



FLIGHT CREW TRAINING MANUAL

VOLUME 2 - TRAINING SYLLABI

AIRBUS INDUSTRIE
TRAINING & FLIGHT OPERATIONS SUPPORT DIVISION



AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	TRAINING SYLLABI TABLE OF CONTENTS	VOL 2 Page 1 REV 24 JUN 2001
---	---	--

CHAPTER 00 - GENERAL INFORMATION

CHAPTER 02 - TYPE RATING COURSES

- Regular Transition Course *E F2R*
- Adapted Jet Familiarization Course *E F2J*
- Adapted Crew Course..... *E F2K*
- Adapted Line Familiarization Course *E F2L*
- First Type Rating on Multi-pilot Airplane Course..... *TBD*
- Cross Crew Qualification
 - A340 / A330 to A320 *E FQF/G*

CHAPTER 04 - RECURRENT TRAINING *E FC4*

CHAPTER 05 - GROUND SCHOOL INSTRUCTOR COURSE..... *E FC5*

CHAPTER 08 - FLIGHT INSTRUCTOR FAMILIARIZATION COURSE *E FC8*

CHAPTER 09 - SIMULATOR INSTRUCTOR COURSE..... *E FC9*

CHAPTER 10 - ETOPS COURSE *E F10*

CHAPTER 18 - CAT II LOW VISIBILITY OPERATIONS..... *E F18*

CHAPTER 19 - CAT III LOW VISIBILITY OPERATIONS..... *E F19*

CHAPTER 20 - EXECUTIVE FAMILIARIZATION COURSE *E F20*

CHAPTER 21 - UPGRADING OF FIRST OFFICER TO CAPTAIN *E F21*

CHAPTER 23 - REFRESHER COURSES..... *E F23*

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	TRAINING SYLLABI TABLE OF CONTENTS	VOL 2 Page 2 REV 24 JUN 2001
---	--	--

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CHAPTER 00

- GENERAL INFORMATION -

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	GENERAL INFORMATION TABLE OF CONTENTS	2.00.00 Page 1 REV 23 JUL 99
---	---	---------------------------------------

2.00.01 - ORGANISATION OF THE MANUAL

2.00.02 - LIST OF NORMAL REVISIONS

2.00.03 - LIST OF TEMPORARY REVISIONS

2.00.04 - LIST OF EFFECTIVE PAGES

AIRBUS INDUSTRIE  Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	GENERAL INFORMATION TABLE OF CONTENTS	2.00.00 Page 2
		REV 22 MAY 98

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AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	GENERAL INFORMATION ORGANISATION OF THE MANUAL	2.00.01 Page 1 REV 24 JUN 2001
---	--	--

01 - FOREWORD

The Flight Crew Training Manual (FCTM) is the support documentation for Flight Crew trainees and instructors and has three objectives :

- It gives Airbus Industrie's philosophy referring to the FCOM and when necessary supplements the FCOM normal, abnormal/emergency procedures to perform training exercises, ensuring homogeneous instruction and operational use
- It contains teaching advises and key points essential for the correct performance of procedures and exercises.
- It deals with the details of the various phases of instruction (briefings, syllabi, ...)

02 - COMMENTS - QUESTIONS - SUGGESTIONS

The FCTM is sent to each Customer Airline's Flight Operation Department and is updated via a "Revision Service" .

All manual holders and users are encouraged to forward their questions and suggestions regarding the Flight Crew Training Manual.

Any questions with respect to use of this manual or information contained herein shall be directed to :

AIRBUS INDUSTRIE TRAINING CENTRE

Customer Services Directorate

5 rue Gabriel Clerc

31707 BLAGNAC CEDEX - FRANCE

ATTN. : Training Policy Department

FAX : 33.(0)5.62.11.07.40

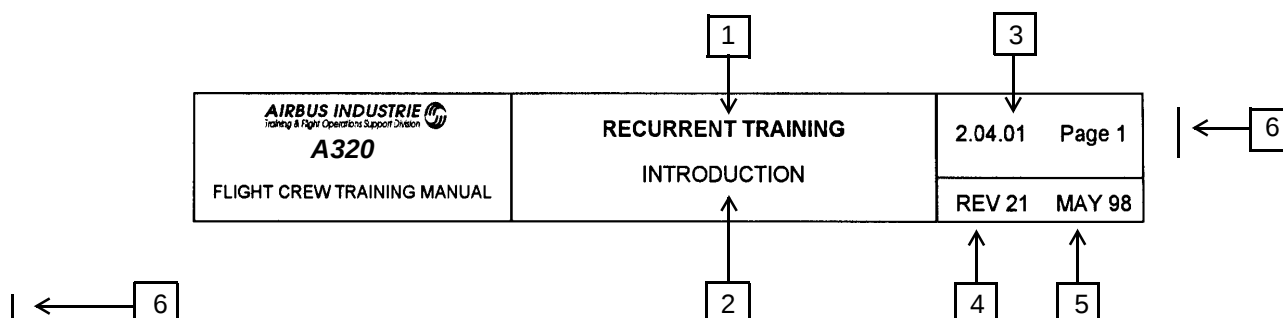
03 - CONTENTS

The FCTM is divided into two volumes :

- Volume 1 : Training Support
- Volume 2 : Training Syllabi

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	GENERAL INFORMATION ORGANISATION OF THE MANUAL	2.00.01 Page 2
		REV 24 JUN 2001

04 - PAGINATION



- 1 Chapter title
- 2 Section title
- 3 FCTM volume number - Chapter number - Section number - Page number

NOTE :

Chapter number and course type number is the same

*Examples : - Chapter **04** is dedicated to the E FC**4** (Recurrent Training)*

*- Chapter **18** is dedicated to the E F**18** (CAT II Low Visibility Operations)*

- 4 Revision number
- 5 Revision date
- 6 A revision bar in front of a line indicates that the line has been revised
A revision bar in front of the page number indicates that the whole page has been revised.

05 - NORMAL REVISIONS

They are issued periodically to cover changes and / or to add new data.

Two documents added to each revision facilitate its incorporation :

- The "Filing Instructions" sheet : it lists the pages to be removed or inserted
- The "List of Effective Pages (LEP)" sheet : it list all the FCTM valid pages

Normal revisions are recorded in the "List of Normal Revisions" section

06 - TEMPORARY REVISIONS

They are printed on yellow paper and are issued when justifying urgent action between normal revisions.

They are recorded in the "List of Temporary Revisions" section.

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	GENERAL INFORMATION ORGANISATION OF THE MANUAL	2.00.01	Page 3
		REV 23	JUL 99

07 - CUSTOMIZATION

When some items of the Airbus Industrie training philosophy are not adopted by a Customer Airline, they are replaced by those of the Airline. The corresponding header pages bear the name of the Airline and are printed in blue.

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	GENERAL INFORMATION ORGANISATION OF THE MANUAL	2.00.01 Page 4
		REV 23 JUL 99

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 A320 FLIGHT CREW TRAINING MANUAL	GENERAL INFORMATION LIST OF NORMAL REVISIONS	2.00.02 Page 1 REV 24 JUN 2001
--	---	---

N°	ISSUE DATE	ENTRY INTO SERVICE DATE
01	NOV 89	-
02	JAN 90	-
03	MAR 90	-
04	MAY 90	-
05	JUN 90	-
06	AUG 90	-
07	NOV 90	-
08	FEB 91	-
09	NOV 92	-
10	DEC 92	-
11	JAN 93	-
12	APR 93	-
13	JUL 93	-
14	OCT 93	-
15	NOV 93	-
16	MAR 94	-
17	AUG 94	-
18	FEB 95	-
19	JUL 95	-
20	JUL 96	-
21	MAY 98	-
22	OCT 98 (Volume 2 ONLY)	-
23	JUL 99	-
24	JUN 2001	03 OCT 2001 (EDW n° 011114)

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	GENERAL INFORMATION LIST OF NORMAL REVISIONS	2.00.02 Page 2
		REV 21 MAY 98

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GENERAL INFORMATION
LIST OF TEMPORARY REVISIONS

N°	DATE IN	DATE OUT	LOCATION	ENTRY INTO SERVICE DATE
01	JAN 91	REV 08	03.03 Page 5C 05.01 Page 2 07.02 Page 3	-
02	FEB 93	REV 12	Chapter 08 - LOFT	-
03	FEB 93	REV 12	Chapter 08 - LOFT	-
04	MAR 94	REV 17	17.05 Page 7	-
05	AUG 94	REV 17	10.03 page 3	-
06	NOV 95	REV 21	Chapter 02 Chapter 06 Chapter 07	-
07	APR 96	REV 20	Chapter 04 Chapter 21	-
08	OCT 96	REV 21	Chapter 11	-
09	AUG 97	REV 21	Chapter 08	-
10	JAN 98	REV 21	Chapter 12 Chapter 13	-
11	NOV 99	TR 13	VOL 2 - Chapter 02	-
12	JAN 2000	REV 24	VOL 2 - Chapter 02	-
13	AUG 2000	REV 24	VOL 2 - Chapter 02	04 OCT 2000
14	FEB 2002	TR 15	VOL 2 - Chapter 02	13 FEB 2002 (CYP n° 021007 AMM n° 021065)
15	FEB 2002	-	VOL 2 - Chapter 02	13 FEB 2002 (CYP n° 021007 AMM n° 021065)



N°	DATE IN	DATE OUT	LOCATION	ENTRY INTO SERVICE DATE
01	JAN 91	REV 08	03.03 Page 5C 05.01 Page 2 07.02 Page 3	-
02	FEB 93	REV 12	Chapter 08 - LOFT	-
03	FEB 93	REV 12	Chapter 08 - LOFT	-
04	MAR 94	REV 17	17.05 Page 7	-
05	AUG 94	REV 17	10.03 page 3	-
06	NOV 95	REV 21	Chapter 02 Chapter 06 Chapter 07	-
07	APR 96	REV 20	Chapter 04 Chapter 21	-
08	OCT 96	REV 21	Chapter 11	-
09	AUG 97	REV 21	Chapter 08	-
10	JAN 98	REV 21	Chapter 12 Chapter 13	-
11	NOV 99	TR 13	VOL 2 - Chapter 02	-
12	JAN 2000	REV 24	VOL 2 - Chapter 02	-
13	AUG 2000	REV 24	VOL 2 - Chapter 02	04 OCT 2000

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	GENERAL INFORMATION LIST OF TEMPORARY REVISIONS	2.00.03 Page 2 REV 21 MAY 98
---	---	---------------------------------------

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AIRBUS INDUSTRIE Training & Flight Operations Support Division  A320 FLIGHT CREW TRAINING MANUAL	GENERAL INFORMATION LIST OF EFFECTIVE PAGES	2.00.04 Page 1 REV 24 JUN 2001
---	---	---

TO BE ISSUED LATER ON

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	GENERAL INFORMATION LIST OF EFFECTIVE PAGES	2.00.04 Page 2
		REV 24 JUN 2001

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AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	TRANSITION COURSES TABLE OF CONTENTS	2.02.00 Page 1 REV 24 JUN 2001
---	--	--

2.02.01 - INTRODUCTION

2.02.02 - TRAINING FOOTPRINT

2.02.03 - GROUND COURSE SYLLABI

2.02.04 - NORMAL COURSE SYLLABI

2.02.05 - ABNORMAL/EMERGENCY COURSE SYLLABI

2.02.06 - LOFT SYLLABI

2.02.07 - SKILL TEST SYLLABI

2.02.08 - BASE TRAINING SYLLABUS

AIRBUS INDUSTRIE Training & Flight Operations Support Division  A320 FLIGHT CREW TRAINING MANUAL	TRANSITION COURSES TABLE OF CONTENTS	2.02.00 Page 2 REV 22 OCT 98
---	--	---

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AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	TRANSITION COURSES INTRODUCTION	2.02.01 Page 1 REV 22 OCT 98
---	---	---------------------------------------

01 - GENERAL

A. PHILOSOPHY OF THE COURSE

The Flight Crew Transition Course is based on the following three principles :

- Systematic approach to instruction
- Learning by doing
- Training to proficiency

a. Systematic approach to instruction :

The task of training must be considered as a whole and an instruction system must be defined to achieve the training objectives. These objectives are determined by a task analysis. Methods and means necessary to implement the instruction system are chosen for their qualities and adaptability to the objectives.

Each phase in the training system is intended to fulfil part of the objectives.

b. Learning by doing :

It is very important that practical exercises are included in each training phase. Practical system training is provided as soon as possible to :

- ensure that the theoretical knowledge is retained
- train the crew members in their respective tasks in the cockpit environment.

c. Training to proficiency :

At the end of the training program, each crew must be capable of carrying out his tasks safely and efficiently, in accordance with the training objectives. Therefore, it is not possible to permit a trainee to move up from one phase to the next until he has acquired the skills necessary to complete the objectives.

d. Crew training - Crew Resource Management (CRM)

The ACRM (Airbus Crew Resource Management) is integrated into the technical training through 7 CRM topics studied during the ACRM workshop. Each topic could be part of the briefing or debriefing of a session depending on crew's performance and various opportunities.

- The debriefing of a topic can be done every time it could enhance the trainee's performance
- The briefing of a topic (if not already debriefed) is scheduled in accordance with the table provided in the Trainee's file

B. PREREQUISITES

Defined by clause 16 in aircraft purchase contract and entry level requirements as specified in the Airbus Training Policy.

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	TRANSITION COURSES INTRODUCTION	2.02.01 Page 2 REV 24 JUN 2001
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02 - TYPE RATING COURSE DESCRIPTION

A. TRANSITION COURSE :

- The basic Transition course (called Regular Course) is declined in several versions (called Adapted Courses) according to the needs of the Airlines and the background of the pilot in order to achieve the training objectives.
Adapted courses are designed from the Regular Transition course by adding extra training (briefing and simulator sessions).
- The Regular and Adapted courses are available with additional days of "Language" option for pilots with no English, no fluent English or insufficient knowledge in technical English.
These extra days are mainly spread over the Ground phase as the systems are studied with projected CBT.
An extra day is proposed before the Progress check in the Normal phase and another one at the end of the Abnormal/Emergency phase, both dedicated to a spare session if needed.

NOTE : *Spare sessions are performed on instructor's request.*

Computerised codes are used to identify the various aircraft and courses. Here under the meaning of the main codes :

a. Aircraft Codes

B = A310	F = A340	H = A321
D = A300-600	G = A330	J = A319
E = A320		

b. Course Codes

		CBT at home	Language option
Regular Course <i>Experienced jet qualified line pilots</i>	E F2RA2	E F2RA4	E F2RA7
Adapted Jet Familiarization Course <i>Pilots with no previous experience on jet aircraft</i>	E F2JA2	E F2JA4	E F2JA7
Adapted Crew Course <i>Pilots with no practice of crew co-ordination and flight deck management</i>	E F2KA2	E F2KA4	E F2KA7
Adapted Line Familiarization Course <i>Pilots with no practice of operation in a line environment.</i>	E F2LA2	E F2LA4	E F2LA7

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	TRANSITION COURSES INTRODUCTION	2.02.01 Page 3 REV 24 JUN 2001
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02 - TYPE RATING COURSE DESCRIPTION (END)

B. CROSS CREW QUALIFICATION COURSE (CCQ) :

Within the fly-by-wire family, the CCQ course is designed to transition from one type to another type of aircraft :

CCQ A330 to A320..... E FQG
 Pilots already type rated on A330

CCQ A340 to A320..... E FQF
 Pilots already type rated on A340

C. A319/A320/A321 SAME TYPE RATING :

The Same Type Rating is the term used by Airbus Industrie to assign a single type rating for different Airbus aircraft.

Same Type Rating permits the carry-over of total credit for crew qualifying from one variant of aircraft type to another, based on common cockpit and flight characteristics.

After completion of an A320 Transition or CCQ course, the A319/A320/A321 Same Type Rating needs only stand up lecture and / or CBT study to highlight the differences between the aircraft.

D. FIRST TYPE RATING ON MULTI-PILOT AIRPLANE COURSE

Refer to "First Type Rating On Multi-pilot Airplane Course" FCTM chapter

03 - COURSE ORGANISATION

A. DESCRIPTION

The instruction concept utilised by Airbus Industrie uses a program divided into phases, each of which generally corresponds to part of the objectives.

In an effort to produce a single syllabus set satisfying all the regulatory authorities requirements (JAA, FAA, CAA, etc.) the sessions take place in various airports.

a. Ground course phase

- Welcome : general introduction presenting Airbus Training Centre and the course,
- Cockpit familiarization session in a Full Flight Simulator.

The ground school phase consists of integrated training using :

- a Computer Based Training (CBT) workstation
- FMGS trainer (F3D)
- ECAM trainer
- Fixed Base Simulator

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	TRANSITION COURSES INTRODUCTION	2.02.01 Page 4
		REV 24 JUN 2001

03 - COURSE ORGANISATION (CONT'D)

A. DESCRIPTION (END)

b. Normal operation phase

Having studied each system of the aircraft separately during the Ground course, the trainee is invited to study integration of these systems and subsequent procedures, as well as aircraft handling in Normal situations. Normal situations here must be understood as flying the aircraft without any internal failure.

The objective is to apply normal procedures with respect of task sharing and crew coordination.

The sessions are scheduled in FBS to study the procedures and in FFS to apply the procedures and practice aircraft handling in normal operations.

A progress check at the end of the Normal phase allows the instructor to evaluate if Trainee's knowledge and skills fulfil the requirements to start the Abnormal phase.

c. Abnormal/emergency operation phase :

Knowing now how to handle the aircraft in normal situations, the trainees are invited to study the aircraft in abnormal/emergency operations, experiencing several failure cases. The objective is to apply the abnormal/emergency procedures with respect of task sharing and crew coordination.

Sessions are scheduled in FBS to study the procedures and in FFS to practice aircraft handling.

d. LOFT (Line Oriented Flight Training) phase

The aim of the LOFT sessions exercise is to give trainees experience in operating the aircraft in real time flying scenarios

[Refer to LOFT briefing - FCTM Vol 1 "Normal Operation Briefings" chapter.]

e. Skill Test phase

According to the JAR - FCL recommendations, the Skill Test syllabi have been designed in a commercial air transport environment.

They consist of :

- 1st part : a real time sector with some specific events.
- 2nd part : additional part to deal with the remaining items to be performed by the trainee in order to fully satisfy the JAR - FCL requirements.

f. Base training phase

Base training if applicable.

[Refer to Base Training Briefing - FCTM Vol 1 "Normal Operation Briefings" chapter.]

03 - COURSE ORGANISATION (END)

B. INSTRUCTOR BRIEFING

The instructor will make a briefing whose duration is stated in the table below within a reasonable time frame before each FBS and FFS session :

Briefing / debriefing duration per session :				
PHASES	BRIEFING			DEBRIEFING
	FBS	FFS	ACRM (if any)	
- Ground	0:30 to 1:00	-	-	At students and/or instructor request
- Normal / Abnormal	1:30	1:30	At instructor's discretion ¹	At instructor's discretion ²
- LOFT	-	1:00		
- Skill test	-	1:00		

1. As a part of the normal session briefing duration
2. According to Trainees' performance

The instructors are advised to use all available tools that can support the learning process significantly i. e. FMGS trainer, ACRM briefings and others. They must brief the Trainees before the first session of the Normal phase to prepare the session using the FCOM and FCTM (Take-off data and flight plan if necessary)

04 - CRITERIA OF PROFICIENCY

A. CBT

a. Test :

On completion of this phase, a multiple choice test will be completed. The minimum level required, to be declared proficient, is determined by the Airline (never lower than 80%).

b. Unsatisfactory test :

The student will undertake another test to be satisfactorily completed prior to next phase of training.

B. FBS AND FFS NOTATIONS

The procedure to assess the Trainees is defined in the ADOPT specific booklet provided during the Instructor ADOPT training. The Trainee's file includes :

- 1 grade sheet per session
- 1 summary sheet
- 1 ACRM follow up

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	TRANSITION COURSES INTRODUCTION	2.02.01 Page 6
		REV 24 JUN 2001

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Regular course

- E F2R -



 A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE TRAINING FOOTPRINT	2.02.02 Page 1 E F2R
		TR 15 FEB 2002

01 - TRAINING DEVICE TIME SHARING PER PHASE

N.B. : except when notified, the allocated time is mentioned in hour/crew

		(With Language)
Total working days (without Base Training)	Regular course = 24 or 25 Adapted course = 27 or 28	28 or 29 31 or 32
GROUND PHASE	9 working days	13

CBT : - Aircraft system study + review

- System Test

FMGS TRAINER sessions	4	9:00	(3 x 2:00 + 3:00)
ECAM TRAINER sessions	3	6:00	(3 x 2:00)
FBS sessions	1	2:00	
FFS familiarization session (Introduction to A320) .	1	0:45	

NORMAL PHASE **6 working days**

FBS sessions	3	9:00	(3 x 3:00)
FFS sessions	3	9:00	(3 x 3:00)

ABNORMAL / EMERGENCY PHASE **5 working days**

FBS sessions	2	6:00	(2 x 3:00)
FFS sessions	3	9:00	(3 x 3:00)

LOFT PHASE **3 working days**

ALOFT briefings	1		
FFS sessions	2	6:00	(2 x 3:00)

SKILL TEST PHASE

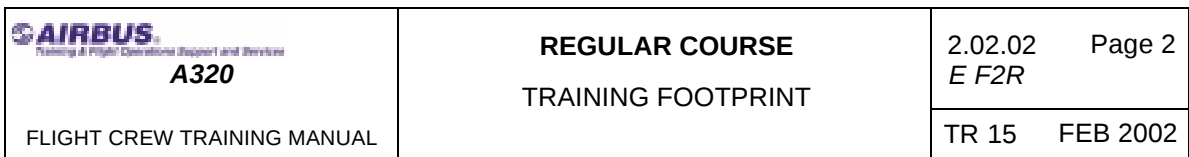
	Standard Crew 1 working day	Non Standard Crew 2 working days
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FFS sessions	1 session 4:00	2 sessions 6:00 (3:00 / trainee)
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In the aircraft :

FLIGHT PHASE (if applicable i.e. French DGAC rule) **1 working day**

Flight	1	Minimum 0:45 / trainee
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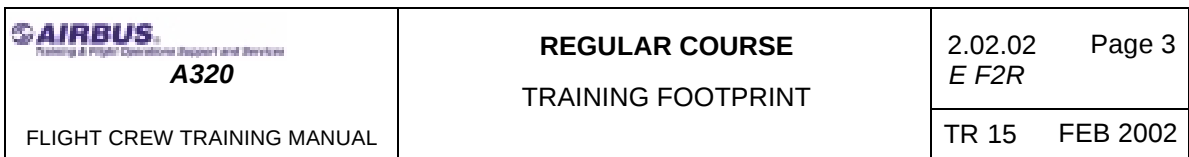


A. GROUND PHASE DAILY FOOTPRINT

DAY 9 :
System test in one session for all trainees on the afternoon, **after having performed VPREP FBS** (might be swapped with FMGS 4 on previous day according to equipment availability).

DAY 1	
Welcome	2:30
CBT :	
- Introduction	0:20
- Aircraft general	0:15
- APU	0:40
- EIS - EFIS	1:15
- Autoflight (1/2)	1:15
FFS 0	0:45

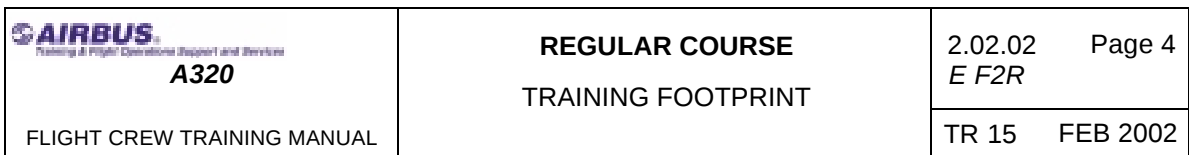
DAY 2 CBT : - Autoflight (2/2) 2:30 - EIS - ECAM 1:45 - System review 0:45 <i>(To be scheduled after 10:30 am) :</i> FMGS 1 2:00	DAY 3 CBT : - Navigation 1:50 - Electric 2:15 - System review 0:55 FMGS 2 2:00	DAY 4 CBT : - Pneumatic 1:00 - Fire protection 0:45 - Press / Vent / Air cond 2:00 - Ice & rain protection 0:30 - System review 0:45 FMGS 3 2:00
DAY 5 CBT : - Landing gear 1:00 - Flight controls 2:30 - Hydraulic 1:15 - Systems review 0:15 ECAM 1 2:00	DAY 6 CBT : - Fuel 1:00 - Power plant 1:30 - Oxygen / Doors / Lights 1:30 - Communication 0:40 - Systems review 0:20 ECAM 2 2:00	DAY 7 CBT : - Recorders 0:05 - Pre-fans 0:30 - System review 1:55 - Performance 3:00 (Take-off / Landing) ECAM 3 2:00
DAY 8 CBT : - System review 4:00 FMGS 4 3:00	DAY 9 CBT : - System test 3:00 - System test debriefing 1:00 V PREP FBS briefing 0:30 V PREP FBS 2:00	Optional day Airbus Crew Resource Management (ACRM)



B - NORMAL, ABNORMAL, LOFT, EVALUATION PHASES DAILY FOOTPRINT

DAY 10 <i>N0 FBS</i>	DAY 11 <i>N1 FBS</i>	DAY 12 <i>N2 FBS</i>
DAY 13 <i>N3 FFS</i>	DAY 14 <i>N4 FFS</i>	DAY 15 <i>N5 FFS</i> (Progress check)
DAY 16 <i>F1 FBS</i>	DAY 17 <i>F2 FBS</i>	DAY 18 <i>F3 FFS</i>
DAY 19 <i>F4 FFS</i>	DAY 20 <i>F5 FFS</i>	
DAY 21 A-LOFT briefings 2:10 Performance complement 2:10 Performance test 0:50 Cabin presentation 0:50 Cabin trainer 1:00	DAY 22 <i>Walk around video 0:20</i> <i>A-LOFT FFS 1</i>	DAY 23 <i>A-LOFT FFS 2</i>
DAY 24 <i>Skill Test FFS</i> Standard Crew : 4 h session Non Standard Crew : 3 h session (Trainee 1)	DAY 25 (Non Standard Crew ONLY) <i>Skill Test FFS</i> Non Standard Crew : 3 h session (Trainee 2)	

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A. GROUND PHASE DAILY FOOTPRINT

		DAY 1 Welcome Projected CBT : - Introduction - Aircraft genera - EIS - EFIS (1/2)
DAY 2 Projected CBT : - EIS - EFIS (2/2) - ECAM - APU	DAY 3 Projected CBT : - Autoflight (1/2) - System review <i>FMGS 1</i> <i>2:00</i>	DAY 4 Projected CBT : - Autoflight system (2/2) - Navigation <i>FMGS 2</i> <i>2:00</i>
DAY 5 Projected CBT : - Electric - Pneumatic - Air conditioning <i>FMGS 3</i> <i>2:00</i>	DAY 6 Projected CBT : - Pressurization - Ventilation - Hydraulic <i>ECAM 1</i> <i>2:00</i>	DAY 7 Projected CBT : - Power plant - Landing gear - System review <i>ECAM 2</i> <i>2:00</i>
DAY 8 Projected CBT : - Fuel - Flight controls - System review <i>ECAM 3</i> <i>2:00</i>	DAY 9 Projected CBT : - Ice and rain protection - Fire protection - TCAS <i>FMGS 4</i> <i>3:00</i>	DAY 10 Projected CBT : - Oxygen / Doors - Lights - Communication - Recorders - System review
DAY 11 Projected CBT : - System review - Performance (Take-off / Landing) <i>V PREP FBS briefing</i> <i>0:30</i> <i>V PREP FBS</i> <i>2:00</i>	DAY 12 Projected CBT : - System review - System test - System test debriefing	DAY 13 Airbus Crew Resource Management (ACRM)



 A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE TRAINING FOOTPRINT	2.02.02 Page 5 E F2R
		TR 15 FEB 2002

03 - REGULAR COURSE + LANGUAGE (END)

B - NORMAL, ABNORMAL, LOFT, EVALUATION PHASES DAILY FOOTPRINT

DAY 14 <i>N0 FBS</i>	DAY 15 <i>N1 FBS</i>	DAY 16 <i>N2 FBS</i>
DAY 17 <i>N3 FFS</i>	DAY 18 <i>N4 FFS</i>	DAY 19 <i>N5 FFS</i> (Progress check)
DAY 20 <i>F1 FBS</i>	DAY 21 <i>F2 FBS</i>	DAY 22 <i>F3 FFS</i>
DAY 23 <i>F4 FFS</i>	DAY 24 <i>F5 FFS</i>	
DAY 25 A-LOFT briefings 2:10 Performance complement 2:10 Performance test 0:50 Cabin presentation 0:50 Cabin trainer 1:00	DAY 26 <i>Walk around video 0:20</i> <i>A-LOFT FFS 1</i>	DAY 27 <i>A-LOFT FFS 2</i>
DAY 28 <i>Skill Test FFS</i> Standard Crew : 4 h session Non Standard Crew : 3 h session (Trainee 1)	DAY 29 (Non Standard Crew ONLY) <i>Skill Test FFS</i> Non Standard Crew : 3 h session (Trainee 2)	

NOTE : When requested by the instructor, spare time sessions are performed :

- the day before the Progress check (Normal phase)
- at the end of the Abnormal/Emergency phase

= Abnormal / emergency sessions

 A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE TRAINING FOOTPRINT	2.02.02 Page 1 <i>E F2R</i> REV 24 JUN 2001
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01 - TRAINING DEVICE TIME SHARING PER PHASE

N.B. : except when notified, the allocated time is mentioned in hour/crew

	(With Language)
Total working days (without Base Training)..... Regular course = 25 Adapted courses = 28	TBD
GROUND PHASE 9 working days	TBD

CBT : - Aircraft system study + review

- System Test

|	FMGS TRAINER sessions.....	4	9:00	(3 x 2:00 + 3:00)
|	ECAM TRAINER sessions.....	3	6:00	(3 x 2:00)
|	FBS sessions	1	2:00	
	FFS familiarization session (Introduction to A320) .	1	0:45	

NORMAL PHASE	6 working days
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	FBS sessions	3	9:00	(3 x 3:00)
	FFS sessions	3	9:00	(3 x 3:00)

ABNORMAL / EMERGENCY PHASE	5 working days
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	FBS sessions	2	6:00	(2 x 3:00)
	FFS sessions	3	9:00	(3 x 3:00)

LOFT PHASE	3 working days
-------------------	-----------------------

	ALOFT briefings	1		
	FFS sessions	2	6:00	(2 x 3:00)

SKILL TEST PHASE	2 working days
-------------------------	-----------------------

	FFS sessions	2	6:00	(3:00 / trainee)
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In the aircraft :

BASE TRAINING PHASE (if applicable i.e. French DGAC rule)	1 working day
--	----------------------

	Flight	1	Minimum 0:45 / trainee	
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AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE TRAINING FOOTPRINT	2.02.02 Page 2 <i>E F2R</i> REV 24 JUN 2001
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02 - REGULAR COURSE

A. GROUND PHASE DAILY FOOTPRINT

All the following time limits are for information and represent the minimum required to study the relevant system.

DAY 9 :

System test in one session for all trainees on the afternoon, **after having performed VPREP FBS** (might be swapped with FMGS 4 on previous day according to equipment availability).

DAY 1

Welcome	2:30
CBT :	
- Introduction	0:20
- Aircraft general	0:15
- APU	0:40
- EIS - EFIS	1:15
- Autoflight (1/2)	1:15
<i>FFS 0</i>	<i>0:45</i>

DAY 2 CBT : - Autoflight (2/2) 2:30 - EIS - ECAM 1:45 - System review 0:45 <i>(To be scheduled after 10:30 am) :</i> <i>FMGS 1 2:00</i>	DAY 3 CBT : - Navigation 1:50 - Electric 2:15 - System review 0:55 <i>FMGS 2 2:00</i>	DAY 4 CBT : - Pneumatic 1:00 - Fire protection 0:45 - Press / Vent 1:00 - Air conditioning 1:00 - Ice & rain protection 0:30 - System review 0:45 <i>FMGS 3 2:00</i>
DAY 5 CBT : - Landing gear 1:00 - Flight controls 2:30 - Hydraulic 1:15 - Systems review 0:15 <i>ECAM 1 2:00</i>	DAY 6 CBT : - Fuel 1:00 - Power plant 1:30 - Oxygen / Doors / Lights 1:30 - Communication 0:40 - Systems review 0:20 <i>ECAM 2 2:00</i>	DAY 7 CBT : - Recorders 0:05 - Pre-fans 0:30 - System review 1:55 - Performance 3:00 (Take-off / Landing) <i>ECAM 3 2:00</i>
DAY 8 CBT : - System review 4:00 <i>FMGS 4 3:00</i>	DAY 9 CBT : - System test 3:00 - System test debriefing 1:00 <i>V PREP FBS briefing 0:30</i> <i>V PREP FBS 2:00</i>	Optional day Airbus Crew Resource Management (ACRM)

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE TRAINING FOOTPRINT	2.02.02 Page 3 <i>E F2R</i> REV 24 JUN 2001
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02 - REGULAR COURSE (END)

B - NORMAL, ABNORMAL, LOFT, EVALUATION PHASES DAILY FOOTPRINT

DAY 10 <i>N0 FBS</i>	DAY 11 <i>N1 FBS</i>	DAY 12 <i>N2 FBS</i>
DAY 13 <i>N3 FFS</i>	DAY 14 <i>N4 FFS</i>	DAY 15 <i>N5 FFS</i> (Progress check)
DAY 16 <i>F1 FBS</i>	DAY 17 <i>F2 FBS</i>	DAY 18 <i>F3 FFS</i>
DAY 19 <i>F4 FFS</i>	DAY 20 <i>F5 FFS</i>	
DAY 21 A-LOFT briefings 2:10 Performance complement 2:10 Performance test 0:50 Cabin presentation 0:50 Cabin trainer 1:00	DAY 22 <i>Walk around video 0:20</i> <i>A-LOFT FFS 1</i>	DAY 23 <i>A-LOFT FFS 2</i>
DAY 24 <i>Skill Test FFS (Trainee 1)</i>	DAY 25 <i>Skill Test FFS (Trainee 2)</i>	

= Abnormal / emergency sessions

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE TRAINING FOOTPRINT	2.02.02 Page 4 <i>E F2R</i> REV 24 JUN 2001
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03 - CBT AT HOME REGULAR COURSE (Not applicable to Adapted Courses)

System test in one session for all trainees on the afternoon, **after having performed VPREP FBS** (might be swapped with FMGS 4 on previous day according to equipment availability).

DAY 1 Welcome 2:30 <i>FFS 0 (1)</i> 0:45 <i>ECAM 1</i> 2:00	DAY 2 <i>FMGS 1</i> 2:00 <i>FMGS 2</i> 2:00 <i>ECAM 2</i> 2:00	DAY 3 <i>FMGS 3</i> 2:00 <i>ECAM 3</i> 2:00
DAY 4 CBT : - Performance 3:00 (Take-off / Landing) - Review 1:00 <i>FMGS 4</i> 3:00	DAY 5 CBT : - System test 3:00 - System test debriefing 1:00 <i>V PREP FBS briefing</i> 0:30 <i>V PREP FBS</i> 2:00	Optional day Airbus Crew Resource Management (ACRM)
DAY 6 <i>N0 FBS</i>	DAY 7 <i>N1 FBS</i>	DAY 8 <i>N2 FBS</i>
DAY 9 <i>N3 FFS</i>	DAY 10 <i>N4 FFS</i>	DAY 11 <i>N5 FFS</i> (Progress check)
DAY 12 <i>F1 FBS</i>	DAY 13 <i>F2 FBS</i>	DAY 14 <i>F3 FFS</i>
DAY 15 <i>F4 FFS</i>	DAY 16 <i>F5 FFS</i>	
DAY 17 A-LOFT briefings 2:10 Performance complement 2:10 Performance test 0:50 Cabin presentation 0:50 Cabin trainer 1:00	DAY 18 <i>Walk around video</i> 0:20 <i>A-LOFT FFS 1</i>	DAY 19 <i>A-LOFT FFS 2</i>
DAY 20 <i>Skill Test FS (Trainee 1)</i>	DAY 21 <i>Skill Test FFS (Trainee 2)</i>	= Abno/emerg sessions

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE GROUND COURSE SYLLABI	2.02.03 Page 1
		REV 24 JUN 2001

FFS SYLLABUS :

FFS 0Page 3

FBS SYLLABUS :

V PREP FBSPage 5

ECAM TRAINER SYLLABI :

ECAM 1Page 7

ECAM 2.....Page 9

ECAM 3Page 11

FMGS TRAINER SYLLABI :

FMGS 1Page 13

FMGS 2Page 27

FMGS 3Page 39

FMGS 4Page 55

The FMGS trainer syllabi (FMGS 1 to 3) contain data that might change due to database periodical replacement. In order to keep these guides up to date, computerized copies are stored on the Airbus Training Centre network and available to all instructor in a specific folder. They will be revised as soon as a change occurs.

The 3 syllabi will be printed and provided to the trainees by the instructor designated to conduct the first session (FMGS 1). This session will start with a briefing about how to use the trainer in order to prepare the next freeplay sessions.

NOTE : *Instructors' FCTM includes the "Session Guides"*

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE GROUND COURSE SYLLABI	2.02.03 Page 2
		REV 21 MAY 98

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FFS 0 TAKE-OFF DATA
INIT PAGE

CO RTE

ALTN/CO RTE

FLT NBR

LAT

COST INDEX

CRZ FL/TEMP

FROM TO

LONG

TROPO

TRIP DIST

CRZ WIND

ALTN

ALTN DIST

FLT to ALTN

ATIS

RWY 15 R

WIND CALM

VISI CAVOK

CEILING

TEMP 14°C

DEW POINT . 10°C

QNH 1013 hPa/29.92 inHg

QFE 995 hPa/29.80 inHg

RWY COND.. DRY

Observations. : AIR COND ON

INIT NEXT PAGE

ZFCG/ZFW

BLOCK

PERF PAGE

IAE

CFM

V1

VR

V2

FLEX

DRT

T/O FLAPS

T/O C.G.

~~TOGA~~

FLEX

~~DRT~~

NOTE :
F/PLN :

LOCAL FLIGHT

TRAFFIC PATTERNS

[illegible]

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE GROUND COURSE SYLLABI	2.02.03 Page 4A
		REV 22 OCT 98

FFS 0 SESSION GUIDE

01 - SESSION OBJECTIVE

This session is called "Aircraft familiarization" in order to avoid any confusion with the first FBS session.

Its only objective is to demistify the Fly-by-Wire system, the fixed thrust levers philosophy and the glass cockpit principle.

02 - TRAINING TOPICS

A. REVIEW

Not applicable

B. INTRODUCE

Not applicable

03 - SESSION PROFICIENCY CRITERIA

Not applicable

INSTRUCTOR ONLY

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FFS 0 SESSION GUIDE (END)

04 - SESSION GUIDE

Although there is no need to rush, 45 minutes to introduce the A320 is not much : don't waste time ! There is no need to show how to use the lights, seats, armrests, etc...

Ask your trainees to sit down, adjust the height of the seat to a reasonable value, help with the armrest and pedals adjustment.

Point out on the PFD's :

- On speed scale mention S / F / 0 marks briefly.
- Usual display of attitude (FD's OFF).
- Altitude and vertical speed indications.
- Heading scale and reference line.
- Omit FMA indications
- Dim to zero the ND's and point out on the Upper ECAM the N1 / EPR (if applicable) indication and disregard the other parameters.
- Dim to zero the lower ECAM.
- Deselect both FD's.
- DO NOT initialize the FMGC's.
- Provide the trainees with average values for :

- Initial target pitch attitude : 15° nose up
- Acceleration pitch attitude : 10° nose up
- Level off target pitch attitude : 2.5° nose up
- Average N1 setting for level flight : 250 kt require some 55% to 60% N1 .

The trainee will conduct a fully visual pattern using the skill he has developed on his previous aircraft, the instructor being there only to help and never to criticize.

NOTE : Second part - Trainee 2 as PF

At trainee's discretion fly a fully automatic blue circuit or repeat same exercise as for Trainee 1.

- **7** : Concerning the stick free speed variations, there is no need to stress too much at this stage the main features of the Fly-by-Wire ; the important message to deliver is :

This is an aircraft, which means that basic handling principles apply.

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VPREP FBS TAKE-OFF DATA
INIT PAGE

CO RTE

ALTN/CO RTE

FLT NBR

LAT

FROM TO

LONG

COST INDEX

CRZ FL/TEMP

TRIP DIST

CRZ WIND

ALTN

ALTN DIST

FLT to ALTN

ATIS

RWY 33 L

WIND CALM

VISI CAVOK

CEILING

TEMP 14°C

DEW POINT . 10°C

QNH 1010 hPa/29.92 inHg

QFE 992 hPa/29.38 inHg

RWY COND.. DRY

Observations. : AIR COND ON

INIT NEXT PAGE

ZFCG/ZFW

BLOCK

PERF PAGE

IAE

CFM

V1

VR

V2

FLEX

DRT

T/O FLAPS

T/O C.G.

TOGA

FLEX

DRT

NOTE :
F/PLN :

LFBO 15 R

SID FISTO

LMG - MORIK - AMB

STAR AMB

LFPO ILS 07

[illegible]

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE GROUND COURSE SYLLABI	2.02.03 Page 6A REV 24 JUN 2001
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VPREP FBS SESSION GUIDE

01 - SESSION OBJECTIVE

- Introduce and practice the preliminary cockpit preparation
- Introduce and practice SOP's and task sharing
- Introduce and practice "After landing", "Parking" and "Securing the aircraft"

02 - TRAINING TOPICS

A. REVIEW

- FMGS preparation
- Task sharing, crew coordination and communication

B. INTRODUCE

- Simulator and safety installation
- Preliminary cockpit preparation
- After landing, parking and securing the aircraft.

03 - SESSION PROFICIENCY CRITERIA

Not applicable

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VPREP FBS SESSION GUIDE (END)

04 - SESSION GUIDE

- **1** : During open book preparation, the instructor will address the listed items during the panel scanning. For this session, set a cold aircraft : no external power, no APU. Emphasize the organisation of various panels.
- **3** : Explain how to correctly adjust seats, armrests, rudder pedals. Point out that the pilot eye should be in line with the red and white balls, and the adjustments should be memorized.
- **4** : Locate the listed equipments even if not installed in the simulator.
- **5** : Explain scan sequences and areas of responsibility (CAPT/FO, PF/PNF).
- **6** : Explain how to tune frequencies (normal and Stand by NAV keys) ; how to transfer control ("SEL" white lights).
- **8** : Modify CPT baro reference by more than 10 hPa. to trigger the NAV ALTI DISCREPANCY. Explain then set again 1010 hPa.
- **9** : OXY MASK test : not only test function, but demonstrate how to use, how to restore normal use of microphone.
- **11** : ACP : review transmission keys, reception knobs, passenger address. Use SIM "call function" to simulate selcall and explain how to reset.
- *Init final* : INIT APPR1 / ILS 15R / AUTO BRK LO
Release then review subsequently ECAM memos and FMA from final to full stop.
- **15** : The purpose is not to study the AUTOLAND but to allow a landing in the FBS without triggering a crash message.

INSTRUCTOR ONLY

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ECAM 1 FBS TAKE-OFF DATA

INIT PAGE			ATIS
CO RTE	FROM TO	TRIP DIST	RWY 15 R
	LFBO/LFBO	123 NM	WIND Calm
ALTN/CO RTE		CRZ WIND	VISI CAVOK
		240°/25 kt	CEILING
FLT NBR		ALTN	TEMP 14°C
[Airline ID] 131		LFBD	DEW POINT . 10°C
LAT	LONG	ALTN DIST	QNH 1010 hPa/ inHg
4338.1N	00122.1E	125 NM	QFE 992 hPa/ inHg
COST INDEX		FLT to ALTN	RWY COND.. DRY
30		FL 140	Observations. :
CRZ FL/TEMP	TROPO		
FL 100 / -7°C	36 090		
INIT NEXT PAGE	PERF PAGE	T/O FLAPS	NOTE :
ZFCG/ZFW	IAE CFM	2	F/PLN :
28.3% - 58 t	V1 149 153		LFBO 15 R
28.3% - 127 600 lb	VR 149 153	T/O C.G.	SID FISTO
	V2 151 155	26.6%	NOPTA
BLOCK		TOGA	Via NOPTA
10 t	FLEX 62 59	FLEX	LFBO ILS 15 R
22 000 lb			
	DRT	DRT	

ECAM 1 TRAINER DATA

Airport selection : - select LFBO/LFBO
 INIT load..... : - select GW 58 t (10 t FOB - CTR TK empty)
 - set OAT of 15°C
 - set QNH 1013 hPa

[illegible]

 A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE GROUND COURSE SYLLABI	2.02.03 Page 8A REV 24 JUN 2001
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ECAM 1 SESSION GUIDE

01 - SESSION OBJECTIVE

- Description of ECAM features
- Use of ECAM

02 - TRAINING TOPICS

A. REVIEW

- Display management priorities and cross transfer logic
- ECAM memo logic
- Warning inhibition features
- ECAM system pages

B. INTRODUCE

- ECAM procedures
- Announcements & call outs
- Relationship ECAM / QRH
- ECAM reconfiguration

03 - SESSION PROFICIENCY CRITERIA

Not applicable

04 - SESSION GUIDE

GENERAL REMARKS:

- The ECAM sessions are normally created for use in a sophisticated Part Task Trainer environment (A320 ECAM System Trainer).
- The user is not supposed to fly an aircraft but to understand the ECAM system and associated links in order to obtain sufficient knowledge and basic skills for system operation, crew co-ordination and communication.
- The training is guided and conducted by experienced instructors. They are operating the training device and following the training syllabi step by step.
- The trainees should achieve complete knowledge and understanding of ECAM architecture and system features, malfunction classification and presentation, ECAM procedures and procedure specifics at the end of the ECAM training.
- The acquired knowledge and skills shall enable the trainee to correctly apply system and procedure handling where it may be required in any training or real environment.
- The regular course schedule is supposed to ensure sufficient review and practice on ECAM system and all associated procedures.

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ECAM 1 SESSION GUIDE (CONT'D)

04 - SESSION GUIDE (CONT'D)

- ECAM trainer or FBS (if applicable) in situation A :

Situation A : Aircraft on ground before engine start

General :

- External electrical power connected,
- Engines not running.

Overhead Panel :

- No amber lights (except pack and GEN fault lights),
- IRS on NAV and already aligned,
- 1 PFD, 1 ND and 2 ECAM displays are used (dim the others if applicable - FBS).
- Select or insert FPLN and performance data (dim screen - FBS)
- FD's ON,
- Target ALT 10000 ft.
- Flaps and speed brakes retracted

- **1** : Quick introduction to :
 - EWD displays
 - SD displays (system pages auto & manual, permanent data, status page)
 - ECP functions (various keys, white light logic)
 - ECAM color coding & various levels of alarm
 - System clock
- **2** : Point out & comment the cross transfer logic :
 - PFD / ND
 - EWD / SD
 - SD / ND
- **3** : APU ECAM page comes up automatically
 - Comment APU start up sequence & ECAM indications (memo, system page)
 - Call BLEED page & turn APU bleed ON
 - Comment the supply sequence (PACK 1 - XBLEED - PACK 2)
 - Observe the ECAM memo.
- **4** : ENG start selector to IGN ; ENG page comes up automatically)
 - Comment the ENG page layout
 - Point out the NW STRG DISC green memo (turns amber after first engine start) if a normal push back is intended (FBS only).
- **5** : ENG start selector back to NORMAL :
 - WHEEL page is automatically displayed on SD
 - FLEX TEMP (FBS) or TOGA (ECAM trainer) reference (N1 or EPR) are calculated and displayed on EWD
 - APU BLEED OFF then APU master switch off (memo)
 - WING anti ice ON : Observe memo & ECAM BLEED page
 - T/O memo displayed after 2 mn ENG on idle
 - F/CTL checks calls F/CTL page (moving side stick or rudder).

 A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE GROUND COURSE SYLLABI	2.02.03 Page 8C REV 24 JUN 2001
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ECAM 1 SESSION GUIDE (CONT'D)

04 - SESSION GUIDE (CONT'D)

- ECAM trainer or FBS (if applicable) in situation B :

Situation B : Aircraft on ground after engine start

General :

- Engines running,
- External electrical power disconnected,
- APU OFF.

MCDU dimmed if applicable (FBS) :

- All parameters as prepared for situation A
- Prepare for take-off
 - Set flaps CONF 2
 - AUTO BRK MAX
 - ARM spoilers
 - Push T/O config p/b on ECP (observe T/O memo green)

- 6 : Set take off power with parking brake ON
(FBS is frozen - position freeze)
 - Observe the red warning (explain park brake is not T/O memo item)
 Engine page comes up automatically on SD (on T/O power setting).
- 7 : Perform normal take-off (ECAM trainer and FBS - parking brake released).
Target Altitude 10000 ft (FL 100).
 - Select flight phase 4 (Flight Phase Synoptic - ECAM trainer).
 - Insert NAV ADR 3 FAULT at 100 kt (100 kt – FBS).
 - Explain T.O INHIBIT magenta memo message.
 - Observe STS reminder on EWD (it appears, if any status exists).
 - Select flight phase 5 – Retract LDG gear/Flaps (ECAM trainer).
 - Select flight phase 6 (ECAM trainer).
- 8 : - Notice level 2 warning - inhibited in phases 1, 4, 5 (ECAM trainer and FBS)
Level 2 warning (master caution) occurs when inhibition is released.
Observe Cruise page (cruise phase must be achieved - FBS).

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ECAM 1 SESSION GUIDE (CONT'D)

04 - SESSION GUIDE (CONT'D)

- ECAM trainer or FBS (if applicable) in situation C :

Situation C : Aircraft in flight

- Cruise with AP & ATHR engaged
- FL 100 ; Altimeter setting is STD
- L/G & Flaps retracted
- Position & fuel freeze (FBS)

- 9 : System page review and use of ECAM control panel
- 10 : Fail upper ECAM DU
 - Observe the EWD priority
 - Explain how to use the ECP in this configuration (system page, status, clear), restore the upper ECAM DU
- 11 : Freeze the FBS
Explain various types of disconnection & associated alert (unwanted, manual); permanent or non permanent message, left or right side display ; how to cancel the aural warning.
- 12 : Explain loss of redundancy
Classified as LEVEL 2 caution
- 13 : Diagonal line on DU and reconfiguration
Classified as level 2 caution
- 14 : How to use the paper check list (QRH) ?
Refer to QRH (2.12) DISPLAY UNIT FAILURE
- 15 : Perform ECAM actions
Revert to memo display on EWD
CLR STS
Explain ECP system selection inhibition (DC ESS BUS FAULT)
Explain use of the ALL key for system review and how to return to cruise page (call STS and clear STS)
Restore malfunction and affected systems

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 A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE GROUND COURSE SYLLABI	2.02.03 Page 8E REV 24 JUN 2001
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ECAM 1 SESSION GUIDE (END)

04 - SESSION GUIDE (END)

■ FBS in approach

ECAM trainer : 2 000 ft preselected and activated by clicking phase 6 on flight phase synoptic :

Aircraft in approach (FBS)
Simulator Status INIT APP1
ECAM trainer is at 2 000 ft

- AP2 and A/THR engaged
- Approach phase activated (FBS)
- Approach modes armed (FBS)
- ALT target 2000 ft (ECAM trainer),
- Speed managed (FBS)
- ILS p/b selected to ON,
- Flaps retracted.

- 16 : Commence descent - position freeze (FBS)
 Select IDLE power (FBS)
 Maintain ALT - select IDLE power (ECAM trainer)
 Extend half speed brakes in order to observe the memo green/amber change, if power is above idle (vary the thrust levers).
 Retract speed brakes after demo.
- 17 : Position release (FBS)
 Pre-select 1200 ft and activate by clicking phase 6 on flight phase synoptic (ECAM trainer).
 Select appropriate speed (145 kt) and activate (ECAM trainer).
 Extend flaps 1 and flaps 2 in sequence
 Extend landing gear and observe :
 - WHEEL page appears on SD,
 - LDG MEMO appears on EWD (RA conditions made).
 Select AUTO BRAKE LOW :
 - Observe feed back on EWD memo and system display.
- 18 : Observe LDG INHIBIT below 800 ft (FBS)
 Activate phase 7 on ECAM trainer synoptic and observe the LDG INHIBIT memo (ECAM trainer).
- 19 : DOOR/OXY page is displayed after engine shut down (FBS)
 GND electrics to ON or start APU.
 ECAM trainer : activate phase 8 and 9 subsequently on ECAM trainer synoptic, shut down the engines and observe DOOR/OXY page (ECAM trainer).

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INSTRUCTOR ONLY

INSTRUCTOR ONLY

ECAM 2 FBS TAKE-OFF DATA

INIT PAGE				ATIS	
CO RTE	FROM TO	TRIP DIST		RWY	33 L
	LFBO/LFPO			WIND	Calm
ALTN/CO RTE		CRZ WIND		VISI	CAVOK
				CEILING	
FLT NBR		ALTN		TEMP	15°C
[Airline ID] 132				DEW POINT .	10°C
LAT	LONG	ALTN DIST		QNH	1010 hPa/ inHg
4338.1N	00122.1E			QFE	995 hPa/ inHg
COST INDEX		FLT to ALTN		RWY COND..	DRY
30		FL 140		Observations. :	
CRZ FL/TEMP	TROPO				
FL 100 / -14°C	36 090				

INIT NEXT PAGE	PERF PAGE	T/O FLAPS	NOTE :
ZFCG/ZFW	IAE CFM		F/PLN :
28.4% - 48 t	V1 120 119	2	LFBO 33 L
28.4% - 105 600 lb	VR 126 125	T/O C.G.	SID FISTO
	V2 127 127	25%	LMG - MORIK
BLOCK		TOGA	AMB
10 t	FLEX 66 64	FLEX	STAR AMB
22 000 lb			LFPO ILS 26
	DRT	DRT	

ECAM 2 TRAINER DATA

Airport selection : - select LFBO/LFBO
 INIT load..... : - select GW 58 t (10 t FOB - CTR TK empty)
 - set OAT of 15°C
 - set QNH 1013 hPa

[illegible]

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE GROUND COURSE SYLLABI	2.02.03 Page 10A REV 24 JUN 2001
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ECAM 2 SESSION GUIDE

01 - SESSION OBJECTIVE

- Description of ECAM features
- Use of ECAM

02 - TRAINING TOPICS

A. REVIEW

- ECAM system pages
- ECAM memo
- Use of QRH

B. INTRODUCE

- Aircraft dispatch with malfunctions - Introduction of MMEL/MEL use
- ECAM warning architecture
- ECAM malfunction classification
- ECAM malfunction presentation
- Study of ECAM action process thru some system malfunctions

03 - SESSION PROFICIENCY CRITERIA

Not applicable

04 - SESSION GUIDE

The purpose of the session is to explain the ECAM warning architecture thru some malfunctions .

- ECAM trainer or FBS (if applicable) in situation A :

Situation A: Aircraft on ground before engine start

General :

- External electrical power connected.
- Engines not running.

Overhead Panel :

- No amber lights (except Pack and Gen. fault lights).
- IRs on NAV and already aligned.
- 1 PFD, 1 ND and 2 ECAM displays are used (dim the others, if applicable – FBS).
- Select or insert FPLN and performance data (dim screen – FBS).
- FD's on
- Target ALT 10000 ft.
- Flaps and speed brakes retracted.

ECAM 2 SESSION GUIDE (CONT'D)

04 - SESSION GUIDE (CONT'D)

- **1** : APU quick start and turn APU bleed on.
 - Insert AIR PACK 1 (2) OVHT.
 - Check ECAM indications and status page.
 - Perform ECAM actions.

Point out how to restore an overheated PACK in flight or on ground.
Explain the use of EMER CANCEL and RCL p/bs.
Point out the use of MMEL for aircraft dispatch.
Restore the faulty pack.
- *ECAM trainer of FBS (if applicable) in situation C :*

Situation C : Aircraft in flight

 - Cruise with AP & ATHR engaged
 - FL 100 ; STD altimeter setting
 - L/G & Flaps retracted
 - Position & fuel freeze (FBS), APU still running
- **2** : • Unfreeze fuel (FBS) and decrease fuel in one wing to obtain imbalance advisory.
Explain advisory philosophy but do not treat the advisory (demo purpose)
- **3** : • Insert CAB PR SYS 1 FAULT
 - Review **level 1 caution** (sound, color, awareness) overcoming the advisory then...
 - Insert CAB PR SYS 1 + 2 Fault
 - Explain **level 2 caution** (sound, master caution, color, independent) overcoming the level 1 caution
 - Insert APU FIRE (extinguishable)
 - Explain **level 3 caution** (sound, master warning, color, priority, overflow) overcoming the level 2 caution
 - Perform ECAM actions and observe automatic return to level 2 when level 3 conditions are cancelled (fire extinguished)

The level 2 caution (CAB PR SYS 1 + 2 FAULT) has again priority. Clear ECAM.

 - Restore all systems & balance fuel.
- **6** : • Select & Insert HYD G RSVR LO LVL
 - Observe associated lights on overhead panel.
 - Perform ECAM actions
 - Explain transition logic from independent to primary and to secondary failures.
 - Analyse : - HYD page on ECAM SD
 - Secondary failures & affected systems (WHEEL/FCTL pages)
 - STATUS page (color coding)
 - Do not restore the failure

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AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE GROUND COURSE SYLLABI	2.02.03 Page 10C REV 24 JUN 2001
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ECAM 2 SESSION GUIDE (END)

04 - SESSION GUIDE (END)

- **7** : • Insert HYD B RSVR OVHT
Perform ECAM actions
- **8** : - Explain sound logic (AP off visual & aural warning :cavalry charge [CRC])
- Recall ECAM / EWD indications : LAND ASAP, overflow, STS.
- Review ECAM versus QRH relationship (speed and landing distance)
- Increments slats / flaps position and special procedures if any.
- Explain "Approach procedure" philosophy.
• Restore green & blue hydraulic systems.
- **9** : • Insert ENG 1 flame out
Explain ECAM indications
Point out LAND ASAP amber
Perform ECAM actions
- **10** : • Insert ENG 1 FIRE (extinguishable)
- Point out LAND ASAP indication changes from amber to red.
- Perform ECAM actions
• Restore ENG & affected systems.
- **11** : • Insert ELEC GEN 1 FAULT
- Perform ECAM actions
- Analyse STS
• Restore all systems
- **12** : • Insert NAV ADR 2 + 3 FAULT
- Perform ECAM actions
- Point out ADRs are numbered 1, 3, 2.
• Restore ADRs.

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ECAM 3 FBS TAKE-OFF DATA

INIT PAGE			ATIS
CO RTE	FROM TO	TRIP DIST	RWY 33 L
	LFBO/EGLL		WIND Calm
ALTN/CO RTE		CRZ WIND	VISI CAVOK
			CEILING
FLT NBR		ALTN	TEMP 9°C
[Airline ID] 233			DEW POINT . 7°C
LAT	LONG	ALTN DIST	QNH 1010 hPa/ inHg
4338.1N	00122.1E		QFE 995 hPa/ inHg
COST INDEX		FLT to ALTN	RWY COND.. DRY
30		FL	Observations. :
CRZ FL/TEMP	TROPO		
FL 280/-41°C	36 090		
INIT NEXT PAGE	PERF PAGE	T/O FLAPS	NOTE :
ZFCG/ZFW	IAE CFM	1 + F	F/PLN :
28.4% - 53 t	V1 154 157		LFBO 33 L
28.4% - 116 600 lb	VR 154 157	T/O C.G.	SID FISTO - LMG
	V2 154 157	25%	UG 21 - MOU - AVLON
BLOCK		TOGA	UM 976 - BRY
15 t	FLEX 64 60	FLEX	UM 733 - GURLU
33 000 lb			STAR BIG
	DRT	DRT	EGLL ILS 27

ECAM 3 TRAINER DATA

Airport selection : - select LFBO/LFBO
 INIT load..... : - select GW 58 t (10 t FOB - CTR TK uplifted)
 - set OAT of 15°C
 - set QNH 1013 hPa

[illegible]

 A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE GROUND COURSE SYLLABI	2.02.03 Page 10A REV 24 JUN 2001
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ECAM 3 SESSION GUIDE

01 - SESSION OBJECTIVE

- Description of ECAM features
- Use of ECAM

02 - TRAINING TOPICS

A. REVIEW

- ECAM utilization & procedures
- ECAM and paper check list

B. INTRODUCE

- Failure of ECAM components
- Study of some system malfunctions
- Reset of computers
- Task sharing, crew coordination and communication.

03 - SESSION PROFICIENCY CRITERIA

- Perform ECAM procedure accurately and without omission
- Interpret correctly ECAM pages and system indications

04 - SESSION GUIDE

The purpose of the session is to review and practice all types of ECAM procedures, some of them being an opportunity to introduce standard task sharing and crew coordination.

- ECAM trainer of FBS (if applicable) in situation C :

Situation C : Aircraft in flight

- Cruise with AP & ATHR engaged
- FL 100 ; STD altimeter setting
- L/G & Flaps retracted
- Position & fuel freeze (FBS)

- 1 : • Insert FWS SDAC 1 + 2 FAULT (ATA 31)
 - Point out the loss of cautions. Some system pages information are available.
 - Review all system pages
 - Disregard ENG 1 (and ENG 2) APPR IDLE ONLY messages (idle is not affected)
 - Insert ELEC GEN 1 FAULT as an example.
 - Notice no warnings but fault light is available (scan overhead panel)
- Restore SDACs

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ECAM 3 SESSION GUIDE (CONT'D)

04 - SESSION GUIDE (CONT'D)

- **2** : • Insert FWS FWC 1 + 2 FAULT
 - Point out there are no warnings, no indications
ECP is lost and ECAM cannot be cleared (it stays as a reminder).
 - Insert ENG 1 FIRE as an example and explain:
The crew has to monitor aircraft systems (most particularly the overhead panel) and detect malfunctions.
 - Restore FWCs
- **3** : • Insert F/CTL SEC 1 FAULT
 - Explain and emphasize computer reset procedure
Point out the use of QRH or ECAM for computer reset
 - Reset should be successful
- **4** : • Insert AUTO FLT RUD TRV LIM 1 then 2 FAULT
 - Explain partial loss of FAC.
 - AUTO FLT RUD TRV LIM 1 FAULT – Loss of redundancy (Level 1).
 - AUTO FLT RUD TRV LIM 2 FAULT.
 - AUTO FLT RUD TRV LIM SYS given as a consequence (Level 2).
 - FAC reset as an ECAM procedure is necessary.
 - Reset should be successful.
- **5** : • Insert HYD B RSVR LO LVL
 - Perform ECAM actions
 - Point out loss of actuators presentation (amber open box versus amber letter)
 - Restore blue hydraulic & affected systems.
- **6** : • Insert F/CTL SLATS LOCKED (Wing Tip Brake)
 - Reduce speed to green dot & select Flap 1
 - Comment ECAM & PFD indications
 - Explain the use of QRH for abnormal slats procedure : paper procedure & tables for CONFIG determination ; landing distance factor, etc)
 - Restore all affected systems
- **7** : • Insert F/CTL FLAP SYS 1 fault (FBS - c/b B7 OVHD panel)
 - Maintain green dot speed & select Flap 1
 - Explain ECAM indications
 - Insert F/CTL FLAP SYS 2 fault (FBS - Pitch control page 3)
 - Select Flap 2
 - Explain ECAM indications
 - Review the use of QRH for abnormal slats procedure
 - Restore all affected systems

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 A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE GROUND COURSE SYLLABI	2.02.03 Page 10C REV 24 JUN 2001
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ECAM 3 SESSION GUIDE (END)

04 - SESSION GUIDE (END)

- **8** : • Insert ENG 2 FIRE (extinguishable)
 - Perform ECAM actions
 - Review crew coordination & task sharing
 - Explain confirmation prior to some actions (levers, Master SW, Fire p/b ...)
 - Restore ENG & affected systems.
- **9** : Insert SMOKE AFT CARGO SMOKE
Review task sharing, crew coordination and communication
 - Restore cargo smoke
- **10** : • Insert ELEC AC BUS 1 FAULT
 - Perform ECAM actions
 - Analyse system & Status pages
 - Restore
- **11** : • Select Wing anti ice ON and observe the memo
 - Call the BLEED page
 - Select Wing anti ice OFF and observe changes
 - Start APU & Select APU BLEED ON
 - Insert AIR L WING BLEED LEAK
 - Perform ECAM actions
 - Observe wing anti-ice valve closure (left side) and loss of APU BLEED.
 - Restore
- **12** : • Unfreeze fuel (FBS)
 - Insert fuel difference of more than 1.5 t and activate (ECAM trainer)
 - Point out and explain relationship ECAM versus QRH or paper check-list
 - Perform FUEL LEAK paper check-list
 - Restore fuel imbalance after having done the check-list

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FMGS 1 TAKE-OFF DATA

INIT PAGE

CO RTE

ALTN/CO RTE

FLT NBR

LAT

COST INDEX

CRZ FL/TEMP

FROM TO

LONG

TROPO

TRIP DIST

CRZ WIND

ALTN

ALTN DIST

FLT to ALTN

ATIS

RWY 15 R

WIND

VISI CAVOK

CEILING

TEMP 14°C

DEW POINT . 02°C

QNH 1013 hPa/ inHg

QFE hPa/ inHg

RWY COND..

Observations. :

INIT NEXT PAGE

ZFCG/ZFW

BLOCK

PERF PAGE

IAE

CFM

V1

VR

V2

FLEX

DRT

T/O FLAPS

T/O C.G.

~~TOGA~~

FLEX

~~DRT~~

NOTE :

F/PLN :

SID FISTO

STAR ----

VIA EPR

LFPO ILS 07



2.02.03 Page 14

TR 15 FEB 2002

E-FMGS1.fm



 Training & Flight Operations Support and Services A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE GROUND COURSE SYLLABI	2.02.03 Page 14A
		TR 15 FEB 2002

FMGS 1 SESSION GUIDE

01 - SESSION OBJECTIVE

- Study and use of the FMGS through a standard preparation sequence.

02 - TRAINING TOPICS

- Practice of the FMGS through a FMGS initialization.

03 - SESSION PROFICIENCY CRITERIA

- Acceptable knowledge of FMGS pages and MCDU.

04 - SESSION GUIDE

- 1 : List of navigation data "STORED" can be modified, the others not.
- 3 : No use of CO RTE for training. Display of LAT and LONG of the departure airport reference. Check the History wind, create a new profile entering True winds per 10000'
- 4 : Stored WPT 3 different formats : PBD, PB/PB, LL. Maximum 5 digits for ident. DUPLICATE NAMES PAGE can be opened with LAT/ LONG and FRQ with NAVAIDS. The STAR should be selected, if it is associated with a VIA (IAF) and only one. It will enter the VIA itself. If there is a choice, the VIA will be presented after selecting a STAR. However VIA and STAR can be entered independently.
- 5 : For a diversion, for a predictable RWY changes for T/O or LDG, or for Training. Two types of secondary pages, depends on the presence of a SEC or not. Use of INIT > and PERF >.
- 6 : Manual tune of TOU notice DUPLICATE NAMES. Tune of frequency 117.7 No DUPLICATE NAMES. Notice the M on ND next to VOR.
- 7 : You may deselect as many as 6 stations. Once deselected in this way, the navaid can no longer be tuned manually through the entry of its ident.
- 8 : TAXI, RTE RSV, FINAL/TIME can be modified. Notice TRIP/TIME, TOW, LW.
- 9 : CRZ page, DES FORECAST > for WIND profile for descent, DES CABIN RATE modification.
- 10 : OPT. FL computed as a function of present gross weight, cost index and temp. REC MAX computed as a function of present gross weight and deviation from ISA. It gives the aircraft a 0.3g buffet margin, a minimum rate of climb at MAX CL thrust, and level flight at MAX CRZ thrust. LIMIT FL 390. With an engine out, shows the recommended MAX EO altitude, computed for long-range cruise speed, anti-icing off. Use of BRG / DIST feature.

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 Training & Flight Operations Support and Services A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE GROUND COURSE SYLLABI	2.02.03 Page 14B
		TR 15 FEB 2002

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FMGS 2 TAKE-OFF DATA

INIT PAGE

CO RTE

ALTN/CO RTE

FLT NBR

LAT

COST INDEX

CRZ FL/TEMP

FROM TO

LONG

TROPO

TRIP DIST

CRZ WIND

ALTN

ALTN DIST

FLT to ALTN

ATIS

RWY 15 R

WIND CALM

VISI CAVOK

CEILING

TEMP 14° C

DEW POINT . 02° C

QNH 1013 hPa/ inHg

QFE hPa/ inHg

RWY COND ..

Observations. :

INIT NEXT PAGE

ZFCG/ZFW

BLOCK

PERF PAGE

IAE

CFM

V1

VR

V2

FLEX

DRT

T/O FLAPS

T/O C.G.

~~TOGA~~

FLEX

~~DRT~~

NOTE :

F/PLN :

SID LACOU

STAR MIRBA

LFBD ILS RWY 23

NOTAM :

RWY 15R THRESHOLD

SHIFT 300 m.

LDG DATA :

QNH 1013 hPa

Temp 15°C

Wind 270°/15 kt

E-FMGS2.fm



 AIRBUS Training & Flight Operations Support and Services A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE GROUND COURSE SYLLABI	2.02.03 Page 16A
		TR 15 FEB 2002

FMGS 2 SESSION GUIDE

01 - SESSION OBJECTIVE

- Practice FMGS functions

02 - TRAINING TOPICS

A. REVIEW

- FMGS flight planning
- Practice of the FMGS through a standard preparation.

B. INTRODUCE

- FMGS procedures : T/O SHIFT, REVERSION MODE
- Practice of the FMGS through a flight profile.

03 - SESSION PROFICIENCY CRITERIA

- Acceptable knowledge of FMGS functions and MCDU pages
- Understanding of indications and messages FCU, FMA, ND.

04 - SESSION GUIDE

- **2** : Notice the same SID is kept for this RWY. Performances for take off should be different in accordance with the new RWY.
- **3** : Flight phases ref. FCOM 4.02.20 p.11.
- **4** : FD on, ILS as reqrd, ND mode ROSE NAV, Range 10, CSTR on.
FCU : ALT window displays 12000, SPD - HDG - V/S windows are dashed.
- **6** : SPEED SEL 230 in cyan for pre-selected speed. SPD selector push for normal speed new target 250 kt in magenta.
HDG pulled OP CLB, with V/S notice SPEED, ALT pulled THR CLB - OP CLB
- **10** : When NAV is armed, it will automatically engage if :
 - the aircraft track line intercepts the flight plan before the TO WPT and
 - the intercept WPT (INTCPT) is displayed on ND and
 - the aircraft reaches the active flight plan leg.
- **15** : Review arrival with constraints including final and missed approach with charts
Check VAPP and configuration FULL is the default setting.
Modify ACC ALT for noise abatement if applicable
NAV ACCY check if necessary.

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 Training & Flight Operations Support and Services A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE GROUND COURSE SYLLABI	2.02.03 Page 16B
		TR 15 FEB 2002

FMGS 2 SESSION GUIDE (END)

04 - SESSION GUIDE (END)

- 16 : Entering the Hold, notice speed reduced to Hold speed. IMM EXIT pops up on F-PLN. The rate of descent is by default 1000 ft/mn, constraints are disregarded. Check LAST EXIT time and fuel according to minimum fuel requirements. When IMM EXIT selected RESUME HOLD pops up, giving the chance to return to the current Hold as long as the FIX point was not sequenced. Passing the FIX the speed will increase.
- 18 : With HDG / TRK mode approximately 15 NM from touchdown activate and confirm APPR phase on the MCDU.
With NAV or LOC* / LOC mode engaged when overflying (DECEL) pseudo waypoint the APPR phase activates automatically.
- 19 : Cleared for ILS, APPR mode armed check FMA. After AP2 engagement check FMA. At green dot speed select Flaps 1.
- 20 : Monitor LOC and G/S interception FMA. Extend Flaps in sequence.
Monitor final approach and auto callouts FMA

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FMGS 3 TAKE-OFF DATA

INIT PAGE

CO RTE

ALTN/CO RTE

FLT NBR

LAT

COST INDEX

CRZ FL/TEMP

FROM TO

LONG

TROPO

TRIP DIST

CRZ WIND

ALTN

ALTN DIST

FLT to ALTN

ATIS

RWY 07

WIND CALM

VISI CAVOK

CEILING

TEMP 15°C

DEW POINT .

QNH 1013 hPa/ inHg

QFE hPa/ inHg

RWY COND ..

Observations. :

INIT NEXT PAGE

ZFCG/ZFW

BLOCK

PERF PAGE

RWY 07 08

V1

VR

V2

FLEX

DRT

T/O FLAPS

T/O C.G.

~~TOGA~~

FLEX

NOTE :

F/PLN :

SID PTV 7V

STAR LMG4

LFBD ILS RWY 23

SID SAU

LFBO ILS RWY 15R

NOTAM :

LFPO RWY 08 WIP

THRESHOLD SHIFT 300m

LDG DATA :

LFBD-QNH : 1013

Temp : 15° C

Wind : 250°/12 kt

LFBO-QNH : 1013

Temp : 15°

Wind : 120°/10 kt

[illegible]



 AIRBUS Training & Flight Operations Support and Services A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE GROUND COURSE SYLLABI	2.02.03 Page 18A
		TR 15 FEB 2002

FMGS 3 SESSION GUIDE

01 - SESSION OBJECTIVE

- Practice FMGS functions.

02 - TRAINING TOPICS

A. REVIEW

- FMGS flight planning
- Practice of the FMGS through a flight profile

B. INTRODUCE

- Diversion

03 - SESSION PROFICIENCY CRITERIA

- Ability to program the FMGS
- Acceptable knowledge of FMGS functions and MCDU pages.

04 - SESSION GUIDE

- **1** : RAD NAV Manual tune :
VOR1 OL - VOR2 TSU / 108.25 CRS 093°
ADF1 ORW / 402 - ADF 2 OYE / 349
- **2** : VERT REV at PTV set ALT CSTR -9000
PERF in CLB page insert SPD [230]
- **4** : Activate SEC F-PLN. Insert T/O SHIFT 300m. Check PERF pages T/O and CLB speed constraint. RAD NAV page VOR1 - CRS 086° - ILS 111.75 OLV to follow extended centerline towards OYE.
- **5** : Push SPD selector Target speed is now 250 kt (magenta). Set 19000 on the FCU and pull, the FL 90 constraint is disregarded in OP CLB mode.
Crossing FL 100 cleared the manual tune in RAD NAV page.
- **6** : VERT REV at SPD LIM and CLR the constraint. Passing PTV set 31000 and push for CLB mode . PROG page set FL 310 in CRZ field (it's lower than requested FL)
- **9** : PROG for Accuracy check if necessary - FUEL PRED for check
- **10** : When passing TOD without initiating the descent, the MCDU / FMA message DECELERATE occurs.
- **11** : ALT selector pulled OP DES all constraints are disregarded.

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 A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE GROUND COURSE SYLLABI	2.02.03 Page 18B
		TR 15 FEB 2002

FMGS 3 SESSION GUIDE (END)

04 - SESSION GUIDE (END)

- 12 : APPR mode armed 2nd AP engaged : FMA. Monitor LOC and G/S interception
Set the Go around ALT.
- 14 : LAT REV at any WPT then Enable ALTN select CLB phase is automatically activated
after Enable ALTN activation. The CRZ FL has been set defaulted to 220 on PROG
page set FL 130.
- 17 : FCU ALT selector set 3000 and pull, with HDG 098°
- 18 : Due to altitude a high rate of descent on intermediate approach may be necessary
Use V/S mode for G/S capture from above, LOC capture has priority.
Monitor the final APPR :
 - LAND at 400 ft RA
 - FLARE / THR IDLE at 40 ft
 - RETARD
 - ROLL OUTAP disconnection just prior to leave the RWY.

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AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE GROUND COURSE SYLLABI	2.02.03 Page 13
		REV 24 JUN 2001

FMGS 1 SYLLABUS

This guideline enables the user to:

STUDY, USE and REVIEW through a STANDARD PREPARATION sequence the main families of MCDU pages.

However, some pages detailed in the expanded description are not included in the regular flow of the FMGS preparation for flight, but this study is necessary to acquire the knowledge for the next session.

SYLLABUS SUMMARY

- HOW TO START THE FREEPLAY TRAINER?
- FREEPLAY TRAINER CHECKS
- FMGS INITIALISATION
- REVIEW

A HOW TO START THE FREEPLAY TRAINER (power is off)?

- STEP 1 Locate the switch at the rear panel of the mock-up and turn it to ON.
- STEP 2 Wait until the computer has completed its automatic initialisation sequence (no mouse click, no keyboard input). If a password is required, click always CANCEL.

- STEP 3 Select CAPT / FO and Units then click OK.
Wait until the PFD and ND are displayed on the screen.

REFER TO USER GUIDE FOR MORE INSTRUCTION, IF APPLICABLE.

TRAINER MAIN FACILITIES

	STORE MEMO button: Memorizes actual freeplay situation and settings.
	RECALL MEMO button: Returns to memorized status (by mouse click). The feature can be used at any time in order to review all sequences and exercises.
	FREEZE/UNFREEZE button : Freezes/unfreezes the flight simulation. Unfreeze is necessary before any further modification/entry (White = FREEZE / Grey = UNFREEZE).
	SPEED UP button: Multiplies the speed by 5 until 5 NM inbound to next WPT then returns to normal speed automatically.

B FREEPLAY TRAINER CHECKS



SPEED BRAKES

Check retracted on screen!

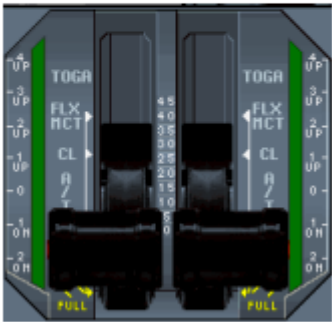
Data not utaded between 2 FCTM revisions

FMGS 1 SYLLABUS (CONT'D)



FLAPS

Check retracted!



THRUST LEVERS

Check idle!



ENGINE MASTER LEVERS

Check off!

C FMGS INITIALISATION



- | | |
|-----------|---|
| DATA | 1 - A/C STATUS check. |
| INIT | 2 - INIT A page.
Insertions (data entries). |
| F-PLN | 3 - FPLN page. Insertions and revisions. Study of DATA pages. Flight plan check and review. SEC FPLN preparation, study and review. |
| SEC F-PLN | |
| RAD NAV | 4 - RAD NAV page
How to tune and check nav aids? |
| INIT | 5 - INIT NEXT PAGE
Insertions and Revisions. |
| PERF | 6 - PERF page. Insertions and revisions. All phases, if applicable. |

Main preparation sequence [1 to 6]

FMGS 1 SYLLABUS (CONT'D)

Entry Instructions

- All data entries in [...] must enter the data field as required (in the given format) in order to avoid a FORMAT ERROR message.
- It is recommended to read comments (if any) prior to doing inputs.
- The initialisation of the FMS will automatically configure the freeplay trainer software to set the environmental factors and where to position the aeroplane.

1 - A/C STATUS page check (data base validity)

Normally at power up, the A/C status page is displayed automatically. If not:

 → 

A/C STATUS **SELECT** then
A/C VERSION **CHECK**
ENGINE VERSION **CHECK**
DATABASE validity **CHECK**, if not valid
 Valid **DATABASE** **SELECT**

LSK*5L push - then **LSK3L** push in order to activate the other database, if applicable.

NOTE: A/C version, engine version and Navigation DataBase must match. A/C version and engine version represent the performance database. If they do not match, the NDB can be used only.

DATA INDEX

STOR
<WAYPOINTS> WAYPOINTS>
STOR
<NAVAIDS> NAVAIDS>
STOR
<RUNWAYS> RUNWAYS>
STOR
<ROUTES> ROUTES>
<A/C STATUS> POSITION MONITOR>
GPS MONITOR>

A320-200
CFM56-5B4
ACTIVE DATA BASE
07SEP-050C AB00000001
SECOND DATA BASE
10AUG-07SEP

PERF FACTOR
0.0

A/C POSITION INVALID

2 - INIT A page entries

 → 

1 *LSK - Line Selector Key
*ARP - Airport Reference Point

INIT

COMP/TO
ALTN RTE
FLY NR
LAT
LONG
COORD INDEX
WIND
TEMP
A/C POSITION INVALID

LFBO/LFPO 1/9

ECAM2 F1STO 01218 LMS
R024 APR DIR DIR
REL REL OFES
01026

<RETURN INSERT>

Find the field **FROM/TO**:

- Type and insert **[LFBO/LFPO]**. The COMPANY ROUTE page will be displayed next (see 2nd picture - 1/9 - ECAM2 is N°1 out of 9 routes, if any). Use **SLEW KEYS** on keypad in order to find the one you are looking for and **INSERT (LSK5R*)**, if applicable.
- In order to create a FLPLN (aim of the exercise) without using the COMPANY ROUTE feature push **LSK5L (RETURN)**.
- 3rd picture will be displayed. ALTN **NONE** is automatically introduced in this case.
- The LAT/LONG (defaulted) are the **ARP*** co-ordinates of LFBO.

INIT

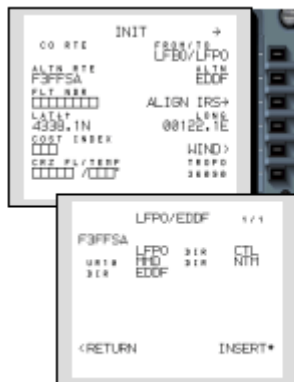
COMP/TO
ALTN RTE
FLY NR
LAT
LONG
COORD INDEX
WIND
TEMP

FMGS 1 SYLLABUS (CONT'D)

2 ALTN COROUTE ENTRY

Find the field **ALTN** on INIT A page:

- Observe there is no defaulted ALTN airport entered.
- Type and insert **[EDDF]** in order to change the ALTN airport (**LSK2R**). If any, the COMPANY ROUTE page is displayed and offers the predefined routes.
- **F3FFSA** is the only COROUTE (1/1) available in this case (LFPO/EDDF).
- After checking the route and WPTS. If found correct, use **LSK5R** to insert (**INSERT***) the COROUTE.
- Observe there is a change in ALTN field and ALTN RTE field (F3FFSA) COROUTE is inserted on INITA.



3 GATE PARKING POSITION ENTRY

Gate Parking Position Entry LFBO – E10:

- Find the field LAT (4338.1N) and modify the ARP LAT into the gate position LAT (4337.8N). Observe the picture and notice the up-down arrows next to LONG (set 00122.5E).
- Push **LSK4L** in order to move the up-down arrows to LAT. Now use the keypad for modification. Push the upper arrow to get the gate LAT 4337.8N or type the LAT into scratch pad and enter via **LSK4L** direct.
- Do the same procedure for LONG with **LSK4R**.
- Push **LSK3R** and **ALIGN IRS**.
- Verify on IRDU, the position for **IR1-3-2**.



4 OTHER INIT A PAGE ENTRIES

Find the field **FLT NBR**:

- Type and insert **AIB320** with **LSK3L**.

Find the field **COST INDEX**:

- Type and insert **30** with **LSK4L**.

Find the field **CRZ FL / TEMP**:

- Type and insert **310** with **LSK6L**. Notice, the TEMP is calculated automatically (-47° C) with an ISA temperature gradient.
- If applicable change the temperature entry in accordance to your documentation (FPLN).

Find the field **TROPO**:

- Type and insert the tropo pause altitude **36000** ft with **LSK6R**.

NOTE: Use the correct format for all entries. Notice the maximum number of digits per entry (3 for C.I., 8 for FLT NBR etc.). **Avoid FORMAT ERROR.**



FMGS 1 SYLLABUS (CONT'D)

5

BASIC WPT ENTRY EXERCISE (OPTION)

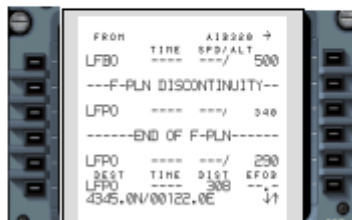
F-PLN



DEPRESS

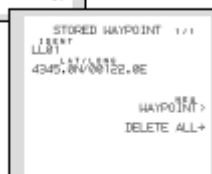
WPT entry **LAT/LONG** format:

- Type in the scratch pad **[4345.0N/00122.0E]**. Compare the figure and insert the scratch pad data in the F-PLN DISCONTINUITY with **LSK2L**.
- Notice, the FMGC converts (provided the correct format has been used) the entered WPT data into **LL01**. The F-PLN Discontinuity disappears and will be replaced by LL01 WPT.
- Notice the Track and Distance information to WPT.



WPT entry as a **STORED WAYPOINT**:

- Push **DATA** on keypad. Find **STORED WAYPOINTS** feature. Push **LSK1R** and notice the crew created WPTs (LL01 is 1/1-one of max 20).
- Using the **NEW WAYPOINT** feature gives a chance to the user to create another WPT by using 3 different formats (PBD, PBX and LL). The WPTs can be given a name (max 5 digits) determined by the user.



Return to FPLN A page. Push **F-PLN** on keypad.

- Notice, after LL01 entry a new discontinuity has been created.
- Type **ADIMA** in the scratch pad and enter in the discontinuity after LL01. Notice, ADIMA is a database WPT and will enter directly as it is known. A new discontinuity will be created after ADIMA.



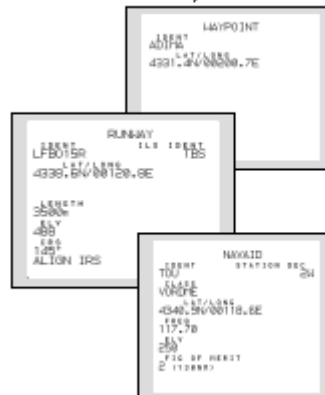
Verify the current FPLN on ND by selecting appropriate range and mode on EFIS control panel (i.e. NAV-mode and 40 or 80 NM range). Notice tracks and distances.

DATA INDEX PAGE FEATURES

Push **DATA** on keypad. Gives access to **DATA INDEX** page. The left column provides information features to WAYPOINTS, NAVAIDS, RUNWAYS, ROUTES and A/C STATUS (refer to page 3 of this syllabus).

- Find **WAYPOINTS** and push **LSK1L**. Type and insert **ADIMA**. Notice database information - push **DATA**.
- Find **RUNWAYS** and push **LSK3L**. Type and insert **LFB015R**. Notice database information - push **DATA**.
- Find **NAVAIDS** and push **LSK2L**. Type and insert **TOU**. A duplicate names page will be opened. Find Toulouse VOR and enter with appropriate LSK. Notice database information.

NOTE: The FMGS database is not modifiable by crew.



Data not utaded between 2 FCTM revisions

FMGS 1 SYLLABUS (CONT'D)

3 - FLIGHT PLAN A preparation

The normal sequence to create a FPLN is as follows (city pair has been entered into INIT A only):

1. Lateral revision on origin (use left LSKs for lateral revisions).
2. Enter departure RWY and SID, if applicable.
3. Enter FPLN to destination and ALTN FPLN, if applicable (use VIA / GO TO for airways or enter WPT by WPT).
4. Lateral revision on destination.
5. Enter STAR, VIA (IAF*), landing RWY and approach procedure, if applicable.

FPLN LFBO/LFPO preparation:

- Push **F-PLN** on keypad.
- (1) Lateral Revision on origin (**LSK11-LFBO**).
- (2) LAT REV from **LFBO** - push **LSK11-DEPARTURE**.
- (3) DEPARTURES from LFBO-push **LSK3L** for RWY **15R**.
- (4) DEPARTURES from LFBO-find **FISTO4A** SID (**FIST4A**) with up and down arrows on keypad (2nd page). Push **LSK3L** for SID.
- A temporary FPLN has been created including departure airport, departure RWY and SID.
- (5) Push **LSK5R-INSERT** to activate the initially selected FPLN.
- Check total distance on FPLN A page versus CFP (322 NM) after correction as following.

***IAF - Initial Approach Fix**

CLEARING WAYPOINTS/DISCONTINUITIES

LL01 and ADIMA do not belong to the intended FPLN. They were entered for practice and are replaced to the end of the current FPLN after insertion. Between the final point of the SID (FISTO) and LL01 a discontinuity has been created automatically. For clearing the 2 WPTs:

- Push **CLR**-key on MCDU keypad (the scratchpad therefore must be empty).
- Notice, **CLR** is now written in the scratchpad.
- Push the LSK next to the WPT you want to clear (LL01).
- Notice, **LL01** has disappeared and is replaced by a discontinuity.
- Repeat the same with **ADIMA** and do the same with a discontinuity, you want to clear in advance.

Notice 322 NM after WPT clearing action.

FMGS 1 SYLLABUS (CONT'D)

3 - FLIGHT PLAN A preparation cont'd

In order to completing the FPLN to LFPO the next steps are:

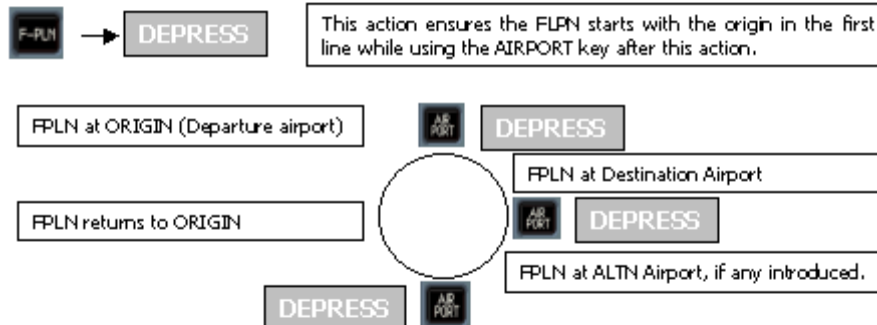
- Type and enter after FISTO with appropriate LSK (discontinuity) **LMG**. Notice, the discontinuity is shifted always one line ahead.
- Type and enter after LMG with appropriate LSK **AMB**. For duplicate names select ***AMB 47N/001E 113.70** (for selection, the distance should normally not be taken. Identify it with LL and FRQ in order to avoid mistakes).
- Type and enter after AMB **CDN**. For duplicate names select ***CDN 48N/001E 116.10**. Notice the corlocation of the WOR with NDBs on duplicate names pages, if applicable.

```

FISTO  TIME  AIR320  →
      TIME  SPE/ALT
      ---/---
LMG    ---/---
      02NH
AMB    TREBEG  97
      ---/---
CDN    ---/---
      99
---F-PLN DISCONTINUITY---
DEST  TIME  DIST  EFOS
LFPO   ---  336  ---  ↓↑
  
```

USE OF MCDU KEYPAD AIRPORT KEY

The airport key is another FPLN access key. It's use prevents from scrolling up and down through a long flight plan in order to find the next destination or the ALTN airport destination. Any push to the AIRPORT key displays always the next destination on active MCDU page. Pushing the FPLN key returns either the FPLN with origin in the first line on ground or PPOS in flight in the first line on MCDU active page.



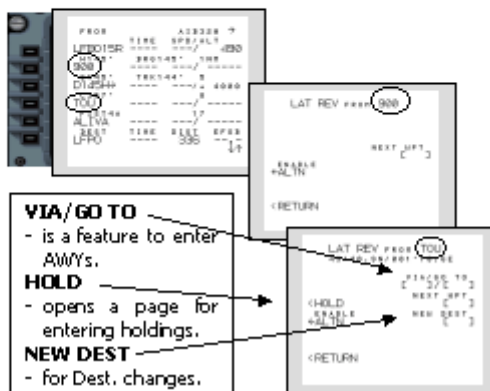
REVISION PAGE REVIEW Lateral/Vertical

LATERAL REVISION FROM 900:

- 900 is an altitude and considered as a **PSEUDO WAYPOINT (WPT)**.
- Push **F-PLN** on keypad. For a lateral revision from 900 push **LSK2L**. The action opens another page. Notice the features available from a Pseudo Waypoint.

LATERAL REVISION FROM TOU:

- TOU is a geographical WPT.
- Push **F-PLN** on keypad. For a lateral revision from TOU push **LSK4L**. On the new page notice the features available from a TO WPT (LL, VIA/GOTO, NEW DEST, HOLD etc.).
- Push **LSK6L** for **RETURN** to FPLN A.



FMGS 1 SYLLABUS (CONT'D)

VERTICAL REVISION at 900:

- For VERTICAL REVISIONS use the right hand LSKs.
- 900 is an altitude and considered as a **PSEUDO WAYPOINT** on vertical revisions as well.
- Push **F-PLN** on keypad for vertical revisions. For a vertical revision at 900 push **LSK2R**. Notice the features available at a pseudo WPT (fuel predictions and speed constraint enter function).

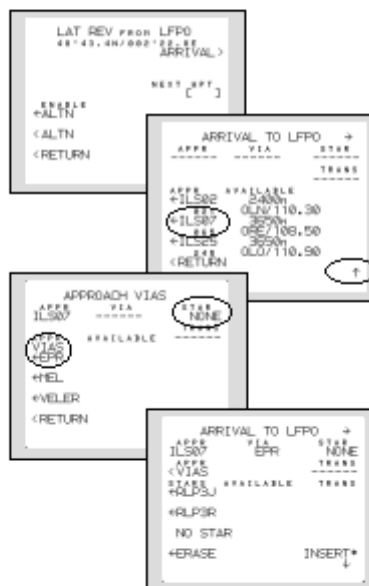
VERTICAL REVISION at TOU:

- TOU is a geographical WPT.
- Push **F-PLN** or **RETURN**. For a vertical revision at TOU push **LSK4R**. Notice the additional features for entries available at a TO WPT (UTC CSTR, ALT CSTR, access to STEP PRED and WIND entry).
- Push **LSK6L** for **RETURN** to FPLN A page.



ARRIVAL PREPARATION LFPO

- Lateral revision at destination **LFPO (LSK6L)**.
- At **LAT REV FROM LFPO** find **ARRIVAL** and push **LSK1R**.
- On **ARRIVAL TO LFPO** find **ILS07** (notice the RWY and ILS data) and push **LSK4L**.
- On **ARRIVAL TO LFPO** next page (after having selected **ILS07**) use the up-down keys to slew up the STARS in order to find **NO STAR**. Push **LSK4L** in order to activate this feature (an appropriate STAR does not exist from this direction).
- If there are VIAS (IAFs) published, another page appears presenting automatically the VIAS. Notice under STAR on this page it has written **NONE** for no STAR selected.
- Find **EPR** and push **LSK3L** to enter this published VIA.
- Notice **ARRIVAL TO LFPO** page presents in amber, in the first line, now APPR-ILS07, VIA-EPR, STAR-NONE. A **TEMPORARY F-PLN** has been created.
- Make sure this is what you have been advised to fly and select **INSERT***.
- Good job - an approach has been successfully entered, including the go around, if any.



NOTE: Any time, a STAR [and a VIA (IAF) or not] have to be selected, the STAR should be selected first. If it is associated with a VIA and there is only one, it will enter the VIA itself. If there is a choice, the VIAS will be presented to the user after selecting a STAR, if any. If the VIAS are entered first, the next action on a STAR will cancel the VIA and consequently has to be repeated. However both, VIA and STAR, can be entered independently, if it is a single choice.

FMGS 1 SYLLABUS (CONT'D)

WHY TO CANCEL A DISCONTINUITY ?

CDN was the last enroute WPT, EPR is the VIA (IAF). A STAR was not entered. Consequently a F-PLN DISCONTINUITY is created between CDN and EPR. The discontinuity is not desired and should normally not be kept in the FPLN.

- On EFIS Control Panel select **PLAN** mode and range **80 NM**.
- Slew the FPLN with keypad up-down arrows to have the discontinuity in the second line (refer to figure).
- Observe the discontinuity on MCDU FPLN page and on ND (no line between CDN and EPR).
- On keypad push **CLR** and clear the discontinuity with **LSK2L**.
- Notice, the discontinuity on MCDU has disappeared and a green line (for active FPLN) connects CDN and EPR now.

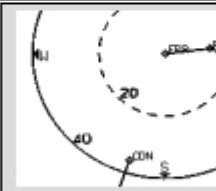


MCDU on F-PLN

```

CDN      TERR 400000 →
      EPR/ALT 0000/0000
---F-PLN DISCONTINUITY---
EPR      --- FLOOR
RETS     --- 10 0000
INTPT    --- 3
EPR      --- 344 EPR
LF0007   --- 17
  
```

ND on 80 NM range



FLIGHT PLAN REVIEW

Check MCDU Flight Plan versus CFP* for validation:

(*CFP - Computerized Flight Plan)

- EFIS mode selector to **PLAN** (map is north oriented).
- Select range as appropriate (for checking track and range of the current FPLN leg).
- Push **F-PLN** key on keypad (origin is the first WPT).
- Notice, from PPOS or ORIGIN to the first WPT, it provides always a **BRG** while for the following legs always a **TRK** is calculated (it is assuming the first leg is the BRG from the aircraft inbound to next WPT).
- Slew the FPLN with up-down arrows and check bearing, distance, constraints on ND and MCDU versus CFP and aeronautical charts for all legs included the ALTN FPLN, if any.
- Notice, an amber line on ORIGIN represents an EO acceleration procedure, if any is published. Published one for LFBO15R.



SECONDARY FLIGHT PLAN PREPARATION

SEC F-PLN

DEPRESS

NOTE: The colour of the SEC FPLN (ND and MCDU) is **white**.

- **SEC INDEX** page is opened (presents only 3 features).
- Select **INIT** with **LSK1R**. Notice on **SEC INIT**, it provides the same features (compared to **INIT A**) to create a **SEC F-PLN** and will not be sequenced as compared to **COPY ACTIVE**.
- But usually push **SEC F-PLN** key again and **COPY ACTIVE** with **LSK1L**.
- The FPLN memorised, as **SEC F-PLN** is a 1 by 1 copy of the active FPLN now.
- The **SEC F-PLN** (after copy) as such will be sequenced as the active (having it ready any time to be activated from PPOS).

```

SEC INDEX
COPY ACTIVE  INIT
SEC F-PLN
  
```

```

SEC INDEX
COPY ACTIVE  INIT
SEC F-PLN
COPY ACTIVE  INIT
SEC F-PLN
COPY ACTIVE  INIT
  
```

```

SEC INDEX
COPY ACTIVE  INIT
SEC F-PLN
COPY ACTIVE  INIT
SEC F-PLN
COPY ACTIVE  INIT
  
```

Data not utaded between 2 FCTM revisions

FMGS 1 SYLLABUS (CONT'D)

PROGRESS PAGE REVIEW

PROG → DEPRESS

- Notice the features available from FMGS **PROG** page.
- Type **LFPO** and insert with **LSK4R**. Notice the great circle BRG and DIST information to LFPO ARP (from current FMGS position).
 - **UPDATEAT** is the feature to put the map to the real a/c position in case of large MAP shift or wrong position calculation.
 - Notice the **CRZ ALT** (entered in INIT A).
 - Find the fields **OPT** and **REC MAX ALT**. For calculation principles refer to FCOM VOL 4. Find FMGS accuracy status (**HIGH**).

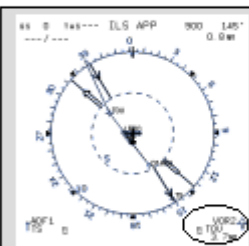
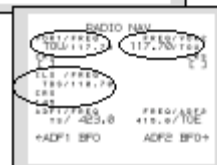


4 - RAD NAV page preparation

RAD NAV → DEPRESS

VOR

- Find **VOR1** label on RAD NAV page. Notice it is already auto tuned (small font) by the FMGS (it is the closest VOR and belongs to the FPLN).
- Type **TOU** and insert with **LSK1L** into VOR1 field. Notice duplicate names page (select by LL and FRQ). Notice the TOU label is displayed in large font now (designation for manual tuning - auto tuning is not possible on a manual tuned NAVAID).
- On EFIS control panel select NAV mode and VOR1 and VOR2.
- Observe the VOR pointers on ND (white and VOR1 small pointer, VOR2 large pointer). As the a/c position is in accordance with FMGS position, the pointers should overlay the facility.
- Notice the underlined M next to the VOR1 label (manual). There is no label on VOR2 for the moment.
- Type **117.7** and enter with **LSK1R** into **VOR2** field. Notice there is no duplicate names page. It tunes the closest VOR with this FRQ and may find another one with this FRQ but different id. To avoid mistakes it is preferable to use the id always.
- VOR2 is manual tuned now.



ADF

- Do the same procedure for **ADFs**.
- For **ADF1** use the FRQ **423.0** for TS NDB. Check EFIS CP and ND. Notice the ADF pointers are of green colour (small pointer for ADF1 and large pointer for ADF2).
- For **ADF2** type and insert with **LSK5R** TOE. Check EFIS CP and ND.
- Notice NDBs are not auto tuned on this FMGS standard.

ILS

- Notice that an **ILS** is automatically tuned when the selected take-off RWY has an ILS equipment.
- On EFIS CP push the ILS p/b and select ROSE ILS. Check **ILS1 TBS 110.70 145°** and ILS DME label on PFD and **ILS2** on ND (CM1). On CM2's EFIS it is the opposite (ILS2 on PFD and ILS1 on ND). Notice the deviation bars on PFD and ND. The ILS indication is of magenta colour.

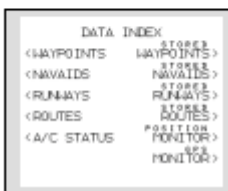
FMGS 1 SYLLABUS (CONT'D)

NOTE: When on whether auto tuning or manual tuning the identifier is displayed and the pointer is visible upon selection (or magenta diamond for ILS), an audio check is not necessary (unless it is a procedure). The receiver in this case receives the signal and the identifier has been scanned. On some NDB transmission type, the BFO must be activated in order to start the scanning sequence. In general the scanning sequence must be completed prior to display any identifier.

MORE ABOUT DATA BASE AND NAVAIDS

Review the database information feature. Push **DATA** p/b on MCDU keypad.

- Select **NAVAIDS** with **LSK2L**. Type and enter **TOU**. Notice the database VOR data (i.e. FIGURE OF MERIT - refer to FCOM VOL4).
- Push **DATA** again and type and enter **TBS**. Notice the database ILS data.
- Repeat. Type and enter **TOE**. Notice the database NDB data.



HOW AND WHY TO DESELECT A NAVAID?

Push **DATA** on MCDU keypad. Find **POSITION MONITOR**. With **LSK5R** call the page. Observe the various data available from this page.

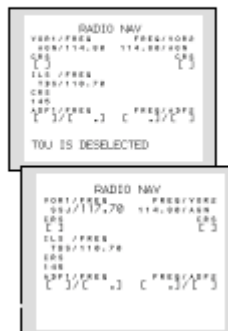
Push **DATA** on MCDU keypad. Find **GPS MONITOR**. With **LSK6R** call the page. Observe the various data available from this page. Remember **GPS** is just another sensor of the a/c navigational systems.

- For NAVAID de-selection push **DATA** again. Find **SEL NAVAIDS** and call the page **SELECTED NAVAIDS**.
- For de-selection type **LMG** and enter with **LSK1R**. The action prevents the FMGS from auto tuning of LMG for radio position update.
- The action is to avoid map shifts in the event of i.e. "unreliable" or "ground checked" VORs (NOTAM). A maximum of **6 VORs** can be deselected at a time.
- Notice the sensor **GPS** can be deselected from this page as well.
- To re-select a de-selected VOR type **CLR** (CLR key) and use the LSK next to the de-selected VOR you want to re-select. The auto tuning function is restored.



A de-selected VOR can be received despite of de-selection by typing and entering the appropriate frequency.

- Deselect **TOU** VOR from the auto tuning list.
- Push **RADNAV** key on MCDU keypad.
- Type **TOU** and enter in **VOR1** field.
- Observe **TOU IS DESELECTED** message in the MCDU. Notice the auto tuning function has tuned **AGN** the next closest VOR.
- Type **117.7** and enter in **VOR1** field. Notice, as the system needs an identifier, it is selecting a VOR identifier that has the same FRQ. **SSJ** VOR in this case. The scanning sequence is starting and it will display on ND what it receives. **TOU** should be scanned in this case. With this procedure a de-selected VOR can be displayed for verification, but is not used for radio position updating.
- Re-select **TOU** VOR again.



FMGS 1 SYLLABUS (CONT'D)

PREDICTION CALCULATION/WIND ENTRY

NOTE: The flight management system needs basic parameters like COST INDEX, CRZ level, WIND, WEIGHT and CG parameters, FUEL for prediction and profile calculation.



Check Cost Index [30].

Check CRZ ALT [310].

Enter Wind:

- Select **WIND**. Notice **HISTORY WIND** page is opened. It is the memorised wind profile from previous descent leg. **INSERT** or:
- Create a new profile with documents (enter true winds) per 10000 ft up to **CRZ FL** or:
- Enter wind per **CLB** and **CRZ WPTS**. Push **F-PLN** and make it a vertical revision at **TOU**. Enter into **WIND** field **200/60** etc.
- Push **F-PLN-NEXT PAGE** for opening **F-PLN B**. Notice the memorised wind entry next to **TOU**.
- For descent preparation push **PERF-NEXT PHASE**. Find **CRZ** phase and **DES FORECAST** on CRZ phase. Enter a wind profile for **DESCENT** phase and change **CAB RATE**, if applicable.
- **Remember** the descent phase (any phase) should be prepared prior to becoming active, if not done during pre-flight.

NOTE: The more precise the wind entries are the better the prediction calculations.



5 - INIT B page preparation (fuel entry and predictions)

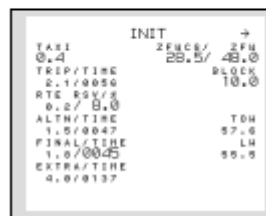


INIT B entries (keep defaulted fuel calculation model)

- Find **ZFWCG [%]** field and enter **28.5**.
- Find **ZFW [t]** field and enter **48.0**.
- **FORMAT** for entry **28.5/48.0**.
- Find **BLOCK [t]** fuel field and enter **10.0**.
- Notice calculated fuel and weight data (cyan - modifiable, green - non modifiable data).

INIT B entries (modified)

- Increase **TAXI** fuel to 400 kg (0.4 t).
- Increase **RTE RSV** to 8.0 % (**FORMAT** for entry /8).
- Increase **FINAL/TIME** to 45 min (/45).
- Notice the changes on appropriate data.
- **ALTN/TIME** are presented in small font. It corresponds to the alternate company route data for the chosen **ALTN** airport **EDDF**.
- Notice **TRIP/TIME**, **TOW** and **LW** predicted data.



FMGS 1 SYLLABUS (CONT'D)

6 - PERFORMANCE page preparation - take-off speeds and power setting - climb, cruise, descent phases and speed pre-selection



TAKE-OFF page entries:

- For **V1-VR-V2** enter [124]-[131]-[131].
- **TRANS ALT** (check or modify, if necessary) [5000].
- **THR RED/ACC** altitudes enter [2000/3500] as a standard noise abatement procedure.
- Take-off shift enter in meters, if applicable (threshold displacement, closed taxiways, WIP*, taking-off from an intersection etc.).
- **FLAPS/THS** enter [2/0.5UP].
- **FLEX TO TEMP** enter [52] °C.
- **ENG OUT ACC** check or modify [2000].
- Push **NEXT PHASE**.

*WIP - Works In Progress

CLB entries: (Notice provided information)

- Pre-select **CLB** speed [230]. Return to defaulted speed 250 kt is possible by selecting the LSK next to *250.
- Push **NEXT PHASE**.

CRZ entries: (Notice provided information)

- Pre-select **CRZ MN** [.81]. Notice CI 30 gives 0.79 M. Return to defaulted MN (mach number) by selecting *.79.
- Push **NEXT PHASE**.

DES entries: (Notice provided information)

- Pre-select IAS for descent and enter [/300]. Notice ECON speed for CI 30 is .75/286 and change in ACT MODE from ECON to **AUTO SPD** (vertical profile will be kept with new reference).
- Push **NEXT PHASE**.

APPR entries: (Notice provided information and entries)

- Remember, the characteristic speeds F - S - Gdot and the V_{REF} (V_{LS}) and V_{APP} are calculated for the predicted landing weight (LW).
- Notice **MDA** provides altimeter settings in altitude only. The lower wind entry is of magnetic type while upper wind entries are in true only.
- Push **NEXT PHASE**.

GO AROUND entries: (Notice provided information)

- For standard noise abatement go around, modify **THR RED/ACC** altitude to read 1790/2200 [/2200].
- Notice if just 2200 ft (with no slash) have been entered erroneously both values are reading 2200/2200.
- Push **PERF** in order to return to **PERF TAKE OFF**.

