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MEL Preamble

The following is applicable for authorized certificate holders operating under Title 14 Code of Federal Regulations (14 CFR) Parts 121, 125, 129, 135: 14 CFR require that all equipment installed on an aircraft in compliance with the Airworthiness Standards and the Operating Rules must be operative. However, the Rules also permit the publication of a Minimum Equipment List (MEL) where compliance with certain equipment requirements is not necessary in the interests of safety under all operating conditions. Experience has shown that with the various levels of redundancy designed into aircraft, operation of every system or installed component may not be necessary when the remaining operative equipment can provide an acceptable level of safety.

A Master Minimum Equipment List (MMEL) is developed by the FAA, with participation by the aviation industry, to improve aircraft utilization and thereby provide more convenient and economic air transportation for the public. The FAA approved MMEL includes those items of equipment related to airworthiness and operating regulations and other items of equipment which the Administrator finds may be inoperative and yet maintain an acceptable level of safety by appropriate conditions and limitations; it does not contain obviously required items such as wings, flaps, and rudders. The MMEL is the basis for development of individual operator MELs which take into consideration the operator's particular aircraft equipment configuration and operational conditions. Operator MELs, for administrative control, may include items not contained in the MMEL; however, relief for administrative control items must be approved by the Administrator. An operator's MEL may differ in format from the MMEL, but cannot be less restrictive than the MMEL. The individual operator's MEL, when approved and authorized, permits operation of the aircraft with inoperative equipment. Equipment not required by the operation being conducted and equipment in excess of 14 CFR requirements are included in the MEL with appropriate conditions and limitations. The MEL must not deviate from the Aircraft Flight Manual Limitations, Emergency Procedures or with Airworthiness Directives. It is important to remember that all equipment related to the airworthiness and the operating regulations of the aircraft not listed on the MMEL must be operative.

Suitable conditions and limitations in the form of placards, maintenance procedures, crew operating procedures and other restrictions as necessary are specified in the MEL to ensure that an acceptable level of safety is maintained.

The MEL is intended to permit operation with inoperative items of equipment for a period of time until repairs can be accomplished. It is important that repairs be accomplished at the earliest opportunity. In order to maintain an acceptable level of safety and reliability, the MMEL establishes limitations on the duration of and conditions for operation with inoperative equipment.

The MEL provides for release of the aircraft for flight with inoperative equipment. When an item of equipment is discovered to be inoperative, it is reported by making an entry in the Aircraft Maintenance Record/Logbook as prescribed by 14 CFR ([see TOPP 50-10-05](#)). The item is then either repaired or may be deferred per the MEL or other approved means acceptable to the Administrator prior to further operation. MEL conditions and limitations do not relieve the operator from determining that the aircraft is in condition for safe operation with items of equipment inoperative. When these requirements are met, an Airworthiness Release, Aircraft Maintenance Record/Logbook entry, or other approved documentation is issued as prescribed by 14 CFR. Such documentation is required prior to operation with any item of equipment inoperative.

Operators are responsible for exercising the necessary operational control to ensure that an acceptable level of safety is maintained. When operating with multiple inoperative items, the interrelationships between those items and the effect on aircraft operation and crew workload will be considered. Operators are to establish a controlled and sound repair program including the parts, personnel, facilities, procedures, and schedules to ensure timely repair.

WHEN USING THE MEL, COMPLIANCE WITH THE STATED INTENT OF THE PREAMBLE, DEFINITIONS, AND THE CONDITIONS AND LIMITATIONS SPECIFIED IN THE MEL IS REQUIRED.

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Delta's MEL/CDL Authority and Scope

14 CFR provides for conditional deviations from the airworthiness of various systems and components for a given type of aircraft. These items are listed for each aircraft type in the FAA Approved Master Minimum Equipment List and FAA Approved Airplane Flight Manual. Delta develops and maintains a FAA-approved Minimum Equipment List (MEL) and Configuration Deviation List (CDL) as authorized for use in Delta's Operations Specifications D95 (see [TOPP 20-00-05](#)).

The intent of Delta's MEL/CDL is to permit aircraft operation with certain inoperative systems/components for a specified period of time until repairs can be accomplished. The MEL/CDL remains active until the necessary action is taken to correct the discrepancy, or until the MEL expiration has been reached.

Under no circumstances may an inoperative or missing system/component, which will affect the airworthiness of an aircraft, be deferred unless specifically authorized by the MEL, CDL or NEF for the type of aircraft involved. Any item not specifically covered in the MEL/CDL/NEF is a no-go item.

MEL and CDL requirements will specify the installation of an aircraft placard for affected system/components, and can impose restricted flight release and/or require repetitive checks.

Delta's MEL contains applicable items from the Master MEL and certain Administrative Control Items (ACI) which may not be listed in the Master MEL. The CDL also lists items that may be missing from the aircraft as contained in the Approved Airplane Flight Manual (AFM) Configuration Deviation List (CDL).

The provisions and limitations of the MEL/CDL are applicable for the "Dispatch" of an aircraft only. For the Delta MEL/CDL purposes, "Dispatch" is defined as the advancement of throttles for the purpose of taking off (takeoff event).

If a component or function becomes inoperative following the takeoff, the MEL/CDL does not apply. If the takeoff is aborted for any reason, the MEL/CDL provisions and limitations become applicable once again.

Revision Effectivity

The List of Effective Pages (LEPs) will have the stamp, date, and signature of the Principal Operation Inspector (Delta – Certificate Management Office) indicating FAA approval of the revision. The date of each individual page will be listed in the LEP body. The MCC Home Page will contain the official version of the MEL/CDL. All other copies will be updated within 21 days.

During the period that the revision is being processed for publication and distribution, the newly revised MEL/CDL may be used for dispatch provided it is ensured that a copy of the revised MEL/CDL page(s) is available to the affected aircraft (to be seen by the current and subsequent pilots) and other appropriate personnel.

A Temporary Revision (TR) may also be published to the MEL/CDL between normal revisions at the discretion of the MEL Program Manager, and will be permanently incorporated into the MEL/CDL at the next revision opportunity. TRs are printed on yellow paper with the effective date in the upper corner of each page, and are not reflected in the LEPs. A MEL revision or TR becomes effective on the date of approval by the FAA Principal Operations Inspector (Delta - Certificate Management Office). The CDL is derived from the AFM, and does not gain separate FAA approval.

If an MEL/CDL revision has been published that changes either the MEL/CDL item number, (M) procedures, (O) procedures, deactivation procedures, or expiration limit, the MEL/CDL restrictions and procedures that were in place at the time of deferral will remain in effect until the MEL/CDL is cleared or extended.

Change Requests

Personnel may request changes to the MEL/CDL by emailing: [MELGroup](#), [ATG088](#). To ensure proper routing of the request, please indicate aircraft type and attach any pertinent information. The MEL/CDL Program Manager will record all requests for consideration during the next routine revision cycle

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Definitions

1. **Accessible Lavatory Items** - Under 14 CFR 382.63, accessible lavatory items include: ability to enter lavatory and maneuver by means of on-board wheelchair. The lavatory shall provide accessible door locks, call buttons, grab bars, faucets, other controls, and dispensers. As an air carrier, you must maintain all aircraft accessibility features in proper working order, per 14 CFR 382.71. The accessible lavatory requirement, in part, applies to aircraft with more than one aisle in which lavatories are provided per 382.63(a). Aircraft operators are not required to retrofit cabin interiors of existing aircraft to comply with the requirements of 382.63.
2. **Administrative Control Item (ACI)** - An item listed by the operator in the MEL for tracking and informational purposes. As an example, ACI may be used to track ETOPS accomplishment of required APU cold-soak, or in-flight verification starts on two engine aircraft. It may be added to an operator's MEL by approval of the Principal Operations Inspector provided no relief is granted, or provided conditions and limitations are contained in an approved document (i.e., Structural Repair Manual, Airworthiness Directive, etc.). If relief other than that granted by an approved document is sought for an administrative control item, a request must be submitted to the Administrator. If the request results in review and approval by the FOEB, the item becomes an MMEL item rather than an administrative control item.
3. **Airplane Flight Manual (AFM)** - The document required for type certification and approved by the responsible FAA Aircraft Certification Office. The FAA approved AFM for the specific aircraft is listed on the applicable Type Certificate Data Sheet. The approved flight manual is the source document for operational limitations and performance parameters for an aircraft.
4. **Autoland** – An autopilot coupled precision instrument approach to landing and rollout on those aircraft that are rollout equipped.
5. **CFR** – The applicable portions of the Code of Federal Regulations.
6. **Considered Inoperative** - As used in the provisos, means that an instrument and equipment item must be treated for dispatch, taxi and flight purposes as though it were inoperative. The item shall not be used or operated until the original deferred item is repaired. Additional actions include: documenting the item on the dispatch release (if applicable), placarding, and complying with all remarks, exceptions, and related MMEL provisions, including any (M) and (O) procedures and observing the repair category.
7. **Contact MCC** - under NAME/DESCRIPTION means that the Maintenance Coordinator must be notified prior to takeoff. If the discrepancy is found prior to pushback, the Maintenance Coordinator must be notified before leaving the gate. This designation is for heightened awareness for certain MEL items requiring MCC review, but not requiring Flight Superintendent (Dispatcher) approval. For example, this statement can be used to alert MCC personnel to items that have short time deferral limits, (Category "A" "B", items), repetitive maintenance checks, or items of high customer impact.
8. **Continuing Authorization (Single Extension)** – An aircraft operator who has the authorization to use an FAA – approved MEL may also have the authority to use a continuing authorization to approve a single (one-time) extension to the repair interval for category B or C items in accordance with Operations Specification D095. Continuing Authorization (Single Extension) is not authorized for repair category A and D items.
9. **Dash (-)** – Indicates a variable number (quantity) of the instrument and equipment items may be installed or required for dispatch. This is common when a fleet MEL is used since aircraft of the same make and model may have differing numbers of specific instrument and/or equipment items installed.
10. **Day** - means the time between the beginning of morning civil twilight and the end of evening civil twilight, or approximately 30 minutes before official local sunrise and 30 minutes after official local sunset.
11. **Day of Discovery** - The calendar day an equipment / instrument malfunction was recorded in the aircraft maintenance log and/or record. This day is excluded from the calendar days or flight days specified in the MMEL for the repair of an inoperative instrument and/or equipment item. This provision is applicable to all MMEL items, i.e., category's "A, B, C and D" and is based on UTC time (see MEL Instructions).
12. **Deactivated and Secured** - The specified component must be put into an acceptable condition for safe flight. An acceptable method of deactivating and securing will be established by the operator.

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13. **DISP. APPR. REQ'D."** - Under NAME/DESCRIPTION, means that the approval of the controlling Flight Superintendent (Dispatcher) is required prior to takeoff. If the discrepancy is found prior to pushback, the approval must be received before leaving the gate. This approval is necessary to ensure that Flight Planning issues which result from this MEL/CDL item have been appropriately considered.

Any of the following constitute Dispatcher approval:

- The MEL item number and description are indicated on the Flight Plan.
- The Captain has received an amended release adding the MEL item number and description.
- The Dispatcher and the Captain have communicated by telephone or radio and have agreed on the conditions of the dispatch.

14. **Electronic Fault Alerting Systems** - New generation aircraft display system fault indications to the flight crew by use of computerized display systems. Each aircraft manufacturer has incorporated individual design philosophies in determining the data that would be represented. The following are customized definitions (specific to each manufacturer) to help determine the level of messages affecting the aircraft's dispatch status.

For the B747, B757, B767, B777:

- Boeing airplanes equipped with Engine Indicating and Crew Alerting Systems (EICAS), provide different priority levels of system messages (WARNING, CAUTION, ADVISORY, STATUS and MAINTENANCE). Any messages that affect airplane dispatch status will be displayed at a STATUS message level or higher. The absence of an EICAS STATUS or higher level (WARNING, CAUTION, ADVISORY) indicates that the system/component is operating within its approved operating limits or tolerances.
- System conditions that result only in a MAINTENANCE level message (i.e., no correlation with a higher level EICAS message) do not affect dispatch and do not require action other than when required during accomplishment of a Lower Order Check, Job Instruction Card, etc.
- The EICAS section of the MEL contains an EICAS Message List which includes System Alert (Warning, Caution, Advisory), Status level and Comm level messages and possible corresponding MEL relief.

For the B717:

- B717 aircraft are equipped with an alerting function which is a subsystem within the Electronic Instrument System (EIS). The alerting function provides various levels of system condition alerts (WARNING, CAUTION, ADVISORY, MAINTENANCE and STATUS). Alerts that affect aircraft dispatch will include WARNING, CAUTION, STATUS or MAINTENANCE level. MAINTENANCE alerts are displayed on the status page of the EIS display panel under the maintenance heading. A MAINTENANCE alert on the EIS indicates the presence of a system fault which can be identified by the Central Fault Display System (CFDS) interrogation. The systems are designed to be fault tolerant, however, for any MAINTENANCE alert, the MEL must be verified for dispatch purposes.
- The EIS section of the MEL contains an EIS Message List which includes alert messages and possible corresponding MEL relief.

For the A319/320/321, A330:

- Airbus aircraft equipped with Electronic Centralized Aircraft Monitoring (ECAM) provide different levels of system condition messages {WARNING (red), CAUTION (amber)}. On A319/320/321 and A330, the ECAM STATUS page also provides MAINTENANCE STATUS messages.
- Any message that affects airplane dispatch is displayed at the WARNING or CAUTION level. For A319/320/321, MAINTENANCE STATUS messages may also affect airplane dispatch.
- System faults that result only in messages on the Central Maintenance System (CMS) (for A330) or on the Centralized Fault Display System (CFDS) (for A319/320/321) do not affect airplane dispatch and do not require action other than as addressed within the aircraft operator's standard maintenance program.

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- The ECAM Messages section of the MEL contains an ECAM Message List which includes Class I (WARNING, CAUTION) and Class II (MAINTENANCE) status messages along with corresponding MEL relief.
15. **ER or ETOPS** - Refers to extended range operations for turbine-engine-powered passenger-carrying airplanes with two engines, whose flight planned routing contains a point farther than 60 minutes flying time from an adequate airport, computed using a one-engine-inoperative cruise speed under standard conditions in still air.
 16. **ETO** deferral codes may be used when conditions occur where it becomes necessary to restrict ETOPS flight operations. In these cases, the MCC will determine the requirement for restricting the aircraft from ETOPS operations. Technicians at the station will be instructed by MCC to create a new log page in the aircraft logbook using the appropriate ETO deferral code. These deferrals will restrict the aircraft to either 60 minutes or 120 minutes. Refer to MEL Chapter 05 ER (ETOPS). This deferral code requires MCC authorization prior to its usage or removal.
 17. **Extended Overwater Operation or Flight** - An operation overwater at a horizontal distance of more than 50 nautical miles from the nearest shoreline.
 18. **Flight Cycle** - One aircraft takeoff and subsequent landing.
 19. **Flight Day** - A 24 hour period (from midnight to midnight) using UTC time, during which at least one flight is initiated for the affected aircraft.
 20. **Flight Hours** - The time from the moment an aircraft leaves the surface of the earth until it touches it at the next point of landing (i.e., takeoff to landing time). "Flight hours" is identical to "time in service" as defined in 14 CFR.
 21. **Heavy Maintenance Visit (HMV)** - As used in this MEL is a scheduled L/H/M, PSV, HMV or C-check.
 22. **Icing Conditions** - An atmospheric environment that may cause ice to form on the aircraft (Structural) or in the engine(s) (Induction).
 - **Aircraft (Structural) Icing** is present when the aircraft surface temperature is between 0 degrees C and -40 degrees C and visible moisture in any form is present (such as clouds, fog with visibility of one mile or less, rain, snow, sleet and ice crystals).
 - **Engine (Induction) Icing** is present when the OAT, TAT or RAT is 10 degrees C or below and visible moisture in any form is present (such as clouds, fog with visibility of one mile or less, rain, snow, sleet and ice crystals).
 23. **Instrument Meteorological Conditions (IMC)** - Meteorological conditions such as to require the flight to be conducted under Instrument Flight Rules.
 24. **Inoperative** - When a system and/or component malfunctions to the extent that it does not accomplish its intended purpose and/or is not consistently functioning normally within its approved operating limit(s) or tolerance(s).
 25. **Inoperative components of an inoperative system** - Inoperative instrument and equipment items which are components of a system which is inoperative are usually considered components directly associated with and having no other function than to support that system. (Warning/caution systems associated with the inoperative system must be operative unless relief is specifically authorized per the MMEL).
 26. **Is not used** - As stated in the provisos, remarks or exceptions for an MMEL instrument or equipment item may specify that another item relieved in the MMEL "is not used." In such cases, crewmembers must not activate, actuate, or otherwise utilize that component or system under normal operations. It is not necessary for aircraft operators to accomplish the (M) procedures associated with the item. However, operational requirements must be complied with, and an additional placard must be affixed, to the extent practical, adjacent to the control or indicator for the item that is not used. This informs crewmembers that an instrument or equipment item is not to be used under normal operations.
 27. **Known or Forecast Windshear Conditions:**
 - Occurring at or below 1,000 feet,
AND
 - Resulting in a loss or gain of greater than 15 knots indicated airspeed.

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28. **LLM** – The definition of LLM when used in this manual is as follows:

- A. The FAA approves CAT II/III OpSpec's which allow aircraft to land in reduced weather minimums or Lower Landing Minimums (LLM). The LLM program allows an aircraft to be dispatched to Category II and/or III conditions as outlined in the aircraft Minimum Equipment List. The aircraft Auto Flight System may be utilized for LLM CAT I operations, or in some cases, CAT II and/or CAT III, depending on the item. The CAT II/III restriction will be noted in the MEL/CDL.
- B. The LLM CAT II/III status of an aircraft may be deferred and placarded by using the MEL deferral code. Several examples of where an LLM deferral will be implemented are:
 - 1) Aircraft was returned to service after unsuccessful autoland, but maintenance procedures were accomplished by non-Auto Flight Qualified (AFQ) authorized personnel which downgraded the aircraft from CATIII.
 - 2) An Autoflight system has had similar repetitive discrepancies.
 - 3) The scheduled auto land system check has not been accomplished.
- C. The LLM deferral code requires MCC authorization prior to its usage or removal. The aircraft LLM status is upgraded to CAT III by using maintenance procedures which must be accomplished by AFQ authorized personnel allowing removal of the LLM deferral.
- D. The following definitions should be used when making MEL compliance or aircraft equipage decisions prior to the dispatch event. Equipment failures that occur after that event will be referenced in the appropriate AOM (ILS Airborne Equipment Requirements). The values referenced below are not intended to reduce the minimum values published on any approach chart or reduce any crew qualification restriction.
 - 1) Basic Turbojet Minimums - A precision or non-precision approach to no less than RVR 4000 (1200m) or $\frac{3}{4}$ SM (1200m) visibility, and a DH of no less than 200 ft or MDH of no less than 250 ft Category I Non-ILS - A non-precision approach to no less than RVR 2400 (550m) or $\frac{1}{2}$ SM (800m) visibility, and a MDH of no less than 250 ft.
 - 2) Category I ILS - A precision approach to no less than RVR 1800 (550m) or $\frac{1}{2}$ SM (800m) visibility, and a DH of no less than 200 ft.
 - 3) Category II - A precision approach to no less than RVR 1000 (300m) and a DH of no less than 100 ft. (Autoland required)
 - 4) Category III - A precision approach to no less than RVR 300 (75m) and an AH of no less than 50 ft. (Autoland required)

28. **Local calendar day** - Means a 24-hour period (from midnight to midnight local time).

29. **(M) PROCEDURES** - The "(M)" symbol indicates a requirement for a specific maintenance procedure which must be accomplished prior to operation with the listed item inoperative. Normally, these procedures are accomplished by maintenance personnel; however, other personnel may be qualified and authorized to perform certain functions. Other personnel may include, but are not limited to Aircraft Maintenance Technicians, Flight Crews and Ramp Personnel. Procedures requiring specialized knowledge or skill or requiring the use of tools or test equipment should be accomplished by maintenance personnel. The satisfactory accomplishment of all maintenance procedures [(M) PROCEDURES], regardless of who performs them, is the responsibility of the operator. Appropriate procedures are published in this MEL.

30. **Non-Combustible Materials** - Materials that will not take fire and burn, ignite, support combustion or give off flammable vapors (e.g., sand).

31. **Nonessential Equipment and Furnishings (NEF)** - Items installed on the aircraft as part of the original type certification, supplemental type certificate, or other form of alteration that have no effect on the safe operation of flight and would not be required by the applicable certification rules or operational rules. They are those items that if inoperative, damaged or missing have no effect on the aircraft's ability to be operated safely under all operational conditions. These nonessential items may be installed in areas including, but not limited to, lavatories, and galley areas. NEF items are not instrument and equipment items already identified in the MEL or CDL of the applicable aircraft. They do not include instrument and equipment items that are functionally required to meet the certification rule or for compliance with any operational rule. See [TOPP 40-40-08](#)

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32. **Notes** - As found under the "REMARKS or EXCEPTIONS" column provide additional information for flight crew, maintenance, or other personnel. Notes are used to identify applicable material which is intended to assist with compliance, but do not relieve the operator of the responsibility for compliance with all applicable requirements. Notes are not a part of the provisos.
33. **(O) PROCEDURES** - The "(O)" symbol indicates a requirement for a specific operations procedure which must be accomplished in planning for and/or operating with the listed item inoperative. Normally, these procedures are accomplished by the flight crew (pilots); however, other personnel may be qualified and authorized to perform certain functions. The satisfactory accomplishment of all procedures, regardless of who performs them, is the responsibility of the operator. Appropriate procedures are published in this MEL/CDL.
34. **Operative** - An operative system and/or component will accomplish its intended purpose and is consistently functioning normally within its design operating limit(s) and tolerance(s). When an MEL item specifies that an item of equipment must be operative, it does not mean that its operational status must be verified; it is to be considered operative unless reported or known to be malfunctioning. When an MEL item specifies that an item of equipment must be verified operative, it means that it must be checked and confirmed operative at the interval(s) specified for that MEL item. When an MEL item specifies that an item of equipment must be verified but no interval is specified, verification is required only at the time of deferral. Other terminology sometimes used interchangeably with "operative" within the MEL is "operates normally", "fully operative", and "considered operative".
35. **Proviso** - Conditions or limitations that must be complied with for operation with the listed instrument or equipment item inoperative. Provisos are indicated by a number or a lower case letter in "Remarks or Exceptions".
36. **RNP-5 Status** (BRNAV) - Deferral code may be used when it is determined that RNP-5 (BRNAV) airspace operations cannot be used and no specific MEL relief applies. This deferral code requires MCC authorization prior to its usage or removal.
37. **RNP-10 Status** - Deferral code that may be used when it is determined that RNP-10 airspace operations cannot be used and no specific MEL relief applies. This deferral code requires MCC authorization prior to its usage or removal.
38. **RVSM Status** - Deferral code may be used when it is determined that RVSM operations cannot be used, no specific MEL relief applies and the aircraft must remain at or below FL280. This deferral code requires MCC authorization prior to its usage or removal.
39. **Takeoff** - Is the act of beginning a flight in which an aircraft is accelerated from a state of rest to that of flight. For the purposes of MEL relief, this translates to the point at which the pilot physically begins to apply power for the purpose of taking flight.
40. **Time In Service** - Means the time from the moment an aircraft leaves the surface of the earth until it touches it at the next point of landing (as defined in 14 CFR). "Time In Service" is identical to "Flight Hours" (as defined in 14 CFR).
41. A **vertical bar (change bar)** - Indicates a change, addition or deletion in the adjacent text for the current revision of that page only. The change bar is dropped at the next revision of that page.
42. **Visible Moisture** - An atmospheric environment containing water in any form that can be seen in natural or artificial light; for example, clouds, fog, rain, sleet, hail or snow.
43. **Visual Flight Rules (VFR)** - Is as defined in 14 CFR. This precludes a pilot from filing an Instrument Flight Rules (IFR) flight plan.
44. **Visual Meteorological Conditions (VMC)** - When the atmospheric environment is such that would allow a flight to proceed under the visual flight rules applicable to the flight. This does not preclude operating under Instrument Flight Rules.

MEL/CDL Format

The ATA System Page is divided into six (6) columns and contains: Item Number and Name/Description, Flight Crew May Placard, Number Installed, Number Required for Dispatch, Repair Category, and Remarks or Exceptions. The units on the Minimum Equipment List/Configuration Deviation List (MEL/CDL) are presented in accordance with the ATA chapter numbering system, and are coded by a six digit number. Under each ATA chapter code, the units are listed in a column by numerical sequence.

Within the complete MEL/CDL item, each associated sub-item is designated by a letter after each item number (24-00-01A, 24-00-01B, etc.). A sub-item may denote one or more of the following:

- Two or more alternatives available for dispatch ("or" item)
- Sub-system(s) of the Main MEL/CDL item
- Aircraft group applicability
- Types of operation for the MEL/CDL item (icing, no-icing, etc.)

The following provides an explanation of the scope and use of each of the columns as titled:

④ NUMBER INSTALLED		NUMBER REQUIRED FOR DISPATCH ⑤	
③ FLIGHT CREW MAY PLACARD		REPAIR CATEGORY ⑥	
① ITEM NO.	② NAME/DESCRIPTION	REMARKS OR EXCEPTIONS ⑦	
21-00-XX	Air Conditioning Packs "DISP.APPR.REQ'D."	Y 2 0 C	⑧ (M)(O) Both may be inoperative provided flight is conducted in an unpressurized configuration.

1. ITEM NO. - This column lists the MEL/CDL Number in ATA Number format.
2. NAME/DESCRIPTION - Below the manufacturer's name of an item, the commonly used terminology for an item may be included in parenthesis. The term "DISP. APPR. REQ'D." in this column is explained in the section, MEL Definitions. The term "Contact MCC" is explained in the section, MEL Definitions. When aircraft numbers or types (e.g. -700 aircraft) are specified in this column, it signifies the applicability of the relief to these aircraft only. However, if no aircraft numbers or types are specified, the relief applies to all the aircraft in that fleet. When applicability is specified by AA compliance, the MCC should be contacted to determine AA completion status for the affected aircraft.
3. FLIGHT CREW MAY PLACARD - This column serves as additional reference to the pilots for items that qualify for Flight Crew Placarding. These items will be identified by the letter "Y". Items NOT available for Flight Crew Placarding will be identified by the letter "N". See Placarding Procedures.
A "Y" in the Flight Crew May Placard column indicates all (M) or (O) PROCEDURES for that item may be performed or managed by the pilots (see MEL Definitions).
4. NUMBER INSTALLED - This column serves as a reference to the number of units installed on the aircraft. The number in this column will also be equal to or greater than the requirements in column five (Number Required For Dispatch).
5. NUMBER REQUIRED FOR DISPATCH - This column depicts the minimum number (quantity) of instrument and equipment items required for operation provided the conditions specified in the "Remarks or Exceptions" column are met.

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NOTE: Reference 4 and 5: When a specific number of units installed / required for dispatch cannot be determined due to the numerous fleet configurations, a dash (-) will be shown in the column and the special limitations will be shown under REMARKS or EXCEPTIONS Column.

6. REPAIR CATEGORY - This column denotes the repair category of the item. The timing for each category item is listed below. Items which are without a category identifier are either Administrative or CDL items and may be inoperative without limit as noted in the REMARKS or EXCEPTIONS column.

Category "A" - Items in this category shall be repaired within the time interval specified in the REMARKS or EXCEPTIONS column of the operator's approved MEL. For time intervals specified in "calendar days" or "flight days," the day the malfunction was recorded in the aircraft logbook is excluded. For all other time intervals (flights, flight legs, cycles, hours, etc.), repair tracking begins at the point when the malfunction is deferred in accordance with the operator's approved MEL.

NOTE: Category "A" items are marked with background shading to highlight their significance.

Category "B" - Items in this category shall be repaired within three (3) consecutive calendar days (72 hours), excluding the day the malfunction was recorded in the Aircraft Maintenance Record / Logbook. For example, if it were recorded at 10 a.m. on January 26th, the three day interval would begin at midnight on the 26th and end at midnight the 29th.

Category "C" - Items in this category shall be repaired within ten (10) consecutive calendar days (240 hours), excluding the day the malfunction was recorded in the Aircraft Maintenance Record / Logbook. For example, if it were recorded at 10 a.m. on January 26th, the 10 day interval would begin at midnight the 26th and end at midnight February 5th.

Category "D" - Items in this category shall be repaired within one hundred twenty (120) consecutive calendar days (2880 hours), excluding the day the malfunction was recorded in the Aircraft Maintenance Record / Logbook.

NOTE 1: Category "A" and "D" items cannot be extended beyond the maximum repair interval as specified in the Minimum Equipment List (MEL).

NOTE 2: Category "B" and "C" items can be extended by the Shift Manager – MCC (see MEL Extensions).

7. REMARKS or EXCEPTIONS – This column may include a statement(s) either prohibiting or permitting operation with a specific number of instrument and equipment items inoperative, provisos (conditions and limitations) for such operation, appropriate notes, and repetitive check (see Repetitive Checks, this manual). Specific procedures which must be accomplished with the listed item inoperative are indicated by "(M)" and/or "(O)" symbols. The function of the (M) and (O) symbols is to denote that a procedure exists which must be conducted, and not to necessarily identify who accomplishes the procedure. The (M) and (O) PROCEDURE(s) will be listed in their entirety below the MEL item along with the applicable graphics and performance corrections, if any.
8. **(M) and (O) PROCEDURES** - Manufacturer's Procedures Manuals are used as a baseline to develop the procedures found in Delta's MEL/CDLs. The procedures found in manufacturer's Procedures Manuals are recommended by the manufacturer and are intended to be used as guidance for the operator in development of their own procedures. The MEL Program Group has the responsibility for developing all applicable (M) and (O) Procedures found in Delta MEL/CDLs (see TOPP 30-20-20).

The (M) and (O) Procedures found in Delta MEL/CDLs may require accomplishment of various routine maintenance and/or pilot actions. In order to keep the size of MEL/CDLs manageable, normal procedures and associated warnings related to activating/deactivating aircraft electrical, pneumatic and hydraulic systems, operating flight controls or engines, etc., are not reproduced in Delta MEL/CDL (M) or (O) Procedures. These normal procedures and precautions are found in applicable TOPP documents, Aircraft Maintenance Manuals, Operations Manuals, Quick Reference Handbook, FOM, etc., and must be followed when accomplishing (M) and/or (O) Procedures.

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For MEL items that restrict cargo loading (bin empty or only empty cargo handling equipment, ballast and fly-away kits), only the items listed below are approved for carriage in the affected bin(s).

- Ballast sand bags (bulk loaded or in ULDs)
- Empty ULDs (containers and/or metal pallets)
- CRAF Mission Fly-Away-Kits (contents listed below)

Main Wheel Assy (2 ea)	IDG Service Pot	WXR Trans
Nose Wheel Assy (2 ea)	Starter	MMR
85 Ton Jack (2 ea)	Start Valve	Radio Altimeter
Tire Dolly	ELMs Relay (3ea)	APU Battery
Torque Wrench	Ram Air Door Hinge (2 ea)	Battery Charger
MLG/NLG Socket	Ram Air Door Plate	Contactor
Oil Case (2 ea)	HF Trans	Engine A/I Valve

NOTE 1: Aircraft /APU battery and containers of hydraulic fluid (Skydrol), oil, and servicing equipment that contain fluids, must be removed from the fly-away kit and located within an operative bin.

NOTE 2: Verify Main and Nose Wheels are inflated to minimum shipping pressure of 50 psi.

Remarks on the Weight Data Record (WDR) will provide verification to flight crews that bin(s) is empty or contains only approved materials as listed above.

MEL Videos

Within the (M) PROCEDURES throughout the MEL you may find the following icon and text.



[Link to Learning Video – \(Example: 36-11-02A\)](#)

This icon will link the user to a TechOps Learning Video. It is not a mandatory requirement of the (M) PROCEDURES that the Learning Video be viewed.

The “Intro to the MEL” video below does not supersede the MEL Front Matter. It is not intended to be a substitute for the instructions in the MEL Front Matter or any referenced TOPP documents.



[Link to Learning Video](#)

Disclaimer

Learning videos are intended to communicate basic ideas and concepts, and are not a substitute for approved manuals and work documents. Always refer to approved, controlled documentation or other stated reference material for the latest information when performing any maintenance or operations procedures.

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Repetitive Check Requirements

The REMARKS or EXCEPTIONS column of some MEL/CDL items is annotated with “Repetitive Check Required (Yellow Placard)”. A yellow placard will be installed as stated in the Placard Types section, and the Captain must ensure that required repetitive checks are accomplished by the appropriate personnel per the instructions for the MEL.

NOTE: At non-maintenance stations where a pilot is not qualified to accomplish the check, contact the Maintenance Coordinator or ACS personnel per TOPP 40-20-15 and the FOM for help in procuring contract maintenance.

The four Repetitive Checks are:

A. PRIOR TO EACH DEPARTURE

It is the Captain’s responsibility to manage these items by either checking the item himself or by advising Maintenance personnel a check is required. Enter the check into the Aircraft Log Book when “Log Book Entry Required” is listed in the MEL/CDL item.

NOTE: If a takeoff is aborted, the captain determines if it is necessary to repeat this type of check.

B. ONCE EACH FLIGHT DAY

The ONCE EACH FLIGHT DAY check is normally accomplished during a layover, but may be accomplished at any station as long as it is accomplished once each flight day. Enter the check into the Aircraft Log Book. The Repetitive Check is accomplished when the item is deferred on the ‘Day of Discovery’ (see Definitions), and fulfills the requirement of the Repetitive Check for that flight day.

C. PRIOR TO THE FIRST FLIGHT OF THE DAY

The check must be entered into the Aircraft Log Book as being accomplished per MEL/CDL requirement.

D. CONDITIONAL REPETITIVE CHECK

The MEL/CDL Remarks or Exceptions column may specify conditional repetitive check requirements, i.e., “BEFORE ENGINE START” or “AFTER FLIGHT CONTROL CHECK.” The Remarks or Exceptions column for these MEL/CDL items will be annotated with “Repetitive Check Required (Yellow Placard)” and may require a logbook entry.

Placard Instruction Table

The following instructions are applicable to the MEL/CDL placard tables. Each inoperative instrument or equipment item must be placarded to inform and remind the crewmembers and maintenance personnel of the item condition. To the extent practical, placards should be located adjacent to the control or indicator for the item affected as specified in the TAB LOCATION column. When the Tab Location column states N/A, no tab is required.

① MEL/CDL ITEM	② TAB LOCATION	④ PLACARD TEXT
34-00-xx	1. #1 Radio Altimeter Indicator 2. GPWS Switch	1. #1 Radio Altimeter Indicator INOP 2. GPWS INOP

MEL/CDL ITEM	TAB LOCATION	PLACARD TEXT
21-00-XX	③ Associated Pack Switch	⑤ _____ Air Conditioning Pack INOP

①	MEL/CDL ITEM - Lists the specific MEL/CDL item number.
②	TAB LOCATION - Place the TAB on or adjacent to the listed switch, indicator, lever, etc., that controls the inoperative unit/system. Multiple TAB locations may be listed for one MEL/CDL item and will be listed numerically in this column as indicated in the above example. When multiple TABs are required, use tabs from additional Aircraft Placards and discard the large unused portion of the placard. Record the same Log or Control No. on each TAB. Place a TAB at each listed location.
③	The term "associated" or "affected" may appear in this column. For example, with a <i>left</i> pack inoperative, the "associated" pack switch is the <i>left</i> switch; with a <i>left</i> boost pump LOW PRESSURE light inoperative, the "affected" LOW PRESSURE light is the <i>left</i> light. Place the TAB(s) on or adjacent to the associated or affected item(s) listed in this column.
④	PLACARD TEXT - A description of the inoperative unit/system to be recorded on the large portion of the Aircraft Placard that is placed in the Aircraft Log Book. Failures of certain systems may cause other systems to be inoperative or require other systems to be considered inoperative. All affected systems will be listed numerically in this column as indicated in the above example. All listed systems are to be recorded on a single Placard. NOTE: Commonly used terms or abbreviations may be substituted for TEXT listed in this column. Additional information that will enhance Flight Crew and Maintenance awareness of the inoperative system/component may be included at the discretion of the individual installing the Placard.
⑤	When there are multiple units or components within a system, a space (____) will be included in this column indicating a descriptive term or position (i.e., left, right, #1, #2, forward, aft, upper, lower, etc.) must be recorded on the placard in addition to the PLACARD TEXT.

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Placard Types

All deferred MEL/CDL items require a Placard to be installed. Placards for the affected item should be located as specified in the TAB LOCATION column.

The following placards are used by both pilots and maintenance personnel:

- A. **White Placard** - The MEL Placard, form 0412-40441, serves as a visual indication to Maintenance personnel and flight crews that a unit or system on the aircraft is inoperative, missing, or restricted to limited operation. The white placard is used for all MEL/CDL items and other deferred items which do not require a Repetitive Check.
 - A placard may also be installed to give advisory information to the pilots about a particular item, such as recent maintenance performed on aircraft systems or major components.
 - On all advisory or information placards, use the white placard and write "N/A" in the MEL Reference Block.
 - In some instances, it is necessary to notify Maintenance personnel and flight crews of special installations or engineering modifications that have been accomplished on a particular aircraft. An information placard or Project Operation and Maintenance Information Form (EP-19) placed in the Aircraft Log Book can be used to accomplish this notification.
 - If an EP-19 Form is used, it will be placed inside a clear plastic sleeve located in the Aircraft Log Book.
- B. **Yellow Placard** - The MEL Placard, form 0412-40512, also provides a visual indication to advise Maintenance personnel and pilots that a unit or system is inoperative, missing, or restricted to limited operation and that a "Repetitive Check" is required. The MEL/CDL will state, in capital letters, when the checks are required. For those MEL/CDL items that require repetitive checks (i.e., "Prior to Each Departure," "Prior to the First Flight of the Day," "Once Each Flight Day", or "Conditional Repetitive Check"), a yellow placard must be installed to advise downline Maintenance personnel and the captain of the repetitive check requirement. Yellow placards may also be used for items deferred per the Maintenance Manual or other approved manuals which require a repetitive check (e.g., fluid leaks).
- C. **Use of Red Tape Placard** - While the tape placard is designed primarily for use in placarding passenger seats as unserviceable, it may be used to placard other unserviceable cabin equipment, such as lavatories. Additionally, the tape placard may be used in conjunction with a "placard" as an attention-getting device. When used in this manner, the "PLACARD" tab shall be affixed to the face of the tape placard.

Performance Instructions

The enroute performance penalties in this MEL/CDL are applied to all flights by the Flight Control Dispatcher when analyzing the flight plan using the FPS flight planning system. The penalty is entered as an Enroute Driftdown Penalty in FPS and applied in FPS by increasing the weight of the aircraft by the penalty amount. The flight planning system will then access the driftdown tables at the penalized, increased weight to determine the driftdown weight limit. One-engine inoperative performance limitations (under FAR 121.191) will be applied where most restrictive. Transoceanic operations are conducted under ETOPS rules and use the same MEL performance penalty method.

A sample Performance Correction for a MEL item is shown below. The contents of the Performance Correction box should be used in conjunction with the other limitations and procedures in the MEL for the applicable dispatch. A quick-reference guide to the Performance Correction is provided below. It is important to note that items appearing above the double line should be considered by all users including the flight crew and dispatcher. Items below the double line are primarily for flight crew or LCC use. Use the appropriate box depending on the type of Weight Data Record (WDR) generated.

NOTE: The Performance Correction shown below is provided for training purposes only and should not be used for MEL 21-25-01A. Additionally, the sample MEL item below may not reflect the most current information.

Example:

①	21-25-01A	Right Recirculation Fan
②	EFFECTIVITY	All
③	FLIGHT PLANNING REQUIREMENTS	Increase BLOCK FUEL by 0.3%.
④	NOTES	None
⑤	AWABS	Performance corrections have been applied.
⑥	TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF None LANDING None

- MEL/CDL Number and Title.
- Effectivity: Aircraft affected by the subject MEL/CDL item.
- Flight Planning Requirements: Requirements that must be taken into account prior to the flight.
 - These items will be the responsibility of the dispatcher and must be taken into account prior to the flight.
 - Examples of Flight Planning Requirements can be, but are not limited to, Enroute Climb Limit Weight or Block Fuel adjustments.
- Notes: Other pertinent information applicable to this MEL item.
- AWABS: Contains information regarding functionality applied by AWABS. One of the two following statements will be published:
 - "Performance corrections have been applied" indicates that the AWABS document contains all applicable MEL adjustments and that no further Flight Crew action is required.

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- “Performance weight corrections have been applied” indicates that only the weights listed on the AWABS document contain the applicable MEL/CDL adjustments. This statement is followed by a specific action (or actions) required by the Flight Crew. Example – “Performance weight corrections have been applied. Reduce V1 by 3 KIAS.” These statements advise that the performance weight corrections have been applied by AWABS, but the Flight Crew must reduce the V1 noted on the AWABS document by 3 KIAS.

6. Takeoff Performance Worksheet: LCC (Load Control Center) will complete this Worksheet (including performance corrections shown in this section) and a copy will be provided to the flight crew when dispatched with a Manual WDR. This section contains three subsections: Takeoff, Landing, and Other Corrections. The section titled “Other Corrections” will only appear if other corrections are to be performed.

NOTE: Performance decrements specified in this section of the performance box are simplified and conservative for the manual computation of takeoff and landing limit weights. AWABS produces more precise weights based on runway length and obstacles. Therefore, comparing AWABS documents with and without an MEL item will frequently produce significantly different results than weights specified in the Takeoff Performance Worksheet section of the performance box.

TAKEOFF

- Runway Allowable Takeoff Weight adjustment.
- Takeoff Climb Limit Weight adjustment.

LANDING

- Runway Allowable Landing Weight adjustment.
- Approach/Landing Climb Limit Weight adjustment.
- Maximum Quick Turnaround Landing Weight adjustment.

OTHER CORRECTIONS

- V-speed adjustments.
- Landing speed adjustments.
- EPR or N1 adjustments.

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MEL/CDL Use (Maintenance)

During Service Checks maintenance personnel will review the aircraft log book for the previous 10 days to ensure any open MEL deferrals are active in LMOS, reference the service check AMDS work card for each fleet. Maintenance personnel will call the MCC in ATL at 404-715-0088 (ext. 5-0088) or 1-800-DELTAMC (1-800-335-8262) immediately if any open MEL/CDL item is not listed on the current MEL/CDL Item List (tran code MEL).

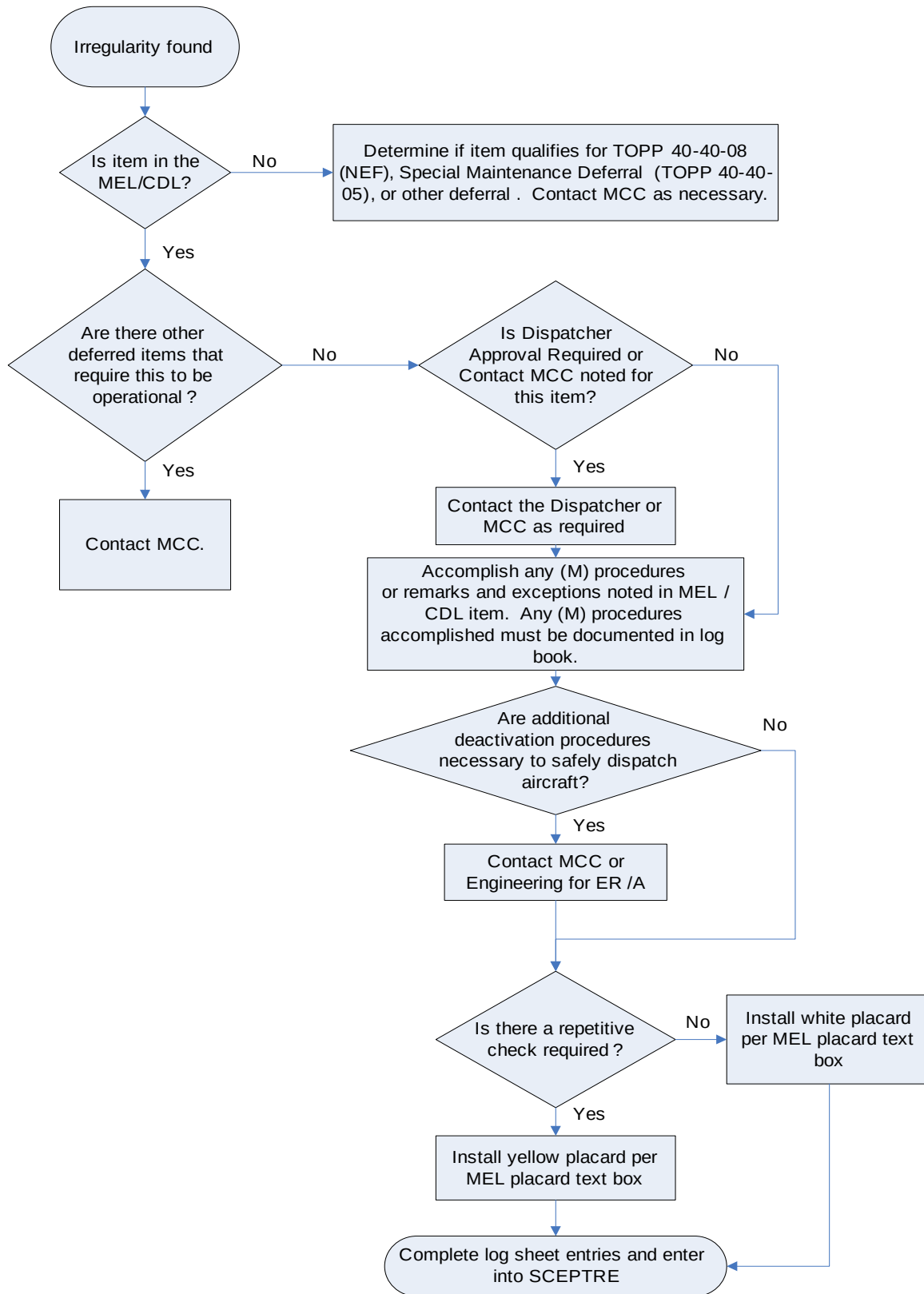
NOTE: If it is determined that a Repair Category 'A' item cannot be cleared prior to flight release from layover, the mechanic assigned to the aircraft must call Aircraft Routing, ATL, ext. 5-0222, to determine if there is sufficient flight time remaining to allow the aircraft to reach the next layover, or to reach a station where the repairs can be accomplished.

