANDLE (7) when it is lifted to the OPEN position, using normal force, and/or - A hissing noise in the immediate door area. If the circumstances permit, fully lower the DOOR CONTROL HANDLE(7) to the CLOSED position. Notify the flight crew immediately.

1. Check the outside conditions via the OBSERVATION WINDOW (6). Make sure that the slide deployment area is clear of:
   - Fire
   - Smoke
   - Obstacles.
2. Check whether the SLIDE ARMING SYSTEM (1) is in SLIDE ARMED mode.
3. Grasp the DOOR ASSIST HANDLE (3) and hold on to it.
4. Lift the DOOR CONTROL HANDLE (7) rapidly fully up and release it.

WARNING	Do not attempt to hold the door closed when the automatic door opening has been initiated.

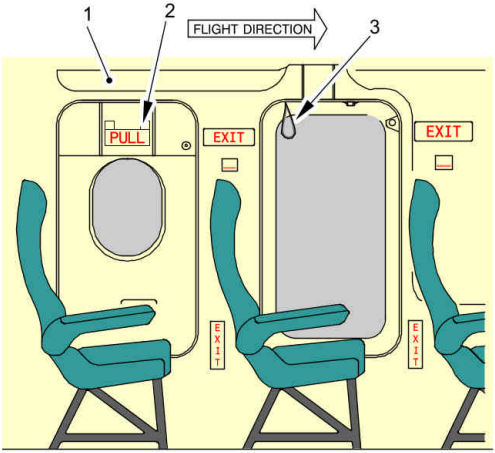
Note: *The door opens automatically and locks in its fully open position. Should the pneumatic assistance of the door fail, push the door open manually.*

EMERGENCY EXIT DESCRIPTION

Criteria: P0006
Applicable to: MSN 2649

DOUBLE OVERWING EMERGENCY EXIT (HATCH)

THE Double Overwing Emergency Exit (Hatch)



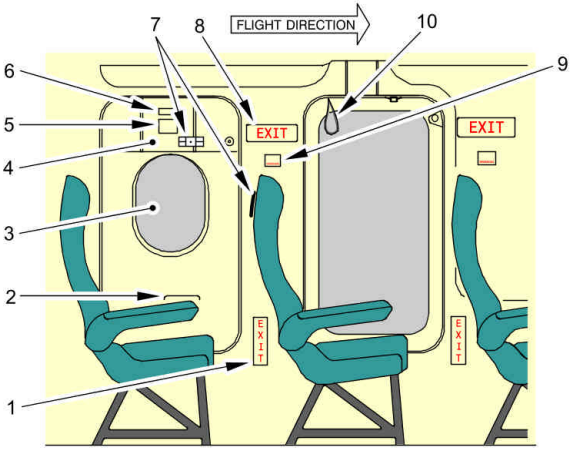
(1) Handle Cover

(2) Control Handle

(3) Slide Manual Inflation Handle

CONTROLS AND INDICATORS OF THE DOUBLE OVERWING EMERGENCY EXIT (HATCH)

Controls and Indicators of the Emergency Exit (Hatch)



(1) Exit Marker
In an emergency the EXIT markers located on both sides of the emergency exit hatch are illuminated.

(2) Handle Recess
The HANDLE RECESS and the COVER FLAP RECESS (6) are used to remove the hatch.

(3) Window
A normal window with a window shade is integrated into the emergency exit hatch.

(4) Handle Cover
The HANDLE COVER covers the HATCH HANDLE (5).

(5) Hatch Handle optionally under a Transparent Handle Flap
The illuminated HATCH HANDLE is used to open and close the hatch from the inside. As an option the HATCH HANDLE is covered with a transparent handle flap.

(6) Cover Flap Recess
The COVER FLAP RECESS and the HANDLE RECESS (2) are used to remove the hatch.

(7) Opening Instructions
You can find the OPENING INSTRUCTIONS for the emergency exit hatch on the back of the seats next to the emergency exits and on the hatch itself.

(8) Exit Sign
The EXIT sign is illuminated to indicate the location of the emergency exit.

(9) Slide Armed Indicator
A SLIDE ARMED indicator indicates the slide status. The indicator is located next to the hatch.
The indicator shows ARMED on a green background when the slide is installed correctly.

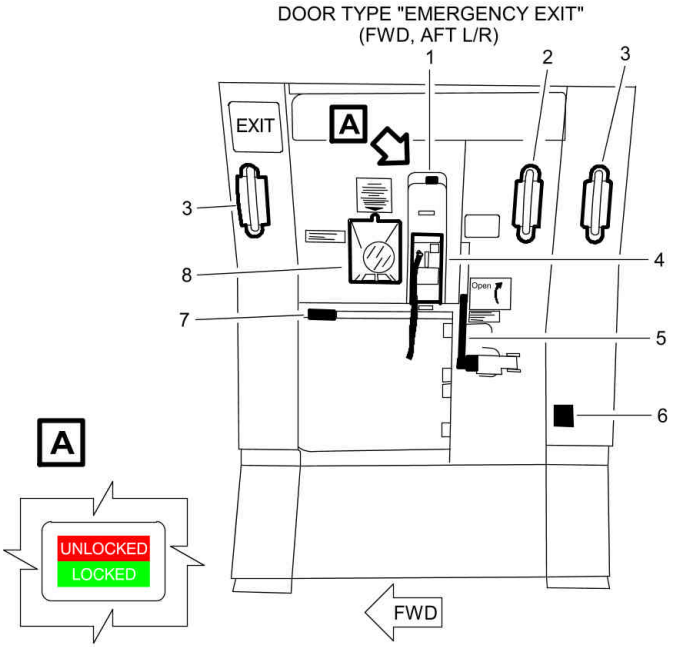
(10) Slide Manual Inflation Handle
When the hatch is removed, you can see the SLIDE MANUAL INFLATION HANDLE.

DOOR TYPE C EMERGENCY EXIT DESCRIPTION

Criteria: K2113, K2675, P0006
Applicable to: MSN 2927-3120

DOOR TYPE C EMERGENCY EXIT

Door Type C EMERGENCY EXIT



(1) Door Locking Indication

(2) Door Assist Handles

(3) Assist Handles

(4) Arming System

(5) Door Control Handle

(6) Floor Path Marking Light

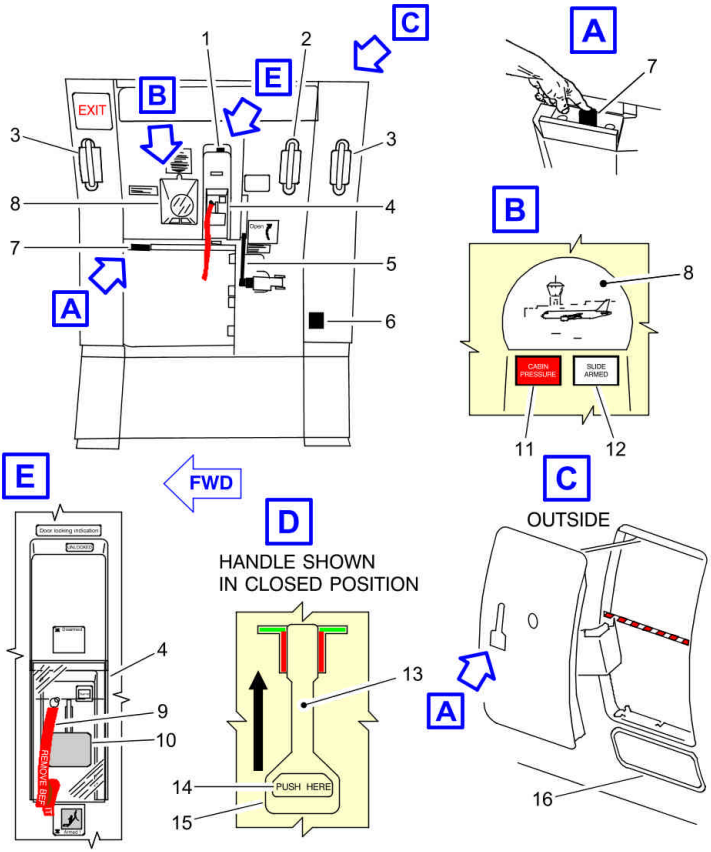
(7) Gust Lock

(8) Observation Window with:

- SLIDE ARMED Indicator Light (white)
- CABIN PRESSURE WARNING Indicator Light (red)

CONTROLS AND INDICATORS OF THE DOOR TYPE C EMERGENCY EXIT

Controls and Indicators of the Door Type C EMERGENCY EXIT



(1) Door Locking Indicator

The DOOR LOCKING indication indicates the door status.

- When the door is **not** in its closed/locked position the information UNLOCKED is displayed on a red background by the DOOR LOCKING indication.
- When the door is closed and locked the information LOCKED is displayed on a green background by the DOOR LOCKING indication.

(2/3) (Door) Assist Handle
The cabin crew can use the (DOOR) ASSIST HANDLEs to hold onto when opening or closing the door from the inside of the cabin.

(4) Slide Arming System
The slide ARMING SYSTEM consists of an SLIDE ARMING LEVER (10) and a SAFETY PIN (9).

(5) Door Control Handle
The cabin crew can use the DOOR CONTROL HANDLE to open and close the door from the inside of the cabin.

(6) Floor Path Marking Light

(7) Gust Lock
The GUST LOCK secures the door in its fully open position.

(8) Observation Window

The OBSERVATION WINDOW has two indicator lights visible from the inside of the cabin as well as from the outside):
- Red CABIN PRESSURE WARNING indicator light (11)
- White SLIDE ARMED indicator light (12).

(9) Safety Pin with Warning Flag
A SAFETY PIN secures the SLIDE ARMING LEVER in the disarmed position.

(10) Slide Arming Lever
The cabin crew can use the SLIDE ARMING LEVER to arm or disarm the door slide/slide-raft.

(11) Cabin Pressure Warning Indicator Light
The red CABIN PRESSURE WARNING indicator light flashes when at least one engine is shut down, the related door is disarmed and the cabin differential pressure is above 2.5 bar (0.0362 PSI).

(12) Slide Armed Indicator Light
The white SLIDE ARMED indicator light goes ON steadily when the door (slide) is in ARMED mode and somebody moves the DOOR CONTROL HANDLE up.

(13) Exterior Door Control Handle
The exterior DOOR CONTROL HANDLE consists of a FLAP (14) and a HANDLE (15).

(14) Flap
The cabin crew can use the FLAP to release the HANDLE (15) from its closed position.

(15) Handle
The cabin crew can use the HANDLE to open and close the door from the outside.

(16) Escape Slide
The emergency exits have an integrated BELLY FAIRING SLIDE SYSTEM. (The slide is a single lane type slide).

EMERGENCY EXIT OPERATION

Criteria: P0006
Applicable to: MSN 2649

Note: The emergency exits are overwing exits. They are always in armed configuration.

EMERGENCY EXIT OPENING FROM THE INSIDE OF THE CABIN

1. Check the outside conditions and make sure that removing the hatch is safe.
2. Remove the handle cover (4) by opening the cover flap recess (6). The slide armed indicator (9) illuminates.
3. Hold on to the Handle recess (2).
4. Lift the transparent handle flap (5), if installed (option).
5. Pull down the Hatch handle (5).

CAUTION	Hold on to the hatch or it will fall into the cabin.

6. Lift the hatch into the cabin, away from the frame, by using the Handle recess (2) and the cover flap recess (6).
7. Throw out the hatch through the opening. The slide inflates automatically.
8. If the escape slide has not inflated automatically, pull the slide manual inflation handle (10).

DOOR TYPE C EMERGENCY EXIT OPERATION

Criteria: K2113, K2675, P0006
Applicable to: MSN 2927-3120

Under normal conditions the emergency exits are not used for boarding, de-boarding etc. Their purpose is to function as emergency exits in case of an emergency evacuation.
However, the emergency exits can be operated like the cabin doors.

Note: Optionally door 2 on the left hand side can be used for boarding and deplaning.

DOOR TYPE C EMERGENCY EXIT OPENING FROM THE INSIDE WITHOUT INITIATING THE SLIDE / SLIDE-RAFT

1. Make sure that the SLIDE ARMING LEVER (10) is in the DISARMED position and the SAFETY PIN (9) is installed.
2. Make sure that the red CABIN PRESSURE WARNING indicator light (11) in the observation window (8) is **not** ON and flashing.

   Do not open the door if the red CABIN PRESSURE WARNING indicator light flashes:
   - Do not force the DOOR CONTROL HANDLE to open the door.
   - Report the indication to the cockpit crew.
   - Make sure that the SLIDE ARMING LEVER (10) is in the DISARMED position and the SAFETY PIN (9) is installed.

WARNING	If the red CABIN PRESSURE WARNING indicator light (10) flashes, do not open the door and report to the cockpit crew. If a cabin crewmember opens the door while the red CABIN PRESSURE WARNING indicator light is ON and flashing, there is a risk that the cabin door will open violently because the cabin is not fully depressurized. The red CABIN PRESSURE WARNING indicator light flashes when all engines are shut down, the related door is disarmed and the cabin differential pressure is above 2.5 mbar (0.0362 PSI).

CAUTION	If the SLIDE ARMED indicator light is ON, the SLIDE ARMING LEVER (10) is in the armed position and the slide will be activated automatically by opening the door.

3. Grasp one of the ASSIST HANDLEs (3).
4. Lift the DOOR CONTROL HANDLE COVER.
5. Lift the DOOR CONTROL HANDLE (5) fully up.
6. Push the door outwards then move it forward and sideward by using the DOOR ASSIST HANDLE (7) until the door locks in its fully open position.

DOOR TYPE C EMERGENCY EXIT NORMAL CLOSING FROM THE INSIDE

1. Grasp one of the ASSIST HANDLEs (3).
2. Press the GUST LOCK (7) and simultaneously pull the support arm towards your body.
3. Move the door to the side by using the DOOR ASSIST HANDLE (2).
4. When the door is in front of its frame, pull the door inwards and lower the DOOR CONTROL HANDLE (5).
5. Check whether the door locked correctly. The DOOR LOCKING indication (1) must indicate LOCKED.

DOOR TYPE C EMERGENCY EXIT NORMAL OPENING FROM THE OUTSIDE

Note: Labels next to the EXTERIOR DOOR CONTROL HANDLE (13) indicate how to operate the door from the outside.

1. Look through the OBSERVATION WINDOW (8) and make sure that the redCABIN PRESSURE WARNING (11) does not flash.
2. Push the FLAP (14) and grasp the HANDLE (15).
3. Lift the handle fully up to the horizontal green line.
4. Pull the door outwards and forward until it locks in its fully open position.

DOOR TYPE C EMERGENCY EXIT NORMAL CLOSING FROM OUTSIDE

1. Push the GUST LOCK (7) to unlock the door.
2. Move the door towards the frame.
3. Push the door into the frame and lower the EXTERIOR DOOR CONTROL HANDLE (13).

The door is locked when the handle is flush with the fuselage.

DOOR TYPE C EMERGENCY EXIT EMERGENCY OPENING

WARNING	When the door is in the ARMED mode, the red CABIN PRESSURE WARNING indicator light (10) does not illuminate to indicate the cabin differential pressure. Indications of cabin differential pressure may be: - Resistance in the DOOR CONTROL HANDLE (5) when it is lifted to the OPEN position, using normal force, and/or - A hissing noise in the immediate door area. If the circumstances permit, fully lower the DOOR CONTROL HANDLE(5) to the CLOSED position. Notify the flight crew immediately.

1. Check whether the ARMING SYSTEM (4) is in ARMED mode.
2. Hold on to one of the ASSIST HANDLEs (3).
3. Check the outside conditions via the OBSERVATION WINDOW (8). Is the slide deployment area clear of:
   - Fire
   - Smoke
   - Obstacle(s)
4. When the outside conditions are safe lift the DOOR CONTROL HANDLE (5) rapidly fully up and release it.

WARNING	Do not attempt to hold the door closed when the automatic door opening has been initiated.

Note: *The door opens automatically and locks in its fully open position. Should the pneumatic assistance of the door fail, push the door open manually.*

SLIDE ARMING SYSTEM

Criteria: P0006
Applicable to: MSN 2649

The cabin crew can arm or disarm the slides in the cabin doors via the SLIDE ARMING LEVER.
The SLIDE ARMING LEVER is connected to the girt bar, and the girt bar is attached to the escape slide.
When the slide is armed the SLIDE ARMING LEVER connects the escape slide via the girt bar to the cabin floor.
When the slide is disarmed the SLIDE ARMING LEVER connects the escape slide via the girt bar to the cabin door.

Note: *The emergency exit hatches are always in armed mode.*

CABIN DOOR AND EMERGENCY EXIT IN DISARMED POSITION

When the SLIDE ARMING LEVER is in the DISARMED position a SAFETY PIN with a red flag must be installed in order to:
- Indicate that the slide is DISARMED
- Prevent inadvertent movement of the SLIDE ARMING LEVER.

CABIN DOOR ARMING PROCEDURE

In order to arm the slide:
1. The SAFETY PIN has to be removed and stowed in the hole provided on the door support arm for that purpose.
2. The SLIDE ARMING LEVER must be moved to the armed position.

Note: *The slide arming lever must be moved fully down for arming and fully up for disarming the door.*

The door is now ready for flight.

Note: *When the SLIDE ARMING LEVER is in the armed position, a flap, which avoids an unintentional reinstallation of the safety pin, moves over the disarmed safety pin hole. If the SLIDE ARMING LEVER is in the armed position and the door is opened from the outside, the lever will move automatically and mechanically to the disarmed position.*

SLIDE ARMING SYSTEM

Criteria: K2113, K2675, K9459, P0006
Applicable to: MSN 2927-3120

The cabin crew can arm or disarm the slides in the cabin doors / exits via the SLIDE ARMING LEVER.
The SLIDE ARMING LEVER is connected to the girt bar, and the girt bar is attached to the escape slide.
When the slide is armed the SLIDE ARMING LEVER connects the escape slide via the girt bar to the cabin floor.
When the slide is disarmed the SLIDE ARMING LEVER connects the escape slide via the girt bar to the cabin door.

CABIN DOOR AND EMERGENCY EXIT IN DISARMED POSITION

When the SLIDE ARMING LEVER is in the DISARMED position a SAFETY PIN with a red flag must be installed in order to:
- Indicate that the slide is DISARMED
- Prevent inadvertent movement of the SLIDE ARMING LEVER.

CABIN DOOR AND EMERGENCY EXIT ARMING PROCEDURE

In order to arm the slide:
1. The SAFETY PIN has to be removed and stowed in the hole provided on the door support arm for that purpose.

   Note: At cabin doors 2 & 3 a pouch can be installed. In that case stow the SAFETY PIN inside the pouch.

2. The SLIDE ARMING LEVER must be moved to the armed position.

Note: The slide arming lever must be moved fully down for arming and fully up for disarming the door.

The door is now ready for flight.

Note: When the SLIDE ARMING LEVER is in the armed position, a flap, which avoids an unintentional reinstallation of the safety pin, moves over the disarmed safety pin hole. If the SLIDE ARMING LEVER is in the armed position and the door is opened from the outside, the lever will move automatically and mechanically to the disarmed position.

DOOR DAMPER AND EMERGENCY EXIT OPERATION CYLINDER

Applicable to: ALL

Each door (Type "C" and "I") is equipped with a damper and an emergency operation cylinder. The over-wing emergency exits (hatches) are not equipped with a damper and an emergency operation cylinder.

Note: *The door has to be open to check the pressure gauge. Do not open the door if the slide is armed!*
How to operate the doors:

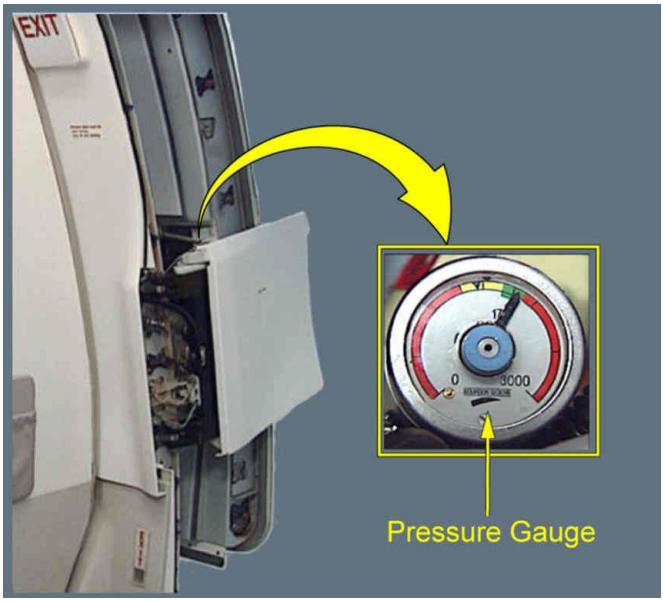
- *Refer to 02-120 Cabin Door Operation*
- *Refer to 02-120 Emergency Exit Operation.*

The emergency operation cylinder is located behind the support arm.

- It limits the door travel during normal operation of the door especially in windy conditions.
- It acts during emergency operation as an actuator for automatic door opening. The damper and the emergency operation cylinder is operated by compressed nitrogen which is stored in a cylinder equipped with a pressure gauge. The pressure is also checked by the CIDS and indicated on the FAP, depending on the aircraft configuration.
- The pressurized nitrogen is released by an actuating device controlled by the slide arming lever.

The pressure gauge has either a colored indication or a numeric indication.

Pressure Gauge (Colored Indication)



The pressure gauge is divided in three distinct areas: green, yellow and red.

Indication	Action
Green	Aircraft can be dispatched.
Yellow	Aircraft can be dispatched. Additional information is given, that pressure has decreased from correct value and a maintenance action is necessary in the next days. Inform the maintenance crew immediately.
Yellow and additional FAP warning.	Aircraft can be dispatched for this flight, but maintenance action is necessary before next flight. Inform the maintenance crew immediately.
Red	Actuator and door inoperative. Maintenance action is necessary before this flight. Inform the maintenance crew immediately.

Pressure Gauge (Numeric Indication)

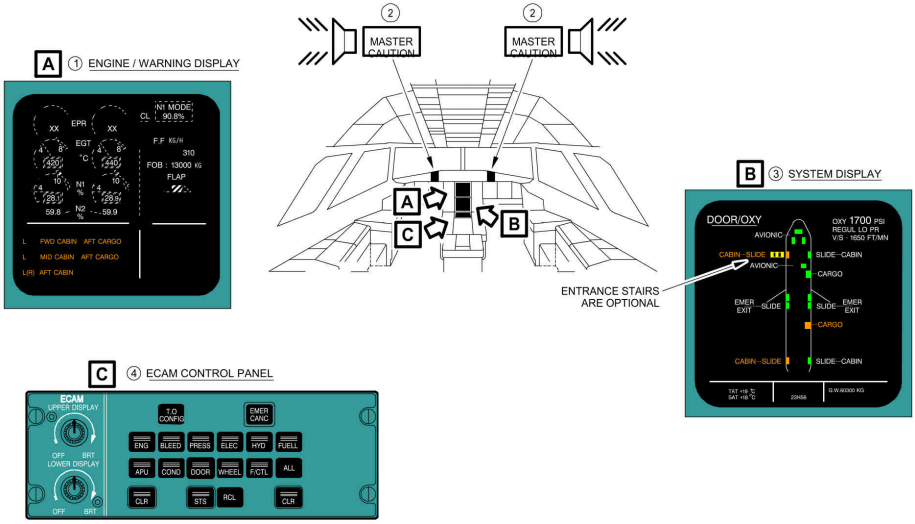
The pressure depends on the ambient temperature.

Indication		Action
TEMP (°C)	PRESSURE (PSI ±5%)	
+50	1950	Aircraft can be dispatched.
+40	1880	
+30	1810	
+20	1740	
+10	1660	
0	1610	
-10	1540	
-20	1465	
-30	1395	
-40	1325	
The displayed pressure deviates from the above values.		Actuator and door inoperative. Maintenance action is necessary before this flight. Inform the maintenance crew immediately.

DOORS AND SLIDES COCKPIT CONTROL SYSTEM

Criteria: P0006
Applicable to: MSN 2649

Doors and Slides Cockpit Control System



(1) ENGINE/WARNING Display

Warnings are automatically displayed on the ENGINE/WARNING display and on the SYSTEM display.

Unlocked doors are shown in amber text on the ENGINE/WARNING DISPLAY. At the same time the DOOR PAGE is displayed on the SYSTEM display.

(2) MASTER CAUTION Light

If the engines are running and a door is not locked, the MASTER CAUTION light flash and a single chime sounds in the cockpit.

(3) SYSTEM Display

Warnings are automatically displayed on the SYSTEM display and on the ENGINE/WARNING display.

Door locked & armed	:	The door symbol is green and there is no message.
Door open	:	The door symbol and the message OPEN are amber.
No data	:	The door symbol shows X in amber, the message NO DATA is white.

Slide armed	:	The message SLIDE adjacent to the door is white.
Slide disarmed/door open	:	The message SLIDE is replaced by a dotted line amber.
Slide disarmed/door closed	:	The door symbol is green and there is no message.

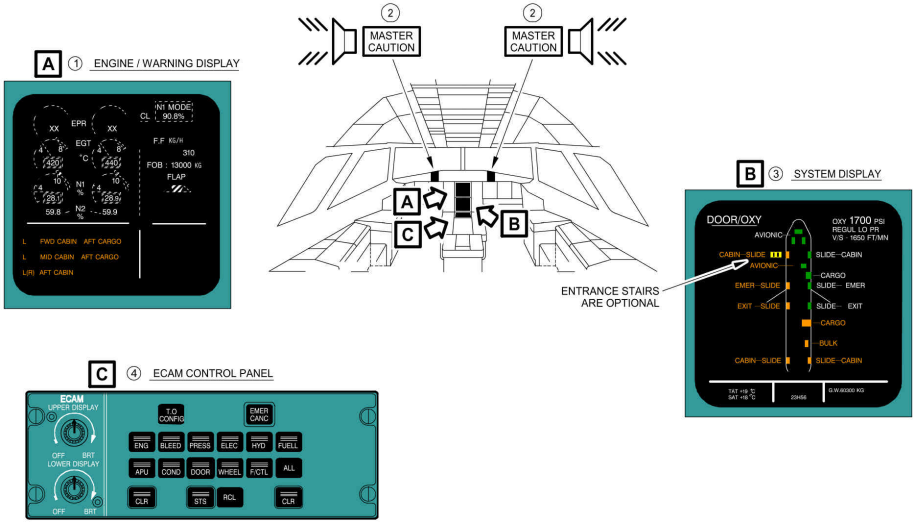
(4) ECAM CONTROL PANEL

The door status can be checked at any time on the SYSTEM display by pushing the DOOR key on the ECAM CONTROL PANEL.

DOORS AND SLIDES COCKPIT CONTROL SYSTEM

Criteria: K2113, K2675, P0006
Applicable to: MSN 2927-3120

Doors and Slides Cockpit Control System



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(4) ECAM CONTROL PANEL

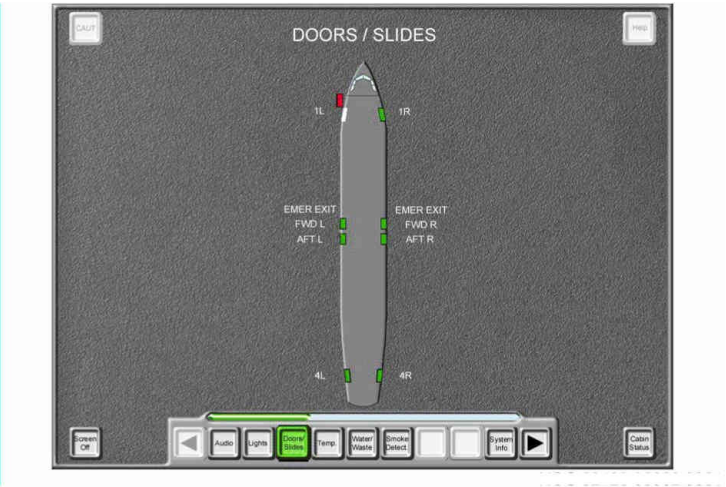
The door status can be checked at any time on the SYSTEM display by pushing the DOOR key on the ECAM CONTROL PANEL.

DOORS AND SLIDES CONTROL FROM THE CABIN

Criteria: P0006
Applicable to: MSN 2649

The doors and slides status can be checked at any time on the FAP. To display the DOORS/SLIDES page on the FAP, push the DOORS / SLIDES button from the function selector.

Doors and Slides Cabin Control System



All open doors are shown as red rectangles outside the aircraft symbol.
All closed doors with disarmed evacuation devices are shown as amber rectangles inside the aircraft symbol.
All closed doors with armed evacuation devices are shown as green rectangles inside the aircraft symbol.
The door/slide pressure and the slide armed/disarmed indications are shown as amber text next to the related door/slide.

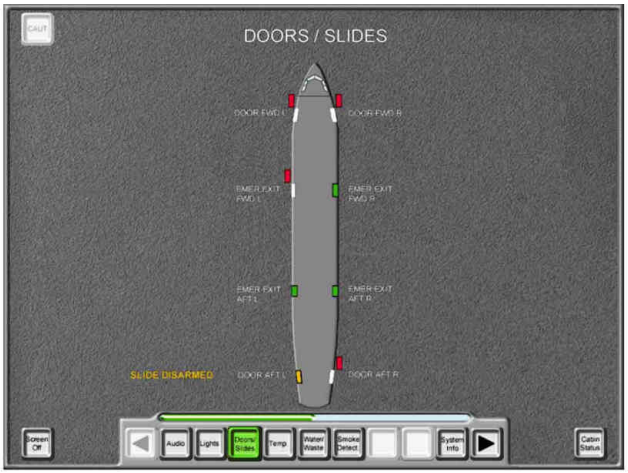
The DOORS/SLIDES menu will be displayed automatically if the following information applies:
- SLIDE PRESSURE LOW
- DOOR PRESSURE LOW
- SLIDE DISARMED.

DOORS AND SLIDES CONTROL SYSTEM FROM THE CABIN

Criteria: K2113, K2675, P0006
Applicable to: MSN 2927-3120

The doors and slides status can be checked at any time on the FAP. To display the DOORS/SLIDES page on the FAP, push the DOORS / SLIDES button from the function selector.

Doors and Slides Cabin Control System



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- SLIDE PRESSURE LOW
- DOOR PRESSURE LOW
- SLIDE DISARMED.

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GENERAL INFORMATION ABOUT GALLEYS

Applicable to: ALL

The galleys are installed in the cabin area.

They are used to:
- Keep and prepare food
- Keep and prepare hot and cold drinks
- Hold removable galley items like full-size and/or half-size trolleys (carts) and containers/standard units

WARNING	Make sure that removable galley items are correctly stowed and latched when not in use. Otherwise injury to persons caused by unsecured galley items is possible.

CAUTION	To correctly secure removable galley items when not in use, close and lock ALL latches and lock ALL other securing devices installed in the galley. A single latch/securing device not used causes overload and/or damage to the properly used latch(es)/securing device(s).

Note: *To assist the latches/securing devices on the galley, the trolleys must be blocked additionally with their brake.*

For additional information about latches and how to operate them: *Refer to Latches*
- Stow catering equipment.

WARNING	Health Hazard! Make sure that the galley equipment is clean and serviceable. Wash your hands before you handle food.

The galleys have stowage compartments for coats, equipment etc.

Technically, there are two types of galleys, wet or dry units:
- Wet Galley:
  A wet galley is used to store and prepare food and drinks.

  There are system connections to/provisions for:
  - Electrical power supply
  - Water
  - Wastewater.
- Dry Galley:
  A dry galley has no system provisions and is only used to store food and drinks.

Independent from the galley type (wet/dry), the galley may have a pelmet. In general, a pelmet is a lightweight structure with these services installed:

- Galley lighting
- Speakers
- Area Call Panel
- Oxygen panel

A pelmet is installed where applicable:

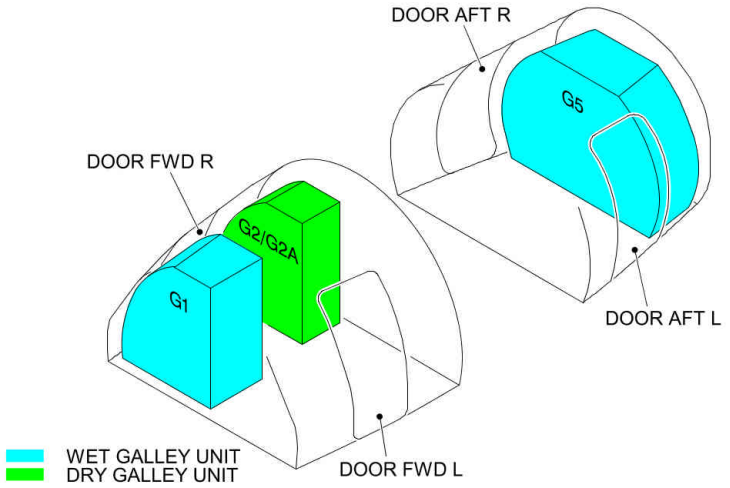
- On top of a galley
- As a ceiling between two galleys
- As a ceiling between a galley and another cabin monument (e.g. a stowage or a lavatory).

GALLEY LOCATION

Criteria: K11138
Applicable to: MSN 2927-3120

These galleys are on board of the aircraft:

Galley Location



EQUIPMENT

2 wet galleys and 1 dry galley are on board of the aircraft.

These galleys are typical equipped with the following devices:
- Ovens for heating and preparing meals.
- Beverages Maker (e.g. coffee maker, water heater etc.)
- Water Boiler
- Water Shut-Off Valves (wet galleys only)
- Sink (wet galleys only)
- Drain Valve (wet galleys only)
- Trolley compartments for halfsize and fullsize trolleys
- Container (standard units)

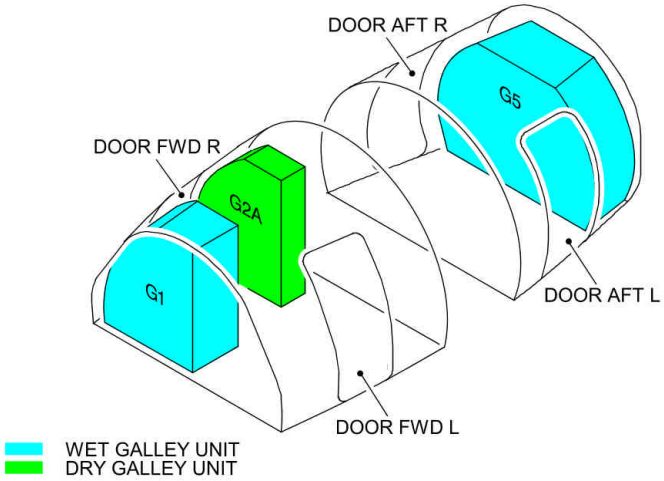
Note: *The equipment list is an example and depends on the actual ordered equipment.*

GALLEY LOCATION

Criteria: K10190
Applicable to: MSN 2649

These galleys are on board of the aircraft:

Location



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- Water Boiler
- Water Shut-Off Valves (wet galleys only)
- Sink (wet galleys only)
- Drain Valve (wet galleys only)
- Trolley compartments for halfsize and fullsize trolleys
- Container (standard units)

Note: *The equipment list is an example and depends on the actual ordered equipment.*

LATCHES

Applicable to: ALL

DESCRIPTION

Latches secure galley items and galley equipment.

When not in use:
- Stow trays and loose items
- Stow and secure removable galley items like trolleys (carts) and containers/standard units

WARNING	Make sure that removable galley items are correctly stowed and latched when not in use. Otherwise injury to persons caused by unsecured galley items is possible.

CAUTION	To correctly secure removable galley items when not in use, close and lock ALL latches and lock ALL other securing devices installed in the galley. A single latch/securing device not used causes overload and/or damage to the properly used latch(es)/securing device(s).

Note: *To assist the latches/securing devices on the galley, the trolleys must be blocked additionally with their brake.*

- Latch/secure all galley inserts, doors, drawers and trolley (cart) doors.

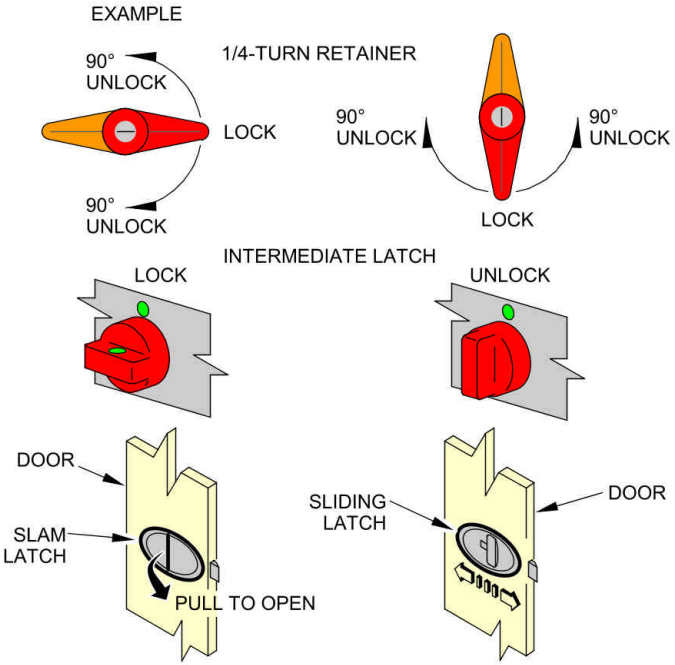
WARNING	Clamping fingers between a latch and an item is possible. Be careful!

LATCH OPERATION

Different types of latches are installed to secure:
- **1/4-turn retainer** in different sizes to latch and secure galley items
- **Intermediate latch** to (additionally, if in combination with other latches) latch and secure galley items

- **Slam latch** to close doors
- **Sliding latch/slam latch or combined latch** to latch and close doors.

Different Types of Latches



HOW TO UNLOCK A LATCH

WARNING	An unlocked galley item is a potential danger in the aircraft and can cause injury to persons and damage to the aircraft interior.

Note: *Make sure that the latches are not unlocked by passengers.*
Unlock the latches only when you take items out of the galleys. Let a crewmember secure the area while you are stowing or removing items.

1/4-TURN RETAINER

Turn the related 1/4-turn retainer 90 ° until it unlatched the galley item.

INTERMEDIATE LATCH

Turn the related intermediate latch 90 ° until it unlatched the galley item.

SLAM LATCH

Some galley compartments have additionally to the 1/4-turn retainer a slam latch, to open the door.

1. Lift the slam latch until the door is unlatched.
2. Using the slam latch, swing out the door.

SLIDING LATCH/SLAM LATCH or COMBINED LATCH

Some galley compartments have additionally to the slam latch a sliding latch or combined latch, to open and unlock the doors.

1. Unlock the sliding latch by sliding the handle. The locking indicator shows the red dot.
2. Lift the slam latch until the door is unlatched.
3. Using the slam latch, swing out the door.

HOW TO LOCK A LATCH

1/4-TURN RETAINER

Turn the related 1/4-turn retainer 90 ° until it latched the galley item.

INTERMEDIATE LATCH

Turn the related intermediate latch 90 ° until it latched the galley item.

SLAM LATCH

Some galley compartments have additionally to the 1/4-turn retainer a slam latch, to close the doors.

1. Using the slam latch, swing in the door.
2. Push the door against the housing until the slam latch engages with a snap.

SLIDING LATCH/SLAM LATCH or COMBINED LATCH

Some galley compartments have additionally to the slam latch a sliding latch or combined latch, to lock and close the doors.

1. Using the slam latch, swing in the door.
2. Push the door against the housing until the slam latch engages with a snap.
3. Lock the sliding latch or combined by sliding the handle. The locking indicator shows the green dot.

ADDITIONAL WORKTABLE

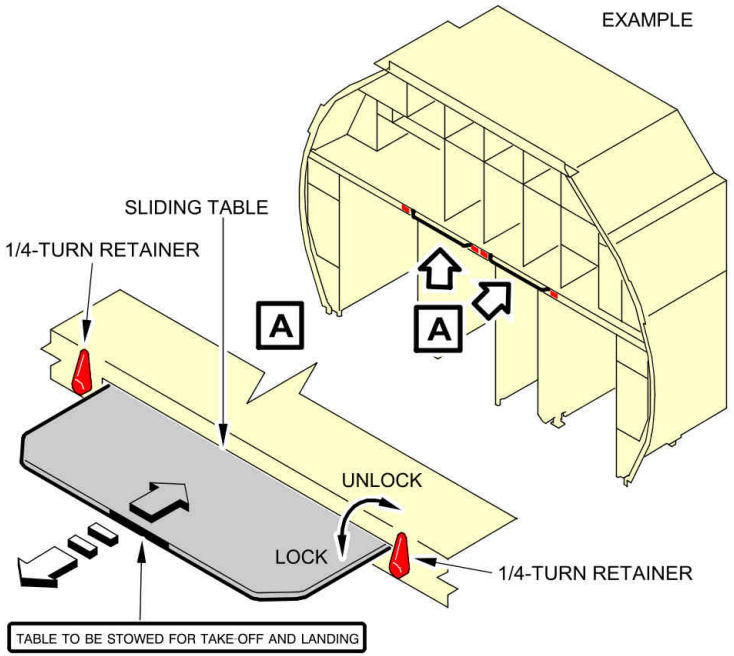
Applicable to: ALL

An additional work table is an additional working place, integrated in some galleys.

WARNING	Danger of collision! A pulled out additional work table is an obstacle in the aisle and can cause injury! Make sure that the additional work tables are not pulled out by passengers. Do not overload the folded work table! Overload may cause damage at the table attachment.

WARNING	Danger of Injury! Make sure that the additional work table is pushed back and correctly latched during - Taxi, Take-off, Turbulences, landing. - cruise, only if not in use.

Sliding Work Table



SLIDING WORK TABLE

- Opening a sliding work table
  1. To unlock the sliding work table, turn the 1/4-turn retainer to the vertical position.
  2. Push the button and pull out the sliding work table.

WARNING	Danger of injury! Always secure items placed on the work table against falling down, especially when they are - Sharp. - Heavy. - Hot.

- Closing a sliding work table

WARNING	Danger of clamping! Clamping of fingers between sliding work table and galley is possible. Be careful!

  1. Make sure that there are no items on the work table.
  2. Push the button and push the sliding work table on its track into the galley.
  3. To lock the sliding work table, turn the 1/4-turn retainer to the horizontal position.

IF A FOLDED WORK TABLE IS INSTALLED:

- Opening a folded work table
  1. Only if the work table has two latches:
     Unlock the sliding latch by sliding the handle. The locking indicator shows the red dot.
  2. Lift the slam latch until the work table is unlatched and open the folded work table.

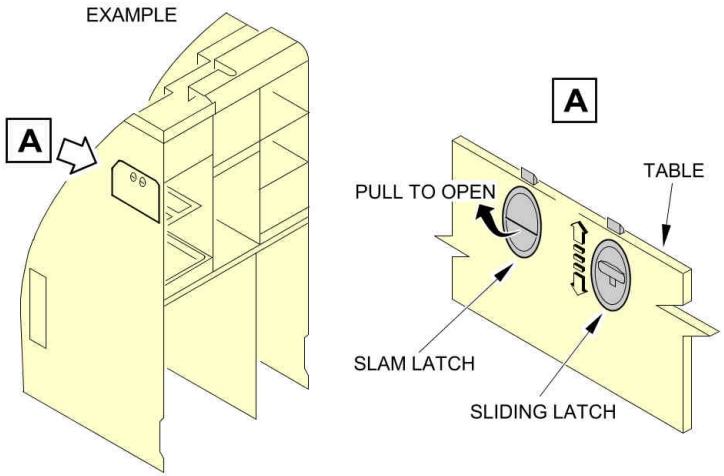
WARNING	Danger of injury! Always secure items placed on the work table against falling down, especially when they are - Sharp - Heavy - Hot

- Closing a folded work table

WARNING	Danger of clamping! Clamping of fingers between folded work table and galley is possible. Be careful!

  1. Make sure that there are no items on the work table.
  2. Close the work table.
  3. Push the work table against the galley until the slam latch engages with a snap.
  4. Only if the work table has two latches:
     Lock the sliding latch by sliding the handle. The locking indicator shows the green dot.

Folded Work Table



TROLLEYS

Applicable to: ALL

A trolley is a mobile unit on board the aircraft. Normal purpose is to store and to transport catering items, for example meals and beverages, and board-shop items.

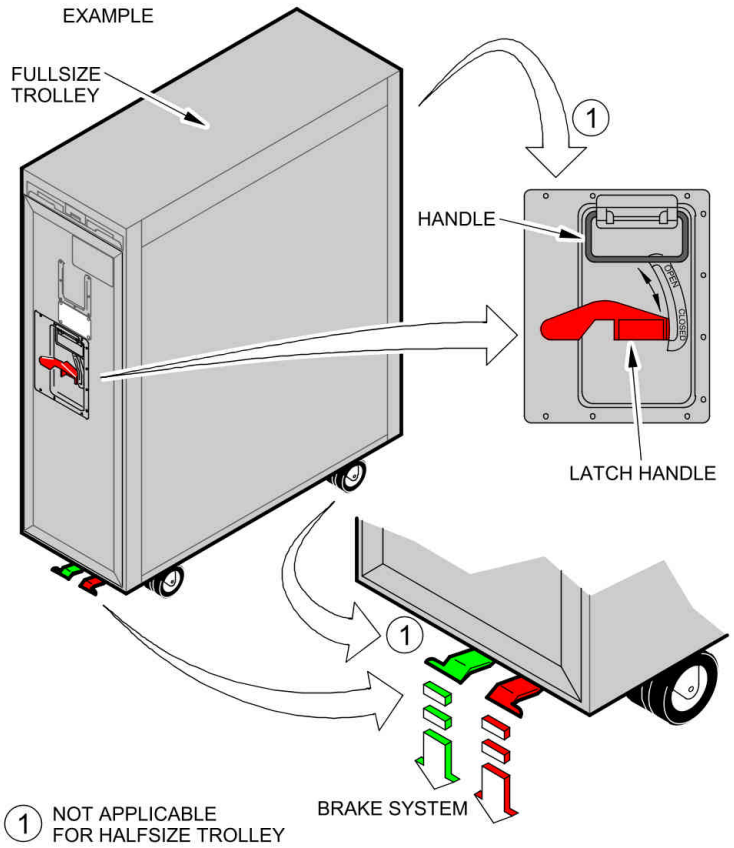
WARNING	Danger of injury! Use a trolley for designated purpose only!

There are full size and half size trolleys. Operated the same way, they only differ in housing length, interior volume and load limit.
The load limit of each trolley is specific. Placards at the trolley compartments (park positions) show the load limits.

CAUTION	Do not overload the Trolleys! Overload may cause damage to the locking mechanism (danger of uncontrolled opening) and/or Trolley housing and/or galley. To avoid overload, distribute some items to other Trolleys.

OPERATING A TROLLEY

Operating elements



REMOVING A TROLLEY FROM ITS COMPARTMENT IN THE GALLEY (PARK POSITION)

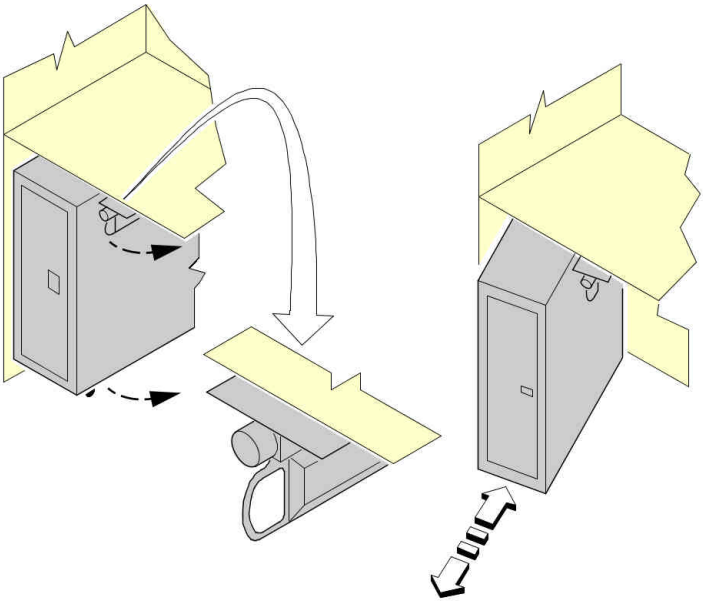
WARNING	Danger of Injury! A Trolley can be heavy. The more heavy a trolley is, the more power is needed to move it. Right after removing from park position and Before entering any passenger zone, check its weight and moveability to ensure safe handling. If necessary ask a crew member for assistance.

1. Open the cover door or the securing latches at the trolley compartment. *Refer to 02-140 Latches*
2. Disengage the trolley brake.
   See **Operating the brake system**, paragraph "Disengaging the trolley brake".

   Note: *If an optional "T" divider is installed in the galley, unlock and rotate the "T" divider to remove the outboard trolley from the stowage area.*
   For that remove the beside (inner) trolley first.
   After this turn the outer trolley toward the middle of the galley (see illustration below).

3. Remove the trolley from its park position.
4. If there is a cover door at the trolley compartment:
   a. Engage the trolley brake.
      See **Operating the brake system**, paragraph "Engaging the trolley brake".
   b. Close the cover door.
   c. Disengage the trolley brake again.

T-divider



(a) Unlock the latch

(b) Swivel the T-divider in the middle of the galley

(c) Turn the trolley in the direction of the center of the galley

TROLLEY OPERATION IN PASSENGER ZONES

WARNING	Danger of Injury! 1. Carefully move the trolley through the aisle and endanger no passengers. 2. Always activate the brake when stopping or parking the trolley. 3. Make sure that the trolley will not be handled by passengers.

OPERATING THE BRAKE SYSTEM

WARNING	Danger of Injury! Carefully operate the trolley brake to minimize the risk of clamping feet.

Engaging the trolley brake

Push the red pedal using a foot to engage the brake.

Disengaging the trolley brake

Push the green pedal using a foot to disengage the brake.

OPERATING THE TROLLEY DOOR / DRAWER

Note: Depending on its exact purpose, a trolley has an additional drawer or not.

Opening the trolley door

1. Turn the latch handle to OPEN position.
2. Swivel out the trolley door using the handle.

Note: The door will remain open, when swiveled out to an angle of 270°.

Closing the trolley door

WARNING	Danger of Injury! Carefully close the trolley door to minimize the risk of clamping fingers.

1. Swivel in the door.
2. Make sure that the latch handle is in OPEN position.
3. Push the door against the housing and hold it with one hand.
4. Turn the latch handle to CLOSED position using the other hand.

Opening the drawer

1. Pull the drawer latch and hold it.
2. Using the drawer latch, pull out the drawer.

Closing the drawer

WARNING	Danger of clamping! Clamping of fingers between drawer and housing is possible. Be careful!

Push the drawer into the housing until the latch engages with a click.

INSERTING THE TROLLEY INTO ITS COMPARTMENT IN THE GALLEY (PARK POSITION)

Note: If trolley compartments are long enough, stow half size trolleys in pairs, one trolley after another.

1. If there is a cover door at the trolley compartment or if the securing latches are closed:
   a. Engage the trolley brake.
   b. Open the cover door or the securing latches.
   c. Disengage the trolley brake again.
2. If necessary turn the trolley around until its door is on the front side.
3. Carefully insert the trolley into its compartment.

   *Note: If an optional "T" divider is installed in the galley, insert the outer trolley first. See **Removing a trolley from its compartment in the galley** (in reverse order)*

4. Engage the trolley brake.
5. Close the cover door or the securing latches at the trolley compartment. *Refer to 02-140 Latches*

ELECTRICAL PANEL

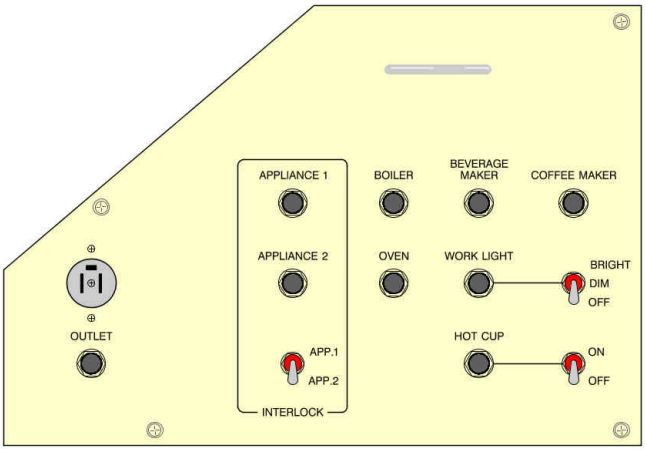
Criteria: K10190
Applicable to: MSN 2649

Electrical panels are installed in several galleys.

Related to the panel, following equipment can be installed:
- Circuit breaker
- Toggle switch for work light and devices
- Indication light
- Push button switches
- Interlock
- Outlet.

Note: The following illustration is an example. It shows a general layout of an electrical panel. The layout and the equipment will differ in various galleys.

Electrical Panel



OPERATION

1. Circuit breaker:
   Circuit breakers operate automatically and secure the related electrical circuit. When a circuit breaker trips, the circuit has been overloaded.

CAUTION	It is not allowed to reset a tripped circuit breaker. If you reset it, you can cause an overload to the system. Make an entry in the aircraft logbook to record the tripped circuit breaker.

2. Work light

   You can set the toggle switch to the following positions:
   - BRIGHT position
   - OFF position
   - DIM position.

3. Toggle Switch for devices

   You can set the toggle switch to the following positions:
   - ON position. To switch the related device ON.
   - OFF position. To switch the related device OFF.

4. Push button switch
   Push the related push button to switch ON/OFF the device. The integrated light comes ON light to indicate the status.
5. Interlock

With the interlock function, one of the desired device is selectable.

6. Indication lights:
   - If the related device is switched ON light, the light comes ON.
   - If the related device is switched OFF light, the light goes OFF.

ELECTRICAL PANEL

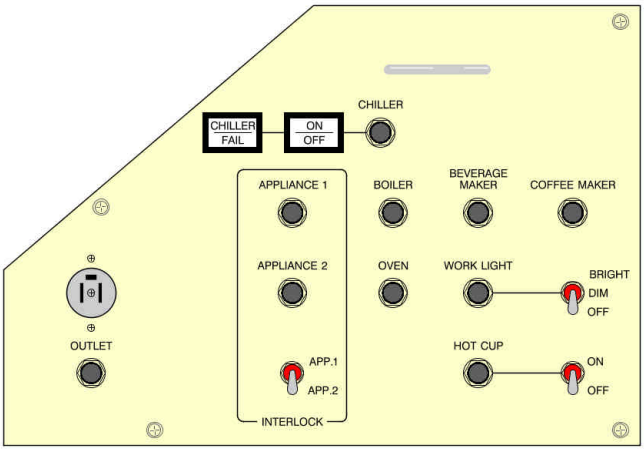
Criteria: K11138
Applicable to: MSN 2927-3120

Electrical panels are installed in several galleys.

Related to the panel, following equipment can be installed:
- Circuit breaker
- Toggle switch for work light and devices.
- Indication light
- Push button switches
- Interlock
- Outlet.

Note: The following illustration is an example. It shows a general layout of an electrical panel. The layout and the equipment will differ in various galleys.

Electrical Panel



OPERATION

1. Circuit breaker:

Circuit breakers operate automatically and secure the related electrical circuit. When a circuit breaker trips, the circuit has been overloaded.

CAUTION	It is not allowed to reset a tripped circuit breaker. If you reset it, you can cause an overload to the system. Make an entry in the aircraft logbook to record the tripped circuit breaker.

2. Work light

   You can set the toggle switch to the following positions:
   - BRIGHT position
   - OFF position
   - DIM position.

3. Toggle Switch for devices

   You can set the toggle switch to the following positions:
   - ON position. To switch the related device ON.
   - OFF position. To switch the related device OFF.

4. Push button switch
   Push the related push button to switch ON/OFF the device. The integrated light comes ON light to indicate the status.
5. Interlock
   With the interlock function, one of the desired device is selectable.
6. Indication lights:
   - If the related device is switched ON light, the light comes ON.
   - If the related device is switched OFF light, the light goes OFF.
7. Air chiller/galley cooling control light
   The control light shows the condition of the air chiller system. After switching ON the air chiller, the ON light lights up. In case of malfunction, the respective MALFUNCTION light or FAIL light lights up.

CAUTION	Make an entry in the aircraft logbook to record the malfunction by naming the individual galley.

GALLEY COOLING

Applicable to: MSN 2927-3120

GENERAL

The galley cooling keeps the content of the cooling trolleys and cooling compartments cool.

DESCRIPTION

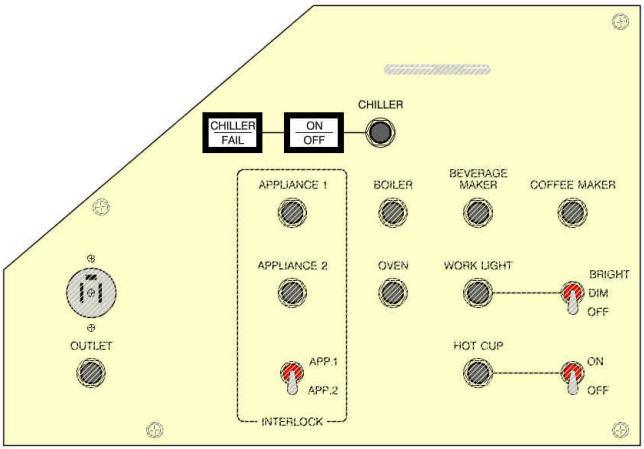
The air chiller units supply cold air to cool the trolleys or the trolley compartment in the connected galleys. Each air chiller unit is connected to one galley only. The cooled air is supplied to the galley through insulated ducts. The air returning from the galley is passed through an evaporator and heat exchanger, chilled and returned to the galley in a closed loop. The drain water of the air chiller unit drains into the aircraft bilge drainage-system or the wastewater drain system of the galley. Each galley system has these main components:

- Air Chiller Units mounted in the galley with tubings to the related compartment.
- Tubing for drainage.
- ON/OFF switches and circuit breakers for the galley cooling system on the electrical panels of the cooled galleys.

Note: *Do not use the circuit breaker to switch ON/OFF the galley cooling system.*

Use the following illustration as an example. It shows a general layout of an electrical panel. The layout and the equipment will differ in various galleys.

Electrical Panel Galley Cooling



OPERATION

- **Starting**
  On the electrical panel, push the related button of the AIR CHILLER to the ON position. The light comes ON.
  The galley cooling system starts. Each related galley has to be switched ON separately.
- **Switching OFF**
  On the electrical panel, push the related button of the AIR CHILLER to the OFF position. The light goes OFF.
  The galley cooling system stops. Each related galley has to be switched OFF separately.

HANDLING

After taking items (like trolleys or containers) out of the cooling compartment, the door of the related compartment must be closed and immediately secured with latches.
Placing the items back to the cooling compartment, make sure that the items are correctly placed and secured. Close the compartment door and immediately secure it with latches.

For description of:
- The trolleys *Refer to 02-140 Trolleys*.
- The latches *Refer to 02-140 Latches*.

WATER TAP

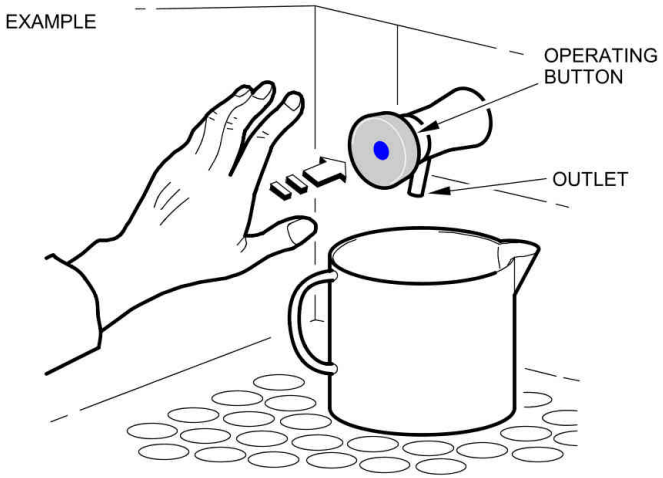
Applicable to: ALL

1. General
   With the water tap you can take water from the aircraft water system.
2. Operation

   To take water from the water tap:
   - Hold a container (for example a cup or a can etc.) below the outlet of the water tap.
   - Push and hold the operating button at the front of the water tap.

   To stop the waterflow:
   - Release the operating button at the front of the water tap.

Galley Water Tap



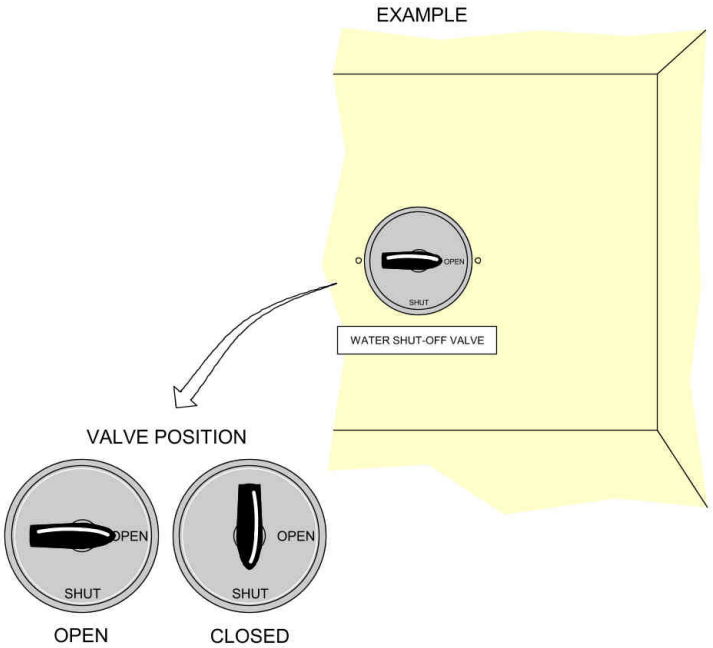
WATER SHUT-OFF VALVE

Applicable to: ALL

1. General
   Water shut-off valves are installed in the water supply lines in the wet galleys.
   When you close the water shut-off valves, the water supply to the equipment (for example boiler, water tap, steam oven etc.) stops.
2. Location
   Each wet galley has a water shut-off valve. A placard MAIN SHUT-OFF VALVE or emergency water shut-off shows the location of its operating handle.
3. Operation
   With the operating handle you can set the water shut-off valve to the open or closed position.
   When the operating handle points to the ON respective OPEN position (as shown on the placard) the water shut-off valve is open.
   When the operating handle points to the OFF respective CLOSED respective SHUT position (as shown on the placard) the water shut-off valve is closed.

CAUTION	Switch off all electrical galley equipment after the water shut-off valve has been closed. This will prevent electrical equipment from heating up while empty and will avoid the risk of potential hazards.

Water Shut-Off Valve



WASTEWATER DRAINING

Applicable to: ALL

1. General

   The wastewater draining has these components for cabin crew attention:
   - Sink
   - Operating button or ring for drain valve

2. Description

   Through the sink and the drain valve the wastewater from the galleys will be discarded.

3. Operation

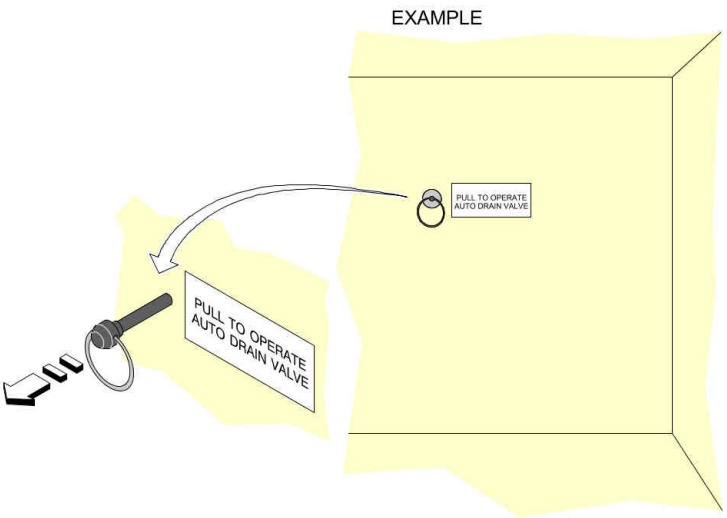
CAUTION	Do not pour - Milk - Cream - Milk with acidic liquids (e.g. orange juice, apple juice, vinegar etc.) together - Coffee grounds - Tea ground - Food rests into the sink. This causes defects on the wastewater drainage system.

Discard residual water and liquids except those mentioned in the caution through the sink.
Flush occasionally with hot water.

WARNING	Hot water can cause serious burns.

You have to pull and release the operating button respective the operating ring of the drain valve, when the wastewaster does not flow through the sink.

Wastewater Drainage



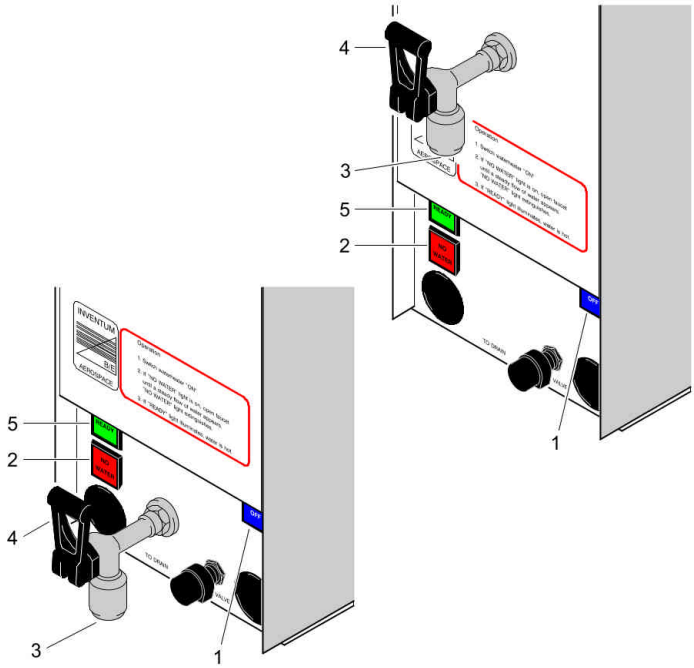
BOILER

Criteria: K11138
Applicable to: MSN 2927-2933

GENERAL

The boiler is a water heater installed in a wet galley and is supplied from the aircraft water system and electrical system.

Boiler



(1) Blue ON/OFF Push-Button

(2) Red NO WATER Light

(3) Outlet

(4) Black Handle

(5) Green READY Light

DESCRIPTION AND OPERATION

DESCRIPTION

The boiler heats 4.1 l (1.08 US Gal) of water to a temperature of 87 °C (188.6 °F).

OPERATION

1.

WARNING	When you open the hot water faucet: - Keep your hands away from the water. - Do not let the water splash. Hot water can cause serious burns.

CAUTION	DANGER! Monitor the Boiler during its operation!

Push the ON/OFF push-button (1) to the ON position. The blue ON/OFF light (1) comes on.

2. If there is not enough water in the boiler, the red NO WATER light (2) comes on and the heater does not operate:
   a. Hold a container (for example a hot-water can) below the outlet (3) of the HOT water-faucet.
   b. Open the HOT water-faucet by pulling the black handle (4) 90 ° towards you. Hold the handle to bleed any air from the boiler until water flows out of the outlet (3).
   c. Release the black handle (4). The water flow stops.
   d. Discard the water from the container through the sink of the galley.
3. When the boiler is full of water the red NO WATER light (2) goes off.
4. The green READY light (5) comes on, when the water is hot and has the correct temperature.
5. HOT water-faucet operation:

WARNING	When you open the hot water faucet: - Keep your hands away from the water. - Do not let the water splash. Hot water can cause serious burns.

   a. Make sure that the container (for example a hot-water can) you use is for hot water and hold the container below the outlet (3) of the HOT water-faucet.
   b. To open the HOT water-faucet, pull the black handle (4) towards you and hold it.
   c. To close the HOT water-faucet, release the black handle (4). The water flow stops.
6. To stop the operation of the boiler, push the ON/OFF push-button (1) to the OFF position. The blue ON/OFF light (1) goes off.

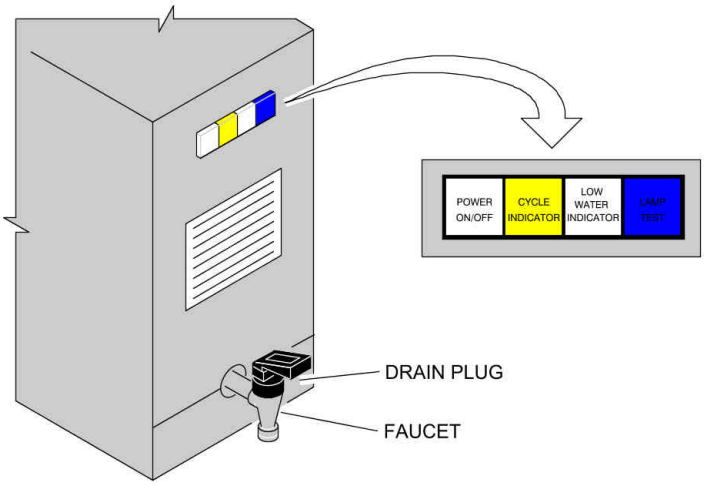
BOILER

Criteria: K10190
Applicable to: MSN 2649

GENERAL

The boiler is a water heater installed in a wet galley and is supplied from the aircraft water system and electrical system.
The function of the boiler is to boil water for in-flight catering.
A faucet is located at the bottom of the front panel for controlling the water flow through the boiler.
With the faucet in the OPEN position, pressurized cold water flows into the bottom of the boiler tank replacing the hot water which discharges through the outlet pipe.
A drain plug is located at the bottom of the front panel to ensure complete draining before removal from its installed position.

Boiler



WARNING	When you open the hot water faucet: - Keep your hands away from the water. - Do not let the water splash. Hot water can cause serious burns.

CAUTION	DANGER! Monitor the Boiler during its operation!

OPERATION

1. Push the POWER ON pb, the CYCLE INDICATOR Light Emitting Diode (LED) will come ON. The boiler automatically fills with water.
2. When the water has reached the pre-set temperature the CYCLE INDICATOR LED will go OFF indicating that the correct temperature has reached.
3. When the LAMP TEST pb is pushed, all the serviceable LEDs come ON and thus check the circuits for function.

TAKING WATER OUT OF THE FAUCET

1. Lift or lower the faucet handle to obtain a supply of water.
2. Release handle to stop flow.

Note: *A water sensor prevents the elements from being energized whilst there is no water, low water in the tank. The LOW WATER LED comes ON to reflect this condition. The boiler will not operate with the LOW WATER LED ON.*

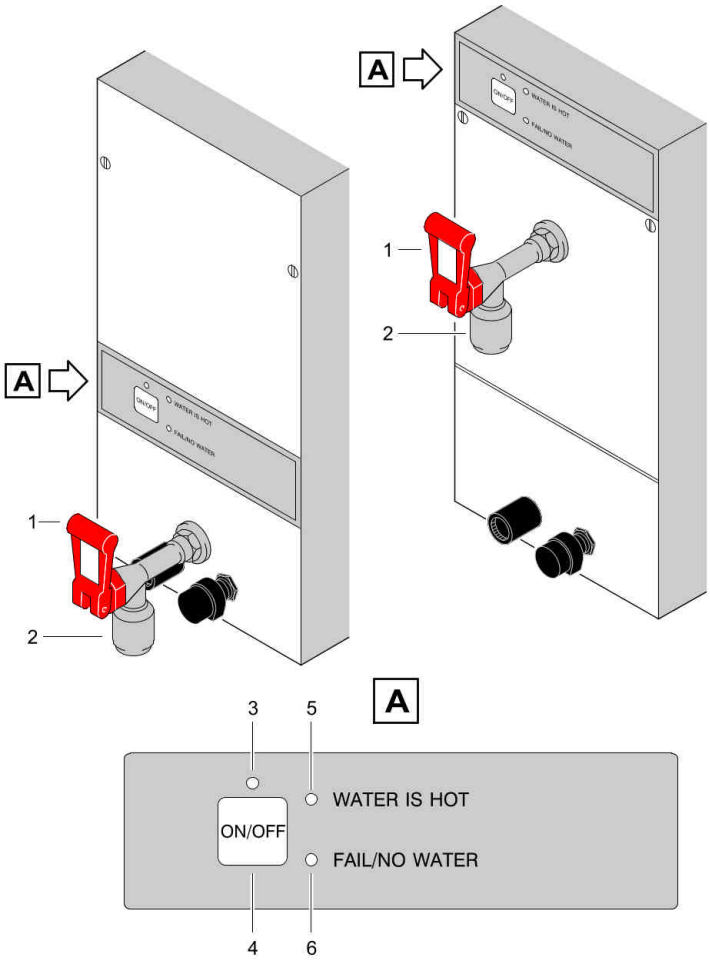
WATER HEATER

Criteria: K11138, K11219
Applicable to: MSN 3034-3120

GENERAL

The water heater is installed in a wet galley and it is supplied from the aircraft water system and electrical system. It supplies hot water to the galley for catering purpose.
The following illustration shows two alternative water heaters.
One of the both water heaters is installed in the galley.

Water Heater



(1) Faucet handle

(2) HOT water- faucet

(3) ON Light Emitting Diode (LED)

(4) ON/OFF pb

(5) WATER IS HOT LED

(6) FAIL/NO WATER LED

DESCRIPTION AND OPERATION

DESCRIPTION

The water heater heats 4.1 l (1.08 US Gal) of water to a temperature of 89 °C ±3 °C (192.2 °F ±5.4 °F).

The water heater has these main components:
1. Faucet handle
2. HOT water- faucet
3. ON LED
4. ON/OFF pb
5. WATER IS HOT LED
6. FAIL/NO WATER LED

OPERATION

WARNING	When you open the hot water faucet: - Keep your hands away from the water. - Do not let the water splash. Hot water can cause serious burns.

CAUTION	DANGER! Monitor the water heater during its operation!

1. Push the ON/OFF pb (4). The ON LED (3) comes ON.
2. The WATER IS HOT LED (5) comes ON, when the water is hot and has the correct temperature.
3. HOT water-faucet operation:
   a. Make sure that the container (for example a hot-water can) you use is for hot water. Hold the container below the outlet of the HOT water-faucet (2).
   b. To open the HOT water-faucet, pull the faucet handle (1) towards you and hold it.
   c. To close the HOT water-faucet, release the faucet handle (1). The water flow stops.
4. To stop the operation of the water heater, push the ON/OFF pb (4). The ON LED (3) goes OFF.

LOW WATER INDICATION

1. If there is not enough water in the water heater, the red FAIL/NO WATER LED (6) comes ON and the heater does not operate:

Carry out the following steps:

a. Hold a container (for example a hot-water can) below the outlet of the HOT water-faucet (2).
b. Open the HOT water-faucet by pulling the faucet handle (1)90 ° towards you. Hold the handle to bleed any air from the water heater until water flows out of the outlet of the HOT water-faucet (2).
c. Release the red faucet handle (1). The water flow stops.
d. Discard the water from the container through the sink of the galley.

2. When the water heater is full of water the red FAIL/NO WATER LED goes OFF.

COFFEE MAKER

Criteria: K10190
Applicable to: MSN 2649

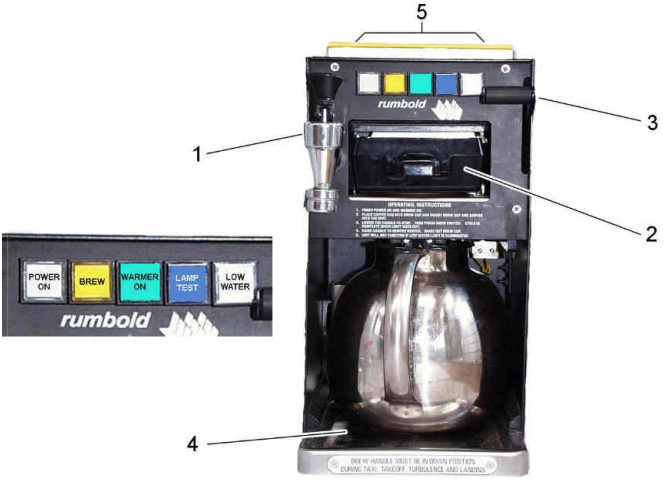
GENERAL

The coffee maker is installed in a wet galley and it is supplied with power and water from the aircraft systems.
Normal purpose of the coffee maker is brewing coffee and hot water outlet.

WARNING	Danger of injury! use the unit only for its designated purposes!

COMPONENTS

Coffee Maker



1. Hot water faucet
2. Brew cup
3. Brew lever
4. Heating pad
5. Operating Panel
   a. POWER ON pb and corresponding indicator lamp:
      The indicator lamp is ON as long as the coffee maker is switched ON.
   b. BREW pb and corresponding indicator lamp:
      Pushbutton used for starting the brewing cycle of coffee.
   c. WARMER ON pb and corresponding indicator lamp:
      Push the button to start/stop heating the heating pad. The indicator lamp is ON as long as the heating pad is heated.
   d. LAMP TEST pb:
      Pushbutton used for checking the indication of all lamps. When the LAMP TEST pb is pushed, all serviceable lamps come ON.
   e. LOW WATER lamp:
      The indicator lamp is ON as long as there is low water in the water tank.

OPERATION

TO TAKE WATER OUT OF THE FAUCET

Note: *The water faucet will provide water with the water temperature of the internal water tank (from the coffee maker).*
If hot water is continuously drawn from the faucet, the brew cycle time will increase and the coffee temperature may be affected.

WARNING	Danger of injury! Serious Burns caused by hot water could be possible. Be Careful!

1. Position a hot water resistant container (for example can or cup) below the outlet of the faucet (1).
2. Raise or lower the handle of the faucet.
3. To stop the hot water flow release the handle of the faucet.

PREPARING THE COFFEE MAKER FOR COFFEE

1. Make sure that the coffee pot is correctly positioned on the heating pad (4).
2. Lift the brew lever (3) upwards until it reaches its top position.

   Note: *The brew cup and coffee pot are unlocked now.*

3. Remove the coffee pot and make sure that it is empty and clean.
4. Insert the coffee pot without a lid in its cavity. Make sure that it is correctly positioned.
5. Remove the brew cup (2) and make sure that the metal plate in the brew cup is securely in place and is clean (cleaning see chapter "CLEANING UNIT COMPONENTS - BREW CUP").
6. Insert a coffee pack. Make sure that it is correctly positioned.
7. Insert the brew cup and make sure that it is correctly positioned.
8. Lower the brew lever downwards until it reaches its bottom position. The brew cup and the coffee pot are fully locked.
9. Push the POWER ON pb. The corresponding indicator lamp comes ON.
10. The unit is ready to brew coffee.

TO BREW COFFEE

1. Check the correct position of the brew cup and the coffee pot.

WARNING	Danger of injury! Do not operate the unit without the coffee pot and the brew cup and the brew lever in down position.

2. Push the BREW pb. The corresponding indicator lamp comes ON.

WARNING	Danger of injury! Serious Burns caused by hot water could be possible.

3. The coffee is ready to serve, when the BREW lamp goes OFF.
4. After the brewing cycle is finished, remove the coffee pack. (See chapter "REMOVING USED COFFEE PACK").

Additional note:

When the BREW pb is pushed, the water in the tank heats up to brewing temperature. Now the cycle for brew starts. It is finished when the coffee reaches the level sensor probes in the coffee pot. After the end of the cycle for brew, the indicator lamp at the BREW pb goes OFF.

The internal control software has special safety features. Operation of the coffee maker stops immediately when:

- The hot water in the water tank reaches the installed low level sensor. At the same time the lamp at the LOW WATER placard at the front side comes ON.
- The water temperature in the water tank falls below 0 °C/32 °F or reaches 91 °C/196 °F.
- The water tank sidewall temperature becomes excessive.
- The brew lever is inadvertently raised.

KEEPING THE COFFEE HOT

Push the WARMER ON pb. The corresponding indicator lamp comes ON.

WARNING	Danger of injury! Don't touch the heating pad. The heating pad is hot. Serious Burns caused by the heating pad could be possible.

Make sure that enough beverage is in the coffee pot.

REMOVING USED COFFEE PACK

1. Lift the brew lever upwards until it reaches its top position.

   Note: The brew cup and coffee maker are unlocked now.

2. Remove carefully the brew cup and discard the used coffee pack.

WARNING	Danger of injury! Serious Burns caused by hot items could be possible. Be Careful!

3. Make sure that the brew cup is clean, if necessary clean it (see chapter "CLEANING THE UNIT COMPONENTS- BREW CUP").
4. Insert the brew cup and make sure that it is correctly positioned.
5. Lower the brew lever downwards until it reaches its bottom position.

Note: *The brew cup and the coffee pot are fully locked.*

REMOVING THE COFFEE POT

1. If the heating MODE is activated:
   Push the WARMER ON pb. The corresponding indicator lamp goes OFF.
2. Lift the brew lever upwards until it reaches its top position.
3. Remove carefully the coffee pot from the heating pad.

WARNING	Danger of injury! The coffee pot and its contents are hot. Serious Burns could be possible. Be Careful!

RE-INSERTING THE COFFEE POT

1. If the brew lever is in the down position, lift the brew lever upwards until it reaches its top position.
2. Place the coffee pot on the heating pad. Make sure that it is correctly positioned.

WARNING	Danger of injury! The coffee pot and its content could be hot. Serious Burns caused by hot items could be possible. Be Careful!

3. Lower the brew lever downwards until it reaches its bottom position.

TAKING THE UNIT OUT OF SERVICE

1. Make sure that the lamps BREW and WARMER ON are not ON.
2. Push the POWER ON pb. The corresponding indicator lamp goes OFF.
3. Lift the brew lever upwards until it reaches its top position. The brew cup and coffee pot are unlocked now.
4. Remove the used coffee pack from the brew cup (see chapter "REMOVING USED COFFEE PACK").
5. Remove the coffee pot from the heating pad.
6. Clean the brew cup and the coffee pot (see Chapter "CLEANING UNIT COMPONENTS").
7. Replace the brew cup and the coffee pot.
8. Lower the brew lever downwards until it reaches its bottom position.

CLEANING UNIT COMPONENTS

WARNING	Danger of poisoning! Do not clean unit components, which are located near the coffee pack or have contact to coffee pack or coffee with anti-bacterial sanitizing spray or toxic liquids. Else poisoning or serious illness is possible!

CAUTION	Do not use boiling water or scouring powder when cleaning unit components. Else damage of the cleaned part is possible.

Coffee pot

1. Clean the coffee pot interior with warm water only.

   Note: *Do not use any rinsing liquid! Residues have a negative influence on the coffee taste.*

2. Clean the coffee pot exterior with warm water and, if necessary with a little rinsing liquid.
3. Dry the coffee pot exterior with a clean lint-free cloth.

Brew cup

1. Clean the interior of the brew cup with warm water only.

   Note: *Do not use any rinsing liquid! Residues have a negative influence on the coffee taste.*

2. Clean its exterior with warm water and, if necessary with a little rinsing liquid.
3. Dry its exterior with a clean lint-free cloth.

Unit surface

Note: *Normally in-flight is not necessary.*

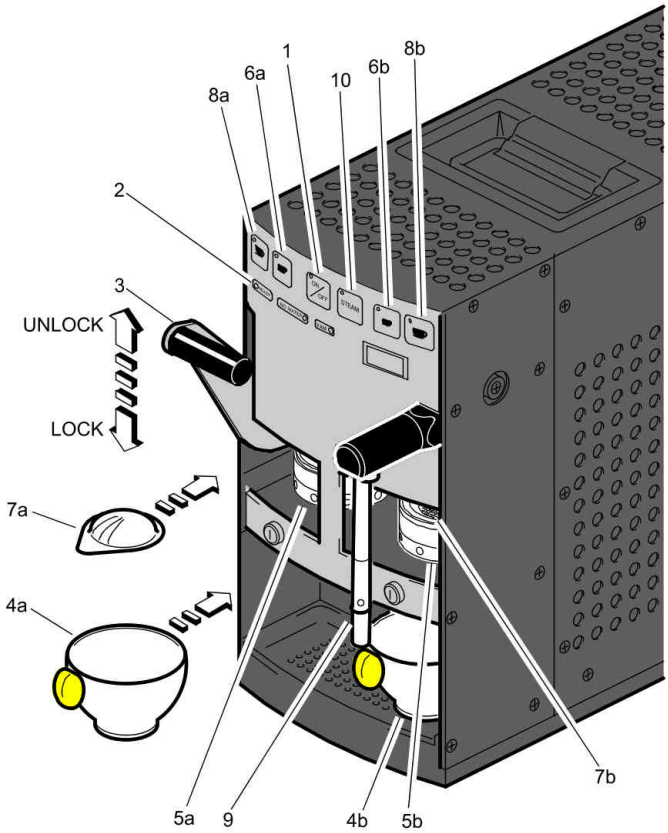
If the unit surface has to be cleaned urgently, proceed as follows:
1. Make sure the heating pad is cool.
2. Clean the surface using a lint-free cloth dampened with warm water.
3. Dry it dry with a clean lint-free cloth.

ESPRESSO MAKER

Criteria: K11138
Applicable to: MSN 2927-2933

The espresso maker is installed in a wet galley and supplied with water from the aircraft water system.
The espresso maker is for preparing espresso, coffee and cappuccino.

Espresso Maker



1. ON/OFF button
2. READY indicator light
3. Handle
4. Coffee cup
5. Coffee-pod holder
6. Small cup button
7. Serving / coffee-pod
8. Large cup button
9. Steam outlet spout
10. STEAM button

WARNING	Health Hazard! Make sure that the STEAM SPOUT and the COFFEE POD HOLDERS with the nozzles are serviceable and clean before each flight.

1. **To start the espresso maker:**
   a. Push the ON/OFF button (1). The ON/OFF indicator light comes on.
   b. Wait until the READY indicator light (2) comes on.
2. **Preparation of espresso and coffee:**
   a. Make sure that the READY indicator light (2) is ON.
   b. As written on its packing, place the espresso serving(s) / coffee pod(s) (7a) and / or (7b) in either one or both coffee-pod holders (5a) and / or (5b).
   c. Push the handle (3) down to the locked position.
   d. Place the clean coffee cup(s) (4a) and / or (4b) in the area under the coffee-pod holder, related to the inserted coffee pod, see b).
   e.

CAUTION	Make sure that the coffee cup is correctly placed below the related coffee pod holder.

   Select the intended coffee type to the related pod holder:

WARNING	When operating the espresso maker be careful. Hot water can cause serious burns.

   - Push the SMALL CUP button (6a) / (6b) for an espresso.
   - Push the LARGE CUP button (8a) / (8b) for a double espresso.

   f. When the brewing cycle is finished the coffee is ready to serve.
   g. Lift the handle (3) to the unlocked position.
   h. Carefully discard the coffee pod(s) (7a) and / or (7b) from the coffee pod holder(s) (5a) and / or (5b).
3. **Preparation of cappuccino:**
   a. Make sure that the READY indicator light (2) is ON.
   b. Steam function:

WARNING	When operating the steam function be careful. Steam can cause serious burns.

   - Fill one and / or both clean cup (4a) / (4b) or a small jug which is suitable to prepare 2 cappuccinos to the half with milk.
   - Put the steam-outlet spout (9) into the milk.

   Note: To optimise the function of the steam spout, the milk should not come over the small hole on the side of the STEAM spout.

- Push the STEAM button (10), the STEAM indicator light is ON.
- Keep frothing the milk until satisfactory foam is made. Apply circular and top to bottom movements to make the froth as dense as possible.

Note: *The steam will function for approximately one minute.*
- *To stop the steam within one minute, push the STEAM button (10) again.*
- *If one minute is not sufficient, push the STEAM button (10) again to start one more cycle.*

c. As written on its packing, place the espresso serving(s) / coffee pod(s) (7a) / (7b) in either one or both coffee pod holders (5a) and / or (5b).
d. Push the handle (3) down to the locked position.
e. Place the coffee cup(s) (4a) and / or (4b) in the area under the coffee pod holder, related to the inserted coffee pod, see d).
f.

CAUTION	Make sure that the coffee cup is correctly placed below the related coffee pod holder.

Push the SMALL CUP button(s) (6a) and / or (6b) related the inserted coffee pod, see d).
g. When the brewing cycle is finished the cappuccino is ready to serve.

Note: *The milk foam can be also prepared in a jug and the foam poured onto a cup of espresso.*

h. Lift the handle (3) to the unlocked position.
i. Clean the plastic steam spout (9) immediately after operation:
- For cleaning the outer surfaces use a clean damp sponge.
- For cleaning the inner surfaces hold an empty cup below the plastic steam spout.

CAUTION	When operating the steam function be careful. Steam can cause serious burns.

- Push the STEAM button (10) again and discard the water through the sink of the galley.
- When the steam cycle is finished, take the cup and discard the water through the sink of the galley.

j. Carefully discard the coffee pod(s) (7a) and / or (7b) from the coffee pod holder(s) (5a) and / or (5b).

4. **To clean and stop the espresso maker**:
a. Push the handle (3) down to the locked position.
b. Make sure that the READY indicator light (2) is on.
c. Place the coffee cups (4a) and (4b) in the area under the coffee pod holder / filter (5a) and (5b).
d.

CAUTION	Make sure that the coffee cup is correctly placed below the related coffee pod holder.

Push the SMALL CUP buttons (6a) and (6b).

WARNING	When operating the espresso maker be careful. Hot water a can cause serious burns.

e. When the brewing cycle is finished take the coffee cups and discard the water through the sink of the galley.
f. Push the ON/OFF button (1). The ON/OFF indicator light goes OFF.