TAKE OFF

V1 FLD RETR V2 VLSR
F=141 S=184 (CR) []
CLASH FLEX/THS
0=200 11/1
TRANS ALT FLEX TO TEMP
5000 1330/1000
THR RED/ACC ENG OUT ACC
1000
NEXT PHASE

CLB

ACT MODE TIME BEST ECON
ECON 0000 7.5
CI 30
ECON
280
SPD
* []
PREV <PHASE NEXT PHASE

CRZ

ACT MODE TIME BEST ECON
ECON 0000 7.5
CI 30
ECON
.79
SPD/HACH
* []
PREV <PHASE NEXT PHASE

DES

ACT MODE TIME BEST ECON
ECON 0000 7.5
CI 30
ECON
.75/286
PREV <PHASE NEXT PHASE

APPR

BEST APPR FINAL
GWS F=138 ILS07
C [] S=181 []
TSP S=181 []
CLASH FLEX/THS
0=196 30
TRANS ALT LER CONF
4000
VAPP VLS FULL
120 124 NEXT
PREV <PHASE NEXT PHASE

GO AROUND

FLD RETR
F=138
S=181
CLASH
0=196
THR RED/ACC ENG OUT ACC
1790/2200 1790
PREV <PHASE

End of FMGS Standard Initialization

Data not utaded between 2 FCTM revisions

FMGS 1 SYLLABUS (END)

REVIEW OF MAIN PREDICTIONS

Push **FUEL PRED** to call fuel prediction page:

- Notice a few fields are still empty as long as engines are not running and therefore **INIT B** is available.
- Average **CRZ WIND** and average **ALTN WIND** can be entered here but a single wind entry at a WPT will cancel the appropriate average wind entry.

```

FUEL PRED
AT LFP0      TIME 0055      EF03 7.4
EDDF      0143      5.9
CH /CG      F03
RTE REV/X   CRZTENP/TBPO -47°/36000
FINAL/TIME  CRZ WIND 000°/000
EXTRA/TIME  ALTN WIND 000°/000
  
```

Push **PROG** to call progress page:

- Observe the FL predictions. **OPT** is mainly a function of the cost index. REC MAX is calculated in respect of a 0.3 g buffet margin.
- Notice the FMGS accuracy status (**HIGH**) and the two auto tuned VORs. A manual tuning can even be done on this page. It will modify the RADIO NAV reception accordingly.
- Try an example and enter AGN in a VOR field and review.

```

TO AIB320
CRZ FL310 OPT FL330 REC MAX FL390

SRC/DIST
---*/--- TO [ ]
UPDATE AT
*[ ]
VOR1/FREQ HIGH FREQ/VOR2
TOU/117.70 117.70/TOU
  
```

Push **F-PLN** to call FPLN A page:

- Observe predictions in **TIME** and **SPD/ALT** fields.
- Notice ALT constraints and speed constraints are taken into consideration. The first ALT constraint on **D145H**WPT will not match and is marked with an amber * with the predicted altitude it can probably make (3160 ft rather than 4000 ft as required by SID).

```

FROM      TIME      AIB320 →
LFB015R 0000      100/ 490
H145°   BRG145° 1NH
900      0000 230/ 900
C145°   TRK144° 5
D145H→ 0001      * 3160
C397°   "      0
TOU      0003      / FL051
(SPD)    "      1
(LIM)    0003 *230/ FL100
BEST TIME DIST EF03
LFP007 0055      344 7.4
          ↓↑
  
```

Push **NEXT PAGE** to call FPLN B page:

- Observe **EFOB** and **WIND** predictions.
- Notice bottom line with destination and selected RWY, TIME (trip time), DIST (trip distance) and EFOB (predicted remaining fuel on board after landing at destination). The line is a permanent display on all FPLN pages.

```

FROM      EF03      AIB320 →
LFB015R 9.0 200°/000
H145°   BRG145° 1NH
900      9.0 200°/000
C145°   TRK144° 5
D145H→ 9.5 110°/035
C397°   "      0
TOU      9.3 200°/048
(SPD)    "      1
(LIM)    "      110°/017
BEST TIME DIST EF03
LFP007 0054      344 7.5
          ↓↑
  
```

REVIEW OF FMGS STANDARD INITIALIZATION SEQUENCE

DATA	1 - A/C STATUS check	RAD NAV	4 - RAD NAV entries (tuning and checks)
INIT	2 - INIT A page entries	INIT	5 - INIT B page (entries, revisions, entries)
F-PLN	3 - F-PLN page entries SEC F-PLN entries - Revisions - FPLN checks/review - ALTN FPLN	PERF	6 - PERF page (entries and revisions) SEC PERF page (entries and revisions, if applicable)

FMGS 2 SYLLABUS

This guide enables the user to:

Use FMGS interfaces (MCDU, FCU and FMS displays) by standard operating procedures. During cockpit preparation (FMS), simulated flight and approach preparation. **LFBO** (Toulouse) and **LFBD** (Bordeaux) departure, arrival and approach charts are required for this session.

SYLLABUS SUMMARY

- FREEPLAY TRAINER CHECKS
- FMGS INITIALISATION / TRAINER PREPARATION
- TAKE-OFF
- CLIMB / CRUISE
- APPROACH PREPARATION
- DESCENT AND APPROACH

A - START THE FREEPLAY TRAINER

REFER TO USER GUIDE FOR MORE INSTRUCTIONS, IF APPLICABLE.

B - REVIEW TRAINER MAIN FACILITIES



STORE MEMO button: Memorises actual freeplay situation and settings.

RECALL MEMO button: Returns to memorised status (by mouse click). The feature can be used at any time in order to review all sequences and exercises.

FREEZE (UNFREEZE) button: Freezes or unfreezes the flight simulation. Unfreeze is necessary before any further modification or entry (Button White - FREEZE / Button Grey - UNFREEZE).

SPEED UP button: Multiplies the speed by 5 until 5 NM inbound to next WPT then returns to normal speed automatically.

C - FREEPLAY TRAINER CHECKS



SPEED BRAKES

Check retracted!



FLAPS

Check retracted!



THRUST LEVERS

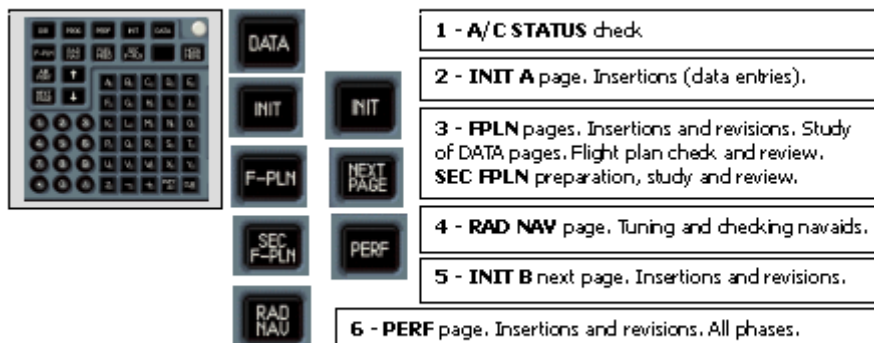
Check idle!



ENGINE MASTERS

Check off!

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE GROUND COURSE SYLLABI	2.02.03 Page 28
---	--	-----------------

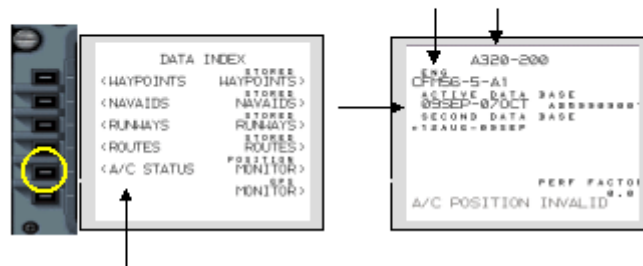
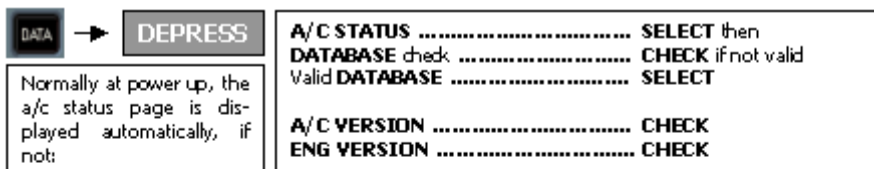
FMGS 2 SYLLABUS (CONT'D)
D - FMGS INITIALISATION


Items 1 to 6 are the main preparation sequence.

Entry Instructions

- All data entries in [...] must be entered in the data field as required (given format) in order to avoid a FORMAT ERROR message.
- It is recommended to read comments (if any) prior to doing inputs.
- The initialisation of the FMS will automatically tell the freeplay trainer software to set the environmental factors and where to position the aeroplane.

WHENEVER YOU NEED TO SEE SOMETHING DURING A DYNAMIC FLIGHT PHASE, STOP THE SIMULATION WITH THE FREEZE BUTTON AND PUSH FREEZE AGAIN IN ORDER TO RELEASE AND TO CONTINUE THE SIMULATION.

1 - A/C STATUS page check (data base validity)


FMGS 2 SYLLABUS (CONT'D)

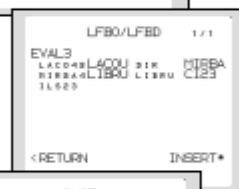
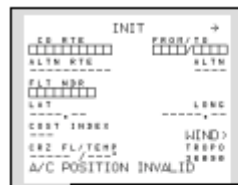
2 - INIT A page entries



1 INIT A preparation

Type and enter into FROM/TO field LFBO/LFBD

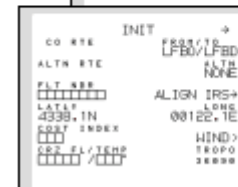
- Notice there is 1 company route available for this city pair.
- Select RETURN in order to create a FPLN on your own.
- ALTN LFPO is automatically introduced in this case.
- The LAT/LONG are the **ARP*** co-ordinates of LFBO.
- CI 30 is automatically entered (small font).



2 ALTN COROUTE entry

Find the field **ALTN** on INIT A page:

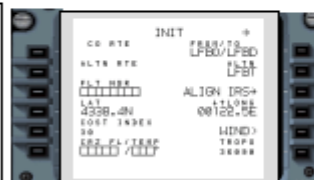
- Observe defaulted no ALTN airport given in this case.
- Type and enter **LFBT - TARBES** in order to change the ALTN airport.
- Notice there is no COMPANY ROUTE from **LFBD/LFBT** available.
- The ALTN FPLN must be created by the user in this case completely.



3 GATE PARKING POSITION entry

Gate Parking Position Entry:

- Modify the **ARP** LAT into the gate position LAT. Observe the image and notice the up-down arrows next to LONG.
- Now use the keypad for modification. Push LSK4L and the upper arrow to get the gate LAT **4338.4N** or type the LAT into scratch pad and enter via LSK4L direct.
- Do the same procedure for LONG and enter **00122.5E** with LSK4R.
- Push LSK3R and **ALIGN IRS**.
- Verify on **IRDU**, the position for **IR1-3-2**.



*ARP - Airport Reference Point

FMGS 2 SYLLABUS (CONT'D)

4

OTHER INIT A page entries

FLT NBR (entry) **AIB320**
- Type and enter **AIB320** or your company id with a given flight number.

COST INDEX (entry) **30**
- Type and enter **30** or check for correct CI and keep it.

CRZ FL / TEMP (entry) **140 / -15**
- Type and enter 140 and -15. If applicable change the temperature entry in accordance to your documentation (FPLN). Today it is different from ISA.

TROPO (entry) **36000**
- Type and enter the tropopause altitude **36000** ft.

NOTE: Use the correct format for all entries. Notice the maximum number of digits per entry (3 for C.I., 8 for FLT NBR etc.). **Avoid FORMAT ERROR.**



3 - F-PLN A PREPARATION Departure Sequence

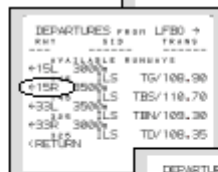
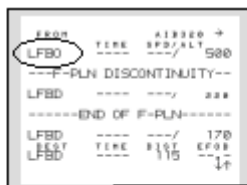
F-PLN

DEPRESS

1. **LAT REV** at **LFBO**
2. **LSK1L** push **DEPARTURE**
3. **DEP RWY** **15R** select
4. For **SID** **LAC04A** enter
(Slew up to next page to find LAC04A SID)

On ECP select PLAN mode and appropriate range. Notice a temporary FPLN exists (amber lines). Check first line on DEPARTURES FROM LFBO on whether your choice is correct or not.

5. **LSK6R** for activation **INSERT** push.



FMGS 2 SYLLABUS (CONT'D)

3 - F-PLN A PREPARATION Arrival Sequence

1. LAT REV from Destination **LFBD**.

- Notice the LAT REV may be done whether on permanent displayed DEST (bottom line) or on **LFBD** after F-PLN DISCONTINUITY.

2. Push ARRIVAL on **LAT REV** FROM **LFBD**.

3. ARR RWY and PROC Select **ILS23**.

4. Slew the STARS and find **MIRBA4**.

5. Select the STAR **MIRBA4**

- Notice on selection a TEMP F-PLN is created and the **VIA (IAF) LIBRU** is inserted automatically since there is only one available fitting the STAR.

6. Check selected items and **INSERT**.



F-PLN DISCONTINUITY (between LACOU and MIRBA) **CLEAR**.

- Flight plan entries are completed. Continue with FPLN checks.

ND MODE Selector **PLAN** (on EFIS CP)

RANGE Selection **AS REQD** (on EFIS CP)

- Review FPLN from origin on ND and MCDU. Check TRACK, DIST and constraints on ND versus documentation (SID - CFP).



4 - SECONDARY F-PLN preparation (departure from a different RWY)



DEPRESS

On **SEC INDEX** **COPY ACTIVE**

- Notice the active FPLN is now copied to the SEC FPLN (white colour).

LAT REV from SEC FPLN **LFBD015R (LSK1L)**

Select **DEPARTURE**

Select new DEP RWY on SEC FPLN **15L**

- Notice the **SID (LACOU4A)** is kept for this RWY.

Depress twice to re-call SEC FPLN **RETURN**

- Notice DEP RWY on SEC FPLN is **15L** now.



5 - RAD NAV page entries



DEPRESS

Tune appropriate nav aids for navigation cross checking.

- Identify on ND by using EFIS control panel selections (NAV mode, range and VOR - ADF selections).
- Check **VORs** (VOR1 **TOU** - RAD 337° inbound LACOU), **ILS15L** and **NDBs** set and check **TN** (1) **TOE** (2) for EOSID.



FMGS 2 SYLLABUS (CONT'D)

6 - INIT B page entries (Gross Weight and CG initialisation)

INIT **DEPRESS**

ZFW CG / ZFW type and enter **25.6/45.3** [%/t]

BLOCK fuel type and enter **10** [t]

- Notice, check and/or modify the fuel, time and weight calculations based upon entries.

```

INIT      +
TAXI      FFWCG/ ZFW
          25.6/ 45.3
TRIP/TIME BLOCK
1.1/0001  10.0
WTE RV/S  0.1/ 5.0
ALTN/TIME  0.7/0001  T04
          1.2/0030  L4
          0.7/0043
          
```

7 - PERFORMANCE page data entries

PERF **DEPRESS**

V1 - VR - V2 type and enter..... **130 - 135 - 136** [kt]

TRANS ALT check **5000** [ft]

THR RED/ACC std noise **1990/3500**

T/O SHIFT set in [m] **300**

- Due to WIP (Works in Progress) a displaced RWY threshold of 300 m is assumed.

FLAPS/THS type and enter **2/1.0 UP**

FLEX temp type and enter **52** [°C]

ENG OUT ACC check **1990**

Characteristic speeds **CHECK**

NEXT PHASE **SELECT**

CLB phase **CHECK**

SPEED pre-set **230**

- Check all PERF phases by **NEXT PHASE** selection.

```

TAKE OFF
V1 130 FLE 130 130
V2 135 135 135
THR 1990 1990 1990
T/O 300 300 300
TRANS ALT 5000 5000 5000
ENG OUT ACC 1990 1990 1990
CLB 230 230 230
NEXT PHASE

```

ATC Cleared Destination LFBF via flight planned route. LACOU standard instrument departure. Climb FL 120 initially. Level change enroute. SQUAWK A 3646.

(TRAINER) COCKPIT PREPARATION FOR TAKE-OFF



ND mode **ROSE NAV**

RANGE **10**

CSTR p/b **ON**

FD check **ON**

ILS p/b **AS RQRD**

VOR ADF sel. **AS RQRD**

FCU target altitude set **12000**

- Set and crosscheck initial cleared altitude on PFDs.

Check on **FCU**:

- **ALT** window displays **12000**.
- **SPD** and **V/S** windows are dashed.
- **HDG** window is dashed.

FMGS 2 SYLLABUS (CONT'D)

CONFIGURING THE A/C FOR TAKE-OFF

ENGINE MASTERS **ON**

- Click to the ON position.

FLAPS select position **2**

- Click position 2.
- MCDU PF on PERF – PNF on FPLN

READY FOR TAKE-OFF

STORE MEMO ICON click. All preparations are memorised.
With click on **RECALL MEMO**, take-off can be repeated.



TAKE-OFF

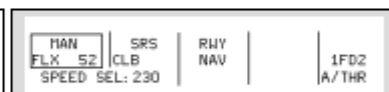
TAKE-OFF POWER select **FLEX**

FREEZE button **CLICK**

- READ FMA | **MAN FLEX** | **SRS** | **RWY** |
- Observe **ATHR** in cyan - armed.
- Notice **SPEED SEL: 230** in cyan for pre-selected CLB speed

UNFREEZE button **CLICK**

Observe the take-off



AFTER LIFT-OFF

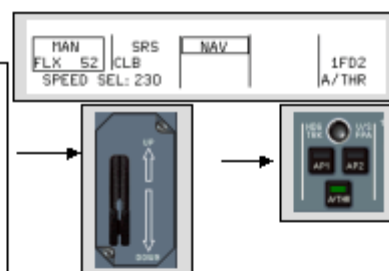
- **POSITIVE CLIMB** -
- **GEAR UP** -

LANDING GEAR **RETRACT**

- **ENGAGE AP1** - (> 100 ft RA)

AUTO PILOT 1 **ENGAGE**

- Notice the first mode change on take-off. NAV mode becomes active when a FPLN exists.
- **NAV GREEN** -



Crossing **THR RED ALT**:

- **LVR CLB** - flashing white on FMA.

THR LEVERS **CLB**

- Notice mode changes on FMA.
- **THR CLB** -
- **ATHR WHITE** - (ATHR is active now).

Crossing **ACC ALT**:

- **CLB** - replaces SRS. Managed CLB mode has engaged.

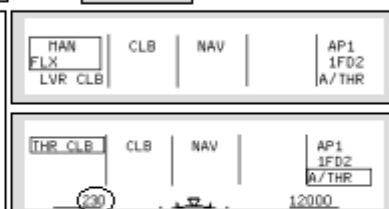
SPEED > F **FLAPS 1**

SPEED > S **FLAPS 0**

Crossing **TRANS ALT**:

BARO REF pull **STD**

- Set and crosscheck **STD** altimeter setting and passing altitude (PFD, EFIS and STBY instruments).
- Notice target SPD **230** kt cyan on PFD.



NOTE:

Target speed 230 kt is displayed on top of the speed scale as long as out of view. It becomes a cyan triangle next to the target speed when in view.

Data not utaded between 2 FCTM revisions

FMGS 2 SYLLABUS (CONT'D)

INITIAL CLIMB OUT

ATC Resume normal speed. Recleared FL140.

To resume normal speed:

SPEED selector **PUSH**

- Notice new speed target is **250** kt now. Target is a magenta triangle on speed scale for defaulted managed SPD below FL100.

FCU new target ALT set **14000**

- Check FL140 cyan on top of ALT scale.



STUDY OF FMA MODE REVERSIONS

ALT selector **PULL**

- Notice vertical mode change to - OP CLB - on FMA.

HDG selector **PULL**

HDG set **300**

- Notice - HDG - on FMA. New HDG target cyan on PFD and on ND.

V/S set and pull **+ 1000**

- Notice on FMA - SPEED | V/S+1000 -. Speed mode has engaged with active V/S.

ALT selector **PULL**

- Notice - THR CLB | OP CLB - on FMA.

Crossing FL100. Observe target speed change from 250 kt to **ECON CLB** (e.g. 325 kt) speed.

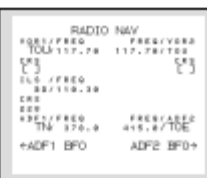


BAD NAV

DEPRESS

Restore the auto tuning function of the FMGS:

- Clear the manually tuned NAVAIDS, if not needed anymore for navigation purposes (raw data check) in order to recover auto tuning.
- Remember, manually tuned navaids have priority and cannot be received after a certain distance. Auto tuning and radio position updating will be lost.



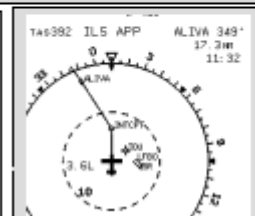
ATC Resume normal navigation.



Select **HDG** to intercept the common leg (TOL - ALIVA) i.e. 010°.

HDG selector **PUSH**

- Check FMA for - NAV BLUE -. NAV mode is armed. The FMS calculates an INTERCEPT with common leg.
- Make sure it is the common leg to intercept, NAV will not engage, if it is not. Will stay cyan on FMA and will not intercept.
- Arming the navigation for intercept should always make sure that the flight plan sequence has been checked and corrected.



FMGS 2 SYLLABUS (CONT'D)

CRUISE PHASE

- Upon reaching **CRZ** altitude **FL140** notice FMA mode changes to - SPD | ALT* - and when ALT capture is completed to - ALT CRZ -.
- In this case a MCDU message **ENTER DESTINATION DATA** may occur. Be aware of the message and clear it for the moment. Will be prepared in sequence.

ATC Cleared direct to MIRBA. Join MIRBA holding. Report ready for descent.

DIRECT TO

OR **DEPRESS**

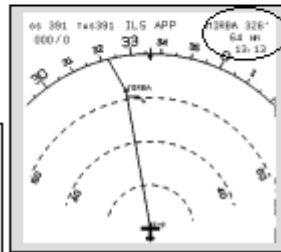
- Observe MCDU FPLN. DIR TO field is displayed.

FPLN **SLEW**

- When MIRBA visible on MCDU FPLN page:

MIRBA **SELECT**

- Or **type** MIRBA and enter.
- Notice changes on FPLN and on ND. **T-P** is PPOS on FPLN and all WPTs have been removed. Predictions are made for MIRBA now.
- No mode changes on FMA.



FROM	1200	1200	1200
TO	1200	1200	1200
CT/D	1200	1200	1200
MIRBA	1200	1200	1200
Q/D	1200	1200	1200
DISP	1200	1200	1200
DISP	1200	1200	1200

FROM	1200	1200	1200
TO	1200	1200	1200
CT/D	1200	1200	1200
MIRBA	1200	1200	1200
Q/D	1200	1200	1200
DISP	1200	1200	1200
DISP	1200	1200	1200

ENTERING A HOLDING

Make sure you are on MCDU FPLN page.

LAT REV **MIRBA**

HOLD **SELECT**

- Check or modify the holding data
INB CRS: 326°
TURN: R
TIME/DIST: 1.0/3.2
- Notice a temporary FPLN is active for the moment.
- Observe the ND for HOLDING display (dashed amber).

INSERT* **SELECT**

LAT REV FROM MIRBA	00:00.00/0000.00
PLACES TO	1200
NEXT WPT	1200
NEW DEST	1200
<RETURN	

COMPUTED HOLD AT MIRBA	
INB CRS	326°
TURN	R
TIME/DIST	1.0/3.2
LAST EXIT	1200
BYE	1200
ERASE	
INSERT*	

ATC Descent to FL100. LFBD expect IL523. Wind 270/15 kt. QNH 1013. Temp 15 DP 12.

After descent clearance received and confirmed:

Target ALT on FCU **10000** **SET**

ALT selector **PUSH**

- Check FMA for - THR IDLE | DES or - SPEED | DES -.
- Check PFD for - FL100 BLUE - and - ALT BLUE - for armed ALT capture (mode change disappears first).
- Notice **ECON** speed range on PFD.

SPEED	DES	NAV	AP1
ALT			1FD2
			A/THR

NOTE: **CLB** and **DES** stay for managed climbing or descending. The FMGS is following a calculated profile (longitudinal - lateral).

Data not utaded between 2 FCTM revisions

FMGS 2 SYLLABUS (CONT'D)

7 - APPROACH preparation for LFBD ILS RWY 23

1 CHECKING OR ENTERING AN ARRIVAL

MCDU on FPLN page:

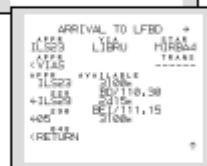
LAT REV at destination **LFBD23**

- As an **arrival RWY** and an **arrival procedure** have already been entered prior to departure, it should read LFBD23 in this case.

ARRIVAL **SELECT**

- Check arrival procedure (MIRBA4), VIA (LIBRU) and approach (ILS23) including the missed approach procedure on MCDU versus arrival and approach charts.

RETURN **SELECT**



2 NAV ACCURACY CHECK

NAV ACCURACY CHECK does not apply with **GPS PRIMARY**. If not, the **FMGS calculated position** has to be validated with raw data.

PROG page **CALL**

TYPE and enter **VOR1** **BDX**

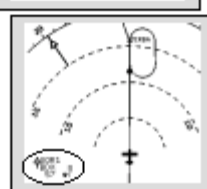
- Notice AGN VOR is currently auto tuned.

TYPE and enter to **BRG/DIST** **BDX**

VOR1 on ECP **SELECT**

NAV ACC **VALIDATE**

- Check and compare FMGS position with VOR raw data position on ND. **ACCHIGH** is confirmed, if **DIST** difference is **1 NM** or less. Rely on FMGS.



3 LANDING PERFORMANCE

PERF page **CALL**

NEXT PHASE **SELECT**

QNH type and enter **1013**

TEMP type and enter **15**

WIND type and enter **270/15**

TRANS ALT check **5000**

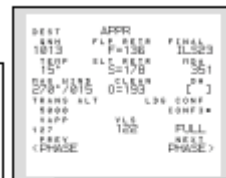
MDA type and enter **351**

VREF (VLS) and VAPP **CHECK**

NEXT PHASE **SELECT**

GO AROUND parameters **MODIFY**

- Modify **THR RED/ACC** and **EO ACC ALT**, if applicable.



4 NAVAIDS FOR ARRIVAL

RADIO NAV page **CALL**

- Tune and identify appropriate **NAVAIDS** for arrival. Select in a useful manner that **VOR1** and **ADF2** may be used at the same time, if applicable.

- Don't do it too early whereas you may still need enroute **NAVAIDS**



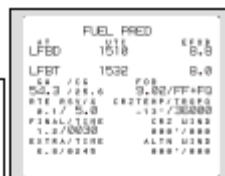
FMGS 2 SYLLABUS (CONT'D)

5

FUEL PREDICTION CHECKS

FUEL PRED page **CALL**

- Check fuel data for destination, alternate and extra fuel.
- Notice the average wind entry features (useful for ALTN in this case).
- Check fuel on board (FOB) and GW / OG data.



MORE ABOUT HOLDINGS

- Shortly prior to entering the holding, the system is managing the holding speed automatically (not G-DOT necessarily).

- **IMM EXIT** has been introduced for leaving the holding.

FPLN page **CALL**

LAT REV from **HOLD R**

LAT REV from **HOLD**

- Notice **LAST EXIT** time and fuel predictions based on minimum fuel requirements. Remember the FPLNs are taken into consideration only (if no ALTN selected - no predictions for ALTN airport).



ATC Proceed to LIBRU and descent to 5000 ft on QNH 1013.

8 - DESCENT AND APPROACH to LFBQ

BARO REF set and pull **1013**
FCU ALT set and pull **5000**

Check FMA for - THR IDLE | OP DES -.
Check PFD for - 5000 BLUE - and - ALT - BLUE (FMA).

Leaving the holding:

IMM EXIT **SELECT**

- Notice **RESUME HOLD** is displayed now which enables the return to the HOLD as long as the holding fix has not been sequenced.

APPR C/L **COMPLETE**



ATC From present position proceed direct LIBRU.

ANOTHER DIRECT TO

- After passing the holding FIX notice speed increases to 250 kt defaulted speed below FL100 (10000 ft).

FPLN page **CALL**

DIR key **PUSH**

LIBRU in DIR field **ENTER**

- Check FPLN and ND for correct DIR TO LIBRU. Notice T-P and other WPTs have disappeared.
- Notice all **constraints** are matched (magenta asterix on FPLN).



FMGS 2 SYLLABUS (END)

NAV ACCURACY CHECK

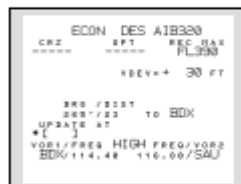
At convenient distance to the airport (upon arriving TMA or within) another navigation **accuracy** check should be done. Not required with GPS PRIMARY, if applicable.

After passing LIBRUI, cleared to desc. to **3000 ft on QNH 1013**.
FCU set and push **3000** – Check FMA

PROG page **CALL**
CHECK or **ENTER** **BDX** (for tuning)
- VOR1 or VOR2

CHECK or **ENTER** to BRG/DIST **BDX**
ON ECP select **VOR1** or **VOR2**
ON ND select **ARC** or **NAV** mode

- Check and compare FMGS position with VOR raw data position on ND. AOC HIGH is confirmed, if DIST difference is **1 NM** or less.
Rely on FMGS HIGH NAVIGATION ACCURACY and on MAP.



ATC Cleared for ILS approach RWY 23. Cleared to land WIND 270/15.

ILS APPROACH AND LANDING

PERF page **CALL**
ACTIVATE APPR PHASE **SELECT AND CONFIRM**
- Or wait until passing DECEL point and activate or monitor auto activation (for conditions refer to FCOM/VOL4).

- Notice PERF APPR phase becomes active. Target speed is VAPP.

APPR modes on FCU **ARM**

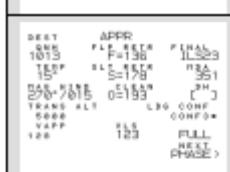
ILS p/b turn to **ON**

AP2 **ENGAGE** (engage 2nd AP)

FMA **CHECK**

SPEED	ALT	NAV	CAT3	AP1+2
G/S	G/S	LOC	DUAL	DUAL
			1013	1013

Should read in this case - G/S | LOC BLUE - - CAT3 DUAL - - AP1+2 - -
At **G-DOT** speed select **FLAPS1**



FINAL APPROACH

HAPPY LANDING!

Localizer and G/S interception **MONITOR**
- FMA should read - LOC (*) STAR - and - LOC GREEN -.
When G/S alive select **FLAPS2** (1 dot to fly up at least)

LANDING GEAR select **DOWN**

- FMA should read - G/S (*) STAR - and - G/S GREEN -.

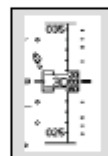
GO AROUND ALT on FCU set **4000**

IN SEQUENCE select **FLAPS3**

..... **FLAPS FULL**

- Check speed prior to select configurations.
- Monitor short final and landing phase.
- FMA should read in sequence:
- **LAND GREEN** - at 400 ft RA
- **FLARE | THR IDLE** - at 40 ft RA
- **RETARD** auto call out at 10 ft in Autoland at 20 ft in Manual landing. Retard thrust levers to IDLE position in order to disconnect the ATHR as well
- **ROLL OUT** - MLG touch down.

AP prior to leaving RWY (40 kt GS) **DISCONNECT**



GOOD JOB !



FMGS 3 SYLLABUS

This guide enables the user to:

Use FMGS interfaces (MCDU, FCU and FMS displays) by standard operating procedures. During cockpit preparation (FMS), simulated flight, approach preparation and diversion.

LFPO (Paris-Orly) **LFBO** (Toulouse) and **LFBD** (Bordeaux) departure, arrival and approach charts are required for this session.

SYLLABUS SUMMARY

- FREEPLAY TRAINER CHECKS
- FMGS INITIALISATION / TRAINER PREPARATION
- TAKE-OFF
- CLIMB / CRUISE
- APPROACH PREPARATION
- DESCENT AND APPROACH
- DIVERSION TO ALTERNATE AIRPORT
- APPROACH AND LANDING AT ALTERNATE

A - START THE FREEPLAY TRAINER

B - REVIEW TRAINER MAIN FACILITIES



STORE MEMO button: Memorises actual freeplay situation and settings.

RECALL MEMO button: Returns to memorised status (by mouse click). The feature can be used at any time in order to review all sequences and exercises.

FREEZE (UNFREEZE) button: Freezes or unfreezes the flight simulation. Unfreeze is necessary before any further modification or entry (Button White - FREEZE / Button Grey - UNFREEZE).

SPEED UP button: Multiplies the speed by 5 until 5 NM inbound to next WPT then returns to normal speed automatically.

C - FREEPLAY TRAINER CHECKS



SPEED BRAKES

Check retracted!



FLAPS

Check retracted!



THRUST LEVERS

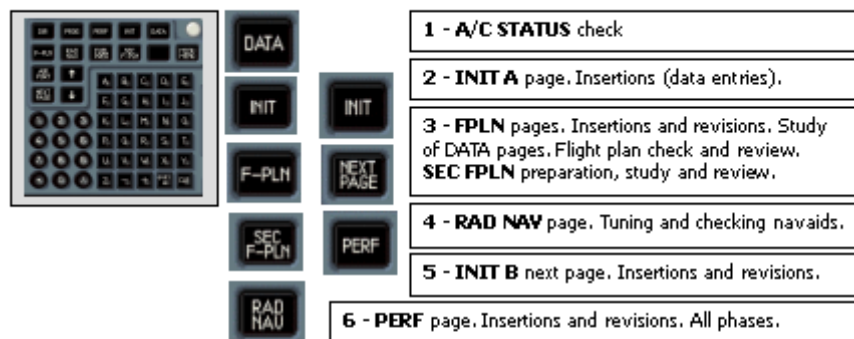
Check idle!



ENGINE MASTERS

Check off!

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE GROUND COURSE SYLLABI	2.02.03 Page 40
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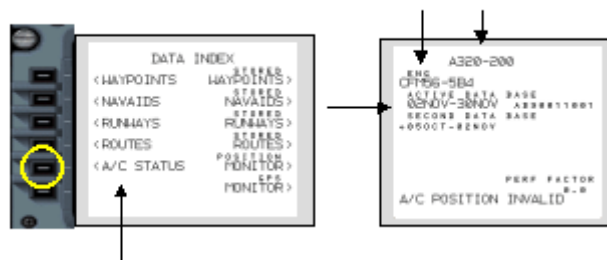
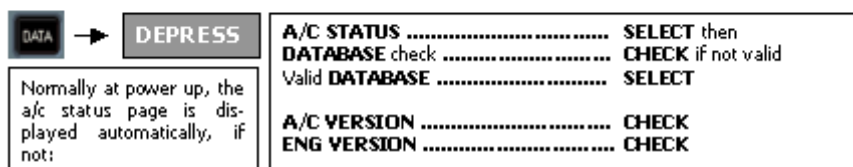
FMGS 3 SYLLABUS (CONT'D)
D - FMGS INITIALISATION


Items 1 to 6 are the main preparation sequence.

Entry Instructions

- All data entries in [...] must be entered in the data field as required (given format) in order to avoid a **FORMAT ERROR** message.
- It is recommended to read comments (if any) prior to doing inputs.
- The initialisation of the FMS will automatically tell the freeplay trainer software to set the environmental factors and where to position the aeroplane.

ADVICE: Whenever convenient FREEZE the SIMULATION, work out the situation and UNFREEZE when ready to continue.

1 - A/C STATUS page check (data base validity)


FMGS 3 SYLLABUS (CONT'D)

2 - INIT A page entries



1 INIT A preparation

Type and enter into FROM/TO field **LFPO/LFBD**

- Notice there are no company routes available for this city pair.
- Select **RETURN** in order to create a FPLN on your own.
- No **ALTN** is given in this case.
- The **LAT/LONG** are the **ARP** co-ordinates of **LFPO**.

CI type and enter **30**

FLT NBR type and enter **AIB320**

CRZ FL/TEMP enter **330/-49**

- Enter first FL only and TEMP correction should be a second action (a space function is not available on the keypad).

IRS **ALIGN**

LAT/LONG on IRDU **CHECK**

2 ALTN COROUTE entry

Find the field **ALTN** on INIT A page:

- Observe there is no defaulted **ALTN** airport.
- Type and enter **LFBD - TOULOUSE** in order to change the **ALTN** airport.
- Notice there is no **COMPANY ROUTE** from **LFBD/LFBD** available.
- The **ALTN FPLN** must be created in this case.

3 HISTORY WIND entry

INIT A page **CALL**

WIND **SELECT**

HISTORY WIND **CHECK**

HISTORY WIND **INSERT**

- Memorised wind during last descent leg.

2 - F-PLN A page entries

DEPARTURE RUNWAY AND SID ENTRY

F-PLN A page **CALL**

LAT REV from departure **LFPO**

DEP RWY select **07**

SID select **PTV7V**

TMPLY FPLN **CHECK**

- Notice a temporary FPLN has been created. Displayed in dashed amber on ND.

TMPLY FPLN **INSERT**

WPTS after PTV enter **LCA** and **LMG**

- Take the **WORS**.

FPLN WPTS, TRACK and **DIST** **CHECK**

Data not utaded between 2 FCTM revisions

FMGS 3 SYLLABUS (CONT'D)

ARRIVAL AND STAR entries for LFBD

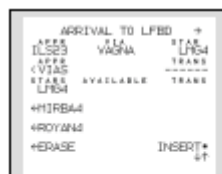
F-PLN A page **CALL**
LAT REV from destination **LFBD**
APPR and landing RWY **ILS23**

STANDARD ARRIVAL **LMG4 STAR**

- Notice VIA VAGNA is automatically selected as for this STAR only one VIA (IAF) exists.
- Observe again a TMPY FPLN was created.

ARRIVAL TO LFBD **INSERT**

- Set the EFIS control panel selectors to **PLAN** mode and select appropriate distance.
- Validate the FPLN data versus CFP and departure and arrival charts (MCDU and ND).
- Check total distance and constraints are correctly entered (CSTR p/b may be selected to ON during check).



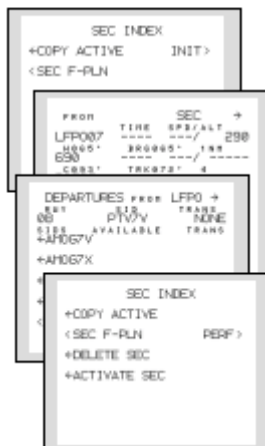
3 - SECONDARY F-PLN PREPARATION RWY change

SEC F-PLN **CALL**
COPY ACTIVE **PUSH**
- Notice again SEC FPLN is of white colour.
LAT REV from **LFPO07**

CHANGE RWY select **RWY08**
- Observe PTV/SID is kept since it applies for RWY 08 as well.

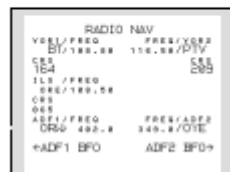
SEC F-PLN **CALL**
- Notice new features (DELETE SEC, ACTIVATE SEC and PERF) are available now. INIT is not available from SEC F-PLN anymore as a SEC FPLN exists.

SEC PERF **SELECT**
PERF DATA for RWY 08 **ENTER**
V1, VR, V2 **127 - 134 - 134**
FLAPS/THS enter **2/1.0UP**
FLEX TO TEMP enter **53**
OTHER DATA **AS APPROPRIATE**



4 - RADNAV page preparation for departure

RADNAV **CALL**
AUTOTUNED NAVAIDS **CHECK**
VOR1 enter **BT**
CRS enter **164**
VOR2 enter **PTV**
CRS enter **209**
ADF1 enter **ORW**
ADF2 enter **OYE**
ILS **CHECK**
- Check all selected NAVAIDS versus SID chart on ND and RADNAV page.



FMGS 3 SYLLABUS (CONT'D)

5 - INIT B page entries

INIT - NEXT PAGE **CALL**

ZFWCG/ZFW enter **28/48**

BLOCK fuel enter **10**

- Check and validate calculated prediction data for FUEL, TIME and WEIGHT. Modify certain data, if applicable.

```
INIT
TAXI 2800/ 48.0
0-2 28.0/ 48.0
TEMP/TIME 1.0/0000
STE 0000
STE 0000
ALTN/TIME 07.8
FINAL/TIME 1.2/0030
EXTRA/TIME 0.0/0021
```

6 - PROGRESS page check

PROG page **CALL**

- Notice here again OPT FL is a function of C.I.

OPT FL **CHECK**

REC MAX FL **CHECK**

- Notice again REC MAX FL is a function of buffet margin (0.3 g).

- FMGS **ACC** status **CHECK**

```
TO AIRBORNE
FL390 OPT FL290 REC FL390
PROG/DIST TO [ ]
*FL [ ]
HOLD/PRES HIGH PROG/DIST
BT/100.00 110.00/PTV
```

7 - PERF page entries

PERF page **CALL**

V1 enter **121**

VR enter **131**

V2 enter **133**

FLAPS/THS enter **2/1.0UP**

FLEX TO TEMP enter **52**

TRANS ALT check **4000**

THR RED/ACC enter **/2290**

ENG OUT ACC check **1790**

CHAR. SPEEDS **CHECK**

NEXT PHASE **SELECT**

CLB SPEED enter **230**

PREV PHASE **SELECT**

- For SOP purpose, the PF displays PERF page during next phases.

```
TAKE OFF
121 FLEX 121
131 VR 131
133 V2 133
TRANS ALT FLEX TO TEMP
4000
THR RED/ACC ENG OUT ACC
1790/2290
```

```
CLB
300 230 0000 7.8
300 230 0000 7.8
300 230 0000 7.8
300 230 0000 7.8
300 230 0000 7.8
300 230 0000 7.8
300 230 0000 7.8
300 230 0000 7.8
300 230 0000 7.8
300 230 0000 7.8
```

ATC Take-off from RWY 08. Threshold displaced by 600 m. TWY 36. Cleared to destination LFBG via flight planned route. PTV Standard Instrument Departure. Climb FL 130 initially. Cross PTV at FL60 or below. Level change enroute. Squawk 3646.

CLEARANCE REVISIONS FOR TAKE-OFF

SEC F-PLN **CALL**

COPY ACTIVE **SELECT**

- This action copies all available data prepared for RWY 07.

LAT REV on Act. FPLN **LF007**

RWY for t/o select **LF008**

On t/o **PERF** TO SHIFT enter **600**

LAT REV at **PTV**

In **ALT CSTR** field enter **- 6000**

New **PERF** data (use the same) **SET and VALIDATE**

New **F-PLN** and **CSTR** data **CHECK**

```
TIME 0000
0000 0000 0000 0000
0000 0000 0000 0000
0000 0000 0000 0000
0000 0000 0000 0000
0000 0000 0000 0000
0000 0000 0000 0000
0000 0000 0000 0000
0000 0000 0000 0000
0000 0000 0000 0000
```

```
VERT REV 1 PTV
0000 0.7 EXTRA 0.8
CLB SPD LON RTE CTR
0000/1000 1.0
*1 CTR ALT -FL390
RETURN
```

Data not utaded between 2 FCTM revisions

FMGS 3 SYLLABUS (CONT'D)

(TRAINER) COCKPIT PREPARATION FOR TAKE-OFF



ND mode ROSE NAV
RANGE 10
CSTR p/b ON
FD check ON
ILS p/b AS RQRD
VOR ADF sel. AS RQRD

FCU target altitude type and enter 13000
- Set and crosscheck initial cleared altitude on PFDs.
Check on FCU:
- ALT window displays 13000.
- SPD and V/S windows are dashed.
- HDG window is dashed.

CONFIGURING THE A/C FOR TAKE-OFF

ENGINE MASTERS ON
- Click to the ON position.
FLAPS select position 2
- Click position 2.
- On MCDU – PF is on PERF and PNF is on FPLN

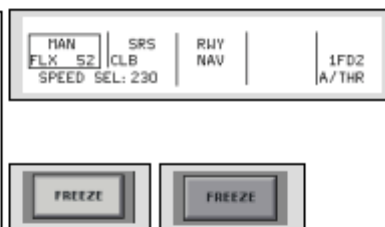


READY FOR TAKE-OFF

STORE MEMO ICON click. All preparations are memorised.
With click on RECALL MEMO, take-off can be repeated.

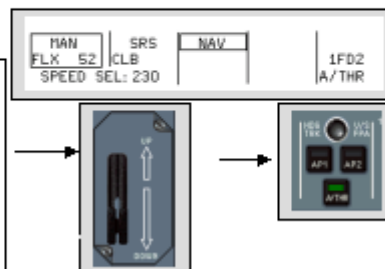
TAKE-OFF

TAKE-OFF POWER select FLEX
FREEZE button CLICK
- READ FMA | MAN FLEX | SRS | RWY |
- Observe ATHR in cyan - armed.
- Notice SPEED SEL: 230 in cyan for pre-selected CLB speed.
UNFREEZE button CLICK
Observe the take-off.



AFTER LIFT-OFF

- POSITIVE CLIMB -
- GEAR UP -
LANDING GEAR RETRACT
- ENGAGE AP1 - (> 100 ft RA)
AUTO PILOT 1 ENGAGE
- Notice the first mode change on take-off. NAV mode becomes active when a FPLN exists.
- NAV GREEN – is the CALL OUT



FMGS 3 SYLLABUS (CONT'D)

Crossing **THR RED ALT**:
- LVR CLB - flashing white on FMA.
THR LEVERS set **CLB**
- The system is matching the 1st and 2nd ALT constraints at D086C WPT + 690 ft and at PTV - FL 60 (FMA magenta indication) in sequence.
- Notice mode changes on FMA.
- THR CLB -
- ATHR WHITE - (ATHR is active now).
Crossing **ACC ALT**:
- CLB - replaces SRS. Managed CLB mode has engaged.
SPEED > F **FLAPS 1**
SPEED > S **FLAPS 0**
Crossing **TRANS ALT**:
BARO REF pull **STD**
- Set and crosscheck **STD** altimeter setting and passing altitude (PFD, EFIS and STBY instruments).
- Notice target SPD **230** kt cyan on PFD.
- The system is matching the 2nd constraint set at PTV - 6000 ft upon ATC advice.

ON INITIAL CLIMB OUT

ATC Resume normal speed. Recleared FL190.

To resume normal speed:

SPEED selector **PUSH**
- Notice new speed target is **250** kt now. Target is magenta for defaulted managed SPD below FL100.

FCU new target ALT set **19000**
- Check FL190 cyan on top of ALT scale.

ALT selector **PULL**
- Notice mode changes on FMA:
- THR CLB - - OP CLB - - ALT BLUE -.
- Crosscheck FL190 cyan on top of ALT scale.
- Observe the constraint FL60 is disregarded in OP CLB mode.

ATC Proceed direct to PTV. No restrictions on speed. After passing PTV climb to FL 310. Will be your final level.

F-PLN page **CALL**
DIR to PTV **SELECT**
VERT REV at **SPD LIM**
CLB **CLB SPD LIM**
- Observe on PERF CLB page and on PFD, the new target speed is ECON CLB (301 kt in this case) speed now.
- Increase range to see the next WPT on ND.

Data not utaded between 2 FCTM revisions

FMGS 3 SYLLABUS (CONT'D)

AFTER PASSING PTV

Cleared for FL310 now.

FCU ALT selector set and push 31000

- Check FMA for - THR CLB - - CLB - - ALT BLUE -.
- Check PFD for FL310 cyan on top of ALT scale.

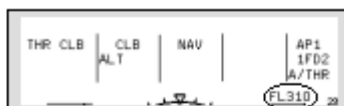
PROG page CALL

CRZ field enter 310

- Notice final CRZ ALT lower then set in INIT A, crew has to revise.

RAD NAV page CALL

- Clear manually tuned NAVAIDS in order to restore AUTOTUNING function of the FMGS.



ATC For separation turn right 20°.

FCU HDG selector pull and set 20° RIGHT

- Check FMA for - THR CLB - - OP CLB - - HDG -.
- Observe on ND FPLN solid green line is dashed line now. NAV mode is de-activated.



ATC Vectors terminated. Resume normal navigation to LCA.

HDG selector PUSH

- Observe NAV armed (cyan) on FMA. But will not engage if current a/c HDG does not intercept the common leg.
- Resume normal navigation does not permit a direct to LCA.

LEFT TURN select HDG 150°

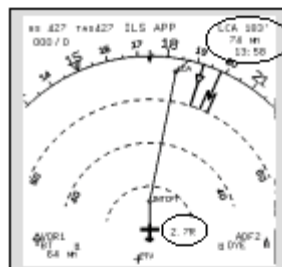
- Observe the INTERCEPT point when a/c HDG has an intercept with common leg.

- Check on FMA in sequence - NAV BLUE - and - NAV GREEN -.

When NAV GREEN:

ALT selector PUSH

- Check FMA for - CLB - (managed CLB has engaged again).



CRUISE PHASE

Reaching CRZ ALT:

- Notice TOC symbol (cyan) next to green FPLN line. Check FMA for -MACH- -ALT* STAR- -ALT CRZ GREEN - in sequence.

PERF page CHECK

- CRZ PHASE and CRZ mode have engaged. Notice target speed is MACH 0.79 now based on C.I. and buffet margin.



NAVAID DESELECTION EXERCISE

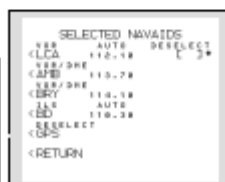
DATA INDEX page CALL

POSITION MONITOR SELECT

SEL NAVAIDS SELECT

AMB VOR type and enter DESELECT (de-select field)

- Monitor the changes. Use CLR to cancel the de-selection. RETURN.



FMGS 3 SYLLABUS (CONT'D)

INFLIGHT NAV ACCURACY CHECK

CHECK is not needed when **GPS PRIMARY**.
PROG page **CALL**
ACC status (HIGH/LOW) **CHECK**
BRG/DIST field TO enter **LMG**
VOR2 field enter **LMG**
 - Compare FMGS position with raw data of LMG (BRG/DIST).
 Difference should be less than 1 NM (3.4 max) in order to confirm
 HIGH accuracy. LCA cannot be used as there is no DME co-located.
LMG for autotuning **CLR**

```

ECON CRZ A1B320
FL310 FL170 FL390
BRG / DIST 210 / 120 TO LMG
VOR2 AT
VOR1 / FREQ HIGH PRES / VOR2
LCA / 110.10 114.00 / LMG
  
```

ATC LFBD expect ILS23. Standard arrival. Wind 250/12 kt. QNH 1013. Temp 15 DP 12. Report ready for descent.

8 - APPROACH preparation for LFBD ILS RWY 23

1 CHECKING OR ENTERING AN ARRIVAL

MODU on **FPLN** page:
LAT REV at destination **LFBD23**
 - As an **arrival RWY** and an **arrival procedure** have already been entered prior to departure, it should read LFBD23 in this case.
ARRIVAL **SELECT**
 - Check arrival procedure (LMG4), VIA (VAGNA) and approach (ILS23) including the missed approach procedure on MODU versus arrival and approach charts. Check ALTN FPLN.
RETURN **SELECT**

```

LAT REV LFBD23
ARRIVAL
NEXT APP 1
ARRIVAL TO LFBD
ILS23 VAGNA STAB LFBD
VAGNA TRANS
ARRIVAL TO LFBD
ILS23 VAGNA STAB LFBD
VAGNA TRANS
ARRIVAL TO LFBD
ILS23 VAGNA STAB LFBD
VAGNA TRANS
  
```

2 LANDING PERFORMANCE

PERF page **CALL**
NEXT PHASE **SELECT** (twice)
QNH type and enter **1013**
TEMP type and enter **15**
WIND type and enter **250/12**
TRANS ALT check **5000**
MDA type and enter **351**
VREF (VLS) and VAPP **CHECK**
NEXT PHASE **SELECT**
GO AROUND parameters **MODIFY**
 - Modify **THR RED/ACC** and **EO ACC ALT**, if applicable.
 - Notice **TOD** symbol next to **LMG** (white colour).

```

BEST APPR
QNH 1013 F=1500 F=1500
TEMP 15 S=101 S=101
WIND 250/12 04000 C 3
TRANS ALT 5000 LCA CONF 3
VREF 351 VLS 351 FULL
VAPP 351 VAPP 351
GO AROUND
F=1500 F=1500
S=101 S=101
S=101 S=101
THR RED/ACC 1000/3150 END OUT ACC 1000
VREF 351
VAPP 351
  
```

3 NAVAIDS FOR ARRIVAL

RADIO NAV page **CALL**
 - Tune and check appropriate NAVAIDS for arrival. Select in a useful manner that VOR1 and ADF2 may be used at the same time, if applicable.
 - Don't do it too early whereas you may still need enroute NAVAIDS

```

RADIO NAV
VOR1 / FREQ 114.00 FREQ / VOR2
VOR2 / FREQ 114.00 FREQ / VOR2
VOR1 / FREQ 114.00 FREQ / VOR2
VOR2 / FREQ 114.00 FREQ / VOR2
VOR1 / FREQ 114.00 FREQ / VOR2
VOR2 / FREQ 114.00 FREQ / VOR2
  
```

Data not utaded between 2 FCTM revisions

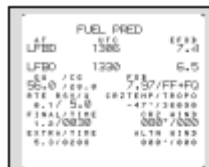
FMGS 3 SYLLABUS (CONT'D)

4

FUEL PREDICTION CHECKS

FUEL PRED page CALL

- Check fuel data for destination, alternate and extra fuel.
- Notice the average wind entry features (useful for ALTN in this case).
- Check fuel on board and GW / CG data.



STORE MEMO PRIOR TO DESCENT (memorizing the current situation)

ATC Descent to FL 120 initially.

9 - DESCENT AND APPROACH to LFBD

FPLN page CALL

TOD MONITOR

- Notice when passing the TOD without initiating descent, the MCDU/FMA message **DECELERATE** occurs in order to mention the situation.

DECELERATE CLEAR

FCU/ALT selector set and push 12000

- Check FMA for - THR IDLE - or - SPD - - DES - . On PFD check FL200 magenta for the next ALT constraint.

CSTR p/b DEPRESS

- Notice the ALT constraint for MARRE WPT is between FL240 and 200.
- Observe the next WPT CHALA is between FL190 and 160.
- Monitor ECON speed range and managed descent profile.

PROG page for descent CHECK



ATC Recleared to descend to 4000 ft on QNH 1013.

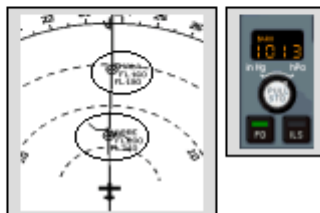
FCU/ALT selector set and pull 4000

BARO REF push and set 1013

- Check FMA for - THR IDLE - - OP DES - .
- Check PFD for - 4000 BLUE - .
- Observe all constraints are disregarded. The WPTs are surrounded by a white circle now while the constraints are still displayed.

PROG page CALL

V/DEV in OP DES MONITOR



NAV ACCURACY CHECK

FCU/ALT selector again PUSH (check FMA changes)
At convenient distance to the airport (upon arriving TMA or within) another navigation **accuracy** check should be done. Not required with **GPS PRIMARY**.

PROG page CALL

CHECK or ENTER BDX (for tuning)

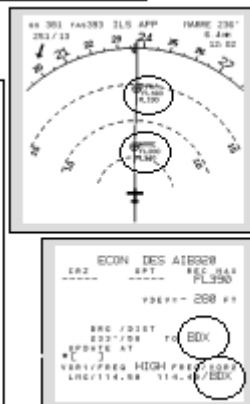
- VOR1 or VOR2

CHECK or ENTER to BRG/DIST BDX

ON ECP select VOR1 or VOR2

ON ND select ARC or NAV mode

- Check and compare FMGS position with VOR raw data position on ND. AOC HIGH is confirmed, if DIST difference is **1 NM** or less. Rely on FMGS HIGH NAVIGATION ACCURACY and on MAP.



FMGS 3 SYLLABUS (CONT'D)

ATC Descend to 3000 ft on QNH 1013. Cleared for ILS approach RWY 23.
Cleared to land WIND 270/15.

ILS APPROACH

- At 40 NM or less from destination check **ILS23** id on PFD and ND.
BARO REF set and check **3000** (monitor constraints)
PERF page **CALL**
ACTIVATE APPR PHASE **SELECT / CONFIRM**
- Or wait until passing DECEL point and activate or monitor auto activation (for conditions refer to FCOMVOL4).
- Notice PERF APPR phase becomes active. Target speed is VAPP.
APPR modes on FCU **ARM**
ILS p/b **DEPRESS**
AP2 **ENGAGE (2nd AP)**
FMA **CHECK**
Should read in this case - G/S | LOC BLUE - - CAT3 DUAL - - AP1+2 -
At **G-DOT** speed select **FLAPS1**

ACT PRG	DES	FLY	FLY	FLY
ECON	0852	8.8		
301				
ECN	8543	8543		
-44/288				
EXPEDITE 0344		BEST		
+APPR PHASE		PHASE		

BEST	APPR	FLY	FLY	FLY
1013	F=136	ILS23		
151	CLL 1013	8543		
290/1012	CLL 1013	8543		
TRANS ALT	CLL 1013	8543		
VAPP	CLL 1013	8543		
120	CLL 1013	8543		
FULL		PHASE		

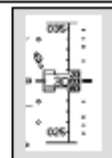
SPEED	ALT	NAV	CAT3	AP1+2
G/S	LOC	LOC	DUAL	1FD2
			IDA 351	A/THR

FINAL APPROACH/GO AROUND

Localizer and G/S interception **MONITOR**
- FMA should read - LOC (*) STAR - and - LOC GREEN -
When G/S alive select **FLAPS2**
GEAR select **DOWN**
- FMA should read - G/S (*) STAR - and - G/S GREEN -
GO AROUND ALT on FCU set **4000**
IN SEQUENCE select **FLAPS3**
..... **FLAPS FULL**
- Check speed prior to select configurations.
- Monitor short final and landing phase.
- FMA should read: - **LAND GREEN** - at 400 ft RA

AT MINIMUM **NO CONTACT**
GO AROUND decision **INITIATE**

- GO AROUND - FLAPS -



GO AROUND

THR LVRS set **TOGA**
FLAPS select **3**
- Check FMA for - MAN TOGA - - SRS - - GA TRACK -
POSITIVE CLB select **GEAR UP**
HDG selector **PUSH**
- Check FMA for - NAV GREEN -

At **THR RED ALT** select **LVRS CLB**

- Passing AOC ALT retract **FLAPS** in sequence.

MAN	SRS	GA	TRK	AP1
TOGA	CLB	CLB	TRK	1FD2
				A/THR

MAN	SRS	NAV	AP1
TOGA	CLB	NAV	1FD2
			A/THR

CLICK TO STORE MEMO

Data not utaded between 2 FCTM revisions

FMGS 3 SYLLABUS (CONT'D)

1 LFBO ARRIVAL ENTRY

F-PLN page **CALL**
LAT REV at destination **LFBO**
ARRIVAL TO LFBO select **ILS15R**
STAR select (gives **VIA AGN**) **AGN3SA**
- Notice the created **TPRY FPLN**.
CHECK first line and **INSERT**
- Check the arrival, approach procedure and go around procedure on **MODU** versus arrival and approach charts.
LAT REV at **WPT** **SAU**
- Correction of **FPLN** sequence after **ALTN FPLN** activation.
At **NEXT WPT** enter **AGN**
CHECK **TPRY FPLN** and **INSERT**
- **FPLN** sequence inbound **TLS** is corrected now. Check briefly again.



2 LANDING PERFORMANCE ENTRIES

PERF page **CALL**
NEXT PHASE **SELECT** (twice)
QNH type and enter **1013**
TEMP type and enter **15**
WIND type and enter **120/10**
TRANS ALT check **5000**
MDA type and enter **688**
VREF (VLS) and **VAPP** **CHECK**
NEXT PHASE **SELECT**
GO AROUND parameters **MODIFY**
- Modify **THR RED/ACC** and **EO ACC ALT**, if applicable.
- Notice **TOD** symbol just 20 NM before **AGN** (white colour).



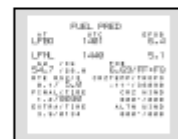
3 NAVAIDS FOR ARRIVAL

RADIO NAV page **CALL**
- Tune and check appropriate **NAVAIDS** for arrival. Select in a useful manner that **VOR1** and **ADF2** may be used at the same time, if applicable.
- Don't do it too early whereas you may still need enroute **NAVAIDS**.



4 FUEL PREDICTION CHECKS

FUEL PRED page **CALL**
- Check fuel data for destination, alternate and extra fuel.
- Notice the average wind entry features (useful for **ALTN** in this case).
- Check fuel on board and **GW - OG** data.



STORE MEMO PRIOR TO DESCENT (memorising the current situation for repeat)

ATC Descent to 3000 ft initially on **QNH 1013**. Nr. 1 - no delay expected.

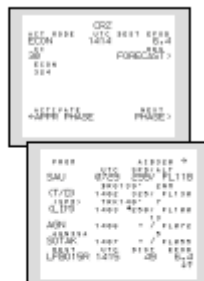
FREEZE SIMULATION, IF NEEDED

Data not utaded between 2 FCTM revisions

FMGS 3 SYLLABUS (CONT'D)

12 - DESCENT, APPROACH AND LANDING to LFBO

FPLN page **CALL**
TOD **MONITOR**
FCU ALT selector set and push **3000**
 - Check FMA for - THR IDLE - or - SPD - - DES - ,
 - On PFD check - FL70 MAGENTA - (matching the constraint).
BARO REF set and push **1013**
 - On PFD check - 7000 MAGENTA - ,
CSTR p/b **DEPRESS**
 - Notice the ALT constraint for AGN07 WPT is FL70 (7000).
 - Monitor ECON speed range and managed descent profile.
PROG page **CALL**
V/DEV **MONITOR**



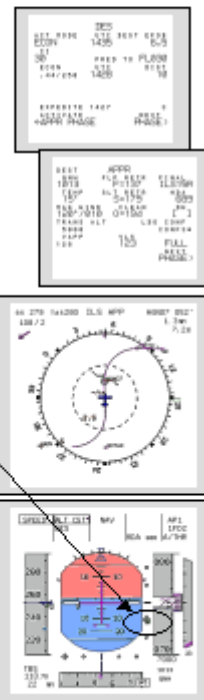
ATC After passing SOTAK 5 NM outbound descent to 3000 ft on QNH 1013.
 Cleared for ILS approach RWY 15R. Cleared to land. Wind 120°/10 kt.

ILS APPROACH

- At 40 NM or less from destination check **ILS15R** id on PFD and ND.
BARO REF cross check **3000**
PERF page **CALL**
ACTIVATE APPR PHASE **SELECT / CONFIRM**

- Or wait until passing DECEL point and activate or monitor auto activation (for conditions refer to FCOM VOL4).
- Notice PERF APPR phase becomes active. Target speed is VAPP.
- Notice due to the ALT constraint (FL 70) a high rate of descent on intermediate approach may be necessary. The G/S may be alive early. Follow with V/S. LOC capture has priority. G/S will not capture before LOC capture.

ILS p/b **DEPRESS**
LOC mode on FCU **ARM**
LOC capture **MONITOR**
 - When passing SOTAK 5 NM outbound:
SPEED below VFE next **FLAPS1** select
GEAR select **DOWN**
PFD for correct setting **CHECK**
APPR modes on FCU **ARM**
AP2 **ENGAGE**
FMA **CHECK**
 Should read in this case - G/S | LOC BLUE - - CAT3 DUAL - - AP1+2 - .



FMGS 3 SYLLABUS (END)

FINAL APPROACH AND LANDING

G/S intercepting MONITOR

G/S alive select FLAPS2

- FMA should read - G/S (*) STAR - and - G/S GREEN - ,

GO AROUND ALT on FCU set 4000

IN SEQUENCE select FLAPS3

..... FLAPS FULL

- Check speed prior to select configurations.

- Monitor short final and landing phase.

FINAL APPR MONITOR

- FMA should read: - LAND GREEN - at 400 ft RA

- FLARE | THR IDLE - at 40 ft RA

- RETARD at 10 ft RA

- ROLL OUT - at touch down of MLG

AP prior to leaving RWY (40 kt) DISCONNECT

GOOD
JOB !



Data not utaded between 2 FCTM revisions

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE GROUND COURSE SYLLABI	2.02.03 Page 54
		REV 24 JUN 2001

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FMGS 4 TAKE-OFF DATA
INIT PAGE

CO RTE

ALTN/CO RTE

FLT NBR

[Airline ID] 134

LAT

4338.1N

COST INDEX

30

CRZ FL/TEMP

FL 350 / - 54°C

FROM TO

LFBO/EGLL

LONG

00122.1E

TROPO

36 090

TRIP DIST

578 NM

CRZ WIND

200°/35 kt

ALTN

LFPO

ALTN DIST

198 NM

FLT to ALTN

280

ATIS

RWY 15 R

WIND 180°/10 kt

VISI CAVOK

CEILING

TEMP 14°C

DEW POINT . 10°C

QNH 1013 hPa/29.92 inHg

QFE 995 hPa/29.38 inHg

RWY COND.. DRY

Observations. : AIR COND ON

INIT NEXT PAGE

ZFCG/ZFW

32.3% - 48 t

32.3% - 105 600 lb

BLOCK

10 t

22 000 lb

PERF PAGE

IAE

CFM

V1

125

124

VR

133

132

V2

133

133

FLEX

66

5264

DRT

T/O FLAPS

1 + F

T/O C.G.

28%

~~TOGA~~

FLEX

~~DRT~~
NOTE :
F/PLN :

LFBO 15 R

SID LACOU

SAU

A25 to DIN

ORTAC

SAM

STAR OKHAM 1C

EGLL ILS 27 L

ALTN : LFPO

ORTAC : 4959N/002W

SAM : FRQ 113.35

[illegible]

FC2R/GROUND/E-FMGS4.fm

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE GROUND COURSE SYLLABI	2.02.03 Page 58 REV 24 JUN 2001
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AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE GROUND COURSE SYLLABI	2.02.03 Page 58A
		REV 24 JUN 2001

FMGS 4 SESSION GUIDE

01 - SESSION OBJECTIVE

- Practice FMGS functions.

02 - TRAINING TOPICS

A. REVIEW

- FMGS flight planning.
- Practice most of the FMGS functions through a complete flight profile.

B. INTRODUCE

- Flight management logic (specific briefing).
- FMGS procedures (descent and approach preparation).

03 - SESSION PROFICIENCY CRITERIA

- Acceptable knowledge of FMGS functions and MCDU pages.
- Understanding of FMGS indications and messages (FMA, ND, FCU)
- Ability to programming the FMGS.

INSTRUCTOR ONLY

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FMGS 4 SESSION GUIDE (CONT'D)

04 - SESSION GUIDE

- **2** : Review PF / PNF task sharing.
Review the full initialization phase (sequence) :
 - Data base validity check, INIT A and WIND page access and entries,
 - FPLN A (B) pagechecks (CSTR, EOSID etc.) - PF/PNF tasks,
 - SEC FPLN – various functions,
 - INIT B initialization – Fuel planning and
 - PERF data entry and checking.
- **3** : Observe aircraft performance (CRZ, OPT, REC MAX FLs).
- **4** : Check all receivers (VOR, ILS, ADF). Set NAVAIDs for initial climb out and SID as appropriate. Point out the procedures.
- **5** : Point out INIT B is inhibited after engine start. For appropriate entries FUEL PRED page can be used only.
- **6** : ATC: To destination EGLL via flight planned route, RWY for take-off 15L, LACOU SID, climb FL090 initially, level change enroute, squawk 3646.
- **7** : Point out that all RWY related PERF data is lost after RWY change on MCDU (which is correct in order not to use data for another RWY).
- **8, 9** : ATC : Amendment to ATC. After take-off maintain HDG 160°, at 8 DME TOU turn right direct to TOU VOR. ALIVA FL 070 or below.
STORE MEMO prior to take-off.
Point out clearly the HDG preset function. Mention the use in case of turns greater than 180°. Anticipate the FMS trainer behaviour. If the HDG selector is erroneously pulled, the normal FMA can be restored with FD reset.
- **10** : Emphasize :
Monitoring the system engagement on the FMA is mandatory.
Mode change announcement is the key to good crew communication.
- **11** : Advice to resume normal SID, if not already done. Manage the vertical navigation as soon as NAV has engaged. Point out CSTR satisfied, missed and disregarded.
- **12** : Upon company request advice immediate return, DIR NOPTA and descent to 4000 ft.
- **15** : The VOR approach (managed guidance) should not demonstrate the NPA specifics but to practice the descent/approach preparation, approach sequence and all FMGS interfaces (FCU, MCDU, FMA etc.).
- **16** : Practice the go around sequence (NAV engaged) until reaching GA ALT and stabilized. FREEZE.

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AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE GROUND COURSE SYLLABI	2.02.03 Page 58C
		REV 24 JUN 2001

FMGS 4 SESSION GUIDE (END)

04 - SESSION GUIDE (END)

- *Init T/O* : RECALL MEMO and recheck all entries prior to next T/O.
ATC : LACOU SID and climb initially to FL090.
- **19** : Review how to cancel speed restrictions.
- **20** : Give radar vectors. Mention the vertical mode reversion following a lateral mode change.
- **23** : DIR SAU. Preset M .80 for FMGS CRZ phase. Mention, it is only possible when phase is not yet active. Enter new CRZ wind 240°/55 kt. Notice wind propagation for subsequent WPTs.
- **24** : Point out the STEP PRED function is available at CRZ WPTs only. Try a step entry to FL 370.
- **25** : Review the different features for NAV ACCURACY checks.
- **28** : Review how to enter a HOLDING at PPOS and how to create an orbit rather than a STD holding. Resume normal navigation when holding is entered into MCDU and IMM EXIT is displayed. Mention, the system is dealing with the holding speed.
- **29** : Review all new features related to GPS PRIMARY function (DATA INDEX, PROG page, GPS DESELECT, POSITION MONITOR, PREDICTIVE GPS etc.).
- **30** : A PAX suffers from serious sickness. Diversion to LFPO (PARIS-ORLY). After NTS proceed to CHW, expect ILS07 VIA EPR.
ATIS LFPO : ILS 07 090/10 CAVOK 14/10 1013 NOSIG
- **31** : Initiate the descent after T/D in order to review the DECELERATE message and the meaning.
- **32** : Inbound NTS use SEC FPLN to prepare the diversion. Speed up to NTS, if applicable. Activate SEC FPLN when passing NTS and resume managed NAV.
- **33** : Commence descent to 6 000 ft. Resume managed speed. Mention the profile descent monitoring symbols (speed and altitude). If time permits demonstrate the vertical mode reversion in descent from DES to V/S on lateral mode change from NAV to HDG.
- **35** : Hold at RBT and explain how to exit and how to delete a holding.

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AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE NORMAL COURSE SYLLABI	2.02.04 Page 1 <i>E F2R</i> REV 24 JUN 2001
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N0 FBS syllabus Page 3

N1 FBS syllabus Page 5

N2 FBS syllabus Page 7

N3 FFS syllabus Page 9

N4 FFS syllabus Page 11

N5 FFS syllabus Page 13

NOTE : *Instructors' FCTM includes the "Session Guides"*

AIRBUS INDUSTRIE Training & Flight Operations Support Division  A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE NORMAL COURSE SYLLABI	2.02.04 Page 2 <i>E F2R</i>
		REV 21 MAY 98

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N0 FBS TAKE-OFF DATA
INIT PAGE

CO RTE

ALTN/CO RTE

FLT NBR

LAT

COST INDEX

CRZ FL/TEMP

FROM TO

LONG

TROPO

TRIP DIST

CRZ WIND

ALTN

ALTN DIST

FL to ALTN

ATIS

RWY 15 R

WIND 200°/5 kt

VISI CAVOK

CEILING

TEMP 20°C

DEW POINT . 10°C

QNH 1018 hPa/30.07 inHg

QFE 1000 hPa/29.54 inHg

RWY COND.. DRY

Observations. : AIR COND ON

INIT NEXT PAGE

ZFCG/ZFW

BLOCK

PERF PAGE

IAE

CFM

V1

VR

V2

FLEX

DRT

T/O FLAPS

T/O C.G.

TOGA

FLEX

DRT

NOTE :
F/PLN :
1st part : Trainee 1

LFBO 15 R

SID LACOU

Return to NOPTA

LFBO 15 R via NOPTA

2nd part : Trainee 2

LFBO 33 L

SID AFRIC

Return to ADIMA

LFBO 33 L via ADIMA

[illegible]

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE NORMAL COURSE SYLLABI	2.02.04 Page 4A
		REV 24 JUN 2001

N0 FBS SESSION GUIDE

01 - SESSION OBJECTIVE

- Practice various types of cockpit preparation
- Practice SOP's and task sharing
- Put into practice skills learnt during CBT, FMGS and ECAM sessions
- Provide a synthesis of the ground course

02 - TRAINING TOPICS

A. REVIEW

- Preliminary cockpit preparation
- FMGS preparation
- ECAM procedures
- Task sharing, crew coordination and communication
- Announcements & call outs

B. INTRODUCE

- Transit cockpit preparation
- Performance calculation practice
- Normal take off
- Descent and approach preparation
- ILS approach
- Normal check lists

03 - SESSION PROFICIENCY CRITERIA

- Knowledge of aircraft system operation
- Understanding of task sharing & crew coordination

INSTRUCTOR ONLY

INSTRUCTOR ONLY

N0 FBS SESSION GUIDE (END)

04 - SESSION GUIDE

- **1** : FMGS initialization : PF prepares entirely ; PNF follows and checks.
- **4** : Explain the brake check and the F/CTL check.
- **5** : For demonstration, select FLAPS 2. Notice there is no warning available.
- **7** : Insert the malfunction when the crew workload is low. Review task sharing and crew communication.
- **10, 24** : Entering a holding pattern offers to the crew the opportunity to complete all actions and preparation required for approach
- **11, 25** : Before final interception (LOC), it is recommended to reduce speed or to activate the approach phase prior to commencing the turn.
- *Init T/O* : Init the aircraft at LFBO 33L before FMGS initialization. Set wind 290°/5 kt.
- **15** : Insert a fuel difference of 800 kg. Crew is advised by the ground crew, but there is no chance for balancing prior to departure.
- **20** : Increase the difference to 1500 kg when the crew workload is low. They should ask and perform the QRH fuel imbalance procedure.
- **21** : The malfunction should be inserted for the PNF.

INSTRUCTOR ONLY

INSTRUCTOR ONLY

N1 FBS TAKE-OFF DATA
INIT PAGE

CO RTE

N1FBS

ALTN/CO RTE

N1 FBSA

FLT NBR

[Airline ID] 201

LAT

4338.1N

COST INDEX

30

CRZ FL/TEMP

FL 310 / -47°C

FROM TO

LFBO/LFPO

LONG

00122.1E

TROPO

36 090

TRIP DIST

372 NM

CRZ WIND

260°/30 kt

ALTN

LFPG

ALTN DIST

80 NM

FLT to ALTN

FL 100

ATIS

RWY 15 R

WIND 100°/10 kt

VISI CAVOK

CEILING

TEMP 14°C

DEW POINT . 10°C

QNH 1015 hPa/29.97 inHg

QFE 997 hPa/29.44 inHg

RWY COND.. DRY

Observations. : AIR COND ON

INIT NEXT PAGE

ZFCG/ZFW

30.2% - 48 t

30.2% - 105 600

BLOCK

16 t

35 300

PERF PAGE

IAE

CFM

V1

VR

V2

FLEX

DRT

T/O FLAPS

2

T/O C.G.

26.6%

~~TOGA~~

FLEX

~~DRT~~
NOTE :
F/PLN :

LFBO 15 R

RADAR VECTORS - AGN

LMG - MORIK - AMB

Via EPR

LFPO ILS 26

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE NORMAL COURSE SYLLABI	2.02.04 Page 6A
		REV 24 JUN 2001

N1 FBS SESSION GUIDE

01 - SESSION OBJECTIVE

- Introduce and practice Normal operation and procedures

02 - TRAINING TOPICS

A. REVIEW

- Transit cockpit preparation
- Normal take off
- ILS approach
- CRM : During debriefings, the instructor will take advantage of all opportunities and session events to review the CRM principles using the CRM modules.

B. INTRODUCE

- Autotrim and stability
- Go around (FD Auto restoration)
- Use of FPV / FPD
- Auto thrust logic
- LOC approach (for FPV/FPD use only)

03 - SESSION PROFICIENCY CRITERIA

- Ability to perform :
 - Transit cockpit preparation
 - Normal take off procedure
 - Standard ILS approach
- Understanding of FPV/FPD utilization and Go around procedure.

INSTRUCTOR ONLY

INSTRUCTOR ONLY

N1 FBS SESSION GUIDE (END)

04 - SESSION GUIDE

- **5, 20** : This is a demo of how to handle a fly by wire aircraft. No need to spend too much time as it will be reviewed during the FFS sessions.
 1. Increase speed from 250 kt to 300 kt in level flight.
 - Demonstrate short term stability through auto trim function with side stick released (1g flight path is kept)
 - Explain how to use the speed trend arrow
 2. Reduce speed to 250 kt with pitch set to 5° nose up
 - Emphasize the stability demo
 3. Demonstrate roll stability :
 - Adjust 25° bank angle and release side stick (1g flight path)
 - Reduce speed to green dot
 - Point out that rudder input is not needed for turn coordination
- **6** : Demonstrate auto thrust engagement and disconnection procedures. Point out N1 rated limits.
Demonstrate how to increase thrust if necessary when ATHR is engaged by moving the thrust levers beyond climb detent. Point out and explain various FMA / ECAM messages.
- **8, 22** : This approach can be flown with AP or manually, at trainee's discretion.
- **11, 25** : No FDs, FPV ON
Demonstrate the relationship between attitude and flight path angle
Demonstrate the effect of varying crosswind with respect to HDG and TRK.
- **12, 26** : Normal ILS – FDs ON / AP ON / ATHR ON (Stabilized Approach).
G/S interception at 3000 ft for following DEMO:
Freeze position and altitude when stabilized on approach path.
No wind / FDs OFF / FPV ON – Observe FPV is centred and points to the current FPA.
Set wind 100°/15 kt. Point out the new HDG to maintain the localizer. Observe the FPV offset.
Set wind 190°/15 kt. Repeat previous DEMO.
Explain technique for raw data ILS corrections.
Release SIM to continue the raw data ILS approach.
- **13, 27** : Point out the auto reengagement of FDs
- **15, 29** : The instructor gives TRACK and ALT changes for practice of FPD.
- **16, 30** : The purpose of this approach is not to study the non precision approach but to train the crew for use of FPV/FPD and approaches, which are TRK/FPA referenced.

N2 FBS TAKE-OFF DATA
INIT PAGE

CO RTE

N2 FBS

ALTN/CO RTE

FLT NBR

[Airline ID] 202

LAT

4338.1N

COST INDEX

30

CRZ FL/TEMP

FL 310 / -47°C

FROM TO

LFBO/LFPO

LONG

00122.1E

TROPO

36 090

TRIP DIST

372 NM

CRZ WIND

260°/30 kt

ALTN

LFPG

ALTN DIST

80 NM

FLT to ALTN

FL 100

ATIS

RWY 15 R

WIND 220°/8 kt

VISI 2 km

CEILING OVC 400 ft

TEMP 20°C

DEW POINT . 10°C

QNH 1010 hPa/29.82 inHg

QFE 992 hPa/29.29 inHg

RWY COND.. DRY

Observations. : AIR COND ON

INIT NEXT PAGE

ZFCG/ZFW

36.2% - 55 t

36.2% - 121 000 lb

BLOCK

9 t

19 800 lb

PERF PAGE

IAE

CFM

V1

VR

V2

FLEX

DRT

T/O FLAPS

3

T/O C.G.

33.5%

TOGA

FLEX

DRT

NOTE :
F/PLN :

LFBO 15 R

SID FISTO

LMG - MORIK - AMB

Via EPR

LFPO ILS 26

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE NORMAL COURSE SYLLABI	2.02.04 Page 6A REV 24 JUN 2001
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N2 FBS SESSION GUIDE

01 - SESSION OBJECTIVE

- Introduction to various non precision approaches

02 - TRAINING TOPICS

A. REVIEW

- FPV / FPD
- CRM : During debriefings, the instructor will take advantage of all opportunities and session events to review the CRM principles using the CRM modules.

B. INTRODUCE

- Manual engine start
- Side stick priority
- Non precision approaches
- Crew incapacitation

03 - SESSION PROFICIENCY CRITERIA

- Understand and apply non precision approach procedures
- Proper use of automation

INSTRUCTOR ONLY

INSTRUCTOR ONLY

N2 FBS SESSION GUIDE (END)

04 - SESSION GUIDE

- **4** : Starting at the same time, T1 full left and T2 full right side stick application. Observe the geometric summarization of the inputs (ailerons neutral and no spoiler extension). T2 applies a small side stick input and keeps. T1 takes over for a couple of seconds and releases. Point out side stick priority visual and audio warnings. T1 is flying and T2 takes over by holding the take over p/b for over 40 seconds. Observe locking out the offside side stick.
- **6, 16** : NDB approach (not in data base) in selected guidance using TRK/FPA. Approach to be started from the holding pattern with no radar assistance in respect to subsequent altitude constraints.
- **9** : VOR approach in selected mode, using TRK / FPA mode.
- **12, 22** : VOR approach in managed mode using HDG / VS mode. Demonstrate DECEL point.
- **19** : VOR approach in managed mode, using TRK/FPA.

INSTRUCTOR ONLY

INSTRUCTOR ONLY

N3 FFS TAKE-OFF DATA
INIT PAGE

CO RTE

N3FFS

ALTN/CO RTE

FLT NBR

[Airline ID] 203

LAT

4338.1N

COST INDEX

30

CRZ FL/TEMP

5000 ft / 9°C

FROM TO

LFBO/LFBO

LONG

00122.1E

TROPO

36 090

TRIP DIST

LOCAL

CRZ WIND

240°/25 kt

ALTN

LFBT

ALTN DIST

70 NM

FLT to ALTN

FL 80

ATIS

RWY 33 L

WIND 300°/12 kt

VISI 10 km

CEILING OVC 3000 ft

TEMP 20°C

DEW POINT . 10°C

QNH 1015 hPa/29.97 inHg

QFE 997 hPa/29.44 inHg

RWY COND.. DRY

Observations. : AIR COND ON

INIT NEXT PAGE

ZFCG/ZFW

28.4% - 48 t

28.4% - 105 600 lb

BLOCK

10 t

22 000 lb

PERF PAGE

IAE

CFM

V1

VR

V2

FLEX

DRT

T/O FLAPS

1 + F

T/O C.G.

26.6%

TOGA

FLEX

DRT

NOTE :
F/PLN :

LFBO 33 L - RADAR VECTORS

ILS 33 L

MALFUNC REF	- N3 FFS - Normal law - Handling characteristics									
	TRAINEE 1									
	INIT T/O									
	■ 1 - TRANSIT COCKPIT PREPARATION									
	2 - TAXI OUT									
	■ 3 - TAKE-OFF - FLAP AUTO RETRACTION (DEMO)									
						FD	ATHR			
	■ 4 - CLIMB - TCAS EVENT									
			AP		FD	ATHR				
	■ 5 - STUDY OF NORMAL LAW									
								FPV		
	6 - RADAR VECTORS									
					FD					
	7 - ILS APPROACH									
					FD					
	8 - LANDING									
	INIT T/O									
	9 - TAKE-OFF									
					FD	ATHR				
	10 - VISUAL PATTERN									
						ATHR	FPV			
	■ 11 - REJECTED LANDING AT 30 FT									
					FD	ATHR				
	12 - VISUAL PATTERN									
							FPV			
	■ 13 - LOW ENERGY WARNING (DEMO)									
	■ 14 - LANDING (SIDESTEP)									
	INIT T/O									
	15 - TAKE-OFF									
					FD	ATHR				
	16 - RADAR VECTORS									
			AP		FD	ATHR				
	■ 17 - NON PRECISION APPROACH									
			AP			ATHR	FPV	FPD		
	18 - LANDING									
	19 - 180° TURN ON RUNWAY									
	IF 2 CAPTAIN CREW OR 2 FIRST OFFICER CREW : CHANGE SEATS BEFORE BEGINNING THE "TRAINEE 2" STAGE									
	TRAINEE 2									
	INIT T/O									
	■ 20 - TAKE-OFF - ALPHA LOCK (DEMO)									
					FD	ATHR				
	21 - RADAR VECTORS									
			AP		FD	ATHR				
	22 - ILS APPROACH									
					FD					
	23 - LANDING									
	INIT T/O									
	24 - TAKE-OFF									
					FD	ATHR				
	25 - VISUAL PATTERN									
						ATHR	FPV			
	■ 26 - REJECTED LANDING AT 30 FT									
					FD	ATHR				
	27 - VISUAL PATTERN									
							FPV			
	■ 28 - LOW ENERGY WARNING									
							FPV			
	■ 29 - LANDING (SIDESTEP)									
	INIT T/O									
	30 - TAKE-OFF									
					FD	ATHR				
	31 - RADAR VECTORS									
			AP		FD	ATHR				
	■ 32 - NON PRECISION APPROACH									
			AP			ATHR	FPV	FPD		
	33 - LANDING									
	34 - 180° TURN ON RUNWAY									
	IF TIME PERMITS									
	35 - TAKE-OFF									
	36 - VISUAL PATTERN									

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE NORMAL COURSE SYLLABI	2.02.04 Page 10A REV 24 JUN 2001
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N3 FFS SESSION GUIDE

01 - SESSION OBJECTIVE

- Introduction to the normal law protection
- Introduction to aircraft handling characteristics

02 - TRAINING TOPICS

A. REVIEW

- ILS and non precision approaches
- CRM : During debriefings, the instructor will take advantage of all opportunities and session events to review the CRM principles using the CRM modules.

B. INTRODUCE

- Simulator and safety installation
- Flap autoretraction and Flap load relief functions
- Normal law - protections
- Low energy warning
- Slats / Alpha speed lock function
- Visual pattern - Rejected landing and landing from visual
- 180° turn on runway
- TCAS monitoring (TA, RA, preventive, corrective)

03 - SESSION PROFICIENCY CRITERIA

- Understanding of normal law protections and Flaps/Slats protection functions
- Ability to perform :
- Standard ILS approach within tolerances (SOPs)
- Standard non precision approach
- Ability to apply correct landing technique.

INSTRUCTOR ONLY

INSTRUCTOR ONLY

N3 FFS SESSION GUIDE (CONT'D)

04 - SESSION GUIDE

- **1** : If proficiency in performing the cockpit preparation is acquired, the instructor should encourage the crew to save time during preparation in order to increase the flight part.
- **3** : Do not retract the flaps until the flap autoretraction occurs (200 kt)
- **4** : TCAS event (TA)
- **5** : Accelerate to and stabilize at 300 kt. Mention the normal law symbols.
ROLL protection :
 Stability in roll to 33° bank. Bank > 33° – positive spiral stability active.
 No pitch trim, lateral and aft side stick application necessary.
 Max bank angle limit 67° (equal to 2.5 g – observe load factor display).
PITCH protection :
 30° nose up, reduced to 25° at low speed.
 15° nose down.
HIGH SPEED protection : (VMO demo only)
 Overspeed warning at VMO + 4 kt (mention symbols).
 Level flight, no bank, stick free high speed upset – VMO + 6 kt protection active. Apply full forward side stick. Protection overrides the side stick input. Pitch trim frozen.
 Side stick forward high speed upset – VMO + certain value will be achieved. Release side stick. Pitch is set to reduce to VMO.
 Bank angle is limited to 45° with protection active. No AP available. Speed brake is available. Warning cannot be cancelled with master warning p/b.
 Positive spiral stability introduced at wings level when protection active.
HIGH AOA protection : (protection has priority)
 V α prot – AOA protection active (Bank angle limited to 45° - AP lost – pitch trim frozen – Speed brakes inhibited).
 α floor – ATHR mode – mention FMA (A.FLOOR versus TOGA LK).
 V α max (ATHR disconnected).
 Accelerate to Green Dot speed. CFIT escape manoeuvre demo.
 Demonstrate that the a/c is fully protected in case of emergency pull up (shallow descent, full aft stick and roll as to simulate intruder or terrain obstacle avoidance).
- **11, 26** : Perform the go around at low altitude (30 ft - JAR requirement).
 Demonstrate the need for increased back pressure on the side stick to achieve the required pitch attitude (flare law).
- **13, 28** : Extend downwind, set CONF 2 (ATHR OFF) and demonstrate the low energy warning (SPEED SPEED SPEED) by turning to base leg with nose up.
- **14, 29** : When final turn complete, ATC orders a runway change.
 "Cleared to land on RWY 15 L (33R) . Aircraft must be stabilized at 500 ft AGL.
- **17, 32** : VOR or NDB approach, managed or selected at instructor's discretion.

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE NORMAL COURSE SYLLABI	2.02.04 Page 10C
		REV 24 JUN 2001

N3 FFS SESSION GUIDE (END)

04 - SESSION GUIDE (END)

- 20 : At ACC ALT, adjust pitch + 20°.
When speed = 148 kt, retract Flaps to 0 and observe "Alpha Lock" on indicator.
Resume normal pitch and accelerate.
Observe Slats retraction when inhibition is removed.

INSTRUCTOR ONLY

INSTRUCTOR ONLY

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INSTRUCTOR ONLY

INSTRUCTOR ONLY

N4 FFS TAKE-OFF DATA
INIT PAGE

CO RTE

N4FFS

ALTN/CO RTE

FLT NBR

[Airline ID] 204

LAT

4338.1N

COST INDEX

30

CRZ FL/TEMP

FL 350 / -51°C

FROM TO

LFBO/EGLL

LONG

00122.1E

TROPO

36 090

TRIP DIST

519 NM

CRZ WIND

090°/35 kt

ALTN

EINN

ALTN DIST

330 NM

FLT to ALTN

310

ATIS

RWY 15 R

WIND 060°/10 kt

VISI CAVOK

CEILING

TEMP 14°C

DEW POINT . 10°C

QNH 1003 hPa/29.62 inHg

QFE 985 hPa/29.08 inHg

RWY COND.. DRY

Observations. : AIR COND ON

INIT NEXT PAGE

ZFCG/ZFW

39% - 55 t

39% - 121 000 lb

BLOCK

18.5 t

40 700 lb

PERF PAGE

IAE

CFM

V1

VR

V2

FLEX

DRT

T/O FLAPS

1 + F

T/O C.G.

33.5%

TOGA

FLEX

DRT

NOTE :
F/PLN :

LFBO 15 R

SID FISTO - LMG

UG21 - MOU - AVLON

UM976 - BRY

UM733 - GURLU

STAR BIG

EGLL ILS 27

MALFUNC REF	- N4 FFS - Overweight - GPWS - Circling									
	TRAINEE 2									
	INIT T/O									
	1 - TRANSIT COCKPIT PREPARATION (APU INOP)									
	2 - ENGINE START - (EXTERNAL/CROSSBLEED)									
	3 - TAXI OUT									
	4 - TAKE-OFF - MTOW - SID									
	5 - CLIMB - TCAS EVENT (PREVENTIVE)									
	6 - RETURN TO DEPARTURE									
	7 - VISUAL APPROACH									
	8 - OVERWEIGHT LANDING									
	INIT APP 2									
	9 - ILS APPROACH - G/S INTERCEPTION FROM ABOVE									
	10 - LANDING									
	INIT APP 2									
	11 - ILS APPROACH									
	12 - GPWS PULL UP (DEMO)									
	13 - GO AROUND - RADAR VECTORS									
	14 - ILS APPROACH									
	15 - CIRCLING									
	16 - LANDING									
	IF 2 CAPTAIN CREW OR 2 FIRST OFFICER CREW : CHANGE SEATS BEFORE BEGINNING THE "TRAINEE 1" STAGE									
	TRAINEE 1									
	17 - TAKE-OFF - MTOW - SID									
	18 - CLIMB - TCAS EVENT (CORRECTIVE)									
	19 - RETURN TO DEPARTURE									
	20 - VISUAL APPROACH									
	21 - OVERWEIGHT LANDING									
	INIT APP 2									
	22 - ILS APPROACH - G/S INTERCEPTION FROM ABOVE									
	23 - LANDING									
	INIT APP 2									
	24 - ILS APPROACH									
	25 - GPWS PULL UP (DEMO)									
	26 - GO AROUND - RADAR VECTORS									
	27 - ILS APPROACH									
	28 - CIRCLING									
	29 - LANDING									
	IF TIME PERMITS :									
	INIT T/O									
	30 - TAKE-OFF									
	31 - VISUAL PATTERN									
	32 - LANDING									

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE NORMAL COURSE SYLLABI	2.02.04 Page 12A REV 24 JUN 2001
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N4 FFS SESSION GUIDE

01 - SESSION OBJECTIVE

- Maximum weight operations
- CFIT : reactions to GPWS warnings
- Circling

02 - TRAINING TOPICS

A. REVIEW

- ILS approach
- CRM : During debriefings, the instructor will take advantage of all opportunities and session events to review the CRM principles using the CRM modules.

B. INTRODUCE

- Engine start with external pneumatics and crossbleed
- MTOW - Packs off take-off
- Crosswind take off
- Overweight landing
- G/S interception from above
- GPWS recovery maneuver
- Circling approach

03 - SESSION PROFICIENCY CRITERIA

- Confirm ability to perform the standard ILS approach
- Understand and apply circling approach procedure.
- Ability to apply GPWS recovery maneuvers
- Ability to perform :
 - Landings
 - Go around
- Confirm ability to handle the aircraft in normal operations

INSTRUCTOR ONLY

INSTRUCTOR ONLY

N4 FFS SESSION GUIDE (END)

04 - SESSION GUIDE

- 1 : APU is temporary inoperative. Instructor should authorize the crew for aircraft dispatch.
- 5 : During initial climb out, a RA (preventive action – “Monitor Vertical Speed”) should be activated. Resume normal navigation after “Clear of Conflict”.
- 6, 19 : The instructor should advise the crew that a passenger is suffering from a heart attack and a landing must be made as soon as possible to save his live.
- Init
APP 2 : Change weather : Ceiling OVC 1000 ft and visibility 8 km.
Insert GW 58 t (48/10) – CG 27 % - Table speed calculated for Flaps 2.
- 9, 22 : Stabilized approach technique should be used. A/c configured for landing and VAPP established prior to commencing exercise. Apply the normal procedure for G/S interception from above.
- 11, 24 : ATC clears to intercept the localizer (helicopter traffic ahead) and to maintain altitude.
At 2 dots above G/S : “Cleared for approach”
For demonstration :
 - Start descent at 2000 ft/mn (mandatory). Maintain 2000 ft/mn during exercise
 - Do not arm approach mode
 - Observe successively GPWS “glide slope”, “sink rate”, “whoop whoop pull up” warnings.
 - At whoop whoop pull up, override the AP and execute an emergency pull up
- 12, 25 : When 2 dots above G/S “Nr.1 - cleared for approach”.
For demonstration purpose start descent with V/S 2000 ft/mn (ROD is mandatory for generating the pull up warning). Approach modes should not be armed. Keep LOC engaged.
The subsequent GPWS warnings should be monitored and clearly be understood (GLIDE SLOPE at 1000 ft RA, SINK RATE at about 700 ft RA and WHOOP – WHOOP PULL UP at about 300 ft RA).
When pull up warning occurs, an emergency pull up should be executed (override the AP for demonstration purposes).
- 13, 26 : The trainee will prepare and brief the circling approach (including the SEC FPLN preparation) during the radar vectoring.
- 18 : During initial climb out, a RA (corrective action – “Climb, Climb now”) should be activated. Resume normal navigation after “Clear of Conflict”.
- 28 : Change wind 260°/10 kt

N5 FFS TAKE-OFF DATA
INIT PAGE

CO RTE

ALTN/CO RTE

FLT NBR

[Airline ID] 205

LAT

4449.7N

COST INDEX

30

CRZ FL/TEMP

FL 130 / -7°C

FROM TO

LFBD/LFBO

LONG

00042.9W

TROPO

36 090

TRIP DIST

159 NM

CRZ WIND

350°/25 kt

ALTN

LFBD

ALTN DIST

161 NM

FLT to ALTN

FL 140

ATIS

RWY 23

WIND 290°/12 kt

VISI 6 km

CEILING OVC 1000 ft

TEMP 4°C

DEW POINT . 1°C

QNH 1008 hPa/29.77 inHg

QFE 1003 hPa/29.62 inHg

RWY COND.. DRY

Observations. : AIR COND ON

Turbulence 15%

INIT NEXT PAGE

ZFCG/ZFW

28.2% - 55 t

28.2% - 121 000 lb

BLOCK

9 t

19 800 lb

PERF PAGE

IAE

CFM

V1

VR

V2

FLEX

DRT

T/O FLAPS

2

T/O C.G.

26.6%

~~TOGA~~

FLEX

~~DRT~~
NOTE :
F/PLN :

LFBD 23

SID SAU

AGN

TOE

LFBO 33 L

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE NORMAL COURSE SYLLABI	2.02.04 Page 14 REV 24 JUN 2001
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MALFUNC REF	- N5 FFS - Windshear - Reversion modes - ECAM procedure review									
PROGRESS CHECK										
	TRAINEE 1									
	INIT T/O									
	1 - TRANSIT COCKPIT PREPARATION									
	2 - ENGINE START									
	3 - TAXI OUT									
	4 - TAKE-OFF (SID)									
	5 - RETURN TO HOLD									
	6 - NON PRECISION APPROACH									
	7 - GO AROUND									
	8 - RADAR VECTORS									
	9 - ILS APPROACH									
	10 - LANDING									
	IF 2 CAPTAIN CREW OR 2 FIRST OFFICER CREW : CHANGE SEATS BEFORE BEGINNING THE "TRAINEE 2" STAGE									
	TRAINEE 2									
	INIT T/O									
	11 - TAKE-OFF (SID)									
	12 - DIRECT TO / HOLD									
	13 - NON PRECISION APPROACH									
	14 - GO AROUND									
	15 - RADAR VECTORS									
	16 - ILS APPROACH									
	17 - LANDING									
TRAINING										
	INIT T/O									
	18 - TAKE-OFF - WINDSHEAR AFTER VR									
	19 - RADAR VECTORS									
	20 - ILS APPROACH - WINDSHEAR									
	21 - GO AROUND									
	22 - REVERSION MODES (DEMO)									
	IF 2 CAPTAIN CREW OR 2 FIRST OFFICER CREW : CHANGE SEATS BEFORE BEGINNING THE "TRAINEE 1" STAGE									
	TRAINEE 1									
	INIT T/O									
	23 - TAKE-OFF - WINDSHEAR AFTER VR									
	24 - RADAR VECTORS									
	25 - ILS APPROACH - WINDSHEAR									
	26 - GO AROUND - Restore									
	27 - ECAM PROCEDURE AND TASK SHARING REVIEW									
	IF TIME PERMITS :									
	28 - RADAR VECTORS (VISUAL FINAL)									
	29 - LANDING									

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE NORMAL COURSE SYLLABI	2.02.04 Page 14A REV 24 JUN 2001
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N5 FFS SESSION GUIDE

01 - SESSION OBJECTIVE

- Progress check of the trainee's ability to handle the aircraft in normal operations according to standard requirements.

02 - TRAINING TOPICS

A. REVIEW

- Normal operations as defined in SOPs
- Normal progress check :
The first part of this session is regarded as a gate. Trainees only progress to the failure phase on satisfactory completion of this section. The instructor acts as ATC, ground engineer and cabin crew but should not instruct during the flight.
Each pilot must demonstrate his ability to perform all normal procedures and maneuvers in accordance with SOPs.
Crew co-operation, understanding of aircraft systems and accurate flying should be assessed.
The crew should fly the aircraft safely and without help.
When the normal progress check is completed, the instructor should resume his/her instructional role.
- ECAM procedure and task sharing before entering the abnormal phase.
- CRM : During debriefings, the instructor will take advantage of all opportunities and session events to review the CRM principles using the CRM modules.

B. INTRODUCE

- Windshear
- Reversion modes

03 - SESSION PROFICIENCY CRITERIA

- SOP assess :
 - Task sharing
 - Call outs
 - Briefings
 - Situational awareness
 - PF/PNF work
 - Decision making
- Handling ; flight within the below listed criteria should not be achieved at the expense of smoothness and good coordination :
 - Speed : + 10 kt / -5 kt
 - Heading : +/- 5°
 - Tracking : +/- 5°
 - Altitude : +/- 50 ft

All phases must be handled safely
- IFR : strict respect of minimum altitudes and clearances

INSTRUCTOR ONLY

INSTRUCTOR ONLY

N5 FFS SESSION GUIDE (END)

04 - SESSION GUIDE

- 5 : "On company request, return to departure".
- 6, 13 : Non precision approach from data base (VOR approach)
The instructor should advise crew that radar has momentarily failed requiring a procedural approach, managed or selected, depending on APPR availability in database.
- 7, 14 : ATC orders a go around at 300 ft passing.
- 9, 16 : Fail the autopilot prior to starting the approach.
- 12 : 2 possible scenarii :
- 1 ---> return to departure and HOLD
- 2 ---> fly to LFBO (DIR TO AGN)
- Init T/O : The predictive Windshear System (PWS) should be set to OFF for the training part of the session if applicable.
- 22 : Climb to 5000 ft. Adjust green dot speed.
Select CONF 1 and decelerate to S speed.
Select higher altitude and engage THR CLB - OP CLB. Do not follow the FD bars and produce a speed trend of approx. 10 kt with pitch.
Observe at VMAX + 4 kt : FDs are removed. ATHR reverts to SPEED mode and is set to regain the target speed.
Decelerate to S speed and engage the FDs.
Select lower altitude and engage THR IDLE - OP DES. Do not follow the FD bars and produce a speed trend of approx. 10 kt with pitch.
Observe at VLS – 2 kt (VLS – 17 kt with SBs) : FD bars are removed, ATHR reverts to SPEED mode and is set to regain target speed.
Restore FDs and clean up prior to continue.
- 27 : Depending on time remaining and as an introduction to the next phase of training, fail an engine and review the ECAM procedure and task sharing.

INSTRUCTOR ONLY

INSTRUCTOR ONLY

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE ABNORMAL/EMERGENCY COURSE SYLLABI	2.02.05 Page 1 REV 24 JUN 2001
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F1 FBS syllabus Page 3

F2 FBS syllabus Page 5

F3 FFS syllabus Page 7

F4 FFS syllabus Page 9

F5 FFS syllabus Page 11

NOTE : *Instructors' FCTM includes the "Session Guides"*

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE ABNORMAL/EMERGENCY COURSE SYLLABI	2.02.05	Page 2
		REV 21	MAY 98

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AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE ABNORMAL/EMERGENCY COURSE SYLLABI	2.02.05 Page 3 REV 24 JUN 2001
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F1 FBS TAKE-OFF DATA			
INIT PAGE CO RTE ALTN/CO RTE FLT NBR [Airline ID] 301 LAT 4338.1N COST INDEX 30 CRZ FL/TEMP FL 310/-47°C FROM TO LFBO/LFPO LONG 00122.1E TROPO 36 090			

MALFUNC REF	- F1 FBS - <i>Engine out operation - Engine relight - Emergency descent</i>						
	TRAINEE 2						
	INIT T/O						
	1 - TRANSIT COCKPIT PREPARATION						
	2 - ENGINE START- START VALVE FAULT						
	3 - START VALVE MANUAL OPERATION						
	4 - TAKE-OFF - POSITION AND ALTITUDE FREEZE						
	5 - ENGINE OUT FAMILIARIZATION						
	INIT T/O						
	6 - TAKE-OFF - ENGINE FAIL AT 100 FT						
	7 - CLEAN UP - Restore						
	INIT T/O						
	8 - TAKE-OFF - ENGINE FAIL AT V2 (DAMAGE)						
	9 - RADAR VECTORS						
	10 - ILS APPROACH - 1 ENGINE OUT						
	11 - GO AROUND - 1 ENGINE OUT - Restore						
	INIT FL 350						
	12 - EMER DESCENT HIGH SPEED - FREEZE AT FL 200						
	INIT FL 350						
	13 - EMER DESCENT LOW SPEED - FREEZE AT FL 100						
	IF 2 CAPTAIN CREW OR 2 FIRST OFFICER CREW : CHANGE SEATS BEFORE BEGINNING THE "TRAINEE 1" STAGE						
	TRAINEE 1						
	INIT T/O						
	14 - TAKE-OFF - ENGINE FAIL AT 100 FT						
	15 - CLEAN UP - Restore						
	INIT T/O						
	16 - TAKE-OFF - ENGINE FAIL AT V2 (NO DAMAGE)						
	17 - ENGINE RELIGHT						
	18 - RADAR VECTORS						
	19 - ILS APPROACH - 1 ENGINE OUT						
	20 - GO AROUND - 1 ENGINE OUT - Restore						
	INIT FL 350						
	21 - ENGINE FAIL						
	22 - DRIFT DOWN (DEMO) - STANDARD OR OBSTACLE STRATEGY						
	23 - SECOND ENGINE FAILURE						
	24 - ENGINE RELIGHT - Restore						
	INIT FL 350						
	25 - EMER DESCENT HIGH SPEED - FREEZE AT FL 200						
	INIT FL 350						
	26 - EMER DESCENT LOW SPEED - FREEZE AT FL 100						
	IF TIME PERMITS :						
	INIT FL 350						
	27 - EMER DESCENT - FREEZE AT FL 200						

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE ABNORMAL/EMERGENCY COURSE SYLLABI	2.02.05 Page 4A
		REV 24 JUN 2001

F1 FBS SESSION GUIDE

01 - SESSION OBJECTIVE

- Introduce and practice engine failure at take off, engine out operation and drift down strategy, emergency descent entry technique.

02 - TRAINING TOPICS

A. REVIEW

- Use of QRH

B. INTRODUCE

- Start valve manual operation
- Engine failure
- Engine relight
- All engine flame out (drift down strategies)
- Emergency descent
- CRM : During debriefings, the instructor will take advantage of all opportunities and session events to review the CRM principles using the CRM modules.

03 - SESSION PROFICIENCY CRITERIA

- Understand and apply :
 - Engine failure at take off procedure
 - Engine out approach and go around
 - Emergency descent procedure and entry technique
- Understand and apply the drift down procedures and strategies.
- Ability to apply ECAM / QRH procedures

INSTRUCTOR ONLY

INSTRUCTOR ONLY

F1 FBS SESSION GUIDE (END)

04 - SESSION GUIDE

- **2** : Insert START VALVE FAULT before engine start for manual start valve paper C/L.
On order "open the valve and keep open" cancel the malfunction and reinsert after the valve is open.
On order "close the valve" cancel the malfunction.
- **5** : Freeze POS and ALT at 500 ft after T/O.
SRS commands satisfied, wings level, side stick released, feet off rudder pedals.
Select ECAM F/CTL page. Select IDLE thrust on one engine.
Adjust pitch attitude to that required by SRS.
Observe: Hands off response of FBW system - stabilized bank angle (7–9° bank), spoilers and ailerons deployed, rudder pedals feedback, flying the pitch as adjusted before.
Side slip index is blue now and represents the BETA TARGET.
Fly the aircraft now. Use continuous rudder input to centering the BETA TARGET. Trim out the foot load and observe the flight control's status on F/CTL page. Repeat the last until satisfied and clearly understood.
Transfer the controls to Trainee 1 and repeat exercises.
- **6, 14** : Insert engine stall at 50 ft and flame out 100 ft for no relight attempt.
- **7, 15** : Restore when "After take off check list" completed.
- **8** : An engine damage should clearly be identifiable in order to avoid a relight attempt (matter of session time frame).
- **13, 26** : Freeze not before reaching FL 100 for training of level off procedure in emergency descent, unwearing the oxygen mask and microphone reset.
- **17** : Relight attempt is unsuccessful.
- **21, 23** : Fail one engine (no damage). The correct drift down procedures should be applied .
When established in descent and procedure completed, fail the 2nd engine (no damage) .
Encourage APU start when passing FL 250. Keep both malfunctions active until FL 200 in order to force the APU bleed start procedure as per ECAM.
- **22** : Use appropriate strategy as defined in FCOM VOL 3 chapter 06
- **24** : Reset EMER GEN and restore normal operations.

INSTRUCTOR ONLY

INSTRUCTOR ONLY

F2 FBS TAKE-OFF DATA
INIT PAGE

CO RTE

F2FBS

ALTN/CO RTE

FLT NBR

[Airline ID 302]

LAT

4338.1N

COST INDEX

30

CRZ FL/TEMP

FL 310 /- 47°C

FROM TO

LFBO/LFPO

LONG

00122.1E

TROPO

36 090

TRIP DIST

345 NM

CRZ WIND

250°/30 kt

ALTN

LFPG

ALTN DIST

80 NM

FLT to ALTN

FL 100

ATIS

RWY 33 L

WIND 280°/10 kt

VISI CAVOK

CEILING

TEMP 8°C

DEW POINT . 2°C

QNH 1010 hPa/29.83 inHg

QFE 992 hPa/29.29 inHg

RWY COND.. DRY

Observations. : AIR COND ON

INIT NEXT PAGE

ZFCG/ZFW

30.2% - 48 t

30.2% - 105 600 lb

BLOCK

12 t

26 400 lb

PERF PAGE

IAE

CFM

V1

VR

V2

FLEX

DRT

T/O FLAPS

2

T/O C.G.

26.6%

~~TOGA~~

FLEX

~~DRT~~
NOTE :
F/PLN :

LFBO 33 L

SID FISTO

LMG - MORIK - AMB

STAR AMB

LFPO ILS 26

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE ABNORMAL/EMERGENCY COURSE SYLLABI	2.02.05 Page 6 REV 24 JUN 2001
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MALFUNC REF	- F2 FBS - Alternate law - Dual hydraulic failure - Smoke									
	TRAINEE 1									
	INIT T/O									
	1 - TRANSIT COCKPIT PREPARATION									
	■ 2 - ENGINE START - EGT OVERLIMIT - Restore									
	3 - TAXI OUT									
	■ 4 - TAKE-OFF - NAV ADR 1 FAULT - (SID)									
						FD	ATHR			
	■ 5 - CLIMB - NAV ADR 2 FAULT									
								FPV		
	■ 6 - F/CTL ALTERNATE LAW (DEMO) - Restore									
								FPV		
	7 - DIRECT TO WPT - HOLDING									
					AP	FD	ATHR			
	INIT T/O									
	■ 8 - HYD G + B SYS LO PR									
						FD	ATHR			
	9 - ILS APPROACH - NO SLATS									
						FD	ATHR			
	10 - GO AROUND - FREEZE - Restore									
	INIT FL 350									
	■ 11 - EMER DESCENT - Restore at FL 100									
					AP	FD	ATHR			
	12 - RADAR VECTORS									
	■ 13 - EMER ELEC CONFIG									
								FPV		
	14 - ILS APPROACH - DIRECT LAW - RAW DATA									
	15 - GO AROUND - FREEZE - Restore									
	TRAINEE 2									
	INIT T/O									
	IF 2 CAPTAIN CREW OR 2 FIRST OFFICER CREW : CHANGE SEATS BEFORE BEGINNING THE "TRAINEE 2" STAGE									
	16 - TAKE-OFF - SID									
						FD	ATHR			
	17 - DIRECT TO WPT - HOLDING									
	■ 18 - HYD G + Y SYS LO PR									
						FD	ATHR			
	19 - ILS APPROACH - NO FLAPS									
						FD	ATHR			
	20 - GO AROUND - FREEZE - Restore									
	INIT FL 350									
	■ 21 - SMOKE / TOXIC FUMES									
					AP	FD	ATHR			
	22 - EMER DESCENT									
					AP	FD	ATHR			
	23 - SMOKE / TOXIC FUMES REMOVAL - Restore									
	: IF TIME PERMITS									
	24 - RADAR VECTORS									
					AP	FD	ATHR			
	■ 25 - ILS APPROACH - RAW DATA									
								FPV		
	IF 2 CAPTAIN CREW OR 2 FIRST OFFICER CREW :									
	26 - ELEC EMER CONFIG									
	27 - ILS APPROACH - RAW DATA									
								FPV		

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE ABNORMAL/EMERGENCY COURSE SYLLABI	2.02.05 Page 6A
		REV 24 JUN 2001

F2 FBS SESSION GUIDE

01 - SESSION OBJECTIVE

- Introduce and practice operations in alternate and direct laws
- Practice the dual hydraulic failure
- Practice the emergency descent

02 - TRAINING TOPICS

A. REVIEW

- Emergency descent
- CRM : During debriefings, the instructor will take advantage of all opportunities and session events to review the CRM principles using the CRM modules.