To document an MEL/CDL item in the log book and install the appropriate placard, Delta AMTs or contract maintenance vendors, under the guidance of MCC, must adhere to the following procedure:

1. When an irregularity is found, verify that the item is not already deferred (do not duplicate a log book entry). Document the irregularity in the aircraft log book in accordance with TOPP 50-10-05.
2. Determine if the item is in the MEL/CDL. If not, contact the MCC through Dispatch to determine if the item qualifies for deferral as NEF (see TOPP 40-40-08), or some other deferral method.
3. Determine that other deferred items do not require this item to be operational. If so, contact the MCC before continuing.
4. If required by the item, Contact Dispatch or MCC to gain authority to defer the item.
5. Accomplish all (M) procedures and instructions noted under the Remarks and Exceptions column in the MEL/CDL.

If a procedure requires a circuit breaker(s) to be pulled and secured, use the orange circuit breaker collar(s). If orange collars are not available, secure the required circuit breaker(s) via alternate means (e.g., Tyrap or other positive securing means) and annotate in the IRO section of the log book, "Missing orange CB collar(s)".

6. If any additional deactivation is required to safely dispatch the aircraft, contact MCC or Engineering for authority and documentation. Record all actions in the log book and install a placard.
7. Determine if a Repetitive Check is required. If so, install a yellow placard according to the MEL placard text box. If the repetitive check is an (M) procedure, comply with check in accordance with instructions.
8. If item does not require a Repetitive Check, install white placard according to the MEL placard text box (see Placarding Instructions, this manual).
9. Enter "Deferred per MEL/CDL xx-xx-xx" in the IRO section of the log book. If the MEL/CDL deferral includes a (M) procedure, compliance must be documented in the IRO section (example: (M) procedures complied with).



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MEL/CDL Use (Pilots)

The MEL/CDL must be reviewed by the flight crew prior to flight to ensure compliance with all limitations and/or procedures associated with each deferred item. Systems/components deferred per the MEL will not be activated, actuated or otherwise utilized under normal operations. Elements, features or functions of deferred systems must not be used if their use will adversely affect the safe operation of the aircraft.

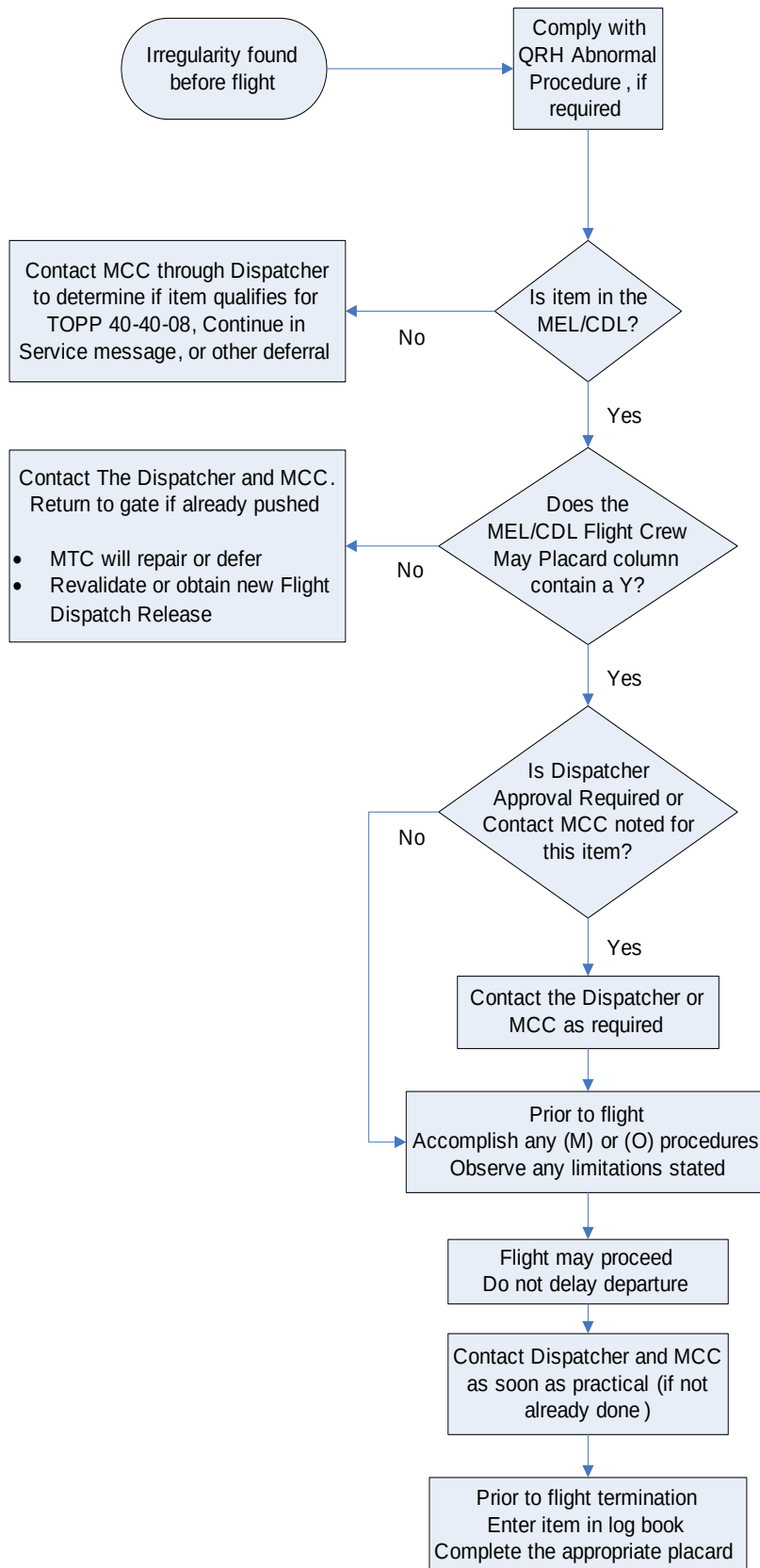
Pilots may document and install the appropriate placard when the MEL/CDL item denotes a 'Y' in the 'Flight Crew May Placard' columns, or when authorized under the NEF Program (see TOPP 40-40-08). In this case, the pilots may perform any required (M) or (O) procedures. To document an MEL/CDL item, the pilot must take the following actions:

1. When an irregularity is found, comply with the QRH Abnormal procedure if required. Verify that the item is not already deferred. Do not duplicate a log book entry.
2. Determine if the item is in the MEL/CDL. If not, contact the MCC through Dispatch to determine if the item qualifies for deferral as NEF (see TOPP 40-40-08), Continue in Service (TOPP 40-40-05), or other deferral method.
3. If the item is in the MEL/CDL, determine if the item contains a 'Y' under the Flight Crew May Placard column. If there is not a 'Y', contact the MCC through Dispatch and return to the gate if already pushed. Maintenance will repair or defer the item. Revalidate or obtain a new Flight Release as necessary.
4. If the item contains a 'Y', determine if "Dispatch Approval Required" or "Contact MCC" is indicated. Contact Dispatch and/or MCC as required.
5. Prior to flight, accomplish all (M) and (O) procedures and any instructions noted for the item under the Remarks and Exception column in the MEL/CDL and observe any restrictions or limitations.

If a procedure requires a circuit breaker(s) to be pulled and secured, use the orange circuit breaker collar(s). If orange collars are not available, secure the required circuit breaker(s) via alternate means (e.g., Tyrap or other positive securing means) and annotate in the IRO section of the log book, "Missing orange CB collar(s)" next to the "Flight crew installed placard at XXX." remark.

6. The flight may proceed without delay. Contact Dispatcher and MCC as soon as practical (if not already done). Logbook entry (see TOPP 50-10-05) and placard (see Placards, this manual) must be completed prior to flight termination.

The log book must have the discrepancy written in the IRF block. Under the direction of MCC, complete the IRO "Correction/Deferral" portion of the Aircraft Maintenance Log. Flight crews completing the deferral will enter the phrase, "Flight Crew Placard Installed at (station) per MEL (xx-xx-xx)" followed by the captain's title, name, six digit employee number, the Maintenance Coordinator's title, name, and six digit employee number in the IRO block. The Mech. Signature or SIGNATURE block will be signed by the AMT.



MEL Expiration

- Expiration dates/times are based on UTC time. Under normal circumstances the aircraft must arrive at the destination station prior to midnight of the expiration date (UTC time). This applies to all Category A, B, C, and D items. If the aircraft cannot arrive at the destination station prior to midnight, due to an unexpected delay (maintenance, flight exception, weather, ATC flow control, etc.), the MCC Shift Manager may approve the flight departure provided the aircraft departs (departs for this policy means an "OUT" time has been sent or all doors closed) prior to midnight (UTC time) of the expiration date. In the event of any additional unexpected delay (ATB, DIV, RTB, etc.), the aircraft must still depart (depart for this policy means an "OUT" time has been sent or all doors closed) prior to midnight (UTC time) of the expiration date. If the delayed departure time is expected to be after midnight, the item must either be repaired, or reviewed by the MCC Shift Manager for possible extension (Category B, C) prior to further revenue flight.
- The Captain and the Maintenance Coordinator have joint responsibility to ensure that MEL expiration periods are not exceeded for MEL/CDL Category B, C and D items. The MCC is solely responsible for monitoring the expiration of Category A items and non-MEL items. The MEL serves as the primary reference source for category and expiration period guidance.
 - The expiration period of category "A" items is defined as the time interval specified in the REMARKS or EXCEPTIONS column of the operator's approved MEL/CDL. For time intervals specified in "flight days," the day the malfunction was recorded in the aircraft logbook is excluded. For all other time intervals (flights, flight legs, cycles, hours, etc.), repair tracking begins at the point when the malfunction is deferred in accordance with the operator's approved MEL/CDL.
 - The MEL/CDL should always be consulted regarding limitations and restrictions. The flight plan MEL/CDL expiration information should be used as a cross-check, not a substitute, for reviewing the MEL/CDL. If any MEL/CDL item in the log book is not listed in the flight plan, check the MEL for its category and expiration period based on the "Day of Discovery" (see *MEL Definitions*).
 - The Captain shall contact the MCC in accordance with the FOM with any questions concerning MEL currency

MEL/CDL Category	MEL/CDL Expiration Time	Extendible?	Who is responsible for MEL/CDL currency?
A	Time interval specified in MEL	No	MCC
B	3 Days	Yes	Pilot and MCC
C	10 Days	Yes	Pilot and MCC
D	120 Days	No	Pilot and MCC
N/A ¹	Item specific (Not in MEL)	Item specific (Not in MEL)	MCC

¹NOTE: A MEL placard may be placed in the logbook which identifies other components / systems not specifically referenced in the MEL. This is done for administrative tracking purposes. These items do not have a MEL Number and the placard MEL/CDL Reference Number block will indicate "N/A" (not applicable). The Captain is not responsible for verification of the expiration period for this type of entry.

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- The MEL/CDL references and expiration dates/times will be listed in the "FLIGHT CONTROL & MAINTENANCE REMARKS" section of the Delta Flight Plan to help verify MEL/CDL information and currency.

The following examples show how MEL/CDL information will appear on the flight plan:

Category A items

M78-34-01 REVERSER UNLOCK INDIC/AMBER U/L/--1INOP
**CATEGORY A MEL

Category B, C and D items

M32-46-01C TIRE PRESSURE INDICATIONS - UP TO 12 INOP
MEL EXPIRATION DATE - 20MAR95 AT 2400 UTC

Extensions of Expiration Date

When a B or C category item has expired and cannot be cleared prior to the next flight release, the appropriate Maintenance Coordinator - MCC must be contacted for possible extension approval. Refer to TOPP 40-40-05 for instructions on MEL extensions

Removal of a Deferral

When documenting the removal of a MEL/CDL deferral in the IRO section of the log page, indicate the action(s) taken to reactivate previously deactivated systems/components, and a statement that the item is cleared (system reactivated and placard removed).

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RNAV Minimum Requirements

The chart below should be used when making MEL compliance or aircraft equipment decisions prior to the dispatch event. Equipment failures that occur after that event will be referenced in the appropriate AOM. The values referenced below are not intended to reduce the minimum values published on any approach chart or reduce any crew qualification restriction.

To use the chart, locate the MEL number for the deferred system. Read the columns to the right of the appropriate MEL number to determine the number of systems required for the type of operation under consideration.

MEL Item on Deferral	Number Required			
	RNAV ENROUTE	RNAV SID/STAR	RNAV Approach	
			RNAV (GPS), GPS, NDB, or VOR using LNAV/VNAV	RNAV (RNP)
22-00-01: Autopilot Systems or	1 or	1 or	1	2 and
22-00-15: MCP – F/D Switches &	1 and	1 and	0	2 and
34-00-12: Flight Director Systems ^①	1	1	0	2
22-00-04: Autothrottle System	0	0	0	1
22-00-06: Flight/Approach Mode Annunciations	0	1 ^②	1 ^②	2
34-00-48: Decision Height/Mins Selector	0	0	1	1
22-00-08: Autothrottle Disengage Lights	0	0	0	1
22-00-15: MCP – LNAV Switch	0	1	1	1
22-00-15: MCP – VNAV Switch	0	0	1	1
22-00-17: TO/GA Switches	0	0	1	1
24-00-01: Electrical Power Source (AC) 24-00-02: (APU may be used as second source)	2	2	2	2
34-00-13: Distance Measuring Equipment	1	1	1	1
34-00-20: Radio Altimeter R/T	0	1 ^③	1	2
34-00-26: GPWS (Set TERR)	0	0	0	1
34-00-35: ADIRU IRS	1	1	1	2
34-00-36: FMCS – FMC Alert Lights	1	1	1	1
34-00-36: FMCS – Computer	1	1	1	2
34-00-36: FMCS – MCDU	1	1	1	2
34-00-36: FMCS – Navigation Databases	1 ^④	1 ^④	1 ^④	2 ^④
34-00-45: Global Positioning System	0	0	1	2

① HUD may be used in place of Captain's Flight Director.

② LNAV Mode Annunciation required.

③ For RNAV off the runway operations, ensure Flight Director selected as master corresponds to the operative Radio Altimeter.

④ Authorized with 1 or 0 if MEL 34-00-36 NAV Database (O) procedure is successfully accomplished.

CONTINUED NEXT PAGE

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RNAV

RNAV (area navigation) equipped aircraft are capable of navigation independent of ground-based navigational aids. The 737 FMC logic uses GPS as the primary update to the FMC position. If GPS data becomes unavailable, FMC position will be determined by radio (DME) or inertial (IRS) updating.

A Predictive Receiver Autonomous Integrity Monitoring (PRAIM) analysis is required to ***dispatch*** to an RNAV approach. When required for dispatch, PRAIM is used by the OCC to predict adequate satellite coverage for RNAV approaches at ETA +/- one hour.

RNAV (GPS), GPS, NDB, VOR Using LNAV / VNAV

A Non-ILS approach based on the use of an on-board FMS database for navigation.

RNAV (RNP)

A non-ILS approach based on the use of a on-board FMS database for navigation containment, monitoring and alerting. The aircraft is the sole source of navigation integrity.

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Low Weather Minimum Requirements

APPROACH CATEGORIES

The following definitions should be used when making MEL compliance or aircraft equipage decisions prior to the dispatch event. Equipment failures that occur after that event will be referenced in the appropriate AOM (ILS Approach Equipment Requirements). The values referenced below are not intended to reduce the minimum values published on any approach chart or reduce any crew qualification restriction.

Basic Turbojet Minimums:

A precision or non-precision approach to no less than RVR 4000 (1200m) or $\frac{3}{4}$ SM (1200m) visibility, and a DH of no less than 200 ft or MDH of no less than 250 ft.

Category I Non-ILS:

A non-precision approach to no less than RVR 2400 (550m) or $\frac{1}{2}$ SM (800m) visibility, and a MDH of no less than 250 ft.

Category I ILS:

A precision approach to no less than RVR 1800 (550m) or $\frac{1}{2}$ SM (800m) visibility, and a DH of no less than 200 ft.

Category I GLS:

A precision approach to no less than RVR 2400 or $\frac{1}{2}$ SM visibility, and a DH of no less than 200 ft.

Category II:

A precision approach to no less than RVR 1200 (350m) and a DH of no less than 100 ft.

A precision approach to no less than RVR 1000 (300m) and a DH of no less than 100 ft. (Autoland or HGS required)

Category III:

A precision approach to no less than RVR 600 (175m) and a DH of no less than 50 ft.

NOTE: See Airway Manual for ground-based equipment requirements.

GLS:

A GBAS Daily Outage Predictions analysis is required to dispatch an GLS approach. When required for dispatch, this report is used by the OCC to predict adequate satellite coverage for GLS approaches at ETA +/- one hour.

EQUIPMENT REQUIREMENTS: HUD OPERATIVE AND USED FOR THE APPROACH

To use the chart, locate the MEL number for the system on MCO. Read the columns to the right of the appropriate MEL number to determine the number of systems required for the type of approach under consideration.

MEL Item on Maintenance Carry Over (MCO)	Number Required for Approach					
	Basic Turbojet Min.	CAT I Non-ILS	CAT I ILS	CAT II ILS	CAT III ILS	CAT I GLS
22-00-01: Autopilot Systems & / or 34-00-12A: Flight Director Systems	0	0	0 and 1①	0 and 1①	0 and 1①	0 and 1①
22-00-01: Autoland System	0	0	0①	0①	0①	0①
22-00-01: Autopilot System Disengage Switches	0	0	0①	0①	0①	0①
22-00-02: Autopilot Disengaged Warning Lights	0	0	0	0	0	0
22-00-02: Autopilot Disengaged Aural Warning (Wailer)	0	0	0	0	0	0
22-00-04: Autothrottle System	0	0	0⑤	0⑤	0⑤	0
22-00-06: Flight and Approach Mode Annunciations	0	0	1②	2②	2②	1②
22-00-08: Autothrottle Disengage Lights	0	0	0	0	0	0
22-00-11: STAB OUT OF TRIM Light	0	0	0	0	0	0
22-00-15: MCP A/P CMD Engage Switches	0	0	0	0	0	0
22-00-15: MCP A/T ARM Switch	0	0	0	0	0	0
22-00-15: MCP A/T SPEED Switch	0	0	0	0	0	0
22-00-15: MCP F/D Switches	0	0	1①	1①	1①	1①
22-00-15: MCP APP Switch	0	0	0	0	0	1
22-00-17A: TO/GA Switches	0	0	1	1	1③	1
22-00-017B: TO/GA Switches	0	0	2	2	2	2
27-00-09: Control Wheel Trim Switches (Captain's)	0	0	0	1	1	0
30-00-13: Windshield Wiper System	0	0	0	2	2	0
32-00-02: Anti-Skid System	0	0	0	0	1	0
32-00-03: Parking Brake Valve	0	0	0	0	1	0
32-00-10: Alternate Anti-Skid Valves	0	0	0	0	2	0
34-00-12B: Flight Director Systems	0	2	2	2	2	2
34-00-13: DME (34-00-12 grouped above w/ 22-00-01)	④	④	④	④	④	④
34-00-14: Marker Beacon Receiver	④	④	④	④	④	④
34-00-17: VOR Systems	④	④	1	2	2	1
34-00-17: ILS Systems (LOC & G/S)	④	④	1	2	2	1
34-00-20: Radio Altimeter Systems	0	0	1	2	2	1
34-00-44: Head-Up Display (HUD)	⑥	0	1	1	1	1
34-00-48: Decision Height/Minimums Selector	0	0	0	2	2	0
34-00-49: Right IRS DC FAIL Light	0	0	0	1	1	0
34-00-56: GLS	0	0	0	0	0	2

CONTINUED NEXT PAGE



HUD OPERATIVE AND USED FOR THE APPROACH

- ① Flight director, displayed on F/O's PFD, required for cross check.
- ② G/S, LOC, FLARE, TO/GA, and GA mode annunciations required on 1 FMA.
- ③ Captain's TO/GA switch must operate normally.
- ④ One or more of these systems may be required as noted on the approach plate.
- ⑤ Autoland – Not Authorized
- ⑥ SA ILS CAT I Approaches – Not Authorized.

EQUIPMENT REQUIREMENTS: HUD INOPERATIVE OR NOT USED FOR THE APPROACH

To use the chart, locate the MEL number for the system on MCO. Read the columns to the right of the appropriate MEL number to determine the number of systems required for the type of approach under consideration.

MEL Item on Maintenance Carry Over (MCO)	Number Required for Approach					
	Basic Turbojet Min.	CAT I Non-ILS	CAT I ILS	CAT II ILS	CAT III ILS	CAT I GLS
22-00-01: Autopilot Systems & / or 34-00-12A: Flight Director Systems	①	1 and 0	1② or 1	2 and 2	2 and 2	1② or 1
22-00-01: Autoland System	0	0	0	1	1	0
22-00-01D: Autopilot System Disengage Switches	①	1	1③	2	2	1③
22-00-01E: Autopilot System Disengage Switches	①	1	2	2	2	2
22-00-02: Autopilot Disengaged Warning Lights	①	2	0 ③	2	2	0 ③
22-00-02: Autopilot Disengaged Aural Warn (Wailer)	①	1	0 ③	1	1	0 ③
22-00-04: Autothrottle System	0	0	0	1	1	0
22-00-06: Flight and Approach Mode Annunciations	①	1④	1④	2	2	1④
22-00-08: Autothrottle Disengage Lights	0	0	0	2	2	0
22-00-11: STAB OUT OF TRIM Light	0	0	0 ③	1	1	0 ③
22-00-15: MCP A/P CMD Engage Switches	①	0	1 ③	2	2	1 ③
22-00-15: MCP Autothrottle ARM Switch	0	0	0	1	1	0
22-00-15: MCP A/T SPEED Switch	0	0	0	1	1	0
22-00-15: MCP F/D Switches	0	0	1	2	2	1
22-00-15: MCP APP Switch	①	1	1	1	1	1
22-00-17A: TO/GA Switches	0	0	1	1	1 ⑤	1
22-00-17B: TO/GA Switches	0	0	2	2	2	2
27-00-09: Control Wheel Trim Switches (Captain's)	0	0	0	1	1	0
30-00-13: Windshield Wiper System	0	0	0	2	2	0
32-00-02: Anti-Skid System	0	0	0	1	1	0
32-00-03: Parking Brake Valve	0	0	0	1	1	0
32-00-10: Alternate Anti-Skid Valves	0	0	0	2	2	0
34-00-12B: Flight Director Systems		0	2	2	2	2
34-00-13: DME(34-00-12 grouped above w/ 22-00-01)	⑥	⑥	⑥	⑥	⑥	⑥
34-00-14: Marker Beacon Receiver	⑥	⑥	⑥	⑥	⑥	⑥
34-00-17: VOR Systems	⑥	⑥	1	2	2	1
34-00-17: ILS Systems (LOC & G/S)	⑥	⑥	1	2	2	1
34-00-20: Radio Altimeter R/T	0	0	1	2	2	1
34-00-44: Head-Up Display (HUD)	⑦	0	0	0	0	0
34-00-48: Decision Height/Minimums Selector	0	0	0	2	2	0
34-00-49: Right IRS DC FAIL Light	0	0	0	1	1	0

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HUD INOPERATIVE OR NOT USED FOR THE APPROACH

- ❶ Both the autopilot and flight director will be utilized for all ILS approaches when the reported weather is below 4,000 RVR or 3/4 mile.
- ❷ Two (2) Autopilots needed for autoland.
- ❸ At least one Flight Director must operate normally.
- ❹ G/S, LOC, FLARE, TO/GA, and GA mode annunciations required on 1 FMA.
- ❺ Captain's TO/GA switch must operate normally.
- ❻ One or more of these systems may be required as noted on the approach plate.
- ❼ SA ILS CAT I Approaches – Not Authorized.
- ❽ Autoland and autothrottle systems must be operative for CAT II when RVR is less than 1200 but not less than 1000.

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	B737 Minimum Equipment List	ATA 11 Placards	R18 08/18/14 Page 11-1

ATA 11 Contents

11-00-01	Aircraft Placards/Markings Repair Installed	11-2

NUMBER INSTALLED			NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD			REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION			REMARKS OR EXCEPTIONS
11-00-01	Aircraft Placards/Markings Repair Installed “Contact MCC” Administrative Control item	N	-	- Item may be used to track repair provided: a) MCC determines that placard is FAA required, b) Install repair per TOPP 40-40-05, c) Enter in log book repair is applied per TOPP 40-40-05, and d) Enter in log book that repair is deferred per MEL 11-00-01. NOTE: If MCC determines that placard is not FAA required, use TOPP 40-40-08 (NEF).

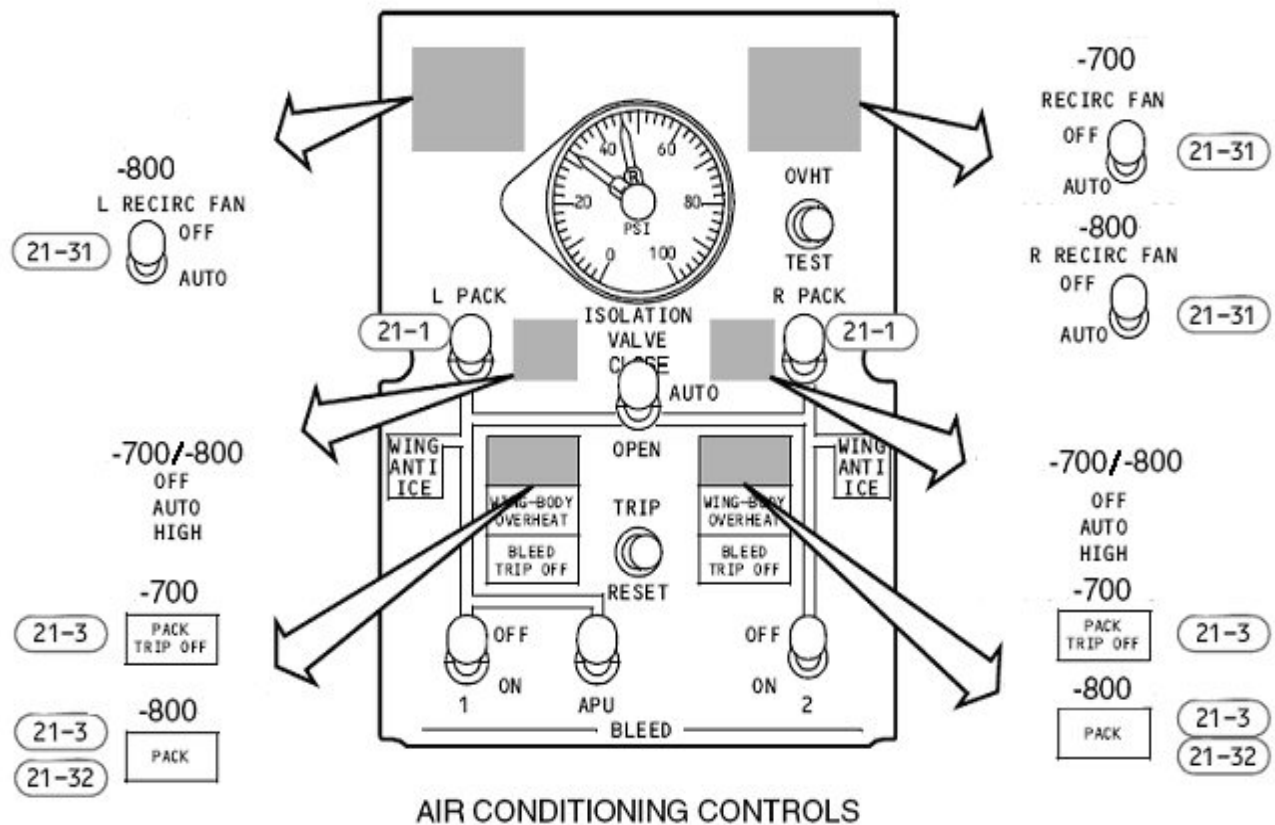
MEL ITEM	TAB LOCATION	PLACARD TEXT
11-00-01	Logbook	_____ REPAIRED PER TOPP 40-40-05

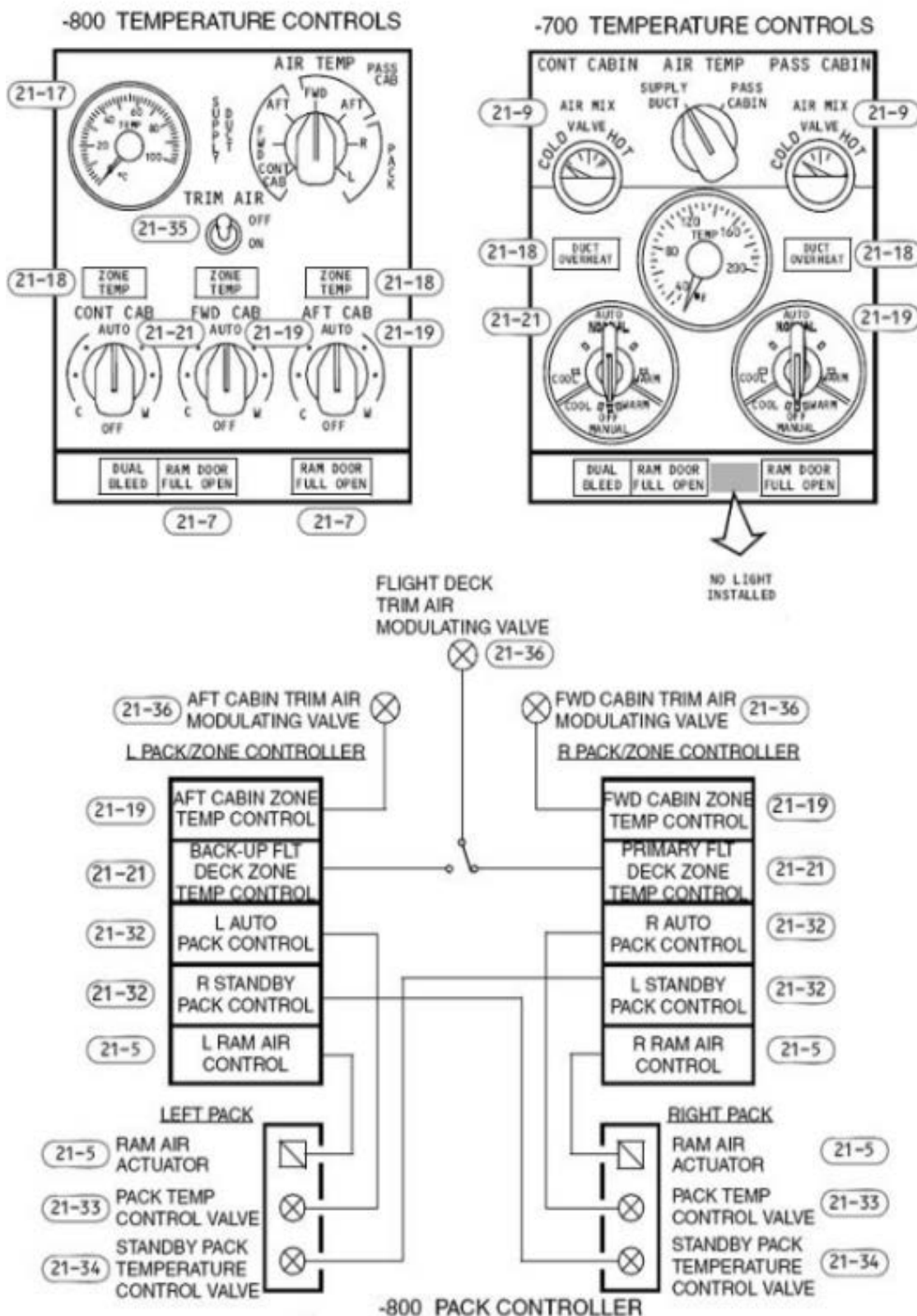
ATA 21 Contents

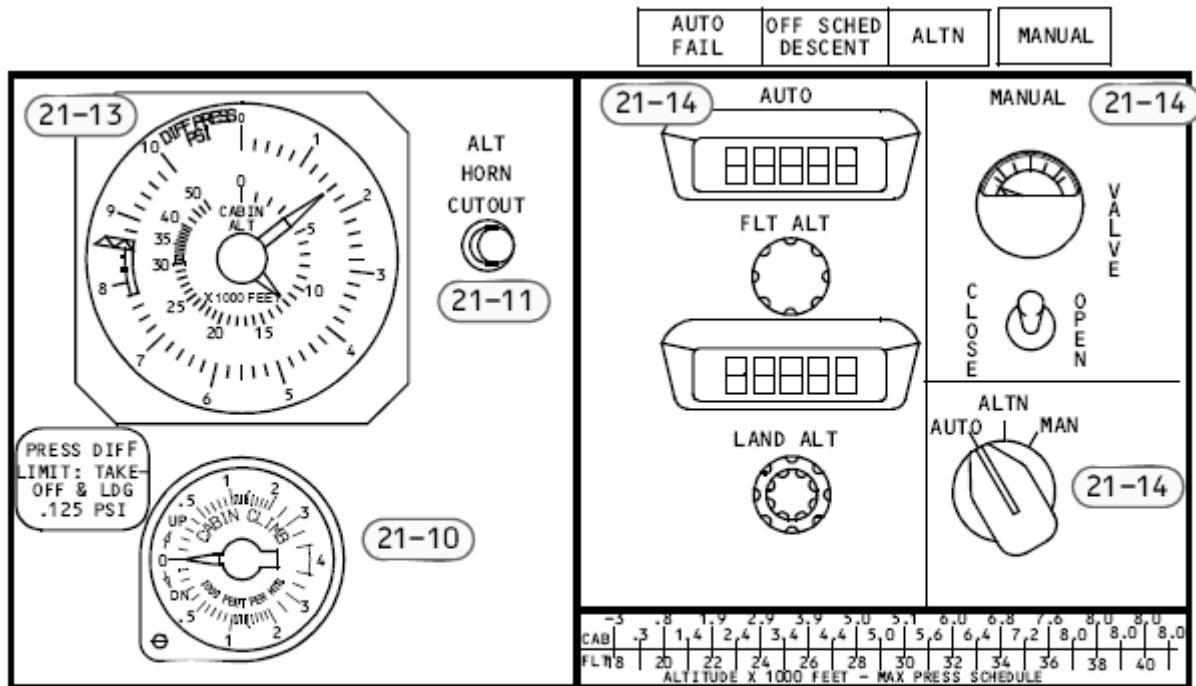
21-00-01A	Air Conditioning Packs	21-7
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21-00-02C	High Flow Mode	21-14
21-00-02D	APU High Flow Mode	21-14
21-00-03	Pack Trip Warning Systems	21-17
21-00-05	Pack Ram Air Systems (Ram Air Door)	21-18
21-00-07	RAM DOOR FULL OPEN Indicating Lights	21-23
21-00-08	Air Mix Valves (-700)	21-24
21-00-09	Air Mix Valve Position Indicators (-700)	21-25
21-00-10A	Cabin Rate of Climb Indicator	21-26
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21-00-11B	High Altitude Warning System (-700)	21-29
21-00-11C	CABIN ALTITUDE Light	21-29
21-00-12A	Cabin Altitude Indicator	21-30
21-00-13A	Cabin Differential Pressure Indicator	21-32
	CABIN PRESSURE CONTROL SYSTEM	21-34
21-00-14A	Automatic Modes	21-34
21-00-14C	Automatic Modes (A/C 3601-3610, 3772, 3773)	21-34
	CABIN PRESSURE CONTROL SYSTEM (CONTINUED)	21-35
21-00-15A	Main Outflow Valve Automatic Mode Actuators	21-39
21-00-15C	Main Outflow Valve Automatic Mode Actuators (A/C 3601-3610, 3772, 3773)	21-39
21-00-15D	Main Outflow Valve Automatic Mode Actuators (-900ER)	21-39
21-00-15E	Main Outflow Valve Manual Mode Actuator (A/C 3701-3771)	21-39
21-00-16A	Pressure Relief Valves	21-43
	TEMPERATURE INDICATORS	21-45
21-00-17A	Supply Duct (-800, -900ER)	21-45
21-00-17B	Supply Duct (-700)	21-45
21-00-17C	Pass Cabin	21-45
21-00-17D	Pack (-800, -900ER)	21-45
	DUCT Overheat Warning Lights	21-46
21-00-18A	ZONE TEMP (-800 -900ER)	21-46
21-00-18B	DUCT OVERHEAT (-700)	21-46
	PASSENGER CABIN TEMPERATURE CONTROL SYSTEM	21-47
21-00-19A	Automatic/Manual Controls (-700)	21-47
21-00-19C	FWD / AFT (-800 -900ER)	21-47
	FLIGHT DECK TEMPERATURE CONTROL SYSTEMS	21-50
21-00-21A	Automatic/Manual Controls (-700)	21-50
21-00-21C	Primary / Back-up Modes (-800 -900ER)	21-50
21-00-24	Gasper Fan (-700)	21-53
21-00-25	Water Separator Anti-icing Systems (-700)	21-54
21-00-26A	Ground Preconditioned Air Connection Check Valve	21-55
	ELECTRICAL / ELECTRONIC EQUIPMENT COOLING BLOWERS	21-57
21-00-27	CDS (Common Display System)	21-57

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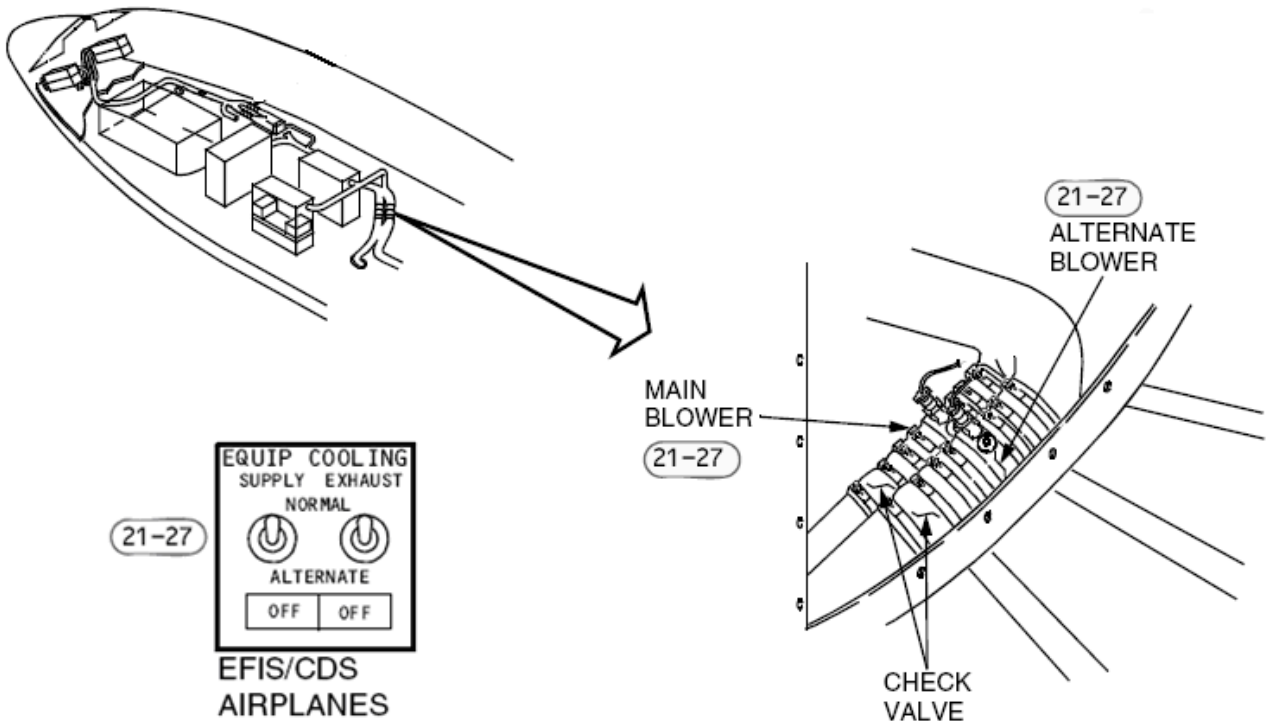
21-00-31A	Recirculation Fan(s) (-800 -900ER)	21-58
21-00-32	Pack Temperature Control System(s) (Electronic Pack / Zone Controller)	21-59
21-00-33A	Pack Temperature Control Valves	21-60
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21-00-36A	Trim Air Modulating Valves (-800)	21-65
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21-00-44A	Fan Bypass Check Valves	21-76
21-00-49	Return Air Grille.....	21-77
21-00-50	Flight Deck Foot Air Diffusers	21-78



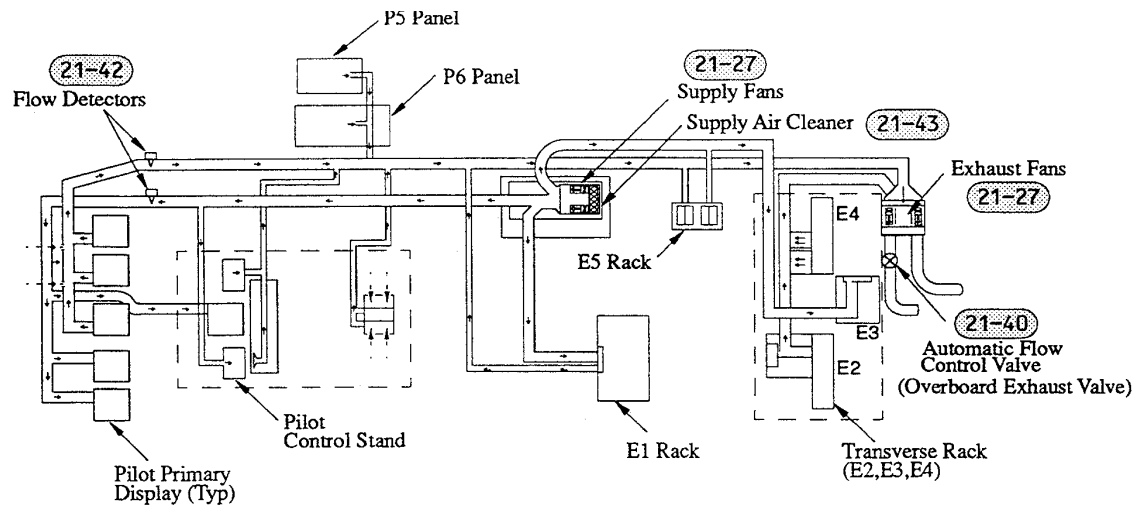




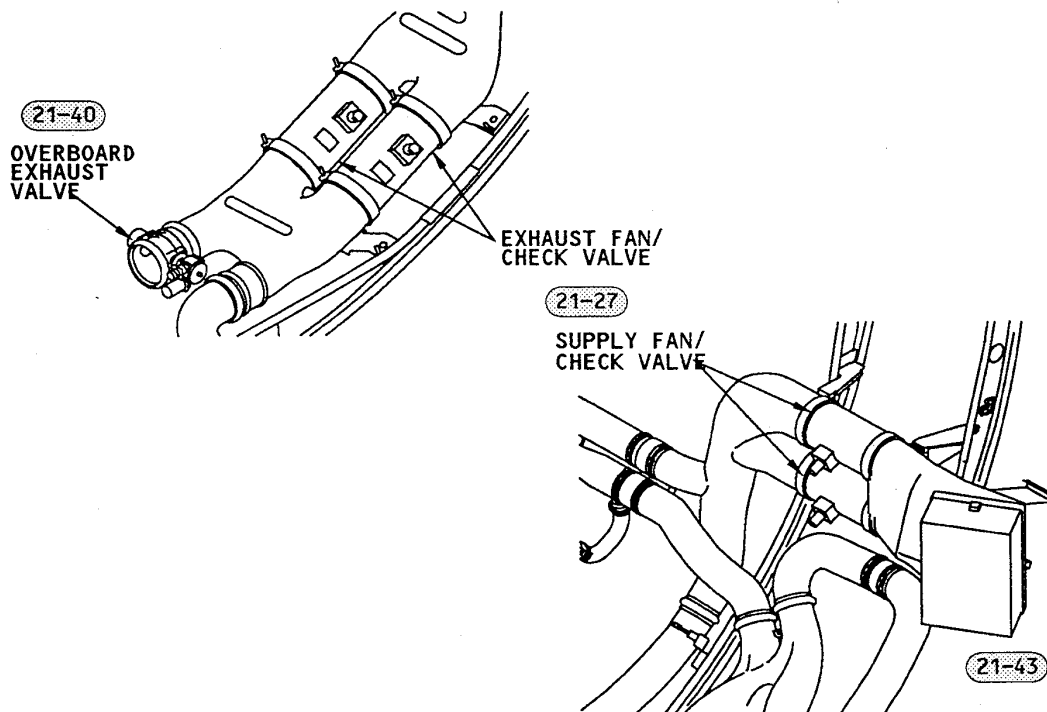
CABIN PRESSURE CONTROL PANEL (DIGITAL SYSTEM)



EQUIPMENT COOLING BLOWERS



800:
CDS EQUIPMENT COOLING SYSTEM



NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH			
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY			
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS	
21-00-01A	Air Conditioning Packs (-700 & -800) "DISP.APPR.REQ'D."	Y	2	1	C	(O) One may be inoperative provided flight altitude remains at or below FL 250. Theater Restrictions may apply	
21-00-01B	Air Conditioning Packs (-900ER) "DISP.APPR.REQ'D"	N	2	1	C	(O)(M) Except for ER operations (ETOPS), one may be inoperative provided: a) Flight altitude remains at or below FL 250, b) Forward cargo heat duct is secured closed, and c) Airport ambient temperature does not exceed 103 degrees F (39 degrees C). Theater Restrictions may apply	
21-00-01C	Air Conditioning Packs (-700 & -800) "DISP.APPR.REQ'D."	N	2	0	C	(O)(M) Both may be inoperative provided: a) Flight is conducted in an unpressurized configuration, b) Recirculation fan(s) operates normally, c) Both E/E equipment cooling exhaust fans operate normally, and d) Cargo compartments remain empty, or are verified to contain only empty cargo handling equipment, ballast, and/or flyaway kits (see MEL Instructions). Theater restrictions may apply	
21-00-01D	Air Conditioning Packs (-900ER) "DISP.APPR.REQ'D"	N	2	0	C	(O)(M) Except for ER operations (ETOPS), both may be inoperative provided: a) Flight is conducted in an unpressurized configuration, b) Recirculation fans operate normally, c) Both E/E equipment cooling exhaust fans operate normally, d) Cargo compartments remain empty, or are verified to contain only empty cargo handling equipment, ballast, and/or flyaway kits (see MEL Instructions), e) Forward cargo heat duct is secured closed, and f) Airport ambient temperature does not exceed 103 degrees F (39 degrees C). Theater restrictions may apply	

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-00-01A	Associated Pack Switch	___ Air Conditioning Pack INOP
21-00-01B	Associated Pack Switch	___ Air Conditioning Pack INOP
21-00-01C	Associated Pack Switch(es)	___ Air Conditioning Pack(s) INOP
21-00-01D	Associated Pack Switch(es)	___ Air Conditioning Pack(s) INOP

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	B737 Minimum Equipment List	ATA 21 Air Conditioning	R16 03/26/13 Page 21-8

(O) PROCEDURES

21-00-01A

1. Limit altitude to FL 250.
2. Position the inoperative PACK switch to OFF.
3. Position the ISOLATION VALVE switch to CLOSE after starting engines.
4. If desired, for increased air flow when the flaps are extended (takeoff and landing), use the APU to supply bleed air to the operating pack (reference Volume I).
 - a. Right pack inoperative
 - 1) Do the Supplementary Procedure - Air Systems "No Engine Bleed Takeoff and Landing" (Refer to the Flight Crew Operations Manual).