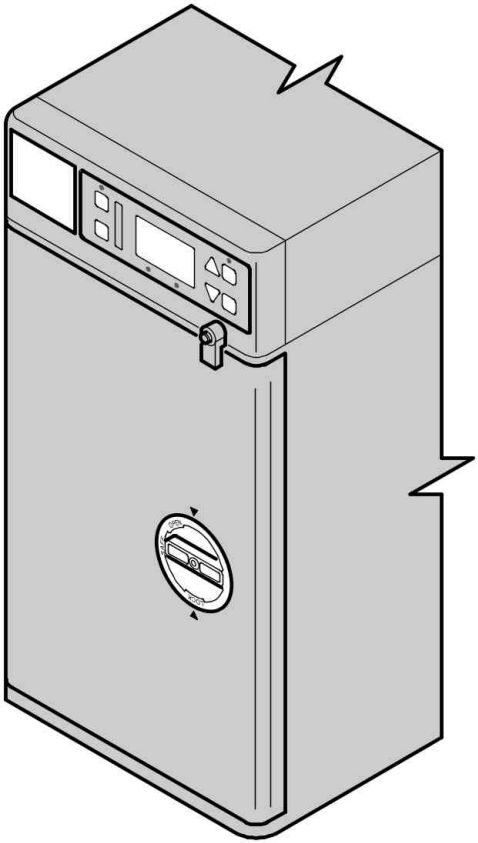
STEAM OVEN/CONVECTION OVEN

Applicable to: MSN 2927-3120

GENERAL

The Steam Oven/High Speed Oven is installed in a galley. It is supplied from the aircraft electrical system.
The oven is supplied with a right or a left hinged door. The oven is controlled by an Oven Control Module (OCM) that is located on the top of the oven.

Steam Oven/Convection Oven



DESCRIPTION

The Oven is designed to heat or reconstitute pre-cooked meals aboard aircraft. Depending on the type of the oven, it can be used in convection mode or in steam mode.

CONVECTION MODE:

The pre-cooked meals are heated by using conventional circulating hot air.

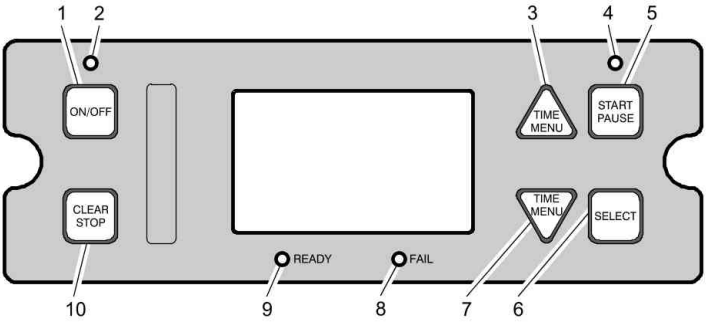
STEAM MODE:

The pre-cooked meals are heated by using a water injection system and pressurized oven cavity.

OVEN CONTROL MODULE (OCM)

The OCM system is built to control an oven with a microprocessor based system. The OCM contains 4 standard and 10 preprogrammed programs that can be customized by the customer. The display indicates the cooking time settings, selected cooking functions and error messages.

Oven Control Module



(1) ON/OFF key: Turns ON/OFF the oven.

(2) ON/OFF Light Emitting Diode (LED): LED will flash in standby mode and continuously during operation.

(3) TIME MENU ▲ key: Scrolls a menu selection up and changes cooking time settings.

(4) START/PAUSE LED: LED is ON during any program run. LED is flashing during the pause.

(5) START/PAUSE key: Starts a cooking cycle and confirms a selected program.

(6) SELECT key: Selects a menu item.

(7) TIME MENU ▼ key: Scrolls a menu selection down and changes cooking time settings.

(8) FAIL LED: LED will flash when ERROR is detected (error message will appear in display).

(9) READY LED: LED will flash when program is finished.

(10) CLEAR/STOP key: Stops or resets a program any time.

HOW TO SWITCH ON THE OVEN

Press the ON/OFF key to switch ON the unit.
The green ON/OFF LED will flash during the self test and the display backlight comes ON.
Display will show the oven mode (S = Steam, C = Convection), the airline logo and the software version, while performing a self test. Message "selftest" appears on the display.

HOW TO START A STANDARD PROGRAM

Press the TIME MENU ▲ key to access the standard programs menu. Press the TIME MENU ▲ or TIME MENU ▼ key to scroll to one of the standard programs "Steam Low", "Steam Medium", "Dry Heat" or "Keep Warm" program.

Note: Depending on the OCM or oven the indication on the display may vary. The indication could also be: "Low", "Medium" and "High" instead of "Low Steam", "Medium Steam" and "Dry Heat".

Press the START/PAUSE key to start the program. The START/PAUSE LED will come ON.

Note: In case the oven is started with the door open or the door is in safe position, the oven will beep twice to notify the user to close and lock the door.

The display shows the progress of the program such as the remaining time, the temperature and the pressure.
As soon as the program is ready, the READY LED is flashing and the display shows "Program Ready". The OCM will give a beep.
The "Program Ready" message can be cleared by pressing the CLEAR/STOP key or by opening the door.

HOW TO STOP A PROGRAM

Press the CLEAR/STOP key to stop a running program. The oven will return to the standby mode. The display will show the stand by screen.

Note: It is not possible to resume the stopped program to restart cooking. A new program or menu has to be selected.
Turn the door knob in safe position to release the pressure from the oven cavity. The door can now safely be opened by turning the door knob in the open position.

HOW TO SELECT A STANDARD PROGRAM WITH A DELAYED START

- Press the TIME MENU ▲ key to access the standard programs menu.
- Press or hold the TIME MENU ▲ or TIME MENU ▼ key to select the Preset time in the Standard Programs menu.
- Press the SELECT key to change the preset time.
- Press or hold the TIME MENU ▲ or TIME MENU ▼ key to change the default preset time.
- Press the SELECT key to confirm.
- Press the TIME MENU ▲ or TIME MENU ▼ key to select a Standard Program.
- Press the SELECT key to change the preset time.
- Press the TIME MENU ▲ or TIME MENU ▼ key to change the default time.
- Press the START/PAUSE key to start the program.

HOW TO ALTER THE RUN TIME OF A PROGRAM (STANDARD PROGRAMS ONLY)

- Start a standard program.
- Press the TIME MENU ▲ or TIME MENU ▼ key during the program run. The remaining time can now be altered. The maximum time is depending on the temperature of the program. High temperature programs are limited in time. The oven will be immediately use the altered time.

HOW TO KEEP THE FOOD WARM

- Press the TIME MENU ▲ key to access the standard programs menu.
- Press the TIME MENU ▲ or TIME MENU ▼ keys to select the keep warm function.
- Press the START/PAUSE key to start the oven or press the SELECT key to change the default time.

PRE-PROGRAMMED PROGRAMS

In addition, there are 10 preprogrammed programs, that can be customized by the customer.

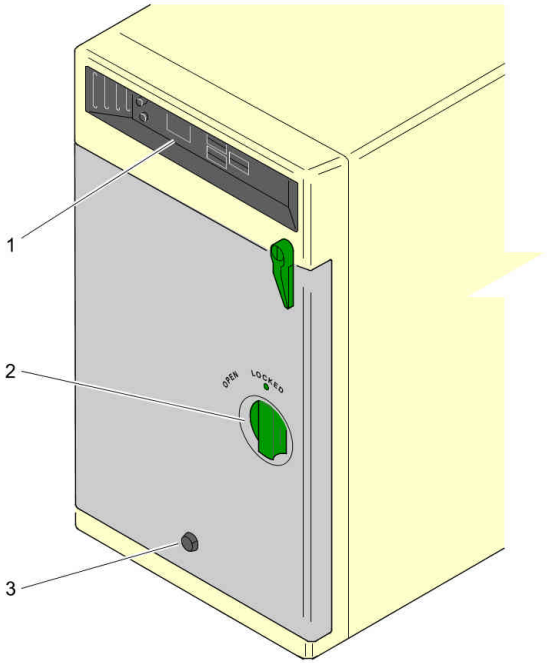
STEAM OVEN

Applicable to: MSN 2649

GENERAL

The steam convection oven is designed to reconstitute frozen food to its desired temperature. The oven can also be utilized for grilling chickens, steaks and for toasting. In the steam mode the preparation times of the various types of meals are up to 25 % less than for the convection oven operation.
The steam convection oven consists of the oven with integrated control panel and shelves.
The oven control module is installed on top of the oven.

Steam Oven



(1) Control module panel

(2) Door knob

(3) Vapour outlet

Note: *The OVEN is provided with a right **or** left side hinged door.*

OPERATION

1. Operating Modes
   The oven has five basic operating modes:

   Convection modes:

   LOW (130 °C)
   MED (150 °C)
   HIGH (210 °C) (Grill Mode)

Steam Modes:

LOW (130 °C)
MED (150 °C)

2. Start of Operation

Reconstitution and Grill mode:

- Set oven control module to ON position (by pressing the POWER ON sw) and the oven is energized.
- Set timer and temperature controller.

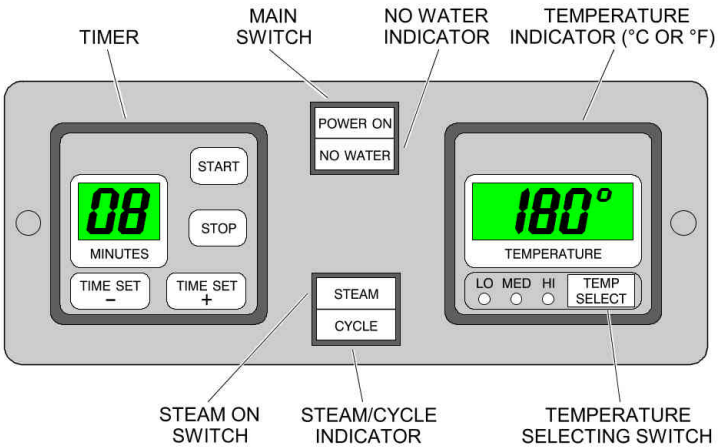
Steam mode:

- Set POWER ON sw to ON position.
- Set the timer cooking time, which is dependent on quantity and kind of food.
- Set the temperature LOW or MED for steam mode by pressing temperature selector more than 2 s on temperature controller.
- Set STEAM sw to ON position. The CYCLE indicator comes ON during steam generation.
- If there is no water available, the NO WATER indicator comes ON. In this case the oven switches over automatically to normal convection mode.

3. End of Operation

Set oven control module to OFF position (by pressing the POWER ON sw again) and the oven is switched OFF.

Control Module Panel



TIMER SETTING

1. Time Setting

Operating time setting is realized by pushing the TIME SET+ pb or TIME SET- pb as required. Holding one of the time set-buttons continuously will result in a fast or down change of time setting.

Note: *The time selected for the previous timer operation cycle will automatically be indicated on the timer when power is supplied to the timer.*

2. Pushing the START pb initiates the timer operation. The remaining operation time will be indicated on the display and the operation of the timer is indicated by a blinking dot beside the indicated time in the lower right hand corner of the display.
   The timer operation can be interrupted at any time by pushing the STOP pb.
   When the set time has elapsed, the timer relay is switched OFF, an acoustic signal will be actuated for 20 s and the display will indicate completion of setting time by a blinking 0. After 20 s the blinking display indication will change to indicate the previously selected operating time. The blinking of the display can be changed to a continuous indication again by pushing the STOP pb or restarting timer operation by pushing the START pb. While acoustic signal is actuated pushing of the STOP pb will also stop this signal. For changing the time setting prior to a restart push the TIME SET+ pb or TIME SET- pb as required. By this the timer display will change to continuous indication. Timer display will be completely deenergized by switching OFF the power supply only.
3. Soaktime
   The timer is provided with an additional contact which can be switched to open position at a free programmable time period (SOAKTIME) prior to end of total selected operating time. The adjustment of this soaktime will be achieved by energizing timer power supply and pushing at the same time the START pb and the TIME SET+ pb. This activates the soaktime setting mode and switches over the display to indicate the soaktime. The required soaktime than can be selected by pushing the TIME SET+ pb and TIME SET- pb. Pushing the STOP pb completes soaktime setting and switches over timer to normal timer operation. The selected soaktime will be stored permanently. The timer contact for soaktime closes when the timer is started, provided that soaktime is less than the set operating time. If, for example, the soaktime is set to 5 min and the operating time to 20 min, the soaktime contact opens 5 min before end of the operating time.

TEMPERATURE SETTING

1. Temperature selection: Pushing the temperature selector button more than 2 s will activate the next temperature step (LOW >>> MED >>> HIGH >>> LOW and so on).

Two operating modes can be programmed:
- Indicator mode: Permanent actual temperature indicated.
- Controller mode: Permanent selected temperature indicated.
- The operating modes can be changed: Pushing the temperature selector button less than 2 s changing from indicator mode to controller mode. After a few seconds, operating mode will switch back automatically to the programmed one.

2. Display, Indications

Normal operation:

The actual temperature (indicator mode) or the selected temperature (controller mode) is shown in the display.

Overheat:

Display indication O.HEA light shows the OVEN OVERHEAT condition.

Temperature sensor error:

Display indication PTER light.

DOOR LATCH MECHANISM

1. Latch general setup:
   - The door latch consists of a spring loaded latching linkage, which engages into the lower and upper strikes in the oven front frame. The operating knob is installed on the door front side.
2. Opening of the door
   - Turn revolving catch in horizontal position.
   - By turning the door knob from LOCKED to OPEN position the latching linkage will disengage from the strikes.
3. Closing of the door
   - Slam door slightly to close. The spring loaded linkage will engage into strikes. The operating knob must manually be put into vertical position in order to achieve secure latching.

BEVERAGE MAKER

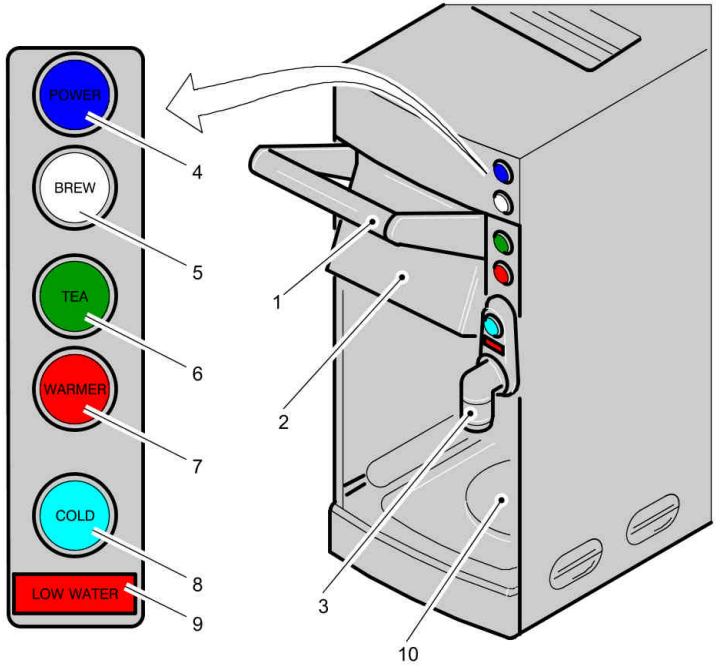
Criteria: K11138
Applicable to: MSN 2927-3120

GENERAL

The beverage maker heats water for a server full of coffee. Optional controls are available to heat a server full of hot water for tea or other uses. Optional controls are available to provide hot or cold water from a faucet on the front of the beverage maker.

The brew chamber uses the standard size 4.25 in (10,79 cm) x 5.25 in (13,33 cm) coffee bag (pillow pack). The brew chamber is sealed during the brew cycle to retain grounds if the pillow pack is torn or broken.

Beverage Maker



(1) Brew Handle

(2) Brew Cup

(3) Faucet

(4) POWER pb

(5) BREW pb

(6) TEA pb (optional)

(7) WARMER pb (optional)

(8) COLD Water or HOT WATER pb (optional)

(9) LOW WATER indication Light Emitting Diode LED (optional)

(10) Server Plate

OPERATION

Note: The server must be in place and the brew handle in the down position to let the pushing of BREW pb or TEA pb start a brew cycle.

1. When the POWER pb is pushed, with the brew handle in the down position, and the server in place in the server cavity, brewing may be started by pushing the BREW pb or by pushing the optional TEA pb.
2. When the temperature in the water tank reaches the set point [approximately 195 °F (91 °C)], the brewed water flows. The water flow will continue until the level sensors detect the liquid in the server or the brew handle is lifted.
3. The brew cycle may be reset by pushing the POWER pb OFF then ON again.

CAUTION	DO NOT USE THE WARMER WHEN USING AN INSULATED SERVER. THE WARMER CAN MAKE THE OUTER SURFACE OF THE INSULATED SERVER VERY HOT.

a. **Brew Coffee**

To prepare beverage maker to brew coffee:

- Push the POWER pb. This starts operation of the tank heaters.
- Remove the brew cup from the brew chamber above the server cavity.
- Put a pillow pack of coffee, with its seam down, on top of the brew cup's metal base plate.
- Put the brew cup into the brew chamber.
- Put an empty server into server cavity.
- Fully lower the brew handle to lock brew cup and server in beverage maker.

Note: Make sure all of the pillow pack is in the brew cup. Do not compress or fold the pillow pack. This could cause the pack to break open during the brew cycle.

To brew a server of coffee, after doing the steps above:

CAUTION	DO NOT USE THE WARMER WHEN USING AN INSULATED SERVER. THE WARMER CAN MAKE THE OUTER SURFACE OF THE INSULATED SERVER VERY HOT.

- Push the WARMER pb (where option is installed). This warmer or platen heater is used to keep coffee hot in the server.
- Push the BREW pb. Brewing will start when the water comes to brew temperature. From a cold start, this will take approximately 3 min. The beverage maker will then brew a server of coffee in approximately 3 min.
- When the brew cycle is complete (shown by the BREW pb light going OFF) lift the brew handle.

- Remove the brew cup and discard the used pillow pack. If there are any coffee grounds in the brew cup, clean the brew cup with clean water.
- Put a new pillow pack in the brew cup and put the brew cup in the brew chamber.
- Fully lower the brew handle to lock brew cup and server in beverage maker.

b. **Brew Tea (optional)**

To brew server of tea (option ◁❄):

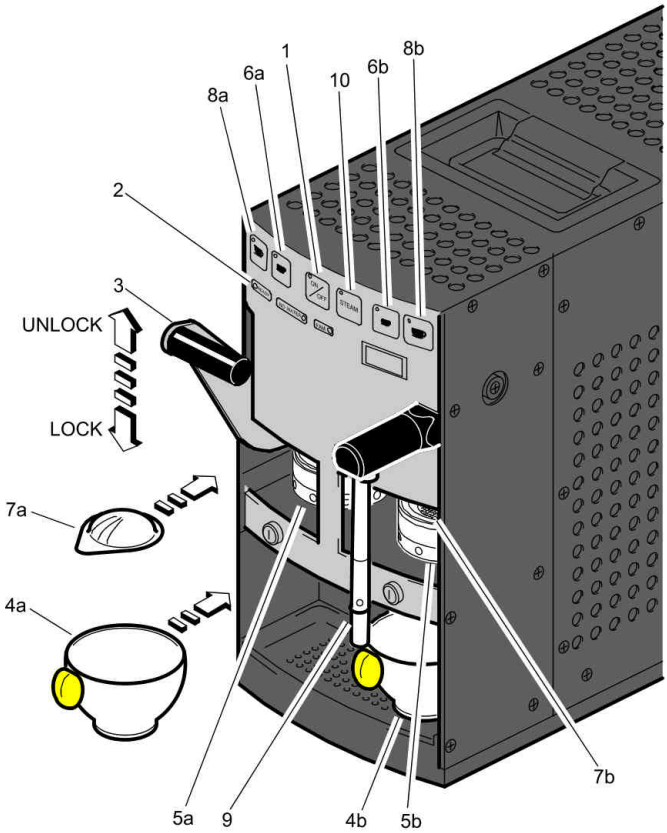
- Push the POWER pb.
- Put an empty server into server cavity.
- Put an empty brew cup into brew chamber.
- Fully lower the brew handle to lock brew cup and server in beverage maker.
- Push the TEA pb.
- When the TEA pb light goes OFF, hot water is prepared for tea.
- Lift the brew handle to get access to the server.
- Put the tea bag(s) in hot water in server until tea is prepared.

ESPRESSO MAKER

Criteria: K10190
Applicable to: MSN 2649

The espresso maker is installed in a wet galley and supplied with water from the aircraft water system.
The espresso maker is for preparing espresso, coffee and cappuccino.

Espresso Maker



1. ON/OFF button
2. READY indicator light
3. Handle
4. Coffee cup
5. Coffee-pod holder
6. Small cup button
7. Serving/coffee-pod
8. Large cup button
9. Steam outlet spout
10. STEAM button

WARNING	Health Hazard! Make sure that the STEAM SPOUT and the COFFEE POD HOLDERS with the nozzles are serviceable and clean before each flight.

1. **To start the espresso maker:**
   a. Push the ON/OFF button (1). The ON/OFF indicator light comes on.
   b. Wait until the READY indicator light (2) comes on.
2. **Preparation of espresso and coffee:**
   a. Make sure that the READY indicator light (2) is ON.
   b. As written on its packing, place the espresso serving(s) / coffee pod(s) (7a) and / or (7b) in either one or both coffee-pod holders (5a) and / or (5b).
   c. Push the handle (3) down to the locked position.
   d. Place the clean coffee cup(s) (4a) and / or (4b) in the area under the coffee-pod holder, related to the inserted coffee pod, see b).
   e.

CAUTION	Make sure that the coffee cup is correctly placed below the related coffee pod holder.

   Select the intended coffee type to the related pod holder:

WARNING	When operating the espresso maker be careful. Hot water can cause serious burns.

   - Push the SMALL CUP button (6a) / (6b) for an espresso.
   - Push the LARGE CUP button (8a) / (8b) for a double espresso.

   f. When the brewing cycle is finished the coffee is ready to serve.
   g. Lift the handle (3) to the unlocked position.
   h. Carefully discard the coffee pod(s) (7a) and / or (7b) from the coffee pod holder(s) (5a) and / or (5b).
3. **Preparation of cappuccino:**
   a. Make sure that the READY indicator light (2) is ON.
   b. Steam function:

WARNING	When operating the steam function be careful. Steam can cause serious burns.

   - Fill one and / or both clean cup (4a) / (4b) or a small jug which is suitable to prepare 2 cappuccinos to the half with milk.
   - Put the steam-outlet spout (9) into the milk.

   Note: To optimise the function of the steam spout, the milk should not come over the small hole on the side of the steam spout.

- Push the STEAM button (10), the STEAM indicator light is ON.
- Keep frothing the milk until satisfactory foam is made. Apply circular and top to bottom movements to make the froth as dense as possible.

Note: *The steam will function for approximately 1 min.*
- *To stop the steam within one minute, push the STEAM button (10) again.*
- *If 1 min is not sufficient, push the STEAM button (10) again to start one more cycle.*

c. As written on its packing, place the espresso serving(s) / coffee pod(s) (7a) / (7b) in either one or both coffee pod holders (5a) and / or (5b).
d. Push the handle (3) down to the locked position.
e. Place the coffee cup(s) (4a) and / or (4b) in the area under the coffee pod holder, related to the inserted coffee pod, see d).
f.

CAUTION	Make sure that the coffee cup is correctly placed below the related coffee pod holder.

Push the SMALL CUP button(s) (6a) and / or (6b) related the inserted coffee pod, see d).
g. When the brewing cycle is finished the cappuccino is ready to serve.

Note: *The milk foam can be also prepared in a jug and the foam poured onto a cup of espresso.*

h. Lift the handle (3) to the unlocked position.
i. Clean the plastic steam spout (9) immediately after operation:
- For cleaning the outer surfaces use a clean damp sponge.
- For cleaning the inner surfaces hold an empty cup below the plastic steam spout.

CAUTION	When operating the steam function be careful. Steam can cause serious burns.

- Push the STEAM button (10) again and discard the water through the sink of the galley.
- When the steam cycle is finished, take the cup and discard the water through the sink of the galley.

j. Carefully discard the coffee pod(s) (7a) and / or (7b) from the coffee pod holder(s) (5a) and / or (5b).

4. **To clean and stop the espresso maker:**
a. Push the handle (3) down to the locked position.
b. Make sure that the READY indicator light (2) is on.
c. Place the coffee cups (4a) and (4b) in the area under the coffee pod holder / filter (5a) and (5b).
d.

CAUTION	Make sure that the coffee cup is correctly placed below the related coffee pod holder.

Push the SMALL CUP buttons (6a) and (6b).

WARNING	When operating the espresso maker be careful. Hot water a can cause serious burns.

e. When the brewing cycle is finished take the coffee cups and discard the water through the sink of the galley.
f. Push the ON/OFF button (1). The ON/OFF indicator light goes OFF.

BUN WARMER

Applicable to: MSN 2927-2933

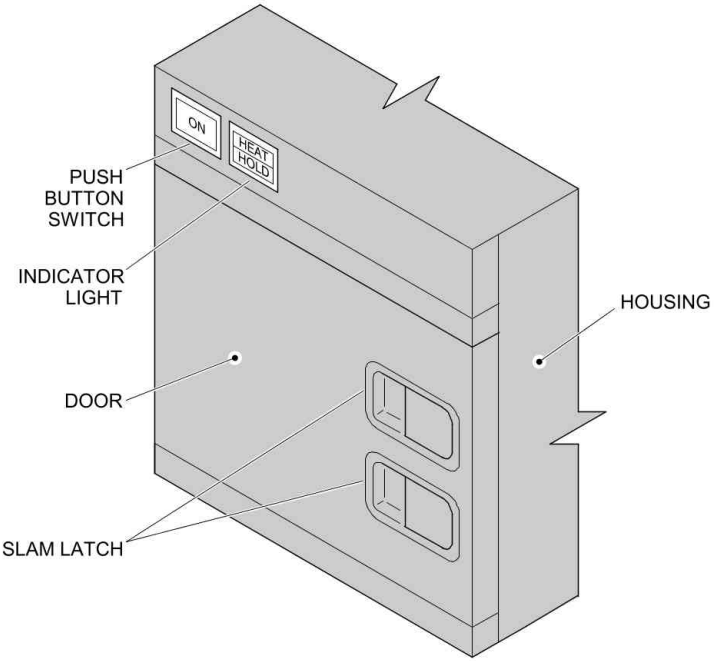
GENERAL

- The bun warmer is installed in a galley and is supplied from the aircraft electrical system.
- The only purpose of the bun warmer is to make buns warm.

WARNING	Danger of injury! use the Bun Warmer only for designated Purposes!

- The bun warmer is a device with a thermostatically controlled heating-element.

Bun warmer



COMPONENTS

The bun warmer has these main components:

- A case assembly
- A door assembly
- Electrical components.

OPERATION - TAKING THE BUN WARMER INTO SERVICE

1. Open the door of the bun warmer:

WARNING	Danger of clamping! Clamping of fingers between the latch and the items is possible. Be careful!

   a. Use the slam latch to open the door. Make sure that the door can be opened freely.
2. Make sure that the bun warmer is clean.
3. Use the insert and position the buns.

Note: *Make sure that the insert is not overloaded, allow enough space between the buns so that the heat can circulate between them.*

4. Position the insert with the buns in the bun warmer.
5. Close the door:

WARNING	Danger of clamping! Clamping of fingers between the latch and the items is possible. Be careful!

a. Using the slam latch close the door, until you hear a snap. Make sure that the door fits correctly in the housing.

WARNING	Danger of injury! Make sure that the door of the bun warmer is correctly latched and Locked. There is Danger of burning!

6. Push the bun warmer push-button switch to the ON position. The light ON and HEAT lights.
7. The bun warmer operates and heats up the bun for 15 min. Then the bun warmer switches into HOLD mode automatically (HOLD lights, HEAT is off).

Note: *The bun warmer has one basic operating mode to warm up the unit to its firmly adjusted temperature.*
You can switch the bun warmer ON and OFF only with the bun warmer push-button switch.

CAUTION	Monitor the Bun Warmer during its operation.

8. When the warming up is finished:
Press the bun warmer push-button to set the bun warmer OFF. All lights of the bun warmer go off.
9. Carefully open the door of the bun warmer:

WARNING	Danger of injury! The buns and the insert are hot. Use protective gloves. Hot Buns and insert can cause burning. Be Careful!

a. Use the slam latch to open the door. Make sure that the door can be opened freely.
b. Carefully remove the insert with the buns.

OPERATION - TAKING THE BUN WARMER OUT OF SERVICE

1. Press the bun warmer push-button to set the bun warmer OFF. All lights of the bun warmer go off.
2. After use, and the bun warmer is cooled, wipe it with a clean lint-free cloth.
3. Close the door:

WARNING	Danger of clamping! Clamping of fingers between the door and Housing is possible. Be careful!

a. Using the slam latch close the door, until you hear a snap. Make sure that the door fits correctly in the housing.

HOT CUP

Applicable to: MSN 2649

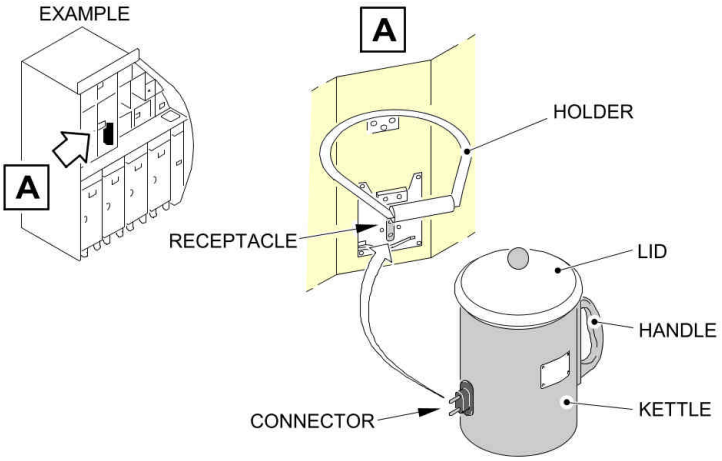
GENERAL

1. The hot cup is a water heater installed in a galley and is supplied from the aircraft electrical system.
2. Normal purpose of the hot cup is to heat up potable water.

WARNING	Danger of injury! use the Hot Cup only for designated purposes!

3. The hot cup is a kettle with a thermostatically controlled heating-element and a lid.

Hot Cup



COMPONENTS

The hot cup has these main components:
1. A lid.
2. A kettle.
3. A connector, for electrical supply.

OPERATION - TAKING THE HOT CUP INTO SERVICE

NEVER USE THE HOT CUP WITHOUT WATER

1. Pull up the holder.
2. Open the lid and make sure that the hot cup is clean.
3. Fill the kettle with water.

WARNING	Danger of Injury! Never fill the Kettle to more than the maximum level. There is Danger of burning from hot water!

4. Close the lid. Make sure that it is correctly positioned.
5. Position the hot cup and push the connector into the receptacle.
6. Pull down the holder.

WARNING	Danger of injury! Make sure that the hot cup is correctly latched.

7. The hot cup operates and heats up the water.

CAUTION	Monitor the hot cup during its operation.

8. When the correct temperature is reached the hot cup switch goes off. The hot water is ready to serve.
9. Carefully pull up the holder, hold the handle and remove the hot cup.

WARNING	Danger of injury! The KETTLE is hot. Hold the hot cup only at the handle. Hot water can cause burning. Be Careful!

OPERATION - TAKING THE HOT CUP OUT OF SERVICE

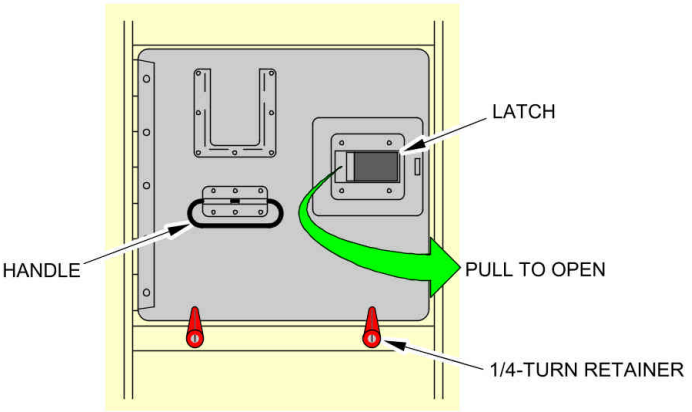
1. Let the hot cup cool.
2. After use, and the hot cup is cooled, dry it with a clean absorbent cloth.
3. Stow and latch the hot cup correctly.

CONTAINER

Applicable to: ALL

Container

EXAMPLE



A container is a mobile unit. Normal purpose is to store and transport several things.

WARNING	Danger of injury! Do not use the Container for any other than designated purposes!

The container has a closed housing with a door. The door is opened and closed by a latch.
The load limit is specific. Placards at the galley compartment show the load limits.

WARNING	Do not overload the containers! Overload may cause damage to the locking mechanism (danger of uncontrolled opening) and/or container housing and/or galley. To avoid injury to persons, distribute some items to other containers.

HANDLING OF THE CONTAINER

WARNING	Danger of clamping! Clamping of fingers between - container door and its housing - Container and storage place is possible. Be careful!

REMOVING THE CONTAINER FROM THE COMPARTMENT

1. Unlock the latch *Refer to 02-140 Latches*.
2.

WARNING	Danger of injury! Some container are heavy. Before you take out any item, check its weight. The higher a heavy item is stowed, the more carefully it must be handled. If needed asked a crewmember for help.

   Hold the handle of the container tightly while you pull out the container.
3. Put the container on a safe place. A safe place is where the container cannot move during flight manoeuvres or turbulences.

OPENING THE CONTAINER

1. Lift the slam latch until the container door is unlatched.
2. Using the slam latch, carefully swing out the container door.

CLOSING THE CONTAINER

1. Make sure that the weight is not overload and no parts touch the door and latch of the container.
2. Swing in the container door.
3. Push the container door against the housing until the slam latch engages with a snap.

RE-INSERTING THE CONTAINER

1. Take the container and place it in the galley.
2. Lock the latch *Refer to 02-140 Latches*.

WASTE TROLLEY

Applicable to: MSN 2927-3120

GENERAL

A waste trolley is a mobile unit on board the aircraft. Normal purpose is to store and to transport waste.

WARNING	Danger of injury! use a Trolley for designated purpose only!

The load limit of each trolley is specific. Placards at the trolley compartments (park positions) show the load limits.

CAUTION	Do not overload the Trolleys! Overload may cause damage to the locking mechanism (danger of uncontrolled opening) and/or Trolley housing and/or galley.

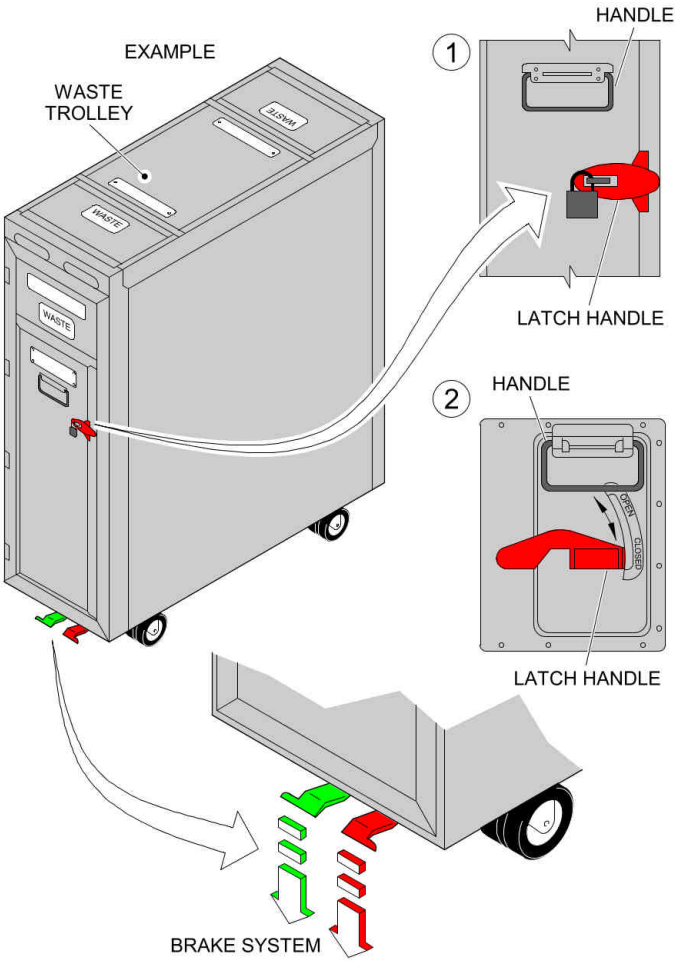
CAUTION	THE TROLLEY MUST BE STOWED AND LATCHED DURING TAKE-OFF, TAXI, TURBULENT WEATHER AND LANDING.

CAUTION	THE TROLLEY MUST BE RESTRAINED BY BRAKING WHILE IT IS OUT OF THE GALLEY AND TEMPORARILY UNATTENDED.

CAUTION	THE TROLLEY MUST NOT BE UNATTENDED WHEN INCLINED AT AN ANGLE OF MORE THAN 8.0 °.

Note: *WHEN MOVING, THE DOOR MUST BE KEPT EITHER CLOSED.*

Waste Trolley



The illustration shows a full size waste trolley with three flaps. There are several types of waste trolleys in full size or half size with one, two or three flaps. The latch handles can be different to the illustration.

OPERATING THE WASTE TROLLEY

REMOVING A TROLLEY FROM ITS COMPARTMENT IN THE GALLEY (PARK POSITION)

WARNING	Danger of Injury! A Trolley can be heavy. The more heavy a trolley is, the more power is needed to move it. Right after removing from park position and Before entering any passenger zone, check its weight and moveability to ensure safe handling. If necessary ask a crew member for assistance.

1. Open the cover door or the securing latches at the trolley compartment.
2. Disengage the trolley brake.
   See Operating the brake system, paragraph "Disengaging the trolley brake".
3. Remove the trolley from its park position.
4. If there is a cover door at the trolley compartment:
   a. Engage the trolley brake.
      See Operating the brake system, paragraph "Engaging the trolley brake".
   b. Close the cover door.
   c. Disengage the trolley brake again.

TROLLEY OPERATION IN PASSENGER ZONES

WARNING	Danger of Injury! 1. Carefully move the trolley through the aisle and endanger no passengers. 2. Always Activate the brake when stopping or parking the trolley. 3. Make sure that the trolley will not be handled by passengers.

OPERATING THE BRAKE SYSTEM

WARNING	Danger of Injury! Carefully operate the trolley brake to minimize the risk of clamping feet.

Engaging the Trolley Brake

Push the red pedal using a foot to engage the brake.

Disengaging the Trolley Brake

Push the green pedal using a foot to disengage the brake.

INSERTING WASTE

There are several types of waste trolleys in full size or half size with one, two or three flaps. The illustration shows a full size waste trolley with three flaps.

1. Waste can be inserted from the top by pushing it downwards through one of the two flaps on both sides.
2. On the top of the front side is a third flap which can be used in the compartment or whenever its useful.

OPENING THE TROLLEY DOOR

1. Open the padlock (if built in).
2. Turn the latch handle to OPEN position.
3. Swivel out the trolley door using the handle.

REPLACING THE FULL WASTE BOX OR BAG

1. Take out the waste box/bag.
2. Close the box/bag and stow it.
3. Insert the new box/bag.

CLOSING THE TROLLEY DOOR

WARNING	DANGER OF INJURY! CAREFULLY CLOSE THE TROLLEY DOOR TO MINIMIZE THE RISK OF CLAMPING FINGERS.

1. Swivel in the door.
2. Make sure that the latch handle is in OPEN position.
3. Push the door against the housing and hold it with one hand.
4. Turn the latch handle to CLOSED position using the other hand.

INSERTING THE TROLLEY INTO ITS COMPARTMENT IN THE GALLEY (PARK POSITION)

1. If there is a cover door at the trolley compartment or if the securing latches are closed:
   a. Engage the trolley brake.
   b. Open the cover door or the securing latches.
   c. Disengage the trolley brake again.
2. If necessary turn the trolley around until its brake pedals are on the front side.
3. Carefully insert the trolley into its compartment.
4. Engage the trolley brake.
5. Close the cover door or the securing latches at the trolley compartment.

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CIDS AND COMMUNICATIONS

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03-010 CABIN INTERCOMMUNICATION DATA SYSTEM

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03-030 COMMUNICATION

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03-050 SERVICE INTERPHONE

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03-090 AUDIO

General System Information....A

SYSTEM DESCRIPTION

Applicable to: ALL

The Cabin Intercommunication Data System (CIDS) operates, controls and monitors the main cabin systems.
The CIDS performs different system and unit tests.

It is connected to the following cabin systems:
- Air Conditioning
- Communications
- Fire Protection
- Ice Protection
- Lights
- Water and Waste

The system philosophy makes it easy to change the cabin layout because CIDS hardware provides spare inputs, outputs and circuits. This allows the connection of new and/or additional cabin equipment without a change of CIDS hardware components. If any equipment is changed, only the CIDS software database has to be updated.
The CIDS system is also able to detect faults in its components and the connected equipment by itself.

INTEGRATED CABIN SYSTEMS

The CIDS provides these system functions:

PASSENGER ADDRESS

The PA system distributes announcements from the cockpit and each attendant station through all assigned PAX loudspeakers.
(*Refer to 03-040 PA from the Cockpit*)

SERVICE INTERPHONE

The service interphone system allows the communication via telephone between the ground crew, the cockpit crew and the cabin crew when the aircraft is on the ground.
(*Refer to 03-050 General System Information*)

CABIN AND FLIGHT CREW INTERPHONE

The cabin interphone system allows the communication via telephone between all attendant stations and between the attendant stations and the cockpit.
(*Refer to 03-060 Interphone System - General Information*)

CABIN READY SIGNALING (OPTIONAL)

The cabin ready signaling informs the cockpit crew about the cabin status.

(*Refer to 03-030 General System Information*)

PASSENGER CALL

The PAX call system controls the illumination of the PAX call-light and the activation of the call-chime.
(*Refer to 03-070 General System Information*)

PASSENGER LIGHTED SIGNS

The PAX lighted signs system controls the NO SMOKING (NS), FASTEN SEAT BELT (FSB), RETURN TO SEAT (RTS) and EXIT signs.
(*Refer to 03-080 Location of Passenger Lighted Signs*)

PRE-RECORDED ANNOUNCEMENT AND BOARDING MUSIC

The PRAM transmits the pre-recorded announcement and the boarding music to the related PAX loudspeakers.(*Refer to 03-090 Prerecorded Announcement*)

CABIN ILLUMINATION

The cabin illumination system controls the illumination of the different cabin areas independently.
(*Refer to 02-070 Cabin Lighting*)

READING LIGHTS

The reading lights system controls the PAX reading lights and attendant work-lights in the cabin. In addition to the above described lights it is possible to install special decor lights and spot lights which are also controlled by the reading light system.
(*Refer to 02-070 Cabin Lighting*)

AIR CONDITIONING

The CIDS can select different temperatures for all defined cabin zones. A fine adjustment of the pre-selected temperature for different zones is possible through FAP operations. The actual temperature per zone is indicated on the FAP.
(*Refer to 02-090 Air conditioning*)

POTABLE WATER INDICATION AND PRE-SELECTION

The potable water indication and pre-selection system shows the filling level of the water tank on the FAP and gives the commands for the pre-selection of the water quantity.
(*Refer to 02-100 FAP - Messages*)

WASTE INDICATION

The waste indication system shows the filling level of the waste tanks on the FAP. In addition to that inoperative lavatories are indicated on the FAP and respective messages come on.

(Refer to Chapter WASTE INDICATION)

LAVATORY SMOKE INDICATION

The smoke detection system controls the visual and acoustical indications in the cabin if a smoke alert is received from the Smoke Detection Control Unit SDCU.
(*Refer to 02-110 Lavatory Smoke Detection*)

DOORS AND ESCAPE-SLIDES PRESSURE MONITORING

The door and escape-slide control system monitors the door and escape-slide bottle-pressure reservoir at the PAX doors and the emergency exits. In addition to that it monitors the status of the doors (OPEN/CLOSED) and the escape-slides (ARMED/DISARMED). The status is indicated on the FAP.
(*Refer to 02-120 Doors and Exits in the Cabin*)

PASSENGER ENTERTAINMENT SYSTEM (OPTIONAL)

The PES transmits audio programs and video sound to the passengers and shows video programs through the video display units in the PAX compartment. The passenger can hear the audio programs and the video sound through the headsets and the loudspeakers. In addition, the CIDS director transmits PA announcements to the headsets and the loudspeakers. As an option, the system provides also internet access and in-seat power supply.
(Refer to Chapter PASSENGER ENTERTAINMENT SYSTEM)

EMERGENCY EVACUATION SIGNALING

The EVAC system controls the evacuation signalling in all cabin areas and in the cockpit. It can be activated from the cockpit, the FAP (guarded push button called EVAC CMD) or, as an option, from the AAP (EVAC CMD) during an emergency.
(*Refer to 05-010 Evacuation alert system*)

PASSENGER SERVICE SYSTEM

The PSS gives the remote controlled operation of the PAX reading lights and the PAX call activation/deactivation.

STERILE COCKPIT (OPTIONAL)

The sterile cockpit command is used by the cockpit crew to indicate that they do not want to be disturbed.

GENERAL

Applicable to: ALL

The CIDS system consists of these components:

- Directors
- Decoder/Encoder Units (DEU), Type A and B
- Passenger Interface and Supply Adapter (PISA)
- Flight Attendant Panel (FAP)
- Cabin Assignment Module (CAM)
- On Board Replaceable Module (OBRM)
- Integrated PRAM (IPRAM)
- Additional Attendant Panel(s) (AAP)
- Attendant Indication Panels (AIP)
- Area Call Panels (ACP)
- Handsets
- Loudspeakers
- Passenger call/reset pushbuttons
- Passenger call lights
- No Smoking (NS), Fasten Seat Belt (FSB) and Return To Seat (RTS) signs.

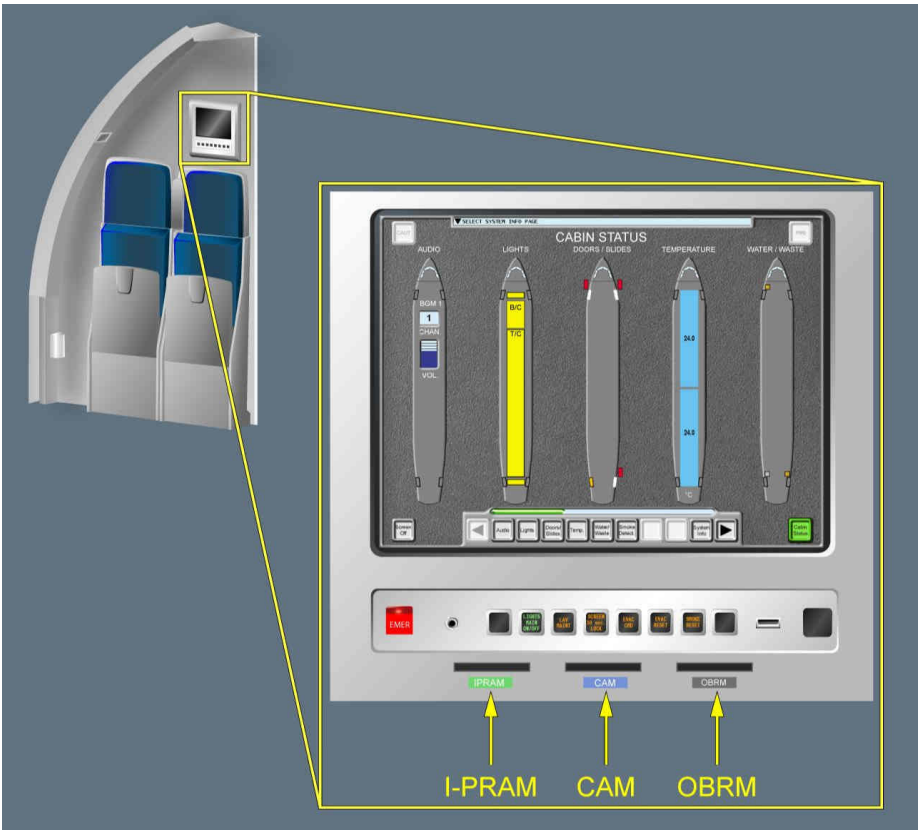
All components of the CIDS are connected to the two identical directors, one of them in active mode and the other one in hot standby mode. The directors are the central control components of the CIDS. They monitor the system performance continuously, store detected faults and send them to the Warning and Maintenance System (WMS) and/or the FAP.
In the event of a major fault, respective information is sent additionally to the ECAM Status Page or to the ECAM Warning Page.

FAP - LOCATION AND MODULES

Applicable to: ALL

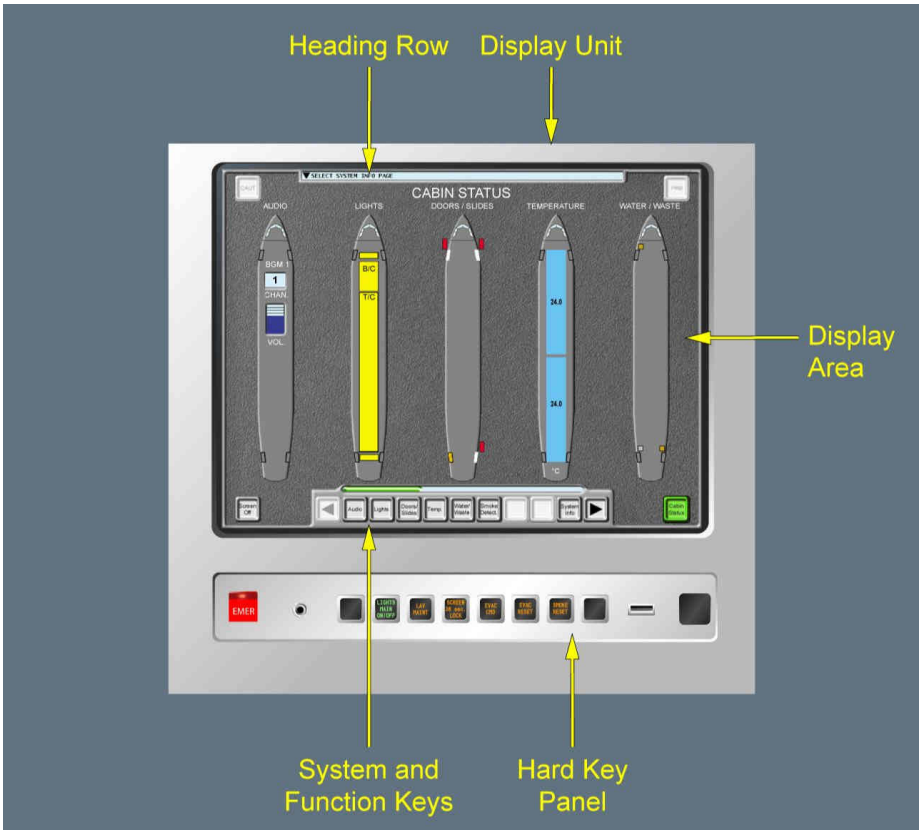
The FAP enables the cabin crew to control certain cabin systems and the CIDS, indicates the status of several cabin systems and provides the cabin zone programming.
It is located at the attendant station FWD L.

FAP Location



The FAP has the following modules:
- Display unit (touch screen panel)
- Sub panel (hardkey panel).

FAP Module Overview



The touch screen panel indicates all the cabin information.
It is used to select the different cabin functions (like cabin illumination) and the cabin programming.
The sub panel contains all hardkeys and some interfaces.
For further information on the FAP hardkey functions *Refer to 02-060 FAP System and Function Buttons*.

OBRM - ON BOARD REPLACEABLE MODULE

The OBRM module is the storage device for the internal system software.
It is installed in the sub panel of the FAP.

CAM - CABIN ASSIGNMENT MODULE

The CAM module stores the CIDS configuration data base.

It is installed in the sub panel of the FAP and includes the cabin definition, e.g. for:
- Cabin zoning
- Seat relation to loudspeakers and passenger lighted signs
- Chime sequences
- Audio levels.

IPRAM - INTEGRATED PRE-RECORDED ANNOUNCEMENT AND MUSIC

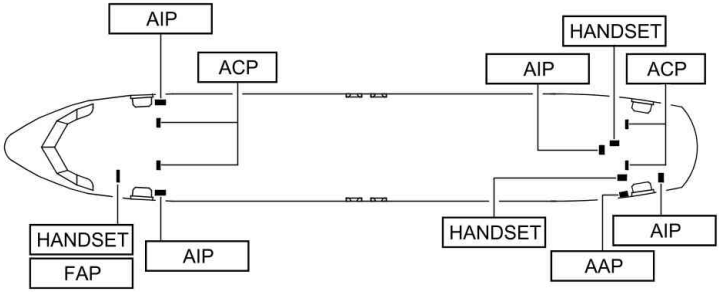
The integrated PRAM system provides the functionalities for announcements and boarding music. All these audio relevant data is stored in a memory unit which is called a CF-Card (compact flash card).
IPRAM functionalities are only available, if a programmed CF-Card is plugged in the sub panel of the FAP.
For further information on audio functions *Refer to 03-090 Prerecorded Announcement*.

CIDS COMPONENTS AT THE ATTENDANT STATIONS

Applicable to: ALL

All CIDS components are installed at the attendant stations. The stations are located in the door areas or in the aisle between them.

Component Location



ADDITIONAL ATTENDANT PANEL

Applicable to: ALL

The AAP enables Cabin Crew to control cabin systems. It is installed at the attendant station AFT L.
The AAP is a switch panel consisting of 3 rows x 6 columns of membrane switches.

(*Refer to 02-060 Additional Attendant Panels*).

ATTENDANT INDICATION PANELS

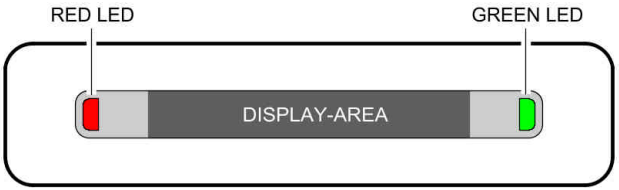
Applicable to: ALL

The AIPs indicate dial and call information of the PA / Interphone system and other system information (e.g. lavatory smoke location, PAX calls, ...) to the attendants.
They are installed at all attendant stations.
The AIPs consists of a two-row alphanumerical display and two indicator lights.
The upper row displays communication information (e.g. interphone calls) and the lower row displays cabin system and emergency information (e.g. direct announcements) with a length of 16 characters maximally.
Each text message displayed in the lower row belongs to the following priority:

Indication related to System Function		Priority
Cabin Interphone	Emergency Call	1
	All Attendant Call	2
	Normal Call	3
Smoke Detection		2
Evacuation Signalling		3
Service Interphone		6
Passenger Address		7
Prerecorded Announcement		7
Passenger Call from	Seatrow	5
	Lavatory	4
	Attendant	4
Sterile Cockpit Indication		8
Waste Warning Indication		3
'Purser Call' Status		5
Cockpit Alert Indication		1
Cabin Alert Confirmation		1

Two indicator lights (red/green) serve as attention getters and ensure a far reaching call function when a respective message is displayed. The red light is used for system and emergency information, the green light for communication information. The lights are steady in normal situations and will flash in emergency situations.

Additional Indication Panel (AIP)

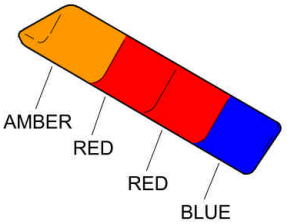


AREA CALL PANELS

Applicable to: ALL

The ACPs give a long-range visual indication about the system status (e.g. PAX call active).
They are installed at the ceiling in the middle of the aisle between the passenger/crew doors, close to the attendant stations.
Each of them has four separately controllable indication fields containing colored LED lights which are visible from the front and the rear side.

Area Call Panel (ACP)



Note: *In case of two red ACP fields both will react as one single field. There will be no difference of the indication modus between them.*

The lighted segments are activated either continuously (steady) or flashing.
In case of "normal" calls they are not flashing (steady), in case of "abnormal" or "emergency" situations they will flash. Only the blue PAX call field will never flash, this will be always a "normal" indication.
The following table shows the types of information on which the cabin attendants are informed about, in combination with the related ACP field and the lighting modus:

SYSTEM INFORMATION	COLOR on ACP (LED)	LIGHT MODUS	PRIORITY
PAX call (from lavatory)	Amber	Steady	5
LAV smoke	Amber	Flashing	2
All ATTND calls (from cockpit)	Red	Steady	3

Continued on the following page

Continued from the previous page

SYSTEM INFORMATION	COLOR on ACP (LED)	LIGHT MODUS	PRIORITY
EMER call (from cockpit)	Red	Flashing	1
All ATTND calls (from cabin)	Red	Steady	3
PAX call (from seat row)	Blue	Steady	5

Note: If a PAX call from a lavatory is started an additional amber light (similar to the ACP lights) comes on steady on the dedicated outside lavatory wall.

CABIN HANDSETS

Applicable to: ALL

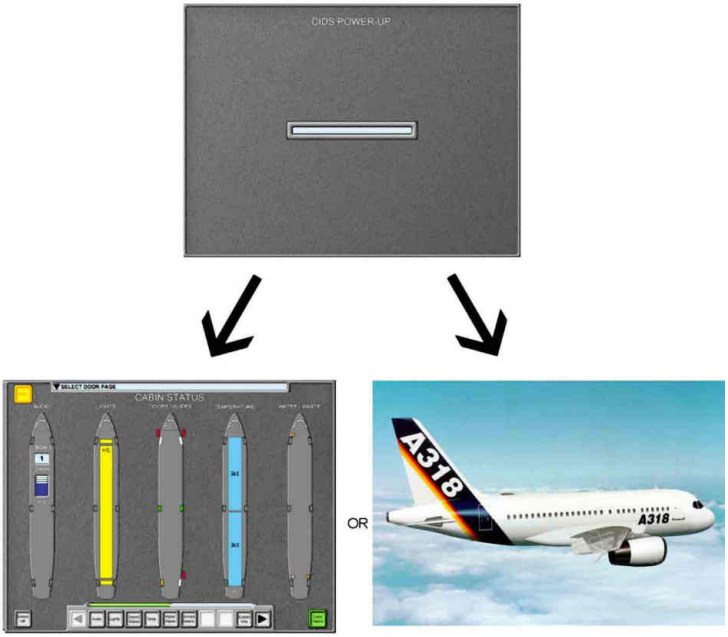
The Cabin Crew use the cabin handsets for the cabin and flight crew interphone functions and for PA announcements.
The handsets are installed at the cabin crew stations.
For detailed handset description: *Refer to 03-040 PA System - General Information about Handset Operation*
For SERVICE INTERPHONE functions: *Refer to 03-050 General System Information*
For CABIN INTERPHONE functions: *Refer to 03-060 Interphone System - General Information*

SYSTEM POWER-UP

Applicable to: ALL

After the CIDS is started the FAP displays the system power-up page. A bar graph is shown to indicate that the system is in the boot phase. When the power-up sequence is completed, a CAM assigned page (e.g. Cabin Status) or a screen saver will be shown.

Power-up Scenario



If the system receives no data from the active CIDS director, the FAP displays a fault page (blue card).

CIDS RESET AFTER CABIN SYSTEM FAILURE(S)

Applicable to: ALL

If a cabin system has failed, this has an impact on the operation of the cabin. In order to recover the cabin system, the Cabin Crew has to request the Flight Crew to perform a CIDS reset as described below. Cabin systems are e.g.: Passenger Address (PA), Cabin Communication Systems, Cabin Lighting, or Flight Attendant Panel (FAP) functions.

A cabin system has failed.

	ACTION	RESULT/SOLUTION YES	NO
1.	Inform the Flight Crew that the CIDS is inoperative. Request the Flight Crew to perform a reset of the CIDS. 1. When the Flight Crew has confirmed the reset, wait 1 minute. 2. Randomly check the system pages on the FAP e.g. LIGHTS, CABIN TEMPERATURE, etc. 3. Establish an interphone and a PA communication link. Are the system pages available and is the interphone and the PA communication operative?	Go to 2.	Go to 3.
2.	The CIDS is operative again. Enter the failure symptoms and the recovery process into the cabin logbook.	END	END
3.	The CIDS is inoperative, or partially inoperative. Report the failure to the Flight Crew and make an entry into the cabin logbook.	END	END

ZONES

Applicable to: ALL

A specific data set containing information about the cabin layout is defined and programmed for each customer in the CAM at the time of delivery.
The CIDS offers an on board programming of some cabin informations/zones and a change of the complete layout information by a CAM layout change or a CAM replacement.
It is also possible to adjust the volume of announcements and chimes.
Furthermore the FAP set-up informations are changeable.

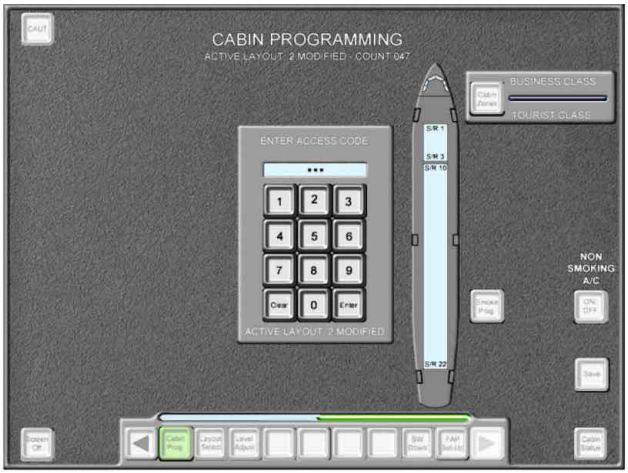
ZONE PROGRAMMING MENU

The cabin programming page provides different tasks of cabin zones programming:

- Programming of cabin zones
- Programming of no smoking zones
- Non-smoking aircraft selection
- Saving procedure

To relocate the boundaries of the cabin zones or non-smoking zones push the Cabin Prog. key in the 2nd level of the system and function key set.
The Cabin Prog. page is code protected. To get access to this page it is necessary to type in the correct password in the ENTER ACCESS CODE menu which comes up.
The correct access code is: **318** or an access code is not yet defined, then push ENTER to get access to the selected page.

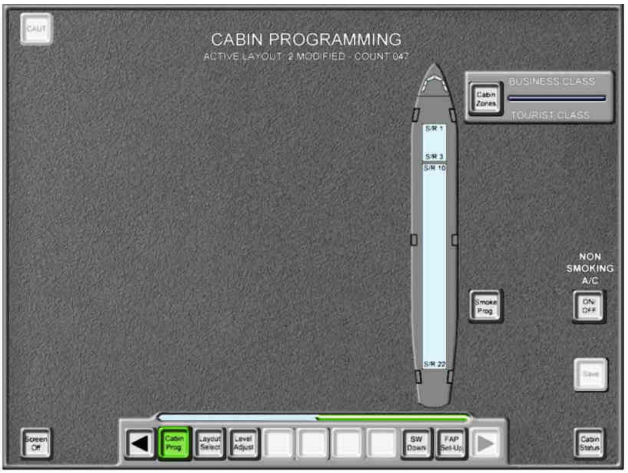
Access Code Menu (Example)



Note: *If the entered access code is not correct, a respective message comes up.*

After this the cabin programming page is shown on the touch screen.

Entry Page (Example)

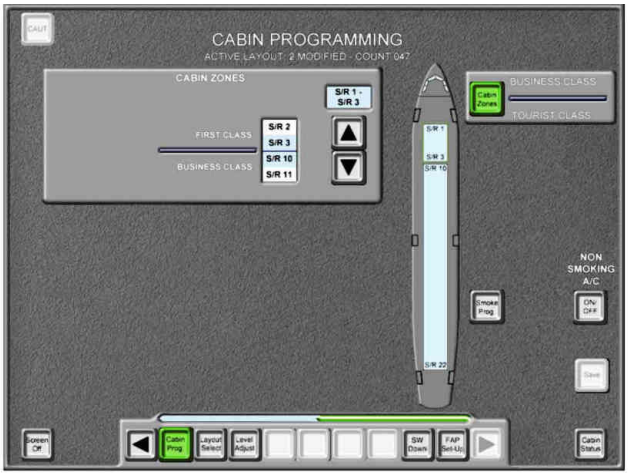


PROGRAMMING OF CABIN ZONES

To relocate the boundary between two cabin zones push the Cabin Zones key next to the related boundary. The Cabin Zones programming panel comes up.
Push the UP/DOWN keys to move the zone boundary. The relocation of the boundary is also indicated in the aircraft symbol (on-line).

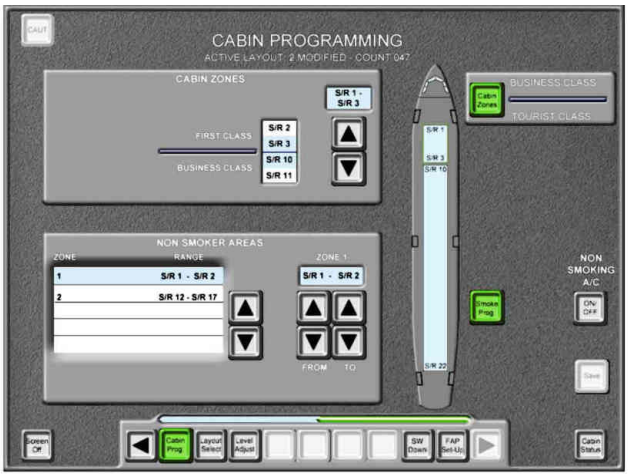
Note: *Each cabin zone must contain a minimum of one seatrow.*

Zones (Example)



The programming of the cabin zones and the non smoker areas can be done on the same page if the zone related Smoke Prog. key is pushed additionally.

Zones and Non Smoker Areas (Example)

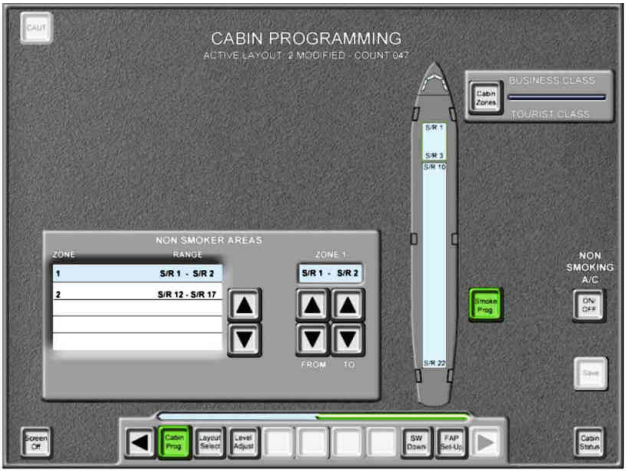


Note: To complete the procedure the Save key must be pushed. Otherwise the changes on the cabin zones programming are not taken into account and the system goes back to the previous settings after leaving the page.

PROGRAMMING OF 'NO SMOKING' ZONES

To relocate the boundary of a no smoking zone in a certain cabin zone push the related Smoke Prog. key. The NON SMOKER AREAS programming panel comes up.
Push the UP/DOWN keys to move the respective boundary.
The principle for changes is the same as for the cabin zones and will also have on-line effects in the cabin.

Non Smoker Areas (symmetrical) (Example)



Note: To complete the procedure the Save key must be pushed. Otherwise the changes on the non smoker areas programming are not taken into account and the system goes back to the previous settings after leaving the page.

SELECTION OF 'NON-SMOKING' AIRCRAFT

Additionally to the programming of the non smoker areas it is possible to select a 'Non Smoking A/C'. To activate/deactivate this mode push the NON SMOKING A/C ON/OFF key located between the programming panel of the non smoker areas and the aircraft symbol on the screen. To save the changes, push the Save key above the system and function key set.

SAVING CAM CHANGES

Applicable to: ALL

After the saving of the CAM changes has been confirmed, the saving progress will be routed via the following blue card giving information concerning the number of changes (e.g. count 048) and the change date.

Saving Procedure (1)

During the time of saving, the next blue card is shown.

Saving Procedure (2)

If the saving was successful, a blue card with saving information will come up. To continue with the normal FAP operation, push the OK key on the screen. Otherwise the system will switch automatically to normal operation (the programming page) after a time out of 10 s.

Saving Procedure (3)

If the saving procedure is completed without success, a corresponding blue card comes up.

Push the OK key to switch back to the programming page.

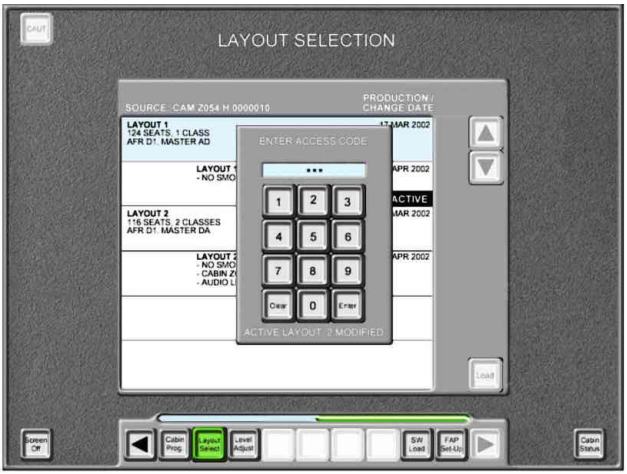
Saving Procedure (4)

LAYOUT SELECTION

Applicable to: ALL

The CIDS allows to select different cabin layouts, stored in the CAM. The CAM can store up to three layouts and modifications done in the CABIN PROGRAMMING mode.
In order to activate the LAYOUT SELECTION page push the Layout Select key in the 2nd level of the system and function key set.
The LAYOUT SELECTION page is code protected. To get access to this page type in the password in the ENTER ACCESS CODE menu which is shown.
The access code is: **318** or an access code is not yet defined, then push ENTER to get access to the selected page.

Access Code Menu



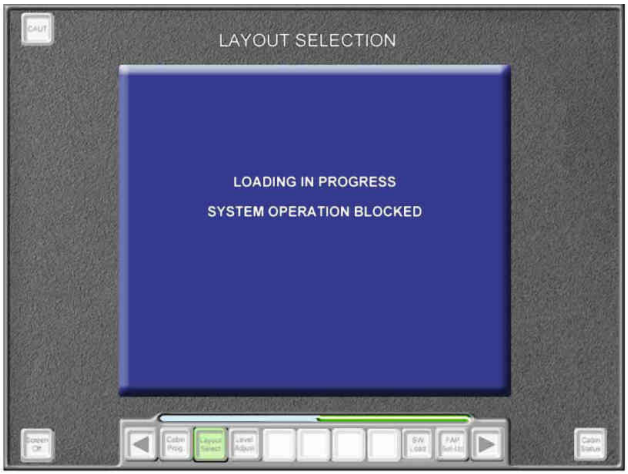
Note: *If the entered access code is not correct a respective message comes up.*

After entering the correct access code the LAYOUT SELECTION page is visible on the touch screen. The following example shows 2 complete layouts (1+2). Additionally modified layouts are selectable if previously programmed with the CABIN PROGRAMMING function. A list box indicates the active layout.

Layout Selection

The respective layout can be chosen with the up and down cursors. The selected layout is highlighted by a colored bar.
To set the chosen layout active push the Load key. Belonging to the loading process a message is displayed on the screen.

Loading Process (1)



After a successful loading process this blue card appears:

Loading Process (2)

If the loading process fails, a respective message comes up and the previous layout stays in use.

Loading Process (3)

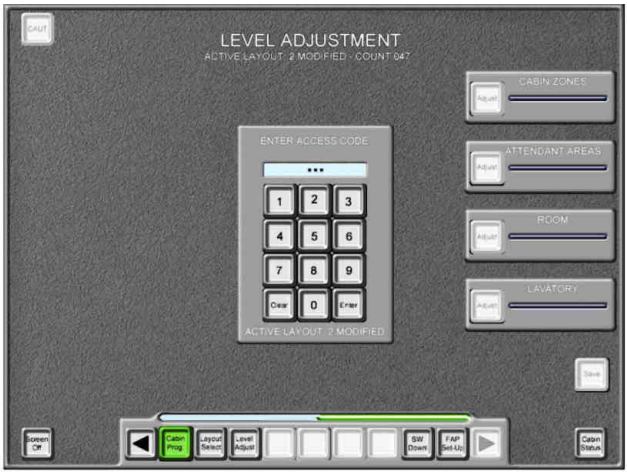
In both cases a manual input is required: push the OK key on the screen to return to the normal FAP operation (LAYOUT SELECTION page).

LEVEL ADJUSTMENT

Applicable to: ALL

On the LEVEL ADJUSTMENT page it is possible to change the volume of announcements/music and chimes in all defined cabin areas independently.
The functions are available in flight and on ground.
To activate this page push the Level Adjust key in the 2nd level of the system and function key set. *Refer to 02-060 FAP System and Function Buttons*.
The Level Adjust page is code protected. To get access to this page it is necessary to type in the correct password in the ENTER ACCESS CODE menu which comes up.
The correct access code is: **318** or an access code is not yet defined, then push ENTER to get access to the selected page.

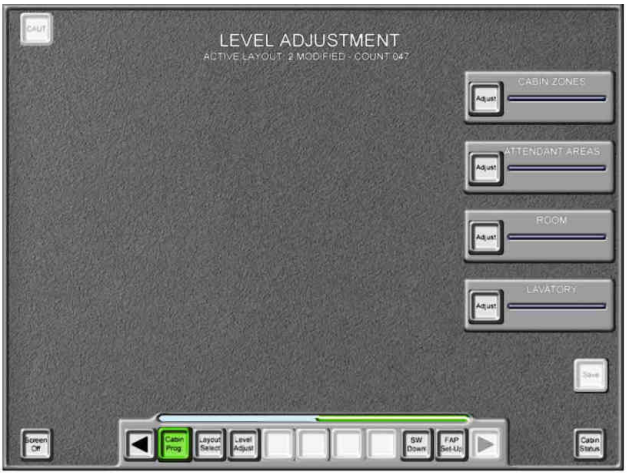
Access Code Menu



Note: *If the entered access code is not correct a respective message comes up.*

After this the LEVEL ADJUSTMENT page will be displayed on the screen.

Level Adjustment (1)

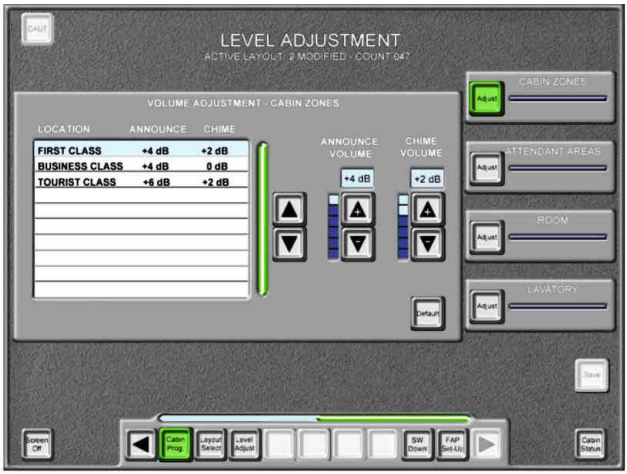


To change the settings in one specific area push the related Adjust button on the screen.

Note: *The function of the Rooms menu depends on the fact whether a Crew Rest room is installed or not. This menu will be displayed only if a related Crew Rest room is installed and assigned to it.*

The following example shows a LEVEL ADJUSTMENT page where the CABIN ZONES are activated for inputs.

Level Adjustment (2)



In the example above the first class is selected and highlighted in the list box. With the UP/DOWN keys other cabin areas are selectable. A scrollbar located on the right hand side of the list box indicates that there are further locations available (e.g. lavatories).
The volume of announcements or chimes in the selected area can be increased/decreased by pushing the related PLUS(+)/MINUS(-) keys on the touch screen.

Note: *To complete the procedure the Save key must be pushed. Otherwise the changes made to the level adjustment are not taken into account and the system goes back to the previous settings after leaving the page.*

To reset the modifications done push the Default key. After that all values will be set to the assigned CAM basic values.

SAVING PROCEDURE

Push the Save key to store the inputs as described in the cabin programming and layout function. A BLUE CARD routes the saving process via this confirmation:

Saving Procedure

To initiate the saving procedure press the OK key or push the Cancel key to return to the previous menu (adjustment page).

SOFTWARE DOWNLOAD

Applicable to: ALL

Via the SW Downl pb as a part of the second level of the System and Function keys the software download page can be selected. On this page software downloads can be performed by plugging in new storage hardware (e.g. flash cards) and loading the respective new version. Normally the Software Download page is protected through an Access Code which secures this page against unallowed use.

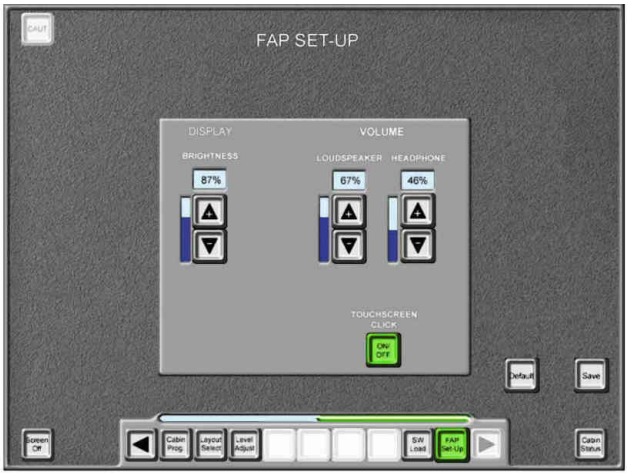
CAUTION	The software download procedure belongs to maintenance personnel only. A wrong handling procedure can cause damage to the electronic equipment.

FAP SETUP

Applicable to: ALL

On the FAP set-up page it is possible to change FAP internal settings, e.g. display brightness, settings for volume of loudspeakers and headphones. Additionally the 'CLICK' of the touch screen keys while they are pushed can be switched ON and OFF.
To get access to this page push the FAP set-up key in the 2nd level of the system and function key set. *Refer to 02-060 FAP System and Function Buttons*.

FAP Set-up



To increase/decrease the display brightness push the related PLUS/MINUS keys on the screen.
Push the corresponding PLUS/MINUS keys to adjust the volume settings of the loudspeakers or headphones.
In both cases the new inputs can be stored if the Save key is pushed.

Note: *To complete the procedure the Save key must be pushed. Otherwise the changes made on the FAP set-up page are not taken into account and the system goes back to the previous settings after leaving the page.*

To re-use the basic settings which are stored in the CAM push the Default key.

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GENERAL SYSTEM INFORMATION

Applicable to: ALL

The cabin communication system is managed by the CIDS and provides these subsequent system functions:

- Passenger Address (PA) system
  Refer to 03-040 Announcements
- Service Interphone
  Refer to 03-050 General System Information
- Interphone
  Refer to 03-060 Interphone System - General Information
- Passenger Call system
  Refer to 03-070 General System Information
- Passenger Lighted Signs
  Refer to 03-080 General System Information
- Audio
  Refer to 03-090 Prerecorded Announcement

PRIORITIES OF THE COMMUNICATION SYSTEM

The communication system functions have different priorities.
The following table shows the priorities for the displayed messages of the communications' subsequent systems on the AIP and the ACP.
After a reset of the indication with the higher priority the AIP will display the previous indication.
The indications are queued up with regard to their priority.

INDICATION RELATED TO SYSTEM FUNCTION		PRIORITY on AIP	PRIORITY on ACP
Cabin Interphone	Emergency Call	1	1
	All Attendant Call	2	3
	Normal Call	3	3
Lavatory Smoke Detection		2	2
Evacuation Signalling		3	4
Service Interphone		6	- - -
Passenger Address		7	- - -
Pre-recorded Announcement		7	- - -
Passenger Call	Call from Seatrow	5	5
	Call from Lavatory	4	5
	Call from Attendant	4	5
Waste Warning Indication		3	2
"Purser Call" Status (optional)		5	- - -

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INDICATION RELATED TO SYSTEM FUNCTION	PRIORITY on	
	AIP	ACP
Cockpit Alert Indication (optional)	1	1
Cabin Alert Confirmation (optional)	1	- - -

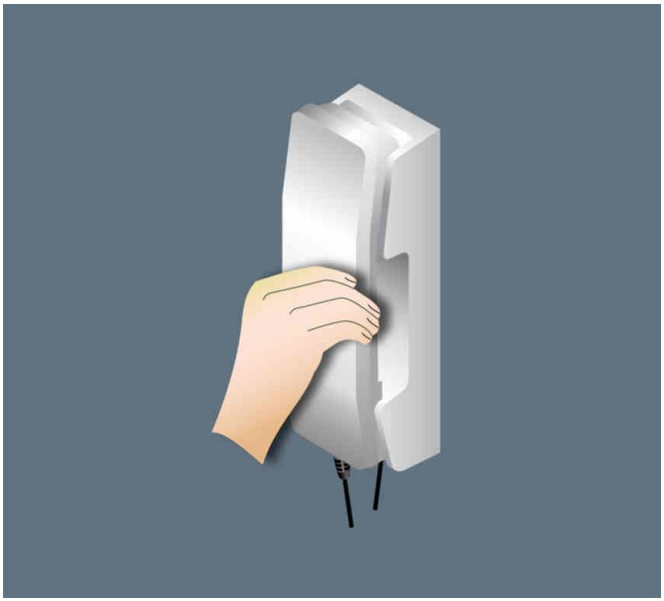
PA SYSTEM - GENERAL INFORMATION ABOUT HANDSET OPERATION

Applicable to: ALL

PICKING UP THE HANDSET

In order to pick up the handset from its cradle, the Cabin Crew must simply pick up the handset holding it from its sides.

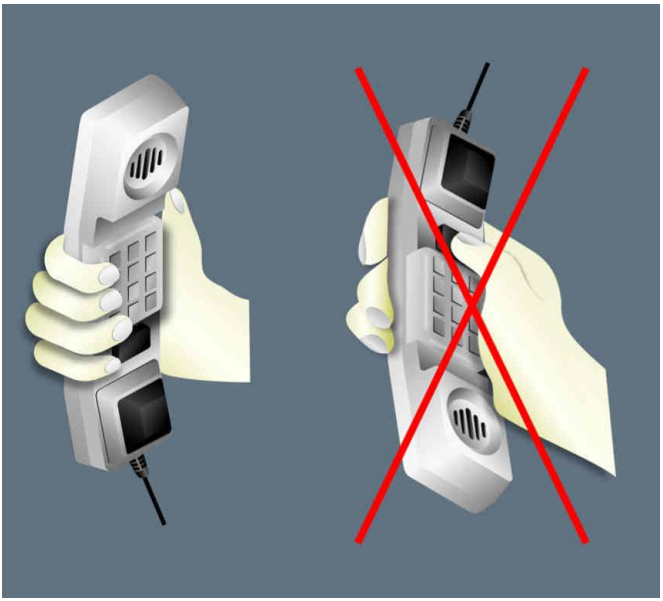
Picking up the Handset



HANDLING OF THE HANDSET MICROPHONE

In order to optimize the handling of the handset and to minimize problems with low level announcements, use the handset like a normal telephone handset.
Cabin Crew should not hold the handset upside-down during announcements. Used upside-down the sensitivity of the handset is the least. The output level as well as the effect of the noise-cancelling feature is reduced. Announcements can be hardly heard in the cabin or may be impossible to understand.

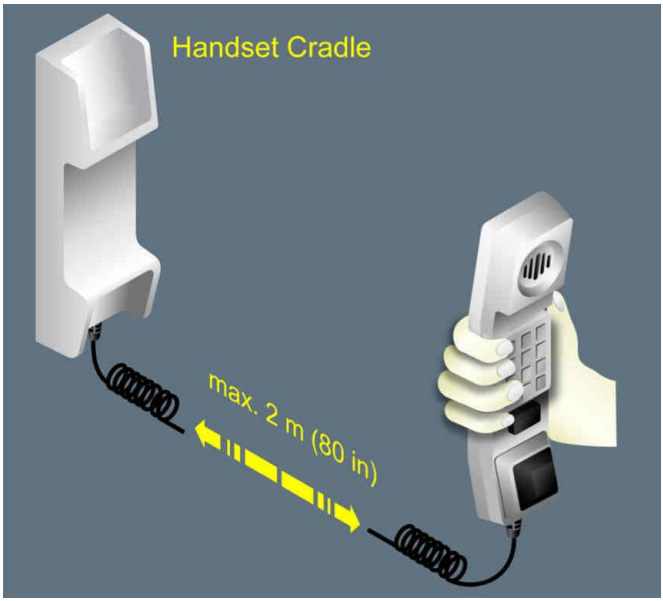
Correct Handset Microphone Use



HANDLING OF THE HANDSET CORD

Do not stretch the handset cord over 2 meters (80 inches).
This may cause damage to the cord supports at both ends of the cord and will lead to handset malfunction.

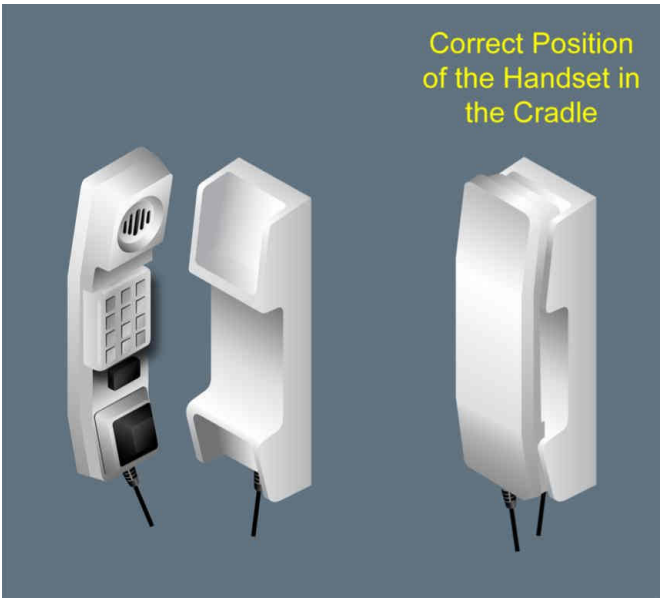
Correct Handset Microphone Use



HANDLING OF THE HANDSET CRADLE

In order to avoid problems with broken housings, place the handset on the support bracket and push it gently to "click" it into its correct position. This way the handset will stay in its position under normal conditions.
If not placed correctly in the support bracket, the handset may fall out of its cradle, onto the cabin floor, and will be damaged.

Correct Handset Cradle Use



PA ANNOUNCEMENTS FROM THE COCKPIT

Applicable to: ALL

The passenger address system distributes the PA related announcements from the cockpit, the attendant stations, the PRAM and the VCU to all assigned PAX loudspeakers.

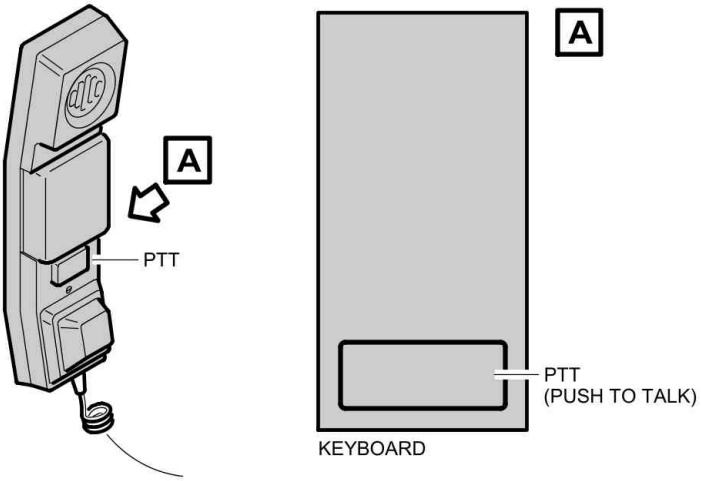
PA ANNOUNCEMENTS FROM THE COCKPIT

With the handset or the equipment connected to the Audio Management Unit (AMU) such as boomset, microphone or oxygen mask a PA announcement from the cockpit can be initiated.

DIRECT PA VIA COCKPIT HANDSET

Hook off the cabin handset and push the PTT key on the handset during the Direct PA announcement.

Cockpit Handset with PTT-Pushbutton



Note: *To raise the attention before an announcement from the cockpit will be made a "HIGH-LOW" chime is heard through the loudspeakers and the related message PA in use is displayed on all AIPs.*

PA FROM THE COCKPIT

Applicable to: ALL

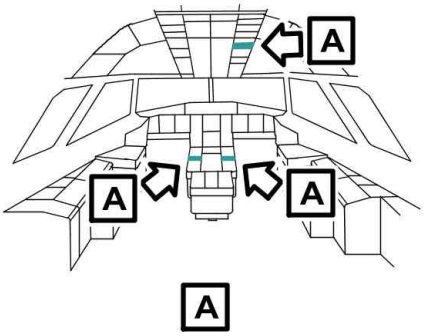
DIRECT PA VIA COCKPIT AUDIO EQUIPMENT

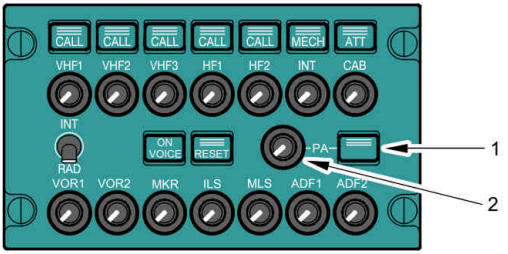
It is also possible to make Direct PA announcements through the acoustic equipment.
The following table shows the available equipment with its functions and the necessary handling procedure during the announcement:

Equipment connected to AMU	PA Transmission P/B on Audio Selector Panel	PA Reception knob on Audio Selector Panel	INT/RAD switch on Audio Selector Panel	Push-to-talk button on Handmike
BOOMSET or OXYGEN MASK	PRESSED	OUT	RAD	- - -
HANDMIKE	PRESSED	OUT	- - -	PRESSED

Note: *When the rectangular PA Transmission pb is pressed three green lines come on.*

Audio Selector Panel (ASP)





AUDIO SELECTOR PANEL 1,2,3

(1) PA TRANSMISSION push button

(2) PA RECEPTION knob

Note: *To raise the attention before an announcement from the cockpit will be made a "HIGH-LOW" chime is heard through the loudspeakers and the related message PA in use is displayed on all AIPs.*

PA MONITORING

The cockpit crew can monitor the PA announcements in the cabin via the AMU by pushing the PA reception knob on an Audio Selector Panel (ASP).
Turning this knob clockwise or counterclockwise controls the volume of the announcement.
Selecting another function stops the PA Monitoring procedure.