B. INTRODUCE

- Engine start fault : EGT overlimit
- Alternate and direct law (Main characteristics)
- Dual hydraulic failure (including the no slats or no flaps procedure)
- Smoke removal
- Emergency electrical configuration

03 - SESSION PROFICIENCY CRITERIA

- Understand and apply :
 - Alternate and direct laws
 - Dual hydraulic failures & no slats or no flaps procedure.
- Understand the Emergency ELEC configuration
- Ability to perform emergency descent
- Ability to perform ECAM & QRH procedures.

INSTRUCTOR ONLY

INSTRUCTOR ONLY

F2 FBS SESSION GUIDE (END)

04 - SESSION GUIDE

- 2 : Demonstrate the protection in autostart. This protection is provided even in manual start on some engines.
- 4 : Fail the ADR 1 when passing 200 ft. Check transfer of controls and use of switching panel.
- 5 : Fail ADR 2 when the after take-off check list has been completed.
- 6 :
Alternate and Direct FCTL law demonstration and practice for both Trainee 1 and Trainee 2.
- Stability in pitch (pitch is alternate). Accelerate to 300 kt and observe autotrim (1g flight path).
- Roll stability is lost (roll is direct with no protection). There is no spiral stability at 33° bank. The roll rate is higher. Turn with 45° of bank and notice the conventional behaving.
Reduce speed and establish landing config. (L/G down and flaps 3). Demonstrate the switching to direct law at L/G extension and manual pitch trim use (pitch is also direct with no protection).
Transfer the controls. Use the switching panel in order to recover the PF – PFD. Repeat the demonstration starting from direct law in landing config. Clean up and demonstrate alternate law.
Too much time should not be spent for this demonstration as it will be repeated in subsequent sessions.
Restore the ADRs. Trainee 1 continues as PF.
- 8, 18 : **For Trainee 1 :**
Insert Blue reservoir LO LVL ; when status page is displayed, insert a Green reservoir LO LVL.
For Trainee 2 :
Insert Yellow reservoir OVHT ; when status page has been cleared, insert a Green reservoir LO LVL. After ECAM actions, confirm by failing the Yellow ENG PUMP in order to avoid a Yellow system restoration before the next landing.
- 11 : Select Excessive Cabin Altitude malfunction.
- 13 : The full ECAM procedure should be applied while flying the a/c. Mention the difference A320 with old and new RAT. Use of RMP 1 for Navaid tuning. The QRH should be used where it is the reference (landing distance procedure, list of remaining systems etc.). Fuel Gravity Feeding procedure should just be mentioned only.
- 21 : Smoke associated with fuel vapors should be assumed. This shall cause turning off the packs (SMOKE/TOXIC FUMES REMOVAL paper c/I), rapid descent and smoke removal procedure.
- 25 : Encourage the Trainee for raw data ILS approach for practice.

F3 FFS TAKE-OFF DATA
INIT PAGE

CO RTE

ALTN/CO RTE

FLT NBR

 [Airline ID]

LAT

 4338.1N

COST INDEX

 30

CRZ FL/TEMP

 FL 350 /-52°C

FROM TO

 LFBO/LFPO

LONG

 00122.1E

TROPO

 36 090

TRIP DIST

 372 NM

CRZ WIND

 260°/30 kt

ALTN

 EDDF

ALTN DIST

 295 NM

FLT to ALTN

 FL 310

ATIS

RWY 15 R

WIND 100°/12 kt

VISI 6 km

CEILING SCT 400 ft

TEMP 1°C

DEW POINT . -3°C

QNH 1003 hPa/29.62 inHg

QFE 985 hPa/29.08 inHg

RWY COND.. WET

Observations. : AIR COND OFF

INIT NEXT PAGE

ZFCG/ZFW

 28.8% - 54 t
 28.8% - 118 800 lb

BLOCK

 12 t
 26 400 lb

PERF PAGE

IAE

CFM

V1

VR

V2

FLEX

DRT

T/O FLAPS

 2

T/O C.G.

 27.5%

~~TOGA~~

FLEX

~~DRT~~

NOTE :
F/PLN :

LFBO 15 R

SID FISTO

LMG - MORIK - AMB

Via EPR

LFPO ILS 07

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE ABNORMAL/EMERGENCY COURSE SYLLABI	2.02.05 Page 8 REV 24 JUN 2001
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MALFUNC REF	- F3 FFS - Engine out operation - Engine relight - Overweight - No slats and no flaps									
	TRAINEE 2									
	I INIT T/O									
	■ 1 - TRANSIT COCKPIT PREPARATION									
	2 - ENGINE START									
	3 - TAKE-OFF									
						FD	ATHR			
	4 - ENGINE FAIL AT V2 (NO DAMAGE)									
						FD	ATHR			
	■ 5 - ENGINE RELIGHT									
		AP				FD	ATHR			
	■ 6 - RADAR VECTORS									
	7 - ILS APPROACH									
						FD	ATHR			
	■ 8 - GO AROUND - ENGINE FAIL (DAMAGE)									
						FD	ATHR			
	9 - RADAR VECTORS									
		AP				FD	ATHR			
	10 - ILS APPROACH - 1 ENGINE OUT									
						FD	ATHR			
	11 - LANDING - 1 ENGINE OUT (OVERWEIGHT) - Restore									
	■ INIT T/O (GW : 62 T)									
	12 - T/O (CROSSWIND) - ENG STALL AT V1 THEN ENG FAIL (300 FT)									
						FD	ATHR			
	13 - RADAR VECTORS									
		AP				FD	ATHR			
	■ 14 - NON PRECISION APPROACH - 1 ENGINE OUT									
		AP				ATHR	FPV	FPD		
	15 - LANDING (CROSSWIND) - 1 ENGINE OUT - Restore									
						ATHR	FPV			
	INIT T/O									
	■ 16 - TAKE-OFF									
						FD	ATHR			
	17 - VISUAL PATTERN									
							ATHR	FPV		
	■ 18 - VISUAL APPROACH - NO SLATS/NO FLAPS									
								FPV		
	19 - LANDING - NO SLATS/NO FLAPS - Restore									
	<i>IF 2 CAPTAIN CREW OR 2 FIRST OFFICER CREW : CHANGE SEATS BEFORE BEGINNING THE "TRAINEE 1" STAGE</i>									
	TRAINEE 1									
	■ INIT T/O (GW : 66 T)									
	20 - TAKE-OFF - ENGINE FAIL AT V2 (NO DAMAGE)									
						FD	ATHR			
	■ 21 - ENGINE RELIGHT									
		AP				FD	ATHR			
	22 - RADAR VECTORS									
	23 - ILS APPROACH									
						FD	ATHR			
	■ 24 - GO AROUND - ENGINE FAIL (DAMAGE)									
						FD	ATHR			
	25 - RADAR VECTORS									
		AP				FD	ATHR			
	26 - ILS APPROACH - 1 ENGINE OUT									
						FD	ATHR			
	27 - LANDING - 1 ENGINE OUT (OVERWEIGHT) - Restore									
	■ INIT T/O (GW : 62 T)									
	28 - TAKE-OFF - ENG STALL AT V1 (CROSSWIND) THEN ENG FAIL (300 FT)									
						FD	ATHR			
	29 - RADAR VECTORS									
		AP				FD	ATHR			
	30 - NON PRECISION APPROACH - 1 ENGINE OUT									
		AP				ATHR	FPV	FPD		
	31 - LANDING - 1 ENGINE OUT (CROSSWIND) - Restore									
						ATHR	FPV			
	INIT T/O									
	■ 32 - TAKE-OFF									
						FD	ATHR			
	33 - VISUAL PATTERN									
							ATHR	FPV		
	■ 34 - VISUAL APPROACH - NO SLATS/NO FLAPS									
								FPV		
	35 - LANDING - NO SLATS/NO FLAPS - Restore									

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE ABNORMAL/EMERGENCY COURSE SYLLABI	2.02.05 Page 8A
		REV 24 JUN 2001

F3 FFS SESSION GUIDE

01 - SESSION OBJECTIVE

- Practice engine failure at take off and go around
- Practice one engine out approaches and landings
- Introduce and practice No Slats & No Flaps approach and landing.
- React to GPWS warning (CFIT exercise)

02 - TRAINING TOPICS

A. REVIEW

- Engine failure at take off procedure
- Engine relight procedure
- ILS and Non precision approaches under engine out condition.
- CRM : During debriefings, the instructor will take advantage of all opportunities and session events to review the CRM principles using the CRM modules.

B. INTRODUCE

- Crosswind take off and landing.
- Engine out handling
- Overweight landing
- Cold weather operation
- No slats & No flaps procedure (approach and landing at high speed)

03 - SESSION PROFICIENCY CRITERIA

- Ability to handle engine failure at take off within the following parameters :
 - Runway HDG +/- 10°
 - Bank angle < 10°
 - FD bars accurately followed
- Ability to fly engine out approaches .
- Understand and perform No Slats & No Flaps approach and landing.

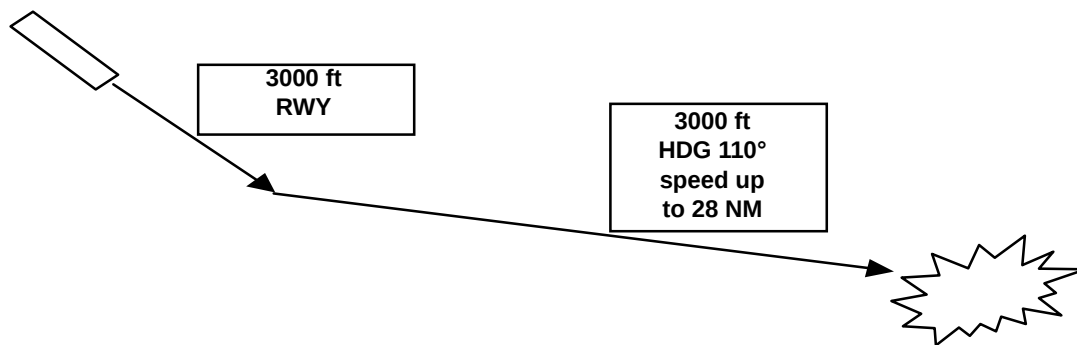
INSTRUCTOR ONLY

INSTRUCTOR ONLY

F3 FFS SESSION GUIDE (END)

04 - SESSION GUIDE

- 1 : In order to save time, transit cockpit prep should be performed at holding point 15 R
- 5, 21 : Remove malfunction before the engine relight procedure.
- 6 : **GPWS event :**
Initial climb permission to 3000 ft (MSA) for engine out acceleration.
IMC conditions (clouds from 400 ft to 6000 ft)



Runway HDG / 3000 ft until clean up then HDG 110 °. Speed up to 28 DME.
Release for normal speed then insert ELECTRONIC MOUNTAIN (GPWS p/b on instructor panel). At less than 2000 ft RA, the terrain warning occurs with "WHOOOP WHOOOP - PULL UP" shortly after.

Observe crew reactions:

- Immediate GPWS recovery
- Crew coordination (who decides the maneuver ?)
- Slow or no reaction
- If the exercise is assessed unsatisfactory, do not repeat it in the same session.

Another opportunity should be found in the next 2 sessions.

After GPWS pull up recovery, order right turn direct to TOE for ILS approach RWY 33L.

Continue with item 7 and next approach should be done on RWY 15 R.

- 8, 24 : Select CAT II weather prior to approach and insert engine failure at minimums.
- Init T/O : ■ Set wind 0 60°/25 kt prior to take-off with no gradient.
- 16, 32 : Clean up after take-off. During Flap and Slat retraction insert subsequently flaps and slats locked by WTB. Ensure the surfaces become locked close to or at retracted position.
- 18, 34 : ILS assisted. Use of autobrake
- Init t/o : Use performance data and weather parameters as for 1st take-off.

F4 FFS TAKE-OFF DATA
INIT PAGE

CO RTE

ALTN/CO RTE

FLT NBR

LAT

COST INDEX

CRZ FL/TEMP

FROM TO

LONG

TROPO

TRIP DIST

CRZ WIND

ALTN

ALTN DIST

FLT to ALTN

ATIS

RWY 33 L

WIND 270°/12 kt

VISI 10 km

CEILING BKN 2000 ft

TEMP 10°C

DEW POINT . 2°C

QNH 1005 hPa/29.68 inHg

QFE 987 hPa/29.35 inHg

RWY COND.. DRY

Observations. : AIR COND ON

Turbulence 15%

INIT NEXT PAGE

ZFCG/ZFW

BLOCK

PERF PAGE

IAE

CFM

V1

VR

V2

FLEX

DRT

T/O FLAPS

T/O C.G.

~~TOGA~~

FLEX

~~DRT~~

NOTE :
F/PLN :

LFBO 33 L

SID AFRIC

G39 to FJR

VARES

STAR VARES

LFML ILS 14 L

MALFUNC REF	- F4 FFS - <i>Alternate / Direct law - Stall recoveries - Dual hydraulic failure - Windshear</i>									
	TRAINEE 1									
	INIT T/O									
	1 - TRANSIT COCKPIT PREPARATION									
	2 - TAXI OUT									
	■ 3 - TAKE-OFF - WINDSHEAR - Restore			FD	ATHR					
	4 - CLIMB FL 80		AP	FD	ATHR					
	■ 5 - DUAL IR FAULT - ALTERNATE LAW					FPV				
	6 - STALL RECOVERY then restore ADRs									
	7 - RADAR VECTORS			FD	ATHR					
	■ 8 - VISUAL APPROACH									
	9 - LANDING - DIRECT LAW - Restore									
	INIT T/O									
	10 - TAKE-OFF			FD	ATHR					
	11 - RADAR VECTORS			FD	ATHR					
	■ 12 - HYD G + Y SYS LO PR			FD	ATHR					
	■ 13 - VISUAL APPROACH - DIRECT LAW - NO FLAPS									
	14 - LANDING - DIRECT LAW - NO FLAPS - Restore									
	IF 2 CAPTAIN CREW OR 2 FIRST OFFICER CREW : CHANGE SEATS BEFORE BEGINNING THE "TRAINEE 2" STAGE									
	TRAINEE 2									
	INIT T/O									
	15 - TAKE-OFF - ENGINE FIRE AT V2			FD	ATHR					
	16 - RADAR VECTORS		AP	FD	ATHR					
	17 - ILS APPROACH - 1 ENGINE OUT - CIRCLING			FD	ATHR					
	18 - LANDING - 1 ENGINE OUT- Restore									
	INIT T/O									
	■ 19 - TAKE-OFF - ENGINE FAIL AT V1 (DAMAGE)			FD	ATHR					
	20 - RADAR VECTORS		AP	FD	ATHR					
	21 - NON PRECISION APPROACH - 1 ENGINE OUT		AP		ATHR	FPV	FPD			
	22 - LANDING - 1 ENGINE OUT - Restore				ATHR	FPV				
	INIT FL 350									
	■ 23 - EMER DESCENT - HIGH SPEED - Restore		AP	FD	ATHR					
	INIT T/O									
	24 - TAKE- OFF - ENGINE FAIL BEFORE V1			FD	ATHR					
	25 - REJECTED TAKE-OFF - Restore									
	INIT T/O									
	■ 26 - TAKE-OFF - ENGINE FIRE BEFORE V1 - LOW VISIBILITY									
	27 - REJECTED TAKE-OFF									
	28 - ON GROUND EMER EVAC - Restore									
	IF TIME PERMITS :									
	REVIEW ITEMS AT INSTRUCTOR AND TRAINEE'S DISCRETION									

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE ABNORMAL/EMERGENCY COURSE SYLLABI	2.02.05 Page 10A
		REV 24 JUN 2001

F4 FFS SESSION GUIDE

01 - SESSION OBJECTIVE

- Demonstrate FCTL alternate and direct laws
- Practice FCTL alternate and direct law approaches
- Practice stall recoveries
- Practice rejected take off

02 - TRAINING TOPICS

A. REVIEW

- Engine out procedure and handling including fire
- Dual hydraulic failure
- Emergency descent
- Windshear
- CRM : During debriefings, the instructor will take advantage of all opportunities and session events to review the CRM principles using the CRM modules.

B. INTRODUCE

- FCTL alternate and direct law handling
- Stall recovery technique
- Rejected take off
- Engine fire
- On ground emergency evacuation

03 - SESSION PROFICIENCY CRITERIA

- Ability to :
 - perform take off with engine failure
 - handle the aircraft with one engine out during approach and handling
- Understand and perform rejected take off and emergency evacuation procedure.
- Handle the aircraft in FCTL alternate & direct laws.

INSTRUCTOR ONLY

INSTRUCTOR ONLY

F4 FFS SESSION GUIDE (END)

04 - SESSION GUIDE

- 3 : Insert windshear event after VR. Restore after recovery
- 5 : Insert NAV IR 2 FAULT. When actions completed insert IR 1 fault with pitch discrepancy. Observe the system in direct law until the faulty IR is turned off and the FCTL computers (ELACs) are recovered by reset action. Recover the PFD and ND for the PF with ATT HDG switch accordingly for all exercises.
Demonstrate FCTL alternate law :
 - Loss of protections.
 - V α floor is lost (ALPHA FLOOR function is inoperative).
 - Static stability (g-limitation – alternate high speed protection) at VMO. Pitch up order is induced at VMO in order to avoid overspeed (autotrim stops and VMO can be exceeded).
 - Static stability at low speed (VLS – alternate high AOA protection). Smooth pitch down order is induced in order to avoid speed lower than VLS (autotrim stops and the a/c can approach to stall).
 - Speed scale with VLS and VSW.
 - Audio stall and Audio overspeed warnings are available (mention the difference). Stall recovery exercises should follow for Trainee 1 and Trainee 2 (clean configuration and alternate law).
Demonstrate FCTL direct law (landing configuration) :
 - Static stability is lost.
 - Pitch control is direct.
 - Use of manual pitch trim.
 - Audio stall and Audio overspeed warnings are available.
 Stall recovery exercises for Trainee 1 and Trainee 2 should follow (landing configuration and direct law). Notice strong pitch up moment when engines are spooling up to TOGA power. Mention the correct recovery technique.
Trainee 1 resumes control to continue.
- 8, 13 : Visual final ILS assisted when no VASI or no PAPI available.
- 12 : Insert Y RSVR LO LVL. When the status page comes, insert G RSVR LO LVL in order to obtain HYD G + Y SYS LO PR.
- 19 : Weather 6 km, ceiling 800 ft prior to take-off.
- 23 : Emergency descent until oxy mask removal and micro reset.
- 26 : Set CAT II weather prior to take-off.

INSTRUCTOR ONLY

INSTRUCTOR ONLY

F5 FFS TAKE-OFF DATA
INIT PAGE

CO RTE

ALTN/CO RTE

FLT NBR

LAT

COST INDEX

CRZ FL/TEMP

FROM TO

LONG

TROPO

TRIP DIST

CRZ WIND

ALTN

ALTN DIST

FLT to ALTN

ATIS

RWY 33 L

WIND 270°/12 kt

VISI 10 km

CEILING BKN 2000 ft

TEMP 10°C

DEW POINT . 2°C

QNH 1005 hPa/29.68 inHg

QFE 987 hPa/29.35 inHg

RWY COND.. DRY

Observations. : Turbulence 15%

INIT NEXT PAGE

ZFCG/ZFW

BLOCK

PERF PAGE

IAE

CFM

V1

VR

V2

FLEX

DRT

T/O FLAPS

T/O C.G.

~~TOGA~~

NOTE :
F/PLN :

LFBO 33 L

SID AFRIC

FJR VARES

STAR VARES

LFML ILS 14 L

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE ABNORMAL/EMERGENCY COURSE SYLLABI	2.02.05 Page 12 REV 24 JUN 2001
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MALFUNC REF	- F5 FFS - Alternate / Direct laws - Dual hydraulic failure - Windshear - Mechanical back-up									
	TRAINEE 2									
	1 - TRANSIT COCKPIT PREPARATION									
	2 - TAXI OUT									
	■ 3 - TAKE-OFF - WINDSHEAR - Restore			FD	ATHR					
	4 - CLIMB TO 5000 FT		AP	FD	ATHR					
	■ 5 - MECHANICAL BACKUP (DEMO) - Restore									
	6 - RADAR VECTORS		AP	FD	ATHR					
	■ 7 - HYD G + B SYS LO PR			FD	ATHR					
	8 - ILS APPROACH - DIRECT LAW - NO SLATS									
	9 - LANDING - DIRECT LAW - NO SLATS - Restore									
	INIT T/O									
	■ 10 - TAKE-OFF - RA 2 FAULT									
	11 - DUAL RA FAILURE				ATHR	FPV				
	12 - VISUAL APPROACH - DIRECT LAW									
	13 - LANDING - DIRECT LAW - Restore									
	IF 2 CAPTAIN CREW OR 2 FIRST OFFICER CREW : CHANGE SEATS BEFORE BEGINNING THE "TRAINEE 1" STAGE									
	TRAINEE 1									
	INIT T/O									
	■ 14 - TAKE-OFF - ENGINE FIRE AT V2			FD	ATHR					
	15 - RADAR VECTORS		AP	FD	ATHR					
	16 - ILS APPROACH - 1 ENGINE OUT - CIRCLING			FD	ATHR					
	17 - LANDING - 1 ENGINE OUT - Restore									
	INIT T/O									
	■ 18 - TAKE-OFF - ENGINE FAIL AT V1 (DAMAGE)			FD	ATHR					
	19 - RADAR VECTORS		AP	FD	ATHR					
	20 - NON PRECISION APPROACH - 1 ENGINE OUT		AP		ATHR	FPV	FPD			
	21 - LANDING - 1 ENGINE OUT - Restore				ATHR	FPV				
	INIT FL 350									
	22 - EMER DESCENT - LOW SPEED - Restore		AP	FD	ATHR					
	INIT T/O									
	23 - TAKE-OFF - ENGINE FAIL BEFORE V1			FD	ATHR					
	24 - REJECTED TAKE-OFF - Restore									
	INIT T/O									
	■ 25 - TAKE-OFF - ENGINE FIRE BEFORE V1 - LOW VISIBILITY									
	26 - REJECTED TAKE-OFF									
	27 - ON GROUND EMER EVAC - Restore									
	IF TIME PERMITS :									
	REVIEW EXERCISE AT INSTRUCTOR'S OR TRAINEES' DISCRETION									

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE ABNORMAL/EMERGENCY COURSE SYLLABI	2.02.05 Page 12A REV 24 JUN 2001
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F5 FFS SESSION GUIDE

01 - SESSION OBJECTIVE

- Practice FCTL alternate and direct law approaches
- Demonstrate and practice mechanical back up
- Practice rejected take off

02 - TRAINING TOPICS

A. REVIEW

- Engine out procedure and handling including fire
- Dual hydraulic failure
- Emergency descent
- Windshear
- Rejected take off
- Emergency evacuation
- CRM : During debriefings, the instructor will take advantage of all opportunities and session events to review the CRM principles using the CRM modules.

B. INTRODUCE

- Use of MMEL for aircraft dispatch
- Mechanical back up
- Dual RA fault

03 - SESSION PROFICIENCY CRITERIA

- Ability to perform :
 - Take off with engine failure
 - Rejected take off and emergency evacuation procedure
- Ability to handle the a/c with one engine out during approach and landing.
- Having achieved a satisfactory standard of accuracy in order to pass the Skill test.

INSTRUCTOR ONLY

INSTRUCTOR ONLY

F5 FFS SESSION GUIDE (END)

04 - SESSION GUIDE

- **3** : Insert windshear after VR. Restore after recovery
- **5** : Set CAVOK prior to start. For Mechanical Back up demonstration sequence fail HYD B SYS and ELAC 2. When ECAM actions completed, fail SEC 2 in order to obtain flight controls in Mechanical Back up.
Each trainee should practice the a/c handling under this specific status. Mention specific handling and warnings.
- **7** : Insert HYD G RSVR LO LVL. When on Status, insert HYD B pump failure in order to obtain the dual hydraulic malfunction.
- **10** : Dispatch with RA2 fault. Fail RA1 on downwind.
The APP mode is inhibited but the full ILS is still available. Even if the LOC mode is used, CAT 1 minimum remains applicable.
- **14** : Set weather as for session start.
- **18** : Weather 6 km, ceiling 800 ft
- **25** : Set CAT II weather prior to take-off.

INSTRUCTOR ONLY

INSTRUCTOR ONLY

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE LOFT SYLLABI	2.02.06 Page 1
		JUN 2001

The Airbus Line Oriented Flight Training (ALOFT) sessions are intended to provide crews with opportunities to enhance their understanding of the A320 and to apply Crew Resource Management principles to simulated regular airline flights.

Scenarios are intended to produce a busy environment, but should never overload the crew. In many cases, there is no single 'right' answer but, using their skills and knowledge, the crew should be able to reach a successful conclusion to each scenario. Alternative solutions may provide useful, constructive post-flight discussion.

Relative simple failures are introduced during the flights to enable the session objectives to be met.

To make ALOFT as valuable and realistic as possible, flight documentation is provided by the instructor at briefing. The flight briefing will begin 1 hour before the scheduled simulator start time and will take 15-20 minutes. Thereafter the crew will have some time to study the documentation and, for example, decide on the required fuel load, etc.

The take-off time for the flight is considered to be 30 minutes after the simulator session starts.

ALOFT flights basic details are :

- ALOFT FFS 1⁽¹⁾Page 3A
 - LEG A : flight from Lyon-Saint Exupery (LFLL) to Bordeaux-Merignac (LFBD)
 - LEG B : flight from Bordeaux to Toulouse-Blagnac (LFBO) with the other pilot as PF
- ALOFT FFS 2⁽¹⁾Page 4A
 - LEG A : flight from Paris-Orly (LFPO) to Frankfurt-Main (EDDF) in winter conditions.
 - LEG B : Flight form Frankfurt to Zurich (LSZH) with the other pilot as PF

NOTE : ⁽¹⁾ *Instructors' FCTM includes the ALOFT session guides and scenarii.*

AIRBUS INDUSTRIE Training & Flight Operations Support Division  A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE LOFT SYLLABI	2.02.06 Page 2 REV 23 JUL 99
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AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE LOFT SYLLABI	2.02.06 Page 3A
		REV 24 JUN 2001

ALOFT FFS 1 SESSION GUIDE

01 - SESSION OBJECTIVE

- Integration of normal and abnormal procedures into a line flight environment.
- Practice of CRM training into line scenario.
- Practice a complete flight into a line environment.
- Practice a crew training.

02 - TRAINING TOPICS

A. REVIEW

- Preflight procedures.
- CRM : During debriefings, the instructor will take advantage of all opportunities and session events to review the CRM principles.

B. INTRODUCE

Not applicable

03 - SESSION PROFICIENCY CRITERIA

- Ability to perform normal and abnormal procedures and techniques in accordance with SOP in a line environment.
- Respect of IFR procedures.
- Ability to apply correctly the following CRM principles :
 - Teamwork and communication
 - Risk assessment and decision making
 - Situation control and awareness

04 - SESSION GUIDE

See scenario on following pages.

INSTRUCTOR ONLY

INSTRUCTOR ONLY

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE LOFT SYLLABI	2.02.06 Page 3B
		REV 24 JUN 2001

ALOFT FFS 1 - SECTOR 1 SCENARIO

A320 A-LOFT 1
 Lyon St Exupery (LFL) / Bordeaux
 Merignac- (LFBD)
 Alternate: Toulouse Blagnac (LFBO)
 Company Freq: 123.45

FLt N°: (ID) 501
 Cost Index: 30
 Cruise: FL310 / M480C
 Cruise Wind: 088 / 55
 Trip Dist: 278 NM
 Altin Cruise: FL130
 Altin Dist: 125 NM

Route: LFL36L ONZON6N THR LMG LMG4
 LFB023
 Aircraft: ZFCG/ZFW: 32.7 % / 58 t
 (127600 lbs)
 Block Fuel: (Crew) (CEP 5.0 t)
 Est TOW: 62.8 t / 138100 lbs
 Take-off CG: 32.0%

ATIS:

LFL – Information... – Rwy36L 030/10
 7000 -RA OVC010 11/09 Q1014
 RERA

LFBD – Information... – Rwy 23 320/06
 8000 -RA SCT008 BKN030
 BKN100 12/10 Q1016 RERA

A320 A-LOFT 1 – SECTOR 1

LYON(ST EXUPERY) (LFL) - BORDEAUX (MERIGNAC)(LFBD)

Events: The events planned for this exercise are:

- ☐ MEL Dispatch with Autobrake inoperative
- ☐ Minimum Fuel scenario, (refuelers on strike)
- ☐ ATHR failure after Take Off (On side of AP in use)
- ☐ TCAS / RA event during frequency change over
- ☐ Dual FMGC failure (followed by autoretset or crew reset)
- ☐ High energy descent at LFBD
- ☐ Antiskid failure on touchdown

Briefing: A suitable clearance expiry time for departure should be given with the clearance.

SIMULATOR SET-UP

REPOSITION to GATE PARK (C63)- (N4543.1 / ED0504.8)

INT LOAD

ZFW 58 t / 127600 lbs
 Fuel (Crew)
 CG 32.7%

ENVIRONMENT

QNH 1014
 Temperature 11°C
 Tropopause Default Value
 Dew Point 09°C
 Wind Direction 030°
 Wind Velocity 10kts
 Wind Page: 5000-030/33 FL290-088/55
 Turbulence Level 10%

VISUAL

Visibility 8000
 Cloud Base 1000 Cloud Top 6000
 Airfield Lights High Intensity

MAINTENANCE INDEX

L/GEAR: AUTO BRK **FAIL**

DOORS:

L Cabin Door Open Select
 RWD Cargo Door Open Select

INSTRUCTIONS

- Offset due to weather or traffic
- Loss of a SEC computer and recovery after ECAM actions
- Purser reports that galleys are not working properly.
- Estimate for a given radial
- Loss of a fuel pump
- Problem with a passenger in the cabin

(E-ALOFT1A.PCX)

ALOFT FFS 1 - SECTOR 1 SCENARIO (END)

Frequency LVS Cpt - 121.7	Phase Pre-Flight Clearance	ATC clears (ID) 501 to Bordeaux Merignac, ONZONEN departure, Flight Plan Route, Climb FL 110, squawk 2536. Clearance expiry time is XXXX	
ATS 135.25		Contact Ground frequency for push and start.	⇒ ⇒
Gnd - 121.82	Start	(ID) 501, Saint Ex Gnd, cleared to push and start, temp 119, QNH 1014 Release Park Brake, cleared to start Set Park Brake Disconnecting, hand signal on the right	⇒ ⇒
	Taxi	(ID) 501 taxi to holding point Rwy 36L (ID) 501 contact Tower freq. 119.25	
Tower 119.25	Take-Off	(ID) 501, Saint Ex Tower, surface wind 030/10 kt, cleared take-off runway 36L	⇒ ⇒
Departure 133.37	Climb 2000ft On contact Passing ONZON	(ID) 501 contact Lyon departure on freq. 133.37 (ID) 501, Lyon, radar contact, passing FLxxx (xxxft), climb FL110 (ID) 501 climb FL 230 contact Bordeaux control on freq. 123.62	⇒ ⇒
Bordeaux Cl 123.62		(ID) 501 Bordeaux Cl, identified passing FLxxx, expedite climb to and maintain FL 310 (ID) 501 recleared to FL280 final due to traffic (ID) 501 contact Bordeaux control on freq. 133.10	⇒ ⇒
Bordeaux Cl 133.10	Cruise	(ID) 501 Bordeaux, identified, FL280	
Bordeaux Cl 132.42		(ID) 501 contact Bordeaux control on freq. 132.42 (ID) 501 Bordeaux Cl, radar contact, cleared for the LMG4 arrival, call back for descent	
	TOD or crew request appr. FL200	(ID) 501 Descend to FL 200. Call approaching (ID) 501 contact Aquitaine approach on freq. 119.27	⇒ ⇒
Aquitaine radar 119.27	Descent	(ID) 501 Aquitaine, radar contact, descend FL200	
Aquitaine radar 119.27		(ID) 501 recleared FL 160	⇒ ⇒
Aquitaine radar 119.27		(ID) 501 descend to altitude 5000', QNH 1016 . Expect an ILS APPR Rwy23, Runway is WET due to recent showers (ID) 501 continue on standard procedure. Descend to altitude 3000ft on QNH 1016,	
Aquitaine radar 119.27	Approach	(ID) 501 Cleared for ILS APPR Rwy23, Report established	
Bordeaux-ATS 131.15		(ID) 501 continue the approach, contact Merignac Tower on 118.30	
Merignac Tower 119.27		(ID) 501 Merignac Tower cleared to land Rwy 23, surface wind 320/06 kt (ID) 501 contact ground on freq.121.90	⇒ ⇒
Bordeaux Ground 121.90		(ID) 501 cleared to stand A10	⇒ ⇒
		Close Doors / Arm Slides	
		Pushback - Nose LEFT	
		(Taxiways TC, T7, T8, A7)	
		Event: after take off, by 1000 ft, fail ATHR on AP in use side.	
		Event: TCAS event (Resolution Advisory) during frequency change over	
		Event: at ALT *reclear to FL280	
		Insert LFBD ATIS - Rwy 23 320/06 8000 SCT008 BKN030 BKN100 12/10 Q1016 RESH	
		Event: when in descent: Insert dual FMGC failure. The FMGC PF side shall be restored after RMP use (autoreset). The other if reset is attempted.	
		Event: expect high energy descent	
		Event: Insert antiskid failure on touchdown	
		Provide ground services - Reset device if applicable	

(E-ALOFT1B.PCX)

AIRBUS INDUSTRIE <i>Training & Flight Operations Support Division</i> A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE LOFT SYLLABI	2.02.06 Page 3D
		REV 24 JUN 2001

ALOFT FFS 1 - SECTOR 2 SCENARIO

A320 A-LOFT 1
 Bordeaux-LFBQ/Toulouse Blagnac-LFBQ
 Alternate: Bordeaux-LFBQ
 Company Freq.: 123.45

Flt N°: (ID) 501
 Cost Index: 30
 Cruise: FL170 / M190C
 Cruise Wind: 150/44kt
 Trip Dist: 125 NM
 Altin Cruise: FL140
 Altin Dist: 142NM
 Route: LFBQ SALUBA AGN05 LFBQ

Aircraft:
 ZFW: 58 t / 127600 lbs
 (127600 lbs)
 (Crew)
 Block Fuel:
 Est TOW: 62.4 / 137300 lbs
 Take-off CG: 32.1 %
 Performance (based on estimated GW)

(Refer to operational calculations)

ATIS:
 LFBQ – Information ... -Rwy23 320/06
 8000 -RA SCT006 BKN030
 BKN100 12/10 Q1016
 LFBQ – Information ... -Rwy15R 240/10
 7000 SCT006 OVC010 13/10
 Q1015 RERA

A320 A-LOFT 1 - SECTOR 2 BORDEAUX (LFBQ) – TOULOUSE (BLAGNAC) (LFBQ)	
Events:	The events planned for this exercise are:
☐ Dispatch with GPS inop (pull both CBs) ☐ Dispatch with CPC1 fault (Autobrake has been repaired) ☐ Runway change for take off ☐ ADR fault on rotation (on PF side) ☐ CPC 2 failure ☐ Map shift on approach	☐ Dispatch with GPS inop (pull both CBs) ☐ Dispatch with CPC1 fault (Autobrake has been repaired) ☐ Runway change for take off ☐ ADR fault on rotation (on PF side) ☐ CPC 2 failure ☐ Map shift on approach
Briefing:	A suitable clearance expiry time for departure should be given with the clearance.
SIMULATOR SET-UP	
REPOSITION to GATE PARK (AG) (N4449.9/ W00042.2)	
INIT LOAD	
ZFW	58 t / 127600 lbs
Fuel	(Crew)
CG	32.1 %
ENVIRONMENT	
QNH	1016
Temperature	12°C
Tropopause	Default Value
Dew Point	10 °C
Wind Direction	320°
Wind Velocity	6 kts
Wind Page:	5000°-350/36 FL170-011/44
Turbulence Level	10%
VISUAL	
Visibility	8000
Cloud Base	800
Thunderstorms	West of NB NDB
FUNCTION INDEX	
DOORS	
L Cabin Door not Closed	Select
RWD Cargo Door not Closed	Select
DISTRACTORS	
	- Estimate for a given radial - Loss of a SEC computer and recovery after ECAM actions - Purser reports that galley are not working properly. - Problem with a passenger in the cabin

Close Doors / Arm Slides

Pushback – Nose Right

(Taxiways P3, S3, S2, S1)

Event 1: insert ADR fault on rotation
 (on PF side)

Offset for traffic separation and weather
 avoidance

Event 1: at TOC insert CPC2 failure
 crew should revert to manual
 pressurization

Insert LFBQ – Information ... -Rwy15R
 240/10 7000 SCT006 OVC010
 13/10 Q1015 RERA

Select LFBQ 15 R, all runways lighting
 on, high intensity

Event 1: Insert a MAP shift (slow)

Provide ground services

(E-ALOFT1C.PCX)

ALOFT FFS 1 - SECTOR 2 SCENARIO (END)

Frequency Merignac Gnd - 121.90	Phase Pre-Flight Clearance	ATC clears (ID) 501 to TOULOUSE Blagnac via the SAU334 departure, Flight Plan Route, Climb FL80, squawk 2486, Clearance expiry time is XXXX	⇒	⇒	Reset previous failures
ATIS 131.15 Gnd - 121.90	Start	(ID) 501 cleared to push and start, temp 120, QNH 1016. Release Park Brake, cleared to start Set Park Brake Disconnecting, hand signals on the right	⇒	⇒	Close Doors / Arm Slides
	Taxi	(ID) 501 taxi to holding point Rwy 23 now in use, Rwy 23 unavailable 40 mn due to inspection. ⇒ (ID) 501 contact Merignac Tower on freq. 118.30	⇒	⇒	Pushback – Nose Right
Tower 118.30	Take-Off	(ID) 501, Merignac Tower, bonjour, I have your revised clearance, advice ready to copy: ATC clears (ID) 501 to TLS via the SAU330 departure, rest unchanged (ID) 501, surface wind 320/6, cleared take-off Rwy 23, CB and Thunderstorm west of NB NDB ⇒ (ID) 501 contact Aquitaine departure on freq. 119.27	⇒	⇒	Event : RWY change for take-off (Taxiways P3, S3, S2, S1)
Aquitaine Dep 119.27	Climb	(ID) 501 Aquitaine departure, radar contact passing FLxxx (ft), climb and maintain FL160 (ID) 501 right turn HDG 160 for separation ⇒ contact Bordeaux control on freq. 124.25	⇒	⇒	Event : insert ADR fault on rotation (on PF side)
Bordeaux Ctl 124.25		(ID) 501 Bordeaux, identified passing FLxxx, climb and maintain FL160 on present HDG Clear of traffic, Resume normal navigation ⇒	⇒	⇒	Event : Offset for traffic separation and weather avoidance
Bordeaux Ctl 124.25	Cruise	(ID) 501 contact Bordeaux Ctl on freq. 129.10 ⇒	⇒	⇒	Insert LF80 – Information – Rwy15R 240/10 7000 SCT006 OVC010 13/10 Q1015 RERA
Bordeaux Ctl 129.10		(ID) 501 Bordeaux, identified maintain FL160 ⇒	⇒	⇒	Event : at TOC insert CPC2 failure crew should revert to manual control
Toulouse ATIS 118.02		(ID) 501 contact Toulouse Appr on freq. 129.30 for lower	⇒	⇒	Select LF8015R , all runways lights on, high intensity
Toulouse App 129.30	Descent	(ID) 501 Toulouse Appr, radar contact, descend FL70 direct to AGN (Agen) cleared for the AGN35 arrival, Expect VOR/DME Appr for Rwy15R (ID) 501 cleared for the VOR/DME Rwy15R Appr (ID) 501 continue on standard procedure, Descend to altitude 3000ft on QNH 1015	⇒	⇒	
Toulouse App 129.30	Approach	(ID) 501 Cleared for the approach, Report established ⇒	⇒	⇒	Event : Insert a MAP shift (slow) (before final turn)
Blagnac Tower 118.1		(ID) 501 continue the approach, contact Blagnac Tower freq. 118.1	⇒	⇒	
Blagnac Ground 121.90		(ID) 501 Blagnac Tower, cleared to land Rwy 15R, surface wind 240/10 (ID) 501 contact Blagnac Ground freq. 121.9	⇒	⇒	
		(ID) 501 Blagnac, cleared to gate E10 via taxiway M, N, & T40	⇒	⇒	Provide ground services

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AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE LOFT SYLLABI	2.02.06 Page 4A REV 24 JUN 2001
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ALOFT FFS 2 SESSION GUIDE

01 - SESSION OBJECTIVE

- Integration of normal and abnormal procedures into a line flight environment.
- Practice of CRM training into line scenario.
- Practice a complete flight into a line environment.
- Practice a crew training.

02 - TRAINING TOPICS

A. REVIEW

- Preflight procedures.
- CRM : During debriefings, the instructor will take advantage of all opportunities and session events to review the CRM principles.

B. INTRODUCE

Not applicable

03 - SESSION PROFICIENCY CRITERIA

- Ability to perform normal and abnormal procedures and techniques in accordance with SOP in a line environment.
- Respect of IFR procedures.
- Ability to apply correctly the following CRM principles :
 - Teamwork and communication
 - Risk assessment and decision making
 - Error management
 - Situation control and awareness

04 - SESSION GUIDE

See scenario on following pages.

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AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE LOFT SYLLABI	2.02.06 Page 4B
		REV 24 JUN 2001

ALOFT FFS 2 - SECTOR 1 SCENARIO

A320 A-LOFT 2 – SECTOR 1

PARIS (ORLY) (LFP0) – FRANKFURT MAIN (EDDF)

Events: The events planned for this exercise are:

- ☐ FCU CH1 fault
- ☐ Severe turbulence then ENG flame out in cruise
- ☐ ENG relight in descent
- ☐ Total FCU fault

Briefing: A suitable clearance expiry time for departure should be given with the clearance.

SIMULATOR SET-UP

REPOSITION to GATE PARK (D08) – (N4843.6 / E00222.0)

INIT LOAD

ZFW 58 t / 127600 lbs
 Fuel (Crew)
 TO CG approx. 32%

ENVIRONMENT

QNH 1009
 Temperature 21°C
 Tropopause Default Value
 Dew Point 10 °C

Wind Direction 120°
 Wind Velocity 10kt
 Wind Page 5000'-187/31kt
 Turbulence Level 10 %

VISUAL

Visibility 8000
 Cloud Base 1500

MALFUNCTION INDEX

DOOMS

L Cabin Door Not Closed Select
 RWD Cargo Door not Closed Select

DISTRUCTIONS

- Offset due to weather or traffic
- Estimate for a given radial
- Loss of a SEC computer and recovery after ECAM actions
- Loss of a fuel pump
- Purser reports that galley are not working properly.
- Problem with a passenger in the cabin

Close Doors / Arm Slides

Pushback – Nose Right

(Taxiways W2, W37)

Event: FCU CH1 fault

Event: CR2 level change

Insert EDDF – Rwy 07L 155/10 8000 -
 RA FEW20 SCT080 21 / 10 Q1014

Select EDDF 07L Runway lightings on,
 high intensity

Event: 5 mn before TOD : severe
 turbulence followed by **ENG flame out**.
 Relight at lower level.

Event: Total FCU fault between FL160
 & FL 100

The trainee performs a Raw data ILS
 approach.

Provide ground services

ALOFT FFS 2 - SECTOR 1 SCENARIO (END)

Frequency ONLY Cpt - 121.05	Phase Pre-Flight Clearance	ATC clears (ID) 502 to Frankfurt, NIPOR7V departure, Flight Plan Route. Climb FL 80, squawk 2534, Clearance expiry time is xxxx Contact Ground on frequency 121.70 for push and start	➡	Close Doors / Arm Slides
ATIS ONLY 131.35	Start	(ID) 502 Grd, cleared to push and start, temp 219, QNH 1009. Release Park Brake, cleared to start Set Park Brake Disconnecting, hand signals on the right		Pushback – Nose Right (Taxiways W12, W37)
Ground - 121.70	Pushback	(ID) 502 taxi to holding point Rwy 08 (ID) 502 contact Tower freq 118.70 (ID) 502, surface wind 100/10, cleared take-off runway 08		
	Taxi	(ID) 502 contact departure on freq 127.75	➡	Event: insert FCU CH1 fault
Tower 118.70	Take-Off	2000ft		
Departure 127.75	Climb	(ID) 502, radar contact passing FLxxx (ft), cleared FL190 (ID) 502 climb FL 250 contact Paris control freq 120.95		Event: CR2 level change
Paris Ctl 120.95	Approaching NIPOR	(ID) 502 identified, passing FLxxx, climb and maintain FL 290 final level (ID) 502 contact Reims control freq 132.50	➡	
Reims Ctl 132.50	Cruise	(ID) 502 identified FL290; call approaching VALEK (ID) 502 contact Maastricht on freq 133.35	➡	Insert EDDF --Rwy 07L 160/10 6000 FEW002 BKN003 12/10 Q1020
Maastricht Ctl 133.35	Approaching VALEK	(ID) 502, radar contact; Call for descent (ID) 502 Descend to FL 160 and contact Rhein radar freq 132.07	➡	Event: 5 mn before TOD : severe turbulence followed by ENG flame out , Auto relight at lower level.(cancel failure)
Rhein radar 132.07	Descent	(ID) 502 identified, EPINO2E clearance limit – Expect ILS approach Rwy 07L, ➡ (ID) 502 cleared FL 100, contact Frankfurt arrival freq 120.80	➡	Event: Total FCU loss between FL160 & FL 100
FRANKFURT ATIS 118.02	approaching EPINO			
Frankfurt Arrival 120.80	Approach On contact	(ID) 502 radar contact. Proceed to EPINO then turn to HDG 130 to LOMPO and descend to FL60. (ID) 502 turn right HDG 160 descend altitude 4000 ft on QNH 1014		
Frankfurt Arrival 120.80	When appropriate	(ID) 502 Turn left HDG xxx, cleared for ILS approach Rwy07L; Report established ➡ (ID) 502 continue the approach, contact Frankfurt Tower on 119.90	➡	The trainee performs a Raw data ILS approach.
Frankfurt Tower 119.90	Landing	(ID) 502 cleared to land Rwy 07L, surface wind 110/06 kt (ID) 502 contact ground on 121.70		
Frankfurt Ground 121.70		(ID) 502 cleared to stand B28 via taxiway A, F and N – (Reset device if applicable) ➡	➡	Provide ground services

(E-ALOFT2B.PCX)

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE LOFT SYLLABI	2.02.06 Page 4D
		REV 24 JUN 2001

ALOFT FFS 2 - SECTOR 2 SCENARIO

A320 A-LOFT 2
 Frankfurt Main EDDF / Zurich LSZH
 Alternate: Stuttgart EDDS
 Company Freq.: 123.45

Flt N°.: (ID) 502
 Cost Index: 30
 Cruise: FL170 / M210C
 Cruise Wind: 155 / 33 kt
 Trip Dist: 160 NM
 Altin Cruise: FL080
 Altin Dist: 116 NM

Route:
 EDDF **NK87G** NKR T722 LAMGO T721
 RLAX LSZH

Aircraft:
 ZFCG/2FW: 33.5% / 58 t
 (127600 lbs)
 Block Fuel: (Crew)
 Est TOWi: 64 t / 143000 lbs
 Take-off CG: 31.8%

ATIS:

EDDF – Information... Rwy 25R 130/10
 9000 RA FEW015 SCT080 12/10
 Q1014 NOSIG

LSZH – Information... Rwy 16 120/06
 7000 RA FEW015 SCT040 20/12
 Q1012

EDDS – Information... Rwy 07 080/12
 6000 RA SCT010 BKN020 16/14
 Q1013

A320 A-LOFT 2 SECTOR 2
FRANKFURT (EDDF) – ZURICH (LSZH) – ALTIN: STUTTGART (EDDS)

Events: The events planned for this exercise are:

- ☐ Windshear after take off
- ☐ EGPWS event during arrival (approaching TRA)
- ☐ ILS transmitter failure
- ☐ Diversion to EDDS
- ☐ Blocked Pilot on PF side

Briefing: A suitable clearance expiry time for departure should be given with the clearance.

SIMULATOR SET-UP

REPOSITION to GATE PARK (B28) - (N5002.8/E00834.3)

INIT LOAD
 ZFW: 58 t / 127600 lbs
 Fuel: (Crew)
 TO CG: 32.5%

ENVIRONMENT
 QNH: 1014
 Temperature: 21°C
 Tropopause: Default Value
 Dew Point: 10°C

Wind Direction: 130°
 Wind Velocity: 10 kts
 Wind Page: 5000'-187/31kt FL170-211/54kt
 Turbulence Level: 10 %

VISUAL
 Visibility: 9000 Recent rain
 Cloud Base: 2000
 Airfield Lights: ON

MAINTENANCE INDEX

DOORS
 L Cabin Door Not Closed Select
 PWD Cargo Door not Closed Select

DISTRACTORS

- Offset due to weather or traffic
- Loss of a SEC and recovery after ECAM actions
- Purser reports that galley are not working properly.
- Estimate for a given radial
- Loss of a fuel pump
- Problem with a passenger in the cabin

Close Doors / Arm Slides

Pushback – Nose Right

(Taxiway N)

Event : Windshear after take off

Event: 10 NM before ANEK1 : fly 5 NM east of TRK (traffic) , then resume normal navigation.

LSZH ATIS – Rwy 16 120/06 7000 RA
 FEW015 SCT040 20/12 Q1012

Event: ILS transmitter failure

Event: EGPWS event approaching TRA
 (Change QNH 922 or activate electronic mountain.)

Event : Diversion to EDDS
 EDDS ATIS- Information ? Rwy 07
 080/12 6000 RA SCT010 BKN020
 16/14 Q1013

Event : Blocked pilot on PF side prior to descent.(recoverable)

Provide ground services

(E-ALOFT2C.PCX)

ALOFT FFS 2 - SECTOR 2 SCENARIO (END)

Frequency	Phase		
Frankfurt CPT - 121.90	Pre-Flight	ATC clears (ID) 502 to Zurich, NKR7G departure, Flight Plan Route, Climb 5000 ft, squawk 0494, Expect FL170, Cross RID at FL90 or below. Clearance expiry time is xxxx Contact Ground same frequency for push and start. $\Rightarrow$	Close Doors / Arm Slides
ATIS FRA 118.02		(ID) 502 cleared to push and start, temp 219, QNH 1014. Release Park Brake, cleared to start Set Park Brake Disconnecting, hand signals on the right	Pushback – Nose Right
Gnd - 121.90	Start	(ID) 502 taxi to holding point Rwy 25 R, via lwy N – E – A (ID) 502 contact Frankfurt Tower freq 119.90 (ID) 502, surface wind 130°/10kt, cleared take-off runway 25R (ID) 502 contact departure freq 120.15	(Taxiway NE-A) <u>Event</u> : Windhear after take off
Tower 119.90	Take-Off	(ID) 502 radar contact, passing FLXXX (R), climb to cross RID at FL90, Cleared FL130 (ID) 502 contact Frankfurt Ctl freq 129.57	
Departure 120.15	Climb	(ID) 502 identified passing FLXXX, climb and maintain FL 170 (ID) 502 contact Frankfurt Ctl freq 127.50	 Event: 10 NM before ANEK1 : fly 5 NM east of TRK (traffic) , then resume normal navigation.
Frankfurt Ctl 129.57		(ID) 502 radar contact, cleared direct RILAX , call for descent. (ID) 502 cleared RILAX then TRA , descend FL80 (ID) 502 contact Zurich APP on freq 118.00	LSZH ATIS – Rwy 16 120/06 7000 RA FEM015 SCT040 20/12 Q1012 Select LSZH 16 Runway lightings on high intensity <u>Event</u> : ILS transmitter failure
Zurich App 118.00	Approach	(ID) 502 identified FLxxx; Expect ILS Runway 16 (ID) 502 descend altitude 5000 ft, QNH is 1012 (ID) 502 descend 4000 ft clear ILS approach RWY16, report established (ID) 502 climb 5000 ft on standard missed approach procedure.	Event: GPWS event approaching TRA (Charge QNH 922 or activate electronic mountain.) Event : Diversion to EDDS
Zurich APP 118.00	Go around	(ID) 502 All means of approach are momentarily failed (no landing within 45 mn). $\Rightarrow$ Your clearance to EDDS is: ZUE (Zuerich East) 50 ROMER N851 TGO (Tango). Proceed to ZUE , Contact Frankfurt Ctl freq 127.50	EDDS ATIS – Information : Rwy 07 080/12 6000 RA SCT010 BKN020 16/14 Q1013
Frankfurt Ctl 127.50	Diversion	(ID) 502 Radar contact, Climb and maintain FL100 . Runway 07 in use at EDDS (ID) 502 descend 5000 ft, QNH is 1013 (ID) 502 descend 4000 ft, continue on standard procedure, Cleared for ILS APPR 07 ; Report established (ID) 502 continue the approach, contact Stuttgart Tower freq 118.80	Event : Blocked pilot on PF side prior to descent. (Recoverable)
STUTTGART ATIS 126.12			
Stuttgart Tower 118.80		(ID) 502 Stuttgart Tower, cleared to land Rwy 07, surface wind 090/10 (ID) 502 contact ground 121.90	Provide ground services
Stuttgart Ground 121.90		(ID) 502 cleared to gate (or holding point) Reset device if applicable $\Rightarrow$	

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 A320 FLIGHT CREW TRAINING MANUAL	TYPE RATING COURSES SKILL TEST SYLLABI	2.02.07 Page 1
		TR 15 FEB 2002

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- 3:00 HOUR SKILL TEST FFS (*Trainee 1*) :
 - Scenario 1..... Page 7
- 3:00 HOUR SKILL TEST FFS (*Trainee 2*) :
 - Scenario 2..... Page 8

Transition courses ONLY :

Standard Crew* ☐

Non Standard Crew* ☒

1
D
A
Y

- 4:00 HOUR SKILL TEST FFS :
 - Scenario 1..... Page 9
 - or
 - Scenario 2..... Page 10

Transition courses :

Standard Crew* ☒

Non Standard Crew* ☒

CCQ courses :

Standard Crew* ☐

Non Standard Crew* ☒

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* Standard Crew = 1 Captain + 1 First Officer
Non Standard Crew = 2 Captains or 2 First Officers



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 A320 FLIGHT CREW TRAINING MANUAL	TYPE RATING COURSES SKILL TEST SYLLABI	2.02.07 Page 3
		TR 15 FEB 2002

SKILL TEST SYLLABI SESSION GUIDE

01 - SESSION OBJECTIVE

- Assessment of the ability to operate the aircraft in normal, abnormal and emergency operations to standard in accordance with SOPs and meeting the relevant standards of accuracy.

02 - TRAINING TOPICS

A. GENERAL

- A skill test scenario consists in series of exercises in a simulated commercial air transport environment.
- A skill test scenario starts as a line oriented flight in which, some specific events have been inserted. Depending upon crew decision, these events may lead either to a diversion or a continuation to destination. This will enable to check the candidate making decisions appropriate to the operational situation. The skill test continues with additional items which complete the minimum required per trainee by the JAR-FCL.
- Each scenario fulfil the requirement of JAR-FCL (Arrêté du 29 Mars 1999) with the arrangements indicated in "DGAC Instruction 10852"
- The FCL item 3.9.3.1 ILS APPROACH RAW DATA may be an ILS approach down to a DH of 200 ft manually flown either without FD but with FPV or with FD in flight control reconfiguration law.

B. FLIGHT PREPARATION

Prior to starting the briefing, the crew receives the session documents : computerised FPLN, loadsheet, the list of airport forecast and NOTAMs and a booklet including RTOW, MMEL extracts to be used when applicable. The **fuel quantity** to be boarded is decided by the trainees.

The crew will be given a slot for departure in order to avoid too long preparations. The Examiner will check the ability of the candidate to plan the flight from this material.

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 A320 FLIGHT CREW TRAINING MANUAL	TYPE RATING COURSES SKILL TEST SYLLABI	2.02.07 Page 4
		TR 15 FEB 2002

SKILL TEST SYLLABI SESSION GUIDE (CONT'D)

02 - TRAINING TOPICS (CONT'D)

C. SUGGESTED BRIEFING

The candidates are briefed by the Examiner as suggested :

- "The skill test comprises 2 main parts. It starts as a line oriented flight in which some specific events have been inserted. Follow the departure clearance and deal with any problems or emergencies as they occur using the procedures and techniques learnt during the training course. Take all appropriate decisions .
- You should use Airbus standard procedures or your own company procedures, if different.
- You are responsible for liaison with ATC, safe operation and navigation of the aircraft. Make sure that you correctly understand ATC instructions.
- The second part comprises the remaining items in order to meet the Authorities requirements. It will be necessary for me to initialize the simulator in order to carry out the exercises. I will keep you advised when I have control of the simulator and when I return control to you.
- You may communicate to each other in your mother language to facilitate procedures, but keep me informed about what you are doing and remember you must speak English to ATC.
- Treat this session as if it was a normal commercial flight. Do not waste time but do not allow yourselves to be rushed. You must tell ATC what you require.
- Make good use of the published documentation for en-route and terminal areas. Set and observe the appropriate minima.
- Make full use of the aircraft equipment and all resources at your disposal including the automation. However for the purpose of the skill test I will indicate during the second part, which level of automation you are authorized to use for instance it is required you demonstrate your ability to fly manually one engine out approach.
- Remember the importance of task sharing and good crew coordination. You are assessed as PF and PNF.
- Use headsets. Consider me as ATC, ground engineer and cabin crew.
- The weather or aircraft parameters might vary for some sequences. I will advise you of the changes.
- For departure, use the data given on the provided forms."

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AIRBUS Training & Flight Operations Support and Services A320 FLIGHT CREW TRAINING MANUAL	TYPE RATING COURSES SKILL TEST SYLLABI	2.02.07 Page 5
		TR 15 FEB 2002

SKILL TEST SYLLABI SESSION GUIDE (END)

03 - PROFICIENCY CRITERIA

The candidate shall demonstrate its ability to :

- perform normal and abnormal procedures according to SOP.
- perform manoeuvres required with smoothness, using the correct procedures and techniques, according to the standard of accuracy required by regulations.
- understand and apply crew co-ordination,
- communicate effectively with the other crew member

The following limits are for general guidance :

- Height Generally +/- 100 feet
- Starting a go-around at decision height + 50 feet / -0 feet
- Minimum descent height/ altitude + 50 feet / -0 feet
- Tracking on radio aids +/- 5°
- Precision approach..... half scale deflection,
azimuth and glide path
- Heading
 - all engines operating +/- 5°
 - with simulated engine failure +/- 10°
- Speed
 - all engines operating +/- 5 knots
 - with simulated engine failure..... + 10 knots/ -5 knots

PASS/FAIL CRITERIA AND RECOMMENDATIONS TO THE EXAMINER :

The applicant shall pass all sections of the Skill Test. Failure in more than 5 items will require the applicant to take the entire test/check again. Any applicant failing not more than 5 items shall take the failed items again.

Failure in any item of the re-test/re-check including those items that have been passed at a previous attempt will require the applicant to take the entire test/check again.

Further training may be required after a failed test. Failure to achieve a valid pass in all sections in two attempts shall require further training as determined by the examiner. There is no limit to the number of skill tests that may be attempted.

The Examiner will endeavour to run exercises in a logical sequence and make sure that the trainees understand his instructions. He shall make his own judgement during the session and revert to his instructor role again, if required, for example when an exercise is unsatisfactorily carried out.

Considering the ability of the trainee to fly as PNF, there is no minimum specified time for assessment.

04 - SESSION GUIDE

Refer to specific guide for each scenario.

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 AIRBUS Training & Flight Operations Support and Services A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE (Non Standard Crew)	2.02.07	Page 7
	SKILL TEST SYLLABI	TR 15	FEB 2002

JAR FCL REF	3:00 HOUR SKILL TEST FFS - SCENARIO 1 -		
LFBO - LFL			
	TRAINEE AS PF		
1.4	1 - TRANSIT COCKPIT PREPARATION		
1.4	2 - BEFORE START		
1.4	3 - ENGINE START		
1.4	4 - AFTER ENGINE START		
	5 - TAXI OUT		
1.6	6 - BEFORE TAKE-OFF (CHECKS)		
	7 - TAKE-OFF		
3.9.1	8 - SID		
	9 - CLIMB		
3.4.4	10 - GEN 1 FAULT		
3.6.1	11 - CRUISE - FWD CARGO SMOKE		
3.9.1	12 - DESCENT - STAR		
3.9.4	13 - NON PRECISION APPROACH (VOR DME)		
	14 - LANDING - Restore		
ADDITIONAL EXERCISES			
	INIT T/O	(LFBO 15 R) CEILING : 500 FT - VISIBILITY 4 KM	
3.4.0/2.5.2	15 - TAKE-OFF - ENGINE FAILURE (BETWEEN V1 and V2)		
	16 - ILS APPROACH 1 ENGINE OUT		
4.3	17 - GO AROUND 1 ENGINE OUT (NO AP)		
3.9.3.4	18 - ILS APPROACH 1 ENGINE OUT (NO AP)		
5.5	19 - LANDING 1 ENGINEOUT - Restore		
	INIT APP 2	CEILING : 300 FT - VISIBILITY : 4 KM	
3.9.3.1	20 - ILS APPROACH - RAW DATA (1)		
	(APPROACH FLOWN TO DH 200 FT)		
	21 - LANDING (OPTIONAL) - Restore		
TRAINEE AS PNF			
	INIT T/O	(LFBO 15R - CEILING : 800 FT - VISIBILITY : 6 KM)	
	22 - TAKE-OFF		
3.9.1	23 - SID WITH RADIAL INTERCEPT		
3.4.6	24 - SLATS STUCK BY WING TIP BRAKES		
3.9.3	25 - ILS APPROACH NO SLATS		
	26 - LANDING - Restore		
	INIT T/O	CAT II WEATHER CONDITIONS	
3.6.1	27 - ENGINE FIRE BEFORE V1 (UNEXTINGUISHABLE FIRE)		
2.6	28 - REJECTED TAKE-OFF (CAPTAIN RESUMES CONTROL)		
	29 - EMERGENCY EVACUATION - Restore		
	(1) May be performed after an INIT T/O according to remaining time.		

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JAR FCL REF	3:00 HOUR SKILL TEST FFS - SCENARIO 2 -	
	LFL - LFBO	
	TRAINEE AS PF	
1.4	1 - TRANSIT COCKPIT PREPARATION (DISPATCH WITH CPC2 FAULT)	
1.4	2 - BEFORE START	
1.4	3 - ENGINE START	
1.4	4 - AFTER ENGINE START	
	5 - TAXI OUT	
1.6	6 - BEFORE TAKE-OFF (CHECKS)	
3.6.5	7 - TAKE-OFF - WINDSHEAR	
3.9.1	8 - SID	
	9 - CLIMB	
3.4.1	10 - CRUISE - CPC1 FAULT (USE OF MAN PRESS FOR DESCENT)	
3.9.1	11 - DESCENT - STAR	
3.9.4	12 - NON PRECISION APPROACH (LOCALIZER)	
	13 - LANDING - Restore	
	ADDITIONAL EXERCISES	
	INIT T/O	(LFBO 15 R) CEILING : 500 FT - VISIBILITY 4 KM
3.4.0		
2.5.2	14 - TAKE-OFF - ENGINE FAILURE (BETWEEN V1 and V2)	
	15 - ILS APPROACH 1 ENGINE OUT	
4.3	16 - GO AROUND 1 ENGINE OUT (NO AP)	
3.9.3.4	17 - ILS APPROACH 1 ENGINE OUT (NO AP)	
5.5	18 - LANDING 1 ENGINE OUT - Restore	
	INIT APP 2	CEILING : 300 FT - VISIBILITY : 4 KM
3.9.3.1	19 - ILS APPROACH - RAW DATA (1)	
	(APPROACH FLOWN TO DH 200 FT)	
	20 - LANDING (OPTIONAL) - Restore	
	TRAINEE AS PNF	
	INIT T/O	(LFBO 15R - CEILING : 800 FT - VISIBILITY : 6 KM)
	21 - TAKE-OFF	
	22 - SID	
3.6.1	23 - ENGINE FIRE	
3.9.3.4	24 - ILS APPROACH 1 ENGINE OUT	
5.5	25 - LANDING 1 ENGINE OUT - Restore	
	INIT T/O	CAT II WEATHER CONDITIONS
3.4.0	26 - ENGINE N1/EGT OVERLIMIT BEFORE V1	
2.6	27 - REJECTED TAKE-OFF (CAPTAIN RESUMES CONTROL) - Restore	
	(1) May be performed after an INIT T/O according to remaining time.	



JAR FCL REF	4:00 HOUR SKILL TEST FFS - SCENARIO 1 -	
LFBO - LFLL		
	TRAINEE 1	
1.4	1 - TRANSIT COCKPIT PREPARATION	
1.4	2 - BEFORE START	
1.4	3 - ENGINE START	
1.4	4 - AFTER ENGINE START	
	5 - TAXI OUT	
1.6	6 - BEFORE TAKE-OFF (CHECKS)	
3.6.5	7 - TAKE-OFF - WINDSHEAR AT ROTATION	
3.9.1	8 - SID	
3.9.1	9 - CLIMB	
3.4.11/3.4.8	10 - CRUISE - FCU FAULT (ALL CHANNELS)	
3.9.1	11 - DESCENT - STAR	
3.9.3.1	12 - ILS APPROACH (RAW DATA)	
	13 - LANDING - Restore	
	INIT T/O (LFLL 18R) CEILING : 500 FT - VISIBILITY 4 KM	
2.5.2	14 - TAKE-OFF - ENGINE FAILURE (BETWEEN V1 and V2)	
	15 - RADAR VECTORS	
3.9.4	16 - NON PRECISION APPROACH (VOR-DME) 1 ENGINE OUT	
4.3	17 - GO AROUND 1 ENGINE OUT (NO AP)	
	18 - RADAR VECTORS	
3.9.3.4	19 - ILS APPROACH 1 ENGINE OUT (NO AP)	
5.5	20 - LANDING 1 ENGINE OUT - Restore	
	2 CAPTAINS or 2 F/Os (CCQ only) :	INIT T/O LFML 14L - CEILING : 500 FT - VISIBILITY : 4 KM
		21 - TAKE-OFF - ENGINE FAILURE (BEFORE V1)
2.6		22 - REJECTED TAKE-OFF - Restore
		THEN CHANGE SEATS BEFORE BEGINNING THE "TRAINEE 2 " STAGE
LFLL - LFBO		
	TRAINEE 2	
	INIT	HOLDING POINT - LFLL 18R
1.6/1.4	23 - BEFORE TAKE OFF (CHECKS)	
2.5.2	24 - TAKE-OFF - ENGINE FAILURE (BETWEEN V1 and V2)	
3.9.1	25 - SID	
	26 - RETURN TO DEPARTURE	
3.9.1	27 - STAR	
3.9.4	28 - NON PRECISION APPROACH (LOCALIZER) 1 ENGINE OUT	
4.3	29 - GO AROUND 1 ENGINE OUT (NO AP)	
	30 - RADAR VECTORS	
3.4.11	31 - DMC 2 FAULT	
3.9.3.4	32 - ILS APPROACH 1 ENGINE OUT (NO AP)	
5.5	33 - LANDING 1 ENGINE OUT - Restore	
	INIT T/O CAT II WEATHER CONDITIONS	
3.6.1	34 - ENGINE FIRE BEFORE V1 (UNEXTINGUISHABLE FIRE)	
2.6	35 - REJECTED TAKE-OFF	
	36 - EMERGENCY EVACUATION - Restore	

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 Training & Flight Operations Support and Services A320 FLIGHT CREW TRAINING MANUAL	TYPE RATING COURSES (Regular Course Standard Crew + All CCQ crew) SKILL TEST SYLLABI	2.02.07 Page 10
		TR 15 FEB 2002

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JAR FCL REF	4:00 HOUR SKILL TEST FFS - SCENARIO 2 -	
LFLL - LFML		
	TRAINEE 1	
1.4	1 - TRANSIT COCKPIT PREPARATION	
1.4	2 - BEFORE START	
1.4	3 - ENGINE START	
1.4	4 - AFTER ENGINE START	
	5 - TAXI OUT	
1.6	6 - BEFORE TAKE-OFF (CHECKS)	
3.4.11	7 - TAKE-OFF - ADR 1 FAULT	
3.9.1	8 - SID	
3.9.1	9 - CLIMB	
3.4.6	10 - ELAC 1 FAULT (RESET OF COMPUTERS)	
3.6.1	11 - CRUISE - FWD CARGO SMOKE	
3.9.1	12 - DESCENT - STAR	
3.9.4	13 - NON PRECISION APPROACH (LOCALIZER)	
4.3	14 - GO AROUND - ENGINE FAILURE (NO AP)	
	15 - RADAR VECTORS	
3.9.3.4	16 - ILS APPROACH 1 ENGINE OUT (NO AP)	
5.5	17 - LANDING 1 ENGINE OUT - Restore	
	INIT T/O	LFML 14L - CAT II WEATHER CONDITIONS
	18 - TAKE OFF - ENGINE FAILURE BEFORE V1	
2.6	19 - REJECTED TAKE-OFF - Restore	
	INIT T/O	LFML 14L - CEILING : 500 FT - VISIBILITY : 4 KM
2.5.2/3.4.0	20 - TAKE-OFF - ENGINE FAILURE (BETWEEN V1 and V2)	
	21 - RADAR VECTORS / VISUAL PATTERN (ADJUST WEATHER VMC)	
5.5	22 - LANDING 1 ENGINE OUT - Restore	
	2 CAPTAINS OR 2 FIRST OFFICERS (CCQ only) : CHANGE SEATS BEFORE BEGINNING THE "TRAINEE 2" STAGE.	
LFML - LFLL		
	TRAINEE 2	
	INIT	HOLDING POINT - LFML 32R
1.6/1.4	23 - BEFORE TAKE OFF (CHECKS)	
	24 - TAKE-OFF	
3.9.1/3.6.9	25 - SID - TCAS EVENT	
	26 - CLIMB	
3.4.11/ 3.4.8/3.4.6	27 - CRUISE - ADR 1 + 2 FAULT	
3.9.1	28 - DESCENT - STAR	
3.9.3.1	29 - ILS APPROACH DIRECT LAW - RAW DATA	
	30 - LANDING - Restore	
	INIT T/O	LFLL 36L - CEILING : 500 FT - VISIBILITY : 4 KM
2.5.2	31 - TAKE-OFF - ENGINE FAILURE (BETWEEN V1 and V2)	
	32 - RADAR VECTORS	
3.9.4	33 - NON PRECISION APPROACH (VOR-DME)	
4.3	34 - GO AROUND 1 ENGINE OUT (NO AP)	
	35 - RADAR VECTORS	
3.9.3.4	36 - ILS APPROACH 1 ENGINE OUT (NO AP)	
5.5	37 - LANDING 1 ENGINE OUT	
		INIT T/O
3.6.1	2 CAPTAINS (CCQ only) :	38 - TAKE-OFF - ENGINE FIRE BEFORE V1 (UNEXTINGUISHABLE FIRE)
2.6		39 - REJECTED TAKE-OFF
		40 - EMERGENCY EVACUATION - Restore

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE SKILL TEST SYLLABI	2.02.07 Page 1 REV 24 JUN 2001
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- SCENARIO 1 - (Toulouse / Lyon)..... Page 3

- SCENARIO 2 - (Lyon / Toulouse)..... Page 7

- SCENARIO 3 - (Marseille / Bordeaux) Page 11

- SCENARIO 4 - (Bordeaux / Marseille) Page 15

NOTE : *Instructors' FCTM includes the Skill Test syllabi, scenarii and session guides*

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE SKILL TEST SYLLABI	2.02.07 Page 2 REV 24 JUN 2001
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AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE SKILL TEST SYLLABI	2.02.07 Page 2A
		REV 24 JUN 2001

SKILL TEST SYLLABI SESSION GUIDE

01 - SESSION OBJECTIVE

- Assessment of the ability to operate the aircraft in normal, abnormal and emergency operations to standard in accordance with SOPs and meeting the relevant standards of accuracy.

02 - TRAINING TOPICS

A. GENERAL

- A skill test scenario consists in series of exercises in a simulated commercial air transport environment.
- A skill test scenario starts as a line oriented flight in which, some specific events have been inserted. Depending upon crew decision, these events may lead either to a diversion or a continuation to destination. This will enable to check the candidate making decisions appropriate to the operational situation. The skill test continues with additional items which complete the minimum required per trainee by the JAR-FCL.
- Four scenarios are proposed. The Examiner will select one scenario applicable to one candidate performing the exercises as PF on the first part of the session. Then the candidate will be checked as PNF at the end of the session.
- The scenarios fulfils the requirement of JAR-FCL (Arrêté du 29 Mars 1999) with the arrangements indicated in "DGAC Instruction 11518"
- The FCL item 3.9.3.1 ILS APPROACH RAW DATA may be an ILS approach down to a DH of 200 ft manually flown either without FD but with FPV or with FD in flight control reconfiguration law.
- The FCL item 3.9.5 CIRCLING shall be completed by the CPT only while the F/O will complete the item 3.9.4 NON PRECISION APPROACH to minimum.

B. FLIGHT PREPARATION

Prior to starting the briefing, the crew receives the session documents : computerised FPLN, loadsheet, the list of airport forecast and NOTAMs and a booklet including RTOW, MMEL extracts to be used when applicable. The **fuel quantity** to be boarded is decided by the trainees.

The crew will be given a slot for departure in order to avoid too long preparations. The Examiner will check the ability of the candidate to plan the flight from this material.

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SKILL TEST SYLLABI SESSION GUIDE (CONT'D)

02 - TRAINING TOPICS (CONT'D)

C. SUGGESTED BRIEFING

The candidates are briefed by the Examiner as suggested :

- "The skill test comprises 2 main parts. It starts as a line oriented flight in which some specific events have been inserted. Follow the departure clearance and deal with any problems or emergencies as they occur using the procedures and techniques learnt during the training course. Take all appropriate decisions .
- You should use Airbus standard procedures or your own company procedures, if different.
- You are responsible for liaison with ATC, safe operation and navigation of the aircraft. Make sure that you correctly understand ATC instructions.
- The second part comprises the remaining items in order to meet the Authorities requirements. It will be necessary for me to initialize the simulator in order to carry out the exercises. I will keep you advised when I have control of the simulator and when I return control to you.
- You may communicate to each other in your mother language to facilitate procedures, but keep me informed about what you are doing and remember you must speak English to ATC.
- Treat this session as if it was a normal commercial flight. Do not waste time but do not allow yourselves to be rushed. You must tell ATC what you require.
- Make good use of the published documentation for en-route and terminal areas. Set and observe the appropriate minima.
- Make full use of the aircraft equipment and all resources at your disposal including the automation. However for the purpose of the skill test I will indicate during the second part, which level of automation you are authorized to use for instance it is required you demonstrate your ability to fly manually one engine out approach.
- Remember the importance of task sharing and good crew coordination. You are assessed as PF and PNF.
- Use headsets. Consider me as ATC, ground engineer and cabin crew.
- The weather or aircraft parameters might vary for some sequences. I will advise you of the changes.
- For departure, use the data given on the provided forms."

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AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE SKILL TEST SYLLABI	2.02.07 Page 2C
		REV 24 JUN 2001

SKILL TEST SYLLABI SESSION GUIDE (CONT'D)

02 - TRAINING TOPICS (END)

D. SPECIAL EVENT OPPORTUNITY

In order to maintain a good level of concentration during periods of low workload, the examiner can select one of the following items and include them in the existing scenario when "Special event opportunity" is specified. They can also be used as distracting items.

- Offset due to weather or traffic
- Estimate for a given radial
- Loss of a SEC computer and recovery after ECAM actions
- Loss of a fuel pump
- Loss of Blue or Yellow HYD electrical pump
- ADR 1 or 2 fault then switching
- Problem with a passenger in the cabin
- Purser reports that galley are not working properly.

03 - PROFICIENCY CRITERIA

The candidate shall demonstrate its ability to :

- perform normal and abnormal procedures according to SOP.
- perform manoeuvres required with smoothness, using the correct procedures and techniques, according to the standard of accuracy required by regulations.
- understand and apply crew co-ordination,
- communicate effectively with the other crew member

The following limits are for general guidance :

- Height Generally +/- 100 feet
- Starting a go-around at decision height + 50 feet / -0 feet
- Minimum descent height/ altitude + 50 feet / -0 feet
- Tracking on radio aids +/- 5°
- Precision approach..... half scale deflection,
azimuth and glide path
- Heading
 - all engines operating +/- 5°
 - with simulated engine failure +/- 10°
- Speed
 - all engines operating +/- 5 knots
 - with simulated engine failure..... + 10 knots/ -5 knots

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SKILL TEST SYLLABI SESSION GUIDE (END)

03 - PROFICIENCY CRITERIA (END)

Pass/Fail Criteria and Recommendations to the Examiner :

The applicant shall pass all sections defined in Appendix 2 JAR -FCL 1-240.

If any item in a section is failed, that section is failed. Failure in more than one section will require the applicant to take the entire test/check again. Any applicant failing only one section shall take the failed section again.

Failure in any section of the re-test including those sections that have been passed at a previous attempt will require the applicant to take the entire test/check again.

Further training may be required after a failed test. Failure to achieve a valid pass in all sections in two attempts shall require further training as determined by the examiner. There is no limit to the number of skill tests that may be attempted.

The Examiner will endeavour to run exercises in a logical sequence and make sure that the trainees understand the instructions. He shall form his own judgement during the session and revert to his instructor role again, if required, for example when an exercise is unsatisfactorily carried out.

Considering the ability of the trainee to fly as PNF, there is no minimum specified time for assessment. Therefore, depending on the time remaining to complete the session, the sequence can be shortened at Examiner's discretion as soon as he considers the performance is satisfactory.

04 - SESSION GUIDE

Refer to specific guide for each scenario.

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SKILL TEST FFS TAKE-OFF DATA
- SCENARIO 1 -

INIT PAGE			ATIS
CO RTE	FROM TO	TRIP DIST	RWY 33 L WIND 340°/10 kt VISI 8 km CEILING OVC 1300 ft TEMP 11°C DEW POINT . 9°C QNH 1015 hPa/ inHg QFE 997 hPa/ inHg RWY COND.. DRY Observations. :
ALTN/CO RTE		CRZ WIND	
FLT NBR		ALTN	
LAT	LONG	ALTN DIST	
COST INDEX		FLT to ALTN	
CRZ FL/TEMP	TROPO		

INIT NEXT PAGE	PERF PAGE	T/O FLAPS	NOTE :
ZFCG/ZFW			F/PLN : LFBO 33 L SID MEN STAR MEN LFLL 18 R
33.5% - 56 t	IAE CFM		
33.5% - 123 200 lb	V1	T/O C.G.	
	VR		
BLOCK	V2	TOGA	
	FLEX		
t		FLEX	
lb	DRT		
		DRT	

AIRBUS INDUSTRIE Training & Flight Operations Support Division  A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE SKILL TEST SYLLABI	2.02.07 Page 4
		REV 24 APR 2000

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MALFUNC REF	SKILL TEST FFS - SCENARIO 1 -									
LFBO - LFL										
1.4	1 - TRANSIT COCKPIT PREPARATION									
1.4	2 - BEFORE START									
1.4	3 - ENGINE START									
1.4	4 - AFTER ENGINE START									
	5 - TAXI OUT									
1.6	6 - BEFORE TAKE-OFF (CHECKS)									
	7 - TAKE-OFF				AP	FD	ATHR			
3.9.1	8 - SID (SPECIAL EVENT OPPORTUNITY)				AP	FD	ATHR			
	9 - CLIMB				AP	FD	ATHR			
3.4.4	10 - GEN 1 FAULT				AP	FD	ATHR			
3.6.2	11 - CRUISE - FWD CARGO SMOKE				AP	FD	ATHR			
3.9.1	12 - DESCENT - STAR				AP	FD	ATHR			
3.9.4	13 - NON PRECISION APPROACH (VOR DME APPROACH)				AP		ATHR	FPV	FPD	
	14 - LANDING - Restore									
ADDITIONAL EXERCISES										
		INIT T/O	(LFBO 15 R) CEILING : 500 FT - VISIBILITY 4 KM							
3.4.0										
2.5.2	15 - TAKE-OFF - ENGINE FAILURE (BETWEEN V1 and V2)					FD	ATHR			
	16 - ILS APPROACH 1 ENGINE OUT				AP		ATHR	FPV	FPD	
4.3	17 - GO AROUND 1 ENGINE OUT (NO AP)					FD	ATHR			
3.9.3.4	18 - ILS APPROACH OUT					FD	ATHR			
5.5	19 - LANDING OUT									
		INIT APP 1	CEILING : 300 FT - VISIBILITY : 4 KM							
3.9.3.1	20 - ILS APPROACH - RAW DATA (1)							FPV		
	(APPROACH FLOWN TO DH 200 FT)									
	LANDING (OPTIONAL)									
	FOLLOWING ITEM IS FOR CAPTAIN ONLY :									
		INIT APP 1	CEILING : 1000 FT - VISIBILITY : 8 KM - WIND : RWY 15R = 040°/12 KT | RWY 33L = 190°/12 KT							
3.9.5	21 - CIRCLING (1)						ATHR	FPV		
	TRAINEE AS PNF									
	22 - DEPARTURE WITH RADIAL INTERCEPT				AP	FD	ATHR			
	(CEILING : 800 FT - VISIBILITY : 6 KM)									
	23 - SLATS FAULT									
	24 - ILS APPROACH NO SLATS					FD	ATHR			
	LANDING (OPTIONAL)									
		INIT T/O	CAT II WEATHER CONDITIONS							
	25 - ENGINE FIRE BEFORE V1									
2.5.4	26 - REJECTED TAKE-OFF (CAPTAIN RESUMES CONTROL)									
	27 - EMERGENCY EVACUATION (OPTIONAL)									
	(1) May be performed after an INIT T/O according to remaining time.									

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SKILL TEST FFS - SCENARIO 1 -

A320 Skill Test 1
Toulouse-LFMD / Lyon-St Exupéry LFL
Alternate: Marseille-Provence, MTL
Company Freq: 120.45

FN: Airbus 401
Cost Index: 30
Cruise: FL200 / M50°C
Cruise Wind: 2000ft
Top Dist: 230 NM
Alt Cruise: FL100
Alt Dist: 148 NM

Route:
LFMD MENUX MEN MENUX LFL-8R

Aircraft:
ZFW: 56112 (200 lbs)
33.5 % / 55.0t
ZFCO2FW: (123 200 lbs)
Block Fuel: (Crew)
Est TOM: 01.8t / 123 800 lbs
Take-off CG: 32.0%

Performance (based on estimated OAT)
(Refer to operational calculations)

ATIS:
LFMD – Information ? Rev33L 340/10
8000 SCT013 11/09 Q1015
NDBG

LFL – Information ? Rev 18R 200/12
6000 BKN015 13/10 Q1012
NDBG

A320 Skill Test 1
TOULOUSE (LFMD) – LYON ST EXUPÉRY (LFL)

Events: The events planned for this exercise are:

- ☐ GEN 1 FAULT
- ☐ FWD CARGO SMOKE

Briefing: A suitable clearance expiry time for departure should be given with the clearance.

SIMULATOR SET-UP

REPORTING TO GATE PARK (E10 - N4337.7 / E00122.4)

INIT LOAD

ZFW	56112/200 lbs
Fuel	(Crew)
CG	32%

ENVIRONMENT

QNH	1015
Temperature	11°C
Tropopause	Default Value
Down Point	9 °C
Wind Direction	340°
Speed	10kts
Wind Gradient	(not ACTIVE)
Turbulence Level	10%

VISUAL

Visibility	8000
Cloud Base	1300
Airfield Lights	High Intensity

MAINTENANCE SCHEDULE

DOORS	
L Cabin Door Not Closed	Select
FWD Cargo Door not Closed	Select
Rear Cargo Door not Closed	Select

SPECIAL EVENTS

- Offset due to weather or turbo
- Loss of a SEC computer and recovery after ECAM actions
- Loss of Blue or Yellow HYD electrical pump.
- Problem with a passenger in the cabin

Close Doors / Arm Slides

Pushback – Nose Right

(Taxiway P, M2, M2)

Extend GEN 1 Fault reset is unsuccessful (may lead to APU start)

Exits (10 NM below descent) ...
FWD CARGO Smoke
(Red warning should disappear after 1mn30)

Insert LFL ATIS – Rev 18R 200/12
6000 BKN015 OVC030 13/10
Q1012

Select LFL 18R, all runway lighting on, high intensity

Weather degraded temporarily to :
ceiling 500 ft and visibility 4km to meet
authorities requirements for ICA.

Additional exercises :
Consult the skill test syllabus.

The data used in this file are designed for simulator sessions only. Under no circumstances it should be used for real flight.

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AIRBUS INDUSTRIE <i>Training & Flight Operations Support Division</i> A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE SKILL TEST SYLLABI	2.02.07 Page 6B
		REV 24 JUN 2001

SKILL TEST FFS - SCENARIO 1 - (END)

Frequency	Phase		
Toulouse CPT - 121.70	Pre-Flight		
ATIS TLS 118.02			
Gnd - 121.90	Start	Pushback	
Push complete			
	Start complete		
Taxi			
Tower 118.10	Take-Off		2000 ft
Departure 129.30	Climb	On contact Apr. FLD80	
Bordeaux Ctl 124.07		30 NM before MEN	
Marseille Ctl 134.10			At TOD
134.10	Descent		
		Passing FL 150	
Lyon Aprpr 127.57			At VNE
Lyon Aprpr 127.57	Approach		
		When established	
St Ex ATIS 131.20			
St Ex Aprpr Tower 120.45			
St Ex Aprpr Ground 121.82			
		ATC clears Airbus 401 to LYON St Ex Aprpr. MEN XX departure. Right Plan Route. Climb and maintain 4000 ft, squawk 0438. Clearance expiry time is XXXX Contact Ground 121.90 for push and start. ➡ Airbus 401 cleared to push and start, temp 11°, QNH 1015. ➡ Release Park Brake, cleared to start ➡ Set Park Brake Disconnecting, hand signals on the right Airbus 401 taxi to holding point Rwy 33L Airbus 401 contact Blagnac Tower 118.10 Airbus 401, surface wind 340/10, cleared take-off runway 33L Airbus 401 contact Toulouse Departure on 129.30 Airbus 401 radar contact passing FLXXX (ft), climb and maintain FL 140 Airbus 401 contact Bordeaux Control 124.07 ➡ Airbus 401 identified passing FLXXX, climb and maintain FL 280 Airbus 401 contact Marseille Control 134.10 Airbus 401 identified FL 280; Call for descent ➡ Airbus 401 cleared direct to ARBON, descend FL 070, request your estimate for ARBON Airbus 401 contact Lyon Approach on 127.57 ➡ Airbus 401 Radar contact, descend to FL 070. After ARBON proceed to VNE. Expect a VOR DME 18R. ➡ Airbus 401 continue on standard procedure. Crossing LVM radial 301°, descend altitude 3000ft on QNH 1012. Airbus 401 Cleared for VOR DME 18R. Report established ➡ Airbus 1 continue the approach, contact St Ex Aprpr Tower on 120.45 Airbus 401 cleared to land Rwy 18R, surface wind 200/12 Airbus 401 contact Ground 121.82 Airbus 401 cleared to holding point (additional exercises) via taxiway xx - Reset device if applicable ➡	
		Close Doors / Arm Slides Pushback – Nose Right (Taxiways P, N2, M2) Event: GEN 1 Fault reset is unsuccessful (may lead to APU start) Event: (10 NM before descent) ... FWD CARGO Smoke (Red warning should disappear after 1mn30) Insert LFL ATIS – Rwy 18R 200/12 6000 BKN015 OVC090 13 / 10 Q1012 Select LFL 18R, all runways lighting on, high intensity Weather degrades temporarily to : ceiling 500 ft and visibility 4km to meet authorities requirements for NPA. Additional exercises : Consult the skill test syllabus.	

**SKILL TEST FFS TAKE-OFF DATA
- SCENARIO 2 -**

INIT PAGE			ATIS
CO RTE	FROM TO	TRIP DIST	RWY 18 R
			WIND 190°/12 kt
ALTN/CO RTE		CRZ WIND	VISI 9 km
			CEILING BKN 2000 ft
FLT NBR		ALTN	TEMP 14°C
			DEW POINT . 8°C
LAT	LONG	ALTN DIST	QNH 1014 hPa/ inHg
			QFE 987 hPa/ inHg
COST INDEX		FLT to ALTN	RWY COND.. DRY
			Observations. :
CRZ FL/TEMP	TROPO		
FL 290 / -50°C	36 090		
INIT NEXT PAGE	PERF PAGE	T/O FLAPS	NOTE :
ZFCG/ZFW	IAE CFM		F/PLN :
	V1		LFL 18 R
33.5% - 56 t	VR	T/O C.G.	SID LERGA
33.5% - 123 200 lb	V2		ORLAK
BLOCK	FLEX	TOGA	STAR ORLAK
	DRT		LFBO 33 L
t		FLEX	
lb			
		DRT	

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE SKILL TEST SYLLABI	2.02.07 Page 8 REV 24 JUN 2001
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AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE SKILL TEST SYLLABI	2.02.07 Page 9
		REV 24 JUN 2001

MALFUNC REF	SKILL TEST FFS - SCENARIO 2 -									
LFLL - LFBO										
1.4	1 - TRANSIT COCKPIT PREPARATION (DISPATCH WITH CPC2 FAULT)									
1.4	2 - BEFORE START									
1.4	3 - ENGINE START									
1.4	4 - AFTER ENGINE START									
	5 - TAXI OUT									
1.6	6 - BEFORE TAKE-OFF (CHECKS)									
3.6.5	7 - TAKE-OFF - WINDSHEAR				AP	FD	ATHR			
3.9.1	8 - SID (SPECIAL EVENT OPPORTUNITY)				AP	FD	ATHR			
	9 - CLIMB				AP	FD	ATHR			
3.4.1	10 - CRUISE - CPC1 FAULT (USE OF MAN PRESS FOR DESCENT)				AP	FD	ATHR			
3.9.1	11 - DESCENT - STAR				AP	FD	ATHR			
3.9.4	12 - ILS APPROACH - TRANSMITTER G/S FAILURE				AP		ATHR	FPV	FPD	
	13 - LANDING - Restore									
ADDITIONAL EXERCISES										
		INIT T/O	(LFBO 15 R) CEILING : 500 FT - VISIBILITY 4 KM							
3.4.0										
2.5.2	14 - TAKE-OFF - ENGINE FAILURE (BETWEEN V1 and V2)					FD	ATHR			
	15 - ILS APPROACH 1 ENGINE OUT				AP		ATHR	FPV	FPD	
4.3	16 - GO AROUND 1 ENGINE OUT (NO AP)					FD	ATHR			
3.9.3.4	17 - ILS APPROACH OUT					FD	ATHR			
5.5	18 - LANDING OUT									
		INIT APP 1	CEILING : 300 FT - VISIBILITY : 4 KM							
3.9.3.1	19 - ILS APPROACH - RAW DATA (1)							FPV		
	(APPROACH FLOWN TO DH 200 FT)									
	LANDING (OPTIONAL)									
	FOLLOWING ITEM IS FOR CAPTAIN ONLY :									
		INIT APP 1	CEILING : 1000 FT - VISIBILITY : 8 KM - WIND : RWY 15R = 040°/12 KT | RWY 33L = 190°/12 KT							
3.9.5	20 - CIRCLING (1)						ATHR	FPV		
	TRAINEE AS PNF									
	21 - DEPARTURE				AP	FD	ATHR			
	(CEILING : 800 FT - VISIBILITY : 6 KM)									
	22 - ENGINE FIRE									
	23 - ILS APPROACH 1 ENGINE OUT					FD	ATHR			
	LANDING (OPTIONAL)									
		INIT T/O	CAT II WEATHER CONDITIONS							
	24 - ENGINE N1/EGT OVERLIMIT BEFORE V1									
2.5.4	25 - REJECTED TAKE-OFF (CAPTAIN RESUMES CONTROL)									
	(1) May be performed after an INIT T/O according to remaining time.									

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SKILL TEST FFS - SCENARIO 2 -

A320 SKILL TEST 2
Lyon St Exspery LRL / Toulouse LFBO
Alternates: Bordeaux Maignac LFBD
Company Freq.: 123.45

PRM: Airbus 401
30
FL250 / N504C
Cruise Wind 200/00 kt
Trip Dist 229 NM
Altitude: FL140
Alt. Dist 117 NM

Route: LFLL-BR LER04XX MEN ORLJACC
LFBO3BL

Altitude: 33.5% / 56 t
27°C OAT
Brake Fuel: (Crew)
Est TOW: 01.8 t / 123 000 lbs
Take-off CG: 32.0%

Performance: (based on estimated OAT)
(Refer to operational calculations)

ATIS:
LFLL - Information ? Rwy18R 920/12
9000 840000 14/08 01013
NORM

**LFBD - Information ? Rwy 33L 270/15
6000 810145 010000 14/08
01015 NORM**

A320 SKILL TEST 2	
LYON ST EXSPERY (LRL) - TOULOUSE BLAIGNAC (LFBO)	
Events:	The events planned for this exercise are:
	☐ Dispatch with CPC 2 FAULT ☐ Windhear after take off ☐ Special event from list ☐ CPC1 FAULT ☐ GS failure 4 NM before intercept
Briefing:	A suitable clearance expiry time for departure should be given with the clearance.
SIMULATOR SET-UP	
REPORT ON to	GATE PARK POSITION (CG3 - N4543-18000048)
INITIATION	
ZFW	56 t / 123 200 lbs
Fuel	(Crew)
CG	32%
ENVIRONMENT	
QNH	1014
Temperature	14°C
Trip time	Default Value
Descent	8 °C
Wind Direction	190°
Speed	12 kts
Wind Gradient	(not ACTIVE)
Turbulence Level	10
Windhear	Take-off after V _R
VISUALS	
Visibility	9000
Cloud Base	2000
Airfield Lights	high intensity
MAINTENANCE INDEX	
DOORS	
L. Cabin Door Not Closed	Select
RWD Cargo Door not Closed	Select
Rear Cargo Door not Closed	Select
SPECIAL EVENTS	
Onset due to weather or traffic	- Estimate for a given radial
Loss of a SEC computer and recovery after ECAM action	- Loss of a fuel pump
Loss of Blue or Yellow HYD electrical pump	- ADR 1 or 2 lost then switching
Power reports that galley are not working properly	- Problem with a passenger in the cabin

Close Doors / Arm Stairs

Pushback - Nose Right

(Taxiways TB and parallel taxiway)

Event: moderate Windhear after take off

Insert cruise wind

Special event from the list

Event: CPC 1 FAULT

Crew could by a need (unassisted)
PRESS MAIN control used during descent

Insert LFBO ATIS - Rwy 33L 270/15
6000 SCT015 OVC030 14/08
01015

Select LFBO 33L, all runways lighting
on, high intensity

4 NM before GS interception...
FAIL GS for LS runway 33L

Weather degrades transparency to :
ceiling 500 ft and visibility 4 km to meet
authorities requirements for NPA.

Additional exercises :
Consult the skill test syllabus.

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SKILL TEST FFS - SCENARIO 2 - (END)

Frequency	Phase	
LYON St Exupery CPT - 121.70	Pre-Flight	ATC clears Airbus 401 to Toulouse Blagnac, LERGAXX departure, Flight Plan Route. Climb and maintain FL60, squawk 0436. Clearance expiry time is XXXX
ATIS LYS 135.25 Gnd - 121.82		Contact Ground 121.82 for push and start. ➡➡
Start	Pushback	Airbus 401 cleared to push and start, temp 14°, QNH 1014. ➡➡
Push complete		Release Park Brake, cleared to start ➡➡
Start complete		Set Park Brake
Taxi		Disconnecting, hand signals on the right
		Airbus 401 taxi to holding point Rwy 18R
		Airbus 401 contact St Exupery Tower 120.45
Tower 120.45	Take-Off	
		Airbus 401, surface wind 190 to 230/12 gusting 18 kt, cleared take-off runway 18R ➡➡
2000ft		Airbus 401 contact Departure on 127.57 ➡➡
Departure	Climb	
127.57	On contact	Airbus 401 radar contact passing FLXXX (ft), climb and maintain FL140
Marseille Ctl 134.10	Appr. FL120	Airbus 401 contact Marseille Control 134.10 ➡➡
20 Nm after MEN		
Bordeaux Ctl 124.07	Cruise	Airbus 401 identified passing FLXXX, climb and maintain FL290
		Airbus 401 contact Bordeaux 124.07 ➡➡
At TOD		Airbus 401 identified FL290; Call ready for descent
		Airbus 401 on STAR ORLAKXX, descend FL060 ➡➡
124.07	Descent	
Passing FL 150		Airbus 401 contact Blagnac Approach on 129.30
Toulouse APP 129.30		
at 40 DME TOU		Airbus 401 Radar contact, descend to 4000ft on QNH 1015. Runway in use 33L. ➡➡
Approach		Airbus 401 direct to TOE. Expect an ILS Approach RWY 33L
129.30		Airbus 401 Cleared for ILS Approach RWY 33L. Report established ➡➡
When established		
TLS ATIS 118.02		Airbus 401 continue the approach, contact Blagnac Tower on 118.10
Blagnac Tower 118.10		Airbus 401 cleared to land RWY 33L, surface wind 270/15
		Airbus 401 contact Ground 121.90
Blagnac Ground 121.90		Airbus 401 cleared to holding point (additional exercises) via taxiway XX - Reset device if applicable ➡➡
		Close Doors / Arm Slides
		Pushback - Nose Right
		(Taxiways TB and parallel taxiway
		Event: moderate Windshear after take off
		Insert cruise wind
		Special event from the list
		Event: CPC 1 FAULT Crew could try a reset (unsuccessful) PRESS MAN control used during descent
		Insert LFBO ATIS - Rwy 33L 270/15 6000 SCTO15 QVC030 14 /08 Q1015
		Select LFBO 33L, all runways lighting on, high intensity
		4 NM before G/S interception... FAIL G/S for ILS runway 33L
		Weather degrades temporarily to : ceiling 500 ft and visibility 4km to meet authorities requirements for NPA.
		Additional exercises : Consult the skill test syllabus.

**SKILL TEST FFS TAKE-OFF DATA
- SCENARIO 3 -**

SKILL TEST FFS TAKE-OFF DATA - SCENARIO 3 -			
INIT PAGE CO RTE ALTN/CO RTE FLT NBR [Airline ID] 401 LAT 4326.2N COST INDEX 30 CRZ FL/TEMP FL 280 / -42°C FROM TO LFML/LFBD LONG 00512.9E TROPO 36 090			

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE SKILL TEST SYLLABI	2.02.07 Page 12
		REV 24 JUN 2001

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MALFUNC REF	SKILL TEST FFS - SCENARIO 3 -									
LFML - LFBD										
1.4	1 - TRANSIT COCKPIT PREPARATION									
1.4	2 - BEFORE START									
1.4	3 - ENGINE START									
1.4	4 - AFTER ENGINE START									
	5 - TAXI OUT									
1.6	6 - BEFORE TAKE-OFF (CHECKS)									
	7 - TAKE-OFF				AP	FD	ATHR			
3.9.1	8 - SID (SPECIAL EVENT OPPORTUNITY)				AP	FD	ATHR			
3.4.5	9 - CLIMB - HYD GREEN RSVR OVHT				AP	FD	ATHR			
3.4.1	10 - CRUISE - CARGO DOOR OPEN then EXCESSIVE CAB ALT				AP	FD	ATHR			
3.9.1	11 - DESCENT - STAR				AP	FD	ATHR			
3.9.4	12 - NON PRECISION APPROACH (VOR DME APPROACH)				AP		ATHR	FPV	FPD	
	13 - LANDING - Restore									
ADDITIONAL EXERCISES										
		INIT T/O	(LFBO 15 R) CEILING : 500 FT - VISIBILITY 4 KM							
3.4.0										
2.5.2	14 - TAKE-OFF - ENGINE FAILURE (BETWEEN V1 and V2)					FD	ATHR			
	15 - ILS APPROACH 1 ENGINE OUT				AP		ATHR	FPV	FPD	
4.3	16 - GO AROUND 1 ENGINE OUT (NO AP)					FD	ATHR			
3.9.3.4	17 - ILS APPROACH OUT					FD	ATHR			
5.5	18 - LANDING OUT									
		INIT APP 1	CEILING : 300 FT - VISIBILITY : 4 KM							
3.9.3.1	19 - ILS APPROACH - ALTERNATE LAW (RIGHT ELEV FAULT) (1)							FPV		
	(APPROACH FLOWN TO DH 200 FT)									
	LANDING (OPTIONAL)									
	FOLLOWING ITEM IS FOR CAPTAIN ONLY :									
		INIT APP 1	CEILING : 1000 FT - VISIBILITY : 8 KM - WIND : RWY 15R = 040°/12 KT | RWY 33L = 190°/12 KT							
3.9.5	20 - CIRCLING (1)						ATHR	FPV		
	TRAINEE AS PNF									
	21 - DEPARTURE WITH RADIAL INTERCEPT				AP	FD	ATHR			
	(CEILING : 800 FT - VISIBILITY : 6 KM)									
	22 - ADR FAULT (PNF SIDE)									
	23 - ILS APPROACH - ATHR FAULT					FD	ATHR			
	LANDING (OPTIONAL)									
		INIT T/O	CAT II WEATHER CONDITIONS							
	24 - ENGINE N1/EGT OVERLIMIT BEFORE V1									
2.5.4	25 - REJECTED TAKE-OFF (CAPTAIN RESUMES CONTROL)									
	(1) May be performed after an INIT T/O according to remaining time.									

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SKILL TEST FFS - SCENARIO 3 -

Close Doors / Arm Slides Remove Chocks, (Ground Power) Pushback – Nose Left (32R - Taxiways - 3B, 3C, 3D)	A320 SKILL TEST 3 MARKELLE PROVENCE (LFML) – BORDEAUX MÉRIGNAC (LFBD)	
	Events: The events planned for this exercise are: ☐ Hydraulic Green reservoir overheats ☐ Cargo door open ☐ Evacuate cabin altitude	A320 SKILL TEST 3 Markelle-LFML / Bordeaux-LFB Altitude: Toulouse-LFB Company Freq.: 123.45 FLN: Airbus A320 Cert In dec: 30 Cruise: FL380 / M420C Cruise Wind: 310 / 70 kt Trip Dist: 272 NM Altitude: FL130 Altitude: 127 NM Route: LFML VARESOX FJR G4M LACOU SECHE MIRBAIX LFBD Altitude: 33.5 % / 561 t ZFC/GCFW: (123 200 lbs) Block Fuel: (Crew) Est TOW: 821 / 136 400 lbs Take-off CG: 32.0 % Performance: (based on estimated GWR) (Refer to operational calculations) ATIS: LFML – Information ? Rwy 32R 320V13 8999 FEMOHD SCT220 12°/4° Q1015 NO360 LFBD – Information ? Rwy23 200V15 8000 OACOM5 00/00 Q1022 NO360 LFBD – Information ? Rwy33L 200V15 8000 RA FEMOHD BKN200 08/05 Q1021 NO360
Events: The events planned for this exercise are: ☐ Hydraulic Green reservoir overheats ☐ Cargo door open ☐ Evacuate cabin altitude	Simulator Set-Up	
	SLIDES pb - disarm APPROPRIATE SET-UP LFML – Runway 32R All runway lights ON POSITION is GATE PARK (CG - M4226.4 / E00513.4) NET LOG ZFW: 561 / 123 200 lbs Fuel: (Crew) CG: 32% MANEUVERING QNH: 1015 Temperature: 12°C Tropopause: Default Value Descent: 04°C Wind Direction: 320° Speed: 13 kts Wind Gradient: (not ACTIVE) Turbulence Level: 15 STATUS CAVOK Cloud Base: 4000 Arrival Lights: high intensity MANEUVERING DOORS L Cabin Door Not Closed Rear Cargo Door not Closed Rear Cargo Door not Closed SPECIFIC EVENTS - Check due to weather or traffic - Loss of a SEC computer and recovery after ECAM actions - Loss of Blue or Yellow HYD electrical pump. - Pusher reports that galley are not working properly. - Estimate for a given call - Loss of a fuel pump - ADR 1 or 2 fault then switching - Problem with a passenger in the cabin	
Event: Insert a HYD G RESVR OVHT	Event: Insert FWD CARGO DOOR OPEN 1 min later, Select EXCESS CAB ALT The crew will start an EMER DESCENT Then decide to divert to LFBD or Continue to LFBD Remove: HYD G RESVR OVHT Insert 801 ATIS – Rwy 23 200V15 8000 OVCOM5 0900 Q1022 ILS 23 in maintenance TLS ATIS – Rwy33 L 200V15 0000 RA FEMOHD BKN200 08/05 Q1021 ILS 33L in maintenance Weather degraded temporarily to: ceiling 500 ft and visibility 4 km to meet authorities requirements for RPA. Select all runway lighting on, high intensity Additional exercises: Consult the skill test syllabus.	

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AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE SKILL TEST SYLLABI	2.02.07 Page 14B
		REV 24 JUN 2001

SKILL TEST FFS - SCENARIO 3 - (END)

EXAMINER Marseille CPT - 121.70 ATIS - 128.26 Gnd - 121.90	Phase Pre-Flight Clearance Start Pushback Push complete Start complete Taxi Taxi starts Take-off 2500ft Departure - 100.20 Climb Appr. FL080 Marseille CR 126.25 Bordeaux CR 124.07 Bordeaux CR 132.42 Descent ATIS BDX 121.15 ATIS TLS 138.00 Aquitaine Appr 119.27 Toulouse Appr 129.30 15 NM inbound Passing FAF Marseille Tower / Blagnac Tower 119.30 Marseille Ground / Blagnac Ground 121.90	ATC clears Airbus 401 to Bordeaux-Mérignac via MARS 5 XX departure Right Hand Route. Climb and maintain FL080, expect FL250, squawk 0304. Departure frequency 120.20. Clearance expiry time is 3000Z. ☞ Contact Ground 121.90. ☞ Airbus 401 cleared to push and start, keep 12°, QNH 1016. ☞ Release Park Brake, cleared to start Set Park Brake Disconnecting, hand signals on the right Airbus 401 taxi to holding point RWY 33R Airbus 401 contact Provence Tower 119.50 Airbus 401, tailwind wind 320/13, cleared for take-off runway 33R Airbus 401 contact Departure on 120.20 Airbus 401 radar contact passing FL080 (R), climb and maintain FL080 Airbus 401 contact Marseille Control on 126.25 Airbus 401 radar contact, due to traffic climb and maintain FL 220 Airbus 401 you are now cleared to climb to FL280, contact Bordeaux Control on 124.07 ☞ Airbus 401 radar contact. Airbus 401 contact Bordeaux Control on 124.42 Airbus 401 radar contact. Call for descent ☞ If the crew decides to divert to LFBQ, Airbus 401 proceed to TOL, descend to 4000ft on QNH 1021. If the crew decides to continue, Airbus 401 descend to FL100 and report MRSB ☞ Airbus 401 contact Aquitaine Approach on 119.27 / or contact Toulouse Approach on 129.30 Airbus 401 identified. For BDX only > Passing MRSB at descent altitude 4000ft on QNH 1022 Airbus 401 ILS on maintenance, expect a VOR/DME approach RWY 23 (3.3L for LFBQ) Airbus 401 Descent 3000ft, Cleared for approach (NORM DME) ☞ Airbus 401 contact Merignac Tower on 119.30 or Blagnac Tower 119.10 Airbus 401 cleared to land RWY 23 or 30L, windset wind 270/15 Airbus 401 contact ground (BDX) 121.90 / (TLS) 121.90 ☞ Airbus 401 cleared to holding point (additional enroute) via language set - Reset device if applicable ☞
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The data used in this file are designed for simulator sessions only. Under no circumstances it should be used for real flights.