NOTE: Keep the pack switch for the right (inoperative) pack in the OFF position and the ISOLATION VALVE switch in the CLOSE position.

- b. Left pack inoperative - PRIOR to takeoff or landing
 - 1) Engine No. 1 BLEED air switch to OFF
 - 2) R PACK switch to AUTO
 - 3) L PACK switch to OFF
 - 4) ISOLATION VALVE switch to OPEN
 - 5) Engine No. 2 BLEED air switch to OFF
 - 6) APU BLEED air switch to ON.
- c. Left pack inoperative - AFTER takeoff or landing
 - 1) APU BLEED air switch to OFF
 - 2) Engine No. 2 BLEED air switch to ON
 - 3) ISOLATION VALVE switch to CLOSE
 - 4) Engine No. 1 BLEED air switch to ON.

21-00-01A	AIR CONDITIONING PACKS
EFFECTIVITY	-700/-800
FLIGHT PLANNING REQUIREMENTS	None
NOTES	None
AWABS	Performance weight corrections have been applied. Verify AWABS V_1 is not less than minimum V_{mcg}. Takeoff is permitted with V_1 set equal to or greater than V_{mcg}. See ODM – Abnormal Section for Minimum Control Speed – Ground (V_{mcg}).
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF None LANDING None OTHER CORRECTIONS Obtain V speeds from the ODM – Takeoff section. If the resulting V_1 is less than minimum V_{mcg}, takeoff is permitted with V_1 set equal to V_{mcg}. See ODM – Abnormal Section for Minimum Control Speed – Ground (V_{mcg}).

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21-00-01B

1. Temperature sensitive cargo and live animals should not be carried in the forward cargo compartment.
2. Limit altitude to FL 250.
3. For galley 4B or 4C food cart chiller installed, use only one chiller inflight.
4. Set R RECIRC FAN switch OFF.
5. Set the PACK switch for the inoperative pack to HIGH to maintain smoke penetration requirements.
6. Position the ISOLATION VALVE switch to CLOSE after starting engines.
7. Use the APU (if available) to supply bleed air to the operating pack for increased airflow during ground operations and inflight when the flaps are extended (takeoff and landing).
 - a. For RIGHT pack inoperative:
 - 1) Do the Supplementary Procedure – Air Systems “No Engine Bleed Takeoff and Landing” (Refer to Operations Manual Volume 1).

NOTE: Keep the pack switch for the right (inoperative) pack in the HIGH position and the ISOLATION VALVE switch in the CLOSE position.
 - b. LEFT pack inoperative – PRIOR to takeoff or landing:
 - 1) Engine No. 1 BLEED air switch to OFF.
 - 2) L PACK switch remains in HIGH.
 - 3) R PACK switch to AUTO.
 - 4) ISOLATION VALVE switch to OPEN.
 - 5) Engine No. 2 BLEED air switch to OFF.
 - 6) APU BLEED air switch to ON.
 - c. LEFT pack inoperative – AFTER takeoff or landing:
 - 1) APU BLEED air switch to OFF.
 - 2) Engine No. 2 BLEED air switch to ON.
 - 3) ISOLATION VALVE switch to CLOSE.
 - 4) Engine No. 1 BLEED air switch to ON.

21-00-01B	AIR CONDITIONING PACKS
EFFECTIVITY	-900ER
FLIGHT PLANNING REQUIREMENTS	Increase BLOCK FUEL by 180 lbs. per hour for APU usage.
NOTES	None
AWABS	Performance weight corrections have been applied. Verify AWABS V_1 is not less than minimum V_{mcg}. Takeoff is permitted with V_1 set equal to or greater than V_{mcg}. See ODM – Abnormal Section for Minimum Control Speed – Ground (V_{mcg}).
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF None LANDING None OTHER CORRECTIONS Obtain V speeds from the ODM – Takeoff section. If the resulting V_1 is less than minimum V_{mcg}, takeoff is permitted with V_1 set equal to V_{mcg}. See ODM – Abnormal Section for Minimum Control Speed – Ground (V_{mcg}).

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21-00-01C

1. Limit altitude to 10,000 ft. for passenger flights.
2. Non-passenger flights above 10,000 ft. require flight crew to be on oxygen.
3. Except for ditching, keep the outflow valve in the full open position
4. Limit climb and descent rates to 500 FPM. to avoid passenger discomfort.
5. Position the ISOLATION VALVE switch to CLOSE after starting engines.
6. To improve passenger cabin and crew compartment temperatures:
 - a. If possible, pre-condition the cabin to a low temperature prior to dispatch. A low initial cabin temperature will result in a lower peak temperature.
 - b. Maintain the highest allowable flight altitude.
 - c. Minimize cabin heat by pulling the shades down and turning off unnecessary lights.
 - d. Position RECIRC FAN switch(es) to AUTO.
 - e. Estimated stabilized temperatures at the end of 30 minutes of flight are shown in this table:

NOTE 1: Prolonged operation at TAT below 10 degrees C / 50 degrees F can cause freezing of unheated water systems located in the aft lower lobe.

NOTE 2: Operation at TAT above 32 degrees C / 90 degrees F is not recommended due to the resulting high temperatures in the passenger and crew cabins.

NOTE 3: Limit number of passengers to 45.

TAT	NO. OF PASS	PASS. CABIN TEMPERATURE		CREW CABIN TEMPERATURE	
°C		°F	°C	°F	°C
-1	0	50	10	70	21
-1	45	70	21	75	24
10	0	70	21	90	32
10	45	80	27	95	35
21	0	90	32	110	43
21	45	95	35	110	43
32	0				
32	45				

21-00-01D

1. Limit altitude to 10,000 feet for passenger flights.
2. Non-Passenger flights above 10,000 feet require flight crew to be on oxygen.
3. Except for ditching, keep the outflow valve in the full open position.
4. Limit climb and descent rates to 500 FPM to avoid passenger discomfort.
5. Set R RECIRC FAN switch to OFF.
6. Set one of the PACK switches in HIGH.
7. Position the ISOLATION VALVE switch to CLOSE after starting engines.
8. To improve passenger cabin and crew compartment temperatures:
 - a. If possible, pre-condition the cabin to a low temperature prior to dispatch. A low initial cabin temperature will result in a lower peak temperature.
 - b. Maintain the highest allowable flight altitude.
 - c. Minimize cabin heat by pulling the shades down and turning off unnecessary lights.
 - d. Position L RECIRC FAN switch to AUTO.
 - e. Estimated stabilized temperatures at the end of 30 minutes of flight are shown in this table (next page):

NOTE 1: Limit number of passengers to 45.

NOTE 2: Prolonged operation at TAT below 10 degrees C / 50 degrees F can cause freezing of unheated water systems located in the aft lower lobe.

CONTINUED NEXT PAGE

NOTE 3: Operation at TAT above 32 degrees C / 90 degrees F is not recommended due to the resulting high temperatures in the passenger and crew cabins.

TAT	NO. OF PASS	PASS. CABIN TEMPERATURE		CREW CABIN TEMPERATURE	
°C		°F	°C	°F	°C
-1	0	50	10	70	21
-1	45	70	21	75	24
10	0	70	21	90	32
10	45	80	27	95	35
21	0	90	32	110	43
21	45	95	35	110	43
32	0				
32	45				

(M) PROCEDURES

21-00-01B

Secure the forward cargo heat duct closed (AMM 21-00-00/901):

1. With shutoff valve 4063-20605-01 installed:
 - a. Remove the forward cargo compartment forward bulkhead liner to gain access to the forward cargo heat duct shutoff valve.
 - b. Locate the manual lever on top of the forward cargo heat duct shutoff valve and move the lever from the fully open (O) position to the fully closed (C) position.
 - c. Reinstall the forward cargo compartment forward bulkhead liner.
2. With shutoff valve 4063-20605-01 NOT installed:
 - a. Remove the forward cargo heat duct check valve.
 - b. Install cap BOE2221-0011 in the heat duct.
3. Deactivate (lock closed) the flow control and shutoff valve for the associated pack:
 - a. For the left flow control and shutoff valve, disconnect and stow the D488 electrical connector.
 - b. For the right flow control and shutoff valve, disconnect and stow the D492 electrical connector.
 - c. Do these steps to lock the flow control and shutoff valve in the closed position:
 - 1) Pull out the manual control shaft.
 - 2) Push in the manual control shaft.
4. Use an operative pack or ground cart to provide cooling when the airplane is electrically powered on the ground and airport temperatures are at or above 73 degrees F (23 degrees C).

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21-00-01C

Configure airplane for unpressurized flight (AMM 21-00-00/901):

1. Manually position the outflow valve in the full open position.
 - a. Position the Pressurization Mode selector to MAN.
 - b. Hold the VALVE toggle switch in the OPEN position until valve position indicator indicates full open.
2. Deactivate (locked closed) the flow control and shutoff valve for the associated pack:
 - a. For the left flow control and shutoff valve, disconnect and stow the D488 electrical connector.
 - b. For the right flow control and shutoff valve, disconnect and stow the D492 electrical connector.
 - c. Do these steps to lock the flow control and shutoff valve in the closed position:
 - 1) Pull out the manual control shaft.
 - 2) Push in the manual control shaft.
3. Pull and secure the P6-4 Panel circuit breaker A/C OVERBOARD EXH VALVE RECONFIG CONT.
4. Position one of the PACK switches in HIGH and placard.
5. For passenger cabin telecommunications system installed, pull and secure P6-1 Panel circuit breaker ENTERTAINMENT PASS TEL CTU

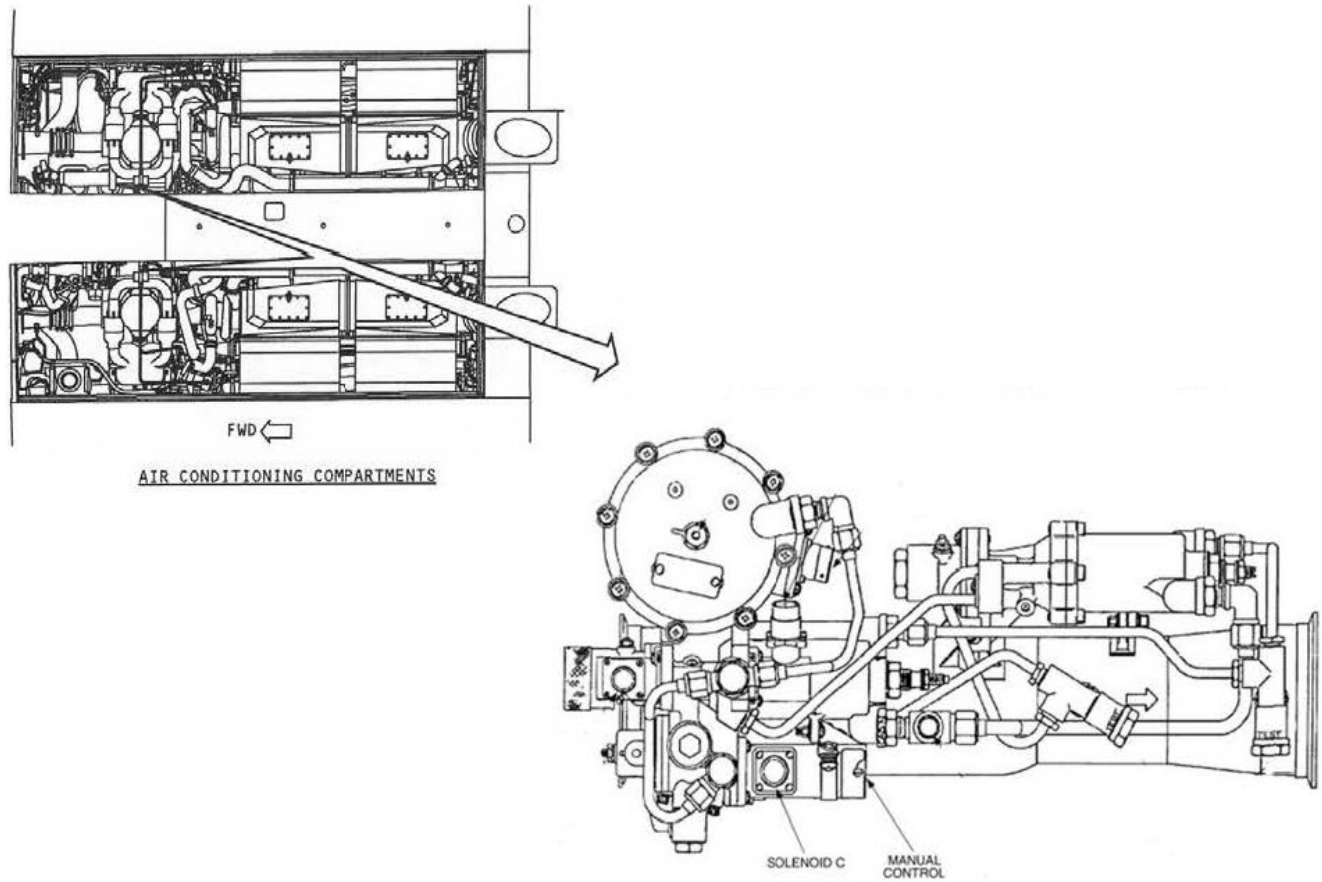
21-00-01D

Configure airplane for unpressurized flight (AMM 21-00-00/901):

1. Manually position the outflow valve in the full open position.
 - a. Position the Pressurization Mode selector to MAN.
 - b. Hold the VALVE toggle switch in the OPEN position until valve position indicator indicates full open.
2. Deactivate (lock closed) the flow control and shutoff valve for the associated pack:
 - a. For the left flow control and shutoff valve, disconnect and stow the D488 electrical connector.
 - b. For the right flow control and shutoff valve, disconnect and stow the D492 electrical connector.
 - c. Do these steps to lock the flow control and shutoff valve in the closed position:
 - 1) Pull out the manual control shaft.
 - 2) Push in the manual control shaft.
3. Secure the forward cargo heat duct closed (AMM 21-00-00/901):
 - a. With shutoff valve 4063-20605-01 installed:
 - 1) Locate the manual lever on top of the forward cargo heat duct shutoff valve and move the lever from the fully open (O) position to the fully closed (C) position.
 - b. With shutoff valve 4063-20605-01 NOT installed:
 - 1) Remove the forward cargo heat duct check valve.
 - 2) Install cap BOE2221-0011 in the heat duct.
4. For passenger cabin telecommunications system installed, pull and secure P6-1 Panel circuit breaker ENTERTAINMENT PASS TEL CTU.
5. Use an operative pack or ground cart to provide cooling when the airplane is electrically powered on the ground and airport temperatures are at or above 73 degrees F (23 degrees C).

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PACK FLOW CONTROL AND SHUTOFF VALVE



NOTE: When deactivating the valve, push in the manual control shaft. To reactivate the valve, pull out the manual control shaft

NUMBER INSTALLED			NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD			REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
	PACK AIRFLOW / SHUT-OFF VALVES				
21-00-02A	Pack Airflow / Shut-Off Valves "DISP.APPR.REQ'D."	N	2	1	C (O)(M) May be inoperative provided: a) Associated valve is deactivated closed, and b) Flight altitude remains at or below FL 250.
21-00-02B	Pack Airflow / Shut-Off Valves "DISP.APPR.REQ'D."	N	2	0	C (O)(M) May be inoperative provided: a) Valves are deactivated closed, b) Flight is conducted in an unpressurized configuration, and c) Cargo compartments remain empty, or are verified to contain only empty cargo handling equipment, ballast, and/or flyaway kits (see MEL Instructions).
21-00-02C	High Flow Mode	Y	2	0	C
21-00-02D	APU High Flow Mode	Y	2	0	C

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-00-02A	Associated Pack Switch	____ Pack Airflow / Shut-Off Valve INOP
21-00-02B	Associated Pack Switch(es)	____ Pack Airflow / Shut-Off Valve(s) INOP
21-00-02C	Associated Pack Switch(es)	____ Pack Airflow / High Flow Mode INOP
21-00-02D	Associated Pack Switch(es)	____ APU High Flow INOP

(O) PROCEDURES

With Pack High Flow Mode or APU High Flow Mode inoperative, cabin ventilation rates will be reduced.

21-00-02A

If one pack is not used refer to MEL 21-00-01A or B for (O) PROCEDURES.

21-00-02B

If both packs are not used refer to MEL 21-00-01C or D for (O) PROCEDURES.

(M) PROCEDURES

21-00-02A

1. Pull and secure the associated AIR CONDITIONING PACK CONT VALVES L/R circuit breaker.
2. Gain access to the inoperative pack shutoff valve located in the air conditioning bay.
3. Disconnect and stow electrical connector D488 (left pack) or D492 (right pack).

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4. If the pack airflow shut-off valve limit switch has failed in the OPEN position:
 - a. Disconnect the electrical connector(s) D486 (left pack) and/or D490 (right pack), jumper pin 1 to pin 3, and verify continuity to airplane ground at pin 3.
 - b. Cap and stow the electrical connector(s) D486 (left pack) and/or D490 (right pack).
5. Push in the manual control shaft. If already in, pull out and push back in to verify that the shaft is in.
6. Reset associated AIR CONDITIONING PACK CONT VALVES L/R circuit breaker opened in Step 1.
7. For a pack airflow shutoff valve deactivated closed, defer the associated pack using [MEL 21-00-01](#).
8. For -900ER ONLY:
 - a. Secure the forward cargo heat duct closed (AMM 21-00-00/901):
 - 1) With shutoff valve 4063-20605-01 installed:
 - a) Locate the manual lever on top of the forward cargo heat duct shutoff valve and move the lever from the fully open (O) position to the fully closed (C) position.
 - 2) With shutoff valve 4063-20605-01 NOT installed:
 - a) Remove the forward cargo heat duct check valve.
 - b) Install cap BOE2221-0011 in the heat duct.
 - b. Use an operative pack or ground cart to provide cooling when the airplane is electrically powered on the ground and airport temperatures are at or above 73 degrees F (23 degrees C).

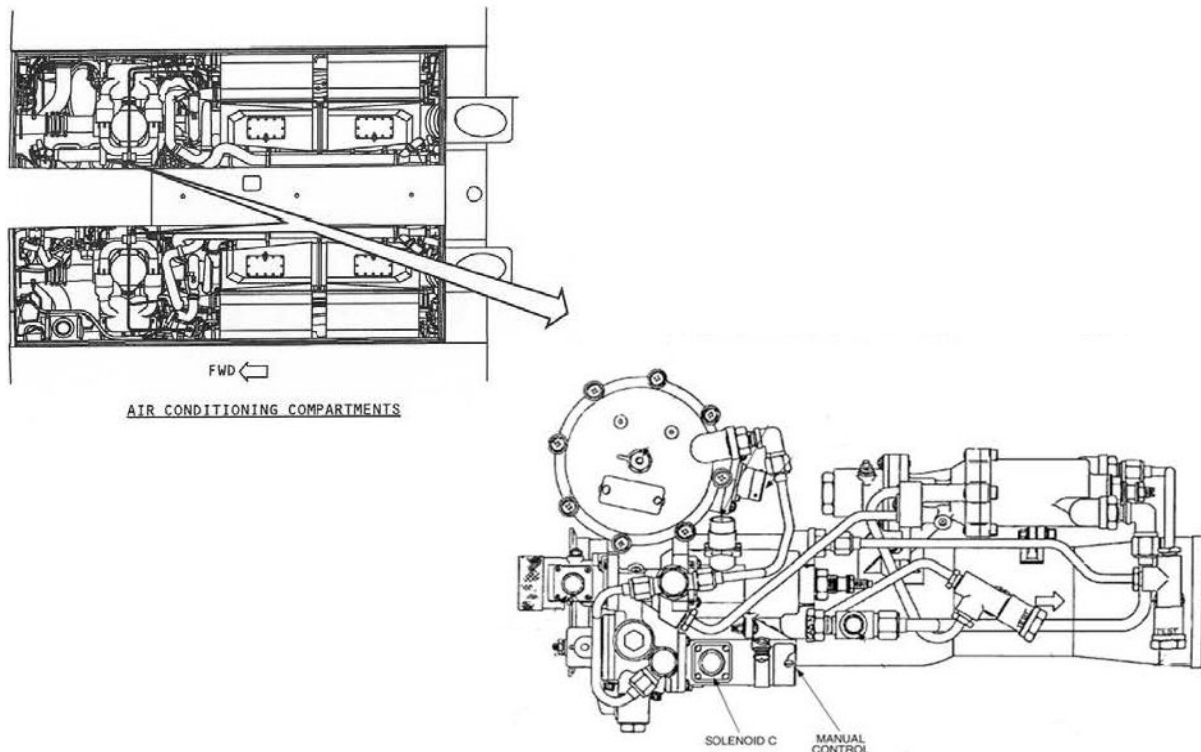
21-00-02B

1. Pull and secure the associated AIR CONDITIONING PACK CONT VALVES L/R circuit breakers.
2. Manually position outflow valve to open position.
 - a. Position the Pressurization Mode selector to MAN
 - b. Hold the VALVE toggle switch in the OPEN position until valve position indicator indicates full open.
3. Gain access to the inoperative pack shutoff valves located in the air conditioning bay.
4. Disconnect and stow electrical connectors D488 (left pack) and D492 (right pack).
5. If the pack airflow shut-off valve limit switch has failed in the OPEN position:
 - a. Disconnect the electrical connector(s) D486 (left pack) and/or D490 (right pack), jumper pin 1 to pin 3, and verify continuity to airplane ground at pin 3.
 - b. Cap and stow the electrical connector(s) D486 (left pack) and/or D490 (right pack).
6. Push in the manual control shaft. If already in, pull out and push back in to verify that the shaft is in.
7. With Passenger Cabin Telecommunications System installed (Airphones), pull and secure the ENTERTAINMENT PASS TEL CTU circuit breaker located on the P6-1 Panel.
8. Reset associated AIR CONDITIONING PACK CONT VALVES L/R circuit breakers opened in Step 1.
9. For a pack airflow shutoff valve deactivated closed, defer the associated pack using [MEL 21-00-01](#).
10. For -700/-800 ONLY:
 - a. Pull and secure the Air Conditioning Overboard Exhaust Valve Reconfiguration Control (A/C OVBD EXH RECONFIG CONT) circuit breaker on the P6-4 Panel and position one of the pack switches for the inoperative packs in HIGH and placard.
 - b. Position one of the PACK switches in HIGH.
11. For -900ER ONLY:
 - a. Secure the forward cargo heat duct closed (AMM 21-00-00/901):
 - 1) With shutoff valve 4063-20605-01 installed:
 - a) Locate the manual lever on top of the forward cargo heat duct shutoff valve and move the lever from the fully open (O) position to the fully closed (C) position.

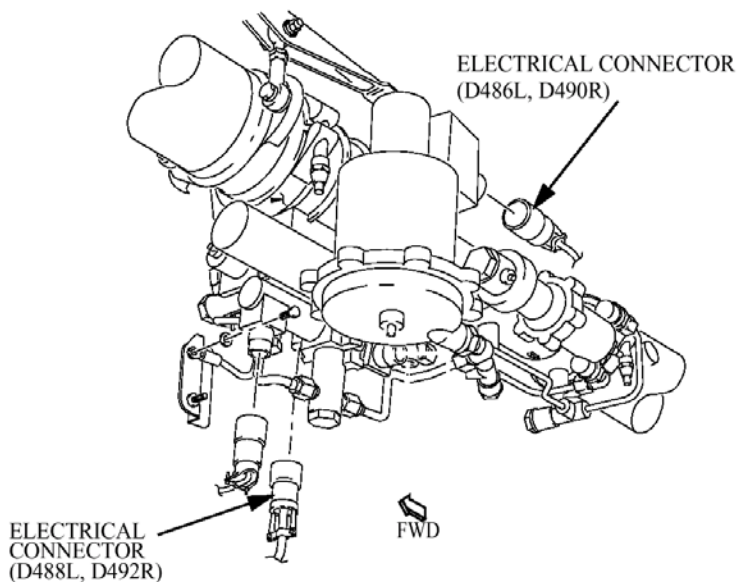
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- 2) With shutoff valve 4063-20605-01 NOT installed:
 - a) Remove the forward cargo heat duct check valve.
 - b) Install cap BOE2221-0011 in the heat duct.
- b. Use an operative pack or ground cart to provide cooling when the airplane is electrically powered on the ground and airport temperatures are at or above 73 degrees F (23 degrees C).

PACK FLOW CONTROL AND SHUTOFF VALVE



NOTE: When deactivating the valve, push in the manual control shaft. To reactivate the valve, pull out the manual control shaft.



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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
21-00-03	Pack Trip Warning Systems "DISP.APPR.REQ'D."	N	2	0	C (O)(M) May be inoperative provided associated pack is deferred per MEL 21-00-01 .

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-00-03	Associated Pack Switch	____ Pack Trip Warning System INOP

(O) PROCEDURES

With Pack High Flow Mode or APU High Flow Mode inoperative, cabin ventilation rates will be reduced.

Refer to [MEL 21-00-01 A, B, C or D](#) as appropriate for (O) PROCEDURES.

(M) PROCEDURES

Defer associated pack per [MEL 21-00-01 A, B, C, or D](#) as appropriate.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
21-00-05	Pack Ram Air Systems (Ram Air Door) "DISP.APPR.REQ'D."	N	2	0	C (O)(M) May be inoperative in the FLIGHT OPEN position provided: a) Operations are not conducted on runways covered with slush or on gravel runways, b) Associated pack is not operated during takeoff or landing on wet runways or runways with standing water, and c) Performance corrections are applied.

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-00-05	Associated Pack Switch(es)	____ Pack Ram Air System INOP

(O) PROCEDURES

NOTE: For -800 and -900ER only, with the ram air modulating system deactivated, the AIR COND light and the associated PACK light may or may not illuminate during Master Caution recall in the air. If illuminated, the AIR COND and associated PACK light will extinguish when reset.

- During takeoff and landing when operating on wet runways or on runways with standing water:
 - Position associated PACK switch(es) to OFF.
 - Position the ISOLATION VALVE switch to CLOSE.

21-00-05	PACK RAM AIR SYSTEMS (RAM AIR DOOR)
EFFECTIVITY	-700/-800
FLIGHT PLANNING REQUIREMENTS	Reduce ENROUTE LIMIT WT by 140 lbs per inoperative system. Increase BLOCK FUEL by 0.4% per inoperative system.
NOTES	Make a notation on the Flight Plan when Enroute Climb is limiting.
AWABS	Performance weight corrections have been applied. Verify AWABS V_1 is not less than minimum V_{mcg} . Takeoff is permitted with V_1 set equal to or greater than V_{mcg} . See ODM – Abnormal Section for Minimum Control Speed – Ground (V_{mcg}).
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF None LANDING None OTHER CORRECTIONS Obtain V speeds from the ODM – Takeoff section. If the resulting V_1 is less than minimum V_{mcg} , takeoff is permitted with V_1 set equal to V_{mcg} . See ODM – Abnormal Section for Minimum Control Speed – Ground (V_{mcg}).

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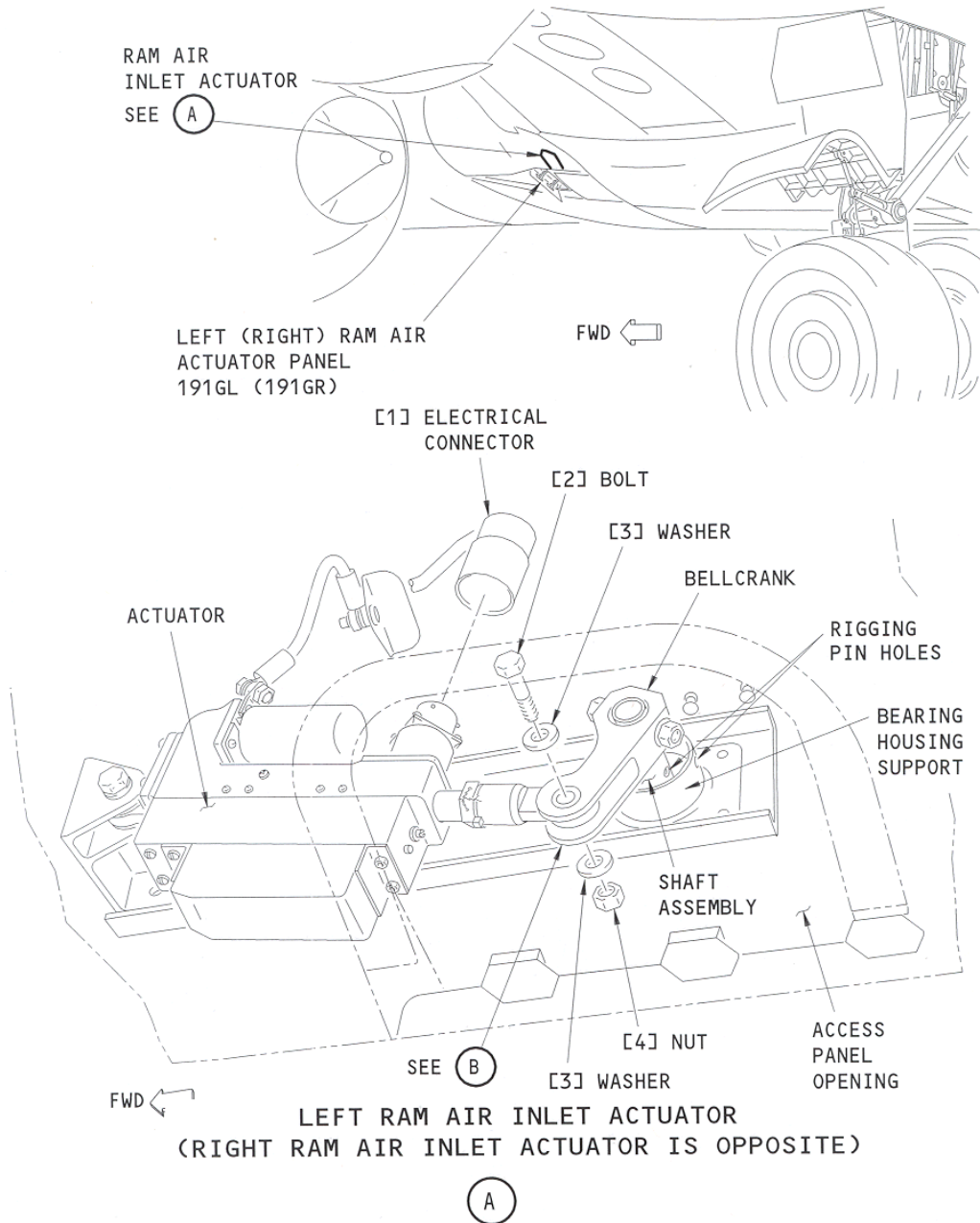
21-00-05	PACK RAM AIR SYSTEMS (RAM AIR DOOR)
EFFECTIVITY	-900ER
FLIGHT PLANNING REQUIREMENTS	Reduce ENROUTE LIMIT WT by 160 lbs per inoperative system. Increase BLOCK FUEL by 0.4% per inoperative system.
NOTES	Make a notation on the Flight Plan when Enroute Climb is limiting.
AWABS	Performance weight corrections have been applied. Verify AWABS V_1 is not less than minimum V_{mcg} . Takeoff is permitted with V_1 set equal to or greater than V_{mcg} . See ODM – Abnormal Section for Minimum Control Speed – Ground (V_{mcg}).
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF None LANDING None OTHER CORRECTIONS Obtain V speeds from the ODM – Takeoff section. If the resulting V_1 is less than minimum V_{mcg} , takeoff is permitted with V_1 set equal to V_{mcg} . See ODM – Abnormal Section for Minimum Control Speed – Ground (V_{mcg}).

(M) PROCEDURES

-700/-800 aircraft

1. Pull and secure the associated circuit breakers located on the P6-4 Panel:
 - a. AIR CONDITIONING RAM AIR MOD LEFT (RIGHT)
 - b. AIR CONDITIONING RAM AIR MOD CONT L (R)
2. Open the associated ram air actuator panel.
3. Disconnect and stow the electrical connector.
4. Remove bolt connecting the actuator rod end to the bellcrank.
5. Separate actuator rod from bell crank and reinstall and secure bolt in the bell crank.
6. Rotate the bell crank to align the rigging pin holes on the shaft assembly with the holes on the bearing housing support.
7. Install bolt (BACB30UU3P36D or equivalent) through the rigging pin holes.
8. Install nut (BACN10JD3 or equivalent) and cotter pin (BACP18BC01D06P or equivalent) on the bolt.
9. Use safety wire to secure the actuator rod end to the attach bolt in the bell crank.
10. Close the ram air actuator panel.
11. Close the associated circuit breakers.

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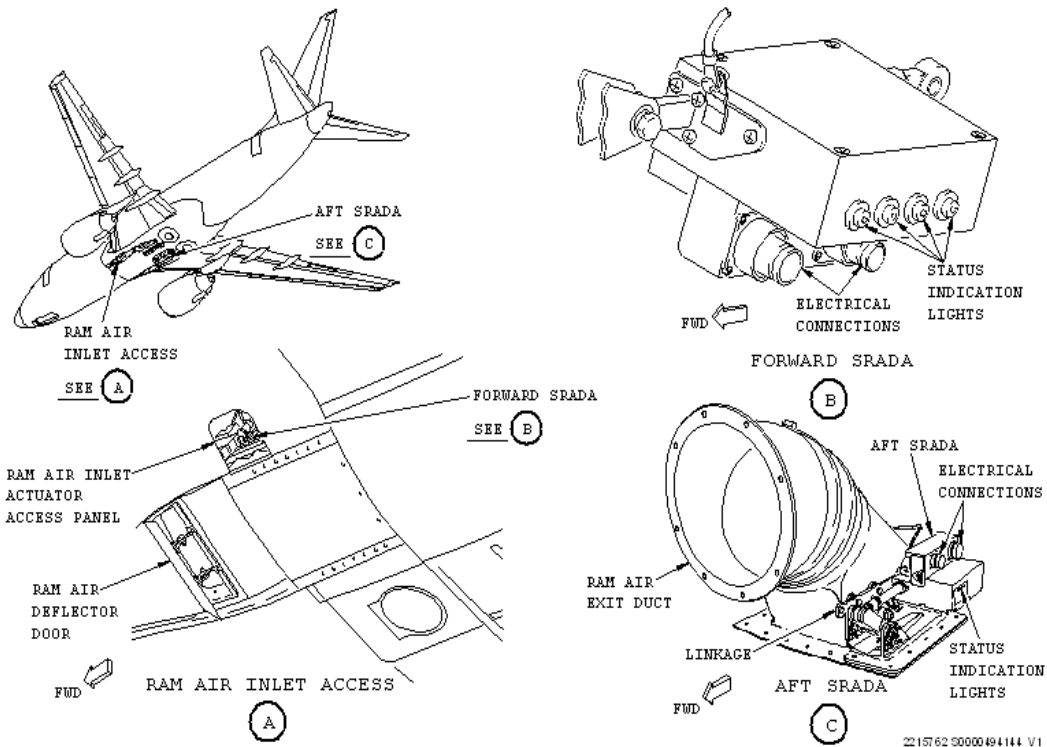
-700/-800 Ram Air Modulation System Deactivation

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-900 aircraft

1. Pull and secure the associated circuit breakers located on the P6-4 Panel:
 - a) AIR CONDITIONING RAM AIR MOD LEFT(RIGHT)
 - b) AIR CONDITIONING RAM AIR MOD CONT L(R)
2. Open the associated ram air inlet and exit actuator panels.
3. Deactivate the ram air inlet modulating system.
 - a) Disconnect and stow the two electrical connectors
 - b) Remove bolt, washers and nut that connect the actuator rod end to the bellcrank.
 - c) Disconnect the actuator rod end from the bellcrank and reinstall and tighten the bolt, washer, and nut in the bellcrank.
 - d) Rotate the bellcrank to align the rigging pin holes on the shaft assembly with the holes on the bearing housing support.
 - e) Install a bolt (BACB30UU3P36D or equivalent) with a 0.1875 inch shank diameter and 2.2 inch shank length through the rigging pin holes. The shank end must be drilled for a cotter pin.
 - f) Install a nut (BACN10JD3 or equivalent) and cotter pin (BACP18BC01D06P or equivalent) with a 0.047 inch diameter and a 0.75 inch length on the bolt.
 - g) Use lockwire to safety the actuator rod end to the attach bolt in the bellcrank.
 - h) Close the associated ram air inlet actuator panel.
4. Deactivate the ram air exit modulating system.
 - a) Disconnect and stow the two electrical connectors.
 - b) Remove bonding jumper from the structure attached to SRADA (Smart Ram Air Door Actuator).
 - c) Remove actuator and mounting hardware. Reinstall mounting hardware without actuator. Retain hardware for remounting the replacement actuator.
 - d) Remove bolt (BACB30PW4-9), nut (BACN10YR3CM), and washers (NAS1149E0463P and NAS1149E0316R) from the forward most drive link (213A3338-5/-6).
 - e) Once free, open the exit louvers until the forward most hole in the link assembly lines up with the hole in the forward most drive link arm.
 - f) Reinstall the hardware removed in step 4.d) in the same order it was uninstalled.
 - g) The louvers should be open approximately 56 degrees relative to the airplane skin.
 - h) Close the associated ram air exit actuator panel.
5. Close the associated circuit breakers located on the P6-4 Panel:
 - a) AIR CONDITIONING RAM AIR MOD LEFT (RIGHT)
 - b) AIR CONDITIONING RAM AIR MOD CONT L(R)

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-900 Ram Air Modulation System Deactivation

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS
21-00-07	RAM DOOR FULL OPEN Indicating Lights	Y	2	0	C	

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-00-07	Affected RAM DOOR FULL OPEN Light(s)	____ RAM DOOR FULL OPEN Light INOP

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH			
FLIGHT CREW MAY PLACARD			Y	2	0	REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION	REMARKS OR EXCEPTIONS					
21-00-08	Air Mix Valves (-700)						
					C	(O)(M) May be inoperative provided associated pack is not used.	

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-00-08	Associated Pack Switch(es)	1. ____ AIR MIX VLV(S) INOP 2. Do NOT Use ____ Pack(s)

(O) PROCEDURES

1. For dispatch with one Air Mix Valve inoperative (pressurized), use [MEL Item 21-00-01A One Pack Inoperative](#) (Pressurized) Operations Procedure.
2. For dispatch with both Air Mix Valves inoperative, use [MEL Item 21-00-01C Two Packs Inoperative](#) (Unpressurized) Operations Procedure.

(M) PROCEDURES

For dispatch with both Air Mix Valves inoperative, use [MEL Item 21-00-01C Maintenance procedure](#).

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS
21-00-09	Air Mix Valve Position Indicators (-700)	Y	2	0	C	

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-00-09	Associated Air Mix Valve Position Indicator	_____ Air Mix Valve Indicator INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
21-00-10A	Cabin Rate of Climb Indicator	Y	1	0	C May be inoperative provided AUTO and ALTN control modes operate normally.
21-00-10B	Cabin Rate of Climb Indicator (A/C 3701-3771) "DISP.APPR.REQ'D."	Y	1	0	C (O)(M) May be inoperative provided: a) Flight is conducted in an unpressurized configuration, b) Outflow valve is positioned to 25% open position, and c) Recirculation fan(s) operate normally.
21-00-10C	Cabin Rate of Climb Indicator (A/C 3601-3610, 3772, 3773) "DISP.APPR.REQ'D."	Y	1	0	C (O)(M) May be inoperative provided: a) Flight is conducted in an unpressurized configuration, b) Lower forward cargo compartment remains empty, or is verified to contain only empty cargo handling equipment, ballast, and/or flyaway kits (see MEL Instructions), c) Outflow valve is positioned to 25% open position, and d) Recirculation fan(s) operate normally.
21-00-10D	Cabin Rate of Climb Indicator (-900ER) "DISP.APPR.REQ'D"	N	1	0	C (O)(M) May be inoperative provided: a) Flight is conducted in an unpressurized configuration, b) Outflow valve is positioned to 25% open position, c) Recirculation fans operate normally, d) Forward cargo heat duct is secured closed, and e) Airport ambient temperature does not exceed 103 degrees F (39 degrees C).

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-00-10A	Cabin Rate of Climb Indicator	Cabin Rate of Climb Indicator INOP
21-00-10B	Cabin Rate of Climb Indicator	Cabin Rate of Climb Indicator INOP
21-00-10C	Cabin Rate of Climb Indicator	Cabin Rate of Climb Indicator INOP
21-00-10D	Cabin Rate of Climb Indicator	Cabin Rate of Climb Indicator INOP

(O) PROCEDURES

21-00-10B, 21-00-10C

- Limit altitude to 10,000 feet for passenger flights.
- Non-passenger flights above 10,000 feet MSL require flight crew to be on oxygen.
- Except for ditching, keep the outflow valve in the 25% open position.
- Only one pack may be used in flight.
- For galley 4B food cart chiller installed, use only one chiller inflight.
- To avoid passenger discomfort, limit climb and descent rates to 500 FPM.

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7. For A/C 3601-3610, 3772, and 3773 only, verify the lower forward cargo compartment remains empty or contains only ballast empty cargo handling equipment (ballast may be loaded in ULDs) or fly away kits.

21-00-10B	CABIN RATE OF CLIMB INDICATOR
21-00-10C	
EFFECTIVITY	-700/-800
FLIGHT PLANNING REQUIREMENTS	None
NOTES	None
AWABS	Performance weight corrections have been applied. Verify AWABS V_1 is not less than minimum V_{mcg}. Takeoff is permitted with V_1 set equal to or greater than V_{mcg}. See ODM – Abnormal Section for Minimum Control Speed – Ground (V_{mcg}).
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF None LANDING None OTHER CORRECTIONS Obtain V speeds from the ODM – Takeoff section. If the resulting V_1 is less than minimum V_{mcg}, takeoff is permitted with V_1 set equal to V_{mcg}. See ODM – Abnormal Section for Minimum Control Speed – Ground (V_{mcg}).

21-00-10D

- Limit altitude to 10,000 feet for passenger flights.
- Non-passenger flights above 10,000 feet require flight crew to be on oxygen.
- Except for ditching, keep the outflow valve in the 25% open position.
- Use only one pack in flight.
- Position R RECIRC FAN switch to OFF.
- Position the PACK switch to HIGH after completing the AFTER TAKEOFF Normal Checklist.
- For galley 4B food cart chiller installed, use only one chiller in flight.
- Limit climb and descent rates to 500 FPM to avoid passenger discomfort.

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21-00-10D CABIN RATE OF CLIMB INDICATOR	
EFFECTIVITY	-900ER
FLIGHT PLANNING REQUIREMENTS	None
NOTES	None
AWABS	Performance weight corrections have been applied. Verify AWABS V_1 is not less than minimum V_{mcg}. Takeoff is permitted with V_1 set equal to or greater than V_{mcg}. See ODM – Abnormal Section for Minimum Control Speed – Ground (V_{mcg}).
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF None LANDING None OTHER CORRECTIONS Obtain V speeds from the ODM – Takeoff section. If the resulting V_1 is less than minimum V_{mcg}, takeoff is permitted with V_1 set equal to V_{mcg}. See ODM – Abnormal Section for Minimum Control Speed – Ground (V_{mcg}).

(M) PROCEDURES

21-00-10B, 21-00-10C

- Position the outflow valve to the 25% open position as follows:
 - Place the Pressurization Mode Selector in the MAN position.
 - Hold the VALVE toggle switch in the OPEN position until valve position indicator indicates 25% open.
- Pull and secure the Air Conditioning Overboard Exhaust Valve Reconfiguration Control (A/C OVBD EXH RECONFIG CONT) circuit breaker on the P6-4 Panel.
- With Passenger Cabin Telecommunications System installed (Airphones), pull and secure the ENTERTAINMENT PASS TEL CTU circuit breaker located on the P6-1 Panel.

21-00-10D

Configure the airplane for unpressurized flight (AMM 21-00-00/901).

- Manually position the outflow valve in the 25% open position:
 - Position the Pressurization Mode selector to MAN.
 - Hold the VALVE toggle switch in the OPEN position until valve position indicates 25% open.
- Secure the forward cargo heat duct closed:
 - With shutoff valve 4063-20605-01 installed:
 - Locate the manual lever on top of the forward cargo heat duct shutoff valve and move the lever from the fully open (O) position to the fully closed (C) position.
 - With shutoff valve 4063-20605-01 NOT installed:
 - Remove the forward cargo heat duct check valve.
 - Install cap BOE2221-0011 in the heat duct.
- Use an operative pack or ground cart to provide cooling when the airplane is electrically powered on the ground and airport temperatures are at or above 73 degrees F (23 degrees C).