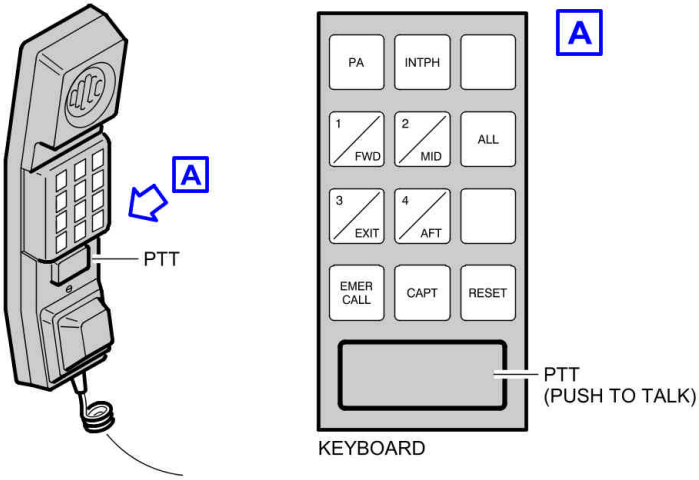
PA ANNOUNCEMENTS FROM AN ATTENDANT HANDSET

Criteria: SA
Applicable to: MSN 2927-3120

PA ANNOUNCEMENTS FROM AN ATTENDANT HANDSET

A PA announcement can be made with all cabin handsets located at every cabin attendant station.

Cabin Handset with Keyboard



If the keys on the handset are pushed in a specific sequence, different connections for the respective PA announcements can be set.
The following table shows the functions which are available from the cabin handsets:

FUNCTION	KEY SEQUENCE	CONNECTION (FROM =>TO)
DIRECT PA	PTT	Handset => All LS
PA ALL	PA + ALL + PTT	Handset => All LS in the cabin
PA FWD	PA + 1/FWD + PTT	Handset => All LS in the FWD cabin
PA AFT	PA + 4/AFT + PTT	Handset => All LS in the Aft cabin
Captain Call	CAPT	Handset => Cockpit Handset
Emergency Call	EMER CALL	Handset => Cockpit Handset and Cabin Handsets

PA INDICATIONS

During the dial procedure the dial information is displayed in the upper row of the respective Attendant Indication Panel (AIP).
Example: Perform the PA ALL function

STEP	ACTION (on the handset)	RESULT on the calling AIP (upper row)	RESULT on all the other AIPs (lower row)
1	Hook off the handset	# (flashing)	(no result)
2	Press the PA + ALL key on the handset	PA ALL	(no result)
3	Press PTT and start the announcement	> PA ALL	PA ALL IN USE

Additionally, the following handset operation related messages could appear in the upper row of the calling AIP while the dialing procedure:

INFORMATION	EXPLANATION
BUSY	Called station is engaged
CNCL	Communication is interrupted by a call with a higher priority
OVER	Station is connected to a call with a higher priority
ERR	A wrong code has been dialed
RST	Reset push button is pressed
WAIT PA CALL	Passenger Address system is already in use

If the dial procedure is finished the respective status information is indicated on all assigned AIPs.

To raise the attention for communication information, a "HIGH-LOW" chime is heard and the green AIP indicator light comes on additionally. This light is located on the right side of the AIP. A red indicator light for system and emergency messages is located on the left side, completed by an information which is displayed in the lower row of the AIP.

Refer to 03-010 CIDS - System Components.

PA ANNOUNCEMENTS FROM AN ATTENDANT HANDSET

Criteria: K10189, SA
Applicable to: MSN 2649

PA ANNOUNCEMENTS FROM AN ATTENDANT HANDSET

A PA announcement can be made with all cabin handsets located at every cabin attendant station.

Cabin Handset with Keyboard

If the keys on the handset are pushed in a specific sequence different connections for the respective PA announcements can be set.
The following table shows the functions which are available from the cabin handsets:

FUNCTION	KEY SEQUENCE	CONNECTION (FROM =>TO)
DIRECT PA	PTT	Handset => All LS
PA ALL	PA ALL + PTT	Handset => All LS in the cabin
PA FWD	PA FWD	Handset => All LS in the FWD cabin
PA AFT	PA AFT	Handset => All LS in the Aft cabin
Captain Call	CAPT	Handset => Cockpit Handset
Emergency Call	EMER CALL	Handset => Cockpit Handset and Cabin Handsets

PA INDICATIONS

During the dial procedure the dial information is displayed in the upper row of the respective Attendant Indication Panel (AIP).
Example: Perform the PA ALL function

STEP	ACTION (on the handset)	RESULT on the calling AIP (upper row)	RESULT on all the other AIP's (lower row)
1	Hook off the handset	# (flashing)	(no result)
2	Press the ALL key on the handset	PA ALL	(no result)
3	Press PTT and start the announcement	> PA ALL	PA ALL IN USE

Additionally, the following handset operation related messages could appear in the upper row of the calling AIP while the dialing procedure:

INFORMATION	EXPLANATION
BUSY	Called station is engaged
CNCL	Communication is interrupted by a call with a higher priority
OVER	Station is connected to a call with a higher priority
ERR	A wrong code has been dialed
RST	Reset push button is pressed
WAIT PA CALL	Passenger Address system is already in use

If the dial procedure is finished the respective status information is indicated on all assigned AIPs.
To raise the attention for communication information, a "HIGH-LOW" chime is heard and the green AIP indicator light comes on additionally. This light is located on the right side of the AIP. A red indicator light for system and emergency messages is located on the left side, completed by an information which is displayed in the lower row of the AIP.
Refer to 03-010 CIDS - System Components.

ANNOUNCEMENTS

Applicable to: ALL

PA ANNOUNCEMENT FROM ADDITIONAL CABIN EQUIPMENT

Optionally an additional hand-microphone can be installed in the FWD area of the cabin. This hand-mike has only restricted capabilities (Direct PA).

PA FUNCTIONAL AND SOURCE PRIORITIES

The PA functions and sources have different priorities.

FUNCTIONAL PRIORITIES

The PA function with the higher priority overrides the function with the lower priority.
The priority levels are given in the following table:

LEVEL	FUNCTION
1	PA from AMU
2	Direct PA and all remaining PA functions

Note: Level 1 has the highest and level 2 the lowest priority.

SOURCE PRIORITIES

A PA source with a higher priority interrupts a PA announcement from a source with a lower priority. Only the announcement from the source with the higher priority is heard.
The sources have the following priority levels:

LEVEL	SOURCE
1	Boom Set, Oxygen Mask (AMU)
2	Cockpit Handset (HS)
3	Purser Handset (HS)
4	Attendant Handset (HS)
5	Prerecorded Announcement (PRAM)
6	EVAC Signaling Tone
7	Video or Entertainment Sounds (VCU)
8	Boarding Music

Note: If the purser handset is not assigned (optional), it will have the same priority level as an attendant handset.
Level 1 has the highest and level 8 the lowest priority with the exception that an announcement coming from a source of a lower priority has a higher functional priority.

PA SETTINGS

It is possible to cancel selected and initiated functions manually.
Furthermore the PA system adjusts the volume function in some cases automatically.

RESET OF SELECTED PA FUNCTIONS

Replacing the handset on the cradle or pushing the RESET pb on the handset cancels a PA function initiated by the handsets functional keys.
If a function is initiated by pushing the PTT pb, the release of this button cancels the function.

VOLUME ADJUSTMENT

In the case of low cabin-pressure or engine running, the volume of a PA announcement increases automatically. This happens also in the case of a data bus failure.
To avoid feedback, the volume of the PA announcement in the area around the respective handset decreases automatically.
For the same reason the volume in the area of the cockpit door decreases if the cockpit door is opened during an announcement.

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GENERAL SYSTEM INFORMATION

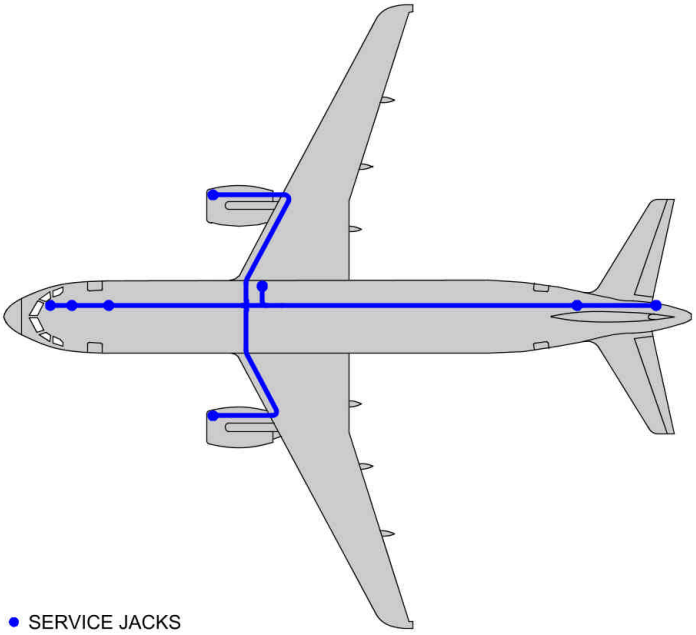
Applicable to: ALL

The service interphone system allows the telephone communication between the flight crew, the cabin crew and the ground service personnel. The service interphone system is available only when the aircraft is on ground.

SYSTEM COMPONENTS

There are 8 service interphone jacks installed at different locations of the aircraft (e.g. one at each engine). The service personnel uses them to talk to each other if their boomsets are connected to the jacks.

Location of the Ground Service Jacks



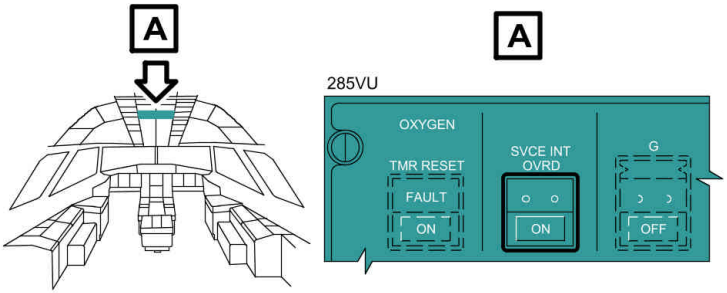
The flight crew or the cabin crew is also able to talk to the connected service personnel through the acoustical equipment in the cockpit or the attendant handsets in the cabin.

SYSTEM OPERATION

The system has an automatic and a manually activated operation mode.

It is activated automatically if the nose landing gear is extended and compressed for more than 10 s.
On the other hand the system can be activated manually by the flight crew through pressing the SVCE INT OVRD pb in the cockpit. This will be indicated by the SVCE INT OVRD pb ON light.

SVCE INT OVRD pushbutton



After the system has been activated either automatically or manually the communication can be started from:
- the cockpit through the acoustical equipment,
- the attendant station by pushing SVCE INTPH + SVCE INTPH on the keyboard of the attendant handset,
- a service interphone jack through a connected boomset.

Note: *Depending on the installed cabin handset option, the "SVCE INTPH" named key might be replaced by the "INTPH" named key.*

The message SVCE INTPH AVAIL on the AIPs indicates that at least one boomset is connected to one of the service interphone jacks and communication is enabled. If an attendant initiates the communication sequence from a cabin handset the message SVCE INTPH is displayed on the AIPs.

Note: *It is necessary to push and hold the SVCE INTPH key on the attendant handset while speaking.*

For communication through the audio equipment from the cockpit follow the procedure as described hereafter:

Equipment connected to AMU	MECH Transmission P/B on ACP	INT Reception knob on ACP	INT/RAD toggle switch on ACP	Push-to-talk button on Handmike
BOOMSET or OXYGEN MASK	PRESSED	OUT	RAD	-----
HANDMIKE	PRESSED	OUT	-----	PRESSED

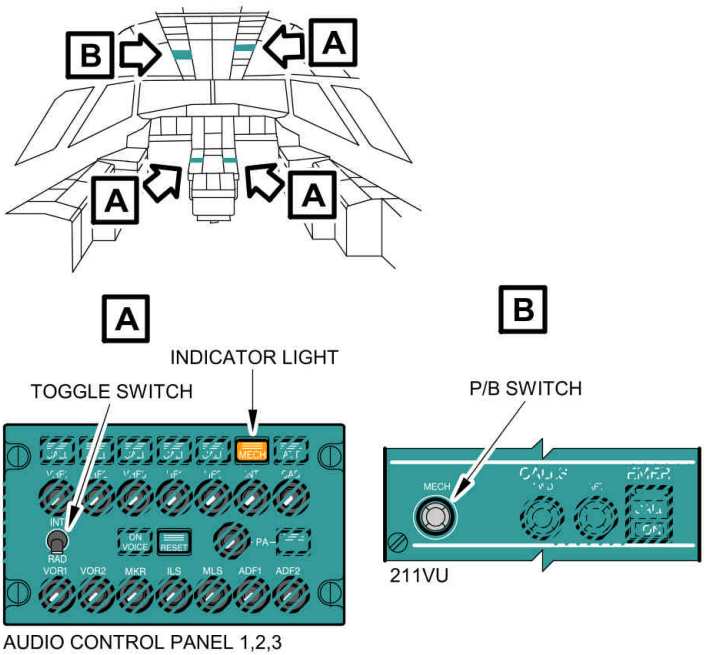
COCKPIT TO GROUND CREW CALL-SYSTEM

In addition to the described service interphone system there is a call system installed which allows the cockpit crew to get the attention of the ground service personnel and vice-versa.

COCKPIT TO GROUND-CREW CALL

On the CALLS overhead panel 211VU push the MECH pb-sw to call for ground service personnel.

Ground-Crew Call Components in the Cockpit



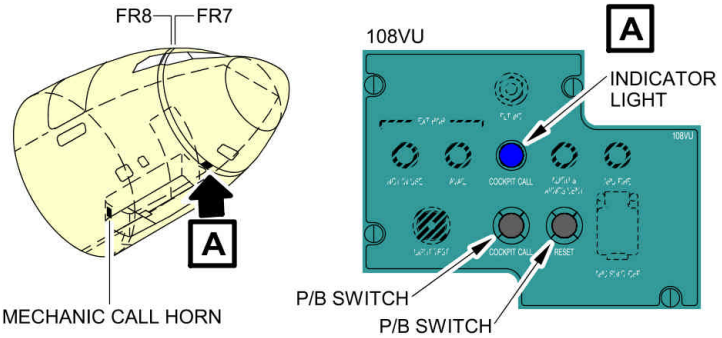
In order to get the attention of the ground crew an external horn will sound during the time the MECH pb-sw is pressed. It is located in the nose gear well.
Additionally, the blue COCKPIT CALL light on the panel 925VU comes on (located near the ground power receptacle).
If the MECH pb-sw is released the external horn will stop but the indicator light will remain on. To reset this light the HORN RESET pb-sw push and release on the panel 925VU.

Furthermore, these warnings are provided through the external horn:
- APU FIRE on ground
- BLOWERS LOW FLOW on ground with engines shut down
- ADIRS ON BAT on ground
- BAT FEED WARN on ground.

GROUND-CREW TO COCKPIT CALL

Push the COCKPIT CALL pb-sw located on the panel 925VU in order to call for the cockpit crew.

Outside Cockpit-Call Components



The amber MECH light on the ACP in the cockpit will flash.
Additionally, the buzzer will sound through the audio-warning loudspeakers as long as the COCKPIT CALL pb-sw is pushed.
To cancel the MECH light legend, push the RESET pb-sw on the Audio Control Panel and release it.

Note: *Perform the RESET procedure in less than one minute after the call, otherwise the MECH light legend goes off automatically.*

INTERPHONE SYSTEM - GENERAL INFORMATION

Criteria: SA
Applicable to: MSN 2927-3120

The cabin and flight crew interphone system allows the telephone communication between all attendant stations and the cockpit.
There can be one or more links initialized at the same time. In the conference mode it is possible to communicate between more than two interphone stations.

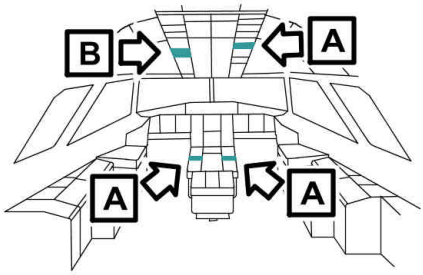
CALLS FROM THE COCKPIT

All calls from the cockpit can be initiated through:
- The audio equipment (boomset, microphone or oxygen mask) connected to the AMU and the available functions on the AUDIO SELECTOR PANEL(s) (ASP) or
- The cockpit handset and its functions.

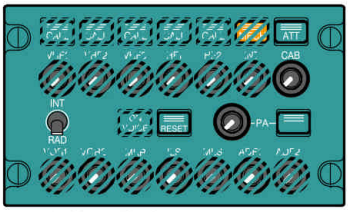
CALLS WITH THE HELP OF THE AUDIO EQUIPMENT

Choose the call destination and press the related pushbutton on the CALLS panel in the cockpit.

Panels in the Cockpit



A



AUDIO SELECTOR PANEL 1,2,3

B

211VU

The following table shows the selectable call destinations, the related pushbutton on the CALLS panel 21VU to be pushed and the associated aural/visual effects in the cabin.

DESTINATION	P/B on CALLS panel	CHIME	Light on ACP	Info on AIP
FWD attendant station	FWD	1 x Hi I-Lo I	Steady RED on FWD ACPs	"CALL CAPT" + steady GREEN light
AFT attendant station	AFT	1 x Hi I-Lo I	Steady RED on AFT ACPs	"CALL CAPT" + steady GREEN light
Emergency call	EMER CALL ON	3 x Hi I-Lo I on all LS	Flashing RED on all ACPs	"EMERGENCY CALL" + flashing RED light

After hooking off the handset at the called station a communication link to the cockpit is established.
To make announcements select some settings on an AUDIO SELECTOR PANEL as shown in the following table:

Equipment connected to AMU	ATT Transmission P/B on ASP	CAB Reception knob on ASP	INT/RAD switch on ASP	Push-to-talk button on Handmike
BOOMSET or OXYGEN MASK	PRESSED	OUT	RAD	- - -
HANDMIKE	PRESSED	OUT	- - -	PRESSED

Note: When the rectangular ATT Transmission pushbutton is pressed three green lines come on.

CALLS FROM THE CABIN

Different functions are available if the keys on the cabin handsets are pushed in a given sequence:

EMERGENCY CALL INITIATED FROM THE CABIN (PURSER/ATTENDANT STATION)

FUNCTION	KEY SEQUENCE	CONNECTION TO
EMER call	EMER CALL	BOOMSET

After hooking off the handset at the called station a communication link is established and announcements can be made.

PURSER/ATTENDANT STATION CALLS COCKPIT

FUNCTION	KEY SEQUENCE	CONNECTION TO
COCKPIT call	CAPT	HS in the cockpit

After hooking off the handset in the cockpit a communication link is established and announcements can be made.

PURSER/ATTENDANT CALLS ALL ATTENDANT STATIONS

FUNCTION	KEY SEQUENCE	CONNECTION TO
All ATTN call	ALL ATTND	All HS in the cabin

After hooking off the handset at the called station a communication link is established and announcements between the purser and the attendants can be made.

PURSER CALLS ATTENDANT STATION

FUNCTION	KEY SEQUENCE	CONNECTION TO
FWD ATTN call	FWD ATTND	HS at ATTN station FWD L+ FWD R
AFT Left ATTN call	AFT L ATTND	HS at ATTN station AFT L+ AFT R
AFT Right ATTN call	AFT R ATTND	HS at ATTN station AFT L+ AFT R

After hooking off the handset at the called station a communication link is established and announcements between the purser and the attendant can be made.

RESET OF SELECTED INTERPHONE FUNCTIONS

A selected call from the cockpit is cancelled, when all requested stations have reset the function on the handset through pushing the Reset button.
The call function is automatically reset after a time period of approx. 5 min, if no requested handset accepts the call.
All other interphone functions can be reset through hooking on the handset to the cradle or pushing the Reset button.

INDICATION/CHIME AND PRIORITIES OF INTERPHONE CALLS

There are optical and aural indications for the different types of interphone calls. Additionally, these calls have fixed priorities.

INDICATIONS

During the dial procedure the dial information is displayed on the related AIP. At the called station the respective light segment in the ACP comes on and a related message is shown on the assigned AIP.
In the cockpit the EMER CALL indicator (for EMER CALL only) and the call indicators on the Audio Selector Panel(s) are activated according the initiated call.

CHIMES

In addition to the optical indications, chimes are emitted through the loudspeakers in the respective cabin area. These chimes consist of a sequence of one or more tones.
The following table shows different chimes:

Chime Type	Musical Note	Frequency [Hz]	Remarks
A	g'	392	Lo II
B	b'	494	Lo I
C	d''	587	Hi I
D	g''	784	Hi II
E	a'	440	
F	c''	523	
G	f''	698	
H	a''	880	
I	c'''	1047	
K	e'''	1317	

The aural annunciation of a cockpit call is done with the cockpit buzzer.

PRIORITIES

There are two types of priorities of interphone calls:
- Functional priorities and
- Source priorities.

The possible functions have different priorities, i.e. every selected function overrides a function with a lower priority.

LEVEL	FUNCTION
1	PA ALL
2	Calls from the Cockpit
3	Emergency Call
4	PA
5	Normal Call
6	Service Interphone
7	All Attendant Call
8	Reset

The sources also have different priorities, i.e. a source with a higher priority interrupts a link to an interphone station with a lower priority. A source with a lower priority and a selected function with a higher priority also interrupts an existing link.

LEVEL	SOURCE
1	AMU (Cockpit Audio Equipment)
2	Cockpit Handset
3	Cabin Handsets
4	PRAM
5	Evacuation Signaling Tone
6	Video / Audio
7	Boarding Music

INTERPHONE SYSTEM - GENERAL INFORMATION

Criteria: K4453, SA
Applicable to: MSN 2649

The cabin and flight crew interphone system allows the telephone communication between all attendant stations and the cockpit.
There can be one or more links initialized at the same time. In the conference mode it is possible to communicate between more than two interphone stations.

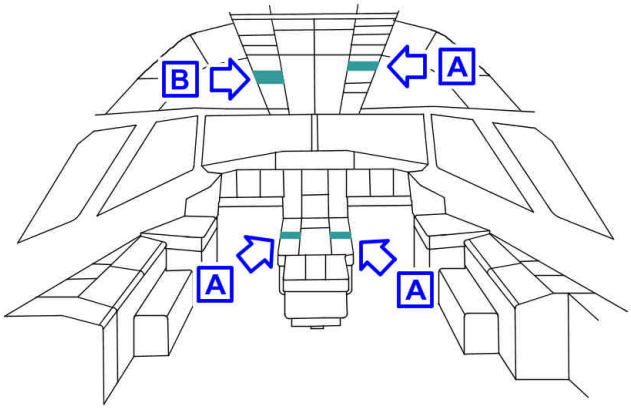
CALLS FROM THE COCKPIT

All calls from the cockpit can be initiated through:
- The audio equipment (boomset, microphone or oxygen mask) connected to the AMU and the available functions on the AUDIO SELECTOR PANEL(s) (ASP) or
- The cockpit handset and its functions.

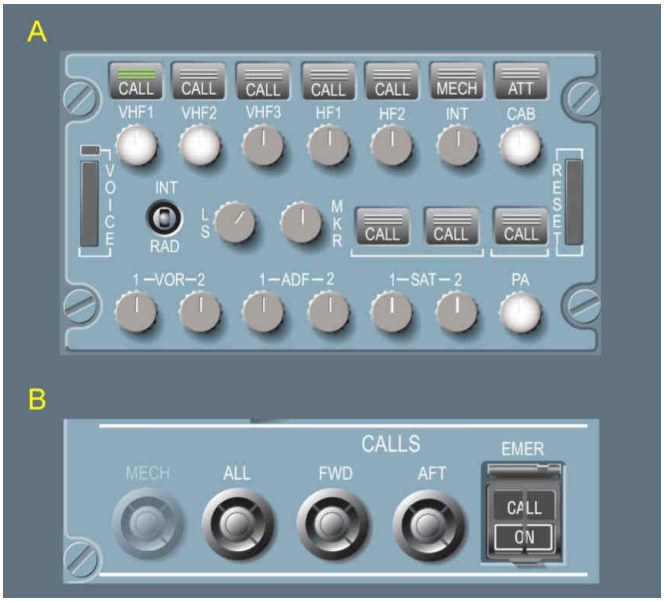
CALLS WITH THE HELP OF THE AUDIO EQUIPMENT

Choose the call destination and press the related pushbutton on the CALLS panel in the cockpit.

AUDIO SELECTOR (A) and CALLS (B) Panels in the Cockpit



AUDIO SELECTOR Panel (A) and CALLS Panel (21VU) (B)



The following table shows the selectable call destinations, the related pushbutton on the CALLS panel 21VU to be pushed and the associated aural/visual effects in the cabin.

DESTINATION	P/B on CALLS panel	CHIME	Light on ACP	Info on AIP
FWD attendant station	FWD	1 x Hi I-Lo I	Steady RED on forward ACPs	"CAPTAIN" + steady GREEN light
AFT attendant station	AFT	1 x Hi I-Lo I	Steady RED on aft ACPs	"CAPTAIN" + steady GREEN light
ALL attendant stations	ALL	1 x Hi I-Lo I	Steady RED on all ACPs	"ALL ATTND" + steady GREEN light
Emergency call	EMER CALL ON	3 x Hi I-Lo I on all LS	Flashing RED on all ACPs	"EMERGENCY" + flashing RED light

After hooking off the handset at the called station a communication link to the cockpit is established.
To make announcements select some settings on an AUDIO SELECTOR PANEL as shown in the following table:

Equipment connected to AMU	ATT Transmission P/B on ASP	CAB Reception knob on ASP	INT/RAD switch on ASP	Push-to-talk button on Handmike
BOOMSET or OXYGEN MASK	PRESSED	OUT	RAD	- - -
HANDMIKE	PRESSED	OUT	- - -	PRESSED

Note: When the rectangular ATT Transmission pushbutton is pressed three green lines come on.

CALLS FROM THE CABIN

Different functions are available if the keys on the cabin handsets are pushed in a given sequence:

EMERGENCY CALL INITIATED FROM THE CABIN (PURSER/ATTENDANT STATION)

FUNCTION	KEY SEQUENCE	CONNECTION TO
EMER call	EMER CALL	BOOMSET

After hooking off the handset at the called station a communication link is established and announcements can be made.

PURSER/ATTENDANT STATION CALLS COCKPIT

FUNCTION	KEY SEQUENCE	CONNECTION TO
COCKPIT call	CAPT	HS in the cockpit

After hooking off the handset in the cockpit a communication link is established and announcements can be made.

PURSER/ATTENDANT CALLS ALL ATTENDANT STATIONS

FUNCTION	KEY SEQUENCE	CONNECTION TO
All ATTN call	INTPH+ALL	All HS in the cabin

After hooking off the handset at the called station a communication link is established and announcements between the purser and the attendants can be made.

PURSER CALLS ATTENDANT STATION

FUNCTION	KEY SEQUENCE	CONNECTION TO
FWD ATTN call	INTPH+1/FWD	HS at ATTN station FWD L+ FWD R
MID ATTN call	INTPH+2/MID	- - -
EXIT ATTN call	INTPH+3/EXIT	- - -
AFT ATTN call	INTPH+4/AFT	HS at ATTN station AFT L+ AFT R

After hooking off the handset at the called station a communication link is established and announcements between the purser and the attendant can be made.

RESET OF SELECTED INTERPHONE FUNCTIONS

A selected call from the cockpit is cancelled, when all requested stations have reset the function on the handset through pushing the Reset button.
The call function is automatically reset after a time period of approx. 5 min, if no requested handset accepts the call.
All other interphone functions can be reset through hooking on the handset to the cradle or pushing the Reset button.

INDICATION/CHIME AND PRIORITIES OF INTERPHONE CALLS

There are optical and aural indications for the different types of interphone calls. Additionally, these calls have fixed priorities.

INDICATIONS

During the dial procedure the dial information is displayed on the related AIP. At the called station the respective light segment in the ACP comes on and a related message is shown on the assigned AIP.
In the cockpit the EMER CALL indicator (for EMER CALL only) and the call indicators on the Audio Selector Panel(s) are activated according the initiated call.

CHIMES

In addition to the optical indications, chimes are emitted through the loudspeakers in the respective cabin area. These chimes consist of a sequence of one or more tones.
The following table shows different chimes:

Chime Type	Musical Note	Frequency [Hz]	Remarks
A	g'	392	Lo II
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H	a''	880	
I	c'''	1047	
K	e'''	1317	

The aural annunciation of a cockpit call is done with the cockpit buzzer.

PRIORITIES

There are two types of priorities of interphone calls:
- Functional priorities and
- Source priorities.

The possible functions have different priorities, i.e. every selected function overrides a function with a lower priority.

LEVEL	FUNCTION
1	PA ALL
2	Calls from the Cockpit
3	Emergency Call
4	PA
5	Normal Call
6	Service Interphone
7	All Attendant Call
8	Reset

The sources also have different priorities, i.e. a source with a higher priority interrupts a link to an interphone station with a lower priority. A source with a lower priority and a selected function with a higher priority also interrupts an existing link.

LEVEL	SOURCE
1	AMU (Cockpit Audio Equipment)
2	Cockpit Handset
3	Cabin Handsets
4	PRAM
5	Evacuation Signaling Tone
6	Video / Audio
7	Boarding Music

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GENERAL SYSTEM INFORMATION

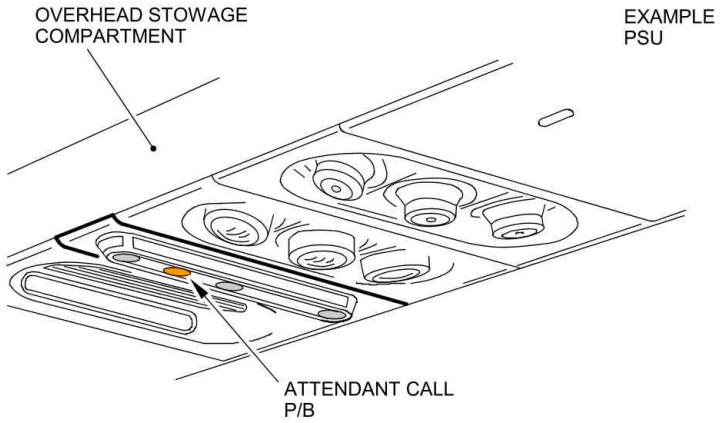
Applicable to: ALL

The Passenger Call system controls the PAX call activations and indications.
These PAX calls can be initiated to call for an attendant if necessary. The passengers can use one of the Attendant Call pb which are installed at each seat row and inside every lavatory.

PAX CALL INITIATED FROM A SEATROW

Passengers can initiate a Passenger Call when they push an Attendant Call pb.
These buttons are installed in the Passenger Service Unit (PSU), which is part of the overhead stowage compartment above the seat rows.

Pax Call via PSU



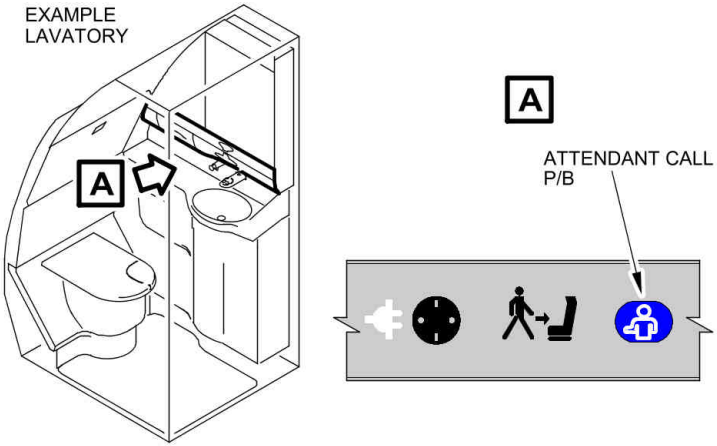
INDICATIONS

After initiating a Pax Call:
- the respective Attendant Call pb on the PSU will illuminate.
- a HI chime, which is assigned to the attendant loudspeakers of the related cabin zone, will sound.
- the blue indication field (LED) of the ACP in this zone will come on steady.
- the related AIP will show the calling seat row in the lower line of its display (e.g. 'CALL SR 10 L').
- an additional arrow (->), which is located in the lower right corner of the AIP display, will indicate that more than only one call from a seat row is initiated.

PAX CALL INITIATED FROM A LAVATORY

Pushing the Attendant Call pb on the Lavatory Service Unit (LSU) will start a LAV Call from a lavatory and the amber light of the related ACP on the outside lavatory wall will come on steady.

Pax Call via LSU



INDICATIONS

After initiating a Pax Call:

- the respective Attendant Call pb on the LSU will illuminate.
- a HI chime, assigned to the attendant loudspeakers of the related cabin zone, will sound.
- the amber call light mounted on the outside wall of the related lavatory will come on steady.
- the amber indication field (LED) of the ACP in this zone will come on steady.
- the related AIP will show the calling lavatory in the lower line of its display (e.g. 'CALL LAV E').
- an additional arrow (->), which is located in the lower right corner of the AIP display, will indicate that more than only one call from a lavatory is initiated.

RESET OF A PAX CALL

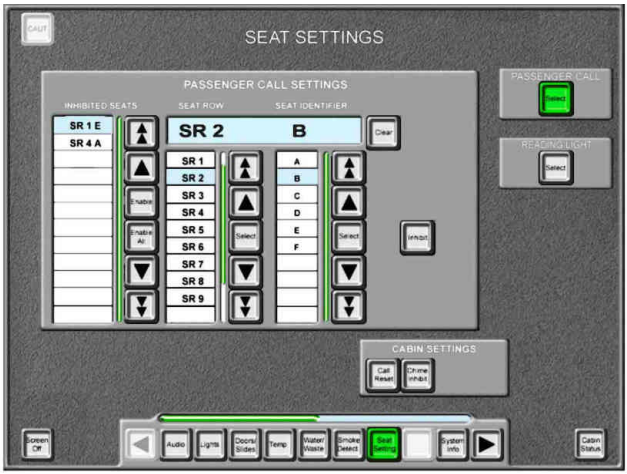
Reset the visual effects of an initiated Pax Call through one of the following procedures:

- Push the related Attendant Call pb (on the PSU or LSU) again

Note: *Closing the A/C doors at the end of the boarding procedure will automatically lead to the reset of all visual effects initiated through a Pax Call.*

- Push the Call Reset pb on the FAP (part of the Cabin Settings pb menu on the Seat Setting pb page).

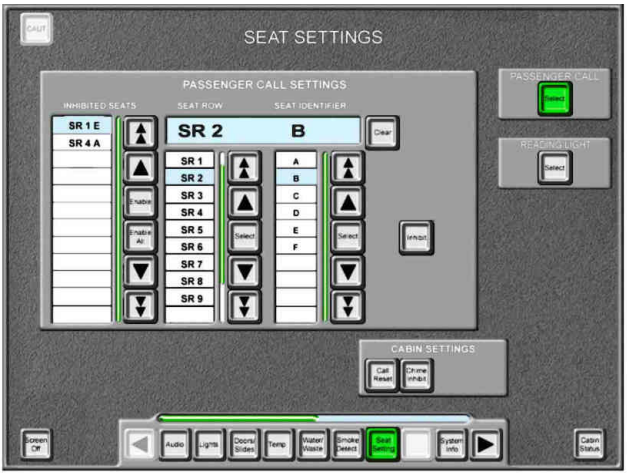
Call Reset pushbutton on the FAP



INHIBIT PASSENGER CALLS

Push the SELECT pushbutton on the PASSENGER CALL control pad. The PASSENGER CALL SETTINGS control pad will come up. From the PASSENGER CALL SETTINGS control pad select the respective seat row and seat identifier, then push the INHIBIT pushbutton.
Push the ENABLE pushbutton or the ENABLE ALL pushbutton to allow one or more inhibited seats again for normal use.
Push the CLEAR pushbutton to erase the current selection.

Passenger Call Settings Menu



GENERAL SYSTEM INFORMATION

Applicable to: ALL

Different signs indicate rules of passenger behavior. They are made of colored LED technology. Most signs are controlled by the passenger lighted-signs system, some are working independently from this system.

The passenger lighted-signs system controls these signs:
- NO SMOKING (NS)
- FASTEN SEAT BELT (FSB)
- RETURN TO SEAT (RTS)
- EXIT

Note: *As an option, instead of NO SMOKING (NS) signs other signs (e.g. PORTABLE ELECTRONIC DEVICES (PED) signs) can be installed.*

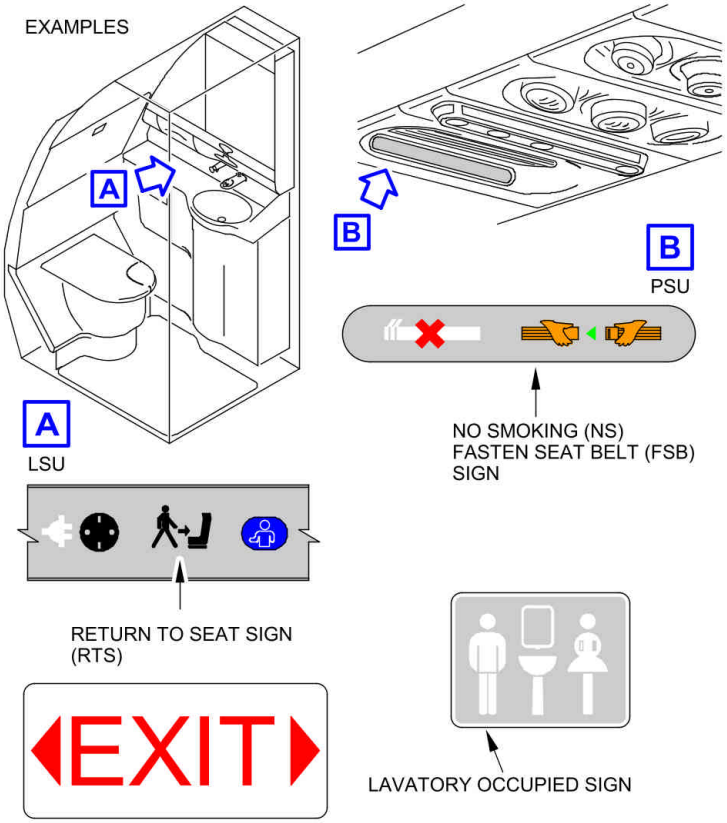
During taxiing, take-off and landing all signs are illuminated.
During climb, cruise and descend they are switched off (e.g. to permit smoking in the related areas) if there are no extreme circumstances (e.g. turbulences).
Independently from the passenger lighted-signs system, each lavatory is equipped with a LAVATORY OCCUPIED SIGN (LOS). These signs show the location of the lavatories and indicate whether they are occupied or free.

LOCATION OF PASSENGER LIGHTED SIGNS

Applicable to: ALL

The NS and FSB signs are located in every PASSENGER SERVICE UNIT (PSU) above the seatrows.
The RTS signs are part of each LAVATORY SERVICE UNIT (LSU).
The EXIT signs are located in each door area in the ceiling of the respective aisle.
The LOS are installed on the outside wall of the lavatory. In case there are two lavatories installed in front of each other, the LOS are installed in the ceiling of the aisle between them. If a lavatory is accessible from two different classes/cabin areas the signs are also visible from both sides.

Passenger Lighted Signs



Note: *The symbols on the LOS are illuminated in GREEN if the related lavatory is free or in RED if it is occupied.*

OPERATION OF PASSENGER LIGHTED SIGNS SYSTEM

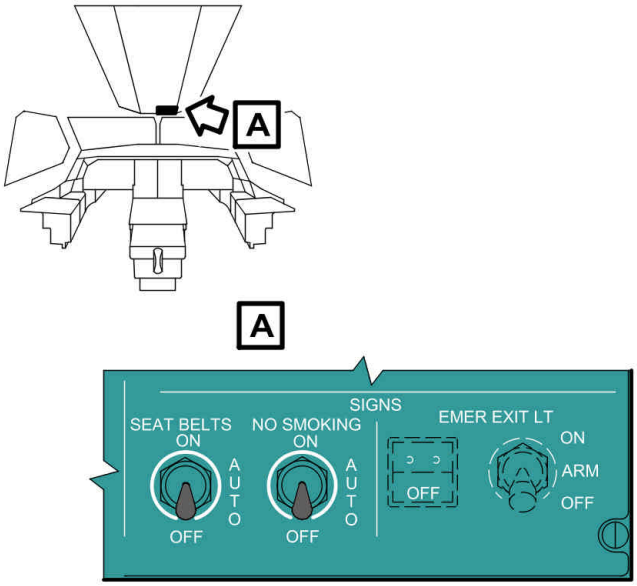
Applicable to: ALL

The NS and FSB/RTS signs operate in different modes:

- ON
- AUTO
- OFF.

The control switches for these modes are located in the cockpit on the SIGNS overhead panel 25VU.

Signs Control Panel



25VU

Note: *The TOILET OCCPD pb-sw indication light on panel 48VU shows the cockpit crew if the L/H FWD lavatory is occupied or if it is free.*

FASTEN SEAT BELT AND RETURN TO SEAT SIGNS

The following table gives an overview about the selectable functions of the SEAT BELTS switch in the cockpit:

Position	FSB-Signs (all)	RTS-Signs (Lavatories)
ON	ON	ON
AUTO	After engine start and during taxi/take-off/landing: ON Other flight phases: OFF	After engine start and during taxi/take-off/landing: ON Other flight phases: OFF
OFF	OFF	OFF

NO SMOKING AND EXIT SIGNS

The following table gives an overview about the selectable functions of the NO SMOKING switch in the cockpit:

Position	Signs in SMOKING areas	Signs in NO SMOKING areas
ON	ON	ON
AUTO	During taxi, take-off and landing: ON Other flight phases: OFF	During taxi, take-off and landing: ON Other flight phases: OFF
OFF	OFF	NS signs: ON EXIT signs: OFF

Note: Every time when passenger lighted signs are switched on, a Lo-I chime is heard through all cabin loudspeakers.

NON SMOKER AIRCRAFT

It is possible to select a Non Smoker A/C function on the FAP. After activating this function (by pushing the related ON/OFF pb on the Cabin Programming page (*Refer to 03-020 Zones*) all NO SMOKING signs are switched on. To unselect this function, push the ON/OFF pb again.

CABIN DECOMPRESSION

In case of cabin decompression all NS and FSB signs are switched on automatically, regardless of the position of the cockpit switches. The RTS signs are switched off.

SIGN CHIME AND FLASH INDICATION

After activation of the NS or FSB signs:
- a Lo I chime is heard through the loudspeakers,
- the signs flash for a time period of 5 s (optional) and then stay on.

SIGNS DIMMING

The passenger lighted signs are dimmed together with the general illumination (*Refer to 02-070 General Illumination*).

GENERAL SYSTEM INFORMATION

Applicable to: ALL

The FAP AUDIO page provides the menu for the prerecorded announcements and the boarding music (BGM) control. These signals come from the audio reproducer unit (PRAM) which is also responsible for some text messages concerning initialization and faults.
Push the AUDIO pb key on the left side of the tool-bar to get access to the AUDIO page. The tool-bar is located in the 1st level of the System and Function key set, *Refer to 02-060 FAP System and Function Buttons*.
Select this page to start and select the Prerecorded Announcement and Boarding Music before the flight and also during the flight. The PRAM-card is a customized item and is specified by the Airline.

Note: *If the Audio button is not listed on the tool-bar push the left arrow key.*

Starting the PRAM-page

The AUDIO page has two different functional menus:
- BOARDING MUSIC (on the left side of the screen) (with an upper and a lower menu), and
- PRERECORDED ANNOUNCEMENT (on the right side of the screen).

AUDIO page on the FAP

Note: *It is also possible to get only BGM or PRAM on this page. In case this is assigned in the CAM, the respective field is blanked out.*

BOARDING MUSIC

On the left hand side of the AUDIO page there is an A/C symbol. This symbol indicates the selected boarding music channel and the music volume in a bar graph. Adjacent to the symbol, a boarding music (BGM) menu is displayed. The BGM menu shows the available channels with their assigned a volume levels.

PRERECORDED ANNOUNCEMENT

Select the prerecorded announcements in the PRERECORDED ANNOUNCEMENT box which is located on the right hand side of the screen.
Enter the announcement numbers by using the numeric panel.
End every selection with the Enter key or wait until the system has accepted the selection after a short time out.

The Prerecorded Announcement menu consists of three parts:
- On Announce,
- Memo, and
- Select.

The selected announcement number is shown in the selection box and in the list box (Memo) with up to 5 messages like Found, Missing, Error etc. The active Memo field is highlighted by another background color.
Change or clear an announcement with the Up and Down arrow keys which are located on the right side of the list box. Then press the Clear Memo key.
Clear all announcements from the list with the Clear all pb key.

After selecting the announcements to be played you have following options:
- Play the next announcement (Play next pb key),
- Play all announcements (Play all pb key), or
- Stop pb the announcement being played.

The announcement being played is indicated in the On Announce box, which is located above the list box Memo. Additionaly, text strings for Memo 1 and Memo 2 will be shown, if selected messages are found or are missing.

The following messages can be transmitted from the PRAM:
AUto - in the On Announce field, if an automatic announcement has been triggered (e. g. cabin decompression announcement),
Missing - in the Memo 1 field, if the announcement is found by the PRAM,
Error - in all input fields (1-5), if the selected announcement is out of the selectable range.

DISTURBED PRAM COMMUNICATION

If there are failures in the communication process between CIDS and the PRAM, different Blue Cards will come up.
The CHECK PRAM blue card will be shown e.g. in case of no power/powerloss: prerecorded audio is not available.

Blue Card - Check PRAM

Note: *A similiar message will come up, if this function is blocked by another (2nd) FAP which can be installed optionally.*

PRAM INIT PHASE

The following Blue Card comes up, if prerecorded audio functions are selected during the initialization phase of the PRAM.
In this case try again after a successful start of the PRAM.

Blue Card - PRAM Initilization

CABIN SETTINGS

In the Cabin Settings menu some general adjustments can be done:

Call Reset - Reset pax calls with this key (*Refer to 03-070 General System Information*)

Chime Inhibit - To suppress the accompanying chimes of pax calls (*Refer to 03-070 General System Information*)

CABIN INFORMATION AND ENTERTAINMENT SYSTEMS

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04-010 IN-FLIGHT ENTERTAINMENT SYSTEM

In-Flight Entertainment - General....A
In Flight Entertainment - General....B
Component Location....C
VCC Smoke Detection....D
Menu Structure....E
Welcome Screen - Description....F
System Status - Description....G
Services Control - Description....H
Seat Reset - Description....I
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04-020 MUSIC

Music System....A

04-030 VIDEO

Video System Description....A
Video System - Operation....B
Video System....C
Video System - Operation by the Passenger....D
Video System....E
Video Announcement - Description....F
Video PA Control - Operation....G
How to Manually Retract the Overhead Monitors....H

04-040 AIRSHOW

Moving Map - Description....A

04-060 TELEPHONE

Passenger Telephone System - General....A
Passenger Telephone System - Operation....B

04-080 IN-SEAT POWER SUPPLY SYSTEM (ISPSS)

In-Seat Power Supply System (ISPSS)....A
PED Power Switch on the FAP....B
PED Power Switch in the Cockpit....C

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IN-FLIGHT ENTERTAINMENT - GENERAL

Criteria: K11136
Applicable to: MSN 2927-2933, 3120

The aircraft is equipped with an entertainment system including
- Prerecorded music
- In-seat power supply
- In-seat video
- Integrated Passenger Flight Information System (PFIS).

Each passenger seat is equipped with a passenger control unit (PCU).
For information on the PCU *Refer to 04-020 Music System*.

IN-FLIGHT ENTERTAINMENT - GENERAL

Criteria: K10188
Applicable to: MSN 2649

The aircraft is equipped with an entertainment system including prerecorded music and prerecorded videos.
Each passenger seat has a Passenger Control Unit (PCU) installed.
For information on the PCU *Refer to 04-020 Music System* and *Refer to 04-030 Video - Operation by the Passenger*.
The audio is transmitted to the seat connected headsets as well as the passenger address loudspeakers. The video signals are transmitted to the Liquid Crystal Display (LCD) screens (retractable as well as wall mounted).

Note: *The entire In-Flight Entertainment (IFE) system will be shut down with the VCC MAIN POWER/PAX SYS pb-sw. This will include the GSM on board system, if installed.*

IN FLIGHT ENTERTAINMENT - GENERAL

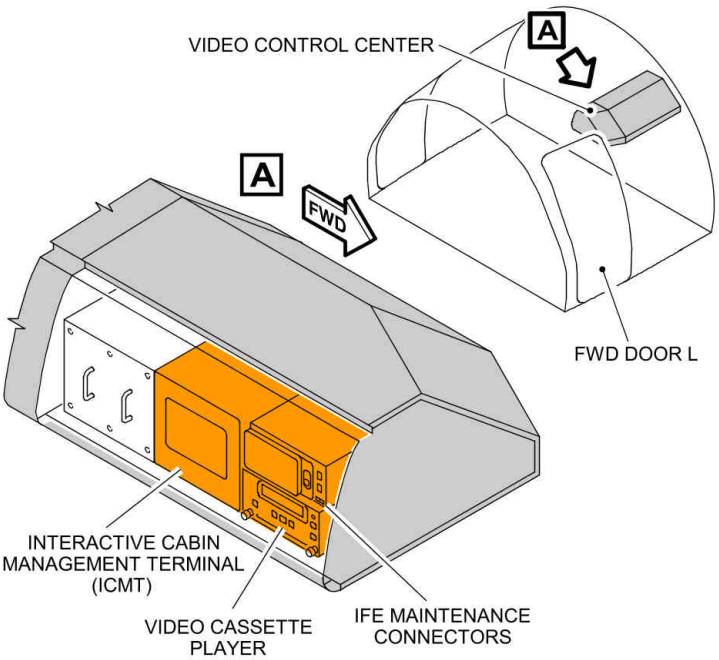
Criteria: K11136, K11459
Applicable to: MSN 3034

The aircraft is delivered with an inoperative IFE system.
Only a few entertainment units are installed in the aircraft.
Based on this no description of operation is added to the CCOM.

COMPONENT LOCATION

Criteria: K11136
Applicable to: MSN 2927-3120

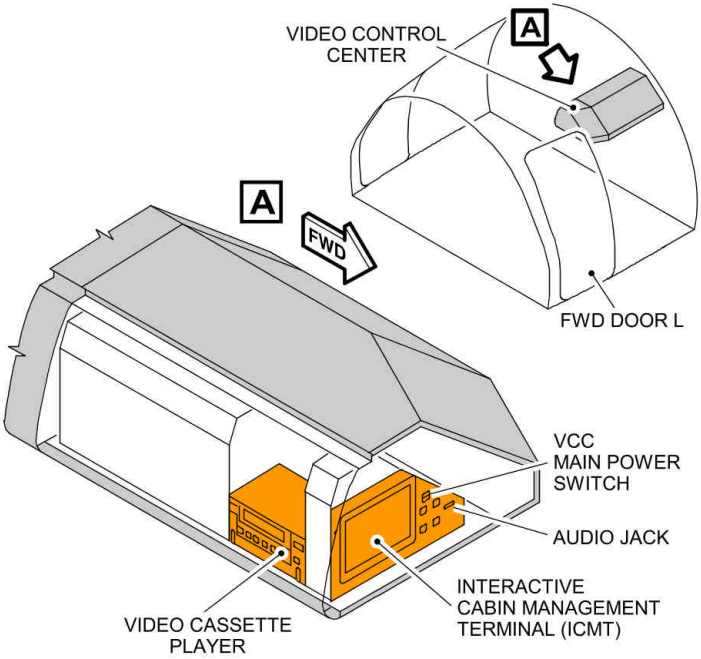
Location of the VCC



COMPONENT LOCATION

Criteria: K10188
Applicable to: MSN 2649

Location of the VCC



Note: *Follow the instructions on the placard that is on the door to the Video Control Center (VCC): In-Flight Entertainment (IFE) system not to be powered if cabin temperature exceeds 40 °C.*

VCC SMOKE DETECTION

Applicable to: ALL

VCC SMOKE DETECTION

The VCC smoke detection system operates independently from the other aircraft smoke detection systems.
A smoke warning indicator in the forward cabin ceiling area near the VCC will flash. (The indicator looks like the lavatory call light)

STAND ALONE VCC SMOKE DETECTION SYSTEM WITH SMOKE DETECTION PANEL

The VCC has a stand alone smoke detection system which may include a smoke detection panel. For information about the location of the smoke detection panel: *Refer to 04-010 Component Location*.

DESCRIPTION OF THE STAND ALONE SMOKE DETECTION SYSTEM

The stand alone smoke detection system gives an alarm signal when it detects the change of ion density due to smoke through one or more sensors.

The stand alone smoke detection system can have two alarm output types:
- Visible alarm by means of an ALARM indicator, if installed
- Aural alarm (intermittent horn), if installed.

If the stand alone smoke detection system has a smoke detection panel in the VCC, it has the following indicator and controls:

Control/Indicator	Description
Indicator: SMOKE	The SMOKE indicator is a red indicator light (intermittent indication) that comes ON if there is smoke in the VCC.
RESET pb	Pushing the RESET pb resets the smoke alarm.
SMOKE TEST pb	Pushing the SMOKE TEST pb tests the function of the alarm panel and the sensitivity of the sensor. If a fault is found, the FAULT indicator light comes ON.

OPERATION OF THE SMOKE DETECTION SYSTEM

If a smoke detection panel is installed, the cabin crew can:
- Reset the smoke detection system after an alarm situation:
  Push the RESET pb.

  Note: *After a reset, the system goes into standby mode for one minute. After one minute, the smoke detection system goes back to the normal mode.*

- Test the smoke detection system, if a SMOKE TEST pb is installed:
  See Test of the Stand Alone Smoke Detection System.

Test of the Stand Alone Smoke Detection System

In order to test the stand alone smoke detection system, the cabin crew can use the SMOKE TEST pb on the SMOKE DETECTION panel in the VCC.

For the test of the smoke detection system follow the steps described below:
1. Push the SMOKE TEST pb. The SMOKE TEST pb will come ON.
2. Wait for 6 s, then you should observe the following:

- All indicators come ON and go OFF twice for 0.5 s.
- The alarm horn sounds (if installed).

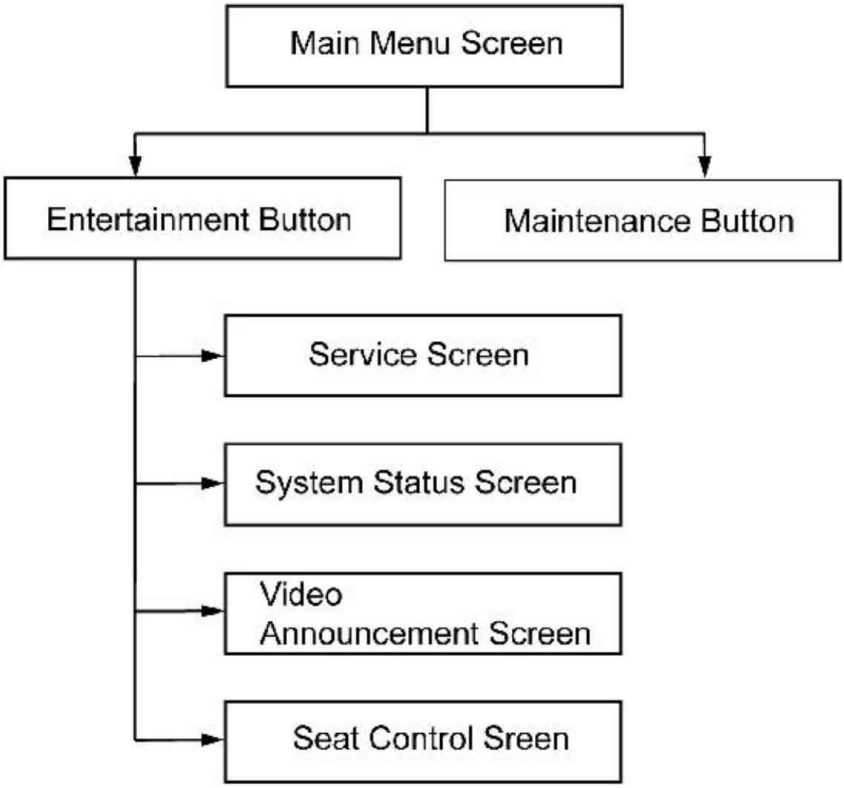
3. Inform the flight crew if there is a fault.

MENU STRUCTURE

Applicable to: MSN 2649

The IFE system is managed via the Crew Panel (CP). The possibilities of navigation on the screen are shown in the following figure.

CP Menu Structure



The arrows show the available links between the menu pages.

WELCOME SCREEN - DESCRIPTION

Applicable to: MSN 2649

The Welcome screen is displayed when the Control Panel (CP) is turned on or anytime the screen is restored after the automatic screen saver has been started.
To get access to the Main Menu, touch the CP.

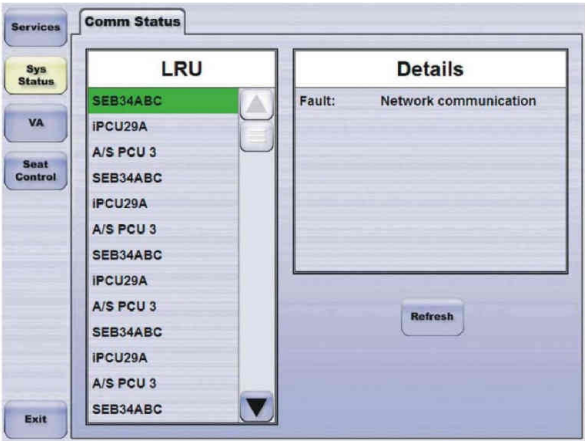
Welcome Screen

SYSTEM STATUS - DESCRIPTION

Applicable to: MSN 2649

The System Status screen displays the units that are not communicating with the system. The System Status screen is generally used for maintenance troubleshooting and usually blank.

System Status Screen



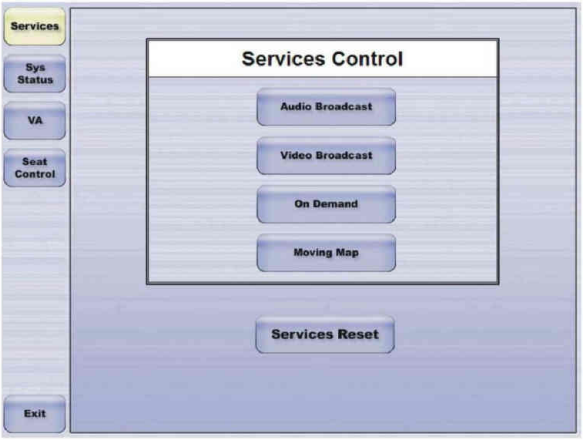
(-) REFRESH Button
Used to refresh the LRU and Details window screens.

SERVICES CONTROL - DESCRIPTION

Applicable to: MSN 2649

For passenger and cabin service purposes a Services Control function is integrated into the entertainment system. The Services Control screen provides On / Off controls for audio and video entertainment services.

Services Control Screen



(-) AUDIO BROADCAST Button
Used to enable/ disable the regular FM audio media broadcast to the seats.

(-) VIDEO BROADCAST Button
Used to enable/ disable the video media broadcast to the seats.

(-) ON DEMAND Button
Used to enable/ disable the On Demand video media broadcast to the seats

(-) MOVING MAP Button
Used to enable/ disable the Moving Map channel to the seats.

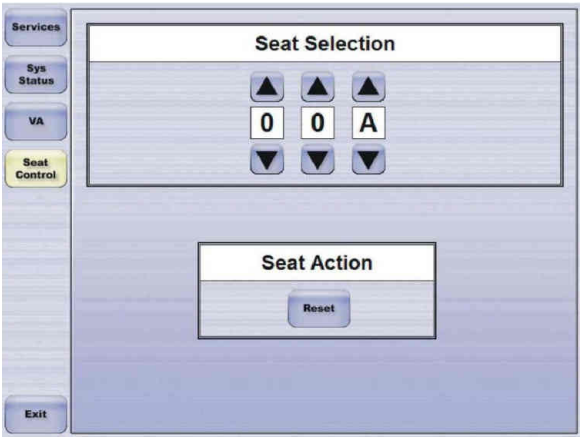
(-) SERVICES RESET Button
Used to stop all services in progress.

SEAT RESET - DESCRIPTION

Applicable to: MSN 2649

Use the Seat Control screen to reset IFE services to a selected seat.
To access the Seat Control screen, touch the Seat Control icon on the screen.

Seat Control Screen



(-) SEAT SELECTION (Scroll)
Used to select a single seat.

(-) SEAT ACTION (Action)
Resets the interactive function of the selected seat so that the interactive application processor reboots.

SEAT RESET - OPERATION

Applicable to: MSN 2649

EXAMPLE OF RESETTING A SEAT

If there is a problem with the electronic equipment at a seat , use the RESET button on the SEAT Control screen.

1. On the SEAT Control screen select the seat where the problem occurred.
2. Touch the Reset icon on the screen.

   Note: The Reset Seat Confirmation screen is displayed.

3. Touch the Yes icon to reset the seat.

   Note: Touch the Cancel icon to cancel the reset command and return to the Seat Control screen.

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MUSIC SYSTEM

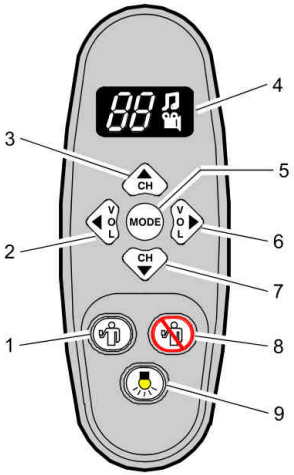
Criteria: K11136
Applicable to: MSN 2927-2933

The audio passenger entertainment system transmits prerecorded audio entertainment programs to the passengers. Each passenger can select entertainment programs via the passenger control units (PCUs) installed at each seat. The passengers can hear these programs through headsets.

PASSENGER CONTROL UNIT IN THE FIRST CLASS

To control the music system in the first class, use the Passenger Control Unit (PCU).

Passenger Control Unit



(1/8) Attendant Call
Push the attendant call key (1) to activate the attendant call.
Push the attendant call reset key (8) to deactivate the attendant call.

(2/6) Volume Control
To increase/decrease the headset volume, push the vol Up key (6) or vol Down key (2).

(3/7) Channel Control
To select an available music channel, push the ch up key (3) or ch down key (7). The selected channel is shown on the PCU display (4).

(4) PCU Display
On the PCU display for instance the selected channel and the selected mode is displayed.

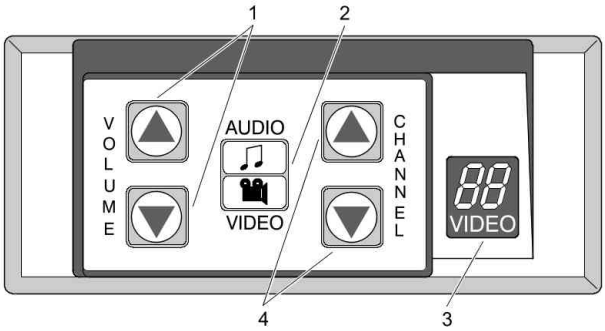
(5) Mode Control
Push the MODE key (5) to select one of the different entertainment modes (AUDIO or VIDEO).

(9) Reading Light
Push the reading light key (9) to switch on/off the reading light.

PASSENGER CONTROL UNIT IN THE ECONOMY CLASS

To control the music system in the economy class, use the Passenger Control Unit (PCU).

Passenger Control Unit



(1) Volume Control
To increase/decrease the headset volume, the passenger has to push the vol +/vol - key (1).

(2) Audio/Video Control
To select the audio and the video entertainment mode, push the Audio/Video key (2).

(3) Channel Control
To select an available music channel, push the ch up/ch down key (3). The selected channel is shown on the channel indicator (3).

(4) Channel Indicator
The selected channel is indicated on the channel indicator (4).

MUSIC SYSTEM

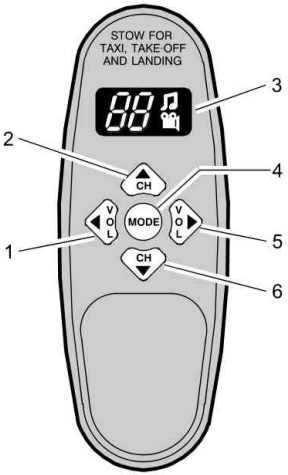
Criteria: K10188
Applicable to: MSN 2649

The audio passenger entertainment system transmits prerecorded audio entertainment programs to the passengers. Each passenger can select entertainment programs via the Passenger Control Units (PCUs) installed at each seat. The passengers can listen to these programs via the headsets.

PASSENGER CONTROL UNIT

To control the music system, use the PCU.

Passenger Control Unit



(1/5) Volume Control
To increase/decrease the headset volume, press the VOL ▲ key (6) or VOL ▼ key (2).

(2/6) Channel Control
To select an available music channel, press the CH ▲ key (3) or CH ▼ key (7). The selected channel is displayed on the PCU display (4).

(3) PCU Display
The PCU display shows the selected channel and the selected mode.

(4) Mode Control
Press the MODE key (5) to select one of the different entertainment modes (AUDIO or VIDEO).

MUSIC SYSTEM

Criteria: K11136, K11400
Applicable to: MSN 3120

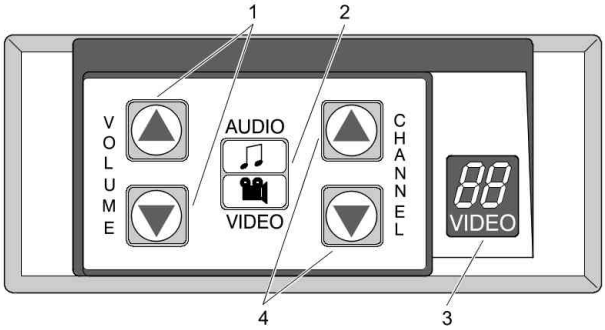
The audio passenger entertainment system transmits pre-recorded audio entertainment programs to the passengers. Each passenger can select entertainment programs via the passenger control units (PCUs) installed at each seat. The passengers can hear these programs through headsets.

To control the music system, use the Passenger Control Unit (PCU).

PASSENGER CONTROL UNIT

To control the music system, use the Passenger Control Unit (PCU).

Passenger Control Unit



(1) Volume Control
To increase/decrease the headset volume, the passenger has to push the vol +/vol - key (1).

(2) Audio/Video Control
To select the audio and the video entertainment mode, push the Audio/Video key (2).

(3) Channel Control
To select an available music channel, push the ch up/ch down key (3). The selected channel is shown on the channel indicator (3).

(4) Channel Indicator
The selected channel is indicated on the channel indicator (4).

VIDEO SYSTEM DESCRIPTION

Applicable to: MSN 2649-2933, 3120

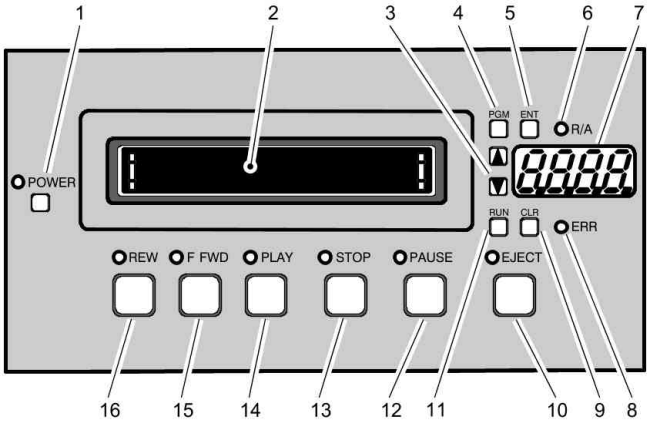
The system uses a Video Cassette Player (VCP) to replay prerecorded programs stored on video tapes. The programs are converted by the tape reproducers into video and audio signals which are transmitted to the System Control Unit (SCU).
The video signals are transmitted to the Liquid Crystal Display (LCD) units.
The audio signals are transmitted via the Cabin Intercommunication Data System (CIDS) directors and the Passenger Entertainment System (PES) so that the program sound can be heard over the passenger address loudspeakers and the PES headsets.

Note: Passenger Address (PA) announcements will override the video sound.

VIDEO CASSETTE PLAYER

The VCP is designed to play a normal or Hi8 8-mm video cassette prerecorded with video programs.

Video Cassette Player



(1) POWER Button and Indicator
Push the POWER button to turn ON the VCP. Push it again to turn it OFF (toggle function).
The POWER indicator illuminates orange when power is ON.

(2) Video Cassette Insertion Opening
A flap protects the opening for video cassette insertion. This opening is located above the MODE control buttons.
The flap is spring-loaded, but does not stop the insertion of a video cassette, when the VCP is ON and the EJECT indicator is OFF (no video cassette is loaded).

If a video cassette is already loaded, the flap prevents the insertion of another cassette. When the VCP is turned OFF, the cassette ejects mechanically.
Insert a video cassette horizontally into the opening, with the label side up. The arrow mark must point toward the VCP. Incorrect insertion of a video cassette is mechanically prevented. When you push the EJECT button, the cassette insertion flap opens and the cassette ejects from the VCP.

(3) UP/DOWN Buttons
Push the UP/DOWN buttons on the front panel to enter the desired segment number on the LED display (R/A mode).

(4) PGM Button

Push the PROGRAM button (PGM) to get into the Random Access (R/A) mode. The R/A mode starts automatically to play the video cassette tape with the pre-programmed videos. The following functions are disabled during the R/A playback:
- PAUSE
- PLAY
- SCAN FORWARD
- SCAN REVERSE
- FAST FORWARD
- REWIND.

(5) ENT Button
Push the ENTER (ENT) button to confirm an entered segment number during the R/A programming mode.

(6) R/A Indicator
The R/A indicator illuminates when the R/A mode is ON.

(7) LED Display
The LED Display displays the segment and the program order.

(8) ERR Indicator
The ERROR (ERR) indicator light is ON when the unit senses condensation. It prevents cassette operation until the humidity fault condition is corrected. Then the indicator goes OFF.

(9) CLR Button
Push the CLEAR (CLR) button to clear the program.

(10) EJECT Button and CASSETTE IN Indicator
The EJECT indicator is ON when the VCP is ON and a video cassette is loaded.

Pushing the EJECT button causes the VCP to disengage the tape from the tape transport mechanism and eject the video cassette.
The EJECT indicator blinks until the cassette is fully ejected, then it goes OFF.

(11) RUN Button
Push the RUN button to start the programmed sequence of a video cassette tape.

(12) PAUSE Button and Indicator
Push the PAUSE button to enter the PAUSE mode. The PAUSE indicator of the VCP is illuminated when the VCP is in the PAUSE mode.

(13) STOP Button and Indicator
Push this button to stop the VCP (STOP mode). The STOP indicator is ON during the STOP or PAUSE mode.

(14) PLAY Button and Indicator
Push this button to put the VCP into the PLAY mode.
The PLAY indicator is ON during the PLAY or PAUSE mode.

(15) F FWD Button and FF Indicator
When the VCP is in any mode except the PLAY mode, push the F FWD button to put the VCP into the FAST FORWARD mode. The FF indicator is ON during the FAST FORWARD mode.
When the VCP is in the PLAY mode, push this button to put the VCP into the SCAN FORWARD mode.
Release the button to return the VCP to PLAY mode. The PLAY and the FF indicator are ON in the SCAN FORWARD mode.

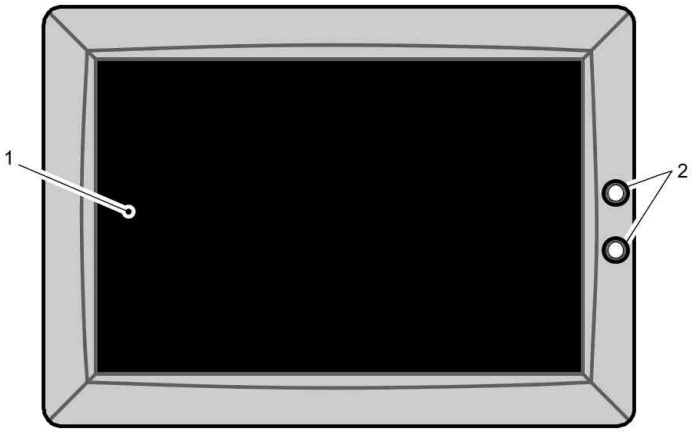
(16) REW Button and Indicator
When the VCP is in any mode except the PLAY mode, pushing this button puts the VCP into the REWIND (REW) mode.
The REW indicator is ON during REW mode.
When the VCP is in PLAY mode, pushing this button puts the VCP into SCAN REVERSE mode. Releasing the button returns the VCP to the PLAY mode.
Both, the PLAY and the REW indicator are ON in the SCAN REVERSE mode.

SMART VIDEO DISPLAY UNIT

The Smart Video Display Unit (SVDU) is a component of the aircraft passenger entertainment system and is a central control unit for distribution of video and audio signals to the passenger cabin zones.
The SVDU contains a color LCD monitor with a touch-panel for selection of the video/audio sources and passenger cabin zones. The SVDU distributes the selected video/audio signal to the

selected zone. The SVDU can also output the audio signals from video sources as PA video audio signals.

SMART VIDEO DISPLAY UNIT



(1) SMART VIDEO DISPLAY UNIT
The SVDU is a component of aircraft passenger entertainment system and is a central control unit for distribution of video and audio signals to the passenger cabin zones.

(2) Brightness Adjusting Buttons
The Brightness Adjusting Buttons are used for manual brightness control on the front of the SVDU.

VIDEO SYSTEM - OPERATION

Applicable to: MSN 2649-2933, 3120

EXAMPLE FOR VIDEO CASSETTE PLAYBACK (NORMAL MODE)

1. Insert a video cassette in the Video Cassette Player (VCP).

   Note: The control functions PLAY, REW, F FWD, EJECT and STOP are active.

2. Push the PLAY button to start the playback.
3. Push the STOP button to stop the playback.
4. Push the REW button to rewind the VCP to the start of the tape.
5. Push the F FWD button to fast forward the VCP to the end of the tape.

EXAMPLE FOR VIDEO CASSETTE PLAYBACK (RANDOM ACCESS MODE)

1. Push the PGM button on the front of the video cassette player (VCP) to get into the R/A mode.
2. Push the CLR button to reset the segment number and program sequence display ("0001").
3. Push the UP/DOWN buttons to enter the segment number in the program.

   Note: *The entered segment number is displayed in the second position from the left on the Light Emitting Diode (LED) display.*

4. Push the ENT button to verify the program.
5. Push the RUN button to play the selected segment as programmed. The unit plays until the end of the program and rewind after it.
6. To change an entered segment number, push the ENT button until the segment number is displayed and push the UP/DOWN buttons to enter the required segment number.

   Note: *When the VCP is set to Random Access (R/A) mode, the VCP function buttons PAUSE, REW, PLAY, and F FWD are inactive, but the STOP and EJECT buttons are active.*

VIDEO SYSTEM

Criteria: K11136
Applicable to: MSN 2927-2933

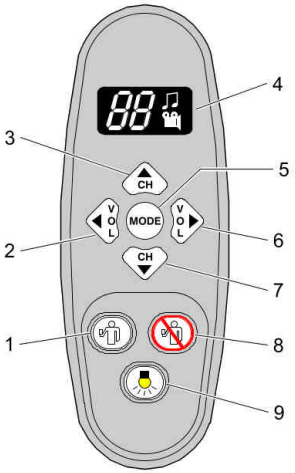
The system uses a reproducer to replay prerecorded programs stored on video tapes. The programs are converted by the reproducers into video and audio signals which are transmitted to the System Control Unit (SCU).
The video signals are transmitted to the LCD units.
The audio signals are transmitted via the Cabin Intercommunication Data System (CIDS) directors and the Passenger Entertainment System (PES) so that the program sound can be heard over the passenger address loudspeakers and the PES headsets.

Note: *PA announcements will override the video sound.*

PASSENGER CONTROL UNIT IN THE FIRST CLASS

To control the video system in the first class, use the Passenger Control Unit (PCU).

Passenger Control Unit



(1/8) Attendant Call
Push the attendant call key (1) to activate the attendant call.
Push the attendant call reset key (8) to deactivate the attendant call.

(2/6) Volume Control
To increase/decrease the headset volume, push the vol Up key (6) or vol Down key (2).

(3/7) Channel Control
To select an available music channel, push the ch up key (3) or ch down key (7). The selected channel is shown on the PCU display (4).

(4) PCU Display
On the PCU display for instance the selected channel and the selected mode is displayed.

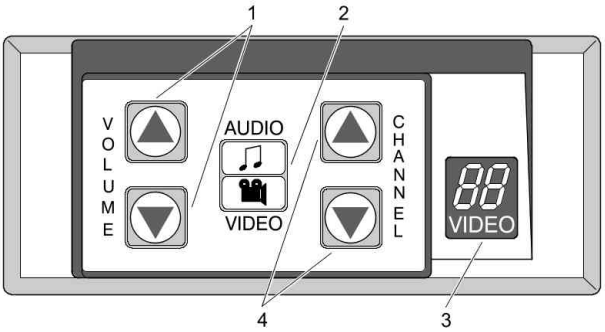
(5) Mode Control
Push the MODE key (5) to select one of the different entertainment modes (AUDIO or VIDEO).

(9) Reading Light
Push the reading light key (9) to switch on/off the reading light.

PASSENGER CONTROL UNIT IN THE ECONOMY CLASS

To control the video system, use the Passenger Control Unit (PCU).

Passenger Control Unit



(1) Volume Control
To increase/decrease the headset volume, the passenger has to push the vol +/vol - key (1).

(2) Audio/Video Control
To select the audio and the video entertainment mode, push the Audio/Video key (2).

(3) Channel Control
To select an available music channel, push the ch up/ch down key (3). The selected channel is shown on the channel indicator (3).

(4) Channel Indicator
The selected channel is indicated on the channel indicator (4).

VIDEO SYSTEM - OPERATION BY THE PASSENGER

Criteria: K10188
Applicable to: MSN 2649

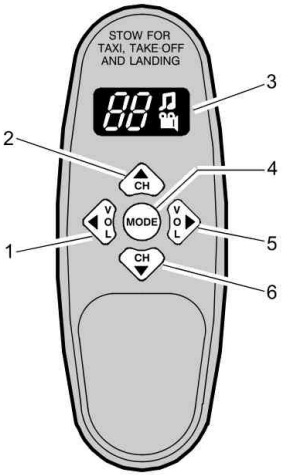
The system uses a reproducer to replay prerecorded programs stored on video tapes. The programs are converted by the reproducers into video and audio signals which are transmitted to the System Control Unit (SCU).
The audio signals are transmitted via the Cabin Intercommunication Data System (CIDS) directors and the Passenger Entertainment System (PES) so that the program sound can be heard via the passenger address loudspeakers and the PES headsets.

Note: Passenger Address (PA) announcements will override the video sound.

PASSENGER HANDSET

To control the video system, use the passenger handset.

Passenger Handset



(1/5) Volume Control
To increase/decrease the headset volume, press the VOL ▲ key (6) or VOL ▼ key (2).

(2/6) Channel Control
To select an available video channel, press the CH ▲ key (3) or CH ▼ key (7). The selected channel is displayed on the PCU display (4).

(3) Liquid Crystal Display (LCD)
The LCD shows the selected channel and the selected mode.

(4) Mode Control
Press the MODE key (5) to select one of the different entertainment modes (AUDIO or VIDEO).

VIDEO SYSTEM

Criteria: K11136, K11400
Applicable to: MSN 3120

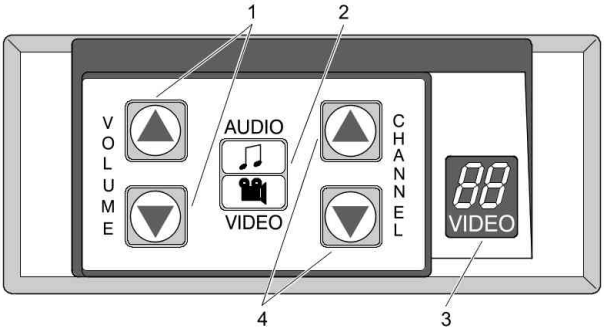
The system uses a reproducer to replay prerecorded programs. The programs are converted by the reproducers into video and audio signals which are transmitted to the System Control Unit (SCU). The video signals are transmitted to the LCD units.
The audio signals are transmitted via the Cabin Intercommunication Data System (CIDS) directors and the Passenger Entertainment System (PES) so that the program sound can be heard over the passenger address loudspeakers and the PES headsets.

Note: *PA announcements will override the video sound.*

PASSENGER CONTROL UNIT

To control the video system, use the Passenger Control Unit (PCU).

Passenger Control Unit



(1) Volume Control
To increase/decrease the headset volume, the passenger has to push the vol +/vol - key (1).

(2) Audio/Video Control
To select the audio and the video entertainment mode, push the Audio/Video key (2).

(3) Channel Control
To select an available music channel, push the ch up/ch down key (3). The selected channel is shown on the channel indicator (3).

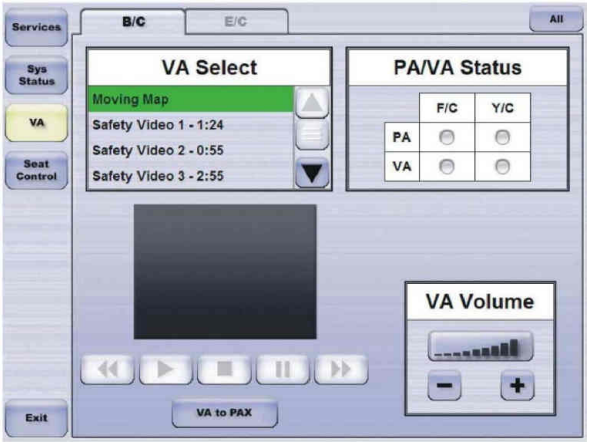
(4) Channel Indicator
The selected channel is indicated on the channel indicator (4).

VIDEO ANNOUNCEMENT - DESCRIPTION

Applicable to: MSN 2649

The Video Announcement screen is used to monitor the video Passenger Announcement (PA) to B/C and Y/C.

Video Announcement Screen



(-) VA SELECT RADIO Button
Allows the cabin crew to select a video announcement from the list.

(-) PA/VA STATUS Button
Used to display whether the system is in PA or VA mode.

(-) VA TO PAX Button
Used to broadcast or cancel the video and audio to the passenger seats.

(-) EXIT Button
Used to terminate all entertainment and VA services.

(-) PA VOLUME Controls
Used to adjust the output level of the audio for the aircraft PA system.

(-) VIDEO Controls
Used to Play, Stop, Pause, Fast Forward, and Reverse the selected video announcement.

(-) PREVIEW WINDOW
Used to display the view what is playing at the seats.

(-) B/C Tab
Used to display the video announcement information and controls for the B/C.

(-) Y/C Tab
Used to display the video announcement information and controls for the Y/C.

VIDEO PA CONTROL - OPERATION

Applicable to: MSN 2649

EXAMPLE TO INITIATE A VIDEO ANNOUNCEMENT

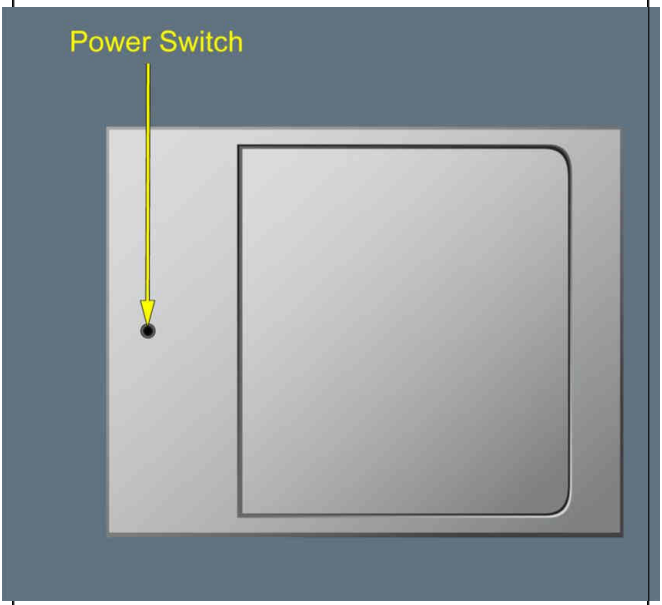
1. Select a video source from the VA Select window.
2. Push the play icon.
3. Adjust the VA Volume by using the + and - icons.
4. Push the VA to PAX icon to broadcast video and audio to the passengers seats.
5. Push the Stop icon to cancel the video announcement.
6. Push the VA to PAX icon to cancel the broadcast.

HOW TO MANUALLY RETRACT THE OVERHEAD MONITORS

Applicable to: ALL

Prior to takeoff or landing some overhead monitors remain deployed.

	ACTION	RESULT/SOLUTION YES	NO
1.	Are some of the overhead monitors still deployed instead of retracting automatically?	Go to 2.	END
2.	Go to an affected overhead monitor and perform the following operation:		

	ACTION	RESULT/SOLUTION YES	NO
	Manually turn OFF the power: Insert a clip or pin through the local power switch hole and push the POWER pb-sw to cut the power to the overhead monitor. The local power switch hole is located behind the overhead monitor. Example of a Power Switch of an Overhead Monitor  *Note:* *The POWER pb-sw is normally only used for maintenance purposes.*	Go to 3.	Go to 3.
3.	Has the affected overhead monitor retracted?	Go to 4.	Go to 5.
4.	If turning OFF the power manually successfully retracted the affected overhead monitor: Repeat the action for any other deployed overhead monitor.	Go to 7.	Go to 7.
5.	Manually close the affected overhead monitor:		

	ACTION	RESULT/SOLUTION YES	NO
	Forcibly push and pull the affected overhead monitor until it is fully stowed and latched.	Go to 6.	Go to 6.
6.	Are there any other affected overhead monitors?	Go to 2.	Go to 7.
7.	When all affected overhead monitors have been retracted: Make an entry into the cabin logbook mentioning the: - Defect - Number and location of the affected overhead monitors - Countermeasures taken.	END	END

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MOVING MAP - DESCRIPTION

Applicable to: MSN 2649

MOVING MAP is part of the Passenger Flight Information System (PFIS). MOVING MAP provides visual in-flight information to the passengers.

The following information is displayed on the cabin monitors via the video system:

- Maps, which indicate the aircraft's position and track
- Flight information such as altitude, ground speed, outside temperature and distance from destination.

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PASSENGER TELEPHONE SYSTEM - GENERAL

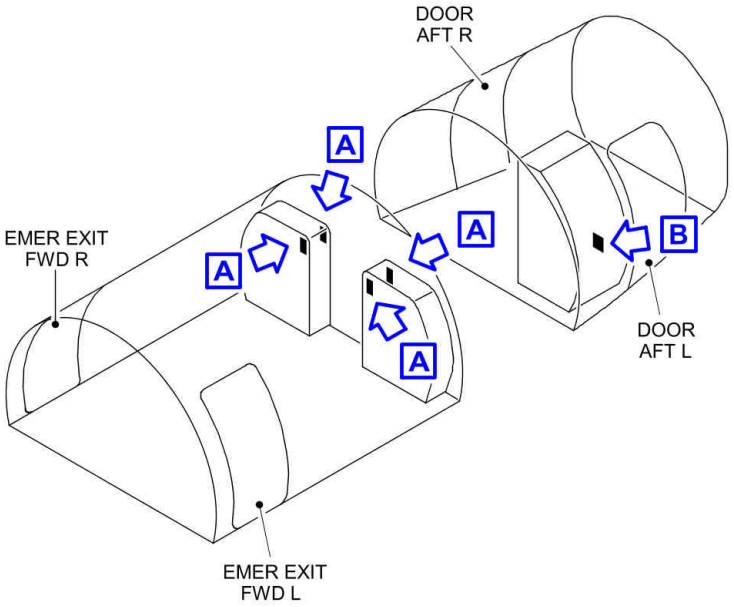
Applicable to: MSN 3034-3120

The Passenger Air to Ground Telephone System (PATS) enables the passengers (and the cabin crew) to make telephone calls via the global public service telephone network during flight. The calls are transmitted to the ground via the aircraft's satellite communication system (SATCOM).

LOCATION OF THE PASSENGER AIR TO GROUND TELEPHONE SYSTEM (PATS)

The following figure shows the location of the PATS and its cabin telephone management panel.