SKILL TEST FFS TAKE-OFF DATA
- SCENARIO 4 -

INIT PAGE			ATIS
CO RTE	FROM TO	TRIP DIST	RWY 23
			WIND 230°/04 kt
ALTN/CO RTE		CRZ WIND	VISI 10 km
			CEILING FEW 1300 ft
FLT NBR		ALTN	TEMP 9°C
			DEW POINT . 6°C
LAT	LONG	ALTN DIST	QNH 1022 hPa/ inHg
			QFE 1017 hPa/ inHg
COST INDEX		FLT to ALTN	RWY COND.. DRY
			Observations. :
CRZ FL/TEMP	TROPO		
INIT NEXT PAGE	PERF PAGE	T/O FLAPS	NOTE :
ZFCG/ZFW	IAE		F/PLN :
	V1		LFBD 23
33.5% - 56 t	VR	T/O C.G.	SID SAU
33.5% - 123 200 lb	V2		GAI39 GAI
BLOCK	FLEX	TOGA	UT24 FJR
	DRT	FLEX	STAR VARES
t			LFML 32 R
lb			

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	REGULAR COURSE SKILL TEST SYLLABI	2.02.07 Page 16
		REV 24 JUN 2001

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MALFUNC REF	SKILL TEST FFS - SCENARIO 4 -									
LFBD - LFML										
1.4	1 - TRANSIT COCKPIT PREPARATION (DISPATCH WITH RA 2 FAULT)									
1.4	2 - BEFORE START									
1.4	3 - ENGINE START									
1.4	4 - AFTER ENGINE START									
	5 - TAXI OUT									
1.6	6 - BEFORE TAKE-OFF (CHECKS)									
	7 - TAKE-OFF		AP	FD	ATHR					
3.9.1	8 - SID		AP	FD	ATHR					
3.4.5	9 - CLIMB - TCAS EVENT		AP	FD	ATHR					
3.4.1	10 - CRUISE - ENGINE FLAME OUT then RELIGHT		AP	FD	ATHR					
3.9.1	11 - DESCENT - RA 1 FAULT (STAR)		AP	FD	ATHR					
3.9.4	12 - ILS APPROACH - NO RA		AP		ATHR	FPV		FPD		
	13 - LANDING - Restore									
ADDITIONAL EXERCISES										
	INIT T/O	(LFBO 15 R) CEILING : 500 FT - VISIBILITY 4 KM								
3.4.0										
2.5.2	14 - TAKE-OFF - ENGINE FAILURE (BETWEEN V1 and V2)			FD	ATHR					
	15 - ILS APPROACH 1 ENGINE OUT		AP		ATHR	FPV		FPD		
4.3	16 - GO AROUND 1 ENGINE OUT (NO AP)			FD	ATHR					
3.9.3.4	17 - ILS APPROACH OUT			FD	ATHR					
5.5	18 - LANDING OUT									
	INIT APP 1	CEILING : 300 FT - VISIBILITY : 4 KM								
3.9.3.1	19 - NON PRECISION APPROACH (VOR DME) (1)					FPV				
	(APPROACH MUST BE CONDUCTED DOWN TO MDA)									
	LANDING (OPTIONAL)									
	FOLLOWING ITEM IS FOR CAPTAIN ONLY :									
	INIT APP 1	CEILING : 1000 FT - VISIBILITY : 8 KM - WIND : RWY 15R = 040°/12 KT | RWY 33L = 190°/12 KT								
3.9.5	20 - CIRCLING (1)				ATHR	FPV				
	TRAINEE AS PNF									
	21 - DEPARTURE		AP	FD	ATHR					
	(CEILING : 800 FT - VISIBILITY : 6 KM)									
	22 - HYD GREEN RSVR LO LVL									
	23 - ILS APPROACH - L/G EXTENSION BY GRAVITY			FD	ATHR					
	LANDING (OPTIONAL)									
	INIT T/O	CAT II WEATHER CONDITIONS								
	24 - ENGINE FIRE BEFORE V1									
2.5.4	25 - REJECTED TAKE-OFF (CAPTAIN RESUMES CONTROL)									
	26 - EMERGENCY EVACUATION (OPTIONAL)									
	(1) May be performed after an INIT T/O according to remaining time.									

INSTRUCTOR ONLY

INSTRUCTOR ONLY

SKILL TEST FFS - SCENARIO 4 -

Close Doors / Arm Slides		A320 SKILL TEST 4	BORDEAUX MERTIGNAC (LFBD) – MARSEILLE PROVENCE (LFML)
Remove Checks, (Ground Power)	Events: The events planned for this exercise are: ☐ DISPATCH with RA.2 FAULT ☐ TCAS event ☐ Engine flame out then reignit ☐ RA.1 FAULT	A320 SKILL TEST 4 Bordeaux - LFBD / Marseille - LFML Alternate: Montpellier - LFMD Toulouse - LFBD Company Freq: 123.45	
Pushback – Nose Left	Briefing: A suitable clearance expiry time for departure should be given with the clearance.		
	BLUE pb - disarm AIRPORT SELECT & STATUS LFBD – Runway 23 All lights ON	SIMULATOR SET-UP	
Insert cruise wind	REPORTING TO GATE PARK POSITION (S19 – B3 – 4448 SN / 00042.2W) (S23N524 – A6 – 4449 SN / 00042.2W)		
	WIND ZFW: 561 / 123 200 lbs Fuel: (Crew) C.O: 32%		
	ENVIRONMENT QNH: 1022 Temperature: 9°C Tropopause: Default Value Dew Point: 6°C		
		Block Fuel: (Crew) Est TCW: 82.31 / 137 800 lbs Take-off C.O: 32.0%	
		Performance (based on estimated QW)	
		(Refer to operational calculations)	
		ATIS:	
		LFBD – Information ? Runway 23 200/4 10km FEW013 09/105 Q1022 NDB	
		LFML – Information ? Runway 32R 320/13 0000 BKN015 SCT030 121/4* Q1015 NDB	
	SPECIAL EVENTS - Offset due to weather or traffic - Loss of a SEC computer and recovery after ECAM actions - Loss of Blue or Yellow HYD electrical pump. - Pallet reports that pallet are not working properly.		- Estimate for a given 100ft - Loss of a fuel pump - ADR 1 or 2 fault then switching - Problem with a passenger in the cabin
		WIND CAVOK Cloud Base: 1300 ft Artificial Lights: high intensity	
		WIND DIRECTION INDEX DOORS L Cabin Door Not Closed: Select RWD Cargo Door not Closed: Select Rear Cargo Door not Closed: Select	
		WIND Insert MRS ATIS – Runway 32R 300/12 0000 BKN015 SCT030 1107 Q1015 Fuel RA1	
		Select LFML 32R, all runway lighting on, high intensity	
		Give RADAR VECTORS for ILS interception RWY 32R and	
		Weather degrades temporarily to : Visibility 4 km ceiling 300 ft in mist authorities requirements for NPA.	
		Additional considerations : consult the skill test syllabus.	

The data used in this file are designed for simulator sessions only. Under no circumstances it should be used for real flights.

SKILL TEST FFS - SCENARIO 4 - (END)

Endurance Bordeaux CPT – 119.27	Phase Pre-Flight Clearance	ATC clears Airbus 401 to Marseille Provence via SALUXX departure Right Run Route. Climb and maintain FL080, expect FL270, approach 030R. Departure frequency 119.27. Clearance expiry time is XXXX. ☞	Close Doors / Arm Slides
ATIS – 121.35 GND – 121.90	Start	Arbus 401 cleared to push and start, keep 01, QNH 1022. ☞ Release Push Brake, cleared to start Set Push Brake Disconnecting, hand signals on the light	Remove Chocks, (Ground Power) Pushback – Nose Left
Tower 119.30	Taxi	Arbus 401 taxi straight ahead to holding point RWY 23	
Departure – 119.27	Taxi starts	Arbus 401 contact Mergnac Tower 119.30	
Climb	Take-Off	Arbus 401 surface wind 23018, cleared for take-off runway 23	
Appt. FLD90	2500ft	Arbus 401 contact Departure on 119.27 ☞	Insert cruise wind
Bordeaux Cl 132.42	Climb	Arbus 401 radar contact passing FLD90 (8), climb and maintain FL080	Event: TCAS event (RA scenario) during transfer from Mergnac-Apprt to Bordeaux Cl. A wrong frequency could be given in order to lose communication during the TCAS event (the crew should manually switch to this previous freq).
Bordeaux Cl 124.07	Cruise	Arbus 401 contact Bordeaux Control on 132.42 ☞	
Marseille Cl 126.26	Cruise	Arbus 401 radar contact, due to traffic climb and maintain FL 200	
MRS ATIS 125.36	Descent	Arbus 401 you are now cleared to climb to FL270, contact Bordeaux Control on 124.07	Event: When crew starts descent, insert in ENG FLAME OUT without damage at 10% reduction. The next attempt will be successful
Provenance Appr 120.20	Approach	Arbus 401 radar contact. Call for descent ☞	Insert MRS ATIS – Run 32R 300/12 9000 BND015 SC1030 11007 QNH15 Fall RAC
Provenance Tower 119.50	500ft after MTG	Arbus 401 identified, descend 4000ft on QNH 10150e VAREX 30X standard arrival ☞	Select LFML 32R, all runways lighting on, high intensity
Provenance Ground 121.90		Arbus 401 expect an ILS approach RWY 32R	Give RADAR VECTORS for ILS interception RWY 32R and
		Arbus 401 HDG 140°, descend altitude 3000ft on QNH 1015 ☞	Weather degraded temporarily to : Visibility 4km ceiling 300 ft to meet authorized requirements for NP-A.
		Arbus 401 cleared to land RWY 32R, surface wind 300/10 contact Provenance Tower on 119.50	Additional exercises : Consult the skill test syllabus.
		Arbus 401 contact Ground 121.90	
		Arbus 401 cleared to holding point (additional exercises) via frequency xx – Reset device if applicable ☞	

The data used in this file are designed for simulator sessions only. Under no circumstances it should be used for real flights.

FLIGHT

Minimum flight time : 0h45 / pilot

LH SEAT RH SEAT

DAY	GA	TG	FS

Flight time :

NIGHT	GA	TG	FS
Flight time :			

Weather :

Malfunxions :

[illegible]

NOTE : Refer to Base Training Briefing in FCTM Vol 1 - "Normal Operation Briefings"

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	TYPE RATING COURSE BASE TRAINING SYLLABUS	2.02.08 Page 2 REV 24 JUN 2001
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Adapted Jet Familiarization course

- E F2J -

 A320 FLIGHT CREW TRAINING MANUAL	TRANSITION COURSES TABLE OF CONTENTS	2.02.00 Page 1 <i>All Adapted Courses</i> REV 24 JUN 2001
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2.02.01 - INTRODUCTION	Refer to Regular Course
2.02.02 - TRAINING FOOTPRINT	
2.02.03 - GROUND COURSE SYLLABI	Refer to Regular Course
2.02.04 - NORMAL COURSE SYLLABI	
2.02.05 - ABNORMAL/EMERGENCY COURSE SYLLABI.	Refer to Regular Course
2.02.06 - LOFT SYLLABI	Refer to Regular Course
2.02.07 - SKILL TEST SYLLABI	Refer to Regular Course
2.02.08 - BASE TRAINING SYLLABUS.....	Refer to Regular Course

AIRBUS INDUSTRIE  Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	TRANSITION COURSES TABLE OF CONTENTS	2.02.00 Page 2 <i>All Adapted Courses</i> REV 22 OCT 98
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 A320 FLIGHT CREW TRAINING MANUAL	ADAPTED JET FAMILIARIZATION COURSE TRAINING FOOTPRINT	2.02.02 Page 1 E F2J
		TR 15 FEB 2002

01 - TRAINING DEVICE TIME SHARING PER PHASE

N.B. : except when notified, the allocated time is mentioned in hour/crew

		(With Language)
Total working days (without Base Training)	Regular course = 24 or 25 Adapted course = 27 or 28	28 or 29 31 or 32
GROUND PHASE	10 working days	14
CBT : - Aircraft system study + review - System Test - Jet Familiarization briefing		
FMGS TRAINER sessions.....	4	9:00 (3 x 2:00 + 3:00)
ECAM TRAINER sessions.....	3	6:00 (3 x 2:00)
FBS sessions	1	2:00
FFS familiarization session (Introduction to A320) .	1	0:45
NORMAL PHASE	8 working days	
FBS sessions	3	9:00 (3 x 3:00)
FFS sessions	5	15:00 (5 x 3:00)
(3 Regular FFS + 2 Adapted Jet FFS)		
ABNORMAL / EMERGENCY PHASE	5 working days	
FBS sessions	2	6:00 (2 x 3:00)
FFS sessions	3	9:00 (3 x 3:00)
LOFT PHASE	3 working days	
ALOFT briefings	1	
FFS sessions	2	6:00 (2 x 3:00)
SKILL TEST PHASE	Standard Crew 1 working day	Non Standard Crew 2 working days
FFS sessions	1 session 4:00	2 sessions 6:00 (3:00 / trainee)
<i>In the aircraft :</i>		
FLIGHT PHASE (if applicable i.e. French DGAC rule)	1 working day	
Flight	1	Minimum 0:45 / trainee



AIRBUS Training & Flight Operations Support and Services A320 FLIGHT CREW TRAINING MANUAL	ADAPTED JET FAMILIARIZATION COURSE TRAINING FOOTPRINT	2.02.02 Page 2 <i>E F2J</i>
		TR 15 FEB 2002

02 - ADAPTED JET FAMILIARIZATION COURSE

A. GROUND PHASE DAILY FOOTPRINT

All the following time limits are for information and represent the minimum required to study the relevant system.

DAY 9 :

System test in one session for all trainees on the afternoon, **after having performed VPREP FBS** (might be swapped with FMGS 4 on previous day according to equipment availability).

DAY 1

Welcome	2:30
CBT :	
- Introduction	0:20
- Aircraft general	0:15
- APU	0:40
- EIS - EFIS	1:15
- Autoflight (1/2)	1:15
<i>FFS 0</i>	0:45

DAY 2 CBT : - Autoflight (2/2) 2:30 - EIS - ECAM 1:45 - System review 0:45 <i>(To be scheduled after 10:30 am) :</i> <i>FMGS 1</i> 2:00	DAY 3 CBT : - Navigation 1:50 - Electric 2:15 - System review 0:55 <i>FMGS 2</i> 2:00	DAY 4 CBT : - Pneumatic 1:00 - Fire protection 0:45 - Press / Vent / Air cond 2:00 - Ice & rain protection 0:30 - System review 0:45 <i>FMGS 3</i> 2:00
DAY 5 CBT : - Landing gear 1:00 - Flight controls 2:30 - Hydraulic 1:15 - Systems review 0:15 <i>ECAM 1</i> 2:00	DAY 6 CBT : - Fuel 1:00 - Power plant 1:30 - Oxygen / Doors / Lights 1:30 - Communication 0:40 - Systems review 0:20 <i>ECAM 2</i> 2:00	DAY 7 CBT : - Recorders 0:05 - Pre-fans 0:30 - System review 1:55 - Performance 3:00 (Take-off / Landing) <i>ECAM 3</i> 2:00
DAY 8 CBT : - System review 4:00 <i>FMGS 4</i> 3:00	DAY 9 CBT : - System test 3:00 - System test debriefing 1:00 <i>V PREP FBS briefing</i> 0:30 <i>V PREP FBS</i> 2:00	Optional day Airbus Crew Resource Management (ACRM)
DAY 10 Adapted Jet Familiarization briefing		



B - NORMAL, ABNORMAL, LOFT, EVALUATION PHASES DAILY FOOTPRINT

DAY 11 <i>N0 FBS</i>	DAY 12 <i>N1 FBS</i>	DAY 13 <i>N2 FBS</i>
DAY 14 <i>NJ FFS</i> (Adapted Jet Familiarization)	DAY 15 <i>N3 FFS</i>	DAY 16 <i>N4 FFS</i>
DAY 17 <i>NJ LOFT FFS</i> (Adapted Jet Familiarization)	DAY 18 <i>N5 FFS</i> (Progress check)	
DAY 19 <i>F1 FBS</i>	DAY 20 <i>F2 FBS</i>	DAY 21 <i>F3 FFS</i>
DAY 22 <i>F4 FFS</i>	DAY 23 <i>F5 FFS</i>	
DAY 24 A-LOFT briefings 2:10 Performance complement 2:10 Performance test 0:50 Cabin presentation 0:50 Cabin trainer 1:00	DAY 25 <i>Walk around video</i> 0:20 <i>A-LOFT FFS 1</i>	DAY 26 <i>A-LOFT FFS 2</i>
DAY 27 <i>Skill Test FFS</i> Standard Crew : 4 h session Non Standard Crew : 3 h session (Trainee 1)	DAY 28 (Non Standard Crew ONLY) <i>Skill Test FFS</i> Non Standard Crew : 3 h session (Trainee 2)	

= Abnormal / emergency sessions



 A320 FLIGHT CREW TRAINING MANUAL	ADAPTED JET FAMILIARIZATION COURSE TRAINING FOOTPRINT	2.02.02 Page 4 E F2J
		TR 15 FEB 2002

03 - ADAPTED JET FAMILIARIZATION COURSE + LANGUAGE

A. GROUND PHASE DAILY FOOTPRINT

		DAY 1 Welcome Projected CBT : - Introduction - Aircraft genera - EIS - EFIS (1/2)
DAY 2 Projected CBT : - EIS - EFIS (2/2) - ECAM - APU	DAY 3 Projected CBT : - Autoflight (1/2) - System review FMGS 1 2:00	DAY 4 Projected CBT : - Autoflight system (2/2) - Navigation FMGS 2 2:00
DAY 5 Projected CBT : - Electric - Pneumatic - Air conditioning FMGS 3 2:00	DAY 6 Projected CBT : - Pressurization - Ventilation - Hydraulic ECAM 1 2:00	DAY 7 Projected CBT : - Power plant - Landing gear - System review ECAM 2 2:00
DAY 8 Projected CBT : - Fuel - Flight controls - System review ECAM 3 2:00	DAY 9 Projected CBT : - Ice and rain protection - Fire protection - TCAS FMGS 4 3:00	DAY 10 Projected CBT : - Oxygen / Doors - Lights - Communication - Recorders - System review
DAY 11 Projected CBT : - System review - Performance (Take-off / Landing) V PREP FBS briefing 0:30 V PREP FBS 2:00	DAY 12 Projected CBT : - System review - System test - System test debriefing	DAY 13 Airbus Crew Resource Management (ACRM)
DAY 14 Adapted Jet Familiarization briefing		



B - NORMAL, ABNORMAL, LOFT, EVALUATION PHASES DAILY FOOTPRINT

DAY 15 <i>N0 FBS</i>	DAY 16 <i>N1 FBS</i>	DAY 17 <i>N2 FBS</i>
DAY 18 <i>NJ FFS</i> (Adapted Jet Familiarization)	DAY 19 <i>N3 FFS</i>	DAY 20 <i>N4 FFS</i>
DAY 21 <i>NJ LOFT FFS</i> (Adapted Jet Familiarization)	DAY 22 <i>N5 FFS</i> (Progress check)	
DAY 23	DAY 24	DAY 25
<i>F1 FBS</i>	<i>F2 FBS</i>	<i>F3 FFS</i>
DAY 26	DAY 27	
<i>F4 FFS</i>	<i>F5 FFS</i>	
DAY 28 A-LOFT briefings 2:10 Performance complement 2:10 Performance test 0:50 Cabin presentation 0:50 Cabin trainer 1:00	DAY 29 <i>Walk around video 0:20</i> <i>A-LOFT FFS 1</i>	DAY 30 <i>A-LOFT FFS 2</i>
DAY 31 <i>Skill Test FFS</i> Standard Crew : 4 h session Non Standard Crew : 3 h session (Trainee 1)	DAY 32 (Non Standard Crew ONLY) <i>Skill Test FFS</i> Non Standard Crew : 3 h session (Trainee 2)	

NOTE : When requested by the instructor, spare time sessions are performed :
 - the day before the Progress check (Normal phase)
 - at the end of the Abnormal/Emergency phase

 = Abnormal / emergency sessions



 Training & Pilot Operations Support and Services A320 FLIGHT CREW TRAINING MANUAL	ADAPTED JET FAMILIARIZATION COURSE TRAINING FOOTPRINT	2.02.02 Page 6 <i>E F2J</i>
		TR 15 FEB 2002

04 - CBT AT HOME REGULAR COURSE (Not applicable to Adapted Courses)

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	ADAPTED JET FAMILIARIZATION COURSE TRAINING FOOTPRINT	2.02.02 Page 1 E F2J
		REV 24 JUN 2001

01 - TRAINING DEVICE TIME SHARING PER PHASE

N.B. : except when notified, the allocated time is mentioned in hour/crew

		(With Language)
Total working days (without Base Training).....	Regular course = 25 Adapted courses = 28	TBD
GROUND PHASE	10 working days	TBD

CBT : - Aircraft system study + review

- System Test

- Jet Familiarization briefing

|	FMGS TRAINER sessions.....	4	9:00	(3 x 2:00 + 3:00)
|	ECAM TRAINER sessions.....	3	6:00	(3 x 2:00)
|	FBS sessions.....	1	2:00	
|	FFS familiarization session (Introduction to A320) .	1	0:45	

NORMAL PHASE **8 working days**

|	FBS sessions.....	3	9:00	(3 x 3:00)
|	FFS sessions.....	5	15:00	(5 x 3:00)
|	(3 Regular FFS + 2 Adapted Jet FFS)			

ABNORMAL / EMERGENCY PHASE **5 working days**

|	FBS sessions.....	2	6:00	(2 x 3:00)
|	FFS sessions.....	3	9:00	(3 x 3:00)

LOFT PHASE **3 working days**

|	ALOFT briefings.....	1		
	FFS sessions.....	2	6:00	(2 x 3:00)

SKILL TEST PHASE **2 working days**

	FFS sessions.....	2	6:00	(3:00 / trainee)
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In the aircraft :

BASE TRAINING PHASE **1 working day** (if applicable i.e. French DGAC rule)

	Flight.....	1	Minimum 0:45 / trainee	
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AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	ADAPTED JET FAMILIARIZATION COURSE TRAINING FOOTPRINT	2.02.02 Page 2 <i>E F2J</i> REV 24 JUN 2001
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02 - ADAPTED JET FAMILIARIZATION COURSE

A. GROUND PHASE DAILY FOOTPRINT

All the following time limits are for information and represent the minimum required to study the relevant system.

DAY 9 :

System test in one session for all trainees on the afternoon, **after having performed VPREP FBS** (might be swapped with FMGS 4 on previous day according to equipment availability).

DAY 1

Welcome	2:30
CBT :	
- Introduction	0:20
- Aircraft general	0:15
- APU	0:40
- EIS - EFIS	1:15
- Autoflight (1/2)	1:15
<i>FFS 0</i>	<i>0:45</i>

DAY 2 CBT : - Autoflight (2/2) 2:30 - EIS - ECAM 1:45 - System review 0:45 <i>(To be scheduled after 10:30 am) :</i> <i>FMGS 1 2:00</i>	DAY 3 CBT : - Navigation 1:50 - Electric 2:15 - System review 0:55 <i>FMGS 2 2:00</i>	DAY 4 CBT : - Pneumatic 1:00 - Fire protection 0:45 - Press / Vent 1:00 - Air conditioning 1:00 - Ice & rain protection 0:30 - System review 0:45 <i>FMGS 3 2:00</i>
DAY 5 CBT : - Landing gear 1:00 - Flight controls 2:30 - Hydraulic 1:15 - Systems review 0:15 <i>ECAM 1 2:00</i>	DAY 6 CBT : - Fuel 1:00 - Power plant 1:30 - Oxygen / Doors / Lights 1:30 - Communication 0:40 - Systems review 0:20 <i>ECAM 2 2:00</i>	DAY 7 CBT : - Recorders 0:05 - Pre-fans 0:30 - System review 1:55 - Performance 3:00 (Take-off / Landing) <i>ECAM 3 2:00</i>
DAY 8 CBT : - System review 4:00 <i>FMGS 4 3:00</i>	DAY 9 CBT : - System test 3:00 - System test debriefing 1:00 <i>V PREP FBS briefing 0:30</i> <i>V PREP FBS 2:00</i>	Optional day Airbus Crew Resource Management (ACRM)
DAY 10 Adapted Jet Familiarization briefing		

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	ADAPTED JET FAMILIARIZATION COURSE TRAINING FOOTPRINT	2.02.02 Page 3 <i>E F2J</i> REV 24 JUN 2001
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02 - ADAPTED JET FAMILIARIZATION COURSE (END)

B - NORMAL, ABNORMAL, LOFT, EVALUATION PHASES DAILY FOOTPRINT

DAY 11 <i>N0 FBS</i>	DAY 12 <i>N1 FBS</i>	DAY 13 <i>N2 FBS</i>
DAY 14 <i>NJ FFS</i> (Adapted Jet Familiarization)	DAY 15 <i>N3 FFS</i>	DAY 16 <i>N4 FFS</i>
DAY 17 <i>NJ LOFT FFS</i> (Adapted Jet Familiarization)	DAY 18 <i>N5 FFS</i> (Progress check)	
DAY 19 <i>F1 FBS</i>	DAY 20 <i>F2 FBS</i>	DAY 21 <i>F3 FFS</i>
DAY 22 <i>F4 FFS</i>	DAY 23 <i>F5 FFS</i>	
DAY 24 A-LOFT briefings 2:10 Performance complement 2:10 Performance test 0:50 Cabin presentation 0:50 Cabin trainer 1:00	DAY 25 <i>Walk around video 0:20</i> <i>A-LOFT FFS 1</i>	DAY 26 <i>A-LOFT FFS 2</i>
DAY 27 <i>Skill Test FFS (Trainee 1)</i>	DAY 28 <i>Skill Test FFS (Trainee 2)</i>	

 = Abnormal / emergency sessions

AIRBUS INDUSTRIE  Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	ADAPTED JET FAMILIARIZATION COURSE TRAINING FOOTPRINT	2.02.02 Page 4 <i>E F2J</i> REV 24 JUN 2001
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03 - CBT AT HOME REGULAR COURSE (Not applicable to Adapted Courses)

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	ADAPTED JET FAMILIARIZATION COURSE NORMAL COURSE SYLLABI	2.02.04 Page 1 <i>E F2J</i> REV 24 JUN 2001
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N0 FBS syllabus Refer to Regular Normal Course on Page 3

N1 FBS syllabus Refer to Regular Normal Course on Page 5

N2 FBS syllabus Refer to Regular Normal Course on Page 7

NJ FFS syllabusPage 8-1

N3 FFS syllabus Refer to Regular Normal Course on Page 9

N4 FFS syllabus Refer to Regular Normal Course on Page 11

NJ LOFT FFS syllabusPage 12-1

N5 FFS syllabus Refer to Regular Normal Course on Page 13

NOTE : *Instructors' FCTM includes the "Session Guides"*

NJ FFS TAKE-OFF DATA
INIT PAGE

CO RTE

ALTN/CO RTE

FLT NBR

LAT

COST INDEX

CRZ FL/TEMP

FROM TO

LONG

TROPO

TRIP DIST

CRZ WIND

ALTN

ALTN DIST

FLT to ALTN

ATIS

RWY 33 L

WIND 300°/10 kt

VISI CAVOK

CEILING

TEMP 14°C

DEW POINT . 10°C

QNH 1013 hPa/29.92 inHg

QFE 995 hPa/29.38 inHg

RWY COND.. DRY

Observations. : AIR COND ON

Turbulence 12%

INIT NEXT PAGE

ZFCG/ZFW

BLOCK

PERF PAGE

IAE

CFM

V1

VR

V2

FLEX

DRT

T/O FLAPS

T/O C.G.

TOGA

FLEX

DRT

NOTE :
F/PLN :

2nd part : use 15 R

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	ADAPTED JET FAMILIARIZATION COURSE NORMAL COURSE SYLLABI	2.02.04 Page 8-2 E F2J REV 23 JUL 99
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MALFUNC REF	- NJ FFS -									
	TRAINEE 1									
	1 - TRANSIT COCKPIT PREPARATION									
	2 - BEFORE START									
	3 - ENGINE START (AUTO)									
	4 - AFTER ENGINE START									
	5 - TAXI OUT									
	6 - BEFORE TAKE-OFF									
	■ 7 - TAKE-OFF - NOISE ABATMENT PROCEDURE									
	■ 8 - CLIMB									
	■ 9 - STUDY OF THRUST CHANGE A/C BEHAVIOUR									
	■ 10 - RELATIONSHIP THRUST/SPEED									
	■ 11 - TURN EXERCISES RELATIONSHIP SPEED/RADIUS									
	12 - CLIMB (HI LEVEL)									
	■ 13 - GENERAL A/C BEHAVIOUR AT HI LEVEL									
	■ 14 - DESCENT (HI SPEED / LOW SPEED)									
	■ 15 - STUDY OF DECELERATION RATE									
	■ 16 - ILS APPROACH									
	17 - GO AROUND									
	18 - RADAR VECTORS									
	■ 19 - VISUAL APPROACH (1)									
	20 - LANDING (1)									
	TRAINEE 2									
	■ 21 - TAKE-OFF - NOISE ABATMENT PROCEDURE									
	■ 22 - CLIMB									
	■ 23 - STUDY OF THRUST CHANGE A/C BEHAVIOUR									
	■ 24 - RELATIONSHIP THRUST/SPEED									
	■ 25 - TURN EXERCISES RELATIONSHIP SPEED/RADIUS									
	26 - CLIMB (HI LEVEL)									
	■ 27 - GENERAL A/C BEHAVIOUR AT HI LEVEL									
	■ 28 - DESCENT (HI SPEED / LOW SPEED)									
	■ 29 - STUDY OF DECELERATION RATE									
	■ 30 - ILS APPROACH									
	31 - GO AROUND									
	32 - RADAR VECTORS									
	■ 33 - VISUAL APPROACH (1)									
	34 - LANDING (1)									
	(1) ITEMS TO BE REPEATED AT THE END OF THE SESSION IF TIME PERMITS.									

 A320 FLIGHT CREW TRAINING MANUAL	ADAPTED JET FAMILIARIZATION COURSE NORMAL COURSE SYLLABI	2.02.04 Page 8-2A <i>E F2J</i> REV 24 JUN 2001
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NJ FFS SESSION GUIDE

01 - SESSION OBJECTIVE

- Introduce the jet aircraft particularities in terms of :
 - flight characteristics and envelope (speed, high altitude handling)
 - thrust / speed management

02 - TRAINING TOPICS

A. REVIEW

- Transit cockpit preparation
- INTRODUCE
- The Trainee has received a 3 hour briefing on jet aircraft performance
- Take-off : noise abatement procedure
- Reduced flight envelope at high altitude
- Engine response
- Aircraft deceleration in approach : stabilized and decelerated approaches

03 - SESSION PROFICIENCY CRITERIA :

- Understanding of thrust / speed management
- Ability to handle a jet aircraft

04 - SESSION GUIDE :

- **7, 21** : On runway : note N1 at idle
 Set 50% : note time to reach 50% (spool up rate)
NOTE : *The engines do not spool up "symmetrically". This justifies a two step thrust application.*
 Set both engines at T/O thrust : note "spool up rate".
 Then apply take-off SOP.

 Apply standard noise abatement procedure.
 Note FMA messages (Thrust reduction and acceleration altitude)
- **8, 22** : Climb at green dot speed (selected) : note pitch attitude and V/S
 Revert to 250 kt IAS : note pitch attitude and V/S

INSTRUCTOR ONLY

INSTRUCTOR ONLY

NJ FFS SESSION GUIDE (CONT'D)

04 - SESSION GUIDE (CONT'D) :

- **9, 10, 23, 24** : Level off at FL 100. ATHR ON, speed MANAGED.
Study aircraft behaviour (acceleration, deceleration rate) during thrust change :
Memorize N1 value then disconnect ATHR.

Reduce N1 by 10% :
- start time ; note time to decelerate from 250 kt to 240 kt (approx 70 sec)
ATHR ON / LVR CLB (speed returns to 250 kt).
Memorize N1 value then disconnect ATHR.

Add N1 10% :
- start time ; note time to accelerate from 250 kt to 260 kt (approx 25 sec)
ATHR ON / LVR CLB (speed returns to 250 kt).
SPD selected ; accelerate to 300 kt. When stable ...

Set N1 at idle (levers are at "MECHANICAL GATE")..
Note N1 / speed trend / IAS reducing continuously.
Maintain altitude note "Speed deceleration rate", and attitude change.

When IAS at Green dot speed : adjust thrust to maintain the speed : note N1 and pitch.
Set CLB thrust note speed trend, note acceleration rate, note time to reobtain
300 kt IAS.
- **11, 25** : Speed : 300 kt ; FL 100. DIR TO WPT ahead (i/e : LMG).
When on course select heading at 180° then turn.
Note with FD bar bank is 25° and radius is 8 NM. Observe the cross track on ND.
DIR TO : TN. Same exercise at 250 kt : radius 5 NM.
- **13, 27** : Climb to FL 330
Call MCDU PERF page ; read CLIMB managed speed field : IAS/MACH
- Monitor MACH displayed on PFD (bottom left) when > 0.5
When indication reaches MCDU predicted value (cross over altitude),
Observe :
- On FCU : "SPD" above the speed knob changes to "MACH"
- From FL 290 to FL 330 : IAS reduces to maintain same MACH
- VLS (**if visible**) increases with altitude
- VMO (red strip) decreases to maintain MMO
- Fuel flow

Select SPD 250 kt. Make turn at 20° then 30° bank : note "how V<M>Alpha PROT"
changes with g-load. Make steep turn (45° bank) to experience high speed buffet.
Explain high speed buffet onset with increasing g-load. Point out the g-load indication
on ECAM system and status display.

INSTRUCTOR ONLY

INSTRUCTOR ONLY

 A320 FLIGHT CREW TRAINING MANUAL	ADAPTED JET FAMILIARIZATION COURSE NORMAL COURSE SYLLABI	2.02.04 Page 8-2C <i>E F2J</i> REV 22 OCT 98
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NJ FFS SESSION GUIDE (END)

04 - SESSION GUIDE (END) :

- **14, 28** : Initiate a descent in managed speed.
 SPD target on PFD increases again : FMS maintains same MACH down to the cross over altitude then reverts to IAS.
 SPD select 280 kt
 - in DES mode >> note V/S
 - in OP DES >> note V/S
 SPD select 300 kt : same exercise.
 Explain which A/C configuration (**light or heavy GW**) descends faster .

- **15, 29** : Stop descent at FL 100 ; resume descent in OP DES /THR manual to 5000 ft.
 Adjust THR to establish a 1 000 ft/mn descent.
 Extended speed brake (half then full) and note "Nose up effect" ; note V/S
 Retract speed brake and note "Nose down effect".

 At 5000 ft ALT : ATHR ON then SPD managed.
Observe : attitude changes and aircraft behaviour from 300 kt to 250 kt.

 ACTIVATE APPR Phase
 From 250 kt, reduce thrust so as to extended LDG gear and Flaps in sequence.
 Note attitude for each aircraft configuration.
 Note distance to slow down from 250 kt to V_{APP}.
 Clean up the aircraft, accelerate to G dot speed.

- **16, 30** : Set a/c at 5 000 ft ALT on glide, then reduce thrust for straight in approach.
 In this case, even with Idle, aircraft is not decelerating. (SPD BRK or LDG gear must be extended first)
 Establish Landing configuration ; note distance to slow down speed from Green dot speed to V_{APP}. Observe pitch change.

 Level off at 2000 ft AGL and practice some turns in landing configuration.

- **19, 33** : Stabilized visual approach (ILS supported).

INSTRUCTOR ONLY

INSTRUCTOR ONLY

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INSTRUCTOR ONLY

INSTRUCTOR ONLY

**NJ LOFT FFS TAKE-OFF DATA
- LEG A -**
INIT PAGE

CO RTE

ALTN/CO RTE

FLT NBR

[Airline ID] 208

LAT

4338.1N

COST INDEX

30

CRZ FL/TEMP

FL 210 / -28°C

FROM TO

LFBO/LFML

LONG

00122.1E

TROPO

36 090

TRIP DIST

195 NM

CRZ WIND

310°/40 kt

ALTN

LFBO

ALTN DIST

176 NM

FLT to ALTN

220

ATIS

RWY 33 R / L

WIND 060°/10 kt

VISI CAVOK

CEILING

TEMP 15°C

DEW POINT . 12°C

QNH 1015 hPa/29.97 inHg

QFE 997 hPa/29.44 inHg

RWY COND.. DRY

Observations. : NOSIG

AIR COND ON

INIT NEXT PAGE

ZFCG/ZFW

32.9% - 59.7 t

32.9% - 131 340 lb

BLOCK

t

lb

PERF PAGE

IAE

CFM

V1

VR

V2

FLEX

DRT

T/O FLAPS

T/O C.G.

~~TOGA~~

FLEX

~~DRT~~

NOTE :
F/PLN :

LFBO 33 L

SID AFRIC

FJR

G6 VARES

STAR VARES

Via RHONE

LFML ILS 14 L

**NJ LOFT FFS FFS TAKE-OFF DATA
- LEG B -**
INIT PAGE

CO RTE

ALTN/CO RTE

FLT NBR

LAT

COST INDEX

CRZ FL/TEMP

FROM TO

LONG

TROPO

TRIP DIST

CRZ WIND

ALTN

ALTN DIST

FLT to ALTN

ATIS

RWY 14 L

WIND 060°/8 + 12 kt

VISI 8 km

CEILING 2000 ft

TEMP 15°C

DEW POINT . 12°C

QNH 1010 hPa/29.83 inHg

QFE 1010 hPa/29.83 inHg

RWY COND.. DRY

Observations. : NOSIG

AIR COND ON

INIT NEXT PAGE

ZFCG/ZFW

BLOCK

PERF PAGE

IAE

CFM

V1

VR

V2

FLEX

DRT

T/O FLAPS

T/O C.G.

~~TOGA~~

FLEX

~~DRT~~

NOTE :
F/PLN :

LFML 14 L

SID VARES

FJR

STAR FJR

Via ADIMA

LFBO VOR 33 L

AIRBUS INDUSTRIE  Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	ADAPTED JET FAMILIARIZATION COURSE NORMAL COURSE SYLLABI	2.02.04Page 12-4 <i>E F2J</i> REV 24 JUN 2001
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AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	ADAPTED JET FAMILIARIZATION COURSE NORMAL COURSE SYLLABI	2.02.04 Page 12-5 <i>E F2J</i> REV 24 JUN 2001
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NJ LOFT FFS - METPLAN

SURFACE OBSERVATIONS AND TERMINAL FORECASTS

LFBO TOULOUSE BLAGNAC

LFBO METAR ddhhmmz 06010KT CAVOK 15/12 Q1015

LFBO TAF ddhhmmz VRB05 CAVOK BCMG 1315 30010KT 9999 SCT040 BKN
100 BCMG hhhh SCT 020 BKN 080

LFML MARSEILLE PROVENCE

LFML METAR ddhhmmz 06012KT 8000 BKN020 OVC060 16/12 Q1010

LFML TAF ddhhmmz 05010KT 7000 SCT030 BCMG hhhh OVC020

LFMT MONTPELLIER MEDITERRANEE

LFMT METAR ddhhmmz 07008KT 9999 SCT040 17/14 Q1010

LFMT TAF ddhhmmz 06010KT 8000 SCT040 BCMG hhhh OVC030

LFBD BORDEAUX MERIGNAC

LFBD METAR ddhhmmz 17003KT CAVOK 16/14 Q1014

LFBD TAF ddhhmmz VRB03KT CAVOK BCMG hhhh 26010KT SCT040 BCMG
hhhh 26012KT OVC030

SIGMET

LFFF SIGMETSST3 VALID ddhhmm ddhhmm ON UIR FRANCE MOD TO SEV TURB
FCST BLW FL360 ON SE QUAD OF UIR FRANCE MOV 10KT

PIREPS

NONE

NJ LOFT FFS (LEG A) - FLIGHT PLAN

COMPUTED ON: dd/mm/yyyy AT hh:mm:ss WITH FLIGHT PLAN: TLS-MRS NJLOFT LEG A
LEBO/LEML/... FLT NBR CPT UNITS: KG/MM/FT/KT

AIRCRAFT FL SPEED PAX:... BAGGAGE CARGO = PAYLOAD
A320 230 CI 30 =

PERFORMANCE FACTOR = 1.00 AIR CONDITIONING = NORM ISA

	DEST	LFML	E.FUEL	A.FUEL	E.TME	NM	NAM	FL	WIND	COMP.	WIND
			2254	.....	00:35	195	192	230	32 KT		310/ 40 KT
+ RESV	5% F		500	.....	00:11	(500kg MINIMUM ENROUTE RESERVE)					
+ ALT	LFBO		1519	.....	00:35	176	181	220	-8 KT		200/ 30 KT
+ FINAL RESV			2083	.....	00:45						

= MIN T/O FUEL	6356	.....	2:06								
+ XTR	.....	.....	.....	MAX XTR FUEL:		698 KG					
= T/O FUEL	.....	.....	.....								
TAXI OUT	200	.....	.....								

CAPT.SIGN

MIN BLOCK	6556	.....	.....								
= BLOCK	.....	.....	.....	MAX BLOCK FUEL:		7254 KG					

BLOCK FUEL/BLOCK TIME

FUEL/TIME ADJUSTMENT FOR 4000 FT DECREASE IN CRZ ALTITUDE: + 20 KG/+ 0 MN
FUEL/TIME ADJUSTMENT FOR 20 KT INCREASE IN HEAD WIND : + 57 KG/+ 1 MN
FUEL/TIME ADJUSTMENT FOR 10 C INCREASE IN DELTA ISA : + 76 KG/+ 0 MN
FUEL/TIME ADJUSTMENT FOR 700 KG INCREASE IN T/O WEIGHT : + 23 KG/+ 0 MN

	E.WT	CORR.	OP.LIMIT:
OEW	41500	.....	
+ PAYLOAD	18200	.....	STRUC. LIMIT:
= ZFW	59700	.....	MZFW = 61000

+ T/O FUEL	6356	.....	
= TOW	66056	.....	MTOW = 73500

- TRIP FUEL	2254	.....	
= LAW	63802	.....	MLW = 64500

WGT :	FLEX T	V1	VR	V2
CONF.: RWY:				
CORRECTIONS:	-----	-----	-----	-----
WET RWY = -				
QNH = -				
ANTI-ICE ON = -				
AIR-COND ON = -				
MEL/CDL ITEM = -				
FORWARD CG = -				

(OAT<,TREF<)	FLEX T	V1	VR	V2
(MINIMUM SPEEDS<)				

SCH. IN	.....	BLOCK IN	.....	LDG	.....	FU	.....
SCH. OFF	.....	BLOCK OFF	.....	T.OFF	.....	RFOB	.....
SCH. TIME	.....	BLOCK TIME	.....	F.TIME	.....	TOTAL	.....
DELAY	.....	ATC/LATE ARR/PAX HANDLG/CARGO/BAGGAGE/TECH./OTHER:.....					

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	ADAPTED JET FAMILIARIZATION COURSE NORMAL COURSE SYLLABI	2.02.04 Page 12-7 <i>E F2J</i> REV 24 JUN 2001
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NJ LOFT FFS (LEG A) - FLIGHT PLAN (END)

WPT	AWY	FL	WIND	MACH	NM	L.T.	E.TA	E.FU	E.FOB	E.WT	NOTES
FRQ	MCS	MSA	SAT	IAS	R.NM	R.T.	A.TA	A.FU	A.FOB	A.WT	
LFBO			../..				.....		6.6	66.3	
4338.1N	00122.1E		.....		195	00:35	.....		.....	.....	
ELEV	499 FT										

FINOT	AFRIC#	72	../..	.43	37	7	.....	1.0	5.6	65.3	
	104	3000	.....	250	158	00:28	.....	.....	.....	.....	
4343.6N	00201.6E										

AFRIC	AFRIC#	196	../..	.68	37	6	.....	1.5	5.0	64.7	
	087	5400	.....	317	121	00:22	.....	.....	.....	.....	
4346.5N	00252.2E										

TOC	G39	230	../..	.69	13	1	.....	1.6	4.9	64.6	
	105	5300	.....	301	108	00:21	.....	.....	.....	.....	

TOD	G39	230	../..	.69	8	1	.....	1.7	4.9	64.6	
	105	5300	.....	301	100	00:20	.....	.....	.....	.....	

FJR	G39	153	../..	.55	28	5	.....	1.7	4.8	64.5	
114.45	105	5300	.....	275	72	00:15	.....	.....	.....	.....	
4334.8N	00358.3E										

VARES	G39	106	../..	.49	16	3	.....	1.8	4.8	64.5	
	107	3500	.....	266	56	00:12	.....	.....	.....	.....	
4330.1N	00419.4E										

RHONE	VARES#	42	../..	.41	24	5	.....	1.8	4.7	64.4	
	109	3500	.....	250	32	00:07	.....	.....	.....	.....	
4323.2N	00450.6E										

MTG	VARES#	14	../..	.36	11	2	.....	1.9	4.7	64.4	
117.3	091	3500	.....	230	21	00:05	.....	.....	.....	.....	
4323.2N	00505.3E										

LFML			../..	.00	21	5	.....	2.5	4.1	63.8	
	STAR		.....	0	0	00:00	.....	.....	.....	.....	
4326.2N	00512.9E										
ELEV	69 FT										

COMP ROUTE	LFBO/LFML										
LFBO	AFRIC##	AFRIC	G39	VARES	VARES##	MTG	DIR				
LFML											

ALTN ROUTE	LFML/LFBO										
LFML	VARES##	VARES	G6	FJR	FJR##	MASAM	STAR				
ADIMA	DIR	LFBO									

AIRBUS CFP V2.2

NJ LOFT FFS (LEG B) - FLIGHT PLAN

COMPUTED ON: dd/mm/yyyy AT hh:mm:ss WITH FLIGHT PLAN: MRS-TLS NJLOFT LEG B
LEML/LEBO/... FLT NBR CPT UNITS: KG/MM/FT/KT

AIRCRAFT FL SPEED PAX: ... BAGGAGE CARGO = PAYLOAD
A320 220 CI 30 =

PERFORMANCE FACTOR = 1.00 AIR CONDITIONING = NORM ISA

	DEST	LFBO	E.FUEL	A.FUEL	E.TME	NM	NAM	FL	WIND	COMP.	WIND
	DEST	LFBO	2291	.....	00:35	181	194	220	-32 KT		310/ 40 KT
+ RESV	5% F		500	.....	00:10	(500kg MINIMUM ENROUTE RESERVE)					
+ ALT	LFED		1461	.....	00:31	142	154	140	-26 KT		280/ 30 KT
+ FINAL RESV			2456	.....	00:45						

= MIN T/O FUEL	6708	.....	2:01								
+ XTR	.....	.....	.....								
= T/O FUEL	.....	.....	.....								
TAXI OUT	200	.....	.....								

MAX XTR FUEL: 1083 KG

CAPT.SIGN

MIN BLOCK	6908	.....	.....								
= BLOCK	.....	.....	.....								

MAX BLOCK FUEL: 7991 KG

BLOCK FUEL/BLOCK TIME

FUEL/TIME ADJUSTMENT FOR 4000 FT DECREASE IN CRZ ALTITUDE:	+	36 KG/+ 0 MN
FUEL/TIME ADJUSTMENT FOR 20 KT INCREASE IN HEAD WIND	:	69 KG/+ 1 MN
FUEL/TIME ADJUSTMENT FOR 10 C INCREASE IN DELTA ISA	:	66 KG/+ 0 MN
FUEL/TIME ADJUSTMENT FOR 1000 KG INCREASE IN T/O WEIGHT	:	24 KG/+ 0 MN

	E.WT	CORR.	OP.LIMIT:
OEW	41500	.....	
+ PAYLOAD	17500	.....	STRUC. LIMIT:
= ZFW	59000	.....	MZFW = 61000
+ T/O FUEL	6708	.....	
= TOW	65708	.....	MTOW = 73500
- TRIP FUEL	2291	.....	
= LAW	63417	.....	MLW = 64500

WGT :	FLEX T	V1	VR	V2
CONF.: RWY:				
CORRECTIONS:	-----	-----	-----	-----
WET RWY	= -			
QNH	=			
ANTI-ICE ON	= -			
AIR-COND ON	= -			
MEL/CDL ITEM	=			
FORWARD CG	= -			

(OAT<,TREF<) FLEX T	V1	VR	V2
(MINIMUM SPEEDS<)			

SCH. IN	.....	BLOCK IN	.....	LDG	.....	FU	.....
SCH. OFF	.....	BLOCK OFF	.....	T.OFF	.....	RFOB	.....
SCH. TIME	.....	BLOCK TIME	.....	F.TIME	.....	TOTAL	.....
DELAY	.....	ATC/LATE ARR/PAX HANDLG/CARGO/BAGGAGE/TECH./OTHER:					

NJ LOFT FFS (LEG B) - FLIGHT PLAN (END)

WPT	AWY	FL	WIND	MACH	NM	L.T.	E.TA	E.FU	E.FOB	E.WT	NOTES
FRQ	MCS	MSA	SAT	IAS	R.NM	R.T.	A.TA	A.FU	A.FOB	A.WT	
LFML			.. / ..						6.9	65.9	
4326.2N	00512.9E		.....		181	00:35	.....		.....	.....	
ELEV	69 FT										
MTG	VARES#	6	.. / ..	.14	11	2	.....	.4	6.5	65.5	
117.3	SID	3500	.....	92	170	00:33	.....	.....	.....	.....	
4323.2N	00505.3E										
RHON	VARES#	12	.. / ..	.28	11	2	.....	.6	6.3	65.3	
271	2100	.....	183	159	00:31	.....	.....	.....	.....	.....	
4323.2N	00450.6E										
VARES	VARES#	112	.. / ..	.59	24	5	.....	1.2	5.7	64.7	
288	2300	.....	318	135	00:26	.....	.....	.....	.....	.....	
4330.1N	00419.4E										
FJR	G6	174	.. / ..	.66	16	3	.....	1.4	5.5	64.5	
114.45	289	2300	.....	318	119	00:23	.....	.....	.....	.....	
4334.8N	00358.3E										
TOC	G39	220	.. / ..	.71	16	2	.....	1.6	5.3	64.3	
267	5300	.....	317	103	00:21	.....	.....	.....	.....	.....	
TOD	G39	220	.. / ..	.71	18	3	.....	1.7	5.2	64.2	
267	5300	.....	317	85	00:18	.....	.....	.....	.....	.....	
FJR63	G39	122	.. / ..	.51	29	5	.....	1.8	5.1	64.1	
267	5300	.....	273	56	00:13	.....	.....	.....	.....	.....	
4329.2N	00231.4E										
MASAM	FJR##	89	.. / ..	.44	12	3	.....	1.8	5.1	64.1	
267	5400	.....	250	44	00:10	.....	.....	.....	.....	.....	
4328.1N	00215.1E										
ADIMA	FJR##	53	.. / ..	.42	11	2	.....	1.9	5.0	64.0	
290	4000	.....	250	33	00:08	.....	.....	.....	.....	.....	
4331.4N	00200.7E										
TOE	FJR##	17	.. / ..	.31	15	4	.....	2.0	4.9	63.9	
415	2610	4000	.....	197	18	00:04	.....	.....	.....	.....	
4328.9N	00140.8E										
LFBO	STAR		.. / ..	.00	18	4	.....	2.5	4.4	63.4	
325		.....	0	0	00:00	.....	.....	.....	.....	.....	
4338.1N	00122.1E										
ELEV	499 FT										

COMP ROUTE LFML/LFBO
 LFML VARES## VARES G6 FJR G39 FJR63 FJR##
 ADIMA FJR## TOE STAR LFBO
 ALTN ROUTE LFBO/LFBD
 LFBO LACOU## TOU SID LACOU MIRBA# LIBRU DIR
 LFBD

AIRBUS CFP V2.2

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	ADAPTED JET FAMILIARIZATION COURSE NORMAL COURSE SYLLABI	2.02.04 Page 12-10 <i>E F2J</i> REV 24 JUN 2001
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NOTE : *LOFT briefing + F/PLN decode keys : refer to FCTM Vol 1 - “Normal Operations Briefings” chapter.*

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	ADAPTED JET FAMILIARIZATION COURSE NORMAL COURSE SYLLABI	2.02.04 Page 12-10A E F2J
		REV 24 JUN 2001

NJ LOFT FFS SESSION GUIDE

01 - SESSION OBJECTIVE

- Introduce the normal operation of a jet aircraft in a simulated line environment

02 - TRAINING TOPICS

A. REVIEW

- Transit cockpit preparation
- Take-off - SID
- Approaches

B. INTRODUCE

- The instructor will play the part of the dispatcher during pre-flight preparation of the session. He will provide the crew with appropriate information and documents concerning the flight such as weather documents, flight plans and NOTAMS, etc.
For the aim of the exercise, the documents published in the appropriate FCTM chapter will suffice. On this occasion he will brief the crew on document format used as a standard in Airbus Training if applicable.
- The crew will have to utilise the documents, particularly the aeronautical charts to prepare and to validate the computerized flight plan CFP they have been provided with.
- Special regards should be taken to the fuel calculation since the crew may not be familiar with Airbus fuel calculation principles. The consequences of diversion from the planned cruising level should be pointed out.
- The crew should be briefed on Airbus capability of following q calculated lateral and vertical flight profile, the corresponding MCDU flight plan issues and the corresponding advantages of FMGS.
- The briefing should mention as well the differences in cruising speed and flight level capability of jet aircraft.
- The crew should be provided with brief information on Fly-by-Wire technique once more including the aircraft taxi, since the session will have to be performed in a real flight time environment.
- Clear air turbulence (CAT)
- Side step approach
- Jet aircraft operation : time management
- Instructor is supposed to keep his role as an instructor despite of LOFT

03 - SESSION PROFICIENCY CRITERIA

- Ability to apply SOPs
- Ability to manage a flight
- Ability to handle the aircraft in a normal environment

INSTRUCTOR ONLY

INSTRUCTOR ONLY

NJ LOFT FFS SESSION GUIDE (END)

04 - SESSION GUIDE

The crew must be provided with documents required for the flight :

COMPUTERIZED FLIGHT PLAN (CFP) :

CFP should be checked by the crew before the flight. Fuel corrections may be made at Captain's discretion.

MET REPORTS :

Weather should be analysed. Wind and temp at FL 230 for LEG A and FL 220 for LEG B to be inserted into MCDU during cockpit preparation.

TAKE-OFF PERF TABLES :

Crew should define T/O configuration, T/O speed and acceleration altitude
Block fuel is increased due to weather, notams, optimistic fuel in CFP.

TOW	T/O flaps	Air cond	Anti-ice	Eng	V1	VR	V2	Flex
LEG A								
66 t	2	ON	OFF	CFM	151	151	151	62
				IAE	152	152	153	65
LEG B								
66 t	2	ON	OFF	CFM	154	154	154	49
				IAE	152	152	155	53

NJ LOFT FFS - LEG A SCENARIO

A320 NJ LOFT LEG B
Toulouse – LFBO / Marseille - LFML
Alternate: Toulouse - LFBO
Company Freq.: 123.45

Fit N°.: Airbus 208
Cost Index: 30
Cruise: FL230 / M30 °C
Cruise Wind 310 / 40
Trip Dist: 195 NM

Altitude Cruise: FL220
Altitude Dist: 176 NM

Route:
LFBO AFRIC# FJR VARES VARES#
RHONE MTG LFML

Aircraft:
ZFW/GZFW: 32.9 t / 59.7 t -
131340 lb
(Crew)
Block Fuel: 66.0 t / 145 200 lb
Est TOW: 32.0 %
Take-off CG: 32.0 %

Performance: (average values based on
estimated G/W – AC on)

1+F V speeds 156, 166, 166 (CFM)
153, 153, 153 (IAE)
Flex 63 (CFM)
66 (IAE)

2 V speeds 151, 151, 151 (CFM)
152, 152, 153 (IAE)
Flex 62 (CFM)
65 (IAE)

(Refer to operational calculations)

ATIS:

LFBO – Information hh RWY 33L 060/12
CAVDK 16 / 12 Q1015 NOSG

LFML – Information hh RWY 14L 060/12
8000 BKN020 DVC 16 / 12
Q1010 NOSG

A320 NJ LOFT LEG A

TOULOUSE BLAGNAC (LFBO) – MARSEILLE PROVENCE (LFML)

Events: The events planned for this exercise are:

- ☐ CFP check. Fuel corrections in accordance to CPT's decision.
- ☐ Weather analysis. Wind and temperature at CRZ ALT. Wind entries during cockpit preparation.
- ☐ T/o configuration calculation and performance data. THR RED and ACC ALT definition.
- ☐ Cross wind take-off and correct noise abatement procedure.
- ☐ Clear air turbulence penetration – restore after procedure application.
- ☐ Side step approach and cross wind landing.

Briefing: A suitable clearance expiry time for departure should be given with the clearance.

SIMULATOR SET-UP

REPOSITION to GATE PARK POSITION E10 (N4337.8 / E01022.5)

INIT. LOAD

ZFW 59.7 t / 131 340 lb
Exp. Payload 18.2 t
Fuel (Crew)
CG 32 %

ENVIRONMENT

QNH 1015
Temperature 15 °C
Tropopause Default Value
Dew Point 12 °C

Wind Direction 060 °
Speed 10 kt
Wind page (not ACTIVE, i.e. Blank)
Wind Direction 310° (FL230)
Wind Velocity 40 kt
Turbulence Level 15 %

Windshear NONE
Turbulence level 15 % (Instructor's discretion)

VISUAL

Visibility cavok
Cloud Base none
Airfield Lights Intensity to 3 (or defaulted setting)

MAINTENANCE INDEX

NONE

Close Doors / Arm Slides

Pushback – Nose Left

Taxiways: T40, P20, M2, M2

Event:

- Cross wind on take-off.
- How does the crew deal with noise abatement procedure?

Events:

- Clear air turbulence event.
- Side step approach at dest.
- Cross wind landing.

Insert TLS ATIS – Rwy 33L 060/10
CAVDK 16 / 12 Q1015

Select LFBO 15R/33L

- All RWY lights ON
- Intensity level 5, if applicable

Provide Ground Power

- Chocks in
- Disarm Slides
- Open Doors

INSTRUCTOR ONLY

INSTRUCTOR ONLY

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	ADAPTED JET FAMILIARIZATION COURSE NORMAL COURSE SYLLABI	2.02.04 Page 12-10D E F2J
		REV 24 JUN 2001

NJ LOFT FFS - LEG A SCENARIO (END)

Frequency Toulouse CPT - 121.70	Phase Pre-Flight	ATC clears Airbus 208 to Marseille LFML. AFRIC ## departure, Right Run Route. Climb and maintain 5000 ft initially, squawk 0314. Clearance expiry time is XXXX Contact Blagnac Ground 121.90 for push and start.	➡	Close Doors / Arm Slides
ATIS TLS 118.02 Gnd - 121.90	Start Pushback Push complete Start complete	Airbus 208 cleared to push and start, temp 15 °C, QNH 1015. Release Park Brake, cleared to start Set Park Brake Disconnecting, hand signals on the right Airbus 208 taxi to holding point Rwy 33L Airbus 208 contact Blagnac Tower 118.10	➡	Pushback – Nose Left (Taxiways T40, P20, N2, M2)
Tower 118.10	Taxi	Airbus 208 surface wind 060/10, cleared for take-off runway 33L Airbus 208 contact Blagnac Departure on 125.17	➡	Event: - Crosswind take-off - Correct noise abatement procedure
2000ft	Take-Off	Airbus 208 radar contact passing altitude xxx ft, climb and maintain FL140, you are cleared direct AFRIC Airbus 208 contact Bordeaux Control 124.07 Airbus 208 identified passing FLXXX, climb and maintain FL 230 Airbus 208 maintain FL 230, contact Marseille Control 126.25	➡	Event: Clear air turbulence penetration
Departure 125.17	Climb On contact Appt. FL140	Airbus 208 radar identified FL230 Airbus 208 contact Marseille Control on 126.85	➡	
Bordeaux Ctl 124.07	Reach. 230 inbd FJR	Airbus 208 identified, squawk 3524. Proceed inbound VARES, expect VARES ## arrival ILS approach RWY 14L, descent FL080, report passing FL100. Airbus 208 contact Provence Approach on 120.20	➡	
Marseille Ctl 126.25	Cruise Desc. request	Airbus 208 identified, squawk 4520, continue inbound RHONE, descend to altitude 3500 ft on QNH 1010, ILS approach RWY 14L, no delay expected. Airbus 208 turn left onto heading 040°. Radar vectors for final ILS RWY 14L, change Approach 131.22	➡	Insert MRS ATIS – Rwy 14L 060/12 8000 BKN020 OVC060 16 / 12 Q1010 NDSIG
Marseille Ctl 128.85	At FL100	Airbus 208 radar contact, descent to altitude 1650 ft on QNH 1010 Airbus 208 turn right heading 030°, cleared to intercept on localiser RWY 14L. Report established Airbus 208 cleared for ILS 14L, contact Provence Tower on 119.50	➡	Select LFML 07 - All RWY lights on - Intensity level 5
Provence Appr 120.20	Descent Radar vectors	Airbus 208 cleared to land Rwy 14R from this approach, RWY 14L is blocked, surface wind 080/10 Airbus 208 vacate next to the left contact Provence Ground 121.90	➡	- How does the crew deal with 1650 ft final approach altitude ILS RWY 14L? - For the side step, assume RWY blocked by unexpected ground traffic.
Provence Appr 131.22	Approach About 7.50 MTG	Airbus 208 cleared to cross RWY 14L gate parking 9C via taxiways E7, D7, C7 and ramp, report marshaller contact. Cookpit – Ground, Chocks in, release brakes	➡	- Provide Ground Power - Chocks in - Disarm Slides - Open Doors
Provence Tower 119.50	After Ldg.			
Provence Ground 121.90				

NJ LOFT FFS - LEG B SCENARIO

A320 NJ LOFT LEG B
Marseille – LFML / Toulouse – LFBO
Alternate: Bordeaux-Mérignac - LFBD
Company Freq.: 123.45

FIN#.: Airbus 209
Cost Index: 30
Cruise: FL220 / M28 °C
Cruise Wind: 340° / 40 kt
Trip Dist.: 181 NM
Altitude Cruise: FL 140
Altitude Descent: 142 NM

Route: LFML VARESS# FJR FJRW# ADIMA
TOE LFBO
Altitude: 32.9% / 59.0 t.
ZFWG/ZFW: 129 800 lb

Block Fuel: (Crew)
Est TOIW: 66.0 t / 145 200 lb
Take-off CG: 29.0 %

Performance: (average values based on estimated G.W. AC on)

1+F
V speeds
Flex
2
V speeds
Flex

161, 161, 161 (CFM)
163, 163, 163 (IAE)
52 (CFM)
55 (IAE)
154, 154, 154 (CFM)
152, 152, 155 (IAE)
49 (CFM)
53 (IAE)

(Refer to operational calculations)

ATIS:

LFML – Information h/h RWY 14L 060/12
8000 BKN020 DVC 16 / 12
Q1010 NOSIG

LFBO – Information h/h RWY 33L 060/10
CAVOK 15 / 12 Q1015 NOSIG

A320 NJ LOFT LEG B

MARSEILLE PROVENCE (LFML) - TOULOUSE MARGNY (LFBO)

Events: The events planned for this exercise are:

- ☐ CFP check. Fuel corrections in accordance to CPT's decision.
- ☐ Weather analysis. Wind and temperature at CRZ ALT. Wind entries during cockpit preparation.
- ☐ T/O configuration calculation and performance data. THR RED and ACC ALT definition.
- ☐ Cross wind take-off and correct noise abatement procedure.
- ☐ Clear air turbulence penetration – restore after procedure application.
- ☐ Non precision approach – go around – visual pattern.

Briefing: A suitable clearance expiry time for departure should be given with the clearance.

SIMULATOR SET-UP

REPOSITION to GATE PARK POSITION 9C (M4326.5 / ED0513.2)

INIT LOAD

ZFW 59.0 t / 129 800 lb
Exp. Payload 17.5 t
Fuel (Crew)
TOC G 29 %

ENVIRONMENT

QNH 1010
Temperature 18 °C
Tropopause Default Value
Dew Point 12 °C

Wind Direction 080 °
Speed 12 kt
Wind page (not ACTIVE, i.e. Blank)
Wind Direction 340° (FL220)
Wind Velocity 40 kt
Turbulence Level 15 %

Windshear NONE
Turbulence level 15 % (Instructor's discretion)

VISUAL

Visibility 8000 m
Cloud Base 2000 ft

Airfield Lights Intensity to 3 (or defaulted setting)

WALFUNCTION INDEX

NONE

Close Doors / Arm Slides

Pushback – Nose Left

(Taxiways: 03, 04, C3, C2, C1)

Event:

- Cross wind on take-off.
- How does the crew deal with noise abatement procedure?

Events:

- Clear air turbulence event.
- NPA approach at destination.
- Go around / visual pattern.
- Cross wind landing.

Insert MRS ATIS – Rwy 14L 060/12 8000
BKN020 DVC060 16 / 12 Q1015
NOSIG

Select LFML 14L

- All RWY lights ON
- Intensity level 5, if applicable

- Provide Ground Power
- Chocks in
- Disarm Slides
- Open Doors

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	ADAPTED JET FAMILIARIZATION COURSE NORMAL COURSE SYLLABI	2.02.04 Page 12-10F E F2J
		REV 24 JUN 2001

NJ LOFT FFS - LEG B SCENARIO (END)

Frequency Marseille CPT - 121.70	Phase Pre-Flight	ATC clears Airbus 209 to Toulouse LFBQ, VAREZ ## departure, Flight Plan Route. Climb and maintain 5000 ft initially, squawk 0314. Clearance expiry time is XXXX	
ATIS MRS 125.85		Contact Provence Ground 121.50 for push and start.	➡
Gnd - 121.90		➡	
	Start	Airbus 209 cleared to push and start, temp 16 °C, QNH 1010. Release Park Brake, cleared to start Set Park Brake Disconnecting, hand signals on the right (left)	➡
	Pushback Push complete Start complete		
	Taxi	Airbus 209 taxi to holding point Rwy 14L Airbus 209 contact Provence Tower 119.50	(Taxiways 03, C4, C3, C2, C1)
	Take-Off	Airbus 209 surface wind 180/8, maintain Rwy heading and 180 kt, cleared for take-off runway 14L Airbus 209 airborne at ..., contact Provence Departure on 120.20	➡
	2000ft		
Departure 120.20	Climb	Airbus 209 radar contact passing altitude xxx (ft), climb and maintain FL 150, you are cleared direct MTG, no restrictions on speed Airbus 209 climb and maintain FL 150, contact Marseille Control 128.85	
Marseille Clt 128.85	Reach 220 mbd FJR	Airbus 209 identified passing FLXXX, climb and maintain FL 220 Airbus 209 maintain FL 230, contact Marseille Control 126.25	
Marseille Clt 126.25	Cruise	Airbus 209 radar identified FL 230, squawk 3524 Airbus 209 for descent contact Bordeaux Control on 124.07	➡
Bordeaux Clt 124.07	Desc. request	Airbus 209 identified, squawk 3524. Proceed inbound FJR, expect FJR ## arrival VOR approach Rwy 33L, descent FL080, report passing FL100. Airbus 209 contact Toulouse Approach on 125.17	
	Descent		
Toulouse Appr 125.17	At FL100		
	Descent	Airbus 209 identified, squawk 4520, continue inbound ADIMA, descend to altitude 4000 ft on QNH 1015, number 2 for VOR approach Rwy 33L, no delay expected.	➡
	At MASAM Radar vectors	Airbus 209 turn left onto heading 240°. Radar vectors for final VOR Rwy 33L, after passing abeam TOE descend to altitude 3000 ft on QNH 1015	
TLS ATIS 118.02		Airbus 209 cleared for standard VOR approach Rwy 33L, contact Blagnac Tower 118.10	➡
Blagnac Tower 118.10	Approach	Airbus 209 cleared to land Rwy 33L, surface wind 060/5 kt	
	On go around	Airbus 209 right hand visual pattern altitude 2000 ft, report abeam tower ready to land, remain on this frequency Airbus 209 cleared to land Rwy 33L from this approach, Rwy 33L, surface wind 060/8	
Blagnac Tower 118.10		Airbus 209 vacate next to the left, contact Blagnac Ground 121.90	
	After Ldg.		
Blagnac Ground 121.90		Airbus 209 cleared to cross Rwy 33R, gate parking 10E via taxiways P, T and ramp, report marshaller contact.	➡
		Cockpit – Ground, Chocks in, release brakes	
			- Provide Ground Power - Chocks in - Disarm Slides - Open Doors



Adapted Crew course

- E F2K -

E F2K

 A320 FLIGHT CREW TRAINING MANUAL	TRANSITION COURSES TABLE OF CONTENTS	2.02.00 Page 1 <i>All Adapted Courses</i> REV 24 JUN 2001
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2.02.01 - INTRODUCTION	Refer to Regular Course
2.02.02 - TRAINING FOOTPRINT	
2.02.03 - GROUND COURSE SYLLABI	Refer to Regular Course
2.02.04 - NORMAL COURSE SYLLABI	
2.02.05 - ABNORMAL/EMERGENCY COURSE SYLLABI.	Refer to Regular Course
2.02.06 - LOFT SYLLABI	Refer to Regular Course
2.02.07 - SKILL TEST SYLLABI	Refer to Regular Course
2.02.08 - BASE TRAINING SYLLABUS.....	Refer to Regular Course

AIRBUS INDUSTRIE  Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	TRANSITION COURSES TABLE OF CONTENTS	2.02.00 Page 2 <i>All Adapted Courses</i> REV 22 OCT 98
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 A320 FLIGHT CREW TRAINING MANUAL	ADAPTED CREW COURSE TRAINING FOOTPRINT	2.02.02 Page 1 E F2K
		TR 15 FEB 2002

01 - TRAINING DEVICE TIME SHARING PER PHASE

N.B. : except when notified, the allocated time is mentioned in hour/crew

		(With Language)
Total working days (without Base Training)	Regular course = 24 or 25 Adapted course = 27 or 28	28 or 29 31 or 32
GROUND PHASE	10 working days	14
CBT : - Aircraft system study + review - System Test - Crew Familiarization briefing		
FMGS TRAINER sessions	4	9:00 (3 x 2:00 + 3:00)
ECAM TRAINER sessions	3	6:00 (3 x 2:00)
FBS sessions	1	2:00
FFS familiarization session (Introduction to A320) .	1	0:45
NORMAL PHASE	8 working days	
FBS sessions	3	9:00 (3 x 3:00)
FFS sessions	5	15:00 (5 x 3:00)
(3 Regular FFS + 2 Adapted Crew FFS)		
ABNORMAL / EMERGENCY PHASE	5 working days	
FBS sessions	2	6:00 (2 x 3:00)
FFS sessions	3	9:00 (3 x 3:00)
LOFT PHASE	3 working days	
ALOFT briefings	1	
FFS sessions	2	6:00 (2 x 3:00)
SKILL TEST PHASE	Standard Crew 1 working day	Non Standard Crew 2 working days
FFS sessions	1 session 4:00	2 sessions 6:00 (3:00 / trainee)
<i>In the aircraft :</i>		
FLIGHT PHASE (if applicable i.e. French DGAC rule)	1 working day	
Flight	1	Minimum 0:45 / trainee



 A320 FLIGHT CREW TRAINING MANUAL	ADAPTED CREW COURSE TRAINING FOOTPRINT	2.02.02 Page 2 E F2K
		TR 15 FEB 2002

02 - ADAPTED CREW COURSE

A. GROUND PHASE DAILY FOOTPRINT

All the following time limits are for information and represent the minimum required to study the relevant system.

DAY 9 :

System test in one session for all trainees on the afternoon, **after having performed VPREP FBS** (might be swapped with FMGS 4 on previous day according to equipment availability).

DAY 1

Welcome	2:30
CBT :	
- Introduction	0:20
- Aircraft general	0:15
- APU	0:40
- EIS - EFIS	1:15
- Autoflight (1/2)	1:15
FFS 0	0:45

DAY 2 CBT : - Autoflight (2/2) 2:30 - EIS - ECAM 1:45 - System review 0:45 <i>(To be scheduled after 10:30 am) :</i> FMGS 1 2:00	DAY 3 CBT : - Navigation 1:50 - Electric 2:15 - System review 0:55 FMGS 2 2:00	DAY 4 CBT : - Pneumatic 1:00 - Fire protection 0:45 - Press / Vent / Air cond 2:00 - Ice & rain protection 0:30 - System review 0:45 FMGS 3 2:00
DAY 5 CBT : - Landing gear 1:00 - Flight controls 2:30 - Hydraulic 1:15 - Systems review 0:15 ECAM 1 2:00	DAY 6 CBT : - Fuel 1:00 - Power plant 1:30 - Oxygen / Doors / Lights 1:30 - Communication 0:40 - Systems review 0:20 ECAM 2 2:00	DAY 7 CBT : - Recorders 0:05 - Pre-fans 0:30 - System review 1:55 - Performance 3:00 (Take-off / Landing) ECAM 3 2:00
DAY 8 CBT : - System review 4:00 FMGS 4 3:00	DAY 9 CBT : - System test 3:00 - System test debriefing 1:00 V PREP FBS briefing 0:30 V PREP FBS 2:00	Optional day Airbus Crew Resource Management (ACRM)
DAY 10 Adapted Crew briefing		



B - NORMAL, ABNORMAL, LOFT, EVALUATION PHASES DAILY FOOTPRINT

DAY 15 <i>N0 FBS</i>	DAY 16 <i>NK FBS</i> (Adapted Crew course)	DAY 17 <i>N1 FBS</i>
DAY 18 <i>N2 FBS</i>	DAY 19 <i>N3 FFS</i>	DAY 20 <i>N4 FFS</i>
DAY 21 <i>NK LOFT FFS</i> (Adapted Crew course)	DAY 22 <i>N5 FFS</i> (Progress check)	
DAY 23 <i>F1 FBS</i>	DAY 24 <i>F2 FBS</i>	DAY 25 <i>F3 FFS</i>
DAY 26 <i>F4 FFS</i>	DAY 27 <i>F5 FFS</i>	
DAY 28 A-LOFT briefings 2:10 Performance complement 2:10 Performance test 0:50 Cabin presentation 0:50 Cabin trainer 1:00	DAY 29 <i>Walk around video 0:20</i> <i>A-LOFT FFS 1</i>	DAY 30 <i>A-LOFT FFS 2</i>
DAY 31 <i>Skill Test FFS</i> Standard Crew : 4 h session Non Standard Crew : 3 h session (Trainee 1)	DAY 32 (Non Standard Crew ONLY) <i>Skill Test FFS</i> Non Standard Crew : 3 h session (Trainee 2)	

NOTE : When requested by the instructor, spare time sessions are performed :
 - the day before the Progress check (Normal phase)
 - at the end of the Abnormal/Emergency phase

 = Abnormal / emergency sessions



 Training & Flight Operations Support and Services A320 FLIGHT CREW TRAINING MANUAL	ADAPTED CREW COURSE TRAINING FOOTPRINT	2.02.02 Page 6 <i>E F2K</i>
		TR 15 FEB 2002

04 - CBT AT HOME REGULAR COURSE (Not applicable to Adapted Courses)

 A320 FLIGHT CREW TRAINING MANUAL	ADAPTED CREW COURSE TRAINING FOOTPRINT	2.02.02 Page 1 E F2K
		REV 24 JUN 2001

01 - TRAINING DEVICE TIME SHARING PER PHASE

N.B. : except when notified, the allocated time is mentioned in hour/crew

	(With Language)
Total working days (without Base Training).....	Regular course = 25 Adapted courses = 28
GROUND PHASE	TBD

GROUND PHASE

10 working days

TBD

CBT : - Aircraft system study + review

- System Test

- Crew Familiarization briefing

|	FMGS TRAINER sessions.....	4	9:00	(3 x 2:00 + 3:00)
|	ECAM TRAINER sessions.....	3	6:00	(3 x 2:00)
|	FBS sessions.....	1	2:00	
|	FFS familiarization session (Introduction to A320) .	1	0:45	

NORMAL PHASE

8 working days

|	FBS sessions.....	3	9:00	(3 x 3:00)
|	FFS sessions.....	5	15:00	(5 x 3:00)
|	(3 Regular FFS + 2 Adapted Crew FFS)			

ABNORMAL / EMERGENCY PHASE

5 working days

|	FBS sessions.....	2	6:00	(2 x 3:00)
|	FFS sessions.....	3	9:00	(3 x 3:00)

LOFT PHASE

3 working days

|	ALOFT briefings.....	1		
	FFS sessions.....	2	6:00	(2 x 3:00)

SKILL TEST PHASE

2 working days

	FFS sessions.....	2	6:00	(3:00 / trainee)
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In the aircraft :

BASE TRAINING PHASE

1 working day

(if applicable i.e. French DGAC rule)

	Flight.....	1	Minimum 0:45 / trainee	
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AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	ADAPTED CREW COURSE TRAINING FOOTPRINT	2.02.02 Page 2 E F2K
		REV 24 JUN 2001

02 - ADAPTED CREW COURSE

A. GROUND PHASE DAILY FOOTPRINT

All the following time limits are for information and represent the minimum required to study the relevant system.

DAY 9 :

System test in one session for all trainees on the afternoon, **after having performed VPREP FBS** (might be swapped with FMGS 4 on previous day according to equipment availability).

DAY 1

Welcome	2:30
CBT :	
- Introduction	0:20
- Aircraft general	0:15
- APU	0:40
- EIS - EFIS	1:15
- Autoflight (1/2)	1:15
<i>FFS 0</i>	<i>0:45</i>

DAY 2 CBT : - Autoflight (2/2) 2:30 - EIS - ECAM 1:45 - System review 0:45 <i>(To be scheduled after 10:30 am) :</i> <i>FMGS 1 2:00</i>	DAY 3 CBT : - Navigation 1:50 - Electric 2:15 - System review 0:55 <i>FMGS 2 2:00</i>	DAY 4 CBT : - Pneumatic 1:00 - Fire protection 0:45 - Press / Vent 1:00 - Air conditioning 1:00 - Ice & rain protection 0:30 - System review 0:45 <i>FMGS 3 2:00</i>
DAY 5 CBT : - Landing gear 1:00 - Flight controls 2:30 - Hydraulic 1:15 - Systems review 0:15 <i>ECAM 1 2:00</i>	DAY 6 CBT : - Fuel 1:00 - Power plant 1:30 - Oxygen / Doors / Lights 1:30 - Communication 0:40 - Systems review 0:20 <i>ECAM 2 2:00</i>	DAY 7 CBT : - Recorders 0:05 - Pre-fans 0:30 - System review 1:55 - Performance 3:00 (Take-off / Landing) <i>ECAM 3 2:00</i>
DAY 8 CBT : - System review 4:00 <i>FMGS 4 3:00</i>	DAY 9 CBT : - System test 3:00 - System test debriefing 1:00 <i>V PREP FBS briefing 0:30</i> <i>V PREP FBS 2:00</i>	Optional day Airbus Crew Resource Management (ACRM)
DAY 10 Adapted Crew briefing		

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	ADAPTED CREW COURSE TRAINING FOOTPRINT	2.02.02 Page 3 <i>E F2K</i> REV 24 JUN 2001
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02 - ADAPTED CREW COURSE (END)

B - NORMAL, ABNORMAL, LOFT, EVALUATION PHASES DAILY FOOTPRINT

DAY 11 <i>N0 FBS</i>	DAY 12 <i>NK FBS</i> <i>(Adapted Crew course)</i>	DAY 13 <i>N1 FBS</i>
DAY 14 <i>N2 FBS</i>	DAY 15 <i>N3 FFS</i>	DAY 16 <i>N4 FFS</i>
DAY 17 <i>NK LOFT FFS</i> <i>(Adapted Crew course)</i>	DAY 18 <i>N5 FFS</i> <i>(Progress check)</i>	
DAY 19 <i>F1 FBS</i>	DAY 20 <i>F2 FBS</i>	DAY 21 <i>F3 FFS</i>
DAY 22 <i>F4 FFS</i>	DAY 23 <i>F5 FFS</i>	
DAY 24 A-LOFT briefings 2:10 Performance complement 2:10 Performance test 0:50 Cabin presentation 0:50 Cabin trainer 1:00	DAY 25 <i>Walk around video 0:20</i> <i>A-LOFT FFS 1</i>	DAY 26 <i>A-LOFT FFS 2</i>
DAY 27 <i>Skill Test FFS (Trainee 1)</i>	DAY 28 <i>Skill Test FFS (Trainee 2)</i>	

 = Abnormal / emergency sessions

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	ADAPTED CREW COURSE TRAINING FOOTPRINT	2.02.02 Page 4 <i>E F2K</i> REV 24 JUN 2001
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03 - CBT AT HOME REGULAR COURSE (Not applicable to Adapted Courses)

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	ADAPTED CREW COURSE NORMAL COURSE SYLLABI	2.02.04 Page 7 <i>E F2K</i> REV 24 JUN 2001
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N0 FBS syllabus Refer to Regular Normal Course on Page 3

NK FBS syllabus..... Page 4-A

N1 FBS syllabus Refer to Regular Normal Course on Page 5

N2 FBS syllabus Refer to Regular Normal Course on Page 7

N3 FFS syllabus Refer to Regular Normal Course on Page 9

N4 FFS syllabus Refer to Regular Normal Course on Page 11

NK LOFT FFS syllabus.....Page 12-1

N5 FFS syllabus Refer to Regular Normal Course on Page 13

NOTE : *Instructors' FCTM includes the "Session Guides"*

AIRBUS INDUSTRIE Training & Flight Operations Support Division  A320 FLIGHT CREW TRAINING MANUAL	ADAPTED CREW COURSE NORMAL COURSE SYLLABI	2.02.04 Page 8 <i>E F2K</i> REV 21 MAY 98
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NK FBS TAKE-OFF DATA
INIT PAGE

CO RTE

ALTN/CO RTE

FLT NBR

LAT

COST INDEX

CRZ FL/TEMP

FROM TO

LONG

TROPO

TRIP DIST

CRZ WIND

ALTN

ALTN DIST

FLT to ALTN

ATIS

RWY 33 L

WIND 360°/15 kt

VISI 4 km

CEILING OVC 1200 ft

TEMP 14°C

DEW POINT . 10°C

QNH 1000 hPa/29.97 inHg

QFE 982 hPa/29.44 inHg

RWY COND.. DRY

Observations. : AIR COND ON

INIT NEXT PAGE

ZFCG/ZFW

BLOCK

PERF PAGE

IAE

CFM

V1

VR

V2

FLEX

DRT

T/O FLAPS

T/O C.G.

~~TOGA~~

FLEX

~~DRT~~

NOTE :
F/PLN :

LFBO 15 R

LFBO 15 R

SID LACOU

MEN - AFRIC

STAR AFRIC

Via ADIMA

LFBO ILS 33 L

ALTN : LFBO 33 L - NO SID - TOU

AUCHE - STAR AUCHE

LFBT ILS 20

 A320 FLIGHT CREW TRAINING MANUAL	ADAPTED CREW COURSE NORMAL COURSE SYLLABI	2.02.04 Page 4-B E F2K REV 23 JUL 99
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MALFUNC REF	- NK FBS -									
	TRAINEE 1									
	■ 1 - TRANSIT COCKPIT PREPARATION									
	2 - ENGINE START									
	■ 3 - TAKE-OFF (SID) | AP | FD | ATHR | | |									
	■ 4 - CLIMB FL 120									
	■ 5 - DIR TO WPT									
	6 - STANDARD ARRIVAL									
	■ 7 - RADAR VECTORS									
	■ 8 - RESUME STAR									
	9 - ILS APPROACH									
	10 - LANDING - AUTOLAND									
	INIT T/O									
	11 - TAKE-OFF (SID) | | FD | ATHR | | |									
	12 - CLIMB									
	13 - DIR TO WPT									
	14 - STANDARD ARRIVAL									
	15 - ILS APPROACH									
	16 - LANDING - AUTOLAND									
	IF 2 CAPTAIN CREW OR 2 FIRST OFFICER CREW : CHANGE SEATS BEFORE BEGINNING THE "TRAINEE 2" STAGE									
	TRAINEE 2									
	INIT T/O									
	■ 17 - TAKE-OFF (SID) | AP | FD | ATHR | | |									
	■ 18 - CLIMB FL 120									
	■ 19 - DIR TO WPT									
	20 - STANDARD ARRIVAL									
	■ 21 - RADAR VECTORS									
	■ 22 - RESUME STAR									
	23 - ILS APPROACH									
	24 - LANDING - AUTOLAND									
	INIT T/O									
	25 - TAKE-OFF (SID) | | FD | ATHR | | |									
	26 - CLIMB									
	27 - DIR TO WPT									
	28 - STANDARD ARRIVAL									
	29 - ILS APPROACH									
	30 - LANDING - AUTOLAND									
	31 - AFTER LANDING									
	32 - PARKING									
	33 - SECURING									

 A320 FLIGHT CREW TRAINING MANUAL	ADAPTED CREW COURSE NORMAL COURSE SYLLABI	2.02.04 Page 4-C <i>E F2K</i> REV 24 JUN 2001
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NK FBS SESSION GUIDE

01 - SESSION OBJECTIVE

- Familiarization with crew concept and procedures in aircraft cockpit environment.

02 - TRAINING TOPICS

A. REVIEW

- Crew communication, task sharing and workload management.
- Transit cockpit preparation.
- Cockpit briefings.
- Use of check lists.
- Use of FMGS.

B. INTRODUCE

- Crew co-ordination with and without AP.
- Aircraft handling and procedure application throughout entire flight.
- SESSION PROFICIENCY CRITERIA
- Understanding of SOPs.
- Ability to perform T/O, SID, STAR and ILS app in good crew coordination with/without AP.

03 - SESSION GUIDE1

In order to reduce take-off preparation time after initial landings, load secondary flight plan via INIT feature, to avoid sequencing or use IOS hardware capability such as FPLN COPY and FLPN REPLY, if applicable. ATC revision during take-off preparation should advise to maintain 210 kt during initial climb out.

- **3, 18** : Resume normal speed during initial climb out. Level off at 5000 ft ALT.
- **4, 19** : Resume normal climb to FL 120.
- **5, 20** : Advise right turn to HDG 100 until further. When established, proceed direct to an appropriate IAF for standard arrival at Toulouse.
- **7, 22** : During descent, advise level off and leaving the STAR by radar vectors.
- **8, 23** : Resume STAR by intercepting common leg.

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INSTRUCTOR ONLY

INSTRUCTOR ONLY

NK LOFT FFS TAKE-OFF DATA
- LEG A -

INIT PAGE			ATIS
CO RTE	FROM TO	TRIP DIST	RWY 27 R / L
			WIND 260°/15 kt
ALTN/CO RTE	EGLL/LFPO	CRZ WIND	VISI 350 m SNRA
			CEILING OVC 300 ft
FLT NBR		ALTN	TEMP -2°C
			DEW POINT . -2°C
LAT	LONG	ALTN DIST	QNH 998 hPa/29.47 inHg
			QFE 995 hPa/29.38 inHg
COST INDEX		FLT to ALTN	RWY COND.. Contaminated
			Observations. : AIR COND ON
CRZ FL/TEMP	TROPO		ANTI ICE ON
			1/4 slush
FL 330 / -53°C	36 090		Braking action medium

INIT NEXT PAGE	PERF PAGE	T/O FLAPS	NOTE :
ZFCG/ZFW	IAE CFM		F/PLN :
	V1		EGLL 27 L
28% - 59.5 t	VR	T/O C.G.	SID MID - MID
28% - 130 900 lb	V2		UA34 - LGL
BLOCK	FLEX	TOGA	STAR LGL
	DRT	FLEX	Via EPR
t			LFPO ILS 26
lb		DRT	

NK LOFT FFSFFS TAKE-OFF DATA
- LEG B -

INIT PAGE			ATIS
CO RTE	FROM TO	TRIP DIST	RWY 27
			WIND 320°/15 - 20 kt
ALTN/CO RTE		CRZ WIND	VISI 1300 m
			CEILING BKN 900 ft
FLT NBR		ALTN	TEMP 8°C
			DEW POINT . 4°C
LAT	LONG	ALTN DIST	QNH 1000 hPa/29.53 inHg
			QFE 988 hPa/29.17 inHg
COST INDEX		FLT to ALTN	RWY COND.. DRY
			Observations. : AIR COND ON
CRZ FL/TEMP	TROPO		ORY facing WEST

INIT NEXT PAGE	PERF PAGE	T/O FLAPS	NOTE :
ZFCG/ZFW	IAE CFM		F/PLN :
	V1		LFPG 27
28% - 60 t	VR	T/O C.G.	SID AMOGA
28% - 132 000 lb	V2		UT 225 - VESAN
BLOCK	FLEX	TOGA	UL613 - SANDY
	DRT		STAR BIG
t		FLEX	EGLL ILS 27 L
lb			
		DRT	

 A320 FLIGHT CREW TRAINING MANUAL	ADAPTED CREW COURSE NORMAL COURSE SYLLABI	2.02.04Page 12-3 E F2K REV 24 JUN 2001
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MALFUNC REF	- NK LOFT FFS -
LEG A : EGLL / LFPO	
	1 - TRANSIT COCKPIT PREPARATION
	2 - BEFORE START
	3 - ENGINE START
	4 - AFTER ENGINE START
	5 - TAXI OUT
	6 - BEFORE TAKE-OFF
	7 - TAKE-OFF - CROSSWIND
	8 - CLIMB
	9 - CRUISE - WEATHER DESTINATION
	CLEAR AIR TURBULENCE
	10 - DESCENT
	11 - LOC APPROACH
	12 - GO AROUND
	13 - DIVERSION
	14 - ILS APPROACH
	15 - LANDING (CROSSWIND)
	16 - TAXI-IN
	17 - PARKING
LEG B : LFPG / EGLL	
	PF CHANGE
	18 - TRANSIT COCKPIT PREPARATION
	19 - BEFORE START
	20 - ENGINE START
	21 - AFTER ENGINE START
	22 - TAXI OUT
	23 - BEFORE TAKE-OFF
	24 - TAKE-OFF - CROSSWIND
	25 - CLIMB
	26 - CRUISE - WEATHER DESTINATION
	27 - DESCENT
	28 - ILS APPROACH
	29 - GO AROUND
	30 - DIVERSION
	31 - NON PRECISION APPROACH
	32 - CIRCLING
	33 - LANDING
	34 - TAXI-IN
	35 - PARKING

AIRBUS INDUSTRIE  Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	ADAPTED CREW COURSE NORMAL COURSE SYLLABI	2.02.04Page 12-4 <i>E F2K</i> REV 24 JUN 2001
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AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	ADAPTED CREW COURSE NORMAL COURSE SYLLABI	2.02.04 Page 12-5 <i>E F2K</i> REV 24 JUN 2001
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NK LOFT FFS - METPLAN

SURFACE OBSERVATIONS AND TERMINAL FORECASTS

EGLL LONDON HEATHROW

EGLL METAR ddhhmmz 26015KT 0350 R27/0800M SNRA OVC003 M02/M02 Q998
 NOSIG
 EGLL TAF ddhhhhz ddhhhh VRB05 1500 OVC004 SCT100 TEMPO hhhh
 28020KT 0500 OVC001 SNSH

LFPO PARIS ORLY

LFPO METAR ddhhmmz 18016KT 9999 BKN015 06/03 Q1007 NOSIG
 LFPO TAF ddhhhhz ddhhhh 13005KT 8000 SCT030 BECMG 0003 4000 BR
 SCT010 TEMPO hhhh 1500 VCFG BKN005 BECMG hhhh 16005KT
 CAVOK

LFPG PARIS CHARLES DE GAULLE

LFPG METAR ddhhmmz 06014KT 9999 FEW012 SCT015 05/03 Q1007 NOSIG
 LFPG TAF NIL

EBBR BRUXELLES INTL

EBBR METAR ddhhmmz 07003KT 8000 SCT100 07/06 Q1009 NOSIG
 EBBR TAF ddhhhhz ddhhhh 07003KT 5000 BR SCT008 BKN015 PROB30
 TEMPO hhhh 1500 BR BKN005

LFBO TOULOUSE BLAGNAC

LFBO METAR ddhhmmz 03002KT 1500 SCT003 BKN005 15/13 Q1005 NOSIG
 LFBO TAF ddhhhhz ddhhhh 04005KT 2000 BR BKN003 OVC008 BECMG hhhh
 OVC003

LFBD BORDEAUX MERIGNAC

LFBD METAR ddhhmmz 06015KT 8000 OVC020 BKN050 14/11 Q1004 NOSIG
 LFBD TAF ddhhhhz ddhhhh 05020KT 8000 OVC020 BKN050 TEMPO hhhh
 9999 BKN020

SIGMET

LFFF SIGMET SST3 VALID ddhhmm ddhhmm ON UIR FRANCE MOD TO SEV TURB
 FCST BLW FL360 ON SE QUAD OF UIR FRANCE MOV NE 10KT

NOTAMS

LFPO ARPT SUBJECT TO CLOSURE AT SHORT NOTICE DUE TO GROUND
 CONTROLLERS STRIKE
 LFBO TOU VOR ON TEST. DISREGARD ALL INFORMATION
 RWY 15L/33R CLSD UFN WIP
 ILS RWY 33L UNSERVICABLE
 LFBD VOR TAC APP RWY 05 IS PROHIBITED FROM ddhhmmz TO
 ddhhmmz DUE TO MILITARY ACTIVITY SOUTH OF AIRPORT

PIREPS

NIL
 END OF REPORT

NK LOFT FFS (LEG A) - FLIGHT PLAN

COMPUTED ON: dd/mm/yyyy AT hh:mm:ss WITH FLIGHT PLAN: LHR-ORY NK LOFT LEG A
EGLL/LEPO .../.../... FLT NBR CPT UNITS: KG/NM/FT/KT

AIRCRAFT FL SPEED PAX: ... BAGGAGE CARGO = PAYLOAD
A320 330 CI 30 =

PERFORMANCE FACTOR = 1.00 AIR CONDITIONING = NORM ISA

	E.FUEL	A.FUEL	E.TME	NM	NAM	FL	WIND	COMP.	WIND
DEST LFPO	2751	.....	00:46	283	276	330	32 KT		290/ 40 KT
+ RESV 5% F	500	.....	00:13	(500kg MINIMUM ENROUTE RESERVE)					
+ ALT LFPG	752	.....	00:17	65	62	100	18 KT		230/ 20 KT
+ FINAL RESV	2421	.....	00:45						

= MIN T/O FUEL	6424	.....	2:01						
+ XTR	.....	.....	.....	MAX XTR FUEL:		1327 KG			
= T/O FUEL	.....	.....	.....						
TAXI OUT	200	.....	.....						
				CAPT.SIGN					
MIN BLOCK	6624	.....	.....						
= BLOCK	.....	.....	.....	MAX BLOCK FUEL:		7951 KG			

BLOCK FUEL/BLOCK TIME

FUEL/TIME ADJUSTMENT FOR 4000 FT DECREASE IN CRZ ALTITUDE:	-	3 KG/+ 0 MN
FUEL/TIME ADJUSTMENT FOR 20 KT INCREASE IN HEAD WIND	: +	64 KG/+ 2 MN
FUEL/TIME ADJUSTMENT FOR 10 C INCREASE IN DELTA ISA	: +	85 KG/+ 0 MN
FUEL/TIME ADJUSTMENT FOR 1000 KG INCREASE IN T/O WEIGHT	: +	34 KG/+ 0 MN

	E.WT	CORR.	OP.LIMIT:
OEW	41500	.....	
+ PAYLOAD	18000	.....	STRUC. LIMIT:
= ZFW	59500	.....	MZFW = 61000
+ T/O FUEL	6424	.....	
= TOW	65924	.....	MTOW = 73500
- TRIP FUEL	2751	.....	
= LAW	63173	.....	MLW = 64500

WGT :	FLEX T	V1	VR	V2
CONF.: RWY:				
CORRECTIONS:	-----	-----	-----	-----
WET RWY = -				
QNH =				
ANTI-ICE ON = -				
AIR-COND ON = -				
MEL/CDL ITEM =				
FORWARD CG = -				
(OAT<,TREF<) FLEX T		V1	VR	V2
(MINIMUM SPEEDS<)				

SCH. IN	.....	BLOCK IN	.....	LDG	.....	FU	.....
SCH. OFF	.....	BLOCK OFF	.....	T.OFF	.....	RFOB	.....
SCH. TIME	.....	BLOCK TIME	.....	F.TIME	.....	TOTAL	.....
DELAY	.....	ATC/LATE ARR/PAX HANDLG/CARGO/BAGGAGE/TECH./OTHER:					

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	ADAPTED CREW COURSE NORMAL COURSE SYLLABI	2.02.04 Page 12-7 E F2K REV 24 JUN 2001
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NK LOFT FFS (LEG A) - FLIGHT PLAN (END)

WPT	AWY	FL	WIND	MACH	NM	L.T.	E.TA	E.FU	E.FOB	E.WT	NOTES
FRQ	MCS	MSA	SAT	IAS	R.NM	R.T.	A.TA	A.FU	A.FOB	A.WT	
EGLL			.. / ..				.....		6.6	66.1	
5128.7N	00027.7W		.....		283	00:46	.....		.....	.....	
ELEV	80 FT										

MID	MID##	32	.. / ..	.40	32	6	.....	.9	5.8	65.3	
114.0	SID	2300	.....	250	251	00:40	.....	.....	.....	.....	
5103.2N	00037.5W										

DRAKE	UA34	237	.. / ..	.70	55	9	.....	1.7	5.0	64.5	
161	2100	.....	300	196	00:31	.....	.....	.....	.....	.....	
5012.6N	00004.6W										

SITET	UA34	251	.. / ..	.72	7	1	.....	1.7	4.9	64.4	
159	2100	.....	300	189	00:30	.....	.....	.....	.....	.....	
5006.0N	00000.0W										

ETRAT	UA34	295	.. / ..	.77	26	3	.....	1.9	4.7	64.2	
170	2200	.....	294	163	00:27	.....	.....	.....	.....	.....	
4941.0N	00009.8E										

TOC	UA34	330	.. / ..	.77	21	3	.....	2.1	4.5	64.0	
170	2200	.....	272	142	00:24	.....	.....	.....	.....	.....	

DVL	UA34	330	.. / ..	.77	2	0	.....	2.1	4.5	64.0	
110.2	170	2200	.....	272	140	00:24	.....	.....	.....	.....	
4918.6N	00018.8E										

TOD	UA34	330	.. / ..	.77	14	2	.....	2.2	4.5	64.0	
169	2800	.....	272	126	00:22	.....	.....	.....	.....	.....	

LGL	UA34	270	.. / ..	.72	18	2	.....	2.2	4.4	63.9	
115.0	169	2800	.....	291	108	00:20	.....	.....	.....	.....	
4847.4N	00031.8E										

CHW	LGL##	187	.. / ..	.62	26	4	.....	2.2	4.4	63.9	
115.2	139	2100	.....	291	82	00:16	.....	.....	.....	.....	
4828.8N	00059.2E										

EPR	LGL##	103	.. / ..	.48	28	4	.....	2.3	4.4	63.9	
115.65	075	2000	.....	262	54	00:12	.....	.....	.....	.....	
4837.5N	00139.4E										

TSU		50	.. / ..	.41	20	4	.....	2.3	4.3	63.8	
108.25	STAR	2000	.....	250	34	00:08	.....	.....	.....	.....	
4845.2N	00206.1E										

LFPO			.. / ..	.00	34	8	.....	3.0	3.7	63.2	
	STAR		.....	0	0	00:00	.....	.....	.....	.....	
4843.4N	00222.8E										
ELEV	292 FT										

COMP ROUTE	EGLL/LFPO										
EGLL	MID##	MID		UA34	LGL	LGL##	EPR	DCT			
TSU	DCT	LFPO									

ALTN ROUTE	LFPO/LFPG										
LFPO	DCT	LFPG									

AIRBUS CFP V2.2											

NK LOFT FFS (LEG B) - FLIGHT PLAN

COMPUTED ON: dd/mm/yyyy AT hh:mm:ss WITH FLIGHT PLAN: **CDG-LHR NK LOFT LEG B**
LFPG/EGLL/.../... FLT NBR CPT UNITS: KG/NM/FT/KT

AIRCRAFT FL SPEED PAX:... BAGGAGE CARGO = PAYLOAD
A320 260 CI 30 =

PERFORMANCE FACTOR = 1.00 AIR CONDITIONING = NORM ISA

	DEST	EGLL	E.FUEL	A.FUEL	E.TIME	NM	NAM	FL	WIND	COMP.	WIND
	DEST	EGLL	2393	.....	00:38	208	215	260	-25 KT		290/ 30 KT
+ RESV	5% F		500	.....	00:11	(500kg MINIMUM ENROUTE RESERVE)					
+ ALT	LFPG		1509	.....	00:36	199	186	270	25 KT		290/ 30 KT
+ FINAL RESV			1869	.....	00:45						

= MIN T/O FUEL	6271	.....	2:10								
+ XTR	.....	.....	.....		MAX XTR FUEL:		621 KG				
= T/O FUEL	.....	.....	.....								
TAXI OUT	200	.....	.....								

MIN BLOCK	6471	.....	.....		CAPT.SIGN						
= BLOCK	.....	.....	.....		MAX BLOCK FUEL:		7093 KG				

		BLOCK FUEL/BLOCK TIME	
FUEL/TIME ADJUSTMENT FOR	4000 FT DECREASE IN CRZ ALTITUDE:	+	18 KG/+ 0 MN
FUEL/TIME ADJUSTMENT FOR	20 KT INCREASE IN HEAD WIND	:	+ 67 KG/+ 1 MN
FUEL/TIME ADJUSTMENT FOR	10 C INCREASE IN DELTA ISA	:	+ 82 KG/+ 0 MN
FUEL/TIME ADJUSTMENT FOR	600 KG INCREASE IN T/O WEIGHT	:	+ 22 KG/+ 0 MN

	E.WT	CORR.	OP.LIMIT:
OEW	41500	.....	
+ PAYLOAD	18500	.....	STRUC. LIMIT:
= ZFW	60000	.....	MZFW = 61000
+ T/O FUEL	6271	.....	
= TOW	66272	.....	MTOW = 73500
- TRIP FUEL	2393	.....	
= LAW	63879	.....	MLW = 64500

WGT :	FLEX T	V1	VR	V2
CONF.: RWY:				
CORRECTIONS:	-----	-----	-----	-----
WET RWY	= -			
QNH	=			
ANTI-ICE ON	= -			
AIR-COND ON	= -			
MEL/CDL ITEM	=			
FORWARD CG	= -			

(QAT<,TREF<)	FLEX T	V1	VR	V2
(MINIMUM SPEEDS<)				

SCH. IN	.....	BLOCK IN	.....	LDC	.....	FU	.....
SCH. OFF	.....	BLOCK OFF	.....	T.OFF	.....	RFOB	.....
SCH. TIME	.....	BLOCK TIME	.....	F.TIME	.....	TOTAL	.....
DELAY	.....	ATC/LATE ARR/PAX HANDLG/CARGO/BAGGAGE/TECH./OTHER:					

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	ADAPTED CREW COURSE NORMAL COURSE SYLLABI	2.02.04 Page 12-9 E F2K REV 24 JUN 2001
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NK LOFT FFS (LEG B) - FLIGHT PLAN (END)

WPT	AWY	FL	WIND	MACH	NM	L.T.	E.TA	E.FU	E.FOB	E.WT	NOTES
FRQ	MCS	MSA	SAT	IAS	R.NM	R.T.	A.TA	A.FU	A.FOB	A.WT	
LFPG			../..				.....		6.5	66.5	
4900.6N	00232.9E		.....		208	00:38	.....		.....	.....	
ELEV	387 FT										

AMOGA	AMOGA#	147	../..	.61	55	10	.....	1.3	5.2	65.2	
	SID	2800	.....	312	153	00:28	.....	.....	.....	.....	
4947.1N	00222.1E										

DIPER	UT225	248	../..	.74	37	6	.....	1.7	4.7	64.7	
	343	2800	.....	312	116	00:22	.....	.....	.....	.....	
5020.8N	00203.7E										

VESAN	UL613	253	../..	.74	2	0	.....	1.7	4.7	64.7	
	322	2800	.....	308	114	00:22	.....	.....	.....	.....	
5022.3N	00201.6E										

TOC	UL613	260	../..	.74	3	0	.....	1.8	4.7	64.7	
	322	2100	.....	304	111	00:22	.....	.....	.....	.....	

TOD	UL613	260	../..	.74	10	2	.....	1.8	4.6	64.6	
	322	2100	.....	304	101	00:20	.....	.....	.....	.....	

RATUK	UL613	225	../..	.64	10	1	.....	1.8	4.6	64.6	
	322	2100	.....	280	91	00:19	.....	.....	.....	.....	
5039.4N	00201.6E										

SOVAT	UL613	191	../..	.60	10	2	.....	1.9	4.6	64.6	
	322	2100	.....	280	81	00:17	.....	.....	.....	.....	
5046.8N	00128.0E										

SANDY	UL613	114	../..	.52	23	4	.....	1.9	4.6	64.6	
	322	2300	.....	280	58	00:13	.....	.....	.....	.....	
5103.9N	00104.1E										

BIG	BIG##	11	../..	.27	42	9	.....	2.2	4.3	64.3	
115.1	296	2400	.....	176	16	00:04	.....	.....	.....	.....	
5119.9N	00002.1E										

EGLL			../..	.00	16	4	.....	2.6	3.9	63.9	
	STAR		.....	0	0	00:00	.....	.....	.....	.....	
5128.7N	00027.7W										
ELEV	80 FT										

COMP ROUTE	LFPG/EGLL						
LFPG	AMOGA#	AMOGA	UT225	DIPER	UL613	SANDY	BIG##
BIG	DCT	EGLL					
ALTN ROUTE	EGLL/LFPG						
EGLL	DCT	OCK	RI	MID	UB39	SFD	UM605
DPE	DPE##	MERUE	DCT	LFPG			

AIRBUS CFP V2.2

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	ADAPTED CREW COURSE NORMAL COURSE SYLLABI	2.02.04 Page 12-10 <i>E F2K</i> REV 24 JUN 2001
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NOTE : *LOFT briefing + F/PLN decode keys : refer to FCTM Vol 1 - “Normal Operations Briefings” chapter.*

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	ADAPTED CREW COURSE NORMAL COURSE SYLLABI	2.02.04Page 12-10A E F2K REV 24 JUN 2001
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NK LOFT FFS SESSION GUIDE

01 - SESSION OBJECTIVE

- Familiarization with crew concept and procedures in line flying environment as PF and PNF

02 - TRAINING TOPICS

A. REVIEW

- Crew communication, task sharing and workload management
- Performance calculation for contaminated RWY
- Use of FMGS features during line flying
- Radio communication rules application during line flying
- Non precision approaches
- Glide slope interception from above
- Circling approach

B. INTRODUCE

- Two legs as PF and PNF :
 - LEG A : EGLL to LFPO with diversion to LFPG
 - LEG B : LFPG to EGLL with diversion to LFPG
- Instructor is supposed to keep his role as an instructor despite of LOFT

03 - SESSION PROFICIENCY CRITERIA

- Ability to perform line flying sectors entirely as a crew
- Ability to apply SOPs during the flight
- Ability to handle the aircraft in all phases of the flight

INSTRUCTOR ONLY

INSTRUCTOR ONLY

NK LOFT FFS SESSION GUIDE (END)

04 - SESSION GUIDE

The crew must be provided with documents required for the flight :

COMPUTERIZED FLIGHT PLAN (CFP) :

CFP should be checked by the crew before the flight. Fuel corrections may be made at Captain's discretion.

MET REPORTS :

Weather should be analysed. Wind and temp at FL 230 to be inserted into MCDU during cockpit preparation.

NOTAMS :

Should be analysed and inoperative VOR's deselected during cockpit preparation

TAKE-OFF PERF TABLES :

Crew should define T/O configuration, T/O speed and acceleration altitude
Block fuel is increased due to weather, notams, optimistic fuel in CFP.

INSTRUCTOR ONLY

INSTRUCTOR ONLY

NK LOFT FFS - LEG A SCENARIO

A320 NK LOFT LEG A

LONDON HEATHROW (EGLL) – PARIS ONLY (LFPD)

Events:

The events planned for this exercise are:

- ☐ CFP check. Fuel corrections in accordance to CPT's decision.
- ☐ Weather and NOTAM analysis.
- ☐ Wind and temperature at CRZ ALT. Wind entries during cockpit preparation.
- ☐ T/O configuration calculation and performance data for contaminated RWY's.
- ☐ THR RED and ACC ALT definition.
- ☐ Correct noise abatement procedure application
- ☐ Clear air turbulence penetration – restore after procedure application.
- ☐ Non precision approaches and diversion.
- ☐ Cross wind landing.

Briefing:

A suitable clearance expiry time for departure should be given with the clearance.

SIMULATOR SET-UP

REPOSITION to GATE PARK POSITION T10 (N6127.7 / W00026.8) S19J B25 (N6128.5 / W00026.8) S23/S24J

INIT LOAD

ZFW 59.5 t / 130 900 lb
Exp. Payload 18.0 t
Fuel (Crew) 32%
C/G

ENVIRONMENT

QNH 998
Temperature M02 °C
Tropopause Default Value
Dew Point M02 °C

Wind Direction 280 °
Speed 15 kt
Wind page (not ACTIVE, i.e. Blank)
Wind Direction 290 ° (FL300)
Wind Velocity 40 kt
Turbulence Level 15 %

Windshear NONE
Turbulence level 15 % (Instructor's discretion)

VISUAL

Visibility 350 m / RVR 800 m (all RWY's)
Cloud Base 300 ft

Aimfield Lights Intensity to 5 (or defaulted setting)

MALFUNCTION INDEX

NONE

Close Doors / Arm Slides

Pushback – Nose Left

Taxiways: Out to ZTL

Event:

- Take-off on contaminated RWY.
- How does the crew deal with noise abatement procedure?

Events:

- Clear air turbulence penetration.
- NPA at destination.
- Diversion to ALTN.
- Cross wind landing.