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
21-00-11A	Cabin Altitude Warning System "DISP.APPR.REQ'D."	Y	1	0	C May be inoperative provided flight altitude remains at or below 10,000 feet MSL
21-00-11B	High Altitude Warning System (-700) "DISP.APPR.REQ'D."	Y	1	0	C May be inoperative provided procedures do not require its use.
21-00-11C	CABIN ALTITUDE Light "DISP.APPR.REQ'D."	Y	2	1	C (O) May be inoperative provided associated TAKEOFF CONFIG warning light operates normally and flight crew performs a briefing on cabin altitude warning indications and procedures before engine start PRIOR TO THE FIRST FLIGHT OF THE DAY or following any change of either flight crew member. (Logbook Entry Required) Repetitive Check Required (Yellow Placard)

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-00-11A	ALT HORN CUTOFF Switch	Cabin Altitude Warning System INOP
21-00-11B	ALT HORN CUTOFF Switch	High Altitude Warning System INOP
21-00-11C	Adjacent to light	CABIN ALTITUDE light INOP

(O) PROCEDURES

21-00-11C

Cabin altitude warning indications and procedures must be included in the takeoff briefing conducted by the flight crew before engine start. This briefing must include the following:

- Whenever the intermittent warning horn sounds in flight at an airplane flight altitude above 10,000 MSL:
 - Immediately don oxygen masks and set regulators to 100%.
 - Establish crew communications.
 - Do the Cabin Altitude Warning or Rapid Depressurization non-normal checklist.

NOTE: Both pilots must verify on the overhead Cabin Altitude panel that the cabin altitude is stabilized below 10,000 feet before removing oxygen masks.

- Whenever the intermittent warning horn sounds on the ground, confirm the airplane is properly configured for takeoff.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
21-00-12A	Cabin Altitude Indicator	Y	1	0	C (O) May be inoperative provided: a) Cabin differential pressure indicator operates normally, and b) A chart is provided to crew to convert differential pressure to cabin altitude.
21-00-12B	Cabin Altitude Indicator (A/C 3701-3771) "DISP.APPR.REQ'D."	Y	1	0	C (O)(M) May be inoperative provided: a) Flight is conducted in an unpressurized configuration, b) Outflow valve is positioned to 25% open position, and c) Recirculation fan(s) operate normally.
21-00-12C	Cabin Altitude Indicator (A/C 3601-3610, 3772, 3773) "DISP.APPR.REQ'D"	Y	1	0	C (O)(M) May be inoperative provided: a) Flight is conducted in an unpressurized configuration, b) Lower forward cargo compartment remains empty, or is verified to contain only empty cargo handling equipment, ballast, and/or flyaway kits (see MEL Instructions), c) Outflow valve is positioned to 25% open position, and d) Recirculation fan(s) operate normally.
21-00-12D	Cabin Altitude Indicator (-900ER) "DISP.APPR.REQ'D"	N	1	0	C (O)(M) May be inoperative provided: a) Flight is conducted in an unpressurized configuration, b) Outflow valve is positioned to 25 % open position, c) Recirculation fans operate normally, d) Forward cargo heat duct is secured closed, and e) Airport ambient temperature does not exceed 103 degrees F (39 degrees C).

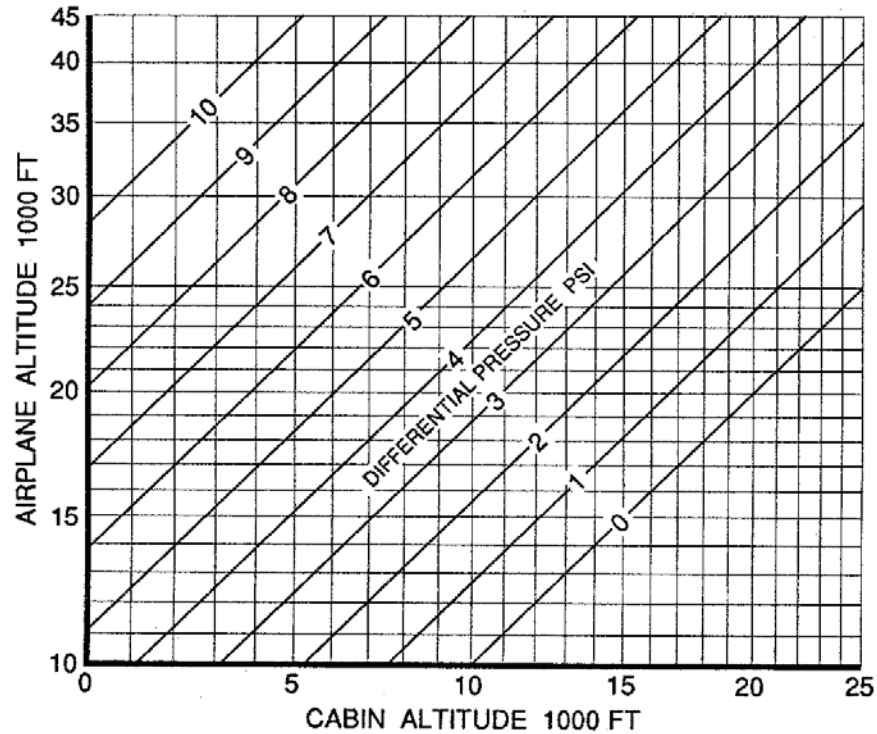
MEL ITEM	TAB LOCATION	PLACARD TEXT
21-00-12A	Cabin Altitude Indicator	Cabin Altitude Indicator INOP
21-00-12B	Cabin Altitude Indicator	Cabin Altitude Indicator INOP
21-00-12C	Cabin Altitude Indicator	Cabin Altitude Indicator INOP
21-00-12D	Cabin Altitude Indicator	Cabin Altitude Indicator INOP

CONTINUED NEXT PAGE

(O) PROCEDURES

21-00-12A

Use the following chart to find cabin altitude.



21-00-12B

Operate aircraft unpressurized. Refer to MEL 21-00-10B for (O) PROCEDURES.

21-00-12C

Operate aircraft unpressurized. Refer to MEL 21-00-10C for (O) PROCEDURES.

21-00-12D

Operate aircraft unpressurized. Refer to MEL 21-00-10D for (O) PROCEDURES.

(M) PROCEDURES

21-00-12B

Configure the airplane for unpressurized flight using MEL 21-00-10B (M) PROCEDURES.

21-00-12C

Configure the airplane for unpressurized flight using MEL 21-00-10C (M) PROCEDURES.

21-00-12D

Configure the airplane for unpressurized flight using MEL 21-00-10D (M) PROCEDURES.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
21-00-13A	Cabin Differential Pressure Indicator	Y	1	0	C (O) May be inoperative provided: a) Cabin altitude indicator operates normally, and b) A chart is provided to crew to convert cabin altitude to differential pressure.
21-00-13B	Cabin Differential Pressure Indicator (A/C 3701-3771) "DISP.APPR.REQ'D."	Y	1	0	C (O)(M) May be inoperative provided: a) Flight is conducted in an unpressurized configuration, b) Outflow valve is positioned to 25% open position, and c) Recirculation fan(s) operate normally.
21-00-13C	Cabin Differential Pressure Indicator (A/C 3601-3610, 3772, 3773) "DISP.APPR.REQ'D."	Y	1	0	C (O)(M) May be inoperative provided: a) Flight is conducted in an unpressurized configuration, b) Lower forward cargo compartment remains empty, or is verified to contain only empty cargo handling equipment, ballast, and/or Fly Away Kits (see MEL Instructions), c) Outflow valve is positioned to 25% open position, and d) Recirculation fan(s) operate normally.
21-00-13D	Cabin Differential Pressure Indicator (-900ER) "DISP.APPR.REQ'D"	N	1	0	C (O)(M) May be inoperative provided: a) Flight is conducted in an unpressurized configuration, b) Outflow valve is positioned to 25% open position, c) Recirculation fans operate normally, d) Forward cargo heat duct is secured closed, and e) Airport ambient temperature does not exceed 103 degrees F (39 degrees C).

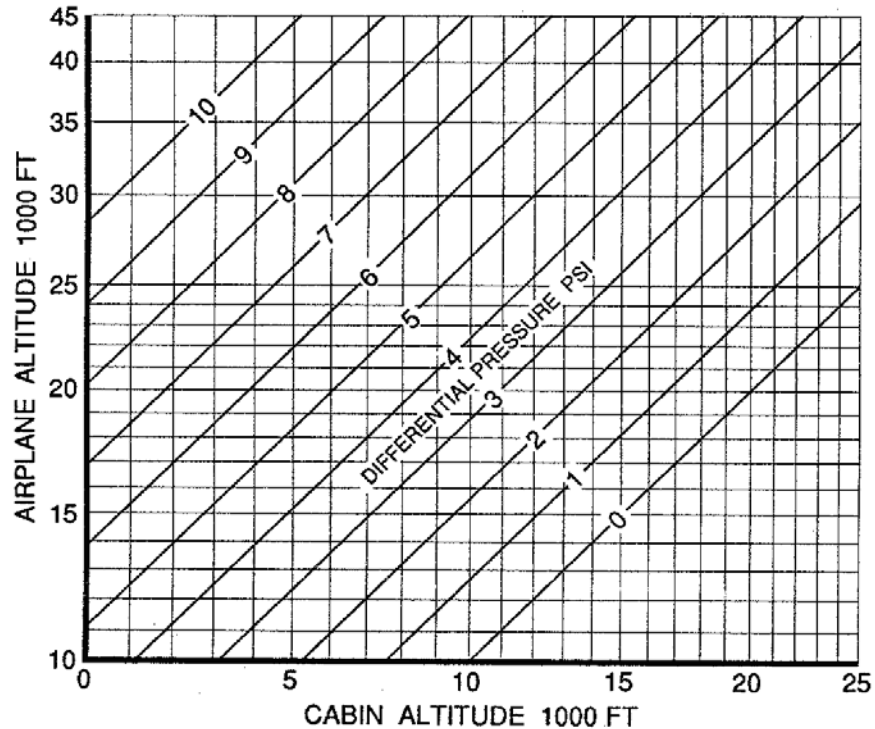
MEL ITEM	TAB LOCATION	PLACARD TEXT
21-00-13A	Cabin Differential Pressure Indicator	Cabin Differential Pressure Indicator Digital Control System INOP
21-00-13B	Cabin Differential Pressure Indicator	Cabin Differential Pressure Indicator Digital Control System INOP
21-00-13C	Cabin Differential Pressure Indicator	Cabin Differential Pressure Indicator Digital Control System INOP
21-00-13D	Cabin Differential Pressure Indicator	Cabin Differential Pressure Indicator Digital Control System INOP

CONTINUED NEXT PAGE

(O) PROCEDURES

21-00-13A

Use the following chart to determine cabin differential pressure.



21-00-13B

Operate aircraft unpressurized. Refer to MEL 21-00-10B for (O) PROCEDURES.

21-00-13C

Operate aircraft unpressurized. Refer to MEL 21-00-10C for (O) PROCEDURES.

21-00-13D

Operate aircraft unpressurized. Refer to MEL 21-00-10D for (O) PROCEDURES.

(M) PROCEDURES

21-00-13B

Configure the airplane for unpressurized flight using MEL 21-00-10B (M) PROCEDURES.

21-00-13C

Configure the airplane for unpressurized flight using MEL 21-00-10C (M) PROCEDURES.

21-00-13D

Configure the airplane for unpressurized flight using MEL 21-00-10D (M) PROCEDURES.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
CABIN PRESSURE CONTROL SYSTEM					
21-00-14A	Automatic Modes	Y	2	1	C (O)(M) May be inoperative provided: a) Manual mode operates normally, and b) Inoperative controller is deactivated.
21-00-14B	Automatic Modes (A/C 3701-3771) "DISP.APPR.REQ'D."	Y	2	0	C (O)(M) May be inoperative for unpressurized flight provided: a) Outflow valve is deactivated in 25% open position or removed, b) Recirculation fan(s) operates normally, and c) Extended overwater flight is prohibited.
21-00-14C	Automatic Modes (A/C 3601-3610, 3772, 3773) "DISP.APPR.REQ'D."	Y	2	0	C (O)(M) May be inoperative for unpressurized flight provided: a) Outflow valve is deactivated in 25% open position or removed, b) Recirculation fan(s) operates normally, and c) Extended overwater flight is prohibited. d) Lower forward cargo compartment remains empty, or is verified to contain only empty cargo handling equipment, ballast, and/or Fly Away kits (see MEL Instructions).
21-00-14D	Automatic Modes (-900ER) "DISP.APPR.REQ'D"	N	2	0	C (O)(M) May be inoperative for unpressurized flight provided: a) Outflow valve is deactivated in the 25% open position or removed, b) Recirculation fans operate normally, c) Extended overwater flight is prohibited, d) Forward cargo heat duct is secured closed, and e) Airport ambient temperature does not exceed 103 degrees F (39 degrees C).
21-00-14E	Manual Mode (A/C 3701-3771) "DISP.APPR.REQ'D."	Y	1	0	C (O)(M) May be inoperative for unpressurized flight provided: a) Outflow valve is deactivated in 25% open position or removed, b) Recirculation fan(s) operates normally, and c) Extended overwater flight is prohibited.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
CABIN PRESSURE CONTROL SYSTEM (CONTINUED)					
21-00-14F	Manual Mode (A/C 3601-3610, 3772, 3773) "DISP.APPR.REQ'D."	Y	1	0	C (O)(M) May be inoperative for unpressurized flight provided: a) Outflow valve is deactivated in 25% open position or removed, b) Recirculation fan(s) operate normally, c) Extended overwater flight is prohibited, and d) Lower forward cargo compartment remains empty, or is verified to contain only empty cargo handling equipment, ballast, and/or Fly Away kits (see MEL Instructions).
21-00-14G	Manual Mode (-900ER) "DISP.APPR.REQ'D"	N	1	0	C (O)(M) May be inoperative for unpressurized flight provided: a) Outflow valve is deactivated in 25% open position or removed, b) Recirculation fans operate normally, c) Extended overwater flight is prohibited, d) Forward cargo heat duct is secured closed, and e) Airport ambient temperature does not exceed 103 degrees F (39 degrees C).

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-00-14A	Cabin Pressurization Panel	Cabin Pressure Control System Automatic Mode ____ Mode INOP
21-00-14B	Cabin Pressurization Panel	Cabin Pressure Control System Automatic Modes ____ Mode INOP
21-00-14C	Cabin Pressurization Panel	Cabin Pressure Control System Automatic Modes ____ Mode INOP
21-00-14D	Cabin Pressurization Panel	Cabin Pressure Control System Automatic Modes ____ Mode INOP
21-00-14E	Cabin Pressurization Panel	Cabin Pressure Control System Manual Mode ____ Mode INOP
21-00-14F	Cabin Pressurization Panel	Cabin Pressure Control System Manual Mode ____ Mode INOP
21-00-14G	Cabin Pressurization Panel	Cabin Pressure Control System Manual Mode ____ Mode INOP

NOTE: Some DCPCS faults indicated by an AUTO FAIL Light are recoverable. Momentarily re-positioning the Pressurization Mode Selector to ALTN and then back to AUTO. If the AUTO FAIL Light remains extinguished with the Pressurization Mode Selector in AUTO, the fault has been corrected and the controller is operating normally.

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(O) PROCEDURES

21-00-14A

1. Normal operation of manual mode may be confirmed as follows:
 - a. Position the Pressurization Mode Selector to MAN.
 - b. Use the VALVE toggle switch to observe that the outflow valve position indicator moves to full open, to full closed and then back to full open.

2. Place Pressurization Mode Selector to ALTN prior to dispatch.

NOTE: Subsequent illumination of the AUTO FAIL light during flight will require placing the Pressurization Mode Selector to MAN for manual mode operation.

21-00-14B, 21-00-14E

Operate aircraft unpressurized. Refer to MEL 21-00-10B for (O) PROCEDURES.

21-00-14C, 21-00-14F

Operate aircraft unpressurized. Refer to MEL 21-00-10C for (O) PROCEDURES.

21-00-14D, 21-00-14G

Operate aircraft unpressurized. Refer to MEL 21-00-10D for (O) PROCEDURES.

(M) PROCEDURES

21-00-14A

Pull and secure the associated P6-4 panel circuit breaker PRESSURIZATION CONTROL-AUTO 1 or AUTO 2 to deactivate the inoperative channel.

21-00-14B, 21-00-14C

1. Configure airplane for unpressurized flight (AMM 21-00-00/901):
 - a. Manually position the outflow valve in the 25% open position:
 - 1) Position the Pressurization Mode selector to MAN.
 - 2) Hold the VALVE toggle switch in the OPEN position until valve position indicator indicates 25% open.
 - b. If the outflow valve cannot be positioned to the 25% open position, remove the outflow valve (AMM 21-31-03/401). Stow electrical connectors.
 - c. Pull and secure these P-6 Panel circuit breakers:
 - 1) PRESSURIZATION CONTROL MANUAL
 - 2) PRESSURIZATION CONTROL AUTO 1
 - 3) PRESSURIZATION CONTROL AUTO 2
 - 4) PRESSURIZATION CONTROL IND
 - 5) PRESSURIZATION CONTROL LCD LTG
 - 6) A/C OVERBOARD EXH VALVE RECONFIG CONT.

NOTE: If the outflow valve cannot be positioned to the 25% open position using the above procedure, Maintenance is Required and Flight Crew May NOT Placard.

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21-00-14D

1. Configure airplane for unpressurized flight:
 - a. Manually position the outflow valve in the 25% open position:
 - 1) Position the Pressurization Mode selector to MAN.
 - 2) Hold the VALVE toggle switch in the OPEN position until valve position indicator indicates 25% open.
 - b. If the outflow valve cannot be positioned to the 25% open position, remove the outflow valve (AMM 21-31-03/401). Stow electrical connectors.
 - c. Pull and secure these P-6 Panel circuit breakers:
 - 1) PRESSURIZATION CONTROL MANUAL
 - 2) PRESSURIZATION CONTROL AUTO 1
 - 3) PRESSURIZATION CONTROL AUTO 2
 - 4) PRESSURIZATION CONTROL IND
 - 5) PRESSURIZATION CONTROL LCD LTG
2. Secure the forward cargo heat duct closed:
 - a. With shutoff valve 4063-20605-01 installed:
 - 1) Locate the manual lever on top of the forward cargo heat duct shutoff valve and move the lever from the fully open (O) position to the fully closed (C) position.
 - b. With shutoff valve 4063-20605-01 NOT installed:
 - 1) Remove the forward cargo heat duct check valve.
 - 2) Install cap BOE2221-0011 in the heat duct.
3. Use an operative pack or ground cart to provide cooling when the airplane is electrically powered on the ground and airport temperatures are at or above 73 degrees F (23 degrees C).

21-00-14E, 21-00-14F

Configure airplane for unpressurized flight (AMM 21-00-00/901)

1. Position the outflow valve in the 25% open position:
 - a. Set parking brake.
 - b. Start both engines (AMM 71-00-00/201).
 - c. Run the engines for two minutes to allow them to stabilize.
 - d. Advance thrust levers as necessary to make sure that N1 is greater than 60% and N2 is greater than 89%.
 - e. Monitor the outflow valve position indicator as it goes to the closed position.
 - f. When the outflow valve is in the 25% position, pull and secure these P6-4 circuit breakers:
 - 1) PRESSURIZATION CONTROL AUTO 1
 - 2) PRESSURIZATION CONTROL AUTO 2.
 - g. Retard thrust levers and shut down both engines.
2. If the outflow valve can not be positioned to the 25% open position, remove the outflow valve (AMM 21-31-03/401). Stow electrical connectors.
3. Pull and secure these P6-4 Panel circuit breakers:
 - a. PRESSURIZATION CONTROL MANUAL
 - b. PRESSURIZATION CONTROL AUTO 1
 - c. PRESSURIZATION CONTROL AUTO 2
 - d. PRESSURIZATION CONTROL IND
 - e. PRESSURIZATION CONTROL LCD LTG
 - f. A/C OVERBOARD EXH VALVE RECONFIG CONT.

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21-00-14G

1. Configure airplane for unpressurized flight:
 - a. Position the outflow valve in the 25% open position:
 - 1) Set parking brake.
 - 2) Start both engines (AMM 71-00-00/201).
 - 3) Run the engines for two minutes to allow them to stabilize.
 - 4) Advance thrust levers as necessary to make sure that N1 is greater than 60% and N2 is greater than 89%.
 - 5) Monitor the outflow valve position indicator as it goes to the closed position.
 - 6) When the outflow valve is in the 25% position, pull and secure these P6-4 circuit breakers:
 - a) PRESSURIZATION CONTROL AUTO 1
 - b) PRESSURIZATION CONTROL AUTO 2.
 - 7) Retard thrust levers and shut down both engines.
 - b. If the outflow valve cannot be positioned to the 25% open position, remove the outflow valve (AMM 21-31-03/401). Stow electrical connectors.
 - c. Pull and secure these P6-4 Panel circuit breakers:
 - 1) PRESSURIZATION CONTROL MANUAL
 - 2) PRESSURIZATION CONTROL AUTO 1
 - 3) PRESSURIZATION CONTROL AUTO 2
 - 4) PRESSURIZATION CONTROL IND
 - 5) PRESSURIZATION CONTROL LCD LTG
2. Secure the forward cargo heat duct closed:
 - a. With shutoff valve 4063-20605-01 installed:
 - 1) Locate the manual lever on top of the forward cargo heat duct shutoff valve and move the lever from the fully open (O) position to the fully closed (C) position.
 - b. With shutoff valve 4063-20605-01 NOT installed:
 - 1) Remove the forward cargo heat duct check valve.
 - 2) Install cap BOE2221-0011 in the heat duct.
3. Use an operative pack or ground cart to provide cooling when the airplane is electrically powered on the ground and airport temperatures are at or above 73 degrees F (23 degrees C).

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
21-00-15A	Main Outflow Valve Automatic Mode Actuators	Y	2	1	C May be inoperative provided the manual mode actuator operates normally.
21-00-15B	Main Outflow Valve Automatic Mode Actuators (A/C 3701-3771) "DISP.APPR.REQ'D."	Y	2	0	C (O)(M) May be inoperative for unpressurized flight provided: a) Outflow valve is deactivated in the 25% open position or removed, b) Recirculation fan(s) operates normally, and c) Extended overwater flight is prohibited.
21-00-15C	Main Outflow Valve Automatic Mode Actuators (A/C 3601-3610, 3772, 3773) "DISP.APPR.REQ'D"	Y	2	0	C (O)(M) May be inoperative for unpressurized flight provided: a) Lower forward cargo compartment remains empty, or is verified to contain only empty cargo handling equipment, ballast, and/or Fly Away kits (see MEL Instructions), b) Outflow valve is deactivated in the 25% open position or removed, c) Recirculation fans operate normally, and d) Extended overwater flight is prohibited.
21-00-15D	Main Outflow Valve Automatic Mode Actuators (-900ER) "DISP.APPR.REQ'D"	N	2	0	C (O)(M) May be inoperative for unpressurized flight provided: a) Outflow valve is deactivated in 25% open position or removed, b) Recirculation fans operate normally, c) Extended overwater flight is prohibited, d) Forward cargo heat duct is secured closed, and e) Airport ambient temperature does not exceed 103 degrees F (39 degrees C).
21-00-15E	Main Outflow Valve Manual Mode Actuator (A/C 3701-3771) "DISP.APPR.REQ'D."	Y	1	0	C (O)(M) May be inoperative for unpressurized flight provided: a) Outflow valve is deactivated in the 25% open position or removed, b) Recirculation fan(s) operate normally, and c) Extended overwater flight is prohibited.
21-00-15F	Main Outflow Valve Manual Mode Actuator (A/C 3601-3610, 3772, 37730) "DISP.APPR.REQ'D."	Y	1	0	C (O)(M) May be inoperative for unpressurized flight provided: a) Lower forward cargo compartment remains empty, or is verified to contain only empty cargo handling equipment, ballast, and/or Fly Away kits (see MEL Instructions), b) Outflow valve is deactivated in the 25% open position or removed, c) Recirculation fans operate normally, and d) Extended overwater flight is prohibited.

CONTINUED NEXT PAGE

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
	MAIN OUTFLOW VALVE ACTUATORS (CONTINUED)				
21-00-15G	Main Outflow Valve Manual Mode Actuator (-900ER) "DISP.APPR.REQ'D."	N	1	0	C (O)(M) May be inoperative for unpressurized flight provided: a) Outflow valve is deactivated in 25% open position or removed, b) Recirculation fans operate normally, c) Extended overwater flight is prohibited, d) Forward cargo heat duct is secured closed, and e) Airport ambient temperature does not exceed 103 degrees F (39 degrees C).

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-00-15A	Cabin Pressurization Panel	Main Outflow Valve Automatic Mode ____ Actuator INOP
21-00-15B	Cabin Pressurization Panel	Main Outflow Valve Automatic Mode ____ Actuators INOP
21-00-15C	Cabin Pressurization Panel	Main Outflow Valve Automatic Mode ____ Actuators INOP
21-00-15D	Cabin Pressurization Panel	Main Outflow Valve Automatic Mode ____ Actuators INOP
21-00-15E	Cabin Pressurization Panel	Main Outflow Valve Manual Mode Actuator INOP
21-00-15F	Cabin Pressurization Panel	Main Outflow Valve Manual Mode Actuator INOP
21-00-15G	Cabin Pressurization Panel	Main Outflow Valve Manual Mode Actuator INOP

(O) PROCEDURES

21-00-15B, 21-00-15E

Operate aircraft unpressurized. Refer to MEL 21-00-10B for (O) PROCEDURES.

21-00-15C, 21-00-15F

Operate aircraft unpressurized. Refer to MEL 21-00-10C for (O) PROCEDURES.

21-00-15D, 21-00-15G

Operate aircraft unpressurized. Refer to MEL 21-00-10D for (O) PROCEDURES.

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(M) PROCEDURES

21-00-15B, 21-00-15C, 21-00-15E, 21-00-15F

Configure airplane for unpressurized flight:

1. Position the outflow valve in the 25% open position using one of the two following methods:
 - a. For Automatic Mode Actuators inoperative:
 - 1) Position the Pressurization Mode selector to MAN.
 - 2) Hold the VALVE toggle switch in the OPEN position until valve position indicator indicates 25% open.
 - b. For Manual Mode Actuator inoperative:
 - 1) Set parking brake.
 - 2) Start both engines (AMM 71-00-00/201).
 - 3) Run the engines for two minutes to allow them to stabilize.
 - 4) Advance thrust levers as necessary to make sure that N1 is greater than 60% and N2 is greater than 89%.
 - 5) Monitor the outflow valve position indicator as it goes to the closed position.
 - 6) When the outflow valve is in the 25% position, pull and secure these P6-4 circuit breakers:
 - a) PRESSURIZATION CONTROL AUTO 1
 - b) PRESSURIZATION CONTROL AUTO 2.
 - 7) Retard thrust levers and shut down both engines. If the outflow valve cannot be positioned to the 25% open position, remove the outflow valve (AMM 21-31-03/401). Stow electrical connectors.
2. If the outflow valve cannot be positioned to the 25% open position, remove the outflow valve (AMM 21-31-03/401). Stow electrical connectors.
3. Pull and secure these P-6 Panel circuit breakers:
 - a. PRESSURIZATION CONTROL MANUAL
 - b. PRESSURIZATION CONTROL AUTO 1
 - c. PRESSURIZATION CONTROL AUTO 2
 - d. PRESSURIZATION CONTROL IND
 - e. PRESSURIZATION CONTROL LCD LTG
 - f. A/C OVERBOARD EXH VALVE RECONFIG CONT.

21-00-15D, 21-00-15G

Configure airplane for unpressurized flight:

1. Position the outflow valve in the 25% open position using one of the two following methods:
 - a. For Automatic Mode Actuators inoperative:
 - 1) Position the Pressurization Mode selector to MAN.
 - 2) Hold the VALVE toggle switch in the OPEN position until valve position indicator indicates 25% open.
 - b. For Manual Mode Actuator inoperative:
 - 1) Set parking brake.
 - 2) Start both engines (AMM 71-00-00/201).
 - 3) Run the engines for two minutes to allow them to stabilize.
 - 4) Advance thrust levers as necessary to make sure that N1 is greater than 60% and N2 is greater than 89%.
 - 5) Monitor the outflow valve position indicator as it goes to the closed position.

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- 6) When the outflow valve is in the 25% position, pull and secure these P6-4 circuit breakers:
 - a) PRESSURIZATION CONTROL AUTO 1
 - b) PRESSURIZATION CONTROL AUTO 2.
- 7) Retard thrust levers and shut down both engines.
4. If the outflow valve cannot be positioned to the 25% open position, remove the outflow valve (AMM 21-31-03/401). Stow electrical connectors.
5. Pull and secure these P-6 Panel circuit breakers:
 - a. PRESSURIZATION CONTROL MANUAL
 - b. PRESSURIZATION CONTROL AUTO 1
 - c. PRESSURIZATION CONTROL AUTO 2
 - d. PRESSURIZATION CONTROL IND
 - e. PRESSURIZATION CONTROL LCD LTG
6. Secure the forward cargo heat duct closed:
 - a. With shutoff valve 4063-20605-01 installed:
 - 1) Locate the manual lever on top of the forward cargo heat duct shutoff valve and move the lever from the fully open (O) position to the fully closed (C) position.
 - b. With shutoff valve 4063-20605-01 NOT installed:
 - 1) Remove the forward cargo heat duct check valve.
 - 2) Install cap BOE2221-0011 in the heat duct.
7. Use an operative pack or ground cart to provide cooling when the airplane is electrically powered on the ground and airport temperatures are at or above 73 degrees F (23 degrees C).

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
21-00-16A	Pressure Relief Valves	N	2	1	C (M) May be inoperative CLOSED for pressurized flight.
21-00-16B	Pressure Relief Valves (A/C 3701-3771) "DISP.APPR.REQ'D."	Y	2	0	C (O)(M) Both may be inoperative provided: a) Flight is conducted in an unpressurized configuration, b) Outflow valve is positioned to the 25% open position, and c) Recirculation fan(s) operates normally.
21-00-16C	Pressure Relief Valves (A/C 3601-3610, 3772, 3773) "DISP.APPR.REQ'D."	Y	2	0	C (O)(M) Both may be inoperative provided: a) Flight is conducted in an unpressurized configuration, b) Lower forward cargo compartment remains empty, or is verified to contain only empty cargo handling equipment, ballast, and/or Fly Away kits (see MEL Instructions), c) Outflow valve is positioned to 25% open position, and d) Recirculation fan(s) operate normally.
21-00-16D	Pressure Relief Valves (-900ER) "DISP.APPR.REQ'D"	N	2	0	C (O)(M) Both may be inoperative provided: a) Flight is conducted in an unpressurized configuration, b) Outflow valve is positioned to 25% open position, c) Recirculation fans operate normally, d) Forward cargo heat duct is secured closed, and e) Airport ambient temperature does not exceed 103 degrees F (39 degrees C).

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-00-16A	Cabin Altitude / Differential Pressure Indicator	___ Pressure Relief Valve INOP
21-00-16B	Cabin Altitude / Differential Pressure Indicator	___ Pressure Relief Valve(s) INOP
21-00-16C	Cabin Altitude / Differential Pressure Indicator	___ Pressure Relief Valve(s) INOP
21-00-16D	Cabin Altitude / Differential Pressure Indicator	___ Pressure Relief Valve(s) INOP

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(O) PROCEDURES

21-00-16B

Operate aircraft unpressurized. Refer to MEL 21-00-10B for (O) PROCEDURES.

21-00-16C

Operate aircraft unpressurized. Refer to MEL 21-00-10C for (O) PROCEDURES.

21-00-16D

Operate aircraft unpressurized. Refer to MEL 21-00-10D for (O) PROCEDURES.

(M) PROCEDURES

21-00-16A

1. Remove the aft bulkhead liner in the aft cargo compartment.
2. Remove Safety Relief Valve. Retain clamp and seal for installation of blanking plate.
3. Using the gasket as a template, make a blanking plate from 0.125 to 0.1875 inch 2024 T3 aluminum to seal pedestal.
4. Make certain that the holes to accept locating pins and ambient sense tube are drilled through blanking.
5. Apply lubricant to both sides of the gasket.
6. Install the gasket, plate, and clamp on the pedestal.
7. Install an airtight cap on the ambient sense tube.
8. Reinstall aft bulkhead liner.

21-00-16B

Refer to MEL 21-00-10B for (M) PROCEDURES

21-00-16C

Refer to MEL 21-00-10C for (M) PROCEDURES

21-00-10D

Refer to MEL 21-00-10D for (M) PROCEDURES.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS
TEMPERATURE INDICATORS						
21-00-17A	Supply Duct (-800, -900ER)	Y	3	0	C	May be inoperative provided associated ZONE TEMP light operates normally.
21-00-17B	Supply Duct (-700)	Y	1	0	C	May be inoperative provided both duct overheat warning systems operate normally.
21-00-17C	Pass Cabin	Y	-	0	C	
21-00-17D	Pack (-800, -900ER)	Y	2	0	C	

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-00-17A	Air Temp Source Selector	Supply Duct Temp Indicator INOP
21-00-17B	Air Temp Source Selector	Supply Duct Temp Indicator INOP
21-00-17C	Air Temp Source Selector	Pass Cabin Temp Indicator INOP
21-00-17D	Air Temp Source Selector	Pack Temp Indicator INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS
DUCT OVERHEAT WARNING LIGHTS						
21-00-18A	ZONE TEMP (-800 -900ER)	Y	3	0	C	May be inoperative provide associated supply duct temperature indicator operates normally.
21-00-18B	DUCT OVERHEAT (-700)	Y	2	0	C	May be inoperative provided supply duct temperature indicators operate normally.

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-00-18A	Affected ZONE TEMP Warning Light	____ ZONE TEMP Warning Light INOP
21-00-18B	Affected DUCT OVERHEAT Warning Light	____ DUCT OVERHEAT Warning Light INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
	PASSENGER CABIN TEMPERATURE CONTROL SYSTEM				
21-00-19A	Automatic/Manual Controls (-700)	Y	2	1	C
21-00-19B	Automatic/Manual Controls (-700) "DISP.APPR.REQ'D."	Y	2	0	C
21-00-19C	FWD / AFT (-800 -900ER)	Y	2	0	C
21-00-19D	FWD / AFT (-800)	Y	2	0	C
21-00-19E	FWD / AFT (-800)	N	2	0	C
21-00-19F	FWD / AFT (-900ER) "DISP.APPR.REQ'D"	N	2	0	C
21-00-19G	FWD / AFT (-900ER) "DISP.APPR.REQ'D"	N	2	0	C

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MEL ITEM	TAB LOCATION	PLACARD TEXT
21-00-19A	Passenger Cabin Temp Selector	Passenger Cabin Temp ____ Control(s) INOP
21-00-19B	Passenger Cabin Temp Selector	Passenger Cabin Temp ____ Control(s) INOP
21-00-19C	Passenger Cabin Temp Selector	Passenger Cabin Temp ____ Control(s) INOP
21-00-19D	1. Passenger Cabin Temp Selector 2. Trim Air Switch	1. Passenger Cabin Temp ____ Control(s) INOP 2. DO NOT OPERATE
21-00-19E	1. Passenger Cabin Temp Selector 2. Trim Air Switch	1. Passenger Cabin Temp ____ Control(s) INOP 2. DO NOT OPERATE
21-00-19F	1. Passenger Cabin Temp Selector 2. Trim Air Switch	1. Passenger Cabin Temp ____ Control(s) INOP 2. DO NOT OPERATE
21-00-19G	1. Passenger Cabin Temp Selector 2. Trim Air Switch	1. Passenger Cabin Temp ____ Control(s) INOP 2. DO NOT OPERATE

(O) PROCEDURES

21-00-19B

If the right pack cannot be used, use [MEL Item 21-00-01A](#) One Pack Inoperative (Pressurized) Operations Procedure.

21-00-19C

1. Make sure that the passenger cabin temperature is stabilized between 70°F and 80°F.
2. Position the AIR TEMP Selector to affected PASS CAB SUPPLY DUCT – FWD or AFT.
3. Rotate the associated Cabin Temperature Selector full clockwise and observe that the corresponding SUPPLY DUCT temperature increases.
4. Rotate the associated Cabin Temperature Selector full counter clockwise and observe that the corresponding SUPPLY DUCT temperature decreases.

21-00-19D, 21-00-19E

Operate all zone temperature selectors normally. The left pack will control the flight deck temperature and the right pack will control the passenger cabin temperature using the average of the two cabin zone temperature settings.

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21-00-19F

1. Use MEL 21-00-01B (O) PROCEDURES.
2. Operate with TRIM AIR switch OFF.
3. Use normal procedures to operate the temperature selectors.

21-00-19G

1. Use MEL 21-00-01B (O) PROCEDURES.
2. Use normal procedures to operate the temperature selectors.
NOTE: With a trim air modulating valve deactivated, the associated FWD CAB or AFT CAB ZONE TEMP light will illuminate during Master Caution recall and will extinguish when Master Caution is reset.

(M) PROCEDURES

21-00-19D

Position the TRIM AIR switch OFF.

21-00-19E

1. Position the associated Zone Temperature Selector (FWD CAB and/or AFT CAB) OFF.
2. Locate the associated trim air modulating valve(s) in the right hand air conditioning bay. Using the valve manual override, position the valve(s) to the CLOSED position as indicated on the valve visual indicator(s).
3. Disconnect and stow the electrical connector from the valve(s). This will disable the associated cabin zone temperature control and ensure the trim air modulating valve(s) remains closed.
4. Position the associated zone temperature selectors(s) to the normal range.

21-00-19F

1. Position the TRIM AIR switch to OFF.
2. Use MEL 21-00-01B (M) PROCEDURES to deactivate one pack and secure the forward cargo heat duct closed.

21-00-19G

1. Position the FWD CAB and/or AFT CAB Temperature Selector to OFF.
2. Locate the associated trim air modulating valve(s) in the right ECS bay.
3. Turn the manual override until the visual position indicator shows the full closed position.
4. Disconnect and stow the electrical connector from the valve(s).
5. Position the associated Temperature Selector(s) to the normal temperature range.
6. Use MEL 21-00-01B (M) PROCEDURES to deactivate one pack and secure the forward cargo heat duct closed.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
FLIGHT DECK TEMPERATURE CONTROL SYSTEMS					
21-00-21A	Automatic/Manual Controls (-700)	Y	2	1	C
21-00-21B	Automatic/Manual Controls (-700) "DISP.APPR.REQ'D."	Y	2	0	C
21-00-21C	Primary / Back-up Modes (-800 -900ER)	Y	2	1	C
21-00-21D	Primary / Back-up Modes (-800)	Y	2	0	C
21-00-21E	Primary / Back-up Modes (-800)	N	2	0	C
21-00-21F	Primary / Back-up Modes (-900ER) "DISP.APPR.REQ'D"	N	2	0	C
21-00-21G	Primary / Back-up Modes (-900ER) "DISP.APPR.REQ'D."	N	2	0	C

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MEL ITEM	TAB LOCATION	PLACARD TEXT
21-00-21A	Cockpit Temp Selector	Cockpit Temp Control ____ Mode INOP
21-00-21B	Cockpit Temp Selector	Cockpit Temp Control ____ Mode INOP Do Not Use Left Pack
21-00-21C	Cockpit Temp Selector	Cockpit Temp Control ____ Mode INOP
21-00-21D	Cockpit Temp Selector	Cockpit Temp ____ Control Primary / Back-up Modes INOP
21-00-21E	Cockpit Temp Selector	Cockpit Temp ____ Control Primary / Back-up Modes INOP
21-00-21F	Cockpit Temp Selector	Cockpit Temp ____ Control Primary / Back-up Modes INOP
21-00-21G	Cockpit Temp Selector	Cockpit Temp ____ Control Primary / Back-up Modes INOP

(O) PROCEDURES

21-00-21B

If the left pack cannot be used, use [MEL Item 21-00-01A](#) One Pack Inoperative (Pressurized) Operations Procedure.

21-00-21C

Use the following procedure to verify that one of the flight deck temperature control systems (Primary or Back-up) is operating normally:

- Press and release either system annunciator panel on the lightshield. The ZONE TEMP light for the CONT CAB, the AIR COND annunciator panel light and the MASTER CAUTION lights will illuminate.
- Press and release either MASTER CAUTION light on the lightshield. The ZONE TEMP light, the AIR COND annunciator panel light and the MASTER CAUTION lights will extinguish.
- Confirm that the Flight Deck supply duct temperature responds to the Temperature Selector as follows:
 - Select the Air Temperature Source Selector to SUPPLY DUCT – CONT CABIN.
 - Select the CONT CAB Temperature Selector to the full clockwise position (full warm) and observe that the SUPPLY DUCT – CONT CABIN temperature increases.
 - Select the CONT CAB Temperature Selector to the full counter-clockwise position (full cold) and observe that the SUPPLY DUCT – CONT CABIN temperature decreases.
- Operate all the zone temperature selectors normally.

NOTE: With both flight deck temperature control systems inoperative, the left pack will control the flight deck temperature and the right pack will control the passenger cabin temperature. With the TRIM AIR switch positioned to OFF, the two cabin zone temperature setting will be averaged.

21-00-21D, 21-00-21E

Operate all the zone temperature selectors normally.

NOTE: With both flight deck temperature control systems inoperative, the left pack will control the flight deck temperature and the right pack will control the passenger cabin temperature. With the TRIM AIR switch positioned to OFF, the two cabin zone temperature setting will be averaged.

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21-00-21F

1. Use MEL 21-00-01B (O) PROCEDURES.
2. Operate with TRIM AIR switch OFF.
3. Use normal procedures to operate the temperature selectors.

21-00-21G

1. Use MEL 21-00-01B (O) PROCEDURES.
2. Use normal procedures to operate the temperature selectors.
NOTE: With a trim air modulating valve deactivated, the associated FWD CAB or AFT CAB ZONE TEMP light will illuminate during Master Caution recall and will extinguish when Master Caution is reset.

(M) PROCEDURES

21-00-21D

Position the TRIM AIR switch to OFF.

21-00-21E

1. Position the CONT CAB zone temperature selector to OFF.
2. Locate the associated trim air modulating valve in the left hand air conditioning bay. Using the valve manual over ride, position the valve to the CLOSED position as indicated on the valve visual indicator.
3. Disconnect and stow the electrical connector from the valve. This will disable the associated cabin zone temperature control and ensure that the trim air modulating valve remains closed.
4. Position the associated zone temperature selector to the normal range.

21-00-21F

1. Position the TRIM AIR switch to OFF.
2. Use MEL 21-00-01B (M) PROCEDURES to deactivate one pack and secure the forward cargo heat duct closed.

21-00-21G

1. Position the CONT CAB Temperature Selector to OFF.
2. Locate the flight deck trim air modulating valve in the left ECS bay.
3. Turn the manual override until the visual position indicator shows the full closed position.
4. Disconnect and stow the electrical connector from the valve.
5. Position the CONT CAB Temperature Selector to the normal temperature range.
6. Use MEL 21-00-01B (M) PROCEDURES to deactivate one pack and secure the forward cargo heat duct closed.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH			
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY			
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS	
21-00-24	Gasper Fan (-700)	Y	1	0	D		

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-00-24	Gasper Fan Switch	Gasper Fan Switch INOP

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH			
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY			
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS	
21-00-25	Water Separator Anti-icing Systems (-700)	Y	2	0	C	(O)(M) May be inoperative provided the associated pack is not used.	

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-00-25	Associated Pack Switch (es)	____ WATER A/I SYS INOP LEAVE ____ PACK(S) OFF

(O) PROCEDURES

- For dispatch with one water separator anti-icing system inoperative (pressurized), use [MEL Item 21-00-01A](#) One Pack Inoperative (Pressurized) Operations Procedure.
- For dispatch with both water separator anti-icing systems inoperative, use [MEL Item 21-00-01C](#) Two Packs Inoperative (Unpressurized) Operations Procedure.

(M) PROCEDURES

Use [MEL 21-00-01](#) Maintenance procedure for one or two packs inoperative, as applicable.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
21-00-26A	Ground Preconditioned Air Connection Check Valve	Y	1	0	C May be inoperative CLOSED.
21-00-26B	Ground Preconditioned Air Connection Check Valve (A/C 3701-3771) "DISP.APPR.REQ'D."	Y	1	0	C (O)(M) May be inoperative provided: a) Flight is conducted in an unpressurized configuration, b) Outflow valve is positioned to the 25% open position, and c) Recirculation fan(s) operate normally.
21-00-26C	Ground Preconditioned Air Connection Check Valve (A/C 3601-3610, 3772, 3773) "DISP.APPR.REQ'D."	Y	1	0	C (O)(M) May be inoperative provided: a) Flight is conducted in an unpressurized configuration, b) Lower forward cargo compartment remains empty, or is verified to contain only empty cargo handling equipment, ballast, and/or flyaway kits (see MEL Instructions), c) Outflow valve is positioned to the 25% open position, and c) Recirculation fan(s) operate normally.
21-00-26D	Ground Preconditioned Air Connection Check Valve (-900ER) "DISP.APPR.REQ'D"	N	1	0	C (O)(M) May be inoperative provided: a) Flight is conducted in an unpressurized configuration, b) Outflow valve is positioned to 25% open position, c) Recirculation fans operate normally, d) Forward cargo heat duct is secured closed, and e) Ambient airport temperature does not exceed 103 degrees F (39 degrees C).

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-00-26A	Cabin Pressure Control Panel	Ground Preconditioned Air Connection Check Valve INOP CLOSED
21-00-26B	Cabin Pressure Control Panel	Ground Preconditioned Air Connection Check Valve INOP
21-00-26C	Cabin Pressure Control Panel	Ground Preconditioned Air Connection Check Valve INOP
21-00-26D	Cabin Pressure Control Panel	Ground Preconditioned Air Connection Check Valve INOP

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(O) PROCEDURES

21-00-26B

Operate aircraft unpressurized. Refer to MEL 21-00-10B for (O) PROCEDURES.