Location of the PAT Units and the Management Panel



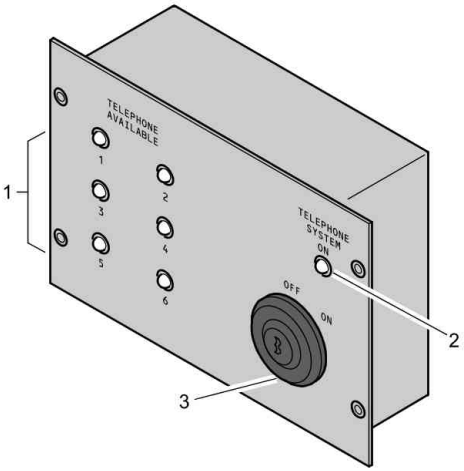
(A) Passenger Air-to-Ground Telephone Units

(B) Cabin Telephone Management Panel

CABIN MANAGEMENT PANEL

The cabin management panel is located at the aft wall of the lavatory at DOOR AFT L. Use the cabin management panel to turn the PATS on or off and to control the functioning of the four units, looking at the lights on the panel.

Cabin Management Panel



(1) Indicator Lamps: Telephone Available 1 - 4

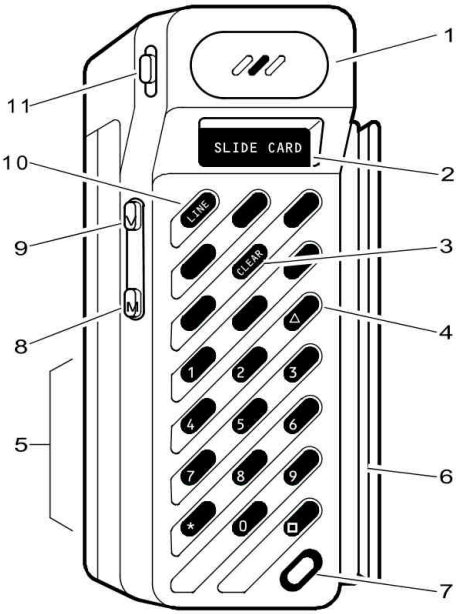
(2) Indicator Lamp: Telephone System ON

(3) Key Operated Switch

PASSENGER AIR TO GROUND TELEPHONE SYSTEM (PATS)

The PAT units are installed at four locations.

PAT Unit



(1) Earpiece

(2) LCD Display
The display is used to convey information to the user.

(3) CLEAR
Use the CLEAR key to clear down a call once the you have finished the telephone conversation. Failing to press CLEAR and simply switching the handset off will result in a fault being logged in the fault log.
Use the CLEAR key also to edit a number when pre-dialling.

(4) View Number (Shift key)
Use the view number key to view a telephone number that has exceeded eleven digits in length. A number that has exceeded eleven digits causes the handset to display the legend DISP. To view the full dialled number, press and hold the View Number key.

(5) Keypad
Use the keypad to enter the telephone number for the call.

(6) Credit Card Slot
Used to read out credit cards, for telephone rates.

(7) Mouth Piece

(8) Mute
Press and hold the MUTE button to mute/prevent any audio from being transmitted. The call recipient will not be able to hear any conversation being held on the aircraft while the MUTE button is pressed. Releasing the button will restore the two way communication.

(9) Volume
Use the VOLUME button to increase or decrease the volume. It has a toggle action. Pressing the button once will either increase or decrease the volume to a maximum or minimum depending on its previous setting. The volume is either at its maximum or minimum value and cannot be set between these values.
The handset is at maximum volume at power on.

(10) LINE
Press LINE to initiate the process which sets up a link between the handset and the cabin unit. When the line button is pressed the link legend starts to flash. As soon as the link is set up, the LINK legend stops flashing, and the LINK and LINE legends become permanently displayed.

(11) OFF/ON
The OFF/ON function is realized via a slide switch with three positions, OFF and two ON positions. The second ON position is a redundant feature but will also switch the handset on.

PASSENGER TELEPHONE SYSTEM - OPERATION

Applicable to: MSN 3034-3120

The passengers can use the telephone handsets that are wall mounted at the forward and aft wall of the stowages.

EXAMPLE OPERATION FOR AIR TO GROUND CALL

1. Remove the handset from the holster/charger by grasping the handset near the top and tilt away from the holster/charger.
2. Turn the telephone system for the economy class on at the cabin telephone management panel (CTM panel): Turn the key from off to on. The lamp (telephone system on) and the indicator lamps for the available handsets comes on.
3. Make sure that B is shown on the display (battery is charged).
4. Use the OFF/ON switch to turn the handset on.

Note: On the display SLIDE CARD is displayed after turning the handset on.

5. Slide the credit card through the slot with the magnetic strip towards the keypad keeping a steady downward pressure on the card.
6. Enter the telephone number. The dialled number is displayed on the top line of the display. If the number has more than 11 digits, the display overflows and DISP is displayed on the display. To view the full dialled number, press and hold the key with the little triangle (shift key). The first 11 digits are displayed. Release the shift key, then press and hold the shift key again. The remaining digits are displayed.
7. Press the LINE key to set up a link between the handset and the cabin unit. If the link is set up, the display shows LINK and LINE.
8. To end the call, press the CLEAR key.
9. Turn the handset off.
10. To deactivate the system, turn the CTM panel key switch to the OFF position. During the next minute any calls in progress using the system are informed by a voice message that the system in closing down and to return the handset to its holster.

    Note: *After deactivation of the system, check the handsets: are they turned off?*

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IN-SEAT POWER SUPPLY SYSTEM (ISPSS)

Criteria: K11409, K11819, SA
Applicable to: MSN 3034-3120

ISPSS is not installed on the aircraft or the information is not available yet.

IN-SEAT POWER SUPPLY SYSTEM (ISPSS)

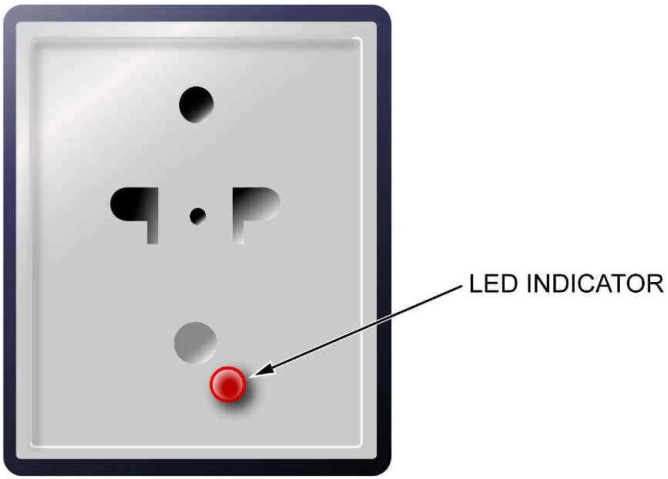
Criteria: K7847, SA
Applicable to: MSN 2649-2933

An In-Seat Power Supply System (ISPSS) is installed in the aircraft cabin to provide power supply for Portable Electronic Devices (PED), e.g. Notebooks.

CAUTION	Any usage of PED should be coordinated and controlled by the cabin crew to avoid any effects to the aircraft systems.

The in-seat power outlets supply 110 V at 60 Hz.
They have protection features that prevent electrical shocks that could occur if an outlet is not used correctly (e.g. inserting foreign objects into an outlet). The in-seat power outlets also have integrated sensors to release power only when a plug is engaged: The in-seat power outlets only provide electrical power if the plug is fully inserted.

Example of a Power Outlet



Each power outlet has a Light Emitting Diode (LED) indicator that indicates the current power status.

Color of the LED Indicator	Power Status of the Power Outlet
	Power is available. A PED will work when it is plugged in.
	Power is limited (temporarily). A PED will not work until the power system has stabilized.
	Power is disabled. A PED will not work until the cabin crew uses the corresponding switch to turn ON the power supply.
	Power is not available (OFF). There is no power supply.

The cabin crew can switch OFF the electrical power any time by using the PED override switch on the Flight Attendant Panel (FAP).
In case of decompression (emergency oxygen system is ON), the ISPSS shuts OFF automatically.

The following switches for ISPSS may be installed:
- A PED POWER hardkey on the FAP
- A PED POWER sw in the cockpit.

When a passenger uses his ISPSS outlet a light, installed at each seat row, indicates the outlet activation to the cabin crewmembers.

CAUTION	Deactivate the power supply for the Portable Electronic Device (PED) outlets during critical flight phases.

PED POWER SWITCH ON THE FAP

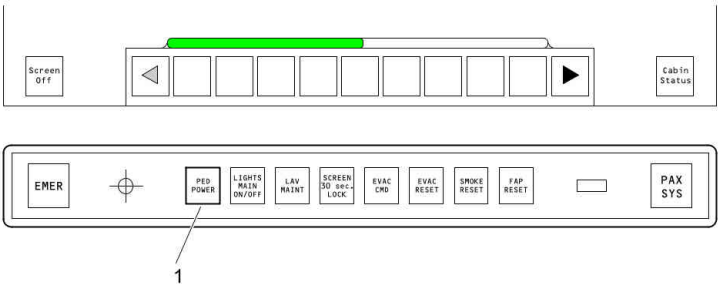
Applicable to: MSN 2649-2933

PED POWER SWITCH ON THE FAP

The cabin crew can switch OFF the electrical power of the Portable Electronic Device (PED) outlets any time by using the PED-POWER ON/OFF switch on the FAP.

CAUTION	Deactivate the power supply for the Portable Electronic Device (PED) outlets during critical flight phases.

Example of the PED Power Switch on the FAP



CAUTION	Any usage of portable electronic devices should be coordinated and controlled by the cabin crew to avoid any effects to the aircraft systems.

PED POWER SWITCH IN THE COCKPIT

Applicable to: MSN 2649-2933

There is on PED Power sw installed in the cockpit or the information is not available yet.

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EVACUATION DEVICES

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05-010 EVACUATION ALERT SYSTEM

Evacuation alert system ..... A

05-020 COCKPIT EMERGENCY EXITS

Clearview Windows ..... A
sliding windows ..... B
descent rope C
cockpit door description and operation ..... D

05-030 ESCAPE SLIDES/ SLIDE RAFTS

Evacuation Devices ..... A
Slide Raft ..... B
Slide Raft Transportation C
Offwing Slide ..... D
Life Lines ..... E
Escape Slide (Emer Exits) ..... F

05-040 AIRCRAFT CRASH POSITION

AIRCRAFT CRASH POSITION A320 IAE ..... A
AIRCRAFT CRASH POSITION A321 IAE ..... B

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EVACUATION ALERT SYSTEM

Applicable to: ALL

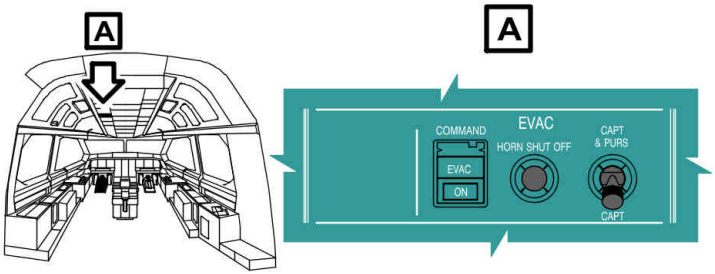
An emergency evacuation signalling system (integrated in the CIDS) is installed. It provides visual and aural alert in the event of impending emergency evacuation of the aircraft.

LOCATION

Panels provided with control and warning lights:

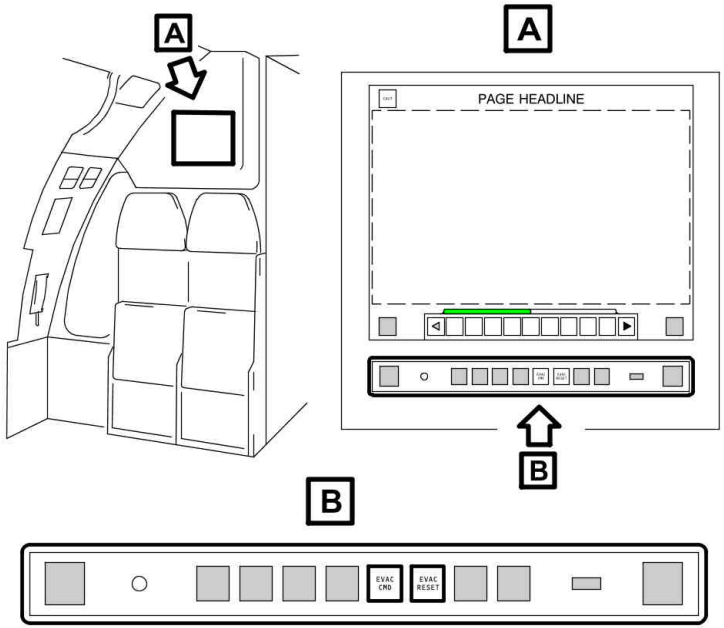
- **In the cockpit**

Signs and controls in the cockpit



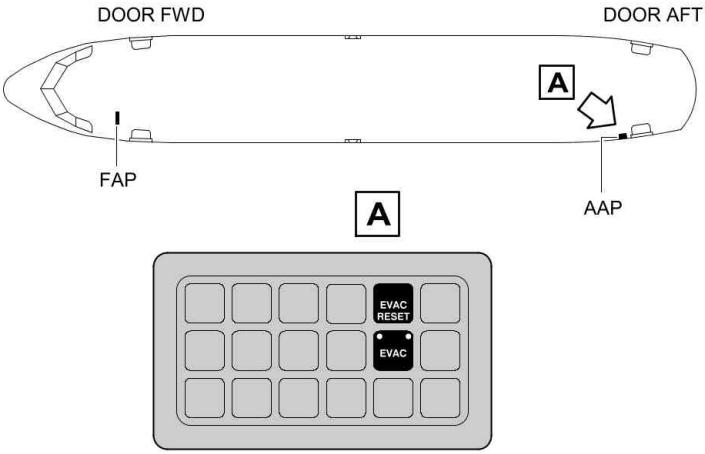
- **At the purser station on the** FAP

Signs and control on the FAP



- **At the Rear** LH **attendant station on the** AAP

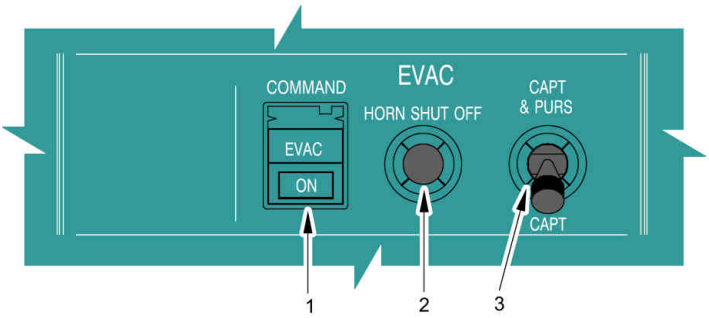
Signs and control at the AAP



DESCRIPTION

- **On the overhead panel in the cockpit**

EVAC Functions on the Cockpit Overhead Panel



(1) COMMAND EVAC ON
When pressed, it activates the EVAC flashlights in the cockpit and cabin, as well as the horns in the cabin.

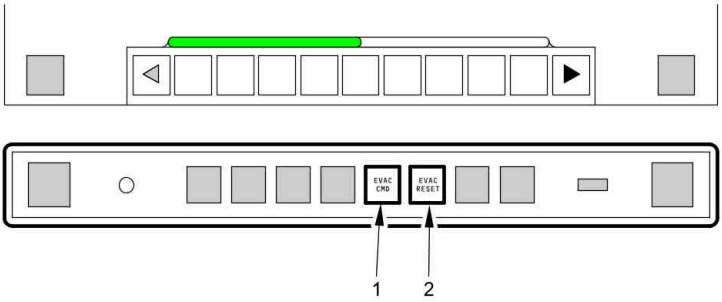
(2) HORN SHUT OFF
When pressed, the cockpit horn is stopped.

(3) CAPT / CAPT & PURS
Two different switch positions are available.

CAPT & PURS : EVAC command can be activated from the cockpit or the FAP.
CAPT : EVAC command can be activated from the cockpit only.

- **On the FAP in the cabin**

EVAC Functions on the FAP



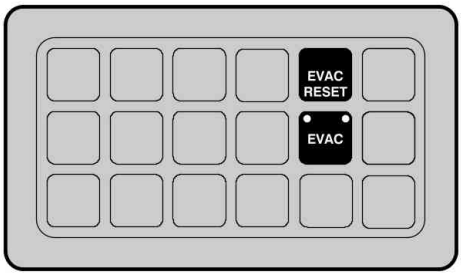
(1) EVAC CMD

Located at the FAP, only to activate the system.

(2) EVAC/RESET
Symbol flashes if the EVAC-System is activated. When touched, the audio warning is stopped.

- **At the Rear** LH **attendant station on the** AAP

EVAC Functions on the AAP



(1) EVAC/RESET
Symbol flashes if the EVAC-System is activated. When touched, the audio warning is stopped.

(2) EVAC
Symbol flashes red (when the EVAC-System is activated).

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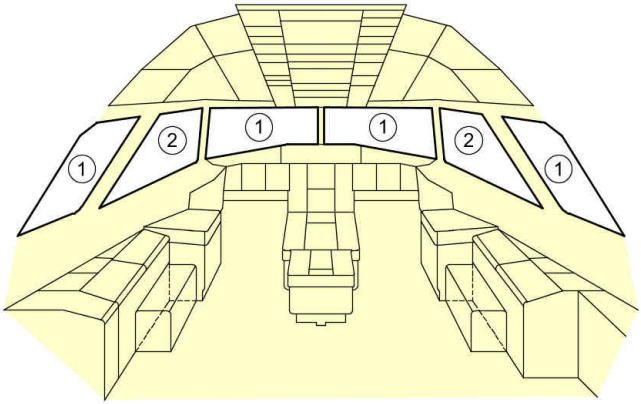
CLEARVIEW WINDOWS

Applicable to: ALL

GENERAL

The cockpit is equipped with fixed and sliding windows, which are installed on the front and sides of the cockpit.

types of windows

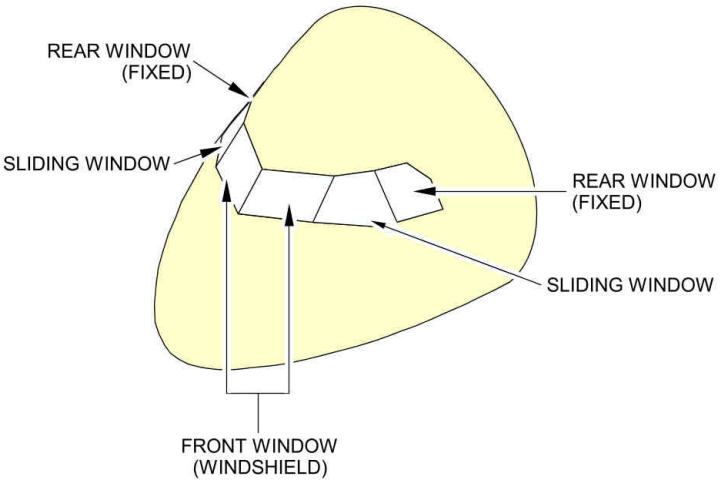


(1) fixed windows

(2) sliding windows

DESCRIPTION

exterior perspective



There are four FIXED WINDOWS

- two are located on each side of the cockpit, and are fitted with an anti-icing and defogging system.
- The other two are located on the front windshield, and are also of the integral security type, specifically designed to protect against bird impact.

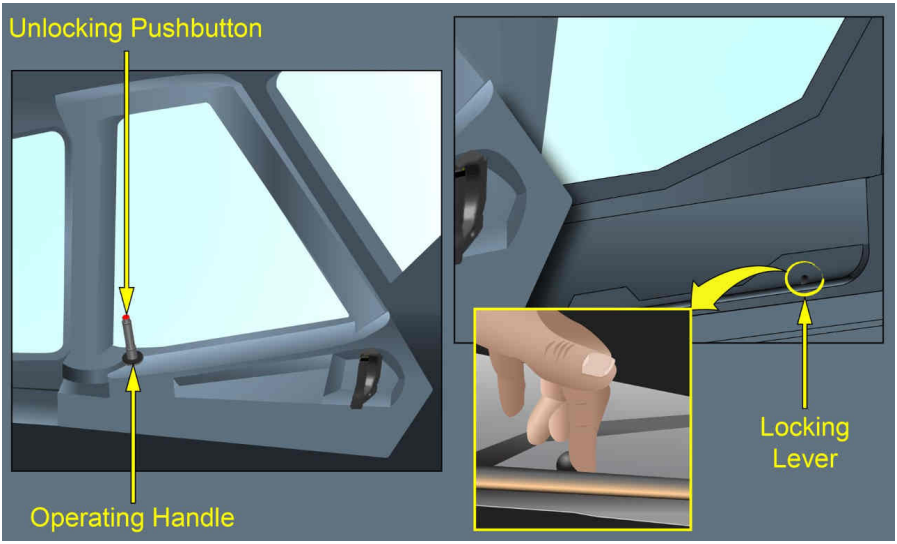
There are two SLIDING WINDOWS

They are located on each side of the windshield, and can be used as crew emergency exits. If an emergency occurs, the cockpit crew can use descent ropes to exit the cockpit through the opened sliding windows.

SLIDING WINDOWS

Applicable to: ALL

DESCRIPTION AND OPERATION



OPENING

1. Simultaneously press the red unlocking push button and rotate the operating handle rearward
2. Push the operating handle backward to move the windows until it locks.

CLOSING

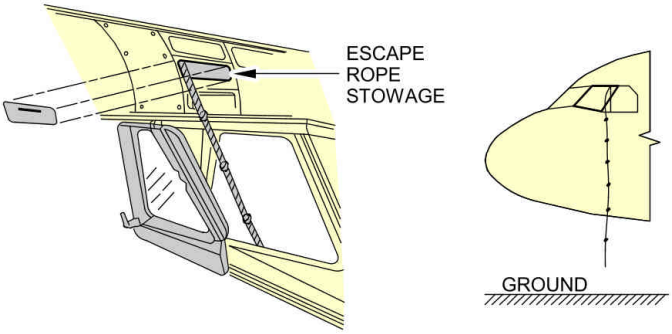
1. Pull forward the locking lever
2. Move the window with the forward window handle until it reaches the closed position
3. Push the operating handle forward to lock the window.

DESCENT ROPE

Applicable to: ALL

A 5.5 m (17.04 ft) knotted rope is stored above each sliding window, on either side of the overhead panel.
Both stowage coverplates are marked with red labels, and are held closed by magnets, which can be quickly opened.
The ropes and their brackets can support a load of 181 kg (400 lb).

Graphic invariant title



COCKPIT DOOR DESCRIPTION AND OPERATION

Applicable to: ALL

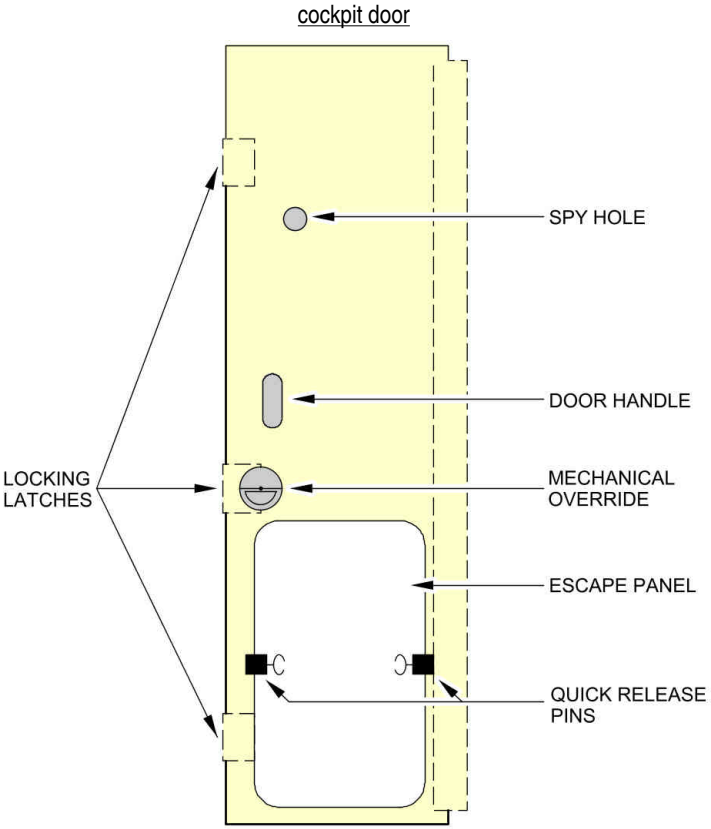
A forward-opening hinge door separates the cockpit from the passenger comportment. It has an electric-locking latch, controlled by pilots. In normal conditions, when the door is closed, it remains locked. Upon cockpit entry request, the flight crew can authorize entry by unlocking the door, which remains closed until it is pushed open.

When the flight crew does not respond to request for entry , the door can be unlocked by the cabin crew, by entering a two to seven digit code (programmed by the airline) on the keypad, installed on the lateral side of the Forward Attendant Panel (FAP).

The door is bulletproof and fully compliant with rapid decompression requirements.

A mechanical override enables the pilots to open the door from the cockpit side.

Refer to 08-030 COCKPIT DOOR OPERATION
Refer to 09-040 COCKPIT EVACUATION THROUGH COCKPIT DOOR


cockpit door
SPY HOLE
DOOR HANDLE
LOCKING LATCHES
MECHANICAL OVERRIDE
ESCAPE PANEL
QUICK RELEASE PINS

Note: *1. The escape panel enables the flight crew to evacuate the cockpit, in case of an emergency, when the door is jammed or stuck. This panel can only be removed from the cockpit side by pulling the quick release pin towards the centre of the flap, and kicking the panel open.*

2. In case of an electrical supply failure, the door is automatically unlocked, but remains closed.

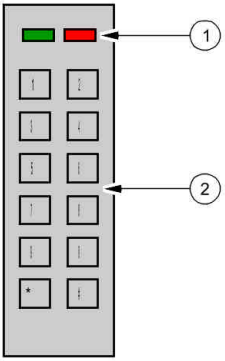
3. If installed and in the event that one locking latch strike fails, or in case of a total CDLS failure, a deadbolt is located at the level of the center latch area of the cockpit door. This deadbolt bolts the door from the cockpit side.

4. In case of rapid decompression in the cockpit, the door is automatically unlocked.
In case of a rapid decompression in the cabin, venting from the cockpit to the cabin is ensured via existing gaps between the cockpit and the cabin, and with additional grids installed in the ceiling panels .

KEYPAD LOCATION AND OPERATION

The keypad is located at the lateral side of the Forward Attendant Panel (FAP) and is used by the cabin crew to request pilots to open the door.

keypad



(1) LOCKED/UNLOCKED DOOR INDICATOR

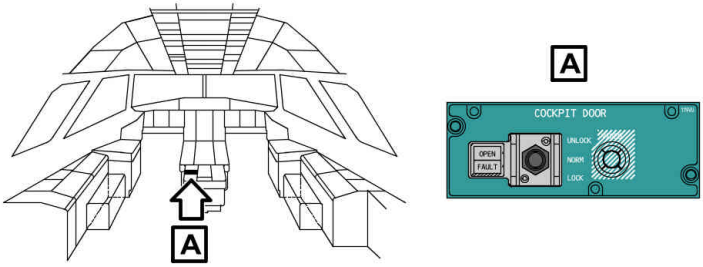
GREEN light ON	:	The door has been unlocked either by a flight crew action, or automatically (during 5 s) when no flight crew action is performed during the delay following an emergency access request. The door can be pushed open.
GREEN light flashes	:	An emergency request to enter the cockpit has been made ; the buzzer will sound continuously in the cockpit, but no action has yet been taken by the flight crew.

RED light ON : The flight crew has denied access, and the door remains locked.

(2) DIGITAL KEYPAD
The keypad is used to sound the buzzer in the cockpit for 1 to 9 s (3 s by default), by entering a zero to seven-digit code, as programmed by the airline, followed by the '#' key. It is also used to enter the two to seven-digit emergency code, followed by the '#' key, when the flight crew does not respond.

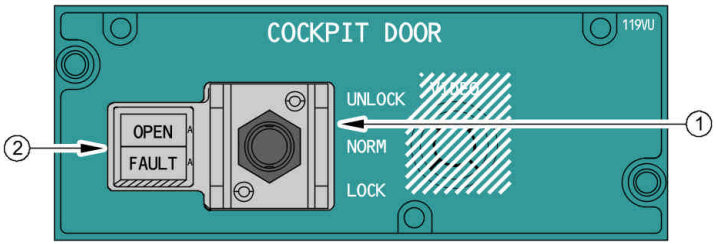
COCKPIT DOOR CONTROL PANEL

Location



The secure cockpit door is controlled by a toggle switch, located on the central pedestal.

Control panel



(1) COCKPIT DOOR toggle switch

UNLOCK position : This position is used to enable the cabin crewmember to open the door. The switch must be pulled and maintained in the unlock position until the door is pushed open.

NORM position : All latches are locked, and EMERGENCY access is possible for the cabin crew.

LOCK position : Once the button has been moved to this position, the door is locked; emergency access, the buzzer, and the keypad are inhibited for a preselected time (5 to 20 min).

Note: *1. If the LOCK position has not been used by the pilot, for at least 5 to 20 min, the cabin crew is able to request an emergency access to open the cockpit door.*
2. The UNLOCK position overrides and resets any previous selection.
3. In case of electrical an supply failure, the cockpit door is automatically unlocked, but remains closed.

(2) COCKPIT DOOR Fault Open indicator

OPEN light ON : The door is not closed, or not locked.

OPEN light flashes : The cabin crew has started an emergency access procedure. If there is no reaction from the flight crew, the door will unlock at the end of the adjustable time delay (15 to 120 s).

FAULT : This light comes when a system failure has been identified (Example : latch, pressure sensors, control unit).

EVACUATION DEVICES

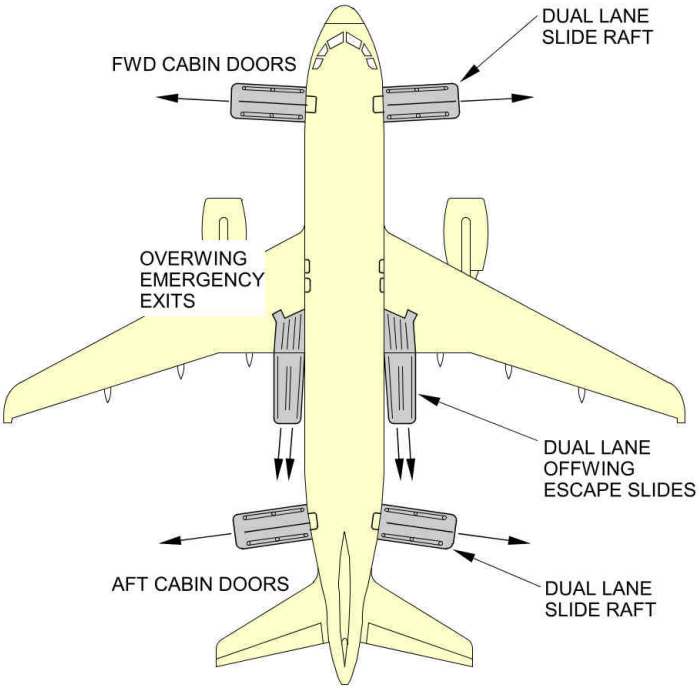
Criteria: K0151, SA
Applicable to: MSN 2649

Slide Rafts and Escape Slides are installed at each door/exit:

- a Slide Raft at each FWD and AFT cabin door
- an Escape slide at each pair of the overwing emergency exits

They take care of a quick passenger and crew evacuation in case of an emergency.

Door and overwing slide location



EVACUATION DEVICES

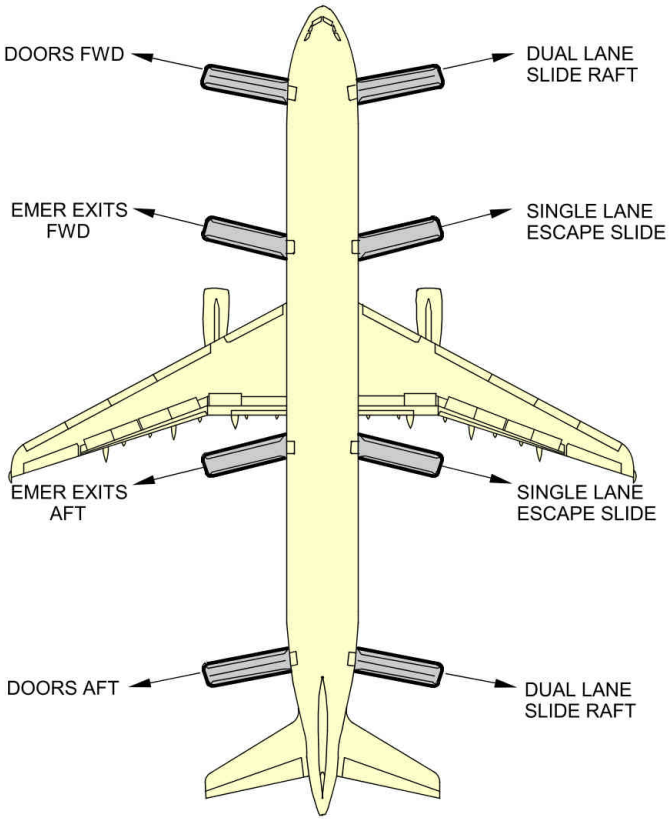
Criteria: K2108, K3712, SA
Applicable to: MSN 2927-3120

Slide Rafts and Escape Slides are installed at each door/exit:

- a Slide Raft at each FWD and AFT cabin door
- an Escape slide at each FWD and AFT emergency exit

They take care of a quick passenger and crew evacuation in case of an emergency.

Door and emergency exit slide location



SLIDE RAFT

Applicable to: ALL

All slide rafts are of the Dual lane type and have two functions:

- as an escape slide,
- as an inflatable raft after ditching.

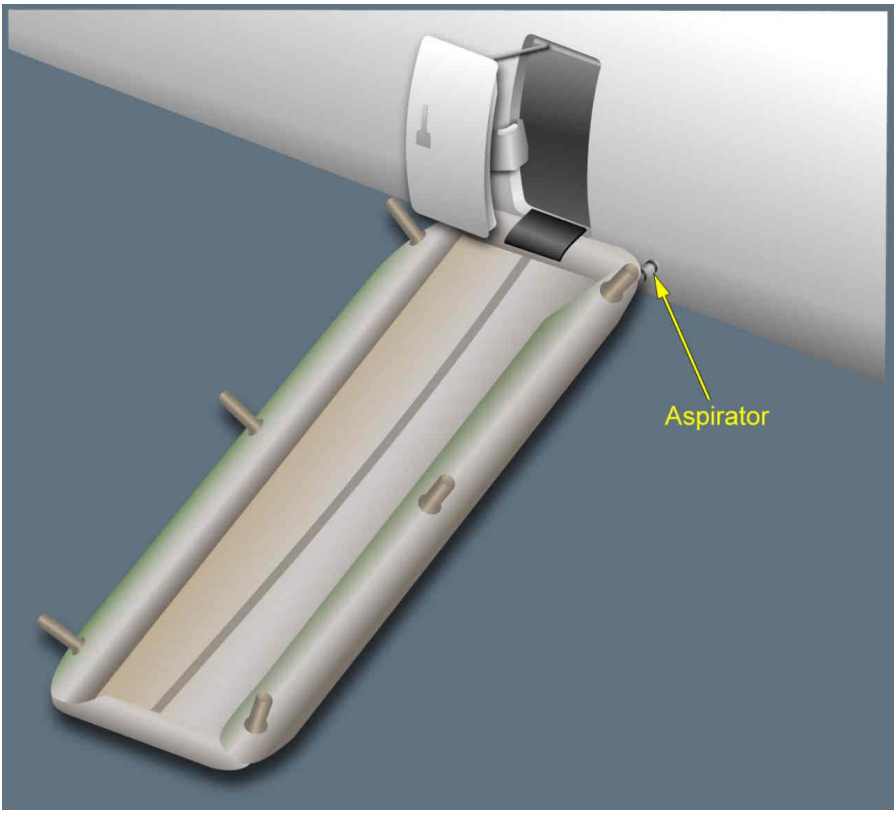
OPERATION

The deployment and inflation of the slide raft is automatically initiated when the door is opened in the armed mode.

As the door opens outboard, the pack release cable is pulled free and the pack slide raft drops outboard of the door. The automatic inflation cable tensions and opens the valve inflation assembly, initiating inflation. The packboard and the lacing cover remain attached to the aircraft door.

The inflation reservoir sensors are connected to the CIDS and the pressure of the inflation cylinder is indicated on the FAP.

Released Slide Raft

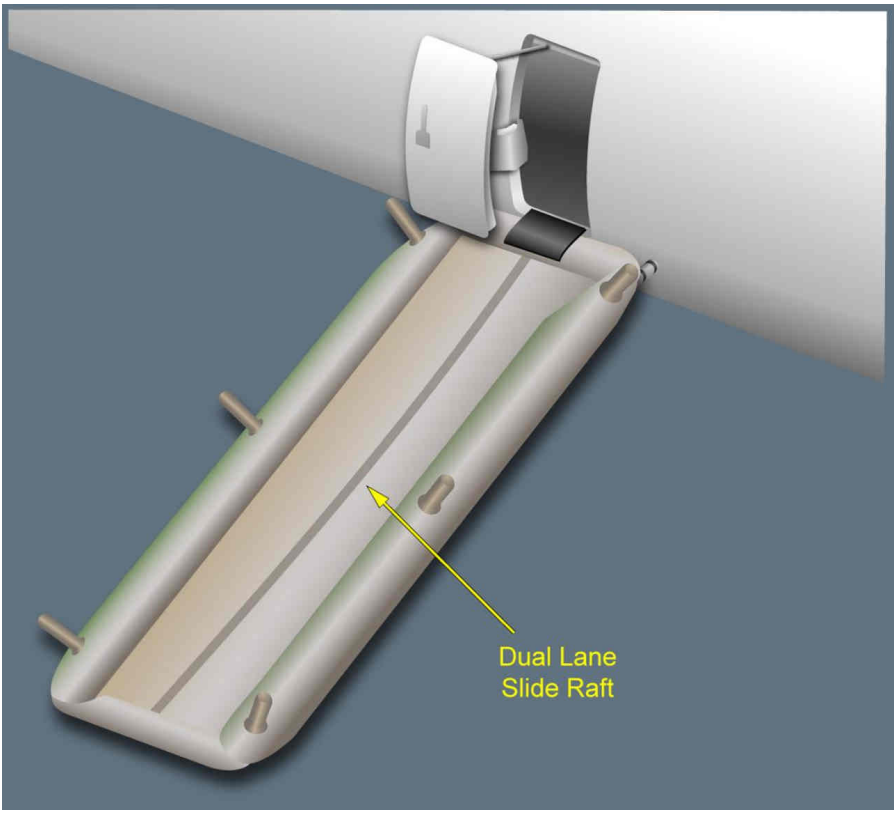


MANUAL INFLATION

If the automatic inflation is not initiated, the red manual inflation handle, located on the girt extension of the slide raft, has to be pulled. The handle is located on the right side of the girt extension.

Manual Inflation

Slide Raft Deployment



The slide raft deploys rapidly after actuation.
A crewmember has to check visually the slide raft is deployed correctly before evacuation.

RAFT MODE

After the inflation of the raft, one of the crewmembers must assist the passengers entering the raft. As soon as a passenger has entered the raft and moved to the toe end, the next passengers board the raft and start seating to both sides. Finally, the assisting crewmember must board the raft and detaches it by cutting the mooring line.

Raft Mode

DISCONNECTION STEP 1

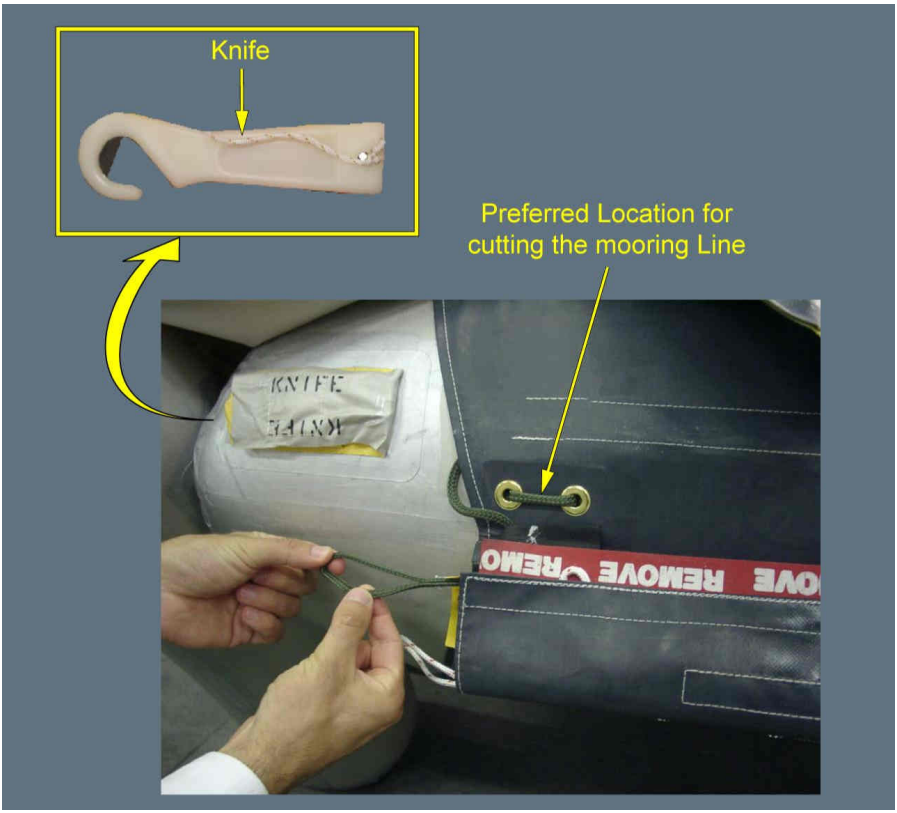
Open the girt flap to get access to the disconnect handle.
To disconnect the slide raft from the A/C, pull the disconnect handle.

Slide Raft Disconnection Step 1

DISCONNECTION STEP 2

The slide raft is moored to the A/C by means of a mooring line which is attached to the girt bar remaining attached to the cabin floor and the slide raft girt.
A hook knife is provided to cut the mooring line. It is located in a pocket on the upper sill tube.

Slide raft Disconnection Step 2



SURVIVAL KIT

A survival kit is provided for each slide raft.

They are stowed:
- In an overhead rack next to the FWD and AFT PAX doors (2 in each).

Remove the survival kit from the stowages. Attach one kit with snap hook to white survival kit lanyard at each slide raft.

Survival Kit Location

SURVIVAL KIT EQUIPMENT

Following items will be found in a standard a survival kit.

Basic Module:

- dehydrated sponge
- bailing bucket
- whistle
- raft repair kit
- sea dye marker
- signalling mirror
- survival manual
- knife
- first aid equipment
- water pouches

Age Limited Module:

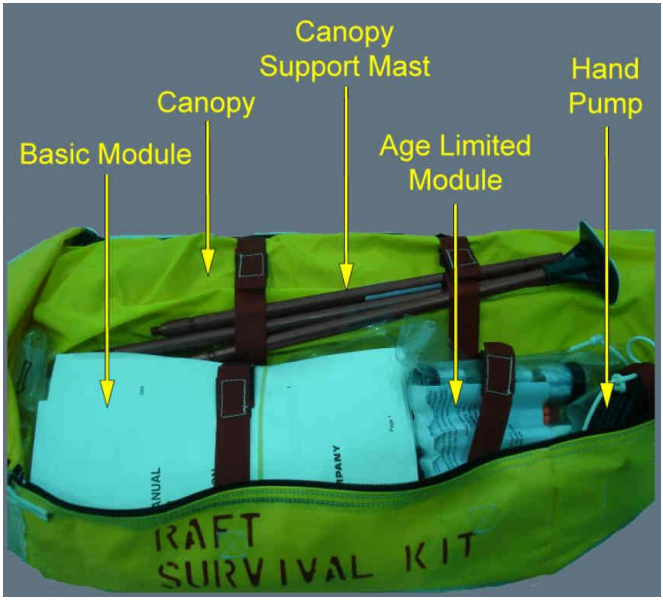
- aerial flares
- water purification tablets
- ammonia inhalant

- burn ointment
- flashlight (2 ea. with standard bulb or 1 ea. with LED)

Not part of the Modules but also included in the survival kit are:

- hand pump
- canopy
- canopy support mast

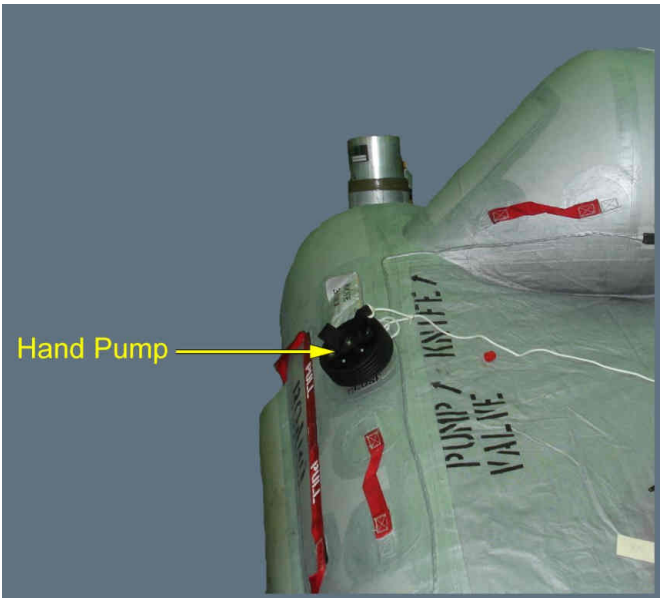
Survival Kit Equipment



USE OF THE HAND PUMP

The hand pump function is to add air to either top chamber or lower chamber of the slide raft. The pump air fittings are clearly marked.

Top Chamber (Example)



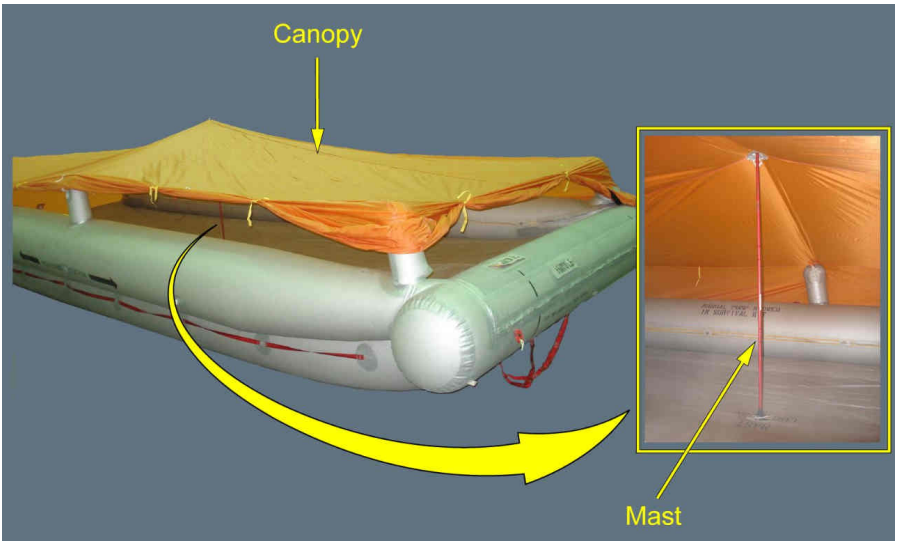
CANOPY

The canopy has a highly visible orange/yellow color. It protects the occupants from different environmental conditions.

CANOPY INSTALLATION

1. Remove canopy and Mast from survival kit
2. Unfold canopy
3. Join velcro on inflatable post and tie down
4. Erect mast in center of roof using grommet provided and secure to velcro patch on floor
5. Pull green elastic over each corner of the raft
6. Tie down outside perimeter using loops provided.

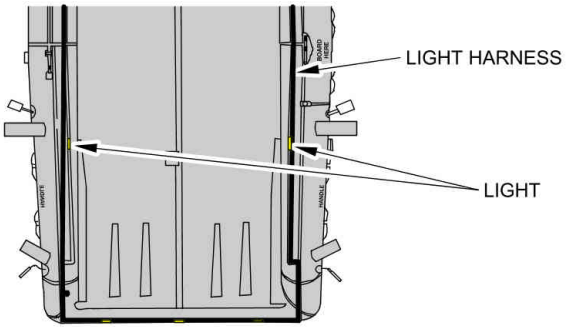
Fix-Up of the Canopy



SLIDE RAFT LIGHTING SYSTEM

Each slide raft is equipped with an integrated lighting system. The electrical harness and lamps are attached to the slide raft along the sliding surface and the runway tube of the slide raft.
The lighting system is automatically activated by the slide deployment. The lights have the same power supply as the cabin emergency lights. If no aircraft power available the lights are illuminated for a period of at least 10 min from the cabin Emergency Power Supply Units (EPSU).

Slide Raft Lighting Location (typical)



SLIDE RAFT TRANSPORTATION

Applicable to: MSN 2649

Only after ditching, if one cabin door is inoperative, its corresponding slide raft can be disconnected, transported and operated from another cabin door, which has already been operated and the slide raft disconnected.

PRIOR TO STEP 1

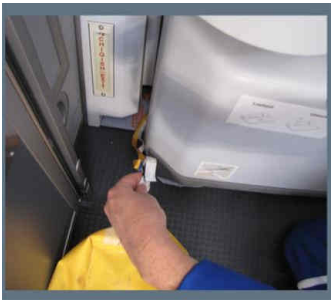
INOPERATIVE DOOR

The slide raft arming lever of the inoperative door must be in the armed position.

SURVIVAL KIT

The survival kits are located in a stowage adjacent to the slide rafts. Survival kits must be attached to the slide rafts using the white lanyard located under the slide pack.

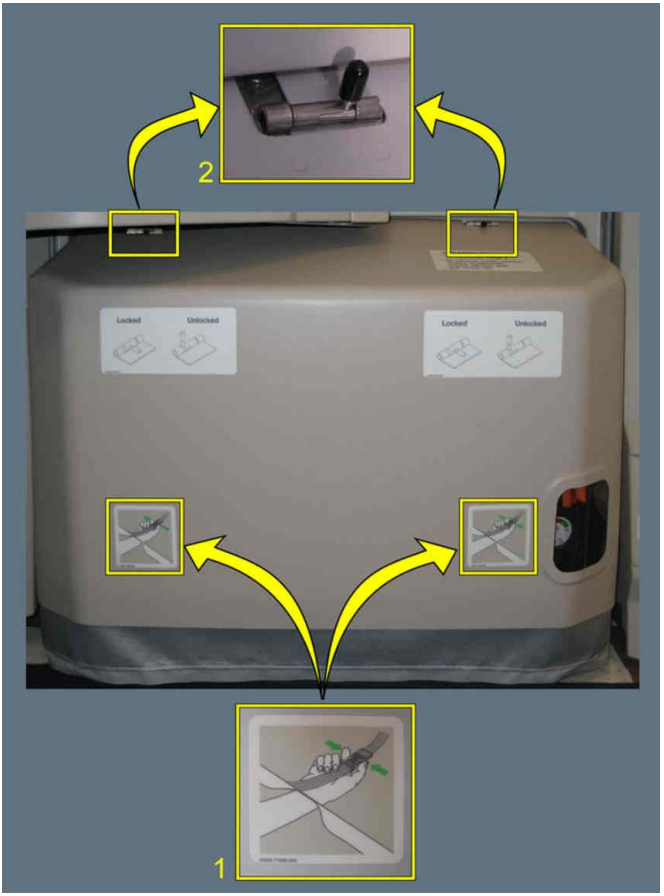
Survival Kit Connection 1



Survival Kit Connection 2

REMOVAL OF THE DECORATIVE COVER

Removal of the Decorative Cover



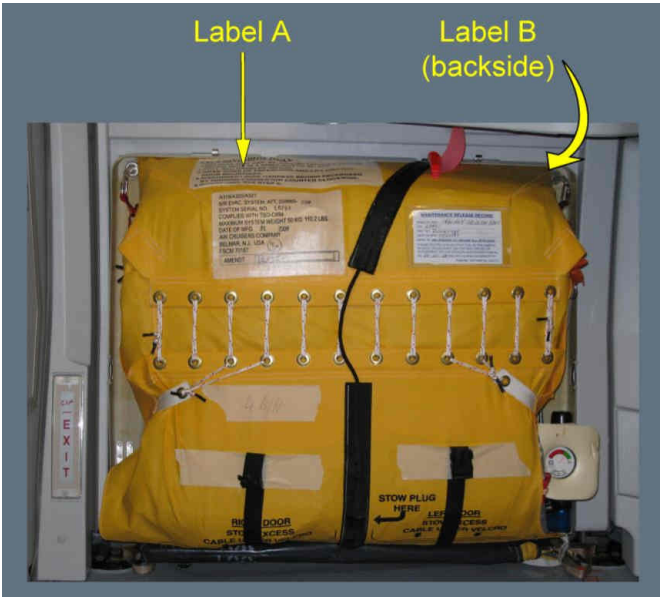
1. Release straps underneath the cover
2. Unlock the latches on the top of the cover.

Decorative Cover

Remove the decorative cover.

INSTRUCTION LABELS

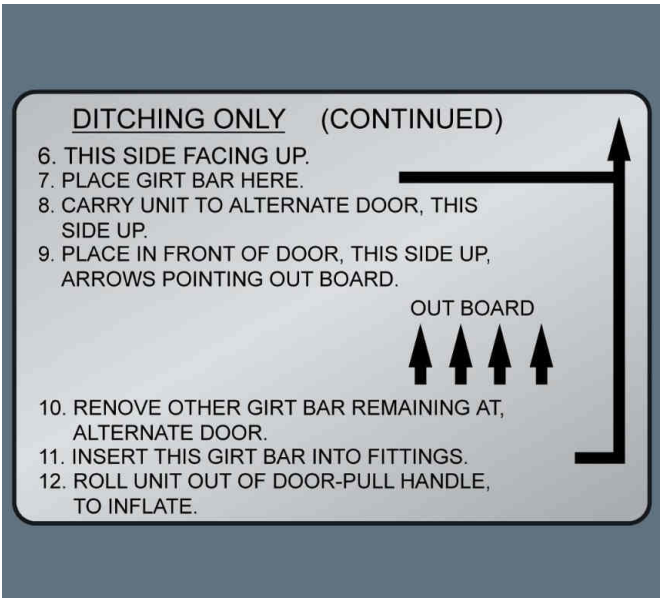
Instruction Label Positions



Instruction Label A

Instruction label step 1 to 5, located above the lacing cover.

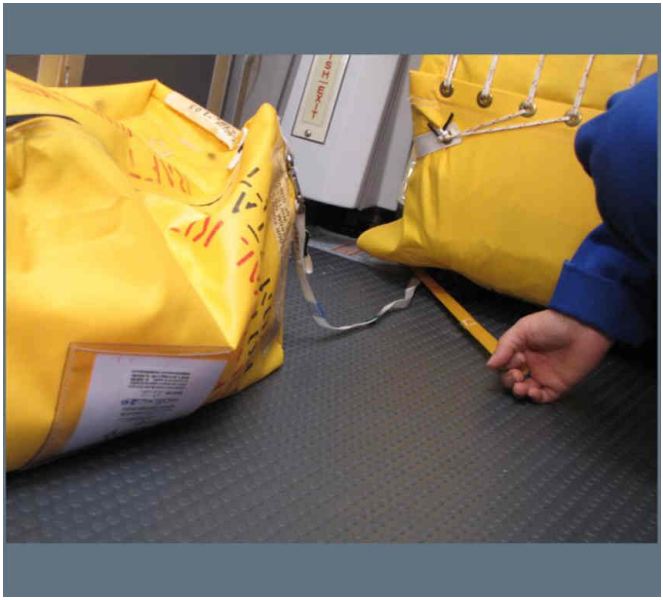
Instruction Label B



Instruction label step 6 to 12, located on the backside of the pack board.

STEP 1

STEP 1



To release the girt bar, firmly pull the yellow lanyard located below the pack in a direction of 45° AFT.

STEP 2

STEP 2

Pull the red handles (LH and RH) on the top of the slide pack.

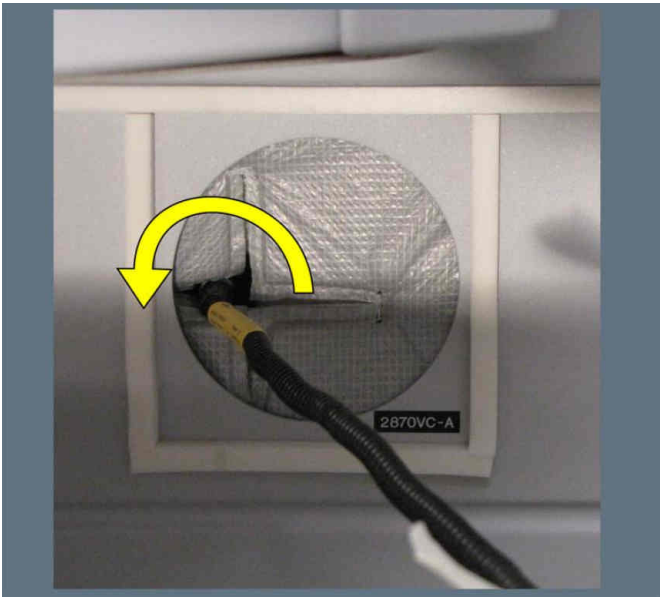
STEP 3

STEP 3

Grab slides of slide pack and lift unit off door mounting.

STEP 4

STEP 4



Disconnect the wire harness behind pack board by turning the connector counterclockwise.

STEP 5 - 6 - 7

STEP 5 - 6 - 7

- Invert the unit by placing the slide raft on floor with pack facing up
- Place the girt bar and the survival kit on the slide pack.

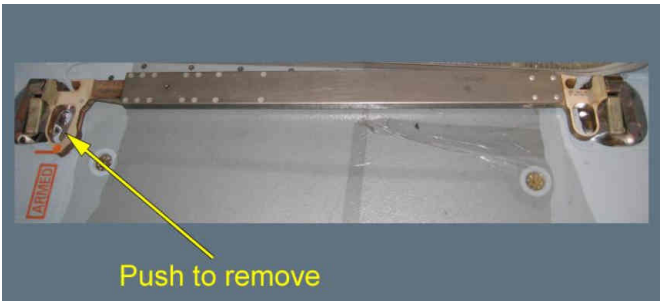
STEP 8 AND 9

STEP 8 and 9

- Carry the unit to the alternative door
- Place in front of door, pack board facing up, arrows pointing outboard
- Place the survival kit on the floor.

STEP 10

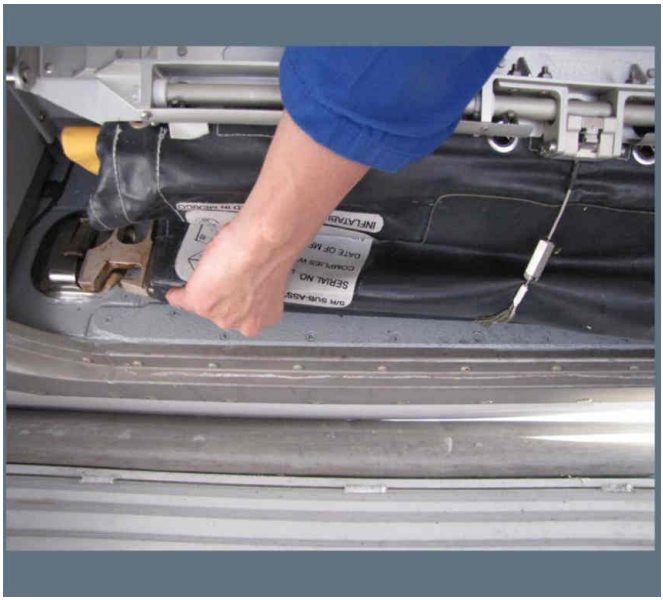
Step 10



Remove the other girt bar remaining at alternate door.

STEP 11

STEP 11

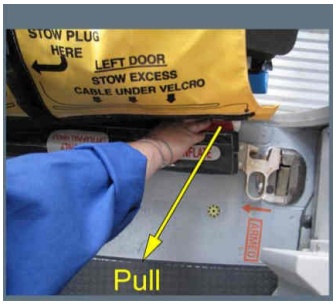


Insert the girt bar into the fittings.

STEP 12 AND 13

Step 12

STEP 13



- Roll the unit out of the door
- Pull the red manual inflation handle to inflate the slide raft.

OFFWING SLIDE

Applicable to: MSN 2649

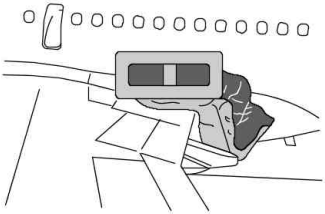
The Offwing Slide are of Dual Lane type and are installed in the wing fuselage facing AFT of the overwing exits.

OPERATION

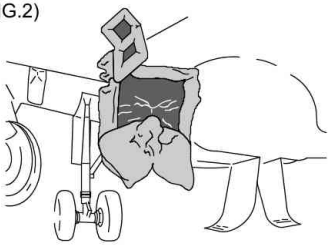
The Slide inflation is automatically initiated if one emergency exit is opened. The Escape Slide inflates and deploys over the wing (See Fig. 1 to 4). The Slide can also be inflated manually after the emergency exit is opened by pulling the Manual Inflation Handle.
The offwing slide deploys rapidly after actuation.
A crew member has to check visually the slide is deployed correctly before evacuation.

Offwing slide Inflation

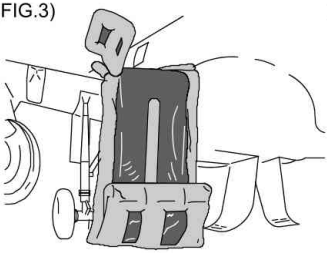
(FIG.1)



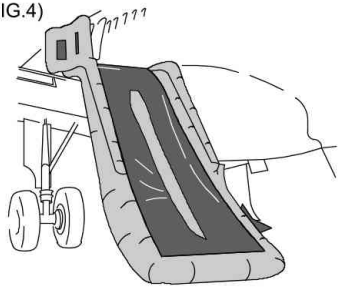
(FIG.2)



(FIG.3)



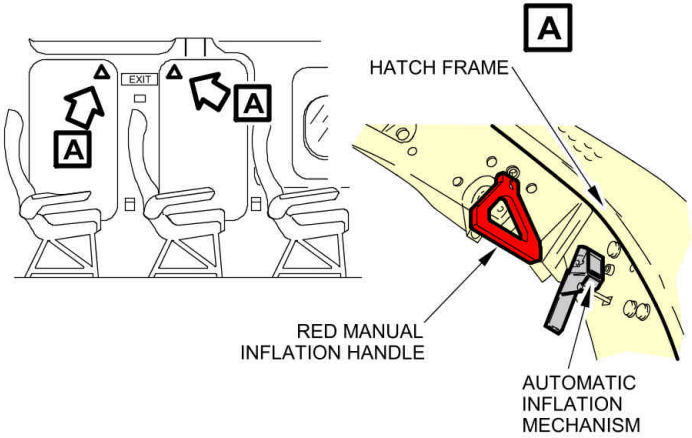
(FIG.4)



MANUAL INFLATION

If the Slide Automatic Inflation does not occur, pull the Manual Inflation Handle installed in the Hatch Frame of each emergency exit.

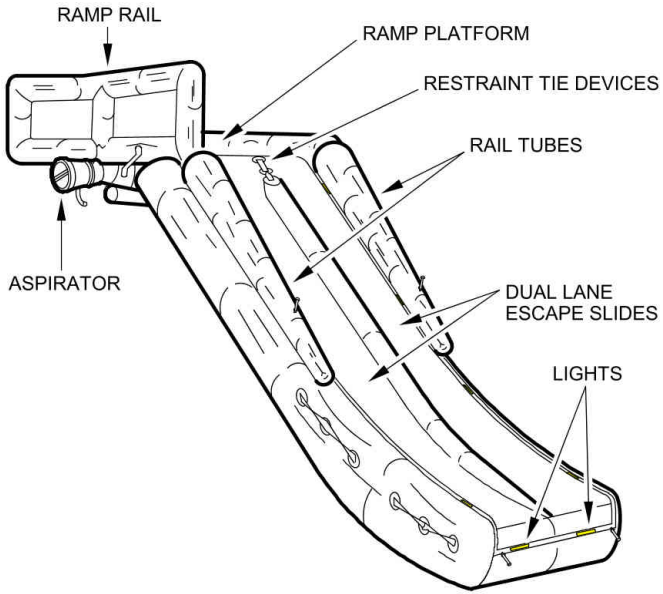
Manual inflation



DESCRIPTION

The Escape Slides for the emergency exits are equipped as follows:

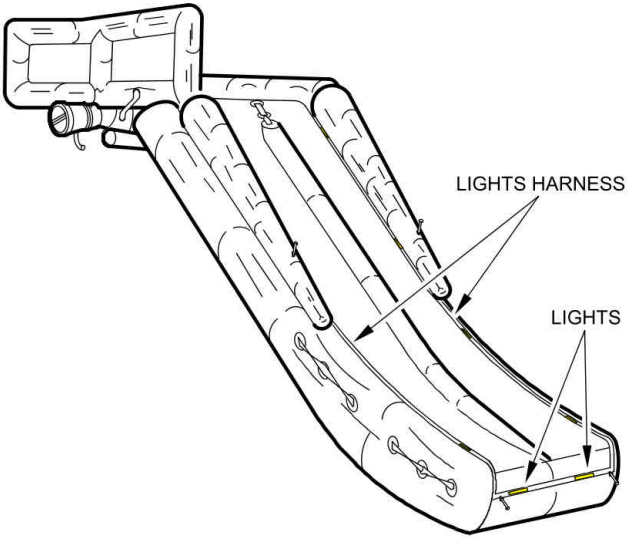
Offwing slide Deployment



OFFWING SLIDE LIGHTING SYSTEM

Each offwing slide is equipped with an integrated lighting system. A light harness is attached on the upper side along of each longitudinal tube and across the bottom of the slide.
The lighting system is automatically activated by the slide deployment. The lights have the same power supply as the cabin emergency lights. If no aircraft power supply available the lights are illuminated for a period of at least 10 min from the cabin Emergency Power Supply Units (EPSU).

Offwing slide lighting location



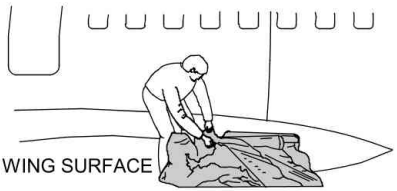
DAMAGED OVERWING SLIDE OPERATION

In case of overwing slide damaged or deflated it can still be used as a hand hold escape chute.

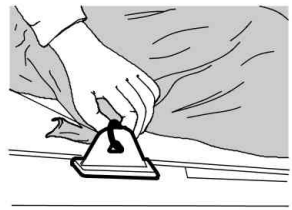
- look for the snap hook (See Fig.1)
- the snap hook must be fixed to the hook attachment point on the wing (See Fig.2)
- four crew members must hold the slide, two on each side (See Fig.3)

Damaged overwing slide

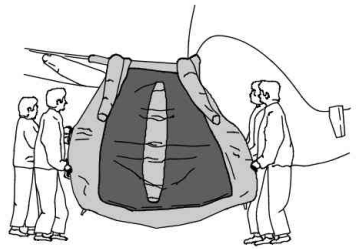
(FIG.1)



(FIG.2)



(FIG.3)



LIFE LINES

Applicable to: MSN 2649

Four additional life lines are provided.

Note: *Only in the event of ditching the LIVE LINES must be installed, to assure the passengers a safe way to the ramp section.*

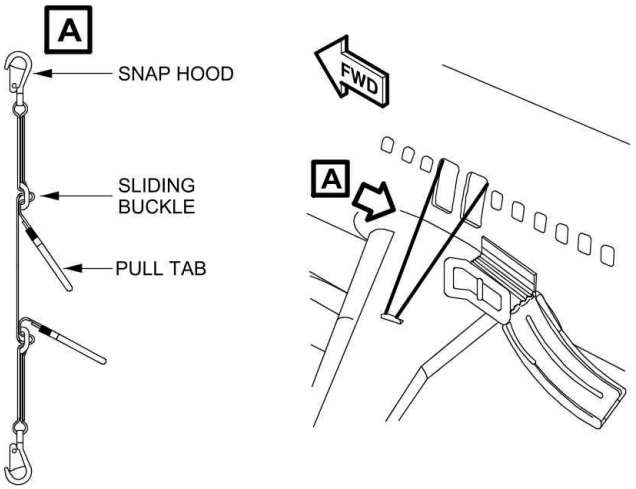
LOCATION

The life lines are stowed in the hatrack above the RH and LH emergency exit doors.

INSTALLATION

The life lines must be fixed with the snap hook between the Door-stop fitting located on the upper corner of the overwing emergency exit door frames and the hook located on the center of the wing surface. After mooring, the Life Line must be pulled tight with the pull tab. The Sliding Buckle hold the Life line tight for the correct length.

Life Line installation



ESCAPE SLIDE (EMER EXITS)

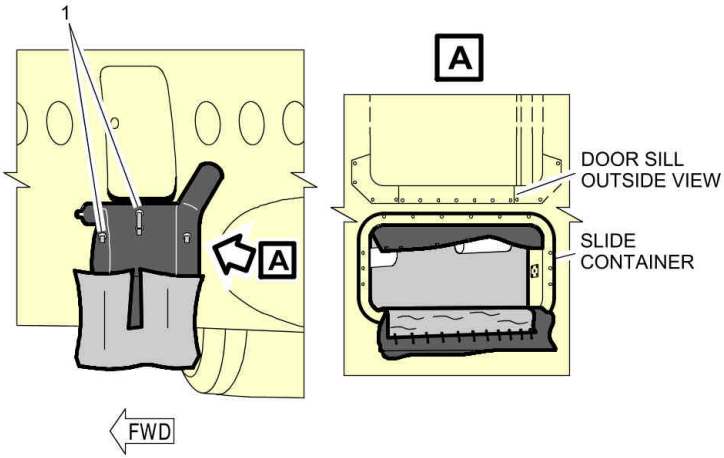
Applicable to: MSN 2927-3120

All Escape Slides are of Single Lane type. They are stowed underneath the emergency exit doors in a Slide Container accessible from outside.

OPERATION

The deployment and inflation of the escape slide is automatically initiated when the door is opened in the armed mode.
An intermediated RESTRAINT TIE DEVICES (1) restrain the Escape slide to approximately one third of its extended length, to prevent that the Escape slide inflate underneath the fuselage.
When the Escape slide becomes sufficiently pressurized, the intermediate tie releases and the Escape slide extends outwards and downwards to contact the ground.

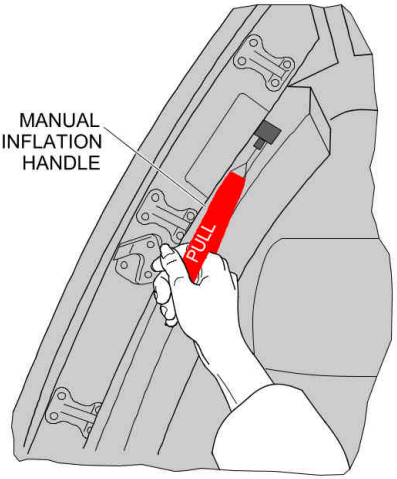
Released Escape Slide



MANUAL INFLATION

If the automatic inflation is not initiated, the manual inflation handle located on the upper right side of the door frame, has to be pulled.

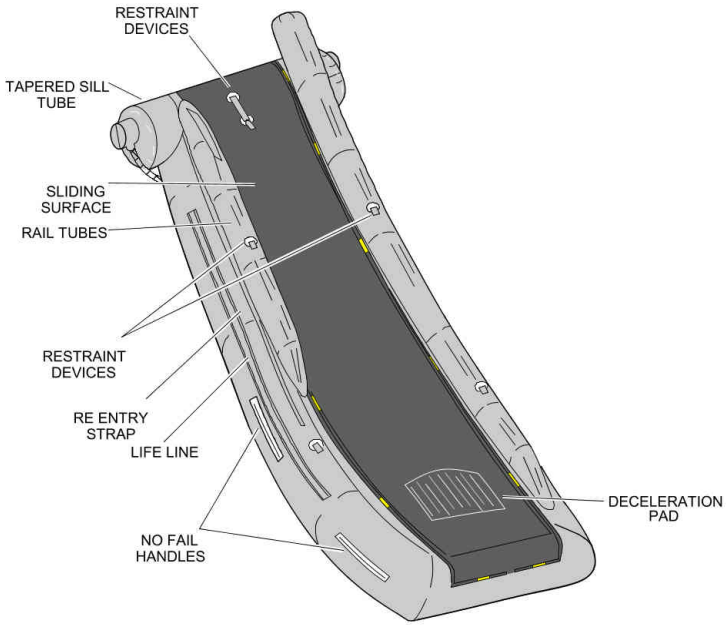
Manual Inflation



DESCRIPTION

The Escape Slide at the FWD and AFT emergency exit doors are equipped as follows:

Escape Slide Deployment

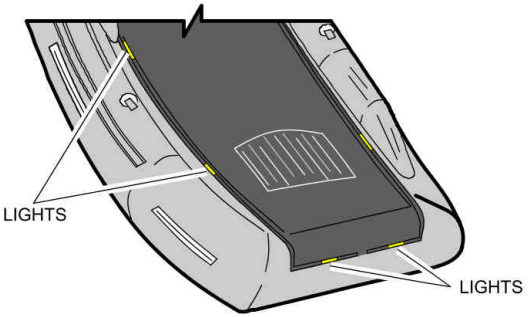


The escape slide deploys rapidly after actuation.
A crew member has to check visually the slide is deployed correctly before evacuation.

ESCAPE SLIDE LIGHTING SYSTEM

Each Escape slide is equipped with an integrated lighting system. A light harness is attached on the upper side along of each longitudinal tube and across the bottom of the slide.
The lighting system is automatically activated by the slide deployment. The lights have the same power supply as the cabin emergency lights. If no aircraft power available the lights are illuminated for a period of at least 10 min from the cabin Emergency Power Supply Units (EPSU).

Escape Slide Lighting Location



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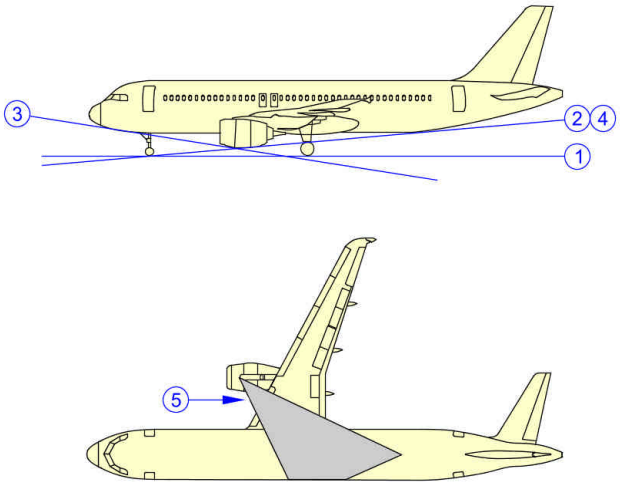
AIRCRAFT CRASH POSITION A320 IAE

Criteria: IAE, 320-200
Applicable to: MSN 2649

aircraft crash position a320 iae



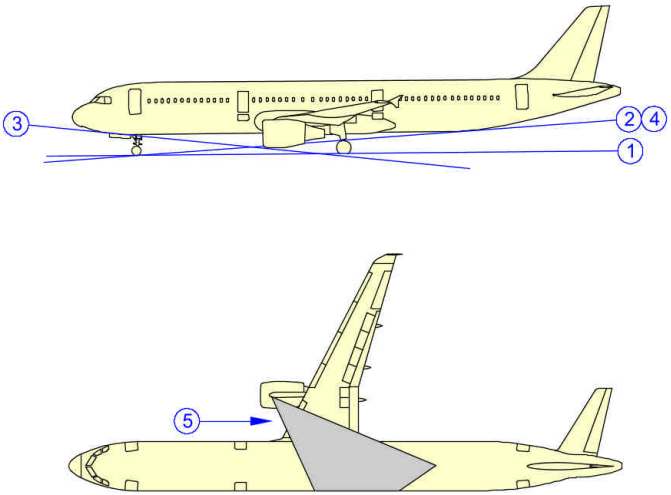
CRASH POSITION CHART A320 IAE

SILL HEIGHT RELATIVE TO CRITICAL CRASH CONDITIONS A320 IAE											
GROUND LINE	CONFIGURATION	FWD DOOR		WING (2nd EMERG Exit)		WING (1st EMERG Exit)		AFT DOOR		PITCH OF LONGIT. AXIS NOSE DOWN	ROLL AROUND LONGIT. AXIS
		LH	RH	LH	RH	LH	RH	LH	RH		
1	ALL GEARS DOWN (NORMAL)	3400	3400	3790	3790	3790	3790	3400	3400	0	0
2	MAIN GEARS UP NOSE GEARS DOWN	3358	3358	3045	3045	2980	2980	1462	1462	-4.43	0
3	MAIN GEARS DOWN NOSE GEAR UP	1869	1869	3372	3372	3470	3470	4700	4700	6.6	0
4	ALL GEARS UP	3500	3500	3020	3020	2938	2938	1150	1150	-5.5	0
5	NOSE GEAR + ONE MAIN GEAR UP. ONE MAIN GEAR DOWN LEANING BACK	3226	3522	3402	3710	3282	3670	2688	2918	-1.34	-4.46

AIRCRAFT CRASH POSITION A321 IAE

Criteria: IAE, 321-200
Applicable to: MSN 2927-3120

AIRCRAFT CRASH POSITION A321 IAE



CRASH POSITION CHART A321 IAE

SILL HEIGHT RELATIVE TO CRITICAL CRASH CONDITIONS A321 IAE											
GROUND LINE	CONFIGURATION	DOOR 1 (FWD)		DOOR 2		DOOR 3		DOOR 4 (AFT)		PITCH OF LONGIT. AXIS NOSE DOWN	ROLL AROUND LONGIT. AXIS
		LH	RH	LH	RH	LH	RH	LH	RH		
1	ALL GEARS DOWN (NORMAL)	3400	3400	3400	3400	3400	3400	3400	3400	0	0
2	MAIN GEARS UP NOSE GEARS DOWN	3373	3373	2961	2961	2427	2427	1836	1836	-2.8	0
3	MAIN GEARS DOWN NOSE GEAR UP	1655	1655	2542	2542	3630	3630	4790	4790	5.7	0
4	ALL GEARS UP	3693	3693	3018	3018	2159	2159	1222	1222	-4.5	0
5	NOSE GEAR, ONE MAIN GEAR UP. ONE MAIN GEAR DOWN LEANING BACK	3520	3235	3395	3106	3210	2922	2961	2740	-0.96	4.30

Introductive text if necessary.

OXYGEN

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06-010 GENERAL

GENERAL ..... A

06-020 COCKPIT

DESCRIPTION ..... A
OPERATION ..... B
LOCATION C
LATERAL CONSOLES ..... D
CONTROLS AND INDICATORS ..... E
PORTABLE BREATHING EQUIPMENT ..... F

06-030 CABIN

DESCRIPTION ..... A
OXYGEN UNITS LOCATION ..... B
OPERATIONAL SEQUENCE C
CONTROLS AND INDICATORS ..... D
OXYGEN MASK ..... E
OXYGEN CONTAINER ..... F
CABIN CREW STATION - LAVATORY AND GALLEY OXYGEN UNIT ..... G

06-040 PORTABLE BREATHING EQUIPMENT

GENERAL ..... A
portable breathing equipment (PBE) ..... B

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GENERAL

Applicable to: ALL

The oxygen system consists of :

- A cockpit-fixed oxygen system, which supplies adequate breathing oxygen to the cockpit occupants in case of depressurization, or emission of smoke and noxious gases.
- A cabin-fixed oxygen system, which supplies oxygen for cabin occupants (passengers and cabin crew) in case of depressurization.
- A portable oxygen system, which is provided in both the cockpit and cabin and is to be used :
  - As PROTECTION for the crew during on board emergencies.
  - For FIRST AID purposes.

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OXYGEN

COCKPIT

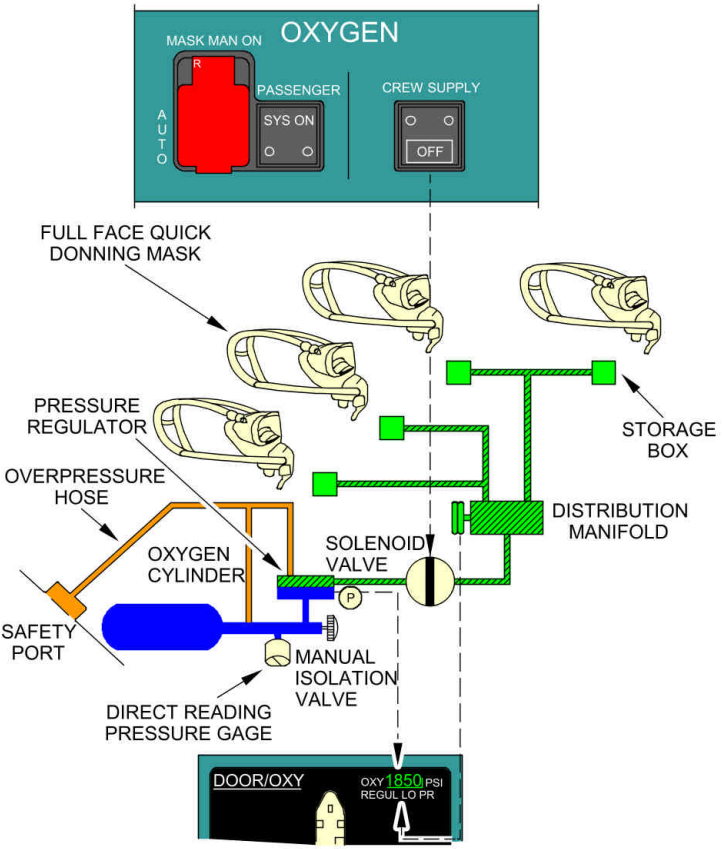
DESCRIPTION

Criteria: P7360, SA
Applicable to: MSN 2927-3120

The cockpit's fixed oxygen system consists of:

- A high-pressure cylinder in the left-hand lower fuselage
- A pressure regulator directly connected to the cylinder that delivers oxygen at a pressure suitable for the user
- Two overpressure safety systems to vent oxygen overboard, through a safety port, if the pressure gets too high
- A supply solenoid valve that allows the crew to shut off the distribution system
- Four full-face quick donning masks, stowed in readily accessible boxes adjacent to crewmembers'seats (one per seat)

DESCRIPTION



DESCRIPTION

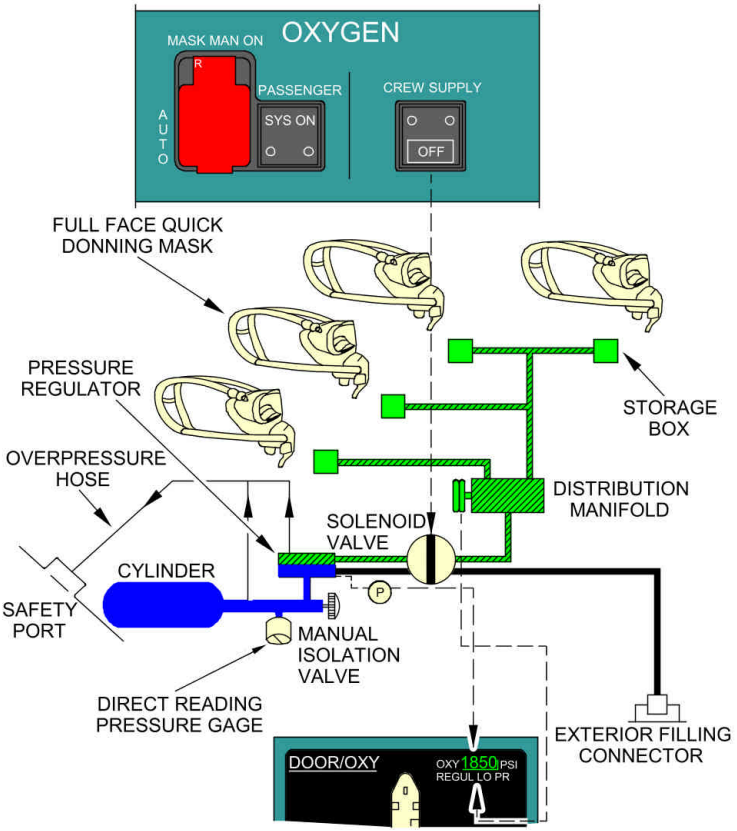
Criteria: P0022, P7360, SA
Applicable to: MSN 2649

The cockpit's fixed oxygen system consists of:

- A high-pressure cylinder in the left-hand lower fuselage
- A pressure regulator directly connected to the cylinder that delivers oxygen at a pressure suitable for the user
- Two overpressure safety systems to vent oxygen overboard, through a safety port, if the pressure gets too high

- A supply solenoid valve that allows the crew to shut off the distribution system
- Four full-face quick donning masks, stowed in readily accessible boxes adjacent to crewmembers'seats (one per seat)
- One filling port for external oxygen replenishment.

DESCRIPTION



OPERATION

Applicable to: ALL

The crewmember squeezes the red grips to pull the mask out of its box. This action causes the mask harness to inflate.

A mask-mounted regulator supplies a mixture of air and oxygen, or pure oxygen, or perform emergency pressure control. With the regulator set on NORMAL, the user breathes a mixture of cabin air and oxygen up to the cabin altitude at which the regulator supplies 100 % oxygen. The user can select 100 % in which case the regulator supplies pure oxygen at all cabin altitudes.
If required by the situation, the user can use the emergency overpressure rotating knob and receive pure oxygen at positive pressure.
The storage box contains a microphone lead with a quick-disconnect for connection to the appropriate mask microphone cable.

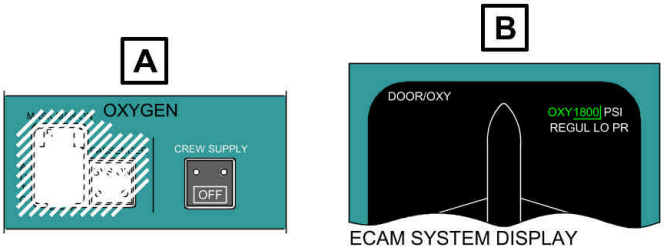
Note: *Each mask may have a removable film that protects the visor against scratches. This strip is optional and may be removed from the mask at any time.*

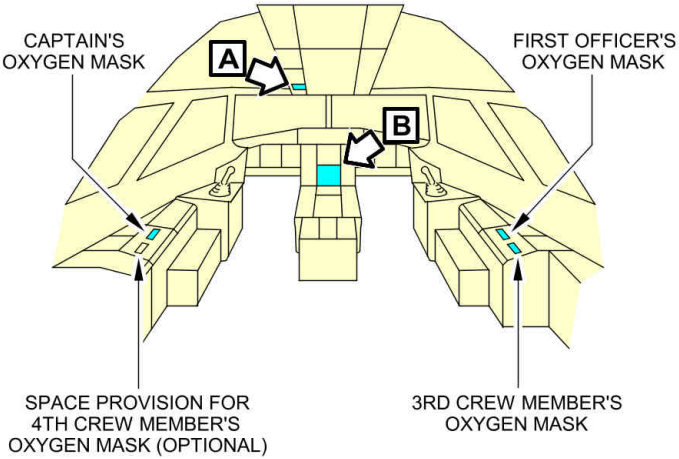
LOCATION

Applicable to: ALL

The cockpit's oxygen system consists of :
- One OXYGEN CREW SUPPLY pb on the overhead panel
- The ECAM SYSTEM DISPLAY, which provides oxygen pressure information.
- 3 (or 4, as installed) oxygen stowage boxes, which contain the quick donning masks.

LOCATION


A
OXYGEN
CREW SUPPLY
OFF
B
DOOR/OXY
OXY 1800 PSI
REGUL LO PR
ECAM SYSTEM DISPLAY

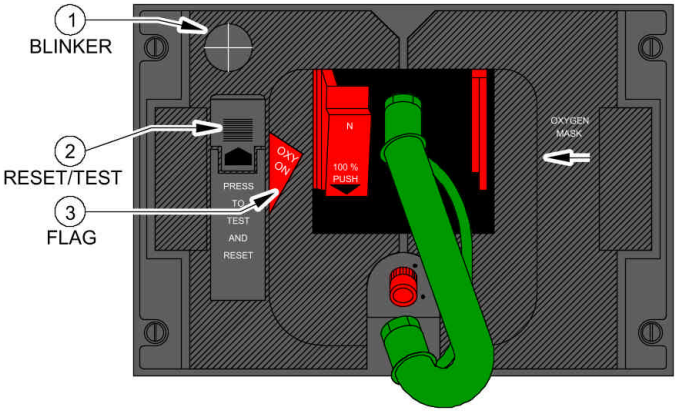

CAPTAIN'S
OXYGEN MASK
A
B
FIRST OFFICER'S
OXYGEN MASK
SPACE PROVISION FOR
4TH CREW MEMBER'S
OXYGEN MASK (OPTIONAL)
3RD CREW MEMBER'S
OXYGEN MASK

LATERAL CONSOLES

Applicable to: ALL

STOWAGE BOX

STOWAGE BOX

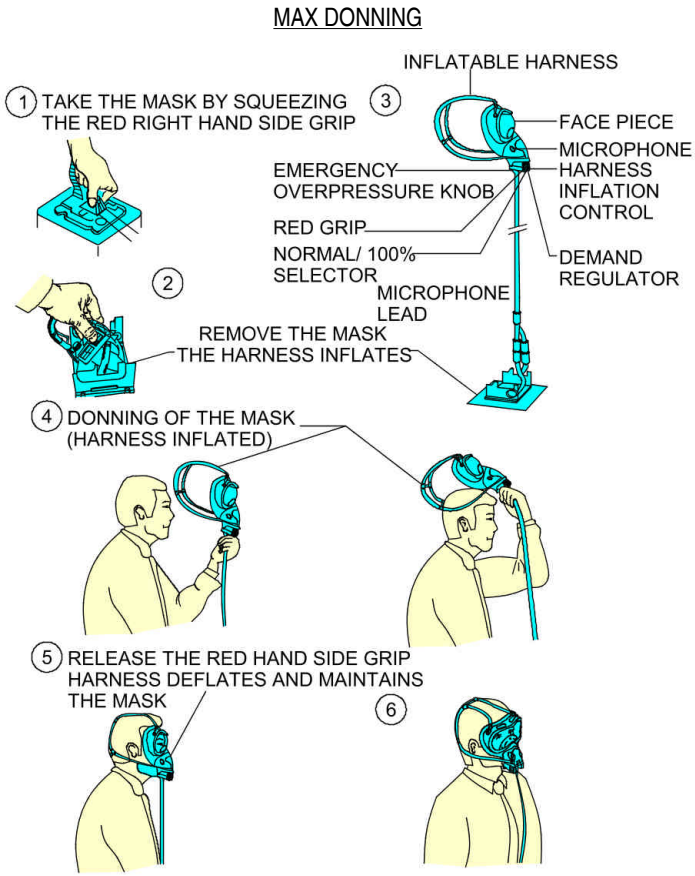


(1) Blinker flowmeter (yellow)
This indicator flashes when oxygen is flowing.