Insert LHR ATIS – Rwy ZTLR 260/15
350 m R800 m SNRA DVC 300 ft
M02/M02 Q998 NOSIG

Select EGLL ZTL

- All RWY lights ON
- Intensity level 5, if applicable

- Provide Ground Power

- Chocks in
- Disarm Slides
- Open Doors

INSTRUCTOR ONLY

INSTRUCTOR ONLY

A320 FLIGHT CREW TRAINING MANUAL	ADAPTED CREW COURSE NORMAL COURSE SYLLABI	2.02.04Page 12-10D E F2K
		REV 24 JUN 2001

NK LOFT FFS - LEG A SCENARIO (END)

Frequency Heathrow CPT - 121.97	Phase Pre-Flight	ATC clears Airbus 210 to Paris City LFPO, MD## departure, Flight Plan Route. Climb and maintain FL120 initially, level change enroute, squawk 4614. Clearance expiry time is XXXX. Contact Heathrow Ground 121.90 for push and start.	➡	Close Doors /Arm Slides
ATIS LHR Dep. 121.85 Gnd - 121.90	Start Pushback Push complete Start complete	Airbus 210 cleared to push and start, temp IM2 °C, QNH 998. Release Park Brake, cleared to start Set Park Brake Disconnecting, hand signals on the right	➡	Pushback – Nose Left (Taxiways Outer to 27L)
Tower 118.50	Taxi	Airbus 210 taxi to holding point Rwy 27L/R Airbus 210 contact Heathrow Tower 118.50		
	Take-Off	Airbus 210 surface wind 280°15, cleared for take-off runway 27L/R Airbus 210 contact London Control on 133.17	➡	
Control 133.17	Climb On contact 2000ft	Airbus 210 radar contact, continue MD## SID climb and maintain FL210, expedite passing FL090, resume normal climb when passing FL100 Airbus 210 contact London Control 127.42		Event: - Contaminated Rwy for take-off - Correct noise abatement procedure
London Ctl 127.42	Appt. FL120 Reach FL120 20nm ind. SITET Cruise	Airbus 210 identified passing FLXXX, climb and maintain FL 330 Airbus 210 maintain FL 330, call passing DRAKE Airbus 210 contact Paris Control 127.30		
Paris Ctl 127.30	Desc. request	Airbus 210 radar contact, maintain FL 330, call ready for descent Airbus 210 contact Paris Control on 124.85	➡	Event: Clear air turbulence penetration
Paris Ctl 124.85	Descent At FL100	Airbus 210 identified, squawk 3524, expect LGL## arrival CHN EPR, ILS approach Rwy 26, descent FL080, report passing FL100, clearance limit EPR. Airbus 210 contact City Approach on 124.45		Insert ORY ATIS – Rwy 26 200°15 G20 1200 m DVC 700 8/4 Q1000 NOSIG Insert CDG ATIS – Rwy 27L 320°12 G15 1300 m BKN 900 DVC 1600 8/4 Q1000 NOSIG
City Appr 124.45	Descent	Airbus 210 identified, squawk 3520, LGL## standard arrival, descend to altitude 4000 ft on QNH 1000, ILS approach Rwy 26, maintain RB T radial 081 until further advised, no delay expected. ➡		Select LFPO 26 - All Rwy lights on - Intensity level 5, if applicable Fail G/S while intercepting LOC Set visual to CAT II conditions
ORY ATIS 131.35 City Tower 118.70	300 RBT Approach passing OM Go Around	Airbus 210 turn right onto heading 165° descend 3000 ft on QNH 1000, intercept ILS Rwy 26, ORY Tower 118.70 Airbus 210 G/S is out of service, cleared for LOC approach Rwy 26, call OM ➡ Airbus 210 visibility 900 m, Rwy 1300 m, cleared to land Rwy 26, wind 280°15 kt, Airbus 210 standard go around to MEL maintain 4000 ft on QNH 1000, contact City Departure on 127.75	➡	- How does the crew deal with switching to LOC approach after G/S Fault? - How is the crew dealing with diversion and NP approaches?
City Departure 127.75	Diversion to CDG	Airbus 210 climb FL080, proceed MEL SUSIN, expect Charles-de-Gaulle VOR Rwy 27L, change CDG appr. 121.15		
CDG Appr; 121.15		Airbus 210 leave SUSIN on HDG 330° and descend to 3000 ft on QNH 1000 Airbus 210 cleared for VOR approach Rwy 27L, change CDG Tower 119.25		- Provide Ground Power - Chocks In - Disarm Slides - Open Doors
CDG Tower 119.25		Airbus 210 cleared to land Rwy 26R, wind 290°15 kt.	➡	
CDG Ground 121.80		Airbus 210 vacate next to the left, change CDG Ground 121.80 Airbus 210 taxi gate parking B20 (X1 – S19), report marshaller contact Cockpit – Ground, Chocks in, release brakes		

NK LOFT FFS - LEG B SCENARIO

A320 NK LOFT LEG B

PARIS CHARLES-DE GAULLES (LFPG) – LONDON HEATHROW (EGLL)

Close Doors / Arm Slides

Pushback – Nose Left

Taxiways: G, N, B, Q

Event:

- Take-off on contaminated RWY.
- How does the crew deal with noise abatement procedure?

Events:

- Clear air turbulence penetration.
- NPA at destination.
- Diversion to ALTN.
- Circle to land.
- Cross wind landing.

Insert CDG ATIS – Rwy 27L 320/12 G15
1300 m R800 m BKN 900 ft OVC
1500 ft 0804 Q1000 NOSIG DRY

Select LFPG 27L

- All RWY lights ON
- Intensity level 5, if applicable

- Provide Ground Power
- Chocks in
- Disarm Slides
- Open Doors

Events:

The events planned for this exercise are:

- CFP check. Fuel corrections in accordance to CPT's decision.
- W/a after and NOTAM analysis.
- Wind and temperature at CRZ ALT. Wind entries during cockpit preparation.
- T/o configuration calculation and performance data for contaminated RWYs.
- THR RED and ACC ALT definition.
- Cross wind Take-off and correct noise abatement procedure.
- Clear air turbulence penetration – restore after procedure application.
- Non precision approaches and diversion.
- Circle to land and cross wind landing.

Briefing: A suitable clearance expiry time for departure should be given with the clearance.

SIMULATOR SET-UP

REPOSITION to GATE PARK POSITION X1 (N49001.0E0232.4) S19J B20 (N4900.3E0233.6) S23/S24J

INIT LOAD

ZFW 60.0 t/132 000 lb
Est. Payload 18.5 t
Fuel (Crew)
CG 32%

ENVIRONMENT

QNH 1000
Temperature 8 °C
Tropopause Default Value
Dew Point 4 °C
Wind Direction 320 °
Speed 25 kt
Wind Page 290° (FL260)
Wind Velocity 30 kt
Turbulence Level 15 %

Windshear NONE
Turbulence level 15 % (Instructor's discretion)

VISUAL

Visibility 1300 m (all RWYs)
Cloud Base 900 ft
Aircraft Lights Intensity to 5 (or defaulted setting)

MALFUNCTION INDEX

NONE

A320 NK LOFT LEG B

CDG – LFPG / LHR - EGLL
Alternate: CDG - LFPG
Company Freq.: 123.45

FIT N°: Airbus 211

Cost Index 30

Cruise: FL260 / M40 °C

Cruise Wind 290 / 30

Tip Dist: 208 NM

Alt Cruise: FL270

Alt Dist: 199 NM

Route:

LFPG AMDG## UTZS VESAN LUB13
SANDY BIC## BIG EGLL

Aircraft:

ZFW CGZFW: 32.9% / 60.0 t -

Block Fuel: 132 000 lb

Est TCWt: 66.0 t/145 200 lb

Take-off CG: 32.0%

Performance: (average values based on estimated G/W – AI and AC on)

1+F

V speeds 154, 157, 157 (CFM)

Flex 140, 146, 146 (IAE)

Flex 61 (CFM)

Flex 63 (IAE)

2

V speeds 152, 154, 155 (CFM)

Flex 140, 146, 146 (IAE)

Flex 60 (CFM)

Flex 63 (IAE)

(Refer to operational calculations)

ATIS:

LFPG – Information Rwy 27L 320/12
G15 1300 m BKN 900 ft OVC
1500 ft 08 / 04 Q1000 NOSIG ALL
RWYs DRY bla good

EGLL – Information Rwy 27L 27R
260/15 620 kt SNRA 350 m R
900 m OVC 300 ft M02 / M02
Q088 NOSIG ALL RWY 1/4 INCH
SLUSH BLA MEDIUM

A320 FLIGHT CREW TRAINING MANUAL	ADAPTED CREW COURSE NORMAL COURSE SYLLABI	2.02.04Page 12-10F E F2K
		REV 24 JUN 2001

NK LOFT FFS - LEG B SCENARIO (CONT'D)

Frequency Charles-d-G, CPT - 126.65	Phase Pre-Flight	ATC clears Airbus 211 to London Heathrow EGLL, AIMOGA ## departure, Flight Plan Route. Climb and maintain FL280, squawk 4614. Clearance expiry time is XXXX.		Close Doors / Arm Slides	
ATIS CDG Dep. 127.12		Contact CDG Ground 121.60 for push and start.			
Ground - 121.60	Start	Airbus 211 cleared to push and start, temp 8 °C, QNH 1000. Release Park Brake, cleared to start Set Park Brake Disconnecting, hand signals on the right/left		Pushback – Nose Left	
	Taxi	Airbus 211 taxi to holding point Runy 27L Airbus 211 contact CDG Tower 119.25		(Taxiways G, N, B, Q or as appropriate)	
Tower 119.25	Take-Off	Airbus 211 surface wind 320/15, cleared for take-off runway 27L		Event: - Crosswind take-off - Correct noise abatement procedure	
	2000ft	Airbus 211 contact CDG Departure on 124.35			
Departure 124.35	Climb On contact	Airbus 211 radar contact, continue AIMOGA ## SID climb and maintain FL220 initially, no speed restriction after passing BIS radial 090°		Event: Clear air turbulence penetration	
Paris Ctr 127.42	Cruise Aprpr. FL120	Airbus 211 contact Paris Control 127.42			
	Reach. FL280 20nm ind. SILET	Airbus 211 identified passing FLXXX, climb and maintain FL 280 Airbus 211 maintain FL 280, call ready for descent			
Paris Ctr 128.27	Desc. request Passing SOVAT	Airbus 211 contact Paris Control 128.27			
		Airbus 211 radar contact, descent to FL 150 Airbus 211 contact London Control on 128.42			
London Ctr 128.42	Descent At FL100	Airbus 211 identified, squawk 3504, expect BIG ## standard arrival, ILS approach RNVY 27L, descent FL090, report passing FL100.		Insert LHR ATIS – Runy 27L 280/15 SNRA 360 m R700 m OVC 300 MD2MD2 Q998 NOSIG All RWY's ¾ Inch slush b/a medium Insert CDG ATIS – RNVY 27L 320/12 G15 1300 m BKN 900 OVC 1500 8/4 Q1000 NOSIG	
Heathrow Aprpr 119.72	Descent passing BIG	Airbus 211 contact Heathrow Approach on 119.72			
LHR ATIS 121.85	Approach passing OM	Airbus 211 identified, squawk 3520, BIG ## standard arrival, descent to altitude 4000 ft on QNH 998, ILS approach RNVY 27L, IL FL070, no delay expected, report BIG		Select EGLL 27L - All RWY lights on - Intensity level 5, if applicable Set visual to CAT II conditions	
Heathrow Tower 118.70	Go Around	Airbus 211 turn left onto heading 310°, descent to altitude 2500 ft on QNH 998, intercept ILS RNVY 27L by HDG 310°. Change Heathrow Tower 118.70		- How does the crew deal with weather decay during approach? - How is the crew dealing with diversion and NP approaches?	
London Ctr. 133.17	Diversion to CDG	Airbus 211 G/S cleared for ILS approach RNVY 27L, call OM Airbus 211 visibility 400 m, RVR 550 m, cleared to land RNVY 27L, wind is vrb 5 kt, in case of go around proceed to OCK, climb to altitude 4000 ft on QNH 998 Airbus 211 proceed to OCK, maintain 4000 ft on QNH 998, contact London Control on 133.17			
London Ctr. 132.60	Cruise Passing HARDY	Airbus 211 climb FL090, proceed OCK Heathrow is closed for snow removal, expect Paris CDG route as filed, OCK, RT, IMD, UB39, SPD, UN605, DPE.			
Paris Ctr. 128.27		Airbus 211 read back correct, continue climbing FL 270 change London Control 132.60 Airbus 211 radar contact, squawk 5421, maintain FL 270, call passing HARDY Airbus 211 change Paris Control 128.27 Airbus 211 radar identified, maintain FL 270, XIDL, DNEPE, expect DPE ## standard arrival RNVY 27L Airbus 211 report ready for descent on Paris Control 127.30			

NK LOFT FFS - LEG B SCENARIO (END)

Paris Ctr. 127.30	Descent	Airbus 211 descent to FL 140 initially, expect DFE## standard arrival for ILS approach RWY 09R, no delay expected	- RMGS preparation for ILS.
ATIS CDG 127.12	Passing Dieppe	Airbus 211 change CDG Approach on 121.15	
CDG Appr. 121.15		Airbus 211 identified, squawk 2314, DFE## standard arrival for WOR approach RWY 09R, circle to land RWY 27L, ILS is out of service, proceed SOKMUMERLE, descent to FL080 ↔	- Preparation, briefing and NPA application. - Preparation of the RMGS for the circling approach (SEC FPLN for landing RWY).
CDG Appr. 121.15	Approach	Airbus 211 turn right to PON and descent to altitude 3000 ft on QNH 1000, report passing PON	- CRM skills as a general monitoring and debriefing item.
CDG Tower 119.25	Passing PON	Airbus 211 turn right HDG 160° and change CDG Tower 119.25	
CDG Tower 119.25	Ready to land	Airbus 211 cleared for WOR approach RWY 09R, Break off to the left for right hand down wind RWY 27L and call ready to land down RWY. Airbus 211 cleared to land RWY 27L wind is 340° / 8 kt	- Management of NPA (TRK FPA), final intercept, level off and break off.
CDG Tower 119.25	Landing	Airbus 211 vacate RWY next to the left and change CDG Ground 121.60	- Visual segment: Sec Fpln activation and landing application.
CDG Ground 121.60	Taxi	Airbus 211 taxi parking gate B20 (X1 -519) and report marshaller contact Cockpit - Ground, Chocks in, release brakes	- Provide Ground Power - Chocks in - Disarm Slides - Open Doors

INSTRUCTOR ONLY

INSTRUCTOR ONLY

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INSTRUCTOR ONLY

INSTRUCTOR ONLY



Adapted Line Familiarization course

- E F2L -

E F2L

 A320 FLIGHT CREW TRAINING MANUAL	TRANSITION COURSES TABLE OF CONTENTS	2.02.00 Page 1 <i>All Adapted Courses</i> REV 24 JUN 2001
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2.02.01 - INTRODUCTION	Refer to Regular Course
2.02.02 - TRAINING FOOTPRINT	
2.02.03 - GROUND COURSE SYLLABI	Refer to Regular Course
2.02.04 - NORMAL COURSE SYLLABI	
2.02.05 - ABNORMAL/EMERGENCY COURSE SYLLABI.	Refer to Regular Course
2.02.06 - LOFT SYLLABI	Refer to Regular Course
2.02.07 - SKILL TEST SYLLABI	Refer to Regular Course
2.02.08 - BASE TRAINING SYLLABUS.....	Refer to Regular Course

AIRBUS INDUSTRIE  Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	TRANSITION COURSES TABLE OF CONTENTS	2.02.00 Page 2 <i>All Adapted Courses</i> REV 22 OCT 98
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 A320 FLIGHT CREW TRAINING MANUAL	ADAPTED LINE FAMILIARIZATION COURSE TRAINING FOOTPRINT	2.02.02 Page 1 E F2L
		TR 15 FEB 2002

01 - TRAINING DEVICE TIME SHARING PER PHASE

N.B. : except when notified, the allocated time is mentioned in hour/crew

		(With Language)
Total working days (without Base Training)	Regular course = 24 or 25 Adapted course = 27 or 28	28 or 29 31 or 32
GROUND PHASE	10 working days	14
CBT : - Aircraft system study + review - System Test - Line Familiarization briefing		
FMGS TRAINER sessions	4	9:00 (3 x 2:00 + 3:00)
ECAM TRAINER sessions	3	6:00 (3 x 2:00)
FBS sessions	1	2:00
FFS familiarization session (Introduction to A320) .	1	0:45
NORMAL PHASE	8 working days	
FBS sessions	5	15:00 (5 x 3:00)
(3 Regular FBS + 2 Adapted Line FBS)		
FFS sessions	3	9:00 (3 x 3:00)
ABNORMAL / EMERGENCY PHASE	5 working days	
FBS sessions	2	6:00 (2 x 3:00)
FFS sessions	3	9:00 (3 x 3:00)
LOFT PHASE	3 working days	
ALOFT briefings	1	
FFS sessions	2	6:00 (2 x 3:00)
SKILL TEST PHASE	Standard Crew 1 working day	Non Standard Crew 2 working days
FFS sessions	1 session 4:00	2 sessions 6:00 (3:00 / trainee)
<i>In the aircraft :</i>		
FLIGHT PHASE (if applicable i.e. French DGAC rule)	1 working day	
Flight	1	Minimum 0:45 / trainee

02 - ADAPTED LINE FAMILIARIZATION COURSE

A. GROUND PHASE DAILY FOOTPRINT

All the following time limits are for information and represent the minimum required to study the relevant system.

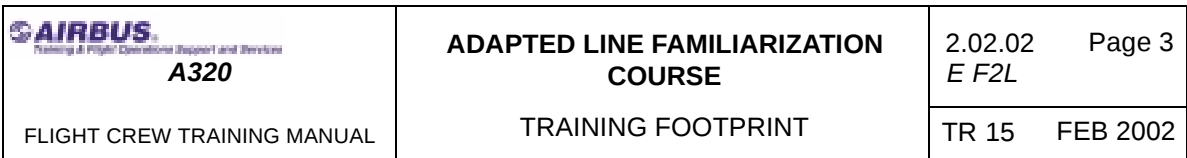
DAY 9 :

System test in one session for all trainees on the afternoon, **after having performed VPREP FBS** (might be swapped with FMGS 4 on previous day according to equipment availability).

DAY 1

Welcome	2:30
CBT :	
- Introduction	0:20
- Aircraft general	0:15
- APU	0:40
- EIS - EFIS	1:15
- Autoflight (1/2)	1:15
FFS 0	0:45

DAY 2 CBT : - Autoflight (2/2) 2:30 - EIS - ECAM 1:45 - System review 0:45 <i>(To be scheduled after 10:30 am) :</i> <i>FMGS 1 2:00</i>	DAY 3 CBT : - Navigation 1:50 - Electric 2:15 - System review 0:55 <i>FMGS 2 2:00</i>	DAY 4 CBT : - Pneumatic 1:00 - Fire protection 0:45 - Press / Vent / Air cond 2:00 - Ice & rain protection 0:30 - System review 0:45 <i>FMGS 3 2:00</i>
DAY 5 CBT : - Landing gear 1:00 - Flight controls 2:30 - Hydraulic 1:15 - Systems review 0:15 <i>ECAM 1 2:00</i>	DAY 6 CBT : - Fuel 1:00 - Power plant 1:30 - Oxygen / Doors / Lights 1:30 - Communication 0:40 - Systems review 0:20 <i>ECAM 2 2:00</i>	DAY 7 CBT : - Recorders 0:05 - Pre-fans 0:30 - System review 1:55 - Performance 3:00 (Take-off / Landing) <i>ECAM 3 2:00</i>
DAY 8 CBT : - System review 4:00 <i>FMGS 4 3:00</i>	DAY 9 CBT : - System test 3:00 - System test debriefing 1:00 <i>V PREP FBS briefing 0:30</i> <i>V PREP FBS 2:00</i>	Optional day Airbus Crew Resource Management (ACRM)
DAY 10 Adapted Line Familiarization briefing		



B - NORMAL, ABNORMAL, LOFT, EVALUATION PHASES DAILY FOOTPRINT

 = Abnormal / emergency sessions

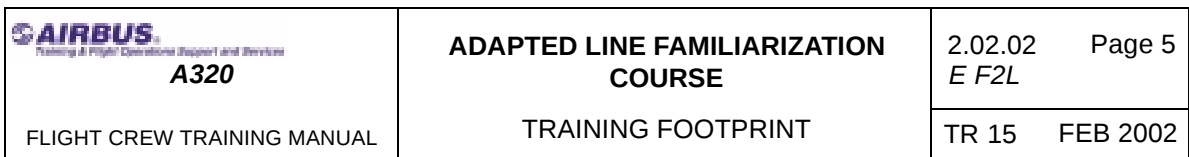


 A320 FLIGHT CREW TRAINING MANUAL	ADAPTED LINE FAMILIARIZATION COURSE TRAINING FOOTPRINT	2.02.02 Page 4 E F2L
		TR 15 FEB 2002

03 - ADAPTED LINE FAMILIARIZATION COURSE + LANGUAGE

A. GROUND PHASE DAILY FOOTPRINT

		DAY 1 Welcome Projected CBT : - Introduction - Aircraft genera - EIS - EFIS (1/2)
DAY 2 Projected CBT : - EIS - EFIS (2/2) - ECAM - APU FMGS 1 2:00	DAY 3 Projected CBT : - Autoflight (1/2) - System review FMGS 1 2:00	DAY 4 Projected CBT : - Autoflight system (2/2) - Navigation FMGS 2 2:00
DAY 5 Projected CBT : - Electric - Pneumatic - Air conditioning FMGS 3 2:00	DAY 6 Projected CBT : - Pressurization - Ventilation - Hydraulic ECAM 1 2:00	DAY 7 Projected CBT : - Power plant - Landing gear - System review ECAM 2 2:00
DAY 8 Projected CBT : - Fuel - Flight controls - System review ECAM 3 2:00	DAY 9 Projected CBT : - Ice and rain protection - Fire protection - TCAS FMGS 4 3:00	DAY 10 Projected CBT : - Oxygen / Doors - Lights - Communication - Recorders - System review
DAY 11 Projected CBT : - System review - Performance (Take-off / Landing) V PREP FBS briefing 0:30 V PREP FBS 2:00	DAY 12 Projected CBT : - System review - System test - System test debriefing	DAY 13 Airbus Crew Resource Management (ACRM)
DAY 14 Adapted Line Familiarization briefing		



B - NORMAL, ABNORMAL, LOFT, EVALUATION PHASES DAILY FOOTPRINT

DAY 15 <i>N0 FBS</i>	DAY 16 <i>N1 FBS</i>	DAY 17 <i>N2 FBS</i>
DAY 18 <i>NL LOFT 1 FBS</i> (Adapted Line Familiarization)	DAY 19 <i>NL LOFT 2 FBS</i> (Adapted Line Familiarization)	DAY 20 <i>N3 FFS</i>
DAY 21 <i>N4 FFS</i>	DAY 22 <i>N5 FFS</i> (Progress check)	

DAY 23	DAY 24	DAY 25
F1 FBS	F2 FBS	F3 FFS
DAY 26	DAY 27	
F4 FFS	F5 FFS	

DAY 28 A-LOFT briefings 2:10 Performance complement 2:10 Performance test 0:50 Cabin presentation 0:50 Cabin trainer 1:00	DAY 29 <i>Walk around video 0:20</i> <i>A-LOFT FFS 1</i>	DAY 30 <i>A-LOFT FFS 2</i>
DAY 31 <i>Skill Test FFS</i> Standard Crew : 4 h session Non Standard Crew : 3 h session (Trainee 1)	DAY 32 (Non Standard Crew ONLY) <i>Skill Test FFS</i> Non Standard Crew : 3 h session (Trainee 2)	

NOTE : When requested by the instructor, spare time sessions are performed :
 - the day before the Progress check (Normal phase)
 - at the end of the Abnormal/Emergency phase

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 Training & Pilot Operations Support and Services A320 FLIGHT CREW TRAINING MANUAL	ADAPTED LINE FAMILIARIZATION COURSE TRAINING FOOTPRINT	2.02.02 Page 6 <i>E F2L</i>
		TR 15 FEB 2002

04 - CBT AT HOME REGULAR COURSE (Not applicable to Adapted Courses)

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	ADAPTED LINE FAMILIARIZATION COURSE TRAINING FOOTPRINT	2.02.02 Page 1 E F2L
		REV 24 JUN 2001

01 - TRAINING DEVICE TIME SHARING PER PHASE

N.B. : except when notified, the allocated time is mentioned in hour/crew

		(With Language)
Total working days (without Base Training).....	Regular course = 25 Adapted courses = 28	TBD
GROUND PHASE	10 working days	TBD

CBT : - Aircraft system study + review

- System Test

- Line Familiarization briefing

| FMGS TRAINER sessions	4	9:00	(3 x 2:00 + 3:00)
| ECAM TRAINER sessions	3	6:00	(3 x 2:00)
| FBS sessions	1	2:00	
| FFS familiarization session (Introduction to A320) .	1	0:45	

NORMAL PHASE **8 working days**

| FBS sessions	5	15:00	(5 x 3:00)
(3 Regular FBS + 2 Adapted Line FBS)			
| FFS sessions	3	9:00	(3 x 3:00)

ABNORMAL / EMERGENCY PHASE **5 working days**

| FBS sessions	2	6:00	(2 x 3:00)
| FFS sessions	3	9:00	(3 x 3:00)

LOFT PHASE **3 working days**

| ALOFT briefings	1		
FFS sessions	2	6:00	(2 x 3:00)

SKILL TEST PHASE **2 working days**

FFS sessions	2	6:00	(3:00 / trainee)
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In the aircraft :

BASE TRAINING PHASE **1 working day** (if applicable i.e. French DGAC rule)

Flight	1	Minimum 0:45 / trainee	
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AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	ADAPTED LINE FAMILIARIZATION COURSE TRAINING FOOTPRINT	2.02.02 Page 2 E F2L
		REV 24 JUN 2001

02 - ADAPTED LINE FAMILIARIZATION COURSE

A. GROUND PHASE DAILY FOOTPRINT

All the following time limits are for information and represent the minimum required to study the relevant system.

DAY 9 :

System test in one session for all trainees on the afternoon, **after having performed VPREP FBS** (might be swapped with FMGS 4 on previous day according to equipment availability).

DAY 1

Welcome	2:30
CBT :	
- Introduction	0:20
- Aircraft general	0:15
- APU	0:40
- EIS - EFIS	1:15
- Autoflight (1/2)	1:15
<i>FFS 0</i>	<i>0:45</i>

DAY 2 CBT : - Autoflight (2/2) 2:30 - EIS - ECAM 1:45 - System review 0:45 <i>(To be scheduled after 10:30 am) :</i> <i>FMGS 1 2:00</i>	DAY 3 CBT : - Navigation 1:50 - Electric 2:15 - System review 0:55 <i>FMGS 2 2:00</i>	DAY 4 CBT : - Pneumatic 1:00 - Fire protection 0:45 - Press / Vent 1:00 - Air conditioning 1:00 - Ice & rain protection 0:30 - System review 0:45 <i>FMGS 3 2:00</i>
DAY 5 CBT : - Landing gear 1:00 - Flight controls 2:30 - Hydraulic 1:15 - Systems review 0:15 <i>ECAM 1 2:00</i>	DAY 6 CBT : - Fuel 1:00 - Power plant 1:30 - Oxygen / Doors / Lights 1:30 - Communication 0:40 - Systems review 0:20 <i>ECAM 2 2:00</i>	DAY 7 CBT : - Recorders 0:05 - Pre-fans 0:30 - System review 1:55 - Performance 3:00 (Take-off / Landing) <i>ECAM 3 2:00</i>
DAY 8 CBT : - System review 4:00 <i>FMGS 4 3:00</i>	DAY 9 CBT : - System test 3:00 - System test debriefing 1:00 <i>V PREP FBS briefing 0:30</i> <i>V PREP FBS 2:00</i>	Optional day Airbus Crew Resource Management (ACRM)
DAY 10 Adapted Line Familiarization briefing		

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	ADAPTED LINE FAMILIARIZATION COURSE TRAINING FOOTPRINT	2.02.02 Page 3 E F2L REV 24 JUN 2001
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02 - ADAPTED LINE FAMILIARIZATION COURSE (END)

B - NORMAL, ABNORMAL, LOFT, EVALUATION PHASES DAILY FOOTPRINT

DAY 11 <i>N0 FBS</i>	DAY 12 <i>N1 FBS</i>	DAY 13 <i>N2 FBS</i>
DAY 14 <i>NL LOFT 1 FBS</i> (Adapted Line Familiarization)	DAY 15 <i>NL LOFT 2 FBS</i> (Adapted Line Familiarization)	DAY 16 <i>N3 FFS</i>
DAY 17 <i>N4 FFS</i>	DAY 18 <i>N5 FFS</i> (Progress check)	
DAY 19 <i>F1 FBS</i>	DAY 20 <i>F2 FBS</i>	DAY 21 <i>F3 FFS</i>
DAY 22 <i>F4 FFS</i>	DAY 23 <i>F5 FFS</i>	
DAY 24 A-LOFT briefings 2:10 Performance complement 2:10 Performance test 0:50 Cabin presentation 0:50 Cabin trainer 1:00	DAY 25 <i>Walk around video 0:20</i> <i>A-LOFT FFS 1</i>	DAY 26 <i>A-LOFT FFS 2</i>
DAY 27 <i>Skill Test FFS (Trainee 1)</i>	DAY 28 <i>Skill Test FFS (Trainee 2)</i>	

 = Abnormal / emergency sessions

AIRBUS INDUSTRIE  Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	ADAPTED LINE FAMILIARIZATION COURSE TRAINING FOOTPRINT	2.02.02 Page 4 <i>E F2L</i> REV 24 JUN 2001
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03 - CBT AT HOME REGULAR COURSE (Not applicable to Adapted Courses)

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	ADAPTED LINE FAMILIARIZATION COURSE NORMAL COURSE SYLLABI	2.02.04 Page 1 <i>E F2L</i> REV 24 JUN 2001
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N0 FBS syllabus Refer to Regular Normal Course on Page 3

N1 FBS syllabus Refer to Regular Normal Course on Page 5

N2 FBS syllabus Refer to Regular Normal Course on Page 7

NL LOFT 1 FBS syllabus.....Page 8-1

NL LOFT 2 FBS syllabus.....Page 8-7

N3 FFS syllabus Refer to Regular Normal Course on Page 9

N4 FFS syllabus Refer to Regular Normal Course on Page 11

N5 FFS syllabus Refer to Regular Normal Course on Page 13

NOTE : *Instructors' FCTM includes the "Session Guides"*

AIRBUS INDUSTRIE Training & Flight Operations Support Division  A320 FLIGHT CREW TRAINING MANUAL	ADAPTED LINE FAMILIARIZATION COURSE NORMAL COURSE SYLLABI	2.02.04 Page 2 <i>E F2L</i>
		REV 21 MAY 98

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NL LOFT 1 FBS TAKE-OFF DATA

INIT PAGE CO RTE FROM TO ALTN/CO RTE FLT NBR [Airline ID] 212 LAT 4843.4N COST INDEX 30 CRZ FL/TEMP FL 330 / -50°C		ATIS RWY 26 WIND Calm VISI 700 m CEILING BKN 200 ft TEMP 5°C DEW POINT . 5°C QNH 1014 hPa/29.96 inHg QFE 1013 hPa/29.62 inHg RWY COND.. DRY Observations: _____ _____ _____ _____	
INIT NEXT PAGE ZFCG/ZFW 30% - 59.5 t 30% - 130 900 lb BLOCK		PERF PAGE IAE CFM V1 VR V2 FLEX DRT	
T/O FLAPS T/O C.G. TOGA FLEX DRT		NOTE : F/PLN : LFPO 26 SID NEV NEV UY27 - MEN STAR MEN LFMT VOR 31 R	

[illegible]

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	ADAPTED LINE FAMILIARIZATION COURSE NORMAL COURSE SYLLABI	2.02.04 Page 8-3 E F2L
		REV 24 JUN 2001

NL LOFT 1 FBS - METPLAN

NL LOFT 1 METPLAN

WEATHER DATA

MARSEILLE PROVENCE - LFML

METAR ddhhmmz 30020 9999 OVC 012 1405 Q1012 NOSIG

TAF ddhhmmz ddhhhh 33010KT 3000 HZ SCT008 OVC100 BECMG SKC 9999

PARIS ORLY - LFPO

METAR ddhhmmz CALM 0700 FG R25 1000/1000/1100 BKN002 05/02 Q1014 NOSIG

TAF ddhhmmz ddhhhh VRB03 0500 FG BKN002 TEMP 0800 0300 OVC001 BECMG 0800
BKN005

PARIS CDG - LFPG

METAR ddhhmmz CALM 0200 FG R280350/0350/0350 OVC002 05/05 Q1014 NOSIG

TAF ddhhmmz ddhhhh VRB03 0300 FG OVC002

BORDEAUX MERIGNAC - LFBD

METAR ddhhmmz 07009KT 9999 BKN022 10/06 Q1013 NOSIG

TAF ddhhmmz ddhhhh 08010KT 9999 SCT010 BKN025 TEMP 1000 10015KT BKN030

TOULOUSE BLAGNAC - LFBO

METAR ddhhmmz 19012KT 1500 HZ OVC012 08/07 Q1011 NOSIG

TAF ddhhmmz ddhhhh 15005KT 2000 HZ BKN007 TEMP 1012 1000 FG BKN004

NICE - LFMN

METAR ddhhmmz 15005KT 900 HZ OVC003 04/03 Q1011 NOSIG

TAF ddhhmmz ddhhhh 15005KT 1000 HZ OVC003 TEMPO 1500 OVC006

MONTPELLIER MEDITERRANEE - LFMT

METAR ddhhmmz 18005KT 2000 HZ OVC008 06/02 Q1011 NOSIG

TAF ddhhmmz ddhhhh 15005KT 1800 HZ OVC009 TEMPO 3000 OVC015

LYON ST EXUPERY - LFLL

METAR ddhhmmz 20012KT 5000 HZ BKN007 M05/M09 Q1002 NOSIG

TAF ddhhmmz ddhhhh 18015KT 9999 BKN006 OVC100 TEMPO 0812 5000

NOTAMS

NIL

PIREPS

NIL

NL LOFT 1 FBS - FLIGHT PLAN

COMPUTED ON: dd/mm/yyyy AT hh:mm:ss WITH FLIGHT PLAN: **ORY-MPL NL LOFT 1**
LEPO/LEMT .../.../... FLT NBR CPT UNITS: KG/MM/FT/KT

AIRCRAFT FL SPEED PAX: ... BAGGAGE CARGO = PAYLOAD
A320 330 CI 30 =

PERFORMANCE FACTOR = 1.00 AIR CONDITIONING = NORM ISA

	DEST	LFMT	E.FUEL	A.FUEL	E.TME	NM	NAM	FL	WIND	COMP.	WIND
			3168	.....	00:56	334	354	330	-16 KT		240/ 50 KT
+ RESV	5% F		500	.....	00:12	(500kg MINIMUM ENROUTE RESERVE)					
+ ALT	LFML		844	.....	00:19	72	73	110	-3 KT		180/ 20 KT
+ FINAL RESV			2494	.....	00:45						

= MIN T/O FUEL 7006 2:12
+ XTR MAX XTR FUEL: 1161 KG
= T/O FUEL
TAXI OUT 200 CAPT.SIGN

MIN BLOCK 7206
= BLOCK MAX BLOCK FUEL: 8368 KG

BLOCK FUEL/BLOCK TIME
FUEL/TIME ADJUSTMENT FOR 4000 FT DECREASE IN CRZ ALTITUDE: + 38 KG/+ 1 MN
FUEL/TIME ADJUSTMENT FOR 20 KT INCREASE IN HEAD WIND : + 94 KG/+ 2 MN
FUEL/TIME ADJUSTMENT FOR 10 C INCREASE IN DELTA ISA : + 80 KG/- 1 MN
FUEL/TIME ADJUSTMENT FOR 1000 KG INCREASE IN T/O WEIGHT : + 39 KG/+ 0 MN

	E.WT	CORR.	OP.LIMIT:
OWW	41500	.....	
+ PAYLOAD	18000	.....	STRUC. LIMIT:
= ZFW	59500	.....	MZFW = 61000
+ T/O FUEL	7006	.....	
= TOW	66507	.....	MTOW = 73500
- TRIP FUEL	3168	.....	
= LAW	63339	.....	MLW = 64500

WGT :	FLEX T	V1	VR	V2
CONF.: RWY:				
CORRECTIONS:	-----			
WET RWY = -				
QNH =				
ANTI-ICE ON = -				
AIR-COND ON = -				
MEL/CDL ITEM =				
FORWARD CG = -				

(QAT<,TREF<) FLEX T V1 VR V2
(MINIMUM SPEEDS<)

SCH. IN	.....	BLOCK IN	.....	LDG	.....	FU	.....
SCH. OFF	.....	BLOCK OFF	.....	T.OFF	.....	RFOB	.....
SCH. TIME	.....	BLOCK TIME	.....	F.TIME	.....	TOTAL	.....
DELAY	.....	ATC/LATE ARR/PAX HANDLG/CARGO/BAGGAGE/TECH./OTHER:					

NL LOFT 1 FBS - FLIGHT PLAN (END)

WPT	AWY	FL	WIND	MACH	NM	L.T.	E.TA	E.FU	E.FOB	E.WT	NOTES
FRQ	MCS	MSA	SAT	IAS	R.NM	R.T.	A.TA	A.FU	A.FOB	A.WT	
LFPO			..../..				.....		7.2	66.7	
4843.4N	00222.8E		.....		334	00:56	.....		.....	.....	
ELEV	292 FT										

NEV	NEV##	270	/..	.75	97	17	.....	1.8	5.4	64.9	
113.40	SID	4000	.....	300	237	00:39	.....	.....	.....	.....	
4709.2N	00255.8E										

TOC	UY27	330	/..	.78	35	5	.....	2.1	5.1	64.6	
174	7900	.....	276	202	00:34	.....	.....	.....	.....	.....	

ADEKA	UY27	330	/..	.78	39	5	.....	2.3	4.9	64.4	
174	7900	.....	276	163	00:29	.....	.....	.....	.....	.....	
4556.5N	00310.8E										

CFA	UY27	330	/..	.78	9	1	.....	2.4	4.8	64.3	
114.35	183	7900	.....	276	154	00:28	.....	.....	.....	.....	
4547.2N	00311.5E										

PINEK	UY27	330	/..	.78	24	3	.....	2.5	4.7	64.2	
182	7900	.....	276	130	00:25	.....	.....	.....	.....	.....	
4522.9N	00310.4E										

TOD	UY27	330	/..	.78	15	2	.....	2.6	4.6	64.1	
182	8100	.....	276	115	00:23	.....	.....	.....	.....	.....	

MORDI	UY27	287	/..	.75	11	2	.....	2.6	4.6	64.1	
182	8100	.....	291	104	00:21	.....	.....	.....	.....	.....	
4457.4N	00310.0E										

MEN	UY27	213	/..	.65	21	3	.....	2.6	4.6	64.1	
115.3	182	8100	.....	291	83	00:18	.....	.....	.....	.....	
4436.5N	00309.7E										

SIMAR	MEN##	32	/..	.40	55	12	.....	2.8	4.5	64.0	
152	8100	.....	250	28	00:06	.....	.....	.....	.....	.....	
4348.6N	00347.7E										

LFMT			/..	.00	28	6	.....	3.4	3.8	63.3	
	STAR		.....	0	0	00:00	.....	.....	.....	.....	
4335.0N	00355.7E										
ELEV	17 FT										

COMP ROUTE	LFPO/LFMT										
LFPO	NEV##	NEV	UY27	MEN	MEN##	SIMAR	DIR				
LFMT											

ALTN ROUTE	LFMT/LFML										
LFMT	RHONE#	VARES	VARES##	MTG	DIR	LFML					

AIRBUS CFP V2.2

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	ADAPTED LINE FAMILIARIZATION COURSE NORMAL COURSE SYLLABI	2.02.04 Page 8-6 <i>E F2L</i> REV 24 JUN 2001
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NOTE : *LOFT briefing + F/PLN decode keys : refer to FCTM Vol 1 - “Normal Operations Briefings” chapter.*

 A320 FLIGHT CREW TRAINING MANUAL	ADAPTED LINE FAMILIARIZATION COURSE NORMAL COURSE SYLLABI	2.02.04 Page 8-6A <i>E F2L</i> REV 22 OCT 98
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NL LOFT 1 FBS SESSION GUIDE

01 - SESSION OBJECTIVE

- Familiarization with line flying specifics and procedures as PF and PNF.

02 - TRAINING TOPICS

A. REVIEW

- Preliminary and cockpit preparation
- Use of check-lists
- Crew briefings
- Use of FMGS features during line flying

B. INTRODUCE

- Familiarization with SOPs
- ICAO rules of the air and two way communication
- Use of FMGS during flight with regard to use of enroute and approach charts
- Flight preparation with regard to :
 - Weather
 - Notams
 - Fuel calculation requirements
 - Flight planning
 - Performance calculation and limitations
- Introduction of role assignment (CPT, F/O) and appropriate task assignment
- Flight from LFPO to FLMT with diversion to LFML
- ACRM task assignment
- Instructor is supposed to keep his role as an instructor despite of LOFT

03 - SESSION PROFICIENCY CRITERIA

- Understanding of SOPs
- Understanding of line flying specifics
- Ability to apply SOPs during the flight
- Ability to handle the aircraft in all phases of the flight

INSTRUCTOR ONLY

INSTRUCTOR ONLY

NL LOFT 1 FBS SESSION GUIDE (END)

04 - SESSION GUIDE

The crew must be provided with documents required for the flight :

COMPUTERIZED FLIGHT PLAN (CFP) :

CFP should be checked by the crew before the flight. Fuel corrections may be made at Captain's discretion.

MET REPORTS :

Weather should be analysed. Wind and temp at FL 230 to be inserted into MCDU during cockpit preparation.

NOTAMS :

Should be analysed and inoperative VOR's deselected during cockpit preparation

TAKE-OFF PERF TABLES :

Crew should define T/O configuration, T/O speed and acceleration altitude
Block fuel is increased due to weather, notams, optimistic fuel in CFP.

INSTRUCTOR ONLY

INSTRUCTOR ONLY

NL LOFT 1 FBS SCENARIO

A320 NL LOFT 1 (FBS)

PARIS ONLY (LFPO) – MONTPELLIER (LFMT)

Close Doors / Arm Slides

Pushback – Nose Left

Taxiways: W

INIT TAKE-OFF (FBS)

Event:

- Low visibility take-off (FFS).
- How does the crew deal with noise abatement procedure?

Events:

- Military activity affecting AWW.
- Dealing with speed and ALT constraints
- NPA at destination.
- Diversion to ALTN.
- ILS approach and autoland.
- Taxi, parking and securing.

Insert ORY ATIS – Rwy 26 Calm FG 700 m R1000 m BKN 200 OVC 1600 ft 0505 Q1014 NOSIG DRY

Select LFPO 26

- All RWY lights ON (FFS)
- Intensity level 5, if applicable (FFS)

- Provide Ground Power
- Chocks in
- Disarm Slides
- Open Doors

The events planned for this exercise are:

- ☐ Preliminary and Cockpit preparation.
- ☐ Use of FM/GS, CFP check. Fuel corrections in accordance to CPT's decision.
- ☐ Weather and analysis.
- ☐ Wind and temperature at CRZ/ALT. Wind entries during cockpit preparation.
- ☐ T/O configuration calculation and performance data for RWY's in use.
- ☐ THR RED and ACC ALT definition.
- ☐ Cross wind take-off and correct noise abatement procedure.
- ☐ Non precision approaches and diversion, PNF resumes controls as PF after go around.
- ☐ Circle to land and autoland, parking and securing procedures.

Briefing: A suitable clearance expiry time for departure should be given with the clearance.

SIMULATOR SET-UP

REPOSITION to GATE PARK POSITION D8 (N4843.6E00221.9) ALLJ – INIT TAKE-OFF (FBS)

INIT LOAD

ZFW 59.5 t / 130 900 lb
Exp. Payload 18.0 t
Fuel (Crew)
C/G 32%

ENVIRONMENT

QNH 1014
Temperature 5 °C
Tropopause Default Value
Dew Point 5 °C
Wind Direction Calm
Speed
Wind Page 240° (FL330)
Wind Direction 50 kt
Wind Velocity 15 % (FFS) on Instr. discretion
Turbulence Level
Windshear NONE
Turbulence level NONE

VISUAL

Visibility 700 m / RVR 1000 m (all RWY's) FFS
Cloud Base 200 ft FFS
Aimfield Lights Intensity to 5 (or defaulted setting) FFS

WALL/FUNCTION INDEX

NONE

A320 NL LOFT 1 (FBS)
Only – LFPO / Montpellier - LFMT
Alternate: Marseille - LFML
Company Freq.: 123.45

FIN#.: Airbus 212
Cost Index 30
Cruise: FL330 / M50 °C
Cruise Wind 240 / 50
Tip Dist: 334 NM
Alt Cruise: FL110
Alt Dist: 72 NM

Route:
LFPO NEW/NEW/UY27 MEN/MEN/NEW
SIMAR LFMT

Altitude:
ZFCG/ZFW: 32.9% / 59.5 t -
130 900 lb
Block Fuel: (Crew)
Est TOW: 66.0 t / 145 200 lb
Take-off CG: 32.0%

Performance: (average values based on estimated GWW – AI and AC on)

1+F V speeds 130, 146, 146 (CFM)
Flex 133, 143, 147 (IAE)
Flex 59 (CFM)
62 (IAE)
2 V speeds 120, 135, 137 (CFM)
Flex 128, 142, 146 (IAE)
Flex 58 (CFM)
61 (IAE)

(Refer to operational calculations)

ATIS:

LFPO – Information h/r Rwy 26 Calm
700 m R1000 m BKN 200 OVC
1500 ft 05 / 05 Q1014 NOSIG ALL
RWYs DRY bla good

LFMT – Information h/r Rwy 38R 180.05
KT 2000 m OVC 800 ft 06 / 02
Q1011 NOSIG ALL Rwy 6A
GOOD

NL LOFT 1 FBS SCENARIO (CONT'D)

Frequency Only CPT - 121.05	Phase Pre-Flight	ATC clears Airbus 212 to Montpellier/LFMT, NEV ## departure, Right Run Route. Climb and maintain FL330, squawk 4614. Clearance expiry time is XXXX	➡	Close Doors / Arm Slides
ATIS ORY Dep. 131.35		Contact Orly Ground 121.70 to push and start.	➡	
End - 121.70	Start Pushback Push complete Start complete	Airbus 212 cleared to push and start, temp 5°C, QNH 1014. Release Park Brake, cleared to start Set Park Brake Disconnecting, hand signals on the right/left	➡	Pushback - Nose Left
	Taxi	Airbus 212 taxi to holding point Rwy 26 Airbus 212 contact Orly Tower 118.70		(Taxiways W or as appropriate Taxi simulation in FBS)
Tower 118.70	Take-Off	Airbus 212 surface wind calm, cleared for take-off runway 26 ➡ Airbus 212 contact Orly Departure on 127.75	➡	Event: - Low visibility take-off - Correct noise abatement procedure
Departure 127.75	Climb On contact	2000ft Airbus 212 radar contact, continue NEV ## SID climb and maintain FL330, no speed restriction after passing TSU/radial 149°, report passing FL080		Correct SOP and ACRM application. ICAO rules of the air Correct two way communication
Paris Ctl 127.42	Cruise Appr. FL080 Reach. FL330	Airbus 212 identified passing FLXXX, climb and maintain FL 330 ➡ Airbus 212 maintain FL 330. Airbus 212 contact Bordeaux Control 133.92		Event: Military activity in AWY. Use of FMGS offset function. Correct return to AWY center line
Bordeaux Ctl 133.92	Passing 5 NM south of CFM Ready for descent	➡ Airbus 212 radar contact, due to military activity in CINF area affecting AWY UY27 on short notice, avoid AWY center line from 5 NM north to 5 NM south of CFM by diverting 6 NM to the east ➡ Airbus 212 resume normal navigation to PINEK and report ready for descent ➡ Airbus 212 descent FL 110 initially, change to Bordeaux control 124.07	➡	
Bordeaux Ctl 124.07	Descent At FL110	➡ Airbus 212 identified, squawk 3524, expect NEV ## standard arrival, VOR approach Rwy 31R, descent FL090, report passing FL110, pass 15 NM north of NEV FL 240 or above ➡ Airbus 212 contact Montpellier Approach on 130.85		Insert MPL ATIS - Rwy 31R 300/25 G 37 10 km SCT 400 ft 350 1405 Q1013 NOSIG All RWY's dry b/a good
Montpellier Appr 130.85	Descent passing FJR	➡ Airbus 212 identified, squawk 3520, NEV ## standard arrival, descend to 2000 ft on QNH 1013, VOR approach Rwy 31R, FL FL070, no delay expected, report FJR ➡ Airbus 212 turn right proceed to ASTEG, report passing ASTEG, ESPIG next, maintain 2000 ft, no delay expected	➡	Insert MRS ATIS - Rwy 14L 190/14 G20 2500 m OVC 2200 ft OVC 3000 ft 1405 Q1013 NOSIG
MPL ATIS 118.42	Approach passing Ldt.	➡ Airbus 212 turn left HDG north, remain on this frequency ➡ Airbus 212 cleared for VOR approach Rwy 31R, report passing FG locator, ready to land ➡ Airbus 212 go around, RWY is blocked by general aviation with collapsed landing gear, airport closed for approx. 1H	➡	Select LFMT 18R (FFS) - All RWY lights on - Intensity level 5, if applicable
Montpellier Appr. 118.70	Go Around	➡ Airbus 212 turn right proceed direct to VARES, climb to FL 110, RHONE next ➡ Airbus 212 maintain FL 110, report VARES.		RWY is blocked, airport is closed! - How does the crew deal with NPA preparation, go around and diversion? - How is the crew dealing with FMGS preparation and ACRM tasks?
Provence Appr. 120.20	Diversion to MRS	➡ Airbus 212 change to Provence Approach 120.20, maintain FL 110		
Provence Appr. 120.20	Approach Ready for descent	➡ Airbus 212 radar contact, squawk 5621, maintain FL 110, VARES ## standard arrival ILS Rwy 14L, Nr. 3, no delay expected, report ready for descent ➡ Airbus 212 descent to 3500 ft on QNH 1013, for delaying action, expect MTG holding ➡ Airbus 212 reduce speed to 200 kt or less, after passing MTG, cleared for standard ILS approach Rwy 14L and descent to 1850 ft, no delay expected	➡	- How does the crew deal with 1850 ft final approach altitude? - How does the crew deal with ATC speed schedule?
MRS ATIS 125.35	After passing MTG	➡ Airbus 212 intercept the localizer Rwy 14L, change Provence Tower 119.50	➡	

NL LOFT 1 FBS SCENARIO (END)

Provence Tower 119:50	Landing After landing	Airbus 212 resume normal speed, you are Nr. 1, cleared for ILS approach RWY 14L, cleared to land, wind 190°/12 kt gusts 18 kt Airbus 212 vacate RWY next to the left, change Provence Ground 121.90 when vacated	- ILS approach with autoland – preparation and application.
	Provence Ground 121:90	Airbus 212 taxi parking gate B3 (FFS) and report marshaller contact	- CRM skills as a general monitoring and debriefing item.
Provence Ground 121:90	Parking	Airbus 211 cleared to switch off	- Management of after landing, parking and securing procedures.
	Securing	Cockpit – Ground, Chocks in, release brakes	- INIT GATE PARKING (FBS) - Provide Ground Power - Chocks in - Disarm Slides - Open Doors

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INSTRUCTOR ONLY

INSTRUCTOR ONLY

NL LOFT 2 FBS TAKE-OFF DATA
INIT PAGE

CO RTE

ALTN/CO RTE

FLT NBR

 [Airline ID] 213

LAT

 4338.1N

COST INDEX

 30

CRZ FL/TEMP

 FL 350 / -55°C

FROM TO

 LFBO/LSZH

LONG

 00122.1E

TROPO

 36 090

TRIP DIST

 407 NM

CRZ WIND

 240°/50 kt

ALTN

 LFLL

ALTN DIST

 239 NM

FLT to ALTN

 180

ATIS

RWY 15 R

WIND 190°/14 kt

VISI 1200 m

CEILING OVC 1200 ft

TEMP -2°C

DEW POINT . -6°C

QNH 1000 hPa/29.53 inHg

QFE 982 hPa/28.99 inHg

RWY COND.. 3.2 mm water

Observations: NOSIG

NOTE :
F/PLN :

LFBO 15 R

SID MEN

MEN

UN 871

MOLUS

WIL

STAR WIL

LSZH ILS 16

INIT NEXT PAGE

ZFCG/ZFW

28% - 59 t

28% - 129 800 lb

BLOCK

PERF PAGE

IAE

CFM

V1

VR

V2

FLEX

DRT

T/O FLAPS

T/O C.G.

TOGA

FLEX

DRT

 A320 FLIGHT CREW TRAINING MANUAL	ADAPTED LINE FAMILIARIZATION COURSE NORMAL COURSE SYLLABI	2.02.04 Page 8-9 <i>E F2L</i> REV 24 JUN 2001
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NL LOFT 2 FBS - METPLAN

NL LOFT 2 METPLAN

WEATHER DATA

MARSEILLE PROVENCE - LFML

METAR ddhhmmz 30020 9999 OVC012 1405 Q1012 NOSIG

TAF ddhhmmz ddhhhh 33010KT 3000 HZ SCT008 OVC100 BECMG SKC 9999

PARIS ORLY - LFPO

METAR ddhhmmz CALM 0700 FG R07 1000/1000/1100 BKN002 05/05 Q1014 NOSIG

TAF ddhhmmz ddhhhh VRB03 0500 FG BKN002 TEMP 0800 0300 OVC001 BECMG 0800
BKN005

PARIS CDG - LFPG

METAR ddhhmmz CALM 0200 FG R280350/0350/0350 OVC002 05/05 Q1014 NOSIG

TAF ddhhmmz ddhhhh VRB03 0300 FG OVC002

BORDEAUX MERIGNAC - LFBD

METAR ddhhmmz 07009KT 9999 BKN022 10/06 Q1013 NOSIG

TAF ddhhmmz ddhhhh 08010KT 9999 SCT010 BKN025 TEMP 1000 10015KT BKN030

TOULOUSE BLAGNAC - LFBO

METAR ddhhmmz 19012KT 1500 HZ OVC012 08/07 Q1011 NOSIG

TAF ddhhmmz ddhhhh 15005KT 2000 HZ BKN007 TEMP 1012 1000 FG BKN004

NICE - LFMN

METAR ddhhmmz 15005KT 900 HZ OVC003 04/03 Q1011 NOSIG

TAF ddhhmmz ddhhhh 15005KT 1000 HZ OVC003 TEMPO 1500 OVC006

MONTPELLIER - LFMT

METAR ddhhmmz 18005KT 2000 HZ OVC008 06/02 Q1011 NOSIG

TAF ddhhmmz ddhhhh 15005KT 1800 HZ OVC009 TEMPO 3000 OVC015

LYON ST EXUPERY - LFLL

METAR ddhhmmz 20012KT 5000 HZ BKN007 M05/M09 Q1002 NOSIG

TAF ddhhmmz ddhhhh 18015KT 9999 BKN006 OVC100 TEMPO 0812 5000

ZURICH - LSZH

METAR ddhhmmz 24008KT 3000 HZ OVC008 M05/M08 Q1005 NOSIG

TAF ddhhmmz ddhhhh 19010KT 5000 BR BKN007

GENEVA - LSGG

METAR ddhhmmz 18010KT 2500 HZ OVC 100 M03/M05 Q1004 NOSIG

TAF ddhhmmz ddhhhh 21010KT 9999 TEMPO 0810 5000 HZ

NOTAMS

NIL

PIREPS

NIL

NL LOFT 2 FBS - FLIGHT PLAN

COMPUTED ON: dd/mm/yyyy AT hh:mm:ss WITH FLIGHT PLAN: **TLS-ZRH NL LOFT 2**
LEBO/LSZH .../.../... FLT NBR CPT UNITS: KG/NM/FT/KT

AIRCRAFT	FL	SPEED	PAX:...	BAGGAGE	CARGO	=	PAYLOAD
A320	350	CI 30	.....	.....	.....	=	.....

PERFORMANCE FACTOR = 1.00 AIR CONDITIONING = NORM ISA

		E.FUEL	A.FUEL	E.TIME	NM	NAM	FL	WIND	COMP.	WIND
DEST	LSZH	3297	.....	00:59	407	377	350	50 KT		240/ 50 KT
+ RESV	5% F	500	.....	00:13	(500kg MINIMUM ENROUTE RESERVE)					
+ ALT	LFLL	2099	.....	00:46	239	256	180	-25 KT		200/ 30 KT
+ FINAL RESV		2267	.....	00:45						

= MIN T/O FUEL	8163	.....	2:43							
+ XTR	.....	.....	.....	MAX XTR FUEL: 634 KG						
= T/O FUEL	.....	.....	.....							
TAXI OUT	200	.....	.....							
				CAPT.SIGN						
MIN BLOCK	8363	.....	.....							
= BLOCK	.....	.....	.....	MAX BLOCK FUEL: 8997 KG						

BLOCK FUEL/BLOCK TIME

FUEL/TIME ADJUSTMENT FOR 4000 FT DECREASE IN CRZ ALTITUDE:	+	16 KG/+ 0 MN
FUEL/TIME ADJUSTMENT FOR 20 KT INCREASE IN HEAD WIND	:	+ 82 KG/+ 2 MN
FUEL/TIME ADJUSTMENT FOR 10 C INCREASE IN DELTA ISA	:	+ 93 KG/- 1 MN
FUEL/TIME ADJUSTMENT FOR 600 KG INCREASE IN T/O WEIGHT	:	+ 28 KG/+ 0 MN

	E.WT	CORR.	OP.LIMIT:	
OEW	41500	.....		
+ PAYLOAD	17500	.....	STRUC. LIMIT:	
= ZFW	59000	.....	MZFW =	61000
+ T/O FUEL	8163	.....		
= TOW	67163	.....	MTOW =	73500
- TRIP FUEL	3297	.....		
= LAW	63866	.....	MLW =	64500
WGT :	FLEX T	V1	VR	V2
CONF.: RWY:				
CORRECTIONS:	-----	-----	-----	-----
WET RWY	= -			
QNH	=			
ANTI-ICE ON	= -			
AIR-COND ON	= -			
MEL/CDL ITEM	=			
FORWARD CG	= -			
(QAT<,TREF<)	FLEX T	V1	VR	V2
(MINIMUM SPEEDS<)				

SCH. IN	.....	BLOCK IN	.....	LDG	.....	FU	.....
SCH. OFF	.....	BLOCK OFF	.....	T.OFF	.....	RFOB	.....
SCH. TIME	.....	BLOCK TIME	.....	F.TIME	.....	TOTAL	.....
DELAY	.....	ATC/LATE ARR/PAX HANDLG/CARGO/BAGGAGE/TECH./OTHER:					

NL LOFT 2 FBS - FLIGHT PLAN (END)

WPT	AWY	FL	WIND	MACH	NM	L.T.	E.TA	E.FU	E.FOB	E.WT	NOTES
FRQ	MCS	MSA	SAT	IAS	R.NM	R.T.	A.TA	A.FU	A.FOB	A.WT	
LFB0			.. / ..				.....		8.4	67.4	
4338.1N	00122.1E		.....		407	00:59	.....		.....	.....	
ELEV	499 FT										

BISBI	MEN##	145	.. / ..	.58	56	10	.....	1.3	7.1	66.1	
	SID	5400	.....	297	351	00:49	.....				
4403.9N	00227.4E										

MEN	MEN##	258	.. / ..	.72	45	6	.....	1.7	6.6	65.6	
115.3	046	8100	.....	297	306	00:43	.....				
4436.5N	00309.7E										

LATAM	UN871	335	.. / ..	.78	53	6	.....	2.1	6.2	65.2	
	062	8100	.....	272	253	00:37	.....				
4502.0N	00414.4E										

TOC	UN871	350	.. / ..	.78	13	2	.....	2.2	6.1	65.1	
	063	7200	.....	263	240	00:35	.....				

BTREK	UN871	350	.. / ..	.78	6	1	.....	2.3	6.1	65.1	
	063	7200	.....	263	234	00:34	.....				
4511.3N	00438.3E										

TDP	UN871	350	.. / ..	.78	38	4	.....	2.4	5.9	64.9	
110.6	063	12300	.....	263	196	00:30	.....				
4529.3N	00526.3E										

GIPMO	UN871	350	.. / ..	.78	6	1	.....	2.5	5.9	64.9	
	043	12300	.....	263	190	00:29	.....				
4533.6N	00531.8E										

SOPLO	UN871	350	.. / ..	.78	14	2	.....	2.5	5.8	64.8	
	043	12300	.....	263	176	00:27	.....				
4543.7N	00544.8E										

OMASI	UN871	350	.. / ..	.78	14	1	.....	2.6	5.8	64.8	
	043	12800	.....	263	162	00:26	.....				
4554.4N	00558.5E										

TOD	UN871	350	.. / ..	.78	30	4	.....	2.7	5.6	64.6	
	043	13000	.....	263	132	00:22	.....				

MOLUS	UN871	299	.. / ..	.77	14	2	.....	2.7	5.6	64.6	
	043	13000	.....	294	118	00:20	.....				
4626.6N	00640.8E										

WIL	DCT	101	.. / ..	.46	67	9	.....	2.8	5.5	64.5	
116.9	050	13000	.....	256	51	00:11	.....				
4710.7N	00754.4E										

EKRIT	WIL##	41	.. / ..	.41	24	5	.....	2.9	5.5	64.5	
	012	6000	.. / ..	250	27	00:06	.....				
4734.4N	00801.7E										

LSZH			.. / ..	.00	27	6	.....	3.5	4.9	63.9	
	STAR		.....	0	0	00:00	.....				
4727.5N	00832.9E										
ELEV	1416 FT										

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	ADAPTED LINE FAMILIARIZATION COURSE NORMAL COURSE SYLLABI	2.02.04 Page 8-12 <i>E F2L</i> REV 24 JUN 2001
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NOTE : *LOFT briefing + F/PLN decode keys : refer to FCTM Vol 1 - “Normal Operations Briefings” chapter.*

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	ADAPTED LINE FAMILIARIZATION COURSE NORMAL COURSE SYLLABI	2.02.04 Page 8-12A <i>E F2L</i>
		REV 23 JUL 99

NL LOFT 2 FBS SESSION GUIDE

01 - SESSION OBJECTIVE

- Familiarization with line flying specifics and procedures as PF and PNF.

02 - TRAINING TOPICS

A. REVIEW

- Cockpit preparation
- Use of check-lists
- Crew briefings
- Use of FMGS features during line flying
- Familiarization with SOPs
- ICAO rules of the air and two way communication
- Use of FMGS during flight with regard to use of enroute and approach charts
- Flight preparation requirements
- Role assignment (CPT, F/O) and appropriate task assignment

B. INTRODUCE

- Take-off with packs off or supplied by APU
- Deselection of nav aids
- Flight from LFBO to LSZH with diversion to LFLL
- Instructor is supposed to keep his role as an instructor despite of LOFT

03 - SESSION PROFICIENCY CRITERIA

- Understanding of SOPs
- Understanding of line flying specifics
- Ability to apply SOPs during the flight
- Ability to handle the aircraft in all phases of the flight

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NL LOFT 2 FBS SESSION GUIDE (END)

04 - SESSION GUIDE

The crew must be provided with documents required for the flight :

COMPUTERIZED FLIGHT PLAN (CFP) :

CFP should be checked by the crew before the flight. Fuel corrections may be made at Captain's discretion.

MET REPORTS :

Weather should be analysed. Wind and temp at FL 230 to be inserted into MCDU during cockpit preparation.

NOTAMS :

Should be analysed and inoperative VOR's deselected during cockpit preparation

TAKE-OFF PERF TABLES :

Crew should define T/O configuration, T/O speed and acceleration altitude
Block fuel is increased due to weather, notams, optimistic fuel in CFP.

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NL LOFT 2 FBS SCENARIO

A320 NL LOFT 2 (FBS) Blagnac – LFBO / Zuerich - LSZH Alternate: Lyon - LFL Company Freq.: 123.45	
FIN#:	Aibus 213
Cost Index:	30
Cruise:	FL350 / M55 °C
Cruise Wind:	240/50
Trip Dist:	407 NM
Alt Cruise:	FL180
Alt Dist:	238 NM
Route: LFBO MEN# MEN UN871 MQLUS WIL WIL# EKRT LSZH	
Aircraft:	32.9% / 59.01 - 129 800 lb
ZFCG/ZFW:	(Crew)
Block Fuel:	87.01 / 147 400 lb
Est TOIW:	32.0%
Take-off CG:	
Performance: (Average values based on estimated GW – AI and AC on)	
1+F	131, 147, 147 (CFM)
V speeds	131, 141, 145 (IAE)
Flex	57 (CFM)
	60 (IAE)
2	121, 136, 138 (CFM)
V speeds	130, 143, 147 (IAE)
Flex	56 (CFM)
	59 (IAE)
(Refer to operational calculations)	
ATIS:	
LFBO – Information h/h RWY 15R 180°/14 kt 1200 m R 1000 m OVC 1200 ft M02 / M06 C1000 NOSIG ALL RWYs 4 km SLUSH b/a medium	
LSZH – Information h/h RWY 14/16 180°/12 kt 618 5000 m BKN 2000 ft M04 / M09 C1002 NOSIG ALL RWY wet b/a G000	
LFL – Information h/h RWY 210°/15 G25 kt 2500 m OVC 2500 ft M02/M08 Q1002 NOSIG RWY wet b/a good	

A320 N. LOFT 2 (FBS)
TOULOUSE-BLAGNAC (LFBO) – ZUERICH (LSZH)

- Events: The events planned for this exercise are:
- ☐ Preliminary and Cockpit preparation.
 - ☐ Use of FMS, CFP, check. Fuel corrections in accordance to CPT's decision.
 - ☐ Weather and analysis.
 - ☐ Wind and temperature at CRZ ALT. Wind entries during cockpit preparation.
 - ☐ T/o configuration calculation and performance data for RWYs in use.
 - ☐ THR RED and ACC ALT definition.
 - ☐ Cross wind take-off and correct noise abatement procedure.
 - ☐ Non precision approaches and diversion, PNF resumes controls as PF after go around.
 - ☐ Circle to land and auto landing, parking and securing procedures.

Briefing: A suitable clearance expiry time for departure should be given with the clearance.

SIMULATOR SET-UP

REPOSITION to GATE PARK POSITION E10 (N4338.1E0122.1) ALL – INIT GATE (FBS)

INIT LOAD	
ZFW	59.0 t / 129 800 lb
Exp. Payload	17.5 t
Fuel	(Crew)
C/G	32%
ENVIRONMENT	
QNH	1000
Temperature	8 °C
Tropopause	Default Value
Dew Point	7 °C
Wind Direction	190°
Speed	12 kt
Wind Page	240° (FL350)
Wind Direction	50 kt
Wind Velocity	15 % (FFS) on instructor's discretion
Turbulence Level	NONE
Windshear	NONE
Turbulence level	NONE

VISUAL

Visibility	1500 m (all RWYs) FFS
Cloud Base	1200 ft FFS
Airfield Lights	Intensity to 5 (or defaulted setting) FFS

MALFUNCTION INDEX

NONE

Close Doors / Arm Slides

Pushback – Nose Left

Taxiways: T, N, M (FFS)

INIT TAKE-OFF (FBS)

Event:

- Cross wind take-off.
- How does the crew deal with noise abatement procedure?

Events:

- Heavy traffic activity affecting AWY.
- Dealing with speed and ALT constraints
- NPA at destination.
- Diversion to ALTN.
- ILS approach and autoland.
- Taxi, parking and securing.

Insert TLS ATIS – Rwy 15R 180°/14 kt
1200 m OVC 1200 ft M02/M06
Q1000 NOSIG 4 mm slush b/a
medium

Select LFBO 15R

- All RWY lights ON (FFS)
- Intensity level 5, if applicable (FFS)

- Provide Ground Power

- Chocks in
- Disarm Slides
- Open Doors

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NL LOFT 2 FBS SCENARIO (CONT'D)

Frequency Blagnac CPT – 121.70	Phase Pre-Flight	ATIS TLS Dep. 131.05 Gnd - 121.80	2000ft	ATC clears Airbus 213 to Zuerich LSZH, MEN## departure, Flight Plan Route. Climb and maintain FL120, squawk 4614. Clearance expiry time is XXXX Contact Blagnac Ground 121.90 for push and start.	Close Doors / Arm Slides
	Start Push complete Start complete			<i> Airbus 213 cleared to push and start, temp IM2 °C, QNH 1000. Release Park Brake, cleared to start Set Park Brake Disconnecting, hand signals on the right/left </i>	Pushback – Nose Left
	Taxi			<i> Airbus 213 taxi to holding point Rwy 16R Airbus 213 at holding point contact Blagnac Tower 118.10, call ready for departure </i>	(Taxiways T, N, M or as appropriate Taxi simulation in FBS)
	Take-Off	Tower 118.10		<i> Airbus 213 surface wind 190/15kt, cleared for take-off runway 15R Airbus 213 contact Toulouse Departure on 129.30 </i>	Event: - Low visibility take-off - Correct noise abatement procedure - Push off take-off
				<i> Airbus 213 radar contact, continue ME## SID climb and maintain FL 210, no restrictions on speed, report passing FL 110 Airbus 213 contact Bordeaux Control 124.07 </i>	Correct SOP and ACRM application. ICAO rules of the air Correct two way communication
				<i> Airbus 213 identified passing FLXXX, climb and maintain FL 360 Airbus 213 maintain FL 360. Airbus 213 contact Marseille Control 134.10 Airbus 213 radar contact, for ground check report your current radial to LHM VOR and for separation turn right by 20°, report your current HDG. Airbus 213 resume normal navigation to UN871, radar service terminated Airbus 213 change to Geneva Control 126.05 Airbus 213 identified, squawk 3524, expect WIL## standard arrival, ILS approach RNVY 16, report passing ready for descent, proceed MOLLUS WIL Airbus 213 descent to FL 150 and change Zuerich Control 131.15 Airbus 213 identified, squawk 3520, WIL## standard arrival, maintain FL 150 on reaching, expect ILS approach RNVY 16, report 20 NM inbound WIL </i>	Event: - Traffic activity in ALLY. Use of radar vectors for short separation. - Use of FCU features, reversions. - Correct return to ALLY center line. - Use of RAD NAV page for check.
				<i> Airbus 213 change to Zuerich Approach 118.00 Airbus 213 radar contact, WIL## standard arrival, ILS approach RNVY 16, descent to 7000 ft on QNH 1002 TL FL 090 Airbus 213 descent to 5000 ft initially, at 7 DME TRA descent to 4000 ft on QNH 1002 and cleared for LOC approach RNVY 16, GS is out of service. Airbus 213 go around, RNVY is blocked by general aviation with collapsed landing gear, airport closed for approx. 1H Airbus 213 follow standard missed approach RNVY 16, climb to 5000 ft, report your decision Airbus 213 proceed TRA, GS, PAS, R226, BALSI, LDP and climb to FL 180, change to Zuerich Departure 125.95 Airbus 213 radar contact, squawk 5471, maintain FL 180, report passing FL 130 Airbus 213 change to Zuerich Control 128.05 Airbus 213 radar contact, maintain FL 180, at 28 DME WIL change to Geneva Control 125.55 </i>	Insert ZRH ATIS – Rwy 16 200Y12 G 15.5 km BKN 2000 ft M04MM09 Q1002 NOSIS All RNVY's wet bla good Insert LYS ATIS – Rwy 16L 200Y16 G 25 5000 m BKN 2000 ft DVC 3000 ft M04MM09 Q1002 NOSIS G wet bla good Select LSZH 16 (FFS) - All Rwy lights on - Intensity level 5, if applicable RNVY is blocked, airport is closed! - How does the crew deal with NPA preparation, go around and diversion? - How is the crew dealing with FMGS preparation and ACRM tasks? - How does the crew deal with speed and altitude constraints? - How does the crew deal with ATC speed schedule?

NL LOFT 2 FBS SCENARIO (END)

Geneva Ctr. 125.55	Passing PAS	Airbus 213 radar contact, maintain FL 180, report passing PAS, expect ULL ILS approach RWY18L with BALST standard arrival procedure		- Fuel, time, weather, NOTAM and minimum review for the flight to an alternate airport.
Marseille Ctr. 126.70	Descent	Airbus 213 change to Marseille Control 126.70	↔	- How to deal with lower airspace procedures and with MEA and MOCA?
Marseille Ctr. 121.90	Ready for descent	Airbus 213 radar contact, squawk 3132, report ready for descent	↔	- CRM skills as a general monitoring and debriefing item.
LYS ATIS 125.35		Airbus 213 descent FL 120, report passing FL 130		- Management of altitude and speed constraints.
Lyon Appr. 127.57	Approach	Airbus 213 maintain FL120 when reaching, change to Lyon Approach 127.57	↔	- RMGS preparation sequence, briefing, ACRM task application in context with approach preparation sequence.
St Exupery Tower 120.45	Landing	Airbus 213 at DME 30 LVM descent to 7000 ft on QNH 1002 initially, report LDP Airbus 213 descent to 5000 ft on QNH 1002, change to St Exupery Tower 120.45		- Management of altitude and speed constraints.
St Exupery Tower 120.45	Taxi	Airbus 213 cleared for standard ILS approach RWY 18L, report ILS established	↔	- ILS approach with autoland – preparation and application.
St. Exupery Gnd. 121.82	Parking	Airbus 213 landed at xxxx, vacate RWY next to the left, call St Exupery Ground 121.82 when vacated (FFS – 519 – 081, 523/24 – 063)	↔	- Management of after landing, parking and securing procedures.
St Exupery Gnd. 121.82	Securing	Codpilot – Ground, Checks in, release brakes Airbus 213 request switch off	↔	- INIT GATE PARKING (FBS)
				- Provide Ground Power
				- Checks in
				- Disarm Slides
				- Open Doors

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Cross Crew Qualification course

- E FQF/G -



 Training & Flight Operations Support and Services A320 FLIGHT CREW TRAINING MANUAL	CCQ A330/A340 to A320 COURSES TABLE OF CONTENTS	2.23.01 Page 1 <i>E FQF/G</i>
		TR 15 FEB 2002

2.02.01 - INTRODUCTION

2.02.02 - TRAINING FOOTPRINT

2.02.03 - GROUND COURSE SYLLABI

2.02.04 - NORMAL COURSE SYLLABI

2.02.05 - ABNORMAL/EMERGENCY COURSE SYLLABI

2.02.06 - Left intentionally blank

2.02.07 - SKILL TEST SYLLABI (*Refer to the Regular Course "Standard Crew" session*)

2.02.08 - BASE TRAINING SYLLABUS (*Refer to Regular Course*)

AIRBUS INDUSTRIE Training & Flight Operations Support Division  A320 FLIGHT CREW TRAINING MANUAL	CCQ A330/A340 to A320 COURSES TABLE OF CONTENTS	2.02.00 Page 2 <i>E FQF/G</i> REV 24 JUN 2001
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AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	CCQ A330/A340 TO A320 COURSE INTRODUCTION	2.02.01 Page 1 <i>E FQF/G</i> REV 22 OCT 98
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01 - GENERAL

A. PHILOSOPHY OF THE COURSE

The Flight Crew Transition Course is based on the following three principles :

- Systematic approach to instruction
- Learning by doing
- Training to proficiency

a. Systematic approach to instruction :

The task of training must be considered as a whole and an instruction system must be defined to achieve the training objectives. These objectives are determined by a task analysis. Methods and means necessary to implement the instruction system are chosen for their qualities and adaptability to the objectives.

Each phase in the training system is intended to fulfil part of the objectives.

b. Learning by doing :

It is very important that practical exercises are included in each training phase. Practical system training is provided as soon as possible to :

- ensure that the theoretical knowledge is retained
- train the crew members in their respective tasks in the cockpit environment.

c. Training to proficiency :

At the end of the training program, each crew must be capable of carrying out his tasks safely and efficiently, in accordance with the training objectives. Therefore, it is not possible to permit a trainee to move up from one phase to the next until he has acquired the skills necessary to complete the objectives.

d. Crew training - Crew Resource Management (CRM)

The ACRM (Airbus Crew Resource Management) is integrated into the technical training through 7 CRM topics studied during the ACRM workshop. Each topic could be part of the briefing or debriefing of a session depending on crew's performance and various opportunities.

- The debriefing of a topic can be done every time it could enhance the trainee's performance
- The briefing of a topic (if not already debriefed) is scheduled in accordance with the table provided in the Trainee's file

B. PREREQUISITES

Defined by clause 16 in aircraft purchase contract and entry level requirements as specified in the Airbus Training Policy.

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	CCQ A330/A340 TO A320 COURSE INTRODUCTION	2.02.01 Page 2 E FQF/G REV 24 JUN 2001
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02 - TYPE RATING COURSE DESCRIPTION

A. TRANSITION COURSE :

- The basic Transition course (called Regular Course) is declined in several versions (called Adapted Courses) according to the needs of the Airlines and the background of the pilot in order to achieve the training objectives.
Adapted courses are designed from the Regular Transition course by adding extra training (briefing and simulator sessions).
- The Regular and Adapted courses are available with additional days of "Language" option for pilots with no English, no fluent English or insufficient knowledge in technical English.
These extra days are mainly spread over the Ground phase as the systems are studied with projected CBT.
An extra day is proposed before the Progress check in the Normal phase and another one at the end of the Abnormal/Emergency phase, both dedicated to a spare session if needed.

NOTE : *Spare sessions are performed on instructor's request.*

Computerised codes are used to identify the various aircraft and courses. Here under the meaning of the main codes :

a. Aircraft Codes

B = A310	F = A340	H = A321
D = A300-600	G = A330	J = A319
E = A320		

b. Course Codes

		CBT at home	Language option
Regular Course <i>Experienced jet qualified line pilots</i>	E F2RA2	E F2RA4	E F2RA7
Adapted Jet Familiarization Course <i>Pilots with no previous experience on jet aircraft</i>	E F2JA2	E F2JA4	E F2JA7
Adapted Crew Course <i>Pilots with no practice of crew co-ordination and flight deck management</i>	E F2KA2	E F2KA4	E F2KA7
Adapted Line Familiarization Course <i>Pilots with no practice of operation in a line environment.</i>	E F2LA2	E F2LA4	E F2LA7

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	CCQ A330/A340 TO A320 COURSE INTRODUCTION	2.02.01 Page 3 <i>E FQF/G</i> REV 24 JUN 2001
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02 - TYPE RATING COURSE DESCRIPTION (END)

B. CROSS CREW QUALIFICATION COURSE (CCQ) :

Within the fly-by-wire family, the CCQ course is designed to transition from one type to another type of aircraft :

CCQ A330 to A320..... E FQG
 Pilots already type rated on A330

CCQ A340 to A320..... E FQF
 Pilots already type rated on A340

C. A319/A320/A321 SAME TYPE RATING :

The Same Type Rating is the term used by Airbus Industrie to assign a single type rating for different Airbus aircraft.

Same Type Rating permits the carry-over of total credit for crew qualifying from one variant of aircraft type to another, based on common cockpit and flight characteristics.

After completion of an A320 Transition or CCQ course, the A319/A320/A321 Same Type Rating needs only stand up lecture and / or CBT study to highlight the differences between the aircraft.

D. FIRST TYPE RATING ON MULTI-PILOT AIRPLANE COURSE

Refer to "First Type Rating On Multi-pilot Airplane Course" FCTM chapter

03 - COURSE ORGANISATION

A. DESCRIPTION

The instruction concept utilised by Airbus Industrie uses a program divided into phases, each of which generally corresponds to part of the objectives.

In an effort to produce a single syllabus set satisfying all the regulatory authorities requirements (JAA, FAA, CAA, etc.) the sessions take place in various airports.

a. Ground course phase

- Welcome : general introduction presenting Airbus Training Centre and the course,
- Cockpit familiarization session in a Full Flight Simulator.

The ground school phase consists of integrated training using :

- a Computer Based Training (CBT) workstation
- FMGS trainer (F3D)

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	CCQ A330/A340 TO A320 COURSE INTRODUCTION	2.02.01 Page 4 <i>E FQF/G</i> REV 24 JUN 2001
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03 - COURSE ORGANISATION (CONT'D)

A. DESCRIPTION (END)

b. Normal operation phase

Having studied each system of the aircraft separately during the Ground course, the trainee is invited to study integration of these systems and subsequent procedures, as well as aircraft handling in Normal situations. Normal situations here must be understood as flying the aircraft without any internal failure.

The objective is to apply normal procedures with respect of task sharing and crew coordination.

The sessions are scheduled in FBS to study the procedures and in FFS to apply the procedures and practice aircraft handling in normal operations.

A progress check at the end of the Normal phase allows the instructor to evaluate if Trainee's knowledge and skills fulfil the requirements to start the Abnormal phase.

c. Abnormal/emergency operation phase :

Knowing now how to handle the aircraft in normal situations, the trainees are invited to study the aircraft in abnormal/emergency operations, experiencing several failure cases. The objective is to apply the abnormal/emergency procedures with respect of task sharing and crew coordination.

Sessions are scheduled in FBS to study the procedures and in FFS to practice aircraft handling.

d. Skill Test phase

According to the JAR - FCL recommendations, the Skill Test syllabi have been designed in a commercial air transport environment.

They consist of :

- 1st part : a real time sector with some specific events.
- 2nd part : additional part to deal with the remaining items to be performed by the trainee in order to fully satisfy the JAR - FCL requirements.

e. Base training phase

Base training if applicable.

[Refer to Base Training Briefing - FCTM Vol 1 "Normal Operation Briefings" chapter.]

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	CCQ A330/A340 TO A320 COURSE INTRODUCTION	2.02.01 Page 5 <i>E FQF/G</i> REV 24 JUN 2001
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03 - COURSE ORGANISATION (END)

B. INSTRUCTOR BRIEFING

The instructor will make a briefing whose duration is stated in the table below within a reasonable time frame before each FBS and FFS session :

Briefing / debriefing duration per session :				
PHASES	BRIEFING			DEBRIEFING
	FBS	FFS	ACRM (if any)	
- Ground	-	-	-	At students and/or instructor request
- Normal / Abnormal	1:30	1:30	At instructor's discretion ¹	At instructor's discretion ²
- Skill test	-	1:00		

1. As a part of the normal session briefing duration
2. According to Trainees' performance

The instructors are advised to use all available tools that can support the learning process significantly i. e. FMGS trainer, ACRM briefings and others. They must brief the Trainees before the first session of the Normal phase to prepare the session using the FCOM and FCTM (Take-off data and flight plan if necessary)

 A320 FLIGHT CREW TRAINING MANUAL	CCQ A330/A340 TO A320 COURSE INTRODUCTION	2.02.01 Page 6 <i>E FQF/G</i> REV 24 JUN 2001
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AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	CCQ A330/A340 TO A320 COURSE INTRODUCTION	2.02.01 Page 7 <i>E FQF/G</i>
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AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	CCQ A330/A340 TO A320 COURSE INTRODUCTION	2.02.01 Page 8 <i>E FQF/G</i>
--	--	--

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	CCQ A330/A340 TO A320 COURSE TRAINING FOOTPRINT	2.02.02 Page 1 <i>E FQF/G</i> REV 24 JUN 2001
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01 - TRAINING DEVICE TIME SHARING PER PHASE

N.B. : except when notified, the allocated time is mentioned in hour/crew

Total working days (without Base Training)		11 working days
GROUND PHASE		5 working days
CBT : - Aircraft system study + review - System Test		
FMGS TRAINER : 1session		2:00
NORMAL PHASE		2 working days
FBS : 1 session.....		3:00
FFS : 1 session.....		3:00
ABNORMAL / EMERGENCY PHASE		3 working days
FBS : 1 session.....		3:00
FFS : 2 sessions		6:00 (2 x 3:00)
SKILL TEST PHASE		1 working day
FFS : 1 sessions		4:00
<i>In the aircraft :</i>		
BASE TRAINING PHASE (if applicable i.e. Frnach DGAC rule)		1 working day
1 flight		Minimum 0:45 / trainee

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	CCQ A330/A340 TO A320 COURSE TRAINING FOOTPRINT	2.02.02 Page 2 <i>E FQF/G</i> REV 24 JUN 2001
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02 - TRAINING DAILY FOOTPRINT

DAY 1 Welcome 2:30 CBT : - Indicating/Recording (EIS - ECAM) 2:00 - Fire protection 0:30 - Navigation 1:00	DAY 2 CBT : - Landing gear 1:15 - Hydraulic 1:15 - Autoflight 2:00 FMGS 2:00	DAY 3 CBT : - Power plant 2:00 - Electric 1:15 - Flight controls 1:30 - Pneumatic 0:45 - Communication 0:30 - CFDS (optional) 0:30
DAY 4 CBT : - Fuel 2:00 - Air cond / pressu / ventilation 2:15 - Cabin presentation 0:50 - Cabin trainer 1:00	DAY 5 CBT : - Ice and rain protection 0:30 - Review 2:00 - System test 2:00	DAY 6 <i>N1 FBS</i>
DAY 7 <i>N2 FFS</i>	DAY 8 <i>F1 FBS</i>	DAY 9 <i>F2 FFS</i>
DAY 10 <i>F3 FFS</i>	DAY 11 <i>Skill test FFS</i>	

 = Abnormal / emergency sessions

FMGS SYLLABUS

This guide enables the user to:
review A330/A340 to A320 FMGS interfaces (MCDU, FCU and FMS displays) and major differences by SOP application during cockpit preparation (FMS), simulated flight and approach preparation.
CYUL (Montreal Dorval) and **KIAD** (Washington Dulles) enroute, departure, arrival and approach charts are required for this session.

SYLLABUS SUMMARY

- FREEPLAY TRAINER CHECKS
- FMGS INITIALISATION / TRAINER PREPARATION
- TAKE-OFF
- CLIMB / CRUISE
- APPROACH PREPARATION
- DESCENT AND APPROACH

A - START THE FREEPLAY TRAINER

REFER TO USER GUIDE FOR MORE INSTRUCTIONS, IF APPLICABLE.

B - REVIEW TRAINER MAIN FACILITIES



STORE MEMO button: Memorises actual freeplay situation and settings.

RECALL MEMO button: Returns to memorised status (by mouse click). The feature can be used at any time in order to review all sequences and exercises.

FREEZE (UNFREEZE) button: Freezes or unfreezes the flight simulation. Unfreeze is necessary before any further modification or entry (Button White - FREEZE / Button Grey - UNFREEZE).

SPEED UP button: Multiplies the speed by 5 until 5 NM inbound to next WPT then returns to normal speed automatically.

C - FREEPLAY TRAINER CHECKS



SPEED BRAKES

Check retracted!



FLAPS

Check retracted!



THRUST LEVERS

Check idle!



ENGINE MASTERS

Check off!

FMGS SYLLABUS (CONT'D)

D - FMGS INITIALISATION



1 - A/C STATUS check

2 - INIT A page. Insertions (data entries).

3 - FPLN pages. Insertions and revisions. Study of DATA pages. Flight plan check and review. SEC FPLN preparation, study and review.

4 - RAD NAV page. Tuning and checking nav aids.

5 - INIT B next page. Insertions and revisions.

6 - PERF page. Insertions and revisions. All phases.

Items 1 to 6 are the main preparation sequence.

Entry Instructions

- All data entries in [...] must be entered in the data field as required (given format) in order to avoid a FORMAT ERROR message.
- It is recommended to read comments (if any) prior to doing inputs.
- The initialisation of the FMS will automatically tell the freeplay trainer software to set the environmental factors and where to position the aeroplane.

WHENEVER YOU NEED TO SEE SOMETHING DURING A DYNAMIC FLIGHT PHASE, STOP THE SIMULATION WITH THE FREEZE BUTTON AND PUSH FREEZE AGAIN IN ORDER TO RELEASE AND TO CONTINUE THE SIMULATION.

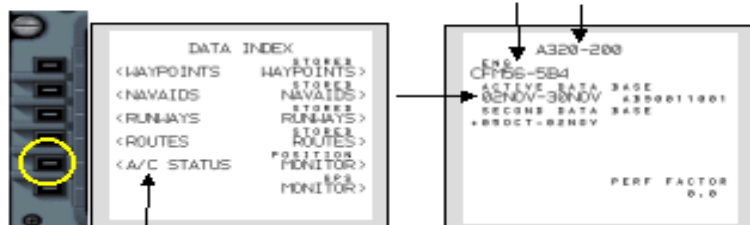
1 - A/C STATUS page check (data base validity)



Normally at power up, the a/c status page is displayed automatically, if not:

A/C STATUS SELECT then
DATABASE validity CHECK, if not valid
Valid DATABASE SELECT

A/C VERSION CHECK
ENG VERSION CHECK



FMGS SYLLABUS (CONT'D)

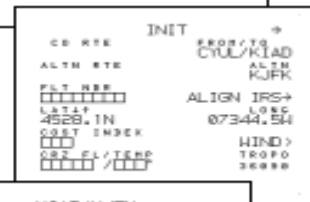
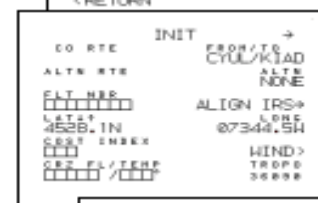
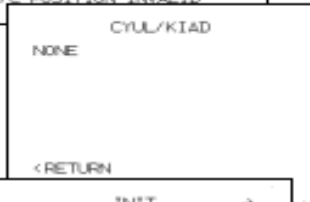
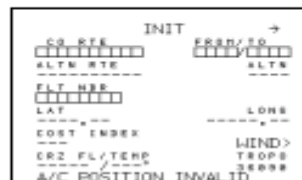
2 - INIT A page entries



1 INIT A preparation

Type and enter into FROM/TO field **CYUL/KIAD**

- Notice there is no company route available for this city pair.
- Select RETURN in order to create a FPLN on your own.
- ALTN field is defaulted empty and NONE is displayed.
- The LAT/LONG are the **ARP*** co-ordinates of **CYUL**.
- ALIGN IRS prompt is available from this page.



2 ALTN COROUTE entry

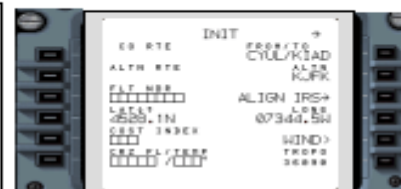
Find the field **ALTN** on INIT A page:

- Observe defaulted no ALTN airport given in this case.
- Type and enter **KJFK** - NEW YORK in order to set an ALTN airport.
- Notice there is no COMPANY ROUTE from **KIAD/KJFK** available.
- The ALTN FPLN must be created by the user in this case completely.

3 GATE PARKING POSITION entry

Gate Parking Position Entry:

- Modify the **ARP** LAT into the gate position LAT. Observe the image and notice the up-down arrows next to LAT.
- Now use the keypad for modification. Push LSK4L and the upper arrow to get the gate 3 LAT **4527.5N** or type the LAT into scratch pad and enter via LSK4L direct.
- Do the same procedure for LONG and enter **07344.9W** with **LSK4R**.
- Push **LSK3R** and **ALIGN IRS**.
- Verify on **IRDU**, the position for **IR1-3-2**.



*ARP - Airport Reference Point

Data not utaded between 2 FCTM revisions

FMGS SYLLABUS (CONT'D)

4

OTHER INIT A page entries

FLT NBR (entry) **AIB320**
- Type and enter **AIB320** or your company id with a given flight number.

COST INDEX (entry) **30**
- Type and enter **30** or check for correct **CI** and keep it.

CRZ FL / TEMP (entry) **350 / -55**
- Type and enter 350 and /-55. If applicable change the temperature entry in accordance to your documentation (FPLN). Today it is not different from ISA.

TROPO (entry) **36000**
- Type and enter the tropopause altitude **36000** ft.

NOTE: Use the correct format for all entries. Notice the maximum number of digits per entry (3 for C.I., 8 for FLT NBR etc.). **Avoid FORMAT ERROR.**



3 - F-PLN A PREPARATION Departure Sequence

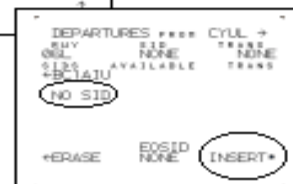
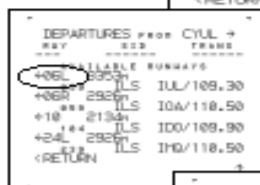
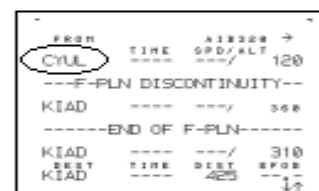
F-PLN

DEPRESS

1. **LAT REV** at **CYUL**
2. **LSK1L** push **DEPARTURE**
3. **DEP RWY** **06L** select
4. For **SID** **NO SID** enter
(Slew up to next page to find NO SID)

On EFIS C.P. select PLAN mode and appropriate range. Notice a temporary FPLN exists (amber lines). Check first line on DEPARTURES FROM CYUL on whether your choice is correct or not. Notice, a temporary Flight Plan (amber) has been created now

5. **LSK6R** for activation **INSERT** push.



FMGS SYLLABUS (CONT'D)

3 - F-PLN A PREPARATION Cruise Sequence

1. **Type** and enter in DISC. **UL**
- Notice the F-PLN DISCONTINUITY is always shifted ahead.
2. Enter a WPT **L/L 4520.0N/07345.0W**
- Notice for the LAT/LONG format a name is automatically created (LL01) for the entered WPT.
3. Enter a WPT **NAPEE**

- Entering *AWYs/Inters.* (enter in sequence in **VIA/GOTO** fields):
1. LAT REV at NAPEE **J569/PLB** etc.
 2. LAT REV at PLB **J29/SYR**
 3. LAT REV at SYR **J59/PSB**
 4. LAT REV at PSB **J61/EMI**

4 - F-PLN A PREPARATION Approach and Alternate Sequence

Notice the F-PLN DISCONTINUITY after EMI

1. LAT REV at **KIAD**
2. **ARRIVAL** **SELECT**
3. Procedure and **RWY** **ILS 19R**
4. For **STAR** select **NO STAR**

- On EFIS C/P, select PLAN mode and appropriate range.
- Notice no predictions are calculated yet.

- Normally radar assistance is given for Arrival.
- Check the procedure is the desired one and **INSERT**
- Check the F-PLN by WPTs, TRKs and Distances.
- Clear all DISCONTINUITIES.
- Check the F-PLN DIST is in accordance with CFP.

ALTN F-PLN Preparation for KJFK:

1. Dep. RWY in KIAD **19R**
2. For SID select **NO SID**
- Set the following WPTs subsequently in DISCONTINUITIES:
ASPER
BAL
MXE
SBJ
FATHO
3. Arrival RWY **KJFK** **ILS 04L**

- LAT REV at KIAD19R, ALTN select and check total alternate distance to KJFK
- Check ALTN F-PLN with enroute chart, if applicable.

Data not utaded between 2 FCTM revisions

FMGS SYLLABUS (CONT'D)

Wind Entries:

- Select INIT page A. Press LSK5R. Notice the HISTORY wind is presented.
- Modify the wind for the flight. Enter the upper wind as presented in the image.
- Notice, after the first entry the name of the page is modified and HISTORY disappears.
- INSERT and check F-PLN page B for the wind propagation sequence calculation and prepare DES FORECAST page.

```
FROM AIR320 →
CYL0BL EF08 HIND
9.0 120°/000
CRZ055 9.7 120°/007
TRK264 9.0
UL 9.6 100°/022
CRZ0 9.4 120°/027
LL01 9.7 100°/015
TEST TIME DIST EF08
KIAD19R 0127 503 6.3
```

```
LL01 EF08 HIND
9.4 077°/015
NAPEE 9.1 152°/030
J507 TRK193 9.0
PLB 9.6 192°/044
CRZ0 9.3 210°/050
J507 9.0
LAGGS 9.2
TEST TIME DIST EF08
KIAD19R 0127 503 6.3
```

```
WIND
120°/025 FL50
150°/030 FL100
180°/040 FL200
210°/050 CRZ FL
FL350
INSERT*
```

```
DES FORECAST
HIND / ALT ] CAB RATE
[ 3°/ [ 3°/ [ ] IFT/HND
[ 3°/ [ 3°/ [ ] -350
[ 3°/ [ 3°/ [ ]
<RETURN
```

OTHER CHECKS AND ENTRIES

PROGRESS page checks:

- Call PROG page and check the CRZ FL entered in INIT A versus OPT and REC MAX FLs.

OPT FL is a function of the C.I.

REC MAX is a function of the buffet margin calculation (0.3 g).

FUEL PRED page checks and entries:

- Call FUEL PRED and check fuel calculation for Destination and Alternate. Set average wind for CRZ and ALTN, if applicable.
- Notice, any wind entry at a certain WPT will cancel the average wind entry.

```
CRZ FL350 TO AIR320
OPT FL370 REC MAX FL383
BRG / DIST TO [ ]
UPDATE AT
* [ ]
VORT/FREQ HIGH FREQ/VORT
YUL/116.30 116.50/YUL
```

```
FUEL PRED
KIAD TIME EF08
0127 6.3
KJFK 0207 4.9
CRZ HIND
210°/050
ALTN HIND
000°/000
```

DATA checks:

- Call DATA, notice there is only one page available.

STORED WAYPOINTS SELECT

- Notice, just 1 WPT is stored (LL01).

Call DATA AC STATUS SELECT

- Confirm on AC STATUS, 1 WPT, created by crew, was entered.

Call DATA POSITION MONITOR SELECT

- Notice, a couple of positions and the IRS drift are available for check.
- The prompt SEL NAVAIDS is available for NAVAID and GPS de-selection.

Call DATA GPS MONITOR SELECT

- The parameters of the 2 GPS sensors (hybrid function in this case - no GPS PRIMARY) are available.

```
A320-200
CRZ055-504
NOTICE DATA BASE
8040V-3040V +80011001
SECOND DATA BASE
+80017-8200P
STORED
8040V-3040V
8011E-8040V
DELETE ALL+
PERF FACTOR
0.0
POSITION MONITOR
PHE SHN 4526.1N/07344.5W
SIRLCP
PHE RPP 4526.1N/07344.5W
SIRLCP
CPHRS 4526.1N/07344.5W
RIS IRS 4526.1N/07344.5W
CRST 1800 1803
NAV 0.0 NAV 0.0 NAV 0.0
<FREEZE NAVAIDS>
GPS MONITOR
SEL POSITION
4526.1N/07344.5W C0
1800.0 "120
1803.0 "120
SEL POSITION
4526.1N/07344.5W C0
1800.0 "120
1803.0 "120
```

FMGS SYLLABUS (CONT'D)

ATC Cleared Destination KIAD via flight planned route. Proceed UL NAFEE after take-off and route as filed. Climb 12000 ft initially. Level change enroute. Expect FL 350.

(TRAINER) COCKPIT PREPARATION FOR TAKE-OFF



ND mode **ROSE NAV**
RANGE **10**
CSTR p/b **ON**
FD check **ON**
ILS p/b **AS RQRD**
YOR ADF sel. **AS RQRD**

FCU target altitude set **12000**
 - Set and crosscheck initial cleared altitude on PFDs.
 Check on **FCU**:
 - **ALT** window displays **12000**.
 - **SPD** and **V/S** windows are dashed.
 - **HDG** window is dashed.

CONFIGURING THE A/C FOR TAKE-OFF

ENGINE MASTERS **ON**
 - Click to the **ON** position.
FLAPS select position **2**
 - Click position **2**.
 - MCDU PF on **PERF** - **PNF** on **FPLN**

READY FOR TAKE-OFF

STORE MEMO ICON click. All preparations are memorised.
 With click on **RECALL MEMO**, take-off can be repeated.



TAKE-OFF

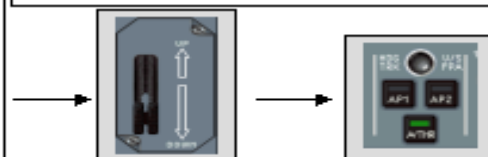
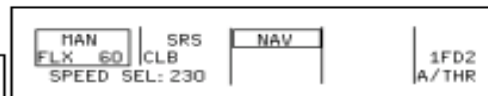
TAKE-OFF POWER select **FLEX**
FREEZE button **CLICK**
 - READ FMA | **MAN FLEX** | **SRS** | **RWY** |
 - Observe **ATHR** in cyan - armed.
 - Notice **SPEED SEL: 230** in cyan for pre-selected CLB speed
UNFREEZE button **CLICK**

Observe the take-off



AFTER LIFT-OFF

- **POSITIVE CLIMB** -
 - **GEAR UP** -
LANDING GEAR **RETRACT**
 - **ENGAGE AP1** - (> 100 ft RA)
AUTO PILOT 1 **ENGAGE**
 - Notice the first mode change on take-off. NAV mode becomes active when a FPLN exists.
 - **NAV GREEN** -



FMGS SYLLABUS (CONT'D)

Crossing **THR RED ALT**:

- LVR CLB - flashing white on FMA.

THR LEVERS **CLB**

- Notice mode changes on FMA.
- THR CLB -
- ATHR WHITE - (ATHR is active now).

Crossing **ACC ALT**:

- CLB - replaces SRS. Managed CLB mode has engaged.

SPEED > F **FLAPS 1**

SPEED > S **FLAPS 0**

Crossing **TRANS ALT**:

BARO REF pull **STD**

- Set and crosscheck **STD** altimeter setting and passing altitude (PFD, EFIS and STBY instruments).
- Notice target SPD **230** kt cyan on PFD.



NOTE:

Target speed 230 kt is displayed on top of the speed scale as long as out of view. It becomes a cyan triangle next to the target speed when in view.

INITIAL CLIMB OUT

ATC Resume normal speed. Recleared FL 200. Proceed to Napee.

To resume normal speed:

SPEED selector **PUSH**

- Notice new speed target is **250** kt now. Target is a magenta triangle on speed scale for defaulted managed SPD below FL100 or 10000 ft.

FCU new target ALT set **20000**

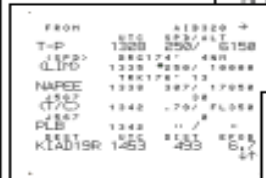
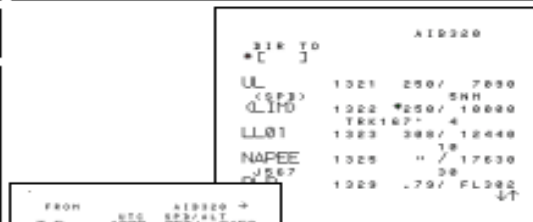
- Check 20000 cyan on top of ALT scale. It cannot be FL since not on STD.



DIRECT TO FEATURE Use of

ATC advised a **DIRECT** to Napee from present position:

- Notice, only the basic DIRECT TO feature is available.
- Activate the DIRECT to Napee with LSKSL or typing Napee in the scratch pad and pushing LSK1L.
- Notice, UL and LL01 are removed and the active mode remains NAV.
- Active WPT is (SPD) (LIM).

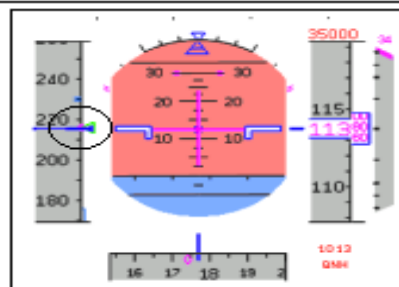


FMGS SYLLABUS (CONT'D)

EXPEDITE CLIMB FEATURE Use of

- ATC advised climbing to FL 350 and **EXPEDITE** passing FL 250:
- On FCU set new altitude target to 35000 and activate expedite climb (**push EXPED**).
 - Active mode is **EXP CLB** now.
 - Managed Speed Target (magenta) is **G-DOT** speed.
 - ALT target is **35000** as still not on STD.
 - Thrust remains THR CLB, which gives max. CLB thrust as before.
 - V/S is achieved as ROC in accordance with max. CLB thrust and appropriate pitch.
 - When passing FL 250 and now on STD, **push/pull** ALT selector and return to normal **ECON CLB** speed.

THR CLB EXP CLB NAV AP1
AL 1FD2
A/THR



RAD 140

DEPRESS

Restore the auto tuning function of the FMGS:

- Clear the manually tuned NAVAIDS, if not needed anymore for navigation purposes (raw data check) in order to recover auto tuning.
- Remember, manually tuned navaids have priority and cannot be received after a certain distance. Auto tuning and radio position updating will be lost. ILS is KIAD 19R.

RADIO NAV
VORT/FREQ FREQ/VORT
PLB/110.00 110.00/PLB
CRS [] []
ILS/FREQ
ILS/111.00
CRS
100
AP1/FREQ 130 FREQ/AP1
[] [] [] []

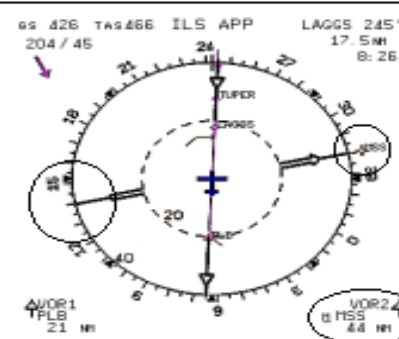
OTHER DIFFERENCES

PROGRESS page check:

- Notice, the REPORT feature (as for LONG RANGE a/c) is not available on this FMGS standard.
- Position report parameters should be received and read out from appropriate FMS pages and EFIS (F-PLN A and B, FUEL PRED, ND and PFD).

POSITION information:

- ATC advised to check passing RAD 140° from MSS VOR.
- Notice, LAT REV at PPOS does not provide FIX INFO feature.
 - Set MSS into i.e. VOR 2 field and check when passing RAD 140°.



STEP CLIMB/STEP DESCENT Use of

- A step CLB to FL 370 is required (check PROG first for MAX REC FL):
One STEP CLB or one STEP DES at any CRZ WPT may be entered.
Call F-PLN **VERT REV** at **TUPER**
STEP PRED prompt LSK4R **PUSH**
In **STEP TO FL370** **ENTER**
INSERT LSK6R **SELECT**
Check F-PLN for predictions. Steps at Geographical WPTs are available only. When reaching the STEP WPT, pull or push the ALT selector for CLB or DES activation. STEP is deleted, if not activated on passing.

STEP AT TUPER
MSS TO
FL370
MSS
ALT STEP FL
141.7500
(RETURN) INSERT

PROG
PLB 0515 0515/FL370
LSS 1000 1000/FL370
TSS 1000 1000/FL370
VSS 1000 1000/FL370
CVC 1000 1000/FL370
VSS 1000 1000/FL370
KINDOR 1000 1000/FL370

FMGS SYLLABUS (CONT'D)

**ALT HOLD function vs
PUSH TO LEVEL OFF**

- EXPED p/b available in place of ALT HOLD p/b.
- PUSH TO LEVEL OFF is available through V/S or FPA selector. When pushed gives whether V/S +0 or FPA +0.0.



CRUISE PHASE

- Upon reaching **CRZ** altitude **FL350** notice FMA mode changes to - MACH | ALT* - and when ALT capture is completed to - ALT CRZ -.

MACH | ALT CRZ | NAV | AP1
1FD2
A/THR

ATC

Company order to return to CYUL.

Proceed PLB YUL. Descent to 15000 ft on QNH 1013. Expect LOC BAC CRS RWY 28.

DIRECT TO

DIR DEPRESS

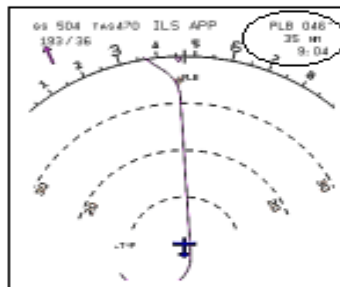
- Observe MCDU FPLN. DIR TO field is displayed.

FPLN **SLEW**

- When PLB visible on MCDU FPLN page:

PLB **SELECT**

- Or **type** PLB and enter.
- Notice changes on FPLN and on ND. **T-P** is PPOS on FPLN and all WPTs have been removed. Predictions are made for PLB now.
- No mode changes on FMA.



FROM: 0556 175/11350
PLB: 0556 175/11350
YUL: 0556 175/11350
---F-PLN DISCONTINUITY---
TURF: 0556 175/11350
K11130 175/11350
NEW CRZ ALT-15000

LAT REV at **PLB**
Type and enter into NEXT WPT field **YUL**

- Temporary F-PLN is created

LSK6R push **INSERT**
- Observe the F-PLN DISCONTINUITY.

DESCENT WIND ENTRY

PERF **PUSH**

- Notice CRZ phase is still active.

DES FORECAST **SELECT**

- Access only available, if DES phase not yet active.

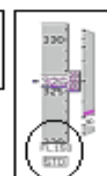
120/20/50 **ENTER**

DES FORECAST
120/20/5000
C 3"/E 1/C 3
C 3"/E 1/C 3
C 3"/E 1/C 3
<RETURN

DESCENT INITIATION

On FCU select **15000**
ALT sel. **PUSH**
THR IDLE | DES **CHECK**
FL150 on PFD **CHECK**

THR IDLE | DES ALT | NAV | AP1
1FD2
A/THR



Data not utaded between 2 FCTM revisions

FMGS SYLLABUS (CONT'D)

9 - APPROACH Preparation for CYUL LOC BAC CRS RWY 28

1 CHECKING OR ENTERING AN ARRIVAL

MCU on FPLN page:

LAT REV at PLB
NEW DEST set CYUL
LAT REV at CYUL
ARRIVAL SELECT
- Select BAC28 with ABC28 arrival.
RETURN SELECT

LAT REV from CYUL28
45° 07' 50" 073° 12' 30" ARRIVAL
NEXT OPT 1
<ALTN
<RETURN

ARRIVAL TO CYUL
ABC28 - VCA ABC28
STARS AVAILABLE TRANS
+ANT28
+CED28
<RETURN

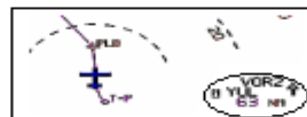
2 NAV ACCURACY CHECK

NAV ACCURACY CHECK does not apply with GPS PRIMARY. If not, the FMGS calculated position has to be validated with raw data.