21-00-26C

Operate aircraft unpressurized. Refer to MEL 21-00-10C for (O) PROCEDURES.

21-00-26D

Operate aircraft unpressurized. Refer to MEL 21-00-10D for (O) PROCEDURES.

(M) PROCEDURES

21-00-26B

Use MEL 21-00-10B (M) PROCEDURES to position the outflow valve to the 25% open position.

21-00-26C

Use MEL 21-00-10C (M) PROCEDURES to position the outflow valve to the 25% open position.

21-00-26D

Use MEL 21-00-10D (M) PROCEDURES to position the outflow valve to the 25% open position and secure the forward cargo heat duct closed..

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
21-00-27	ELECTRICAL / ELECTRONIC EQUIPMENT COOLING BLOWERS CDS (Common Display System)	Y	4	3	B (O)(M) One fan may be inoperative provided: a) All remaining fans are verified to operate normally, and b) Both low flow detectors are verified to operate normally.

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-00-27	Equipment Cooling Switch Panel	Equipment Cooling Fan CDS INOP

(O) PROCEDURE NOTES

NOTE 1: If the EQUIP COOLING SUPPLY OFF light illuminates during flight (both supply fans inoperative), continued flight beyond 30 minutes can result in loss of the Captain's Display Units and the lower center Display Unit.

NOTE 2: If the EQUIP COOLING EXHAUST OFF light illuminates during flight (both exhaust fans inoperative), continued flight beyond 30 minutes can result in loss of the First Officer's Display Units and the upper center Display Unit.

(M) PROCEDURES

For Equipment Cooling Supply or Exhaust system associated with the inoperative fan, verify that the low flow detector and remaining fan operate normally:

- Position associated Equipment Cooling Panel (P5) EQUIP COOLING SUPPLY or EXHAUST switch to the operative fan position (NORM or ALTN).
- Verify that the associated Equipment Cooling Supply or Exhaust OFF light extinguishes.

For Equipment Cooling Supply or Exhaust system with both fans operative, verify that the low flow detector and both fans operate normally:

- Open associated P6-4 Panel Equipment Cooling Supply or Exhaust FAN CONTROL NORMAL circuit breaker.
- Verify that the associated Equipment Cooling Supply or Exhaust OFF light illuminates.
- Position associated Equipment Cooling Panel (P5) EQUIP COOLING SUPPLY or EXHAUST switch to ALTERNATE.
- Verify the associated Equipment Cooling Supply or Exhaust OFF light extinguishes.
- Open associated P6-4 Panel Equipment Cooling Supply or Exhaust FAN CONTROL ALTN circuit breaker.
- Verify that the associated Equipment Cooling Supply or Exhaust OFF light illuminates.
- Close P6-4 Panel Equipment Cooling Supply or Exhaust FAN CONTROL NORMAL and FAN CONTROL ALTN circuit breakers.
- Verify that the associated Equipment Cooling Supply or Exhaust OFF light extinguishes.
- Position associated Equipment Cooling Panel (P5) EQUIP COOLING SUPPLY or EXHAUST switch NORMAL.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS
21-00-31A	Recirculation Fan(s) (-800 -900ER) "DISP.APPR.REQ'D."	Y	2	1	C	Left fan may be inoperative provided the left pack is operating when OAT is above 100 degrees F (38 degrees C).
21-00-31B	Recirculation Fan(s) (-800 -900ER) "DISP.APPR.REQ'D."	Y	2	1	C	Right fan may be inoperative provided: a) The left pack is operating when OAT is above 100 degrees F (38 degrees C), and b) Flight is conducted pressurized.
21-00-31C	Recirculation Fan(s) (-800 -900ER) "DISP.APPR.REQ'D."	Y	2	0	C	May be inoperative provided: a) OAT remains below 100 degrees F (38 degrees C), and b) Flight is conducted pressurized.
21-00-31D	Recirculation Fan (-700) "DISP.APPR.REQ'D."	Y	1	0	C	May be inoperative provided: a) The left pack is operating when OAT is above 100 degrees F (38 degrees C), b) Flight is conducted pressurized, and c) Both packs operate normally.

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-00-31A	Associated Recirculation Fan Switch	____ Recirculation Fan INOP
21-00-31B	Associated Recirculation Fan Switch	____ Recirculation Fan INOP
21-00-31C	Associated Recirculation Fan Switch(es)	____ Recirculation Fan INOP
21-00-31D	Associated Recirculation Fan Switch	Recirculation Fan INOP

OPERATIONS NOTE: Position affected Recirculation Fan Switch(es) to OFF.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
21-00-32	Pack Temperature Control System(s) (Electronic Pack / Zone Controller)	Y	4	2	C (O) One system (primary or standby) on each pack may be inoperative provided remaining system on associated pack is checked to operate normally.

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-00-32	Associated PACK Light	_____ Pack Temperature Control System _____ Controller INOP

(O) PROCEDURES

Verify that remaining system on associated pack operates normally as follows:

1. Press and release a system annunciator panel on the lightshield. The affected PACK light, AIR COND light, and MASTER CAUTION light may illuminate.
2. Press and release a MASTER CAUTION light on the lightshield. The affected PACK light, AIR COND light, and MASTER CAUTION light will extinguish.
3. Illumination of the affected lights when recalled and extinguishing when reset verifies that the remaining pack temperature control system operates normally.

NOTE: The ZONE TEMP light(s) may illuminate during recall but must extinguish after MASTER CAUTION Light is pressed.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
21-00-33A	Pack Temperature Control Valves	Y	2	0	C (O) May be inoperative provided associated Standby Pack Temperature Control Valve(s) is verified to operate normally.
21-00-33B	Pack Temperature Control Valves "DISP.APPR.REQ'D."	Y	2	1	C (O)(M) May be inoperative provided associated pack is deferred per MEL 21-00-01A or B as applicable.
21-00-33C	Pack Temperature Control Valves "DISP.APPR.REQ'D."	N	2	0	C (O)(M) Both may be inoperative provided both packs are deferred per MEL 21-00-01C or D as applicable.
21-00-33D	Pack Temperature Control Valves	N	2	0	C (O)(M) May be inoperative provided: a) Associated Temperature Control Valve is deactivated closed, and b) Associated Standby Pack Temperature Control Valve(s) is verified to operate normally.

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-00-33A	Associated Pack Switch(es)	Pack Temperature Control Valve(s) INOP
21-00-33B	Associated Pack Switch	Pack Temperature Control Valve INOP
21-00-33C	Associated Pack Switch(es)	Pack Temperature Control Valve(s) INOP
21-00-33D	Associated Pack Switch(es)	Pack Temperature Control Valve(s) INOP

(O) PROCEDURES

21-00-33A, 21-00-33D

If the associated pack is to be used, verify that the remaining pack temperature control system operates normally as follows:

1. Press and release a system annunciator panel on the lightshield. The affected PACK light, AIR COND light, and MASTER CAUTION light will illuminate.
2. Press and release a MASTER CAUTION light on the lightshield. The affected PACK light, AIR COND light, and MASTER CAUTION light will extinguish.
3. Illumination of the affected lights when recalled and extinguishing when reset verifies that the remaining pack temperature control system operates normally.

21-00-33B

If one pack is not used refer to MEL 21-00-01A or B for (O) PROCEDURES.

21-00-33C

If both packs are not used refer to MEL 21-00-01C or D for (O) PROCEDURES.

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(M) PROCEDURES

21-00-33B

Use MEL 21-00-01A or B (M) PROCEDURES as applicable to defer the associated pack.

21-00-33C

Use MEL 21-00-01C or D (M) PROCEDURES as applicable to defer the associated pack.

21-00-33D

Deactivate and lock the associated Pack Temperature Control Valve closed:

NOTE: The associated inoperative temperature control valve could be stuck in the open position. To help prevent hot air from entering into the air distribution system resulting in a hot cabin temperature, the associated temperature control valve can be manually closed.

1. Disconnect and stow the electrical connector from the associated Pack Temperature Control Valve.
2. Turn the manual override on the associated Pack Temperature Control Valve until the visual position indicator shows the full closed position.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
21-00-34A	Standby Pack Temperature Control Valves	Y	2	0	C (O) May be inoperative provided associated Pack Temperature Control Valve(s) is checked to operate normally.
21-00-34B	Standby Pack Temperature Control Valves "DISP.APPR.REQ'D."	Y	2	1	C (O)(M) May be inoperative provided associated pack is deferred per MEL 21-00-01A or B as applicable.
21-00-34C	Standby Pack Temperature Control Valves "DISP.APPR.REQ'D."	N	2	0	C (O)(M) Both may be inoperative provided both packs are deferred per MEL 21-00-01C or D as applicable.

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-00-34A	Associated pack Switch(es)	Standby Pack Temperature Control Valves INOP
21-00-34B	Associated pack Switch	Standby Pack Temperature Control Valve INOP
21-00-34C	Associated pack Switch(es)	Standby Pack Temperature Control Valves INOP

(O) PROCEDURES

21-00-34A

If the associated pack is to be used, verify that one of the pack temperature control systems operates normally as follows:

1. Press and release a system annunciator panel on the lightshield. The affected PACK light, AIR COND light, and MASTER CAUTION light may illuminate.
2. Press and release a MASTER CAUTION light on the lightshield. The affected PACK light, AIR COND light, and MASTER CAUTION light will extinguish.
3. Illumination of the affected lights when recalled and extinguishing when reset verifies that the remaining pack temperature control system operates normally.

21-00-34B

If one pack is not used refer to MEL 21-00-01A or B for (O) PROCEDURES.

21-00-34C

If both packs are not used refer to MEL 21-00-01C or D for (O) PROCEDURES.

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(M) PROCEDURES

21-00-034B

Use MEL 21-00-01A or B (M) PROCEDURES as applicable to defer the associated pack.

21-00-33C

Use MEL 21-00-01C or D (M) PROCEDURES as applicable to defer the associated pack.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
21-00-35A	Trim Air Pressure Regulating and Shutoff Valve (-800)	N	1	0	C (M) May be inoperative secured closed.
21-00-35B	Trim Air Pressure Regulating and Shutoff Valve (-900ER) "DISP.APPR.REQ'D"	N	1	0	C (O)(M) May be inoperative provided: a) Forward cargo heat duct is secured closed, b) Airport ambient temperature does not exceed 103 degrees F (39 degrees C), and c) One air conditioning pack is considered inoperative and deferred per MEL 21-00-01B .

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-00-35A	Trim Air Switch	Trim Air Pressure Regulating and Shutoff Valve INOP
21-00-35B	Trim Air Switch	Trim Air Pressure Regulating and Shutoff Valve INOP

(O) PROCEDURES

21-00-35B

Refer to MEL 21-00-01B for (O) PROCEDURES.

(M) PROCEDURES

21-00-35A

1. Position the TRIM AIR switch to OFF.
2. Manually close the trim air pressure and regulating valve (located in the right air conditioning bay next to the keel beam, inboard of the Air Cycle Machine (ACM)) using the valve manual override.
3. Pull and secure the TRIM AIR PRESS circuit breaker on the P6-4 Panel.

21-00-35B

1. Position the TRIM AIR switch to OFF.
2. Manually close the trim air pressure and regulating valve (located in the right air conditioning bay next to the keel beam, inboard of the Air Cycle Machine (ACM)) using the valve manual override.
3. Pull and secure the TRIM AIR PRESS circuit breaker on the P6-4 Panel.
4. Apply [MEL 21-00-01B](#) to deactivate one pack and secure the forward cargo heat duct closed.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
21-00-36A	Trim Air Modulating Valves (-800)	N	3	0	C (M) May be inoperative closed.
21-00-36B	Trim Air Modulating Valves (-800)	Y	3	0	C (O) May be inoperative in any position provided the Trim Air Pressure Regulating and Shutoff Valve remains closed.
21-00-36C	Trim Air Modulating Valves (-900ER) "DISP.APPR.REQ'D"	N	3	0	C (O)(M) May be inoperative closed provided: a) Forward cargo heat duct is secured closed, b) Airport ambient temperature does not exceed 103 degrees F (39 degrees C), and c) One air conditioning pack is considered inoperative and deferred per MEL 21-00-01B.
21-00-36D	Trim Air Modulating Valves (-900ER) "DISP.APPR.REQ'D"	N	3	0	C (O)(M) May be inoperative in any position provided: a) Trim Air Pressure Regulating and Shutoff Valve remains closed, b) Forward cargo heat duct is secured closed, and c) Airport ambient temperature does not exceed 103 degrees F (39 degrees C), and d) One air conditioning pack is considered inoperative and deferred per MEL 21-00-01B.

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-00-36A	Trim Air Switch	Trim Air Modulating Valve(s) INOP CLOSED
21-00-36B	Trim Air Switch	Trim Air Modulating Valve(s) INOP
21-00-36C	Trim Air Switch	Trim Air Modulating Valve(s) INOP CLOSED
21-00-36D	Trim Air Switch	Trim Air Modulating Valve(s) INOP

(O) PROCEDURES

21-00-36B

1. Operate with TRIM AIR switch OFF.
2. Use normal procedures to operate the temperature selectors.

21-00-36C

Refer to MEL 21-00-01B for (O) PROCEDURES for inoperative pack.

21-00-36D

1. Operate with TRIM AIR switch OFF.
2. Refer to MEL 21-00-01B for (O) PROCEDURES for inoperative pack,

CONTINUED NEXT PAGE

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(M) PROCEDURES

21-00-36A

1. Position the associated CONT CAB, FWD CAB or AFT CAB temperature selector to OFF.
2. Disconnect and stow the electrical connector from the inoperative valve.

NOTE: The valve for the flight deck is in the left ECS bay. The valves for the forward and aft passenger cabin are in the right ECS bay.

3. Turn the manual override on the associated Trim Air Modulating valve until the visual position indicator shows the full closed position.
4. Position the associated temperature selector back to the normal operating range.

21-00-36C

1. Position the CONT CAB, FWD CAB or AFT CAB temperature selector for the inoperative valve to OFF.
2. Disconnect and stow the electrical connector from the inoperative valve.

NOTE: The valve for the flight deck is in the left ECS bay. The valves for the forward and aft passenger cabin are in the right ECS bay.

3. Turn the manual override on the associated Trim Air Modulating valve until the visual position indicator shows the full closed position.
4. Position the associated temperature selector back to the normal operating range.
5. Apply [MEL 21-00-01B](#) to deactivate one pack and secure the forward cargo heat duct closed.

21-00-36D

1. Position the TRIM AIR switch to OFF.
2. Apply [MEL 21-00-01B](#) to deactivate one pack and secure the forward cargo heat duct closed.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
21-00-38	Outflow Valve Position Indicator	Y	1	0	C (O)(M) May be inoperative provided valve is verified to be operating normally.

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-00-38	Outflow Valve Position Indicator	Outflow Valve Position Indicator INOP

(O) PROCEDURES or (M) PROCEDURES

1. Provide electrical power.
2. Check that the following PRESSURIZATION CONTROL circuit breakers on the P6-4 Panel are pushed in and closed:
 - a. PRESSURIZATION CONTROL-MAN
 - b. PRESSURIZATION CONTROL-AUTO 1
 - c. PRESSURIZATION CONTROL-AUTO 2
 - d. PRESSURIZATION CONTROL-IND
 - e. PRESSURIZATION CONTROL-LCD LTG
3. Verify visually that the outflow valve is in the fully opened position.
4. Position the mode selector to MAN.
5. Check that the MANUAL light illuminates.
6. Hold the VALVE switch in the CLOSED position for 30 seconds.
7. Check visually that the aft outflow valve has moved to the full closed position.
8. Position the mode selector to AUTO.
9. Check that the MANUAL light extinguishes.
10. Check visually that the aft outflow valve has moved to the full open position.

NUMBER INSTALLED			NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD			REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
21-00-39	Trim Air Check Valves	N 2	1	C	(M) May be inoperative closed.

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-00-39	Trim Air Switch	Trim Air Check Valves INOP

(M) PROCEDURES

An inoperative trim air check valve is configured in the “closed” position by installing a blanking plate on the downstream side of the inoperative trim air check valve.

MANUFACTURE BLANKING PLATE AS FOLLOWS:

DIAMETER 3.10, THICKNESS 0.40

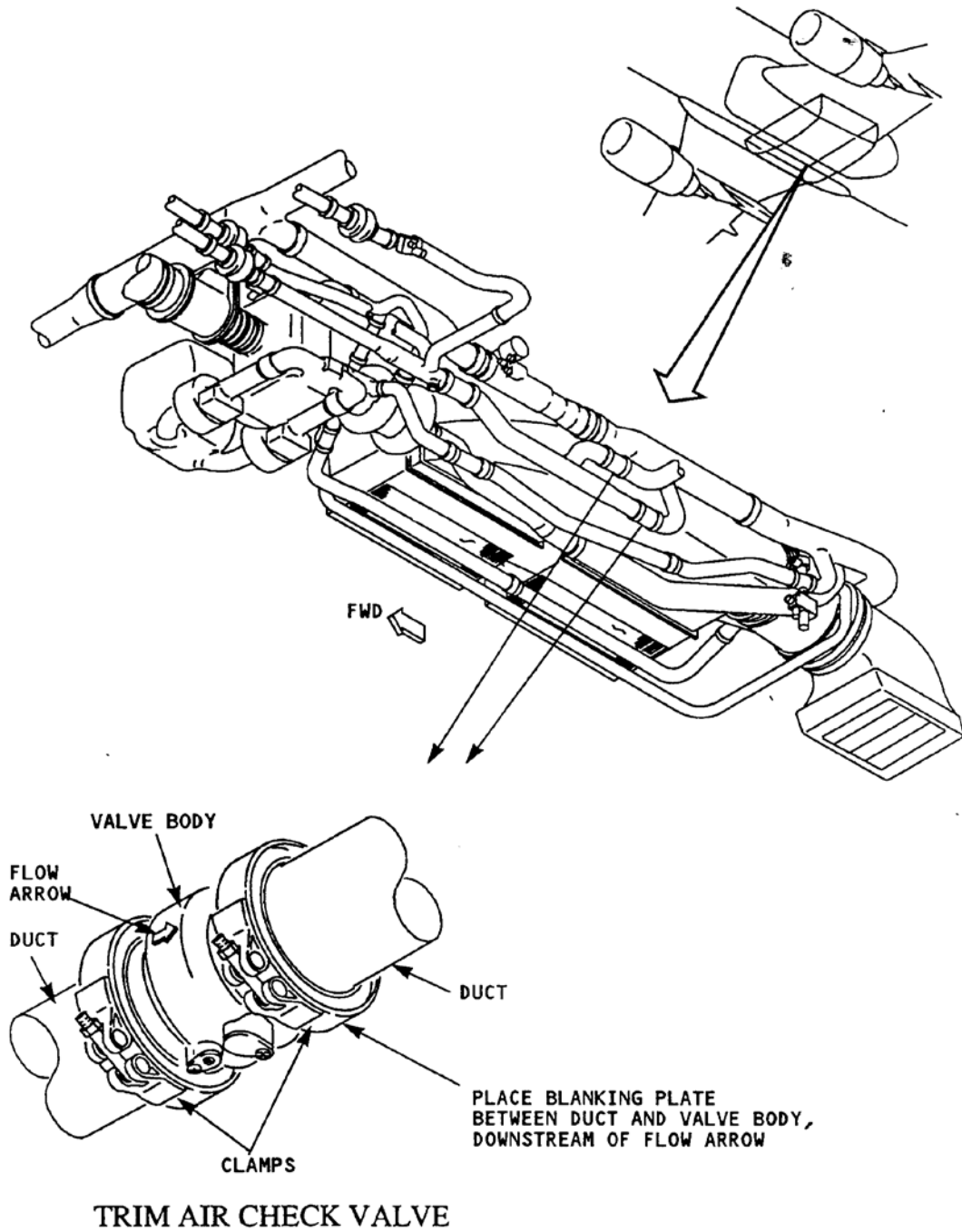
ALLOWABLE MATERIAL:

- Titanium 6al-4v per mil-t-9046 type 3 comp c
- Inconel 718 per ams 5596
- 301 cres per mil-s-5059 1/2, 3/4 or full hard

WARNING: REMOVE THE PRESSURE FROM THE PNEUMATIC SYSTEM. PRESSURE IN THE PNEUMATIC SYSTEM CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

- Remove pressure from the pneumatic system.
 - Place 1 BLEED, 2 BLEED and APU BLEED switches on the P5 –10 Air Conditioning Control Panel to OFF.
 - The two trim air check valves are both located in the right air conditioning equipment bay.
 - Remove clamp on forward side of the inoperative check valve and install blanking plate. Reinstall clamp, tighten clamp (45 inch-pounds).
- Perform Leakage check.
 - Supply pneumatic power.
 - Place the applicable PACK switch to AUTO and the TRIM AIR switch OFF.
 - Check valve flange for leakage, minor leakage is acceptable.
 - Close air conditioning door.
- Return aircraft to normal condition.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
21-00-40A	Equipment Cooling Automatic Flow Control Valve / Overboard Exhaust Valve (A/C 3701-3771) "DISP.APPR.REQ'D."	Y	1	0	C (O)(M) May be inoperative in the OPEN position provided: a) Flight is conducted in an unpressurized configuration, b) Outflow valve is positioned to the 25% open position, and c) Recirculation fan(s) operate normally.
21-00-40B	Equipment Cooling Automatic Flow Control Valve / Overboard Exhaust Valve (A/C 3601-3610, 3772, 3773) "DISP.APPR.REQ'D"	Y	1	0	C (O)(M) May be inoperative in the OPEN position provided: a) Flight is conducted in an unpressurized configuration, b) Lower forward cargo compartment remains empty, or is verified to contain only empty cargo handling equipment, ballast, and/or flyaway kits (see MEL Instructions), c) Outflow valve is positioned to the 25% open position, and c) Recirculation fan(s) operate normally.
21-00-40C	Equipment Cooling Automatic Flow Control Valve / Overboard Exhaust Valve (-900ER) "DISP.APPR.REQ'D."	N	1	0	C (O)(M) May be inoperative in OPEN position provided: a) Flight is conducted in an unpressurized configuration, b) Outflow valve is positioned to 25% open position, c) Recirculation fans operate normally, d) Forward cargo heat duct is secured closed, and e) Airport ambient temperature does not exceed 103 degrees F (39 degrees C).
21-00-40D	Equipment Cooling Automatic Flow Control Valve / Overboard Exhaust Valve	N	1	0	C (O)(M) Except for ER operations (ETOPS), may be inoperative provided: a) Actuator is verified to be in the smoke position, and b) Both packs operate normally.

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-00-40A	Equipment Cooling Switch Panel	Automatic Flow Control Valve / Overboard Exhaust Valve INOP OPEN
21-00-40B	Equipment Cooling Switch Panel	Automatic Flow Control Valve / Overboard Exhaust Valve INOP OPEN
21-00-40C	Equipment Cooling Switch Panel	Automatic Flow Control Valve / Overboard Exhaust Valve INOP OPEN
21-00-40D	Equipment Cooling Switch Panel	Automatic Flow Control Valve / Overboard Exhaust Valve INOP CLOSED

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(O) PROCEDURES

NOTE: Both air conditioning packs are required to maintain pressurization when the valve is failed with actuator in the smoke position. Descent may be required if an air conditioning pack fails enroute.

21-00-40A

Operate aircraft unpressurized. Refer to MEL 21-00-10B for (O) PROCEDURES.

21-00-40B

Operate aircraft unpressurized. Refer to MEL 21-00-10C for (O) PROCEDURES.

21-00-40C

Operate aircraft unpressurized. Refer to MEL 21-00-10D for (O) PROCEDURES.

21-00-40D

Refer to the Remarks or Exceptions Column.

(M) PROCEDURES

21-00-40A

Use MEL 21-00-10B (M) PROCEDURES to configure the airplane.

21-00-40B

Use MEL 21-00-10C (M) PROCEDURES to configure the airplane.

21-00-40C

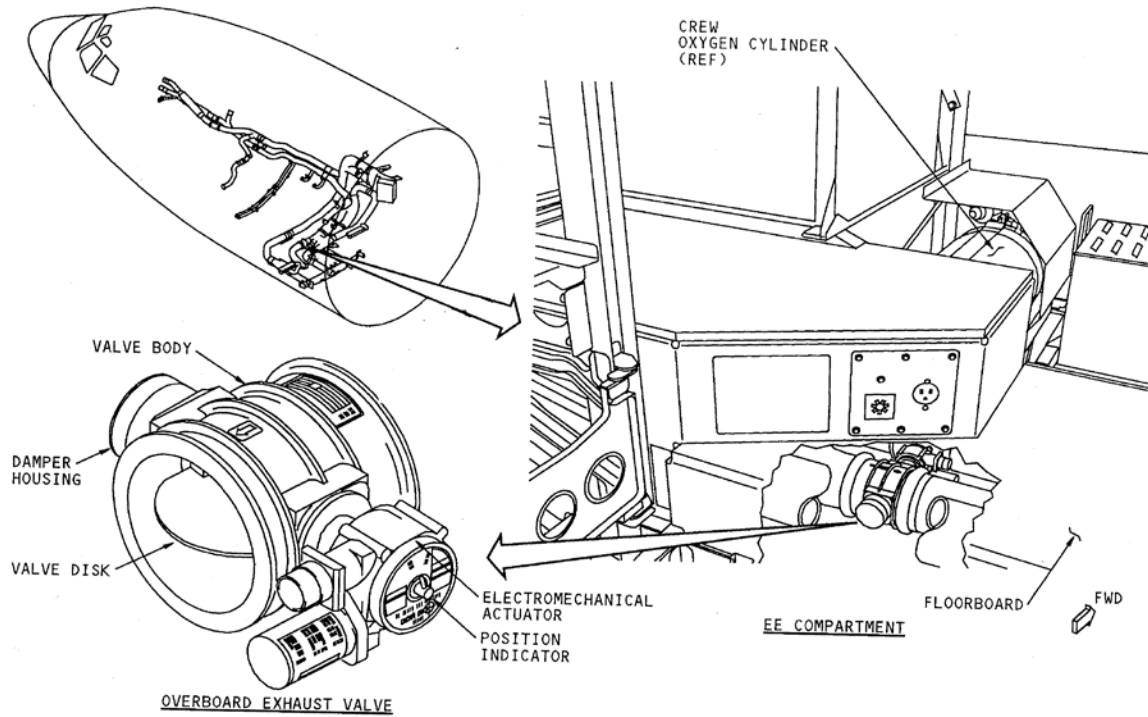
Use MEL 21-00-10D (M) PROCEDURES to configure the airplane.

21-00-40D

VALVE INOPERATIVE PARTIALLY OPEN.

1. Verify that the actuator is in the SMOKE (S) position. If valve has not failed in the SMOKE position, the following procedure can be attempted to position and deactivate the valve in the SMOKE position:
 - a. Put the airplane in the air mode using the BITE in the Proximity Switch Electronics Unit (PSEU) (AMM 32-09-00).
 - b. Position one of the air conditioning pack switches to HIGH.
 - c. Position the right recirculation fan switch to OFF.
 - d. After 10 seconds, pull and secure P6-4 Panel Air Conditioning Overboard Exhaust Valve Control circuit breaker.
 - e. Disconnect, cap and stow electrical connector D11880 on the overboard exhaust valve.
 - f. Verify valve is in the SMOKE position.
 - g. Close P6-4 Panel Air Conditioning Overboard Exhaust Valve Control circuit breaker.
 - h. Restore airplane to its required configuration.

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EQUIPMENT COOLING - OVERBOARD EXHAUST VALVE

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
21-00-41	Door Area Heater Systems (Fwd Entry / Overwing Emergency Exit Hatch / Aft Entry)	N	3	0	D (M) May be inoperative deactivated.

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-00-41	Logbook	_____ Area Heater System(s) INOP

(M) PROCEDURES

Deactivate the entry door area and overwing emergency exit hatch area heater systems:

1. To deactivate the inoperative forward entry door and overwing emergency exit hatch area heater systems, pull and secure the FWD DOOR AREA HEATER (C1280) circuit breaker on the P91 Power Distribution Panel.

NOTE: Opening circuit breaker C1280 deactivates both the forward entry door area heater and all overwing exit hatch heaters.

2. To deactivate the inoperative aft entry door area heater system, pull and secure the AFT DOOR AREA HEATER (C1279) circuit breaker on the P91 Power Distribution Panel.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH			
FLIGHT CREW MAY PLACARD			N	2	REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION	REMARKS OR EXCEPTIONS					
21-00-42	Equipment Cooling Low Flow Detector Systems	(O)(M) May be inoperative provided associated fans (supply or exhaust) are verified to operate normally.					

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-00-42	Associated Equipment Cooling Off Light	Equipment Cooling Low Flow Detector Systems INOP

(O) PROCEDURES

Refer to the Remarks or Exceptions column.

NOTE 1: Captain's displays are cooled by the supply fans.

NOTE 2: First Officer's displays are cooled by the exhaust fans.

(M) PROCEDURES

1. Verify that a fan in the affected cooling system is operating normally as follows:
 - a. For an exhaust system low flow detector failure, verify the exhaust fans are operating by feeling for air exiting the Overboard Exhaust vent at the bottom of the airplane near the centerline. Select the other exhaust fan and repeat.
 - b. For a supply system low flow detector failure, verify the supply fans are operating by feeling the selected fan motor for vibration. Select the other supply fan and repeat.
2. Verify that the components in the unaffected cooling system operate normally as follows:
 - a. Open circuit breaker EQUIP COOLING SUPPLY (EXHAUST) FAN CONTROL NORMAL on the P6-4 Panel.
 - b. Verify that the EQUIP COOLING SUPPLY (EXHAUST) OFF light illuminates.
 - c. Position the EQUIP COOLING SUPPLY (EXHAUST) switch to ALTERNATE.
 - d. Verify that the EQUIP COOLING SUPPLY (EXHAUST) OFF light extinguishes.
 - e. Open circuit breaker EQUIP COOLING SUPPLY (EXHAUST) FAN CONTROL ALTN on the P6-4 Panel.
 - f. Verify that the EQUIP COOLING SUPPLY (EXHAUST) OFF light illuminates.
 - g. Close the EQUIP COOLING SUPPLY (EXHAUST) FAN CONTROL NORMAL and EQUIP COOLING SUPPLY (EXHAUST) FAN CONTROL ALTN circuit breakers on the P6-4 Panel.
 - h. Verify that the EQUIP COOLING SUPPLY (EXHAUST) OFF light extinguishes.
 - i. Position the EQUIP COOLING SUPPLY (EXHAUST) switch to NORMAL.
3. To prevent the equipment cooling ground crew call horn from sounding on the ground with a low flow detector system inoperative, the associated Equipment Cooling Low Flow Detect Exhaust/Supply circuit breaker on the P18-3 panel may be opened and collared. Also refer to MEL Item 34-00-35C when dispatching in this configuration.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH			
FLIGHT CREW MAY PLACARD					REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION						REMARKS OR EXCEPTIONS
21-00-43	Equipment Cooling Air Filter	N	1	0	C	(M) Equipment Cooling System may be operated with filter removed.	

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-00-43	Equipment Cooling Switch	Equipment Cooling Air Filter Removed

(M) PROCEDURES

1. Remove electrical power from the airplane.
2. Remove the forward right bulkhead liner.
3. Remove the equipment cooling air filter.
4. Re-install forward right bulkhead liner and apply electrical power as necessary.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS
21-00-44A	Fan Bypass Check Valves "DISP.APPR.REQ'D."	Y	2	0	C	May be inoperative open/missing provided airport ambient temperature remains below 80 degrees F (27 degrees C).
21-00-44B	Fan Bypass Check Valves	Y	2	0	C	May be inoperative open/missing for an associated inoperative pack.
21-00-44C	Fan Bypass Check Valves	Y	2	1	D	May be inoperative open/missing provided pack associated with remaining fan bypass check valve operates normally.

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-00-44A	Associated Pack Switch	Fan Bypass Check Valves INOP
21-00-44B	Associated Pack Switch	Fan Bypass Check Valves INOP
21-00-44C	Associated Pack Switch	Fan Bypass Check Valves INOP

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
21-00-49	Return Air Grille	N	-	-	C (M) One may be broken or missing provided: a) Broken or missing grille is located within a designated area, and b) Grille is removed and replaced with a blanking plate.

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-00-49	Logbook	_____ Return Air Grille Broken / Missing

(M) PROCEDURES

1. For -700 and -800 aircraft, the designated location within which a return air grille may be broken or missing is station 887-907.
2. For -900ER aircraft, the designated location within which a return air grille may be broken or missing is station 727G-727K and station 887-907.

NOTE 1: For a damaged return air grille not located in the designated location, it is acceptable to replace the damaged return air grille with one in the allowed location if the two return air grill assemblies are the same part number.

NOTE 2: Grille must be replaced by a panel that completely blocks the area.

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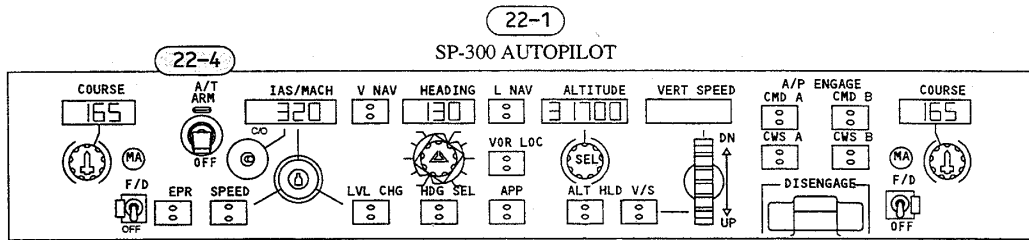
NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH			
FLIGHT CREW MAY PLACARD			2	0	REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION	Y			C	REMARKS OR EXCEPTIONS	
21-00-50	Flight Deck Foot Air Diffusers					May be inoperative provided flight deck temperature is acceptable to flight crew.	

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-00-50	Logbook	Flight Deck Foot Air Diffuser(s) INOP

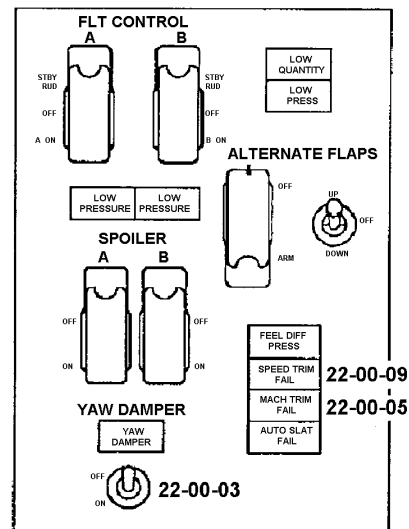
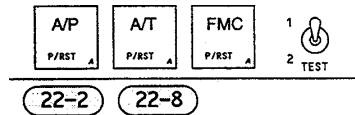
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FLIGHT CONTROLS



NUMBER INSTALLED			NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD			REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION			REMARKS OR EXCEPTIONS
22-00-00L	LLM Category II/III Status (Lower Landing Minimums) "DISP.APPR.REQ'D." Administrative Control Item	N	-	(M) Aircraft restricted from autopilot coupled Autoland due to chronic problem or no Autoland in 30 days. a) This Item number is only used for deferring the Autoland status of the aircraft and MCC authorization is required prior to its usage or removal. b) Practice Autolands are permitted if authorized by MCC. c) This item does not prohibit CAT II/III approaches using HUD.

MEL ITEM	TAB LOCATION	PLACARD TEXT
22-00-00L	Adjacent to each PFD	Autoland Not Authorized

(M) PROCEDURES

1. Create a new log page in the aircraft logbook using the appropriate MEL Item Number (contact MCC for instructions).
2. The deferral code LLM must also be entered on the log page and the placard when deferring this item.
3. MCC authorization is required prior to its usage or removal.

NUMBER INSTALLED			NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD			REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
AUTO FLIGHT SYSTEMS					
22-00-01A	Autopilot Systems "DISP.APPR.REQ'D."	Y	2	1	C May be inoperative provided: a) Approach minimums do not require its use, and b) RNAV operations do not require their use; refer to Navigation Equipment Tab (this manual) for RNAV Minimum Requirements . NOTE: Any mode which functions normally may be used. <u>HUD not used for approach</u> CAT II/III – Not Authorized NOTE: If operable, both the autopilot and Flight Director will be utilized for all ILS approaches when reported weather is below 4000 RVR or $\frac{3}{4}$ mile.
22-00-01B	Autopilot Systems "DISP.APPR.REQ'D."	Y	2	0	B Except for ER operations (ETOPS), may be inoperative provided: a) Approach minimums do not require their use; b) Enroute operations do not require autopilot use, c) Number of flight segments and segment duration is acceptable to flight crew, and d) RNAV operations do not require their use; refer to Navigation Equipment Tab (this manual) for RNAV Minimum Requirements . NOTE 1: Any mode which functions normally may be used. If CWS is inoperative, do not use other modes (pitch or roll) NOTE 2: Autopilot required for Non-ILS approaches. <u>RVSM Operations</u> Not Authorized <u>HUD used for approach</u> CAT I ILS, CAT II,III – Requires: 34-00-12 Flight Director Systems (1 minimum). Flight Director, displayed on F/O PFD, required for cross check. <u>HUD not used for approach</u> CAT II/III – Not Authorized Theater restrictions may Apply

CONTINUED NEXT PAGE

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS	
AUTO FLIGHT SYSTEMS						
22-00-01C	Autoland "DISP.APPR.REQ'D."	Y	1	0	C	May be inoperative provided approach minimums do not require its use. <u>HUD used for approach</u> CAT I ILS/CAT II/III – Requires: Flight Director, displayed on F/O's PFD, for cross check. <u>HUD not used for approach</u> CAT II/III – Not Authorized
22-00-01D	Control Wheel Autopilot Disconnect Switches "DISP.APPR.REQ'D."	Y	2	1	C	One may be inoperative provided: a) Autopilot is not used below 1500 feet AGL, and b) Approach minimums do not require use of autopilot. <u>HUD used for approach</u> Requires Flight Director, displayed on F/O's PFD, for cross check. <u>HUD not used for approach</u> CAT II/III – Not Authorized CAT I ILS – Requires: One Flight Director operating normally. Autopilot required for Non-ILS approaches.
22-00-01E	Control Wheel Autopilot Disconnect Switches "DISP.APPR.REQ'D."	Y	2	0	B	May be inoperative provided: a) Autopilot is not used, and b) Approach minimums do not require use of autopilot. <u>HUD used for approach</u> Flight Director, displayed on F/O's PFD, required for cross check. <u>HUD not used for approach</u> CAT I/II/III – Not Authorized Autopilot required for Non-ILS approaches.
22-00-01F	Autopilot Disengage Bar	Y	1	0	C	

CONTINUED NEXT PAGE

MEL ITEM	TAB LOCATION	PLACARD TEXT
22-00-01A	AFCS Mode Control Panel	____ Autopilot System INOP
22-00-01B	AFCS Mode Control Panel	____ Autopilot System(s) INOP
22-00-01C	AFCS Mode Control Panel	Autoland INOP
22-00-01D	AFCS Mode Control Panel	____ Control Wheel A/P Disengage Switch INOP
22-00-01E	AFCS Mode Control Panel	1. Both Control Wheel A/P Disengage Switches INOP 2. Do NOT use the Autopilot
22-00-01F	Autopilot Disengage Bar	Autopilot Disengage Bar INOP

NOTE 1: Failures in one or both FCC's could affect these systems: Mach Trim (MEL Item 22-00-05), Speed Trim (MEL Item 22-00-10), Flight Director (MEL Item 34-00-12) and Altitude Alerting (MEL item 34-25).

NOTE 2: One FCC must operate normally for the Speed Trim System (MEL Item 22-00-10) to function.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS	
	AUTOPILOT DISENGAGED WARNING SYSTEM					
22-00-02A	Lights	Y	2	1	C	May be inoperative and autopilot may be used in any axis.
22-00-02B	Lights "DISP.APPR.REQ'D."	Y	2	0	B	Except for ER operations (ETOPS), may be inoperative provided: a) Autopilots are not used, and b) Approach minimums do not require their use; <u>HUD not used for approach</u> CAT I Non-ILS/II/III - Not Authorized Autopilot required for Non-ILS approaches. CAT I ILS – Requires: At least one Flight Director operating normally.
22-00-02C	Aural Warning (Wailer) "DISP.APPR.REQ'D."	Y	1	0	C	May be inoperative provided: a) Approach minimums do not require use of Autopilot, and b) Approach minimums do not require its use; <u>HUD not used for approach</u> CAT I Non-ILS/II/III – Not Authorized Autopilot required for Non-ILS approaches. CAT I ILS – Requires: At least one Flight Director operating normally.

MEL ITEM	TAB LOCATION	PLACARD TEXT
22-00-02A	Autopilot Disengaged Warning Light	___ A/P Disengaged Warning Light INOP
22-00-02B	Autopilot Disengaged Warning Lights	1. ___ A/P Disengaged Warning Light(s) INOP 2. Do NOT Use Autopilots
22-00-02C	Autopilot Disengaged Warning Lights	Autopilot Disengaged Aural Warning INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
22-00-03A	Yaw Damper "DISP.APPR.REQ'D."	Y	1	0	C (O) May be inoperative provided yaw damper switch remains OFF.
22-00-03B	Yaw Damper Indicator	Y	1	0	C

MEL ITEM	TAB LOCATION	PLACARD TEXT
22-00-03A	Yaw Damper Switch	Yaw Damper INOP
22-00-03B	Yaw Damper Indicator	Yaw Damper Indicator INOP

(O) PROCEDURES

22-00-03A

- Do not exceed flaps 30 during landing if crosswinds exceed 30 knots.
- Avoid areas of predicted moderate or severe turbulence. If turbulence is encountered and passenger comfort becomes affected, reduce airspeed and/or descend to a lower altitude. For passenger comfort considerations only, if field length permits, it is recommended that flap 40 not be used for landing.
- Limit altitude to FL290.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD			REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
22-00-04	Autothrottle System "DISP.APPR.REQ'D."	Y	1	0	C May be inoperative provided: a) Approach minimums do not require its use, and b) RNAV operations do not require their use; refer to Navigation Equipment Tab (this manual) for RNAV Minimum Requirements . <u>HUD used for approach</u> Autoland - Not Authorized CAT II/III - Authorized <u>HUD not used for approach</u> Autoland – Not Authorized

MEL ITEM	TAB LOCATION	PLACARD TEXT
22-00-04	Autothrottle Arm Switch	Autothrottle System INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
22-00-05A	Mach Trim System "DISP.APPR.REQ'D."	N	2	0	C (O)(M) May be inoperative provided: a) Speed is limited to 280 KIAS/.82M, and b) Mach trim actuator is verified to be in null / uncommanded elevator position.
22-00-05B	Mach Trim System	N	2	1	C (O)(M) One may be inoperative deactivated provided: a) Remaining Mach trim system is verified to operate normally, b) Mach trim fail light operates normally, and c) Autoland is deferred per MEL 22-00-01C .

MEL ITEM	TAB LOCATION	PLACARD TEXT
22-00-05A	Mach Trim Fail Light	Both Mach Trim Systems INOP
22-00-05B	Mach Trim Fail Light	____ Mach Trim System INOP

(O) PROCEDURES

22-00-05A

Refer to the Remarks or Exceptions column.

22-00-05B

With one mach trim system deactivated, NO AUTOLAND will be annunciated.

(M) PROCEDURES

22-00-05A

NOTE 1: A mach trim actuator and mach trim system are required to position the elevator trailing edge if it is out of alignment. An actuator or accessory box that does not operate must be replaced.

NOTE 2: Dispatch with both Mach Trim Systems inoperative is not allowed if the elevator trailing edge is not aligned with the index mark on the fuselage.

1. Apply electrical power to the aircraft.
2. Apply hydraulic power to the flight controls.
3. Position flaps to UP.
4. Position stabilizer to 4 units of trim.
5. Jiggle the control column in order to place the elevators in the detent position.
6. Visually check that the elevator trailing edge is aligned within 0.06 inches of the index mark on the fuselage.
7. Pull and secure the following AUTO FLIGHT CONTROL circuit breakers on the P6-2 / P18-1 Panels:
 - a. MACH TRIM AC
 - b. MACH TRIM DC
8. Restore electrical and hydraulic power as required.

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22-00-05B

1. Deactivate the inoperative mach trim system and verify the remaining mach trim system is operating normally.
 - a. Pull and Secure the associated MACH TRIM AC and MACH TRIM DC circuit breakers on the P18-1 panel (channel A) or P6-2 panel (channel B), as appropriate.
 - b. Perform the DFCS BITE library test No. 33, Mach Trim, for the remaining system (channel A or channel B), and verify that the test passes.
2. Defer Autoland inoperative per [MEL 22-00-01C](#).

NUMBER INSTALLED			NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD			REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION			REMARKS OR EXCEPTIONS
22-00-06	Flight and Approach Mode Annunciations "DISP.APPR.REQ'D."	Y	- 0	C Individual mode annunciation may be inoperative provided: a) Associated system modes are not used, b) Approach minimums do not require their use, and c) RNAV operations do not require their use; refer to Navigation Equipment Tab (this manual) for RNAV Minimum Requirements . <u>HUD used for approach</u> CAT II/III – Not Authorized CAT I ILS - Requires one operative Flight Mode Annunciator <u>HUD not used for approach</u> CAT II/III – Not Authorized CAT I ILS/CAT I Non-ILS - Requires one operative Flight Mode Annunciator

MEL ITEM	TAB LOCATION	PLACARD TEXT
22-00-06	Affected Flight Mode Annunciation Panel(s)	____ Flight Mode Annunciator(s) INOP

OPERATIONS NOTE

NOTE: Individual modes may not be used when associated annunciator is inoperative.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
22-00-08A	Autothrottle Disengage Lights "DISP.APPR.REQ'D."	Y	2	1	C May be inoperative when autothrottle is used provided RNAV operations do not require their use; refer to Navigation Equipment Tab (this manual) for RNAV Minimum Requirements .
22-00-08B	Autothrottle Disengage Lights "DISP.APPR.REQ'D."	Y	2	0	C May be inoperative provided: a) Autothrottle is not used, b) Approach minimums do not require their use, and c) RNAV operations do not require their use; refer to Navigation Equipment Tab (this manual) for RNAV Minimum Requirements . <u>HUD not used for approach</u> CAT II/III – Not Authorized

MEL ITEM	TAB LOCATION	PLACARD TEXT
22-00-08A	Affected Autothrottle Disengage Light	____ Autothrottle Disengage Light INOP
22-00-08B	Both Autothrottle Disengage Lights	1. ____ Autothrottle Disengage Light(s) INOP 2. Do NOT Use Autothrottle

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH			
FLIGHT CREW MAY PLACARD			1	0	REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION	N			C	REMARKS OR EXCEPTIONS	
22-00-09	Speed Trim Fail Light System					(M) May be inoperative provided speed trim system is verified to operate normally.	