(2) RESET/TEST control slide
The crewmember presses the slide, and pushes it in the direction of the arrow to test : the operation of the blinker, the regulator supply, system sealing downstream of the valve ; and the regulator sealing and system operation. Pressing the RESET control slide, after the oxygen mask has been used, cuts off the oxygen, and the mask microphone.

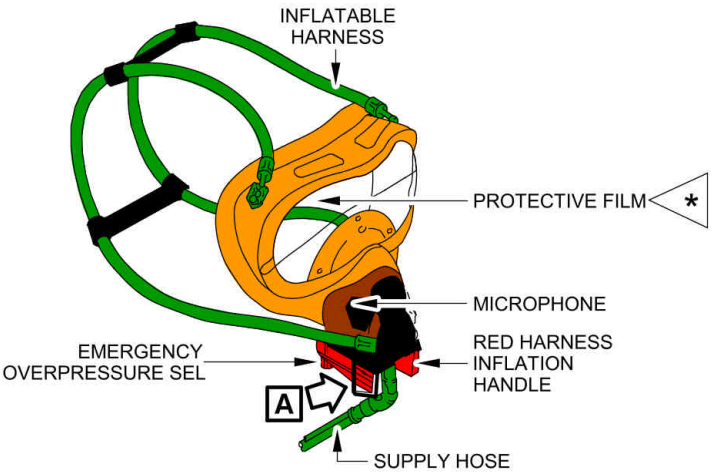
(3) OXY ON flag
As soon as the left flap door opens, the mask is supplied with oxygen and, once it closes (mask still supplied with oxygen), the "OXY ON" flag appears.

MAX DONNING


MAX DONNING
INFLATABLE HARNESS
1 TAKE THE MASK BY SQUEEZING THE RED RIGHT HAND SIDE GRIP
3
FACE PIECE
MICROPHONE
EMERGENCY OVERPRESSURE KNOB
HARNESS INFLATION CONTROL
RED GRIP
NORMAL/ 100% SELECTOR
DEMAND REGULATOR
2
MICROPHONE LEAD
REMOVE THE MASK
THE HARNESS INFLATES
4 DONNING OF THE MASK (HARNESS INFLATED)
5 RELEASE THE RED HAND SIDE GRIP
HARNESS DEFLATES AND MAINTAINS THE MASK
6

CREW 0XYGEN MASK

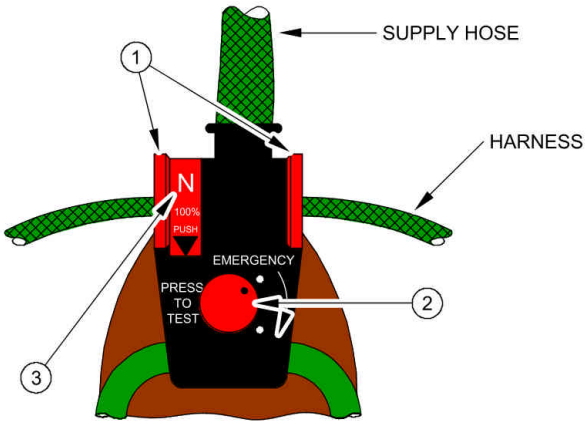
CREW OXYGEN



Note: *The protective film can be removed to help crewmembers recover a sufficient visual field, in case of ice accumulation on the screen, in the event of rapid cabin depressurization.*

PRESSURE REGULATOR

PRESSURE REGULATOR



(1) Red grips

Squeezing the right-hand side grip unlocks the two-flap door, and enables the harness to inflate.

(2) EMERGENCY pressure selector

Use of this selector creates an overpressure, which eliminates condensation and prevents smoke, smell or ashes from entering the mask.

- Pressing this knob generates an overpressure for a few seconds.
- Turning the knob, in the direction of the arrow, generates a permanent overpressure.

Note: Overpressure supply automatically is started, when cabin altitude exceeds 30 000 ft.

(3) N/100 % SEL

Pushing up the button from underneath releases it, and it pops up to the N (normal) position. Pressing it again returns it to 100 %.

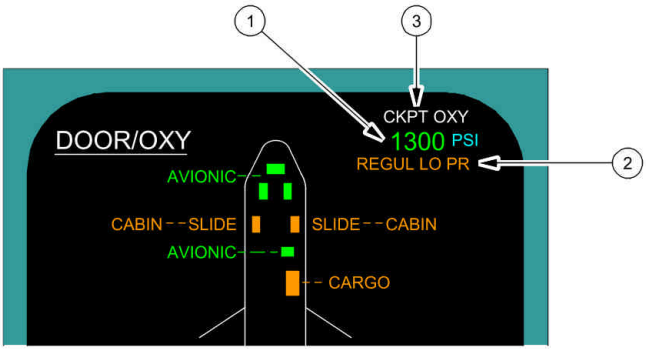
100 % : The mask delivers 100 % oxygen.

N : The mask delivers a mixture of air and oxygen, the content of which varies depending on the cabin altitude. When cabin altitude goes above 35 000 ft, the air inlet closes and the user breathes 100 % oxygen.

CONTROLS AND INDICATORS

Applicable to: ALL

ECAM DOOR/OXY PAGE



(1) OXY high pressure indication

Green : When pressure is ≥ 600 PSI
It pulses in green, when pressure is < 600 PSI (the DOOR/OXY page is automatically displayed).

Amber : When pressure is < 300 PSI
An amber half frame appears, when oxygen pressure is < 1 000 PSI.
In this case, the flight crew must check that the remaining quantity is not below the minimum.

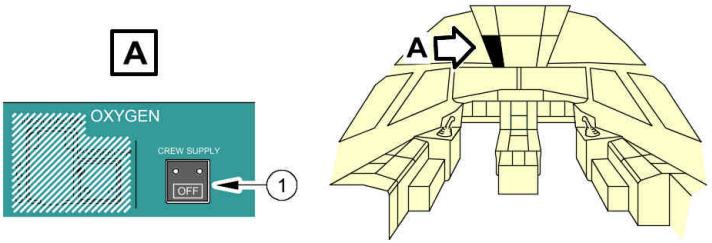
(2) REGUL LO PR indication
It appears amber, if oxygen pressure on the low-pressure circuit is low (50 PSI).

(3) CKPT OXY indication
It is normally white.

It becomes amber, when :
- Pressure goes below 300 PSI.
- Low oxygen pressure is detected.
- The overhead panel's OXYGEN CREW SUPPLY push-button is OFF.

OVERHEAD PANEL

OVERHEAD PANEL



(1) The CREW SUPPLY pushbutton electrically controls the position of the low pressure (LP) solenoid valve.

OFF : The OFF legend comes on white, and the valve is closed.

ON : (Pushbutton pressed - normal position during flight)
The valve is opened, low pressure (LP) oxygen is supplied to the masks.

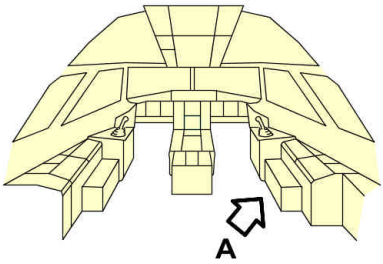
PORTABLE BREATHING EQUIPMENT

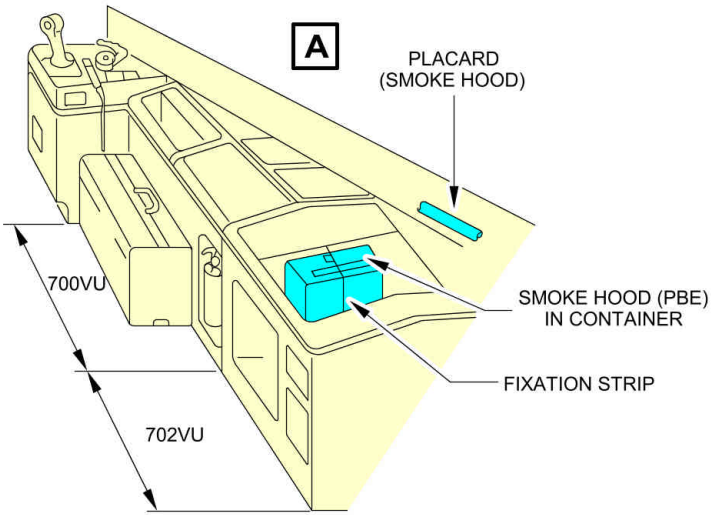
Applicable to: ALL

One PBE, located on the right aft console 702 VU in the cockpit, ensures protection of the eyes and respiratory system of one (or two) flight crewmembers when fighting a fire, in case of smoke or noxious gas emissions, or in the event of a loss in pressure altitude.

Refer to 06-040 GENERAL and *Refer to 06-040 PORTABLE BREATHING EQUIPMENT (PBE)*

PORTABLE BREATHING EQUIPMENT





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DESCRIPTION

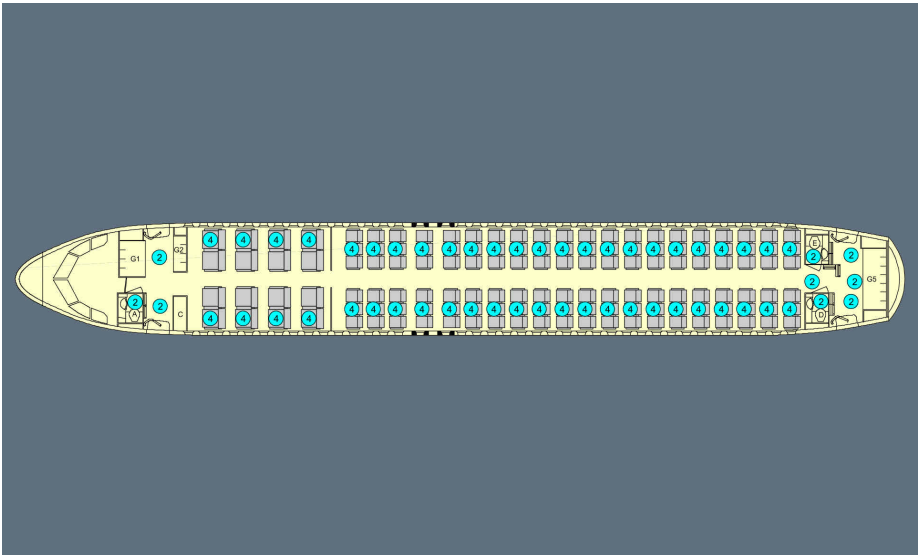
Applicable to: ALL

The cabin-fixed chemical oxygen system supplies oxygen to occupants, in case of cabin depressurization.
The oxygen is produced by chemical generators, and each generator feeds a group of 2, 3 or 4 masks.
Generator and masks are in containers, located : Above the passenger seats, in the lavatories, in each galley, and at each cabin crew station.

OXYGEN UNITS LOCATION

Criteria: K10190
Applicable to: MSN 2649

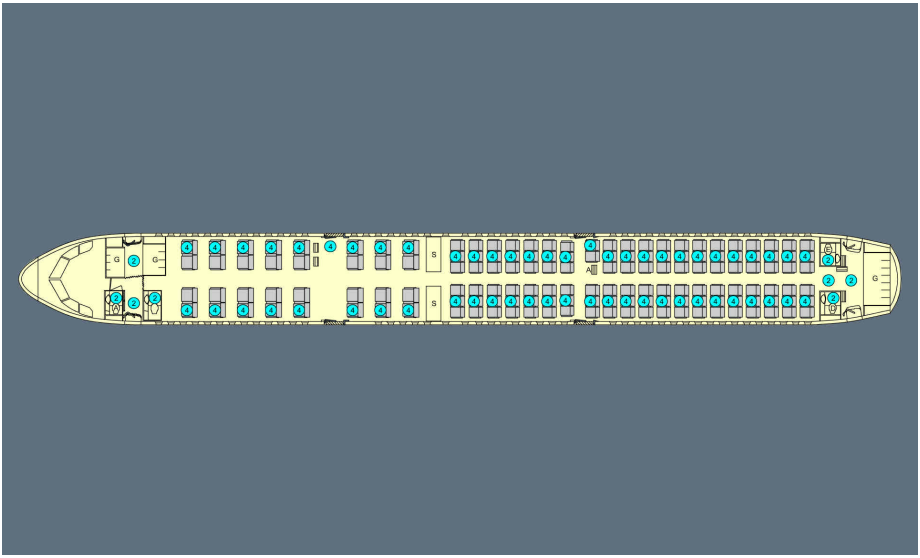
ARRANGEMENT



OXYGEN UNITS LOCATION

Criteria: K11138
Applicable to: MSN 2927-3034

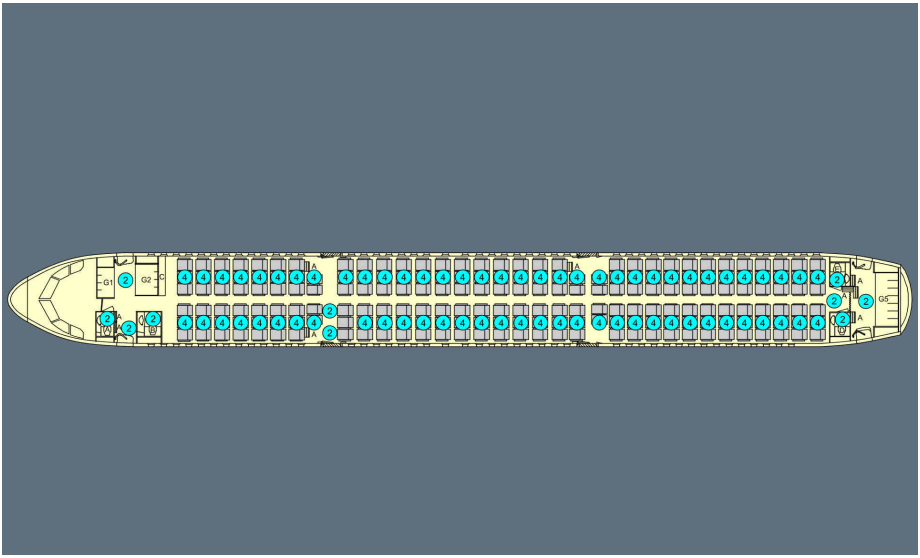
ARRANGEMENT



OXYGEN UNITS LOCATION

Criteria: K11138, K11390
Applicable to: MSN 3120

ARRANGEMENT



OPERATIONAL SEQUENCE

Applicable to: ALL

SYSTEM ACTIVATION

The cabin oxygen system automatically operates when the altitude pressure switch, located in the avionics compartment, closes. The switch closes when the cabin pressure decreases to a pressure equivalent to 14 000 +250, -750 ft (4 260 +76 -228 m).
To manually operate the system, the flight crewmembers push the "MASK MAN ON pb" , located on the overhead panel.

SYSTEM OPERATION

When electrical power releases the door latches :

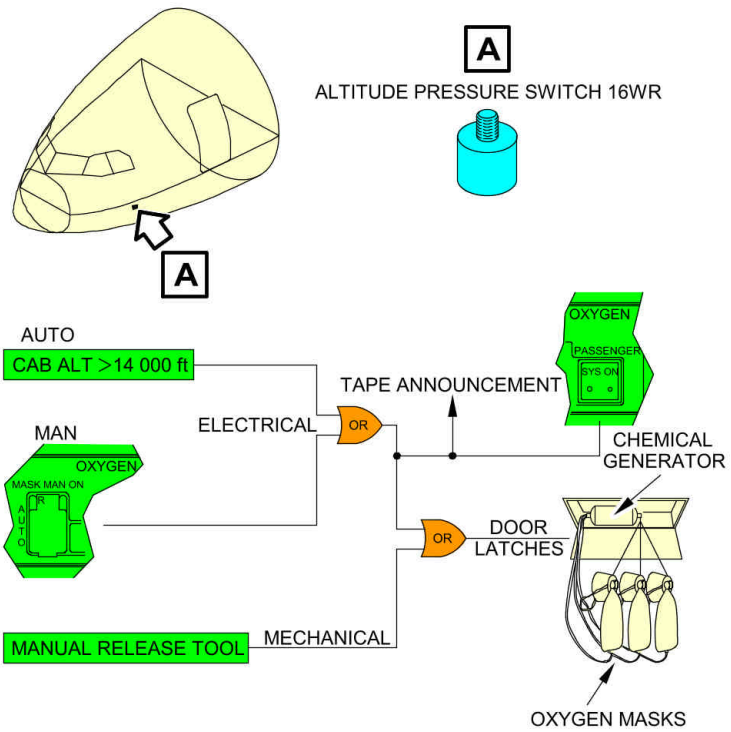
- The passenger oxygen container doors open and the masks drop down for the use of passengers and cabin attendants.
- A taped message is transmitted through the Passenger Address system.

- The green "SYS ON" indicator light, on the cockpit overhead panel, comes on.
- When a user pulls the oxygen mask towards their face, the chemical oxygen generator starts to operate and the oxygen flows.
- The mask receives pure oxygen under positive pressure for about 15 min, until the generator is depleted.

If a passenger oxygen container door does not open, the cabin crew can open it by using the manual release tool. The manual release tool has to be pushed in a hole of the container door to disengage the electrical latch.

Note: *There is no apparent inflation of the mask reservoir bag at lower altitudes between approximately 10 000 and 19 000 ft.*

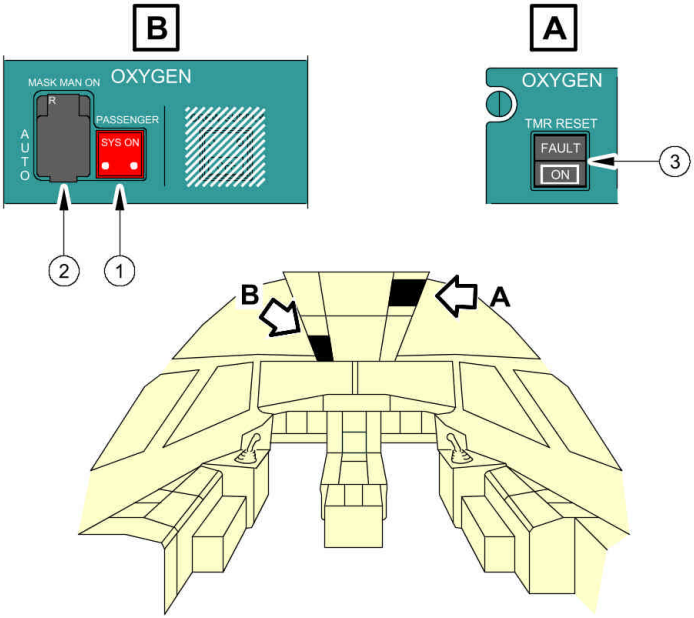
SYSTEM OPERATION



CONTROLS AND INDICATORS

Applicable to: ALL

COCKPIT OVERHEAD PANEL



(1) PASSENGERS SYS ON

This light comes on white, when the control for the oxygen mask doors is activated. It remains on until the "TMR RESET pb" is pressed.

(2) MASK MAN ON

The guard keeps this button in the AUTO position.

AUTO : The mask doors open automatically, when the altitude exceeds 14 000 ft.

Pressed: The mask doors open.

(3) TMR RESET pb

Maintenance crews use this pushbutton to reset the control circuit after the system has operated.

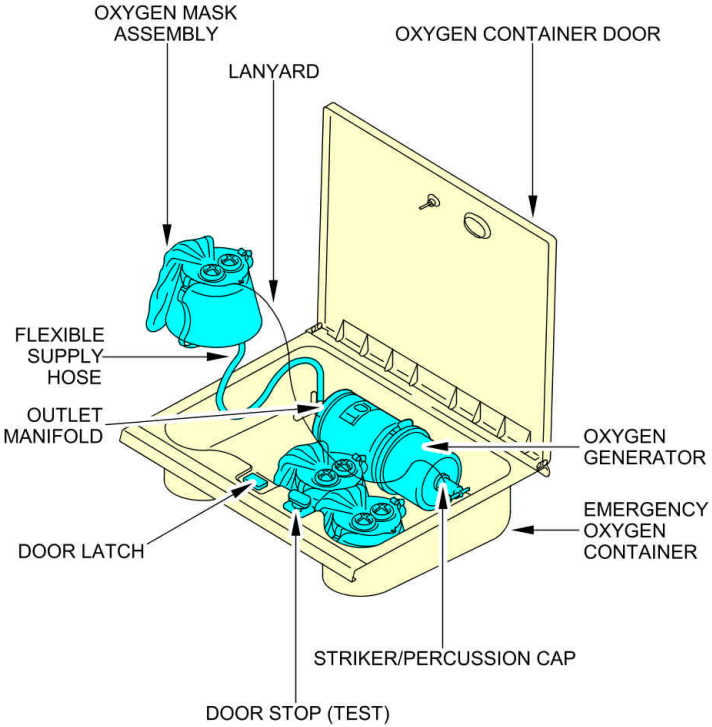
ON : This light comes on white, and the PASSENGER SYS ON light goes off

FAULT : This light comes on amber, when the door latch solenoids are energized for more than 30 s.

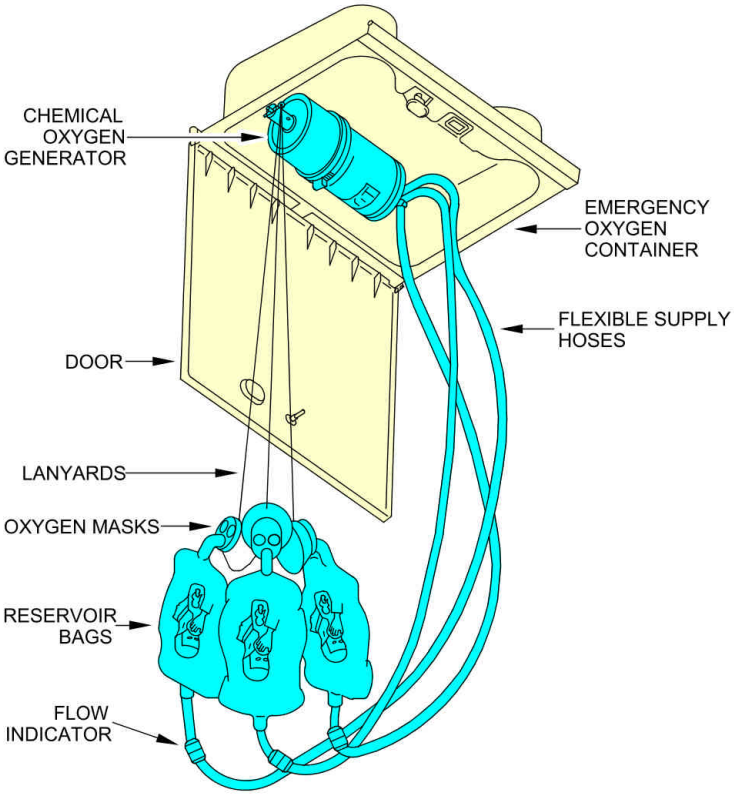
OXYGEN MASK

Applicable to: ALL

OXYGEN MASK STOWED IN UNIT



OXYGEN MASK RELEASED

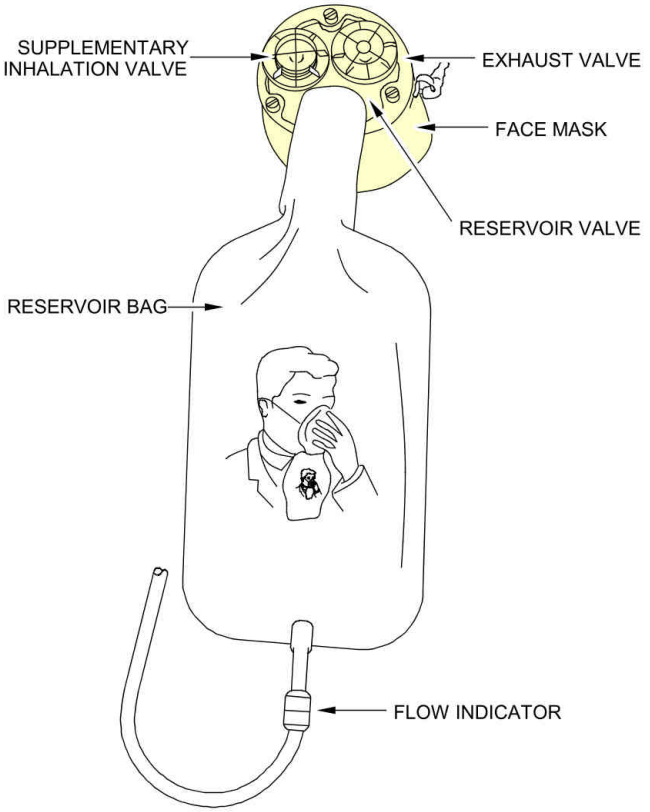


DESCRIPTION

The mask assembly consists of a reservoir bag and a face mask. The mask is fitted with three (3) valves : The reservoir and exhaust valves, plus a supplementary inhalation valve.

Note: *The capacity of the reservoir bag is 1.5 l.*

OXYGEN MASK



OPERATION

The oxygen unit doors open, and :

- Oxygen masks fall and hang on the lanyards.
- User pulls one mask to their face. (The lanyard pulls the release pin from the striker assembly of the generator).
- The striker hits the percussion cap, and the oxygen supply is generated.
- Oxygen flows through the flexible supply hoses into the reservoir bag.
- The flow indicator indicates oxygen flow as follows : in case oxygen is flowing > 0.5 l/min in the housing of the flow indicator, a green tube is visible. If there is no oxygen flowing or < 0.5 l/min, there is noting visible inside the clear flow indicator housing.

- The chemical oxygen generator supplies a flow of low pressure oxygen for a minimum of 15 min.

CAUTION	ONCE ACTIVATED, OXYGEN GENERATION CANNOT BE STOPPED.

- The chemical reaction used for oxygen generation creates heat. Therefore, after an emergency mask deployment, it is recommended that a PAX announcement be made to advise of the possibility of the smell of burning, smoke, and of a cabin temperature increase associated with normal operation of the oxygen generator system.

INADVERTENT OXYGEN MASK DEPLOYMENT

CAUTION	DO NOT RESTORE AN OXYGEN MASK, IF THE OXYGEN GENERATOR IS STARTED IN ORDER TO PREVENT THE SMELL OF BURNING OR FUMES.

RECOMMENDATIONS

- Although it is not dangerous to the aircraft, if the oxygen mask is stored when the oxygen generator started, this occurrence may be very unpleasant and frightening for passengers and crew. Both the flight and cabin crewmembers should be properly trained regarding the correct action to be adopted in the event of an inadvertent deployment of the oxygen generator.
- If the generator is started, the door must be left open. To minimize inconvenience to the passengers, and avoid having the deployed masks in their way, they should be relocated, if possible. This will also ensure they are seated in a location in which a generator has not been used, in case a decompression occurs later in the flight. (If no alternate seats are available, the crew should be prepared to assist these passengers in reaching spare masks, in event of decompression).
- If it is impossible, or undesirable to relocate the passengers, the mask could be taken out of their way by cutting the mask tubes. Masks will then be replaced when the generator is replaced.
- The crew should be instructed on how to recognize whether a generator has started. If the unit has not started, then passenger relocation, or removal of the mask hoses is unnecessary. In that case, maintenance should be advised of the unit that deployed, in order to check the latch condition and verify correct mask stowage.
- Even, if no smoke was noticed, the equipment is no longer ready for service, once the generator has deployed. If the masks are stowed in this case, the crew may prevent maintenance from recognizing that a generator needs replacement, and that the masks also need inspection and possible replacement.

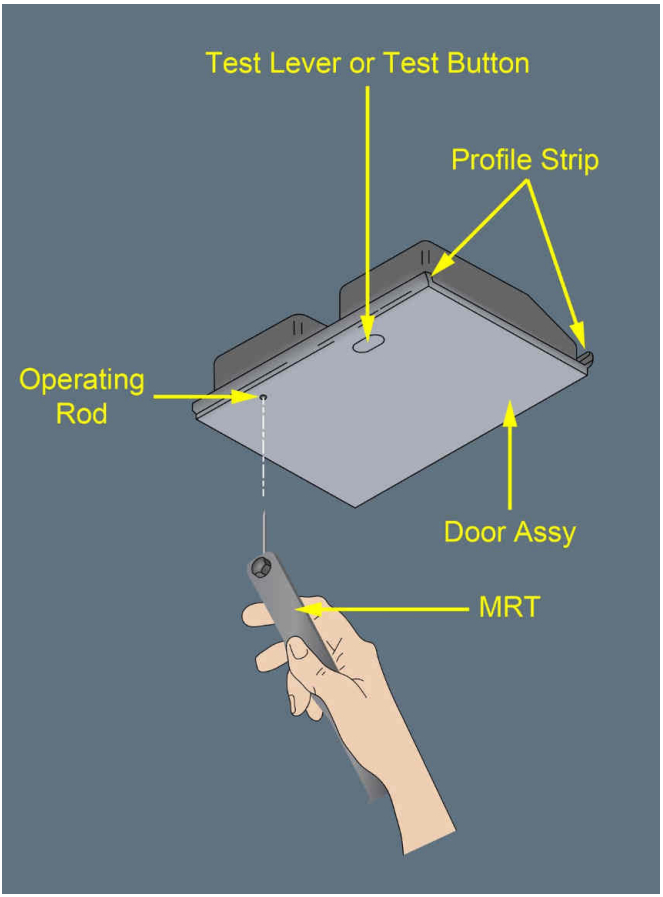
OXYGEN CONTAINER

Applicable to: ALL

MANUAL UNLOCKING

The door of the container can be opened manually with the MANUAL RELEASE TOOL (MRT). Insert the pin-end of the tool into the operating rod of the door latch, and push. The door opens.

MANUAL UNLOCKING

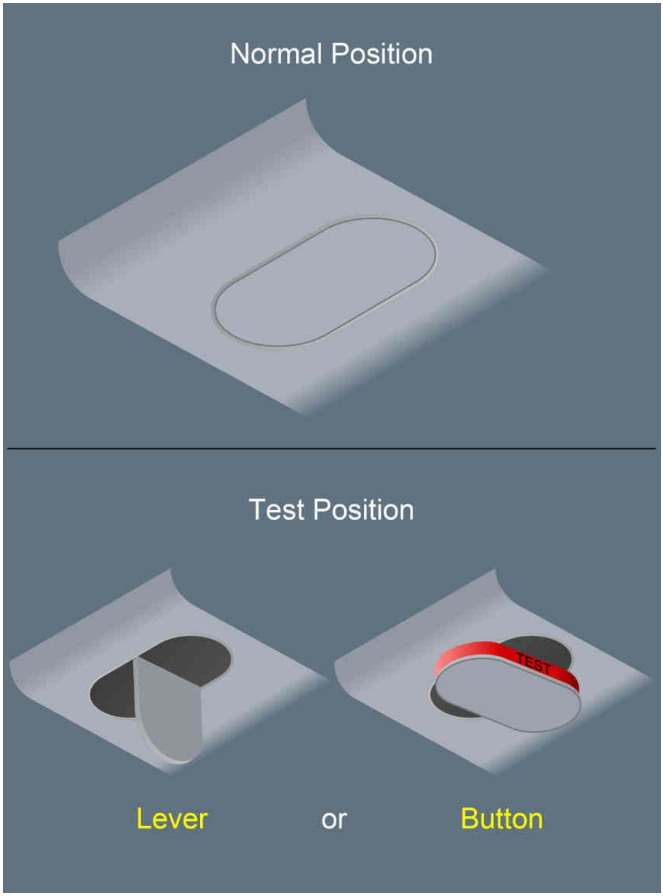


UNLOCKING SYSTEM TEST

This test is performed by maintenance personnel.

To test the unlocking system, press the "MAN ON pb" in the cockpit. To prevent the oxygen masks from falling, while performing this test, put all the oxygen containers into test configuration.
There is a test lever or a test button on each container. Use the lever or button to put the container in normal configuration or in unlocking test configuration.

NORMAL CONFIGURATION AND UNLOCKING TEST POSITION



All container buttons or levers must be flush with the container for normal operation, otherwise the masks will not fall in the case of a decompression.

In order to put the container from test configuration into normal configuration:

- push the lever until it is flush with the container, or
- pull the button, rotate to a 90 ° angle and release.

Note: The number of oxygen masks, contained in the unit, is written on the inner side of the test lever or on the side of the test button.

CABIN CREW STATION - LAVATORY AND GALLEY OXYGEN UNIT

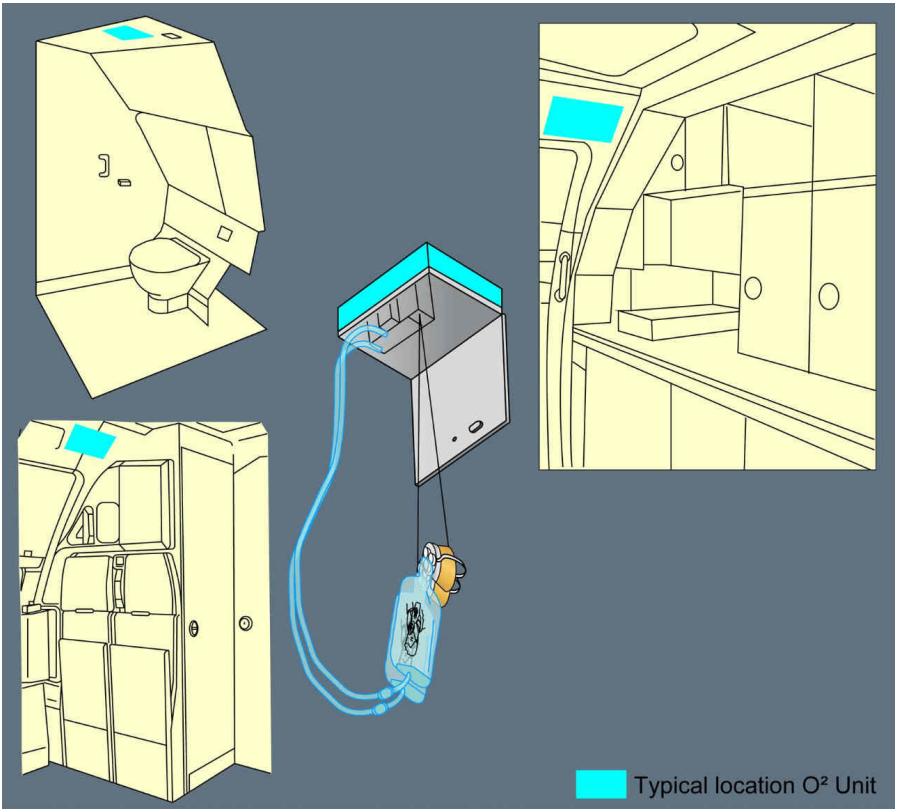
Applicable to: ALL

DESCRIPTION

A two-mask oxygen unit is installed in each cabin crew station, lavatory and galley.

LOCATION

LOCATION



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GENERAL

Applicable to: ALL

The cabin attendant portable devices are installed in several places in the cabin area. The possible positions are :

- in the galley area,
- in the attendant seats areas,
- in the overhead stowages,
- in the cabin stowages/doghouses.

They provide protection to the cabin crew during emergencies.

The portable devices consist of :

- Protective Breathing Equipment PBE.
- Portable high-pressure oxygen cylinders with continuous flow oxygen mask.

PORTABLE BREATHING EQUIPMENT (PBE)

Criteria: SA
Applicable to: MSN 2927-3120

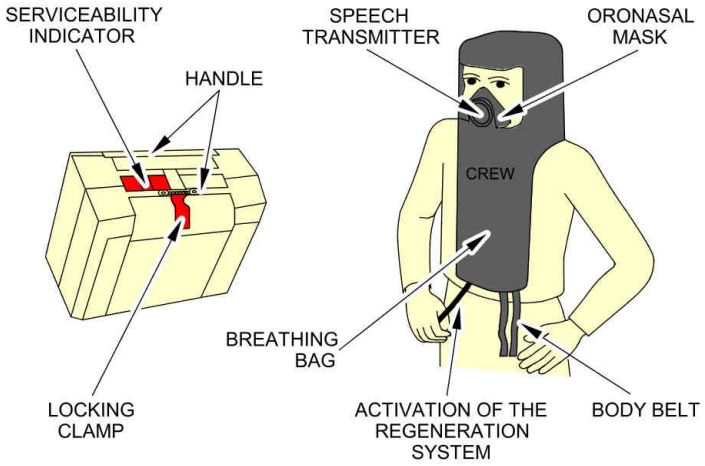
GENERAL

The PBE protects the user's eyes and respiratory system against heat, smoke, and/or noxious gases. It ensures that a minimum of 15 minutes of total autonomy is available.
The PBE is readily available to cabin attendants. The primary purpose of the PBE is to supply oxygen to cabin attendants, in the event of a fire, smoke and/or noxious gases. It enables them to move about freely in the cabin and extinguish a fire.

DESCRIPTION

The smoke hood is based on a chemical air regeneration system, located in the breathing bag. An oronasal mask allows inhalation of regenerated air, and returns the exhaled air to the regeneration system.
The hood is serviceable, as long as the yellow indicator on the case is not broken, and operates for at least 20 min.

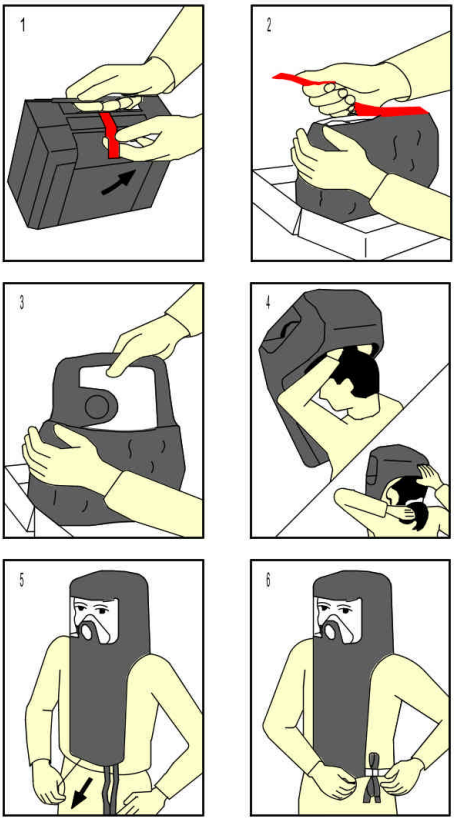
description



UTILIZATION

The breathing hood is stored under a vacuum-sealed pouch, which is mounted inside a box. Two tamper-evident seals secure the pouch within the container and serve as a tamper indicator.

UTILIZATION



PORTABLE BREATHING EQUIPMENT (PBE)

Criteria: P4654, SA
Applicable to: MSN 2649

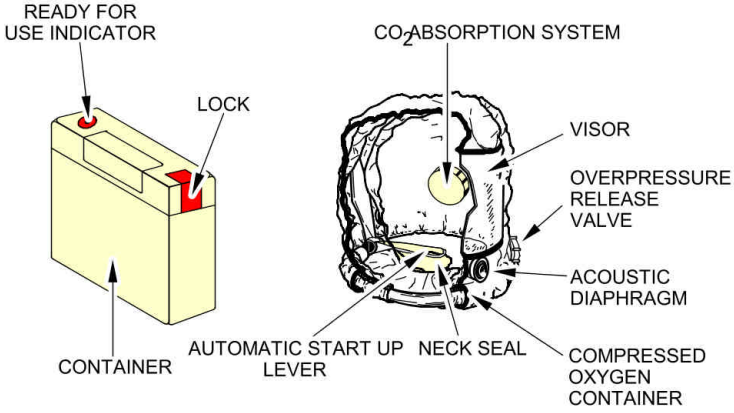
GENERAL

The PBE protects the user's eyes and respiratory system against heat, smoke, and/or noxious gases. It ensures that a minimum of 15 min of total autonomy is available.
The PBE is readily available to cabin attendants. The primary purpose of the PBE is to supply oxygen to cabin attendants, in the event of a fire, smoke and/or noxious gases. It enables them to move about freely in the cabin and extinguish a fire.

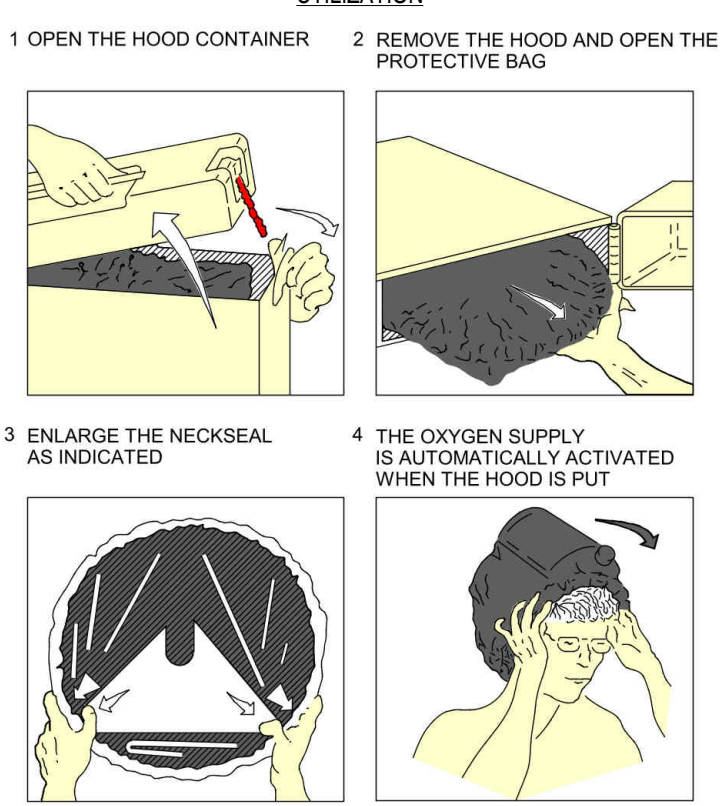
DESCRIPTION

The smoke hood is equipped with one CO2 absorption system which furnish an effective time of use of 15 min.
A "ready for use" status of the hood is ensured by checking that the indicator mounted on the hood container is not red.

DESCRIPTION



UTILIZATION



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EMERGENCY EQUIPMENT

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07-010 PORTABLE EMERGENCY EQUIPMENT

Symbol List ..... A
Location - General Overview ..... B
Location in the Cockpit - FWD Area C
Location in the Cockpit - AFT L Area ..... D
Location in the Cockpit - AFT R Area ..... E
Location in the Cabin - All Areas ..... F
Location in the Cabin - FWD Area ..... G
Location in the Cabin - MID Area ..... H
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First Aid Kit ..... J
Flashlights ..... K
Flashlight Cockpit L
Megaphones ..... M
Emergency Radio Beacon ..... N
Portable Fire Extinguishers ..... O
Portable Fire Extinguisher Cockpit ..... P
Life Vests ..... Q
Life Vests Crew ..... R
Life Vests Passenger ..... S
Life Vests Infant ..... T
Survival Kit ..... U
Demonstration Kit V
Flight Deck Escape Rope ..... W
Crash Axe X
Fire fighting gloves ..... Y

07-020 FIXED EMERGENCY EQUIPMENT

Fixed Emergency Equipment ..... A

07-030 SUPPLEMENTARY MEDICAL EQUIPMENT

Special Medical Equipment ..... A

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SYMBOL LIST

Applicable to: ALL

The portable emergency equipment is stowed or installed at different locations throughout the aircraft.
The following table shows all symbols which are used to identify the installed portable emergency equipment.

Note: Depending on the airline's choice and/or airworthiness requirements, some of these items may be not installed in this particular aircraft.

Symbol	Designation
	Crash Axe
	First Aid Kit
	Automated External Defibrillator (AED)
	Emergency Locator Transmitter (ELT)
	Flashlight

Continued on the following page

Continued from the previous page

Symbol	Designation
	Survival Kit
	Crew Life Vest
	Adult Life Vest
	Infant Life Vest
	Demo Kit
	Oxygen Cylinder and Mask
	Manual Release Tool

Continued on the following page

Continued from the previous page

Symbol	Designation
	Extension Seat BeltChild Seat Belt
	Emergency Medical Kit (EMK)
	Smoke Hood
	Fire Extinguisher (Halon)
	Fire Extinguisher (Water)
	Megaphone
	Gloves

Continued on the following page

Continued from the previous page

Symbol	Designation
	Baby Survival Cot
	CPR Face Mask
	Resuscitator
	Dangerous Goods Kit
	Life Line
	Crowbar Jemmy
	Signalling Kit

Continued on the following page

Continued from the previous page

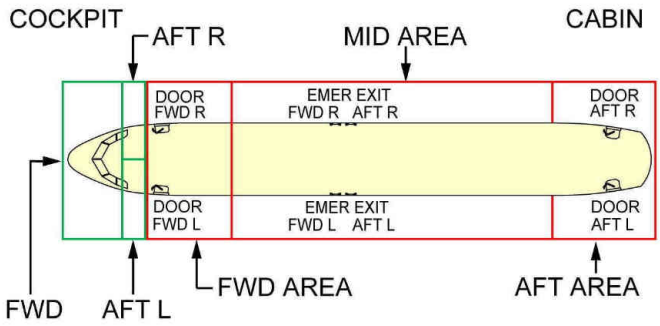
Symbol	Designation
	Crew Tabard Day-Glo Hat
	Life Raft
	Eyewash Bottle

The graphics in the following paragraphs show the location of the portable emergency equipment at the day of aircraft delivery.

LOCATION - GENERAL OVERVIEW

Criteria: SA
Applicable to: MSN 2649

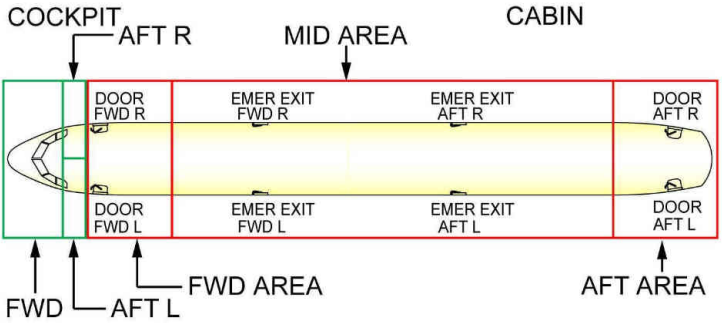
Overview



LOCATION - GENERAL OVERVIEW

Criteria: K2100, SA
Applicable to: MSN 2927-3120

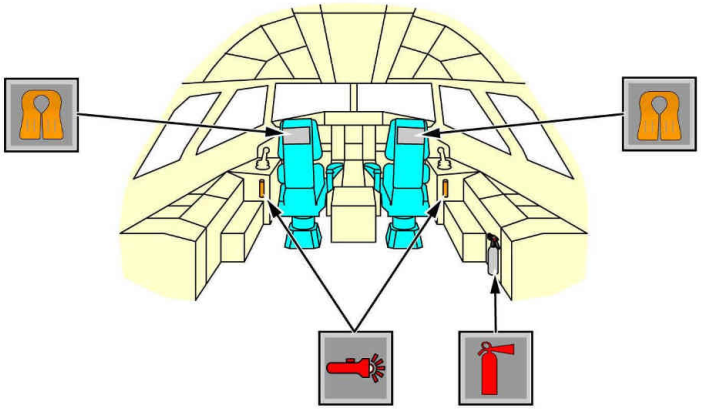
Overview



LOCATION IN THE COCKPIT - FWD AREA

Applicable to: ALL

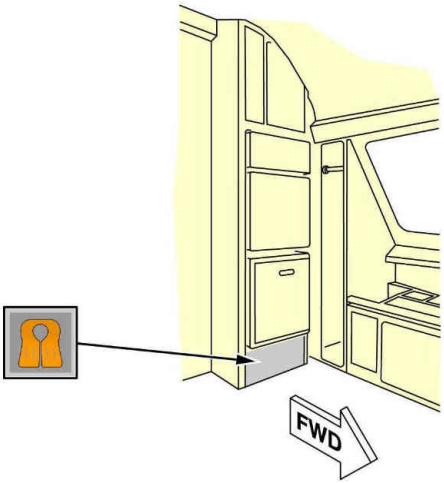
Cockpit - FWD Area



LOCATION IN THE COCKPIT - AFT L AREA

Applicable to: ALL

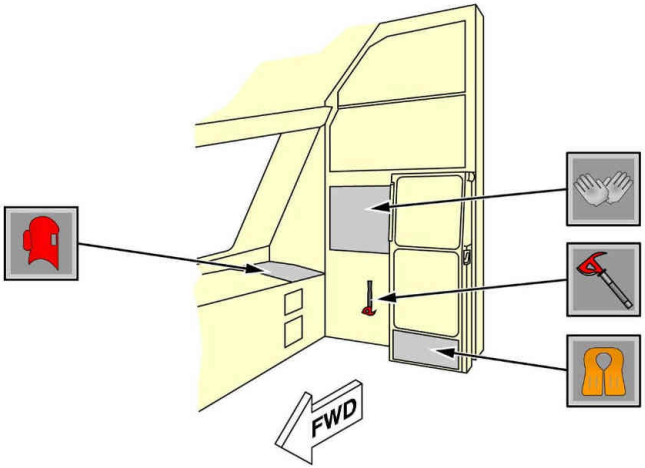
Cockpit - AFT L Area



LOCATION IN THE COCKPIT - AFT R AREA

Criteria: K10190
Applicable to: MSN 2649

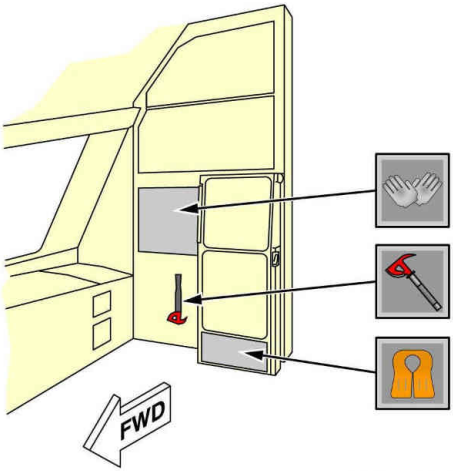
Cockpit - AFT R Area



LOCATION IN THE COCKPIT - AFT R AREA

Criteria: K11138
Applicable to: MSN 2927-3120

Cockpit - AFT R Area

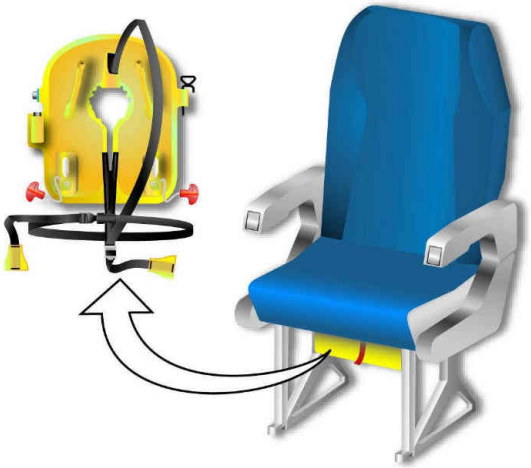


LOCATION IN THE CABIN - ALL AREAS

Applicable to: ALL

In all cabin areas the adult life vests are stowed under each passenger seat, independent of the seat type, which is installed.

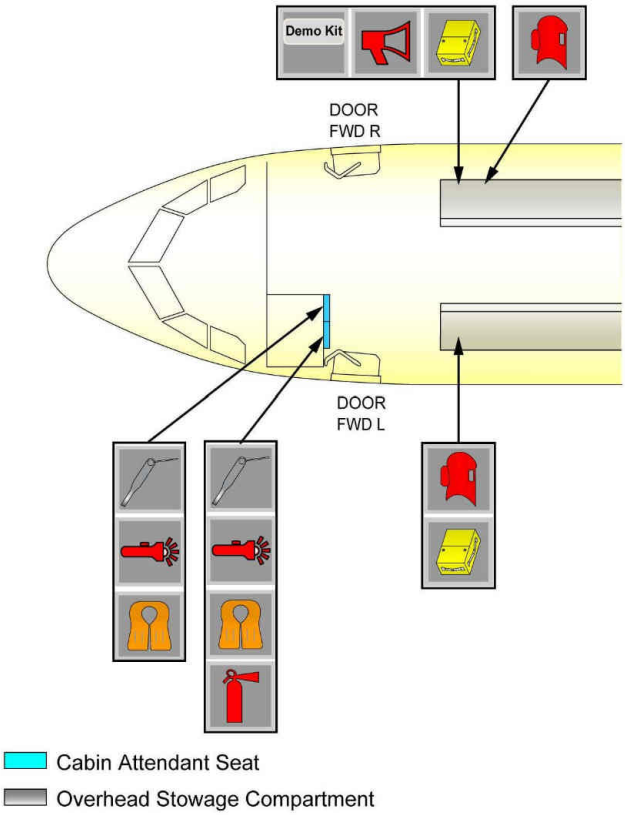
Location of Adult Life Vest



LOCATION IN THE CABIN - FWD AREA

Criteria: K11138
Applicable to: MSN 2927-3034

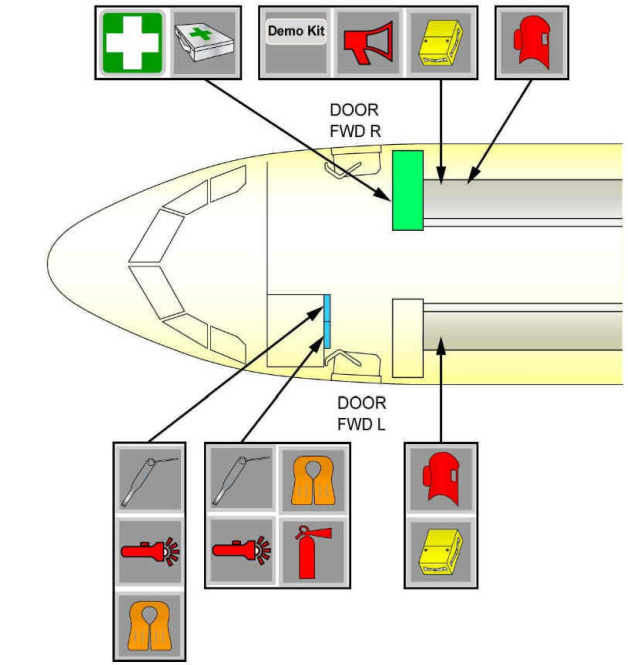
Cabin - FWD Area



LOCATION IN THE CABIN - FWD AREA

Criteria: K11138, K11390
Applicable to: MSN 3120

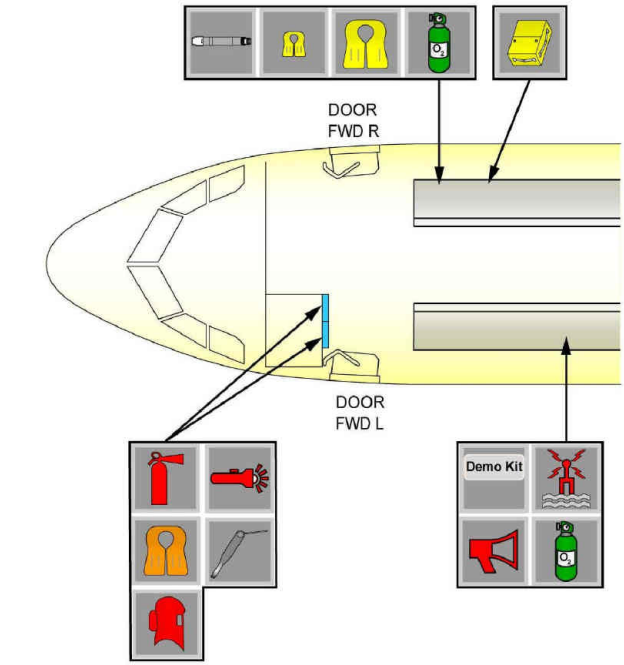
Cabin - FWD Area



LOCATION IN THE CABIN - FWD AREA

Criteria: K10190
Applicable to: MSN 2649

Cabin - FWD Area

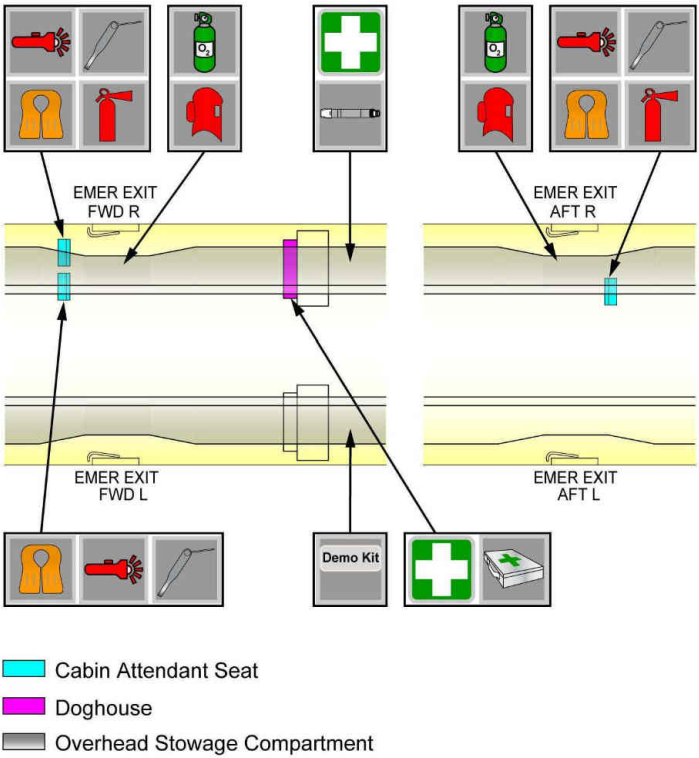


Cabin Attendant Seat
Overhead Stowage Compartment

LOCATION IN THE CABIN - MID AREA

Criteria: K11138
Applicable to: MSN 2927-3034

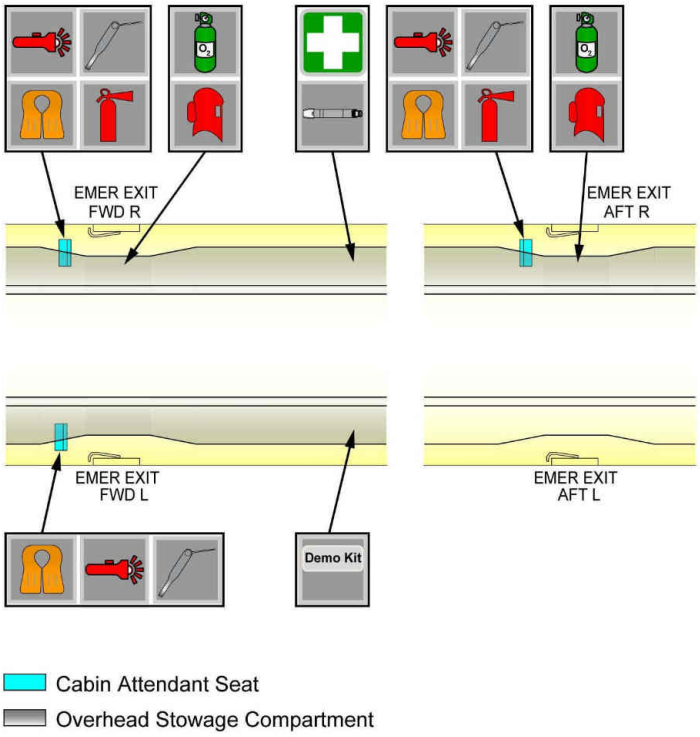
Cabin - MID Area



LOCATION IN THE CABIN - MID AREA

Criteria: K11138, K11390
Applicable to: MSN 3120

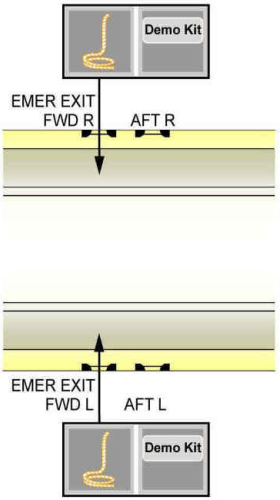
Cabin - MID Area



LOCATION IN THE CABIN - MID AREA

Criteria: K10190
Applicable to: MSN 2649

Cabin - MID Area

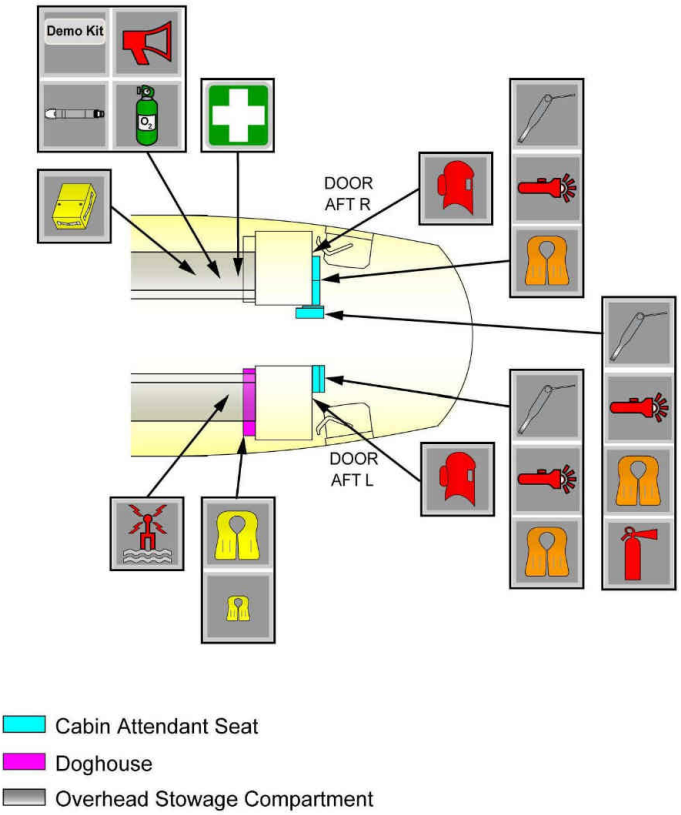


Overhead Stowage Compartment

LOCATION IN THE CABIN - AFT AREA

Criteria: K11138
Applicable to: MSN 2927-3034

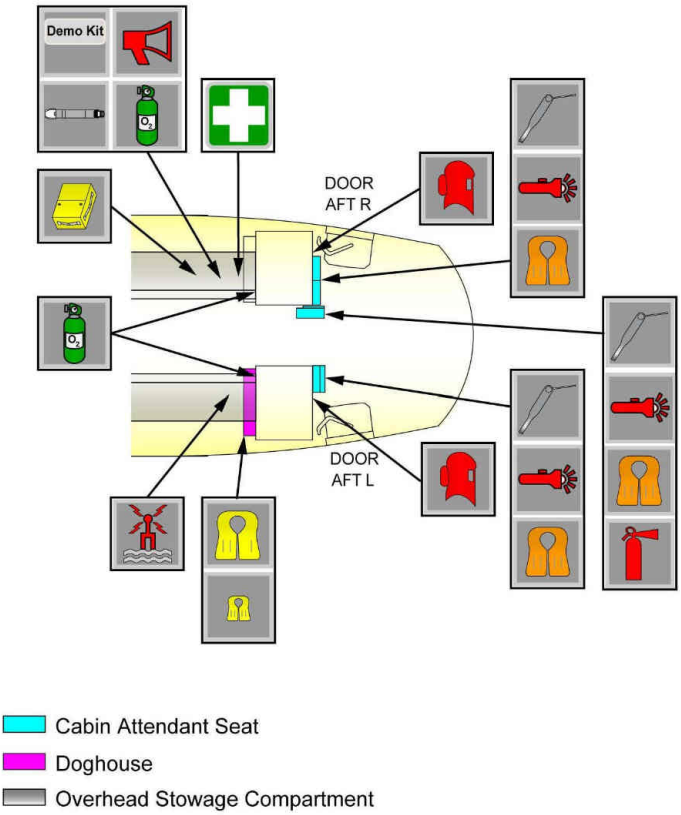
Cabin - AFT Area



LOCATION IN THE CABIN - AFT AREA

Criteria: K11138, K11390
Applicable to: MSN 3120

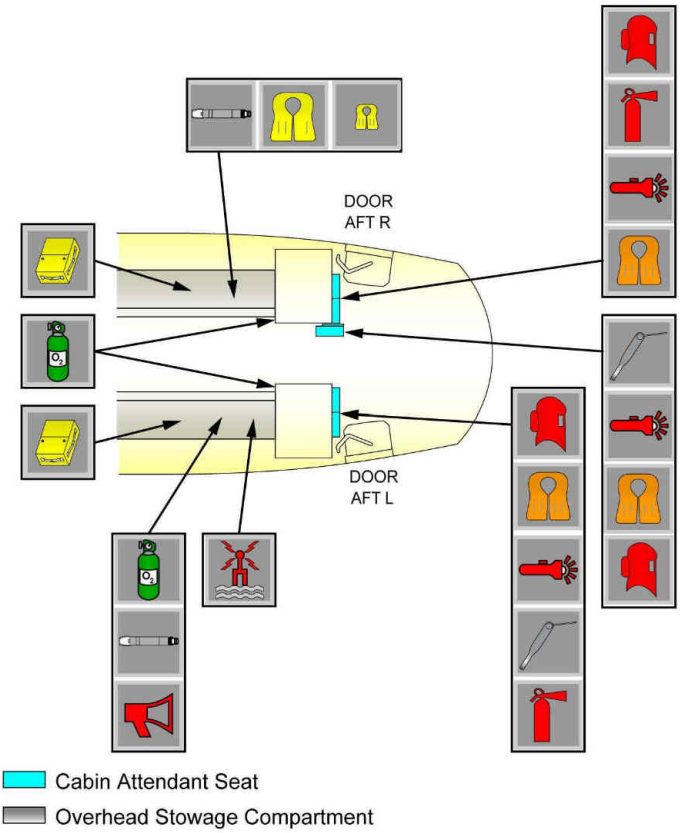
Cabin - AFT Area



LOCATION IN THE CABIN - AFT AREA

Criteria: K10190
Applicable to: MSN 2649

Cabin - AFT Area



FIRST AID KIT

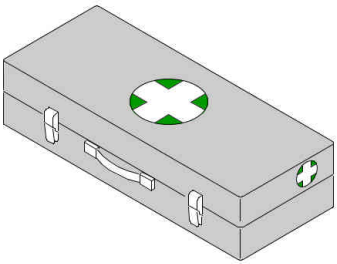
Applicable to: ALL

At least one first aid kit must be on board the aircraft.

Note: *Maybe there is no first aid kit installed at the day of aircraft delivery. Then the airline is responsible to install the first aid kit(s) before operating the aircraft.*

Placards on the cabin furniture show the exact location of the first aid kit(s).
Each first aid kit has a content list inside.

First Aid Kit (Example)



FLASHLIGHTS

Applicable to: ALL

A lot of flashlights are installed throughout the aircraft.

1. DESCRIPTION
   The flashlight is explosion proof and powered by dry batteries.
   The flashlight is ON automatically, when removed from the retention bracket.
   The flashlight is OFF automatically, when put into the retention bracket.
2. OPERATIONAL REMOVAL OF THE FLASHLIGHT
   a. Hold the body of the flashlight.
   b. Pull it from the retaining clip of the retention bracket.

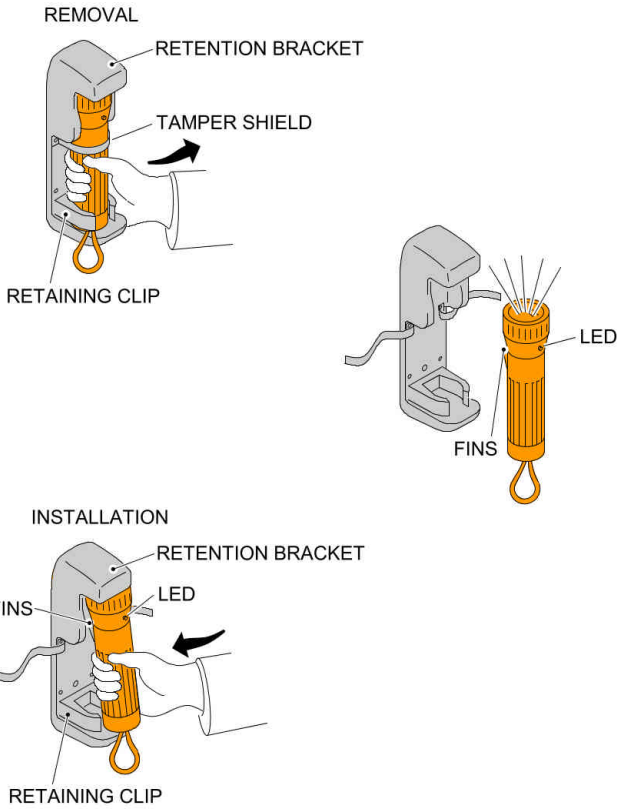
      Note: *The tamper shield will be disconnected.*

3. INSTALLATION OF THE FLASHLIGHT
   a. Hold the body of the flashlight.

      Note: *The FINS has to point to the retention bracket and the LED has to point away from the retention bracket.*

   b. Let the FINS of the flashlight move into the recess of the retention bracket.
   c. Push the body of the flashlight into the retaining clip.

Operation of the Flashlight



FLASHLIGHT COCKPIT

Applicable to: ALL

LOCATION

A lot of flashlights are installed throughout the aircraft.

DESCRIPTION AND OPERATION

1. DESCRIPTION

The flashlight is powered by 2 alkaline managanese dioxide batteries.

The main components of the flashlight is:
- a BODY.
- a REFLECTOR ASSEMBLY.
- a LENS.
- a SWITCH ASSEMBLY with BUTTON and CAP.

2. OPERATION

Note: *A cracked or broken flashlight bulb that remains glowing has the potential to cause an explosion in hazardous atmospheres.*

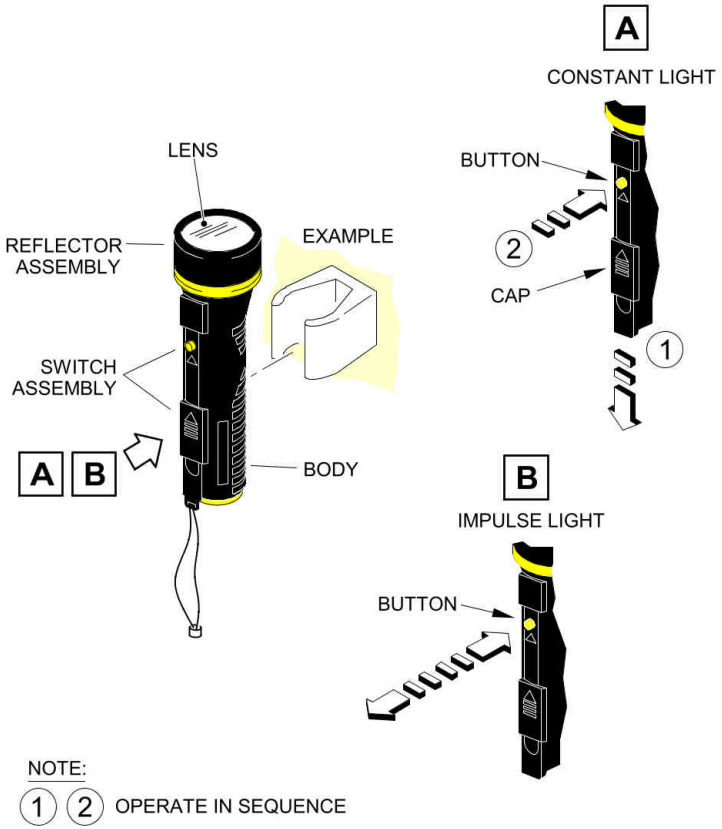
a. Hold the body of the flashlight.
b. Pull it from the bracket.
c. Operation Mode

The flashlight is usable for **constant light** and **impulse light**.
- **Constant Light**
  1. Slide back the CAP of the SWITCH ASSEMBLY.
  2. Firmly press the BUTTON until it engages, the light comes on.
- **Impulse Light**
  1. Slide back the CAP.
  2. Firmly press the BUTTON until it engages, the light comes on.
  3. Light pressing on the BUTTON lets the light goes off and releasing the BUTTON lets the light comes on again.

Note: *The SOS-Signal is:*
three times a short signal (for S)
three times a long signal (for O)
three times a short signal (for S).

d. Firmly press the BUTTON until it disengages, the light goes off and slide back the CAP of the SWITCH ASSEMBLY.
e. Firmly push the BODY of the flashlight into the bracket.

Flashlight Cockpit



MEGAPHONES

Applicable to: ALL

The on-board megaphones are powered by 8 alkaline batteries (AA-size) each.

OPERATION OF THE MEGAPHONE

1. Hold the megaphone to the mouth.

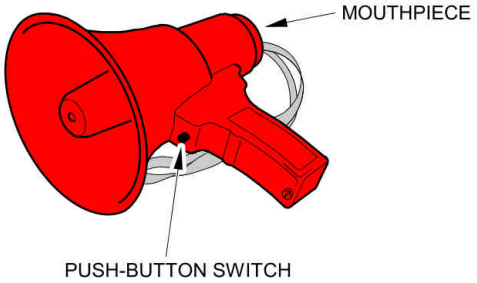
   Note: Do not place the hand around the mouthpiece.

2. Point the megaphone towards the passengers.

WARNING	Do not operate the megaphone near a person's ears. Amplified sound or howling can cause damage to the inner ear.

3. Contact the mouthpiece of the megaphone with the lips.
4. Push the push-button switch and then speak slowly with a strong voice.

Operation of the Megaphone



EMERGENCY RADIO BEACON

Applicable to: ALL

DESCRIPTION AND OPERATION OF THE EMERGENCY RADIO BEACON

1. Description
   The emergency radio beacon (referred to as the beacon) operates in water or on land. Operating instructions are given on the operating-instruction plate bonded on the beacon's housing.

   The beacon is a compact, buoyant, emergency locator transmitter with:
   - An identification plate.
   - An operating instruction plate.
   - A battery plate.
   - An electronic assembly.
   - A float and an antenna.
   - A lanyard.

   The beacon transmits distress signals simultaneously on three frequencies:
   - 121.5 MHz for civil distress frequency.
   - 243 MHz for military distress frequency.
   - 406.025 MHz COSPAS-SARSAT frequency.
2. Operation

Operation in Water

1. Unwind the lanyard beginning with the snap hook.
2. Connect the snap hook with the lanyard securely to the raft.
3. Carefully pull the antenna from the opening and position the antenna.
4. Activate the beacon by switching the beacon's ARM/OFF/ON sw 3-POSITION-SWITCH to the ON position. This switch is placed on the front face of the electronic assy.
5. Put the emergency radio beacon into the water.

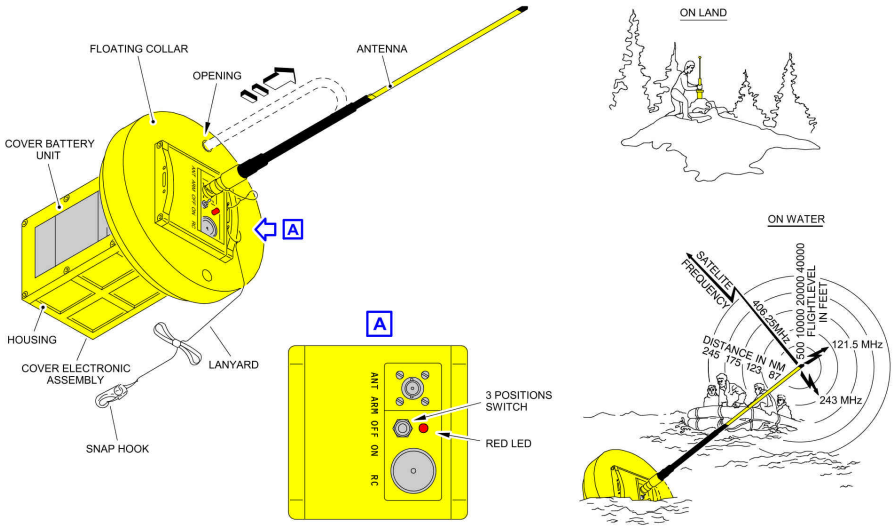
Note: *The emergency radio beacon operates automatically in a few seconds and drifts out to the end of the lanyard.*

Operation on Land

1. Look for an area clear of obstruction such as trees.
2. Choose the highest point for best transmission.
3. Carefully pull the antenna from the opening and position the antenna.
4. Activate the beacon by switching the beacon's ARM/OFF/ON sw 3-POSITION-SWITCH to the ON position. This switch is placed on the front face of the electronic assy.
5. Place the beacon.

Note: *The emergency radio beacon operates automatically in a few seconds.*

Emergency Radio Beacon



PORTABLE FIRE EXTINGUISHERS

Applicable to: ALL

DESCRIPTION AND OPERATION OF THE PORTABLE FIRE EXTINGUISHER

1. DESCRIPTION
   The portable fire extinguisher is filled with HALON 1211 and extinguishes small fires as such its capacity is limited. The instruction for operation of the fire extinguisher is shown on a placard bonded on the body of the extinguisher.
2. OPERATION

WARNING	It is recommended to use a smoke hood when fighting a fire. Smoke from fire and gas from the fire extinguisher may cause irritation of the eyes and respiratory organs.

   1. Remove the portable fire extinguisher from the bracket.

CAUTION	Read the Instruction, Cautions and Warnings bonded on the fire extinguishers bottle.

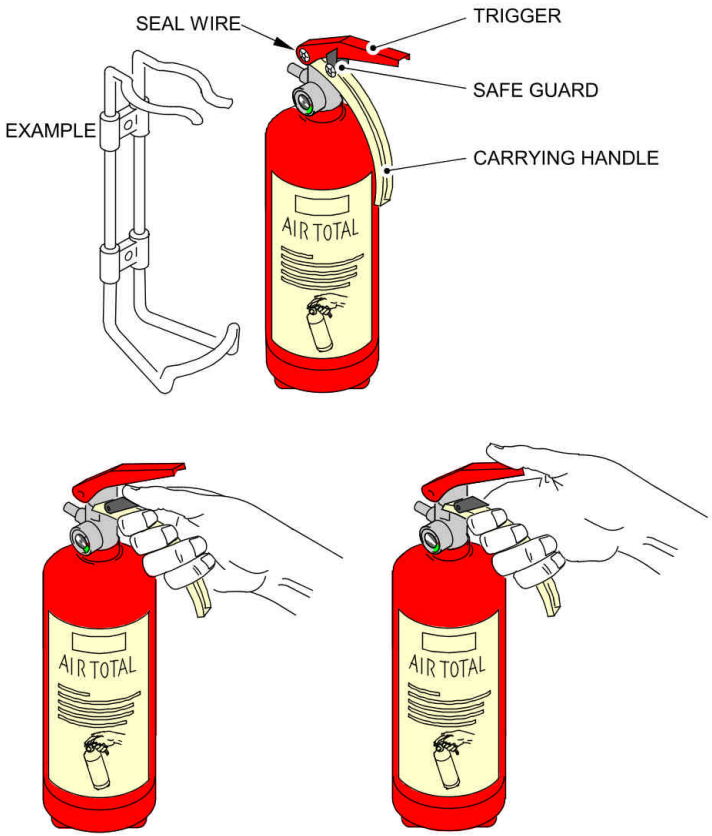
   2. Carry the extinguisher holding it on the CARRYING HANDLE.
   3. To operate, hold the extinguisher upright and lift the CARRYING HANDLE.
   4. Bent down SAFE GUARD (black) and remove SEAL WIRE.
   5. Stand at least 1.8 m (6 ft) away from the fire and aim the nozzle at the base of flame.
   6. To start the flow of extinguishant, depress TRIGGER (red) and use a sweeping motion from side to side at the base of fire.

      Remarks

      a. Only the fully developed cloud of extinguishant is effective, not the stream from the discharge-hose outlet. If the cloud does not developed around the fire, move back.
      b. NEVER point the full stream into liquid fires. Start at the base and always fight the front of the fire and follow the flames.
      c. When fighting fires on burning solids, apply the extinguishant in sharp bursts.

   7. To stop the flow of extinguishant, release the TRIGGER (red) lever.

Operation HALON Portable Fire Extinguisher



PORTABLE FIRE EXTINGUISHER COCKPIT

Applicable to: ALL

A halon portable fire extinguisher is in the cockpit.

DESCRIPTION

The portable fire extinguisher extinguishes small fires as such its capacity is limited. The instruction for operation of the fire extinguisher is shown on a placard bonded on the body of the extinguisher. The fire extinguisher has:

- A monoblock pressed steel tank, red coated.
- A valve tap with a trigger handle for use a carriage and a jet-spray.
- Content is Halon 1211.

WARNING	It is recommended to use a smoke hood when fighting a fire. Smoke from fire and gas from the fire extinguisher may cause irritation of the eyes and respiratory organs.

OPERATION OF THE HALON PORTABLE FIRE EXTINGUISHER

1. Remove the portable fire extinguisher from the bracket.

CAUTION	Read the Instruction, Cautions and Warnings bonded on the fire extinguishers bottle.

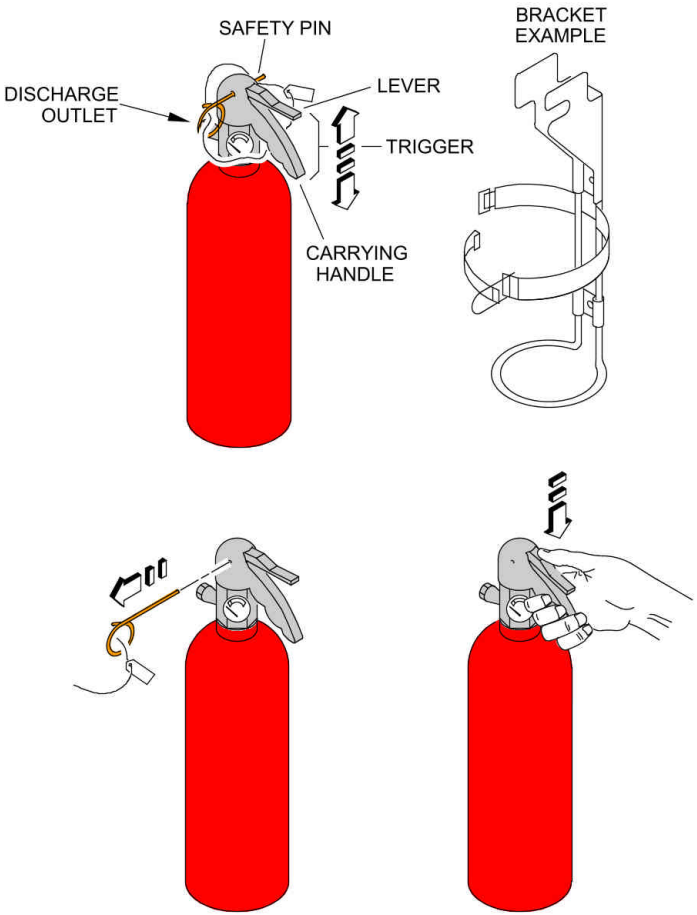
2. Carry the extinguisher holding it on the CARRYING HANDLE.
3. To operate, hold the extinguisher upright.
4. Pull SAFETY PIN.
5. Stand at least 1.8 m (6 ft.) away from the fire and aim the nozzle at the base of flame.
6. To start the flow of extinguishant, hold the device in one hand and firmly press with the thumb on the LEVER of the TRIGGER.

Remarks

a. Only the fully developed cloud of extinguishant is effective, not the stream from the DISCHARGE OUTLET. If the cloud does not developed around the fire, move back.
b. NEVER point the full stream into liquid fires. Start at the base and always fight the front of the fire and follow the flames.
c. When fighting fires on burning solids, apply the extinguishant in sharp bursts.

7. To stop the flow of extinguishant, release the LEVER.

Operation Portable Fire Extinguisher



LIFE VESTS

Applicable to: ALL

1. Location
   There is a life vest for every crewmember - flight crew and cabin crew - on board the aircraft. The life vests for the flight crew are stowed in each cockpit seat and these for the cabin crew are stowed in each cabin attendant seat.

Placards on all seats show the exact location of the life vest.

There are life vests for all passengers as well. These types of life vest are or may be installed:

a. Adult life vest:
   There is one life vest for each passenger on board the aircraft.
   Additionally some spare life vests are stowed in the cabin.
b. Infant life vest:
   Normally there are some infant life vests on board the aircraft.
c. Baby survival raft:
   Some baby-survival rafts may be stowed on board the aircraft.

To see the exact location of all life vests, please refer to the paragraphs whose title starts with "Location (...)"

2. Operation
   Each life vest shows the instruction for its use.

LIFE VESTS CREW

Applicable to: MSN 2649

LIFE VESTS FOR THE FLIGHT CREW AND THE CABIN CREW

There is a life vest for every crewmember - flight crew and cabin crew - on board the aircraft.
The life vests for the flight crew are stowed in each cockpit seat and these for the cabin crew are stowed in each cabin attendant seat.
Placards on all seats show the exact location of the life vest.

DESCRIPTION

The life vests have these main components:

- Inflatable cells.
- Waistbelt harness with buckle and harness-pull-tab.
- Gas inflation system.
- Oral inflation system.
- Water-activated light assembly.
- Whistle.

OPERATION

Each life vest shows the instruction for its use:

1. Grasp the poly bag and tear the pull-tab free of the bag, thus opening the sewn end.
2. Remove the life vest from its bag, then unroll it.
   a. Hold the life vest on each side of the neck opening and put the head through the opening.
   b. Run the waistbelt harness around the back of the waist and back to the front.
   c. Hold the buckle ends:

WARNING	Danger of finger clamping by closing the buckle!

Close the buckle below the life vest.

d. Pull the HARNESS PULL-TAB to tighten snugly.

Note: *Make sure that the life vest is drawn firmly against the body.*

3. Inflation:

WARNING	Do not inflate the life vest inside the aircraft. An inflated life vest may hinder the person who wears it from leaving the aircraft through the emergency exit and may cause injury or death.

CAUTION	ORAL INFLATION PRIOR TO GAS INFLATION WILL CAUSE EXCESSIVE PRESSURE WHICH MAY BURST THE LIFE VEST.

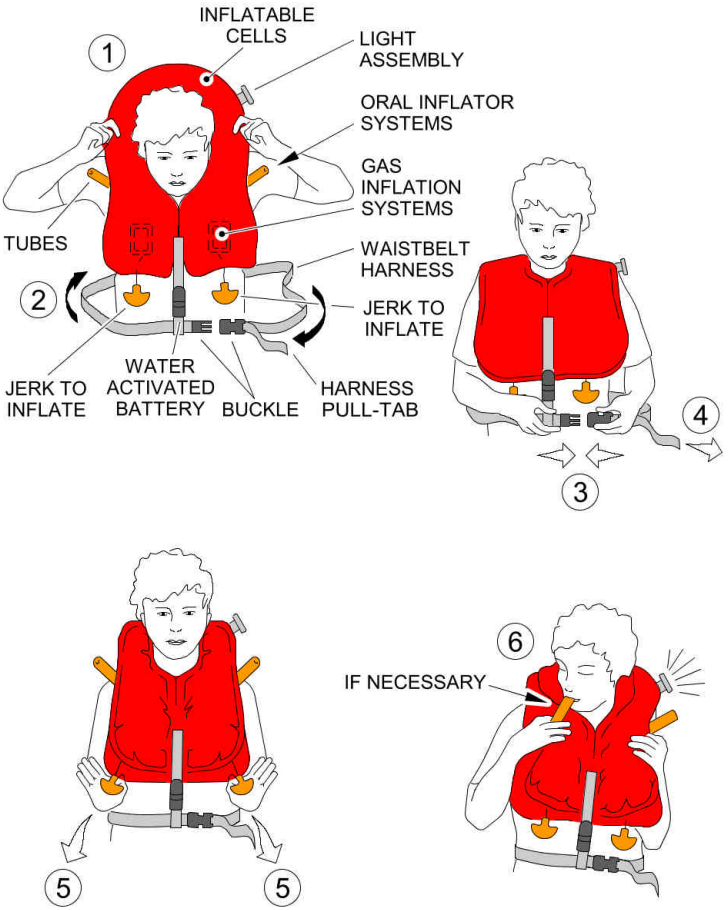
Pull the red JERK TO INFLATE tags, this inflates the buoyancy chambers with the gas inflation system.

a. With the oral inflator system you can inflate the life vest yourself. Inflation is done by blowing into the end of the tubes by mouth.
b. If more or less pressure in the life vest is necessary, use the oral inflator system.