PROG page CALL
TYPE and enter VOR2 YUL
- Notice PLB WOR is currently auto tuned.
TYPE and enter to BRG/DIST YUL
VOR2 on ECP SELECT
NAV ACC VALIDATE
- Check and compare FMGS position with VOR raw data position on ND. ACC HIGH is confirmed, if DIST difference is 1 NM or less. Rely on FMGS.



BRG / DIST
360° / 63.4 TO YUL



3 LANDING PERFORMANCE

PERF page CALL
NEXT PHASE SELECT
QNH type and enter 1013
TEMP type and enter 15
WIND type and enter 270/15
TRANS ALT check 18000
MDA type and enter 620
VREF (VLS) and VAPP CHECK
NEXT PHASE SELECT
GO AROUND parameters MODIFY
- Modify THR RED/ACC and EO ACC ALT, if applicable.

REST APPR FINAL
1013 FLY PATH BAC28
1500 ALT 1500
1500 S=1800
BAC28
270°/15 0=1800
TRANS ALT L30 CONF
10000
VAPP 150 FULL
1000 NEXT
<PHASE

GO AROUND
FLY PATH
F=1500
ALT 1500
S=1800
0=1800
THR RED/ACC EOE DST ACC
1000/3100 1000
<PHASE

4 NAVAIDS FOR ARRIVAL

RADIO NAV page CALL
- Tune and identify appropriate NAVAIDS for arrival. Select in a useful manner that VOR1 and ADF2 may be used at the same time, if applicable.
- Don't do it too early whereas you may still need enroute NAVAIDS
- Check ILS for the correct CRS (284°) in this case.

RADIO NAV
VOR1/FREQ 101.300 VOR2/FREQ 118.200
VOR1 CRS 30 VOR2 CRS 30
VOR1 FREQ 101.300 VOR2 FREQ 118.200
VOR1 FREQ 101.300 VOR2 FREQ 118.200
VOR1 FREQ 101.300 VOR2 FREQ 118.200
ADF1 BFO ADF2 BFO+

FMGS SYLLABUS (CONT'D)

ATC Proceed to PLB NAPEE for standard LOC BAC CRS approach RWY28 and descent to 3000 ft on QNH 1013.

10 - DESCENT AND APPROACH to CYUL

BARO REF check **1013**
FCU ALT set and push **3000**

Check FMA for - THR IDLE or THR DES | DES -,
Check PFD for - 3000 BLUE - and - ALT - BLUE (FMA).

- In order to replace the (DECEL) point upstream for a stabilized Non Precision Approach, enter at EBGUR the VAPP 128 kt in this case.
- The automatic engagement of the approach phase should be monitored.

APPR C/L **COMPLETE**

THR DES	DES	NAV	AP1
	ALT		1FD2
		MDH 620	A/THR



FROM	UTC	ATIS	→
ABCOT	1343	232/	7400
NAPEE	1344	232/	05H
(DECEL)	1344	232/	10
EBGUR	1347	232/	0578
EBGUR	1348	232/	0
APPR	1348	232/	0
GAUL1	1348	232/	0
EBGUR	1348	232/	0
CYUL28	1348	232/	0

NAV ACCURACY CHECK

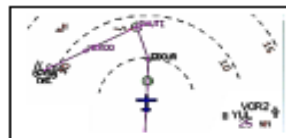
At convenient distance to the airport (upon arriving TMA or within) another navigation **accuracy** check should be done. Not required with GPS PRIMARY, if applicable.

PROG page **CALL**
CHECK or **ENTER** **YUL** (for tuning)
- VOR1 or VOR2

CHECK or **ENTER** to BRG/DIST **YUL**
ON ECP select **VOR1** or **VOR2**
ON ND select **ARC** or **NAV** mode

- Check and compare FMGS position with VOR raw data position on ND. ACC HIGH is confirmed, if DIST difference is 1 NM or less. Rely on FMGS HIGH NAVIGATION ACCURACY and on MAP.

BRG / DIST	TO YUL
232° / 24.6	



ATC Cleared for LOC BAC CRS approach RWY 28.

LOC BAC CRS APPROACH AND LANDING

PERF page **CALL**
ACTIVATE APPR PHASE **SELECT AND CONFIRM**
- Or wait until passing DECEL point and activate or monitor auto activation (for conditions refer to FCOM VOL4).
- Notice PERF APPR phase becomes active. Target speed is VAPP.
APPR modes on FCU **DO NOT ARM**
TRK FPAFD mode **SELECT**
ILS p/b turn to **ON**
FMA **CHECK**

SPEED	ALT	TRACK	AP1
			1FD2
		MDH 620	A/THR

Should read in this case SPEED | ALT | TRACK
At **G-DOT** speed select **FLAPS1**

DESP	APPR	FINAL
05H	FLP. REEF	BAC28
1013	F=150	
TRF	SLT. REEF	HB
15	S=165	620
EAC WIND	0=195	
270°/015		
TRANS ALT	LDG CONF	
10000	CONF2*	
VAPP	123	FULL
120		REST
		PHASE>

FMGS SYLLABUS (END)

FINAL APPROACH

LOC function **DO NOT ARM**
Localizer interception **MONITOR**
 - Intercept the LOC BAC CRS with TRACK and ILS ROSE mode selected
AT 5 SPEED select **FLAPS 2**
LANDING GEAR select **DOWN**
GO AROUND ALT on FCU check **3000**
IN SEQUENCE select **FLAPS3**
 **FLAPS FULL**
 - Check speed prior to select configurations.
 - Monitor short final and landing phase.
FPA - 3.0 **SET and PULL**
NIKOO at 2100 ft manage **PASSING**
R 327 YJN 3 NM to MAP **PASS at 1300 ft**
MINIMUM **MONITOR**
AT 70 ft above MINIMUM **PUSH TO LEVEL OFF**
FMA **CHECK**

SPEED | FPA-3.0° | TRACK | AP1
MDH 620 1FD2
A/THR



GO AROUND

NO VISUAL REFERENCE at MINIMUM - DECIDE

GO AROUND - FLAPS

Select **TOGA**
 Select **Flaps one Step**
 Read FMA : **MAN TOGA | SRS | GA TRK**
 At positive Climb **GEAR UP**

FREEZE **CLICK**

REPEAT any sequence needed, if not **QUIT**

MAN TOGA | SRS ALT | GA TRK | AP1
1FD2
A/THR

SESSION COMPLETED

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	CCQ A330/A340 to A320 COURSES NORMAL COURSE SYLLABI	2.02.04 Page 1 <i>E FQF/G</i> REV 24 JUN 2001
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CCQ N1 FBS syllabusPage 3

CCQ N2 FFS syllabusPage 5

NOTE : *Instructors' FCTM includes the "Session Guides"*

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	CCQ A330/A340 to A320 COURSES NORMAL COURSE SYLLABI	2.02.04 Page 2 <i>E FQF/G</i> REV 24 JUN 2001
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CCQ N1 FBS TAKE-OFF DATA

INIT PAGE			ATIS
CO RTE	FROM TO	TRIP DIST	RWY 06 L / 06 R
	CYUL/KIAD	501 NM	WIND 120°/210 kt
ALTN/CO RTE		CRZ WIND	VISI CAVOK
		210°/30 kt	CEILING
FLT NBR		ALTN	TEMP 15°C
[Airline ID] 241		KJFK	DEW POINT . 11°C
LAT	LONG	ALTN DIST	QNH 1020 hPa/30.12 inHg
4528.1N	07344.5W	248 NM	QFE 1015 hPa/29.97 inHg
COST INDEX		FLT to ALTN	RWY COND.. DRY
30		290	Observations. : AIR COND ON
CRZ FL/TEMP	TROPO		
FL 350 / -55°C	36 090		
INIT NEXT PAGE	PERF PAGE	T/O FLAPS	NOTE :
ZFCG/ZFW	IAE CFM	1 + F	F/PLN :
28% - 48 t	V1	T/O C.G.	CYUL 06 L - SID DORVAL
28% - 105 600 lb	VR	25%	UL - NAPEE - J567 - PLB
BLOCK	V2	TOGA	J29 - SYR - J59 - PSB
16 t	FLEX	FLEX	J61 - EMI
35 300 lb	DRT	DRT	KIAD ILS 19 R
			ALTN : KIAD - SID CAPITAL
			OTT
			V308 - SIE
			STAR CAMRN
			KJFK ILS 04 L

 A320 FLIGHT CREW TRAINING MANUAL	CCQ A330/A340 TO A320 COURSE NORMAL COURSE SYLLABI	2.02.04 Page 4A <i>E FQF/G</i> REV 22 OCT 98
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CCQ N1 FBS SESSION GUIDE

01 - BRIEFING TOPICS

- Normal engine start
- Take-off : use of RTOLW and limitations
- Demonstration of flaps auto-retraction.
- Use of FMGS.
- ILS back course.
- Reversion mode

02 - SESSION OBJECTIVE

- To study the A320 cockpit.
- To learn the flaps auto-retraction depending on the speed.
- To study the difference between A330 or A340 and A320 for LOC back course.

03 - SESSION PROFICIENCY CRITERIA

- Good application of normal procedures
- Good LOC back course approach

04 - SESSION GUIDE

- **1** : INIT LOAD
 During preliminary and cockpit preparation, highlight the new location of controls :
 - landing gear gravity extension handle
 - parking brake
 - loudspeaker knob and lights
 - engine fire test single push button
 - FCU ALT HOLD
 - EFIS DMC switching
 - new FM switching
 - ECAM and AUDIO switching

Insert cruise wind at only one way point.
 Standard ISDU on overhead panel has ALIGN light and keyboard.
 Time to NAV is displayed on ECAM memo.
 TTN is indicated on "ISDU panel, data selector on HDG position.

- **3** : Normal use of AUTO START, 2 engines started by the trainee (2 AND 1).

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CCQ N1 FBS SESSION GUIDE (CONT'D)

04 - SESSION GUIDE (CONT'D)

- **7, 19** : For TAKE-OFF, rotate at 3°/sec to a pitch target of 15°.
After LANDING GEAR RETRACTION, adjust pitch to 12° to accelerate.
Observe : Auto-retraction of flaps to 0 at 210 kt
(before VFE which is 215 kt).
Review of ECAM pages - FMGS practice.

- **8** : Stop climb - Select V/S = 0 on FCU or push V/S knob (according to status).

- **9, 21** : Use of prediction function DIRECT TO / WIND ENTRY

- **10** : **Reversion due to loss of NAV mode**

CONDITIONS	EVENT	CONSEQUENCE
CLB engaged	Loss of NAV mode	OP CLB engages
DES engaged		V/S engages

Reversion due to high V/S

CONDITIONS	EVENT	CONSEQUENCE
- High V/S-FPA > 0 selected	IAS = VLS + 5	- OPEN mode engages in order to regain the target speed
- High V/S-FPA < 0 selected and - Clean configuration	IAS = VMAX - 5	- OP CLB engages when the FCU selected altitude is higher than the current a/c altitude.
- High V/S-FPA < 0 selected and - Configuration other than clean	IAS = VMAX + 4	- OP DES engages when the FCU selected altitude is lower than the current a/c altitude.

- **11** : Trigger FUEL IMBALANCE conditions from the Instructor Operating Station (IOS).
Difference between LEFT and RIGHT > 1,5 t (advisory).

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AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	CCQ A330/A340 TO A320 COURSE NORMAL COURSE SYLLABI	2.02.04 Page 4C E FQF/G
		REV 21 MAY 98

CCQ N1 FBS SESSION GUIDE (CONT'D)

04 - SESSION GUIDE (CONT'D)

■ 13, 24 : LOC Back Course

RAD NAV keyDEPRESS

ILS IDENTENTER

- If in database the proper frequency and the FRONT CRS will be tuned.

NOTE : *The "RWY/ILS MISMATCH" message may be triggered. Disregard it.*

- If not database : SET the appropriate frequency and set the FRONT CRS into the CRS field.

ON EFIS CTRL PANEL, ILS ROSE MODESELECT

The display provides the correct LEFT / RIGHT information relative to the beam deviation

CAUTION :

- DO NOT select ILS through ILS pb switch, PFD shows reverse deviations.
- DO NOT arm LOC or APPR modes

Flight director may be used as for and ADF approach by selecting the TRK - FPA

■ 16, 26 : The aim of this exercise is to highlight the FMA environment and corresponding manoeuvres without other constraints.

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CCQ N1 FBS SESSION GUIDE (END)

04 - SESSION GUIDE (END)

■ **22** : Reversion when FD orders are not followed

CONDITIONS	EVENT	CONSEQUENCE
- FD engaged only (no AP) and - OP DES or EXPED DES or DES engaged	- IAS = VLS -2 - IAS = VLS -17 (if speedbrakes are extended)	Automatic engagement of SPD mode on A/THR, and consequently of V/S (FPA) mode on FD to regain the target speed or VLS whichever is greater.
- FD engaged only (no PA) and - OP CLB or EXPED CLB or CLB engaged	IAS = VMAX + 4	Automatic engagement of SPD mode on A/THR, and consequently of V/S (FPA) mode on FD to regain the target speed or VMAX whichever is lower.

NOTE : *In clean configuration, VMAX = VMO/MMO*
In other than clean conf, VMAX = VFE or VLE applies

- In climb, using OP CLB/CLB mode, target speed 250 kt.
FD bar not followed, a/c symbol below pitch bar to obtain :

Speed trend plus 10 kt to plus 15 kt until VMAX

- In descent, using OP DES/DES. FD bar not followed, a/c symbol above pitch bar to obtain :

Speed trend minus 10 kt to minus 15 kt until VLS.

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CCQ N2 FFS TAKE-OFF DATA

INIT PAGE			ATIS
CO RTE	FROM TO	TRIP DIST	RWY 15 R / 33 L
	LFBO/LFBO	LOCAL	WIND 180°/10 kt 300°/10 kt
ALTN/CO RTE		CRZ WIND	VISI CAVOK
			CEILING
FLT NBR		ALTN	TEMP 14°C
[Airline ID] 242			DEW POINT . 12°C
LAT	LONG	ALTN DIST	QNH 1020 hPa/30.08 inHg
4338.1N	00122.1E		QFE 1002 hPa/29.55 inHg
COST INDEX		FLT to ALTN	RWY COND.. DRY
30			Observations. : _____
CRZ FL/TEMP	TROPO		_____
5000 ft / 10°C	36 090		_____

INIT NEXT PAGE	PERF PAGE	T/O FLAPS	NOTE :
ZFCG/ZFW	IAE CFM	1 + F	Wind change during session
28.4% - 48 t	V1		F/PLN :
28.4% -105 600 lb	VR	T/O C.G.	Departure and arrival for current rwy
	V2	26.6%	in use
BLOCK		TOGA	
10 t	FLEX	FLEX	
22 000 lb			
	DRT	DRT	

MALFUNC REF	- CCQ N2 FFS - Normal Operations	-		+	
	PF : CM1				
	■ 1 - TRANSIT COCKPIT PREPARATION				
	INIT T/O				
	2 - BEFORE TAKE-OFF CHECK-LIST				
	3 - TAKE-OFF (FLEX) | AP | FD | ATHR | | |				
	4 - CLIMB FL 250				
	5 - STAR MAX RATE OF DESCENT				
	■ 6 - ILS APP | AP | FD | ATHR | | |				
	7 - MANUAL LANDING (USE OF REVERSERS)				
	8 - TAXI 180° ON RUNWAY				
	9 - TAKE-OFF (CROSS WIND) | | | ATHR | FPV | FPD |				
	■ 10 - RADAR VECTORS VOR DME APP (MANAGED - DECELERATED)				
	11 - CIRCLING | | | ATHR | FPV | FPD |				
	12 - LANDING				
	■ 13 - TAKE-OFF (25 KT CROSSWIND)				
	14 - VISUAL PATTERN | | | FPV | | |				
	■ 15 - FINAL APPROACH				
	■ 16 - GO AROUND				
	17 - VISUAL PATTERN				
	18 - LANDING				
	PF : CM2				
	19 - TAKE-OFF (FLEX) | AP | FD | ATHR | | |				
	20 - CLIMB FL 250				
	21 - STAR MAX RATE OF DESCENT				
	■ 22 - ILS APP | AP | FD | ATHR | | |				
	23 - MANUAL LANDING (USE OF REVERSERS)				
	24 - TAXI 180° ON RUNWAY				
	25 - TAKE-OFF (CROSSWIND) | AP | FD | ATHR | | |				
	■ 26 - RADAR VECTORS VOR DME APPR				
	27 - CIRCLING | | | ATHR | FPV | FPD |				
	28 - LANDING				
	■ 29 - TAKE-OFF (25 KT CROSSWIND) | AP | FD | ATHR | | |				
	30 - VISUAL PATTERN | | | FPV | | |				
	■ 31 - FINAL APPROACH				
	■ 32 - GO AROUND				
	33 - VISUAL PATTERN				
	34 - LANDING				
	MICROBURST				
	INIT T/O				
	35 - MICROBURST ENCOUNTERED DURING TAKE-OFF AFTER V1				
	INIT APP 1				
	36 - MICROBURST ENCOUNTERED ON APP - GO AROUND				
	PF : CM1				
	INIT T/O				
	37 - MICROBURST ENCOUNTERED DURING TAKE-OFF AFTER V1				
	INIT APP 1				
	38 - MICROBURST ENCOUNTERED ON APP - GO AROUND				
	INIT T/O				
	39 - AFTER LANDING CHECK-LIST				
	40 - PARKING CHECK-LIST				

 A320 FLIGHT CREW TRAINING MANUAL	CCQ A330/A340 TO A320 COURSE NORMAL COURSE SYLLABI	2.02.04 Page 6A <i>E FQF/G</i> REV 22 OCT 98
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CCQ N2 FFS SESSION GUIDE

01 - BRIEFING TOPICS

- Take-off and landing with crosswind and AFT CG
- Visual circuit
- Circling
- Low energy warning (optional)

02 - SESSION OBJECTIVE

- To study the normal operations of A320.

03 - SESSION PROFICIENCY CRITERIA

- To handle the A320 in normal operations
- To reinforce the use of FPV in crosswind and confirm correct crosswind technique for landing including AFT CG situations.

04 - SESSION GUIDE

- [1](#) : INIT holding point 33L.
- [6, 22](#) : Insert CAT 1 minima for this exercise
- [10, 26](#) : Insert ceiling : 600 ft
- [13, 29](#) : Insert crosswind : 25 kt
- [15, 31](#) : Restore wind calm.
- [16, 32](#) : See FCOM Vol 3.03.23 and QRH 3.09

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AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	CCQ A330/A340 to A320 COURSES ABNORMAL/EMERGENCY COURSE SYLLABI	2.02.05 Page 1 <i>E FQF/G</i> REV 24 JUN 2001
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CCQ F1 FBS syllabusPage 3

CCQ F2 FFS syllabus.....Page 5

CCQ F2 FFS syllabus.....Page 7

NOTE : *Instructors' FCTM includes the "Session Guides"*

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	CCQ A330/A340 to A320 COURSES ABNORMAL/EMERGENCY COURSE SYLLABI	2.02.05 Page 2 <i>E FQF/G</i> REV 24 JUN 2001
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CCQ F1 FBS TAKE-OFF DATA

INIT PAGE			ATIS
CO RTE	FROM TO	TRIP DIST	RWY 15 R
	LFBO/LFBO	878 NM	WIND 180°/10 kt
ALTN/CO RTE		CRZ WIND	VISI 800 m
			CEILING 250 ft
FLT NBR		ALTN	TEMP 4°C
[Airline ID] 251		LFBD	DEW POINT . 2°C
LAT	LONG	ALTN DIST	QNH 1020 hPa/30.08 inHg
4338.1N	00122.1E	123 NM	QFE 1002 hPa/29.55 inHg
COST INDEX		FLT to ALTN	RWY COND.. WET
30		140	Observations. : AIR COND ON
CRZ FL/TEMP	TROPO		ANTI ICE ON
FL 310 / -47°C	36 090		Visible moisture
			Braking action good

INIT NEXT PAGE	PERF PAGE	T/O FLAPS	NOTE :
ZFCG/ZFW	IAE CFM	2	F/PLN :
39.3% - 50 t	V1		LFBO 15 R
39.3% - 110 000 lb	VR	T/O C.G.	SID LACOU
	V2	35%	SAU - NTS
BLOCK		TOGA	DIN - CAN
14 t	FLEX	FLEX	PTV - NEV
30 800 lb			CMF - MEN
	DRT	DRT	LFBO 15 R

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	CCQ A330/A340 TO A320 COURSE ABNORMAL/EMERGENCY COURSE SYLLABI	2.02.05 Page 4A <i>E FQF/G</i>
		REV 22 OCT 98

CCQ F1 FBS SESSION GUIDE

01 - BRIEFING TOPICS

- Manual engines start
- F/CTL computers and reconfiguration laws logic
- Control of fuel
- Avionics smoke - Smoke removal procedure
- FM failure

02 - SESSION OBJECTIVE

- To practice the location and reconfiguration of the computers flight controls.
- To study the transfert and FCMC failure

03 - SESSION PROFICIENCY CRITERIA

- Good use of ECAM
- Acceptable knowledge of flight controls fuel and smoke abnormal procedures

04 - SESSION GUIDE

- **3** : MAN START ENG 2 then 1.
- **9** : During climb fail one computer at a time, and restore before next step (new function and new control location). Then demonstrate the result in configuration 1 ELAC fault, 2 ELAC's fault, SEC 1 or 2 or 3 only operative.
- **11** : Avionics smoke : emphasize study of procedure and status. Continue procedure until "... before L/G extension".

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CCQ F2 FFS TAKE-OFF DATA

INIT PAGE				ATIS	
CO RTE	FROM TO	TRIP DIST		RWY	33 L
				WIND	360°/10 kt
ALTN/CO RTE		CRZ WIND		VISI	800 m / Snow
				CEILING	500 ft
FLT NBR		ALTN		TEMP	2°C
				DEW POINT .	0°C
LAT	LONG	ALTN DIST		QNH	1010 hPa/29.81 inHg
				QFE	992 hPa/29.26 inHg
COST INDEX		FLT to ALTN		RWY COND..	Slush 6 mm
				Observations. :	AIR COND ON
CRZ FL/TEMP	TROPO				ANTI ICE ON
					Braking action medium
INIT NEXT PAGE	PERF PAGE	T/O FLAPS	NOTE :		
ZFCG/ZFW	IAE		F/PLN :		
	V1		LFBO 33 L		
28.4% - 48 t	VR		SID FISTO		
28.4% - 105 600 lb	V2		UT210 - LMG		
			UT258 - MORIK		
BLOCK	FLEX		UT158 - AMB		
			STAR AMB		
10 t	DRT		LFPO ILS 26		
22 000 lb					

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	CCQ A330/A340 TO A320 COURSE ABNORMAL/EMERGENCY COURSE SYLLABI	2.02.05 Page 6 <i>E FQF/G</i> REV 21 MAY 98
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MALFUNC REF	- CCQ F2 FFS - <i>1 Engine Out - Emergency Descent</i>		-		+
	PF : CM1				
	1 - TRANSIT COCKPIT PREPARATION				
	2 - BEFORE START				
	3 - ENGINES START (EXTERNAL ELECTRIC + PNEUMATIC then CROSSBLEED)				
	4 - AFTER START CHECK-LIST				
	5 - TAXI				
	6 - BEFORE TAKE-OFF CHECK-LIST				
	7 - TAKE-OFF - ENGINE FLAME OUT AFTER V1 | AP | FD | ATHR | | |				
	8 - RETURN TO DEPARTURE				
	9 - ILS APP 1 ENG OUT | AP | FD | ATHR | | |				
	10 - GO AROUND				
	11 - RADAR VECTORS TO DOWNWIND LEG				
	12 - ILS APP 1 ENG OUT				
	13 - GO AROUND AT MINIMUM - Restore				
	INIT FL 350				
	14 - PRESSURIZATION FAILURE				
	■ 15 - EMERGENCY DESCENT HIGH SPEED / EXPEDITE P/B				
	■ 16 - RETURN TO DEPARTURE - ALL GEN. FAULT - EMER. ELEC. CONFIG				
	17 - ILS APP				
	18 - LANDING - Restore				
	PF : CM2				
	INIT T/O				
	19 - TAKE-OFF ENGINE FLAME OUT AFTER V1 | AP | FD | ATHR | | |				
	20 - RETURN TO DEPARTURE				
	21 - ILS APP 1 ENG OUT | AP | FD | ATHR | | |				
	22 - GO AROUND - Restore				
	23 - ATC CLEARANCE FL 350 | | FD | | | |				
	24 - ALL ENGINE FLAME OUT FL 100				
	■ 25 - RELIGHT IN FLIGHT - ENG 1 ONLY - UNSUCCESSFUL FOR 2				
	26 - START APU - RELIGHT ON APU BLEED FOR 2				
	INIT FL 350				
	27 - STRUCTURAL DAMAGE				
	28 - EMERGENCY DESCENT | AP | FD | ATHR | | |				
	29 - RETURN TO DEPARTURE				
	30 - ILS APP				
	31 - LANDING - Restore				
	INIT T/O				
	32 - AFTER LANDING CHECK-LIST				
	33 - PARKING CHECK-LIST				
	NOTE 1 : In case of 2 Captain crew,, each Captain must perform the exercises 16,, 17 and 18 as PF				
	NOTE 2 : In case of 2 First Officer crew,, each F/O must perform the exercises 24,, 25 and 26 as PNF				

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	CCQ A330/A340 TO A320 COURSE ABNORMAL/EMERGENCY COURSE SYLLABI	2.02.05 Page 6A <i>E FQF/G</i> REV 22 OCT 98
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CCQ F2 FFS SESSION GUIDE

01 - BRIEFING TOPICS

- Contaminated runway
- Engines start with external devices
Engine failure (drift down rules + performance differences)
- Approach 1 engine out (approach/climb gradient)
- All engines flame out
- All engines generators fault (Flight control law) - ELEC EMER CONFIG
- Emergency descent

02 - SESSION OBJECTIVE

- To study the 1 engine out procedure
- Review relight in flight.
- Review emergency descent.

03 - SESSION PROFICIENCY CRITERIA

- Good ECAM actions and task sharing
- Acceptable procedure and handling in N -1 and N -2 operations
- Acceptable approach in raw data
- Good emergency descents

04 - SESSION GUIDE

- **15** : Point out differences in term of rate of descent
- **16** : Fail all GEN. reaching FL 100.
- **25** : Relight ENG 1 only. Point out the performance on one engine.
At low altitude for training purpose, maintain Green Dot for best angle of descent and to start APU as soon as practicable. Air pressure will then be available for Air Start below 20 000 ft.

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CCQ F3 FFS TAKE-OFF DATA

INIT PAGE			ATIS
CO RTE	FROM TO	TRIP DIST	RWY 33 L
	LFBO/LFPO	345 NM	WIND 300°/ kt
ALTN/CO RTE		CRZ WIND	VISI 8 km
		280°/40 kt	CEILING 1000 ft
FLT NBR		ALTN	TEMP 14°C
[Airline ID] 253		EDDF	DEW POINT . 10°C
LAT	LONG	ALTN DIST	QNH 1020 hPa/30.08 inHg
4338.1N	00122.1E	279 NM	QFE 1002 hPa/29.55 inHg
COST INDEX		FLT to ALTN	RWY COND.. DRY
30		250	Observations. : AIR COND ON
CRZ FL/TEMP	TROPO		
FL 310 / -47°C	36 090		
INIT NEXT PAGE	PERF PAGE	T/O FLAPS	NOTE :
ZFCG/ZFW	IAE CFM	1 + F	Weather minima for 1st part of each half session :
28.4% - 48 t	V1		Visibility : 10 km
28.4% - 105 600 lb	VR	T/O C.G.	Ceiling : 2500 ft
	V2	26.6%	FPLN :
BLOCK		TOGA	LFBO 33 L
10 t	FLEX	FLEX	SID FISTO - UT210 - LMG
22 000 lb		DRT	UT258 - MORIK
	DRT		UT158 - AMB
			STAR AMB
			LFPO ILS 26

MALFUNC REF	- CCQ F3 FFS - F/CTL : Reconfiguration Laws - Hydraulic	-		+	
	PF : CM1				
	1 - TRANSIT COCKPIT PREPARATION				
	2 - BEFORE START				
	3 - ENGINES START				
	4 - AFTER START CHECK LIST				
	5 - TAXI				
	6 - BEFORE TAKE-OFF				
	7 - TAKE-OFF | | FD | ATHR | | |				
	8 - CLIMB 1FL 100				
	■ 9 - FAILURE TO BE IN ALT LAW (YAW DAMP SYS FAULT) | | | | FPV | |				
	10 - APPROACH TO STALL IN LANDING CONFIG (DIRECT LAW)				
	11 - RECOVERY FROM STALL				
	12 - RADAR VECTORS TO ILS APPR				
	13 - LANDING - Restore				
	14 - TAKE-OFF				
	■ 15 - HYD GREEN LOW LVL + YELLOW LOW LVL				
	16 - DUAL HYD LOW PRESS				
	17 - VISUAL APPROACH (ILS ASSISTED)				
	18 - LANDING				
	INIT T/O				
	19 - TAKE-OFF ENGINE 2 FAILURE AFTER V1 (CAT 1 MINIMA)				
	20 - RADAR VECTORS - WEATHER IMPROVES				
	21 - VOR DME APPROACH | AP | | ATHR | FPV | FPD |				
	22 - LANDING				
	PF : CM2				
	INIT T/O				
	23 - TAKE-OFF CLIMB FL 100				
	■ 24 - FAILURE TO BE IN ALT LAW (FACs OFF)				
	25 - APPROACH TO STALL IN LANDING CONFIG (DIRECT LAW)				
	26 - RECOVERY FROM STALL | | FD | ATHR | | FPD |				
	27 - RADAR VECTORS TO ILS APPR				
	28 - LANDING - Restore				
	29 - TAKE-OFF				
	■ 30 - HYD GREEN LOW LVL + BLUE LOW LVL				
	31 - DUAL HYD LOW PRESS				
	32 - VISUAL APPROACH (ILS ASSISTED)				
	33 - LANDING				
	INIT T/O				
	34 - TAKE-OFF ENGINE 1 FAILURE AFTER V1 (CAT 1 MINIMA)				
	35 - RADAR VECTORS - WEATHER IMPROVES | AP | | ATHR | FPV | FPD |				
	36 - VOR DME APPROACH - LANDING				
	INIT T/O				
	37 - TAKE-OFF - ENGINE FIRE AT V1 -15 KT				
	38 - REJECTED TAKE-OFF AND EVACUATION				

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	CCQ A330/A340 TO A320 COURSE ABNORMAL/EMERGENCY COURSE SYLLABI	2.02.05 Page 8A <i>E FQF/G</i>
		REV 22 OCT 98

CCQ F3 FFS SESSION GUIDE

01 - BRIEFING TOPICS

- CRM issue : Team performance
- FLT CONT. : Reconfiguration laws.
- Approach to stall and recovery.
- Dual hydraulic failures.
- One engine out circuit.

02 - SESSION OBJECTIVE

- To review approaches to stall and recovery in A320
- To study procedures and handling in case of dual hydraulic failure.
- To study procedures and handling one engine out

03 - SESSION PROFICIENCY CRITERIA

- Good abnormal and emergency procedures
- Good handling

04 - SESSION GUIDE

- **9** : Use YAW DAMPER SYS FAULT to obtain alternate law.
- **15, 30** : Insert second HYD Lo Level when crew reads status page.
- **24** : Use FACs OFF fault to obtain alternate law.

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AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	CCQ COURSES SKILL TEST SYLLABI	2.02.07 Page 1 ALL CCQ REV 24 JUN 2001
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- SCENARIO 1 - (Toulouse / Lyon)Page 3

- SCENARIO 2 - (Lyon / Marseille).....Page 7

NOTE : *Instructors' FCTM includes the Skill Test syllabi, scenarii and session guides*

AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	CCQ COURSES SKILL TEST SYLLABI	2.02.07 Page 2 <i>ALL CCQ</i> REV 24 JUN 2001
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 A320 FLIGHT CREW TRAINING MANUAL	CCQ COURSES SKILL TEST SYLLABI	2.02.07 Page 2C ALL CCQ REV 24 JUN 2001
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CCQ SKILL TEST SYLLABI SESSION GUIDE

01 - SESSION OBJECTIVE

- Assessment of the ability to operate the aircraft in normal, abnormal and emergency operations to standard in accordance with SOPs and meeting the relevant standards of accuracy.

02 - TRAINING TOPICS

A. GENERAL

- A skill test scenario consists in series of exercises in a simulated commercial air transport environment.
- A skill test scenario starts as a line oriented flight in which, some specific events have been inserted. Depending upon crew decision, these events may lead either to a diversion or a continuation to destination. This will enable to check the candidate making decisions appropriate to the operational situation. The skill test continues with additional items which complete the minimum required per trainee by the JAR-FCL.
- Two scenarios are proposed : each of them lasts 4 hours per crew.
As the CCQ skill test is considered as an additional Type Rating, some items to be covered during the full check have been removed.
- The scenarios fulfils the requirement of JAR-FCL (Arrêté du 29 Mars 1999) with the arrangements indicated in "DGAC Instruction 10852"
- The FCL item 3.9.3.1 ILS APPROACH RAW DATA may be an ILS approach down to a DH of 200 ft manually flown either without FD but with FPV or with FD in flight control reconfiguration law.

B. FLIGHT PREPARATION

Prior to starting the briefing, the crew receives the session documents : computerised FPLN, loadsheet, the list of airport forecast and NOTAMs and a booklet including RTOW, MMEL extracts to be used when applicable. The **fuel quantity** to be boarded is decided by the trainees.

The crew will be given a slot for departure in order to avoid too long preparations. The Examiner will check the ability of the candidate to plan the flight from this material.

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CCQ SKILL TEST SYLLABI SESSION GUIDE (CONT'D)

02 - TRAINING TOPICS (END)

C. SUGGESTED BRIEFING

The candidates are briefed by the Examiner as suggested :

- "The skill test comprises 2 main parts. It starts as a line oriented flight in which some specific events have been inserted. Follow the departure clearance and deal with any problems or emergencies as they occur using the procedures and techniques learnt during the training course. Take all appropriate decisions .
- You should use Airbus standard procedures or your own company procedures, if different.
- You are responsible for liaison with ATC, safe operation and navigation of the aircraft. Make sure that you correctly understand ATC instructions.
- The second part comprises the remaining items in order to meet the Authorities requirements. It will be necessary for me to initialize the simulator in order to carry out the exercises. I will keep you advised when I have control of the simulator and when I return control to you.
- You may communicate to each other in your mother language to facilitate procedures, but keep me informed about what you are doing and remember you must speak English to ATC.
- Treat this session as if it was a normal commercial flight. Do not waste time but do not allow yourselves to be rushed. You must tell ATC what you require.
- Make good use of the published documentation for en-route and terminal areas. Set and observe the appropriate minima.
- Make full use of the aircraft equipment and all resources at your disposal including the automation. However for the purpose of the skill test I will indicate during the second part, which level of automation you are authorized to use for instance it is required you demonstrate your ability to fly manually one engine out approach.
- Remember the importance of task sharing and good crew coordination. You are assessed as PF and PNF.
- Use headsets. Consider me as ATC, ground engineer and cabin crew.
- The weather or aircraft parameters might vary for some sequences. I will advise you of the changes.
- For departure, use the data given on the provided forms."

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AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	CCQ COURSES SKILL TEST SYLLABI	2.02.07 Page 2E ALL CCQ REV 24 JUN 2001
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CCQ SKILL TEST SYLLABI SESSION GUIDE (END)

03 - PROFICIENCY CRITERIA

The candidate shall demonstrate its ability to :

- perform normal and abnormal procedures according to SOP.
- perform manoeuvres required with smoothness, using the correct procedures and techniques, according to the standard of accuracy required by regulations.
- understand and apply crew co-ordination,
- communicate effectively with the other crew member

The following limits are for general guidance :

- Height Generally +/- 100 feet
- Starting a go-around at decision height + 50 feet / -0 feet
- Minimum descent height/ altitude + 50 feet / -0 feet
- Tracking on radio aids +/- 5°
- Precision approach..... half scale deflection,
azimuth and glide path
- Heading
 - all engines operating +/- 5°
 - with simulated engine failure +/- 10°
- Speed
 - all engines operating +/- 5 knots
 - with simulated engine failure..... + 10 knots/ -5 knots

Pass/Fail Criteria and Recommendations to the Examiner :

The applicant shall pass all sections defined in Appendix 2 JAR -FCL 1-240.

If any item in a section is failed, that section is failed. Failure in more than one section will require the applicant to take the entire test/check again. Any applicant failing only one section shall take the failed section again.

Failure in any section of the re-test including those sections that have been passed at a previous attempt will require the applicant to take the entire test/check again.

Further training may be required after a failed test. Failure to achieve a valid pass in all sections in two attempts shall require further training as determined by the examiner. There is no limit to the number of skill tests that may be attempted.

The Examiner will endeavour to run exercises in a logical sequence and make sure that the trainees understand the instructions. He shall form his own judgement during the session and revert to his instructor role again, if required, for example when an exercise is unsatisfactorily carried out.

Considering the ability of the trainee to fly as PNF, there is no minimum specified time for assessment. Therefore, depending on the time remaining to complete the session, the sequence can be shortened at Examiner's discretion as soon as he considers the performance is satisfactory.

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SKILL TEST FFS TAKE-OFF DATA
- SCENARIO 1 -

SKILL TEST FFS TAKE-OFF DATA - SCENARIO 1 -			
INIT PAGE CO RTE ALTN/CO RTE FLT NBR [Airline ID] 401 LAT 4338.1N COST INDEX 30 CRZ FL/TEMP FL 290 / -50°C FROM TO LFBO/LFLL LONG 00122.1E TROPO 36 090	TRIP DIST 23 NM CRZ WIND 200°/30 kt ALTN LFML ALTN DIST 148 NM FLT to ALTN 190	ATIS RWY 33 L WIND 340°/10 kt VISI 8 km CEILING OVC 1300 ft TEMP 11°C DEW POINT . 9°C QNH 1015 hPa/ inHg QFE 997 hPa/ inHg RWY COND.. DRY Observations. :	
INIT NEXT PAGE ZFCG/ZFW 33.5% - 56 t 33.5% - 123 200 lb BLOCK t lb	PERF PAGE IAE CFM V1 VR V2 FLEX DRT	T/O FLAPS T/O C.G. TOGA FLEX DRT	NOTE : F/PLN : LFBO 33 L SID MEN STAR MEN LFLL 18

AIRBUS INDUSTRIE Training & Flight Operations Support Division  A320 FLIGHT CREW TRAINING MANUAL	CCQ A330/A340 TO A320 COURSE SKILL TEST SYLLABI	2.02.07 Page 4 <i>E FQF/G</i> REV 24 APR 2000
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MALFUNC REF	SKILL TEST FFS - SCENARIO 1 -									
LFBO - LFLL					PF : CPT					
1.4	1 - TRANSIT COCKPIT PREPARATION									
1.4	2 - BEFORE START									
1.4	3 - ENGINE START									
1.4	4 - AFTER ENGINE START									
	5 - TAXI OUT									
1.6	6 - BEFORE TAKE-OFF (CHECKS)									
3.6.5	7 - TAKE-OFF - WINDSHEAR					FD	ATHR			
3.9.1	8 - SID				AP	FD	ATHR			
3.9.1	9 - CLIMB				AP	FD	ATHR			
3.4.11/3.4.8	10 - CRUISE - FCU FAULT (ALL CHANNELS)							FPV		
3.9.1	11 - DESCENT - STAR							FPV		
3.9.3.1	12 - ILS APPROACH (RAW DATA)							FPV		
	13 - LANDING - Restore									
	INIT T/O (LFLL 18R) CEILING : 500 FT - VISIBILITY 4 KM									
2.5.2	14 - TAKE-OFF - ENGINE FAILURE (BETWEEN V1 and V2)					FD	ATHR			
	15 - RADAR VECTORS				AP	FD	ATHR			
3.9.4	16 - NON PRECISION APPROACH (VOR-DME) 1 ENGINE OUT				AP		ATHR	FPV	FPD	
4.3	17 - GO AROUND 1 ENGINE OUT (NO AP)					FD	ATHR			
	18 - RADAR VECTORS					FD	ATHR			
3.9.3.4	19 - ILS APPROACH 1 ENGINE OUT (18L)					FD	ATHR			
5.5	20 - LANDING 1ENGINEOUT - Restore									
LFLL - LFBO					PF : F/O					
		INIT	HOLDING POINT - LFLL 18R							
1.6/1.4	21 - BEFORE TAKE OFF (CHECKS)									
2.5.2	22 - TAKE-OFF - ENGINE FAILURE (BETWEEN V1 and V2)					FD	ATHR			
3.4.0	(REVERSE UNLOCKED)									
3.9.1	23 - SID				AP	FD	ATHR			
	24 - RETURN TO DEPARTURE				AP	FD	ATHR			
3.9.1	25 - STAR				AP	FD	ATHR			
3.9.4	26 - NON PRECISION APPROACH (LOC) 1 ENGINE OUT (18L)				AP		ATHR	FPV	FPD	
4.3	27 - GO AROUND 1 ENGINE OUT (NO AP)					FD	ATHR			
	28 - RADAR VECTORS					FD	ATHR			
3.4.11	29 - DMC 2 FAULT					FD	ATHR			
3.9.3.4	30 - ILS APPROACH 1 ENGINE OUT					FD	ATHR			
5.5	31 - LANDING 1 ENGINE OUT - Restore									
	INIT T/O CAT II WEATHER CONDITIONS									
3.6.1	32 - ENGINE FIRE BEFORE V1									
2.6	33 - REJECTED TAKE-OFF									
	34 - EMERGENCY EVACUATION									

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SKILL TEST FFS - SCENARIO 1 - Part 1

CCQ TO A320 SKILL TEST SCENARIO 1

PART 1

Toulouse-LFBO/Lyon ST Exupery LFL
Alternate: Marseille Provence LFM
Company Freq: 123.45

Ft No.: Airbus 401
Cost Index: 30
Cruise: FL290 / M 50C
Cruise Wind 200.30kt
Trip Dist: 236 NM
Alt Cruise: FL190
Alt Dist: 148 NM

Route:
LFBO MEN4B MEN MEN5 LFL18L

Aircraft: 33.5 % / 56.0 t
ZFCG/ZFW: (123 200 lbs)
Block Fuel: (Crew)
Est TOW: 61.8 t / 123 600 lbs
Take-off CG: 32.0%

Performance: (based on estimated GW)
(Refer to operational calculations)

ATIS:

LFBO – Information ? Rwy33L 340/10
8000 SCT013 11 / 09 Q1015
NOSIG

LFL – Information ? Rwy 18L 200/12
3000 SCT 004 BKN007 13 / 10
Q1012 NOSIG

CCQ TO A320 SKILL TEST SCENARIO 1

PART 1 TOULOUSE (LFBO) – LYON ST EXUPERY (LFL)

Events: The events planned for this exercise (PART 1) are:

- ☐ WIND SHEAR AFTER TAKE OFF
☐ FCU FAULT (ALL CHANNELS)

Briefing: A suitable clearance expiry time for departure should be given with the clearance.

SIMULATOR SET-UP (PART1)

REPOSITION to GATE PARK (E10) - (H4337.7 / E00122.4)

INIT LOAD

ZFW 56 t / 123 200 lbs
Fuel (Crew)
CG 32%

ENVIRONMENT

QNH 1015
Temperature 11°C
Tropopause 36090
Dew Point 9 °C

Wind Direction 340°
Speed 10kts
Wind Gradient (not ACTIVE)
Turbulence Level 10%

Windshear Take-off after VR

VISUAL

Visibility 8000
Cloud Base 1300
Airfield Lights high intensity

MAINTENANCE INDEX

DOORS

L Cabin Door Not Closed Selected
FWD Cargo Door not Closed Selected
Rear Cargo Door not Closed Selected

(E-TEST1gd1A.PCX)

SKILL TEST FFS - SCENARIO 1 - Part 1 (CONT'D)

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PRE-FLIGHT		
Toulouse CPT - 121.70 ATIS TLS 118.02	ATC clears Airbus 401 to LYON St Exupery, MEN 4B departure, Flight Plan Route. Climb and maintain 4000 ft, squawk 0436. Clearance expiry time is XXXX Contact Ground 121.90 for push and start.	→
GND - 121.90	Airbus 401 cleared to push and start, temp 11°, QNH 1015.	→
START	Pushback → Push completed → Start completed → Release Park Brake, cleared to start Set Park Brake Disconnecting, hand signals on the right	→
TAXI	Airbus 401 taxi to holding point Rwy 33L Airbus 401 contact Blagnac Tower 118.10	→
TWR 118.10	Airbus 401, surface wind 310 to 350/10 gusting 18kt, cleared take-off runway 33L	→
TAKE-OFF	Airbus 401 contact departure on 129.30	→
DEPARTURE 129.30	Airbus 401 radar contact passing FLXXX (ft), climb and maintain FL140	→
CLIMB	Airbus 401 contact Bordeaux control 124.07	→
Bordeaux CTL 124.07	Airbus 401, climb and maintain FL 290 Airbus 401 contact Marseille 134.10	→
CRUISE	Airbus 401 identified FL290, call for descent Airbus 401 cleared direct to ARBON, descend FL70, request your estimate for ARBON	→
Marseille CTL 134.10	Airbus 401 contact Saint Ex APP on 127.57	→
DESCENT	Airbus 401 Radar contact, descend to FL 070. After ARBON proceed to VNE Expect a ILS RWY 18L	→
Saint Ex APP 127.57	Airbus 401 continue on standard procedure. Crossing LVM radial 301°, descend altitude 3000ft on QNH 1012. Airbus 401 Cleared for ILS 18L. Report established	→
APPROACH	Airbus 401 continue the approach, contact Lyon Tower on 120.45	→
Saint Ex TWR 120.45	Airbus 401 cleared to land Rwy 18L, surface wind 200/12	→
Saint Ex GND 121.82	Airbus 401 contact ground 121.82	→

(E-TEST1gd1B.PCX)

SKILL TEST FFS - SCENARIO 1 - Part 1 (END)

	PART 1 ADDITIONAL EXERCISES REPOSITION HOLDING POINT 18R – ENGINES RUNNING CLEAR ALL MALFUNCTIONS - RESTORE INIT LOAD ZFW56 t / 123 200 lbs Fuel6 t / 13 300 lbs CG32% VISUAL Initial (then adjust accordingly to the exercise) Visibility4000 Cloud Base500 Airfield Lightshigh Intensity ☐ TAKE-OFF / ENGINE FAILURE (BETWEEN V1 AND V2) ☐ RADAR VECTORS ☐ NON PRECISION APPROACH (VORD DME) 1 ENGINE OUT ☐ GO AROUND – 1 ENGINE OUT (NO AP) ☐ RADAR VECTORS (18L) ☐ ILS APPROACH (18L) – 1 ENGINE OUT ☐ LANDING (18L) 1 ENGINE OUT	
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SKILL TEST FFS - SCENARIO 1 - Part 2

PART 2 LYON ST EXUPERY (LFL) - TOULOUSE (LFBO)

PART 2

Events: The events planned for this exercise (PART 2) are:

- ☐ ENGINE FAILURE AT TAKE-OFF (BETWEEN V1 AND V2)
- ☐ DMC 2 FAULT

SIMULATOR SET-UP (PART2)

REPOSITION HOLDING POINT 18R – ENGINES RUNNING
CLEAR ALL MALFUNCTIONS - RESTORE

INIT LOAD

ZFW 56 t / 123 200 lbs
Fuel (Crew)
CG 32%

ENVIRONMENT

QNH 1012
Temperature 13°C
Tropopause 36090
Dew Point 9 °C

Wind Direction 200°
Speed 12kts
Wind Gradient (not ACTIVE)
Turbulence Level 10%

VISUAL

Visibility 3000
Cloud Base 400
Airfield Lights high intensity

Lyon Satolas LFL / Toulouse-LFBO
Alternate: Bordeaux-Mérignac LFBD
Company Freq.: 123.45

Flt No.: Airbus 401
Cost Index: 30
Cruise: FL280 / M40°C
Cruise Wind 200/30 kt
Trip Dist: 229 NM
Alt Cruise: FL140
Alt Dist: 117 NM

Route:

LFL18R LERGA 6S MEN ORLAK3N
LFBO33L

Aircraft:

ZFCG/ZFW: 33.5 % / 56.0 t
(123 200 lbs)

Block Fuel:

(Crew)

Est TOW: 61.8 t / 123 600 lbs

Take-off CG: 32.0%

Performance: (based on estimated GW)
(Refer to operational calculations)

ATIS:

LFL – Rwy 18L 200/12 3000 SCT 004
BKND05 OVC090 13 /10 Q1012
RWY 18L G/S u/s

(E-TEST1gd2A.PCX)

SKILL TEST FFS - SCENARIO 1 - Part 2 (CONT'D)

Saint Ex TWR 120.45 TAKE-OFF	ATC clears Airbus 401 to Toulouse Blagnac, LERGA 6S departure, Flight Plan Route squawk 0445	
	Airbus 401, surface wind 190 to 230/12 gusting 18 kt, cleared take-off runway 18R	⇒ Event: Reverse unlocked (between V1 and V2) engine failure.
	Airbus 401, contact Lyon APP on 127.57	
	Airbus 401, continue on normal SID, climb 5000 ft QNH 1012	
APP 127.57 CLIMB – 1 eng. out		
	⇒	⇒ FAIL G/S for ILS 18L
	⇒	⇒ WEATHER select CAT I (expecting a go-around due to weather for the localizer app and meeting authorities requirements for the second app: ILS)
	⇒	⇒ FAIL AP 1+2 (to meet authorities requirements for 1 eng. out go-around)
Saint Ex APP 127.57 APPROACH – 1 eng. out At examiner discretion ⇒	⇒	⇒
	⇒	⇒
	⇒	⇒
	⇒	⇒
Saint Ex TWR 120.45 GO-AROUND – 1 eng. out	Airbus 1 continue the approach, contact Lyon Tower on 120.45	
	Airbus 401 cleared to land Rwy 18L, surface wind 200/12	
	⇒	⇒
	⇒	⇒
Saint Ex APP 127.57 CLIMB – 1 eng. Out	Airbus 401, continue on standard missed approach procedure	
	⇒	⇒
	⇒	⇒
	⇒	⇒
Saint Ex APP 127.57 APPROACH – 1 eng. out	⇒	⇒
	⇒	⇒
	⇒	⇒
	⇒	⇒
Saint Ex TWR 120.45	Airbus 401 continue the approach, contact Lyon Tower on 120.45	
	Airbus 401 cleared to land Rwy 18L, surface wind 200/12	
	⇒	⇒
	⇒	⇒
Saint Ex GND 121.82	Airbus 401 hold position	⇒ ADDITIONAL EXERCISES PART 2

(E-TEST1gd2B.PCX)

SKILL TEST FFS - SCENARIO 1 - Part 2 (END)

PART 2 ADDITIONAL EXERCISES	HOLDING POINT 18R - ENGINES RUNNING CLEAR ALL MALFUNCTIONS - RESTORE	INIT LOAD ZFW 56 t / 123 200 lbs Fuel 6 t / 13 300 lbs CG 32% VISUAL Initial (then adjust accordingly to the exercise) Visibility 4000 Cloud Base 500 Airfield Lights high Intensity ☐ ENGINE FIRE BEFORE V1 ☐ REJECTED TAKE-OFF ☐ EMERGENCY EVACUATION
	REPOSITION	
	INIT LOAD	
	VISUAL	
	ENGINE FIRE BEFORE V1	

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SKILL TEST FFS TAKE-OFF DATA
- SCENARIO 2 -

INIT PAGE			ATIS
CO RTE	FROM TO	TRIP DIST	RWY 18 R
			WIND 190°/12 kt
ALTN/CO RTE		CRZ WIND	VISI 9 km
			CEILING BKN 2000 ft
FLT NBR		ALTN	TEMP 14°C
			DEW POINT . 8°C
LAT	LONG	ALTN DIST	QNH 1014 hPa/ inHg
			QFE 987 hPa/ inHg
COST INDEX		FLT to ALTN	RWY COND.. DRY
			Observations. :
CRZ FL/TEMP	TROPO		
INIT NEXT PAGE	PERF PAGE	T/O FLAPS	NOTE :
ZFCG/ZFW	IAE CFM		F/PLN :
	V1		LFL 18R
33.5% - 56 t	VR	T/O C.G.	SID ROMAN
33.5% - 123 200 lb	V2		MTL
BLOCK	FLEX	TOGA	STAR MTL
	DRT		LFML 14
t		FLEX	
lb			
		DRT	

AIRBUS INDUSTRIE  Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	CCQ A330/A340 TO A320 COURSE SKILL TEST SYLLABI	2.02.07 Page 8 <i>E FQF/G</i> REV 24 APR 2000
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AIRBUS INDUSTRIE Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	CCQ A330/A340 TO A320 COURSE SKILL TEST SYLLABI	2.02.07 Page 9 <i>E FQF/G</i> REV 24 JUN 2001
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JAR FCL REF	SKILL TEST FFS - SCENARIO 2 -									
LFLL - LFML					PF : CPT					
1.4	1 - TRANSIT COCKPIT PREPARATION									
1.4	2 - BEFORE START									
1.4	3 - ENGINE START									
1.4	4 - AFTER ENGINE START									
	5 - TAXI OUT									
1.6	6 - BEFORE TAKE-OFF (CHECKS)									
3.4.11	7 - TAKE-OFF - ADR 1 FAULT					FD	ATHR			
3.9.1	8 - SID				AP	FD	ATHR			
3.9.1	9 - CLIMB				AP	FD	ATHR			
3.4.6	10 - ELAC 1 FAULT (RESET OF COMPUTERS)				AP	FD	ATHR			
3.6.2	11 - CRUISE - CARGO SMOKE				AP	FD	ATHR			
3.9.1	12 - DESCENT - STAR				AP	FD	ATHR			
3.9.4	13 - NON PRECISION APPROACH (LOCALIZER)				AP		ATHR	FPV	FPD	
4.3	14 - GO AROUND - ENGINE FAILURE (NO AP)					FD	ATHR			
	15 - RADAR VECTORS					FD	ATHR			
3.9.3.4	16 - ILS APPROACH 1 ENGINE OUT					FD	ATHR			
5.5	17 - LANDING 1ENGINEOUT - Restore									
		INIT T/O	LFML 14L - CAT II WEATHER CONDITIONS							
	18 - TAKE OFF - ENGINE FAILURE BEFORE V1									
2.6	19 - REJECTED TAKE-OFF - Restore									
		INIT T/O	LFML 14L - CEILING : 500 FT - VISIBILITY : 4 KM							
2.5.2/3.4.0	20 - TAKE-OFF - ENGINE FAILURE (BETWEEN V1 and V2)					FD	ATHR			
	21 - RADAR VECTORS / VISUAL PATTERN (ADJUST WEATHER VFR)						ATHR	FPV		
5.5	22 - LANDING 1 ENGINE OUT									
LFML - LFLL					PF : F/O					
		INIT	HOLDING POINT - LFML 32R							
1.6/1.4	23 - BEFORE TAKE OFF (CHECKS)									
	24 - TAKE-OFF					FD	ATHR			
3.9.1/3.6.9	25 - SID - TCAS EVENT				AP	FD	ATHR			
	26 - CLIMB				AP	FD	ATHR			
3.4.11/ 3.4.8/3.4.6	27 - CRUISE - ADR 1 + 2 FAULT							FPV		
3.9.1	28 - DESCENT - STAR							FPV		
3.9.3.1	29 - ILS APPROACH - RAW DATA							FPV		
	30 - LANDING									
		INIT T/O	LFLL 36L - CEILING : 500 FT - VISIBILITY : 4 KM							
2.5.2	31 - TAKE-OFF - ENGINE FAILURE (BETWEEN V1 and V2)					FD	ATHR			
	32 - RADAR VECTORS				AP	FD	ATHR			
3.9.4	33 - NON PRECISION APPROACH (VOR-DME)				AP		ATHR	FPV	FPD	
4.3	34 - GO AROUND 1 ENGINE OUT					FD	ATHR			
	35 - RADAR VECTORS					FD	ATHR			
3.9.3.4	36 - ILS APPROACH 1 ENGINE OUT					FD	ATHR			
5.5	37 - LANDING 1 ENGINE OUT									

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SKILL TEST FFS - SCENARIO 2 - Part 1

CCQ TO A320 SKILL TEST SCENARIO 2

PART 1

Lyon St Exupery LFLL/Marseille LFML
Alternate: Montpellier LFMT
Company Freq.: 123.45

Flt No.: **Airbus 401**
Cost Index: **30**
Cruise: **FL280 / M 40°C**
Cruise Wind: **200/30kt**
Trip Dist: **229 NM**
Alt'n Cruise: **FL140**
Alt'n Dist: **80 NM**

Route:
LFLL 18R ROMANES ROMAN MTL MTL3B
LFML 14

Aircraft:
ZFCG/ZFW: **33.5 % / 56.0 t**
(123 200 lbs)
Block Fuel: **(Crew)**
Est TOW: **61.8 t / 123 600 lbs**
Take-off CG: **32.0%**

Performance: (based on estimated GWO)
(Refer to operational calculations)

ATIS:

LFLL – Information ? Rwy 18R 190/12
9000 BKN020 14 / 08 Q1014
NOSIG

LFML – Information ? Rwy 14L 240/11
5000 BKN010 17 / 09 Q1015
NOSIG

CCQ TO A320 SKILL TEST SCENARIO 2

PART 1 LYON ST EXUPERY (LFLL) - MARSEILLE (LFML)

Events: The events planned for this exercise (PART 1) are:

- ☐ ADR 1 FAULT
- ☐ ELAC 1 FAULT
- ☐ CARGO SMOKE
- ☐ ENGINE FAILURE (go-around)

Briefing: A suitable clearance expiry time for departure should be given with the clearance.

SIMULATOR SET-UP (PART1)

REPOSITION to GATE PARK (C63) - (H4543.1E00504.8.4)

INIT LOAD

ZFW **56 t / 123 200 lbs**
Fuel **(Crew)**
CG **32%**

ENVIRONMENT

QNH **1014**
Temperature **14°C**
Tropopause **36090**
Dew Point **8 °C**
Wind Direction **190°**
Speed **12kts**
Wind Gradient **(not ACTIVE)**
Turbulence Level **10%**

VISUAL

Visibility **9000**
Cloud Base **2000**
Airfield Lights **high intensity**

MAFUNCTION INDEX

DOORS

L Cabin Door Not Closed **Selected**
FWD Cargo Door not Closed **Selected**
Rear Cargo Door not Closed **Selected**

(E-TEST2gd1A.PCX)

A320 FLIGHT CREW TRAINING MANUAL	CCQ A330/A340 TO A320 COURSE SKILL TEST SYLLABI	2.02.07 Page 10B E FQF/G
		REV 24 JUN 2001

Saint Ex CPT - 121.70 ATIS 135.25	PRE-FLIGHT	ATC clears Airbus 401 to Marseille, ROMAN GS departure, Flight Plan Route, squawk 0436. Clearance expiry time is XXXX Contact Ground 121.82 for push and start.	⇒	Close Doors / Arm Slides
GND - 121.82	START	Airbus 401 cleared to push and start, temp 14°, QNH 1014.	⇒	
		Pushback ⇒ Push completed ⇒ Start completed ⇒	⇒	Pushback - Illose Left (Taxiways TC, T6, T5, ...)
	TAXI	Airbus 401 taxi to holding point Rwy 18R Airbus 401 contact Saint Ex Tower 120.45	⇒	
TWR 120.45	TAKE-OFF	Airbus 401, surface wind 190 / 12 kt, cleared take-off runway 18R	⇒	
		200ft ⇒ 2000ft ⇒ Airbus 401 contact departure on 125.8	⇒	FAIL ADR 1 (200ft)
	DEPARTURE 125.8	Airbus 401 radar contact passing FLXXX (ft), climb and maintain FL110	⇒	
	CLIMB	Airbus 401 contact Marseille control 123.8	⇒	
Marseille CTL 123.8		Airbus 401, climb FL 180	⇒	
		Airbus 401 contact Marseille 126.25	⇒	Event: ELAC 1 FAULT (reset of computer)
Marseille CTL 126.25		Airbus 401 identified, climb and maintain FL280;	⇒	Insert LRML ATIS -- Information ? Rwy 14L GS W's 240M1 5000 BKN010 17 / 09 Q1015 NOSIG
	CRUISE	Airbus 401, call for descent	⇒	Select LRML 14. (all runways lighting on, high intensity)
		At cruise level ⇒	⇒	Event : CARGO SMOKE
		20 NM before TOD ⇒	⇒	
	DESCENT	At TOD ⇒	⇒	
		Airbus 401 cleared direct to MAZET, descend FL80	⇒	
		Passing FL 150 ⇒	⇒	
Provence APP 131.22		Airbus 401 contact PROVENCE APP on 131.22	⇒	
	APPROACH	Airbus 401, radar contact, proceed MAZET 5000 ft QNH 1015, expect a LOC DME 14L, GS W's	⇒	WEATHER select CAT I (expecting a go-around due to weather for the localizer app and meeting authorities requirements for the second app: ILS).
		Approaching MAZET ⇒	⇒	
		When established ⇒	⇒	
		Airbus 401 continue the approach, contact PROVENCE Tower on 119.5	⇒	

(E-TEST2gd1B.PCX)

SKILL TEST FFS - SCENARIO 2 - Part 1 (END)

[illegible]

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INSTRUCTOR ONLY

INSTRUCTOR ONLY

SKILL TEST FFS - SCENARIO 2 - Part 2

PART 2

Marseille LFML / Lyon Satolas LFLL
Alternate: Marseille LFML
Company Freq.: 123.45

Flt No.: **Airbus 401**
Cost Index: **30**
Cruise: **FL290 / M50°C**
Cruise Wind: **200/30 kt**
Trip Dist: **229 NM**
Alt'n Cruise: **FL190**
Alt'n Dist: **148 NM**

Route:
LFML 32R AVN7C MTL MTL5 LFLL 36L

Aircraft:
ZFCG/ZFW: **33.5 % / 56.0 t**
(123 200 lbs)
Block Fuel: (Crew)
Est TOW: **61.8 t / 123 600 lbs**
Take-off CG: **32.0%**

Performance: (based on estimated GW)
(Refer to operational calculations)

ATIS:

LFML – Information ? Rwy 32R 240/11
5000 BKN010 17/09 Q1015
NOSIG

LFLL – Information ? Rwy 36L 190/04
5000 BKN010 14/08 Q1014
NOSIG

PART 2 MARSEILLE (LFML) - LYON ST EXUPERY (LFLL)

Events: The events planned for this exercise (PART 2) are:

- ☐ TCAS RA
☐ ADR 1 + 2 FAULT

SIMULATOR SET-UP (PART2)

REPOSITION HOLDING POINT 32R – ENGINES RUNNING
CLEAR ALL MALFUNCTIONS - RESTORE

INIT LO/40 ZFW: **56 t / 123 200 lbs**
Fuel: (Crew)
CG: **32%**

ENVIRONMENT

QNH: **1015**
Temperature: **17°C**
Tropopause: **36090**
Dew Point: **9 °C**

Wind Direction: **240°**
Speed: **11kts**
Wind Gradient: (not ACTIVE)
Turbulence Level: **10%**

VISUAL

Visibility: **5000**
Cloud Base: **1000**
Airfield Lights: **high intensity**

(E-TEST2gd2A.PCX)

SKILL TEST FFS - SCENARIO 2 - Part 2 (CONT'D)

INSTRUCTOR ONLY

INSTRUCTOR ONLY

[illegible]

(E-TEST2gd2B.PCX)

SKILL TEST FFS - SCENARIO 2 - Part 2 (END)

	PART 2 ADDITIONAL EXERCISES HOLDING POINT 36L - ENGINES RUNNING CLEAR ALL MALFUNCTIONS - RESTORE REPOSITION INIT LOAD ZFW 56 t / 123 200 lbs Fuel 6 t / 13 300 lbs CG 32% VISUAL Initial (then adjust accordingly to the exercise) Visibility 4000 Cloud Base 500 Airfield Lights high intensity ☐ TAKE-OFF / ENGINE FAILURE (BETWEEN V1 AND V2) ☐ RADAR VECTORS ☐ VOR DME 36L 1 ENGINE OUT ☐ GO-AROUND 1 ENGINE OUT ☐ RADAR VECTORS ☐ ILS 36 L 1 ENGINE OUT ☐ LANDING 1 ENGINE OUT	

(E-TEST2gd2C.PCX)

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INSTRUCTOR ONLY

INSTRUCTOR ONLY

AIRBUS INDUSTRIE  Training & Flight Operations Support Division A320 FLIGHT CREW TRAINING MANUAL	TYPE RATING COURSE BASE TRAINING SYLLABUS	2.02.08 Page 2 REV 24 JUN 2001
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CHAPTER 04

- RECURRENT TRAINING-

CHAP 04

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	RECURRENT TRAINING TABLE OF CONTENTS	2.04.00 Page 1 <i>E FC4</i> REV 21 MAY 98
---	--	---

2.04.01 - INTRODUCTION

2.04.02 - TRAINING FOOTPRINT

2.04.03 - TRAINING SYLLABI

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	RECURRENT TRAINING TABLE OF CONTENTS	2.04.00 Page 2 <i>E FC4</i> REV 21 MAY 98
---	--	---

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AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	RECURRENT TRAINING INTRODUCTION	2.04.01 Page 1
		<i>E FC4</i> REV 23 JUL 99

R

01 - GENERAL

Airbus Industrie Recurrent Training and Checking Program is designed as a unique service for the Customer Airlines.

The analysis supporting this recommended program has been conducted in accordance with FAR and JAR requirements with regard to the list of items to be considered and the cycle of events.

This Recurrent Training applies to crewmembers rated on Airbus Fly By Wire aircraft designed with a strong functional commonality (Airbus family concept). This concept is taken into account in the following program.

02 - OBJECTIVES OF THE COURSE

Each flight crew member will follow the Recurrent Training and Checking Program as detailed hereafter. The training program achieves not only an expansion of the bi-annual requirements(1) but it also provides in deep knowledge, a thorough insight into the operational and technical development that have come to light worldwide.

The regulation to be applied for operator recurrent training and checking may be more restrictive than the guide lines described in this document, and in any case the operator specifics need to be embedded.

By this mean, the operator is able to continually build on crew member experience so that the operation of the aircraft is maintained with the highest level of safety.

It is the responsibility of the Airline to get the approval of their recurrent training/checking program as it is defined in their operation manual.

The recurrent follow up of the sequence will remain under Airline responsibility as well as line checks and Emergency & Safety equipment training and checking.

(1) The normal interval between 2 Recurrent Training and Checking programs is 6 months.

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	RECURRENT TRAINING INTRODUCTION	2.04.01 Page 2
		<i>E FC4</i> REV 23 JUL 99

03 - COURSE DESCRIPTION

The two (2) Recurrent Training and Checking Programs comprise ground school (CBT), CRM training and FFS sessions that ensure a complete aircraft system review after a cycle of three years.

- **CBT (SYSTEM REVIEW) :**

The systems annually reviewed will be those suggested in the table given in the "Ground Course review" sample. That table ensures a complete aircraft review over a cycle of 3 years. It will also include a study of in service experience events and operational procedures.

A questionnaire covering all systems will be given to assess the level of knowledge.

- **FFS :**

The advantage of Airbus family concept is taken into account to classify Normal, Abnormal and Emergency procedures in categories of equivalence according to their effect on :

- The Automation (Autopilot [A/P] - Flight directors [FD] - Autothrust [ATHR] - Flight Management and Guidance Computer [FMGC])
- Approach procedures (aircraft configuration and landing characteristics)
- Flight control laws (Normal, Alternate, Direct laws)

A list of those events within their class is given in the detailed program.

This list includes events which have been selected by Airbus Training because of their specificity.

The Operator is allowed to modify or add some events according to its own requirements or National regulations.

- **CRM TRAINING :**

The objective of this training is to enhance communication and of pilot's management skills. It consists in briefing during training sessions and case based studies. Even if a 4 year recurrent training cycle is required by the JAA, a unique period of 3 years is considered for both CRM and system training. It should include elements such as :

- Situational awareness detecting and recovering.
- Situational awareness preventing
- Error, Performance and Safety
- Communication
- Team performance
- Procedures and practices
- Decision making

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	RECURRENT TRAINING INTRODUCTION	2.04.01 Page 3 <i>E FC4</i> REV 23 JUL 99
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04 - RECURRENT TRAINING AND CHECKING FOLLOW-UP

A. GENERAL

Each trainee will be provided with 2 forms, one for ground studies and one for the FFS sessions (refer to samples on next pages). These forms will become part of his / her Recurrent Training file for the complete 3 year cycle (see **1**)

B. FFS TRAINING AND CHECKING FOLLOW UP SHEET (see sample on next page)

All the events are to be completed by the individual trainee as PF during the 3 year cycle. The instructor will :

- 1 - Train as directed by the syllabus.
- 2 - Select items from the classes of equivalence as directed by the syllabus. The instructor should select items with regard to :
 - Previous training and check exercises completed.
 - The remaining exercises which must be completed during the 3 year cycle.
- 3 - Fill the column relating to the session :
 - T1, T2 ... for the training sessions (see **2**)
 - and
 - C1, C2... for the check (see **3**)

The training and checking session date should also be entered (see **4**) as well as the CRM elements reviewed during the CRM training (see **5**)

C. GROUND REVIEW SHEET (see sample on next page)

All the items listed on this form must be reviewed during the 3 year period ; the items can be reviewed in any order. It is suggested that around 16 items are covered each year.

As each item is completed, a cross is placed in the corresponding box (see **6**) ; the score from the questionnaire is also entered at the bottom of the form (see **7**)

A minimum score of 80% is required unless an Operator or Authority requires more.

05 - RECURRENT TRAINING AND CHECKING FOLLOW-UP SAMPLES

A. FFS TRAINING AND CHECKING FOLLOW-UP SHEET SAMPLE

A320 ☒

STARTING DATE : Jul 13th, 1997

NAME : (CPT ☒ - F/O ☐)

AIRLINE : A.I 00

Each instructor designated to conduct either training or checking session within a period of 3 years starting on the date mentioned hereabove must update this table according to the performed events.

4 Date : JUL 13, 1997
JAN 15, 1998
JUL 16, 1998
JAN 16, 1999

CLASS	TRAINING						EVENTS	CHECKING					
	Year 1		Year 2		Year 3			Year 1		Year 2		Year 3	
	T1	T2	T3	T4	T5	T6		C1	C2	C3	C4	C5	C6
1A -	X						A MANUAL START	X					
							B CROSS BLEED START	X					
							C START VALVE MAN OPERATION						
			X				D START WITH EXTERNAL POWER						
- 1B -		X					A EXCESS CABIN ALTITUDE						
							B AIR COND SMOKE						
							C ENGINE FIRE			X			
			X				D FUEL IMBALANCE						
- 2 -	X						A AUTOPILOT OFF			X			
		X					B AUTOTHRUST OFF						
							C FCU 1 + 2 FAULT			X			
- 3 -		X					A HYD : G RSVR LO AIR PR/OVHT						
							B BRAKES : A/SKID FAULT or NWS OFF			X			
			X				C F/CTL SLATS OR FLAPS LOCKED			X			
- 4 -	X						A ELEC : DUBUS 1 + 2 FAULT						
							B AUTO FLT : FMGS 1 + 2 FAULT			X			
							C HYD : B + Y SYS LO PR						
- 5 -			X				A F/CTL : ALT LAW			X			
- 6 -		X					A NAV : RA 1 + 2 FAULT		X				
			X				B HYD : G + Y SYS LO PR						
	X						C HYD : G + B SYS LO PR			X			
							D ELEC : EMER CONFIG						
ACRM							A S.A DETECTING RECOVERING						
			X				B S. A PREVENTING						
			X				C ERROR PERFORMANCE AND SAFETY						
	X						D COMMUNICATION						
	X						E TEAM PERFORMANCE						
		X					F PROCEDURE AND PRACTICES						
		X					G DECISION MAKING						

5

NOTE : - The day before T2, T4 and T6 is dedicated to CBT "Ground review and Quiz" (see next table)
 - All the exercises listed above are to be completed within a cycle of 3 years
 - At least two (2) CRM elements should be completed every year

(SAMPLE1.PCX)

05 - RECURRENT TRAINING AND CHECKING FOLLOW-UP SAMPLES (END)

B. GROUND COURSE REVIEW SAMPLE

A320 ✕

1

NAME : (CPT ✕ - F/O □) T. A. SMITH

AIRLINE : A.I 00

ATA		SYSTEM	YEAR 1	YEAR 2	YEAR 3
GROUND REVIEW	21	AIR COND	Pack and temperature regulation	X	
			Warning and operating limitations	X	
			Pack overheat - Duct overheat	X	
	21	PRESS	Warning and operating limitations	X	
	21	VENT	Avionic, lavatory and pack bay ventilation	X	
			Warning and operating limitations	X	
	22	AFS	Peripheral interfaces	X	
			Flight envelope	X	
			MCDU and/or FMGC reconfiguration	X	
			Autoflight system warnings	X	
	23	COMM	Intercommunication system architecture and controls		
	24	ELEC	Emergency electrical control panel		
			AC warnings and operating limitations		
			DC warnings and operating limitations		
			Loss of ESS TR and TR1		
	26	FIRE	Cargo compartment fire protections and warnings	X	
			Lavatories fire protections and warnings	X	
	27	F/CTL	Protections and reconfiguration laws	X	
			Warning and operating limitations	X	
			IRS disagree	X	
	28	FUEL	System		
			Warnings and limitations		
	29	HYD	Warning and operating limitations		X
			Reservoir overheat - dual system LO LVL		X
	30	ICE	Wing anti ice system		X
			Ice detection system and warnings		X
	31	EIS	Warnings and limitations	X	
			DMC / DU reconfiguration	X	
	32	L/G	Warning and operating limitations		X
			Gravity extension and braking with accumulator		X
Braking : antiskid and autobrake				X	
Tire pressure indication system				X	
33	LIGHTS	Cockpit and exterior lighting			
34	NAV	ADIRS warnings and operating limitations			
		NAV system warnings and operating limitations			
		ADIRU fault and switching			
35	OXYGEN	Cockpit and cabin systems			
36	PNEU	Pack regulation		X	
		Warnings and operating limitations		X	
		Bleed faults and wing leak		X	
38		Water waste system		X	
45	OMS	CFDS failure classification - Back up clock		X	
49	APU	Warning and Operating Limitations			
52	DOORS	Operation and arming system			
70	POWER PLANT	ECAM secondary parameters	X		
		Warnings and operating limitations	X		
Performance		All operating limitations			
		Take off optimization			
		Require and actual landing distance			
			SCORE		
Date : _____ - QUIZ YEAR 1			92%		
Date : _____ - QUIZ YEAR 2			88%		
Date : _____ - QUIZ YEAR 3					

(SAMPLE2.PCX)

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	RECURRENT TRAINING INTRODUCTION	2.04.01 Page 6 <i>E FC4</i>
		REV 23 JUL 99

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AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	RECURRENT TRAINING TRAINING FOOTPRINT	2.04.02 Page 1
		<i>E FC4</i> REV 23 JUL 99

01 - TRAINING DEVICE TIME SHARING

N. B. : Except when notified, the allocated time is mentioned per crew

TRAINING AND CHECKING PROGRAM N° 1		2 working days
FFS : 2 sessions		6:00 (2 x 3:00)
TRAINING AND CHECKING PROGRAM N° 2		3 working days
CBT : - Aircraft system review.....		4:00 / trainee
- Quiz.....		2:00 / trainee
FFS : 2 sessions.....		6:00 (2 x 3:00)

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	RECURRENT TRAINING TRAINING FOOTPRINT	2.04.02 Page 2
		<i>E FC4</i> REV 23 JUL 99

01 - TRAINING AND CHECKING PROGRAM N° 1

DAY 1	DAY 2
Training FFS briefing 1:00 Training FFS : 3:00 - <i>Practice of required proficiency items</i> - <i>CRM items</i>	Check FFS briefing 1:00 Check FFS : 3:00 - <i>Operator proficiency check</i>

02 - TRAINING AND CHECKING PROGRAM N° 2

DAY 1	DAY 2	DAY 3
CBT review : 4:00 - <i>System review as suggested in the "Ground Review" follow-up sheet</i> - <i>Study of in service experience events and operational procedures</i> CBT quiz 2:00	Training FFS briefing 1:00 Training FFS : 3:00 - <i>Practice of required proficiency items as defined in the previous period</i> - <i>CRM items</i>	Check FFS briefing 1:00 Check FFS : 3:00 - <i>Licence renewal check and Operator proficiency check</i>

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	RECURRENT TRAINING TRAINING SYLLABI	2.04.03 Page 1
		<i>E FC4</i> REV 23 JUL 99

Recurrent Training and Checking follow-up sheet Page 03

Recurrent Training FFS syllabus Page 05

Recurrent Checking FFS syllabus Page 07

NOTE : *Instructors' FCTM includes the "Session Guides"*

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	RECURRENT TRAINING TRAINING SYLLABI	2.04.03 Page 2 <i>E FC4</i> REV 21 MAY 98
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AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	RECURRENT TRAINING TRAINING SYLLABI	2.04.03 Page 3 E FC4 REV 23 JUL 99
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- RECURRENT TRAINING AND CHECKING FOLLOW-UP SHEET -

A320
STARTING DATE :
NAME : (CPT ☐ - F/O ☐)

AIRLINE :

Each instructor designated to conduct either training or checking session within a period of 3 years starting on the date mentioned hereabove must update this table according to the performed events.

Date :

CLASS	TRAINING						EVENTS		CHECKING							
	Year 1		Year 2		Year 3				Year 1		Year 2		Year 3			
	T1	T2	T3	T4	T5	T6			C1	C2	C3	C4	C5	C6		
- 1A -							A	MANUAL START								
							B	CROSS BLEED START								
							C	START VALVE MAN OPERATION								
							D	START WITH EXTERNAL POWER								
- 1B -							A	EXCESS CABIN ALTITUDE								
							B	AIR COND SMOKE								
							C	ENGINE FIRE								
							D	FUEL IMBALANCE								
- 2 -							A	AUTOPILOT OFF								
							B	AUTOTHRUST OFF								
							C	FCU 1 + 2 FAULT								
- 3 -							A	HYD : G RSVR LO AIR PR/OVHT								
							B	BRAKES : A/SKID FAULT or NWS OFF								
							C	F/CTL : SLATS OR FLAPS LOCKED								
- 4 -							A	ELEC : DC BUS 1 + 2 FAULT								
							B	AUTO FLT : FMGS 1 + 2 FAULT								
							C	HYD : B + Y SYS LO PR								
- 5 -							A	F/CTL : ALT LAW								
- 6 -							A	NAV : RA 1 + 2 FAULT								
							B	HYD : G + Y SYS LO PR								
							C	HYD : G + B SYS LO PR								
							D	ELEC : EMER CONFIG								
ACRM	Year 1	Year 2	Year 3				A	S.A DETECTING RECOVERING								
							B	S. A PREVENTING								
							C	ERROR PERFORMANCE AND SAFETY								
							D	COMMUNICATION								
							E	TEAM PERFORMANCE								
							F	PROCEDURE AND PRACTICES								
							G	DECISION MAKING								

NOTE : - The day before T2, T4 and T6 is dedicated to CBT "Ground review and Quiz" (see next table)
 - All the exercises listed above are to be completed within a cycle of 3 years
 - At least two (2) CRM elements should be completed every year

(SHEET1.PCX)

- RECURRENT TRAINING AND CHECKING FOLLOW-UP SHEET -

A320

NAME : (CPT ☐ - F/O ☐)

AIRLINE :

GROUND REVIEW	ATA	SYSTEM	YEAR 1	YEAR 2	YEAR 3	
	21	AIR COND	Pack and temperature regulation Warning and operating limitations Pack overheat - Duct overheat			
	21	PRESS	Warning and operating limitations			
	21	VENT	Avionic, lavatory and pack bay ventilation Warning and operating limitations			
	22	AFS	Peripheral interfaces Flight envelope MCDU and/or FMGC reconfiguration Autoflight system warnings			
	23	COMM	Intercommunication system architecture and controls			
	24	ELEC	Emergency electrical control panel AC warnings and operating limitations DC warnings and operating limitations Loss of ESS TR and TR1			
	26	FIRE	Cargo compartment fire protections and warnings Lavatories fire protections and warnings			
	27	F/CTL	Protections and reconfiguration laws Warning and operating limitations IRS disagree			
	28	FUEL	System Warnings and limitations			
	29	HYD	Warning and operating limitations Reservoir overheat - dual system LO LVL			
	30	ICE	Wing anti ice system Ice detection system and warnings			
	31	EIS	Warnings and limitations DMC / DU reconfiguration			
	32	L/G	Warning and operating limitations Gravity extension and braking with accumulator Braking : antiskid and autobrake Tire pressure indication system			
	33	LIGHTS	Cockpit and exterior lighting			
	34	NAV	ADIRS warnings and operating limitations NAV system warnings and operating limitations ADIRU fault and switching			
	35	OXYGEN	Cockpit and cabin systems			
	36	PNEU	Pack regulation Warnings and operating limitations Bleed faults and wing leak			
	38		Water waste system			
	45	OMS	CFDS failure classification - Back up clock			
	49	APU	Warning and Operating Limitations			
	52	DOORS	Operation and arming system			
	70	POWER PLANT	ECAM secondary parameters Warnings and operating limitations			
		Performance	All operating limitations Take off optimization Require and actual landing distance			
				SCORE		
	Date : _____ - QUIZ YEAR 1.....					
	Date : _____ - QUIZ YEAR 2.....					
	Date : _____ - QUIZ YEAR 3.....					

(SHEET2.PCX)

RECURRENT TRAINING FFS FFS TAKE-OFF DATA
INIT PAGE

CO RTE

ALTN/CO RTE

FLT NBR

 [Airline ID] 431

LAT

 4338.1N

COST INDEX

 30

CRZ FL/TEMP

 4000 ft / - 3°C

FROM/TO

 LFBO/LFBO

LONG

 00122.1E

TROPO

 36 090

TRIP DIST

 LOCAL

CRZ WIND

ALTN

 LFBD

ALTN DIST

 123 NM

FL to ALTN

 140

ATIS

RWY 15 R

WIND 230°/25 kt

VISI 8 km

CEILING OVC 1000 ft

TEMP 2°C

DEW POINT ... 0°C

QNH 1007 hPa

QFE 989 hPa

RWY COND ... DRY

Observations : _____

NOTE :

LFBO 15 R

Local flight

Traffic pattern d

ALTN : LFBO LACOU SID - LACOU

MIRBA STAR - LFBD ILS 23

INIT NEXT PAGE

ZFCG/ZFW

28.4%-48 t

28.4%-105 600 lb

BLOCK

10 t

22 000 lb

PERF PAGE

IAE CFM

 V1

 VR

 V2

 FLEX

 DRT

T/O FLAPS

 2

T/O C.G.

 26.6%

 —TOGA—

 FLEX

 —DRT—

MALFUNC REF.	- RECURRENT TRAINING FFS -	-	+
	TRAINEE 1 AS PF		
	1 - TRANSIT COCKPIT PREPARATION		
	2 - BEFORE START		
	■ 3 - ENGINE START (EVENT OUT OF CLASS 1A)		
	4 - AFTER START		
	5 - TAXI		
	6 - BEFORE TAKE-OFF		
	7 - TAKE-OFF - ENGINE FAILURE AFTER V1 (CROSS WIND) | AP | FD | ATHR | |		
	8 - RADAR VECTORS		
	9 - NON PRECISION APPR - ONE ENGINE OUT | AP | | ATHR | FPV | FPD |		
	10 - GO AROUND - ONE ENGINE OUT - REPORT ON DOWNWIND		
	■ 11 - VISUAL APPR | | | ATHR | FPV | |		
	12 - LANDING - ONE ENGINE OUT (CROSS WIND) - Restore		
	INIT T/O (WIND 130°/15 kt)		
	■ 13 - TAKE-OFF - TCAS EXERCISE OR INCAPACITATION | | FD | ATHR | |		
	■ 14 - SID CLIMB - EVENT OUT OF CLASS 2 THEN		
	■ 15 - EVENT OUT OF CLASS 3 OR 4		
	16 - HOLDING		
	17 - VISUAL APPR - APPR ILS ASSISTED | | | ATHR | FPV | |		
	18 - LANDING		
	19 - TAKE-OFF - WINDSHEAR BEFORE V1		
	20 - REJECTED TAKE-OFF		
	TRAINEE 2 AS PF		
	INIT T/O		
	■ 21 - TAKE-OFF - WINDSHEAR AFTER VR | | FD | ATHR | |		
	■ INIT FL 350 (OPTIONAL)		
	■ 22 - EVENT OUT OF CLASS 1B		
	23 - DESCENT FL 100 - EVENT OUT OF CLASS 2 | AP | FD | ATHR | |		
	24 - ILS APPR		
	■ 25 - CIRCLING (OPTIONAL) | AP | FD | ATHR | |		
	26 - LANDING		
	INIT T/O (WIND 130°/25 kt)		
	27 - TAKE-OFF - ENGINE FAILURE AFTER V1 (CROSS WIND)		
	28 - NON PRECISION APPR - ONE ENGINE OUT		
	29 - GO AROUND - ONE ENGINE OUT - REPORT DOWNWIND | | FD | ATHR | |		
	■ 30 - VISUAL APPR		
	31 - LANDING - ONE ENGINE OUT (CROSS WIND) - Restore | | FD | | |		
	INIT T/O (WIND 130°/15 kt)		
	■ 32 - TAKE-OFF - TCAS EXERCISE (OPTIONAL)		
	■ 33 - EVENT OUT OF CLASS 5 or 6		
	34 - VISUAL APPR - APPR ILS ASSISTED | | | ATHR | FPV | |		
	35 - LANDING - Restore		
	■ CAT II OR CAT III TRAINING (OPTIONAL)		
	■ 36 - TAKE-OFF- LOW VISIBILITY OPERATIONS		
	37 - RADAR VECTORS - LOW VISIBILITY OPERATIONS BRIEFING		
	38 - ILS APPR | AP | FD | ATHR | |		
	39 - LANDING		
	40 - AFTER LANDING AND PARKING		

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	RECURRENT TRAINING TRAINING SYLLABI	2.04.03 Page 6A <i>E FC4</i>
		REV 23 JUL 99

R

RECURRENT TRAINING FFS SESSION GUIDE

01 - SESSION OBJECTIVE

- To be able to perform normal and abnormal procedures and handling.
- To review the selected CRM items.

02 - TRAINING TOPICS

A. REVIEW

- Cross wind take-off
- Non precision approach
- Engine out procedure and handling
- Windshear recovery procedures
- TCAS and incapacitation procedures.
- Failure management according to selections
- Selected CRM items.

B. INTRODUCE

NIL

03 - SESSION PROFICIENCY CRITERIA

- Ability to demonstrate the maneuvers prescribed in this session in proper use with qualities of prudence and care in selecting a course of action.
- Ability to apply CRM skills in all phases of flight.

INSTRUCTOR ONLY

INSTRUCTOR ONLY

RECURRENT TRAINING FFS SESSION GUIDE (END)

04 - SESSION GUIDE

Eng	V1	VR	V2	Flex
CFM	145	154	154	47
IAE	145	153	153	47

- 3 : Select malfunction out of the Class 1A list as proposed in follow up forms.
- 11, 30 : Remove wind gradient prior to approach - set ceiling 3000 ft.
- 13, 32 : Select TCAS exercise or incapacitation [(once a year) unless the equipment is available on the trainings device].
- 14, 22 : Select malfunction out of Class 2 list as proposed in follow up form.
- 21 : Set Ceiling 1000 ft. Cancel windshear after cleaning up.
- Init 350 : Only if required by the following event (emergency descent etc.).
- 25 : If required by Company or National Authorities.
- 33 : Select malfunction out of Class 6 list as proposed in follow up form.
- Cat II/III : Performed once a year. Set the lowest applicable minimum for the crew.
- 36 : If time permits, otherwise INIT Base leg und unfreeze position when Low Visibility Operations briefing completed. Set visual and wind conditions as appropriate.

INSTRUCTOR ONLY

INSTRUCTOR ONLY

RECURRENT CHECKING FFS TAKE-OFF DATA
INIT PAGE

CO RTE

ALTN/CO RTE

FLT NBR

 [Airline ID] 432

LAT

 4338.1N

COST INDEX

 30

CRZ FL/TEMP

 4000 ft / -3°C

FROM/TO

 LFBO/LFPO

LONG

 00122.1E

TROPO

 36 090

TRIP DIST

 LOCAL

CRZ WIND

ALTN

 LFBD

ALTN DIST

 123 NM

FL to ALTN

 240

ATIS

RWY 15 R

WIND 130°/25 kt

VISI 6 km

CEILING OVC 800 ft

TEMP 5°C

DEW POINT ... 2°C

QNH 1005 hPa

QFE 987 hPa

RWY COND ... DRY

Observations : _____

NOTE :

LFBO 15 R

Local flight

Traffic patterns

ALTN : LFBO LACOU DEP - LACOU

MIRBA ARR - LFBD ILS 23

INIT NEXT PAGE

ZFCG/ZFW

28.4%-48 t

28.4%-105 600 lb

BLOCK

10 t

22 000 lb

PERF PAGE

IAE CFM

 V1

 VR

 V2

 FLEX

T/O FLAPS

 2

T/O C.G.

 26.6%

 —TOGA—

 FLEX

 —DRT—

MALFUNC REF.	- RECURRENT CHECKING FFS -										-	+
	TRAINEE 2 AS PF											
	1 - TRANSIT COCKPIT PREPARATION											
	2 - BEFORE START											
	■ 3 - ENGINE START (EVENT OUT OF CLASS 1A)											
	4 - AFTER START											
	5 - TAXI											
	6 - BEFORE TAKE-OFF											
	7 - TAKE-OFF - ENGINE FAILURE AT V1 (CROSS WIND) | AP | FD | ATHR | | |											
	8 - SID OR RADAR VECTORS											
	9 - NON PRECISION APPR - ONE ENGINE OUT | AP | | | ATHR | FPV | FPD |											
	10 - GO AROUND - ONE ENGINE OUT - REPORT ON DOWNWIND											
	■ 11 - VISUAL APPR - APPR ILS ASSISTED | | | | ATHR | FPV | |											
	12 - LANDING - ONE ENGINE OUT (CROSS WIND) - Restore											
	INIT T/O (WIND 130°/15 kt)											
	■ 13 - TAKE-OFF - WINDSHEAR AFTER VR | | | FD | ATHR | | |											
	14 - SID CLIMB											
	■ 15 - EVENT OUT OF CLASS 6											
	16 - HOLDING											
	17 - VISUAL APPR - APPR ILS ASSISTED | | | | ATHR | FPV | |											
	18 - LANDING											
	TRAINEE 1 AS PF											
	■ 19 - TAKE-OFF - WINDSHEAR AFTER VR | | | FD | ATHR | | |											
	20 - RADAR VECTORS											
	■ 21 - ILS APPR | AP | FD | ATHR | | |											
	22 - CIRCLING | | | | ATHR | FPV | |											
	23 - LANDING											
	INIT T/O (WIND 130°/25 kt)											
	24 - TAKE-OFF - ENGINE FAILURE AFTER V1											
	25 - NON PRECISION APPR - ONE ENGINE OUT | | | | ATHR | FPV | FPD |											
	26 - GO AROUND - ONE ENGINE OUT - REPORT DOWNWIND | | | FD | ATHR | | |											
	27 - VISUAL APPR | | | | ATHR | PPV | |											
	28 - LANDING - ONE ENGINE OUT (CROSS WIND) - Restore | | | | | |											
	INIT T/O (WIND 130°/15 kt)											
	29 - TAKE-OFF - TCAS EXERCISE (OPTIONAL)											
	■ 30 - EVENT OUT OF CLASS 6											
	31 - VISUAL APPR - APPR ILS ASSISTED | | | | ATHR | FPV | |											
	32 - LANDING - Restore											
	CAT II OR CAT III TRAINING											
	■ 33 - TAKE-OFF - LOW VISIBILITY OPERATIONS											
	34 - CAT II / III APPR											
	■ 35 - GO AROUND - Restore | AP | FD | ATHR | | |											
	INIT T/O											
	36 - TAKE-OFF - LOW VISIBILITY - ENGINE FIRE (UNEXT.) AT V1 -30 KT											
	38 - REJECTED TAKE-OFF											
	37 - ON GROUND EMERGENCY EVACUATION - Restore											

RECURRENT CHECKING FFS SESSION GUIDE

01 - SESSION OBJECTIVE

- To be able to execute normal and abnormal procedure and handling.
- To attain sufficient proficiency for the recurrent check.

02 - TRAINING TOPICS

A. REVIEW

- Flight in severe turbulence.
- Emergency descent.
- RTO and on ground emergency evacuation.
- Failure management according to selections.

B. INTRODUCE (NIL)

03 - SESSION PROFICIENCY CRITERIA

- Ability to demonstrate the prescribed maneuvers in this session must be with good judgement commensurate and high level of safety.
- Ability to demonstrate acting as a crew and to apply CRM skills in all phases of flight.

04 - SESSION GUIDE

Eng	V1	VR	V2	Flex
CFM	145	154	154	47
IAE	145	153	153	47

- 3 : Select malfunction out of the Class 1A list as proposed in follow up forms.
- 11 : Remove wind gradient prior to approach - set ceiling 3000 ft.
- 13, 19 : Remove windshear after cleaning up.
- 15, 30 : Select malfunction out of Class 6 list as proposed in follow up forms.
- 21 : Could be performed in raw data, if required by regulations or operator.
- 33 : Set the lowest minimum applicable for the crew.
Change wind 130°/5 kt. Take-off only, if time permits, otherwise INIT base leg and unfreeze position when Low Visibility Operations briefing completed.
- 35 : For CAT II qualified crews : one missed approach (any reason) every 6 months.
For CAT III qualified crews : one missed approach (A/P disconnection) per year.

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	RECURRENT TRAINING TRAINING SYLLABI	2.04.03 Page 8B <i>E FC4</i>
		REV 21 MAY 98

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INSTRUCTOR ONLY

INSTRUCTOR ONLY



CHAPTER 05

- GROUND SCHOOL INSTRUCTOR COURSE -

CHAP 05

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	GROUND SCHOOL INSTRUCTOR COURSE TABLE OF CONTENTS	2.05.00 Page 1 <i>E FC5</i>	R
		REV 23 JUL 99	

2.05.01 - INTRODUCTION

2.05.02 - TRAINING FOOTPRINT

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	GROUND SCHOOL INSTRUCTOR COURSE TABLE OF CONTENTS	2.05.00 Page 2 <i>E FC5</i>	R
		REV 23 JUL 99	

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AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	GROUND SCHOOL INSTRUCTOR COURSE INTRODUCTION	2.05.01 Page 1 <i>E FC5</i>	R
		REV 23 JUL 99	

01 - GENERAL

This course is designed to bring the trainee to the level of ground instructor on Airbus A320. It is centered on the ground phase and on the FBS sessions of the A320 Regular Transition course and is further supplemented by an observation of a full Abnormal/Emergency phase extracted from the Regular course.

This course does not include aircraft handling but introduces the basic of task sharing and crew coordination.

02 - OBJECTIVES OF THE COURSE

A. PHASE 1 : GROUND COURSE

- To study all aircraft system
- To study in the ECAM trainer, FMGS trainer and Fixed Base Simulator the integration of systems and subsequent procedures.

B. PHASE 2 : NORMAL OPERATIONS

- To study in the Fixed Base Simulator the integrations of systems and subsequent procedures as well as aircraft handling in normal situations.

C. PHASE 3 : ABNORMAL/EMERGENCY OPERATIONS

- To observe and study in the Fixed Base Simulator the abnormal/emergency procedures with full crew coordination

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	GROUND SCHOOL INSTRUCTOR COURSE TRAINING FOOTPRINT	2.05.02 Page 1 <i>E FC5</i>
		REV 23 JUL 99

R

TRAINING DAILY FOOTPRINT

A. GROUND PHASE

DAY 1 to DAY 11 Refer to Regular Transition Course - Ground Phase
--

B. NORMAL PHASE

DAY 12 Refer to Regular Transition course N1 FBS	DAY 13 Refer to Regular Transition course N2 FBS
---	---

C. ABNORMAL/EMERGENCY PHASE

DAY 14 to DAY 18 <u>Trainee as an observer :</u> Refer to Regular Transition course - Abn/emerg Phase (F1 FBS to F5 FFS)
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AIRBUS INDUSTRIE Training & Flight Operations Support Division  A319/A320/A321 FLIGHT CREW TRAINING MANUAL	GROUND SCHOOL INSTRUCTOR COURSE TRAINING FOOTPRINT	2.05.02 Page 2 <i>E FC5</i>	R
		REV 23 JUL 99	

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CHAPTER 08

- FLIGHT INSTRUCTOR FAMILIARIZATION COURSE -

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	FLIGHT INSTRUCTOR FAMILIARIZATION COURSE TABLE OF CONTENTS	2.08.00 Page 1 <i>E FC8</i> REV 21 MAY 98
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2.08.01 - INTRODUCTION

2.08.02 - TRAINING FOOTPRINT

2.08.03 - TRAINING SYLLABI

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	FLIGHT INSTRUCTOR FAMILIARIZATION COURSE TABLE OF CONTENTS	2.08.00 Page 2 <i>E FC8</i> REV 21 MAY 98
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AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	FLIGHT INSTRUCTOR FAMILIARIZATION COURSE INTRODUCTION	2.08.01 Page 1 <i>E FC8</i>
		REV 21 MAY 98

01 - GENERAL

The Flight Instructor Familiarization course is designed to gain experience with the specific techniques required to base train on the A319/A320/A321

The trainee instructor is assumed to have previous instructional experience in jet transport aircraft and have satisfactorily completed an A320 Transition course. It is considered advantageous, though not imperative, that he should have had the opportunity to consolidate his knowledge of systems and operating procedures with some 100 hours or 4 months of practical line flying.

The course is flexible and will be adapted to match any special requirements of the customer Airline, particularly in the area of trainees' previous experience.

02 - OBJECTIVES OF THE COURSE

- To provide flight instructor familiarization on aircraft type for already qualified instructors
- To provide familiarization with the operation of the aircraft from the right hand seat with limited assistance from the student
- To improve the basic operating and supervising skills of instructor candidate
- To improve the management and co-ordination skills of instructor during aircraft training
- To familiarize flight instructors with the basic Airbus Training syllabi

During the course the participant is able to revise the specific techniques of conducting base training, whilst becoming more familiar with operating the aircraft from the right hand seat. Certain phases of simulator and flight sessions are flown with an Airbus Training instructor role playing the student in order to :

- expose the trainee to typical student reactions and problems
- expand his power of analysis
- use the varied means available to encourage improvement in student performance

N. B. : Following successful completion of the course, the Airline may seek trainee's designation as a flight instructor with the appropriate aviation Authority.

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	FLIGHT INSTRUCTOR FAMILIARIZATION COURSE INTRODUCTION	2.08.01 Page 2 <i>E FC8</i>
		REV 21 MAY 98

03 - COURSE ORGANIZATION

A. FFS SESSION BRIEFING

The FFS is treated in all respects as a real aircraft being used for base training i. e. engine failures are simulated by retarding the respective throttle.

Ensuing drills will generally be touch drills.

Of course genuine failures do occur during training flights and examples of these will be introduced using the full capabilities of the simulator and handled using the necessary drills and check-list procedures.

The action, in the event of a genuine failure, must be made clear in the first take-off briefing i. e. the trainee will assume control of the aircraft clearly calling "**I have control**" and expecting the response from the Airbus instructor acting as student "**You have control**".

The failure is then handled using the appropriate abnormal/emergency procedures.

a. General right hand seat familiarization demonstration practice

Normal preparation, explanation of seats controls, adjustment, use of red and white balls to have optimum visual references during low minima approach.

b. Use of FMS

Refer to FCTM Vol 1 - "Normal Operations Briefings" chapter - Base training briefing

c. Touch and go

Refer to FCTM Vol 1 - "Normal Operations Briefings" chapter - Base training briefing

d. Late final descent clearance

Maintain cleared altitude on final approach (use LOC to track ILS centreline);
 Select gear down, flap full and reduce speed to V_{APP} when cleared for the approach.

METHOD IN VISUAL APPROACH

Select both FDs OFF (ATHR speed mode), select FPV. Adjust pitch attitude to obtain -6° angle as indicated by FPV.

As correct approach path regained adjust pitch attitude to that required for normal approach.

NOTE : In all cases the approach must be stabilized by 500 ft AGL. If not, a go around should be consider.

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	FLIGHT INSTRUCTOR FAMILIARIZATION COURSE INTRODUCTION	2.08.01 Page 3 <i>E FC8</i>
		REV 21 MAY 98

03 - COURSE ORGANIZATION (CONT'D)

A. FFS SESSION BRIEFING (END)

d. Late final descent clearance (end)

DUCK UNDER

De-stabilizing the approach by undue increase rate of descent in the last 300 ft is potentially hazardous.

A threshold crossing height of 50 ft R. A. is the norm. Reducing this altitude increases the risk of short touchdown. For information 1 dot fly up at 50 ft R. A. is 14 ft below the correct glide path, 2 dots is 28 ft below (landing gear clearance at 50 ft R. A. is 32 ft).

Corrections form "duck under" can also lead to landings further along the runway than desired.

If stabilisation is not achieved, a go around should be considered.

e. Error recovery

During this part the Airbus instructor will behave as a student and introduce common student problems and reactions. The trainee upon noticing the error should not simply highlight the solution but try to analyse the possible reasons behind it.

Be aware of the students receptive state wehn pointing out errors. It could be better for the instructor to fly the aircraft while he summarizes a problem so that the student does not have to divide his attention into trying to listen and to fly at the same time. If small errors increase progressively during a session, recognize the stress build up early enough to prevent trainee's depression by removing all pressures, either by demonstrating a circuit, pointing out any weakness, together with the proper corrective actions, or by allowing him to use the automilot for part of the exercise.

f. Instructor take over

Refer to FCTM Vol 1 - "Normal Operations Briefings" chapter - Base training briefing

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	FLIGHT INSTRUCTOR FAMILIARIZATION COURSE INTRODUCTION	2.08.01 Page 4 <i>E FC8</i>
		REV 21 MAY 98

03 - COURSE ORGANIZATION (CONT'D)

B. FLIGHT SESSION BRIEFING

Refer to :

- Same chapter : "FFS SESSION BRIEFING"
- FCTM Vol 1 - "Normal Operations Briefings" chapter - Base training briefing

The instructor will train to proficiency.

Before the flight it is important to ensure that control be handed from one pilot to the other and it is handed over clearly and unambiguously (**I have control / You have control**).

Also cover actions in event of instructor incapacitation (declare an emergency and position aircraft of an automatic approach and landing).

- Side step manoeuvre / very crisp roll control mean that it is possible to overcontrol during this exercise

CAUTION : Some civil aviation Authorities have defined a minimum height for such a manoeuvre.

- Go around from 50 ft : similar to a normal go around but taken during the flare.
 - Apply power while rotating to arrest the sink rate, call for "Go around flaps". The main gear may touch the ground during the manoeuvre.
 - Check positive climb before retracting gear.
- Immediate go from touch : when landing roll continuation is not possible.
 - Select TOGA
 - Maintain configuration (ignore take-off config warning)
 - Rotate to 10° pitch and maintain until safely airborne
 - When above VLS, retract flaps to conf 3 and continue with normal procedure.

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	FLIGHT INSTRUCTOR FAMILIARIZATION COURSE TRAINING FOOTPRINT	2.08.02 Page 1 <i>E FC8</i>
		REV 21 MAY 98

01 - TRAINING DAILY FOOTPRINT (1 TRAINEE)

DAY 1	7:00	DAY 2	4:00
Briefing : 2:00 - Instructor's FCTM - A320 Regular Course syllabi - Instructor techniques FFS : 3:00 - Familiarization with training procedures and recovery techniques flying from the right seat. (Airbus instructor role playing the student from the left seat) FFS briefing and debriefing : 2:00		Flight : 2:00 - Right hand seat training practicing some of the items covered during FFS session (Part of the flight flown with Airbus instructor role playing the student from the left hand seat) Flight briefing and debriefing : 2:00	

02 - TRAINING DAILY FOOTPRINT (2 TRAINEES)

DAY 1	7:00	DAY 2	5:00	DAY 3	6:00
Briefing : 2:00 - Instructor's FCTM - A320 Regular Course syllabi - Instructor techniques FFS : 3:00 - Trainee number 1 : Familiarization with training procedures and recovery techniques flying from the right seat. (Airbus instructor role playing the student from the left seat) - Trainee number 2 : Observing from the jump seat FFS briefing and debriefing : 2:00		FFS : 3:00 - Trainee number 2 : Familiarization with training procedures and recovery techniques flying from the right seat. (Airbus instructor role playing the student from the left seat) - Trainee number 1 : Observing from the jump seat FFS briefing and debriefing : 2:00		Flight : - Right hand seat training practicing some of the items covered during FFS session (Part of the flight flown with Airbus instructor role playing the student from the left hand seat) - Trainee number 1 flight 2:00 - Trainee number 2 : observing from the jump seat - Trainee number 2 flight 2:00 - Trainee number 1 : observing from the jump sea Flight briefing and debriefing : 2:00	

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	FLIGHT INSTRUCTOR FAMILIARIZATION COURSE TRAINING FOOTPRINT	2.08.02 Page 2 <i>E FC8</i> REV 21 MAY 98
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AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	FLIGHT INSTRUCTOR FAMILIARIZATION COURSE TRAINING SYLLABI	2.08.03 Page 1 <i>E FC8</i>
		REV 21 MAY 98

FFS syllabus Page 03

Flight syllabus Page 05

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	FLIGHT INSTRUCTOR FAMILIARIZATION COURSE TRAINING SYLLABI	2.08.03 Page 2 <i>E FC8</i>
		REV 21 MAY 98

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FFS TAKE-OFF DATA				
INIT PAGE CO RTE BLUE ALTN/CO RTE FLT NBR [Airline ID] 830 LAT 4338.1N COST INDEX 30 CRZ FL/TEMP FL 40 / 6°C FROM/TO LFBO/LFBO LONG 00122.1E TROPO		TRIP DIST CRZ WIND ALTN ALTN DIST FL to ALTN		ATIS RWY 15 R WIND 240°/15 kt VISI CAVOK CEILING TEMP 10°C DEW POINT ... QNH 1013 hPa/29.92 inHg QFE 982 hPa/29.00 inHg RWY COND ... DRY Observations : _____ _____ _____ _____
INIT NEXT PAGE ZFCG/ZFW 28%-45 t 28%-99.000 lb BLOCK 8 t 17.600 lb	PERF PAGE IAE CFM V1 116 115 VR 120 120 V2 122 122 FLEX 55 55 DRT	T/O FLAPS 2 T/O C.G. TOGA FLEX DRT —DRT—	NOTE : Local flight	

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	FLIGHT INSTRUCTOR FAMILIARIZATION COURSE TRAINING SYLLABI	2.08.03 Page 4 <i>E FC8</i>
		REV 21 MAY 98

MALFUNC REF.	- FFS -	-	+
	1 - TRANSIT COCKPIT PREPARATION		
	2 - ENGINE START		
	PART A : TRAINEE INSTRUCTOR IN RHS - AIRBUS INSTRUCTOR IN LHS		
	3 - TAKE-OFF		
	4 - VISUAL PATTERN|		
	5 - ILS / VISUAL APPROACH		
	6 - TOUCH AND GO - GO AROUND		
	7 - ENGINE FAILURE AFTER V1		
	8 - ONE ENGINE OUT APPROACH		
	9 - ENGINE OUT GO AROUND		
	10 - VISUAL APPROACH 1 ENGINE OUT		
	11 - FULL STOP LANDING		
	- APPROACHES PERFORMED UNTIL SATISFACTORY STANDARD IS REACHED		
	- ALL ENGINES (2 CIRCUITS MINIMUM) / ENGINE OUT WITH OR WITHOUT AUTOTHRUST AT INSTRUCTOR'S DISCRETION INCLUDING :		
	• SIDE STICK INTERFERENCE		
	PART B : TRAINEE INSTRUCTOR IN RHS - AIRBUS INSTRUCTOR IN LHS ERROR RECOVERY		
	12 - TAKE-OFF		
	13 - VISUAL PATTERN|		
	14 - ILS / VISUAL APPROACH		
	15 - TOUCH AND GO - GO AROUND		
	- APPROACHES PERFORMED UNTIL SATISFACTORY STANDARD IS REACHED		
	- ALL ENGINES / ENGINE OUT WITH OR WITHOUT AUTOTHRUST AT INSTRUCTOR'S DISCRETION INCLUDING :		
	<i>NORMAL OPERATIONS :</i>		
	• TAKE-OFF CONFIG WARNING		
	• OVERCONTROLLING DOWNWIND		
	• NO RETARD		
	• HIGH FLARE - LONG FLOAT		
	• FLAP 3 (GPWS)		
	• LONG FLARE		
	• IMMEDIATE GO FROM TOUCH		
	• TOO HIGH ON APPROACH - NO FLARE		
	• LANDING GEAR FORGOTTEN		
	• MISUSE OF RUDDER		
	• OVERCONTROL IN ROLL DURING FLARE		
	• INCAPACITATION		
	<i>ENGINE OUT OPERATIONS :</i>		
	• WRONG RUDDER INPUTS		
	• MISHANDLED FLARE		
	• FAILURE OF OPERATING ENGINE		
	16 - FULL STOP LANDING		

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	FLIGHT INSTRUCTOR FAMILIARIZATION COURSE TRAINING SYLLABI	2.08.03 Page 6 <i>E FC8</i>
		REV 21 MAY 98

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CHAPTER 09

- SIMULATOR INSTRUCTOR FAMILIARIZATION COURSE -

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	SIMULATOR INSTRUCTOR FAMILIARIZATION COURSE TABLE OF CONTENTS	2.09.00 Page 1 <i>E FC9</i> REV 21 MAY 98
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2.09.01 - INTRODUCTION

2.09.02 - TRAINING FOOTPRINT

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	SIMULATOR INSTRUCTOR FAMILIARIZATION COURSE TABLE OF CONTENTS	2.09.00 Page 2 <i>E FC9</i>
		REV 21 MAY 98

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AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	SIMULATOR INSTRUCTOR FAMILIARIZATION COURSE TABLE OF CONTENTS	2.09.01 Page 1 <i>E FC9</i>
		REV 21 MAY 98

01 - GENERAL

The course is designed to bring the trainee to the level of simulator instructor for the A320. Previous experience on the A320 plus an experience as a simulator instructor are assumed.