MEL ITEM	TAB LOCATION	PLACARD TEXT
22-00-09	SPEED TRIM FAIL Light	SPEED TRIM FAIL Light INOP

(M) PROCEDURES

Verify that both speed trim systems operate normally as follows:

1. Using the FMS CDU INIT/REF INDEX screen make these selections:
 - a. MAINT
 - b. DFCS
 - c. FAULT REVIEW
 - d. CURRENT STATUS
 - e. Do steps as required on the CDU screen.
 - f. CONTINUE
2. If the CURRENT STATUS test fails, correct the fault shown on the CDU.
3. If the CURRENT STATUS test passes, continue.
4. Make these selections on the CDU:
 - a. CHANNEL A AND B
 - b. SPEED TRIM SYSTEM
 - c. Do the steps as required on the CDU screen.
 - d. CONTINUE
5. Make sure the speed trim fail light fails the test.
6. Make sure the other speed and stab trim tests pass.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
22-00-10	Speed Trim System "DISP.APPR.REQ'D."	N	2	1	C (M) One may be inoperative deactivated provided: a) Remaining speed trim system is verified to operate normally, and b) Speed trim fail light operates normally.

MEL ITEM	TAB LOCATION	PLACARD TEXT
22-00-10	SPEED TRIM FAIL Light	____ Speed Trim System INOP

(M) PROCEDURES

Deactivate the inoperative speed trim system and verify the remaining speed trim system is operating normally.

1. Pull and secure the associated FCC DC circuit breaker on the P18-1 panel (channel A) or P6-2 panel (channel B), as appropriate

NOTE 1: The associated Flight Control Computer (FCC) will be deactivated. Defer per [MEL 22-00-01](#).

NOTE 2: Flight Director Takeoff and Go-around are not available when either FCC circuit breaker is pulled open.

NOTE 3: A deactivated FCC will generate a dispatchable PSEU fault. Defer per [MEL 32-00-17](#).

NOTE 4: Possible loss of FD input to HGS outside of AIII operation.

2. Perform the DFCS BITE Group Number 14 Speed/Stab Trim Tests for the remaining system (channel A or channel B), and verify that the tests pass.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD			REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
22-00-11	STAB OUT OF TRIM Light "DISP.APPR.REQ'D."	Y	1	0	B (O) Except for ER operations (ETOPS), may be inoperative provided: a) Autopilots are not used, and b) Approach minimums do not require its use. <u>RVSM Operations</u> Not Authorized <u>HUD not used for approach</u> CAT II/III – Not Authorized CAT I ILS – Requires one Flight Director operating normally

MEL ITEM	TAB LOCATION	PLACARD TEXT
22-00-11	STAB OUT OF TRIM Light	1. Stab Out of Trim Light INOP 2. Do NOT Use Autopilot

(O) PROCEDURES

Refer to the Remarks or Exceptions column.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS
	MODE CONTROL PANEL SELECTORS					
22-00-14A	V/S Selector (DOWN, UP)	Y	1	0	C	May be inoperative provided procedures do not require its use. <u>Non-Precision Approaches (V/S method)</u> NOT Authorized
22-00-14B	Bank Angle Selector (10, 15, 20, 25, 30)	Y	1	0	C	

MEL ITEM	TAB LOCATION	PLACARD TEXT
22-00-14A	AFCS MCP Vertical Speed Selector	Vertical Speed Selector INOP
22-00-14B	AFCS MCP Bank Angle Selector	Bank Angle Selector INOP



NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS
	MODE CONTROL PANEL SWITCHES / PADDLES					
22-00-15A	A/P CWS Engage Switches "DISP.APPR.REQ'D."	Y	2	0	C	
22-00-15B	A/P CMD Engage Switches "DISP.APPR.REQ'D."	Y	2	1	C	May be inoperative provided approach minimums do not require its use, <u>HUD not used for approach</u> CAT II/III – Not Authorized CAT I ILS – Requires one Flight Director operating normally
22-00-15C	A/P CMD Engage Switches "DISP.APPR.REQ'D."	Y	2	0	B	(O) Except for ER operations (ETOPS), may be inoperative provided: a) Autopilots are not used, and b) Approach minimums do not require their use, <u>RVSM Operations</u> Not Authorized <u>HUD not used for approach</u> CAT II/III – Not Authorized CAT I ILS - Requires one Flight Director operating normally CAT I Non-ILS – Not Authorized NOTE: Autopilot required for Non-ILS approaches
22-00-15D	Autothrottle Arm Switch "DISP.APPR.REQ'D."	Y	1	0	C	May be inoperative provided approach minimums do not require autothrottle use, <u>HUD not used for approach</u> CAT II/III – Not Authorized
22-00-15E	A/T SPEED Switch "DISP.APPR.REQ'D."	Y	1	0	C	May be inoperative provided approach minimums do not require autothrottle use, <u>HUD not used for approach</u> CAT II/III – Not Authorized
22-00-15F	F/D Switches "DISP.APPR.REQ'D."	Y	2	0	C	May be inoperative provided: a) Approach minimums do not require their use, and b) RNAV operations do not require their use; refer to Navigation Equipment Tab (this manual) for RNAV Minimum Requirements . <u>HUD used for approach</u> CAT II/III, CAT I ILS – One required. NOTE: Flight Director, displayed on F/O's PFD, required for cross check. <u>HUD not used for approach</u> CAT II/III – Not Authorized CAT I ILS – One required

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
MODE CONTROL PANEL SWITCHES / PADDLES (Continued)					
22-00-15G	IAS/MACH Change Over Switch	Y	1	0	C
22-00-15H	APP Switch "DISP.APPR.REQ'D."	Y	1	0	C
May be inoperative provided approach minimums do not require use of autopilot or flight director; HUD not used for approach CAT II/III, – Not Authorized CAT I ILS/ CAT I Non-ILS – Not Authorized NOTE: Autopilot required for Non-ILS approaches.					
22-00-15I	N1, LNAV, VNAV, LVL CHG, V/S, HDG SEL, ALT HOLD, and VOR/LOC Switches "DISP.APPR.REQ'D."	Y	8	0	C
(O) May be inoperative provided: a) Enroute operations do not require their use, and b) RNAV operations do not require their use; refer to Navigation Equipment Tab (this manual) for RNAV Minimum Requirements. Non-Precision Approaches (VNAV method) NOT Authorized with VNAV Mode or Switch Inoperative RVSM Operations See (O) Procedure for this item.					
22-00-15J	SPD INTV, and ALT INTV Switches	Y	2	0	C

MEL ITEM	TAB LOCATION	PLACARD TEXT
22-00-15A	A/P Engage Switch	___ A/P CWS Engage Switch(es) INOP
22-00-15B	A/P Engage Switch	___ A/P CMD Engage Switches INOP
22-00-15C	A/P Engage Switch	1. ___ A/P CMD Engage Switch(es) INOP 2. Do NOT Use Autopilot
22-00-15D	Autothrottle Arm Switch	Autothrottle Arm Switch INOP
22-00-15E	A/T SPEED Switch	A/T SPEED Switch INOP
22-00-15F	Affected F/D Switch	___ F/D Switch(es) INOP
22-00-15G	IAS/MACH Change Over Switch	IAS/MACH Change Over Switch INOP
22-00-15H	APP Switch	APP Switch INOP
22-00-15I	Affected AFCS MCP Switch	___ Mode Switch INOP
22-00-15J	Affected AFCS MCP Switch	___ Mode Switch INOP

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(O) PROCEDURES

22-00-15C

Refer to the Remarks or Exceptions column.

22-00-15I

For RVSM operations requiring altitude hold capability, either ALT HOLD, V/S, or VNAV may be used.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS
MODE CONTROL PANEL WINDOWS						
22-00-16A	Airspeed (IAS / MACH)	Y	1	0	C	May be inoperative provided selected airspeed indications on both PFD's operate normally.
22-00-16B	Heading (HEADING)	Y	1	0	C	May be inoperative provided selected heading indications on both PFD's operate normally.
22-00-16C	Vertical Speed (VERT SPEED)	Y	1	0	C	May be inoperative provided procedures do not require its use.
22-00-16D	Vertical Speed (VERT SPEED)	Y	1	0	C	May be inoperative and associated selector used provided selected vertical speed indications on both PFD's operate normally.
22-00-16E	Altitude (ALTITUDE)	Y	1	0	C	May be inoperative provided selected altitude indications on both PFD's operate normally.
22-00-16F	Course (COURSE)	Y	2	0	C	May be inoperative and associated selector used provided selected course indications operate normally.
22-00-16G	Window Lighting	Y	1	0	B	May be inoperative provided: a) Selected airspeed indications operate normally, b) Selected heading indications operate normally, c) Selected vertical speed indications operate normally, d) Selected altitude indications operate normally, and e) Selected course indications operate normally.

MEL ITEM	TAB LOCATION	PLACARD TEXT
22-00-16A	MCP Airspeed Window	MCP Airspeed Window INOP
22-00-16B	MCP Heading Window	MCP Heading Window INOP
22-00-16C	MCP Vertical Speed Window	MCP Vertical Speed Window INOP
22-00-16D	MCP Vertical Speed Window	MCP Vertical Speed Window INOP
22-00-16E	MCP Altitude Window	MCP Altitude Window INOP
22-00-16F	MCP Course Window	MCP Course Window INOP
22-00-16G	Associated MCP Window	MCP Window Lighting INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
22-00-17A	Takeoff / Go-Around (TO/GA) Switches "DISP.APPR.REQ'D."	Y	2	1	C One may be inoperative provided approach minimums do not require its use. <u>HUD used for approach</u> CAT III – Captain's TO/GA must operate normally. CAT I ILS/ CAT II – One required. <u>HUD not used for approach</u> CAT III – Captain's TO/GA must operate normally. CAT I ILS/ CAT II – One required.
22-00-17B	Takeoff / Go-Around (TO/GA) Switches "DISP.APPR.REQ'D."	Y	2	0	C May be inoperative provided: a) Both thrust levers are operated manually for takeoff, b) Autopilot and Flight Director are not used below Minimum Descent Altitude or 500 feet, whichever is higher, c) Approach minimums do not require their use, and d) RNAV operations do not require their use; refer to Navigation Equipment Tab (this manual) for RNAV Minimum Requirements . <u>HUD used for approach</u> CAT I ILS, CAT II/III – Not Authorized <u>HUD not used for approach</u> CAT I ILS, CAT II/III – Not Authorized NOTE: Flight Director go-around and windshear guidance are not available with both TO / GA switches inoperative.

MEL ITEM	TAB LOCATION	PLACARD TEXT
22-00-17A	AFCS MCP	____ Takeoff / Go-Around (TO / GA) Switch INOP
22-00-17B	AFCS MCP	1. Takeoff / Go-Around (TO / GA) Switches INOP 2. See MEL Remarks or Exceptions for Autopilot and Flight Director restrictions.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS
	MODE CONTROL PANEL SWITCH LIGHTS					
22-00-18A	Autopilot CWS Engage Switch Lights	Y	2	0	C	
22-00-18B	Autopilot CMD Engage Switch Lights	Y	2	1	C	
22-00-18C	Autopilot CMD Engage Switch Lights “DISP.APPR.REQ'D”	Y	2	0	B	(O) Except for ER operations (ETOPS), may be inoperative provided autopilots are not used.
22-00-18D	A/T ARM Switch Light	Y	1	0	C	
22-00-18E	Mode Selector Switch Lights	Y	10	0	C	

MEL ITEM	TAB LOCATION	PLACARD TEXT
22-00-18A	Affected AFCS CWS Engage Switch Lights	AFCS CWS Engage Switch Light(s) INOP
22-00-18B	Affected AFCS CMD Engage Switch Light	AFCS CMD Engage Switch Light INOP
22-00-18C	Affected AFCS CMD Engage Switch Lights	AFCS CMD Engage Switch Lights INOP
22-00-18D	A/T ARM Switch Light	A/T ARM Switch Light INOP
22-00-18E	Affected MCP Mode Selector Switch	___ Mode Selector Switch Light INOP

(O) PROCEDURES

22-00-18C

Refer to MEL item 22-00-01 Remarks or Exceptions for inoperative autopilots.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION			REMARKS OR EXCEPTIONS	
22-00-19	Thrust Mode Display	Y	1	0	C May be inoperative provided thrust mode limits are observed.

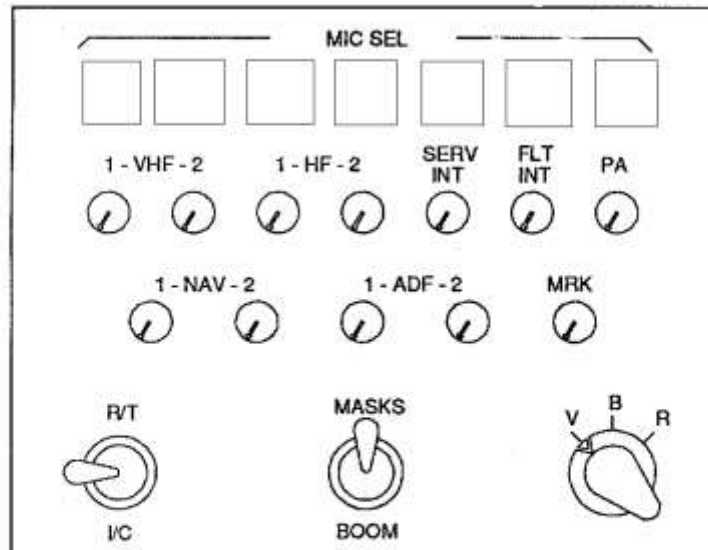
MEL ITEM	TAB LOCATION	PLACARD TEXT
22-00-19	Thrust Mode Display	Thrust Mode Display INOP

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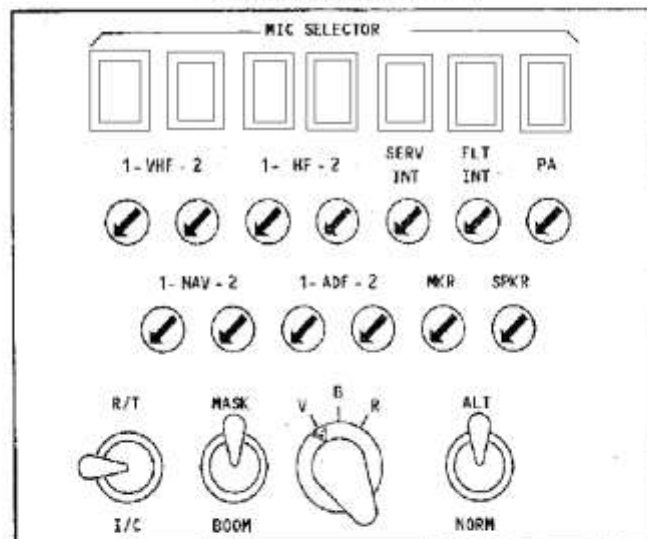
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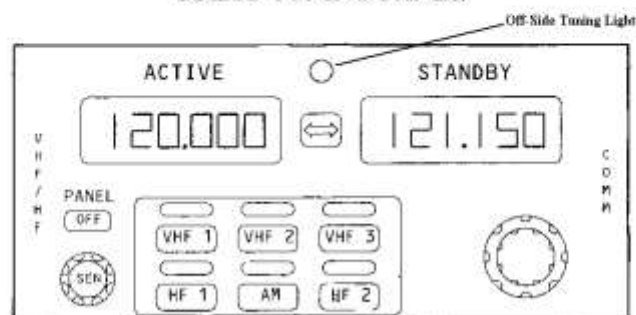
AUDIO SELECTOR PANEL



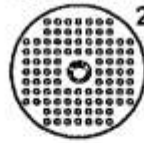
AUDIO SELECTOR PANEL



RADIO TUNING PANEL

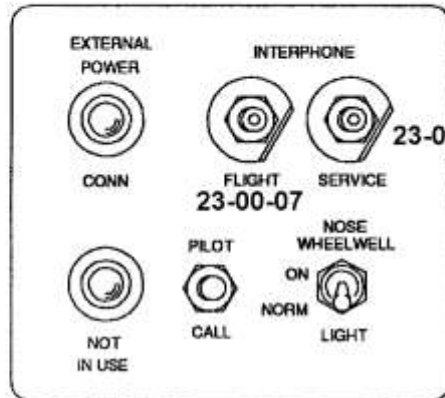


FLIGHT DECK
SPEAKER



23-00-01

EXTERNAL POWER RECEPTACLE



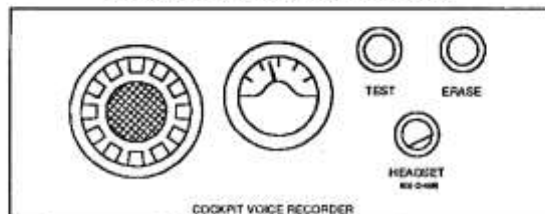
23-00-04

SERVICE INTERPHONE SWITCH



23-00-04

23-00-10
COCKPIT VOICE RECORDER



NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
23-00-01A	Flight Deck Speaker System	Y	1	0	B May be inoperative provided: a) Headset, earphones, or headphones associated with inoperative speaker(s) are installed and operate normally, b) TCAS audio is considered inoperative and deferred per MEL 34-00-40F , and c) TAWS (GPWS) advisory callouts are considered inoperative and deferred per MEL 34-00-26E . d) Altitude Alert Tone is considered inoperative and deferred per MEL 34-00-25B .
23-00-01B	Flight Deck Speaker System	Y	1	0	C (O)(M) May be inoperative provided: a) Procedures do not require its use, b) Headset earphones or headphones associated with inoperative speaker(s) are installed and operate normally, and c) Aural Alert voices, TCAS, TAWS (GPWS), Altitude Alert, are verified to operate normally.

MEL ITEM	TAB LOCATION	PLACARD TEXT
23-00-01A	Associated Audio Control Panel	____ Flight Deck Speaker INOP
23-00-01B	Associated Audio Control Panel	____ Flight Deck Speaker INOP

(O) PROCEDURES

23-00-01B

Verify TCAS and GPWS aural alerts operate normally.

1. Perform TCAS Supplementary Procedure (Reference Vol 1, Supplementary Procedures, Section 15).
Confirm aural annunciation at the completion of the test is heard.
2. Perform GPWS Supplementary Procedure (Reference Vol 1, Supplementary Procedures, Section 15).
Confirm GPWS Aural alerts are heard.

(M) PROCEDURES

23-00-01B

Verify Altitude Aural Alert operates normally.

1. Perform Altitude Alert test under the CURRENT STATUS item on the DFCS BITE TEST FAULT REVIEW menu from the Control Display unit (CDU).

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
23-00-02A	Passenger Address System	Y	1	0	B (O) May be inoperative provided: a) Alternate, normal and emergency procedures and/or operating restrictions are used, and b) Flight attendant alerting system (audio and visual) operates normally. NOTE: Any station that operates normally may be used.
23-00-02B	Lavatory Speakers	Y	2	0	C (O) May be inoperative provided alternate procedures are used.
23-00-02C	Cabin Speakers	Y	-	-	C May be inoperative provided speakers are not adjacent to each other.

MEL ITEM	TAB LOCATION	PLACARD TEXT
23-00-02A	Captain's Audio Control Panel	Passenger Address System INOP
23-00-02B	Captain's Audio Control Panel	____ Lavatory Speaker INOP
23-00-02C	Captain's Audio Control Panel	____ Cabin Speaker INOP

(O) PROCEDURES

23-00-02A

1. Refer to FOM, Passenger Handling (Chapter 7), Inoperative PA.
2. Refer to QRH, Non-Normal Checklist, Section 5 (Communications), PA System Inoperative.
3. Refer to In-flight Service Onboard Manual, Aircraft Equipment/Systems (Chapter 6), System Malfunctions, Inoperative P.A. System.

23-00-02B

1. Prior to departure, the pilot in command will notify flight attendants of inoperative lavatory speaker(s).
2. Flight attendants must give instructions to lavatory occupants verbally when lavatory speakers are inoperative.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
23-00-03A	VHF Communication Systems "DISP.APPR.REQ'D."	Y	3	2	C LEFT (No. 1) must operate normally. NOTE 1: Refer to Delta Airway Manual, Ch. CM, Theater Guidance for communication requirements. NOTE 2: Dual VHF Communication Required For ILS PRM Operations. NOTE 3: ACARS will be inoperative and must be deferred per MEL item 23-00-09A if CENTER (No.3) VHF is inoperative.
23-00-03B	Radio Tuning Panels (RTP)	Y	3	2	C One may be inoperative provided left radio tuning panel operates normally.
23-00-03C	Off-Side Tuning Light	Y	3	0	C

MEL ITEM	TAB LOCATION	PLACARD TEXT
23-00-03A	Associated Radio Tuning Panel	____ VHF Communication Systems INOP
23-00-03B	Affected Radio Tuning Panel	____ Radio Tuning Panels INOP
23-00-03C	Affected Radio Tuning Panel	____ Radio Tuning Panel Off-Side Tuning Light INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
CREWMEMBER INTERPHONE SYSTEM					
23-00-04A	Flight Deck to Cabin, Cabin to Flight Deck Functions	Y	-	-	B (O) May be inoperative provided: a) Flight deck to cabin and cabin to flight deck interphone functions operate normally on forward cabin handset, and b) Alternate communications procedures between the affected Flight Attendants stations are used. NOTE: Any station functions that operate normally may be used.
23-00-04B	Cabin to Cabin Function	Y	2	0	B (O) May be inoperative provided alternate communication procedures between affected flight attendant stations are used. NOTE: Any station functions that operate normally may be used.
23-00-04C	Flight Deck to Ground Function (Includes CALL functions)	Y	1	0	C (O) Flight interphone flight deck to ground / ground to flight deck function may be inoperative provided: a) Alternate procedures are used, and b) Nose gear service interphone jack operates normally.
23-00-04D	Flight Deck to Ground Function (Includes CALL functions)	Y	1	0	C (O) Service interphone flight deck to ground / ground to flight deck function may be inoperative provided: a) Alternate procedures are used, and b) Nose gear flight interphone jack operates normally.
23-00-04E	Flight Deck to Ground Function (Includes CALL functions)	Y	2	0	B (O) May be inoperative provided alternate procedures are used.

CONTINUED NEXT PAGE

MEL ITEM	TAB LOCATION	PLACARD TEXT
23-00-04A	Captain's Audio Control Panel	Flight Deck to Cabin, Cabin to Flight Deck Functions INOP
23-00-04B	Captain's Audio Control Panel	Cabin to Cabin Function INOP
23-00-04C	Captain's Audio Control Panel	Flight Deck to Ground Function INOP
23-00-04D	Captain's Audio Control Panel	Flight Deck to Ground Function INOP
23-00-04E	Captain's Audio Control Panel	Flight Deck to Ground Function INOP

(O) PROCEDURES

23-00-04A

Refer to QRH, Non-Normal Checklist, Section 5 (Communications), Cabin Interphone System Inoperative.

23-00-04B

Refer to In-flight Service On Board Manual, Aircraft Equipment / Systems, Inoperative Interphone System.

23-00-04C, 23-00-04D, 23-00-04E

1. Use operative flight or service interphone flight deck-to-ground function for communication with ground personnel.
2. If flight and service interphone flight deck-to-ground functions are inoperative, refer to FOM, Ramp Operations (Chapter 6), Communication.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
23-00-06A	Selective Call System (SELCAL) "DISP.APPR.REQ'D."	Y	1	0	C (O) May be inoperative provided alternate procedures are established and used.
23-00-06B	SELCAL Channels "DISP.APPR.REQ'D."	Y	-	0	C (O) May be inoperative provided alternate procedures are established and used.

MEL ITEM	TAB LOCATION	PLACARD TEXT
23-00-06A	SELCAL Panel	SELCAL System INOP
23-00-06B	SELCAL Panel	SELCAL Channel(s) ____ INOP

(O) PROCEDURES

23-00-06A, 23-00-06B

May be inoperative provided appropriate Company radio frequency or ACARS is monitored in flight.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
23-00-09A	ACARS System "DISP.APPR.REQ'D."	Y	1	0	C (O) May be inoperative provided alternate procedures are established and used. NOTE 1: Refer to Delta Airway Manual, Section 5, Communications, for requirements. NOTE 2: Any portion of system that operates normally may be used.
23-00-09B	ACARS Automatic Engine Data Reporting System "DISP.APPR.REQ'D."	Y	1	0	C (O) May be inoperative provided engine trend data is manually entered onto Engine Trend Data sheets at RON and/or Mtc. Station ONCE EACH FLIGHT DAY. Repetitive Check Required (Yellow Placard) NOTE: Refer to Delta Airway Manual, Section 5, Communications, for requirements.
23-00-09C	ACARS Printer	Y	1	0	C
23-00-09D	FMC Interface Function	Y	-	0	C (O) May be inoperative provided alternate procedures are established and used. NOTE: Any portion of system that operates normally may be used.
23-00-09E	FMC Interface Function	Y	1	0	C May be inoperative provided procedures do not require its use. NOTE: Any portion of system that operates normally may be used.

MEL ITEM	TAB LOCATION	PLACARD TEXT
23-00-09A	ACARS Display Unit	ACARS INOP
23-00-09B	ACARS Display Unit	ACARS Automatic Engine Data Reporting System INOP
23-00-09C	ACARS Printer	ACARS Printer INOP
23-00-09D	ACARS Display Unit	FMC Interface Function INOP
23-00-09E	ACARS Display Unit	FMC Interface Function INOP

(O) PROCEDURES

23-00-09A, 23-00-09D

Refer to QRH, Non-Normal Checklists Communications, ACARS Inop or ACARS MU Fail or DU Fail.

23-00-09B

1. Refer to [TOPP 50-10-25](#).
2. Refer to FOM, Administration, Engine Performance Report.
3. Note on maintenance placard, enter "Auto Engine Trend Data Report not Xmitting-Record Data in Engine Performance Log".

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
23-00-10A	Cockpit Voice Recorder System (CVR) without Recorder Independent Power Supply (RIPS) -800 (3701-3771) -700 (3601-3610) "Contact MCC"	Y	1	0	A May be inoperative provided: a) Flight Data Recorder (FDR) operates normally, and b) Repairs are made within three flight days.
23-00-10B	Cockpit Voice Recorder System (CVR) with Recorder Independent Power Supply (RIPS) -900ER -800 (3772 & subs) -700 (3611 & subs)	Y	1	0	A (M) May be inoperative provided: a) Flight Data Recorder (FDR) operates normally, b) RIPS circuit breaker is pulled and collared, c) A 15 minute interval after pulling the c/b is achieved before departure, and d) Repairs are made within three flight days. NOTE: CVR is inoperative with the RIPS c/b pulled and collared.
23-00-10C	Recorder Independent Power Supply (RIPS) -900ER -800 (3772 & subs) -700 (3611 & subs)	N	1	0	C (M) May be inoperative provided: a) CVR operates normally, and b) RIPS battery is removed.
23-00-10D	Recorder Independent Power Supply (RIPS) -900ER -800 (3772 & subs) -700 (3611 & subs)	N	1	0	A (M) May be inoperative provided: a) Flight Data Recorder operates normally, b) RIPS battery is removed, and c) Repairs are made within three flight days.

MEL ITEM	TAB LOCATION	PLACARD TEXT
23-00-10A	Cockpit Voice Recorder Panel	Cockpit Voice Recorder INOP
23-00-10B	Cockpit Voice Recorder Panel	Cockpit Voice Recorder INOP
23-00-10C	Cockpit Voice Recorder Panel	Cockpit Voice Recorder INOP
23-00-10D	Cockpit Voice Recorder Panel	Cockpit Voice Recorder INOP

(M) PROCEDURES

23-00-10B

Deactivate RIPS (AMM 23-00-00/901):

1. Pull and secure RIPS circuit breaker.

23-00-10C, 23-00-10D

Remove RIPS battery (AMM 23-00-00/901).

1. Remove battery from RIPS.
2. Cover battery pack connector on the RIPS charger assembly with an electrical connector cap.
3. Secure electrical connector cap to charger assembly with tape.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
23-00-11	HF Communication Systems "DISP.APPR.REQ'D."	Y	-	0	C
					(M) May be inoperative provided route of flight does not require the use of HF radios. NOTE: Refer to Delta Airway Manual, Ch. CM, Communications Equipment Requirements Chart, for HF requirements.

MEL ITEM	TAB LOCATION	PLACARD TEXT
23-00-11	Associated Radio Tuning Panel	____ HF Comm System INOP

(M) PROCEDURES

Contact MCC to check 30 day history. When an aircraft achieves the third individual MEL occurrence in thirty (30) days, MCC should apply MEL item 23-00-98.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
	EMERGENCY LOCATOR TRANSMITTER (ELT)				
23-00-12A	Emergency Locator Transmitter (ELT) "DISP.APPR.REQ'D."	Y	2	1	D (M)May be inoperative, missing or out of date provided: a) Remaining ELT operates normally, and b) Associated system is deactivated if ELT is "fixed" type. NOTE 1: Aircraft ELT effectivity can be checked in the Volume 1 Differences Chart , Aircraft General, Emergency Equipment. NOTE 2: "Fixed" type units require deactivation and Flight Crew may not placard
23-00-12B	Emergency Locator Transmitter (ELT) "DISP.APPR.REQ'D."	Y	2	0	A (M)May be inoperative, missing or out of date provided: a) Associated system is deactivated if ELT is "fixed" type, b) Repairs are made within 90 days, and c) Extended overwater operations or flights within the states of Alaska or Hawaii over uninhabited areas are not allowed. NOTE 1: Aircraft ELT effectivity can be checked in the Volume 1 Differences Chart , Aircraft General, Emergency Equipment. NOTE 2: "Fixed" type units require deactivation and Flight Crew may not placard.

MEL ITEM	TAB LOCATION	PLACARD TEXT
23-00-12A	Aft Overhead Panel (fixed type) ELT (survival type)	___ ELT INOP / Missing
23-00-12B	Aft Overhead Panel (fixed type) ELT (survival type)	BOTH ELTs INOP / Missing

NOTE: "Fixed" ELTs are automatic and permanently installed in the fuselage and controlled by a switch on the P5 cockpit overhead panel . "Survival" type ELTs are portable.

(M) PROCEDURES

23-00-12A, 23-00-12B

Deactivate the inoperative "fixed" ELT:

1. Gain access to the ELT. The ELT is located in the passenger cabin above the ceiling panel forward of the dorsal fin.
2. Position the switch on the ELT unit to OFF.
3. Disconnect, cap and stow the electrical connector on the ELT unit.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
23-00-14A	Headset Boom Microphones "Contact MCC"	Y	2	0	A May be inoperative provided: a) Associated hand microphone is installed and operates normally, and b) Repairs are made within three flight days.
23-00-14B	Headset Earphones / Headphones (Captain and First Officer)	Y	2	1	C Either captains or first officer's headset may be inoperative provided associated flight deck speaker operates normally.
23-00-14C	Boom Microphones / Headset Earphones / Headphones (Excess or Spare)	Y	-	0	D May be inoperative.

MEL ITEM	TAB LOCATION	PLACARD TEXT
23-00-14A	Associated Audio Control Panel	____ Headset Boom Microphone(s) INOP
23-00-14B	Associated Audio Control Panel	____ Headset Earphone / Headphone INOP
23-00-14C	Logbook	Excess/Spare Boom Microphone / Headset Earphone / Headphone INOP

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
23-00-15	Pre-Recorded Passenger Announcement System	Y	1	0	D (O) May be inoperative provided alternate procedures are used.

MEL ITEM	TAB LOCATION	PLACARD TEXT
23-00-15	FWD Flight Attendant Panel	Pre-Recorded Passenger Announcement System INOP

(O) PROCEDURES

Flight Attendants will make all preflight announcements through the Passenger Address System or by direct communication with all passengers in each cabin.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
PUSH-TO-TALK (PTT) SWITCHES					
23-00-16A	Control Wheel PTT Switches	N	2	1	C (M) May be inoperative provided: a) Associated audio selector panel PTT switch operates normally, and b) Affected switch is either verified failed open or is deactivated.
23-00-16B	Flight Crew Audio Selector Panel PTT Switches	Y	2	1	C (M) May be inoperative provided: a) Associated Control Wheel PTT switch operates normally, and b) Affected switch is verified failed open.
23-00-16C	Glareshield Panel PTT Switches (-700 -900ER)	Y	2	0	C (M) May be inoperative provided affected switch is either verified failed open or deactivated.

MEL ITEM	TAB LOCATION	PLACARD TEXT
23-00-16A	Associated Audio Control Panel	____ Control Wheel PTT Switch INOP
23-00-16B	Affected Audio Control Panel	____ Flight Crew Audio Selector Panel PTT Switch INOP
23-00-16C	Adjacent to glareshield switch	____ Glareshield PTT Switch INOP

(M) PROCEDURES

23-00-16A

1. To verify the switch has electrically failed open listen for sidetone during a trial transmission, but do not use the associated PTT switch.

NOTE: If there is sidetone, the PTT switch has failed in the closed position.

2. Deactivate the Control Wheel PTT switch as follows:
 - a. Remove the two mounting screws from the Control Wheel.
 - b. Carefully remove the PTT switch assembly to get access to the wires.
 - c. Disconnect, cap and stow the GROUND (BLK/BRN) wire connected to the switch.
 - d. Carefully push the clamp into the recess in the Control Wheel.
 - e. Install and tighten the two mounting screws on the Control Wheel.
 - f. Verify that R/T and/or I/C communications can be established using the associated Audio Selector Panel PTT switch.

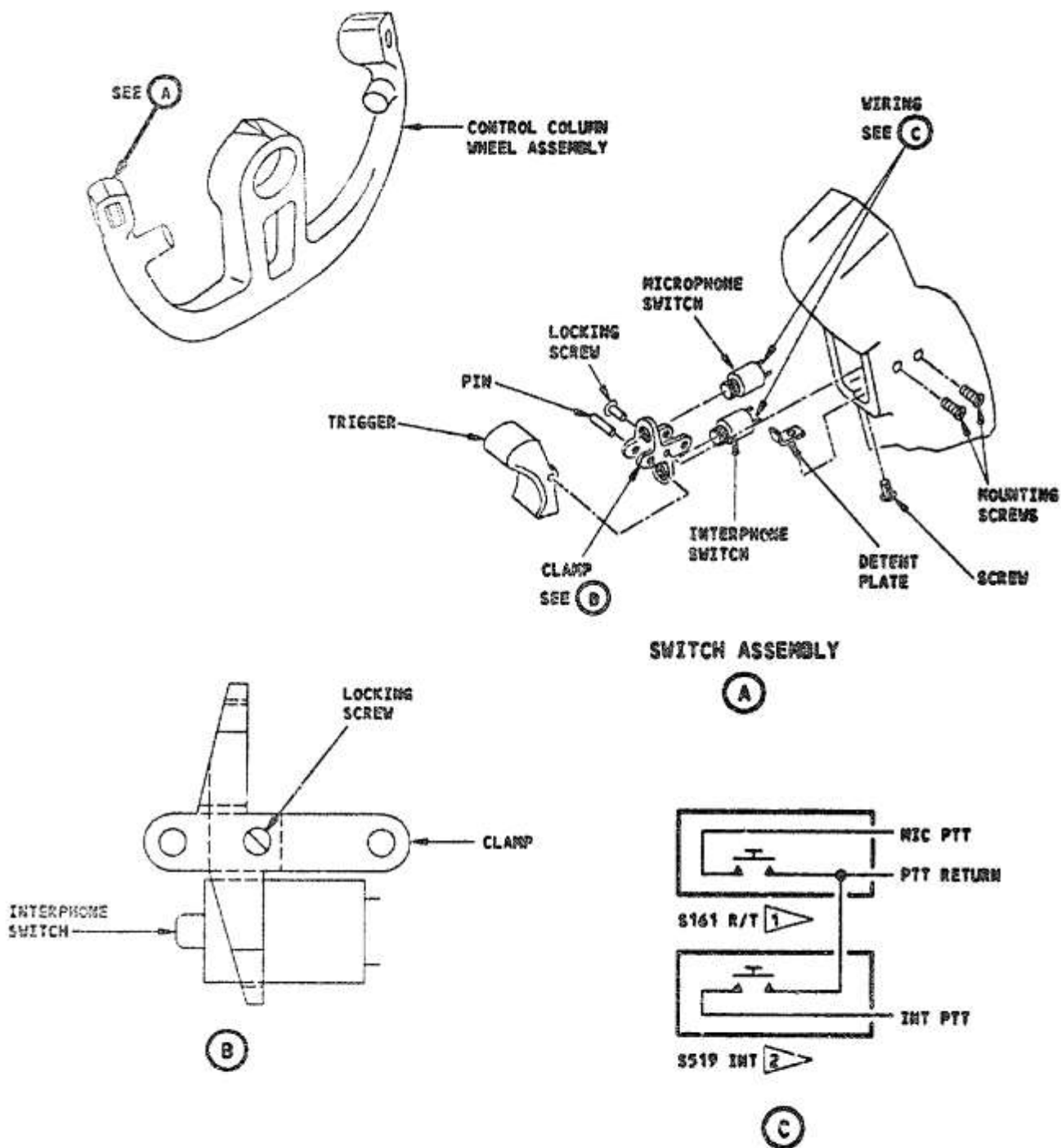
23-00-16B, 23-00-16C

1. To verify the switch has electrically failed open listen for sidetone during a trial transmission, but do not use the associated PTT switch.

NOTE: If there is sidetone, the PTT switch has failed in the closed position.

2. (23-00-16C only) To deactivate the inoperative switch, disconnect, cap and stow the ground wire of the glareshield panel PTT switch.

CONTINUED NEXT PAGE



- 1 CAPTAIN'S SHOWN, FIRST OFFICER'S S214
2 CAPTAIN'S SHOWN, FIRST OFFICER'S S520

CONTROL WHEEL PTT SWITCH - REMOVAL / INSTALLATION

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
23-00-17	Flight Deck Hand Microphones (Captain and First Officer)	Y	2	0 C	May be inoperative or missing provided associated boom microphone operates normally.

MEL ITEM	TAB LOCATION	PLACARD TEXT
23-00-17	Associated Audio Control Panel	____ Flight Deck Hand Microphone(s) INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
23-00-18A	Satellite Communication System (SATCOM) "DISP.APPR.REQ'D."	Y	-	0	C May be inoperative provided procedures do not require its use. NOTE: Refer to Delta Airway Manual, Section 11, Theater Guidance, for operations with SATCOM unavailable.
23-00-18B	SATCOM Voice "DISP.APPR.REQ'D."	Y	-	0	C May be inoperative provided procedures do not require its use. NOTE: Refer to Delta Airway Manual, Section 11, Theater Guidance for operations with SATCOM unavailable.
23-00-18C	SATCOM Data "DISP.APPR.REQ'D."	Y	-	0	C May be inoperative provided procedures do not require its use. NOTE: Refer to Delta Airway Manual, Section 11, Theater Guidance for operations with SATCOM unavailable.

MEL ITEM	TAB LOCATION	PLACARD TEXT
23-00-18A	Associated Audio Control Panel	SATCOM INOP
23-00-18B	Associated Audio Control Panel	SATCOM VOICE INOP
23-00-18C	Associated Audio Control Panel	SATCOM DATA INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
	ALERTING SYSTEM (AUDIO / VISUAL)				
23-00-19A	Flight Deck Call Light System	Y	1	0	B May be inoperative provided flight deck audio alerting system operates normally. NOTE: Flight deck audio alerting system must always be operative.
23-00-19B	Flight Attendant Call Light System (Visual Alert)	Y	1	0	B (O) May be inoperative provided: a) PA system operates normally, and b) Alternate procedures for contacting flight attendants are used. NOTE 1: Passenger to Attendant Call System is considered a Nonessential Equipment Furnishings (NEF) item. NOTE 2: Any visual alerting system function(s) that operates normally may be used.
23-00-19C	Flight Attendant Call Chime System (Audio Alert)	Y	1	0	B (O) May be inoperative provided: a) PA system operates normally, and b) Alternate procedures for contacting flight attendants are used. NOTE 1: Passenger to Attendant Call System is considered a Nonessential Equipment Furnishings (NEF) item. NOTE 2: Any audio alerting system function(s) that operates normally may be used.

MEL ITEM	TAB LOCATION	PLACARD TEXT
23-00-19A	Flight Deck Call Light	Flight Deck Call Light INOP
23-00-19B	Captain's Audio Panel	___ Flight Attendant Call Light INOP
23-00-19C	Captain's Audio Panel	___ Flight Attendant Call Chime INOP

(O) PROCEDURES

23-00-19B, 23-00-19C

Flight Attendants will use PA or establish verbal communication with inoperative call light or chime positions.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
HANDSET SYSTEMS					
23-00-20A	Flight Deck Handset	Y	1	0	C (O) May be inoperative provided: a) Flight Deck to cabin communication operates normally, and b) Alternate procedures are used.
23-00-20B	Cabin Handsets	Y	-	-	B (O) May be inoperative provided: a) Fifty percent of cabin handsets operate normally, b) Forward position must be operative, and c) Alternate communications procedures between affected flight attendants station are used. NOTE : Any handset function(s) that operate normally may be used.

MEL ITEM	TAB LOCATION	PLACARD TEXT
23-00-20A	Flight Deck Handset	Flight Deck Handset INOP
23-00-20B	Affected Cabin Handset	____ Cabin Handset INOP

(O) PROCEDURES

23-00-20A

Use the Cabin Interphone / PA function of the Captain's or First Officer's Audio Selector Panel.

23-00-20B

Flight Attendant occupying seat with inoperative handset will establish communication with Flight Attendant occupying the position with an operative handset.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
23-00-27	Data Link Communication	Y	1	0 C	(O) May be inoperative provided alternate procedures are used.

MEL ITEM	TAB LOCATION	PLACARD TEXT
23-00-27	Adjacent to the MCDU	Data Link Communication INOP

(O) PROCEDURE

Contact ATC via VHF, HF, or SATCOM voice (if installed).

NUMBER INSTALLED			NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD			REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION		REMARKS OR EXCEPTIONS	
23-00-98	Long Range Communication System "DISP.APPR.REQ'D"	N	(M) Aircraft restricted due to HF history. WATRS routes not authorized. MCC authorization is required prior to its usage or removal.	
	Administrative Control Item			

MEL ITEM	TAB LOCATION	PLACARD TEXT
23-00-98	Log Book	HF Restricted

(M) PROCEDURE

Use this item to restrict aircraft due to HF equipment that has been placed on MEL three (3) or more times in the last thirty (30) days.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
23-00-99A	In-flight Entertainment (IFE) System (system deactivated) "DISP.APPR.REQ'D"	Y	1	0	D (M)(O) May be inoperative provided: a) System is deactivated, and b) For aircraft with the AVOD MOD the pre-recorded announcements are considered inoperative and deferred per MEL 23-00-15 . NOTE: Approval for flight must be obtained from the MCC Shift Manager.
23-00-99B	In-flight Entertainment (IFE) System (partially operative) "DISP.APPR.REQ'D"	Y	1	0	D (O) May be inoperative provided alternate procedures are used. NOTE1: This item is for use when the IFE system has a zone inoperative, wrong media software or corrupt file server leaving it partially inoperative. For all other individual IFE components see the Nonessential Equipment and Furnishings List (NEF) for deferral. NOTE 2: Any part of the system that is operational may be used.

MEL ITEM	TAB LOCATION	PLACARD TEXT
23-00-99A	1. Video On Light 2. IFE Control Panel	IFE Inoperative – "Do not use"
23-00-99B	1. Video On Light 2. IFE Control Panel	IFE_____functions(s) Inop

(O) PROCEDURES

23-00-99A, 23-00-99B

Captain to brief Lead Flight Attendant that it may be necessary to do passenger briefings and emergency equipment demonstrations verbally.

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(M) PROCEDURES

23-00-99A

1. To deactivate the IFE System:
 - a. Turn the IFE Power Switch to the OFF position.
 - b. For aircraft 3744-3771, pull and secure the PWR IFE DC circuit breaker located on the P6 panel.
 - c. For aircraft 3801-3900, pull and secure the following circuit breakers on the P-6 circuit breaker panel:
 - 1) 115V AC Seat Power AFT
 - 2) 115V AC Seat Power FWD
 - 3) 115V AC IFE AC
 - 4) 28V DC IFE DC
 - 5) 115V AC Video-1

NOTE: For Business Elite Seats, deactivation of the IFE system will also remove recline and footrest power.