Note: *The oral inflation system in each inflatable cell can also be used to release gas by depressing the valves at the tube ends.*

4. Light assembly activation:
The light assembly is activated when the battery is immersed in water.

Life Vest Crew



LIFE VESTS PASSENGER

Applicable to: MSN 2649

GENERAL

There are adult life vests for all passengers. Additionally some spare life vests are stowed in the cabin.

To see the exact location of all life vests, please refer to the **LOCATION** paragraphs of this chapter.

DESCRIPTION

The life vests have these main components:
- Inflatable cells.
- Waistbelt harness with buckle and harness-pull-tab.
- Gas inflation system.
- Oral inflation system.
- Water-activated light assembly.
- Whistle.

OPERATION

Each LIFE VEST shows the instruction for its use:
1. Grasp the poly bag and tear the pull-tab free of the bag, thus opening the sewn end.
2. Remove the life vest from its bag, then unroll it.
   a. Hold the life vest on each side of the neck opening and put the head through the opening.
   b. Run the waistbelt harness around the back of the waist and back to the front.
   c. Hold the buckle ends:

WARNING	Danger of finger clamping by closing the buckle!

   Close the buckle below the life vest.
   d. Pull the HARNESS PULL-TAB to tighten snugly.

   Note: *Make sure that the life vest is drawn firmly against the body.*

3. Inflation:

WARNING	Do not inflate the life vest inside the aircraft. An inflated life vest may hinder the person who wears it from leaving the aircraft through the emergency exit and may cause injury or death.

CAUTION	ORAL INFLATION PRIOR TO GAS INFLATION WILL CAUSE EXCESSIVE PRESSURE WHICH MAY BURST THE LIFE VEST.

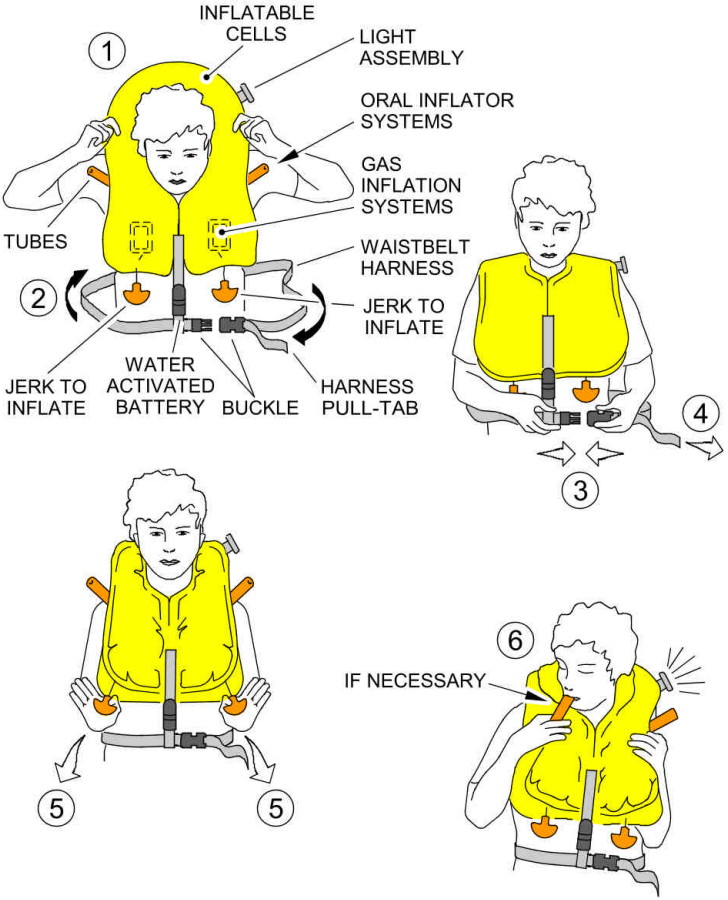
Pull the red JERK TO INFLATE tags, this inflates the buoyancy chambers with the gas inflation system.

   a. With the ORAL INFLATOR system you can inflate the life vest yourself. Inflation is done by blowing into the end of the tubes by mouth.
   b. If more or less pressure in the life vest is necessary, use the oral inflator system.

Note: *The oral inflation system in each inflatable cell can also be used to release gas by depressing the valves at the tube ends.*

4. Light assembly activation:
   a. The light assembly activates automatically when the battery is immersed in water.

Life Vests for Passenger



LIFE VESTS INFANT

Applicable to: MSN 2649

GENERAL

The infant life vest is intended for preserving the life of infants or small children.

DESCRIPTION

The life vests have these main components:
- Inflatable cells
- Waistbelt harness with buckle, harness-pull-tab and harness-adjust-tab
- Gas inflation system
- Oral inflation system
- Water-activated light assembly
- Tether line.

OPERATION

Each CHILD LIFE VEST shows the instruction for its use:
1. Grasp the poly bag and tear the pull-tab free of the bag, thus opening the sewn end.
2. Hold the child life vest on each side of the neck opening and put the head through the opening.
3. Place one child's leg over waistbelt harness loop and pull the harness-adjust-tab so that this strap is snug but not tight.
4. Run the waistbelt harness around back of the child's waist and back to the front.
5. Hold the buckle ends:

WARNING	Danger of finger clamping by closing the buckle!

Close the buckle below the life vest.

6. Pull the harness-pull-tab to tighten snugly.
7. Inflation:

CAUTION	ORAL INFLATION PRIOR TO GAS INFLATION WILL CAUSE EXCESSIVE PRESSURE WHICH MAY BURST THE LIFE VEST.

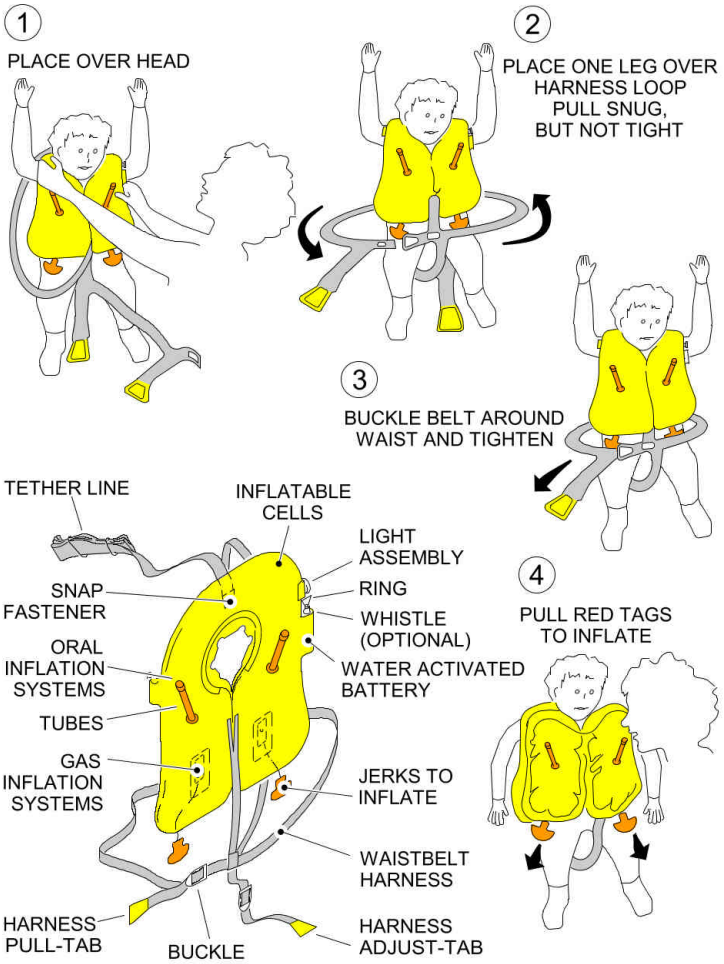
Pull the red JERK TO INFLATE tags to inflate the buoyancy chambers with the gas inflation system.

a. With the ORAL INFLATOR system you can inflate the life vest yourself. Inflation is done by blowing into the end of the tubes by mouth.
b. If more or less pressure in the life vest is necessary, use the oral inflator system.

Note: *The oral inflation system in each inflatable cell can also be used to release gas by depressing the valves at the tube ends.*

8. Light System Assembly Activation:
   a. Pull the ring and the light system will be activated automatically when it is immersed in water.

Child/Infant Life Vest

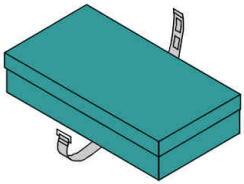


SURVIVAL KIT

Applicable to: MSN 2927-3120

At least one survival kit is stowed on board the aircraft.
Placards on the cabin furniture show the exact location of the first aid kit(s).
Each first aid kit has a content list inside.

Survival Kit

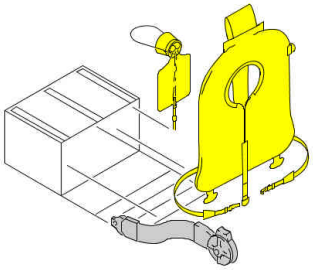


DEMONSTRATION KIT

Applicable to: MSN 2927-3120

Some demonstration kits are stowed on board the aircraft, in stowages or hatracks near to the attendant stations.

Demonstration Kit



The demonstration kit has a valise with:
- A life vest
- An oxygen mask
- A seat belt.

FLIGHT DECK ESCAPE ROPE

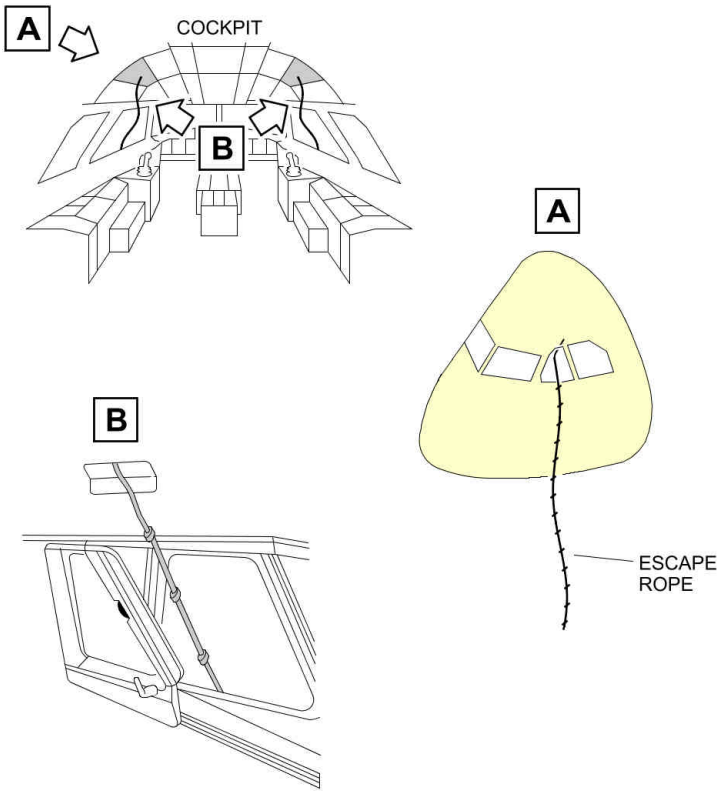
Applicable to: ALL

1. Location

2 Flight Deck Escape Ropes are on board the aircraft:
- 1 in a RH stowage above the RH sliding window on the side of the overhead panel, marked by a red label.
- 1 in a LH stowage above the LH sliding window on the side of the overhead panel, marked by a red label.

2. Description
The Flight Deck Escape Rope is a 5.5 m (18 ft) long and knotted. The rope is connected with one end to the structure of the aircraft. The rope and the attachment can support a load of 900 kg (1 984 lb).

Flight Deck Escape Rope

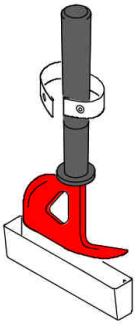


CRASH AXE

Applicable to: ALL

The crash axes are used to cut through light structures, panels and windows. They have insulated handles which are resistant to high voltages.
The crash axes are put into brackets on board the aircraft.

Crash Axe

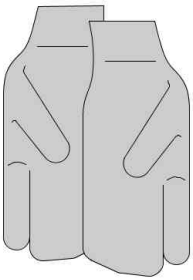


FIRE FIGHTING GLOVES

Applicable to: ALL

The crewmember uses the fire fighting gloves to grasp hot metal or burning parts. Placards on the cabin furniture show the exact location of the fire fighting gloves.

Fire Fighting Gloves



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FIXED EMERGENCY EQUIPMENT

Applicable to: ALL

EMERGENCY LOCATOR TRANSMITTER SYSTEM ELT SYSTEM

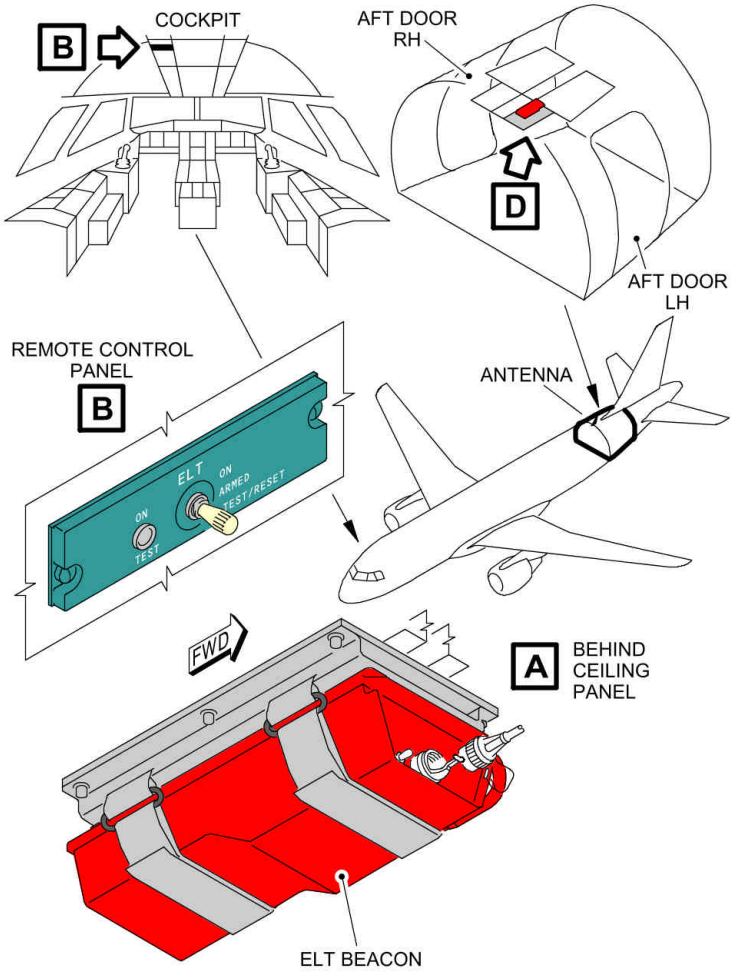
LOCATION OF THE ELT SYSTEM

One ELT system is on board of the aircraft and has these components:

1. Emergency Locator Transmitter (ELT) beacon:
   The ELT beacon is installed in the AFT cabin area Zone 260, last seat-row, above the RH ceiling panel in a support assembly.
   The support assembly, holds the ELT beacon in position with a strap assembly.
2. Remote Control Panel (RCP):
   The RCP is installed in the cockpit area on the cockpit overhead panel.
3. Antenna:
   The antenna is installed on the upper external fuselage in the AFT aircraft area, just forward of the vertical stabilizer.

Note: *The ELT beacon does not replace the survival ELT. The existence of the survival ELT is in addition necessary.*

Location of the Emergency Locator Transmitter (ELT) System



DESCRIPTION OF THE ELT SYSTEM

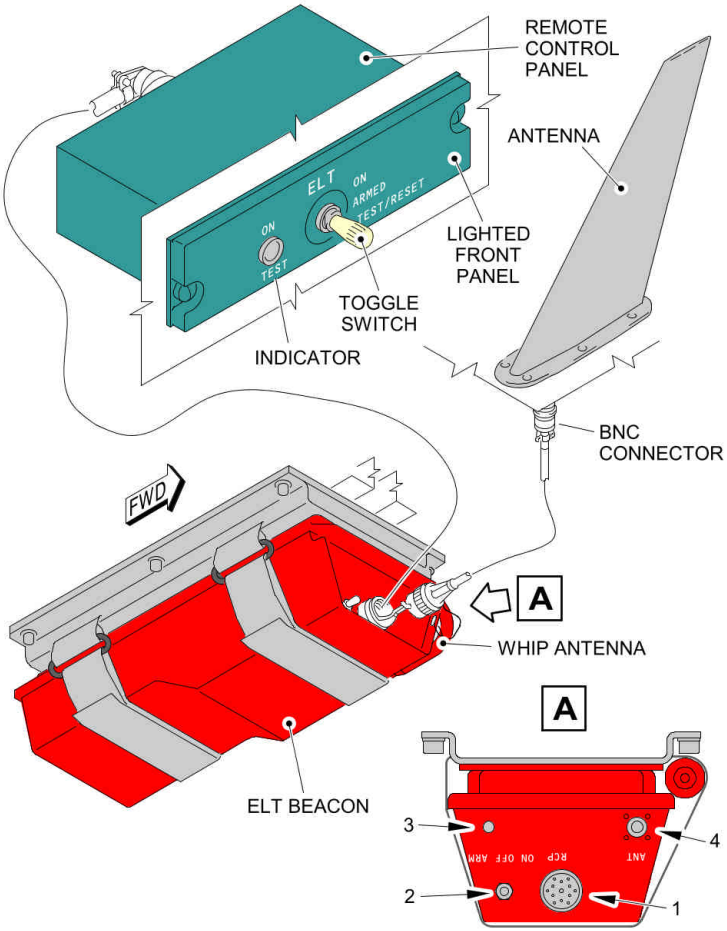
The ELT System transmits on 3 frequencies, 121.5 MHz (civil) and 243 MHz (military) homing signals and with 406 MHz to the COSPAS-SARSAT satellite system. The components of the ELT system are described as follows:

1. The ELT Beacon has these components:
   - PLACARDS attached to the housing (identification, battery expiry date and operating instructions).
   - An electronic assembly with an activation board and triple-frequency transmitter for 406 MHz, 121.5 MHz and 243 MHz.
   - A high-power battery pack.
   - Interfaces for connecting:
     - The RCP CONNECTOR to the RCP.
     - The ANT CONNECTOR to the ANTENNA.
   - A RED LED.
   - AN ON/OFF/ARM SWITCH.
   - A WHIP-ANTENNA.
2. The RCP is an enclosed box with:
   - A LIGHTED FRONT PANEL.
     - An 'ON'/'ARMED'/'TEST/RESET' TOGGLE SWITCH.
     - An ON/TEST INDICATOR.
   - A BACK PANEL with:
     - A connector to connect the RCP to ELT Beacon.
     - An identification placard.
3. Antenna

   The antenna transmits omni-directional on three-frequencies when the ELT operates. The antenna has these components:
   - A fiberglass radome on an aluminum-alloy base plate.
   - A radiating element placed in the fiberglass radome.
   - A BNC CONNECTOR on the lower side of the base plate.

   The BNC CONNECTOR is connected by coaxial cable to the ANT connection on the ELT Beacon.

Description of the Emergency Locator Transmitter (ELT) System



(1) RCP connection

(2) ON/OFF/ARM TOGGLE SWITCH

(3) A RED LED

(4) ANT connection

GENERAL

The ELT system operates in automatically or manual configuration.

AUTOMATIC OPERATION

1. Automatic operation occurs, when the G-switch detects an impact and the ELT system starts the transmission.
2. The RED LED at the ELT beacon comes ON.

MANUAL OPERATION

Set on the RCP the ON/OFF/TEST/RESET TOGGLE SWITCH to the ON position. The RED LED and the aural indicator indicate ELT beacon activation.

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SPECIAL MEDICAL EQUIPMENT

Applicable to: ALL

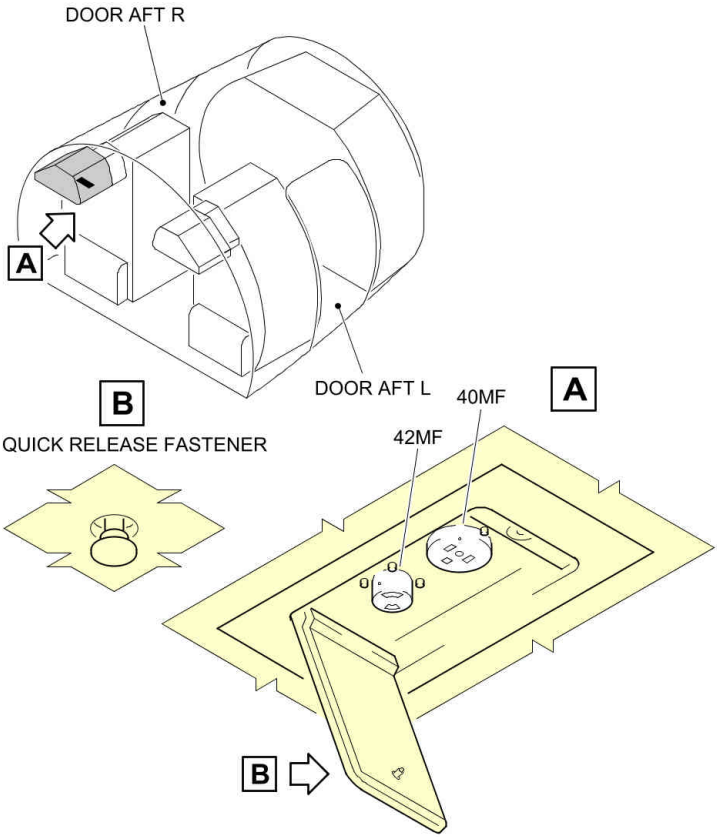
This chapter gives information about the location and description of the supplementary medical equipment.

MEDICAL RECEPTACLE

Location

1. General
   1 medical panel, integrated underneath the lateral hatrack (PSU channel) is on board the aircraft. The medical panel has 2 medical receptacles (referred to receptacle).
2. Location of the Medical Panel:
   - AFT cabin area, RH in the PSU channel.

Medical Receptacle



Description and Operation

1. Description
   The receptacles are installed to supply medical equipment with electrical power.

The medical panel has these components:

- Cover
  The cover protects the receptacles.
  The cover is held in the closed position with a quick-release fastener (push to open/push to close).
- Receptacle
  The medical panel has the receptacles 40MF and 42MF.
  The receptacle 40MF is supplied with 115 V AC 400 Hz 1-phase.
  The receptacle 42MF is supplied with 28 V DC.

2. Operation

Putting into Operation

- Open the cover of the medical panel by pushing the quick-release fastener.
- Connect the medical equipment to the related receptacle.

Note: *Only authorized persons who are familiar with operation of the medical equipment may use this device.*

Taking out of Operation

- Switch off the medical equipment and disconnect it from the related receptacle.
- Close the cover of the medical panel by pushing the quick-release fastener against the latch until it engages with a snap.

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STANDARD OPERATING PROCEDURES

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REFUELING/DEFUELING PROCEDURE WITH PASSENGERS ON BOARD....A

08-130 DANGEROUS GOODS

Dangerous Goods....A

GENERAL INFORMATION

Applicable to: ALL

The CCOM's Standard Operating Procedures (SOPs) and Abnormal/Emergency Procedures are those recommended by Airbus as operational guidelines.
Standard Operating Procedures should be developed in accordance with Operator policies, procedures and local Aviation Authority requirements.
If an airline wishes to integrate its customized procedures, the airline can do so by using the "XML version" of the CCOM.
SOPs are normal cabin crew procedures for standard aircraft operations.
Aviation Authorities do not certify the SOPs.
SOPs are continuously updated. Revisions take into account the feedback received from all Operators, in addition to the results of continuous monitoring of the aircraft's in-service life.
SOPs are composed of inspections, cabin preparations, and normal procedures.

PRESENTATION

Applicable to: ALL

When inserted in the procedure, expanded information appears in italics.

This information :
- Explains actions for which the reason is not evident.
- Furnishes additional background info.

If an action depends on a precondition, a black dot identifies the precondition. For example :

BLACK DOT

DOOR OPERATION FROM INSIDE
• IF THE RED CABIN PRESSURE INDICATOR FLASHES :
– DO NOT OPEN THE DOOR AND REPORT TO COCKPIT CREW.

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EFFECTIVE BRIEFINGS FOR CABIN OPERATIONS

Applicable to: ALL

INTRODUCTION

A safe flight starts with good planning, and good planning for a flight starts with briefings. Briefings are a very important part of any flight preparation.
Different briefings take place before the flight:

The Purser to cabin crew preflight briefing	**The flight crew** to cabin crew preflight briefing
The passenger preflight safety briefing	

Note: The passenger preflight safety briefing is addressed in the Planned Ground Evacuation Flight Operations Briefing Notes

There may also be other briefings during the flight for example during unusual, abnormal or emergency situations.
The aim of briefings is to establish a clear plan of action, communicate and exchange information and ensure there is a common understanding between all crewmembers .
The aim of this effective briefings is to enable the cabin crew to:

1. Plan and prepare briefings
2. Perform successful briefings
3. Improve communication and coordination onboard the aircraft

Note: The word 'Purser' refers to Senior Cabin Crewmember.

BACKGROUND INFORMATION

Briefings are identified as being a crucial ingredient to effective crew resource management to:

- Ensure open communication between the flight crew, the cabin crew and the passengers
- Promote teamwork
- Ensure that task sharing and the workload is evenly distributed
- Set the expectations and standards for the flight.

The lack of some of these elements has been cited in many accident and incident reports as a contributing factor, for example:

- A lack of communication and coordination between the flight crew and the cabin crew
- Misunderstandings due to ineffective communication
- Errors, due to heavy workload
- Errors, due to intentional/unintentional deviation from procedures.

An effective briefing is a valuable tool for cabin crew and flight crew to help manage errors and achieve a successful outcome.

OBJECTIVES OF CREW BRIEFINGS

The briefing should provide a clear picture of the flight and build a common understanding amongst the crew of the expectations of the flight.
A successful briefing should be short, interesting and detailed, and should include teamwork, communication, coordination, planning and anticipating possible events:

TEAM BUILDING AND TEAMWORK	Many cabin crew and flight crew are faced with the challenge of constantly working with different colleagues, often with colleagues that they have never met or worked with before. However, they are expected to work in very close proximity for long periods of time. In this case, it is important to quickly establish teamwork and **synergy**. Good team performance depends on synergy, which means working together. **Synergy** is a vital ingredient to effective teamwork. The conditions for synergy are: - A shared goal - A clear crew structure - Clear task allocation - Team spirit - Good Leadership. The structure of the cabin crew ensures that each cabin crew member has a specific role and specific duties related to that role. The application of good Crew Resource Management (CRM) within a crew creates the right balance for the crew to work as an effective team. For a team to be successful, they must be able to talk to each other, share information, listen to each other and be assertive, when necessary.
ENCOURAGE OPEN COMMUNICATION	A good briefing must encourage open, interactive communication between all crewmembers, emphasizing the importance of questions, input from crewmembers, and exchanging information.
CREW COORDINATION AND WORKLOAD DISTRIBUTION	The briefing establishes the chain of command and identifies the leadership. The Purser organizes the workload and duties of the cabin crew, and ensures that each cabin crewmember understands their responsibilities. The workload must be evenly distributed amongst the crewmembers to avoid individuals from work overload, which may distract attention from critical tasks, and lead to errors.

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PLANNING AND TIME MANAGEMENT	Cabin crew activities should be planned, based on the flight time, the expected flight conditions, the Standard Operating Procedures of the Operator, and the service requirements. Cabin crew should be encouraged to prioritize tasks during periods of heavy workload, and according to flight conditions.
UNPLANNED EVENTS	Briefings are the ideal moment for cabin crew and flight crew to discuss the importance of safety duties and responsibilities, to ensure crew communication, coordination and crew awareness during unplanned events. Highlight the need for the cabin crew to: - Respond promptly and efficiently to any unusual, abnormal or emergency situation - Communicate with flight crew and Purser.

WHEN TO PERFORM THE CABIN CREW BRIEFING

Cabin crew preflight briefings and flight crew to cabin crew preflight briefings should be performed before each duty period. In most countries, cabin crew briefings are mandatory and are required by the national aviation authority regulations.

Sufficient time should be spent on the briefing to ensure that all crewmembers are familiar with their operating position and duties. The time will vary depending on the number of crew, size of aircraft, area of operation, etc.

When possible, the preflight briefings should be held in a designated briefing room. If this is not possible, the briefing may be performed onboard the aircraft, before passenger boarding begins.

BRIEFING TECHNIQUES

The briefing is addressed to all cabin crewmembers, and is performed by the Purser (senior cabin crewmember). The expectations, tone and the standards for the flight are set during this briefing. The Purser must keep in mind the main objectives of the briefing, as well as important information specific to the flight.

A good tip to conduct an effective briefing is to use the **A**, **B**, **C** rule:

A for Appropriate:

The briefing should be relevant and appropriate to the flight. It should highlight the specific details of the flight. A briefing should be prepared for each individual flight otherwise it may become routine and repetitive.

The Purser should:

- Plan and prepare the briefing
- Select the relevant information before the briefing.

B for Brief:

A briefing should be as the word suggests, “brief”. The Purser should keep the briefing short to ensure that the attention of all cabin crew is focused on the most important points.

C for Clear and Concise:

The briefing must be understood by all cabin crew. It should be interactive, and encourage cabin crew to share information and ask questions. The Purser should adopt good communication methods to encourage feedback.

SETTING THE TONE FOR EFFECTIVE TEAMWORK

The briefing is the starting point for a high performance team. The Purser must create an environment where open, interactive communication is encouraged. The Purser can use some practical communication skills to create such an environment, using positive language and appropriate body language. For example, the use of the word “we” encourages all cabin crew to participate and contribute to the flight.

The purser should:

- Use professional and friendly language
- Listen with patience and not interrupt others
- Ask the cabin crew if they have any questions or comments
- Encourage the cabin crew to exchange information and ideas at all times
- Ensure all cabin crew are involved in the briefing
- Answer questions directly
- Use eye contact, as appropriate.

THE PURSER TO CABIN CREW PREFLIGHT BRIEFING

As previously mentioned the briefing should focus on the most important points relevant to the flight.

The cabin crew briefing should cover the following points:

- **Introductions:** The preflight briefing must always start with professional, respectful introductions, It is important that the Purser invites the cabin crew to introduce themselves, particularly as they may not already know each other.
- **Flight details:** For example, the flight number, destination(s), departure time, estimated time of arrival, aircraft registration.
- **Special flight information:** For example, passenger loads, special requirements for passengers, any identified maintenance issues that may affect the flight.
- **Workload distribution, task sharing and responsibilities:** Clearly define the duties and responsibilities for each member of the cabin crew, to ensure that they are all aware of their own, and each others, role. The Purser should take into account the rank and operating experience of the cabin crew when distributing the tasks. The Purser should ask safety related questions to ensure that each cabin crew understands their position on board the aircraft.

- **Crew Communication and Coordination:** Encourage the cabin crew to immediately report and communicate any unusual, abnormal or emergency situation to the Captain and the Purser. The Purser should then ensure that each crew member has a clear picture of the situation.
- **Review of the operating procedures:** To ensure that the cabin crew understand the importance of performing their duties in accordance with the Operator's Standard Operating Procedures (SOPs) and emergency procedures. When the procedures are understood and adhered to, they provide a common ground and understanding for the entire crew, and ensure crew coordination at all times.
- **Questions:** It is important to provide the cabin crew with the opportunity to ask questions, in order to clarify that the entire cabin crew has understood the items discussed during the briefing. Many Operators have cabin crew based in different locations throughout the world. The Purser should take into account such cultural aspects and remember that not all crewmembers may have the same understanding.

Note: *Cabin crew must be encouraged to report to the Purser, or the flight crew, anything that they feel may compromise the safety of the flight.*

THE FLIGHT CREW TO CABIN CREW PREFLIGHT BRIEFING

Although the work of the flight crew and cabin crew is very different in nature, the flight crew and the cabin crew work as one crew, with a common goal, the safe completion of the flight.
The sharing of information from the cockpit to the cabin, and from the cabin to the cockpit is essential to the safety of the flight.
The most important Standard Operating Procedure an Operator can adopt to ensure flight crew and cabin crew communication and coordination is a **flight crew to cabin crew preflight briefing.** The flight crew to cabin crew briefing should encourage open two-way communication, teamwork and coordination.
The pre-flight briefing should include the following topics:

- **Introductions:** The flight crew to cabin crew preflight briefing must always start with professional, respectful introductions,
- **The en-route weather:** To determine if areas of turbulence are anticipated during the flight and to manage and secure the cabin in a timely manner.
- **The estimated flight time:** The flight time may be shorter or longer than expected. This information will help the Purser with time management to organize cabin activities.
- **Unusual Situations:** For example, armed escorts traveling onboard.
- **Cockpit entry procedures:** Use of interphone and Cockpit Door Surveillance System (CDSS). Dimming the lights before entry.
- **Sterile cockpit rule:** The sterile cockpit procedures should be discussed, for example the signals and procedures to be applied when the sterile cockpit rule is in effect. During this briefing, the Purser and Captain should establish the circumstances in which it is acceptable to call the flight crew when the sterile cockpit rule is in effect.

- **Emergency and communication procedures:** Use of call/alert system and interphone.
- **Anything that the flight crew or the cabin crew need to discuss related to the flight:** Any training taking place in the cockpit. The number of Persons with Reduced Mobility (PRMs) expected on board and where they will be seated.

SETTING THE TONE FOR EFFECTIVE TEAMWORK

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- Ensure all cabin crew are involved in the briefing
- Answer questions directly
- Use eye contact, as appropriate.

CREW COMMUNICATION

Applicable to: ALL

INTRODUCTION

Effective communication between cabin crew and flight crew is essential. It is a key element in setting the tone for the management of the flight. Communication enables cabin crew to contribute to the decision-making process and to enhance situational awareness in normal and abnormal situations.
Communication is essential for the safe operation of the aircraft as many accident analyses have indicated that communicating information between the cabin and the cockpit is vital to flight safety.

STATISTICAL DATA - BACKGROUND INFORMATION

STATISTICAL DATA

A survey of pilot safety representatives and cabin crew stated that:

- 37 % of the Cabin Crew
- 60 % of the pilots

Thought that communication between flight and cabin crew was adequate.

CREW RESOURCE MANAGEMENT (CRM)

CRM can be defined as the effective use of all available resources (e.g. all crew, aircraft systems and supporting facilities), to achieve safe and efficient operations (EU-OPS and ICAO) Initially, CRM was for flight crew only. Today, it is a mandatory part of all cabin crew training in EASA and FAA operating regions and many countries throughout the world.
It helps crew to be:

- Objective
- Effective

CRM reviews topics such as:

- Situational awareness
- Effective communication
- Planning and decision-making
- Stress awareness
- Human factors

COMPANY CULTURE

The company should encourage good communication between the flight crew and the cabin crew and provide all employees with:

- The marketing policy (e.g. service-orientation)
- The operator safety policy (e.g. Procedures)

The company also has responsibility in promoting:

- The feeling of cooperation and mutual respect and understanding
- Effective communication between flight and cabin crew
- Joint pre-flight briefings for flight and cabin crew to review operational procedures
- Joint debriefings for safety-related occurrences
- Update of Standard Operating Procedures

CREW COMMUNICATION / COORDINATION

STANDARD OPERATING PROCEDURES

Standard Operating Procedures (SOPs) are a set of written instructions that document a routine or a repetitive activity during the normal course of their duty. They detail the work processes that are conducted.
SOPs are a form of communication that is provided by the operators to crew. When the procedures are understood and adhered to, they provide a common ground and understanding between the entire crew.
Many operators have crew of different cultures and nationalities who are sometimes based in various parts of the world. The common language of SOPs enables all crew to work together and communicate.
SOPs are structured in a specific format and should be followed in a concise, step-by-step manner. They are designed to ensure that cabin crew go through the correct process when performing actions such as operating doors and arming/disarming slides.
Emergency procedures are essential when unusual events occur (e.g. oven smoke, etc). Crew can coordinate following the written procedures and be reactive and effective.

COMMUNICATION WITH ALL GROUND

Communication with maintenance personnel is important when a technical malfunction occurs. All technical incidents must be reported to them as maintenance personnel ensure the good working condition of an aircraft.
When catering personnel are onboard the aircraft, cabin crew should be present in the galley area to monitor catering operations. It enables the cabin crew to ensure that all equipment is in good working order and clean (e.g. trolleys/brakes, ovens, handles and latches). This gives the cabin crew the opportunity to have the equipment replaced if possible.
The boarding of the aircraft is a very coordinated task between the flight crew, cabin crew and boarding staff. In order to avoid confusion and the boarding of the passengers before the cabin preparation is complete, cabin crew should communicate with the boarding staff.

REPORTING

Reporting is another means of communication that enables the cabin crew to inform the flight crew, safety management or maintenance crew when an unusual event occurs. It is a good way to reduce or eliminate the risk of incidents/accidents or deviations to procedures.
The cabin crew should function as an extension of the flight crew, to ensure safety in the cabin and should never hesitate to report to the flight crew when they think that the safety of the cabin is threatened.
They should raise their situational awareness during operations such as:

DE/ANTI-ICING OPERATIONS:

- A very light coating of snow or ice on the wings can lead a dramatic outcome.

FUELING/DEFUELING :

- Threat of fuel leaks, fire

Passengers can also be a great source of information, and may sometimes be the first to bring information to cabin crew regarding:

- The cabin (noise, fumes, smoke, fire, loose objects…)
- Other passengers behavior
- Aircraft condition (window seals, wings, fuselage…)

Any event or incident should also be reported if it is believed that:

- The safety of the operation can be improved
- SOPs are not efficient enough
- Some events/incidents should be reviewed during training in order to reduce their occurrences.

The report of an event/incident can be delivered in different ways:

AURAL:

- The content of the report must be concise, as precise as possible with a clear terminology to report problems and the actions taken (e.g. oven fire)

WRITTEN:

- The reporting process in the logbook should be as simple as possible and well documented, including details as to what, where and when (e.g. oxygen used during the flight and needs to be replaced)

OPERATIONAL AND HUMAN FACTORS AFFECTING CREW COMMUNICATION

Several factors can deteriorate communication between crew:

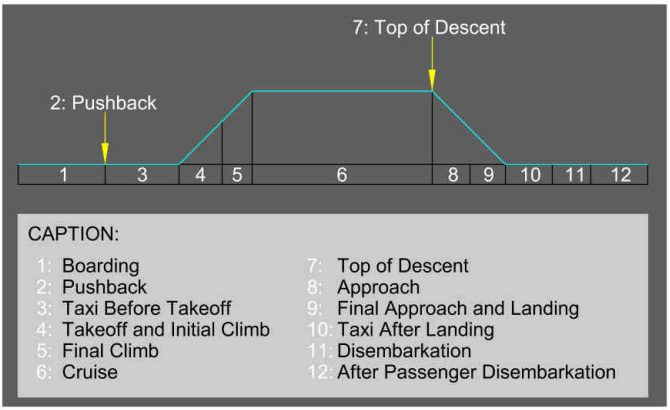
DIFFICULTIES IN THE TRANSMISSION OF COMMUNICATION	• Distortion of information due to background noise, excessive feedback (and volume) on the Passenger Announcement and interphone.
SOPs	• Sterile Cockpit rule when the flight crew should only be disturbed for safety related issues. Poor communication due to the reinforced cockpit door policy.
FATIGUE	• Long flight times, early check-in, late checkout.
STRESS	• Company pressure, high workload.
CULTURAL DIFFERENCES	• Crew flying together may be from different nationalities and the company language may not be their mother tongue. Cultural differences are not just limited to different countries of origin, but education, upbringing and values.
COMPANY CULTURE	• Some operators do not encourage communication between flight and cabin crew.
ASSUMPTIONS	• One of the parties “assumes” that the other party knows or is aware of a situation, and there is no communication at all. The sender of a message may assume that the person receiving the message understands the content and context.
PERCEPTION	• Bad or poor perception of each other’s duties.
LACK OF CONFIDENCE	• A lack of confidence in the abilities of the other members of the crew.

PHASES OF FLIGHT

Applicable to: ALL

The following flight phases are applicable to cabin operations:

PHASES OF FLIGHT



1. **BOARDING**: Begins when the first passenger enters the aircraft, and ends when all the aircraft doors have been closed.
2. **PUSHBACK**: Begins when the jetway is removed, and ends when the aircraft is pushed back.
3. **TAXI BEFORE TAKEOFF:** Begins with the pushback from the gate, and ends when the aircraft begins the takeoff roll.
4. **TAKEOFF AND INITIAL CLIMB**: Begins when the takeoff roll starts, (all people onboard are seated with their seat belts fastened) and ends when the cabin crew are allowed to leave their seats.
5. **FINAL CLIMB**: Begins when the cabin crew leave their seats, and ends when seat belt signs are switched off, after climb.
6. **CRUISE:** Begins when the seat belt signs are switched off and ends when the seat belt signs are switched on before descent.
7. **TOP OF DESCENT**: Begins when the aircraft starts to descend, and ends before the approach.
8. **APPROACH**: Begins at 10 000 ft (approximately 10 min before touchdown), and ends with the cabin ready signal to the cockpit crew.
9. **FINAL APPROACH AND LANDING**: Begins when the cabin crew are required to take their seats and to end when the aircraft leaves the active runway.
10. **TAXI AFTER LANDING**: Begins when the aircraft leaves the active runway, and ends when the seat belts signs are switched off after the final parking position is reached and the aircraft is at a complete stop.

11. **DISEMBARKATION**: Begins when the jetway is positioned, and ends when the last passenger has left the aircraft.
12. **AFTER PASSENGER DISEMBARKATION**: Begins when all passengers have disembarked, and ends either at the next boarding, or when the cabin crew leaves the aircraft.

Note: *The critical phases of flight are 3, 4, 9 and 10: Taxi before Takeoff, Takeoff and Initial climb, Final Approach and Landing, Taxi after Landing.*

STERILE COCKPIT

Applicable to: ALL

CABIN CREW TO FLIGHT CREW COMMUNICATION DURING CRITICAL PHASES OF FLIGHT

The critical phases of flight, refers to all ground operations involving taxi, takeoff, and landing and all flight operations when the aircraft is below 10 000 ft.
The aim of the sterile cockpit policy is to enable the flight crew focus on their duties without being distracted by non-flight related matters.
During the critical phases of flight, the sterile cockpit policy is applied.
Therefore, calls from the cabin crew or entry into the cockpit are restricted to:

SAFETY AND SECURITY RELATED MATTERS

The following are some examples of safety-related situations:
- Fire or smoke in the cabin
- Abnormal noises or vibrations
- Observation of fuel or other fluid leaks.

Note: *In normal operations, the Purser communicates with the flight crew on behalf of the cabin crew. In the case of an abnormal or emergency situation being discovered, the first cabin crewmember to discover a safety-related situation must report it the flight crew.*

DOOR OPERATION FROM OUTSIDE

Applicable to: ALL

OPENING

RED CABIN PRESSURE INDICATOR.....CHECK

The red cabin pressure indicator, seen through the observation window, must not be flashing. If it is, do not open the door.
If cabin crew opens the door while the red cabin pressure indicator is flashing, there is a risk that the cabin door will open violently due to the cabin not being fully depressurized.
The RED INDICATOR LIGHT flashes in case of a cabin differential pressure above 2.5 mbar (0.0362 PSI), when at least one engine is shut down and the related door is disarmed.

FLAP.....PUSH
HANDLE.....GRASP AND LIFT UP FULLY

The handle must be fully lifted UP to the horizontal green line.

DOOR.....PULL OUTWARDS and PUSH FORWARDS

Do not use the handle to move the door.

HANDLE.....LOWER INTO IT RECESS

Note: Doors automatically disarm, when opened from the outside.

CLOSING

Prior to closing, push the gust lock to unlock the door.
CONTROL HANDLE.....LIFT
DOOR.....MOVE TOWARDS THE FRAME and PUSH IN

Do not use the handle to move the door.

CONTROL HANDLE.....LOWER

The door is locked when the handle is flush with the door surface.

DOORS 2 AND 3 OPERATION FROM OUTSIDE

Applicable to: MSN 2927-3120

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The red cabin pressure indicator, seen through the observation window, must not be flashing. If it is, do not open the door.
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DOOR.....MOVE TOWARDS THE FRAME and PUSH IN

Do not use the handle to move the door.

CONTROL HANDLE.....LOWER

The door is locked when the handle is flush with the door surface.

DOOR OPERATION FROM INSIDE

Applicable to: ALL

OPENING

FRAME ASSIST HANDLE.....GRASP

Assist handle is located on the frame.

SLIDE ARMING LEVER DISARMED.....CHECK
GIRT BAR FLOOR VISUAL INDICATION.....CHECK

A girt bar floor visual indication is installed at doors 1 and 4.

SAFETY PIN INSTALLED.....CHECK
CABIN DIFFERENTIAL PRESSURE WARNING INDICATOR.....CHECK

● **If the red cabin pressure indicator flashes**

DO NOT FORCE THE HANDLE TO OPEN THE DOOR.....
.....REPORT TO THE COCKPIT CREW

WARNING	*If cabin crew opens the door while the red cabin pressure indicator is flashing, there is a risk that the cabin door will open violently due to the cabin not being fully depressurized.* *The RED INDICATOR LIGHT flashes in case of a cabin differential pressure above 2.5 mbar (0.0362 PSI), when at least one engine is shut down and the related door is disarmed.*

OUTSIDE CONDITIONS.....CHECK
DOOR CONTROL HANDLE.....LIFT UP FULLY
By using the door assist handle, push the door outwards, then move it forwards until the door locks into its fully open position.

CLOSING

To unlock the door from its fully open position :

FRAME ASSIST HANDLE..... GRASP

Assist handle is located on the frame.

GUST LOCK..... PRESS

The gust lock, located on the support arm, must be pressed with the palm of the hand.

SUPPORT ARM.....PULL SIMULTANEOUSLY
By using the door assist handle, move the door backwards.

Do not use the control handle to move the door.

● **When the door is in front of its frame :**

DOOR..... PULL IN
DOOR CONTROL HANDLE..... LOWER

Check that the door locks correctly.

The door locking indicator, located on the upper part of the door, indicates "LOCKED" (in green).

DOORS 2 AND 3 OPERATION FROM INSIDE

Applicable to: MSN 2927-3120

OPENING

FRAME ASSIST HANDLE..... GRASP

Assist handle is located on the frame.

CONTROL HANDLE PLASTIC COVER..... REMOVE

SLIDE ARMING LEVER DISARMED.....CHECK
SAFETY PIN INSTALLED.....CHECK
CABIN DIFFERENTIAL PRESSURE WARNING INDICATOR.....CHECK

- **If the red cabin pressure indicator flashes**

DO NOT FORCE THE HANDLE TO OPEN THE DOOR.....
.....REPORT TO THE COCKPIT CREW

WARNING	*If cabin crew opens the door while the red cabin pressure indicator is flashing, there is a risk that the cabin door will open violently due to the cabin not being fully depressurized.* *The RED INDICATOR LIGHT flashes in case of a cabin differential pressure above 2.5 mbar (0.0362 PSI), when at least one engine is shut down and the related door is disarmed.*

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DOOR CONTROL HANDLE..... LIFT UP FULLY

By using the door assist handle, push the door outwards, then move it forwards until the door locks into its fully open position.

CLOSING

To unlock the door from its fully open position :

FRAME ASSIST HANDLE..... GRASP

Assist handle is located on the frame.

GUST LOCK..... PRESS

The gust lock, located on the support arm, must be pressed with the palm of the hand.

SUPPORT ARM.....PULL SIMULTANEOUSLY

By using the door assist handle, move the door backwards.

Do not use the control handle to move the door.

- **When the door is in front of its frame :**

DOOR..... PULL IN
DOOR CONTROL HANDLE..... LOWER

Check that the door locks correctly.

The door locking indicator, located on the upper part of the door, indicates "LOCKED" (in green).

CONTROL HANDLE PLASTIC COVER.....INSTALL

COCKPIT DOOR OPERATION

Applicable to: ALL

DOOR OPENING FROM THE CABIN

CABIN CREW ROUTINE ACCESS..... REQUEST ON KEYPAD
CABIN CREW.....PRESS #, or N + #

"N" represents an Operator-defined figure between 0 and 7 digits.

CABIN CREW.....STAND IN COCKPIT DOOR AXIS

The cabin crew should stand in the axis of the cockpit door.
A buzzer sounds in cockpit.

- **If entry is NOT authorized by the flight crew :**
  - The flight crew locks the door via the DOOR LOCK switch.
  - The keypad's red light comes on steady, and indicates that the door is locked. Emergency access, the buzzer, and the keypad are inhibited for a preselected time between 5 and 20 min.
- **If entry is authorized by the flight crew :**
  - The flight crew unlocks the door via the DOOR LOCK switch.
  - The keypad's green light comes on steady, and indicates that the door is unlocked.

  CABIN CREW.....PUSH THE DOOR TO OPEN
- **If there is no reaction from the flight crew :**
  CABIN CREW SECOND ACCESS.....REQUEST ON KEYPAD

  Repeat the above procedure.
- **If there is no reaction from the flight crew, after the second request :**
  CABIN CREW.....CALL THE COCKPIT

  To establish contact with the flight crew and request access to the cockpit.
  - **If there is no reaction from the flight crew, after a cabin crew interphone call :**
    CABIN CREW.....
    ..... APPLY THE FOLLOWING EMERGENCY ACCESS PROCEDURE
    EMERGENCY ENTRY CODE.....ENTER, AND PRESS #

    The emergency entry code is an Operator-defined figure between 2 and 7 digits.
    A buzzer will sound continuously in the cockpit and the keypad's green light flashes. After a preselected time between 15 and 120 s, the keypad's green light comes on steady, and the cabin crew can then push the door open.

  CABIN CREW.....PUSH DOOR TO OPEN

  The cockpit door unlocks for 5 s.

The buzzer stops and indicates that the door is unlocked.

DOOR OPENING FROM THE COCKPIT

DOOR LOCK SWITCH..... UNLOCK

Unlock switch position must be maintained to unlock the door.
The green LED comes on, on the keypad.

COCKPIT DOOR..... PULL

The door can only be opened by pushing it during switch activation.

COCKPIT SLIDING WINDOWS OPERATION

Applicable to: ALL

OPENING

OPERATING LEVER.....PRESS FULLY

This will disengage the locking pins from their latches. As soon as the operating lever is pressed, a red indicator appears to show that the window is unlocked.

OPERATING LEVER.....ROTATE AFT

This will release the window from its fixed structure.

Pull backwards to slide the window panel aft.

At the end of travel, the window is locked in the open position.

CLOSING

To unlock the window :

LOCKING PIN..... UNLOCK (PULL AFT)
OPERATING LEVER..... PUSH FORWARD

The operating lever must be pushed until the window panel is in its fixed frame.

OPERATING LEVER.....ROTATE FORWARD

This will move the window panel into its frame.

The window is closed and locked, when the red indicator on the handle is no longer visible.

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PREFLIGHT BRIEFING

Applicable to: ALL

The Pre-Flight Briefing is the starting Block for a high-performance crew. The aim of the briefing is to organize the crew activities, to ensure that the workload is evenly distributed amongst the crew.

WHO	- The Purser conducts the Pre-Flight Briefing - The entire cabin crew attends the Pre-Flight Briefing
WHY	- To highlight: • Safety and security standards • Cabin crew performance expectations • The chain of command - To encourage: • A high level of safety • Communication/Crew Resource Management (CRM) • Teamwork • Crew coordination
WHAT the Pre-Flight Briefing must include	- Cabin crewmember introduction and welcome - An introduction to the flight crew, if possible. (If it is not possible to meet the flight crew during the cabin crew briefing, the Purser must brief with the flight crew on board the aircraft) - Flight information (aircraft type, aircraft status, flight number, flight destination, flight duration) - The allocation of cabin crewmember briefing areas and responsibilities. The Purser should take into consideration the rank and operating experience of the cabin crewmember. - The allocation of cabin crewmember commercial tasks (galleys, I...) - Cabin crew cooperation aspects: • Discipline, responsibilities, chain of command and reporting • Importance of crew coordination and communication - An in-flight safety review includes : Exit-row seating requirements / identifying Able-Bodied Passengers (ABP) • The need for constant situational awareness • The importance of silent review • Sterile cockpit rules and guidelines • A reminder to report unusual occurrences
WHERE	- In a designated briefing room, or - On board the aircraft

Continued on the following page

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WHEN	- At the beginning of each duty period - At a time that is specifically reserved for this purpose
HOW it must be done	- The Purser must prepare the safety briefing in advance, the briefing should be relevant, and appropriate to the flight. - The Purser must welcome the crew - All cabin crewmembers should be able to see and hear the Purser - The Purser should speak clearly - It is important that every cabin crewmember knows their allocated work position, and their safety responsibilities. - The briefing should be understood by all the cabin crewmembers. - Give the cabin crewmembers the opportunity to ask question - The Purser must respect time constraints

GROUND CHECK

Applicable to: ALL

The ground check procedures should be performed in accordance with Operator policies, procedures and local Aviation Authority requirements.
The ground check procedures are usually performed before the departure of flights from originating stations and transit stops when a crew change has taken place.
Cabin crew should check the operation of the different systems.

PHOTOLUMINESCENT FLOOR PATH MARKING

To ensure the photoluminescent floor path marking is fully charged prior to push back.

CABIN LIGHTING.....ON

Cabin lighting must be set to ON prior to the push back with a minimum of:

- *DIM1 level (i.e. 50% of brightness) for 30 min or,*
- *full bright for 15 min .*

EMERGENCY LIGHT ACTIVATION

This check should be performed with one cabin crew located at the FAP, and the others located at each evacuation area :

FAP's EMER PUSHBUTTON.....PRESS

The cabin crew should check whether the emergency lighting system is properly operating in all of the different zones : exit signs, exit lights, emergency ceiling lights and escape path marking system.

CABIN CREW.....REPORT
FAP's EMER PUSHBUTTON.....PRESS

SYSTEMS CHECK

The cabin crew should check the FAP CIDS caution button :

- **If CIDS caution light is illuminated in flashing mode :**
  A text message is displayed in the INFO ROW.

  CABIN CREW.....CHECK THE RELATED SYSTEM PAGE
  CABIN CREW.....REPORT TO MAINTENANCE

WATER/WASTE QUANTITY

The cabin crew should check the water/waste quantity before departure.
The water/waste quantity check is performed using the FAP.

WASTE QUANTITY

WASTE QUANTITY.....CHECK

The waste tank should be empty before the aircraft departure.

WATER QUANTITY

WATER QUANTITY.....CHECK

Ensure that the quantity of water available is sufficient for the amount of passengers, and, the expected duration of flight.

Note: Any discrepancies or malfunctions (Blue cards) must be reported to the flight crew and, maintenance as early as possible.
The water and, waste quantities must be confirmed to the flight crew as correct before departure.

PASSENGER ADDRESS TEST

DIRECT PA FROM ANY STATION TO ALL LOUDSPEAKERS :

This PA is addressed to all cabin zones, attendant stations.

HANDSET INTERPHONE..... HOOK OFF
PTT PUSHBUTTON ONLY..... PRESS

The "DIRECT PA" indication appears on the upper line of calling AIP.

ANNOUNCEMENT..... START

On all other AIPs, the "DIRECT PA IN USE" message appears on the lower line.

Note: This direct passenger announcement system should only be used for urgent messages.

PASSENGER CALL TEST

RANDOM PASSENGER CALL TESTS SHOULD BE PERFORMED IN EACH CABIN ZONE

On the PSU, CABIN CREW CALL BUTTON..... PRESS
On the PSU, check that the corresponding seat row numbering light illuminates.
On the ACP of the corresponding zone, check that the blue light is on.
On the AIP of the corresponding zone, check that a "CALL SR XX LH/RH" message appears on the AIP's lower line.
At the cabin crew and all passengers loudspeakers of the applicable zone, check that a HI1 tone audio chime is triggered.
Repeat this check at random in all of the cabin zones.

RANDOM PASSENGER CALL TESTS SHOULD BE PERFORMED IN LAVATORIES

In lavatory, on LSU, CABIN CREW CALL BUTTON.....PRESS
The amber light of the respective lavatory is on, located on the outside wall-mounted PAX call indicator.

On the ACP of the corresponding zone, check that the amber light is on.
On the AIP of the corresponding zone, check that a "LAV XX" message appears on the AIP's lower line.
At the cabin crew and all passengers loudspeakers, check that a HI1 tone audio chime is triggered.
Repeat this check in other(s) lavatory(ies).

INTERPHONE CALL TEST - CABIN TO CABIN

PURSER CALLS TO ALL ATTENDANTS STATIONS

FWD L HANDSET INTERPHONE.....HOOK OFF
INTPH+ALL..... DIAL
Check that the "ALL ATTND" indication appears on the upper line of the FWD L AIP.
On the ACP of all cabin crew stations, check that the red light comes on steady.
Check that a HI1-LO1 chime triggers at all cabin crew loudspeaker stations as well as all passengers loudspeakers.
On the AIP of all cabin crew stations, check that a "CALL ATTND 1 L" message appears, and that steady green indicator comes on.
ALL CABIN CREW STATION HANDSET INTERPHONES.....HOOK OFF
COMMUNICATION.....START
ALL CABIN CREWS..... REPORT

INTERPHONE CALL TEST - CABIN TO COCKPIT

CABIN CREW CALLS TO THE COCKPIT

HANDSET INTERPHONE..... HOOK OFF
CAPT.....DIAL
Check that the "CAPTAIN" indication appears on the upper line of the calling AIP

On the cockpit ACPs, the ATT lights flashes and a buzzer sounds (1x3 s).

EMERGENCY CABIN CREW CALLS TO THE COCKPIT

HANDSET INTERPHONE..... HOOK OFF
EMER CALL.....DIAL
Check that the "EMER CALL" indication appears on the calling AIP.

The legend flashes on EMER pushbutton of the cockpit's call panel.
On the cockpit ACPs, the ATT light flashes and a buzzer sounds (3x3 s).

INTERPHONE CALL TEST - COCKPIT TO CABIN

COCKPIT CALLS TO THE PURSER

In the cockpit

ACP FWD CALL BUTTON..... PRESS

In the cockpit, use the ACP to communicate.

In the cabin :

On the ACP of FWD cabin crew station, check that the red light comes on steady.
Check that a HI1-LO1 chime triggers at all cabin crew loudspeaker stations as well as all passengers loudspeakers.
On the AIP of the FWD station, check that a "CALL CAPTAIN" message appears on the AIP's upper line, and that a steady green indicator comes on.
FWD CREW STATION HANDSET INTERPHONE..... HOOK OFF
PURSER.....REPORT

LAVATORY SMOKE DETECTORS

LAVATORY SMOKE DETECTORS..... CHECK

The Cabin Crew should visually check for any signs of tampering with the lavatory smoke detectors .
If foreign objects (such a tissue paper or plastic bags), or signs of tampering are found , the Cabin Crew should inform the line maintenance.

DEPARTURE PROCEDURES

Criteria: K8400, K9459, SA
Applicable to: MSN 2927-3120

PURSER.....CALL CABIN CREW

Purser calls cabin crew via the PA.

ALL DOORS LOCKED.....CHECK
SLIDE ARMED.....ORDER

ARMING PROCEDURE

SAFETY PIN (with red flag).....REMOVE
ARMING LEVER.....PUSH FULLY DOWN TO THE ARMED MODE

The arming lever is armed, when it is in the section labelled "ARMED".

Note: *When the door is in the "ARMED" mode, the "cabin pressure warning light" does not illuminate to indicate cabin differential pressure.*

SAFETY PIN (with red flag).....STOW

For doors 1 and 4 safety pin is stowed in a hole located on the support arm. The red flag must be stowed (not hanging). For doors 2 and 3 the safety pin is stowed in pocket of CAS compartment.

GIRT BAR FLOOR VISUAL INDICATION.....CHECK

A girt bar floor visual indication is installed at doors 1 and 4.

The door is now ready for flight.

DOOR/SLIDES CHECK

Before each flight, the cabin crew must perform the following checks :

ALL DOORS LOCKED AND ARMED.....CHECK
CROSSCHECK ALL DOORS.....CONDUCT

Note: *For aircraft equipped with overwing exits, these exits remain armed at all times.*

DOORS/SLIDES FAP CHECK

Purser checks the status of the doors/slides on the FAP :

DOORS/SLIDES PAGE.....SELECT
ALL DOORS LOCKED and ALL SLIDES ARMED.....CHECK

CABIN READY NOTIFICATION

When the cabin is ready for take off, the purser must notify the cockpit crew.

CABIN READY.....NOTIFY THE CAPTAIN

● **On the FAP, if the CABIN READY function is available :**

CABIN STATUS PAGE.....SELECT
CABIN READY PUSHBUTTON.....PRESS

DEPARTURE PROCEDURES

Criteria: K8400, SA
Applicable to: MSN 2649

PURSER.....CALL CABIN CREW

Purser calls cabin crew via the PA.

ALL DOORS LOCKED.....CHECK
SLIDE ARMED.....ORDER

ARMING PROCEDURE

SAFETY PIN (with red flag).....REMOVE
ARMING LEVER.....PUSH FULLY DOWN TO THE ARMED MODE

The arming lever is armed, when it is in the section labelled "ARMED".

Note: When the door is in the "ARMED" mode, the "cabin pressure warning light" does not illuminate to indicate cabin differential pressure.

SAFETY PIN (with red flag).....STOW

Safety pin is stowed in a hole located on the support arm. The red flag must be stowed (not hanging).

GIRT BAR FLOOR VISUAL INDICATION.....CHECK

A girt bar floor visual indication is installed at doors 1 and 4.

The door is now ready for flight.

DOORS/SLIDES CHECK

Before each flight, the cabin crew must perform the following checks :

ALL DOORS LOCKED AND ARMED.....CHECK
CROSSCHECK ALL DOORS.....CONDUCT

Note: For aircraft equipped with overwing exits, these exits remain armed at all times.

DOORS/SLIDES FAP CHECK

Purser checks the status of the doors/slides on the FAP :

DOORS/SLIDES PAGE.....SELECT
ALL DOORS LOCKED and ALL SLIDES ARMED.....CHECK

CABIN READY NOTIFICATION

When the cabin is ready for take off, the purser must notify the cockpit crew.

CABIN READY..... NOTIFY THE CAPTAIN

- **On the FAP, if the CABIN READY function is available :**
  CABIN STATUS PAGE..... SELECT
  CABIN READY PUSHBUTTON..... PRESS

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ARRIVAL PROCEDURES

Applicable to: ALL

PURSER.....CALL CABIN CREW

Purser calls cabin crew via the PA.

SLIDE DISARMED.....ORDER

DOORS DISARMING PROCEDURE

SAFETY PIN (with red flag hanging)..... REMOVE FROM STOWAGE
ARMING LEVER..... LIFT FULLY TO THE DISARMED POSITION

Once the door is disarmed :

SAFETY PIN (with red flag hanging).....REPLACE
GIRT BAR FLOOR VISUAL INDICATION.....CHECK

A girt bar floor visual indication is installed at doors 1 and 4.

DOORS/SLIDES CHECK

At arrival, the cabin crew must perform the following checks :

ALL DOORS DISARMED.....CHECK
CROSSCHECK ALL DOORS.....CONDUCT

Note: For aircraft equipped with overwing exits, these exits remain armed at all times.

DOORS/SLIDES FAP CHECK

Purser check the status of the doors/slides on the FAP.

DOORS/SLIDES PAGE..... SELECT
SLIDES DISARMED.....CHECK

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CABIN CREW SAFETY-RELATED DUTIES PRE-PASSENGER BOARDING

Applicable to: ALL

PURSER	CABIN CREWMEMBERS
Pre-flight check of emergency equipment Perform security checks, if required. - Report to Purser: Emergency equipment discrepancies found during the pre-flight checks.	Pre-flight check of emergency equipment Perform security checks, if required. - Report to Purser: Emergency equipment discrepancies found during the pre-flight checks.
End of Pre-Passenger Boarding	End of Pre-Passenger Boarding

CABIN CREW SAFETY-RELATED DUTIES DURING BOARDING

Applicable to: ALL

PURSER	CABIN CREWMEMBERS
- Go to assigned boarding station - Brief Passengers	- Go to assigned boarding stations - Assist unaccompanied minors, handicapped persons, families - Monitor the amount of baggage and ensure correct stowage (overhead bins, under seats) - Check that exits and escape paths are clear of obstructions - Check that aisles and cross-aisles are clear of obstructions - Distribute extension and /or baby seatbelts, if necessary - Manage the passenger flow - Ensure that passengers comply with "No smoking" regulations, as applicable - Ensure that passenger seating complies with seating regulations, as applicable - Check that Able-Bodied Passengers (ABPs) are seated at exits.
Report to Captain : Any unusual or abnormal situations	Report to Purser : Any unusual or abnormal situations
End of BOARDING	End of BOARDING

CABIN CREW SAFETY-RELATED DUTIES BEFORE PUSH BACK

Applicable to: ALL

PURSER	CABIN CREWMEMBERS
- Go to assigned door - Perform the Door Arming Procedure, and cross check the opposite door	- Go to assigned door, or boarding stations - Perform the Door Arming Procedure, and crosscheck the opposite door
- Acknowledge that door checks have been received - Check FAP DOOR page	- Report to purser: Confirm that doors are armed and crosschecked
	Check that : - Passengers are seated with seat belts fastened - Stowage of passengers and crew baggage complies with regulations, - lavatories are vacant and secured - Social areas are vacant and secured - Crew rest areas are vacant and doors are closed and locked - Galley are secured, all catering items are correctly stowed and latched - Exit and escape paths are clear of obstructions - Cabin curtains are open and secured
Report to Captain: Confirm passenger count	Report to Purser: Confirm passenger count

CABIN CREW SAFETY-RELATED DUTIES DURING TAXI BEFORE TAKEOFF

Applicable to: ALL

PURSER	CABIN CREWMEMBERS
- Go to assigned boarding station - Request crewmembers to take their "Passenger Safety Briefing" position	- Go to assigned boarding station - Take "Passenger Safety Briefing" position
- Perform the "Passenger Safety Briefing" announcement	- Perform the "Passenger Safety Briefing" Note: *For aircrafts equipped with pictograms on exit marking signs and on exit location signs, the cabin crew in charge of the safety briefing should highlight these pictograms to the passengers.*

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PURSER	CABIN CREWMEMBERS
	Check that : - Passengers are seated with their seat belts fastened - Stowage of passenger and crew baggage complies with regulations, - All pre-departure service items are removed - Tray tables are in upright and locked position and cup holders are stowed - Seat backs are in upright position, armrests and footrests are correctly stowed - Lavatories are vacant and secured - Infant life vests are distributed - Social areas are vacant and secured - Crew rest areas are vacant, crew rest doors are closed and locked - Galleys are secured, and all catering items are correctly stowed - TV monitors and In-Flight Entertainment (IFE) equipment are stowed - Passengers comply with Portable Electronic Devices (PED) restrictions - Any equipment items are stowed as required - Exits and escape paths are clear of obstructions - Aisles and cross-aisles are clear of obstructions
- Report to Captain "Cabin ready for takeoff" . Press the CABIN READY pb ◁ on the FAP	- Report to Purser "Cabin ready for takeoff" Take designated crew seat and secure harness for takeoff
- Adjust the cabin lighting - Take crew seat and secure harness for takeoff	
- Perform the silent review	- Perform the silent review

CABIN CREW SAFETY-RELATED DUTIES DURING TAKEOFF AND INITIAL CLIMB

Applicable to: ALL

PURSER	CABIN CREWMEMBERS
- Remain seated.	- Remain seated.

Note: However in accordance with airline policies and procedures, it may be acceptable for cabin crew to leave their seats for safety related event.

CABIN CREW SAFETY-RELATED DUTIES DURING FINAL CLIMB

Applicable to: ALL

PURSER	CABIN CREWMEMBERS
- Adjust cabin lighting	- Check lavatories - Close cabin curtains
- Report to Purser	- Report to Purser

CABIN CREW SAFETY-RELATED DUTIES DURING CRUISE

Applicable to: ALL

PURSER	CABIN CREWMEMBERS
- Purser may decide, in the absence of instructions from the cockpit crew, to discontinue non-safety related tasks during turbulence - Check regularly FAP	- Frequently monitor lavatories, galleys and cabin (at least every 15 min) - Check that the fire detection systems have not been disabled or tampered with - Regularly report to Purser - Ensure passenger and crew compliance with all lighted signs, placards and crewmembers instructions - Ensure that passengers use only permitted electronic devices
- Maintain communication with cockpit crew, Purser and cabin crewmembers - Enter cabin maintenance items and any emergency equipment use into the cabin logbook.	- Maintain communication with Purser - Inform purser of cabin maintenance items or use of any emergency equipment that should be entered in the cabin logbook
- Report to cockpit crew : Any unusual or abnormal situations	- Report to Purser: Any unusual or abnormal situations

CABIN CREW SAFETY-RELATED DUTIES FROM TOP OF DESCENT

Applicable to: ALL

PURSER	CABIN CREWMEMBERS
- Make preliminary announcement to start securing the cabin	- Open cabin curtains Check that: - Passengers are seated with seat belts fastened - Stowage of passengers and crew baggage complies with regulations, as applicable - Social areas are vacant and secured - Crew rests areas are vacant and door closed - Galleys are secured, and all catering items are correctly stowed - Any equipment items are stowed, as required - Commercial electrical equipments is off - Exits and escape paths are clear of obstructions - Aisles and cross-aisles are clear of obstructions
- Complete and close the cabin Logbook.	- Report to Purser: Any cabin maintenance items and use of any emergency equipment.
- Ask for any special ground assistance - Request all updated arrival information	

CABIN CREW SAFETY-RELATED DUTIES DURING APPROACH

Applicable to: ALL

PURSER	CABIN CREWMEMBERS
When the Fasten Seat Belt signs come on: - Perform the Cabin Preparation for Landing announcement.	When the Fasten Seat Belt signs come on, ensure that: - Passengers are seated with seat belts fastened - Stowage of passenger and crew complies with regulations - Ensure passenger and crew compliance with all lighted signs, placards and crewmember instructions - Tray tables are in the in upright position and cup holders are stowed - Seat backs are in the upright position, armrests and foot-rests are correctly stowed. - Lavatories are vacant and secured - Social areas are vacant and secured - Galleys are secured, and all catering items are correctly stowed - TV monitors and In-Flight Entertainment (IFE) equipment are stowed - Passengers comply with Portable Electronic Devices (PED) restrictions - Any equipment items are stowed, as required - Exits and escape paths are clear of obstructions - Aisles and cross-aisles are clear of obstructions
- Report to the cockpit crew "Cabin ready for landing". Press the CABIN READY pb on the FAP	- Report to Purser "Cabin ready for landing" Take designated crew seat and secure harness for landing.
- Adjust the cabin lighting - Take designated crew seat and secure harness for landing.	
- Perform silent review	- Perform silent review

CABIN CREW SAFETY-RELATED DUTIES DURING FINAL APPROACH AND LANDING

Applicable to: ALL

PURSER	CABIN CREWMEMBERS
- Remain seated.	- Remain seated.
- Perform the silent review	- Perform the silent review

Note: *However in accordance with airline policies and procedures, it may be acceptable for cabin crew to leave their seats for safety related event.*

CABIN CREW SAFETY-RELATED DUTIES DURING TAXI AFTER LANDING

Applicable to: ALL

CAUTION	The cabin crew must remain seated (except to perform a safety related duty) until: - The aircraft arrives on to the stand.

PURSER	CABIN CREWMEMBERS
- Remain seated at designated crew station	- Remain seated at designated crew station
Perform the Door Disarming procedure and cross check with the opposite door. - Acknowledge doors checks when received - Check the FAP to verify all doors are disarmed.	Perform the Door Disarming procedure and cross check with the opposite door. - Report to Purser: Confirm that doors are disarmed and crossed checked.

CABIN CREW SAFETY-RELATED DUTIES DURING DISEMBARKATION

Applicable to: ALL

PURSER	CABIN CREWMEMBERS
- Go to disembarking station	- Go to assigned disembarking station - Manage the flow of passengers - Ensure that passengers comply with "No Smoking" regulations, as applicable - Disembarkation. of disabled passengers

CABIN CREW SAFETY-RELATED DUTIES AFTER LAST PASSENGER DISEMBARKS

Applicable to: ALL

PURSER	CABIN CREWMEMBERS
	- perform general cabin check (galleys, lavatories)
- Report to Captain	- Report to Purser

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PASSENGER SAFETY BRIEFING

Applicable to: ALL

The safety briefing will prepare passengers for an emergency by providing them with information regarding the location and operation of emergency equipment that they may have to operate in the case of en emergency.
Passengers who are well briefed are better prepared for an emergency.

HOW	- A verbal announcement made by the Purser and a demonstration performed by the cabin crewmembers or, - By an audio visual presentation
WHAT the Passenger Safety Briefing must include	The Passenger Safety Briefing should include the following: - Smoking regulations - Back of the seat to be in the upright position and the tray table stowed - Location of the emergency exits - Location and the use of floor proximity escape path markings - Stowage of hand baggage - Restrictions on the use of portable electronic devices - The location and contents of the safety briefing card Passengers must receive a demonstration of the following: - The use of safety belts and/or safety harnesses, including how to fasten and unfasten the seat belts and/or safety harnesses - The location and use of oxygen equipment. Passengers must also be briefed to extinguish all smoking materials when oxygen is used. - The location and use of life vests, if required. **Individual safety briefings** An individual safety briefing must be provided to a passenger who is unable to receive information contained in the standard safety briefing. These passengers may be: - Visually impaired - Hearing impaired
WHERE	When the cabin crewmembers perform a demonstration, they should stand in their assigned brief and secure areas, in the cabin. When an audio visual presentation is provided cabin crewmembers should stand in their assigned brief and secure area in the cabin and point to the exits.

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WHEN	**After takeoff** Passengers are reminded of the following: - Smoking regulations - The use of seat belts including the safety benefits of keeping seat belts fastened irrespective of the Fasten Seat Belt sign status. **In-flight** Due to turbulence passengers must be instructed to return to their seats and fasten their seat belts. In an emergency in-flight, passengers are instructed in the emergency action that is appropriate to the circumstances. **Before landing** Passengers are reminded of the following: - Smoking regulations - Use of seat belts and/or safety harnesses - Back of the seat to be in the upright position and tray table stowed - Restrictions on the use of portable electronic devices - Restore and secure hand baggage in the correct locations **After landing** Passengers are reminded of the following: - Smoking regulations - To remain seated with seat belts securely fastened until the aircraft has come to a complete stop and the Fasten Seat Belt signs have been switched off.
HOW it must be done	Passenger briefings and safety demonstrations must be performed in a standardized manner: - The speaker must clearly enunciate passenger briefings, and should pause between sentences - Cabin crewmembers must simultaneously perform the safety demonstration, and their gestures should reflect the speaker's step-by-step instructions in real time. To clearly point out areas or safety items within the aircraft: The cabin crewmember should ensure that their fingers (on both hands) are together, and point towards the indicated area.

REFUELING/DEFUELING PROCEDURE WITH PASSENGERS ON BOARD

Applicable to: ALL

CAUTION	The ground area beneath the exits intended for emergency evacuation and slide deployment must be kept clear. Operators will need to designate such exits, taking into account their ground servicing and catering operations.

The cockpit crew must notify the cabin crew before beginning to refuel/defuel.

CABIN PREPARATION BEFORE REFUELING/DEFUELING

The cabin crew must coordinate actions with the cockpit crew to ensure that:

captain

FASTEN SEAT BELT SIGNS.....OFF
NO SMOKING SIGNS.....ON

Purser

CABIN LIGHTING.....ON

The cabin lighting must be on to enable identification of the emergency exits.

The cabin crew must check the following:

Cabin crewmembers

CABIN CURTAINS.....OPEN AND SECURED
EXITS.....CLEAR OF ANY OBSTRUCTIONS
AISLES AND CROSS-AISLES.....CLEAR OF ANY OBSTRUCTIONS

PASSENGER BRIEFING BEFORE REFUELING/DEFUELING

Purser

PASSENGER BRIEFING.....PERFORM

Ladies and Gentlemen, (Pause)
We are about to refuel.

While refueling is in progress, for safety reasons, please:
- *Unfasten your seat belts*
- *Smoking is prohibited*
- *Use of cigarette lighters and matches is prohibited.*
- *Individual items of electronic equipment must not be used while Refuelling/Defuelling is in progress.*

Please, remain seated.
Thank you.

Cabin crewmembers

PASSENGER COMPLIANCE..... CHECK

DOOR AND EXIT PREPARATION DURING REFUELING/DEFUELING

Cabin crewmembers

AT DOORS..... REMAIN

At least one cabin crewmember must be stationed at each pair of door, and must be prepared for an emergency, if required.

DANGEROUS GOODS

Applicable to: ALL

INTRODUCTION

many everyday items and substances can be dangerous when transported by air. due to the variations in temperature and pressure during a flight, some of these items may leak or break, generating toxic fumes or possibly starting a fire.

DEFINITION

The International Civil Aviation Organization (ICAO) defines dangerous goods as;
"Articles or substances which are capable of posing a risk to health, safety, property or the environment and which are shown in the list of dangerous goods in the technical instructions or which are classified according to those instructions".

DANGEROUS GOODS REGULATORY REQUIREMENTS RECOMMENDATIONS

The International Civil Aviation Organization (ICAO) and the International Air Travel Association (IATA) provide guidance material for Operators who wish to develop their dangerous goods training programs. The ICAO and IATA guidance material is updated annually and provides Operators with an excellent source of information on dangerous goods.
EASA, the FAA and Many Aviation authorities require that Operators provide dangerous goods training for cabin crew during initial and recurrent training.
This training Should include :

1. The risks involved in carrying dangerous goods by air.
2. How to deal with a dangerous goods incident onboard the aircraft.

DANGEROUS GOODS CLASSIFICATION

Dangerous goods are classified into hazard classes. Each hazard class is divided into several sections and specific labels are applied to each one of these classes and/or sections.
A system of diamond-shaped placards and labels are used to identify dangerous goods. Different colors and symbols, such as a flame for flammables or skull and crossbones for poisons, identify the dangers associated with the product.

Note: *These symbols are as Known at the time of the publication and are subject to revision. Operators should refer to the IATA Dangerous Goods Regulations.*

Class 1 : Explosives

Explosive substances, explosive articles, and pyrotechnic devices, for example, ammunition, and fireworks

Class 2: Gases

Class 2.1 Flammable Gas: Gases, which ignite on contact with an ignition source, such as acetylene and hydrogen

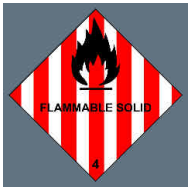
Class 2.2 Non-Flammable Gases: Gases, wich are neither flammable nor poisonous.

Class 2.3 Poisonous Gases : Gases liable to cause death or serious injury to humans if inhaled for example hydrogen cyanide

Class 3: Flammable liquids

Examples are petrol, alcohol, and perfume.

Class 4: Flammable Solids



Class 4.1 Flammable Solids Examples are matches, flammable

Class 4.2: Spontaneous Combustibles

Class 4.3: Dangerous When Wet Solid substances that emit a flammable gas when wet or react with water when wet, such as sodium and potassium.

Class 5 : Oxidizing Agents and Organic peroxides

Class 5.1 Oxidizing Agent oxidizing agents, which are not organic such as ammonium nitrate and chemical oxygen generators.

Class 5.2 Organic Peroxides Are thermally unstable substances that may undergo heat generating, self-accelerating decomposition. These substances are sensitive to impact or friction, or may create a dangerous reaction when in contact with other substances. These substances may be explosive and burn rapidly. Some examples are, fertilizers and pool chemicals.

Class 6: Toxic (poisonous) and infectious substances

Class 6.1 Toxic substances Those substances that are liable to cause death or injury if swallowed, inhaled or absorbed through the skin. Examples are pesticides, poisons and mercury.

Class 6.2 Infectious substances Those known to contain, or reasonably expected to contain, pathogens, such as Bacteria, Viruses and medical waste (used needles).

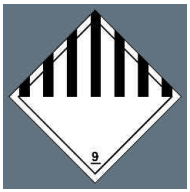
Class 7: Radioactive materials

Radioactive materials-I Symbol

Class 8: Corrosives

Corrosive substances can dissolve organic tissue or severely corrode certain metals for example, hydrochloric acid or sulfuric acid contained in batteries.

Class 9: Miscellaneous



Hazardous substances such as dry ice and magnets.

DANGEROUS GOODS ACCEPTED IN THE CABIN

Passengers and cabin crew are permitted to carry a limited amount of classified dangerous goods for personal use in their carry-on baggage, such as:

- Toiletry articles: e.g. perfume, nail polish and nail polish remover.
- Small lithium and lithium-ion batteries, such as those found in portable electronic devices.
- Alcoholic beverages, with an alcohol content of less than 70%
- Dry ice.

Note: *The types of items that are authorized onboard the aircraft may vary in each country, depending on the local aviation authority and security regulations.*

Other classificated dangerous goods that are permitted in the cabin include required emergency equipment, in airworthiness regulations, such as :

- Oxygen
- Fire extinguisher
- CO2 gas cylinders to inflate the life vests.

PROHIBITED DANGEROUS GOODS

The discovery of the following items in the cabin must be considered as a dangerous goods incident as the items below are strictly prohibited for transport in the cabin:

EXPLOSIVES	Fireworks, Fares, Toy gun caps
COMPRESSED GASES	Filled or partly filled aqualung cylinders (including camping gas cylinders)
FLAMMABLE LIQUIDS AND SOLIDS	Lighter fuel, Non-Safety matches, Paints, Thinner, Fire lighters
OXIDIZERS	Some bleaching powders
ORGANIC PEROXIDES	Some types of solid hydrogen peroxide
POISONS	Arsenic, Cyanide and weed-killer
IRRITATING MATERIALS	Tear gas devices
INFECTIOUS SUBSTANCES	Live virus materials
RADIOACTIVE MATERIALS	Medical or research samples which contain radioactive sources
CORROSIVES	Acids, alkalis, wet cell type car batteries and caustic soda
MAGNETIZED MATERIALS	Instruments containing magnets

DANGEROUS GOODS HANDLING

Operator's should provide dangerous goods response kits onboard the aircraft to enable the cabin crew to deal with a dangerous goods incident. A dangerous goods response kit usually contains the following minimum equipment:

- Large, heavy quality polyethylene bags
- Bag ties to seal the bags correctly after use
- Long rubber gloves.

If a dangerous goods response kit is not provided onboard the aircraft, the cabin crew must improvise using the equipment that is available. There are many pieces of equipment in the cabin that the cabin crew may use in this case, such as:

- Oven gloves/fire gloves that can be covered with plastic bags to protect the hands.
- Large and small polyethylene bags, e.g. waste bin bags, duty free bags or airsickness bags
- Absorbent materials, e.g. paper towels, newspapers or headrest covers
- Catering boxes
- Towel
- Blankets.

CREW COMMUNICATION AND COORDINATION

The cabin should provide the flight crew with an accurate description of the item, and the effects in the cabin, in order to help the fight crew to apply the appropriate procedure. It is essential that the cabin crew and flight crew coordinate their actions and that they keep each other fully informed of their actions and intentions.
Refer to 09-020 GUIDELINES FOR IN-FLIGHT SMOKE AND FIRE MANAGEMENT

PROTECTION

The cabin crew should put on gloves before they touch leaking, suspicious packages or items in order to protect their hands. If rubber gloves are not provided, fire-resistant gloves or oven gloves covered by polyethylene bags are a suitable alternative.
The cabin crew should also use Portable Breathing Equipment (PBE) to protect themselves from fumes or smoke.
If there are fumes or smoke, the cabin crew should take prompt action and move passengers away from the affected area, provide wet towels or cloths to passengers, and instruct passengers to breathe through them.
If the item or substance is emitting fumes or smoke, or if there is a fire, the cabin crew must apply the procedures for smoke and fire incidents provided in The Flight Operations Briefing Notes Cabin Smoke Awareness*Refer to 09-020 AWARENESS TO SMOKE IN HIDDEN AREAS* and Managing In-Flight Fires.
Water should not be used on a spillage or when fumes are present as it may spread the spillage or increase the fumes. Consideration should also be given to the possible presence of electrical components when using water extinguishers.

DANGEROUS GOODS REMOVAL

The dangerous good and the associated contaminated materials should be removed from the cabin.
The dangerous good should be placed in a dangerous goods bag or a polyethylene bag, with the broken part or opening facing upwards. Put all materials that become contaminated when removing the dangerous good in the same bag.

Close the bag and expel excess air, twist the open end of the bag, and seal it by tying a knot or using a bag tie.

Note: *The cabin crew must not make the bag airtight. It must be tight enough to be secure, but not so tight that pressure equalization cannot take place.*

Take off the gloves, and avoid skin contact with any contaminants. Put the gloves in the second bag. Place the first bag into the second dangerous goods bag using the same procedure.
All contaminated materials, such as seat covers and sections of carpet should be treated in the same manner as a dangerous good.

STOWING DANGEROUS GOODS ITEMS

After the cabin crew clean up the dangerous goods spill, they must ensure that the polyethylene bags containing the dangerous goods are safely stowed and secured.
If a catering box is available, the cabin crew can use it to store the bags containing the dangerous goods.
Dangerous goods should be stored in a location that is as far away from the cockpit and passengers as possible. The cabin crew may use an aft galley or aft lavatory, if possible. However, boxes or plastic bag(s) must not be stored against the pressure bulkhead or fuselage wall.
If the cabin crew uses a lavatory to store dangerous goods, boxes should be put on the floor, bag(s) should be stowed in an empty waste container, and the lavatory door should be locked from the outside. Using the lavatory to store the dangerous goods will prevent fumes from entering the cabin.

Note: *In a pressurized aircraft, if a lavatory is used, any fumes will be vented away from passengers.*

When moving a box that contains dangerous goods, the cabin crew must ensure that the opening remains upward. When moving a bag, the cabin crew must ensure that the receptacle containing the dangerous goods remains upright.
Regardless of the location of the catering box or bag, the cabin crew must secure them firmly to prevent them from moving.

REPORTING A DANGEROUS GOODS INCIDENT

The cabin crew and flight crew should coordinate to complete an Air Safety Report following a dangerous goods incident. In many countries this report is mandatory.
This report should include:

The date of the incident or accident, or the discovery of undeclared or incorrectly declared dangerous goods
The flight number and flight date
A description of the goods and the location found in the cabin
The type of packaging, and the packaging specification marking on it

Passenger details, e.g. seat number, name, address
Crew actions
Any other relevant information

The cabin crew must enter the details of the incident in the aircraft maintenance logbook, so that the maintenance personnel can replace the dangerous goods kit (if installed) and repair any damage to the cabin caused by the incident.

On Arrival

After landing, notify the ground personnel of all the known facts about the Dangerous Goods item and where it is stowed.

OPERATIONAL AND HUMAN FACTORS INVOLVED IN AN IN-FLIGHT DANGEROUS GOODS INCIDENT

When dangerous goods are discovered in the cabin, this may be an indication of other problems, such as:

A lack of security screening on ground
A lack of dangerous goods awareness training for passenger handling staff and security staff
Not adhering to the Operator's policy regarding the transportation of dangerous goods in the cabin
A lack of visible information provided to passengers regarding dangerous goods that may be carried onboard, e.g. at check-in desks or on the tickets.

PREVENTION STRATEGIES

Dangerous goods are regularly and routinely carried on passenger and all cargo aircraft and present little hazard in transport provided they are correctly identified, packaged and handled. But, Dangerous Goods can be potentially harmful to passengers and crew if they release smoke or fumes in the cabin or develop into an on-board fire.

Therefore, both the operator and the cabin crew should take the following preventive actions

- Display notices for passengers at check-in areas, ticket sales desks, etc.
- Ensure that the regulations regarding the transportation of dangerous goods are strictly adhered to by ground personnel, passengers and the cabin crew and flight crew
- Provide detailed and precise procedures for dangerous goods handling and emergencies to all employees who may come into contact with dangerous goods.

ABNORMAL/EMERGENCY PROCEDURES

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PAX SEAT SMOKE I
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TURBULENCE THREAT AWARENESS....A

09-080-30 CABIN DEPRESSURIZATION AWARENESS

CABIN DEPRESSURIZATION AWARENESS....A

09-080-40 PLANNED DITCHING - UNPLANNED DITCHING

PLANNED DITCHING - UNPLANNED DITCHING....A

09-080-50 CABIN SMOKE AWARENESS

CABIN SMOKE AWARENESS....A

09-080-60 MANAGING IN-FLIGHT FIRES

MANAGING IN-FLIGHT FIRES....A

GENERAL INFORMATION

Applicable to: ALL

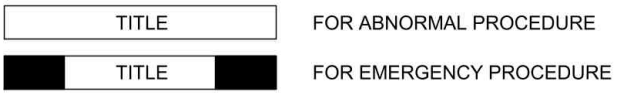
Abnormal/Emergency procedures are actions that must be taken by the cabin crew after a failure.
The CCOM's Abnormal/Emergency procedures are those recommended by Airbus as operational guidelines.
Standard operating procedures and Abnormal/Emergency procedures should be developed in accordance with Operator policies, procedures and local Aviation Authority requirements.
Abnormal/Emergency procedures are synchronized with the FCOM PRO/ABN (Flight Crew Operating Manual) procedures, requiring flight and cabin crews to communicate and cooperate.
Abnormal/Emergency procedures, specific to the cabin crew, concern smoke/fire fighting, depressurization, etc.
Aviation Authorities do not certify the Abnormal/Emergency procedures.
They are continuously updated. Revisions take into account the feedback received from all Operators, in addition to the results of continuous monitoring of the aircraft's in-service life.
Each Abnormal/Emergency Procedure is considered to be a separate DU, which is updated according to its validity criteria.