02 - OBJECTIVES OF THE COURSE

A. PHASE 1

- To brief trainees on instructor techniques
- To present the Transition course syllabi

B. PHASE 2

- The trainee should observe a minimum of 3 consecutive training sessions in a scheduled simulator course, including 1:30 briefing and 0:30 debriefing.

C. PHASE 3

- The trainee conducts a minimum of 3 consecutive training sessions under supervision, including 1:30 briefing and 0:30 debriefing.

During a general debriefing the trainee will review manoeuvres and his performance will be reviewed.

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	SIMULATOR INSTRUCTOR FAMILIARIZATION COURSE TABLE OF CONTENTS	2.09.01 Page 2 <i>E FC9</i> REV 21 MAY 98
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AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	SIMULATOR INSTRUCTOR FAMILIARIZATION COURSE TRAINING FOOTPRINT	2.09.02 Page 1 <i>E FC9</i>
		REV 21 MAY 98

TRAINING DEVICE TIME SHARING PER PHASE

<i>PHASE 1 : General briefing</i>		<i>1/2 working day</i>
<i>PHASE 2 : Trainee as observator</i>		<i>3 working days</i>
FFS : 3 sessions		9:00 (3 x 3:00)
<i>PHASE 3 : Trainee under supervision</i>		<i>3 working days</i>
FFS : 3 sessions		9:00 (3 x 3:00)
<i>TOTAL DURATION</i>		<i>7 working days</i>

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	SIMULATOR INSTRUCTOR FAMILIARIZATION COURSE TRAINING FOOTPRINT	2.09.02 Page 2 <i>E FC9</i>
		REV 21 MAY 98

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CHAPTER 10

- ETOPS COURSE -

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	ETOPS COURSE TABLE OF CONTENTS	2.10.00 Page 1 <i>E F10</i> REV 21 MAY 98
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2.10.01 - INTRODUCTION

2.10.02 - TRAINING FOOTPRINT

2.10.03 - TRAINING SYLLABI

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	ETOPS COURSE TABLE OF CONTENTS	2.10.00 Page 2 <i>E F10</i> REV 21 MAY 98
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AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	ETOPS COURSE INTRODUCTION	2.10.01 Page 1 <i>E F10</i>	R
		REV 23 JUL 99	

The ETOPS course is designed in order to train the flight crew for the specifics of ETOPS requirements and rules, dispatch criteria as well as the operational guidelines to effectively operate in the ETOPS environment.

It can be given in conjunction with the Dispatcher course.

- Trainee's documentation package is made of :

- Trainee's "Airbus ETOPS course folder" ⁽¹⁾
- "Getting to Grips with ETOPS" booklet ⁽¹⁾
- FCOM volumes and QRH

(1) To be provided by the Instructor

- The following documentation is at instructor's disposal in the Trainees' Office :

- Trainee's "Airbus ETOPS course folder"
- "Getting to Grips with ETOPS" booklet
- FCOM volumes and QRH
- Instructor ETOPS syllabus
- Trainee's files and Airbus certificate
- Documents for ETOPS course :
 - North Atlantic plotting chart
 - Portable computer and CD-ROM

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	ETOPS COURSE INTRODUCTION	2.10.01 Page 2 <i>E F10</i> REV 21 MAY 98
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AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	ETOPS COURSE TRAINING FOOTPRINT	2.10.02 Page 1 <i>E F10</i>
		REV 23 JUL 99

R

DAY 1	6:00	DAY 2
Briefing : - Theory and operational practice - Long haul ETOPS flight preparation - Practical exercises		Briefing : 1:15 In the simulator : - Long haul ETOPS flight preparation 0:50 - FFS session 3:00

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	ETOPS COURSE TRAINING FOOTPRINT	2.10.02 Page 2 <i>E F10</i>
		REV 21 MAY 98

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AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	ETOPS COURSE TRAINING SYLLABI	2.10.03 Page 1	R
		<i>E F10</i> REV 23 JUL 99	

FFS syllabus Page 03

NOTE : *Instructors' FCTM includes the "Session Guides"*

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	ETOPS COURSE TRAINING SYLLABI	2.10.03 Page 2 <i>E F10</i> REV 21 MAY 98
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ETOPS FFS TAKE-OFF DATA
INIT PAGE

CO RTE

ALTN/CO RTE

FLT NBR

 [Airline ID] 101

LAT

 5242.5N

COST INDEX

 20

CRZ FL/TEMP

 FL 360 / -53°C

FROM/TO

 EINN/KJFK

LONG

 00854.4W

TROPO

TRIP DIST

 2792 NM

CRZ WIND

 HD 48 kt

ALTN

 KBOS

ALTN DIST

 183 NM

FL to ALTN

 230

ATIS

RWY 24

WIND 310°/19 kt - G 25 kt

VISI 10 km

CEILING FEW 020 SCT 045

TEMP 9°C

DEW POINT ... 1°C

QNH 1013 hPa/29.92 inHg

QFE 1012 hPa/29.89 inHg

RWY COND ... DRY

Observations : _____

INIT NEXT PAGE

ZFCG/ZFW

 35.7%-47.5 t
35.7%-95 000 lb

BLOCK

 18.6 t
40 920 lb

PERF PAGE

IAE CFM

 V1

 VR

 V2

 FLEX

 DRT

T/O FLAPS

 1 + F

T/O C.G.

 29 %

TOGA

FLEX

—DRT—

NOTE :

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	ETOPS COURSE TRAINING SYLLABI	2.10.03 Page 4A <i>E F10</i>
		REV 23 JUL 99

R

ETOPS FFS SESSION GUIDE

01 - SESSION OBJECTIVE

- To train the crew for all aspects of ETOPS rules and practice the designed scenario according to JAA or FAA requirements.

02 - TRAINING TOPICS

A. REVIEW

- FMGS preparation
- Fuel monitoring
- Engine failure
- Loss of generators
- Diversion

B. INTRODUCE

- ETOPS flight preparation
- ETOPS FMGS preparation
- ETOPS navigation rules and strategies
- Failures affecting ETOPS (recovery)
- Changes of strategy (relevant NAV and fuel policy)

03 - SESSION PROFICIENCY CRITERIA

- Ability to demonstrate and to operate effectively the aircraft in an ETOPS environment according to ETOPS rules and specific SOPs.

04 - SESSION GUIDE

NIL

NOTE : A 10 minutes break is to be scheduled before beginning the Part 2 FFS session

INSTRUCTOR ONLY

INSTRUCTOR ONLY



CHAPTER 18

- CAT II LOW VISIBILITY OPERATIONS -

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	CAT II LOW VISIBILITY OPERATIONS TABLE OF CONTENTS	2.18.00 Page 1 <i>E F18</i> REV 23 JUL 99
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R

2.18.01 - INTRODUCTION

2.18.02 - TRAINING FOOTPRINT

2.18.03 - TRAINING SYLLABI

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	CAT II LOW VISIBILITY OPERATIONS INTRODUCTION	2.18.01 Page 1	R
		REV 23 JUL 99	

The CAT 2 course provides the specific training required to prepare trainees to practice CAT 2 approaches as allowed by local Authorities.

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	CAT II LOW VISIBILITY OPERATIONS TRAINING FOOTPRINT	2.18.02 Page 1 <i>E F18</i>
		REV 23 JUL 99

R

TRAINING DAILY FOOTPRINT

DAY 1		DAY 2	
VACBI :	3:00	TRAINING FFS :	2:00
		- Training practice	
		EVALUATION FFS :	1:00
		- Review and check	

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	CAT II LOW VISIBILITY OPERATIONS TRAINING SYLLABI	2.18.03 Page 1
		<i>E F18</i> REV 23 JUL 99

R

FFS syllabus (*Training*) Page 03

FFS syllabus (*Evaluation*) Page 05

NOTE : *Instructors' FCTM includes the "Session Guides"*

CAT II TRAINING FFS TAKE-OFF DATA

CAT II TRAINING FFS TAKE-OFF DATA				
INIT PAGE CO RTE FROM/TO LFBO/LFBO ALTN/CO RTE ECAM1A FLT NBR [Airline ID] 181 LAT 4338.1N LONG 00122.1E COST INDEX 30 CRZ FL/TEMP 3000 ft / -5°C		TRIP DIST LOCAL CRZ WIND ALTN LFBT ALTN DIST 123 NM FL to ALTN 140		ATIS RWY 15 R WIND 100°/5 kt VISI Per syllabus CEILING Per syllabus TEMP 2°C / 36°F DEW POINT ... 1°C / 34°F QNH 1020hPa QFE 1002 hPa RWY COND ... DRY Observations :
INIT NEXT PAGE ZFCG/ZFW 25%-48 t 25%-105 600 lb BLOCK 10 t 22 000 lb	PERF PAGE IAE CFM V1 123 118 VR 131 126 V2 132 127 FLEX 60 55 DRT	T/O FLAPS 2 T/O C.G. 26.6% TOGA FLEX DRT	NOTE : F/PLN : LFBO 15 R Local flight Traffic patterns T/O performance data are not corrected ALTN : LFBO LACOU SID - LACOU MIRBA STAR - LFB D ILS 23	

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	CAT II LOW VISIBILITY OPERATIONS TRAINING SYLLABI	2.18.03 Page 4
		<i>E F18</i>
		REV 23 JUL 99

MALFUNC REF.	- CAT II TRAINING FFS - (2:00 session per crew)	-	+
	AIRLINE OPERATIONAL MINIMUM :		
	LOW VISIBILITY TAKE-OFF : RVR : DH :		
	INIT T/O		
130 FT	■ 1 - COCKPIT PREPARED BY INSTRUCTOR - LOW VISIBILITY OPS T/O BRIEFING		
125 M	ENGINES RUNNING, FUEL FREEZE,		
	■ 2 - TAKE-OFF - FOG PATCHES - FOLLOW YAW BAR		
	■ 3 - HOLDING - CAT II BRIEFING		
170 FT	■ 4 - APPROACH - 2 AP		
400 M	REVIEW VISUAL SEGMENT		
	FREEZE AT 150 FT - REVIEW VISUAL SEGMENT - RELEASE		
130 FT	FREEZE AT 100 FT - REVIEW VISUAL SEGMENT - RELEASE		
300 M	AUTOLAND		
	INIT T/O FUEL FREEZE		
130 FT			
200 M	5 - TAKE-OFF		
	■ 6 - APPROACH - ABOVE 1000 FT		
	REVIEW LOSS OF ILS TRANSMITTER		
	REVIEW LOSS OF ILS RECEIVERS		
	REVIEW LOSS OF RADIO ALTIMETERS		
	REVIEW LOSS OF STAND BY HORIZON		
130 FT	REVIEW OF INSTRUMENT FAILURES		
400 M	7 - AUTOLAND		
150 FT	■ 8 - TAKE-OFF - FOG PATCHES - ENGINE FAILURE ABOVE 100 KT - BEFORE V1 (*)		
125 M	REJECTED TAKE-OFF - Restore (*)		
	(ITEM NOT REQUIRED IN CASE OF 2 FIRST OFFICER CREW)		
	9 - TAKE-OFF - RADAR VECTORS DOWNWIND (*) (**)		
	■ 10 - APPROACH 2 AP - DH 100 FT (*) (**) LOSS OF LOC TRANSMITTER AT 220 FT - AUTOLAND WARNING - GO AROUND - Restore (*) (**) GO AROUND - Restore ATHR		
150 FT	■ 11 - APPROACH 2 AP - DH 100 FT - 1 ATHR ONLY		
0 M	REMAINING ATHR FAILS AT 500 FT		
150 FT	■ 12 - APPROACH - 2 AP - DH 100 FT - ENGINE FAILURE BELOW 100 FT (*) (**) LANDING (*) (**) GO AROUND - RESTORE ATHR		
300 M	■ 13 - APPROACH 2 AP - DH 100 FT - CHECK ATT WARNING AT 300 FT (*) MANUAL GO AROUND (USING STDBY HORIZON) (*)		
150 FT	■ 14 - APPROACH 2 AP - DH 100 FT (**) CM1 INCAPACITATION ABOVE DH - GO AROUND (**) (ITEM NOT REQUIRED IN CASE OF 2 CAPTAIN CREW)		
300 M	■ 15 - APPROACH - 2 AP - DH 100 FT ENG FAIL AT 400 FT GO AROUND - CLEAN UP		
0/0	■ 16 - RELIGHT - APPROACH - 2 AP - DH 100 FT LOC BEAM DEVIATION - GO AROUND		
150 FT	■ 17 - APPROACH - 1 AP - DH 100 FT (*) (**) AUTOPILOT DISCONNECT AT 80 FT MANUAL LANDING OR AUTOLAND (IN CASE OF 2 FIRST OFFICER CREW)		
300 M			
	(*) ITEMS TO BE REPEATED IN CASE OF 2 CAPTAIN CREW		
	(**) ITEMS TO BE REPEATED IN CASE OF 2 FIRST OFFICER CREW		

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	CAT II LOW VISIBILITY OPERATIONS TRAINING SYLLABI	2.18.03 Page 4A <i>E F18</i>
		REV 23 JUL 99

R

CAT II TRAINING FFS SESSION GUIDE

01 - SESSION OBJECTIVE

- To consolidate the CAT II CBT training with practical illustration of low visibility flying conditions so that the crew reach the required level of proficiency for CAT II and low visibility operations.

02 - TRAINING TOPICS

A. REVIEW

NIL

B. INTRODUCE

- CAT II and low visibility training

03 - SESSION PROFICIENCY CRITERIA

- The crew has reached a good level of proficiency so as to operate low visibility and CAT II.

04 - SESSION GUIDE

*The minimum specified on the syllabus are compliant with J.A.A requirements.
For all exercises, the instructor must adapt RVR and cloud base settings to the Airline operational minimum when they are different. In this case they must be mentioned on the syllabus page, in the appropriate box.*

- 1 : - Ensure that the trainee does not waste time in setting-up prior to start
- An appropriate take-off alternate should be inserted in the SEC F/PLAN.
- 2 : - Brief the crew that visibility will be reduced to zero on the take-off run to illustrate the effectiveness of the YAW-BAR.
(NOTE : YAW-BAR will appear only if the ILS/LOC is available for the same RWY direction)
- Ask the PF to continue T/O for training purposes, using the YAW-BAR only.
- Freeze SIM just prior to V1, increase visibility to show aircraft on centerline, then continue the take-off.
- 3 : - Ensure that the crew can give a concise CAT II approach briefing.
- Stress task sharing, weather minima, crew qualification, alternate planning, fuel requirements, aircraft or airfield servicibility, SOP, flight deck lighting, etc...
- Check crew seating position
- LO or MED autobrake is recommended
- Check autoland limitations.

CAT II TRAINING FFS SESSION GUIDE (CONT'D)

04 - SESSION GUIDE (CONT'D)

- 4 : - The crew must check autoland function prior to approach (CAT 3 SINGLE, CAT 3 DUAL).
 - The crew must acknowledge all FMA changes.
 - The crew must call and acknowledge approach std. call-out.
 - Check that Go Around ALT is properly set.

A. Freeze the approach at DH 150 and review visual segment [change RVR 550 m (CAT 1) to RVR 300 m (CAT 2)].

 - Ask crew to switch landing lights ON and OFF, to show the change in visual clues.
 - Vary the flight deck lightening to illustrate the necessity of low intensity.

B. Freeze SIM at DH 100 ft and review visual segment at RVR 350 m and vert. vis. 100 ft (CAT 2 min).

 - Release SIM and perform autoland.
 - Observe FLARE mode latest at 30 ft RA.
 - Observe autobrake "DECEL"
 - Check autopilot roll-out mode.

NOTE : *During landing roll when starting manual braking, disconnect autopilot at the same time.*
- 6 : Insert STBY horizon when ILS established but above 1000 ft AGL.

NOTE : *There is NO ECAM warning and NO approach capability change on FMA, but CAT 2 approach is NOT allowed (CAT 1 only).*
- 8 : - Reduce visibility to zero and insert eng failure at 100 kt (before V1).
 - Ensure that the PF is using YAW-BAR guidance during rejected take-off.
- 10 : A. Insert LOC transmitter failure before OM (or FAF) (restore).

NOTE : - AP's and FD's remain engaged in approach mode (G/S and LOC green)

 - LOC index is removed
 - LOC scale flashes **ONLY** if LOC transm. failure occurs when aircraft is captured on the localizer.

CAUTION : NO RED LOC WARNING

B. Insert LOC transmitter failure for the second time at 200 ft RA.

 - Check indications mentioned in A plus RED AUTOLAND WARNING
 - Crew must initiate GA if visual references are not sufficient
- 11 : - Insert A/THR 1 failure at 2000 ft
 Insert A/THR 2 failure at 500 ft RA
 ...Crew initiates a go around
 - Restore A/THR before next approach

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	CAT II LOW VISIBILITY OPERATIONS TRAINING SYLLABI	2.18.03 Page 4C <i>E F18</i>
		REV 23 JUL 99

R

CAT II TRAINING FFS SESSION GUIDE (END)

04 - SESSION GUIDE (END)

- 12 : - Insert eng. failure at or below 100 ft (when visual), and illustrate single eng. capability of the autopilot (CAT 3 single).
- Autoland is allowed.
- 13 : If ATT warning is inserted :
- Check that PF is doing a manual go around using STDBY HORIZON.
- Attitude warning must be analysed after GA.
- 14 : - Captain's (LH seat) failure to respond to standard call-out is to be considered as his incapacitation.
- Once the incapacitation has been established the F/O (RH seat) must make a go around.
- 15 : - Insert engine failure at 500 ft RA.
- Check that the eng failure is noticed without delay
- In this case go around must be initiated.
NOTE : *Sometimes failure is noticed too late (below 100 ft) and therefore autoland is performed.*
- 16 : Insert LOC beam deviation at 300 ft RA
- 17 : Insert A/P failure at 80 ft RA, Manual landing is allowed if visual references are sufficient.

INSTRUCTOR ONLY

INSTRUCTOR ONLY

CAT II EVALUATION FFS TAKE-OFF DATA

CAT II EVALUATION FFS TAKE-OFF DATA				
INIT PAGE CO RTE FROM/TO LFBO/LFBO ALTN/CO RTE ECAM1A FLT NBR [Airline ID] 182 LAT 4338.1N LONG 00122.1E COST INDEX 30 CRZ FL/TEMP 3000 ft / -3°C		TRIP DIST LOCAL CRZ WIND ALTN LFBT ALTN DIST 123 NM FL to ALTN 140		ATIS RWY 15 R WIND 100°/5 kt VISI Per syllabus CEILING Per syllabus TEMP 2°C/36°F DEW POINT ... 1°C/34°F QNH 1020 hPa QFE 1002 hPa RWY COND ... DRY Observations : _____ _____ _____ _____
INIT NEXT PAGE ZFCG/ZFW 28.4%-48 t 28.4%-105 800 lb BLOCK 10 t 22 000 lb	PERF PAGE IAE CFM V1 123 118 VR 131 126 V2 132 127 FLEX 60 55 DRT	T/O FLAPS 2 T/O C.G. 26.6% TOGA FLEX DRT	NOTE : F/PLN : LFBO 15 R Local flight Traffic patterns T/O performance data are not corrected ALTN : LFBO LACOU SID - LACOU MIRBA STAR - LFB D ILS 23	

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	CAT II LOW VISIBILITY OPERATIONS TRAINING SYLLABI	2.18.03 Page 6A <i>E F18</i> REV 23 JUL 99
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CAT II EVALUATION FFS SESSION GUIDE

01 - SESSION OBJECTIVE

- Demonstration of competence to operate aircraft in CAT II weather conditions as Captain or First Officer.

02 - TRAINING TOPICS

A. REVIEW

NIL

B. INTRODUCE

Evaluation in CAT II weather conditions and :

- In normal configuration
- With engine failure
- With autothrust failure

03 - SESSION PROFICIENCY CRITERIA

- To demonstrate that all proficiency requirements are mastered.

04 - SESSION GUIDE

- Avoid using INIT function as much as possible.
- Connect the exercises with the radar vectoring.
- Lead the session as close as possible to line-oriented flight philosophy.
- Use headsets
- Remember the importance of task sharing and good crew coordination.
- Crew is assessed as Captain and First Officer.
- Don't let yourself get involved in a discussion during session. Make your own judgement and revert to your instructor role again if for example an exercise is unsatisfactorily carried out.

- 5 : RVR = 200 m or company lowest applicable minimum.

INSTRUCTOR ONLY

INSTRUCTOR ONLY



CHAPTER 19

- CAT III LOW VISIBILITY OPERATIONS -

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	CAT III LOW VISIBILITY OPERATIONS TABLE OF CONTENTS	2.19.00 Page 1 <i>E F19</i> REV 23 JUL 99
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R

2.19.01 - INTRODUCTION

2.19.02 - TRAINING FOOTPRINT

2.19.03 - TRAINING SYLLABI

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	CAT III LOW VISIBILITY OPERATIONS TABLE OF CONTENTS	2.19.00 Page 2 <i>E F19</i> REV 23 JUL 99	R

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AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	CAT III LOW VISIBILITY OPERATIONS INTRODUCTION	2.19.01	Page 1	R
		<i>E F19</i>		
		REV 23	JUL 99	

The CAT 3 course provides the specific training required to prepare trainees to practice CAT 3 approaches as allowed by local Authorities.

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	CAT III LOW VISIBILITY OPERATIONS INTRODUCTION	2.19.01 Page 2 <i>E F19</i> REV 23 JUL 99
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AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	CAT III LOW VISIBILITY OPERATIONS TRAINING FOOTPRINT	2.19.02 Page 1 <i>E F19</i>
		REV 23 JUL 99

R

TRAINING DAILY FOOTPRINT

DAY 1		DAY 2	
VACBI :	3:00	TRAINING FFS :	2:00
		- Training practice	
		EVALUATION FFS :	1:00
		- Review and check	

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	CAT III LOW VISIBILITY OPERATIONS TRAINING SYLLABI	2.19.03 Page 1 <i>E F19</i> REV 23 JUL 99	R

FFS syllabus (*Training*) Page 03

FFS syllabus (*Evaluation*) Page 05

NOTE : *Instructors' FCTM include the "Session Guides"*

CAT III TRAINING FFS TAKE-OFF DATA

CAT III TRAINING FFS TAKE-OFF DATA				
INIT PAGE CO RTE ALTN/CO RTE FLT NBR [Airline ID] 191 LAT 4338.1N COST INDEX 30 CRZ FL/TEMP FL 350 / -59°C FROM/TO LFBO/LFPO LONG 00122.1E TROPO 36 090		TRIP DIST 345 NM CRZ WIND ALTN LFPG ALTN DIST 80 NM FL to ALTN 100		ATIS RWY 15 R WIND 170°/5 kt VISI Per syllabus CEILING Per syllabus TEMP 12°C DEW POINT ... 12°C QNH 1020 hPa QFE 1002 hPa RWY COND ... DRY Observations : _____ _____ _____ _____
INIT NEXT PAGE ZFCG/ZFW 28.4%-48 t 28.4%-105.800 lb BLOCK 10 t 22.000 lb	PERF PAGE IAE CFM V1 123 118 VR 131 126 V2 132 127 FLEX 60 55 DRT	T/O FLAPS 2 T/O C.G. 26.6% TOGA FLEX DRT	NOTE : F/PLN : LFBO 15 R FISTO SID - FISTO LMG - MORIK AMB - VILRO VIA EPR LFPO ILS 26 T/O performance data are not corrected	

MALFUNC REF.	- CAT III TRAINING FFS - (2:00 session per crew)	-	+
	AIRLINE OPERATIONAL MINIMUM :		
	LOW VISIBILITY TAKE-OFF : RVR : DH :		
	INIT T/O		
	■ 1 - COCKPIT PREPARED BY INSTRUCTOR - LOW VISIBILITY OPS T/O BRIEFING		
	ENGINES RUNNING - FUEL FREEZE		
125 M	■ 2 - TAKE-OFF- FOG PATCHES FOLLOW YAW BAR		
	■ 3 - HOLDING CAT III BRIEFING		
	■ 4 - APPROACH CAT III DUAL		
	REVIEW VISUAL SEGMENT		
150 FT	DH 100 FT - FREEZE AT 100 FT - RVR 300 M		
80 FT	DH 50 FT - FREEZE AT 50 FT - RVR 200 M		
60 FT	DH 20 FT - FREEZE AT 20 FT - RVR 125 M		
	AUTOLAND		
125 M	5 - TAKE-OFF		
60 FT	■ 6 - APPROACH ABOVE 1000 FT		
125 M	REVIEW LOSS OF ILS TRANSMITTER		
	REVIEW LOSS OF ILS RECEIVERS		
	REVIEW LOSS OF RADIO ALTIMETER		
	REVIEW LOSS OF STANDBY HORIZON		
	REVIEW INSTRUMENT FAILURES		
	7 - AUTOLAND		
60 FT	■ 8 - TAKE-OFF FOG PATCHES (*)		
125 M	ENGINE FAILURE ABOVE 100 KT/ BEFORE V1 (*)		
	REJECTED TAKE-OFF (*)		
	(ITEM NOT REQUIRED IN CASE OF 2 FIRST OFFICER CREW)		
125 M	9 - TAKE-OFF (*) (**)		
60 FT	10 - APPROACH CAT3 DUAL DH 20 FT (*) (**)		
125 M	LOSS OF LOC TRANSMITTER AT 200 FT - AUTOLAND WARNING (*) (**)		
	GO AROUND - Restore (*) (**)		
60 FT	■ 11 - APPROACH CAT 3 DUAL DH 20 FT (*) (**)		
125 M	CHECK ATT WARNING AT 100 FT (*) (**)		
	GO AROUND USING STANDBY HORIZON (*) (**)		
60 FT	■ 12 - APPROACH CAT 3 DUAL - ILS PERFORMANCE : CAT II (*) (**)		
125 M	ENG FAIL AT 200 FT - GO AROUND - CLEAN UP (*) (**)		
60 FT	13 - APPROACH CAT 3 SINGLE DH 50 FT		
125 M	AUTOPILOT DISCONNECT AT 100 FT - GO AROUND		
125 M	■ 14 - APPROACH CAT 3 DUAL - CAPT INCAPACITATION - F/O GO AROUND (**)		
	(ITEM NOT REQUIRED IN CASE OF 2 CAPTAIN CREW)		
60 FT	■ 15 - APPROACH CAT 3 DUAL DH 50 FT (*)		
125 M	ATHR 1 FAIL AT 300 FT - GO AROUND - RESTORE (*)		
60 FT	■ 16 - APPROACH CAT 3 DUAL DH 20 FT - ENG FAIL BELOW 50 FT (*) (**)		
125 M	AUTOLAND (*) (**)		
	(*) ITEMS TO BE REPEATED IN CASE OF 2 CAPTAIN CREW		
	(**) ITEMS TO BE REPEATED IN CASE OF 2 FIRST OFFICER CREW		

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	CAT III LOW VISIBILITY OPERATIONS TRAINING SYLLABI	2.19.03 Page 4A E F19
		REV 23 JUL 99

R

CAT III TRAINING FFS SESSION GUIDE

01 - SESSION OBJECTIVE

- Complete CAT III training so that the crew reach the required level of proficiency for CAT III and low visibility operations.

02 - TRAINING TOPICS

A. REVIEW

NIL

B. INTRODUCE

- CAT III and low visibility training

03 - SESSION PROFICIENCY CRITERIA

- The crew has reached a good level of proficiency so as to operate low visibility and CAT III.

04 - SESSION GUIDE

*The minimum specified on the syllabus are compliant with J.A.A requirements.
For all exercises, the instructor must adapt RVR and cloud base settings to the Airline operational minimum when they are different. In this case they must be mentioned on the syllabus page, in the appropriate box.*

- 1 : - Ensure that the trainee does not waste time in setting-up prior to start
- An appropriate take-off alternate should be inserted in the SEC F/PLAN.
- 2 : - Brief the crew that visibility will be reduced to zero on the take-off run to illustrate the effectiveness of the YAW-BAR.
(NOTE : YAW-BAR will appear only if the ILS/LOC is available for the same RWY direction)
- Ask the PF to continue T/O for training purposes, using the YAW-BAR only.
- Freeze SIM just prior to V1, increase visibility to show aircraft on centerline, then continue the take-off.
- 3 : - Ensure that the crew can give a concise CAT III approach briefing.
- Stress task sharing, weather minima, crew qualification, alternate planning, fuel requirements, aircraft or airfield servicibility, SOP, flight deck lighting, etc...
- Check crew seating position
- LO or MED autobrake is recommended
- Check autoland limitations.

INSTRUCTOR ONLY

INSTRUCTOR ONLY

CAT III TRAINING FFS SESSION GUIDE (END)

04 - SESSION GUIDE (END)

- 4 : - The crew must check autoland function prior to approach (CAT 3 SINGLE, CAT 3 DUAL).
 - The crew must acknowledge all FMA changes.
 - The crew must call and acknowledge approach std. call-out.
 - Check that Go Around ALT is properly set.

A. Freeze the approach at DH 100 and review visual segment [change RVR 300 m (CAT 2) to RVR 200 m].

 - Ask crew to switch landing lights ON and OFF, to show the change in visual clues.
 - Vary the flight deck lightening to illustrate the necessity of low intensity.

B. Freeze SIM at DH 50 ft and review visual segment at RVR 200 m and vert. vis. 60 ft.

C. Freeze SIM at DH 20 ft and review visual segment at RVR 125 m and vert. vis. 30 ft.

 - Release SIM and perform autoland.
 - Observe FLARE mode latest at 30 ft RA.
 - Observe autobrake "DECEL"
- 8 : - Reduce visibility to zero and insert eng failure at 100 kt (before V1).
 - Ensure that the PF is using YAW-BAR guidance during rejected take-off.
- 11 : Insert STBY horizon when ILS established but above 1000 ft AGL.

NOTE : *There is NO ECAM warning and NO approach capability change on FMA, but CAT 2 approach is NOT allowed (CAT 1 only).*
- 12 : With and ILS CAT 2, CAT 2 minimum only are available.
In France, some airports are allowed to use CAT 3 minimums with DH 50 ft
- 14 : - Captain's (LH seat) failure to respond to standard call-outs is to be considered as his incapacitation.
 - Once the incapacitation has been established the F/O (RH seat) must make a go around
- 15 : - Insert A/THR 1 + 2 failure at 500 ft RA
 - ...Crew initiates a go around
 - Restore A/THR before next approach
- 16 : - Insert eng. failure at or below 50 ft, and illustrate single eng. capability of the autopilot (CAT 3 single).

INSTRUCTOR ONLY

INSTRUCTOR ONLY

CAT III EVALUATION FFS TAKE-OFF DATA

CAT III EVALUATION FFS TAKE-OFF DATA				
INIT PAGE CO RTE ALTN/CO RTE FLT NBR [Airline ID] 192 LAT 4338.1N COST INDEX 30 CRZ FL/TEMP FL 350 / -59°C FROM/TO LFBO/LFPO LONG 00122.1E TROPO 36 090		TRIP DIST 345 NM CRZ WIND ALTN LFPG ALTN DIST 80 NM FL to ALTN 100		ATIS RWY 15 R WIND 170°/5 kt VISI Per syllabus CEILING Per syllabus TEMP 12°C DEW POINT ... 12°C QNH 1020 hPa QFE 1002 hPa RWY COND ... DRY Observations : _____ _____ _____ _____
INIT NEXT PAGE ZFCG/ZFW 28.4%-48 t 28.4%-105 800 lb BLOCK 10 t 20 000 lb	PERF PAGE IAE CFM V1 123 118 VR 131 126 V2 132 127 FLEX 60 55 DRT	T/O FLAPS 2 T/O C.G. 26.6% TOGA FLEX DRT	NOTE : F/PLN : LFBO 15 R FISTO SID - FISTO LMG - MORIK AMB - VILRO VIA EPR LFPO ILS 26 T/O performance data are not corrected	

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	CAT III LOW VISIBILITY OPERATIONS TRAINING SYLLABI	2.19.03 Page 6A <i>E F19</i> REV 23 JUL 99
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R

CAT III EVALUATION FFS SESSION GUIDE

01 - SESSION OBJECTIVE

- Demonstration of competence to operate aircraft in low visibility and CAT III operations.

02 - TRAINING TOPICS

A. REVIEW

NIL

B. INTRODUCE

Evaluation in CAT III weather conditions and :

- In normal configuration
- With engine failure
- With autothrust failure

03 - SESSION PROFICIENCY CRITERIA

- To demonstrate that all proficiency requirements are mastered.

04 - SESSION GUIDE

- Avoid using INIT function as much as possible.
- Connect the exercises with the radar vectoring.
- Lead the session as close as possible to line-oriented flight philosophy.
- Use headsets
- Remember the importance of task sharing and good crew coordination.
- Crew is assessed as Captain and First Officer.
- Don't let yourself get involved in a discussion during session. Make your own judgement and revert to your instructor role again if for example an exercise is unsatisfactorily carried out.

- 5 : RVR = 125 m or company lowest applicable minimum.

INSTRUCTOR ONLY

INSTRUCTOR ONLY



CHAPTER 20

- EXECUTIVE FAMILIARIZATION COURSE -

CHAP 20

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	EXECUTIVE FAMILIARIZATION COURSE TABLE OF CONTENTS	2.20.00 Page 1 <i>E F20</i> REV 21 MAY 98
---	--	---

2.20.01 - INTRODUCTION

2.20.02 - TRAINING FOOTPRINT

2.20.03 - TRAINING SYLLABI

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	EXECUTIVE FAMILIARIZATION COURSE TABLE OF CONTENTS	2.20.00 Page 2 <i>E F20</i> REV 21 MAY 98
---	--	---

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AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	EXECUTIVE FAMILIARIZATION COURSE INTRODUCTION	2.20.01 Page 1 <i>E F20</i> REV 21 MAY 98
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01 - GENERAL

This Executive Familiarization course is taught to the Flight Management personnel of the airlines for whom a general knowledge of the aircraft is necessary.

02 - OBJECTIVES OF THE COURSE

This course give an overview of the main systems in the aircraft

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	EXECUTIVE FAMILIARIZATION COURSE INTRODUCTION	2.20.01 Page 2 <i>E F20</i>
		REV 21 MAY 98

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AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	EXECUTIVE FAMILIARIZATION COURSE TRAINING FOOTPRINT	2.20.02 Page 1 <i>E F20</i> REV 21 MAY 98
---	---	---

TRAINING DAILY FOOTPRINT

N. B. : FFS duration is 3:00 per crew

DAY 1 7:00 VACBI : - Electronic Instrument System (EIS) - FMGS - ECAM	DAY 2 7:00 VACBI : - Flight controls - Navigation - Performance	DAY 3 FFS 1 : - Review of the various systems through the handling of the aircraft.
DAY 4 FFS 2 : - Review of the various systems through the handling of the aircraft.	DAY 5 FFS 3 : - Review of the various systems through the handling of the aircraft.	

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	EXECUTIVE FAMILIARIZATION COURSE TRAINING FOOTPRINT	2.20.02 Page 2 <i>E F20</i>
		REV 21 MAY 98

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AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	EXECUTIVE FAMILIARIZATION COURSE TRAINING SYLLABI	2.20.03 Page 1 <i>E F20</i>
		REV 21 MAY 98

FFS 1 syllabus Page 03

FFS 2 syllabus Page 05

FFS 3 syllabus Page 07

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	EXECUTIVE FAMILIARIZATION COURSE TRAINING SYLLABI	2.20.03 Page 2 <i>E F20</i> REV 21 MAY 98
---	---	---

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FFS 1 TAKE-OFF DATA
INIT PAGE

CO RTE

N. A.

ALTN/CO RTE

N. A.

FLT NBR

[Airline ID] 201

LAT

4338.1N

COST INDEX

30

CRZ FL/TEMP

FL 100 / -7°C

FROM/TO

LFBO/LFBO

LONG

0122.1E

TROPO

DEFAULT

TRIP DIST

LOCAL

CRZ WIND

VRB

ALTN

LFBO

ALTN DIST

N. A.

FL to ALTN

N. A.

ATIS

RWY 15 R

WIND 180°/12 kt

VISI CAVOK

CEILING

TEMP 14°C

DEW POINT ... 10°C

QNH 1015 hPa/29.97 inHg

QFE 997 hPa/29.44 inHg

RWY COND ... DRY

Observations : AIR COND ON

INIT NEXT PAGE

ZFCG/ZFW

37%-48 t

37%-105.600 lb

BLOCK

 10 t
 22.000 lb

PERF PAGE

IAE CFM

V1

122 118

VR

132 126

V2

132 127

FLEX

56 56

DRT

T/O FLAPS

2

T/O C.G.

35%

—TOGA—

FLEX

—DRT—

NOTE :

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	EXECUTIVE FAMILIARIZATION COURSE TRAINING SYLLABI	2.20.03 Page 4 <i>E F20</i> REV 21 MAY 98
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MALFUNC REF.	- FFS 1 -	-	+	
	1 - SIMULATOR SAFETY BRIEFING			
	INIT GATE			
	2 - SEAT ADJUSTEMENTS, PEDALS, LIGHTS, ETC			
	3 - RAPID COCKPIT PREPARATION BY INSTRUCTOR			
	DEMO OF COCKPIT LIGHTS AND P/B PHILOSOPHY			
	SHORT EXPLANATION OF EIS, FCU AND ECAM INDICATIONS AND FUNCTIONS			
	4 - DEMONSTRATION OF MCDU PREPARATION			
	5 - AUTO ENGINE START			
	6 - AFTER START CHECK LIST BY INSTRUCTOR			
	INIT T/O			
	7 - BEFORE TAKE-OFF CHECK LIST BY INSTRUCTOR			
	8 - TAKE-OFF - INSTRUCTOR EXPLAINS FMA INDICATIONS			
	9 - CLIMB TO 5000 FT (AP ENGAGED DURING CLIMB AS REQUIRED)			
	10 - RADAR VECTORS TO DOWNWIND			
	11 - APPROACH CHECK-LIST AND MCDU PREPARATION DEMO BY INSTRUCTOR			
	12 - ILS APPROACH AND AUTOLAND TO FULL STOP DEMO (MED AUTO BRAKE)			
	INIT T/O			
	13 - TAKE-OFF (BEFORE TAKE-OFF CHECK LIST BY INSTRUCTOR)			
	14 - CLIMB TO 10 000 FT (AP AS REQUIRED)			
	15 - EXPLANATION OF FMA INDICATIONS DURING CLIMB			
	16 - DEMO ND MODES AND SYMBOLS, EXPLAIN FCU CONTROLS AND FUNCTIONS			
	SELECTED V MANAGED GUIDANCE PHILOSOPHY (HDG, DIRTO, ALT, ETC...)			
	17 - FLIGHT CONTROLS (NORMAL LAW) - HANDLING AND PROTECTIONS			
	(STABILITY, LIMITS, HI-SPEED, HI AOA, ALPHA-FLOOR, ETC...)			
	18 - RADAR VECTORS TO IAF FOR ILS APPROACH			
	19 - APPROACH CHECK LIST AND MCDU PREPARATION BY INSTRUCTOR			
	20 - MANUAL ILS APPROACH WITH FD AND ATHR			
	21 - LANDING (MANUAL BRAKES)			
	22 - TAXI TO END OF RUNWAY - 180 DEG TURN			
	23 - TAKE-OFF (BEFORE TAKE-OFF CHECKS BY INSTRUCTOR)			
	24 - TURN DOWNWIND AT 2000 FT FOR VISUAL PATTERN			
	25 - FD OFF - USE OF FPV (LEVEL FLIGHT AND FINAL APPROACH)			
	26 - VISUAL APPROACH AND LANDING			
	IF TIME PERMITS :			
	CM2			
	27 - TAKE-OFF (BEFORE TAKE-OFF CHECK LIST BY INSTRUCTOR)			
	28 - RADAR VECTORS TO IAF FOR ILS APPROACH			
	29 - APPROACH CHECK LIST AND MCDU PREPARATION BY INSTRUCTOR			
	30 - MANUAL ILS APPROACH WITH FD AND ATHR			
	31 - LANDING (MANUAL BRAKES)			
	32 - TAXI TO END OF RUNWAY - 180° DEG TURN			

FFS 2 TAKE-OFF DATA				
INIT PAGE				ATIS
CO RTE	FROM/TO	TRIP DIST	RWY 33 L	
N. A.	LFBO/LFBO	LOCAL	WIND 240°/10 kt	
ALTN/CO RTE		CRZ WIND	VISI CAVOK	
N. A.		VRB	CEILING	
FLT NBR		ALTN	TEMP 14°C	
[Airline ID] 202		LFBO	DEW POINT ... 10°C	
LAT	LONG	ALTN DIST	QNH 1010 hPa/29.83 inHg	
4338.1N	00122.1E	N. A.	QFE 992 hPa/29.29 inHg	
COST INDEX		FL to ALTN	RWY COND ... DRY	
30		N. A.	Observations : AIR COND ON	
CRZ FL/TEMP	TROPO			
FL 150 / -15°C	DEFAULT			
INIT NEXT PAGE		T/O FLAPS		NOTE :
ZFCG/ZFW	IAE CFM		1 + F	
28%-48 t	V1	124 124	T/O C.G.	
28%-105.600 lb	VR	133 134	26.6%	
BLOCK	V2	133 134	—TOGA—	
10 t	FLEX	56 52	FLEX	
22.000 lb	DRT		—DRT—	

MALFUNC REF.	- FFS 2 -	-	+
	INIT T/O		
	1 - TRANSIT COCKPIT PREPARATION DEMO BY INSTRUCTOR		
	2 - MCDU PREPARATION BY CM1 (TALK THROUGH BY INSTRUCTOR)		
	3 - INSTANT ENGINE START		
	4 - AFTER START CHECK LIST EXCEPT FLAPS		
	DEMO TAKE-OFF CONFIG TEST ON ECAM CONTROL PANEL		
	COMPLETE AFTER START CHECK LIST		
	5 - BEFORE TAKE-OFF CHECK LIST BY INSTRUCTOR		
	6 - TAKE-OFF - DEMO FLT CTL REACTION TO ENGINE FAILURE AFTER ROTATION		
	CM1 MAKES ROTATION TO 15° PITCH THEN HANDS AND FEET OFF		
	ENGINE 1 FLAME OUT - EXPLAIN FLT CTL REACTION AND BETA TGT		
	INDICATE BANK ANGLE, RUDDER POSITION AND AIRSPEED INDICATIONS		
	(ALPHA PROT, ALPHA FLOOR)		
	INIT T/O		
	7 - TAKE-OFF - ENG 1 FLAME OUT AFTER GEAR UP		
	MANUAL CONTROL BY CM1 OF FLIGHT PATH AND BETA TGT TO 1000 FT		
	INIT T/O		
	8 - TAKE-OFF - ENG 1 FLAME OUT AFTER GEAR UP		
	MANUAL CONTROL BY CM1 OF FLIGHT PATH AND BETA TGT TO 1000 FT		
	INIT T/O		
	9 - TAKE-OFF - ENG 1 FLAME OUT AFTER ROTATION - ENGAGE AP 1		
	INDICATE AP CONTROL OF FLIGHT PATH AND RUDDER		
	ABOVE 400 FT AGL EXPLAIN AND CARRY OUT ECAM PROCEDURE FOR ENG FLAME OUT		
	10 - MAINTAIN 3000 FT - RADAR VECTORS DOWNWIND FOR ILS APPROACH		
	11 - APPROACH CHECK LIST AND MCDU PREPARATION		
	12 - ONE ENGINE OUT ILS APPROACH WITH AP ENGAGED TO MDA		
	AT MDA DISCONNECT AP FOR MANUAL LANDING		
	INIT T/O		
	13 - TAKE-OFF - SID (MANAGED NAV AND VERTICAL - CLB/CLB/NAV)		
	14 - CLIMB TO 15 000 FT - INSERT ALTITUDE AND SPEED CONSTRAINTS DURING CLIMB		
	(EXPLAIN INDICATIONS ON FMA, MCDU AND ND)		
	15 - HYD : GREEN RSVR LO LVL - EXPLAIN TASK SHARING AND ECAM PROCEDURE		
	16 - HYD : BLUE RSVR L LVL - HYD : G + B SYS LO PRE - ECAM PROCEDURE		
	CM1 AND CM2 FLT CTLS A/C HANDLING - EXPLAIN SYS PAGE AND STATUS PAGE - Restore		
	17 - RADAR VECTORS FOR VOR APPROACH		
	18 - MCDU PREPARATION EXPLANATION BY INSTRUCTOR - APPROACH CHECK LIST		
	19 - VOR APPROACH - A/P ENGAGED, MANAGED NAV AND VERTICAL (APPR MODE ENGAGED)		
	20 - GO AROUND AT MDA - RADAR VECTORS		
	21 - VOR APPROACH - A/P ENGAGED, SELECTED TRACK/FPA (EXPLAIN TRACK/FPA FUNCTION)		
	IF TIME PERMITS :		
	CM2		
	22 - MCDU PREPARATION EXPLANATION BY INSTRUCTOR - APPROACH CHECK LIST		
	23 - VOR APPROACH - A/P ENGAGED, MANAGED NAV AND VERTICAL (APPR MODE ENGAGED)		
	24 - GO AROUND AT MDA - RADAR VECTORS		
	25 - VOR APPROACH - A/P ENGAGED, SELECTED TRACK/FPA (EXPLAIN TRACK/FPA FUNCTION)		

FFS 3 TAKE-OFF DATA
INIT PAGE

CO RTE

N. A.

ALTN/CO RTE

N. A.

FLT NBR

[Airline ID] 203

LAT

4338.1N

COST INDEX

30

CRZ FL/TEMP

FL 140 / -13°C

FROM/TO

LFBO/LFBD

LONG

0122.1E

TROPO

DEFAULT

TRIP DIST

126 NM

CRZ WIND

VRB

ALTN

LFBO

ALTN DIST

126 NM

FL to ALTN

150

ATIS

RWY 33 L

WIND 240°/10 kt

VISI CAVOK

CEILING

TEMP 14°C

DEW POINT ... 10°C

QNH 1015 hPa/29.97 inHg

QFE 997 hPa/29.44 inHg

RWY COND ... DRY

Observations : AIR COND ON

INIT NEXT PAGE

ZFCG/ZFW

28%-48 t

28%-105.600 lb

BLOCK

 10 t
 22.000 lb

PERF PAGE

IAE CFM

V1

123 118

VR

131 126

V2

132 127

FLEX

56 52

DRT

T/O FLAPS

2

T/O C.G.

26.6%

—TOGA—

FLEX

—DRT—

NOTE :
F/PLN :

LFBO 33

LACOU DEP - LACOU

DIR MIRBA

MIRBA APP

ALTN : LFBD 23 - SAU DEP - SAU

A25-AGN - AGN ARR - LFBO ILS 15R

ATIS LFBD 240°/10 kt

VISI 4 km - OVC 600 ft

QNH 1005 hPa - NOSIG

TEMP 14°C



CHAPTER 21

- UPGRADING OF FIRST OFFICER TO CAPTAIN -

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	UPGRADING OF F/O TO CAPTAIN (Simulator phase 2 ONLY) TABLE OF CONTENTS	2.21.00 Page 1 <i>E F21</i> REV 21 MAY 98
---	--	---

2.21.01 - INTRODUCTION

2.21.02 - TRAINING FOOTPRINT

2.21.03 - TRAINING SYLLABI

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	UPGRADING OF F/O TO CAPTAIN (Simulator phase 2 ONLY) TABLE OF CONTENTS	2.21.00 Page 2 <i>E F21</i>
		REV 21 MAY 98

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AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	UPGRADING OF F/O TO CAPTAIN (Simulator phase 2 ONLY) INTRODUCTION	2.21.01 Page 1 E F21
		REV 21 MAY 98

01 - GENERAL

The Upgrading of First Officer to Captain course is designed for trainees who have been selected by their own Company to be upgraded to Captain position according to specific requirements defined by the local airworthiness Authorities.

It applies to :

- Currently rated First Officers experienced in operating the aircraft (minimum 300 hours)
- Proficient aircraft pilots well versed in core system knowledge, system integration and normal, abnormal/emergency procedures
- First Officer having already followed a command conversion course in their own Company as defined by the local airworthiness Authorities.

NOTE : *This course is not a command conversion course*

02 - OBJECTIVES OF THE COURSE

The objective of this course is to prepare the trainees to safely, knowledgeably and effectively pilot the A320 at type rating proficiency from the left hand seat according to Airbus task sharing philosophy.

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	UPGRADING OF F/O TO CAPTAIN (Simulator phase 2 ONLY) INTRODUCTION	2.21.01 Page 2 <i>E F21</i>
		REV 21 MAY 98

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AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	UPGRADING OF F/O TO CAPTAIN (Simulator phase 2 ONLY) TRAINING FOOTPRINT	2.21.02 Page 1 E F21
		REV 21 MAY 98

TRAINING DAILY FOOTPRINT

N. B. : FBS and FFS duration is 3:00 per crew

Optional 7:00 Airbus Crew Resource Management (ACRM)	DAY 1 7:00 VACBI : (at home if required) - System review - Performance review	DAY 2 FBS : (ACRM) - New task sharing study (CM1 - CM2) - Crew coordination review in normal - abnormal situations
DAY 3 FFS : (ACRM) - Review of some abnormal/emergency situations with new task sharing and decision making - Study of all abnormal/emergency situations to be handled only from the left hand seat	DAY 4 LOFT FFS : (ACRM) - Review of decision making and leadership	DAY 5 L.O.E.⁽¹⁾ FFS : - Individual and crew member performance evaluation - Decision making evaluation (1) Line Oriented Evaluation
DAY 6 EVALUATION FFS : - Check		

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	UPGRADING OF F/O TO CAPTAIN (Simulator phase 2 ONLY) TRAINING FOOTPRINT	2.21.02 Page 2 <i>E F21</i>
		REV 21 MAY 98

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AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	UPGRADING OF F/O TO CAPTAIN (Simulator phase 2 ONLY) TRAINING SYLLABI	2.21.03 Page 1 <i>E F21</i>
		REV 21 MAY 98

FBS syllabus	Page 03
FFS syllabus	Page 05
LOFT FFS	Page 07
L.O.E. FFS	Page 09
Evaluation FFS	Page 13

NOTE : *Instructors' FCTM includes the "Session Guides"*

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	UPGRADING OF F/O TO CAPTAIN (Simulator phase 2 ONLY) TRAINING SYLLABI	2.21.03 Page 2 <i>E F21</i> REV 21 MAY 98
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FBS TAKE-OFF DATA
INIT PAGE

CO RTE

F2FBS

ALTN/CO RTE

N. A.

FLT NBR

[Airline ID] 210

LAT

4338.1N

COST INDEX

30

CRZ FL/TEMP

FL 330 / -51°C

FROM/TO

LFBO/LFPO

LONG

00122.1E

TROPO

DEFAULT

TRIP DIST

345 NM

CRZ WIND

VRB

ALTN

LFPG

ALTN DIST

80 NM

FL to ALTN

100

ATIS

RWY 15 R

WIND 180°/10 kt

VISI CAVOK

CEILING

TEMP 15°C

DEW POINT ... 10°C

QNH 1018 hPa/30.06 inHg

QFE 1000 hPa/29.53 inHg

RWY COND ... DRY

Observations : AIR COND ON

INIT NEXT PAGE

ZFCG/ZFW

39.3%-60 t

39.3%-120.230 lb

BLOCK

 14 t
 30.900 lb

PERF PAGE

IAE CFM

V1

VR

V2

FLEX

DRT

T/O FLAPS

2

T/O C.G.

35%

—TOGA—

FLEX

—DRT—

NOTE :
F/PLN :

LFBO 15 R

LMG DEP - LMG

UR10 - CDN

DIR MEL

VIA MEL

LFPO ILS 26

ALTN : POGN DEP - CLM - NO STAR

NO VIA - LFPG ILS 27

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	UPGRADING OF F/O TO CAPTAIN (Simulator phase 2 ONLY) TRAINING SYLLABI	2.21.03 Page 4A <i>E F21</i>
		REV 21 MAY 98

FBS SESSION GUIDE

01 - BRIEFING TOPICS

- CRM issue : Team Performance
- Task sharing (CM1 / CM2)
- Review dual hydraulic failure
- All engine flame out

02 - SESSION OBJECTIVE

- To study new task sharing
- To review crew coordination in normal and abnormal situation

03 - SESSION PROFICIENCY CRITERIA

- Ability to fly as Captain

04 - SESSION GUIDE

- 9 : Start the exercise crossing FL 250
- 18 : CM2 incapacitation after V1 at "rotate" call
- 30 : Enter unextinguishable fire

INSTRUCTOR ONLY

INSTRUCTOR ONLY

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	UPGRADING OF F/O TO CAPTAIN (Simulator phase 2 ONLY) TRAINING SYLLABI	2.21.03 Page 4B <i>E F21</i>
		REV 21 MAY 98

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INSTRUCTOR ONLY

INSTRUCTOR ONLY

FFS TAKE-OFF DATA
INIT PAGE

CO RTE

N. A.

ALTN/CO RTE

N. A.

FLT NBR

[airline ID] 211

LAT

4338.1N

COST INDEX

30

CRZ FL/TEMP

FL 330 / -51°C

FROM/TO

LFBO/LFPO

LONG

00122.1E

TROPO

DEFAULT

TRIP DIST

372 NM

CRZ WIND

VRB

ALTN

LFPG

ALTN DIST

80 NM

FL to ALTN

100

ATIS

RWY 33 L

WIND 060°/20 kt

VISI CAVOK

CEILING

TEMP 15°C

DEW POINT ... 10°C

QNH 1015 hPa/29.97 inHg

QFE 997 hPa/29.44 inHg

RWY COND ... DRY / WET

Observations : AIR COND ON

Braking action good

INIT NEXT PAGE

ZFCG/ZFW

39.4%-54 t

39.4%-119.050 lb

BLOCK

 10 t
 22.000 lb

PERF PAGE

IAE CFM

V1

VR

V2

FLEX

DRT

T/O FLAPS

1 + F

T/O C.G.

36%

—TOGA—

FLEX

—DRT—

NOTE :
F/PLN :

LFBO 33 L

NO SID

DIR AGN

UA34 - AMB

UR10 - CDN

DIR MEL

VIA MEL

LFPO ILS 26

ALTN : LFPO 26 - POGN DEP - CLM

NO STAR - NO VIA - LFPG ILS 27

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	UPGRADING OF F/O TO CAPTAIN (Simulator phase 2 ONLY) TRAINING SYLLABI	2.21.03 Page 6A <i>E F21</i>
		REV 21 MAY 98

FFS SESSION GUIDE

01 - BRIEFING TOPICS

- CRM issue : Decision making
- All generator failure
- ILS approach in raw data
- RTO and evacuation

02 - SESSION OBJECTIVE

- To review task sharing and decision making
- To study abnormal or emergency situations which can only be handle from the left seat

03 - SESSION PROFICIENCY CRITERIA

- Ability to work as Captain in abnormal or emergency situations
- Workload management

04 - SESSION GUIDE

- 1 : Enter 1 main fuel pump failure and give the MMEL page only on request
- 9 : Enter the failure crossing FL 150
- 19 : Enter engine flame out at V1 -15 kt
Emphasize the decision making before and after the stop
- 26 : Enter unextinguishable fire at V1 -15 kt

INSTRUCTOR ONLY

INSTRUCTOR ONLY

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	UPGRADING OF F/O TO CAPTAIN (Simulator phase 2 ONLY) TRAINING SYLLABI	2.21.03 Page 6B <i>E F21</i>
		REV 21 MAY 98

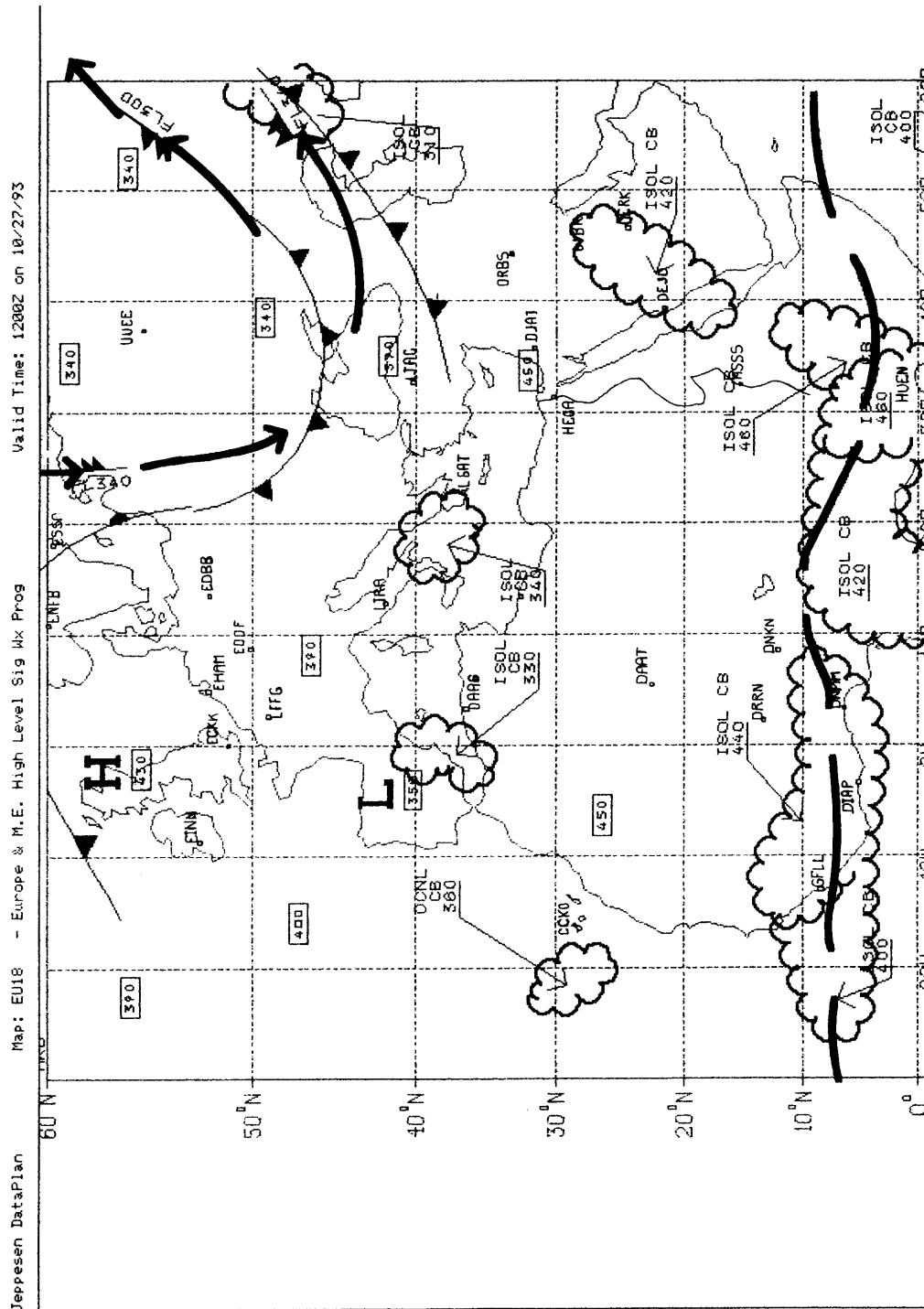
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INSTRUCTOR ONLY

INSTRUCTOR ONLY

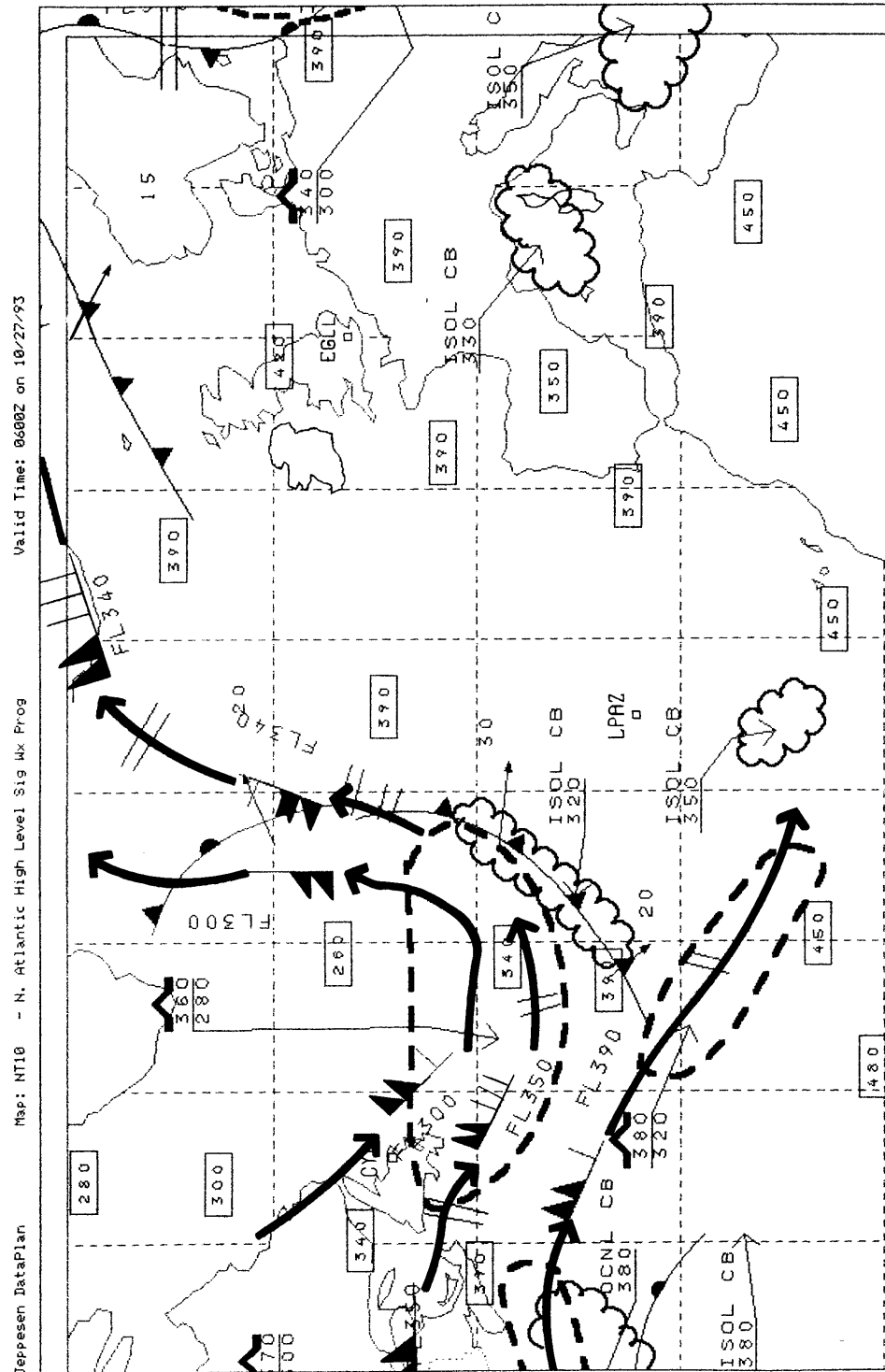
LOFT FFS TAKE-OFF DATA PARIS ORLY / TOULOUSE				
INIT PAGE CO RTE ORYTLS ALTN/CO RTE FLT NBR [Airline ID] 260 LAT 4843.6N COST INDEX 30 CRZ FL/TEMP FL 370 / -57°C FROM/TO LFPO/LFBO LONG 00222.2E TROPO		TRIP DIST 325 NM CRZ WIND 320°/15 kt ALTN LFBD ALTN DIST 116 NM FL to ALTN 240		ATIS RWY 08 WIND 180°/16 kt VISI Over 10 km CEILING 1500 ft TEMP 6°C DEW POINT ... 1°C QNH 1007 hPa/29.73 inHg QFE 997 hPa/29.44 inHg RWY COND ... DRY Observations : ORY / CDG closed after take-off due to strike
INIT NEXT PAGE ZFCG/ZFW 37.5%-57.8 t 37.5%-127 200 lb BLOCK	PERF PAGE IAE CFM V1 VR V2 FLEX DRT	T/O FLAPS T/O C.G. 35.5% TOGA FLEX DRT	NOTE : Parking POS E 08 SID PTV 7V - PTV UB 31 - BELPA UG 365 - AULON 2N ALTN : DCT - AGN - STAR MIRBA 4	

LOFT FFS - SURFACE



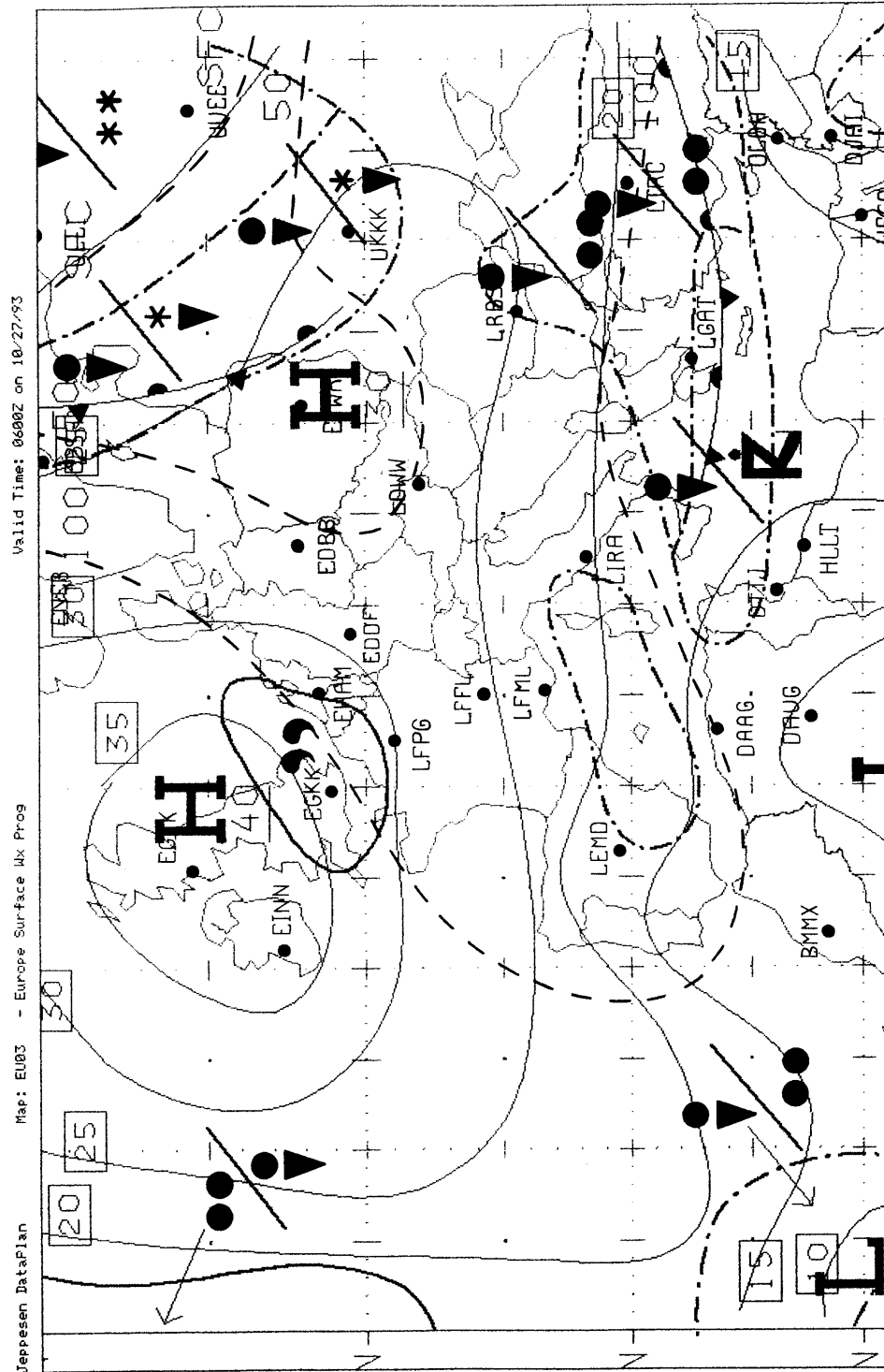
(SURFACE1.PCX)

LOFT FFS - SURFACE



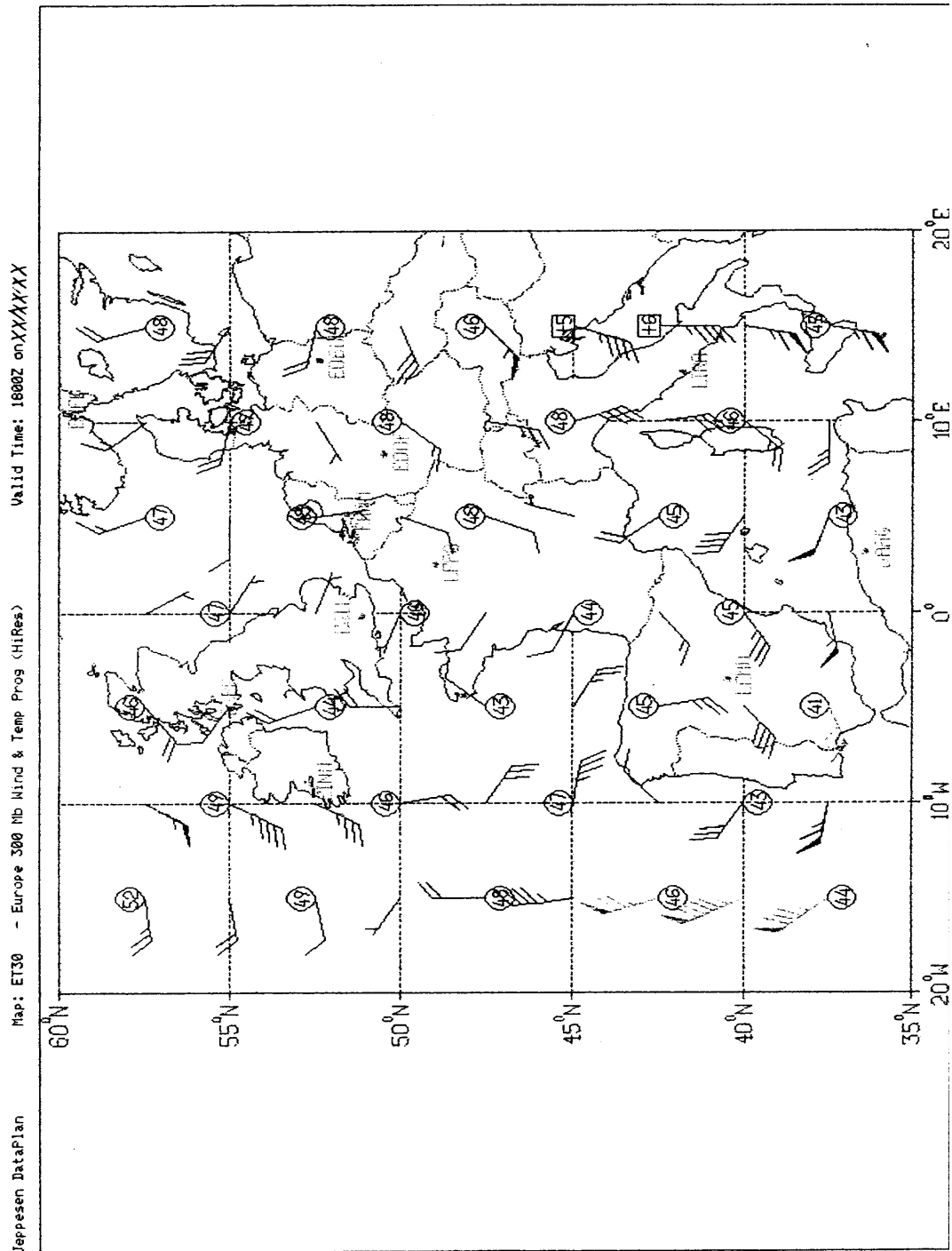
(SURFACE2.PCX)

LOFT FFS - SURFACE



(SURFACE3.PCX)

LOFT FFS - FLIGHT DATA 1



(WIND1.PCX)

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	UPGRADING OF F/O TO CAPTAIN (Simulator phase 2 ONLY) TRAINING SYLLABI	2.21.03 Page 8E E F21 REV 21 MAY 98
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LOFT FFS - FLIGHT DATA 2

T/EU03 - XX/XX/XX, 21:39:56

LOW LEVEL SURFACE WEATHER PROG FOR EUROPE, THE MIDDLE
EAST AND NORTH AFRICA.

SOLID LINES ENCLOSE AREAS OF CONTINUOUS PRECIPITATION.
 DOT DASH LINES ENCLOSE AREAS OF SHOWERY PRECIPITATION.
 DOTTED LINES WITHIN PRECIPITATION AREAS DIVIDE LIQUID FROM SOLID
 PRECIPITATION. IF A PRECIPITATION AREA IS COVERED BY VERTICAL
 SHADING, THEN HALF OR MORE OF THIS AREA IS EXPECTED TO EXPERIENCE
 PRECIPITATION AT ANY ONE TIME. IF A PRECIPITATION AREA IS NOT
 COVERED BY VERTICAL SHADING, THEN LESS THAN HALF OF THIS AREA IS
 EXPECTED TO EXPERIENCE PRECIPITATION AT ANY ONE TIME.

A SINGLE DOT MEANS INTERMITTENT RAIN.
 TWO DOTS SIDE BY SIDE MEANS CONTINUOUS RAIN.
 AN ASTERICK MEANS INTERMITTENT SNOW.
 TWO ASTERICKS SIDE BY SIDE MEANS CONTINUOUS SNOW.
 A CURL WITH A DOT UNDERNEATH MEANS FREEZING RAIN.
 AN INVERTED TRIANGLE WITH A DOT OR ASTERIC ON TOP
 MEANS RAIN SHOWERS OR SNOW SHOWERS RESPECTIVELY.
 A COMMA MEANS DRIZZLE.
 A 'K' WITH A LINE OVER IT AND AN ARROW AT THE END
 MEANS THUNDERSTORM. IF THE TOP LINE HAS A DOT OVER IT,
 THIS MAKES IT A THUNDER SHOWER.
 A THIN SOLID LINE DEPICTS ISOBARS AT 8 MB INTERVALS LABELED
 WITH A TWO DIGIT PRESSURE VALUE INSIDE A BOX.
 A H OR L DEPICTS A HIGH OR LOW RESPECTIVELY WITH THE CENTRAL
 PRESSURE GIVEN IN A TWO DIGIT NUMBER BELOW THE FEATURE AND
 UNDERLINED.

THE FOLLOWING WEATHER MAP IS A FORECAST BASED ON DATA ANALYZED
 APPROXIMATELY 8-12 HOURS PRIOR TO THE INDICATED VALID TIME.
 FORECASTS ARE MADE FOR VALID TIMES 0600Z AND 1800Z.

&+&+

M/EU03 - XX/XX/XX, 08:06:21

&+&PMAP

(SURFTXT.PCX)

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	UPGRADING OF F/O TO CAPTAIN (Simulator phase 2 ONLY) TRAINING SYLLABI	2.21.03 Page 8F E F21
		REV 21 MAY 98

LOFT FFS - FLIGHT DATA 3

"@\$@\$

PLAN1190 LFPO TO LFBO A320 M79 / F IFR 28/11/96
NONSTOP COMPUTED 10:55 FOR ETD 13:00 PROGS 280000Z KGS

ATTN CAPT

FLT RELEASE LFPO / LFBO ON 28/11/96

FTL / DAY	ORG / DEST	TTL NAM	PRF	ROUTE	AVG WIND /	AVG TEMP
/ 28	LFPO / LFBO	0323		RAP	P011	/ M057
	E. FUEL	A. FUEL	E. TIME	NM	NAM	FL
DEST LFBO	003100	.....	00 / 48	0331	0323	370
RESV 0.05	000155	.....	00 / 04			
ALT LFBD	001600	.....	00 / 21	0116	0113	140
HOLD	001040	.....	00 / 30			
ETOPS RES	000000	.....	00 / 00			
ETOPS XPRT	000000	.....	00 / 00			
XTR	000000	.....	00 / 00	CAPT. SIGN	.....	
TOF	005895	.....	01 / 43			
TAXI	000200	CORR.	+ / -			
BLOCK	006095	.....	01 / 43	BLOCK FUEL	.....	

FUEL BURN ADJUSTMENT FOR 4000FT DECREASE IN ALTITUDE : KGS

FUEL BURN ADJUSTMENT FOR 1000 KG DECREASE/INCREASE IN TOW : 10 KGS

	E. WT	CORR.	OP. LIMIT	STRUC.	REASONS FOR OP. LIMIT
BASIC WT	043000	.....			
EPLD	014760	.....			
EZFW	057760	.....	ZFW . . . . .	/	.....
TOF	005895	.....			
ETOW	063655	.....	OTOW . . . . .	/	.....
EB / O	003100	.....			
ELAW	060555	.....	LAW . . . . .	/	.....

LFPO PTV7V PTV UB31 BELPA UG365 AULON AULN2N LFBO

BLOCK IN LDG FU1

BLOCK OFF T. OFF FU2

BLOCK TIME F. TIME FU3

(FFS-LOAD.VPO)

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	UPGRADING OF F/O TO CAPTAIN (Simulator phase 2 ONLY) TRAINING SYLLABI	2.21.03 Page 8G <i>E F21</i>
		REV 21 MAY 98

LOFT FFS - FLIGHT DATA 4

WPT AWY	FLT MSA	WIND OAT	TAS GS	OTT ITT	OMT IMT	DST RDST	NAM RNAM	E.T C.T	E. TA A. TA	ECBO ACBO	EFOB AFOB	E. WT
LFPO ELEV 0292 FT												
D164T	...	.../...	..	154	155	014	014	0003	....	000.4	005.7	063.3
PTV7V	...	...		154	155	0317	0308	0003	....	....	....	....
PTV	...	.../...	..	208	210	034	033	0005	....	001.4	004.7	062.3
UB31	...	...		208	210	0283	0275	0008	....	....	....	....
CAROS			..	183	185	068	066	0010	....	001.8	004.3	061.9
UB31				183	185	0215	0209	0018	....	....	....	....
TOC	370	019 / 030	396	183	185	016	016	0002	....	002.1	004.0	061.6
UB31	040	M55	426	183	185	0199	0193	0020	....	....	....	....
LCA	370	019 / 030	449	183	185	004	004	0001	....	002.3	003.8	061.4
UB31	040	M54	478	183	185	0195	0189	0021	....	....	....	....
GUERE	370	020 / 031	450	185	187	030	029	0004	....	002.6	003.5	061.1
UB31	087	M54	480	185	187	0165	0160	0025	....	....	....	....
TOD	370	021 / 034	450	185	187	054	051	0007	....	003.0	003.1	060.7
UB31	087	M55	483	185	187	0111	0109	0032	....	....	....	....
BELPA	...	.../...	..	185	187	018	018	0003	....	003.0	003.1	060.7
UB31	...	...		185	187	0093	0091	0035	....	....	....	....
AULON	...	.../...	..	199	201	039	037	0006	....	003.2	002.9	060.5
UG365	...	...		199	201	0054	0054	0042	....	....	....	....
LFBO	...	.../...	..	...	...	0054	054	009	....	003.4	002.7	060.3
AULN2N	...	...		...	...	0000	0000	0051	....	....	....	....
..	...	.../...	..	...	...	...	...	...				
..	...	...		...	...	...	...	...				
..	...	.../...	..	...	...	...	...	...				
..	...	...		...	...	...	...	...				

WP	NAME	CO-ORDINATES	WP	NAME	CO-ORDINATES
..	LFPO	N48 43.4 E002 22.8	..	D164T	N48 39.6 E002 37.2
..	PTV	N48 09,3 E002 15,9	..	CAROS	N47 01,2 E002 57,8
..	TOC		..	LCA	N46 41.5 E002 09.1
..	GUERE	N46 11.4 E002 05.4	..	TOD	
..	BELPA	N44 59.5 E001 56.7	..	AULON	N44 22.7 E001 38.8
..	LFBO	N43 37.4 E001 22.9			

END OF DATAPLAN
 REQUEST NO .. 1190
 (FFS-FPLN.VPO)

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	UPGRADING OF F/O TO CAPTAIN (Simulator phase 2 ONLY) TRAINING SYLLABI	2.21.03 Page 8H E F21
		REV 21 MAY 98

LOFT FFS - FLIGHT DATA 5

PLAN 2676

METPLAN WEATHER

XX/XX/XX

-

SURFACE OBSERVATION

LFPO	XX/XX/XXZ	18016KT	9999	BKN015	06/03	Q1007	NOSIG
LFPG	XX/XX/XXZ	06014KT	9999	FEW12	SCT015	05/03	Q1007 NOSIG
EBBR	XX/XX/XXZ	0703KT	8000	SCT100	07/06	Q1009	NOSIG

FLIGHT PLAN DEPARTURE INFORMATION

TERMINAL FORECAST

LFPO XX/XX/XXZ XXXXXX 13005KT 8000 SCT030 BECMG 0003 4000 BR SCT010 TEMPO
 XXXX 1500 VCFG BKN 005 BECMG 0709 16005KT CAVOK
 LFPG NIL
 EBBR XX/XX/XXZ XXXXXX 04005KT 5000 BR SCT008 BKN 015 PROB 30 TEMPO XXXX
 1500 BR BKN 005

NOTAM

LFPO ARPT SUBJECT TO CLOSURE AT SHORT NOTICE DUE TO GROUND CONTROLLERS STRIKE.

PIREPS

NONE REPORTED

FLIGHT PLAN - HAZARD TO FLIGHT INFORMATION

CONVECTIVE SIGMETS/SIGMETS

LFPG SIGMET SST 3 VALID XX XX XX XX LFPO ON UIR FRANCE MOD TO SEV TURB FCST
 BLW FL 360 ON SE QUAD OF UIR FRANCE MOV W 10KT NC

FLIGHT PLAN EN ROUTE INFORMATION

SURFACE OBSERVATION

LFPV NIL
 LFOJ NIL

TERMINAL FORECAST

NONE AVAILABLE

WINDS/TEMPERATURES ALOFT FORECASTS

FD DATA BASED ON XX XX XX Z

VALID XX XX XX Z FOR USE XX XX XX Z TO XX XX XX Z

12000	18000	24000	30000	34000	39000
4634N-00194E					
2109M03	2212M14	2006M28	3105M41	3419M48	3623M51
4501N-00166E					
2408M03	2512M15	2911M26	3518M39	3224M46	3423M51

(NOTAMS1.PCX)

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	UPGRADING OF F/O TO CAPTAIN (Simulator phase 2 ONLY) TRAINING SYLLABI	2.21.03 Page 81 <i>E F21</i>
		REV 21 MAY 98

LOFT FFS - FLIGHT DATA 6

FLIGHT PLAN ARRIVAL INFORMATION

SURFACE OBSERVATION

LFBO XX XX XX Z 03002KT 1500 SCT 003 BKN 005 15/13 Q1005 NOSIG

TERMINAL FORECAST

LFBO XX XX XX Z XX XX XX 04005KT 2000 BR BKN 003 OVC 008 BECMG XX XX OVC 003

LFBD XX XX XX Z XX XX XX 05020KT 8000 OVC 020 BKN 050 TEMPO XXXX 9999 BKN 020

NOTAMS

TOU VOR ON TEST. DISREGARD ALL INFORMATION.

RWY 15L/33R CLSD UFN WIP.

ILS RWY 33L UNSERVICEABLE

SURFACE OBSERVATION

LFBD XX XX XX Z XX XX XX 06015KT 8000 OVC 020 BKN 050 14/11 Q1004 NOSIG

NOTAMS

VOR TAC APP RWY 05 IS PROHIBITED FROM XX XX XX Z TO XX XX XX Z DUE TO MILITARY ACTIVITY SOUTH OF AIRPORT.

PIREPS

NONE REPORTED

(NOTAMS2.PCX)

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	UPGRADING OF F/O TO CAPTAIN (Simulator phase 2 ONLY) TRAINING SYLLABI	2.21.03 Page 8J <i>E F21</i> REV 21 MAY 98
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NOTE : *LOFT briefing + F/PLN decode keys : refer to FCTM Vol 1 - "Normal Operations Briefings" chapter*

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	UPGRADING OF F/O TO CAPTAIN (Simulator phase 2 ONLY) TRAINING SYLLABI	2.21.03 Page 8K <i>E F21</i>
		REV 21 MAY 98

LOFT FFS SESSION GUIDE - Standard Crew -

01 - BRIEFING TOPICS

- CRM issue : Decision making
- The instructor will present dispatch release documents to trainees in the briefing room and give a general briefing on the conduct of the loft session. At this stage, he will answer questions and clarify any points trainees may have regarding documentation.
- He will take the role of dispatcher and action the trainee crew decisions regarding extra fuel, deferred items, etc... Once the crew has entered the simulator, the instructor will communicate with them as required, in the role of ground mechanic, ATC, cabin crew or company agent.
- Any malfunction actuated must be allowed to continue either to corrective action by the crew or to final landing and arrival at the gate for parking.
- Except in the event of simulator problems, the instructor must not interrupt the crew in any way, particularly concerning crew decisions and actions.

02 - SESSION OBJECTIVE

- This session is to demonstrate a real time flight with real time problems.
- After lift off, only two failures will be permitted (see session guide) :
 - One malfunction is mandatory during climb and must be kept to the top of descent (see malfunction list).
 - One other failure is permitted during the flight. The failures must be taken from the malfunction list.
Second failure can be inserted enroute to the destination or the alternate.
- Flight from LFPO - PARIS ORLY to LFBO - TOULOUSE BLAGNAC.
- Departure with a deferred item.
- Landing in TOULOUSE becomes impossible.
- Diversion to LBD - BORDEAUX MERIGNAC.

03 - SESSION PROFICIENCY CRITERIA

(NIL)

INSTRUCTOR ONLY

INSTRUCTOR ONLY

LOFT FFS SESSION GUIDE (CONT'D)
- Standard Crew -

04 - SESSION GUIDE

■ IN THE BRIEFING ROOM :

The crew must be provided with documents required for the flight :

COMPUTERIZED FLIGHT PLAN (CFP) :

CFP should be checked by the crew before the flight, and fuel corrections may be made by the captain.

Block fuel may be increased due to weather and NOTAMS.

MET REPORTS :

Weather should be analysed, wind and temperature at FL 370 to be inserted into MCDU during cockpit preparation.

XXXXXX Z indicates that day and time of weather data are valid for the intended flight period.

NOTAMS :

Should be analysed and inoperative VOR's deselected during cockpit preparation (TOU VOR on test).

TECHNICAL LOG BOOK : (SEC 3 FAULT - MANDATORY malfunction)

Crew should analyse deferred item, using pages from FCTM (MMEL chapter) :

- T/O with full thrust must be performed,
- MTOW must be reduced,
- T/O speed corrections must be applied,
- Landing distance must be increased by 10% and
- C/B SEC 3/SPLY ---- Q19 must be pulled.

LOAD AND TRIM SHEET :

Should be analysed and corrected if necessary (e.g. : increased block fuel)

- Stress that ideal CG = 33% and when T/O CG is lower than 27% MAC the basic performance must be corrected (see FCOM VOL 2).

- With AFT CG and crosswind, special T/O procedure should be applied (see SOP A320).

INSTRUCTOR ONLY

INSTRUCTOR ONLY

LOFT FFS SESSION GUIDE (CONT'D)
 - Standard Crew -

04 - SESSION GUIDE (CONT'D)

■ IN THE BRIEFING ROOM (END)

TAKE-OFF PERF TABLES

Crew should define T/O configuration, T/O speed and accelerat. alt. (FLX T/O is NOT allowed. Therefore see FCTM - Chapter MMEL).

- If the crew has NOT completed PERF CRS yet, the instructor will define all TAKE-OFF DATA as shown below :

BLOCK FUEL	TOW	T/O THRUST	T/O CONF	V1	VR	V2	1 ENG OUT ACC ALT
6.1 t	63.9 t	TOGA	2	140 kt	142 kt	143 kt	1500 FT QNH
(1)	-	See FCTM Chapter MMEL	-	143-3 See FCTM Chapter MMEL	143-1 See FCTM Chapter MMEL	144-1 See FCTM Chapter MMEL	is between MINI and MAXI accel. alt.

(1) Block fuel may be increased due to weather, notams, low holding fuel in CFP, possible lower cruise flight level as determined by the crew.

■ PREFLIGHT :

Select malfunction : **SEC 3 INOP (MANDATORY)**.

When engine n° 2 is stabilized after start, select **APU FAULT (OPTIONAL)**.

TAKE-OFF DATA

ATIS : see T/O data page, insert turbulence level 30%.

Enter T/O data according to the crew preparation, or instructor definition (if crew has not completed performance course).

PARKING GATE POSITION

Aircraft is parked at Gate D08 (Coordinates : N 4843.6 E 0222.2).

Set left window visual ON, press INIT GATE.

Check that gate coordinates have been entered and cross checked by the crew.

LOFT FFS SESSION GUIDE (CONT'D)
- Standard Crew -

04 - SESSION GUIDE (CONT'D)

■ PREFLIGHT (END) :

INITIAL CALL

ORLY FLIGHT DATA (Cpt) 121.05

"[Airline ID] XXX - information ... , are you ready for clearance ?"

DEPARTURE CLEARANCE

"[Airline ID] XXX - ATC clearance from LFPO to LFBO FL 370 via PTV ... departure, flight planned route, squawk A0304, call Orly Ground 121.70 for start and push."

ENGINE START

ORLY GROUND 121.70

When start and push requested :

"[Airline ID] XXX - start and push approved, QNH 1007, call ready for taxi."

Select malfunction : **APU FAULT** when engine n° 2 is stabilized (OPTIONAL).

NOTE : *Because of APU FAULT cross bleed eng start is required. Check that proper procedure is being used (FCOM VOL 3) and MMEL consulted (See FCTM - Chapter MMEL).*

■ PUSH BACK AND TAXI :

ORLY GROUND 121.70

Push back NOSE pointing LEFT.

When taxi requested :

"[Airline ID] XXX - taxi to holding position RWY 08 and change to TWR 118.70."

The aircraft is released at push back completion on HDG 310°.

Set CAVOK and TWILIGHT visual. Taxi to the left of the apron on HDG 260 until reaching RWY 08 on the left hand side, slightly after abeam on RWY 08 threshold.

Set HIRL intensity to level 5 on visual page.

INSTRUCTOR ONLY

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AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	UPGRADING OF F/O TO CAPTAIN (Simulator phase 2 ONLY) TRAINING SYLLABI	2.21.03 Page 80 E F21
		REV 21 MAY 98

LOFT FFS SESSION GUIDE (CONT'D) - Standard Crew -

04 - SESSION GUIDE (CONT'D)

■ TAKE-OFF :

ORLY TOWER 118.70

At holding point and ready for line up and T/O - T/O clearance :

"[Airline ID] XXX - after take-off, maintain 220 kt until intercepting BT radial 164°, wind 180°/16 kt, RWY 08 - cleared for take off "

- Check how speed restriction is inserted as a constraint.
- Check that for combination of crosswind and aft C/G, PF applied full fwd side stick, and moved thr. levers progressively to reach FLX/TOGA gate at 40 kt (see A320 SOP).
- Check that noise abatement restrictions are respected (Maintain RWY centerline and acceleration alt. is 3000' AAL).

■ AFTER TAKE-OFF - CLIMB:

ORLY TOWER 118.70

Crew is after T/O and reporting airborne and passing current ALT :

"[Airline ID] XXX - airborne at ... , change Orly Departure 127.75."

NOTE : *Check how the crew is operating with RMP's.*

ORLY DEPARTURE 127.75

Crew reports on FRQ, passing ... ft :

"[Airline ID] XXX - radar contact, passing FT. Climb to FL 210 initially, speed restrictions terminated."

NOTE : *Check how speed restrictions 220 kt and 250 kt are cleared. Crew reports approaching FL 210.*

"[Airline ID] XXX - maintain FL 210 and change to Paris Control 125.45."

INSTRUCTOR ONLY

INSTRUCTOR ONLY

LOFT FFS SESSION GUIDE (CONT'D)
- Standard Crew -

04 - SESSION GUIDE (CONT'D)

■ **AFTER TAKE-OFF - CLIMB (END)**

PARIS CONTROL 125.45

Crew reports on FRQ, maintaining FL 210 :

"[Airline ID] XXX - radar contact. Climb to FL 290 - will be your final level, expedite climb until passing FL 280."

NOTE : *Check level change on progress page. Check exp. climb (not recommended abv FL 250 [See FCOM 4.05.40])*

Crew reports out of FL 280, if not, instructor mentions it :

"[Airline ID] XXX - resume normal climb to FL 290, and contact Bordeaux Control 133.75."

NOTE : *Insert malfunction in climb, preferably at the end of climb phase (mandatory). FL 290 and FL 410 are the only FL available for cruise due to airspace restriction (Preferably HYD G RSVR OVHT).*

■ **CRUISE:**

BORDEAUX CONTROL 133.75

Crew reports on FRQ and reaching, maintaining FL 290 :

"[Airline ID] XXX - radar contact, maintain FL 290, proceed from present position direct LMG, AULON next, flight planned route and call ready for descent."

Check that crew reviews revised fuel predictions after reclearance.

Enter moderate turbulence (50%) and check that crew applies turbulence penetration procedure.

If necessary increase turbulence to 80%.

At instructor discretion insert second malfunction in cruise.

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AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	UPGRADING OF F/O TO CAPTAIN (Simulator phase 2 ONLY) TRAINING SYLLABI	2.21.03 Page 8Q E F21
		REV 21 MAY 98

LOFT FFS SESSION GUIDE (CONT'D) - Standard Crew -

04 - SESSION GUIDE (CONT'D)

■ DESCENT :

BORDEAUX CONTROL 133.75

NOTE : *Check that TOU VOR has been failed*

The following weather for LFBO should be inserted :
030°/02 kt 1500 OVC 003 15/6 QNH 1005 NOSIG.

BORDEAUX CONTROL 133.75

Crew reports ready for descent :

"[Airline ID] XXX - for further change Bordeaux Control 129.40."

BORDEAUX CONTROL 129.40

Crew reports on FRQ, current FL and ready for descent :

"[Airline ID] XXX - radar contact squawk A0304 ident, proceed inbound AULON and descend to FL 150."

Crew reports reaching and maintaining FL 150 :

"[Airline ID] XXX - copied, change to Toulouse Radar 129.30."

TOULOUSE RADAR 129.30

Crew reports on FRQ, approaching AULON and maintaining FL 150 :

"[Airline ID] XXX - radar contact continue inbound to NOPTA, descent to FL 070, number 4 for approach, expect 10 min delay over NOPTA, AULON ... arrival, ILS APPR 15R. "

NOTE : *Check that the crew has inserted the proper arrival and that they have checked holding LAST EXIT - UTC and holding LAST EXIT - FUEL (see FCOM 4.04.30 p 15).*

Crew reports reaching and maintaining FL 070 and is probably about to join the NOPTA holding :

"[Airline ID] XXX - roger, change Toulouse Approach 121.10."

INSTRUCTOR ONLY

INSTRUCTOR ONLY

LOFT FFS SESSION GUIDE (CONT'D)
- Standard Crew -

04 - SESSION GUIDE (CONT'D)

■ **APPROACH :**

TOULOUSE APPROACH 121.10

Crew reports on FRQ, maintaining FL 070 and considers to restore the G HYD system prior to commence approach normally at that stage :

"[Airline ID] XXX - you are Nr. 2, no delay expected, turn right HDG 240°, radar vectors ILS approach RWY 15R, descent to 4000 ft QNH 1005."

When about to approach LOC intercept and G HYD system has been resored normally by utilisation of the correct procedure during radar leg :

"[Airline ID] XXX - turn left HDG 190°, cleared to intercept the localiser, maintain 4000 ft for the time being you are still Nr. 2."

Keep aircraft at 4000 ft until reaching 9.3 TBS DME for G/S interception from above (Max 2 dots above). Watch preparation for stabilized approach principle.

"[Airline ID] XXX - cleared to approach RWY 15R, Nr. 1 now."

Check that crew is utilising proper procedure for G/S interception from above. At VAPP and V/S - 1500 ft/min, A/C should be established on G/S at approx 5.8 TBS/1900 ft RA.

When established on G/S (G/S* comes up) :

"[Airline ID] XXX - change Blagnac Tower 118.10."

BLAGNAC TOWER 118.10

Crew reports on FRQ, ILS 15R established :

"[Airline ID] XXX - Nr. 1, cleared to land RWY 15R, wind calm."

NOTE : At 1000 ft AGL insert G/S transmitter failure.

Check that G/A is initiated not later than LOC minimum (MDA 870 ft).

INSTRUCTOR ONLY

INSTRUCTOR ONLY

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	UPGRADING OF F/O TO CAPTAIN (Simulator phase 2 ONLY) TRAINING SYLLABI	2.21.03 Page 8S <i>E F21</i>
		REV 21 MAY 98

LOFT FFS SESSION GUIDE (CONT'D) - Standard Crew -

04 - SESSION GUIDE (CONT'D)

■ GO AROUND :

BLAGNAC TOWER 118.10

Crew reports on go around :

"[Airline ID] XXX - glide slope RWY 15R is out of service, follow standard missed approach procedure, maintain 4000 ft, change Toulouse Radar 121.10."

NOTE : *Landing in Toulouse becomes impossible because of :*

- Low cloud base and G/S failure,
- RWY 15L/33R is closed (see notam) and
- ILS 33L U/S (see notam).

■ DIVERSION (to LFBD) :

TOULOUSE RADAR 121.10

Crew reports on go around inbound NOPTA, maintaining 4000 ft and has normally decided after a brief review of the conditions to divert to ALTN airport LFBD :

"[Airline ID] XXX - from present position proceed direct AGN climb to FL 100 initially and contact Bordeaux Control 124.25."

BORDEAUX CONTROL 124.45

Crew reports on FRQ and inbound AGN, climbing to FL100 with decision to divert to LFBD and asking for further advise :

"[Airline ID] XXX - maintain FL 100 on reaching, squawk A5420, proceed AGN-MIRBA direct. Expect MIRBA arrival, ILS RWY 23, what is your requested level ?"

Check that crew considers use of optimum FL and is requesting further climb :

"[Airline ID] XXX - climb and maintain FL ... , report ready for descent."

ECAM amber caution L + R WING TK LO LVL may come on during diversion.
If G HYD SYS not restored and landing gear extended, FOB might not be sufficient to reach LFBD. Check crew awareness and freeze fuel if necessary to avoid negative impact on trainees of a inflight fuel starvation.

Insert the following weather for LFBD :
050 15 KT 9999 OVC 020 15/12 Q1005 NOSIG

INSTRUCTOR ONLY

INSTRUCTOR ONLY

LOFT FFS SESSION GUIDE (CONT'D)
- Standard Crew -

04 - SESSION GUIDE (CONT'D)

■ DESCENT AND APPROACH AT LFBD

BORDEAUX CONTROL 124.45

Crew is reaching TOD and reports ready for descend :

"[Airline ID] XXX - descend to FL 080 and contact Merignac Approach 121.20."

MERIGNAC APPROACH 121.20

Crew reports on FRQ, passing ALT, descending to FL 080 :

"[Airline ID] XXX - radar contact, proceed to MIRBA, expect MIRBA 4 arrival for ILS RWY 23 circle to land RWY 05" - (use of VOR TAC RWY 05 prohibited by NOTAM).

MERIGNAC APPROACH 121.20

Crew is approaching to MIRBA and shortly prior to passing :

"[Airline ID] XXX - inbound LIBRU descent to 5000 ft QNH 1004 BE next."

NOTE : Check that the crew has inserted proper arrival for ILS RWY 23 and that SEC-F/PLAN is prepared for CIRCLING APPCH RWY 05.

When passing LIBRU :

"[Airline ID] XXX - continue descent to 2000 ft, QNH 1004, proceed direct BE."

When passing BE :

"[Airline ID] XXX - cleared for ILS APPR RWY 23, report RWY in sight."

Set TWILIGHT visual and HIRL intensity 5, then set CAVOK when aircraft is below 2000 ft and established on ILS RWY 23.

When RWY in sight reported :

"[Airline ID] XXX - cleared for circling approach RWY 05, contact TWR 118.30."

INSTRUCTOR ONLY

INSTRUCTOR ONLY

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	UPGRADING OF F/O TO CAPTAIN (Simulator phase 2 ONLY) TRAINING SYLLABI	2.21.03 Page 8U E F21
		REV 21 MAY 98

LOFT FFS SESSION GUIDE (CONT'D)
 - Standard Crew -

04 - SESSION GUIDE (END)

■ DESCENT AND APPROACH AT LFBD (END)

MERIGNAC TOWER 118.30

Crew reports on FRQ and position :

Check that correct circling procedure is followed (Prohibited SE of RWY 05/23).

"[Airline ID] XXX - continue circling approach for RWY 05, report LH base."

NOTE : *Check that the crew has activated SEC F/PLAN for RWY 05, with the correct headwind for RWY 05.*

Crew reports on left hand base for RWY 05 :

"[Airline ID] XXX - cleared to land RWY 05 wind 050°/15 kt gustings 20 kt."

NOTE : *Check that managed speed is being used for the approach RWY 05 if SEC FPLN activated for that runway, or selected speed + wind correction if SEC FPLN not activated.*

■ AFTER LANDING AND PARKING:

MERIGNAC TOWER 118.30

Bordeaux SIM visual scenario is generic, therefore RWY will have to be left to the right. Aircraft has landed at RWY 05 and is on roll out

"[Airline ID] XXX - leave RWY at first taxiway to the right and call vacated."

Crew calls RWY 05 vacated :

"[Airline ID] XXX - change Merignac Ground 121.70."

MERIGNAC GROUND 121.70

Crew reports on FRQ and asks for taxi instructions :

"[Airline ID] XXX - follow green lights report at gate and marshaller contact." Thence.

INSTRUCTOR ONLY

INSTRUCTOR ONLY

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	UPGRADING OF F/O TO CAPTAIN (Simulator phase 2 ONLY) TRAINING SYLLABI	2.21.03 Page 8V E F21
		REV 21 MAY 98

LOFT FFS SESSION GUIDE (CONT'D) - Standard Crew -
--

05 - CHOISE OF MALFUNCTIONS

(A max of 2 malfunctions to be selected during the entire flight)

- COCKPIT PREPARATION

SEC 3 FAULT (MANDATORY) - Deferred item.

AND

APU FAULT (OPTIONAL) - Insert malfunction when ENG N° 2 is stabilized.

- CLIMB

NOTE : ONE failure is mandatory and must be kept on, up to the top of descent (TOD).

GREEN RSVR OVERHEAT

OR

FMGC 2 FAILURE (If crew attempts a reset, it will be successfull).

- CRUISE

R WING LEAK and PCK 1 OVERHEAT

NOTE : *Emerg. descent is required approx 5 min after PACK 1 OVERHEAT selection.*

OR

ENG FAILURE IN CRUISE - (No damage - Eng relight).

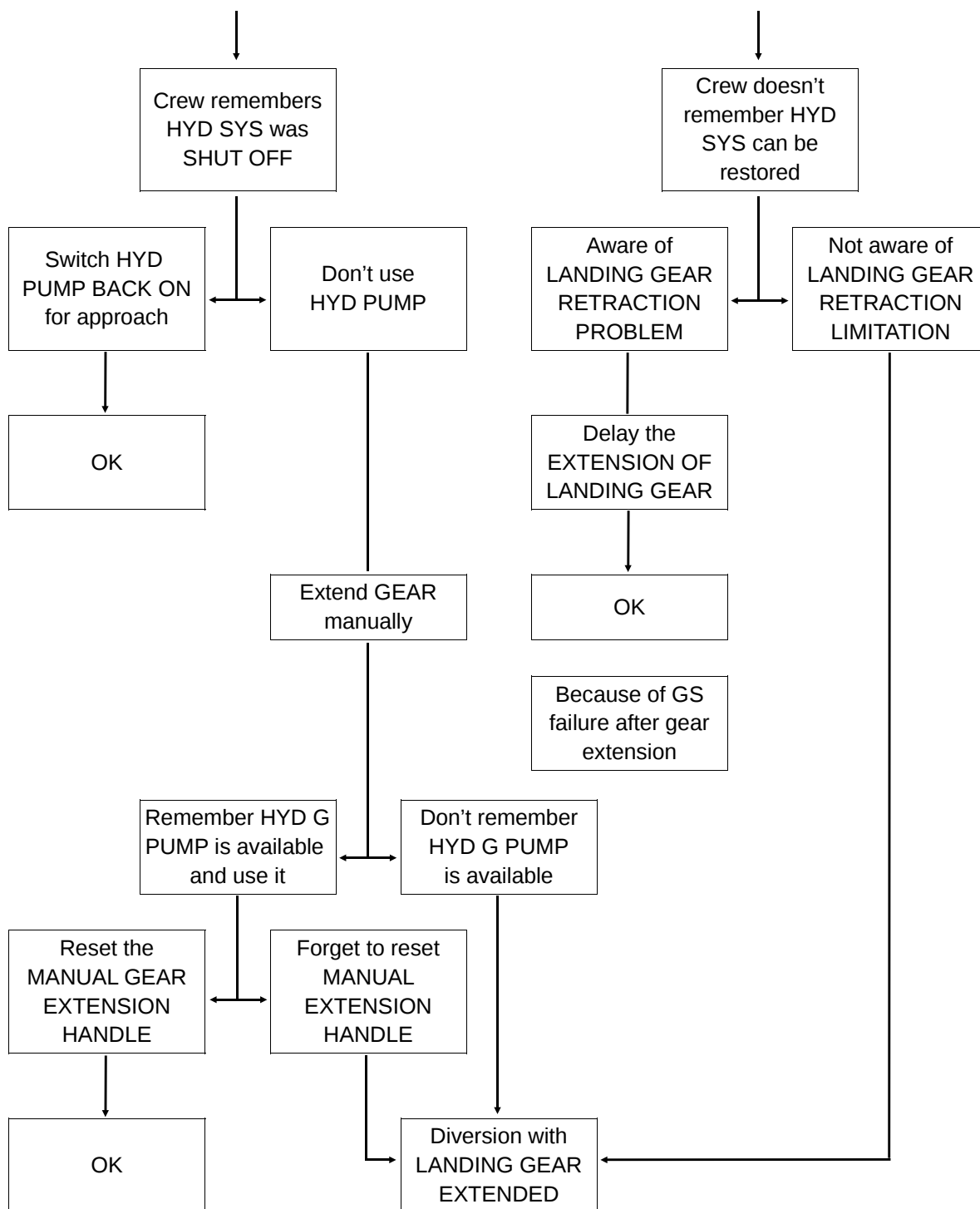
- DIVERSION

No failure, but ECAM amber caution L + R WING TK LO LVL might be triggered depending on remaining FOB.