- d. For POST AA 2500-01776 (Panasonic IFE mod) aircraft 3701-3743, pull and secure the following circuit breakers on the P-6 circuit breaker panel:
 - 1) AMCU 1
 - 2) AMCU 2
 - 3) AI, FS
 - 4) MDR
 - 5) IFE DC
 - 6) CELL MODEM
 - 7) ACU
 - 8) CREW PANEL
 - 9) HDD OML
- e. For PRE AA 2500-01776 (Panasonic IFE mod) aircraft 3701-3743, pull and secure the following circuit breakers on the P-6 circuit breaker panel.
- f. For aircraft 3601-3610 and 3772-3773, pull and secure the following circuit breakers on the P-6 circuit breaker panel:
 - 1) Seat PWR FWD
 - 2) Seat PWR AFT
 - 3) IVS Head End
 - 4) PWR Control

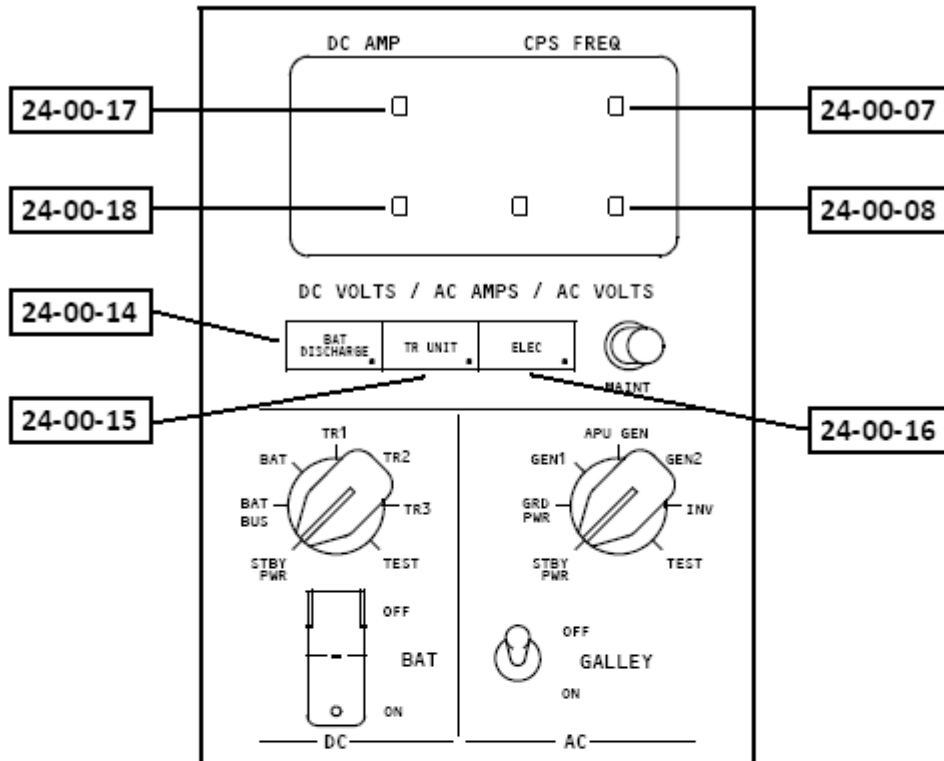
2. Install a placard on the IFE control panel stating "IFE Inoperative – Do not use".
3. On ships 3801 thru 3899, 3601 thru 3610, and 3701 thru 3773 with the AVOD, the pre-recorded announcement system is considered inoperative and deferred per [MEL 23-00-15](#).

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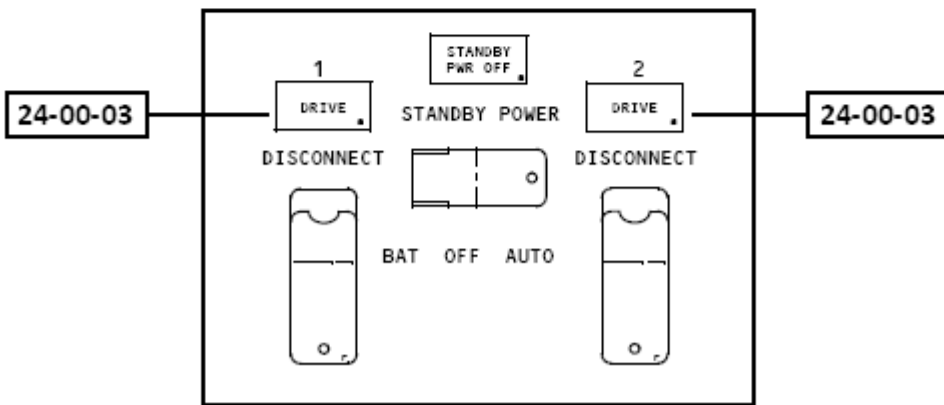
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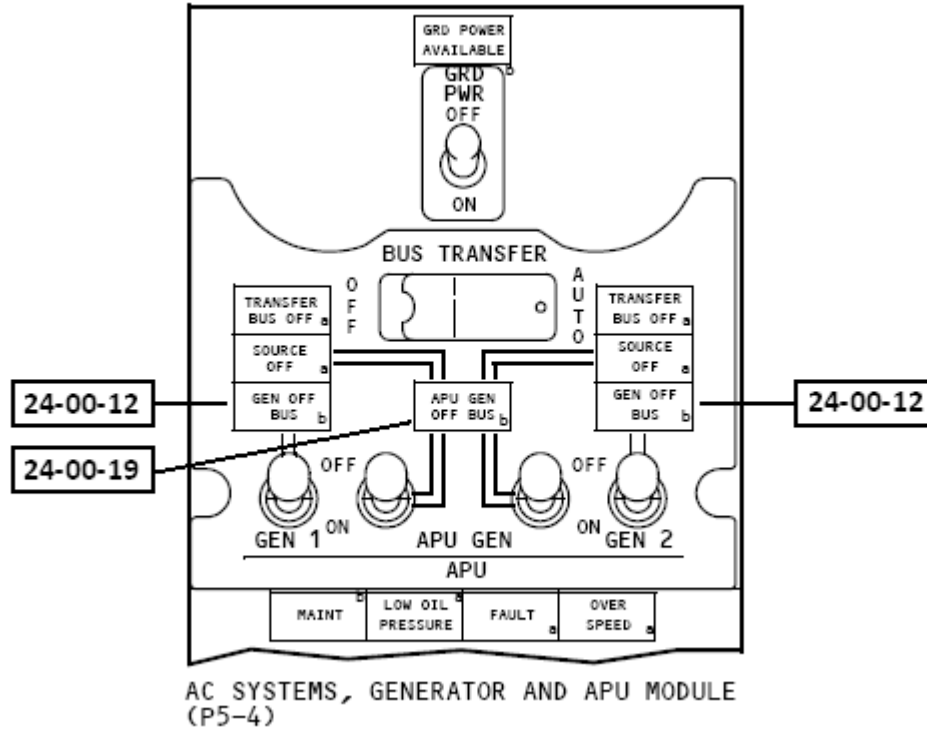
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ELECTRICAL METERS, BATTERY AND GALLEY
POWER MODULE (P5-13)



GENERATOR DRIVE AND STANDBY POWER
MODULE (P5-5)



NUMBER INSTALLED			NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD			REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
24-00-01	Engine Driven Generator System "DISP.APPR.REQ'D."	N 2	1	B	(O)(M) Except for ER operations (ETOPS), may be inoperative provided: a) APU generator operates normally and is used throughout flight, b) APU oil quantity is serviced to full prior to deferral and ONCE EACH FLIGHT DAY (Log Book Entry Required), c) RNAV operations do not require their use; refer to Navigation Equipment Tab (this manual) for RNAV Minimum Requirements, and d) Performance Corrections are applied. NOTE: Use of coastal routing is recommended for operations from Alaska "to" the 48 contiguous states. Repetitive Check Required (Yellow Placard) Theater Restrictions may apply

MEL ITEM	TAB LOCATION	PLACARD TEXT
24-00-01	Associated Engine Driven Generator Switch	___ Engine Driven Generator System INOP

(O) PROCEDURES

Refer to the Remarks or Exceptions column.

24-00-01	ENGINE DRIVEN GENERATOR SYSTEM
EFFECTIVITY	All
FLIGHT PLANNING REQUIREMENTS	Increase BLOCK FUEL by 180 lbs. per hour for APU usage.
NOTES	None
AWABS	Performance corrections have been applied.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF None LANDING None

CONTINUED NEXT PAGE

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(M) PROCEDURES

1. Check for proper oil level in the inoperative IDG.
NOTE: The IDG may be operated without oil for up to 50 hours in the disconnected mode.
2. Disconnect Generator (IDG) as follows (if not previously disconnected):
 - a. Supply external power.
 - b. Start the associated engine.
 - c. Position the AC meter selector switch to the applicable generator position.
 - d. Lift the DISCONNECT switch guard.
 - e. Push the DISCONNECT switch to the DISCONNECT position when the engine is at or above idle speed.
 - f. Verify the DRIVE light illuminates.
 - g. Verify the following AC Meter indications on the P-5 panel:
 - 1) Verify the AC VOLTS indication shows 0 volts.
 - 2) Verify the CPS FREQ indication is blank.
3. Shut down engine.
4. Service APU oil level to full.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
24-00-02	APU Generator System "DISP.APPR.REQ'D."	Y	1	0	C
					Except for ER operations (ETOPS), may be inoperative provided RNAV operations do not require their use; refer to Navigation Equipment Tab (this manual) for RNAV Minimum Requirements. NOTE: Use of coastal routing is recommended for operations from Alaska "to" the 48 contiguous states. Theater restrictions may apply

MEL ITEM	TAB LOCATION	PLACARD TEXT
24-00-02	APU Generator Switch	APU Generator INOP

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS
24-00-03	Engine Driven Generator DRIVE Lights	Y	2	0	C	

MEL ITEM	TAB LOCATION	PLACARD TEXT
24-00-03	Affected Engine Driven Generator DRIVE Light(s)	____ Engine Driven Generator DRIVE Lights INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH			
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY			
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS	
24-00-07	Frequency Meter	Y	1	0	C		

MEL ITEM	TAB LOCATION	PLACARD TEXT
24-00-07	Frequency Meter	Frequency Meter INOP

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
24-00-08	AC Volts Indication	Y	1	0	B (O) May be inoperative except in STBY PWR position provided Standby Power Test is accomplished.

MEL ITEM	TAB LOCATION	PLACARD TEXT
24-00-08	AC Voltmeter	AC Volts Indication INOP

(O) PROCEDURES

Accomplish a Standby Power System Test. Refer to the Operations Manual, Volume 1, Supplementary Procedures, Electrical Section, STANDBY POWER TEST.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD			1	REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION	Y		C	REMARKS OR EXCEPTIONS	
24-00-11	External Power System "DISP.APPR.REQ'D."				0	

MEL ITEM	TAB LOCATION	PLACARD TEXT
24-00-11	Ground Power Switch	External Power System INOP

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
24-00-12	GEN OFF BUS Lights	Y	2	1	C May be inoperative provided associated generator AC ammeter operates normally.

MEL ITEM	TAB LOCATION	PLACARD TEXT
24-00-12	Affected GEN OFF BUS Light	___ GEN OFF BUS Light INOP

OPERATIONS NOTE

The associated AC ammeter can be used to determine when the generator is not supplying the generator bus.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH			
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY			
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS	
24-00-14	BAT DISCHARGE Light	Y	1	0	C		

MEL ITEM	TAB LOCATION	PLACARD TEXT
24-00-14	BAT DISCHARGE Light	BAT DISCHARGE Light INOP

OPERATIONS NOTE

The BAT DISCHARGE light illuminates whenever the main battery or the Auxiliary battery (if installed, -800) is discharging. The following tests may be performed to verify that the batteries are not discharging:

1. Position the DC Meters Selector to the BAT position and verify that the DC AMPS indication is not negative.
2. If an AUX battery is installed(-800), position the DC Meters Selector to the AUX BAT position and verify that the DC AMPS indication is not negative.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION	Y	1	0	C
24-00-15	TR UNIT Light				
REMARKS OR EXCEPTIONS					

MEL ITEM	TAB LOCATION	PLACARD TEXT
24-00-15	TR UNIT Light	TR UNIT Light INOP

OPERATIONS NOTE

The TR UNIT light illuminates whenever a TR fault exists. The following test may be performed to verify that the TR's are operating normally:

1. Position the DC Meters selector to the TR 1 position and verify that the DC AMPS indication is greater than 5 amps.
2. Position the DC Meters selector to the TR 2 position and verify that the DC AMPS indication is greater than 5 amps.
3. Position the DC Meters selector to the TR 3 position and verify that the DC VOLTS indication is 28 ± 6 volts.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
24-00-16	ELEC Light	Y	1	0	C
					(O) May be inoperative OFF provided: a) Standby Power Test is accomplished ONCE EACH FLIGHT DAY. (Log Book Entry Required), and b) Battery Charger is verified to operate normally. Repetitive Check Required (Yellow Placard)

MEL ITEM	TAB LOCATION	PLACARD TEXT
24-00-16	Overhead Electircal Panel	DC ELEC Light INOP

(O) PROCEDURES

Verify that the standby power system and the battery charger are operating normally.

Ships 3701-3771

1. Accomplish Standby Power System Test. Refer to the Operations Manual, Volume 1, Supplementary Procedures, Electrical Section, Standby Power Test.
2. Position the DC Meters selector to the AUX BAT position.
3. Position the STANDBY POWER switch to the BAT position.
4. Wait for 5 seconds.
5. Position the STANDBY POWER switch to the AUTO position and verify that the DC AMPS indication is greater than or equal to 10 Amps.
6. Position the DC Meters selector to the BAT position and verify that the DC AMPS indication is greater than or equal to 10 Amps.
7. If the DC AMPS indication is less than 10 Amps, position the STANDBY POWER switch to the BAT position.
8. Wait for 5 seconds.
9. Position the STANDBY POWER switch to the AUTO position and verify that the DC AMPS indication is greater than or equal to 10 Amps.
10. Return the DC Meters selector to pretest position.

Ships 3601-3610, 3772, 3773, 3801-3900

1. Perform a test of the Standby Power System (Reference Boeing Operations Manual Supplementary Normal Procedures, "Standby Power Test").
2. Position the DC Meter selector to the BAT position.
3. Position the STANDBY POWER switch to the BAT position.
4. Wait for 5 seconds.
5. Position the STANDBY POWER switch to the AUTO position and verify that the DC AMPS indication is greater than or equal to 10 Amps.
6. Return the DC Meters selector to pretest position.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
24-00-17	DC Ammeter Indication	Y	1	0	B (O) May be inoperative provided: a) BAT position operates normally, b) Standby Power Test is accomplished, and c) Procedures do not require its use.

MEL ITEM	TAB LOCATION	PLACARD TEXT
24-00-17	DC Ammeter	DC Ammeter Indication INOP

(O) PROCEDURES

1. Accomplish Standby Power System Test. Refer to the Operations Manual, Volume 1, Supplementary Procedures, Electrical Section, STANDBY POWER TEST.
2. Verify normal operation of the DC ammeter indication in the BAT position.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
24-00-18	DC Volts Indication	Y	1	0 B	(O) May be inoperative except in STBY PWR position provided Standby Power Test is accomplished.

MEL ITEM	TAB LOCATION	PLACARD TEXT
24-00-18	DC Voltmeter	DC Volts Indication INOP

(O) PROCEDURES

Accomplish Standby Power System Test. Refer to the Operations Manual, Volume 1, Supplementary Procedures, Electrical Section, STANDBY POWER TEST.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
24-00-19	APU GEN OFF BUS Light	Y	1	0	C May be inoperative provided: a) APU frequency meter operates normally, and b) APU ammeter operates normally.

MEL ITEM	TAB LOCATION	PLACARD TEXT
24-00-19	APU GEN OFF BUS Light	APU GEN OFF BUS Light INOP

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
	FLIGHT ATTENDANT SEAT ASSEMBLY (SINGLE OR DUAL POSITION)				
25-00-03A	Required Flight Attendant Seats (Refer to In-flight Service Onboard Manual for required seat locations) "DISP.APPR.REQ'D."	Y	-	-	B (O)(M) One seat or assembly (dual position) may be inoperative provided: a) Affected seat or seat assembly is not occupied, b) Flight attendant(s) displaced by inoperative seat(s) occupies either an adjacent flight attendant seat or passenger seat which is most accessible to inoperative seat(s), so as to most effectively perform assigned duties, c) Alternate procedures are established and used for displaced Flight Attendant(s) (Ref. In-flight Service Onboard Manual), d) Folding type seat stows automatically or is secured in retracted position and is checked ONCE EACH FLIGHT DAY (LOG BOOK ENTRY REQUIRED), and e) Passenger seat assigned to flight attendant is placarded "FOR FLIGHT ATTENDANT ONLY". NOTE 1: An automatic folding seat that will not stow automatically is considered inoperative. NOTE 2: A seat position with an inoperative or missing restraint system renders that seat position inoperative. NOTE 3: If one side of a dual seat assembly is inoperative and a flight attendant is displaced to the adjacent seat, adjacent seat must operate normally. Repetitive Check Required (Yellow Placard)
25-00-03B	Excess Flight Attendant Seat(s)	Y	-	0	C (M) May be inoperative provided: a) Affected seat position or seat assembly is not occupied, and b) Folding type seat stows automatically or is secured in retracted position and is checked ONCE EACH FLIGHT DAY (LOG BOOK ENTRY REQUIRED). NOTE 1: An automatic folding seat that will not stow automatically is considered inoperative. NOTE 2: A seat position with an inoperative or missing restraint system is considered inoperative. Repetitive Check Required (Yellow Placard)

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MEL ITEM	TAB LOCATION	PLACARD TEXT
25-00-03A	Logbook	____ Flight Attendant Seat INOP
25-00-03B	Logbook	____ Flight Attendant Seat INOP

(O) PROCEDURES

25-00-03A

1. The flight attendant assigned to the affected seat position must occupy either a passenger seat or an excess flight attendant seat, whichever is most accessible to the inoperative seat. The flight attendant must be able to reach the assigned emergency exit in essentially the same time as from the normally assigned seat, i.e., a 2 or 3 second time difference is considered "essentially the same time".
2. Refer to In-Flight Service Onboard Manual, Section 7, Flight Dispatch With Inoperative Flight Attendant Seat.

(M) PROCEDURES

25-00-03A, 25-00-03B

Ensure the Flight Attendant Seat automatically retracts without assistance to the fully stowed position.

If the seat will not automatically retract without assistance to the fully stowed position, secure the inoperative seat in the fully stowed position using the following procedure (*Maintenance is Required and Flight Crew May NOT Placard*):

1. Secure seat in the retracted (fully stowed) position using high visibility tape.
2. Placard the seat using high visibility tape or a section of 2 inch wide masking tape with the words "UNSERVICEABLE - DO NOT USE" printed legibly in 1 inch black letters.

ONCE EACH FLIGHT DAY:

Ensure seat has remained in fully stowed position. If seat has been secured in the fully stowed position with tape, ensure tape is in good condition.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
25-00-05A	Cargo Compartment Restraint Components "DISP.APPR.REQ'D."	Y	-	-	A (M) May be inoperative or missing provided: a) Acceptable cargo loading limits from Weight and Balance Document are observed, and b) Repairs are made prior to the completion of the next heavy maintenance visit.
25-00-05B	Cargo Compartment Restraint Components "DISP.APPR.REQ'D."	Y	-	-	C May be inoperative or missing provided associated cargo compartment remains empty, or is verified to contain only empty cargo handling equipment, ballast, and/or flyaway kits (see MEL Instructions).

MEL ITEM	TAB LOCATION	PLACARD TEXT
25-00-05A	Logbook	Cargo Compartment ____ Restraint Components INOP
25-00-05B	Logbook	Cargo Compartment ____ Restraint Components INOP

(M) PROCEDURES

25-00-05A

Refer to Aircraft Loading Manual (ALM):

B737-900ER Weight and Balance Chapter 3943, Cargo Loading Section.

B737-800 Weight and Balance Chapter 3991, Cargo Loading Section.

B737-700 Weight and Balance Chapter 3992, Cargo Loading Section.



NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
PASSENGER SEATS					
25-00-06A	Passenger Seat(s) "DISP.APPR.REQ'D."	Y	-	-	D (M) May be inoperative provided: a) Seat does not block an Emergency Exit, b) Seat does not restrict any passenger from access to main aircraft aisle, and c) The affected seat(s) are blocked and placarded "DO NOT OCCUPY." NOTE 1: A seat with an inoperative seat belt is considered to be inoperative. NOTE 2: Inoperative seats do not affect required number of Flight Attendants. NOTE 3: Affected seats may include seat behind and / or adjacent outboard seats. NOTE 4: Seats with an inoperative or broken seat track attach fitting, or seat frame damage affecting integrity of seat track attach fittings, may not remain installed for dispatch using this MEL. Contact MCC. NOTE 5: MCC must contact Flight Control for coordinating with ACS and ROC to remove seat from inventory until repaired.
25-00-06B	Passenger Seat(s) "DISP.APPR.REQ'D."	N	-	0	C (O)(M) May be inoperative and seat removed provided OEW performance corrections are applied. NOTE 1: Inoperative seats do not affect required number of Flight Attendants. NOTE 2: MCC must contact Flight Control for coordination with ACS and ROC to remove seat from inventory until seat(s) is reinstalled. NOTE 3: Seats with an inoperative or broken seat track attach fitting, or seat frame damage affecting integrity of seat track attach fittings, must be removed. Contact MCC.
25-00-06C	Recline Mechanism	N	-	-	D (M) May be inoperative and seat occupied provided seat is secured in up-right position.

CONTINUED NEXT PAGE

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS	
PASSENGER SEATS (Continued)						
25-00-06D	Recline Mechanism	Y	-	-	C	May be inoperative and seat occupied provided seat back is immovable in full upright position.
25-00-06E	Arm Rests with Recline Mechanism	Y	-	-	C	(M) May be inoperative or missing and seat occupied provided: a) Arm rest does not block an Emergency Exit, b) Arm rest does not restrict any passenger from access to main aircraft aisle, and c) If armrest is missing, seat is secured in full upright position.
25-00-06F	Arm Rests without Recline Mechanism	Y	-	-	C	May be inoperative or missing and seat occupied provided: a) Arm rest does not block an Emergency Exit, and b) Arm rest does not restrict any passenger from access to main aircraft aisle.
25-00-06G	Underseat Baggage Restraining Bars	Y	-	-	C	(O) May be inoperative provided: a) Baggage is not stowed under seat with inoperative restraining bar, b) Associated seat is placarded "DO NOT STOW BAGGAGE UNDER THIS SEAT", and c) Procedures are established to alert Cabin Crew of inoperative restraining bar.
25-00-06H	Seat Belt Air Bag Restraint Systems "DISP.APPR.REQ'D"	Y	-	0	D	May be inoperative provided affected seat is blocked and placarded "DO NOT OCCUPY".

MEL ITEM	TAB LOCATION	PLACARD TEXT
25-00-06A	Logbook	Passenger Seat(s) ____ INOP
25-00-06B	Logbook	Passenger Seat(s) ____ INOP / Removed
25-00-06C	Logbook	Recline Mechanism Seat(s) ____ INOP
25-00-06D	Logbook	Recline Mechanism Seat(s) ____ INOP
25-00-06E	Logbook	Arm Rest Seat(s) ____ INOP
25-00-06F	Logbook	Arm Rest Seat(s) ____ INOP
25-00-06G	Logbook	Underseat Baggage Restraining Bar Seat(s) ____ INOP
25-00-06H	Logbook	Passenger Seat(s) ____ Seat Belt Air Bag Restraint System INOP

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(O) PROCEDURES

25-00-06B

25-00-06B PASSENGER SEATS REMOVED	
EFFECTIVITY	All
FLIGHT PLANNING REQUIREMENTS	None
NOTES	None
AWABS	Performance corrections have been applied.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF None LANDING None OTHER CORRECTIONS (Manual Weight & Balance Worksheet Only) Use applicable OEW correction for "Passenger Seat Assembly" in ALM – Weight and Balance Section.

25-00-06G

1. If the baggage restraining bar needs to be removed, *Maintenance is required and the Flight crew may not placard.*
2. Advise cabin crew to ensure baggage is not stowed under seats with inoperative or missing restraining bars.
3. Advise cabin crew to inform passengers occupying seat with affected bar and passenger behind the seat with the affected bar not to stow baggage under the seat.

(M) PROCEDURES

25-00-06A

Install Seat INOP Block-Out Cover part number 25-5136-001 per ERA 10-485792-14MA.

- 1) If the seat is stuck in the recline position block off affected seat(s) and the seat directly behind the inoperative seat by installing a Seat INOP Block-Out Cover part number 25-5136-001 per ERA 10-485792-14MA. Affected seats would be any seat with blocked access to an aisle by the inoperative seat.

NOTE: The inoperative seat or affected seat(s) must not block access to an Emergency Exit or aisle.

- 2) If the seatback is loose or blocks access to an Emergency Exit secure upright with a Seat INOP Block-Out Cover part number 25-5136-001 per ERA 10-485792-14MA or alternatively for seat backs without AVOD installed remove the seat back and placard the seatback "MUST REMAIN WITH AIRPLANE" and stow in available closet. Block off affected seat directly behind the inoperative seat(s) by installing a Seat INOP Block-Out Cover part number 25-5136-001 per ERA 10-485792-14MA. Install a Seat INOP Block-Out Placard part number 11-0972-001 per ERA 10-485792-14MA or equivalent* on seat with removed seat back.

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In the event that the Seat INOP Block-Out Cover is not available the seat may be made inoperative per one of the following provisions provided the MCC is contacted to schedule the installation of a Seat INOP Block-Out Cover at the next maintenance station the cover is available:

- 1) Secure the inoperative seat in the upright position and block seat per MEL applicable Remarks or Exceptions and placard "DO NOT OCCUPY" by installing a Seat INOP Block-Out Placard part number 11-0972-001 per ERA 10-485792-14MA or equivalent*.
- 2) If the recline mechanism is inoperative, ensure the seat remains in the upright position otherwise secure the seat in the upright or break over position as required maintaining a pleasant and professional appearance and block off affected seat(s) and the seat directly behind the inoperative seat per MEL applicable Remarks or Exceptions and placard "DO NOT OCCUPY" by installing a Seat INOP Block-Out Placard part number 11-0972-001 per ERA 10-485792-14MA or equivalent*. Affected seats would be any seat with blocked access to an aisle by the inoperative seat. NOTE: The inoperative seat or affected seat(s) must not block access to an Emergency Exit or aisle.
- 3) If the seatback is loose or blocks access to an Emergency Exit and the seat back does not have AVOD installed remove seatback and block off affected seat directly behind the inoperative seat per MEL applicable Remarks or Exceptions and placard "DO NOT OCCUPY" by installing a Seat INOP Block-Out Placard part number 11-0972-001 per ERA 10-485792-14MA or equivalent*. Placard seatback, "MUST REMAIN WITH AIRPLANE" and stow in available closet. Seat back is to remain in closet until removed by maintenance for repair or re-installation. For seats with AVOD installed see prior step.

*An acceptable alternative to the "DO NOT OCCUPY" placard is to apply a one or two sections of 2 inch wide masking tape as required over the head rest area (seat bottom if seat back is removed) with the words "UNSERVICEABLE – DO NOT USE" printed neatly and legibly in 1.5 inch black or red letters and contacting MCC to schedule the installation of the approved Seat INOP Block-Out Cover part number 25-5136-001 and/or Seat INOP Block-Out Placard part number 11-0972-001.25-00-06B

25-00-06B

1. When removing seat, ensure the IFE for the remaining seats/areas operate where possible.
2. Ensure emergency escape path lighting meets minimum dispatch requirements (see MEL 33-00-19).
3. Tie back/stow all electrical connectors, wires, phone connections, etc. for the affected seat.

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25-00-06C

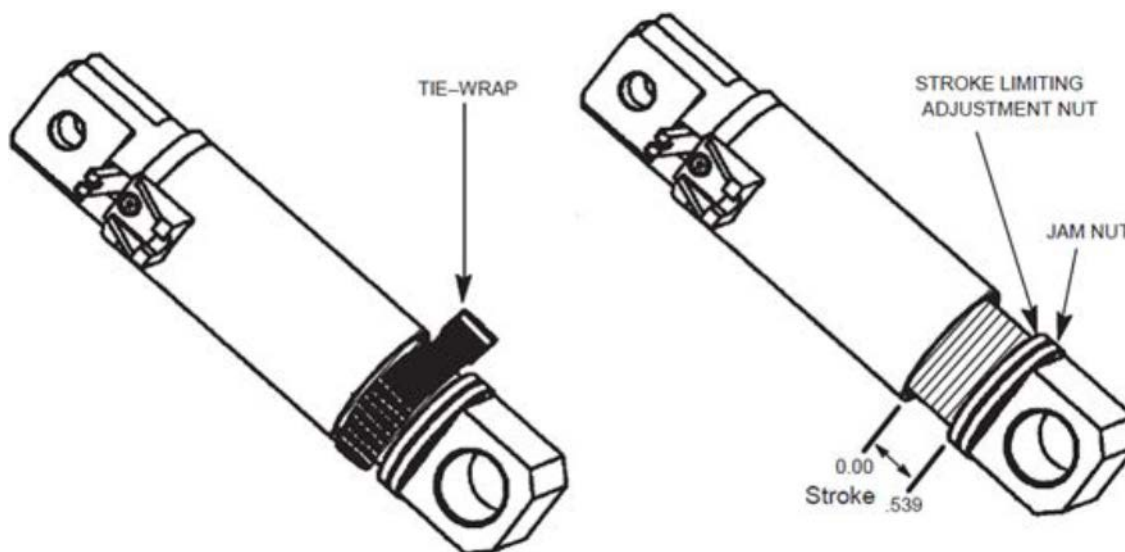
-700/-800 airplanes

Secure seat by disconnecting the control cable at the seat cylinder or by locking the seat cylinder in the full upright position.

-900 airplanes

Secure seat in an upright position by one of the following methods:

- 1) Install nylon tie-wraps(s) around threaded area to restrict travel of hydrolok.
- 2) Turn stroke limiting adjustment nut to obtain 0.00 stroke. Tighten jam nut against limiting adjustment nut.



25-00-06E

1. Ensure the affected arm rest does not block access to an emergency exit or the aisle. If the arm rest needs to be removed, Maintenance is required and the Flight crew may not placard.
2. Secure seat by disconnecting the control cable at the seat cylinder or by locking the seat cylinder in the full upright position.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH			
FLIGHT CREW MAY PLACARD			Y	-	-	REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS	
25-00-09	"Fasten Seat Belts While Seated" Signs or Placards					C May be illegible or missing provided a legible sign or placard is visible from each occupied passenger seat.	

MEL ITEM	TAB LOCATION	PLACARD TEXT
25-00-09	Logbook	____ Fasten Seat Belts While Seated Signs or Placards Missing / Illegible / INOP

NUMBER INSTALLED		NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD			
ITEM NO.	NAME / DESCRIPTION	REMARKS OR EXCEPTIONS	
25-00-10	Non-essential Equipment and Furnishings (NEF)	May be inoperative, damaged or missing provided that item(s) is deferred in accordance with the NEF deferral program. NOTE 1: Do not use this MEL item to defer the discrepancy. Defer the discrepancy under the NEF program per TOPP 40-40-08. NOTE 2: Exterior lavatory door ash trays are not considered NEF items.	

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
25-00-11A	Primary Observer's Seat (Including Associated Equipment) "DISP.APPR.REQ'D."	Y	1	0	A May be inoperative provided: a) A passenger seat in passenger cabin is made available to an FAA inspector for performance of official duties, and b) Repairs are made within two flight days.
25-00-11B	Primary Observer's Seat (Including Associated Equipment) "Contact MCC"	Y	1	0	A May be inoperative provided: a) Required minimum safety equipment (safety belt and oxygen) is available, b) Seat is acceptable to an FAA inspector for performance of official duties, and c) Repairs are made within two flight days. NOTE 1: These provisos are intended to provide for occupancy of above seats by an FAA inspector when minimum safety equipment (oxygen and safety belt) is functional and inspector determines conditions to be acceptable. NOTE 2: The Pilot-in-Command will determine if minimum safety equipment is functional for other persons authorized to occupy any observer seat(s).
25-00-11C	Crotch Straps	Y	-	0	C

MEL ITEM	TAB LOCATION	PLACARD TEXT
25-00-11A	Logbook	Primary Observer's Seat INOP
25-00-11B	Logbook	Primary Observer's Seat INOP
25-00-11C	Logbook	Primary Observer's Seat Crotch Straps INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO. NAME / DESCRIPTION					REMARKS OR EXCEPTIONS	
CABIN EMERGENCY FLASHLIGHT HOLDERS / FLASHLIGHTS						
25-00-12A	Cabin	Y	-	0	C	May be inoperative or missing provided crewmember assigned to affected position has a flashlight of equivalent characteristics readily available.
25-00-12B	Flight Deck	Y	-	0	C	May be inoperative or missing provided crewmember assigned to affected position has a flashlight of equivalent characteristics readily available.

MEL ITEM	TAB LOCATION	PLACARD TEXT
25-00-12A	Logbook	____ Cabin Emergency Flashlight Holder(s) / Flashlight(s) INOP
25-00-12B	Logbook	____ Flight Deck Emergency Flashlight Holder(s) / Flashlight(s) INOP

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD			REPAIR CATEGORY			
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS	
25-00-16	Cargo Compartment Lining Panels and Floor Panels "DISP.APPR.REQ'D."	Y	-	0	C	May be damaged or missing provided associated compartment remains empty, or is verified to contain only empty cargo handling equipment, ballast, and/or flyaway kits (see MEL Instructions).

MEL ITEM	TAB LOCATION	PLACARD TEXT
25-00-16	Logbook	Lower Cargo Compartment Lining Panel(s) INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
EMERGENCY MEDICAL EQUIPMENT					
25-00-17A	First Aid Kits "Contact MCC"	Y	-	-	A (O) One kit may be incomplete, missing or inoperative provided: a) An incomplete or inoperative First Aid Kit is resealed in a manner that will identify it as a unit that can not be mistaken for a fully serviceable unit, and b) Repairs or replacements are made within 1 flight.
25-00-17B	First Aid Kit Seals	Y	-	0	C (O) Aircraft may be dispatched with seal(s) broken provided, PRIOR TO EACH DEPARTURE, it is verified that kit contains required minimum contents. Repetitive Check Required (Yellow Placard)
25-00-17C	AED (Automatic External Defibrillator) "Contact MCC"	Y	1	0	A (O) May be incomplete, missing or inoperative provided: a) An incomplete or inoperative AED is resealed in a manner that will identify it as a unit that can not be mistaken for a fully serviceable unit, and b) Repairs or replacements are made within 1 flight.
25-00-17D	AED Bracket / Lock	Y	1	0	C
25-00-17E	EEMK (Enhanced Emergency Medical Kit) "Contact MCC"	Y	2	0	A (O) May be incomplete, missing or inoperative provided: a) An incomplete or inoperative EEMK is resealed in a manner that will identify it as a unit that can not be mistaken for a fully serviceable unit, and b) Repairs or replacements are made within 1 flight.
25-00-17F	EEMK (Enhanced Emergency Medical Kit) "Contact MCC"	Y	2	1	D (O) May be incomplete, missing or inoperative provided an incomplete or inoperative EEMK is resealed in a manner that will identify it as a unit that can not be mistaken for a fully serviceable unit.
25-00-17G	EEMK Bracket / Lock	Y	1	0	C
25-00-17H	Red Pouch (Medical Accessory Pouch)	Y	1	0	C May be inoperative, missing, or contain less than minimum required contents.

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MEL ITEM	TAB LOCATION	PLACARD TEXT
25-00-17A	Logbook	____ First Aid Kit Incomplete / Missing / INOP
25-00-17B	Logbook	____ First Aid Kit Seal(s) Broken
25-00-17C	Logbook	AED Incomplete / Missing / INOP
25-00-17D	Logbook	AED Bracket / Lock INOP
25-00-17E	Logbook	____ EEMK(s) Incomplete / Missing / INOP
25-00-17F	Logbook	EEMK Incomplete / Missing / INOP
25-00-17G	Logbook	EEMK Bracket / Lock INOP
25-00-17H	Logbook	Red Pouch (Medical Accessory Pouch) INOP / Missing

(O) PROCEDURES

25-00-17A, 25-00-17C, 25-00-17E, 25-00-17F

1. Re-seal the unit in a manner that will identify it as a unit that cannot be mistaken for a fully serviceable unit.
2. Captain to inform Lead Flight Attendant/Purser of inoperative or missing emergency equipment.

25-00-17B

If seals are broken, PRIOR TO EACH DEPARTURE, verify the First Aid Kit contains the following:

1 pair	Protective Gloves or equivalent	1 pair	Bandage Scissors
1 pkg	Ammonia Inhalants (10/pkg)	1 pkg	1 Inch Adhesive Bandages (16/pkg)
2 rolls	Adhesive Tape	4 pkg	4 Inch Gauze Bandages (1/pkg)
2 pkg	Wire Splints (1/pkg)	5 pkg	40 Inch Triangular Bandages (1/pkg)
2 pkg	Antibiotic Ointment Packets or Antiseptic Wipes (10/pkg)	8 pkg	4 Inch Compress Bandages (1/pkg)

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
	PASSENGER FLOTATION EQUIPMENT				
25-00-18A	Passenger Life Vests "DISP.APPR.REQ'D."	Y	-	-	D May be inoperative or missing provided extended overwater operations are not conducted.
25-00-18B	Passenger Life Vests "DISP.APPR.REQ'D."	Y	-	-	D May be inoperative or missing provided associated seat is blocked off, placarded DO NOT OCCUPY, and deferred per MEL item 25-00-06A .
25-00-18C	Spare Life Vests	Y	-	-	D May be inoperative or missing.
25-00-18D	Infant Life Vests (If Installed)	Y	-	-	D (O) May be inoperative or missing.
25-00-18E	Life Rafts "DISP.APPR.REQ'D."	Y	-	-	D (O) Except for extended overwater operations, may be inoperative, missing, or not easily accessible.

MEL ITEM	TAB LOCATION	PLACARD TEXT
25-00-18A	Logbook	____ Life Vest(s) INOP / Missing
25-00-18B	Logbook	____ Life Vest(s) INOP / Missing
25-00-18C	Logbook	____ Spare Life Vest(s) INOP / Missing
25-00-18D	Logbook	____ Infant Life Vest(s) INOP / Missing
25-00-18E	Logbook	____ Life Raft(s) INOP / Missing

(O) PROCEDURES

25-00-18D

On aircraft equipped with single cell adult life vests, an infant life vest is normally available for each occupant under 35 pounds for extended overwater operations. In the event that there are not enough infant life vests onboard for the extended overwater operation and all attempts have been made to locate and board additional infant life vests, notify an Airport Customer Service (ACS) Agent so that they can initialize their passenger handling procedures.

CONTINUED NEXT PAGE

25-00-18E

If life raft is missing (removed), refer to the following Performance Adjustment:

25-00-18E	LIFE RAFTS REMOVED
EFFECTIVITY	All
FLIGHT PLANNING REQUIREMENTS	Extended Overwater Operations Prohibited.
NOTES	None
AWABS	Performance corrections have been applied.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF None LANDING None OTHER CORRECTIONS (Manual Weight & Balance Worksheet only) Use applicable OEW correction for "Life Raft" in ALM – Weight and Balance Section.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD			REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
25-00-20A	Exterior Lavatory Door Ashtrays "Contact MCC"	Y	-	-	A Up to 50% may be missing or inoperative provided it is replaced within 10 calendar days.
25-00-20B	Exterior Lavatory Door Ashtrays "Contact MCC"	Y	-	-	A More than 50% may be missing or inoperative for 3 days.

MEL ITEM	TAB LOCATION	PLACARD TEXT
25-00-20A	Logbook	____ Exterior Lavatory Door Ashtray Missing
25-00-20B	Logbook	____ Exterior Lavatory Door Ashtray Missing

NOTE: Interior lavatory ashtrays are considered Non-essential Equipment Furnishings items.
See TOPP 40-40-08 for the NEF deferral process.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
FLIGHT CREW SEATS					
25-00-21A	Recline "Contact MCC"	N	2	0	A (M) May be inoperative provided: a) Seat is secured in a position acceptable to affected crewmember, and b) Repairs are made within two flight days.
25-00-21B	Vertical Adjustment "Contact MCC"	N	2	0	A (M) May be inoperative provided: a) Seat is secured in a position acceptable to affected crewmember, and b) Repairs are made within two flight days.
25-00-21C	Armrests	Y	4	0	B (M) May be inoperative in the up position or removed provided seat is acceptable to affected crewmember.
25-00-21D	Lumbar / Thigh Supports	Y	4	0	C May be inoperative provided seat is acceptable to affected crewmember.
25-00-21E	Headrests	Y	2	0	C May be inoperative or missing provided seat is acceptable to affected crewmember.

MEL ITEM	TAB LOCATION	PLACARD TEXT
25-00-21A	Logbook	____ Seat Recline INOP
25-00-21B	Logbook	____ Seat Vertical Adjustment INOP
25-00-21C	Logbook	____ Seat Armrest INOP
25-00-21D	Logbook	____ Seat Lumbar / Thigh Support INOP
25-00-21E	Logbook	____ Seat Headrest INOP

(M) PROCEDURES

25-00-21A

For an inoperative recline mechanism, ensure the seat is secured in a position acceptable to the affected crewmember by performing a functional test to verify the seat back cannot be moved. Also verify that full travel of the seat on its track is not impaired.

25-00-21B

For an inoperative vertical adjustment mechanism, perform a functional test to verify the seat cannot be moved in a vertical direction. If necessary, secure the seat in a fixed vertical position by disconnecting the vertical adjustment operating cable or removing the vertical adjustment pushrod mechanism, as appropriate.

25-00-21C

Secure an inoperative armrest in the up position or remove from seat.

NOTE: If necessary to remove armrest, Maintenance is Required and the Flight Crew May NOT Placard.

NUMBER INSTALLED			NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD			REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
	GALLEY / LAVATORY WASTE RECEPTACLE ACCESS DOORS / COVERS				
25-00-22A	Galley Waste Receptacles Access Doors / Covers	Y	-	-	C (O)(M) May be inoperative provided: a) Associated container is empty, b) Container access is secured to prevent waste introduction into compartment, and c) Procedures are used to ensure that sufficient galley waste receptacles are available to accommodate all waste that may be generated on a flight.
25-00-22B	Lavatory Waste Receptacles Access Doors / Covers "DISP.APPR.REQ'D."	Y	-	-	C (O)(M) May be inoperative provided: a) Associated container is empty, b) Container access is secured to prevent waste introduction into compartment, c) Lavatory is used only by crewmembers, and d) Associated lavatory entrance door is locked closed and placarded: INOPERATIVE – DO NOT ENTER. NOTE: These provisions are not intended to prohibit lavatory use or inspection by crewmembers.

MEL ITEM	TAB LOCATION	PLACARD TEXT
25-00-22A	Logbook	___ Galley Waste Receptacles Access Doors/Covers INOP
25-00-22B	Logbook	___ Lav Waste Receptacles Access Doors / Covers INOP

(O) PROCEDURES

25-00-22A

Refer to the In-Flight Service On-Board Manual, Section 3 Regulations / Guidelines, Trash.

25-00-22B

Refer to the Remarks or Exceptions column.

(M) PROCEDURES

25-00-22A

1. Refer to the Remarks or Exceptions column.
2. Using suitable pressure sensitive tape, secure waste receptacle access door(s) or cover(s) closed.

25-00-22B

1. Using suitable pressure sensitive tape, secure waste receptacle access door(s) or cover(s) closed.
2. Lock the lavatory closed and placard INOPERATIVE – DO NOT ENTER.

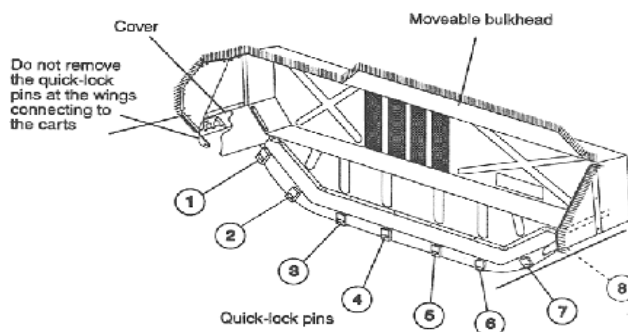
NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
25-00-23A	Automatic Cargo Loading System (Fwd)	N	1	0	D (M) May be inoperative.
25-00-23B	Automatic Cargo Loading System (Aft)	N	1	0	D (M) May be inoperative.

MEL ITEM	TAB LOCATION	PLACARD TEXT
25-00-23A	Logbook	___ Automatic Cargo Loading System (Fwd) INOP
25-00-23B	Logbook	___ Automatic Cargo Loading System (Aft)

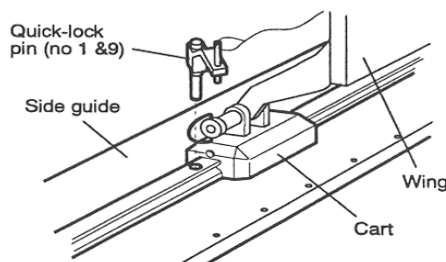
(M) PROCEDURES

25-00-23A, 25-00-23B

1. Pull and secure the associated circuit breaker. FWD CARGO LOADER CONTROL P6-12 Panel, AFT CARGO LOADER CONTROL P6-11 Panel.
2. Release the moveable bulkhead from the carpet attachments by removing the 8 quick-lock pins under the cover.



3. Push and slide the moveable bulkhead to a position close to the drive unit.
4. Secure the moveable bulkhead with the two quick-lock pins (No.1 and 8) through the holes in the track in front of the cart.



5. Re-Position the cover to protect the camlocks on the carpet. Manually load cargo.

NUMBER INSTALLED					NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD			REPAIR CATEGORY			
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS
25-00-24A	Overhead Storage Bin(s) / Cabin, Galley and Lavatory Storage Compartment / Closets	Y	-	-	C	(M) May be inoperative provided: a) Procedures are used to secure the affected bin, compartment or closet in the CLOSED position, b) Affected bin, compartment or closet is prominently placarded DO NOT USE, c) Any emergency equipment located in affected bin, compartment, or closet is considered inoperative and is deferred per applicable MEL, and d) Affected bin, compartment or closet is not used for storage of any item(s) except for those permanently affixed. NOTE: For overhead bins, if no partitions are installed, entire overhead bin is considered inoperative.
25-00-24B	Overhead Storage Bin(s) / Cabin, Galley and Lavatory Storage Compartment / Closets	N	-	-	C	(O)(M) May be inoperative provided: a) For non-retractable doors, affected door is removed, b) For retractable doors, affected door is removed or secured in the retracted (fully open) position, c) Affected bin, compartment or closet is not used for storage of any item(s) except for those permanently affixed, d) Affected bin, compartment or closet is prominently placarded DO NOT USE, e) Crew members and passengers are alerted of inoperative bins, compartments or closets, and f) Passengers are briefed that associated bin, compartment or closet is not used. NOTE 1: For overhead bins, if no partitions are installed, entire overhead bin is considered inoperative. NOTE 2: Any emergency equipment located in the affected bin, compartment or closet (permanently affixed) is available for use.
25-00-24C	Multi Latch/Quarter Turn Lug Installations	Y	-	-	C	One latch/lug per compartment may be inoperative provided: a) Remaining latch(es)/lug(s) on affected compartments operate normally, and b) If affected compartment is used for a galley cart, cart remains empty.