PRESENTATION

Applicable to: ALL

Emergency procedure titles are displayed within a rectangle, that has two black squares on each side.
Abnormal procedure titles are displayed within a rectangle, but there are no black square on each side.

PROCEDURE TITLES

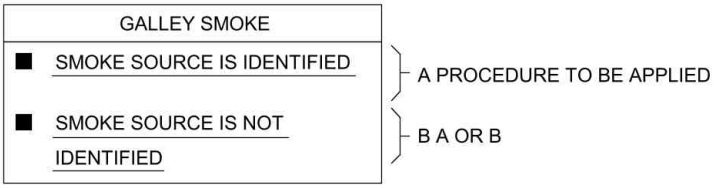


When inserted in the procedure, expanded information appears in italics.

This information :
- Identifies the failure.
- Explains actions for which the reason is not evident.
- Furnishes additional background info.

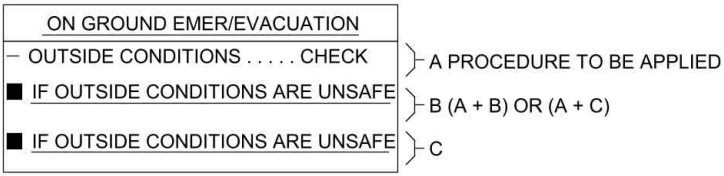
When several procedures appear under the same title, a black square indicates the beginning of each procedure.
Only one procedure is applicable at a time. For example :

BLACK SQUARE



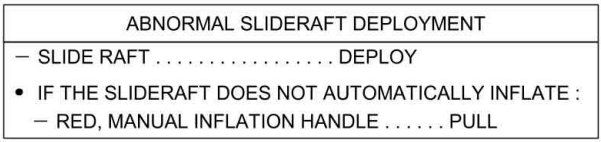
Black squares also indicate various possible procedures, among which only one is applicable. For example :

BLACK SQUARES



If an action depends on a precondition, a black dot identifies the precondition. For example :

BLACK DOT



GUIDELINES FOR IN-FLIGHT SMOKE AND FIRE MANAGEMENT

Applicable to: ALL

The cabin crew is responsible for effectively dealing with in-flight emergencies that involve smoke and fire. The following factors are important to enable cabin crew to correctly manage a smoke or fire event in-flight.

FIGHT THE FIRE

The cabin crew must be aware of the importance of taking immediate and aggressive action to determine the source of the smoke/fire.

The cabin crew must take action to:
- Rapidly evaluate the situation
- Determine the source of the smoke/fire
- Access the fire, if necessary
- Fight the fire, using firefighting equipment, and/or any other appropriate item that is rapidly available (e.g. non-alcoholic beverages, including carbonated drinks, coffee, tea, juice)
- Smother the fire by using wet pillows, or wet blankets, in order to stop the fire from igniting again.

COMMUNICATE AND COORDINATE

The cabin crew must be aware of the importance for the need for on effective crew communication and coordination. When smoke/fire is detected, the cabin crew must immediately inform:
- The flight crew
- The Purser

FIRE PREVENTION

The cabin crew must be vigilant and pay attention to any unusual odors, noises, unusual system behavior that may be an indication of a possible fire.
- Lavatories, including the associated smoke detector and wastebin fire extinguisher.
- Galleys, ensuring that no flammable materials, such as paper napkins, and towels are not left near or in heated galley equipment. The cabin crew monitor the galley electrical panels for fault indications and tripped circuit breakers.
- The cabin must regularly monitored for fire hazards.

CIRCUIT BREAKERS

Circuit breakers are designed to provide protection from overheating, due to an abnormal electrical load on a piece of equipment. The circuit breaker will trip automatically when a

Continued on the following page

GUIDELINES FOR IN-FLIGHT SMOKE AND FIRE MANAGEMENT (Cont'd)

predetermined electrical load is detected. When the circuit breaker trips this will result in the total or partial deactivation of the affected electrical installation.
Circuit breakers that relate to cabin items, such as lights, and entertainment systems, etc..., may be used to isolate equipment in the event of smoke and fire, in accordance with the operator's policy.

WARNING	Do not reset a tripped circuit breaker, because this may cause more damage to the equipment, may affect other electrical equipment, may cause an overheat and/or smoke.

Cabin reports of tripped circuit breakers should be reported to the flight crew immediately, and entered in the maintenance logbook.

LITHIUM BATTERIES FIRES

The two types of batteries commonly used to power consumer (PEDs) are lithium batteries (disposable) and lithium-ion batteries (rechargeable). Both types are capable of ignition and subsequent explosion due to overheating. The resulting fire can flare repeatedly as each cell ruptures and releases its contents.
Based on testing by the Fire Safety Branch of the FAA, the following procedures are recommended for fighting a fire of a lithium type battery-powered PED regardless if the battery is disposable or rechargeable:

- Relocate passenger away from the device, use halon, halon replacement or water fire extinguisher to prevent the spread of the fire to adjacent battery cells and materials
- Pour water , or other **non-alcoholic** liquid , from any available source over the cells immediately after extinguishing the fire.

Note: Only water or other non-alcoholic liquid can provide sufficient cooling to prevent re-ignition and/or spreading of the fire to adjacent batteries. Significant cooling is needed to prevent the spread of fire to additional cells in a battery pack.

WARNING	- Do not attempt to pick up and move a smoking or burning device - Do not cover the device or use ice to cool down the device. Ice or other materials insulate the device increasing the likelihood that additional battery cells will ignite. - Do not use fire resistant burn bags to isolate burning lithium type batteries. Transferring a burning appliance into a burn bag may be extremely hazardous.

CLASSES OF FIRE

Applicable to: ALL

Class A fires involve the following types of material:
- Wood
- Cloth
- Paper
- Rubber
- Plastic

Fires from these materials require the cooling effects of quantities of water. Use a water extinguisher or liquids containing a large quantity of water, (e.g. tea, coffee, juice).

WARNING	Do not use liquids that have alcohol.

Class B fires involve flammable liquids, for example:
- Oils
- Grease
- Aircraft fuel
- Hydraulic fluid
- Tar
- Oil -based paints
- Lacquers
- Flammable gases

Fires from these materials require an extinguishing agent that have a blanketing effect.

WARNING	Do not use a water extinguisher for class B fires. Use a halon extinguisher.

Class C fires involve electrical equipment, for example:
- Coffeemakers,
- Ovens
- Wiring
- Circuit breakers

WARNING	Do not use a water extinguisher on electrical fires, because this may cause electric shock and damage other electrical circuits. Use a halon extinguisher.

A halon extinguisher would be required.

Continued on the following page

CLASSES OF FIRE (Cont'd)

Class D fires involve combustible metals, for example:
- Magnesium
- Titanium
- Zirconium
- Sodium

WARNING	Do not use a halon extinguisher or water for a class D fire.

Special dry powder extinguishers are used on these types of fire, because of the possible chemical reaction between the extinguishing agent and the burning metal.

Note: *For lithium batteries fires* *Refer to 09-020 GUIDELINES FOR IN-FLIGHT SMOKE AND FIRE MANAGEMENT*

FIRE EXTINGUISHERS APPLICABLE TO EACH THE CLASS OF FIRE

The cabin crew should select the appropriate fire extinguisher according to the type of fire, class A, B, C or D:

1. Carbon Dioxide Extinguisher - For class B or C fires
2. Water Extinguisher - For class A fires
3. Dry Chemical Extinguishers - For class A, B, or C fires
4. Halogenated Hydrocarbons (Halon or BCF) - For class A, B, or C

WARNING	When a halon extinguisher is used on a class A fire, the affected area must be dampened with water afterward to prevent the fire from re-ignition.

5. Specialized Dry Powder Extinguishers - For class D fires.

AWARENESS TO SMOKE IN HIDDEN AREAS

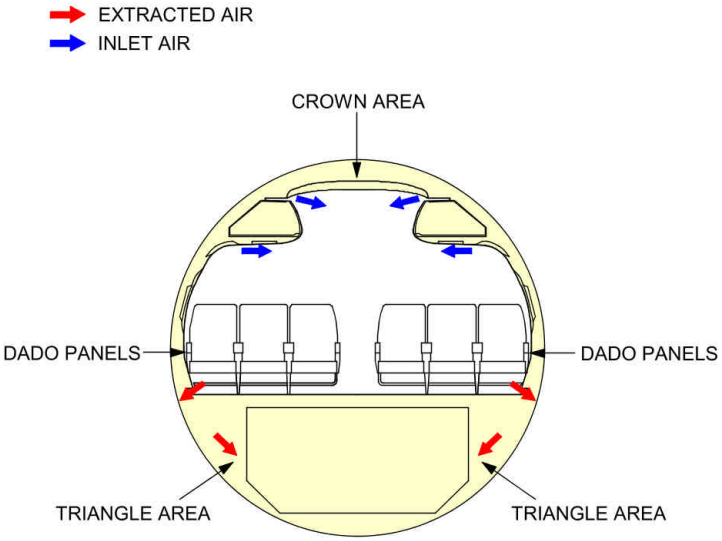
Applicable to: ALL

It is important for cabin crew to be aware of the potential sources of smoke onboard the aircraft, and to familiarize themselves with these areas.

This enables crewmembers to determine the source of the smoke, and take immediate action:

- Crown Area: This area is above the ceiling panels. This overhead area includes wiring bundles, control surface cables, passenger emergency oxygen system, parts of the air conditioning system, and components of the aircraft In-Flight Entertainment System (IFE).
- Dado Panels: These are the vents that are at the foot of the sidewall panels, on each side of the passenger cabin. Most aircraft air conditioning systems supply conditioned air from the cabin ceiling. This conditioned air then flows from the top of the cabin to the bottom, exits via the return grills, and finally leaves the aircraft via the outflow valves.
- Triangle Area: This area is below the floor outboard of the cargo area. This area hosts hydraulic lines, electrical components and wiring bundles.

AIR DISTRIBUTION



AREA SPECIFIC FIRES

Applicable to: ALL

Firefighting methods are different depending on the location and the source of the fire. However, there are some general guidelines that the cabin crew should be observe.

FIRES IN HIDDEN AREAS

Smoke emissions from sidewall panels and ceiling panels may indicate a hidden fire. In some cases, smoke may appear some distance from the source.
When the cabin crew suspects a fire in a hidden area, for example, behind a panel, they should try to locate a "hot spot". A "hot spot" is an abnormally warm area. A "hot spot" is usually a good indicator as to where the source of the fire is.

Note: *To find the "hot spot", the cabin crew should move the back of their hand along the panels to find the hottest area.*
This is because, the skin on the back of the hand is thinner and, is more sensitive to temperature changes than the palm.

It may be necessary to remove or lever panels to insert the nozzle of the fire extinguisher. Use a crash axe that has an insulated handle to lever panels.

CAUTION	Be very careful when removing, or levering panels, because some of these areas may contain essential wiring or aircraft systems.

FIRES IN ENCLOSED AREAS

When a fire occurs in an enclosed area such as, a lavatory, an overhead bin, a closet or a crew rest area, before opening the door, always check the door panel for heat.

Note: *The cabin crew should check for heat using the back of the hand.*

- **If the cabin crew suspects a fire in an enclosed area, they must:**
  - Open the door or the overhead bin slightly (just enough to pass the nozzle of the fire extinguisher).
- **If the fire is visible, the cabin crew must:**
  - Discharge the fire extinguisher at the base of the fire in a sweeping motion.
- **If the source of the fire has not been located, do not randomly discharge the fire extinguisher into an enclosed area:**
  - The cabin crew must actively search the entire area to locate the source of the fire.

Continued on the following page

AREA SPECIFIC FIRES (Cont'd)

GALLEY SMOKE/FIRE

GALLEY ELECTRICAL EQUIPMENT

The source of smoke/fire in the galley areas is usually due to the malfunction of electrical equipment, such as, coffee makers, water boilers, ovens etc.

When the source of the smoke/fire has been identified as coming from a piece of electrical equipment, the cabin crew must:

- Switch off the power
- Pull the associated circuit breaker, that is located on the galley electrical panel.

OVEN FIRES

In the case of an oven fire, the cabin crew must:

- Keep the oven door closed, to deprive the fire of oxygen. In many cases the fire will extinguish by itself
- Switch off the power to the oven
- Pull the associated circuit breaker, on the galley electrical panel.

● **If the situation worsens, the cabin crew must:**

- Don a PBE and fire gloves for protection
- Open the oven door slightly, just enough to insert the nozzle of the fire extinguisher
- Insert the nozzle of the fire extinguisher, and discharge the fire extinguisher
- Close the oven door
- Repeat the procedure as necessary.

FIRE FIGHTING ROLE DEFINITION

Applicable to: ALL

The firefighting procedures require a team of at least three cabin crewmembers. A team effort is the most effective way to combat an onboard fire. The roles are defined as follows:

- the Firefighter
- the Communicator
- the Assistant Firefighter

Crew communication and coordination is important, and the roles of these three cabin crewmembers complement each other, because their tasks are performed simultaneously, in order to optimize the firefighting effort.

THE FIREFIGHTER

The first crewmember that finds the fire will take the role of the Firefighter.

This cabin crewmember:

- Alerts other cabin crewmembers
- Obtains the nearest fire extinguisher (consider the use of a PBE)
- Immediately locates the source of the fire
- Fights the fire.

THE COMMUNICATOR

The second cabin crewmember on the scene.

The communicator:

- Informs the flight crew of the fire/smoke:
  - Location
  - Source
  - Severity/Density (color of smoke/odor)
  - Firefighting progress
  - Number of fire extinguishers used
  - Time firefighting action started.
- Maintains the communication link between the cabin and the flight crew, via an interphone that is near the firefighting scene
- Provides the flight crew with an accurate description of the firefighting effort, and of the situation in the cabin.

THE ASSISTANT FIREFIGHTER

The third cabin crewmember on the scene.

Continued on the following page

FIRE FIGHTING ROLE DEFINITION (Cont'd)

The Assistant Firefighter:

- Supplies extra firefighting equipment
- Supports the firefighting effort
- Removes flammable material from the area
- The Assistant Firefighter must be prepared to replace the Firefighter, and exchange roles with the Firefighter, as required.

SUPPORT CREWMEMBERS

These crewmembers are not directly involved in the firefighting effort, but will be required provide assistance (e.g. to relocate passengers, administer first-aid, calm and reassure passengers). After any fire or smoke occurrence, one crewmember should be responsible for monitoring the affected area for the remainder of the flight, and should regularly report to the Purser.

BASIC FIRE FIGHTING PROCEDURE

Applicable to: ALL

The Firefighter, the Communicator and the Assistant Firefighter perform their roles and actions **SIMULTANEOUSLY**.

FIREFIGHTER

OTHER CREWMEMBERS ..... ALERT
FIREFIGHTING EQUIPMENT..... EQUIP

Take the nearest appropriate fire extinguisher. Consider the use of a PBE.

SOURCE OF THE FIRE..... LOCATE
FIRE EXTINGUISHER..... DISCHARGE AT BASE OF FIRE
FIREFIGHTING EFFORT..... MAINTAIN UNTIL THE FIRE IS OUT

- **When the fire is out:**

  AFFECTED AREA..... DAMPEN

  The affected area should be dampened to prevent the fire from re-ignition.

WARNING	*Do not dampen electrical equipment.*

COMMUNICATOR

FLIGHT CREW.....NOTIFY IMMEDIATELY VIA INTERPHONE

Use the interphone, to prevent smoke from contaminating the cockpit. Give the following information:

- Location
- Source
- Severity/Density (color of smoke/odor)
- Firefighting progress
- Number of fire extinguishers used
- Time firefighting action started.

COMMUNICATION WITH FLIGHT CREW..... MAINTAIN
INSTRUCTIONS FROM FLIGHT CREW..... COMMUNICATE TO CREWMEMBERS

ASSISTANT FIREFIGHTER

FIREFIGHTING EQUIPMENT..... SUPPLY

- **If necessary:**

  REPLACE FIREFIGHTER..... PREPARE
  PBE.....DON

Continued on the following page

BASIC FIRE FIGHTING PROCEDURE (Cont'd)

SUPPORT CREWMEMBERS

PASSENGERS AND PORTABLE OXYGEN.....MOVE FROM IMMEDIATE AREA
FIREFIGHTING EFFORT.....ASSIST AND SUPPORT
PASSENGERS.....CALM AND REASSURE

- **When the fire is out:**

  DEDICATED CREWMEMBER..... MONITOR FOR THE REMAINDER OF THE FLIGHT

  The affected area must be monitored for the remainder of the flight. Regular reports must be made to the Chief Purser.

CABIN SMOKE/FIRE PROCEDURE "HIDDEN AREA" OR "UNKNOWN SOURCE"

Applicable to: ALL

Smoke emissions from sidewall panels, ceiling panels and vents may indicate a hidden fire. In some cases, smoke may appear some distance away from it's actual source.

BASIC FIRE FIGHTING PROCEDURE ..... APPLY

FIREFIGHTER

SOURCE OF SMOKE.....LOCATE
REASON FOR SMOKE..... INVESTIGATE AND DETERMINE

Note: *To determine the source of a potential fire, crewmembers should check for "hot spots" on panels. Use the back of the hand along the panels to feel for the presence of unusually hot areas.*

- **WHEN "HOT SPOT" IS LOCATED:**

  AREA..... ACCESS WITH CARE

CAUTION	When gaining access behind panels, be aware of the presence of wiring bundles. Make a careful incision in the panel to pass extinguisher nozzle, or lever the panel to gain access.

  FIRE EXTINGUISHER.....DISCHARGE

LAVATORY SMOKE/FIRE PROCEDURE

Applicable to: ALL

Lavatory smoke/fires can be caused by electrical system malfunctions for example, the water heater, toilet vacuum, or may be caused by burning materials usually caused by a carelessly discarded cigarette in the lavatory waste bin.

COCKPIT CREW

SMOKE LAVATORY SMOKE..... CREW AWARENESS

Maintain contact with the cabin crew to follow up on the status of the fire.

CABIN CREW PROCEDURE

On the FAP, and/or related AAP, the SMOKE warning indication comes on, with an associated triple chime, repeated every 30 s (optionally 10 s).

AFFECTED LAVATORY..... LOCATE

On all AIPs, the affected lavatory is clearly indicated and a red indicator flashes.
The amber light, on the respective ACPs (according to CAM assignment), and the outside Smoke/Pax call indicator of the affected lavatory flashes.
Affected lavatory is also shown on the FAP Smoke page.

WARNING	Do not open the lavatory door. First, check the door for heat. Using the back of the hand, feel the panel of the lavatory door, to determine temperature and presence of fire.

LAVATORY DOOR.....CHECK FOR HEAT

- **If the door lavatory panel is cool:**
  LAVATORY DOOR ..... OPEN SLOWLY WITH CAUTION
  SOURCE OF SMOKE/FIRE..... LOCATE
- **If fire is present:**
  BASIC FIREFIGHTING PROCEDURE..... APPLY

  Note: *There is an automatic fire extinguisher installed, above the wastebin in each lavatory.*

FIRE EXTINGUISHER..... DISCHARGE AT BASE OF FIRE
SMOKE PUSHBUTTON (ON THE FAP or AAP IN YOUR ZONE)..... RESET

To silence the chime, and reset all visual warnings on the ACPs, the AIPs.

Continued on the following page

LAVATORY SMOKE/FIRE PROCEDURE (Cont'd)

Note: *The amber Smoke indicator of the affected lavatory, the SMOKE RESET pb on the FAP and respective AAP and the indication on the FAP Smoke page remain ON until all smoke has dissipated.*

- **If door panel is hot**

  Note: *If the door is hot, the fire is at a critical stage. Have extra fire fighting equipment available and ready to use.*

  PBE.....DON
  FIREFIGHTER..... PROTECT SELF
  Stay low and crouch down, using the door panel as protection against smoke and heat.
  (*)LAVATORY DOOR.....OPEN SLIGHTLY
  Just enough to pass the nozzle of the extinguisher.
  (*)FIRE EXTINGUISHER..... DISCHARGE
  (*)LAVATORY DOOR..... CLOSE
  FIREFIGHTING ..... REPEAT AS NECESSARY

  (*)Repeat last four steps of the procedure, as necessary.

- **If situation is cleared :**
  AFFECTED LAVATORY.....MONITOR FOR THE REMAINDER OF THE FLIGHT
  To ensure that the lavatory remains clear of smoke.

PAX SEAT SMOKE

Applicable to: ALL

The class of fire will determine how a passenger seat smoke/fire event is dealt with. The source of smoke/fire may come the IFE screen, ISPSS outlet, or from the seat boxes located under the passenger seats.

- **If passenger seat smoke is suspected :**
  CABIN CREW.....INFORM AND COORDINATE WITH COCKPIT CREW
  BASIC FIRE FIGHTING PROCEDURE.....APPLY IF NECESSARY

GALLEY SMOKE

Applicable to: ALL

Galley smoke/fire occurrences can be caused by electrical equipment malfunction for example, coffee makers, ovens, water boilers etc.

■ **If the source of the smoke/fire is identified from a piece of electrical equipment:**

ELECTRICAL POWER..... OFF
APPLICABLE CIRCUIT BREAKER..... PULL

Circuit breakers are located on the galley's centralized electrical panel. Pulling the applicable circuit breaker should stop the smoke/fire.

■ **If the smoke/electrical smell source cannot be identified:**

GALLEY SHUTOFF

MAIN GALLEY POWER pb.....OFF
ALL CIRCUIT BREAKERS..... PULL

● **If the smoke/fire continues:**

BASIC FIRE FIGHTING PROCEDURE..... APPLY

OVEN SMOKE

Applicable to: ALL

Oven smoke/fires occurrences may be caused by the oven contents, such as, food or grease deposits. Electrical malfunctions may be another source.

OVEN DOOR..... KEEP CLOSED

Note: By keeping the oven door closed, the fire will usually extinguish itself.

OVEN POWER..... OFF
CIRCUIT BREAKER..... PULL

The applicable oven circuit breaker is located on the galley's centralized electrical panel.

- **IF SMOKE OR FIRE IS STILL PRESENT:**

  PBE AND FIRE GLOVES..... DON
  OVEN DOOR..... OPEN SLIGHTLY

  Note: Open the oven door slightly, just enough to insert the nozzle of the fire extinguisher into the oven.

  (*)FIRE EXTINGUISHER..... DISCHARGE
  (*)OVEN DOOR..... CLOSE
  (*)FIREFIGHTING ..... REPEAT AS NECESSARY

  (*)Repeat last three steps of the procedure, as necessary.

OVERHEAD BIN SMOKE/FIRE PROCEDURE

Applicable to: ALL

Smoke/fire in overhead bins may be caused by the contents (i.e. electronic device, spare lithium battery) or electrical malfunction in the Passenger Service Unit (PSU).
The firefighter, the assistant firefighter, the communicator and the support crewmembers must conduct their tasks simultaneously.

- **When smoke is coming from an overhead bin:**

FIREFIGHTER AND ASSISTANT FIREFIGHTER
PBE..... DON

FIREFIGHTER
FIRE EXTINGUISHER.....TAKE

Note: Consider the use of fire gloves.

ASSISTANT FIREFIGHTER
WATER OR NON-ALCOHOLIC LIQUID.....TAKE

Note: Water or non-alcoholic liquid is required if the fire involves lithium battery.

SUPPORT CREWMEMBERS
PASSENGERS..... RELOCATE

COMMUNICATOR
FLIGHT CREW.....NOTIFY IMMEDIATELY VIA INTERPHONE

FIREFIGHTER
OVERHEAD BIN.....CHECK FOR HEAT

Using the back of the hand, feel the overhead bin to determine the temperature and presence of fire.

(*)OVERHEAD BIN..... OPEN SLIGHTLY

Enough to pass the nozzle of the fire extinguisher.

CAUTION	Opening the overhead bin more than necessary can cause contamination of the cabin with smoke, and can result in smoke inhalation.

(*)FIRE EXTINGUISHER .....DISCHARGE

Note: The fire extinguisher must be discharged into the overhead bin, away from the seat, to prevent debris from contaminating the cabin.

(*)OVERHEAD BIN .....CLOSE AND LATCH
FIREFIGHTING..... REPEAT AS NECESSARY

(*)Repeat last three steps of the procedure, as necessary.

Continued on the following page

OVERHEAD BIN SMOKE/FIRE PROCEDURE (Cont'd)

- **When the flames are suppressed:**

FIREFIGHTER
OVERHEAD BIN.....CHECK THE SOURCE OF FIRE

Note: *The assistant firefighter must support the firefighter in the case of re-ignition by using fire extinguisher.*

- **If source of smoke/fire is coming from a visible PED and/or Spare batteries:**

FIREFIGHTER
ON PED OR SPARE LITHIUM BATTERIES.....
..... POUR WATER OR NON-ALCOHOLIC LIQUID

The PED or Spare lithium batteries must be cooled down by pouring water or non-alcoholic liquids.

- **If the source of smoke/fire is coming from an identified item:**

FIREFIGHTER
IDENTIFIED ITEM.....TAKE OUT
ON IDENTIFIED ITEM.....POUR WATER OR NON-ALCOHOLIC LIQUID

The identified item must be cooled down by pouring water or non-alcoholic liquids.

- **If the source of smoke/fire is coming from a non-identified item:**

FIREFIGHTER
OVERHEAD BIN..... EMPTY WITH CAUTION

Note: *Empty the overhead bin until the source of smoke/fire is identified.*

ON IDENTIFIED ITEM.....POUR WATER OR NON-ALCOHOLIC LIQUID

The identified item must be cooled down by pouring water or non-alcoholic liquids.

STORAGE PROCEDURE AFTER A LITHIUM BATTERY FIRE ..... APPLY

END OF PROC

LITHIUM BATTERY FIRE

Applicable to: ALL

The roles of the firefighter, assistant firefighter and communicator must be distributed according to the basic firefighting procedure.

In the case of PED or spare lithium battery fire in the cabin or when notified by the flight crew:

- **If there are flames:**
  FIREFIGHTING EQUIPMENT..... TAKE
  Consider the use of a PBE and fire gloves.
  HALON EXTINGUISHER.....DISCHARGE
  Halon extinguisher must be discharged to suppress the flames prior to cool down the PED or the Spare lithium battery.

- **When the flames are suppressed or If there are no flames:**
  ON PED or spare lithium battery.....POUR WATER OR NON-ALCOHOLIC LIQUID
  The PED or Spare lithium batteries must be cooled down by pouring water or non-alcoholic Liquids
  STORAGE PROCEDURE AFTER A LITHIUM BATTERY FIRE ..... APPLY

WARNING	*- Do not attempt to pick up and move a smoking or burning device* *- Do not cover the device or use ice to cool down the device. Ice or other materials insulate the device increasing the likelihood that additional battery cells will ignite.* *- Do not use fire resistant burn bags to isolate burning lithium type batteries. Transferring a burning appliance into a burn bag may be extremely hazardous.*

END OF PROC

STORAGE PROCEDURE AFTER A LITHIUM BATTERY FIRE

Applicable to: ALL

- **When the PED or the spare battery can be safely moved:**

  FIRE GLOVES..... PUT ON
  RECEPTACLE..... TAKE

  Consider the use of any suitable empty receptacle (e.g. standard unit or lavatory waste bin ...)

  RECEPTACLE..... FILL WITH WATER OR NON-ALCOHOLIC LIQUID
  PED OR SPARE BATTERY..... IMMERSE

  Total immersion of the PED or the spare battery will prevent fire re-ignition.

  RECEPTACLE.....STORE INTO THE NEAREST LAVATORY
  LAVATORY.....SET AS INOPERATIVE
  AFFECTED LAVATORY..... MONITOR

  The affected lavatory must be regularly monitored for the remainder of the flight to ensure that the device remains immersed.

  END OF PROC

VCC SMOKE

Applicable to: MSN 2927-3120

If the IFE modules like VCCs (Video Control Center) are ventilated by forced air a Stand Alone Smoke Detection System is provided along with an additional Smoke Indication Light installed in the cabin located in the info beam door 1 area).

CABIN CREW PROCEDURE

In case of VCC smoke, the Smoke Indication Light comes on amber. On the VCC Smoke Detection Indication Panel, the "SMOKE" indication comes on red and an alarm horn in the cabin (latest 60 seconds after start of the smoke emission).

CABIN CREW..... INFORM AND COORDINATE WITH COCKPIT CREW
VCC MAIN POWER SWITCH.....OFF

The VCC MAIN POWER SWITCH is located on the VCC.

BASIC FIRE FIGHTING PROCEDURE..... APPLY IF REQUIRED
HORN INTERRUPT pushbutton.....PUSH

To silence the chime in all the cabin.

Note: The horn interrupt pushbutton is located on the VCC Smoke Detection Indication Panel.

CABIN CREW..... MAINTAIN CONTACT WITH COKPIT CREW

The cabin crew should maintain contact with the cockpit crew to monitor the status of the smoke.

- **If situation is cleared :**

  VCC.....MONITOR FOR THE REMAINDER OF THE FLIGHT

  To ensure that the VCC remains clear of smoke.

VCC SMOKE DETECTION SYSTEM FAILURE

In case the VCC Smoke Detection fails, the "FAULT" light located on the VCC Smoke Detection Indication Panel, comes on amber.

VCC MAIN POWER SWITCH.....OFF

CAUTION	The VCC must not be operated when the VCC Smoke detection has failed.

COCKPIT CREW.....INFORM
LOGBOOK.....ENTER VCC SMOKE DETECTION FAILURE

In case of inoperative ventilation, the smoke detection system might not be operable anymore.

- **In this case :**

  VCC MAIN POWER SWITCH..... OFF

EMERGENCY CALLS

Applicable to: ALL

In the event if an abnormal or an emergency situation in the cabin, any cabin crewmember may make this call.

EMERGENCY CALLS TO FLIGHT CREW

CABIN CREW	FLIGHT CREW
In the event if an abnormal or an emergency situation in the cabin: - Press the EMER CALL pb - Wait for the flight crew to reply	The flight crew must reply

PLANNED EMERGENCY LANDING

Applicable to: ALL

EMERGENCY ALERT

CAPTAIN	PURSER	CABIN CREW
- Using the PA announce "Purser to Cockpit, please!"	- Go immediately to the cockpit to be briefed by the captain	- Stop all activities, secure any equipment that is being used - Go to designated crew station and standby the interphone ready for Purser's briefing.

CAPTAIN	PURSER	CABIN CREW
Brief the Purser	Ask the captain for the following information: - Nature of the emergency and intentions - Time available to prepare the cabin (synchronize watches) - Signal to brace - Signal to remain seated (if no evacuation is required. On ground emergency only) - Special instructions (for example, exits that may be unusable) - Acknowledge the captains briefing - Ask the captain who will make the initial announcement and when.	
Note: *The captain should, if time permits, allow the Purser time to brief the cabin crew.*	- Brief the cabin crew using the PRIO CONF Call function on the interphone handset.	- Acknowledge Purser's briefing.

PASSENGER PREPARATION

FLIGHT CREW	PURSER
- Turn on the NO SMOKING/FASTEN SEAT BELT signs - If duties permit, make a PA announcement to the passengers of the nature of the emergency *Note:* *For psychological reasons, the flight crew should make the initial announcement to the passengers.*	If the captain's duties permit, the captain will make the initial announcement. If this is not possible for the captain to make the announcement, the Purser will make the initial announcement to the passengers stating: - The nature of the emergency and the captains intentions - The need to prepare the cabin

Continued on the following page

PLANNED EMERGENCY LANDING (Cont'd)

FLIGHT CREW	PURSER
	- Follow the instructions of cabin crew member.
	Make the Emergency Announcement containing the following: - Brace positions - Locations of exits - Loose items - ABPs - Safety card review - Flotation devices (Ditching Only).
	Note: *The Purser must monitor the time during the cabin preparation announcements. Allow time for task to be accomplished, when the allocated time is up, inform the cabin crew by announcing. "Cabin crew return to demonstration positions"* "Finish preparations".

BRACE FOR IMPACT

FLIGHT CREW	CABIN CREW
- Announce using the PA system "BRACE FOR IMPACT" *Note:* *The flight crew will make the "Brace for impact" command approximately 1 minute before landing.*	- Shout "BRACE, BRACE , BRACE" until aircraft comes to complete stop.

INITIATING THE EVACUATION

FLIGHT CREW	CABIN CREW
- Using the PA system announce "EVACUATE, EVACUATE" - Press the EVAC CMD pb to sound the evacuation horn.	Shout evacuation commands: - "EVACUATE, EVACUATE" "SEAT BELTS OFF" - "LEAVE EVERYTHING" - "GET OUT".

- **If there is no communication from the flight crew and, a catastrophic situation exists in the cabin, the cabin crew should initiate the evacuation.**

PURSER/CABIN CREWMEMBER
To initiate an evacuation use whatever means are available: - Use the PA system, megaphone or shout the evacuation commands "EVACUATE, EVACUATE" "SEAT BELTS OFF"

Continued on the following page

PLANNED EMERGENCY LANDING (Cont'd)

PURSER/CABIN CREWMEMBER

- Press the EVAC CMD pb on the FAP

Note: *The evacuation horn will sound in the cabin only if the switch in the cockpit is set to CAPT/PURS.*

EVACUATION NOT REQUIRED

In the case of a planned emergency landing, when the passengers have been prepared to anticipate evacuating the aircraft. If no evacuation is required after the aircraft has landed it will be necessary for the flight crew to inform the cabin crew and passengers as soon as possible in order to prevent an unnecessary evacuation from being initiated.

FLIGHT CREW	CABIN CREW
When an evacuation is not required the flight crew must make an immediate announcement - Using the PA system announce "REMAIN SEATED".	The Purser should reinforce this message using the PA to announce to passengers that an evacuation of the aircraft is not necessary, and ask passengers to remain in their seats

UNPLANNED EMERGENCY LANDING

Applicable to: ALL

In the case of an abnormal or emergency situation during the takeoff or landing such as:
- Imminent impact or,
- Aircraft damage.

The command to brace for impact should be given as a minimum warning to passengers.
The brace command can be initiated by the flight crew or the cabin crew.

BRACE COMMANDS - UNPLANNED EMERGENCY LANDING

FLIGHT CREW	CABIN CREW
If the flight crew are aware of imminent impact: - Using PA announce "BRACE FOR IMPACT"	If the cabin crew are aware of imminent impact, or on the command of the flight crew: - Cabin crew must adopt their brace position and shout "HEADS DOWN, STAY DOWN" - Repeat the brace commands until the aircraft has come to a complete stop.

EVACUATION GUIDELINES

Applicable to: ALL

There are many factors that contribute to the successful evacuation of an aircraft:
- The procedural knowledge of the cabin crew: This includes training, experience and behavior,
- The aircraft configuration, the layout of the cabin,
- The environment inside and outside the aircraft (e.g., the presence of smoke, fire, the cabin lighting, and outside conditions),
- The behavior of the passengers, their age, level of fitness and motivation.

During an emergency, it is essential for the cabin crew to be able to apply their knowledge of procedures, and rapidly adapt to the situation.
In the case of a life threatening situation onboard the aircraft, it is essential that the aircraft is evacuated quickly and efficiently to increase the occupants chances of survival.

CROWD CONTROL

One of the key elements to a efficient evacuation is effective crowd control and cabin management by the cabin crew. The actions and commands of the cabin crew will influence the performance of the passengers during the evacuation.

1. The objectives for the cabin crewmembers are:
   - To quickly establish the passenger flow at each usable exit,
   - To evacuate the aircraft as quickly as possible.
2. The cabin crew must use positive verbal commands and physical gestures, in order to efficiently direct passengers towards the exits and assist them down the slides.

   Note: *Cabin crew must also be prepared to use some physical force, if necessary, to evacuate some passengers from the aircraft.*

   The commands used by the cabin crew should be:
   - Assertive
   - Positive
   - Short
   - Loud
   - Clear

   Note: *The cabin crew **must** be assertive and be in complete control of the evacuation.*

3. Situational awareness will play a large part in the evacuation process. The cabin crew must be able to assess not only what is happening at their exit, but also what is happening inside the cabin.

Continued on the following page

EVACUATION GUIDELINES (Cont'd)

The cabin crewmembers must be able to:
- Assess the flow of passengers from the exits and be aware to changes in the passenger flow rate,
- Be aware of the status of the other exits, especially when redirecting the passengers,
- To adapt their actions and commands when the cabin is congested or an exit is dried up, in order to keep the evacuation flowing and maximize the use of all exits.

MANAGING EXITS DURING AN EVACUATION

ASSESSING THE OUTSIDE CONDITIONS

Before opening the door the cabin crew must assess the outside conditions.

Use the observation window to check that the slide deployment area is clear of:
- Smoke
- Fire
- Obstacles and
- Debris.

CABIN CREW ACTIONS AT USABLE EXITS

Once the exit has been opened, the cabin crew must visually check that the slide is fully deployed and inflated.

Note: *In dark of night conditions, the cabin crewmember should visually check that the slide deployment area is clear of fire, obstacles or debris, to ensure that the area is safe before starting to evacuate passengers.*

The cabin crewmember must stand clear of the exit in the frame assist space, and hold on to the frame assist handle.

The cabin crew must monitor the evacuation, and maintain an even flow of passengers from each exit, the cabin crew should use commands, such as:
- "Jump, jump"
- "Hurry"

Some passengers may try to sit on the door sill before going down the slide. **This must be avoided**, as it will delay the flow of passengers from the exit.
The cabin crew must be aware of what is happening inside the cabin, and outside the aircraft.

The cabin crew must:
- Keep shouting their commands to bring passengers to the exits

Continued on the following page

EVACUATION GUIDELINES (Cont'd)

- Be aware of any developments that would render the exit unusable, for example:
  - Slide damage,
  - Fire in the area,
  - External hazard.

CABIN CREW ACTIONS AT UNUSABLE EXITS

An exit may be unusable at the beginning of an evacuation or may become unusable during the evacuation.

1. An exit may be unusable at the beginning of the evacuation, for one of the following reasons:
   - The exit is jammed, and will not open,
   - Slide does not deploy correctly or the slide is damaged,
   - There are external hazards.

   The cabin crewmember who is responsible for the unusable exit must inform the passengers that the exit is blocked, and redirect the passengers to the nearest usable exit.

   Note: *The cabin crewmember must guard the exit to prevent the exit from being used.*

   When redirecting passengers, the cabin crewmember should listen for the other crewmembers giving the command to "Come this way" or "Jump" for confirmation that another exit is usable.

   Redirect passengers to the nearest usable exit with the appropriate positive commands and gestures, such as:
   - "Go ahead, go straight"
   - "Go that way" with the appropriate gesture
   - "Go across"
   - "Quick, quick"
   - "Hurry up, hurry up"

2. An exit becomes unusable during the evacuation:

   The cabin crew must be aware of the environment inside and outside the cabin. If the situation changes during the evacuation, for example:
   - The slide becomes damaged,
   - A fire develops in the area,
   - There are other external hazards.

   Then the cabin crewmember at the unusable exit must perform the following actions:
   - Stop the evacuation,

Continued on the following page

EVACUATION GUIDELINES (Cont'd)

- Block the exit and redirect passengers to the nearest usable exit,
- Guard the exit.

PRE-CABIN CREW EVACUATION

When the flow of passengers to the exit begins to slow down, the cabin crew should check the cabin and call all remaining passengers to the exits.
When the flow of passengers has stopped, the cabin crew should check their assigned area for any remaining passengers.
When the cabin crewmember's assigned area is empty, or it is no longer safe to remain onboard the aircraft, the cabin crewmember should evacuate through the first usable exit.
If an evacuation occurs away from an airfield, the cabin crew should take their assigned emergency equipment from the aircraft, if the situation permits.

POST EVACUATION DUTIES

The cabin crew will be responsible for a large number of passengers until they are assisted by the rescue and emergency services personnel.

When the cabin crew have evacuated the aircraft they must manage the passengers on the ground, by:

- Assisting passengers away from the slides
- Directing passengers upwind and away from the aircraft
- Keeping passengers away from, fuel , fire and vehicles
- Assembling the passengers and keeping them together
- Enforcing no smoking and prohibiting the use of mobile phones
- Assisting passengers and giving first aid, when necessary
- Making a passenger headcount, if possible.

Note: *Cabin crewmembers seated near a megaphone should consider taking it from the aircraft to assist with crowd management post evacuation.*

COCKPIT-ASSIGNED DUTIES FOR EVACUATION

Applicable to: ALL

■ **If it is NOT POSSIBLE to reach the passenger cabin :**

The cockpit crew should evacuate the aircraft via the cockpit clearview windows, by using the escape ropes.

On ground, each crewmember must help passengers, and direct them away from the aircraft.

■ **If it is POSSIBLE to reach the passenger cabin :**

CAPT	- Is the last person to leave the cockpit : Proceeds to the cabin and, helps with passenger evacuation, as necessary. - Is the last person to leave the aircraft : Checks that all persons have evacuated the aircraft. - Evacuates the aircraft, via the rear door, or any other available exit, if he/she cannot reach the rear door. - On ground, he/she takes command of operations until rescue units arrive.
F/O	- Proceeds to the cabin, and takes the emergency equipment. - Evacuates the aircraft, using any available exit. - Helps passengers on ground, and directs them away from the aircraft.

CABIN CREW-ASSIGNED AREAS FOR EVACUATION

Criteria: SA
Applicable to: MSN 2649

CABIN CREW DESIGNATION	ASSIGNED JUMPSEAT AND DOOR	ASSIGNED JUMPSEAT	ASSIGNED AREA
1 PURSER	DOOR 1 LH	FWD OUTBOARD	FWD/MID
1 CABIN CREW	DOOR 1 LH/RH	FWD INBOARD	FWD/MID
1 CABIN CREW	DOOR 2 RH	AFT CENTER	MID/AFT
1 CABIN CREW	DOOR 2 LH	REARWARD	MID/AFT

Note: These procedures are established for the minimum required number of 4 cabin crews. At least, one crewmember must be seated on the center swivel cabin attendant seat (if installed).

CABIN CREW-ASSIGNED AREAS FOR EVACUATION

Criteria: K2113, SA
Applicable to: MSN 2927-3120

CABIN CREW DESIGNATION	ASSIGNED JUMPSEAT AND DOOR	ASSIGNED JUMPSEAT	ASSIGNED AREA
1 PURSER	DOOR 1 LH	FWD INBOARD	FWD/MID
1 CABIN CREW	DOOR 2	FWD/MID	FWD/MID
1 CABIN CREW	DOOR 3	AFT/MID	MID/AFT
1 CABIN CREW	DOOR 4 LH	AFT LH	MID/AFT
1 CABIN CREW	DOOR 4 RH	AFT RH	MID/AFT

Note: *These procedures are established for the minimum required number of 5 cabin crews. For customized seating configurations of 200 passenger seats or less, the minimum required cabin crew can be reduced to 4 (JAR OPS 1.990).*
When the minimum required cabin crew is reduced to 4, occupancy of AFT RH seat is not required.
However, one cabin crew must be seated on the center swivel cabin attendant seat (if installed).

EMERGENCY PASSENGER DOOR OPERATION

Criteria: SA
Applicable to: MSN 2649

FRAME ASSIST HANDLE.....GRASP
SLIDE ARMED.....CHECK
OUTSIDE CONDITIONS.....CHECK SAFE

Use the door window to ensure that slide deployment area is clear of:
- Fire
- Smoke
- Obstacle

- **If outside conditions are safe:**
  DOOR CONTROL HANDLE.....RAPIDLY LIFT FULLY UP AND RELEASE

WARNING	When the door is in the "ARMED" mode, the "Cabin Pressure Warning Light" does not illuminate to indicate cabin differential pressure. Indications of cabin differential pressure may be: - Resistance in the Door Control Handle when it is being lifted to the open position, using normal force, and/or - A Hissing noise around the immediate door area, If circumstances permit, fully lower the door control handle to the closed position. Notify the flight crew immediately.

- **If the door power assist fails the door will not open automatically:**
  DOOR .....PUSH TO OPEN
  GUST LOCK.....CHECK ENGAGED
  SLIDE DEPLOYED AND INFLATED..... VISUAL CHECK

- **If the slide is not inflated:**

  Note: *The Cabin Crew must only pull the red manual inflation handle if the slide is not inflated but is fully deployed.*

  RED, MANUAL INFLATION HANDLE.....PULL

  This red, manual inflation handle is located on the right-hand side of the slide's girt extension.

EMERGENCY PASSENGER DOOR OPERATION

Criteria: K2113, SA
Applicable to: MSN 2927-3120

FRAME ASSIST HANDLE.....GRASP
SLIDE ARMED.....CHECK
OUTSIDE CONDITIONS.....CHECK SAFE

Use the door window to ensure that slide deployment area is clear of:
- Fire
- Smoke
- Obstacle

● **If outside conditions are safe:**
DOOR CONTROL HANDLE.....RAPIDLY LIFT FULLY UP AND RELEASE

- For doors 1 and 4 , the door unlocks then moves up . Then the door opens automatically and locks in the open position.
- For doors 2 and 3, the door unlocks, moves up and remains in that position for 3 s, to allow the slide located in the fuselage to deploy. Then the door opens automatically and locks in the open position.

WARNING	When the door is in the "ARMED" mode, the "Cabin Pressure Warning Light" does not illuminate to indicate cabin differential pressure. Indications of cabin differential pressure may be: - Resistance in the Door Control Handle when it is being lifted to the open position, using normal force, and/or - A Hissing noise around the immediate door area, If circumstances permit, fully lower the door control handle to the closed position. Notify the flight crew immediately.

● **If the door power assist fails the door will not open automatically:**
DOOR .....PUSH TO OPEN
GUST LOCK.....CHECK ENGAGED
SLIDE DEPLOYED AND INFLATED..... VISUAL CHECK

● **If the slide is not inflated:**

Note: *The Cabin Crew must pull the red manual inflation handle if the slide is not inflated but is fully deployed.*

RED, MANUAL INFLATION HANDLE.....PULL

Continued on the following page

EMERGENCY PASSENGER DOOR OPERATION (Cont'd)

- *For doors 1 and 4, this red, manual inflation handle is located on the right side of the gird bar.*
- *For doors 2 and 3, this red, manual inflation handle is located on the right side of the door frame.*

TO OPEN THE OVERWING EXIT

Applicable to: MSN 2649

OVERWING EXIT.....SIT DOWN NEXT TO THE EXIT

Note: The emergency overwing exits are always in armed mode.

OVERWING EXIT COVER.....PULL AND DISCARD

Note: The slide armed indicator illuminates.

OVERWING EXIT LOWER HANDLE RECESS.....HOLD FIRMLY
OVERWING EXIT UPPER HATCH HANDLE..... PULL DOWN
OVERWING EXIT HATCH..... REMOVE AND THROW OUTSIDE AIRCRAFT

Note: The slide automatically deploys and inflates.

- **If the slide does not automatically inflate:**
  RED, MANUAL INFLATION HANDLE.....PULL
- **In the event of ditching, and if lifeline on board the aircraft:**
  LIFELINE..... INSTALL
  The lifelines are stowed in overhead stowage above the RH and LH overwing exit.
  ONE LIFELINE SNAPHOOK.....ATTACH TO THE YELLOW DOOR-STOP
  The door-stop fitting is on the upper rear corner of the overwing exit.
  SECOND LIFELINE SNAPHOOK.....ATTACH TO THE YELLOW WING HOOK
  The hook is on the center of the wing surface.
  LIFELINE PULL TABS..... PULL FIRMLY TO ADJUST

CABIN PREPARATION FOR PLANNED ON GROUND EVACUATION

Applicable to: ALL

CAPTAIN.....BRIEF PURSER

1. Nature of the emergency and intentions
2. Time available to prepare the cabin

Note: Synchronize watches, to assist with time management

3. The signal to brace
4. Signal to remain seated (if, an evacuation is not required)
5. Special instructions

PURSER.....ACKNOWLEDGE CAPTAIN'S BRIEFING
PURSER..... BRIEF ALL CABIN CREWMEMBERS
DEMONSTRATION POSITIONS..... TAKE
PURSER.....PERFORM EMERGENCY ANNOUNCEMENT

The Purser will brief passengers using the PA.

Note: When reading the announcement, the Purser should pause at key points in order to allow the cabin crewmembers time to demonstrate, and check passenger compliance.

The emergency announcement contains the following information:
- *Brace positions*
- *The location of exits*
- *Removal of sharp objects*
- *Review of the safety information card*
- *Passenger assistance, able bodied passengers.*

DEMONSTRATION.....PERFORM

- *Demonstrate the information to the passengers as it is being read*
- *Demonstrate the brace positions*
- *Use the safety information card to illustrate the information.*

CABIN..... SECURE

The cabin secure must also include the following items:
- *Removal of all service equipment (cups, pillows, headsets etc.) from the cabin*
- *Secure all galleys (trolleys and containers stowed and latched)*
- *Switch off galley power*
- *Lock all lavatory doors.*

PASSENGERS.....ASSIST

Continued on the following page

CABIN PREPARATION FOR PLANNED ON GROUND EVACUATION (Cont'd)

- *Move and reseat passengers as required.*
- *Brief ABPs (Able Bodied Passengers)*
- *Brief passengers assisting unaccompanied minors, elderly and disabled passengers.*

SLIDE IN ARMED POSITION..... CHECK

Ensure that the area around the exits are free from all obstructions.

CABIN .....CHECK SECURE
CABIN SECURE COMPLETED.....INFORM PURSER
DESIGNATED CREW SEAT.....TAKE AND SECURE HARNESS
CABIN READY .....INFORM CAPTAIN

When the cabin is secured, the purser must notify the captain.

PURSER CREW SEAT..... TAKE AND SECURE HARNESS
SILENT REVIEW.....PERFORM

Review evacuation commands, actions, and responsibilities.

BRACE POSITION..... ADOPT ON CAPTAIN'S COMMAND

ON GROUND EVACUATION

Criteria: SA
Applicable to: MSN 2649

Note: The order to evacuate is usually given by the flight crew, however, in clearly catastrophic circumstances any cabin crewmember may initiate an evacuation.

EVACUATION ORDER..... RECEIVED
"EVACUATE, EVACUATE, SEAT BELTS OFF"..... SHOUT
"LEAVE EVERYTHING, HIGH HEELS OFF"..... SHOUT
FRAME ASSIST HANDLE..... GRASP
SLIDE ARMED..... CHECK
OUTSIDE CONDITIONS ..... CHECK SAFE

Check through the observation window to ensure that the slide deployment area is clear of:
- *Fire*
- *Smoke*
- *Obstacles*

● **If outside conditions are unsafe:**
PASSENGERS TO NEAREST USABLE EXIT..... REDIRECT
EXIT ..... GUARD

● **If outside conditions are safe:**
FRAME ASSIST HANDLE..... GRASP
DOOR..... OPEN

● **If the door power assist fails the door will not open automatically:**
DOOR ..... PUSH TO OPEN MANUALLY
GUST LOCK..... CHECK ENGAGED
SLIDE DEPLOYED AND INFLATED..... VISUAL CHECK

Also ensure that the slide deployment area is clear of all obstructions.

● **If the slide (or slideraft) does not automatically inflate:**

Note: The cabin crew must only pull the red manual inflation handle if the slide is not inflated but is fully deployed.

RED, MANUAL INFLATION HANDLE..... PULL

The red, manual inflation handle is located on the right-hand side of the slide girt extension.

ASSIST SPACE..... OCCUPY
PASSENGER EVACUATION..... EXPEDITE

Continued on the following page

ON GROUND EVACUATION (Cont'd)

"COME THIS WAY, HURRY, JUMP, JUMP".....SHOUT

- **If the slide (or slideraft) becomes unserviceable:**

PASSENGER EVACUATION.....STOP
PASSENGERS TO ANOTHER USABLE EXIT.....REDIRECT
ASSIGNED AREA .....CHECK FULLY EVACUATED
EMERGENCY EQUIPMENT..... TAKE

Time permitting, each cabin crewmember takes their designated safety and survival equipment before leaving the aircraft.

CABIN CREW.....EVACUATE
PASSENGERS AWAY FROM THE AIRCRAFT..... DIRECT
ON GROUND .....CONDUCT POST EVACUATION DUTIES

ON GROUND EVACUATION

Criteria: K2113, SA
Applicable to: MSN 2927-3120

Note: The order to evacuate is usually given by the flight crew, however, in clearly catastrophic circumstances any cabin crewmember may initiate an evacuation.

EVACUATION ORDER..... RECEIVED
"EVACUATE, EVACUATE, SEAT BELTS OFF"..... SHOUT
"LEAVE EVERYTHING, HIGH HEELS OFF"..... SHOUT
FRAME ASSIST HANDLE..... GRASP
SLIDE ARMED..... CHECK
OUTSIDE CONDITIONS ..... CHECK SAFE

Check through the observation window to ensure that the slide deployment area is clear of:
- *Fire*
- *Smoke*
- *Obstacles*

● **If outside conditions are unsafe:**
PASSENGERS TO NEAREST USABLE EXIT..... REDIRECT
EXIT ..... GUARD

● **If outside conditions are safe:**
FRAME ASSIST HANDLE..... GRASP
DOOR..... OPEN

● **If the door power assist fails the door will not open automatically:**
DOOR ..... PUSH TO OPEN MANUALLY
GUST LOCK..... CHECK ENGAGED
SLIDE DEPLOYED AND INFLATED..... VISUAL CHECK

Also ensure that the slide deployment area is clear of all obstructions.

● **If the slide (or slideraft) does not automatically inflate:**

Note: The Cabin Crew must only pull the red manual inflation handle if the slide is not inflated but is fully deployed.

RED, MANUAL INFLATION HANDLE..... PULL

The red, manual inflation handle is located on the right-hand side of the slide girt extension. For the emergency exit : the red, manual inflation handle is located on the right-hand side of the upper door frame.

Continued on the following page

ON GROUND EVACUATION (Cont'd)

ASSIST SPACE.....OCCUPY
PASSENGER EVACUATION.....EXPEDITE
"COME THIS WAY, HURRY, RUN AND JUMP".....SHOUT

- **If the slide (or slideraft) becomes unserviceable:**

PASSENGER EVACUATION.....STOP
PASSENGERS TO ANOTHER USABLE EXIT.....REDIRECT
ASSIGNED AREA .....CHECK FULLY EVACUATED
EMERGENCY EQUIPMENT..... TAKE

Time permitting, each cabin crewmember takes their designated safety and survival equipment before leaving the aircraft.

CABIN CREW.....EVACUATE
PASSENGERS AWAY FROM THE AIRCRAFT..... DIRECT
ON GROUND .....CONDUCT POST EVACUATION DUTIES

CABIN PREPARATION FOR DITCHING

Criteria: K2113, K3712, SA
Applicable to: MSN 2927-3120

CAPTAIN.....BRIEF PURSER

1. Nature of the emergency and intention
2. Time available to prepare the cabin

Note: Synchronize watches, to assist with time management

3. The signal to brace
4. Special instructions

PURSER.....ACKNOWLEDGE CAPTAIN'S BRIEFING
PURSER..... BRIEF ALL CABIN CREWMEMBERS
DEMONSTRATION POSITIONS..... TAKE

Cabin crew must take their own lifevests. The cabin crew will don their lifevests during the demonstration.

PURSER.....PERFORM EMERGENCY ANNOUNCEMENT

The Purser will brief passengers using the PA.

Note: When reading the announcement, the Purser should pause at key points in order to allow the cabin crew time to demonstrate, and check passenger compliance.

The emergency announcement contains the following information:
- *Lifevests (location and use)*
- *Brace position*
- *The location of exits*
- *Removal of sharp objects*
- *Review of the safety information card*
- *Passenger assistance, able bodied passengers, and assistance in fitting infant lifevests.*

DEMONSTRATION.....PERFORM

- *Demonstrate the information to the passengers as it is being read*
- *Demonstrate the brace position*
- *Use the safety information card to illustrate the information.*

CABIN..... CHECK SECURE

The cabin secure must also include the following :
- *Remove all service equipment (cups, pillows, headsets etc.) from the cabin*
- *Secure all galleys (trolleys and containers stowed and latched)*

Continued on the following page

CABIN PREPARATION FOR DITCHING (Cont'd)

- *Switch off galley power*
- *Lock all lavatory doors.*

PASSENGERS ..... ASSIST

- *Move and reseat passengers as required*
- *Brief ABPs (Able Bodied Passengers)*
- *Brief passengers assisting unaccompanied minors, elderly and disabled passengers.*

SLIDERAFT IN ARMED POSITION AT DOORS 1 AND 4..... CHECK

Ensure that the area around the exit is free from all obstruction.

SURVIVAL KIT FROM STOWAGE..... REMOVE

The survival kit must be removed from the overhead stowage and attached to the slide raft using the white lanyard.

ESCAPE SLIDE AT DOORS 2 AND 3..... DISARM

Note: *1. Doors 2 and 3 escape slides cannot be disconnected from the aircraft.*
2. If applicable, these exits can be used as a launching station for portable rafts.

Ensure that the area around the exit is free from all obstruction.

ABLE BODIED PASSENGERS (ABPs) SEATED AT EXIT..... BRIEF

The Able Bodied Passengers (ABPs) seated at the exit will assist the cabin crewmember during the evacuation.

CABIN .....CHECK SECURE
CABIN SECURE COMPLETE..... INFORM PURSER
DESIGNATED CREW SEAT.....TAKE AND SECURE HARNESS
CABIN READY..... INFORM CAPTAIN

When the cabin is secure, the purser must notify the captain.

PURSER CREW SEAT..... TAKE AND SECURE HARNESS
SILENT REVIEW.....PERFORM

Review evacuation commands, actions, and responsibilities.

BRACE POSITION..... ADOPT ON CAPTAIN'S COMMAND

CABIN PREPARATION FOR DITCHING

Criteria: K0151, SA
Applicable to: MSN 2649

CAPTAIN.....BRIEF PURSER

1. Nature of the emergency and intentions
2. Time available to prepare the cabin

Note: Synchronize watches, to assist with time management

3. The signal to brace
4. Special instructions

PURSER.....ACKNOWLEDGE CAPTAIN'S BRIEFING
PURSER..... BRIEF ALL CABIN CREWMEMBERS
DEMONSTRATION POSITIONS..... TAKE

Cabin crewmembers must take their own lifevests. The cabin crewmembers will don their lifevests during the demonstration.

PURSER.....PERFORM EMERGENCY ANNOUNCEMENT

The Purser will brief passengers using the PA.

Note: When reading the announcement, the Purser should pause at key points in order to allow the cabin crewmembers time to demonstrate, and check passenger compliance.

The emergency announcement contains the following information:
- *Lifevests (location and use)*
- *Brace positions*
- *The location of exits*
- *Removal of sharp objects*
- *Review of the safety information card*
- *Passenger assistance, able bodied passengers, and assistance in fitting infant lifevests.*

DEMONSTRATION.....PERFORM

- *Demonstrate the information to the passengers as it is being read*
- *Demonstrate the brace positions*
- *Use the safety information card to illustrate the information.*

CABIN..... CHECK SECURE

The cabin secure must also include the following items:
- *Remove all service equipment (cups, pillows, headsets etc.) from the cabin*
- *Secure all galleys (trolleys and containers stowed and latched)*

Continued on the following page

CABIN PREPARATION FOR DITCHING (Cont'd)

- *Switch off galley power*
- *Lock all lavatory doors.*

PASSENGERS ..... ASSIST

- *Move and reseat passengers as required*
- *Brief ABPs (Able Bodied Passengers)*
- *Brief passengers assisting unaccompanied minors, elderly and disabled passengers.*

SLIDE IN ARMED POSITION..... CHECK

Ensure that the area around the exits are free from all obstructions.

SURVIVAL KIT FROM STOWAGE..... REMOVE

The survival kit must be removed from the overhead stowage and attached to the slide raft using the white lanyard.

ABLE BODIED PASSENGERS (ABPs) SEATED AT EXIT..... BRIEF

The Able Bodied Passengers (ABPs) seated at the exit will assist the cabin crewmember during the evacuation.

CABIN .....CHECK SECURE
CABIN SECURE COMPLETED.....INFORM PURSER
DESIGNATED CREW SEAT.....TAKE AND SECURE HARNESS
CABIN READY..... INFORM CAPTAIN

When the cabin is secured, the purser must notify the captain.

PURSER CREW SEAT..... TAKE AND SECURE HARNESS
SILENT REVIEW.....PERFORM

Review evacuation commands, actions, and responsibilities.

BRACE POSITION..... ADOPT ON CAPTAIN'S COMMAND

EVACUATION ON WATER

Criteria: K0151, SA
Applicable to: MSN 2649

When the cabin receives the order to evacuate, each cabin crewmember must proceed as follows :

STAND UP AND SHOUT..... "UNFASTEN SEATBELTS, LIFEVESTS ON"

Inflate the lifevest, only once outside the aircraft.

ORDER..... "REMOVE SHOES"

- **If the Type I door is usable**

  DOOR IN ARMED POSITION..... OPEN
  RED, MANUAL INFLATION HANDLE..... PULL

  Do not wait for automatic inflation of the slideraft.

- **If the water level is close to the door sill**

  The slideraft inflates on the water.

  SLIDERAFT..... LEAVE ATTACHED TO CABIN FLOOR
  ASSIST SPACE..... OCCUPY

- **If the water level is too far away from the door sill**

  SLIDERAFT..... DISCONNECT FROM DOOR SILL

  The slideraft remains tied to the aircraft by a 6 m (20 ft) mooring line.

  MOORING LINE..... HOLD

  To keep the slideraft close to the exit, hold the mooring line.

PASSENGERS EVACUATION ..... EXPEDITE
COME THIS WAY, HURRY..... SHOUT
PASSENGERS LIFEVESTS..... INSTRUCT PASSENGERS TO INFLATE LIFEVESTS WHEN EVACUATING THE AIRCRAFT
NUMBER OF PASSENGERS BOARDING THE SLIDERAFT..... MONITOR

Ensure that the slideraft is not overloaded.

ASSIGNED AREA ..... CHECK FULLY EVACUATED
LAST CREWMEMBER..... BOARD SLIDERAFT

The last crewmember must board with all the necessary safety equipment.

MOORING LINE..... CUT
SURVIVAL KIT..... RETRIEVE

The survival kit is attached to the slideraft via a lanyard.

Continued on the following page

EVACUATION ON WATER (Cont'd)

Evacuation is usually done through the passenger doors. However, if one of the passenger doors is not usable, the overwing exit may be used for evacuation. The cabin crew should install the lifeline to help passenger to stay on the wing. These passengers will, however, be obliged to wait on the wing until the slideraft arrives, and until all other passengers have evacuated from the passenger door exits, and have finished boarding the sliderafts.

- **If the aircraft is equipped with portable raft**

  Before using a portable raft at a passenger door, ensure that all usable sliderafts have been boarded to their maximum capacity and detached from the doorsill.

  Locate and open the portable raft compartment ; remove the raft pack.

  Carry the raft pack to the exit.

  Place it on the floor near exit.

  Firmly tie the end of the mooring line to a fixed part of the aircraft (a passenger seat, or one of the frame assist handles).

  Throw the portable raft out of the aircraft the raft will inflate automatically.

  - **If the portable raft does not inflate automatically**

    Pull on the mooring line to inflate the portable raft

  Pull the portable raft near to the aircraft using the mooring line, and board passengers.

  Note: *Passengers should be distributed evenly to prevent the raft from capsizing.*

  When all passengers have boarded the portable raft, the crewmember must board.

  Separate the portable raft from the aircraft by cutting the mooring line.

EVACUATION ON WATER

Criteria: K2113, K3712, SA
Applicable to: MSN 2927-3120

When the cabin receives the order to evacuate, each cabin crewmember must proceed as follows :

STAND UP AND SHOUT..... "UNFASTEN SEATBELTS, LIFEVESTS ON"

Inflate the lifevest, only when outside the aircraft.

ORDER..... "REMOVE SHOES"

- **If doors 1 and 4 are usable**

  DOOR WITH SLIDERAFT ARMED .....OPEN
  RED, MANUAL INFLATION HANDLE.....PULL

  Do not wait for automatic inflation of the slideraft, however, make sure that the door is fully open.

  - **If the water level is close to the door sill**

    The slideraft inflates on the water.

    SLIDERAFT..... LEAVE ATTACHED TO CABIN FLOOR
    ASSIST SPACE..... OCCUPY

  - **If the water level is too far below the door sill**

    SLIDERAFT..... DISCONNECT FROM DOOR SILL

    The slideraft remains tied to the aircraft by a 6 m (20 ft) mooring line.

    MOORING LINE..... HOLD

    To keep the slideraft close to the exit, hold the mooring line.

PASSENGERS EVACUATION .....EXPEDITE
COME THIS WAY, HURRY.....SHOUT
INFLATE LIFEVEST..... SHOUT
NUMBER OF PASSENGERS BOARDING THE SLIDERAFT.....MONITOR

Ensure that the slideraft is not overloaded.

ASSIGNED AREA ..... CHECK FULLY EVACUATED
LAST CREWMEMBER..... BOARD SLIDERAFT

The last crewmember must board with all the necessary safety equipment.

SLIDERAFT..... DISCONNECT FROM DOOR SILL
PASSENGER IN THE WATER..... ASSIST
MOORING LINE.....CUT
SURVIVAL KIT..... RETRIEVE

The survival kit is attached to the slideraft via a lanyard.

Continued on the following page

EVACUATION ON WATER (Cont'd)

- **If doors 2 and 3 are usable**

  ESCAPE SLIDE ..... CHECK DISARMED
  OUTSIDE CONDITION ..... CHECK
  DOOR ..... OPEN

  Note: *If applicable, doors 2 and 3 can be used as a launching station for portable rafts.*

  PASSENGERS EVACUATION ..... EXPEDITE
  COME THIS WAY, HURRY..... SHOUT
  INFLATE LIFEVEST..... SHOUT
  JUMP INTO WATER..... SHOUT

- **If the aircraft is equipped with portable raft**

  Locate and open the portable raft compartment ; remove the raft pack.

  Carry the raft pack to the exit.

  Place it on the floor near exit.

  Firmly tie the end of the mooring line to a fixed part of the aircraft (a passenger seat, or one of the frame assist handles).

  Throw the portable raft out of the aircraft; the raft will inflate automatically.

  - **If the portable raft does not inflate automatically**

    Pull on the mooring line to inflate the portable raft

  Assist passengers to board the raft.

  Note: *Passengers should be distributed evenly to prevent the raft from capsizing.*

  When all passengers have boarded the portable raft, the crewmember must board.

  Separate the portable raft from the aircraft by cutting the mooring line.

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COCKPIT EVACUATION THROUGH WINDOW

Applicable to: ALL

OPENING THE SLIDING WINDOW

HANDLE.....PUSH DOWN AND PULL BACK

Pulling the handle backwards, opens the sliding window.

COCKPIT EVACUATION WITH ESCAPE ROPE

ESCAPE ROPE STOWAGE..... OPEN

The escape rope stowage is located above the sliding window, on either side of the overhead panel.

ESCAPE ROPE..... UNROLL

Unroll the escape rope until the red flag appears, and throw it through the window.

SEAT.....STEP ON
ESCAPE ROPE..... GRASP

Grasp the escape rope firmly with both hands, and slide down along the rope.

COCKPIT EVACUATION THROUGH COCKPIT DOOR

Applicable to: ALL

QUICK RELEASE PINS..... PULL TOWARDS THE CENTER OF THE FLAP
ESCAPE PANEL..... KICK TOWARDS CABIN
THROUGH ESCAPE PANEL.....EVACUATE
ON HANDS AND KNEES ..... MOVE TOWARDS CABIN

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DEPRESSURIZATION WARNINGS

Applicable to: ALL

A loss of pressurization can be slow - in the case of a small air leak - while a rapid or explosive depressurization occurs suddenly within a few seconds.
In the case of excessive cabin pressure/depressurization, indications will successively alert the cabin crew of a pressurization malfunction.

CABIN INDICATIONS

When the cabin altitude reaches >11 300 ft the following will happen:

- The EXIT signs will come on
- The cabin lighting comes on 100 % or (CAM assigned value)
- The FASTEN SEAT BELT and NO SMOKING signs come on

Note: In the case of depressurization, the lavatory RETURN TO SEAT signs do not come on.

When the cabin altitude reaches 14 000 ft the following will happen:

- The oxygen masks will drop down
- The PA volume increases
- The emergency depressurization messages will be broadcast (if installed).

CABIN DEPRESSURIZATION

Applicable to: ALL

- **If oxygen masks drop:**

  NEAREST OXYGEN MASK..... DON
  NEAREST SEAT.....SIT DOWN
  SEATBELT.....FASTEN

WARNING	*Do not remove your oxygen mask until it is safe to do so. Removing your oxygen mask during a depressurization may lead to a total incapacitation caused by hypoxia*

  - **If no seat is available:**

    FIXED OBJECT.....GRASP AND HOLD ON

    When no seat is available, the cabin crew should wedge themselves between passengers and hold on.

- **If the flight crew does not communicate with the cabin crew:**

  CABIN/COCKPIT COMMUNICATION..... ESTABLISH

  The cabin crew should, as soon as possible, inform the flight crew of the situation by appropriate means and confirm that the flight crew wear their oxygen masks.

  - **If no reply from the cockpit:**

    CABIN CREW..... EQUIP YOURSELF WITH OXYGEN
    CABIN CREW..... ENTER COCKPIT
    CABIN CREW..... PROVIDE ASSISTANCE TO THE FLIGHT CREW

- **If the flight crew communicates with the cabin crew:**

  "DON OXYGEN MASKS - FASTEN SEAT BELTS"..... INSTRUCT PASSENGERS

  From your location, speak through your mask, or use gestures to demonstrate the donning of masks.

  ANNOUNCEMENT..... MAKE, IF POSSIBLE

  Although the bag does not inflate, oxygen is flowing to the mask.

  Note: *In the case of a cabin depressurization, the lavatory "return to seat" signs do not come on. For passengers located in the lavatories, 2 masks will immediately drop down from the lavatory ceiling. Passengers should apply the mask over their nose and mouth.*

- **When notified by the flight crew (PA) that a safe flight level has been reached:**

  CABIN CREW .....TRANSFER TO PORTABLE OXYGEN

Continued on the following page

CABIN DEPRESSURIZATION (Cont'd)

Note: To prevent crew incapacitation due to hypoxia, the cabin crew must transfer to portable oxygen, and consider their post decompression oxygen needs. when deciding to remove oxygen masks, the cabin crew must use good judgement and must be alert to any sign of hypoxia.

FLIGHT CREW .....CHECK

The cabin crewmember nearest to the cockpit should check on the flight crew in case assistance is needed.

PASSENGERS AND CABIN..... CHECK

The cabin crew should check for passenger injuries and damage to the cabin.

FIRST AID AND OXYGEN ..... GIVE AS REQUIRED
CABIN STATUS.....REPORT TO FLIGHT CREW

Report the nature of injuries and the cabin damage to the flight crew.

ABNORMAL CABIN ALTITUDE

Applicable to: ALL

Immediately after the Flight Crew informs the Cabin Crew of possible abnormal cabin pressure the Cabin Crew must apply the following abnormal cabin altitude procedure :

CABIN CREW..... STOP ACTIVITIES
CABIN CREW..... TAKE DESIGNATED CABIN CREW SEAT AND SECURE HARNESS
CABIN TO COCKPIT COMMUNICATION..... MAINTAIN

- **If cabin depressurization occurs :**
  CABIN DEPRESSURIZATION..... APPLY

Note: The Cabin Crew must apply the CABIN DEPRESSURIZATION procedure upon any indication of CABIN DEPRESSURIZATION (ref. to chapter 09-050 Abnormal/ Emergency procedures).

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TURBULENCE MANAGEMENT

Applicable to: ALL

The following levels of turbulence can be encountered during a flight:
- Light turbulence
- Moderate turbulence
- Severe turbulence.

The cabin crew should always use these terms when communicating turbulent conditions to the flight crew or other cabin crewmembers.
The following table provides the definition and the cabin conditions associated with each of the three levels of turbulence.

LIGHT TURBULENCE	MODERATE TURBULENCE	SEVERE TURBULENCE
Light turbulence momentarily causes slight, rapid, and rhythmic bumpiness without noticeable changes in the aircraft altitude or attitude.	Moderate turbulence, causes rapid bumps or jolts.	Severe turbulence causes large abrupt changes in the aircraft altitude and attitude.
Cabin Conditions	**Cabin Conditions**	**Cabin Conditions**
• Liquids are shaking but are not splashing out of cups • Trolleys can be maneuvered with little difficulty • Passengers may feel a slight strain against their seat belts.	• Liquids splashing out of cups • Trolleys difficult to manoeuvre • Difficult to walk in the cabin • Difficult to stand without holding on to something • Passengers feel definite strain against their seat belts.	• Items falling or lifting off the floor • Loose items are tossed about the cabin • Impossible to walk • Passengers are forced violently against their seat belts

CABIN GUIDELINES

It is important that the cabin crew perform frequent cabin checks and correctly manage the galleys to ensure safety and reduce the probability of injuries.

Therefore, the cabin crew should:
- Check the cabin frequently and ensure that the cabin is kept tidy
- Minimize the amount of service equipment left on galley and bar (when installed) surfaces. When items must remain available they should be placed inside draws that are easily accessible
- Ensure that galleys are correctly secured and latched after each service/use
- Ensure that trolleys and equipment should be correctly stowed after use.

CABIN CREW PROCEDURES

Applicable to: ALL

SECURING THE CABIN AND PASSENGER COMPLIANCE

The table below provides the cabin crew procedures in the case of turbulence.

LIGHT TURBULENCE	MODERATE TURBULENCE	SEVERE TURBULENCE
- Visually check that all passengers are seated with their seat belts fastened and hand baggage is stowed - Infants must be removed from bassinets and secured with an infant seat belt (if applicable) on the guardians lap, or secured in an approved car seat - Give the "cabin secure" to the Purser - Purser informs the flight crew that the cabin is secure.	- When the cabin crew are returning to their crew seats, check that all passengers are seated with their seat belts securely fastened and hand baggage is stowed Infants must be removed from bassinets and secured with an infant seat belt (if applicable) on the guardians lap, or secured in an approved car seat Prohibit the use of the forward and rear stairs Give the "cabin secure" to the Purser Purser informs the flight crew that the cabin is secure.	- The cabin crew must not attempt to visually check passenger compliance - If trolleys are in the cabin, set the brakes on all trolleys that are in use in the current location - Place jugs/pots of hot beverages on the floor - The cabin crew must immediately sit down. Take the nearest seat (including passenger seat) and fasten seatbelt/harness. **WARNING** Cabin crew must not risk personal injury by continuing service during turbulent conditions. The personal safety of the cabin crew is the priority

GALLEY AREAS

LIGHT TURBULENCE	MODERATE TURBULENCE	SEVERE TURBULENCE
- Ensure that trolleys and galley equipment that is not in use are correctly stowed and secured.	- Ensure that trolleys and galley equipment that is not in use are correctly stowed and secured - If the turbulence is expected for a long duration, stow and secure galley items - Cabin crewmembers working in the galley areas must take their seats when the galley is secured.	- Set the brakes on all trolleys that are in use in their current location - Place jugs/pots of hot beverages on the floor - The cabin crew must immediately sit down. Fasten seat belt/harness. **WARNING** Cabin crew must not risk personal injury by continuing service during turbulent

Continued on the following page

CABIN CREW PROCEDURES (Cont'd)

LIGHT TURBULENCE	MODERATE TURBULENCE	SEVERE TURBULENCE
		conditions. The personal safety of the cabin crew is the priority.

ANTICIPATED TURBULENCE PROCEDURES

Applicable to: ALL

When turbulence is anticipated the cabin crew will have a certain amount of time before the turbulence is encountered to secure the cabin and themselves.

FLIGHT CREW PREFLIGHT	PURSER PREFLIGHT	CABIN CREW PREFLIGHT
- Include as part of the pre-flight briefing with Purser, expected areas of turbulence during the flight.	- Inform all the cabin crew of any turbulence information received from the flight crew during the pre-flight briefing	- Acknowledge information from Purser.
FLIGHT CREW IN-FLIGHT	**PURSER IN-FLIGHT**	**CABIN CREW IN-FLIGHT**
- When turbulence is expected during the flight, the flight crew must advise the cabin crew how much time is available to secure the cabin, the level and expected duration of the turbulence encounter - The captain or first officer will make a PA announcement to the passengers instructing them to return to their seats and fasten their seatbelts.	- When the service is interrupted as a precautionary measure, a PA announcement should be made to the passengers explaining WHY the service is interrupted - Ensure that all passengers and cabin crew are secured - Inform the flight crew that all passengers and cabin crew are secured.	- Once the cabin crew are advised of anticipated turbulence, the cabin crew should prioritize their duties based on the time available before the turbulence encounter. - Stow and secure large items first, such as, trolleys - Remove bottles from the cabin and galley surfaces. Throw away any hot liquids - Secure the cabin, ensure that the lavatories are unoccupied - Secure the galleys - The cabin crew should then secure themselves - Inform Purser that passengers and cabin crew are secured.

UNANTICIPATED TURBULENCE PROCEDURES

Applicable to: ALL

FLIGHT CREW	PURSER	CABIN CREW
- Switch on the Fasten Seatbelt signs and make a PA to passengers and cabin crew to "Fasten Seatbelts Immediately".	- The Purser must Immediately sit down. Take the nearest seat (including passenger seat) and fasten seatbelt and harness.	- The cabin crew must immediately sit down. Take the nearest seat (including passenger seat) and fasten seatbelt/harness. **WARNING** Cabin crew must not risk personal injury by continuing service during turbulent conditions. The personal safety of the cabin crew is the priority.

POST TURBULENCE DUTIES

Applicable to: ALL

FLIGHT CREW	PURSER	CABIN CREW
- Advise cabin crew when it is safe to resume duties.	- Resume duties - Report any passenger injuries and/or cabin damage to the flight crew.	- Check for passenger injuries, give first aid if necessary - Calm and reassure passengers - Check for cabin damage - Report to Purser any passenger injuries and/or cabin damage.

FLIGHT CREWMEMBER INCAPACITATION

Applicable to: ALL

- **If a flight crewmember becomes incapacitated:**

  The remaining flight crewmember will as soon as practicable call for help from cabin crewmembers.

  The simplest and most effective way to summon help is via the PA system: "ATTENTION, PURSER TO COCKPIT PLEASE"

  The nearest cabin crewmember, must immediately proceed to the cockpit. The cabin crewmember must carry out the following actions:

  FLIGHT CREW SHOULDER HARNESS..... TIGHTEN AND MANUALLY LOCK
  FLIGHT CREW SEAT.....PUSH THE SEAT FULLY AFT
  FLIGHT CREW SEAT BACK..... RECLINE

- **If the incapacitated flight crewmember is unconscious or has difficulty breathing:**
  OXYGEN ..... ADMINISTER IMMEDIATELY
  INSTRUCTIONS FROM THE PILOT FLYING..... FOLLOW

CAUTION	It takes two people to move an unconscious body from a flight crew seat, in order to prevent damage or interference to the cockpit controls.

- **If it is not possible to move the incapacitated flight crewmember:**
  CABIN CREWMEMBER IN THE COCKPIT..... REMAIN

  One cabin crewmember should remain in the cockpit to take care of, and observe the incapacitated flight crewmember.

  MEDICAL ASSISTANCE .....REQUEST

  Make a PA announcement to request assistance from any medically qualified passenger onboard.

  COMPANY QUALIFIED PILOT..... REQUEST ASSISTANCE

  Request the assistance of a type qualified company pilot onboard to replace the incapacitated flight crewmember.

FLIGHT CREWMEMBER'S CHECK-LIST USE

Criteria: 320-200
Applicable to: MSN 2649

The minimum certified number of flight crewmembers on the A320 is two. To comply with Jar-Ops 1.1010 (g), for a practical demonstration by cabin crewmembers in the use of flight crewmember's checklists.

- **If one of the flight crewmembers becomes incapacitated when only the minimum required flight crew is onboard, a cabin crewmember may be required by the remaining pilot to assist by reading the landing checklists. At the request of the remaining flight crewmember the cabin crewmember who will read the checklist should proceed as follows:**
  CABIN CREWMEMBER..... READ CHECKLIST ALOUD CLEARLY
  RESPONSE FROM FLIGHT CREWMEMBER..... WAIT UNTIL RECEIVED

Note: *The cabin crewmember must wait for the response of the flight crewmember , before moving onto the next item on the checklist.*
Continue to the last item of the checklist, after the flight crewmember gives the response to the last checklist item.

CABIN CREWMEMBER..... REPLY "CHECKLIST COMPLETE"

This reply is given only after the final checklist response from flight crewmember has been received.

FLIGHT CREWMEMBER'S CHECK-LIST USE

Criteria: 321-200
Applicable to: MSN 2927-3120

The minimum certified number of flight crewmembers on the A321 is two. To comply with Jar-Ops 1.1010 (g), for a practical demonstration by cabin crewmembers in the use of flight crewmember's checklists.

- **If one of the flight crewmembers becomes incapacitated when only the minimum required flight crew is onboard, a cabin crewmember may be required by the remaining pilot to assist by reading the landing checklists. At the request of the remaining flight crewmember the cabin crewmember who will read the checklist should proceed as follows:**
  CABIN CREWMEMBER..... READ CHECKLIST ALOUD CLEARLY
  RESPONSE FROM FLIGHT CREWMEMBER..... WAIT UNTIL RECEIVED

Note: *The cabin crewmember must wait for the response of the flight crewmember , before moving onto the next item on the checklist.*
Continue to the last item of the checklist, after the flight crewmember gives the response to the last checklist item.

CABIN CREWMEMBER..... REPLY "CHECKLIST COMPLETE"

This reply is given only after the final checklist response from flight crewmember has been received.

BOMB ON BOARD

Applicable to: ALL

CABIN PROCEDURES

If a suspect device is found in the cabin:

WARNING	do not cut or disconnect any wires and do not open or attempt to gain entry to internal components of a closed or concealed suspect device. any attempt may result in an explosion. booby-trapped closed devices have been used on aircraft in the past.

WARNING	alternate locations must not be used without consulting with an aviation explosives security specialist. **never take a suspect device to the flight deck.**

CAUTION	The least risk bomb location for aircraft structure and systems is center of the RH aft cabin door.

EOD PERSONNEL ON BOARD.....CHECK

Announce : "Is there any EOD personnel on board ?". By using the initials, only persons familiar with EOD (Explosive Ordnance Disposal) will be made aware of the problem.

BOMB.....
.....DO NOT OPEN, DO NOT CUT WIRES, SECURE AGAINST SLIPPING, AVOID SHOCKS

Secure in the attitude found and do not lift before having checked for an anti-lift ignition device.

PASSENGERS..... LEAD AWAY FROM BOMB

Move passengers at least 4 seat rows away the bomb location. On full flights, it may be necessary to double up passengers to achieve standoff from the suspect device.
Passengers near the bomb should protect their heads with pillows, blankets.
All passengers must remain seated with seatbelts on and, if possible, head below the top of the head rest. Seat backs and tray tables must be in their full upright position.
Service items may need to be collected in order to secure tray tables.

PORTABLE ELECTRONIC DEVICES.....SWITCH OFF

The cabin crews must command passengers to switch off all portable electronic devices.

BOMB.....CHECK NO ANTI-LIFT DEVICE

To check for an anti-lift switch or lever, slide a string or stiff card (such as the emergency information card) under the bomb, without disturbing the bomb.
If the string or card cannot be slipped under the bomb, it may indicate that an anti-lift switch or lever is present and that the bomb cannot be moved.
If a card is used and can be slid under the bomb, leave it under the bomb and move together with the bomb.

Continued on the following page

BOMB ON BOARD (Cont'd)

If it is not possible to move the bomb, then it should be surrounded with a single thin sheet of plastic (e.g. trash bag), then with wetted materials, and other blast attenuation materials such as seat cushions and soft carry-on baggage. Move personnel as far away from the bomb location as possible.

EMERGENCY EQUIPMENTS.....REMOVE AND STOW

Emergency equipments (PBE, fire extinguisher, ...) located close to the LRBL must be removed and stowed in alternate location.

GALLEY/IFE POWER.....OFF

All galley and IFE equipments located close to the LRBL must be switched off.

- **If the bomb can be moved :**

RH AFT CABIN DOOR SLIDE..... DISARM
LEAST RISK BOMB LOCATION (LRBL)..... PREPARE

Build up a platform of solid baggage against the door up to about 25 cm (10 in) below the middle of the door.
On top of this, build up at least 25 cm (10 in) of wetted material such as blankets and pillows. Place a single thin sheet of plastic (e.g. trash bag) on top of the wetted materials. This prevents any possible short circuit.

CAUTION	*DO NOT OMIT THE PLASTIC SHEETS, AS THE SUSPECT DEVICE COULD GET WET AND POSSIBLY SHORT CIRCUIT ELECTRONIC COMPONENTS CAUSING INADVERTENT DEVICE ACTIVATION.*

BOMB INDICATION LINE.....POSITION

Note: *A bomb location indicator line is a 6- to 8- foot (1.8 to 2.4 m) line (e.g. neckties, headset cord, or belts connected together) preferably of constrating color, that helps the responding bomb squad find the precise location of the suspect device within the LRBL stack once constructed.*

Position the bomb indication line from the location on the platform where you will place the suspect device, EXTENDING outward into the aisle.

BOMB.....MOVE TO LRBL

Carefully carry in the attitude found and place on top of the wetted materials in the same attitude and as close to the door structure as possible.

CAUTION	Ensure that the suspect device, when placed on the stack against the door, is above the slide pack but not against the door handle, and if possible, avoid placement in the view port.

Continued on the following page

BOMB ON BOARD (Cont'd)

LEAST RISK BOMB LOCATION (LRBL).....COMPLETE

Place an additional single thin sheet of plastic over the bomb.

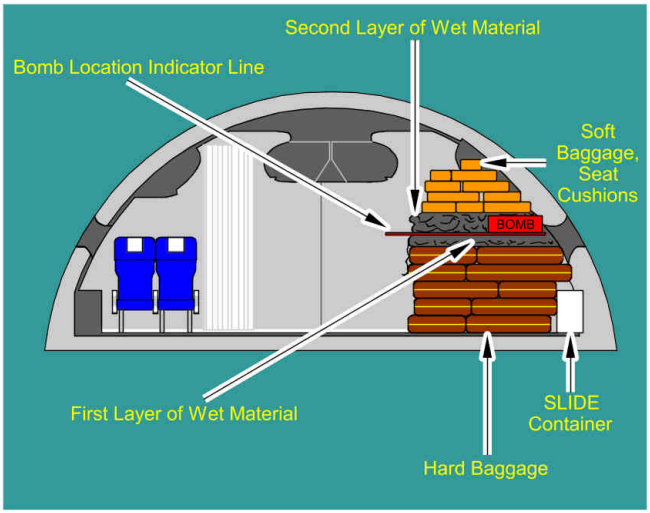
CAUTION	*DO NOT OMIT THE PLASTIC SHEETS, AS THE SUSPECT DEVICE COULD GET WET AND POSSIBLY SHORT CIRCUIT ELECTRONIC COMPONENTS CAUSING INADVERTENT DEVICE ACTIVATION.*

Build up at 25 cm (10 in) of wetted material around the sides and on top of the bomb.
DO NOT PLACE ANYTHING BETWEEN THE BOMB AND THE DOOR, AND MINIMIZE AIRSPACE AROUND THE BOMB.
The idea is to build up a protective surrounding of the bomb so that the explosive force is directed in the only unprotected area into the door structure.
Fill the area around the bomb with seat cushions and other soft materials such as hand luggage (saturated with water or any other nonflammable liquid) up to the cabin ceiling, compressing as much as possible. Secure the LRBL stack in place using belt, ties or other appropriate materials. The more material stacked around the bomb, the less the damage will be.
USE ONLY SOFT MATERIAL. AVOID USING MATERIALS CONTAINING ANY INFLAMMABLE LIQUID AND ANY METAL OBJECTS WHICH COULD BECOME DANGEROUS PROJECTILES.

Continued on the following page

BOMB ON BOARD (Cont'd)

LRBL STACK



PASSENGERS..... MOVE/ADVISE

Move passengers at least 4 seat rows away from the least risk bomb location (RH aft cabin door). On full flights, it may be necessary to double up passengers to achieve standoff from the suspect device.
Passengers near the bomb should protect their heads with pillows, blankets.
All passengers must remain seated with seatbelts on and, if possible, head below the top of the head rest. Seat backs and tray tables must be in their full upright position.

CABIN CREW ..... NOTIFY COCKPIT CREW

Cabin crew notify the flight crew that the bomb is secured at the LRBL.

EVACUATION/DISEMBARKATION..... EXECUTE

Evacuate through normal and emergency exits on the opposite side of the "bomb" location. Do not use the door just opposite the "bomb".
Use all available airport facilities to disembark without delay.

SINGLE BLADE LAVATORY DOOR EMERGENCY OPERATION

Applicable to: ALL

In case of an emergency, the single-blade lavatory door may be unlocked from the cabin.

LAVATORY SIGN COVER..... LIFT

The spring-loaded lavatory sign cover is located above the door's VACANT/OCCUPIED indicator.

KNOB..... SLIDE TO THE SIDE

Sliding the knob to the side will unlock the lavatory door, and the indicator will show: "VACANT".

LAVATORY DOOR..... PULL OPEN

- **If the lavatory door still does not open:**

  UPPER AND LOWER OUTSIDE LATCHES OF THE DOOR..... UNLOCK

  LAVATORY DOOR ..... PULL OPEN

WARNING	After releasing the lavatory door: Hold on to the lavatory door to prevent injury .

BI-FOLDING LAVATORY DOOR EMERGENCY OPERATION

Applicable to: ALL

In case of an emergency, the bi-folding lavatory door may be unlocked from the cabin.

LAVATORY SIGN COVER..... LIFT

The spring-loaded lavatory sign cover is located above the door's VACANT/OCCUPIED indicator.