LOFT FFS SESSION GUIDE (END) - Standard Crew -

05 - CHOICE OF MALFUNCTIONS (END)

If **RSVR OVERHEAT GREEN** is selected as malfunction, different scenarios are possible depending on the Crew proficiency :



LOFT FFS - APPENDIX 1

AAA K0FC-02-0140-005-A970AA

Mod : 20167+21615

CFM Eng : 56-S-A1

AIRBUS INDUSTRIE		LOAD and TRIM SHEET ANSETT		A320-211 VERSION 40FCB4YC OR 60BCB4YC																																																																													
DRY OPERATING WEIGHT <table border="1"> <tr> <td>W WEIGHT(kg)</td> <td>CG %MAC</td> </tr> <tr> <td>43.000</td> <td>26</td> </tr> <tr> <td colspan="2"> $I = \frac{(CG - 25) \times W}{20000} + 50$ </td> </tr> <tr> <td>DRY OPER. WEIGHT INDEX</td> <td>52,1</td> </tr> </table>		W WEIGHT(kg)	CG %MAC	43.000	26	$I = \frac{(CG - 25) \times W}{20000} + 50$		DRY OPER. WEIGHT INDEX	52,1	AIRCRAFT A-320 REGISTER: F-WWFT DATE: XX/XX/XX PREPARED BY: FLT N°: A1-02 KRALJ F. FROM: LFPO TO: LFB0		DRY OPERATING WEIGHT 43.000 WEIGHT DEVIATION 0 CORRECTED DRY OPER. WEIGHT 43.000 CARGO 3.960 PASSENGERS 10.800 ZERO FUEL WEIGHT 57.760 TOTAL FUEL 6.500 TOTAL WEIGHT 64.260																																																																					
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CAUTION : WHEN THE T.O CG IS LOWER THAN 27% MAC THE BASIC PERFORMANCE MUST BE CORRECTED : - T.O : Use appropriate RTOLW chart, or, make CG correction on QUICK REF TABLE - LDG : Make CG correction on LDG speed and distance.																																																																																	

A320
FLIGHT CREW TRAINING MANUAL
LOADING
WEIGHT and BALANCE
2.01.40 P 5/6

(EFCOM1.PCX)

L.O.E. FFS TAKE-OFF DATA - (LEG A) - LYON - TARBES				
INIT PAGE CO RTE N.A. ALTN/CO RTE N.A. FLT NBR [Airline ID] 212 LAT 4543.6N COST INDEX 30 CRZ FL/TEMP FL 350 / -56°C FROM/TO LFL/LFBT LONG 00504.9E TROPO DEFAULT		TRIP DIST 282 NM CRZ WIND 360°/85 kt ALTN LFBO ALTN DIST 65 NM FL to ALTN FL 240		ATIS RWY 18 R WIND 270°/12 kt VISI 1200 m CEILING OVC 1500 ft TEMP 8°C DEW POINT ... 4°C QNH 1019 hPa/30.10inHg QFE 989 hPa/29.20 inHG RWY COND ... WET Observations : AIR COND ON ANTI ICE ON Braking action medium
INIT NEXT PAGE ZFCG - ZFW 38.5%-55.9 t 38.5%-122980 lb BLOCK t lb	PERF PAGE IAE CFM V1 VR V2 FLEX DRT	T/O FLAPS T/O C.G. % TOGA FLEX —DRT—	NOTE: FPLN : LFL 18R MEN DEP G5 - GAI DIR AUCHE AUCHE ARR LFBT ILS 20 ALTN : LFBT 20 - TBO DEP - TBO ARR - LFBO VOR 33L	

L.O.E. FFS TAKE - OFF DATA
- (LEG B) -
TOULOUSE - MARSEILLE

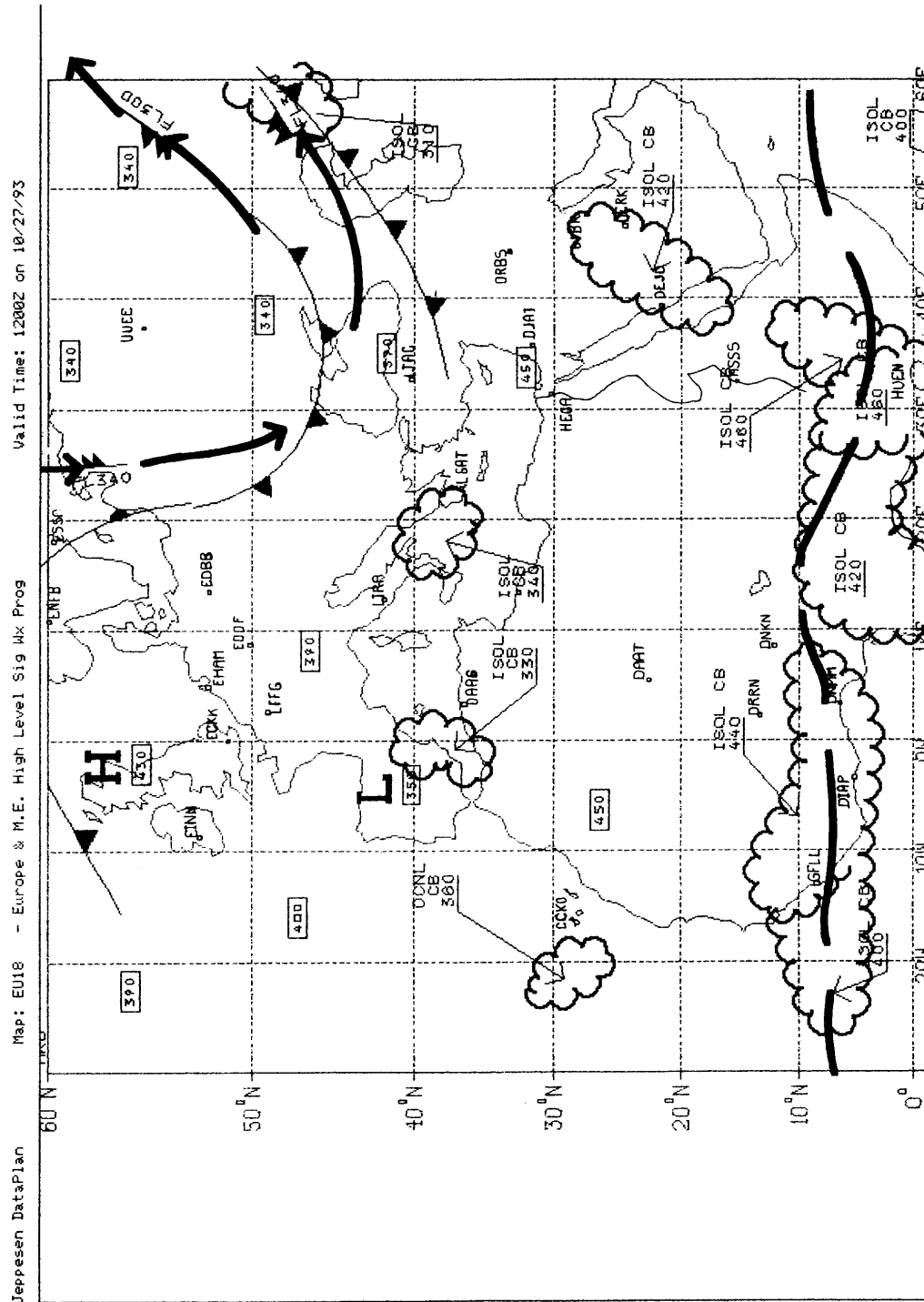
INIT PAGE		ATIS	
CO RTE	FROM/TO	TRIP DIST	RWY 15 R
N.A.	LFBO/LFML	213 NM	WIND 110°/12 - 25 kt
ALTN/CO RTE		CRZ WIND	VISI 2000 m
N.A.		300°/70 kt	CEILING BKN 1500 ft
FLT NBR		ALTN	TEMP 12°C
[Airline ID] 213		LFLL	DEW POINT ... 8°C
LAT	LONG	ALTN DIST	QNH 1018hPa/30.10inHg
4337.1N	00122.1E	138 NM	QFE 1000 hPa/29.53 inHg
COST INDEX		FL to ALTN	RWY COND ... DRY
30		FL 240	Observations : AIR COND ON
CRZ FL/TEMP	TROPO		ANTI ICE OFF
FL 290 / -45°C	DEFAULT		Braking action good

INIT NEXT PAGE	PERF PAGE	T/O FLAPS	NOTE:
ZFCG - ZFW	IAE CFM		FPLN :
38.5%-55.9 t	V1		LFBO 15R
38.5%-122980 lb	VR	T/O C.G.	PPG DEP
	V2	%	PPG
BLOCK		TOGA	PPG ARR
t	FLEX	FLEX	LFML NDB 14L
lb			ALTN : LFML 14L - MTL DEP - MTL -
		DRT	MTL ARR - LFLL ILS 36L

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	UPGRADING OF F/O TO CAPTAIN (Simulator phase 2 ONLY) TRAINING SYLLABI	2.21.03 Page 12 <i>E F21</i>
		REV 21 MAY 98

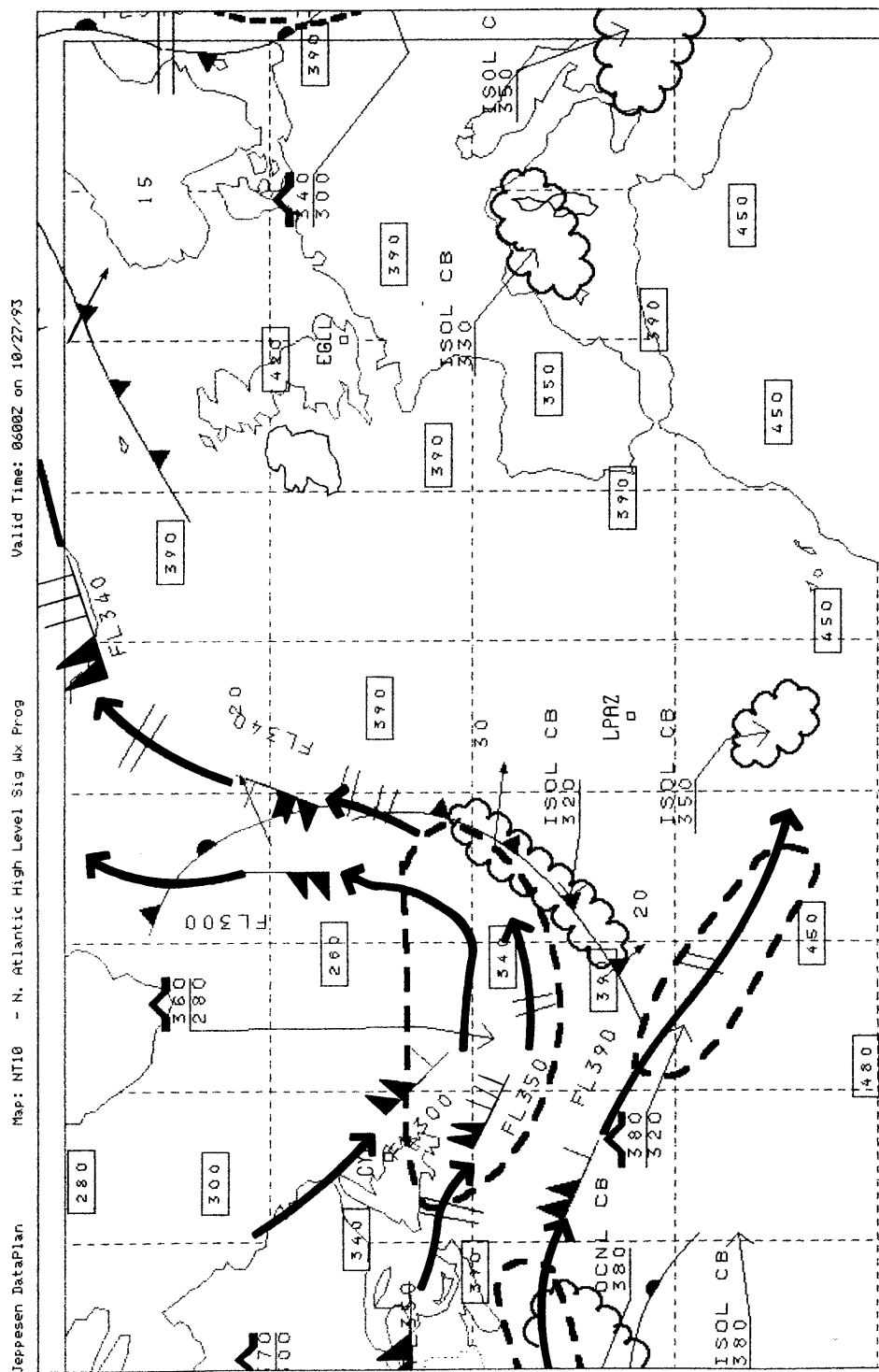
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L.O.E. FFS - METEO 1



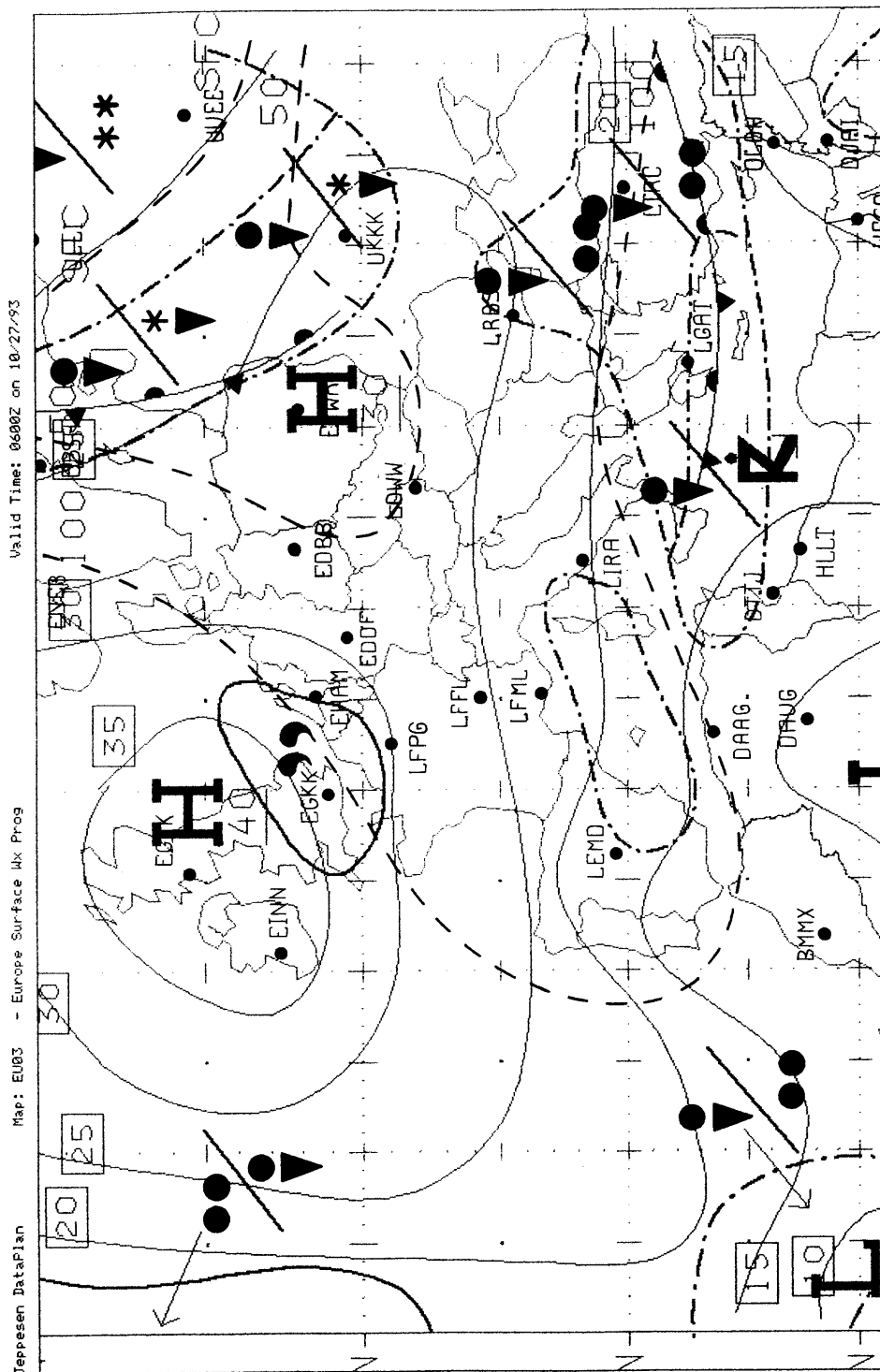
(SURFACE1.PCX)

L.O.E. FFS - METEO 2



(SURFACE2.PCX)

L.O.E. FFS - METEO 3



(SURFACE3.PCX)

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	UPGRADING OF F/O TO CAPTAIN (Simulator phase 2 ONLY) TRAINING SYLLABI	2.21.03 Page 12D E F21
		REV 21 MAY 98

L.O.E. FFS (LEG A) - FLIGHT PLAN

***** JAS SESSION Mon May 18 15:41:45 1998 j7067660.txt *****

PLAN 3541 LFLM TO LFBT A320 LRC/F IFR 05/18/98
 NONSTOP COMPUTED 1340Z FOR ETD 1000Z PROGS 1800ADF AIB320 KGS

ATTN CAPT. STRAUB
 FLT RELEASE AIB320 LFLM/LFBT ON 05/19/98

FLT/DAY	ORG /DEST	TTL NAM	PRF	ROUTE	AVG WIND/	AVG TEMP
AIB320 /19	LFLM/LFBT	0281	F	STRA	P004 /	M45

	E.FUEL	A.FUEL	E.TME	NM	NAM	FL
DEST LFBT	001741	...	00/45	0282	0281	290
RESV 0.05	000087	...	00/03			
ALT LFBO	000572	...	00/14	0066	0067	240
HOLD	000924	...	00/30			
ETOPS RES	000000	...	00/00			
ETOPS XPRT	000000	...	00/00			
XTR	000000	...	00/00	CAPT.SIGN		
TOF	003324	...	01/32	STRAUB		
TAXI	000300	CORR.	+ / -			
BLOCK	003624	...	01/32	BLOCK FUEL.		

FUEL BURN ADJUSTMENT FOR 4000FT DECREASE IN CRZ ALTITUDE : KGS

FUEL BURN ADJUSTMENT FOR 1000KGS INCREASE/DECREASE IN TOW : 0023 KGS

	E.WT	CORR.	OP.LIMIT	STRUC.	REASONS FOR OP.LIMIT
BASIC WT	042165	...			
EPLD	013735	...			
EZFW	055900	...	ZFW ... ..061000 /.		
TOF	003324	...			
ETOW	059223	...	OTOW ... ..073500 /.		
EB/O	001741	...			
ELAW	057482	...	LAW ... ..064500 /.		

LFLM MEN2N MEN UG5 GAI..LFBT

BLOCK IN LDG FU1 FU3

BLOCK OFF T.OFF FU2 FU4

BLOCK TIME F.TIME

WPT	FLT	WIND	TAS	OTT	OMT	DST	NAM	E.T.	E.TA	ECBO	EFOB.	E.WT.
AWY	MSA	OAT	GS	ITT	IMT	RDST	RNAM	C.T.	A.TA	ACBO	AFOB.	

LFLM ELEV 00820FT

D354F	...	.../...	353	354	005	005	0001	....	000.4	003.3	059.2
MEN2N	...	...	353	354	0277	0276	0001	....	.....	.....	.....

LSA	...	.../...	188	189	009	009	0002	....	000.5	003.1	059.0
MEN2N	...	...	188	189	0268	0267	0003	....	.....	.....	.....

MURRO	...	.../...	231	232	039	038	0007		001.0	002.6	058.5
MEN2N	...	...	230	232	0229	0229	0010				

(LOEA.PCX)

L.O.E. FFS (LEG A) - FLIGHT PLAN (END)

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TOC 290 345/024 344 231 232 011 011 0002 .... 001.2 002.4 058.3
MEN2N 081 M45 354 231 232 0218 0218 0012 .... .....

- - - - -
MEN 290 345/024 414 231 232 056 055 0008 .... 001.5 002.2 058.1
MEN2N 081 M45 423 231 233 0162 0163 0020 .... .....

- - - - -
GAI 290 332/024 413 236 238 070 069 0010 .... 001.8 001.8 057.7
UG5 081 M45 416 235 237 0092 0094 0030 .... .....

- - - - -
TOD 290 315/025 414 241 242 021 021 0003 .... 002.0 001.7 057.6
.. 092 M44 406 239 242 0071 0073 0033 .... .....

- - - - -
LFBT ... .../... ... 071 073 0012 .... 002.0 001.6 057.5
.. ... .. ... 0000 0000 0045 .... .....

- - - - -
WP NAME CO-ORDINATES WP NAME CO-ORDINATES
.. LFL  N45 43.5 E005 04.9 .. D354F N45 48.9 E005 04.5
.. LSA  N45 43.5 E005 05.4 .. MURRO N45 19.0 E004 22.8
.. MEN  N44 36.5 E003 09.7 .. GAI    N43 57.2 E001 49.5
.. LFBT N43 11.1 W000 00.2
- - - - -

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(FPL-AIB320-IX
-A320/M-SDHI/C
-LFLL1000
-N0414F290 DCT MEN UG5 GAI DCT
-LFBT0045 LFBO
-REG/9A-CTF SEL/XXXX
-E/0132 P/TBN R/VE S/M J/L D/06 C WHITE
A/WHITE
C/STRAUB)

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END OF JEPPESEN DATAPLAN
REQUEST NO. 3541

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(LOEA2.PCX)

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	UPGRADING OF F/O TO CAPTAIN (Simulator phase 2 ONLY) TRAINING SYLLABI	2.21.03 Page 12F E F21
		REV 21 MAY 98

L.O.E. FFS (LEG B) - FLIGHT PLAN

PLAN 3573 LFBO TO LFML A320 LRC/F IFR 05/18/98
NONSTOP COMPUTED 1341Z FOR ETD 1000Z PROGS 1800ADF AIB320 KGS

ATTN CAPT. STRAUB
FLT RELEASE AIB320 LFBO/LFML ON 05/19/98

FLT/DAY	ORG /DEST	TTL NAM	PRF	ROUTE	AVG WIND/	AVG TEMP
AIB320 /19	LFBO/LFML	0187	F	STRA	P029 /	M44

	E.FUEL	A.FUEL	E.TME	NM	NAM	FL
DEST	LFML 001296	...	00/32	0203	0187	290
RESV	0.05 000065	...	00/02			
ALT	LFL 001014	...	00/26	0138	0147	240
HOLD	000923	...	00/30			
ETOPS RES	000000	...	00/00			
ETOPS XPRT	000000	...	00/00			
XTR	000000	...	00/00	CAPT.SIGN		
TOF	003298	...	01/30	STRAUB		
TAXI	000300	CORR.	+ / -			
BLOCK	003598	...	01/30	BLOCK FUEL.		

FUEL BURN ADJUSTMENT FOR 4000FT DECREASE IN CRZ ALTITUDE : KGS

FUEL BURN ADJUSTMENT FOR 1000KGS INCREASE/DECREASE IN TOW : KGS

	E.WT	CORR.	OP.LIMIT	STRUC.	REASONS FOR OP.LIMIT
BASIC WT	042165	...			
EPLD	013735	...			
EZFW	055900	...	ZFW	061000 /.	...
TOF	003298	...			
ETOW	059198	...	OTOW	073500 /.	...
EB/O	001296	...			
ELAW	057902	...	LAW	064500 /.	...

LFBO PPG4A PPG PPG3B LFML

BLOCK IN LDG FU1 FU3

BLOCK OFF T.OFF FU2 FU4

BLOCK TIME F.TIME

WPT	FLT	WIND	TAS	OTT	OMT	DST	NAM	E.T.	E.TA	ECBO	EFOB.	E.WT.
AWY	MSA	OAT	GS	ITT	IMT	RDST	RNAM	C.T.	A.TA	ACBO	AFOB.	.....

LFBO ELEV 00499FT

TS	...	.../...	143	144	009	008	0002	....	000.4	003.2	059.1
PPG4A	...	...	143	145	0194	0179	0002	....	....	.....	.....

GALDO	...	.../...	142	144	019	017	0003	....	000.7	002.9	058.8
PPG4A	...	...	143	144	0175	0162	0005	....	....	.....	.....

TOU43	...	.../...	096	098	014	013	0002		000.9	002.7	058.6
PPG4A	...	...	097	098	0161	0149	0007				

(LOEB1.PCX)

L.O.E. FFS (LEG B) - FLIGHT PLAN (CONT'D)

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MORIL ... .../... 129 131 016 015 0003 .... 001.1 002.5 058.4
PPG4A ... .. 129 131 0145 0134 0010 .... .. .

- - - - -
TOC 290 301/035 344 130 132 007 006 0001 .... 001.2 002.4 058.3
PPG4A 120 M44 377 130 132 0138 0128 0011 .... .. .

- - - - -
PPG 290 301/035 415 130 132 023 021 0003 .... 001.3 002.3 058.2
PPG4A 120 M44 450 130 132 0115 0107 0014 .... .. .

- - - - -
TOD 290 303/037 415 078 080 041 039 0006 .... 001.5 002.1 058.0
PPG3B 120 M44 440 078 080 0074 0068 0020 .... .. .

- - - - -
SUBIL ... .../... 078 080 038 035 0006 .... 001.6 002.0 057.9
PPG3B ... .. 078 079 0036 0033 0026 .... .. .

- - - - -
BORG0 ... .../... 045 046 010 009 0002 .... 001.6 002.0 057.9
PPG3B ... .. 045 046 0026 0024 0028 .... .. .

- - - - -
LFML ... .../... ... 026 024 0004 .... 001.6 002.0 057.9
PPG3B ... .. 0000 0000 0032 .... .. .

- - - - -
WP NAME CO-ORDINATES WP NAME CO-ORDINATES
.. LFBO N43 38.1 E001 22.1 .. TS N43 30.4 E001 29.2
.. GALDO N43 15.6 E001 44.8 .. TOU43 N43 14.0 E002 04.2
.. MORIL N43 04.0 E002 21.0 .. PPG N42 45.0 E002 52.0
.. SUBIL N43 01.7 E004 36.5 .. BORG0 N43 08.8 E004 46.2
.. LFML N43 26.2 E005 12.9
- - - - -

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(FPL-AIB320-IX
-A320/M-SDHI/C
-LFBO1000
-N0415F290 DCT PPG DCT
-LFML0032 LFLL
-REG/9A-CTF SEL/XXXX
-E/0130 P/TBN R/VE S/M J/L D/06 C WHITE
A/WHITE
C/STRAUB)

```

END OF JEPPESEN DATAPLAN
 REQUEST NO. 3573
 (LOEB2.PCX)

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	UPGRADING OF F/O TO CAPTAIN (Simulator phase 2 ONLY) TRAINING SYLLABI	2.21.03 Page 12H E F21
		REV 21 MAY 98

L.O.E. FFS (LEG B) - FLIGHT PLAN (CONT'D)

PLAN 3604 LFBO TO LFML A320 LRC/F IFR 05/18/98
 NONSTOP COMPUTED 1344Z FOR ETD 1000Z PROGS 1800ADF AIB320 KGS

ATTN CAPT. STRAUB
 FLT RELEASE AIB320 LFBO/LFML ON 05/19/98

FLT/DAY	ORG /DEST	TTL NAM	PRF	ROUTE	AVG WIND/	AVG TEMP
AIB320 /19	LFBO/LFML	0213	F	STRA	P026 /	M45

	E.FUEL	A.FUEL	E.TME	NM	NAM	FL
DEST LFML	001416	...	00/36	0224	0213	290
RESV 0.05	000071	...	00/02			
ALT LFLL	001014	...	00/26	0138	0147	240
HOLD	000923	...	00/30			
ETOPS RES	000000	...	00/00			
ETOPS XPRT	000000	...	00/00			
XTR	000000	...	00/00	CAPT.SIGN		
TOF	003424	...	01/34	STRAUB		
TAXI	000300	CORR.	+ / -			
BLOCK	003724	...	01/34	BLOCK FUEL.		

FUEL BURN ADJUSTMENT FOR 4000FT DECREASE IN CRZ ALTITUDE : KGS

FUEL BURN ADJUSTMENT FOR 1000KGS INCREASE/DECREASE IN TOW : 0016 KGS

	E.WT	CORR.	OP.LIMIT	STRUC.	REASONS FOR OP.LIMIT
BASIC WT	042165	...			
EPLD	013735	...			
EZFW	055900	...	ZFW	061000 /.	
TOF	003424	...			
ETOW	059324	...	OTOW	073500 /.	
EB/O	001416	...			
ELAW	057908	...	LAW	064500 /.	

LFBO AFRI4A AFRIC..FJR..VARES VARES3 LFML

BLOCK IN LDG FU1 FU3

BLOCK OFF T.OFF FU2 FU4

BLOCK TIME F.TIME

WPT	FLT	WIND	TAS	OTT	OMT	DST	NAM	E.T.	E.TA	ECBO	EFOB.	E.WT.
AWY	MSA	OAT	GS	ITT	IMT	RDST	RNAM	C.T.	A.TA	ACBO	AFOB.	

LFBO ELEV 00499FT

D145H	...	.../...	143	145	004	004	0001	....	000.4	003.4	059.3
AFRI4	...	...	..	143	145	0220	0209	0001	....	.....	.....

D087L	...	.../...	033	035	012	012	0002	....	000.5	003.2	059.1
AFRI4	...	...	..	033	035	0208	0197	0003	....	.....	.....

FINOT	...	.../...	086	088	019	019	0003	....	000.8	002.9	058.8
AFRI4	...	...	..	087	088	0189	0178	0006	....	.....	.....

(LOEB3.PCX)

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	UPGRADING OF F/O TO CAPTAIN (Simulator phase 2 ONLY) TRAINING SYLLABI	2.21.03 Page 121 <i>E F21</i>
		REV 21 MAY 98

L.O.E. FFS (LEG B) - FLIGHT PLAN (END)

TOC	290	320/028	344	084	086	028	028	0005	....	001.2	002.5	058.4
AFRI4	054	M44	350	085	086	0161	0150	0011	....	....	....	....
AFRIC	290	320/028	415	084	086	009	009	0001	....	001.2	002.5	058.4
AFRI4	054	M44	430	085	086	0152	0141	0012	....	....	....	....
FJR	290	319/031	415	103	105	049	046	0007	....	001.5	002.2	058.1
..	054	M44	440	104	106	0103	0095	0019	....	....	....	....
VARES	290	317/034	414	106	109	016	015	0002	....	001.6	002.2	058.1
..	051	M45	443	107	108	0087	0080	0021	....	....	....	....
TOD	290	315/036	414	107	108	013	012	0002	....	001.6	002.1	058.0
VARES	028	M45	445	107	108	0074	0068	0023	....	....	....	....
RHONE	...	.../...	...	107	108	011	010	0002	....	001.6	002.1	058.0
VARES	...	...	..	107	108	0063	0058	0025	....	....	....	....
FJR46	...	.../...	...	110	111	006	006	0001	....	001.6	002.1	058.0
VARES	...	...	..	110	111	0057	0052	0026	....	....	....	....
D214Y	...	.../...	...	213	214	022	020	0004	....	001.7	002.1	058.0
VARES	...	...	..	213	214	0035	0032	0030	....	....	....	....
BORGO	...	.../...	...	044	045	009	008	0002	....	001.7	002.0	057.9
VARES	...	...	..	044	045	0026	0024	0032	....	....	....	....
LFML	...	.../...	...	...	...	026	024	0004	....	001.7	002.0	057.9
VARES	...	...	..	...	...	0000	0000	0036	....	....	....	....
WP	NAME	CO-ORDINATES				WP	NAME	CO-ORDINATES				
..	LFBO	N43	38.1	E001	22.1	..	D145H	N43	34.4	E001	25.3	
..	D087L	N43	41.7	E001	35.5	..	FINOT	N43	42.9	E002	01.8	
..	AFRIC	N43	46.5	E002	52.2	..	FJR	N43	34.8	E003	58.2	
..	VARES	N43	30.2	E004	19.4	..	RHONE	N43	23.2	E004	50.7	
..	FJR46	N43	21.1	E004	58.5	..	D214Y	N43	02.2	E004	46.6	
..	BORGO	N43	08.8	E004	46.2	..	LFML	N43	26.2	E005	12.9	

(FPL-AIB320-IX
 -A320/M-SDHI/C
 -LFBO1000
 -N0415F290 DCT AFRIC DCT FJR DCT VARES DCT
 -LFML0036 LFLL
 -REG/9A-CTF SEL/XXXX
 -E/0134 P/TBN R/VE S/M J/L D/06 C WHITE
 A/WHITE
 C/STRAUB)

END OF JEPPESEN DATAPLAN
 (LOEB4.PCX)

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	UPGRADING OF F/O TO CAPTAIN (Simulator phase 2 ONLY) TRAINING SYLLABI	2.21.03 Page 12J <i>E F21</i> REV 21 MAY 98
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NOTE : *LOFT briefing + F/PLN decode keys : refer to FCTM Vol 1 - "Normal Operations Briefings" chapter*

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	UPGRADING OF F/O TO CAPTAIN (Simulator phase 2 ONLY) TRAINING SYLLABI	2.21.03 Page 12K <i>E F21</i>
		REV 21 MAY 98

L.O.E. FFS (LEG A) - SESSION GUIDE

01 - BRIEFING TOPICS

- Standard LOFT briefing.
- Instructor will take the role of dispatcher and action the trainee crew decisions regarding extra fuel etc... Once the crew has entered the simulator, the instructor will communicate with them as required, in the role of ground mechanic, ATC, cabin crew or company agent.
- Except in the event of simulator problems, the instructor must not interrupt the crew in any way, particularly concerning crew decisions and actions.
- Performance Calculation.
- Non Precision Approach and Circling.
- Diversion to ALTN airport.
- Turbulence penetration procedure.

02 - SESSION OBJECTIVE

Crew should apply good crew coordination as PF and PNF within a Line Oriented Flight Training environment.

- This session is to demonstrate a real time flight with real time problems.
- 1st flight (Leg A) from LFLL - LYON / SATOLAS to LFBT - TARBES / OSSUN - LOURDES.
- Approach and Landing in LFBT are to be done as a Precision Approach and normal landing planning.
- Go around and diversion (weather below minimum - airport closed for certain period of time).
- Decision making and diversion to LFBO - TOULOUSE / BLAGNAC.

03 - SESSION PROFICIENCY CRITERIA

The trainees must be proficient in:

- Crew coordination (ACRM tasks),
- Decision making process,
- FMGS utilization,
- Radio communication and use of technical equipment (use of RMP and ACP) and
- A/C handling on all flight phases.

INSTRUCTOR ONLY

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AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	UPGRADING OF F/O TO CAPTAIN (Simulator phase 2 ONLY) TRAINING SYLLABI	2.21.03 Page 12L <i>E F21</i> REV 21 MAY 98
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L.O.E. FFS (LEG A) - SESSION GUIDE (CONT'D)

04 - SESSION GUIDE

■ IN THE BRIEFING ROOM :

The crew must be provided with documents required for the flight:

COMPUTERIZED FLIGHT PLAN (CFP) :

CFP should be checked by the crew before the flight, and fuel corrections may be made by the captain.

Block fuel may be increased due to weather and NOTAMS if applicable.

MET REPORTS :

Weather should be analysed, wind and temperature at FL 9000 m (FL 295) to be inserted into MCDU during cockpit preparation.

XXXXXX Z indicates that day and time of weather data are valid for the intended flight period.

NOTAMS :

Should be analysed and inoperative VOR's (if applicable) deselected during cockpit preparation (i.e. VOR on test).

- T/O with full thrust or flexible thrust should be performed,

LOAD AND TRIM SHEET

Should be analysed and corrected if necessary (e.g. : increased block fuel)

- Stress that ideal CG = 33% and when T/O CG is lower than 27% MAC the basic performance must be corrected (see FCOM VOL 2).

- With AFT CG and crosswind, special T/O procedure should be applied if applicable (see SOP A320).

L.O.E. FFS (LEG A) - SESSION GUIDE (CONT'D)

04 - SESSION GUIDE (CONT'D)

■ IN THE BRIEFING ROOM (END)

TAKE-OFF PERF TABLES

Crew should define T/O configuration, T/O speed and acceleration altitude.

- If the crew has NOT completed PERF CRS yet, the instructor will define all TAKE-OFF DATA as shown below (AIR COND ON / ANTI ICE OFF) :

BLOCK FUEL	TOW	T/O THRUST	T/O CONF	V1	VR	V2	ENG OUT ACC ALT
8.0 t (1)	62 t	IAE FLEX 52°C	2	152 kt	152 kt	152 kt	1000 ft QNH
8.0 t (1)	62 t	CFM FLEX 53°C	2	149 kt	149 kt	150 kt	1000 ft QNH

(1) Block fuel may be increased due to weather, notams, Low holding fuel in CFP, possible lower cruise flight level as determined by the crew.

■ PREFLIGHT :

TAKE-OFF DATA

ATIS : see T/O data page, insert turbulence level 10%.

Enter T/O data according to the crew preparation, or instructor definition (if crew has not completed performance course).

PARKING GATE POSITION

Aircraft is at Gate parking position (select MAP on IOS to validate LL).

Set left window visual ON, press INIT GATE.

Check that gate coordinates have been entered and cross checked by the crew.

AIRPORT INFORMATION AND WEATHER DATA (provided by operations office)

LFBT : ILS 20 240/15 1800 BKN1000 OVC 2000 18/16 Q1018 NOSIG DRY BRKNG ACT GOOD

LFBO : VOR 33L 240/20 2400 BKN1000 OVC2000 18/17 Q1018 NOSIG DRY BRKNG ACT GOOD

LFBD : ILS 23 240/15 750 R1000 OVC450 17/15 Q1018 RERA PROB 40 TS WET BRKNG ACT MED

LFLL : 18R 270/15 1200 OVC1500 8/4 Q1019 RESH NOSIG WET BRKNG ACT GOOD

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	UPGRADING OF F/O TO CAPTAIN (Simulator phase 2 ONLY) TRAINING SYLLABI	2.21.03 Page 12N E F21 REV 21 MAY 98
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L.O.E. FFS (LEG A) - SESSION GUIDE (CONT'D)

04 - SESSION GUIDE

■ PREFLIGHT (END) :

Crew is requested in accordance to a LMC to dispatch the a/c with 3 t extra cargo and has to decide whether it is possible or not, since the current fuel figures cannot be changed anymore without significant delay.

Note : *Because penalty ration is 23 kg / 1000 kg the expected extra fuel burn off will be $3 \times 23 = 66 + 5\%$ Rte Res. This needs to carry 70 kg extra fuel for 3 t extra cargo.*

INITIAL CALL

SATOLAS FLIGHT DATA (Cpt) 121.70

"[Airline ID] XXX - information ... , are you ready to copy your ATC ?"

DEPARTURE CLEARANCE

"[Airline ID] XXX - ATC clearance from LFLL to LFBT, FL 110 initially, flight planned route, MEN ... departure, level change enroute, squawk A3615, for push and start change SATOLAS GROUND 121.82."

■ ENGINE START AND PUSH BACK :

SATOLAS GROUND 121.82

When start and push requested:

"[Airline ID] XXX - start and push approved, QNH 1012, call ready for taxi."

■ AFTER PUSH BACK AND TAXI :

SATOLAS GROUND 121.82

Push back NOSE pointing proper direction.

When taxi requested:

"[Airline ID] XXX - taxi to holding position RWY 18R, via TWY's T5, T4, T3 and A3, due to digging works expect take-off from intersection A3, 2900 m remaining distance, at A3 holding change SATOLAS TOWER 120.45 and report ready for departure."

The before T/O check list to the line should have been completed prior to asking for line-up and take-off. When lining up the proper actions should be noticed and mentioned if necessary and the before T/O c/l below the line should be performed.

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	UPGRADING OF F/O TO CAPTAIN (Simulator phase 2 ONLY) TRAINING SYLLABI	2.21.03 Page 120 E F21 REV 21 MAY 98
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L.O.E. FFS (LEG A) - SESSION GUIDE (CONT'D)

04 - SESSION GUIDE (CONT'D)

■ AFTER PUSH BACK AND TAXI (END) :

Furthermore it should be noticed how the crew is dealing with the revised RWY length (new performance data) and insertion of the take-off shift into T/O PERF page. Upon arriving the holding position, the PNF should have been solved the problems. Instructor may prepare the crew during briefing on short notice concerning works in progress, since they do'nt have handsome performance data sheets in order to achieve the new performance calculation within a suitable period of time during taxi.

■ TAKE-OFF:

SATOLAS TOWER 120.45

At holding point and ready for line up and T/O - T/O clearance to be given :

"[Airline ID] XXX - line-up RWY 18R, cleared for take-off, wind 270°/22 kt.

- Check how expedite climb is initiated after T/O or speed restriction is inserted as a constraint (green - dot speed) and how the crew is watching to meet the required constraining speeds and / or altitudes if applicable.*
- Check that for combination of crosswind and aft C/G (if applicable) for this particular T/O, PF applied full fwd side stick, and moved thr. levers progressively to reach FLX / TOGA detent at 40 kt (see A320 SOP).*
- Check that noise abatement restrictions are respected.*

■ AFTER TAKE-OFF - CLIMB :

SATOLAS TOWER 120.45

Crew is after T/O and reporting airborne and passing current ALT :

"[Airline ID] XXX - airborne at ... , remain on this FRQ, report passing 4500 ft on SATOLAS RADAR 127.57 climbing to FL 110, if no contact continue this FRQ."

NOTE : *Check how the crew is operating with RMP's.*

Crew reports passing 4500 ft ALT on SATOLAS RADAR :

SATOLAS RADAR 127.57

"[Airline ID] XXX - radar contact, climb to FL 110 initially and change MARSEILLE CONTROL 134.10."

INSTRUCTOR ONLY

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AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	UPGRADING OF F/O TO CAPTAIN (Simulator phase 2 ONLY) TRAINING SYLLABI	2.21.03 Page 12P E F21
		REV 21 MAY 98

L.O.E. FFS (LEG A) - SESSION GUIDE (CONT'D)

04 - SESSION GUIDE (CONT'D)

■ AFTER TAKE-OFF - CLIMB (END) :

MARSEILLE CONTROL 134.10

Crew reports on FRQ, climbing to FL 110 initially :

"[Airline ID] XXX - squawk 5746 ident, climb to FL 200 initially and maintain until further advised, check passing FL 190."

NOTE : *Check level change on progress page to activate the FMGS cruise phase.
Check transponder operations. ATC reports RADAR CONTACT after ident.*

Crew reports passing FL 190 and reaching FL 200, if not, instructor mentions it:

"[Airline ID] XXX - climb to FL 280, will be your final level due to traffic, for your information a preceding a/c has reported moderate to severe turbulence between FL's 260 and 330 close to 45N04E."

Crew reports approaching and maintaining FL 280.

"[Airline ID] XXX - maintain FL 280 and change to BORDEAUX CONTROL 124.07."

■ CRUISE:

BORDEAUX CONTROL 124.07

Crew reports on FRQ and maintaining FL 280 and estimate next WPT :

It should be watched how the crew is dealing with turbulence and turbulence penetration procedures. After proper application of the procedures the turbulence should be removed on IOS and an appropriate level should be set again (i.e. 10%).

"[Airline ID] XXX - radar contact, maintain FL 280, MEN, GAI, AUCHE, expect AUCHE arrival and ILS approach RWY 20, descent at own discretion, report leaving FL 280, arrange your descent so as to be passing AUCHE at FL 130, report leaving FL 280."

Check that crew reviews revised fuel predictions after reclearance and checks the TOD the FMGS preparation for arrival and the insertion of an ALT constraint at AUCHE. The following TARBES weather should have been provided to the crew :
*LFBT : ILS 20 240/15 1200 BKN1000 OVC2000 18/16 Q1018 NOSIG RWY WET
 BRKNG ACT GOOD. For information LFL, LFMT and LFML are closed currently due to weather.*

Crew reports commencing descent to FL 130.

"[Airline ID] XXX - descent to FL 180 initially, contact TOULOUSE RADAR 125.17."

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	UPGRADING OF F/O TO CAPTAIN (Simulator phase 2 ONLY) TRAINING SYLLABI	2.21.03 Page 12Q E F21
		REV 21 MAY 98

L.O.E. FFS (LEG A) - SESSION GUIDE (CONT'D)

04 - SESSION GUIDE (CONT'D)

■ DESCENT:

TOULOUSE RADAR 125.17

Crew reports on FRQ, passing a certain FL :

"[Airline ID] XXX - TOULOUSE RADAR is on test , inbound AUCHE descent to FL 130 and report reaching."

It should be watched how the crew is respecting the ALT restrictions inbound to AUCHE and is managing the descent to be passing at FL 130.

The following weather should be prepared and provided to the crew on request for the ALTN airport LFBO TOULOUSE BLAGNAC :
LFBO : VOR 33L 240/20 1800 BKN1200 OVC2000 18/17 Q1018 RASH WET BRKNG ACT MEDIUM TO GOOD.

Crew reports approaching AUCHE and reaching FL130.

"[Airline ID] XXX - change to LOURDES APPROACH 120.30."

■ APPROACH :

LOURDES APPROACH 120.30

Crew reports on FRQ passing AUCHE and maintaining FL 130.

"[Airline ID] XXX - descent to 3000 ft inbound TBO, AUCHE ... arrival, ILS approach RWY 20, Nr. 1, no delay expected."

While the a/c is descending the TARBES weather should be set appropriately on IOS with RWY light system at max brightness (5) and during approach 0/0 on visibility and cloud base should be set to make the crew going around. Check how the crew is dealing with approach preparation, briefing and a/c handling during approach. The choosen approach (stabilized or decelerated) and the selection of auto brake should be noticed.

Crew reports passing TBO and maintaining 3000 ft ALT.

"[Airline ID] XXX - remain on this frequency, cleared to intercept the ILS RWY 20, cleared to land, wind 230°/15 kt."

INSTRUCTOR ONLY

INSTRUCTOR ONLY

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	UPGRADING OF F/O TO CAPTAIN (Simulator phase 2 ONLY) TRAINING SYLLABI	2.21.03 Page 12R <i>E F21</i> REV 21 MAY 98
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L.O.E. FFS (LEG A) - SESSION GUIDE (CONT'D)

04 - SESSION GUIDE (CONT'D)

■ GO AROUND :

LOURDES APPROACH 120.30

Crew reports on go around RWY 20. The correct a/c handling and procedure application during go around should have been watched.

"[Airline ID] XXX - follow standard go around procedure to TBO, clearance limit, climb to 4000 ft ALT initially, airport is closed for the time being, advise your decisions."

The decision making should be noticed with regards to the already known closed airports and the fuel requirements for a diversion should have been checked. The crew should have chosen the ALTN Toulouse and informs the ATC accordingly.

"[Airline ID] XXX - expect TBO ... arrival, RWY in use 33L, what is your requested level."

Crew may chose the defaulted FL 240. It should be noticed that the crew is using the FMGS in order to decide the ALT for diversion.

"[Airline ID] XXX - climb to FL 130, will be your final level, TBO ... arrival, change TOULOUSE RADAR 129.30."

■ DIVERSION :

TOULOUSE RADAR 129.30

Crew reports on FRQ and reaching and maintaining FL 130.

[Airline ID] XXX - maintain FL 130, TBO ... arrival, expect VOR approach RWY 33L, report ready for descent, how long can you hold over SULIT for delaying actions ?"

It should be noticed how the crew satisfies the ATC demand concerning the holding time at SULIT and reports it accordingly. The crew calls ready for descent.

[Airline ID] XXX - descent to 5000 ft ALT, QNH 1018, report passing SULIT, no delay expected."

The following weather should be prepared for Toulouse :

*LFBO : VOR 33L 290/15 G20 1800 BKN1200 OVC2000 18/17 Q1018 RESH WET
BRKNG ACT GOOD.*

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	UPGRADING OF F/O TO CAPTAIN (Simulator phase 2 ONLY) TRAINING SYLLABI	2.21.03 Page 12S <i>E F21</i>
		REV 21 MAY 98

L.O.E. FFS (LEG A) - SESSION GUIDE (END)

04 - SESSION GUIDE (END)

■ DESCENT AND APPROACH :

TOULOUSE RADAR 129.30

Crew reports reaching 5000 ft ALT and overflight SULIT.

"[Airline ID] XXX - cleared for standard VOR approach RWY 33L, descent to 3000 ft, report leaving 4000 ft and final intercept."

It should have been watched how the crew prepared the non precision approach and how the briefing was done. Furthermore should be noticed how the crew is dealing with the altitude constraint at D165 (4000 ft ALT), how the crew is using the AFS during approach (i.e. TRK - FPA when cleared to approach, watching the decel point) and the proper a/c handling and raw data checking.

Crew reports maintaining 3000 ft and turning final.

"[Airline ID] XXX - change BLAGNAC TOWER 118.10."

■ LANDING AND AFTER LANDING :

BLAGNAC TOWER 118.10

Crew reports on FRQ, final course established, ready to land.

"[Airline ID] XXX - cleared to land RWY 33L, vacate RWY first TWY to the left, wind 300°/15 kt gusts 25 kt."

Crew reports landing.

"[Airline ID] XXX - landing time ... , report RWY vacated."

crew reports RWY vacated.

"[Airline ID] XXX - change BLAGNAC GROUND 121.90."

■ PARKING :

Crew reports on FRQ.

"[Airline ID] XXX - gate E42, report marshaller contact."

Proper a/c taxiing should be noticed and c/l application as well should be noticed during taxi...

INSTRUCTOR ONLY

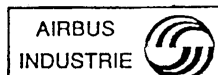
INSTRUCTOR ONLY

APPENDIX 1

AA 80FC-02-0140-005-A970AA

Mod : 20167+21615

CFM Eng : 565-A1



LOAD and TRIM SHEET
ANSETT

A320-211

VERSION 40FC/B4YC
OR 60BC/B4YC

DRY OPERATING WEIGHT	
W WEIGHT(kg)	CG %MAC
43.000	26
$I = \frac{(CG - 25) \times W}{20000} + 50$	
DRY OPER. WEIGHT INDEX	52,1

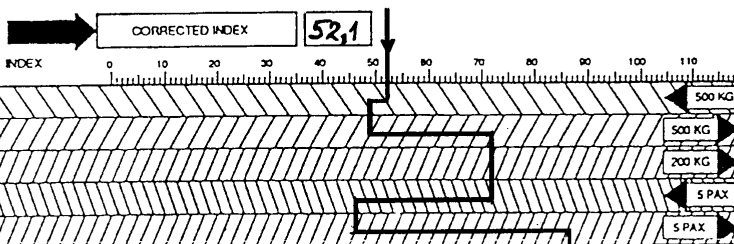
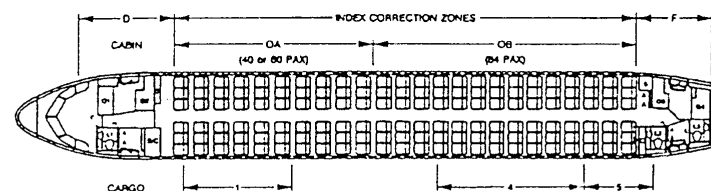
AIRCRAFT A-320
REGISTER: F-WWFT
DATE: XX/XX/XX PREPARED BY:
FLT N°: A1-02 KRALJ F.
FROM: LFPO TO: LFBO

DRY OPERATING WEIGHT	43.000
WEIGHT DEVIATION	0
CORRECTED DRY OPER. WEIGHT	43.000
CARGO	3.960
PASSENGERS	10.800
ZERO FUEL WEIGHT	57.760
TOTAL FUEL	6.500
TOTAL WEIGHT	64.260

ZONES	D	F
WEIGHT(kg)	0	0
DEVIATION	0	0

BASIC INDEX CORRECTION		
DRY OPER. WEIGHT DEVIATION	ZONES	
	D	F
+100kg	-1.4	+1.8
-100kg	+1.4	-1.8
INDEX CORRECTION	0	

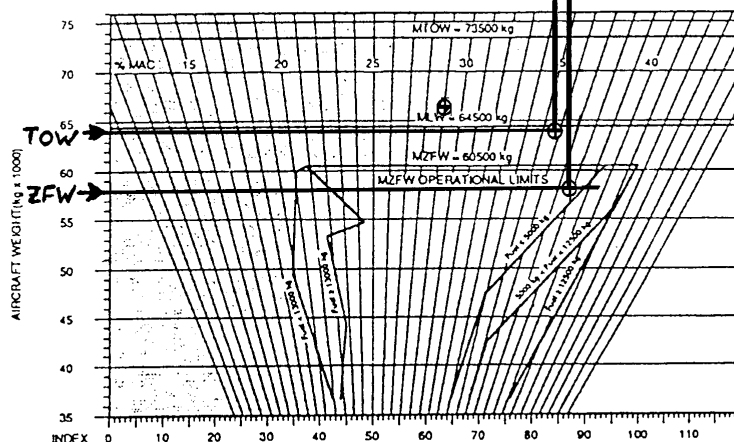
ZONES	Nr	WEIGHT(kg)
CARGO 1		460
CARGO 4		3500
CARGO 5		
CABIN OA	60	
CABIN OB	80	



FUEL CORRECT.	-2	INDEX	
---------------	----	-------	--

FUEL INDEX CORRECTION

WEIGHT (kg)	I	WEIGHT (kg)	I
3000	2	12000	2
3500	1	12500	-2
4000	1	13000	-3
4500	0	13500	-3
5000	0	14000	-4
5500	-1	14500	-5
6000	-1	15000	-6
6500	-2	15500	-7
7000	-2	16000	-8
7500	-3	16500	-9
8000	-3	17000	-10
8500	-4	17500	-11
9000	-4	18000	-12
9500	-4	18500	-13
10000	-4	18730	-13
10500	-4		
11000	-3		
11500	-3		



CAUTION : WHEN THE T.O CG IS LOWER THAN 27% MAC THE BASIC PERFORMANCE MUST BE CORRECTED :
- T.O : Use appropriate RTOLW chart, or, make CG correction on QUICK REF TABLE
- LDG : Make CG correction on LDG speed and distance.

A320
LOADING
WEIGHT and BALANCE
2.01.40
P 5 / 6

INSTRUCTOR ONLY

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AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	UPGRADING OF F/O TO CAPTAIN (Simulator phase 2 ONLY) TRAINING SYLLABI	2.21.03 Page 12U <i>E F21</i>
		REV 21 MAY 98

L.O.E. FFS (LEG B) - SESSION GUIDE

01 - BRIEFING TOPICS

- Standard LOFT briefing.
- Instructor will take the role of dispatcher and action the trainee crew decisions regarding extra fuel etc... Once the crew has entered the simulator, the instructor will communicate with them as required, in the role of ground mechanic, ATC, cabin crew or company agent.
- Except in the event of simulator problems, the instructor must not interrupt the crew in any way, particularly concerning crew decisions and actions.
- Performance Calculation.
- Non Precision Approach and Circling.
- Diversion to ALTN airport.
- Turbulence penetration procedure.

02 - SESSION OBJECTIVE

Crew should apply good crew coordination as PF and PNF within a Line Oriented Flight Training environment.

- This session is to demonstrate a real time flight with real time problems.
- 2nd flight (Leg B) from LFBO - TOULOUSE / BLAGNAC to LFML - MARSEILLE / PROVENCE.
- 1st approach at LFML will be a LOC approach with go around - weather improves.
- 2nd approach is to be done as a NDB approach with circling and normal landing.

03 - SESSION PROFICIENCY CRITERIA

The trainees must be proficient in:

- Crew coordination (ACRM tasks),
- Decision making process,
- FMGS utilization,
- Radio communication and use of technical equipment (use of RMP and ACP) and
- A/C handling on all flight phases.

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AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	UPGRADING OF F/O TO CAPTAIN (Simulator phase 2 ONLY) TRAINING SYLLABI	2.21.03 Page 12V E F21
		REV 21 MAY 98

L.O.E. FFS (LEG B) - SESSION GUIDE (CONT'D)

04 - SESSION GUIDE

■ IN THE BRIEFING ROOM :

The crew must be provided with documents required for the flight:

COMPUTERIZED FLIGHT PLAN (CFP) :

CFP should be checked by the crew before the flight, and fuel corrections may be made by the captain.

Block fuel may be increased due to weather and NOTAMS if applicable.

MET REPORTS :

Weather should be analysed, wind and temperature at FL 9000 m (FL 295) to be inserted into MCDU during cockpit preparation.

XXXXXX Z indicates that day and time of weather data are valid for the intended flight period.

NOTAMS :

Should be analysed and inoperative VOR's (if applicable) deselected during cockpit preparation (i.e. VOR on test).

- T/O with full thrust flexible thrust should be performed,

LOAD AND TRIM SHEET

Should be analysed and corrected if necessary (e.g. : increased block fuel)

- Stress that ideal CG = 33% and when T/O CG is lower than 27% MAC the basic performance must be corrected (see FCOM VOL 2).

- With AFT CG and crosswind, special T/O procedure should be applied if applicable (see SOP A320).

L.O.E. FFS (LEG B) - SESSION GUIDE (CONT'D)

04 - SESSION GUIDE (CONT'D)

■ IN THE BRIEFING ROOM (END)

TAKE-OFF PERF TABLES

Crew should define T/O configuration, T/O speed and acceleration altitude.

- If the crew has NOT completed PERF CRS yet, the instructor will define all TAKE-OFF DATA as shown below (AIR COND ON / ANTI ICE OFF):

BLOCK FUEL	TOW	T/O THRUST	T/O CONF	V1	VR	V2	ENG OUT ACC ALT
8.0 t ⁽¹⁾	62 t	IAE FLEX 56°C	1 + F	150 kt	152 kt	152 kt	1000 ft QNH
8.0 t ⁽¹⁾	62 t	CFM FLEX 52°C	1 + F	135 kt	141 kt	141 kt	1000 ft QNH

⁽¹⁾ Block fuel may be increased due to weather, notams, Low holding fuel in CFP, possible lower cruise flight level as determined by the crew.

■ PREFLIGHT:

TAKE-OFF DATA

ATIS : see T/O data page, insert turbulence level 10 % and top of clouds 500 ft.
 Enter T/O data according to the crew preparation, or instructor definition (if crew has not completed performance course).

PARKING GATE POSITION

Aircraft is at Gate parking position (select MAP on IOS to validate LL).
 Set left window visual ON, press INIT GATE.
 Check that gate coordinates have been entered and cross checked by the crew.

AIRPORT INFORMATION AND WEATHER DATA (provided by operations office)

LFBO : 15R/L 110/15 G25 2000 BKN1500 12/8 Q1018 NOSIG DRY BRKNG ACT GOOD

LFML : ILS 14R 050/12 G18 4000 BRK1500 OVC2500 16/14 Q1020 RAIN PROB 40 TS WET BRKNG ACT MED

LFLL : ILS 36L 060/18 G25 1200 OVC1800 11/7 Q1018 RESH NOSIG WET BRKNG ACT GOOD

LFMT : ILS 31R 040/18 G25 4000 BKN1500 OVC2500 16/7 1020 PROB40 TS WET BRKNG ACT GOOD

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	UPGRADING OF F/O TO CAPTAIN (Simulator phase 2 ONLY) TRAINING SYLLABI	2.21.03 Page 12X <i>E F21</i> REV 21 MAY 98
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L.O.E. FFS (LEG B) - SESSION GUIDE (CONT'D)

04 - SESSION GUIDE (CONT'D)

■ PREFLIGHT (END) :

Crew is requested in accordance to a LMC to dispatch the a/c with 3 t extra cargo and has to decide whether it is possible or not, since the current fuel figures cannot be changed anymore without significant delay if applicable.

NOTE : *Because penalty ration is 23 kg / 1000 kg the expected extra fuel burn off will be $3 \times 23 = 66 + 5\%$ Rte Res. This needs to carry 70 kg extra fuel for 3 t extra cargo.*

INITIAL CALL

BLAGNAC FLIGHT DATA (Cpt) 121.70

"[Airline ID] XXX - information ... , are you ready to copy your ATC ?"

DEPARTURE CLEARANCE

"[Airline ID] XXX - ATC clearance from LFBO to LFML, FL 180 initially, flight planned route, PPG ... departure, level change enroute, squawk A2475, for push and start change TOULOUSE GROUND 121.90."

SELCAL COMPANY OPS 130.20

On short notice a NOTAM by MARSEILLE has been received concerning all MARSEILLE FIR traffic : Due to navy rocket exercises 100 NM south of FJR VOR at position 4155.0N 00358.0E radius 50 NM, all overflying traffic prohibited within the assigned area.

■ ENGINE START AND PUSH BACK :

BLAGNAC GROUND 121.90

Crew reports on FRQ and is advised on first contact that the routing cannot be provided without delay. Crew requests a new clearance and start and push.

"[Airline ID] XXX - flight plan is cancelled, request your decision."

Crew requests new flight plan via Montpellier and has already prepared the most probable routing on SEC FPLN.

"[Airline ID] XXX - your ATC to LFML, AFRIC ... departure - G393 - FJR - G6 - MTG clearance limit, climb FL 180 initially, level change enroute, squawk 2475, start and push approved, call ready for taxi."

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	UPGRADING OF F/O TO CAPTAIN (Simulator phase 2 ONLY) TRAINING SYLLABI	2.21.03 Page 12Y <i>E F21</i>
		REV 21 MAY 98

L.O.E. FFS (LEG B) - SESSION GUIDE (CONT'D)

04 - SESSION GUIDE (CONT'D)

■ AFTER PUSH BACK AND TAXI :

BLAGNAC GROUND 121.90

Push back NOSE pointing proper direction.
When taxi requested:

"[Airline ID] XXX - taxi to holding position RWY 33L, cleared to cross 33R, at holding change BLAGNAC TOWER 118.10, and report ready for departure."

The before T/O check list to the line should have been completed prior to asking for line-up and take-off. When lining up the proper actions should be noticed and mentioned if necessary and the before T/O c/l below the line should be performed. It should be noticed how the crew is preparing the new departure route because of RWY change from 15R to 33L.

■ TAKE-OFF :

BLAGNAC TOWER 118.10

At holding point and ready for line up and T/O - T/O clearance to be given :

"[Airline ID] XXX - here is an amendment to your ATC proceed AFRIC ... departure, line-up RWY 33L, cleared for take-off, wind 050°/15 kt."

- Check how expedite climb is initiated after T/O or speed restriction is inserted as a constraint (green - dot speed) and how the crew is watching to meet the required constraining speeds and / or altitudes if applicable.
- Check that for combination of crosswind and aft C/G (if applicable) for this particular T/O, PF applied full fwd side stick, and moved thr. levers progressively to reach FLX / TOGA detent at 40 kt (see A320 SOP).
- Check that noise abatement restrictions are respected.

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AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	UPGRADING OF F/O TO CAPTAIN (Simulator phase 2 ONLY) TRAINING SYLLABI	2.21.03 Page 12Z E F21
		REV 21 MAY 98

L.O.E. FFS (LEG B) - SESSION GUIDE (CONT'D)

04 - SESSION GUIDE (CONT'D)

■ AFTER TAKE-OFF - CLIMB :

BLAGNAC TOWER 118.10

Crew is after T/O and reporting airborne and passing current ALT :

"[Airline ID] XXX - airborne at ... , change TOULOUSE DEPARTURE 125.17."

TOULOUSE DEPARTURE 125.17

NOTE : *Check how the crew is operating with RMP's again.*

Crew reports on FRQ, passing a certain ALT.

"[Airline ID] XXX - radar contact, climb to FL 180 initially, call passing FINOT on MARSEILLE CONTROL 126.25."

If applicable during this phase, FMGS may fail for a short period of time to make the crew changing to back up navigation through RMP's checking at the same time how the crew is dealing with this problem and if continuously checking raw data during all phases of flight. Furthermore may be noticed at this occasion how the crew is doing the computer restart attempt by application of the proper procedures (Vol 4 or QRH).

■ CRUISE :

MARSEILLE CONTROL 126.25

Crew reports on FRQ reaching or maintaining FL 180 and passing FINOT.

"[Airline ID] XXX - squawk 5736 ident, climb to FL 290 will be your final level, proceed FJR - G6 - VARES, expect VARES arrival, RWY 14L LOC approach."

NOTE : *Check level change on progress page if applicable to activate the FMGS cruise phase. Check transponder operations. ATC reports RADAR CONTACT after ident.*

Crew reports passing FJR, maintaining FL 290 :

"[Airline ID] XXX - maintain and change to PROVENCE APPROACH 120.20."

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	UPGRADING OF F/O TO CAPTAIN (Simulator phase 2 ONLY) TRAINING SYLLABI	2.21.03 E F21	Page 12AA
		REV 21	MAY 98

L.O.E. FFS (LEG B) - SESSION GUIDE (CONT'D)

04 - SESSION GUIDE (CONT'D)

■ CRUISE (END) :

PROVENCE APPROACH 120.20

Crew reports on FRQ and maintaining FL 290, proceeding inbound VARES.
 "[Airline ID] XXX - maintain FL 290, report ready for descent, VARES ... arrival, LOC approach RWY 14L, circling RWY 32L."

Crew checks TOD and reports ready for descent
 "[Airline ID] XXX - descent to 5000 ft initially, QNH 1020, proceed VARES, RHONE, BORG0, join BORG0 holding at 5000 ft for short delay until further advised, report your last BORG0 exit time."

■ DESCENT :

Check that crew reviews revised fuel predictions after reclearance and checks the TOD the FMGS preparation for arrival and preparation of FMGS SEC FPLN for circling regarding the restrictions. Notice the application of correct briefing for non precision approach and circling, the insertion of ALT constraints on BORG0, the correct checking of the last exit time from holding page and the insertion of and regarding to an ALT constraint on final (1650 ft ALT) if applicable. Crew has to set the correct MDA for circling.

The following MARSEILLE Provence weather should have been provided to the crew :
LFML : NDB 14L 320/12 3000 BKN1500 OVC2000 18/16 Q1020 RAIN RWY WET BRKNG ACT MEDIUM. (Rain should be inserted from IOS just to make the crew use of screen wipers).

PROVENCE APPROACH 120.20

Crew reports reaching 5000 ft and proceeding to BORG0.
 "[Airline ID] XXX - maintain 5000 ft for the time being, report outbound end."

Crew joins the holding and reports outbound end.

■ APPROACH :

PROVENCE APPROACH 120.20

"[Airline ID] XXX - proceed MTG, outbound BORG0 descent to 3500 ft, QNH 1020."

Crew reports approaching MTG and reaching 3500 ft ALT.
 "[Airline ID] XXX - cleared for standard LOC approach RWY 14L, descent to 1650 ft, QNH 1020, change to PROVENCE TOWER 119.50."

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	UPGRADING OF F/O TO CAPTAIN (Simulator phase 2 ONLY) TRAINING SYLLABI	2.21.03 E F21	Page 12AB
		REV 21	MAY 98

L.O.E. FFS (LEG B) - SESSION GUIDE (CONT'D)

04 - SESSION GUIDE (CONT'D)

■ APPROACH AND GO AROUND :

PROVENCE TOWER 119.50

Crew reports on FRQ descending 1650 ft.

"[Airline ID] XXX - cleared for LOC approach RWY 14L, when field in sight break off to the right."

While the a/c is on approach the PROVENCE weather should be set appropriately on IOS with RWY light system at max brightness (5) and during approach CAT III on visibility and cloud base should be set to make the crew going around. Check how the crew is dealing with approach preparation, briefing and a/c handling during approach. The chosen approach (stabilized or decelerated) and the selection of auto brake should be noticed.

Crew reports passing outre marker and on go around.

"[Airline ID] XXX - follow standard go around procedure, weather is improving, climb 3500 ft, change PROVENCE APPROACH 120.20."

PROVENCE APPROACH 120.20

Crew reports on FRQ, reaching and maintaining 3500 ft ALT, proceeding to MTG.

"[Airline ID] XXX - LOC transmitter u/s for the time being, expect NDB approach, RWY 14L, circling RWY 32R, copy weather, wind 320°/12 kt OVC 1800 ft visibility 3500 m, temperature 18, dew point 17, QNH 1020 nosig, rwy is wet breaking action good."

crew reports passing MTG, maintaining 3500 ft ALT.

The weather data should be set on IOS in accordance to the report above.

It should be noticed how the crew introduces the new approach procedure and how a short briefing is performed accordingly.

"[Airline ID] XXX - cleared for NDB approach RWY 14L, descent to 1650 ft, QNH 1020 and change to PROVENCE TOWER 119.50

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	UPGRADING OF F/O TO CAPTAIN (Simulator phase 2 ONLY) TRAINING SYLLABI	2.21.03 <i>E F21</i>	Page 12AC
		REV 21	MAY 98

L.O.E. FFS (LEG B) - SESSION GUIDE (END)

04 - SESSION GUIDE (END)

■ 2ND APPROACH AND CIRCLING :

PROVENCE APPROACH 119.50

Crew reports on FRQ and reaching and maintaining 1650 ft ALT.

"[Airline ID] XXX - standard NDB approach RWY 14L, call OM and airfield in sight, break off to the right."

Crew reports OM and ground contact.

Cavok should be selected on IOS. It should be noticed how the crew performs the entire circling approach, particularly procedure application and a/c handling on manual and visual flight. Rain should be removed if applicable

"[Airline ID] XXX - report on short final RWY 32R and ready to land."

■ FINAL APPROACH AND LANDING :

PROVENCE TOWER 119.50

Crew reports on short final and ready to land.

"[Airline ID] XXX - cleared to land RWY 32R, wind 320°/12 kt, report RWY vacated."

■ AFTER LANDING AND PARKING :

PROVENCE TOWER 119.50

Crew reports on RWY 32R vacated.

"[Airline ID] XXX - landing time ... , change PROVENCE GROUND 121.90."

Crew reports on FRQ.

"[Airline ID] XXX - gate ... , report marshaller contact."

Proper aircraft taxiing should be noticed and c/l application as well should be noticed during taxi...

INSTRUCTOR ONLY

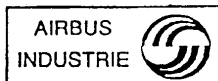
INSTRUCTOR ONLY

APPENDIX 1

AA 80FC-02-0140-005-A970AA

Mod : 20107+21615

CFM Eng : 56.5-A1



LOAD and TRIM SHEET
ANSETT

A320-211

VERSION 40FC/84YC
OR 60BC/84YC

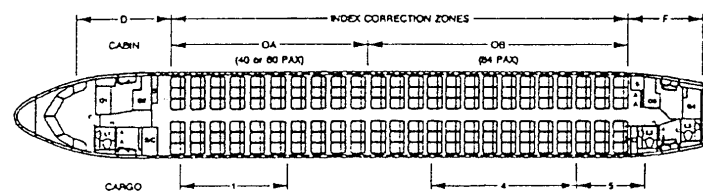
DRY OPERATING WEIGHT	
W WEIGHT(kg)	CG %MAC
43.000	26
$I = \frac{(CG - 25) \times W}{20000} + 50$	
DRY OPER. WEIGHT INDEX	52,1

AIRCRAFT A-320
REGISTER F-WWFT
DATE: XX/XX/XX PREPARED BY:
FLT N°: A1-02 KRALJ F.
FROM: LFPO TO: LFB0

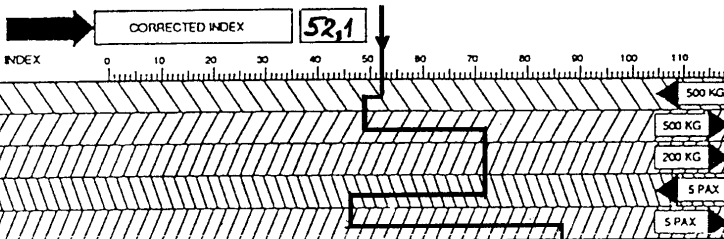
DRY OPERATING WEIGHT	43.000
WEIGHT DEVIATION	0
CORRECTED DRY OPER. WEIGHT	43.000
CARGO	3.960
PASSENGERS	10.800
ZERO FUEL WEIGHT	57.760
TOTAL FUEL	6.500
TOTAL WEIGHT	64.260

ZONES	D	F
WEIGHT(kg)	0	0
DEVIATION	0	0

BASIC INDEX CORRECTION			
DRY OPER. WEIGHT DEVIATION	ZONES		
	D		F
+100kg	-1.4		+1.8
-100kg	+1.4		-1.8
INDEX CORRECTION		Ø	

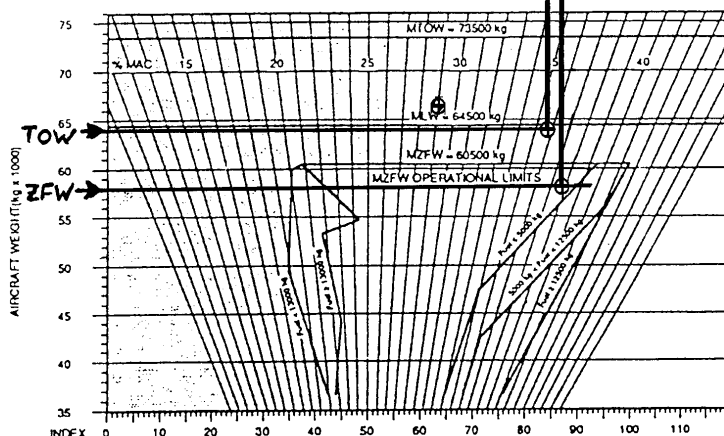


ZONES	Nr	WEIGHT(kg)
CARGO 1	460	
CARGO 4	3500	
CARGO 5		
CABIN OA	60	
CABIN OG	80	



FUEL CORRECT.	-2
---------------	----

FUEL INDEX CORRECTION	
WEIGHT (kg)	I
3000	2
3500	1
4000	0
4500	0
5000	0
5500	-1
6000	-1
6500	-2
7000	-2
7500	-3
8000	-3
8500	-4
9000	-4
9500	-4
10000	-4
10500	-4
11000	-3
11500	-3



CAUTION : WHEN THE T.O CG IS LOWER THAN 27% MAC THE BASIC PERFORMANCE MUST BE CORRECTED :
- T.O : Use appropriate RTOLW chart, or, make CG correction on QUICK REF TABLE
- LDG : Make CG correction on LDG speed and distance.



LOADING
WEIGHT and BALANCE

2.01.40 P 5 / 6

INSTRUCTOR ONLY

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(EFCOM1.PCX)

EVALUATION FFS TAKE-OFF DATA
INIT PAGE

CO RTE

N.A.

ALTN/CO RTE

N.A.

FLT NBR

[Airline ID] 270

LAT

4338.1N

COST INDEX

30

CRZ FL/TEMP

FL 310 / -46°C

FROM/TO

LFBO/LFPO

LONG

0122.1E

TROPO

DEFAULT

TRIP DIST

345 NM

CRZ WIND

VRB

ALTN

LFPG

ALTN DIST

80 NM

FL to ALTN

100

ATIS

RWY 15 R

WIND 240°/10 kt

VISI 4 km

CEILING OVC 600 ft

TEMP 25°C

DEW POINT ... 18°C

QNH 1008 hPa/29.77 inHg

QFE 990 hPa/29.23 inHg

RWY COND ... DRY

Observations : AIR COND ON

INIT NEXT PAGE

ZFCG/ZFW

36% / 55 t

36% / 121.280 lb

BLOCK

[] t

[] lb

PERF PAGE

IAE CFM

V1

VR

V2

FLEX

DRT

T/O FLAPS

[]

T/O C.G.

34%

TOGA

FLEX

—DRT—

NOTE :

F/PLN :

LFBO 15 R

LMG DEP - LMG

UR10 - AMB

DIR VILRO

NO STAR

VIA MEL

LFPO ILS 26

ALTN : POGN DEP - CLM - NO STAR

NO VIA - LFPG ILS 27

EVALUATION SESSION GUIDE

01 - BRIEFING TOPICS

- Evaluation in normal and abnormal or emergency configuration.

02 - SESSION OBJECTIVE

- Demonstration of the competence to operate A320 as Captain or First Officer, Pilot flying or Pilot not flying.
- Completion of simulator syllabus in order to start aircraft training.

03 - SESSION PROFICIENCY CRITERIA

(TBD)

04 - SESSION GUIDE

TOW	T/O flaps	Air cond	Anti-ice	Eng	V1	VR	V2	Flex
64 t	1 + F	ON	OFF	IAE	151 kt	155 kt	155 kt	52°
				CFM	155 kt	158 kt	158 kt	55°

Suggested briefing :

- The flight will consist of a normal airline flight from Toulouse to Orly with a Limoge departure.
Please use your actual Company and Airbus procedures.
- You will be responsible for liaison with ATC, safe operation and navigation of the aircraft. Make sure that you correctly understand ATC instructions. During the flight it will be necessary for me to initialize the simulator in order to carry out certain exercises ; I will inform you when I have control of the simulator and when I return control to you.
- You may communicate to each other in your mother language to facilitate procedures, but please keep me informed about what you are doing and remember you must speak English to ATC.
- Remember this is normal commercial flight: do not waste time but do not allow yourselves to be rushed. You must tell ATC what you require.
- Make good use of the published documentation for en route and terminals areas. Set and observe the appropriate minimas.
- Make full use of all aircraft equipment. If I do not wish you to use something, I may cause it to fail.
- Remember the importance of task sharing and good crew coordination. You are assessed as PF AND PNF.
- Use headsets and consider me as ATC.
- Engine failure Flaps Retraction Altitude will be XXX feed.
- Single Engine Go around Acceleration Altitude will be XXX feed.
- The weather for departure will be....
- The aircraft weight and C.G. will be....

EVALUATION SESSION GUIDE (END)

04 - SESSION GUIDE

Try to avoid INIT's during the session.

Endeavour to run exercises in a logical sequence and make sure that the trainees understand your instructions. Don't let yourself get involved in discussions.

Make your own judgment during the session and revert to your instructor role again if, for example, an exercise is unsatisfactorily carried out.

- 8 : Among exercises, insert a change of altitude when ALT*.
- 19 : Insert "800 ft / 6 km" to check go around in FPV or FPD.
- 23 : Insert wing tip brake (WTB) when flaps between 1 and 0.
- 31 : For engine fire on ground and on ground emergency evacuation - insert unextinguishable fire.

INSTRUCTOR ONLY

INSTRUCTOR ONLY



CHAPTER 23

- REFRESHER COURSES -

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	REFRESHER COURSE TABLE OF CONTENTS	2.23.00 Page 1 <i>E F23</i> REV 21 MAY 98
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2.23.01 - INTRODUCTION

2.23.02 - TRAINING FOOTPRINT

2.23.03 - TRAINING SYLLABI

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	REFRESHER COURSE TABLE OF CONTENTS	2.23.00 Page 2 <i>E F23</i> REV 21 MAY 98
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01 - REFRESHER POLICY BETWEEN EVALUATION FFS AND BASE TRAINING INTERRUPTION

A. AFTER TRANSITION COURSE :

R
R
R

Interruption length :	Until 21 days (1)	22 to 42 days	43 days to 2 months	2 to 3 months	3 to 6 months	6 to 9 months	9 to 12 months	Above
Refresher course to be performed :	None	REF # 1 (2)	REF # 2	REF # 3	REF # 4	REF # 5	REF # 6	New Type Rating
+ Base Training								

(1) The period of 21 days may be extended to a maximum of 1 month by issue of a training deviation.

(2) Refresher # 1 can be performed in either the simulator or the aircraft ; if performed in the aircraft, the Training Captain must refer to the Refresher Flight syllabus.

B. AFTER CCQ COURSE :

a. Case 1 :

Base aircraft not flown during the following periods (i. e. pilot **not current on base aircraft** at time of Base Training) :

R
R
R

Interruption length :	Until 2 months	2 to 3 months	3 to 6 months	6 to 9 months	9 to 12 months	12 to 18 months	18 to 24 months	Above
Refresher course to be performed :	None	REF # 1 (2)	REF # 2	REF # 3	REF # 4	REF # 5	REF # 6	New Type Rating
+ Base Training								

(2) Refresher # 1 can be performed in either the simulator or the aircraft ; if performed in the aircraft, the Training Captain must refer to the Refresher Flight syllabus.

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	REFRESHER COURSE INTRODUCTION	2.23.01 Page 2 E F23
		REV 23 JUL 99

01 - REFRESHER POLICY BETWEEN EVALUATION FFS AND BASE TRAINING INTERRUPTION (END)

B. AFTER CCQ COURSE (END) :

b. Case 2 :

Pilot **current on base aircraft** at the time of Base Training :

<i>Interruption length :</i>	Until 6 months	6 to 9 months	9 to 12 months	12 to 18 months	18 to 24 months	Above
<i>Refresher course to be performed :</i>	None	REF # 1 (2)	REF # 2	REF # 3	REF # 4	New Type Rating
	+ Base Training					

(2) Refresher # 1 can be performed in either the simulator or the aircraft ; if performed in the aircraft, the Training Captain must refer to the Refresher Flight syllabus.

02 - REFRESHER POLICY BETWEEN BASE TRAINING AND I.O.E INTERRUPTION

<i>Interruption length :</i>	Until 1 month	1 to 2 months	2 to 3 months	3 to 6 months	6 to 9 months	9 to 12 months	12 to 18 months	Above
<i>Refresher course to be performed :</i>	None	REF # 1	REF # 2	REF # 3	REF # 4	REF # 5	REF # 6	New Type Rating

03 - REFRESHER POLICY : FLIGHT INTERRUPTION

Unless more restrictive rules are edicted by the Airline or local Authority, a Recurrent Training is recommended after a 6 month to 9 month flight interruption.

Specific Refresher course is recommended when flight interruption exceeds 9 months.

<i>Interruption length :</i>	Until 6 months	6 to 9 months	9 to 12 months	12 to 18 months	18 to 48 months	Above
<i>Refresher course to be performed :</i>	None	Recurrent Training	REF # 4	REF # 5	REF # 6	New Type Rating

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	REFRESHER COURSE TRAINING FOOTPRINT	2.23.02 Page 1 <i>E F23</i> REV 22 OCT 98
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01 - TRAINING DEVICE TIME SHARING

REFRESHER # 1		1 working day
FFS : 1 session		3:00
OR		
1 flight		At Flight Instructor discretion
REFRESHER # 2		2 working days
FBS : 1 session.....		3:00
FFS : 1 session.....		3:00
REFRESHER # 3		3 working days
CBT : review.....		6:00
FBS : 1 session.....		3:00
FFS : 2 sessions		6:00 (2 x 3:00)
REFRESHER # 4		4 working days
CBT : review.....		9:00
FBS : 1 session.....		3:00
FFS : 3 sessions		9:00 (3 x 3:00)
REFRESHER # 5		5 working days
CBT : review.....		12:00
FBS : 2 sessions		6:00 (2 x 3:00)
FFS : 3 sessions		9:00 (3 x 3:00)
REFRESHER # 6		6 working days
CBT : review.....		15:00
FBS : 2 sessions		6:00 (2 x 3:00)
FFS : 4 sessions		12:00 (4 x 3:00)

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	REFRESHER COURSE TRAINING FOOTPRINT	2.23.02 Page 3 <i>E F23</i>
		REV 22 OCT 98

02 - REFRESHER COURSES DAILY FOOTPRINT (END)

E. REFRESHER # 5

DAY 1 <i>CBT</i> 3:00 <i>FBS 1</i>	DAY 2 <i>CBT</i> 3:00 <i>FBS 2</i>	DAY 3 <i>CBT</i> 3:00 <i>FFS 2</i>
DAY 4 <i>CBT</i> 3:00 <i>FFS 3</i>	DAY 5 <i>FFS 4</i>	

F. REFRESHER # 6

DAY 1 <i>CBT</i> 3:00 <i>FBS 1</i>	DAY 2 <i>CBT</i> 3:00 <i>FBS 2</i>	DAY 3 <i>CBT</i> 3:00 <i>FFS 1</i>
DAY 4 <i>CBT</i> 3:00 <i>FFS 2</i>	DAY 5 <i>CBT</i> 3:00 <i>FFS 3</i>	DAY 6 <i>FFS 4</i>

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	REFRESHER COURSE TRAINING FOOTPRINT	2.23.02 Page 4 <i>E F23</i>
		REV 21 MAY 98

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AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	REFRESHER COURSE TRAINING SYLLABI	2.23.03 Page 1 E F23 REV 21 MAY 98
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FBS 1 syllabus Page 03

FBS 2 syllabus Page 05

FFS 1 syllabus Page 07

FFS 2 syllabus Page 09

FFS 3 syllabus Page 11

FFS 4 syllabus Page 13

Flight syllabus Page 15

NOTE : *Instructors' FCTM includes the "Session Guides"*

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	REFRESHER COURSE TRAINING SYLLABI	2.23.03 Page 2 <i>E F23</i> REV 21 MAY 98
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REFRESHER FBS 1 TAKE-OFF DATA

REFRESHER FBS 1 TAKE-OFF DATA			
INIT PAGE		ATIS	
CO RTE 	FROM/TO 	TRIP DIST 	RWY 15 R
ALTN/CO RTE 		CRZ WIND 	WIND 240°/10 kt
FLT NBR 		ALTN 	VISI CAVOK
[Airline ID] 2301		LFBO 	CEILING
LAT 	LONG 	ALTN DIST 	TEMP 30°C
4338.1N	00122.1E	70 NM	DEW POINT ... 18°C
COST INDEX 		FL to ALTN 	QNH 1010 hPa/29.83 inHg
30		080	QFE 992 hPa/29.29 inHg
CRZ FL/TEMP 	TROPO 		RWY COND ... DRY
FL 090 / - 4°C	36 090		Observations : _____ _____ _____ _____
INIT NEXT PAGE	PERF PAGE	T/O FLAPS	NOTE :
ZFCG/ZFW 	IAE CFM V1		FPLN :
28%-48 t	VR	T/O C.G. 	LFBO 15 R
28%-105.600 lb	V2		NO SID
BLOCK 	FLEX		TOU - AUCHE
10 t	DRT		AUCHE STAR
22.000 lb			TBO - TL
			LFBO NDB 20
			ALTN : LFBO 20 - NO SID - SULIT
			NO STAR - VIA SULIT -
			LFBO VOR 33 L

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	REFRESHER COURSE TRAINING SYLLABI	2.23.03 Page 4A E F23
		REV 23 JUL 99

R

REFRESHER FBS 1 SESSION GUIDE

01 - SESSION OBJECTIVE :

- To practice non precision approaches in automatic flight and in accordance with SOPs
- To use automation during non precision approaches and discuss "Procedures and Practices" issue as discussed in the ACRM workshop

02 - TRAINING TOPICS

A. REVIEW

- ACRM : Procedures and practices
- Non precision approaches
- Protections with AP engaged in V/S mode

B. INTRODUCE

NIL

03 - SESSION PROFICIENCY CRITERIA :

- Good execution of non precision approaches in accordance with SOPs.

04 - SESSION GUIDE :

- 7 : Insert an altitude constraint in the SID.
- 9 : FMGS exercise :
 - Deselect function
Display selected nav aids page (DATA - POSITION MONITOR - SEL NAVAIDS)
Insert a nav aid in use into DESELECT field. Note the rearrangement of the selected nav aids. Clear the deselected nav aid in order to revert to initial display.
 - Use direct to function (DIR TO)
- 10, 29 : Use NDB APP runway 20 at LFBT.
This approach can be flown either in managed or in selected guidance.
- 17, 18 : Point out that AP maintains VLS (or VMAX) and V/S obtained whatever V/S selected on FCU.
- Item 27 : Use TS Locator 33L at LFBO
This approach will be flown in selected guidance (not in database).

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REFRESHER FBS 2 TAKE-OFF DATA
INIT PAGE

CO RTE

ALTN/CO RTE

FLT NBR

LAT

COST INDEX

CRZ FL/TEMP

FROM/TO

LONG

TROPO

TRIP DIST

CRZ WIND

ALTN

ALTN DIST

FL to ALTN

ATIS

RWY 15 R

WIND 240°/10 kt

VISI CAVOK

CEILING

TEMP 10°C

DEW POINT ... 6°C

QNH 1020 hPa/30.12 inHg

QFE 1002 hPa/29.59 inHg

RWY COND ... DRY

Observations : _____

INIT NEXT PAGE

ZFCG/ZFW

BLOCK

PERF PAGE

IAE CFM

V1	123	118
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VR	131	126
----	-----	-----

V2	132	127
----	-----	-----

FLEX	56	52
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DRT		
-----	--	--

T/O FLAPS

T/O C.G.

—TOGA—

FLEX

—DRT—

NOTE :
F/PLN :

LFBO 15 R

FISTO SID - LMG

MORIK - AMB

DIR VILRO

NO STAR

VIA EPR

LFPO ILS 26

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	REFRESHER COURSE TRAINING SYLLABI	2.23.03 Page 6 R E F23
		REV 23 JUL 99

MALFUNC REF.	- REFRESHER FBS 2 - FLIGHT CONTROLS - PNEUMATIC - PRESSURIZATION - ELECTRICS NAVIGATION - INSTRUMENTS - HYDRAULICS - LANDING GEAR	-		+	
	TRAINEE 1				
	1 - PRELIMINARY COCKPIT PREPARATION				
	2 - BEFORE START				
	3 - ENGINE START (ABNORMAL STARTS)				
	1st ENGINE - START VALVE FAILS TO OPEN (START VALVE MANUAL OPERATION)				
	2nd ENGINE - START VALVE FAILS TO CLOSE - Restore				
	4 - AFTER START				
	5 - TAXI				
	6 - BEFORE TAKE-OFF				
	7 - TAKE-OFF SID				
	8 - CLIMB FL 110				
	9 - SIDESTICK FAULT - Restore				
	10 - CLIMB FL 310				
	11 - CPC 1 then CPC 2 FAULT - PRESS MANUAL OPERATION - Restore				
	12 - CRUISE : PACK 2 OVERHEAT then				
	13 - LEFT WING LEAK (EMERGENCY DESCENT) - Restore at FL 100				
	14 - RETURN TO DEPARTURE				
	15 - FLAPS JAMMED				
	16 - ILS APPROACH NO FLAPS				
	17 - GO AROUND - Restore				
	INIT FL 100				
	18 - ALL GEN FAULT				
	19 - REVIEW OF EMER ELEC CONFIG - Restore				
	20 - RADAR VECTORS				
	21 - RA 1 + 2 FAULT				
	22 - ILS APPR - DIRECT LAW				
	23 - GO AROUND - Restore				
	TRANSFER OF CONTROLS TO TRAINEE 2				
	24 - CLIMB FL 110				
	25 - HYD G + B RSVR LO LVL				
	26 - HOLD then RADAR VECTORS				
	27 - LANDING GEAR GRAVITY EXTENSION				
	28 - ILS APPR NO SLATS				
	29 - GO AROUND - Restore				
	INIT T/O				
	30 - TAKE OFF - ADR or IR FAILURE				
	31 - RADAR VECTORS				
	32 - 2nd ADR or IR FAILURE (OR 2nd IR FAILURE)				
	33 - ILS APPR - DIRECT LAW				
	34 - GO AROUND - Restore				
	INIT T/O				
	35 - AFTER LANDING CHECK-LIST				
	36 - PARKING CHECK-LIST				
	37 - SECURING AIRCRAFT				

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	REFRESHER COURSE TRAINING SYLLABI	2.23.03 Page 6A <i>E F23</i>
		REV 23 JUL 99

R

REFRESHER FBS 2 SESSION GUIDE

01 - SESSION OBJECTIVE

- To review main systems
- To review main failures and related procedure
- To prepare trainees for the recurring FFS sessions

02 - TRAINING TOPICS

A. REVIEW

- Abnormal engine start
- Sidestick fault
- Pressurization problems with emergency descent
- Abnormal slats / flaps procedure and approach
- Electrical emergency configuration and associated procedure
- Dual RA fault
- Dual hydraulic system malfunction and associated procedure
- Dual ADR or dual IR faults

B. INTRODUCE

NIL

03 - SESSION PROFICIENCY CRITERIA

- To be able to apply procedural knowledge to the current situation

04 - SESSION GUIDE

- According to exercise, insert failure during phase of flight giving the most realistic training.
- Restore failure or malfunction either after procedure completion (single failure) or after go around (failure which affects handling such as dual hydraulic failure, flight control problems, etc)

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REFRESHER FFS 1 TAKE-OFF DATA
INIT PAGE

CO RTE

ALTN/CO RTE

FLT NBR

LAT

COST INDEX

CRZ FL/TEMP

FROM/TO

LONG

TROPO

TRIP DIST

CRZ WIND

ALTN

ALTN DIST

FL to ALTN

ATIS

RWY 15 R

WIND 240°/12 kt

VISI CAVOK

CEILING

TEMP 20°C

DEW POINT ... 18°C

QNH 1005 hPa/29.68 inHg

QFE 987 hPa/29.14 inHg

RWY COND ... DRY

Observations : _____

INIT NEXT PAGE

ZFCG/ZFW

BLOCK

PERF PAGE

IAE CFM

V1	123	124
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VR	131	134
----	-----	-----

V2	132	134
----	-----	-----

FLEX	56	52
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DRT		
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T/O FLAPS

T/O C.G.

NOTE :

Local flight

Blue pattern (if applicable)

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	REFRESHER COURSE TRAINING SYLLABI	2.23.03 Page 8 R E F23
		REV 23 JUL 99

MALFUNC REF.	- REFRESHER FFS 1 - VISUAL PATTERNS - ENGINE						-	+
	TRAINEE 1							
	1 - PRELIMINARY AND COCKPIT PREPARATION							
	2 - ENGINE START							
	■ 3 - AFTER START AND TAXI							
	4 - BEFORE TAKE-OFF							
	5 - TAKE-OFF							
	6 - RADAR VECTORS FOR ILS APPROACH		FD	ATHR				
	7 - ILS APPROACH		FD	ATHR				
	8 - WINDSHEAR - GO AROUND - Restore							
	9 - VISUAL PATTERN			ATHR	FPV			
	10 - VISUAL APPROACH AND LANDING			ATHR	FPV			
	INIT T/O							
	11 - TAKE-OFF - ENGINE 1 FAIL ABOVE V1	AP	FD	ATHR				
	12 - VISUAL PATTERN			ATHR	FPV			
	13 - LANDING ONE ENG OUT- Restore							
	INIT T/O							
	■ 14 - TAKE-OFF - FLAPS JAMMED DURING RETRACTION		FD	ATHR				
	15 - ILS APPROACH (FLAPS LOCKED) - LANDING - Restore				FPV			
	INIT T/O							
	16 - TAKE-OFF - VISUAL PATTERN			ATHR	FPV			
	17 - VISUAL APPROACH (ILS ASSISTED)							
	■ 18 - TOUCH AND GO		FD	ATHR				
	19 - VISUAL PATTERN			ATHR	FPV			
	20 - LANDING							
	TRAINEE 2							
	INIT T/O							
	21 - TAKE-OFF		FD	ATHR				
	22 - RADAR VECTORS FOR ILS APPROACH		FD	ATHR				
	23 - WINDSHEAR - GO AROUND - Restore		FD	ATHR				
	24 - VISUAL PATTERN			ATHR	FPV			
	25 - LANDING							
	INIT T/O							
	26 - TAKE-OFF - ENGINE 2 FIRE AFTER V1		FD	ATHR				
	27 - VISUAL PATTERN			ATHR	FPV			
	28 - LANDING ONE ENG OUT - Restore							
	INIT T/O							
	29 - TAKE-OFF - VISUAL PATTERN			ATHR	FPV			
	30 - VISUAL APPROACH (ILS ASSISTED)							
	■ 31 - TOUCH AND GO		FD	ATHR				
	32 - VISUAL PATTERN			ATHR	FPV			
	33 - LANDING							
	34 - AFTER LANDING							
	■ 35 - TAXI TO THE RAMP (IF TIME PERMITS)							
	36 - PARKING							
	37 - SECURING AIRCRAFT							

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	REFRESHER COURSE TRAINING SYLLABI	2.23.03 Page 8A <i>E F23</i> REV 23 JUL 99
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R

REFRESHER FFS 1 SESSION GUIDE

01 - SESSION OBJECTIVE

- The Trainees must demonstrate the ability to apply SOPs in normal, abnormal and emergency situations.

02 - TRAINING TOPICS

A. REVIEW

- Full cockpit preparation (cold aircraft).
- Windshear recovery
- Visual patterns
- Crosswind take-off and landing
- Engine out on take-off

B. INTRODUCE

- Touch and go procedure
(Refer to Base Training briefing in FCTM Vol 1 - "Normal Operation briefings" chapter)

03 - SESSION PROFICIENCY CRITERIA

- To demonstrate the ability to perform maneuvers required by the syllabus using the correct procedure and technique, according to the standard of accuracy.

04 - SESSION GUIDE

- 3, 35 : Taxi may be reduced if time limited.
- 14 : Insert failure (flaps jammed - WTB) when flaps less than 2.
- Item 18, 31: *Briefing downwind* :
 - Spoilers not armed
 - No use of reversers
 - No use of brakes after touchdown

Final approach :

 - ECAM landing memo - spoilers blue

On ground :

 - nosewheel down
 - maintain centerline

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REFRESHER FFS 1 SESSION GUIDE (END)

04 - SESSION GUIDE (END)

■ 18, 31 (end): *Crew actions (instructor checks) :*

1. RUDDER TRIM RESET
2. FLAPS "2"
3. THRUST 50% N1 (1.05 EPR)
4. PITCH TRIM SET
5. FCU "HDG-V/S"
6. FLAPS CHECK
7. CALL "GO"
8. CALL "ROTATE" AT VR

INSTRUCTOR ONLY

INSTRUCTOR ONLY

REFRESHER FFS 2 TAKE-OFF DATA
INIT PAGE

CO RTE

ALTN/CO RTE

FLT NBR

LAT

COST INDEX

CRZ FL/TEMP

FROM/TO

LONG

TROPO

TRIP DIST

CRZ WIND

ALTN

ALTN DIST

FL to ALTN

ATIS

RWY 15 R

WIND 120°/6 kt

VISI CAVOK

CEILING

TEMP 14°C

DEW POINT ... 7°C

QNH 1020 hPa/30.08 inHg

QFE 1002 hPa/29.55 inHg

RWY COND ... DRY

Observations : AIR COND ON

INIT NEXT PAGE

ZFCG/ZFW

BLOCK

PERF PAGE

IAE CFM

V1	156	154
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VR	156	154
----	-----	-----

V2	158	156
----	-----	-----

FLEX		
------	--	--

DRT		
-----	--	--

T/O FLAPS

T/O C.G.

TOGA

~~FLEX~~

~~DRT~~

NOTE :
F/PLN :

LFBO 15 R

FISTO SID - LMG

MORIK - AMB

DIR VILRO

NO STAR

VIA EPR

LFPO ILS 07

ALTN : LFPG 07 - DIR CLM - CTL

UR 10 - MMD - LUXIE - NTM -

NTM STAR - VIA MTR EDDF ILS 25R

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	REFRESHER COURSE TRAINING SYLLABI	2.23.03 Page 10 <i>R</i> E F23
		REV 23 JUL 99

MALFUNC REF.	- REFRESHER FFS 2 - RECONFIGURATION CONTROLS LAWS - HYDRAULICS - ONE ENG OUT					-	+
	TRAINEE 1						
	1 - TRANSIT COCKPIT PREPARATION						
	2 - BEFORE START						
	3 - ENGINE START						
	4 - AFTER START CHECK LIST						
	5 - TAXI						
	6 - BEFORE TAKE-OFF						
	7 - TAKE-OFF (MTOW / AFT CG MAX)						
	8 - CLIMB FL110						
	■ 9 - IRS 3 FAULT THEN IRS 1/2 ATT DISCREPANCY						
	10 - APPROACH TO STALL T/O AND LDG CONFIG						
	11 - TRANSFER CONTROLS TO TRAINEE 2						
	12 - APPROACH TO STALL TAKE OFF AND LDG CONFIG - Restore						
	■ 13 - B HYD - ELAC 2 - SEC 2 FAULT - MECHANICAL BACK-UP						
	14 - CLIMB 1000 FT THEN TURN 90° BANK 15° MAX						
	15 - TRANSFER OF CONTROL TO TRAINEE 1 then restore						
	16 - RADAR VECTORS TO LFBO						
	■ 17 - HYD G + Y RSVR LO LVL						
	18 - VISUAL PATTERN						
	19 - LANDING NO FLAPS - Restore						
	INIT T/O						
	■ 20 - TAKE-OFF - ENG 1 STALL AT V1 + 5 KT						
	21 - VISUAL PATTERN						
	22 - LANDING 1 ENG OUT - Restore						
	TRAINEE 2						
	23 - TAKE-OFF- CLIMB 4000 FT						
	■ 24 - HYD G + B RSVR LO LVL						
	25 - VISUAL PATTERN						
	26 - LANDING NO SLATS - Restore						
	INIT T/O						
	■ 27 - TAKE-OFF - ENG 2 STALL AT V1 + 5 KT						
	28 - VISUAL PATTERN						
	29 - LANDING 1 ENG OUT- Restore						
	INIT T/O						
	30 - TAKE-OFF						
	31 - ELAC 1 + 2 FAULT						
	32 - VISUAL PATTERN						
	33 - LANDING - DIRECT LAW - Restore						
	INIT T/O						
	■ 34 - TAKE-OFF - ENG FIRE AT V1 -10 KT						
	35 - REJECTED TAKE-OFF - ON GROUND EMERGENCY EVACUATION - Restore						

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	REFRESHER COURSE TRAINING SYLLABI	2.23.03 Page 10A E F23
		REV 23 JUL 99

REFRESHER FFS 2 SESSION GUIDE

01 - SESSION OBJECTIVE

- To practice stall recovery
- To review dual hydraulic failure procedure and handling
- To review one engine out operation

02 - TRAINING TOPICS

A. REVIEW

- Flight control reconfiguration laws
- Approach to stall and recovery
- Dual hydraulic failures
- One engine out pattern

B. INTRODUCE

NIL

03 - SESSION PROFICIENCY CRITERIA

- To demonstrate the ability to perform manoeuvres required by the syllabus using the correct procedure and technique, according to the standard of accuracy

04 - SESSION GUIDE

- 9 : IR 3 fault then PITCH or ROLL discrepancy between two remaining IRs.
Review the various reconfiguration laws (Direct then Alternate)
Restore normal weight (below max landing weight) prior to starting exercises.
- 13 : Fail Blue HYD and ELAC 2. Carry out ECAM actions and point out that the remaining computers are still able to control the aircraft. The crew must be prepared for mechanical back-up (probability 10^{-9}). Fail SEC 2 in order to obtain mechanical back-up. Let the trainees fly the aircraft then restore all systems.
- 17, 24 : Insert second HYD RSVR Lo Level when crew reads status page.
- 20, 27 : After stall, insert flame out for one and extinguishable fire for the other exercise.
- 34 : Insert unextinguishable fire.

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INSTRUCTOR ONLY

INSTRUCTOR ONLY

REFRESHER FFS 3 TAKE-OFF DATA

REFRESHER FFS 3 TAKE-OFF DATA			
INIT PAGE CO RTE ALTN/CO RTE FLT NBR [Airline ID] 2305 LAT 4338.1N COST INDEX 30 CRZ FL/TEMP FL 140 / -12°C FROM/TO LFBO/LFBD LONG 00122.1E TROPO 36 090			

MALFUNC REF.	- REFRESHER FFS 3 - NAV - F/CTL RECONFIGURATION LAW - ONE ENGINE OUT										-	+
	TRAINEE 2											
	1 - TRANSIT COCKPIT PREPARATION											
	2 - BEFORE START											
	3 - ENGINES START											
	4 - AFTER START CHECK-LIST											
	5 - TAXI											
	6 - BEFORE TAKE-OFF CHECK-LIST											
	■ 7 - TAKE-OFF (MAX CROSSWIND)											
	8 - SID CLIMB FL 140 | AP | FD |ATHR| | |											
	■ 9 - TCAS (OPTIONAL) TRAFFIC ADVISORY											
	10 - FMGS EXERCISES (USE STBY NAV - Restore)											
	■ 11 - TCAS (OPTIONAL) RESOLUTION ADVISORY											
	12 - STAR - ENGINE FIRE											
	■ 13 - VOR DME APPR - 1 ENG OUT | AP | |ATHR| FPV | FPD|											
	14 - CIRCLING											
	15 - LANDING - 1 ENG OUT - Restore | | |ATHR| FPV | |											
	INIT T/O											
	■ 16 - TAKE-OFF - WINDSHEAR - Restore | | FD |ATHR| | |											
	17 - VISUAL PATTERN - RA 1 + 2 FAULT | | |ATHR| FPV | |											
	18 - LANDING - DIRECT LAW - Restore											
	TRAINEE 1											
	INIT T/O F/PLN LFBD-LFBO											
	■ 19 - TAKE-OFF (MAX CROSSWIND) | | FD |ATHR| | |											
	20 - SID CLIMB FL 110 | AP | FD |ATHR| | |											
	■ 21 - TCAS (OPTIONAL) RESOLUTION ADVISORY											
	22 - ADR 3 + 2 FAULT (ALTERNATE LAW)											
	23 - RETURN TO DEPARTURE | | | |FPV| |											
	24 - VISUAL APPROACH											
	25 - LANDING DIRECT LAW - Restore											
	INIT T/O											
	26 - TAKE OFF - ENGINE 1 FIRE | | FD |ATHR| | |											
	27 - RADAR VECTORS											
	■ 28 - VOR DME APPR - 1 ENG OUT | AP | |ATHR| FPV | FPD|											
	29 - CIRCLING | | |ATHR| FPV | |											
	30 - LANDING - 1 ENG OUT - Restore											
	INIT T/O											
	■ 31 - TAKE-OFF - WINDSHEAR - Restore | | FD |ATHR| | |											
	32 - VISUAL PATTERN RA 1 + 2 FAULT | | |ATHR| FPV | |											
	33 - LANDING - DIRECT LAW - Restore											
	33 - AFTER LANDING AND PARKING CHECK-LISTS											

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	REFRESHER COURSE TRAINING SYLLABI	2.23.03 Page 12A R E F23
		REV 23 JUL 99

REFRESHER FFS 3 SESSION GUIDE

01 - SESSION OBJECTIVE

- To be able to execute normal and abnormal procedures and handling.

02 - TRAINING TOPICS

A. REVIEW

- Crosswind take-off procedure
- Engine out non precision approaches
- Circle to land procedure
- Windshear recovery
- Dual malfunction and landing in direct law
- Engine out visual pattern approaches and landings
- Use of STBY navigation

B. INTRODUCE

- TCAS traffic and resolution advisories

03 - SESSION PROFICIENCY CRITERIA

- To demonstrate the ability to perform maneuvers required by the syllabus using the correct procedure and technique, according to the standard of accuracy.

04 - SESSION GUIDE

- 7, 19 : Select 25 kt XWIND for these 2 take-off only, then set 8 kt XWIND for the session.
Enter windshear after V1.
- 9, 11, 21: TCAS exercises should be briefed and inserted if simulator features are available
- 13, 28 : LFBD : VOR APP RWY 05 then circling for landing RWY 23.
LFBO : VOR APP RWY 33 L then circling for landing RWY 15 R
This type of non precision approach is requested by some Authorities.
- 16, 31 : Select windshear after VR

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REFRESHER FFS 4 TAKE-OFF DATA
INIT PAGE

CO RTE

ALTN/CO RTE

FLT NBR

LAT

COST INDEX

CRZ FL/TEMP

FROM/TO

LONG

TROPO

TRIP DIST

CRZ WIND

ALTN

ALTN DIST

FL to ALTN

ATIS

RWY 15 R

WIND CALM

VISI 400 m

CEILING OVC 100 ft

TEMP -5°C

DEW POINT ... -5°C

QNH 1020 hPa/30.12 inHg

QFE 1002 hPa/29.59 inHg

RWY COND ... WET

Observations : _____

INIT NEXT PAGE

ZFCG/ZFW

BLOCK

PERF PAGE

IAE CFM

V1	135	114
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VR	144	133
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V2	144	133
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FLEX	51	54
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DRT		
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T/O FLAPS

T/O C.G.

TOGA

FLEX

—DRT—

NOTE :
F/PLN :

LFBO 15 R

FISTO SID - LMG

MORIK - AMB

DIR VILRO

NO STAR

VIA EPR

LFPO ILS 26

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	REFRESHER COURSE TRAINING SYLLABI	2.23.03 Page 14 <i>R</i> E F23
		REV 23 JUL 99

MALFUNC REF.	- REFRESHER FFS 4 - EMERGENCY PROCEDURES DESCENT - RTO - EVACUATION										-	+
	TRAINEE 1											
	1 - TRANSIT COCKPIT PREPARATION											
	2 - BEFORE START											
	3 - ENGINE START											
	4 - AFTER START CHECK-LIST											
	5 - TAXI											
	6 - BEFORE TAKE-OFF CHECK-LIST											
	■ 7 - TAKE-OFF (CAT II CONDITIONS)											
	8 - SID CLIMB FL 310											
	9 - TCAS (OPTIONAL) RESOLUTION ADVISORY											
	■ 10 - SEVERE TURBULENCE EXERCISE											
	11 - STRUCTURAL DAMAGE - EMERGENCY DESCENT											
	12 - RETURN TO DEPARTURE- Restore											
	13 - HYD : G RSVR LO LVL											
	14 - HYD : B OR Y RSVR LO LVL											
	15 - DUAL HYD SYS LOW PRESS PROCEDURE											
	16 - ILS APPROACH											
	17 - LANDING NO SLATS OR NO FLAPS - Restore											
	INIT T/O											
	18 - TAKE-OFF											
	19 - VISUAL PATTERN - ELAC 1 + 2 FAULT											
	20 - LANDING DIRECT LAW - Restore											
	TRAINEE 2											
	INIT T/O											
	21 - TAKE-OFF SID											
	■ 22 - ABNORMAL FLAPS OR SLATS DURING RETRACTION (WTB)											
	23 - ILS APPROACH											
	24 - LANDING NO FLAPS OR NO SLATS - Restore											
	INIT T/O											
	25 - TAKE-OFF - ENG 2 FAIL AT V1 + 5 KT											
	26 - ILS APP - 1 ENG OUT											
	■ 27 - GO AROUND - Restore											
	INIT FL 350											
	28 - RAPID DECOMPRESSION OR SMOKE											
	29 - EMERGENCY DESCENT - Restore FL 100											
	30 - RADAR VECTORS											
	31 - NON PRECISION APPR											
	32 - LANDING											
	INIT T/O											
	■ 33 - TAKE-OFF ENG FIRE BEFORE V1											
	34 - REJECTED TAKE-OFF											
	35 - ON GROUND EMERGENCY EVACUATION - Restore											

AIRBUS INDUSTRIE Training & Flight Operations Support Division A319/A320/A321 FLIGHT CREW TRAINING MANUAL	REFRESHER COURSE TRAINING SYLLABI	2.23.03 Page 14A E F23
		REV 23 JUL 99

REFRESHER FFS 4 SESSION GUIDE

01 - SESSION OBJECTIVE

- To be able to execute abnormal and emergency procedures
- To attain sufficient proficiency for the recurring Evaluation

02 - TRAINING TOPICS

A. REVIEW

- Low visibility during take-off
- Turbulence penetration procedure
- Dual hydraulic malfunction
- Emergency descent
- Rejected take-off
- On ground emergency evacuation

B. INTRODUCE

- NIL

03 - SESSION PROFICIENCY CRITERIA

- To demonstrate the ability to perform maneuvers required by the syllabus using the correct procedure and technique, according to the standard of accuracy and in accordance with SOPs.

04 - SESSION GUIDE

- 7 : After take-off the weather should improve accordingly
- 10 : Enter severe turbulence and check that the crew reacts accordingly. (procedure and handling) [Ref : FCOM Vol 3 supplementary techniques].
- 22 : Insert a malfunction (SLAT or FLAP stuck by WTB) that covers the opposite of the one selected in the Trainee 1 part.
- 27 : Activate a traffic or any problem to justify a go around
- 33 : Enter unextinguishable fire at V1 -30 kt.

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