KNOB..... SLIDE TO THE SIDE

Sliding the knob to the side will unlock the lavatory door, and the indicator will show: "VACANT".

LAVATORY DOOR..... PULL OPEN

- **If the lavatory door still does not open:**

  UPPER AND LOWER OUTSIDE LATCHES OF THE DOOR..... UNLOCK

  LAVATORY DOOR ..... PULL OPEN

WARNING	After releasing the lavatory door: Hold on to the lavatory door to prevent injury .

REJECTED TAKEOFF

Applicable to: ALL

In the event of a rejected takeoff, the cabin crew should proceed as follows:

CABIN CREW.....REMAIN SEATED WITH HARNESS SECURED

The cabin crew must remain seated in their jump seats, until the aircraft comes to a complete stop.

COCKPIT CREW INSTRUCTIONS.....WAIT FOR AND FOLLOW

- **If the cabin crew suspects or notices the development of an emergency situation (based on passenger reactions, smoke, noises, odors, aircraft attitude...):**

  CABIN CONDITIONS..... ASSESS

  When the aircraft comes to a complete stop, and if necessary, the cabin crew can leave their jump seats to further assess any conditions and/or passenger reactions.

- **If the cabin crew determines that there is an emergency situation:**

  CABIN CREW..... IMMEDIATELY NOTIFY COCKPIT CREW

  The cabin crew must immediately notify the cockpit crew of the cabin conditions, and of the nature of the emergency.

  COCKPIT CREW INSTRUCTIONS.....FOLLOW

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UNPLANNED GROUND EVACUATION

Applicable to: ALL

INTRODUCTION

The primary responsibility of the cabin crew during an evacuation is to direct passengers to evacuate the aircraft using all of the available exits. The aim of an evacuation is to ensure that passengers and crewmembers leave the aircraft as rapidly and as safely as possible.
Many factors contribute to the successful evacuation of the aircraft:

- The procedural knowledge of the cabin crew: *This includes training, experience and behavior*
- The environment inside and outside the aircraft (e.g., the presence of smoke, fire, the cabin lighting and outside conditions)
- The passengers' behavior, age, level of fitness and motivation
- The aircraft configuration and the layout of the cabin.

During an emergency, it is essential for the cabin crew to be able to apply their knowledge of procedures and rapidly adapt to the situation.

OPERATIONAL STANDARDS FOR AN UNPLANNED GROUND EVACUATION

THE SILENT REVIEW

The use of the Silent Review, Or the 30 s review , is excellent tool that the cabin crew can use to prepare for the unexpected. The Silent Review helps the cabin crew focus their attention duties and responsibilities and on safety.
The cabin crew should perform the Silent Review during the takeoff and landing phases of flight. This review helps the cabin crew prepare themselves and enables them to react rapidly.
The Silent Review should contain all of the elements needed to review evacuation duties and responsibilities. It may include, but is not limited to,
the following subjects:

THE SILENT REVIEW	• Brace for impact
	• Commands
	• Number of passengers in assigned area including any special needs passengers
	• Identifying Able Bodied Passengers (ABPs)
	• How much of the cabin can be seen from assigned station and assist space
	• Initiating evacuation, if necessary (i.e. Identify under what circumstances the cabin crew will initiate an evacuation: catastrophic situation involving the passengers, aircraft or crew)
	• Operating exits
	• Assessing outside conditions
	• Self-protection
	• Locating the manual inflation handle for the slide/slideraft

The following is an example of a Silent Review that uses the first word of each subject to form a word that is easy to remember. This example is "**OLDABC**":

- **O**peration of exits
- **L**ocation of equipment
- **D**rill (Brace for impact)
- **A**ble-Bodied Passengers and persons wilth reduced mobility
- **B**race Position
- **C**ommands.

WHEN CAN THE CABIN CREW INITIATE AN EVACUATION?

When waiting for takeoff and landing, the cabin crew should be alert to any indication of a possible emergency. Such indications may include fire, smoke, scraping metal, unusual noises, the force of impact or an unusual aircraft attitude.
Many evacuations are unplanned, and occur without warning. In most cases, the decision to evacuate is made by the flight crew.
Information received from the cabin crew played an important role in the flight crew's decision to evacuate.
In some cases, it may be necessary for the cabin crew to initiate an evacuation, when there is a catastrophic situation, such as:

- **Uncontrollable fire**
- **Dense smoke**
- **Severe structural damage**
- **Emergency landing on water**
- **No communication from the flight crew.**

When the cabin crew decide to initiate an evacuation, they must evaluate the level of danger and the consequences that a delay in decision-making may have. Smoke or fire that is out of control requires a rapid decision, because of the danger it presents to the occupants of the aircraft, its ability to incapacitate rapidly, impair judgment and restrict vision, therefore making the evacuation a process difficult. In these cases, delaying the evacuation reduces the chances of survival.
If the cabin crew consider that an evacuation is necessary, they must attempt to contact the flight crew in order to inform them of the situation.
An evacuation requires cabin crew coordination. Therefore, all cabin crew must be informed that a life-threatening situation exists. There are many ways to inform cabin crewmembers, such as via:

- **An evacuation alarm**
- **A Public Address**
- **An interphone**
- **A megaphone.**

FACTORS INFLUENCING SUCCESSFUL AIRCRAFT EVACUATION

ASSERTIVE CABIN CREW

Assertive cabin crew are positive in their commands and behavior. They use short, clear commands that will have an immediate impact on the rapidity of the cabin evacuation.
Their body language will clearly indicate to the passengers the actions to follow even if the passengers don't understand the language being spoken. The cabin crew must be assertive in their use of commands, and, if necessary, be prepared to use some physical force to evacuate passengers from the aircraft.
Commands should be:

- Assertive
- Short
- Loud
- Clear
- Well-paced

Body language is extremely important: The gestures of the cabin crew and tone of their voice must reflect what they want to achieve, because passengers may not always understand the language that the cabin crew are using.

BRACE COMMANDS

The brace command is the first and most important instruction that cabin crew must provide to passengers in an unplanned emergency. The purpose of instructing passengers to take the brace position is to reduce injuries during impact, in order to increase the chances of survival.

The brace position has two functions: Firstly, it reduces the extent of body movement, due to the fact that passengers must lean or bend over their legs. Secondly, it protects passengers from hitting their head on a hard surface.
When the cabin crew use the brace commands it is important that all of the passengers seated in the cabin can hear and understand the commands. If the commands are not synchronized (particularly on smaller aircraft, when the cabin crew are seated close together), the commands may not be audible, and therefore may not be understood by the passengers. This can lead to confusion among the passengers.

EXAMPLE	Brace commands are: '**Heads down**', '**Stay down**', or '**Heads down**, **feet back**'.

ASSESSING OUTSIDE CONDITIONS

Before opening an exit, the cabin crew must check that the outside conditions are safe, and that the slide deployment area is clear of:

- Fire
- Smoke
- Obstacles
- Debris.

The cabin crew should open the exit, only if it safe to do so.
The cabin crew must hold on to the frame assist handle.
The cabin crew can use commands such as '**Stand back**, **stand back**' to hold passengers back from the exit, during the exit opening and slide deployment sequence.
The cabin crew must visually check that the slide is deployed and fully inflated. When the cabin crew confirm that the exit is usable, they can start the evacuation.
The cabin crew should only use the command 'Come this way' when a cabin crewmember has confirmed that the exit is usable.

ABLE-BODIED PASSENGER (ABP) COMMANDS

The cabin crew should be trained to identify Able-Bodied Passengers (ABPs), in order to assist the cabin crew with safety-related tasks during an evacuation. The cabin crew can easily identify ABPs during the passenger boarding process.
ABPs can assist and protect the cabin crew during the door opening and slide inflation sequence, by keeping passengers back from the exit, until the slide has inflated and conditions are safe.

USE OF THE ASSIST SPACE

Each aircraft has a dedicated assist space located on either side of the door. If possible use the assist space facing the majority of the passengers. The cabin crew must firmly grasp the frame assist handle and position themselves correctly in the assist space. This will:

- Prevent the cabin crewmember from being pushed out of the exit
- Prevent the cabin crewmember from interfering with evacuating passengers.

CROWD CONTROL COMMANDS

The cabin crew must have absolute control of the situation and provide assertive commands and instructions to passengers. There are documented cases of evacuations during which the passengers did not behave appropriately, and did not comply with the instructions provided by the cabin crew.
It is important to note that during evacuations, especially when there is a possible life-threatening situation, passengers may react in many different ways, such as by:

- Panicking (screaming, crying, hysteria)
- Freezing up (not able to react)
- Not being aware that danger exists
- Pushing
- Exiting with carry-on baggage.

CARRY-ON BAGGAGE

Many studies and investigation reports document the fact that in some cases, it was necessary for the cabin crew to argue with passengers because passengers attempted to take their baggage with them during emergencies (in one case, the evacuating passenger tried to exit with his guitar).
Cabin crew should instruct passengers to leave their baggage **at the beginning** of the evacuation, otherwise carry-on baggage brought to the exits can cause a blockage and congestion at the exit and in the aisles and reduce the efficiency of the evacuation.

EXAMPLE	Possible commands are '**Open seatbelts**, **leave everything**' , '**Open seatbelts**, **no baggage**'

The cabin crew can also include this information in the passenger pre-flight safety briefing in order to reinforce the message, i.e.: '**If an emergency evacuation is necessary, leave all your belongings behind**'.

EXIT FLOW MANAGEMENT COMMANDS

It is essential that passengers evacuate the aircraft immediately. The cabin crew must monitor the evacuation, and maintain an even flow of passengers from each exit to avoid congestion at the end of the slides. The cabin crew must continually monitor the slide to ensure that it remains safe for use.
During the evacuation, the cabin crew should ensure that they use appropriate types of commands. For example, in a nose gear collapse, the forward doors and slides may be close to the ground. Therefore, it may not be appropriate to command passengers to '**jump and slide**'.

In the case of a nose gear collapse the cabin crew should communicate with the flight crew for instructions on evacuating.
The cabin crew should consider the type of commands they will use, according to:

- The type of exit: For example, an overwing ramp/slide
- Single-lane or dual-lane slide
- The attitude of the slide, after slide inflation
- Passengers' behavior.

To ensure the flow of passenger evacuation, the cabin crew can use commands, such as:

- '**Jump, slide and run away**'
- **'Run and slide'**
- **'Run, run'** (This may be appropriate if the slide is very close to the ground)
- **'Two by two'**(dual-lane slides)
- **'Keep moving"**
- **'Hurry, hurry'**
- **'Stand, Jump'** or **'Stay on your feet'** (This can be used for passengers who insist on sitting on the door sill).

It may be necessary to use a certain amount of physical force in order to encourage some passengers to leave the aircraft. There is an absolute need for cabin crew to assert their authority in order to avoid delays in getting passengers down the slide and away from danger. It is important to advise passengers to leave the area of the slide when they have evacuated in order to avoid congestion and injury at the foot of the slide.

UNUSABLE EXITS

An exit may not be usable at the beginning of the evacuation or may become unusable during the evacuation.
An exit may be unusable at the beginning of the evacuation, for one of the following reasons:

- The exit is jammed, and will not open
- The slide does not deploy correctly, or the slide is damaged
- There are external hazards, such as fire, smoke, obstacles or debris.

The cabin crew responsible for the unusable exit must inform the passengers that the exit is blocked, and redirect passengers to the nearest usable exit.
The cabin crewmember must guard the exit to prevent the exit from being used. If the exit was initially jammed, the cabin crew could try the exit again to see if it will open.
When redirecting passengers, the cabin crew must know in which direction to send the passengers. The cabin crew should listen for the nearest cabin crew giving passengers the command to '**come this way**' or '**jump**', for confirmation that another exit is usable.

The cabin crew at the unusable exit must use positive commands and gestures to redirect passengers to the nearest usable exit, with commands such as:

- **'Exit blocked'**
- **'Go across'**
- **'Go forward'**
- **'Go back'**

The cabin crew should encourage passengers to move rapidly and to hurry.

- The slide becomes damaged
- A fire develops in the area
- There are other external hazards.

Then the cabin crewmember at the unusable exit must perform the following actions:

- Stop the evacuation
- Block the exit and redirect passengers to the nearest usable exit
- Guard the exit.

DRIED-UP EXITS

A dried-up exit is a usable exit that passengers are no longer using to evacuate the aircraft. During an evacuation, it is important to maximize the use of all of the usable exits, in order to reduce the evacuation time. When an exit is no longer being used, and if the circumstances permit, the cabin crewmembers at these exits must make every effort to attract passengers to these exits.
The reasons for a dried-up exit could be:

- The exit is at the rear of the aircraft and passengers tend to go for the door through which they entered
- The exit may be in an area where there are few passengers, i.e. first class

The cabin crew at the dried-up exit must use positive commands and gestures to encourage the passengers to their exit. It may be necessary to go into the cabin to attract the passengers.
Use commands such as:

- **'Come this way''**
- **'Hurry, hurry'**

CABIN CONFIGURATION

The cabin configuration can have an impact on the rate and flow of the evacuation: e.g. the physical layout of the cabin, the passenger seating density, the access to the exits, the width of the cross aisles and the location of the monuments, etc. The cabin configuration also plays a major role when identifying the areas/exits with the highest/least passenger seating density.

To enhance the situational awareness skills of the cabin crew, they should be familiar with the cabin layout, and the areas where congestion may occur, due to:

- Passenger seating density
- The location of galleys, lavatories, cupboards, etc
- Restricted visibility
- Passengers arriving from different directions.

It may be necessary for the cabin crew to redirect passengers to other usable exits to avoid congestion, and to maximize the use of all the usable exits, in order to evacuate the aircraft as rapidly as possible. To achieve this, the cabin crew must be aware of what is happening in the cabin during the evacuation.

EXIT BYPASS

If an exit becomes too congested, the cabin crew can re-direct passengers to another less congested usable exit. This is referred to as exit bypass. The cabin crew can use exit bypass to maintain an even flow of passengers to all of the usable exits and to maximize their use.

PRE-EVACUATION OF THE CABIN CREW

When the flow of passengers to the exit begins to slow down, the cabin crew should check the cabin and call all remaining passengers to the exits.
When the flow of passengers has stopped, the cabin crew should check their assigned area for any remaining passengers.
When the cabin crewmember's assigned area is empty, or it is no longer safe to remain onboard the aircraft, the cabin crew should evacuate through the first usable exit.
The nearest cabin crew should check the cockpit.
If an evacuation occurs away from an airfield, the cabin crew should take emergency equipment from the aircraft, if the situation permits.
Whether evacuating off airport or at an airfield, it is extremely useful for cabin crew to have a megaphone to manage passengers on the ground after the evacuation.

POST-EVACUATION RESPONSIBILITIES

When the cabin crew are outside the aircraft, they are responsible for the passengers until they are relieved by the emergency services or by the authorities.
The cabin crew should perform the following actions to ensure passenger safety:

- Direct passengers upwind and away from the aircraft
- Assemble passengers and keep them together
- Direct passengers away from fuel, fire and vehicles
- Assist passengers and provide first aid, if necessary

- Enforce a **NO SMOKING policy**
- Make a passenger headcount, if possible.

PASSENGER SAFETY BRIEFINGS

Safety briefings should focus the passengers' attention on safety, and make passengers aware that it is in their interest to pay attention.
When introducing a safety briefing, the cabin crew can increase passenger awareness by using phrases such as '**For your safety**' or '**As your safety is important to us**'.
The cabin crew should emphasize the importance of:

- Listening to or watching the safety briefing
- Being aware of the location and use of safety equipment: i.e. safety cards, exits and seatbelts

When cabin crew are required to perform a safety demonstration, they must speak slowly and clearly on the PA and pause at key points during the announcement to give the cabin crew sufficient time to demonstrate.
The cabin crew should be animated and try to make eye contact with as many passengers as possible in order to attract the passengers attention to the safety briefing. This also applies to the cabin crew when they provide audiovisual safety presentations. When using an audiovisual presentation, the cabin crew should take their positions in the cabin and point to the exits.

FACTORS AFFECTING OPERATIONAL STANDARDS

Analysis of in-service events reveal that operational standards may not be effective or applicable in the following situations:
A procedure is not applied correctly:

- Cabin crew are not at their designated exit during takeoff and landing or leave the exit unattended

Cabin crew training is not sufficient:

- The cabin crew do not have the skills to efficiently evacuate an aircraft
- The cabin crew lack training in crew communication and coordination skills

Operational procedures are not sufficient:

- The Operator does not permit the cabin crew to initiate an evacuation
- The Operator does not provide guidelines to the cabin crew that explain
- The Operator does not include the Silent Review in the standard operating procedures

The communication with passengers is not effective:

- The cabin crew do not provide assertive commands
- The cabin crew commands are negative or complicated

PREVENTION STRATEGIES

It is impossible to prevent a necessary unplanned evacuation. However, if an unplanned evacuation is required, it is possible to take preventive steps that will help in achieving an efficient evacuation

The cabin crew should :

- Be regularly trained and demonstrate proficiency in the use of emergency procedures and equipment
- Ensure that the communication and coordination between the flight and cabin crew is effective when an emergency event occurs
- Attract passengers attention to safety briefings
- Remember the importance of assertive commands and gestures during an evacuation
- Be aware of their surroundings and implement an appropriate evacuation technique depending on the exit, the number of passengers in their assigned area and the situation.

PLANNED GROUND EVACUATION

Applicable to: ALL

INTRODUCTION

A planned ground evacuation can be defined as an evacuation that enables the cabin crew to review procedures, and to inform and prepare passengers for an emergency landing. The cabin crew provide passengers with brace instructions, guidance on exit usage, and information on how and when exits should be operated. Effective communication between the crewmembers and the passengers is necessary for a timely, effective and orderly response.

EMERGENCY CHECKLIST

Emergency checklists are useful tools that enable cabin crew to prepare the cabin for a planned emergency. They contain all the steps required to prepare the cabin for an emergency and list the steps to be completed in order of priority.

Many Operators have developed checklists in the form of laminated cards that are distributed to each cabin crew, or are stowed near the cabin crew stations and are readily accessible to the cabin crew.

Emergency checklists are designed to provide support to cabin crew in a planned emergency, and to help them complete all the necessary steps without forgetting anything. Emergency checklists should be short and consistent.

EMERGENCY CHECKLIST CONTENTS

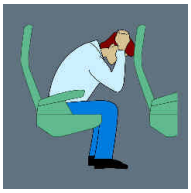
THE BRACE POSITION

The brace position is essential when preparing passengers for an emergency landing. Reviewing the brace position during the emergency passenger briefing will help to ensure that passengers are in the correct brace position for landing.
The brace position has a dual function: First of all, it reduces body movement, as passengers must lean or bend over their legs. Secondly, it protects passengers from hitting their head on a hard surface.
This position must be adapted if the seat is:

- Facing a seat back or a bulkhead
- Forward facing or aft-facing with a safety belt and a shoulder harness (crewmember seats only).

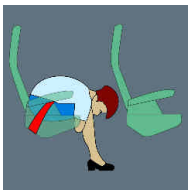
It must also be adapted if passengers are obese, pregnant or traveling with infants.

Passenger Brace Positions



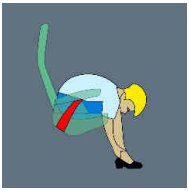
Normal Seating Position

Against a bulkhead



Greater distance between seats

Adults with infant



No bulkhead or seat in front

Pregnant lady

Cabin Crew Brace Positions

Forward facing seat

Aft facing seat

It must be emphasized to passengers that they should expect more than one impact. Passengers must remain in the brace position until the aircraft comes until a complete stop.

Once the brace position has been explained, the next step is to inform the passengers when to assume the brace position, for example:

"When you hear the cabin crew shouting "**Brace, Brace**,", this will be your signal to take the brace position, you must remain in this position until the aircraft has come to a complete stop".

EMERGENCY EXIT LOCATION

The cabin crew must indicate the location of all the emergency exits and the floor path lighting to the passengers.

LOOSE ITEMS

All loose items must be secured as they may be projected into the cabin during landing causing injury or impeding access to exits.
Items to be stowed and secured include:

- Carry-on baggage
- Handbags
- Laptops
- Briefcases

All of these items must be placed in an overhead bin, closet or under a seat.
High-heeled shoes and sharp objects must also be removed, as they may cause damage to the slide during an evacuation. In addition, these objects must not be stowed in seat pockets, since they may injure passengers when they take the brace position.
Seat pockets should only be used to stow small objects, such as pens and eyeglasses. Cabin crew should also remove items such as pens, badges and wing pins from their uniforms.

OPERATIONAL STANDARDS FOR A PLANNED GROUND EVACUATION

PLANNED GROUND EVACUATION BRIEFING

In any type of unusual, abnormal or emergency situation, crew communication and co-ordination play a vital role. It is important that information is shared amongst the entire crew. Successful evacuations are dependent on effective communication among the flight crew, the cabin crew and the passengers.
It is important for Operators to establish procedures in order to ensure that adequate guidance is provided to both flight crew and cabin crew on how to conduct abnormal and emergency briefings.
For example, if the flight crew need to inform the cabin crew of an emergency, there may be a specific signal to alert the cabin, such as:

- A series of chimes
- A specific PA: i.e. "Purser to cockpit".

These specific actions alert the other crewmembers that there is an emergency situation. When the cabin crew hear the signal, this indicates that an emergency situation exists, and that they

must start to secure equipment. Cabin crew should be ready, at their stations, to be briefed by the Purser via the interphone.

THE FLIGHT CREW TO PURSER BRIEFING

The flight crew should brief the Purser in a clear, precise and concise manner.
The briefing should provide the Purser with the following information:

- Nature of emergency (landing or ditching)
- Time available to prepare the cabin (the cabin and flight crew should synchronize watches to assist with time management)
- What the brace signal will be
- Signal to remain seated (if no evacuation is required)
- Special instructions/other information
- Who will inform the passengers and when (flight crew or Purser).

THE PURSER TO CABIN CREW BRIEFING

The Purser must take note of the time in order to manage the time available for the emergency briefing. A certain amount of time is allocated to each task on the checklist. The Purser will need to closely monitor the time in order to accomplish as many tasks on the checklists, as time permits.
The extent of the cabin preparation will depend on the time available. The steps of the cabin preparation should be completed in the order of their importance.
The Purser will relay the information provided by the flight crew to all of the cabin crew and then instruct them to:

- Take their emergency checklists
- Take their emergency briefing position
- Be prepared for the emergency announcement and demonstration.

THE CABIN CREW TO PASSENGER BRIEFING

For psychological reasons, it is advised that the flight crew make the initial announcement. However, due to the high workload in the cockpit during an emergency, the Purser may be required to make the announcement.
The Purser must inform the passengers about:

- The nature of the emergency
- The need to prepare the cabin
- The need for passengers to follow the cabin crew instructions.

Before the emergency demonstration begins, the cabin crew must ensure that:

- The cabin dividers are open
- The lighting is on full bright
- The entertainment system is switched off

The cabin crew should be ready to demonstrate the emergency briefing in their assigned area. In order to conduct an effective briefing, the cabin crew must not distract the passenger's attention from the briefing.
Some helpful tips include:

- Remain in the assigned area
- Ensure all passengers can see the demonstration
- Do not talk during the announcement
- Coordinate the demonstration with the announcement.

When reading the announcement, the Purser should speak slowly and clearly, and remember to pause at key points. This will enable cabin crewmembers to perform the demonstration, and verify passenger compliance.

THE SIGNAL TO EVACUATE

The flight crew will initiate the evacuation by using the PA to make an appropriate announcement, such as: "**Evacuate, Evacuate**", and then pressing the EVAC COMMAND pushbutton.

Note: *Preparing the cabin for an emergency does not always result in an evacuation. If the flight crew decide that no evacuation is required, they may announce: "Passengers and crew remain seated".*
Cabin crew must be assertive in order to ensure that passengers remain seated, and that they follow all instructions.

THE CABIN EVACUATION PROCESS

The evacuation must begin immediately upon receiving the evacuation signal.
Positive, assertive action from the cabin crew will directly impact the rate and flow of passenger movement to the exits and down the slides. The commands used by the cabin crew are an essential part of the evacuation process.
Commands should be:

- Asservite
- Short
- Loud
- Clear
- Well-placed
- Positive.

The following are of some of the commands that are used during the evacuation of:

- '**Seatbelts off**'
- '**Leave everything**'
- '**Come this way**'
- '**Hurry, hurry**'
- '**Jump and slide**'
- '**Two by Two**' (dual lane slide).

During the evacuation, the cabin crew must:

- Monitor the flow of the evacuation. Be aware of congestion in the cabin, and at the bottom of the slide
- Be alert to situations developing during the evacuation, for example slide damage or a fire that would make it impossible to use the exit
- Be prepared to re-direct passengers to other exits if necessary.

POST-EVACUATION

The majority of emergency evacuations happen at, or near, an airport. While the crewmembers are evacuating the aircraft, the Airport Emergency Plan (AEP) is implemented. This plan consists of deploying emergency services such as Airport Rescue Fire Fighting, ambulances and police to the scene.
The crewmembers are responsible for the passengers until they are relieved by the rescue services.
They must carry out the following actions to ensure passenger safety:

- Assist passengers away from the slides
- Direct the passengers away from fuel, fire and vehicles
- Assist in marshalling passengers to a safe area upwind, away from the aircraft
- Keep passengers together and complete a headcount
- Treat injured passengers, and give first aid, if necessary
- Enforce a NO SMOKING policy.

Crewmembers should also receive training and survival information according to regions, such as:

- Desert areas
- Tropical areas
- Polar regions
- Mountainous areas.

FACTORS AFFECTING ADHERENCE TO THE OPERATIONAL STANDARDS

Analysis of in-service events reveals that the operational standards can be ineffective or non-applicable due to the following reasons:

Incorrect application of the procedure:

- An inappropriate person is seated at an overwing exit.

Lack of training and familiarity with procedures:

- Cabin Crew lack sufficient assertiveness when ordering passengers to exit the aircraft
- Cabin crew do not use the manual inflation handle when the slide does not automatically inflate.

Lack of procedures:

- The Operator provides inadequate procedures and guidelines for planned emergencies
- The Operator does not give specific briefings to passengers seated at overwing exits

Ineffective cabin crew communication with the passengers:

- Passengers do not adopt the brace position or the correct brace position when the cabin crew shout the commands.

Ineffective cabin crew communication with the flight crew:

- The flight crew do not inform the Purser how much the time is available to prepare the cabin. Therefore, the cabin crew are not aware of the time constraints and unable to prioritize the checklist tasks
- The flight crew decide not to perform the evacuation. However, the cabin crew do not hear the order to 'remain seated', and shout the evacuation commands
- The brace signal given by the flight crew, is too early, is not heard or comes too late. Therefore, cabin crew and passengers are sitting upright upon impact.

PREVENTION STRATEGIES

It is impossible to prevent an unexpected event such as a ground evacuation. However, if an evacuation is required, it is possible to take preventive steps that will help in achieving an efficient evacuation:

• Effective communication and coordination between the flight and cabin crew is crucial when an emergency event occurs

• Training should ensure that crewmembers are proficient in the use of emergency evacuation procedures, commands and crowd control. Cabin crew should be trained on the location, function and operation of each piece of emergency equipment onboard the aircraft

• Cabin crew should verify that the passengers seated at exit rows will be able to assist the cabin crew, in the case of an emergency.

Individual briefings provided to passengers seated at exit rows have two benefits:

- Firstly, it provides passengers with the opportunity to ask the cabin crew questions
- Secondly, it enables the cabin crew to ensure that the passengers seated at the exit rows understand the language in which the cabin crew will give their commands and are capable of opening the exit in the case of an emergency

• Attract passengers' attention during the safety demonstration by making eye contact with as many passengers as possible
• Draw passengers' attention to the safety card, and emphasize that a review of the safety card is important, because it contains additional safety information.

TURBULENCE THREAT AWARENESS

Applicable to: ALL

INTRODUCTION

Turbulence is the leading cause of injury to passengers and cabin crew in non-fatal accidents. Initiatives can be taken to reduce turbulence-related injuries, with little or no financial cost to the operator.

The aim of this operational awareness is to:

Increase cabin crew awareness of the hazards of turbulence
Provide strategies to enable the cabin crew to effectively manage the cabin during turbulence
Help cabin crew to ensure safety in the cabin and reduce turbulence-related injuries.

BACKGROUND INFORMATION

Injuries to cabin crew during turbulence occur much more frequently than turbulence-related injuries to passengers, because cabin crew are constantly working in the cabin.
IATA, Safety Trend Evaluation, Analysis and Data Exchange System (STEADES) performed a study of turbulence-related injuries to cabin crew.

Analysis revealed that from January 1st 2004 to December 31st 2004 there were 232 reported cases of turbulence-related injuries to cabin crew and that:

- 64 % of the injuries were due to cabin crew not being secured during turbulence
- 44 % of the injuries occurred in the galley
- 9 % of these incidents resulted in serious injury to cabin crew.

In the majority of these cases, cabin crew were lifted off the floor, or lost their balance, resulting in foot, ankle and back/spinal injuries. Other cabin crew injuries were due to loose items in the cabin, such as trolleys.

TURBULENCE DEFINITIONS

The levels of turbulence are defined and described as follows:

- **Light Turbulence:**
  Light turbulence momentarily causes slight, erratic changes in the aircraft altitude or attitude:

  Passengers may feel a slight strain against seat belts
  Liquids are shaking but are not splashing out of cups
  Trolleys can be maneuvered with little difficulty.

- **Moderate Turbulence:**
  Moderate turbulence, causes rapid bumps or jolts:

Passengers feel definite strain against seat belts
Liquids splash out of cups
Trolleys are difficult to maneuver – It is difficult to walk or stand in the cabin.

- **Severe Turbulence:**
  Severe turbulence causes large abrupt changes in the aircraft altitude and attitude:

- Passengers are forced violently against their seatbelts
- Items fall or lift off the floor
- Loose items are tossed about the cabin
- It is impossible to walk.

TURBULENCE MANAGEMENT

Refer to 09-055 TURBULENCE MANAGEMENT

CREW COMMUNICATION AND COORDINATION

Two-way communication between the cabin crew and the flight crew is necessary in order to manage turbulence and prevent turbulence-related injuries. There are Standard Operating Procedures (SOPs) that can be implemented to enable the flight crew and the cabin crew to improve communication and effectively manage the aircraft and the cabin during turbulence. For example, use common terminology when communicating the severity of turbulence:

- **Light Turbulence**
- **Moderate Turbulence**
- **Severe Turbulence**

Using common terminology ensures that the flight crew and the cabin crew share a common understanding of the level of turbulence expected. This enables the cabin crew to perform the appropriate actions and duties, to effectively manage the cabin during turbulence.

Note: *On large aircraft, it is possible that the forward section of the aircraft will experience less turbulence than the aft section of the aircraft. Therefore, the flight crew may not be aware of the level of turbulence experienced in the aft section of the cabin.*

It is important that the cabin crew inform the flight crew of turbulent conditions in the cabin during the flight.

ANTICIPATED TURBULENCE

Refer to 09-055 ANTICIPATED TURBULENCE PROCEDURES

SUDDEN TURBULENCE

Refer to 09-055 UNANTICIPATED TURBULENCE PROCEDURES

POST TURBULENCE

Refer to 09-055 POST TURBULENCE DUTIES

OPERATIONAL AND HUMAN FACTORS INVOLVED IN A TURBULENCE ENCOUNTER

Analysis of in-service events has revealed that the operational standards are not always effective or applied.
For example:

- The cabin crew do not follow the flight crew instructions to be seated during turbulence
- The cabin crew do not have sufficient training to understand the hazards associated with turbulence
- Communication between the flight crew and the cabin crew is not effective: The cabin crew and the flight crew do not use the same terminology, resulting in information that is not accurate which may lead to errors in communication
- Ineffective communication with passengers: The cabin crew do not stress to passengers the importance of complying with the seat belt sign during turbulence.

TURBULENCE-RELATED INJURIES - PREVENTION STRATEGIES

Operators can apply the following prevention strategies in order to help reduce the risk of turbulence-related injuries:
• Develop Standard Operating Procedures (SOPs), that include:

- Communication between the flight crew, the cabin crew and passengers
- Specific procedures for anticipated and sudden turbulence encounters
- The duties of the cabin crew before, during and after a turbulence encounter.

• Emphasize the importance of the flight crew and cabin crew preflight briefing, that should include the following subjects:

- Anticipated areas of turbulence during the flight
- The importance of keeping the flight crew informed of the conditions in the cabin.

• Use standard terminology (**Light, Moderate, Severe**) when referring to the level of a turbulence encounter to ensure that all cabin crew and flight crew understand the meaning and the required actions
• Encourage the use of seat belts. During the after takeoff passenger announcement, the cabin crew should advise passengers to use their seat belts during the flight, and request that passengers keep their seat belts fastened at all times when seated.
• Provide effective training for cabin crew on how to increase their personal safety and passenger safety during turbulence
• Increase cabin crew awareness regarding the use and location of handrails throughout the cabin, or equipment that cabin crew could use to hold on to in the event of turbulence

• Train cabin crew to effectively use the PA system and other types of communication with passengers during turbulence to ensure safety.

CABIN DEPRESSURIZATION AWARENESS

Applicable to: ALL

INTRODUCTION

Aircraft have cabin air systems that control pressurization, airflow, air filtration and temperature. The purpose of these systems is to provide a safe and comfortable cabin environment and to protect all cabin occupants from the physiological risks associated with depressurization at high altitudes.
In the case of a depressurization, there is a risk that not enough oxygen will be supplied to the body. This condition, hypoxia (lack of oxygen), is the greatest threat to both crewmembers and passengers.
The objectives of this guidance are therefore to:

- Review the different types of depressurization
- Enhance cabin and flight crew awareness of the importance of rapidly taking appropriate action to successfully manage depressurization.

TYPES OF DEPRESSURIZATION

The risk of a pressurized cabin is the potential for cabin depressurization. This can occur due to a pressurization system malfunction or damage to the aircraft that results in a break in the aircraft structure or the loss of a window. This causes cabin air to escape outside the aircraft.
The loss of pressurization **can be slow** - in case of a small air leak - **while a Rapid or Explosive** depressurization occurs suddenly, usually within **a few seconds**.
The consequences of depressurization and its impact on cabin occupants depends on a number of factors including:

- **The size of the cabin**:
- **The damage to the aircraft structure**: The larger the opening, the faster the depressurization time
- **The pressure differential**: The greater the pressure differential between the cabin pressure and the external environmental pressure, the more forceful the depressurization.

When cabin pressure decreases, the cabin occupants are no longer protected from the dangers of high altitudes and there is an increased risk of hypoxia, depressurization, illness and hypothermia. It is, therefore, important that cabin crew recognize the different types of depressurization and react effectively to overcome the difficulties associated with a loss in cabin pressure.

RAPID OR EXPLOSIVE DEPRESSURIZATION

Rapid/Explosive depressurization results in a sudden loss in cabin pressure and can be recognized by the following signs:

- A loud bang, thump or clap that is the result of the sudden contact between the internal and external masses of air
- Cloud of fog or misting in the cabin that is due to the drop in temperature and the change of humidity
- Rush of air, as the air exits the cabin
- A decrease in temperature, as the cabin temperature equalizes with the outside air temperature
- The release of the cabin oxygen masks, when the cabin altitude reaches 14 000 feet.

If a break in the aircraft structure is the cause of the depressurization:

- Unsecured items in the immediate area are ejected from the aircraft
- Debris may fly around the cabin
- Loose items may become projectiles
- Dust particles may limit visibility.

In the case of rapid/explosive depressurization, there may be a lot of confusion due to the high noise level and fog that makes it difficult to communicate in the cabin.

SLOW OR INSIDIOUS DEPRESSURIZATION

Slow/Insidious depressurization involves a very gradual decrease in cabin pressure.
Slow depressurization may be the result of a faulty door seal, a malfunction in the pressurization system or a cracked window.
Slow depressurization may not always be obvious. The cabin crew may not notice the changes in the cabin, until the oxygen masks drop down from the Passenger Service Units (PSUs). Therefore, the cabin crew must be aware of signs that could indicate a slow depressurization. One of the first physiological indications of a slow depressurization may be ear discomfort or '**popping**', joint pain or stomach pain due to gas expansion.
The insidious nature of **Hypoxia** causes a subtle decrease in individual performance, followed by incapacitation. Therefore the symptoms may not be identified until it is too late.

HYPOXIA

As mentioned, the greatest danger during depressurization is hypoxia. The effects of hypoxia cannot be over emphasized. It is important for the cabin crew to realize that even mild hypoxia, though not fatal, can have fatal results. This is because hypoxia can significantly reduce the ability of the cabin crew to perform, and consequently lead to errors that may be fatal. It is therefore important that cabin crew continuously observe and monitor each other and the passengers for signs and symptoms of hypoxia.
The most common type of aviation hypoxia is "hypoxic hypoxia", that occurs due to low partial pressure of oxygen in the arterial blood. ***If oxygen is not used immediately in hypoxia cases,***

it is possible that occupants become incapacitated and lose consciousness in a very short time.

PHYSIOLOGICAL AND PSYCHOLOGICAL EFFECTS OF HYPOXIA

It is important that cabin crew can recognize the symptoms of hypoxia in themselves and in others. During a depressurization some passengers may show signs of hypoxia and may not even attempt to put their masks on.
It is necessary to remember that each person may not react in the same way and that the symptoms of hypoxia may manifest themselves differently in each individual.

INITIAL SIGNS OF HYPOXIA INCLUDE	- Stomach pain due to gas expansion - Tingling sensation in the hands and feet - Cyanosis (blue discoloration of the lips and fingernails) - Increased rate of breathing - Headache - Nausea - Light-headedness - Dizziness - Sweating - Irritability - Euphoria - Ear discomfort
THESE SYMPTOMS BECOME MORE PRONOUNCED AS THE LACK OF OXYGEN INCREASES	- Impaired vision - Impaired judgment - Impaired motor skills (not able to coordinate body movements) - Drowsiness - Slurred speech - Memory loss - Difficulty to concentrate.

Hypoxia can cause a false sense of well-being. It is possible for a person to be hypoxic and not be aware of their condition. ***Therefore, it is important that the cabin crew recognize the signs of hypoxia and provide oxygen as soon as possible in order to prevent a loss of consciousness.***
The affected passenger or cabin crew will usually recover a few minutes after receiving oxygen. However, they may not be aware of having lost consciousness.

TIME OF USEFUL CONSCIOUSNESS

The TUC refers to the time available to individuals to perform their tasks after they have been deprived of oxygen, but are still aware of their environment and capable of controlling their actions.

It is important for the cabin crew to realize that the time of useful consciousness is different for each individual, and depends on the:

- Altitude
- Duration at Altitude
- Temperature
- Physical Exertion
- Emotional State
- Amount of activity.

The cabin crew must remember that in cases of continued physical activity, the time of useful consciousness (Table 1) is significantly reduced.

The Time of Useful Consciousness

TIME OF USEFUL CONSCIOUSNESS		
Altitude	Moderate Activity	Sitting Quietly
22 000 feet	5 minutes	10 minutes
25 000 feet	2 minutes	3 minutes
28 000 feet	1 minute	1.5 minutes
30 000 feet	45 seconds	1.25 minutes
35 000 feet	30 seconds	45 seconds
40 000 feet	18 seconds	30 seconds

It is important to emphasize that this table is only a guideline, and provides average values that can increase or decrease, depending on the skills needed to accomplish a task, on the individual's health, and on the amount of activity. For example, the time of useful consciousness for cabin crew involved in moderate activity is significantly less compared to a passenger that is sitting quietly

The following are some other factors that can contribute to reducing the time of useful consciousness:

- **Fatigue:** A person who is physically or mentally fatigued will have an increased risk of hypoxia
- **Physical effort:** During physical activity, there is an increased need for oxygen, an increased risk of hypoxia and, as a result, a decrease in the amount of useful consciousness time
- **Alcohol:** Alcohol can significantly affect behavior and can increase the risk of hypoxia in addition to aggravating some of the behavioral changes resulting from hypoxia.

CABIN DEPRESSURIZATION

IMMEDIATE ACTIONS

In the case of depressurization the immediate use of oxygen is critical.
Therefore, the first actions to be performed by the cabin crew are:

- **Immediately don the nearest oxygen mask**
- **Contact the Flight Crew – the cabin crew should as soon as possible, by the most appropriate means, contact the flight crew and confirm that the flight crew are wearing their oxygen masks**
- **Sit down fasten seat belt, or grasp a fixed object.**

Refer to 09-050 CABIN DEPRESSURIZATION

If the cabin crew cannot sit down or grasp a fixed object, they should wedge themselves between passengers and ask passengers for assistance. For example, in one cabin depressurization event, a cabin crew was saved from ejection out of the aircraft because a passenger was holding on to the cabin crew's ankle.
The priority of the cabin crew is to consider their personal safety.

POST DEPRESSURIZATION

When advised by the flight crew that a safe altitude has been reached, the cabin crew should transfer to the portable oxygen cylinders and consider their post depressurization oxygen needs. When deciding to remove their oxygen masks, cabin crew must use good judgment and be alert to any signs of hypoxia.
After cabin Depressurization, the cabin crew should:

- Check on the flight crew, and be prepared to assist in the case of pilot incapacitation
- Check passengers for any injuries
- Check the cabin for any damage
- Provide first-aid and oxygen, as necessary
- Report the cabin status to the flight crew.

OXYGEN SYSTEMS

When the cabin altitude reaches 14 000 ft , the oxygen masks stored above the passenger seats, in the lavatories, galleys, and crew stations will deploy automatically. The oxygen mask system can also be deployed manually by the flight crew.
A minimum of two oxygen masks are stowed in each Passenger Service Unit (PSU). Each mask has a lanyard attached to a pull pin. Pulling one mask will remove the pin and activate the flow of oxygen to all the masks in the unit
The following two types of oxygen are available on the aircraft:

1. ***CHEMICAL***
2. ***GASEOUS***

CHEMICALLY-GENERATED OXYGEN SYSTEM

The oxygen is provided by chemical generators in each PSU. As soon as an oxygen mask is pulled down, and the release pin is removed, oxygen begins to flow to the mask. It is not possible to stop the flow of oxygen after it has started.
The chemical generator creates heat, and therefore results in a burning odor where dust has gathered. This is normal, however, passengers may become concerned with the smell of burning associated with the oxygen generators.
Therefore, the cabin crew should make a passenger announcement, when it is safe to do so, that there is a possibility of a smell of burning associated with the normal operation of chemical oxygen generator systems.

GASEOUS OXYGEN SYSTEM

The oxygen is provided by gaseous cylinders stowed in the cargo compartment. The activation of the gaseous system depends on cabin altitude.
This system does not generate a burning odor, because no heat is generated.

FACTORS AFFECTING COMPLIANCE WITH OPERATIONAL STANDARDS

The analysis of in-service events has revealed that operating standards may not be effective or applicable in the following situations:

- The cabin crew do not recognize the indications of a slow depressurization, and continue to perform their tasks in the cabin as usual
- The cabin crew do not have sufficient information or training
- There is a lack of cabin crew procedures, applicable to a loss cabin pressure, oxygen mask deployment and altitude of the aircraft. Sometimes the procedures do not sufficiently emphasize the importance of immediately donning the nearest oxygen mask
- The cabin crew do not apply the procedures correctly. For example, oxygen masks are removed too soon during depressurization causing incapacitation.

PLANNED DITCHING - UNPLANNED DITCHING

Applicable to: ALL

INTRODUCTION

Planned ditching in commercial aviation is a rare occurrence. During a **planned ditching**, the cabin crew may have prior notice, and therefore, sufficient time to prepare the cabin, or to advise passengers to put on their life vests.
The flight and cabin crew coordination will have a high impact on the outcome of the evacuation in case of a planned ditching.
On the other hand there is no or little time for the cabin crew to prepare the passengers when an unplanned ditching occurs. In the event of an **unplanned ditching** the attitude of the flight and cabin crewmembers and their immediate actions are key factors for the success of the evacuation and survival of passengers.

STATISTICAL DATA – BACKGROUND INFORMATION

PLANNED DITCHING

A report of the CAAP said that the statistical chances of surviving a ditching were high as it was estimated from UK and USA data that 88 % of controlled ditching result in few injuries to flight crew or passengers.

UNPLANNED DITCHING

Many inadvertent landings on water (referred to as an Unplanned Ditching) have been documented. During an unplanned ditching, there is no time for the cabin crew to advise the passengers to don life vests or adopt the brace position.
An NTSB study of Air Carrier water contact accidents indicates that these accidents are usually unplanned, with no time to prepare. Most accidents occur during the takeoff and landing phases of flight, and usually within proximity of the airport. Many water contact accidents occur during the hours of darkness.
There is usually a lot of damage to the aircraft. In some cases, the cabin has flooded quickly, and the aircraft has sunk within minutes.

PLANNED DITCHING BRIEFING

THE FLIGHT CREW/CABIN CREW BRIEFING

The Flight crew will deliver the following information to the Purser:

- Nature of the emergency (ditching)
- Time available (check watch)
- Special instructions
- Brace signal.

In the event of a planned ditching the flight crew will not give the instruction to remain seated to the Purser. As the aircraft may sink rapidly after impact everyone will have to evacuate immediately.

THE PURSER/CABIN CREW BRIEFING

The Purser will note the time in order to prepare the cabin according to the time available before the aircraft ditching.

The Purser will transmit the information given by the flight crew and will instruct the crewmember to:

- Take their position
- Be prepared for the emergency announcement and demonstration.

THE CABIN CREW/PASSENGER BRIEFING

The situation should be announced to passengers. The flight crew should make the announcement but in case of workload in the cockpit it may be delegated to the Purser.

The Purser informs passengers about:

- The nature of the emergency
- The coming preparation of the cabin
- The attention and respect of passengers to cabin crewmembers instructions.

When the instructions and demonstrations are performed some conditions should be respected:

- The cabin dividers should be open
- The cabin lighting should be turned to bright
- The entertainment system switched off.

The cabin crew should be ready to demonstrate the Emergency Briefing in their assigned area. The crewmembers must have their own life vest before starting the briefing.

In order to deliver an effective briefing, the crewmembers should respect some conditions:

- Stay in the assigned area
- Ensure all passengers can see the demonstration
- Do not talk during the announcements
- Coordinate the demonstration with the announcement.

When reading the announcement, the Purser should speak slowly, distinctly and pause at key points in order to give cabin crewmembers time to don their life vests, demonstrate, and check passenger compliance.

THE EMERGENCY CHECKLIST

The Life Vest

Crewmembers should simultaneously don their life vest and demonstrate to the passengers, as follows:

- Remove the life vest from the pouch
- Unfold the life vest and hold it up for the passengers to see
- Don the life vest
- Secure straps
- Identify light (if applicable)
- Identify whistle (if applicable)

If an adult life vest is to be used for a child, adapt it accordingly. If available, distribute and explain to passengers how to use other flotation equipment, such as baby survival cots.
When demonstrating the life vest use, the purser must insist that passengers must inflate their life vests only when they are outside of the aircraft.
The reasons for not inflating a life vest until outside the airplane are that the life vest punctures more easily, it makes movement more difficult and it can affect the efficiency of the brace position.

The Brace Position

It is a protective position that passengers must adopt before the impact of the aircraft on ground or water. It is one of the most important items in preparing for an emergency.
This position has a dual function. Firstly, it reduces the extent of body flailing, as passengers must lean or bend over their legs. Secondly, it protects the head from hitting a surface.

Note: *example of brace positions can be found in* *Refer to 09-080-10 PLANNED GROUND EVACUATION*

Emergency Exit

Cabin crew will point out the location of the nearest emergency exits and the floor proximity exit path lighting.

Overwing exit

The cabin crew should demonstrate how to evacuate an overwing exit. As the overwing exits do not have flotation aids, the cabin crew should indicate the location of the nearest slide/raft to passengers that are seated at overwing exits.

Loose Items

Some items can become projectiles in the cabin during landing if they are not stowed:

- Carry on baggage
- Shoes without laces or heeled shoes
- Handbags
- Laptops
- Briefcases.

Able Bodied Passengers (ABP)

The International Civil Aviation Organization (ICAO) defines able-bodied passengers as "**passengers selected by crewmembers to assist in managing emergency situations if and as required**".
The selection of Able Bodied Passengers may be based on their ability to understand instructions, their physical ability, and their ability to stay calm.

They can be chosen from people such as:

- Deadheading crewmembers
- Military personnel
- Police
- Fire personnel
- Medical personnel
- People who respond to instruction.

The ABP should be reseated at exits. The reseating action should not separate families, as the ABP will be more concerned about their family than about the aircraft evacuation.

The crewmembers should select three ABPs for each exit and they should be briefed as follows:

- To replace the cabin crewmember in case the crewmember becomes incapacitated
- How to assess conditions outside the aircraft, for example, identify exit usable/unusable (determined by water level)
- How to open the exit
- How to protect oneself from going overboard, and to remain in the assist space
- To manually inflate the slide /slideraft
- Commands to be used during evacuation,
- How to board the slide/ slideraft and distribute passengers evenly
- How to disconnect the slide/slideraft
- How to cut the mooring line to release the slide/slideraft from the aircraft.

If additional rafts are carried on board, the ABPs should be briefed on how to:

- Take the raft to the exit
- Use the mooring line to attach the raft to a fixed part of the aircraft, for example, a passenger seat

- Launch the slide/slideraft (the raft must be thrown outside the aircraft)
- Manually-inflate the slide/slideraft, in case it does not inflate.
- Board the slide/slideraft and distribute passengers evenly.

The role of the ABPs is also to help people that require assistance including:
Disabled, *Elderly*, Unaccompanied minors, *People traveling alone with more than one child*.

Securing the Cabin

When the passenger briefing has been completed, the final cabin secure is required, as follows:

- Seat belts fastened
- Seat backs in the up-right position
- Tray tables closed and latched
- Armrests down
- Carry on baggage stowed and secure
- Overhead bins closed and latched
- Aisles clear of all obstructions
- Service items cleared
- Cabin dividers open.

The lavatories should be vacated and locked and the galley equipment should be secured as follows:

- Close and lock all containers
- Ensure that carts are correctly stowed and secured
- Switch off all galley power and pull all galley circuit breakers.

When all the checklist items are complete, the Purser will notify the flight crew and ask for an update of the situation, and the amount of time remaining.
The emergency lights should be switched on and the cabin lights switched off.
Cabin crewmembers should take their seats, adjust the harness, begin a silent review and be prepared to brace when the command comes from the flight crew (approximately 1 minute before ditching).

OPERATIONAL STANDARDS FOR A PLANNED DITCHING

Refer to 09-030 CABIN PREPARATION FOR DITCHING

POST DITCHING

During the survival and until rescued, passengers and crewmembers must keep their life vests on.
The crew will organize the survival in the raft as follows:

- Erect the canopy to prevent wind-chill hypothermia from affecting wet bodies and to assist rescue services to locate the sliderafts
- Administer first aid to injured passengers
- Ensure that the weight is evenly distributed to avoid the raft from capsizing
- Keep the raft clean and dry to prevent illness and infection
- Use the survival kit equipment to indicate location

THE RESCUE

When an aircraft or a ship has been sighted, all the signaling equipment available should be used to attract attention. Occupants must stop signaling as the craft approaches.
The crewmembers and passengers must follow the instructions of the rescue personnel, and remain in the raft until instructed.

OPERATIONAL STANDARDS FOR AN UNPLANNED DITCHING

In any unprepared emergency the reaction of the cabin crew will depend largely on their situational awareness skill and their ability to identify an abnormal situation and react accordingly.

THE SILENT REVIEW

During **Take-Off** and landing phases near water or during a flight when life vest demonstration is required, the use of the Silent Review will highlight the situational awareness of the cabin crew in the case of an unexpected event.

They will review for example the following situations:

- The commands to be used
- The cabin environment
- How to initiate evacuation
- Operation of exits
- How to access outside conditions
- What equipment to take
- How to manage passengers in the water
- How to manage passengers in the raft.

THE IMPACT PHASE

The unplanned ditching is more likely to occur near airports built close to water than at sea or in extended surfaces of water. So during the takeoff and landing phases the crewmembers will realize rapidly if the situation is deteriorating and will shout the commands for the "**Brace**" position:
"**Heads down**", "**Hold your ankles**", "**Stay down**".

This position will reduce the amount of injury to the passengers and give them a chance of being able to evacuate the aircraft. The commands should be given until the aircraft has come to a complete stop.

THE EVACUATION PHASE

The cabin crew will assess outside conditions:

- If the aircraft is floating or sinking
- If the water level is present at exits

There can be 2 different situations and the cabin crew will have to react accordingly:

SITUATION I	The cabin crew will shout the commands for the life vests: – "Life vests under your seats" – "Tear open the pouch" – "Place over your heads" – "Fasten straps tight around waist" – "Inflate when leaving the aircraft" • They will direct passengers to the usable exits or redirect them if the exits become unusable • Passengers will board the slideraft.
SITUATION II	The following actions will be taken if the aircraft is sinking rapidly: • The crewmembers will direct passengers out the nearest opening, exit • Instruct passengers to support themselves, by holding anything that will keep them afloat (seat cushions for example) • Find as much flotation equipment (live vests) as time permits and distribute it to passengers • Leave the aircraft.

FACTORS AFFECTING THE OPERATIONAL STANDARDS

Analysis of events reveal that the operational standards can be ineffective or non applicable in the following situations:

• **Incorrect application of the procedure**:
– The cabin crew disarm the slide before opening the door as they believe that the slide would float upward and block the exit due to the closeness of the water

• **Lack of training**:
– The cabin crew have difficulty to put a capsized raft in the right position

• **Inadequate airline policy**:
– The aircraft is equipped with seat cushions as flotation aids instead of live vests, but the passenger briefing cards describe the use of life vest and there is a placard on each seat stating 'life vest under your seat'

• **The cabin crew do not know what procedure to apply to a particular situation**:
– The exit door is under the level of water

• **Ineffective communication with flight crew**:

– The flight crew notify the purser to prepare the cabin for ditching. The purser does not understand that it will be the only warning and assumes the flight crew will give further instructions before the aircraft hits the water.

PREVENTION STRATEGIES

It is impossible to prevent an unexpected event such as an unplanned ditching.
However the following prevention strategies should be developed for a planned ditching:

- ***The preflight safety demonstration*** will review the appropriate amendments (the use of life vest and flotation-seat cushions) to the normal safety demonstration.
- ***The passengers will know the appropriate Brace Position*** and when and how to operate the overwing exits in case of an emergency event by means of the safety instruction card
- ***Cabin crew should be regularly trained*** to on the procedures in the case of planned and unplanned ditching
- ***Good communication between flight and cabin crew*** will enable the crewmembers to perform an effective cabin preparation if an emergency event occurs
- ***Detailed documented procedures*** should be provided to cabin crew by the airline

SUMMARY OF KEY POINTS

- Airlines should encourage the cabin crew to use the Silent Review policy as a useful tool. It enables the cabin crew to be prepared for an unexpected event
- In the event of an unplanned ditching the reactions of the crewmembers are important as they will have a direct effect on the chances of survival
- Airlines should plan regular training courses and exercises for the cabin crew emphasizing the ditching procedures and the use of the ditching equipment.
- Airlines should issue documented procedures for the briefing between the flight and cabin crew according to time availability
- Airlines should make sure they provide the right documentation according to their aircraft equipment
- Airlines should include in their procedures and training the recommendations issued by aviation authorities
- Airlines should collect incidents that occur during operational flights to be analyzed in order to improve the different procedures and training of their cabin crew.

CABIN SMOKE AWARENESS

Applicable to: ALL

INTRODUCTION

It is important that cabin crew are aware of indications of smoke, respond to them appropriately and report them to the flight crew. All crewmembers must take any report of smoke in the cabin seriously. They must immediately identify the source of smoke and take the appropriate action in order to significantly minimize the risk of fire onboard the aircraft.
It is wise to treat a smoke occurrence as potential fire, until it has been proven otherwise.
The cabin crews must remember that the development of an odor, or smoke, takes some time before it can be detected.
However only communicate '**Smoke**' if that is what has been seen – do not mention '**Fire**' if no flames are visible.
Additional information on how to deal with in-flight fire events is provided in :

- *Refer to 09-080-60 MANAGING IN-FLIGHT FIRES*
- *Refer to 09-020 AWARENESS TO SMOKE IN HIDDEN AREAS*

BACKGROUND INFORMATION

Analysis of in-service events involving smoke in the cabin has shown:

- Cases where the cabin crew detected **the source of smoke easily**
- Cases where the cabin crew detected **the source of smoke with difficulty**.

In most cases, the cabin crew reported that the source of smoke was easily identified.
The following are the areas where the cabin crewmembers can easily detect the source of smoke:

- **Galley equipment** (ovens, coffeemakers) represented the most common source of smoke
- **Cabin equipment** (i.e. a seat screen or seat control malfunction)
- **Lavatories**.

The following are areas where it is difficult for the cabin crewmembers to detect the source of smoke:

- **Air conditioning**
- **Sidewall panels**
- **Ceiling panels**.

Smoke coming from the above areas may be attributed to:

- **The Auxiliary Power Unit** (APU)
- **Cabin recirculation fans**
- **Cargo compartments**
- **Crew Rest Compartments**

- **Electrical wiring**
- **Engine Air Bleed**.(e.g Bird ingestion, ...)

Sometimes human error is a contributing factor to some smoke occurrences, such as:

- Putting a flammable item in an oven (e.g. plastic wrapping left on food during the cooking cycle, …)
- Leaving an empty coffeemaker on a hot plate
- Placing a flammable item close to a source of heat (e.g. plastic cups next to a hot oven)
- Forgetting to complete a pre-flight check of the ovens for cleanliness (i.e. papers or food grease left in the oven)
- Smoking in the lavatories.

If it is not possible for the cabin crew to immediately detect the source of smoke, the following consequences may occur:

- **Fire**
- **Emergency evacuation**
- **Hospitalization of cabin crew and/or passengers due to smoke inhalation**
- **Flight delays, In-flight turn back, diversions.**

OPERATIONAL STANDARDS FOR A SMOKE OCCURRENCE

When cabin crew identify and locate smoke, they must apply the appropriate procedures in order to stop the smoke and prevent a fire.
Smoke can from different areas of the aircraft.
These areas can be identified as either "**EASY**" or "**DIFFICULT**" sources of smoke.

THE "EASY" SOURCES OF SMOKE

The cabin crew must take the following action:

- Shut off the electrical power by pulling the corresponding circuit breaker and shutting off the power, if applicable.
- Inform the flight crew immediately.
- Closely monitor the situation.
- Prepare a fire extinguisher, Protective Breathing Equipment (PBE) and fire gloves in case the situation deteriorates.

THE "DIFFICULT" SOURCES OF SMOKE

The cabin crew may have limited or no access to areas such as sidewall and ceiling panels or air conditioning, and may have no way of visually monitoring them.
If smoke comes from any of these areas, the cabin crew must take the following action:

- Inform the flight crew.
- Closely monitor the situation.

- Search for hot spots using the back of the hand.
- Prepare a fire extinguisher, Protective Breathing Equipment (PBE) and fire gloves in case the situation deteriorates.

PROTECTION FROM SMOKE

Smoke can impair judgment and affect performance. When inhaled, even in small quantities, it can be fatal depending on an individual's level of tolerance.
Materials that are used in the cabin release toxic fumes when smoldering, such as:

- Carbon monoxide (CO)
- Hydrogen cyanide
- Hydrogen chloride and Acrolein.

The cabin crew must take the following action, in order to protect everyone on board from the negative effects and consequences of smoke inhalation:

- Do not open the cockpit door, unless it is necessary. Take necessary action to prevent smoke and fumes from contaminating the cockpit.
- Move passengers away from the smoke source area. If this is not possible, encourage the passengers to bend forward and remain at a low level where the air is clearer.
- Use wet towels, a wet cloth, or a head rest cover to reduce some of the effects of smoke inhalation. Instruct passengers to hold the wet towel/cloth over their nose and mouth and breathe through it.

In addition, the cabin crew should use Protective Breathing Equipment (PBEs) to protect themselves.

USE OF CIRCUIT BREAKERS

Circuit breakers perform a dual function in aircraft electrical systems. Their primary function is to provide protection from overheating. This can occur if there is an overload or a fault on a piece of electrical equipment which may result in the total or partial deactivation of the electrical system.
The secondary function is to facilitate the isolation of specific circuits that do not have an individual ON/OFF switch.
The likely reason for a circuit breaker to trip (release) is due to a fault in the electrical load, or in the associated wiring. A circuit breaker will open, when a predetermined current is detected.
The cabin crew should pull the circuit breaker related to equipment if they see smoke coming from this equipment.
Pulling a circuit breaker will cut off the power source to an electrical item. A circuit breaker that is pulled or has tripped automatically, must never be re-engaged by the cabin crew.
If a circuit breaker trips, this may indicate a problem. In addition, this problem may be located in an area that is not visible.

Re-engaging a tripped circuit breaker may cause more electrical damage and increase the risk of damage to other equipment.
The cabin crewmembers must never use circuit breakers as ON/OFF switches for equipment.

OPERATIONAL AND HUMAN FACTORS INVOLVED IN THE DETECTION OF SMOKE

When smoke is detected in the cabin, the cabin crew must immediately try to identify the source. Some areas are equipped with smoke detection devices which will alert both the flight crew and the cabin crew when smoke is detected.

SMOKE DETECTORS

There is a smoke detector in all lavatories. If smoke enters into the measuring chamber of a smoke detector, a visual and aural warning is transmitted to the cabin and cockpit.

VISUAL INDICATIONS IN THE CABIN

Visual indicators appear on the following systems in order to notify to the cabin crew that smoke is detected:

- All Attendant Indication Panels (AIP)
- The applicable Area Call Panel (ACP)
- The associated lavatory wall light
- The Forward Attendant Panel (FAP).
- The Aft Attendant Panel (AAP)

AURAL INDICATIONS IN THE CABIN

The following aural indicators will simultaneously trigger, with the visual indicators:

- A repetitive chime from all the cabin loudspeakers
- A repetitive chime from all attendant station loudspeakers.

HUMAN FACTORS INVOLVED IN THE DETECTION OF SMOKE (SITUATIONAL AWARENESS)

The cabin crew must also use their senses (**Hearing, Touch, Smell, Vision**) to detect smoke. Sometimes, the cabin crew may not see any smoke, but may recognize such indications as:

- An abnormal noise in the cabin
- An abnormally warm surface
- An unusual odor.

Sense Hearing	Cabin crew and passengers may hear abnormal (snapping, crackling) noises and should report them. These noises could be caused by electrical arcing of wiring.
Sense of Touch	When trying to find the source of smoke, the cabin crew should use the back of their hands to check the temperature and/or heat of the various panels and/or doors.
Sense of Vision	The different panels (Attendant Indication Panels, Area Call Panel…) located throughout the cabin will help the cabin crew to detect the presence of smoke in the aircraft.

Sense of Smell	The following abnormal odors may indicate the presence of smoke
Descriptions of odors	***Primary cause*** (Most Reported listed First)
Acrid Chemical	Electrical Equipment/IFE Engine Oil Leak
Burning	Electrical Equipment Galley Equipment Bird Ingestion
Chemical	Contaminated Bleed Cuts APU Ingestion
Chlorine	Smoke hood Blocked Door Area Drain
Electrical	Electrical Equipment
Dirty Socks	APU or Engine Oil Leaks
Foul	Lavatories
Fuel	APU FCU/Fuel Line
Oil	Engine or APU oil Leak
Skydrol	Engine Hydraulic
Sulphur	Wiring Avionics Filter Water Contamination Light Bulb

OPERATIONAL AND HUMAN FACTORS AFFECTING OPERATIONAL STANDARDS

The analysis of in-service events shows that operational standards may not be effective or may not be applicable due to the following:

• Ineffective detection of smoke:

- Odors or smoke may take some time to develop before it can be detected
- Recirculation of smoke through air conditioning.

• Inadequate procedures:

- The procedures do not include all the factors involved in smoke detection

• Incorrect application of the procedure:

- Cabin crew reset a tripped circuit breaker without informing the flight crew about the incident

• Lack of training:

- The cabin crew are not proficient enough to accurately perform their respective duties in the event of smoke
- The cabin crew are not proactive or hesitant to apply the required procedure
- The cabin crew do not know what procedure should be applied (e.g. The crewmember opens the door of an oven that is emitting smoke, …).

• Lack of Operator policy:

- The Operator does not have a policy regarding the use of circuit breakers.

• Ineffective communication with flight crew:

- The cabin crew do not accurately communicate with the flight crew and inform them of a fire without having seen flames. It may cause the flight crew to decide to perform an unnecessary emergency landing
- Important information from the cabin crew and passengers may not always be taken into account by the flight crew (odors, noises…).

PREVENTION STRATEGIES

It is important to remember that the source of smoke may quickly develop into an on-board fire if left undetected. Therefore, both the operator and the cabin crew should take the following preventative actions:

- Perform a complete pre-flight check including ovens and galleys to ensure that they are clean (papers or any flammable items left in it)
- Frequently monitor the cabin, galleys (ovens) and lavatories (waste bins)
- The cabin crew should have good knowledge of the cabin configuration and of all smoke procedures.
- Operators should provide training and documentation about all smoke-related procedures
- Operators should ensure that cabin crew are medically fit for the flight (e.g. cabin crew do not have a cold that may affect their ability to detect the odor of smoke
- Finally, operators should have a policy about tripped circuit breakers which prevents cabin crew from resetting tripped circuit breakers in any circumstance. The policy should also encourage cabin crew to immediately report tripped circuit breakers to the flight crew. Tripped circuit breakers indicate the existence of an abnormal electrical situation, and the possible existence of smoke and/or fire.

MANAGING IN-FLIGHT FIRES

Applicable to: ALL

INTRODUCTION

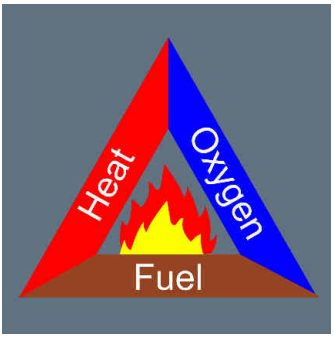
An in-flight fire is probably the most serious in-flight emergency and must be brought under control as soon as possible. Considering the crucial role that time plays in this type of emergency, it is imperative that no time is lost when attempting to extinguish the fire.

STATISTICAL DATA – BACKGROUND INFORMATION

A study conducted by the Transportation Safety Board of Canada revealed that the average elapsed time between the discovery of an in-flight fire and the actual landing of the aircraft is 17 minutes.
Any fire, no matter how small, may rapidly become out of control, if not dealt with quickly.
The first priority will always be **TO PUT IT OUT.**

BASIC FIRE CHEMISTRY

To enable cabin crew to effectively fight an in-flight fire, it is important for cabin crew to have a basic knowledge of fire chemistry. This will help cabin crew to understand the importance of selecting the correct fire extinguisher in a given fire situation.
The key to fire prevention is keeping fuel and ignition sources separate.
Combustion consists of three elements: **Oxygen**, **heat** and **Fuel**
Together, these elements create a chemical chain reaction and result in a fire.
The goal of firefighting is to eliminate at least one element from the fire, in order to extinguish it.



The Fire Triangle

A fire will continue unless:

- The fuel supply has been cut off
- There is no more oxygen available
- The temperature has been cooled below the flammability temperature.

Note: *For the purpose of this document, "**fuel**" refers to any flammable material.*

FIRE CLASSIFICATION

Fires are classified into four types: those in solids, those in flammable liquids, those in electrical equipment, and those in flammable metals. These are called, respectively, **class A, B, C, and D fires**.

Refer to 09-020 CLASSES OF FIRE

Class A and C fires are the most commonly encountered fires onboard aircraft. It is important for the cabin crew to select an appropriate fire extinguisher, according to the class of fire.

FIREFIGHTER EQUIPMENT

FIRE EXTINGUISHERS

Hand-held fire extinguishers discharge an extinguishing agent for 8 to 25 seconds, depending on their type and capacity. Due to this short period, it is essential to select and use the appropriate fire extinguisher immediately.

There are different types of fire extinguishers:

- **Halon** : is the generic name for the group of " bromochlorodifluoromethane " (BCF) extinguishers that can be used for class A, B, and C fires
- **Carbon dioxide** (CO2) for class B and C fires
- **Dry powde**r (DP) for class D fires
- **Dry chemicals** for class A, B, and C fires
- **Water solution** (H2O) for class A fires.

HOW TO USE A FIRE EXTINGUISHER

Note: *This can also be easily remembered by using the word **P A S S***

- ***P***ull the pin or turn the handle as appropriate. For some water extinguishers, the handle must be turned in a clockwise direction, in order to pierce the carbon dioxide cartridge and to pressurize the extinguisher
- ***A***im the fire extinguisher at the base of the fire. The best firefighting results are achieved by attacking the base of the fire at the closest edge of the fire, and progressing toward the back. If possible test the fire extinguisher before aiming it at the fire
- ***S***queeze the top handle or lever
- ***S***weep the fire extinguisher nozzle from side to side in a sweeping motion

Do not direct the initial extinguishing agent discharge at close range onto burning material. The high speed of the stream of extinguishing agent may cause the extinguishing agent to splash and/or scatter burning material. Stay at least five to eight feet away from the fire
Hand-held fire extinguishers should always be used in an upright position.

Note: ***There are only a limited number of fire extinguishers onboard the aircraft. Ensure that an extinguisher has been fully discharged before using another.***

PORTABLE BREATHING EQUIPMENT

Protective Breathing Equipment (PBE) is designed to protect the cabin crew from smoke, toxic fumes and gases. The cabin crew can still communicate amongst themselves, and with the flight crew via the interphone.

CRASH AXE

A crash axe can be used to lever panels, to enable cabin crew to insert the nozzle of the fire extinguisher behind a panel. The crash axe may also be used for moving burning material for example, burnt wiring. The crash axe has an insulated handle and is resistant to high voltages. Only use the hook end of the crash axe and use small tapping motions to make a hole in an area that is difficult to access. The hook end can then be used to make the hole bigger as required.

FIRE GLOVES

Fire gloves are fire retardant. These gloves give protection to hands and arms against heat.

USE OF NON STANDARD EMERGENCY EQUIPMENT

Cabin crew need to be resourceful when fighting an in-flight fire. Be prepared to improvise by using other equipment such as pots of coffee/tea, to fight a visible fire for example, a waste bin fire.

OPERATIONAL STANDARDS FOR AN IN-FLIGHT FIRE

CREW COMMUNICATION AND COORDINATION

In the event of an in-flight fire, communication between the cabin crew and flight crew is essential. If a fire is discovered in the cabin, the cabin crew must inform the flight crew immediately.
The firefighting effort requires coordination between the cabin crew. The duties are divided into three main roles, the Firefighter, the Communicator and the Assistant Firefighter. All other cabin crew play a supporting role.
Refer to 09-020 FIRE FIGHTING ROLE DEFINITION
After any fire or smoke occurrence, one cabin crewmember should be responsible for monitoring the affected area for the remainder of the flight, and for regularly reporting to the Purser. Then the Purser will report to the flight crew.

AWARENESS TO SMOKE AND FIRE HIDDEN AREAS

Refer to 09-020 AWARENESS TO SMOKE IN HIDDEN AREAS

AREA SPECIFIC FIRES

Refer to 09-020 AREA SPECIFIC FIRES

OVEN FIRES / SMOKE

*Refer to 09-020 OVEN SMOKE*Oven fires are a common occurrence onboard the aircraft. Many oven fires are preventable.
Some of the contributing factors to oven fires have been items left in the oven such as paper towels, etc.
When an oven fire occurs, the oven door should be kept closed. It is hazardous to open an oven door when a fire is present, because this will introduce oxygen and may cause a flash fire.

FIRE IN ENCLOSED AREAS

In the cabin, all lavatories have smoke detectors and automatic fire extinguishers under each washbasin. All crew rest areas have smoke detectors and extinguishers. Cabin crew must react immediately to smoke detector alerts.
When fire occurs in an enclosed area, such as, a lavatory, an overhead bin, closet or crew rest area, before opening the door, always check the door panel for heat.
Check for heat using the back of the hand:

- Open the door or the overhead bin slightly (just enough to pass the nozzle of the fire extinguisher).

If the fire is visible:

- Discharge the fire extinguisher at the base of the fire in a sweeping motion.

If the source of the fire has not been located do not randomly discharge the fire extinguisher into an enclosed area.
If the source fire is not visible, the cabin crew must aggressively search the entire area to locate the source of the fire.

WASTE BIN FIRE

If there is a fire in the waste bin, the fire extinguisher operates automatically. When a predetermined temperature has been reached, the fusible plug at the end of the discharge tube melts, and enables the extinguishing agent to flow into the waste bin.
Cabin crew should ensure that a preflight check of the pressure gauge is conducted, to ensure that the waste bin fire extinguisher is functional.
Regular checks of the lavatories should be conducted in-flight as part of the cabin crew duties.

LITHIUM BATTERY FIRE

Refer to 09-020 GUIDELINES FOR IN-FLIGHT SMOKE AND FIRE MANAGEMENT

OPERATIONAL AND HUMAN FACTORS INVOLVED IN IN-FLIGHT FIRES MANAGEMENT

HUMAN FACTORS (SITUATION AWARENESS)

Cabin crew should always be alert to any sight, odor or sound that may indicate the presence of fire, including:

- Fumes or unusual odors
- Electrical malfunctions, for example, tripped circuit breakers
- Noises, such as popping, snapping or crackling that may indicate electrical arcing
- Hot spots on sidewalls, floors, and panels.

Another possible of sign of a fire onboard may be passengers or cabin crewmembers suddenly developing:

- Eye irritation
- Sore throats
- Headaches.

This may indicate that fumes are present, before smoke or fire is visible. The cabin crew must immediately investigate any reports from passengers that may indicate fire, in order to locate and extinguish the fire in its early stages.

FACTORS AFFECTING OPERATIONAL STANDARDS

Analysis of in-service events has demonstrated that operational standards can be ineffective or not applicable in the following situations:

• Ineffective detection of fire:

– Passenger tampers with lavatory smoke detector and drops cigarette end in the waste bin.

• Incorrect application of the procedure:

– A crewmember opens the lavatory doors without checking it for heat with the back of their hand, and a flash fire occurs.

• Lack of training:

– The cabin crew do not immediately react to the fire

– A cabin crewmember notices the fire, but loses time in locating the nearest fire extinguisher in the cabin

– The cabin crew do not have adequate firefighting skills – Cabin crew do not coordinate their firefighting efforts.

• Lack of Operator procedures and policy:

– The Operator does not have adequate procedures and policies for cabin crew to effectively deal with onboard fires.

• Ineffective communication with the flight crew:
– The communicator underestimates the severity of the fire to the flight crew, the flight crew think it's a smoke incident.

PREVENTION STRATEGIES

Fire prevention should be practiced by cabin crew as part of their daily duties. Cabin crew should maintain continuous vigilance and be alert to any indication of a fire.
Some of the fire prevention duties of the cabin crew can include:

1. Frequently monitoring of the lavatories during the flight
2. Performing a complete pre-flight check of the ovens and galleys to ensure that they are clean and serviceable
3. Ensuring that all passengers and crew comply with the NO SMOKING policy.

CABIN CREW BULLETINS

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10-10 Introduction

Introduction....A

10-CCB1 Spurious FAP Message

Spurious FAP Message....A

10-CCB2 Inadvertent FAP Reset

Inadvertent FAP Reset....A

10-CCB3 Loss Of The I-PRAM Audio Sound

Loss Of The I-PRAM Audio Sound....A

10-CCB4 Anomalies On The FAP Pages

Anomalies On The FAP Pages....A

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INTRODUCTION

Applicable to: ALL

DEFINITION

A **Cabin Crew Bulletin (CCB)** is issued to rapidly inform operators of any deviations from initial design objectives that have a significant impact on cabin operations. A CCB provides the operators with technical information and temporary operational procedures that address these deviations.

TYPE OF CCB

CCBs can either be red or white, depending on their level of priority.

Red CCBs : Are issued to indicate that non-compliance with the recommended procedures may have a significant impact on the safe operation of the cabin.

Withe CCBs : Are issued to indicate that non-compliance with the recommended procedures may have a significant impact on the operation of the cabin.

Airbus strongly recommends that all Operators rapidly apply the CCB corrective actions as soon as they become available, particularly for red CCBs.
The information in the CCB is recommended by Airbus, but may not be approved by Airworthiness Authorities. If the procedures contained in the CCB differs from the procedures in the AFM, the approved AFM remains the reference.

CCB CONTENT AND MANAGEMENT

A CCB:
- Is a part of the Cabin Crew Operating Manual (CCOM)
- Is temporary and usually focuses on one operational subject only
- Remains applicable until the appropriate corrective actions are completed
- Is filed in numerical order.

The content of each CCB includes:

- The reason for issue
- Technical explanations of the deviation from the initial design objectives
- The CCB operational procedure(s) to be applied
- The corrective actions that cancel the CCB , if available when the CCB is issued.

CCB NUMBERING

CCBs are fully integrated in the CCOM from December 2008, therefore the CCB numbering has been modified.

From December 2008, 5 CCBs remain applicable (depending on aircraft configuration) for the entire fleet.

TITLE	OLD NUMBERING	NEW NUMBERING	APPROVAL DATE
Spurious FAP Message	030/2	1 issue 1.0	SEP 28/07
Inadvertent FAP Reset	031/2	2 issue 1.0	SEP 28/07
Loss of the I-PRAM Audio Sound	034/2	3 issue 1.0	SEP 28/07
Anomalies on the FAP Pages	035/2	4 issue 1.0	SEP 28/07
No Automatic Cabin Illumination in Case of Excessive Cabin Altitude or Cabin Decompression	042/2	5 issue 1.0	SEP 28/07

DISTRIBUTION

CCBs are distributed to all affected Operators. The Operator shall provide cabin crews with the content of the CCB without delay.

SPURIOUS FAP MESSAGE

Applicable to: ALL

CCB1 Issue 1.0
SPURIOUS FAP MESSAGE - APPROVAL

Ident.: **10-CCB1-CCB1-00006267.0001001 / 28 SEP 07** **AIRWORTHINESS RELATED**

APPROVAL REFERENCE
APPROVED BY: Head of Flight Operations Support and Services
Approval date: 28 SEP 07
Approval reference: Head of Flight Operations Support and Services
Approved by: Head of Flight Operations Support and Services

This CCB covers a significant operational issue. Non-compliance with this CCB may have a significant impact on the operation of the cabin.
Therefore, Operators must distribute this CCB, or the information contained in this CCB, to all cabin crews without delay.
In addition, it is recommended that all Operators rapidly incorporate applicable corrective Service Bulletins as soon as they become available.

Reason for issue: Spurious FAP message, displayed on the system info page of the Forward Attendant Panel (FAP) after system power-up or power transfer.
The purpose of this CCB is to provide cabin crew with operational recommendations regarding an erroneous FAP message on the system info page.

Applicable to: A318, A319/A320/A321 aircraft with enhanced CIDS (Mod 33100): CIDS software PN Z064H000030D/30E/30F/31A/31B/31C/31D

Cancelled by: CIDS OBRM PN Z064H000032A (MOD 37007).
This item is corrected via a CIDS software upgrade, incorporated on CIDS OBRM PN Z064H000032A with MOD 37007 (via RFC procedure).

Note: The interchangeability code, given in the Illustrated Part Catalog (IPC), indicates the conditions for interchangeability of equipment. After installation of corrective modification(s)/SB(s), if an Operator reinstalls any equipment affected by this CCB, it is the Operator's responsibility to ensure that the recommendations given in this CCB are applied again for the applicable aircraft.

CCBs are issued by Airbus, as the need arises, to rapidly inform operators of any deviations from initial design objectives that have a significant operational impact related to cabin.
Airbus distributes CCBs to all CCOM holders.
The information in the CCB is recommended by Airbus, but may not be approved by Airworthiness Authorities.
If the procedures contained in this CCB differ from the procedures in the AFM, the approved AFM remains the reference.

M	Localization	T	DU Title	DU identification	DU date
	10-CCB1		**Spurious FAP Message**	NG00560	
	10-CCB1		**Spurious FAP Message - Approval**	00006267.0001001	28 SEP 07
	Criteria: K8400 **Applicable to: ALL**				
	10-CCB1		**Spurious FAP Message - Desc - Bulletin**	00006268.0001001	28 SEP 07
	Criteria: K8400 **Applicable to: ALL**				
	10-CCB1		**Spurious FAP Message - Proc - Bulletin**	00006269.0001001	28 SEP 07
	Criteria: K8400 **Applicable to: ALL**				

EXPLANATION

During CIDS power-up, the message “CHECK ATTENDANT AND PAX RELATED FUNCTIONS [PA/INTPH/SIGNS/PAX CALL/LIGHTS]” may appear on the FAP system info page.

PROCEDURE

The validity of the fault message can be checked by selecting the FAP status page.

FAP STATUS PAGE..... SELECT AND CHECK
CABIN CREW.....COORDINATE WITH FLIGHT CREW

If no anomaly is noticed, the correct FAP indication can be recovered by a reset of the Directors via C/Bs located on 49VU and 121VU in the cockpit

INADVERTENT FAP RESET

Applicable to: ALL

CCB2 Issue 1.0
INADVERTENT FAP RESET - APPROVAL

Ident.: **10-CCB2-CCB2-00006270.0001001 / 28 SEP 07** **AIRWORTHINESS RELATED**

APPROVAL REFERENCE
APPROVED BY: Head of Flight Operations Support and Services
Approval date: 28 SEP 07
Approval reference: Head of Flight Operations Support and Services
Approved by: Head of Flight Operations Support and Services

This CCB covers a significant operational issue. Non-compliance with this CCB may have a significant impact on the operation of the cabin.
Therefore, Operators must distribute this CCB, or the information contained in this CCB, to all cabin crews without delay.
In addition, it is recommended that all Operators rapidly incorporate applicable corrective Service Bulletins as soon as they become available.

Reason for issue: The purpose of this CCB is to provide cabin crew with information and operational recommendations regarding FAP reset.

Applicable to: A318, A319/A320/A321 aircraft with enhances CIDS (MOD 33100): CIDS software PN Z064H000030D/30E/30F/31A/31B/31C/31D/32A

Cancelled by: It is expected that this item will be corrected via the next CIDS software/hardware planned to be available end of 2009.

Note: The interchangeability code, given in the Illustrated Part Catalog (IPC), indicates the conditions for interchangeability of equipment. After installation of corrective modification(s)/SB(s), if an Operator reinstalls any equipment affected by this CCB, it is the Operator's responsibility to ensure that the recommendations given in this CCB are applied again for the applicable aircraft.

CCBs are issued by Airbus, as the need arises, to rapidly inform operators of any deviations from initial design objectives that have a significant operational impact related to cabin.
Airbus distributes CCBs to all CCOM holders.
The information in the CCB is recommended by Airbus, but may not be approved by Airworthiness Authorities.
If the procedures contained in this CCB differ from the procedures in the AFM, the approved AFM remains the reference.

M	Localization	T	DU Title	DU identification	DU date
	10-CCB2		**Inadvertent FAP Reset**	NG00561	
	10-CCB2		**Inadvertent FAP Reset - Approval**	00006270.0001001	28 SEP 07
	Criteria: K8400 **Applicable to: ALL**				
	10-CCB2		**Inadvertent FAP Reset - Bulletin**	00006271.0001001	28 SEP 07
	Criteria: K8400 **Applicable to: ALL**				

EXPLANATION

Communications between the FAP and the CIDS may get lost temporarily thus resulting in FAP reset. During an inadvertent FAP reset, the FAP functions may be lost for the time of the power-up sequence (Approximately 100 s).

PROCEDURE

No procedure is applicable.
During the FAP power-up sequence, in case of need, the lights can be controlled using the AAP (if installed).

LOSS OF THE I-PRAM AUDIO SOUND

Applicable to: ALL

CCB3 Issue 1.0
LOSS OF THE I-PRAM AUDIO SOUND - APPROVAL

Ident.: **10-CCB3-CCB3-00006272.0001001 / 28 SEP 07** **AIRWORTHINESS RELATED**
Applicable to: ALL

APPROVAL REFERENCE
APPROVED BY: Head of Flight Operations Support and Services
Approval date: 28 SEP 07
Approval reference: Head of Flight Operations Support and Services
Approved by: Head of Flight Operations Support and Services

This CCB covers a significant operational issue. Non-compliance with this CCB may have a significant impact on the operation of the cabin.
Therefore, Operators must distribute this CCB, or the information contained in this CCB, to all cabin crews without delay.
In addition, it is recommended that all Operators rapidly incorporate applicable corrective Service Bulletins as soon as they become available.

Reason for issue: The purpose of this CCB is to provide cabin crew with operational recommendations regarding loss of I-PRAM audio sound.

Applicable to: A318, A319/A320/A321 aircraft with enhanced CIDS (Mod 33100): CIDS software PN Z064H000030D/30E/30F/31A/31B/31C/31D.

Cancelled by: CIDS OBRM PN Z064H000032A (MOD 37007).
This item is corrected via a CIDS software update, incorporated on CIDS OBRM PN Z064H000032A with MOD 37007 (via RFC procedure).

Note: The interchangeability code, given in the Illustrated Part Catalog (IPC), indicates the conditions for interchangeability of equipment. After installation of corrective modification(s)/SB(s), if an Operator reinstalls any equipment affected by this CCB, it is the Operator's responsibility to ensure that the recommendations given in this CCB are applied again for the applicable aircraft.

CCBs are issued by Airbus, as the need arises, to rapidly inform operators of any deviations from initial design objectives that have a significant operational impact related to cabin.
Airbus distributes CCBs to all CCOM holders.
The information in the CCB is recommended by Airbus, but may not be approved by Airworthiness Authorities.
If the procedures contained in this CCB differ from the procedures in the AFM, the approved AFM remains the reference.

M	Localization	T	DU Title	DU identification	DU date
	10-CCB3		**Loss Of The I-PRAM Audio Sound**	NG00562	
	10-CCB3		**Loss Of The I-PRAM Audio Sound - Approval**	00006272.0001001	28 SEP 07
	Criteria: K8400 **Applicable to: ALL**				
	10-CCB3		**Loss Of The I-PRAM Audio Sound - desc - Bulletin**	00006273.0001001	28 SEP 07
	Criteria: K8400 **Applicable to: ALL**				
	10-CCB3		**Loss Of The I-PRAM Audio Sound - Proc - Bulletin**	00006274.0001001	28 SEP 07
	Criteria: K8400 **Applicable to: ALL**				

Applicable to: ALL

EXPLANATION

Although the handling of the FAP audio page appears to be normal, no sound can be heard in the cabin when an announcement or the boarding music is selected.

Applicable to: ALL

PROCEDURE

CABIN CREW..... COORDINATE WITH FLIGHT CREW

The I-PRAM functionality can be recovered by a reset of the Directors via C/Bs located on 49VU and 121VU in the cockpit.

ANOMALIES ON THE FAP PAGES

Applicable to: ALL

CCB4 Issue 1.0
ANOMALIES ON THE FAP PAGES - APPROVAL

Ident.: **10-CCB4-CCB4-00006277.0001001 / 28 SEP 07** **AIRWORTHINESS RELATED**
Applicable to: ALL

APPROVAL REFERENCE
APPROVED BY: Head of Flight Operations Support and Services
Approval date: 28 SEP 07
Approval reference: Head of Flight Operations Support and Services
Approved by: Head of Flight Operations Support and Services

This CCB covers a significant operational issue. Non-compliance with this CCB may have a significant impact on the operation of the cabin.
Therefore, Operators must distribute this CCB, or the information contained in this CCB, to all cabin crews without delay.
In addition, it is recommended that all Operators rapidly incorporate applicable corrective Service Bulletins as soon as they become available.

Reason for issue: The purpose of this CCB is to provide cabin crew with operational recommendations regarding possible anomaly on the FAP Pages.

Applicable to: A318, A319/A320/A321 aircraft with enhanced CIDS (Mod 33100): CIDS software PN Z064H000030D/30E/30F/31A/31B/31C/31D

Cancelled by: CIDS OBRM PN Z064H000032A (MOD 37007).
This item is corrected via a CIDS software upgrade, incorporated on CIDS OBRM PN Z064H000032A with MOD 37007 (via RFC procedure).

Note: The interchangeability code, given in the Illustrated Part Catalog (IPC), indicates the conditions for interchangeability of equipment. After installation of corrective modification(s)/SB(s), if an Operator reinstalls any equipment affected by this CCB, it is the Operator's responsibility to ensure that the recommendations given in this CCB are applied again for the applicable aircraft.

CCBs are issued by Airbus, as the need arises, to rapidly inform operators of any deviations from initial design objectives that have a significant operational impact related to cabin.
Airbus distributes CCBs to all CCOM holders.
The information in the CCB is recommended by Airbus, but may not be approved by Airworthiness Authorities.
If the procedures contained in this CCB differ from the procedures in the AFM, the approved AFM remains the reference.

M	Localization	T	DU Title	DU identification	DU date
	10-CCB4		**Anomalies On The FAP Pages**	NG00564	
	10-CCB4		**Anomalies On The FAP Pages - Approval**	00006277.0001001	28 SEP 07
	Criteria: K8400 **Applicable to: ALL**				
	10-CCB4		**Anomalies On The FAP Pages - Desc - Bulletin**	00006278.0001001	28 SEP 07
	Criteria: K8400 **Applicable to: ALL**				
	10-CCB4		**Anomalies On The FAP Pages - Proc - Bulletin**	00006279.0001001	28 SEP 07
	Criteria: K8400 **Applicable to: ALL**				

Applicable to: ALL

EXPLANATION

It may happen that display and operation anomalies may be experienced on the FAP pages (Mostly audio or Lighting page).

Applicable to: ALL

PROCEDURE

CABIN CREW..... COORDINATE WITH FLIGHT CREW

The correct FAP indication or the FAP operation can be recovered by a reset of the Directors via C/Bs located on 49VU and 121VU in the cockpit.