CONTINUED NEXT PAGE

MEL ITEM	TAB LOCATION	PLACARD TEXT
25-00-24A	Logbook	____ Overhead Storage Bin(s) / Cabin and Galley Storage Compartment / Closets INOP
25-00-24B	Logbook	____ Overhead Storage Bin(s) / Cabin and Galley Storage Compartment / Closets INOP
25-00-24C	Logbook	____ Multi Latch/Quarter Turn Lug INOP

(O) PROCEDURES

25-00-24B

Crewmembers are advised of inoperative bins. Passengers are briefed that associated bin or compartment is not used.

(M) PROCEDURES

25-00-24A

1. Empty compartment (except for permanently affixed items).
2. Using suitable pressure sensitive tape (i.e., bag bin tape, nylon or fiberglass reinforced tape, **not** masking tape, etc.), secure compartment CLOSED. If unable to secure compartment closed, Maintenance is Required and Flight Crew May NOT Placard.
3. Placard compartment using "Inoperative Cabin Appearance" placard or equivalent.
4. The following items are considered "emergency equipment" and may not be relocated:
 - Fire Extinguishers
 - Megaphones
 - Flashlights
 - EEMK
 - AED
 - PBE
 - Passenger Oxygen Bottles
 - First Aid Kits
5. Except for the items listed above, cabin equipment may be relocated provided:
 - a. Location placarding (if installed) of the affected item is removed or obscured.
 - b. Install temporary location placard on the outside of compartment / bin specifying the new location.
 - c. Install temporary placard on the outside of compartment / bin where the item has been relocated.
 - d. Note location of relocated equipment on aircraft logbook placard.

25-00-24B

1. Removed affected door. Securely store the removed door if it remains on the aircraft.
2. Attach DO NOT USE placard to the affected compartment.

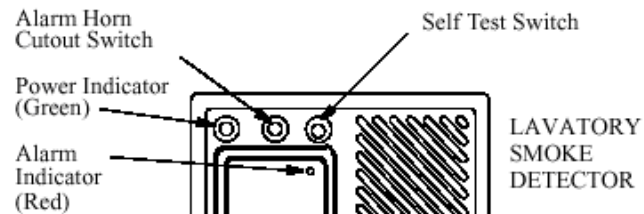
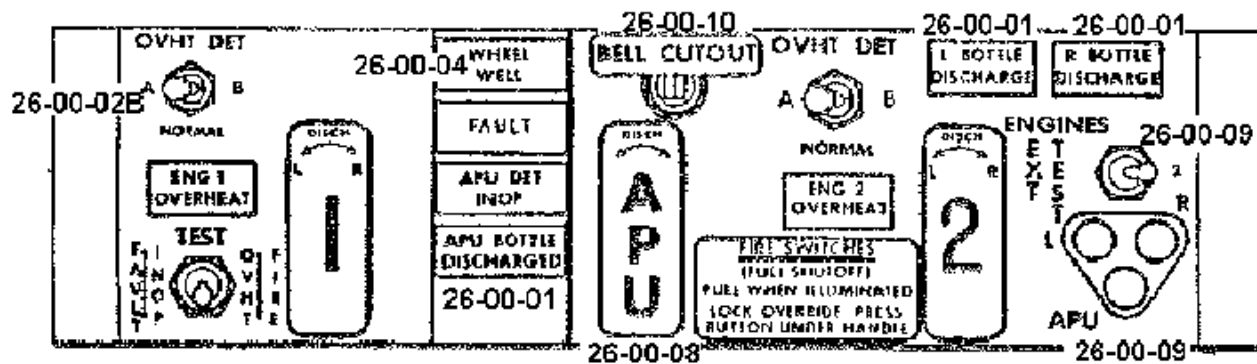
NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
25-99-01A	PED Mount Administrative Control Item	Y	-	-	Reconfigure cockpit for two (2) operative PED mounts. See TOPP 40-40-05 for instructions.
25-99-01B	PED Mount "DISP.APPR.REQ'D." Administrative Control Item	Y	-	-	Reconfigure cockpit for one (1) operative PED mount. See TOPP 40-40-05 for instructions.
25-99-01C	PED Mount "DISP.APPR.REQ'D." Administrative Control Item	Y	-	-	Reconfigure cockpit for zero (0) operative PED mounts. See TOPP 40-40-05 for instructions.

MEL ITEM	TAB LOCATION	PLACARD TEXT
25-99-01A	Log book	Reconfigured PED mounts per TOPP 40-40-05
25-99-01B	Log book	Reconfigured PED mounts per TOPP 40-40-05
25-99-01C	Log book	Reconfigured PED mounts per TOPP 40-40-05

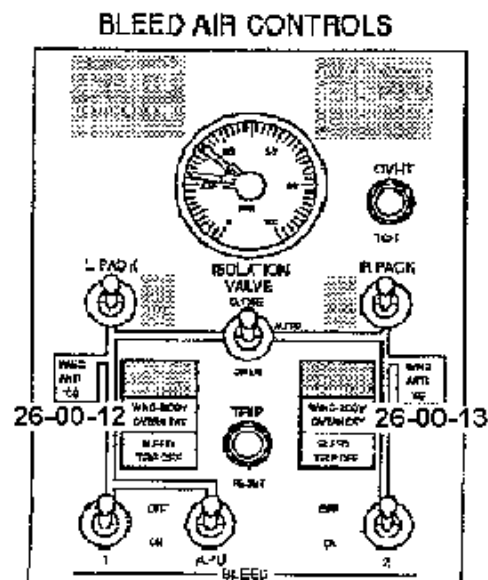
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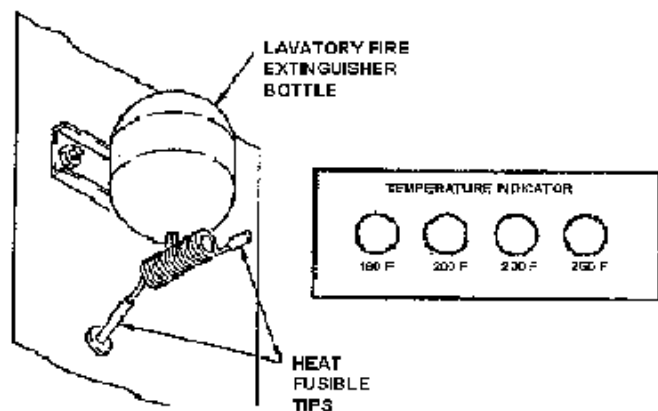
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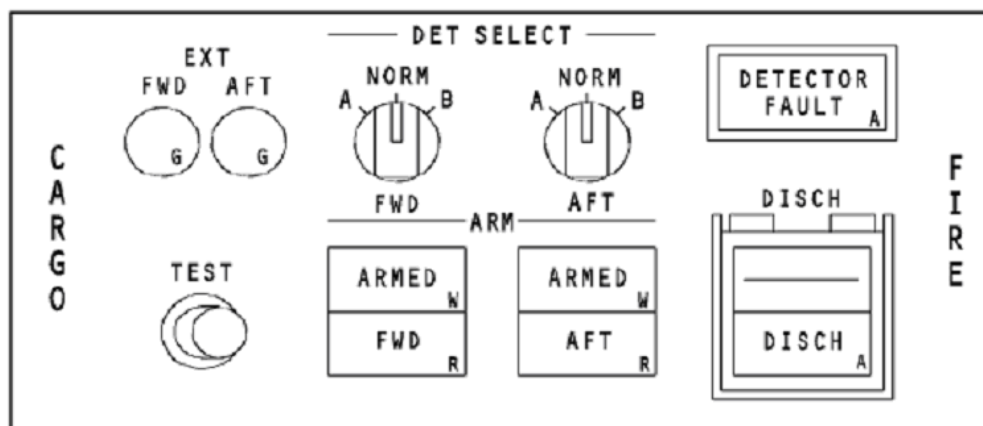


26-00-16



26-00-15
LAVATORY FIRE EXTINGUISHER SYSTEM





26-00-19 CARGO FIRE CONTROL PANEL

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS
26-00-01A	Engine Fire Extinguisher Bottle DISCHARGE Lights	Y		2	0	C
26-00-01B	APU Fire Extinguisher Bottle DISCHARGE Lights	N	1	0	C	

MEL ITEM	TAB LOCATION	PLACARD TEXT
26-00-01A	Engine Fire Extinguisher Bottle DISCHARGE Light(s)	___ Engine Fire Extinguisher Bottle DISCHARGE Light(s) INOP
26-00-01B	APU Fire Extinguisher Bottle DISCHARGE Light(s)	___ APU Fire Extinguisher Bottle DISCHARGE Light(s) INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
26-00-02	ENGINE OVERHEAT AND FIRE DETECTION SYSTEMS Dual Loop "DISP.APPR.REQ'D"	Y	4	2	C (O) Except for ER operations (ETOPS) beyond 120 minutes, One loop (A or B) per engine may be inoperative.

MEL ITEM	TAB LOCATION	PLACARD TEXT
26-00-02	Engine Overheat And Fire Detection System Test Switch	___ Engine Fire Loop ___ INOP

(O) PROCEDURES

An inoperative loop may exist if the overheat and fire protection panel check in the Operations Manual, Volume 1, Normal Procedures, is not positive. If the check is not positive:

1. Deselect the inoperative loop on the affected engine and retest the system using the Fire and Overheat System Test with an Inoperative Loop in the Operations Manual, Volume 1, Supplementary Procedures.
2. If positive test cannot be achieved with A or B loop deselected, the system is inoperative and dispatch is not allowed.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
26-00-03	Portable Fire Extinguishers (Passenger Cabin Only)	Y	4	3 C	(M) One H₂O type extinguisher in any location or aft-cabin HALON extinguisher may be inoperative provided inoperative fire extinguisher is tagged inoperative, removed from installed location, and placed out of sight so it cannot be mistaken for a functional unit. NOTE: Cockpit HALON extinguisher must be operative.

MEL ITEM	TAB LOCATION	PLACARD TEXT
26-00-03	Logbook	____ Portable Fire Extinguisher INOP

(M) PROCEDURES

Using tape or other suitable means, cover affected fire extinguisher bottle location placarding.

NOTE: For locations with two fire extinguisher bottles installed, do NOT cover placard if remaining bottle is operative.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
26-00-04	Wheel Well Fire Detection System "DISP.APPR.REQ'D."	N	1	0	C (O)(M) May be inoperative provided brakes are inspected and are cool to touch PRIOR TO ENGINE START. Repetitive Check Required (Yellow Placard)

MEL ITEM	TAB LOCATION	PLACARD TEXT
26-00-04	Wheel Well Fire Warning Light	Wheel Well Fire Detection System INOP

(O) PROCEDURES

1. After takeoff, avoid the possibility of retracting a wheel overheated from dragging brakes by leaving landing gear extended for 10 minutes. Performance for the two-engine/gear down configuration is better than for the engine-out/gear up configuration.
2. In case of engine failure after V1, performance is the prime consideration. Landing gear should be retracted until obstruction clearance requirement has been met, then extended for a 10 minute cooling period.
3. Pilots must consider the possibility of ice accumulation due to delayed landing gear retraction during winter operations from contaminated runways.
4. Observe max gear down speed until landing gear is retracted.

26-00-04	WHEEL WELL FIRE DETECTION SYSTEM
EFFECTIVITY	All
FLIGHT PLANNING REQUIREMENTS	1. Increase BLOCK FUEL by 800 lbs. 2. Increase trip time by 2 minutes.
NOTES	None
AWABS	Performance corrections have been applied.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF None LANDING None

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(M) PROCEDURES

Deactivate the wheel well fire detection system and verify brakes are cool to the touch prior to engine start.

1. Perform a Compartment Overheat Detection Control (CODC) Module Unit "LOCAL TEST".
2. If the fault code from the CODC "LOCAL TEST" is other than "84", perform the following:
 - a. Remove the two light bulbs from the WHEEL WELL light on the P8 panel.
 - b. Disconnect the fire bell:
 - 1) Remove Flight Control Computer B to get access to the wiring for the fire bell.
 - 2) Disconnect the wires from D742, pin 16 and pin 25 on the E1-4 shelf.
 - 3) Cap and stow the wires.
 - 4) Install Flight Control Computer B.
3. If the fault code from the CODC "LOCAL TEST" is "84", the wheel well fire alarm function is the source of the fault. Perform the following:
 - a. Disconnect the connectors D840 and D842 on both sides of the detection element.
 - b. Perform a second CODC "LOCAL TEST".
 - c. If the second CODC "LOCAL TEST" presents any fault codes, perform the following:
 - 1) Reconnect connectors D840 and D842.
 - 2) Remove the two light bulbs from the WHEEL WELL light on the P8 panel.
 - 3) Disconnect the fire bell:
 - a) Remove Flight Control Computer B to get access to the wiring for the fire bell.
 - b) Disconnect the wires from D742, pin 16 and pin 25 on the E1-4 shelf.
 - c) Cap and stow the wires.
 - d) Install Flight Control Computer B.
 - d. If the second CODC "LOCAL TEST" shows no faults, perform the following:
 - 1) Stow the wiring going into connector D840 and D842 near the detector element.
 - 2) Perform the Overheat/Fire Warning System Test per AMM 26-18-00. All tests should pass except for the wheel well fire function with the disabled element.
4. Just prior to engine start, check that brakes are cool to the touch.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH			
FLIGHT CREW MAY PLACARD			Y	1	0	REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION	REMARKS OR EXCEPTIONS					
26-00-06	APU Fire Shutoff System "DISP.APPR.REQ'D."					(O) Except for ER operations (ETOPS), may be inoperative provided APU is not used.	

MEL ITEM	TAB LOCATION	PLACARD TEXT
26-00-06	1. APU Fire Handle 2. APU Start Switch	1. APU Fire Shutoff System INOP 2. Do NOT Use APU

(O) PROCEDURES

1. Dispatch is not allowed if the APU is required by other procedures.
2. APU is not used.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH			
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY			
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS	
26-00-07	APU Fire Extinguisher System "DISP.APPR.REQ'D."	Y	1	0	C	(O) Except for ER operations (ETOPS), may be inoperative provided APU is not used.	

MEL ITEM	TAB LOCATION	PLACARD TEXT
26-00-07	1. APU Fire Handle 2. APU Start Switch	1. APU Fire Extinguisher System INOP 2. Do NOT Use APU

(O) PROCEDURES

1. Dispatch is not allowed if the APU is required by other procedures.
2. APU is not used.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
26-00-08A	APU FIRE DETECTION SYSTEM Single Loop "DISP.APPR.REQ'D."	Y	1	0	C (O)(M) Except for ER operations (ETOPS), May be inoperative provided APU is not used. Theater Restrictions may apply
26-00-08B	APU DET INOP Light	Y	1	0	C (O) May be inoperative extinguished provided: a) APU fire detection system operates normally, and b) A fire warning test is performed PRIOR TO EACH DEPARTURE. Repetitive Check Required (Yellow Placard)
26-00-08C	External Warning Horn / Warning Light	Y	1	0	C May be inoperative for ground operation provided system is continuously monitored at flight deck control panel.

MEL ITEM	TAB LOCATION	PLACARD TEXT
26-00-08A	1. Fire Warning Test Switch 2. APU Start Switch	1. APU Fire Loop __ INOP 2. Do NOT Use APU
26-00-08B	Fire Warning Test Switch	APU DET INOP Light INOP
26-00-08C	Fire Warning Test Switch	External APU Fire Warning Horn / Warning Light INOP

(O) PROCEDURES

26-00-08A

- Dispatch is not allowed if the APU is required by other procedures.
- APU must not be started.

NOTE 1: The MASTER CAUTION lights and the OVHT/DET system annunciator light do not illuminate during the Fault/Inop test. The MASTER CAUTION lights and the OVHT/DET system annunciator light will illuminate during a system annunciator panel recall.

NOTE 2: When performing the Operations Manual, Volume 1, Supplementary Procedures, Engines APU, Battery Start, the fire warning bell may not sound and the master FIRE WARN lights may not illuminate.

26-00-08B

Refer to the Remarks or Exceptions Column.

NOTE: If the APU DET INOP light does not illuminate but the APU Fire Warning switch illuminates during OVERHEAT/FIRE test, the APU fire detection system is operating normally. The APU can be used if the OVERHEAT/FIRE test is performed before each APU start.

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(M) PROCEDURES

26-00-08A

Pull and secure the FIRE PROTECTION DETECTION APU circuit breaker.

NOTE: To prevent nuisance/false warnings, the FIRE PROTECTION DETECTION APU circuit breaker can be pulled and secured. With this circuit breaker open, the MASTER CAUTION lights and the OVHT/DET system annunciator light do not illuminate during the Fault/Inop test. The APU DET INOP light will remain illuminated and the MASTER CAUTION lights and the OVHT/DET system annunciator light will illuminate during a system annunciator panel recall.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
26-00-09A	Engine / APU Fire Extinguisher Test System (EXT TEST) (Squib Test)	N	3	0	C (M) May be inoperative provided: a) Failure is verified to be in squib test circuit, and b) Squib circuit is checked ONCE EACH FLIGHT DAY. (Log Book Entry Required) Repetitive Check Required (Yellow Placard)
26-00-09B	APU Fire Extinguisher Squib Test Circuits (EXT TEST)	Y	2	1	C (O) May be inoperative provided remaining APU Squib test circuit is verified to operate normally ONCE EACH FLIGHT DAY. (Log Book Entry Required) Repetitive Check Required (Yellow Placard)
26-00-09C	APU Squib Light "DISP.APPR.REQ'D."	Y	1	0	C (O) Except for ER operations (ETOPS), may be inoperative provided APU is not used.

MEL ITEM	TAB LOCATION	PLACARD TEXT
26-00-09A	Fire Warning Test Switch	Engine / APU Fire Extinguisher Squib Test INOP
26-00-09B	APU Squib Light	APU Fire Extinguisher Squib Test Circuits
26-00-09C	1. APU Squib Light 2. APU Start Switch	1. APU Squib Light INOP 2. Do NOT Use APU

(O) PROCEDURES

26-00-09B

- Reference the following Operations Manual, Volume 1, Procedures:
 - Normal Procedures - Amplified Procedures - Preflight Procedure - First Officer.
 - Supplementary Procedures – Electrical - Electrical Power Up.
- Verify remaining APU squib test circuit operates normally once each flight day in the "EXTINGUISHER TEST Switch - Check":
 - EXT TEST switch in position 1 or 2, APU green extinguisher test light illuminates.
 - Release EXT TEST switch, APU green extinguisher test light extinguishes.

26-00-09C

- Dispatch is not allowed if the APU is required by other procedures.
- APU is not used.

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(M) PROCEDURES

26-00-09A

1. Fabricate a squib test lamp with pigtail leads terminating in size #8 lugs or alligator clips, using lamp P/N 387 (28 Volt, 40 Milliamp) in suitable holder.

CAUTION: Restrict personnel from fire bottle area while testing. Limit squib current to 50 milliamperes maximum.

2. Verify that the squib circuit is operative as follows:
 - a. For Engines:
 - 1) Open the two / four engine fire extinguisher circuit breakers on the P6-2 Panel as identified in the ENGINE SQUIB TEST TABLE on the following page.
 - 2) Gain access to the P6-2 circuit breaker panel.
 - 3) Connect the test lamp across the terminals of the appropriate circuit breaker for the inoperative test light circuit to be tested.
 - 4) Pull out the Engine Fire Handle Switch for the suspect system by depressing the override button. Rotate the Engine Fire Handle to one side to confirm squib circuit continuity.
 - 5) Test lamp illuminated indicates intact squib.
 - 6) Remove test lamp from the circuit breaker and close all of the circuit breakers opened in Step 1.
 - b. For APU:
 - 1) Open the APU fire extinguisher circuit breaker on the P6-2 panel.
 - 2) Gain access to the P6-2 circuit breaker panel.
 - 3) Connect the test lamp across the terminals of the APU fire extinguisher circuit breaker for the inoperative test light circuit to be tested.
 - 4) Pull out the APU Fire Handle Switch for the suspect system by depressing the override button. Rotate the APU Fire Handle to one side to confirm squib circuit continuity.
 - 5) Test lamp illuminated indicates intact squib.
 - 6) Remove test lamp from the circuit breaker and close the circuit breaker opened in Step 1.

Dual Outlet Dual Cartridge Bottle

BOTTLE	SQUIB NO.	SQUIB PLUG NO.	C / B OPEN and TEST LAMP CONNECTION	
Left	1	D582, Pin 4	Across C296	Left Ext Bottle
Left	1	D582, Pin 6	Across C1021	Left Ext Bottle
Left	2	D1322, Pin 4	Across C296	Left Ext Bottle
Left	2	D1322, Pin 6	Across C1021	Left Ext Bottle
Right	1	D584, Pin 4	Across C297	Right Ext Bottle
Right	1	D584, Pin 6	Across C1022	Right Ext Bottle
Right	2	D1324, Pin 4	Across C297	Right Ext Bottle
Right	2	D1324, Pin 6	Across C1022	Right Ext Bottle

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS	
FIRE WARNING BELL						
26-00-10A	Bell Cutout Switch (Overheat / Fire Protection Panel)	Y	1	0	C	May be inoperative provided: a) Bell Cutout Function of both Master Fire Warning lights operates normally, and b) Fire Warning Bell operates normally.
26-00-10B	Bell Cutout Function of Master Fire Warning Light	Y	2	1	C	May be inoperative provided: a) Bell Cutout Switch operates normally, and b) Fire Warning Bell operates normally.

MEL ITEM	TAB LOCATION	PLACARD TEXT
26-00-10A	Fire Warning Bell Cutout Switch	Fire Warning Bell Cutout Switch INOP
26-00-10B	Master Fire Warning Light	Fire Warning Bell Cutout Function of Master Fire Warning Light INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
26-00-12	Wing-Body Overheat Detector System (Left) "DISP.APPR.REQ'D."	Y	1	0	C (O) Except for ER operations (ETOPS), may be inoperative provided: a) Right pack and engine bleed is used for pressurization only, b) Use of APU is prohibited except for engine start, c) Isolation valve and left engine bleed valve remain closed for all operations except engine start, d) Aircraft is not operated in known or forecast icing conditions, and e) Limit altitude to FL250.

MEL ITEM	TAB LOCATION	PLACARD TEXT
26-00-12	Left WING-BODY OVERHEAT Light	Left Wing-Body Overheat Detector System INOP

(O) PROCEDURES

- Limit altitude to FL 250.
- Refer to MEL 21-00-01A or B (O) PROCEDURES, as appropriate, for information when the left pack is not used.
- Except for engine start, do not use the APU for pneumatic air supply and/or electrical power.
- After engine start, make sure that:
 - ISOLATION VALVE switch is set to CLOSE
 - APU switch is set to OFF
 - Engine No. 1 BLEED air switch is set to OFF.
 - L PACK switch is set to OFF
 - R PACK set as desired.
- Do not dispatch into known or forecast icing conditions.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
26-00-13	Wing-Body Overheat Detector System (Right) "DISP.APPR.REQ'D."	Y	1	0	C (O) Except for ER operations (ETOPS), may be inoperative provided: a) Left pack and left engine or APU bleed air is used for pressurization only, b) Isolation valve and right engine bleed valve remain closed for all operations except engine start, c) Aircraft is not operated in known or forecast icing conditions, and d) Limit altitude to FL250.

MEL ITEM	TAB LOCATION	PLACARD TEXT
26-00-13	Right WING-BODY OVERHEAT Light	Right Wing-Body Overheat Detector System INOP

(O) PROCEDURES

- Limit altitude to FL 250.
- Refer to MEL 21-00-01A or B (O) PROCEDURES, as appropriate, for information when the right pack is not used.
- After engine start, make sure that:
 - ISOLATION VALVE switch is set to CLOSE.
 - Engine No. 2 BLEED air switch is set to OFF.
 - R PACK switch is set to OFF
 - L PACK as desired.
- Do not dispatch into known icing or forecast icing conditions.
- Increased air flow will occur when flaps are extended (takeoff and landing) if the APU is used instead of engine bleed to supply bleed air to the left pack.
- With the L PACK switch in AUTO, the pack operates in the high flow mode.
- Do not set the L PACK to HIGH for takeoff and landing with the engine bleed on.
- Do not use APU bleed air at altitudes above 17,000 feet.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
26-00-15A	Lavatory Fire Extinguisher Systems	Y	-	0	C For each lavatory, lavatory fire extinguisher system may be inoperative provided lavatory smoke detector system operates normally.
26-00-15B	Lavatory Fire Extinguisher Systems "DISP.APPR.REQ'D."	Y	-	0	C (O)(M) For each lavatory, lavatory fire extinguisher system may be inoperative provided: a) Lavatory waste receptacle is empty, b) Associated lavatory door is locked closed and placarded, "INOPERATIVE - DO NOT ENTER", and c) Lavatory is used only by crewmembers. NOTE: These provisos are not intended to prohibit lavatory use or inspections by crewmembers.

MEL ITEM	TAB LOCATION	PLACARD TEXT
26-00-15A	Logbook	___ Lavatory Fire Extinguisher System(s) INOP
26-00-15B	Logbook	___ Lavatory Fire Extinguisher System(s) INOP

(O) PROCEDURES

26-00-15B

Make sure that the associated lavatory is kept locked and is not entered except for use or inspection by crew members.

(M) PROCEDURES

26-00-15B

For an inoperative lavatory smoke detection system:

1. Empty the waste receptacles.
2. Lift the flap above the OCCUPIED/VACANT indicator and slide the lock to OCCUPIED.
3. Placard door "INOPERATIVE - DO NOT ENTER".

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
26-00-16A	Lavatory Smoke Detection Systems "DISP.APPR.REQ'D."	Y	-	0	C (O)(M) For each lavatory, lavatory smoke detection system may be inoperative provided: a) Lavatory waste receptacle is empty, b) Associated lavatory door is locked closed and placarded, "INOPERATIVE - DO NOT ENTER", and c) Lavatory is used only by crewmembers. NOTE: These provisos are not intended to prohibit lavatory use or inspections by crewmembers.
26-00-16B	Lavatory Smoke Detector TEST Switch on Cabin Attendants Panel	N	1	0	C (M) May be inoperative provided each lavatory smoke detector is verified to operate normally.
26-00-16C	Lavatory Smoke Detector SELF TEST Switch	N	-	0	C (M) May be inoperative provided associated lavatory smoke detector is verified to operate normally.

MEL ITEM	TAB LOCATION	PLACARD TEXT
26-00-16A	Logbook	___ Lavatory Smoke Detection System(s) INOP
26-00-16B	Logbook	Lavatory Smoke Detector TEST Switch on Cabin Attendants Panel INOP
26-00-16C	Logbook	___ Lavatory Smoke Detector Self Test Switch INOP

(O) PROCEDURES

26-00-16A

Make sure that the associated lavatory is kept locked and is not entered except for use or inspection by crew members.

(M) PROCEDURES

26-00-16A

For an inoperative lavatory smoke detection system:

1. Empty the waste receptacles.
2. Lift the flap above the OCCUPIED/VACANT indicator and slide the lock to OCCUPIED.
3. Placard door "INOPERATIVE - DO NOT ENTER".

26-00-16B

For each smoke detector, do the lavatory smoke detection system test (AMM 26-14-00/501).

26-00-16C

For the associated smoke detector, do the lavatory smoke detection system test (AMM 26-14-00/501).

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
26-00-18	Wing-Body Overheat Test System (Flight Deck Test Feature)	N	1	0	C (M) May be inoperative provided system integrity is verified by an acceptable procedure ONCE EACH FLIGHT DAY. (Log Book Entry Required) Repetitive Check Required (Yellow Placard)

MEL ITEM	TAB LOCATION	PLACARD TEXT
26-00-18	Wing-Body Overheat Test Switch	Wing-Body Overheat Test System INOP

(M) PROCEDURES

Verify the Wing-Body Overheat test system integrity as follows:

1. Apply heat from an appropriate heat source to an operable detector element in the left wing-body overheat detection system and in the right wing-body overheat detection system. The substitute test heat device must not produce heat greater than 450°F (232°C). This temperature limit should be observed in event fuel vapors exist in the area.
2. When a detector element in the right system is heated, observe that these lights come on:
 - a. Left WING-BODY OVERHEAT light on the Air Conditioning Panel (P5)
 - b. The AIR COND light on the glareshield P7.
 - c. The MASTER CAUTION lights.
3. When a detector element in the right system is heated, observe that these lights come on:
 - a. Right WING-BODY OVERHEAT light on the Air Conditioning Panel (P5)
 - b. The AIR COND light on the glareshield P7.
 - c. The MASTER CAUTION lights.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
26-00-19A	Lower Cargo Compartment Fire Detection Systems / Suppression Systems "DISP.APPR.REQ'D."	Y	2	0	C (O) May be inoperative provided associated cargo compartment remains empty, or is verified to contain only empty cargo handling equipment, ballast, and/or flyaway kits (see MEL Instructions).
26-00-19B	Fwd/ Aft Detection Loops	Y	4	2	C (O) One loop (A or B) in each compartment may be inoperative provided opposite loop is checked to operate normally.
26-00-19C	Extinguisher Bottle No. 2 "DISP.APPR.REQ'D."	N	1	0	C (O)(M) Except for ER operations (ETOPS), may be inoperative with cargo carried in compartment provided flight remains within 60 minutes of landing at a suitable airport.
26-00-19D	DISCH Light	N	1	0	C (M) May be inoperative provided associated extinguisher bottle(s) is verified to have an adequate charge ONCE EACH FLIGHT DAY. (Log Book Entry Required) Repetitive Check Required (Yellow Placard)
26-00-19E	EXT Lights (FWD and AFT)	N	2	0	C (M) May be inoperative provided: a) Failure is verified to be in squib light circuit, and b) Squib circuit is verified to operate normally ONCE EACH FLIGHT DAY. (Log Book Entry Required) Repetitive Check Required (Yellow Placard)
26-00-19F	DETECTOR FAULT Light	Y	1	0	C (O) May be inoperative provided the cargo fire TEST switch is used to check for faults in the cargo fire detection and suppression system before each flight.

MEL ITEM	TAB LOCATION	PLACARD TEXT
26-00-19A	Cargo Fire Detection Panel	Cargo Compartment Fire Detection / Suppression Systems INOP
26-00-19B	Affected Cargo Fire Detector Loop Select Switch	____ Cargo Fire Detection Loops INOP
26-00-19C	Cargo Fire Detection Panel	Extinguisher Bottle No. 2 INOP
26-00-19D	Cargo Fire DISCH Light	Cargo Fire Suppression DISCH Light INOP
26-00-19E	Affected Cargo Fire EXT Light(s)	____ Cargo Fire Suppression EXT Light(s) INOP
26-00-19F	Near DETECTOR FAULT Light	Cargo Smoke DETECTOR FAULT Light INOP

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NOTE: One detector in either detector loop (A or B) in each cargo compartment may be inoperative with no loading restrictions. MDM loading restrictions apply if the Cargo Electronics Unit (CEU) is inoperative or both loops (A and B) in a cargo compartment have one or more detectors inoperative.

(O) PROCEDURES

26-00-19A

Refer to Remarks or Exceptions Column

26-00-19B

NOTE: If a Cargo Fire Panel FWD or AFT warning light fails to illuminate during system test, one or more detection loops for the associated compartment is inoperative.

To determine specific inoperative loop(s):

1. Position the Cargo Fire Panel FWD and AFT DET SELECT Switch to A.
2. Press and hold Cargo Fire Panel TEST switch.
3. Verify that the following indications occur within 4 seconds:
 - a. Fire Bell sounds.
 - b. Both Master FIRE WARN lights illuminate.
 - c. Cargo Fire Panel FWD and AFT warning lights illuminate.
 - d. Cargo Fire Panel DISCH light illuminates.
 - e. Cargo Fire Panel EXT FWD and EXT AFT lights illuminate.
4. If one or more smoke detectors in LOOP A is inoperative, the Cargo Fire Panel DETECTOR FAULT Light will illuminate and the associated FWD or AFT warning light will remain extinguished for the cargo compartment with the inoperative detector.
5. Release the Cargo Fire Panel TEST switch. The DETECTOR FAULT light remains illuminated if a loop failure is detected in either the forward or aft cargo compartment. Otherwise all indications will clear within half a second.
6. Position Cargo Fire Panel FWD and AFT DET SELECT switch to B and repeat the above test (Steps 2 through 5).
7. Position Cargo Fire Panel DET SELECT switch(es) as require for flight. One detection loop (A or B) must operate normally in each cargo compartment or cargo loading restrictions must be observed.

26-00-19C

Refer to Remarks or Exceptions Column

NOTE: With Extinguisher Bottle No.2 inoperative, fire suppression capability is reduced to 60 minutes, airplane must remain within 60 minutes of a suitable airport.

26-00-19F

Before each flight, do a test of the cargo fire detection and suppression system using the TEST switch on the cargo fire panel. Refer to Operations Manual Volume 1, Supplementary Procedures for test.

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(M) PROCEDURES

26-00-19C

Do these steps to prevent anomalies in the indication of the DISCH light during operation and the EXT FWD test light during system test.

1. Disconnect, cap and stow electrical connector D12816 on the Extinguisher Bottle No. 2 pressure switch.
2. Disconnect electrical connectors D12820 and D12818 from the Extinguisher Bottle No. 2 squibs.
3. Install a jumper across pins 1 and 2 on both connectors. Cap and stow connectors.

26-00-19D

Do these steps for an inoperative DISCH light circuit to make sure that the fire extinguisher bottle has an adequate charge:

1. Build a test lamp (28 Volts DC/40 milliamps) with pigtail leads terminating in pin contacts in a suitable holder.
NOTE: Any suitable lamp (P/N 387) or digital multimeter can be used.
2. Remove the Cargo Fire Panel.
3. Disconnect the electrical connector D12760 from the panel.
4. Connect the test lamp or digital multimeter between the airplane side of connector D12760, Pin 48 (+28 volt source for Bottle No. 1) and Pin 28 (pressure switch ground).
5. For airplanes with Extinguisher Bottle No. 2:
 - a. Connect test lamp or digital multimeter between the airplane side of connector D12760, Pin 45 (+28 volt source for Bottle No. 2) and Pin 28 (pressure switch ground).
6. If the test lamp remains extinguished or the digital multimeter indicates an open circuit the associated bottle has an adequate charge.
7. Remove the test lamp.
8. Reconnect the electrical connector D12760 to the panel.
9. Install the Cargo Fire Panel.

26-00-19E

Do these steps for an inoperative EXT light circuit to verify normal operation of associated squib circuit:

1. Build a test lamp (28 Volts DC/40 milliamps) with pigtail leads terminating in pin contacts in a suitable holder.
 - a. Any suitable lamp (P/N 387) can be used.
2. Remove the Cargo Fire Panel.
3. Disconnect the electrical connector D12760 from the panel.

CAUTION: TO PREVENT INJURY, RESTRICT PERSONNEL FROM EXTINGUISHER BOTTLE AREA DURING SQUIB CIRCUIT TEST. LIMIT CURRENT TO 40 MILLIAMPS MAXIMUM DURING TEST. USE TEST LAMP (28 VOLT, 40 MILLIAMPS ONLY). DO NOT USE A MULTIMETER.

CONTINUED NEXT PAGE

4. Use the table below to determine which pin numbers to connect between the test lamp and the airplane side of connector D12760.
 - a. If the test lamp illuminates, the squib circuit is intact.

CARGO FIRE BOTTLE SQUIB TEST TABLE

TEST LAMP CONNECTION

Bottle	Squib	Squib Plug No.	Pin No. (+28 Vdc Source)	Pin No. (Ground Path)
1	FWD	D12794	D12760, Pin 48	D12760, Pin 26
1	AFT	D12796	D12760, Pin 48	D12760, Pin 24

2	FWD	D12818	D12760, Pin 45	D12760, Pin 12
2	AFT	D12820	D12760, Pin 45	D12760, Pin 23

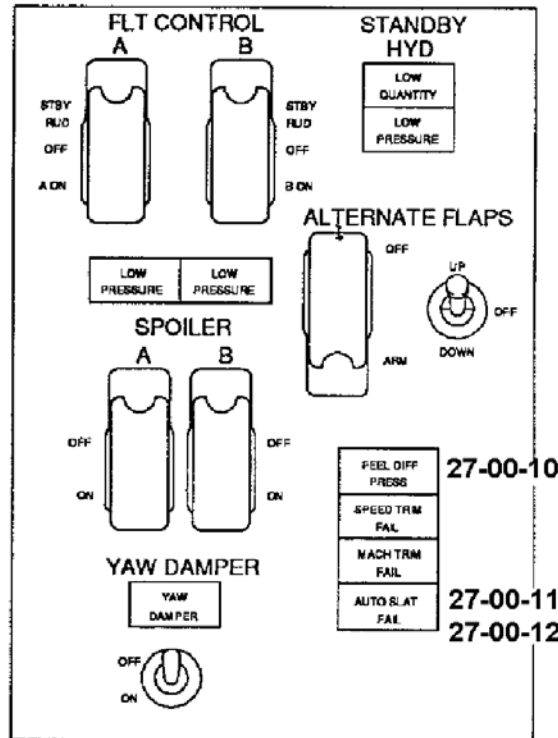
5. Remove the test lamp.
6. Reconnect electrical connector D12760 to the panel.
7. Install the Cargo Fire Panel.

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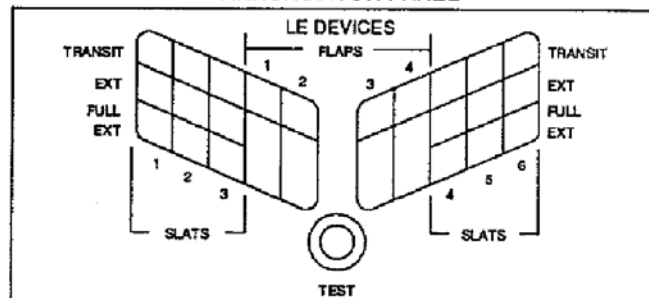
FLIGHT CONTROLS



LE DEVICE POSITION LIGHTS

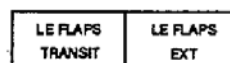
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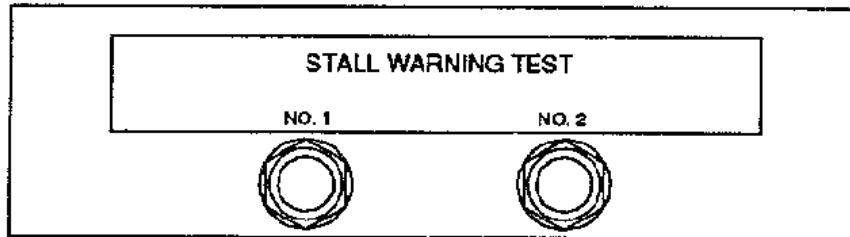
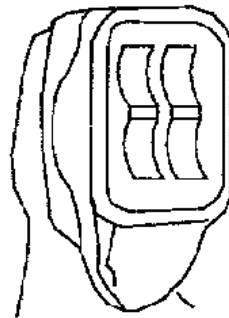
ANNUNCIATOR PANEL



27-00-04

FORWARD PANEL



STALL WARNING SYSTEMS**27-00-13****CONTROL WHEEL****STAB TRIM
SWITCHES**

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
27-00-04A	Leading Edge Flap/Slat Position Light Systems	Y	2	1	C Aft overhead panel LE DEVICES Annunciator panel may be inoperative.
27-00-04B	Leading Edge Flap/Slat Position Light Systems Forward Panel Lights "DISP.APPR.REQ'D."	Y	2	1	C (M) Forward panel lights may be inoperative provided: a) LE DEVICES Annunciator panel operates normally and is used to verify proper LED position, and b) A placard is installed to indicate proper position for flap configuration in use.
27-00-04C	Leading Edge Slat Indications (-800) "DISP.APPR.REQ'D."	Y	8	7	C (O)(M) Indication lights on forward panel, and in addition, indication lights for one leading edge slat, except for slats 3, 4, 5 and 6 on overhead annunciator panel may be inoperative provided: a) Normal operation is verified by flight crew PRIOR TO EACH TAKEOFF AND LANDING, b) Maximum speed is limited to 300 KIAS at/below FL 200 or .65 Mach above FL 200, c) All remaining indications on overhead annunciator panel operate normally, and d) Stall warning operation of both systems is verified to operate normally. Repetitive Check Required (Yellow Placard)
27-00-04D	Leading Edge Slat Indications (-700) "DISP.APPR.REQ'D."	Y	8	7	C (O)(M) Indication lights on forward panel, and in addition, indication lights for one leading edge slat, except for slats 4 and 5, on overhead annunciator panel may be inoperative provided: a) Normal operation is verified by flight crew PRIOR TO EACH TAKEOFF AND LANDING, b) Maximum speed is limited to 300 KIAS at/below FL 200 or .65 Mach above FL 200, c) All remaining indications on overhead annunciator panel operate normally, and d) Stall warning operation of both systems is verified to operate normally. Repetitive Check Required (Yellow Placard)

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
	(CONTINUED)				
27-00-04E	Leading Edge Slat Indications (-900ER) "DISP.APPR.REQ'D."	Y	8	7	C
					(O)(M) Indication lights on forward panel, and in addition, indication lights for one leading edge slat, except for slats 2, 3, 4, 5, 6, and 7 on overhead annunciator panel may be inoperative provided: a) Normal operation is verified by flight crew PRIOR TO EACH TAKEOFF AND LANDING, b) Maximum speed is limited to 300 KIAS at/below FL 200 or .65 Mach above FL 200, c) All remaining indications on overhead annunciator panel operate normally, and d) Stall warning operation of both systems is verified to operate normally.
					Repetitive Check Required (Yellow Placard)

MEL ITEM	TAB LOCATION	PLACARD TEXT
27-00-04A	Affected Panel Light System	_____ Panel Light System INOP
27-00-04B	Affected LED Annunciator Panels	_____ Leading Edge Slat Indications INOP
27-00-04C	Affected LED Annunciator Panels	_____ Leading Edge Slat Indications INOP
27-00-04D	Affected LED Annunciator Panels	_____ Leading Edge Slat Indications INOP
27-00-04E	Affected LED Annunciator Panels	_____ Leading Edge Slat Indications INOP

(O) PROCEDURES

27-00-04C, 27-00-04D, 27-00-04E

With forward position indicator lights inoperative and one SLATS annunciator panel light inoperative:

1. Verify leading edge slat position for the inoperative indication before each takeoff and landing.
2. Limit airspeed:
 - a. At or below FL 200, limit airspeed to 300 KIAS.
 - b. Above FL 200, limit airspeed to 0.65 Mach.

NOTE 1: Refer to ODM, Flight Planning Section, Buffet Onset Boundary Speeds chart for maintaining minimum maneuvering speeds.

NOTE 2: VNAV will limit the speed target to 230 KIAS unless speed intervention is used.

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(M) PROCEDURES

NOTE: For the -700, slat indications for slats 4 and 5 are not allowed to be inoperative due to the inability to visually verify their position from the flight deck. For the -800, slat indications for slats 3, 4, 5 and 6 are not allowed to be inoperative due to the inability to visually verify their position from the flight deck. For the -900ER, slat indications for slats 2, 3, 4, 5, 6 and 7 are not allowed to be inoperative due to the inability to visually verify their position from the flight deck.

27-00-04B

With forward position indicator lights inoperative:

1. Cycle the flaps.
2. Verify that the LE DEVICES annunciator panel (P5) operates normally during flap extension and retraction.

NOTE: Dispatch is not allowed if the LE DEVICES annunciator panel FLAP TRANSIT lights do not illuminate properly and the forward panel light(s) are inoperative.

3. Remove the bulbs from the associated forward position indicator light(s) on the center instrument panel, P2.
4. Use this data to make a placard and put it adjacent to the LE DEVICES annunciator panel:

737-700 and 737-800
Flap positions 1 thru 5 All slats in EXT position LE flaps extended Flap positions 10 thru 40 All slats in FULL EXT position LE flaps extended

737-900ER
Flap positions 1 thru 25 All slats in EXT position LE flaps extended Flap positions 30 and 40 All slats in FULL EXT Position LE flaps extended

27-00-04C, 27-00-04D, 27-00-04E

With forward position indicator lights inoperative and one SLATS annunciator panel light inoperative:

1. Cycle the flaps.
2. Verify that the remaining LE DEVICES annunciator panel (P5) lights operate normally during flap extension and retraction.

NOTE 1: If an annunciator panel TRANSIT light fails to illuminate while the corresponding device is in motion, then this light must be considered inoperative.

NOTE 2: This MEL item is applicable to inoperative leading edge SLAT indications and not the leading edge FLAP indications on the LE DEVICES annunciator panel. Dispatch is not allowed if the LE DEVICES annunciator panel FLAP lights do not illuminate properly and the forward panel light(s) are inoperative.

3. Remove the bulbs from the associated forward position indicator light(s) on the center instrument panel, P2.

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4. Use this data to make a placard and put it adjacent to the annunciator panel:

737-700 and 737-800	737-900ER
Flap positions 1 thru 5 All slats in EXT position LE flaps extended Flap positions 10 thru 40 All slats in FULL EXT position LE flaps extended	Flap positions 1 thru 25 All slats in EXT position LE flaps extended Flap positions 30 and 40 All slats in FULL EXT Position LE flaps extended

5. Determine which TE flap position(s) causes the inoperative slat indication.

NOTE: If faulty indication is intermittent or cannot be replicated on the ground, use FSEU BITE to determine if an FSEU input has been recently faulty. If FSEU BITE (Flight Leg 0) indicates fault message codes 27-81200 through 27-81223 or 27-81225 through 27-81236, pull and secure the Stall Warning Asymmetry Mode circuit breaker on the P18-2 Panel. If FSEU BITE does not yield one of these fault codes because the fault indication light(s) flashes ON/OFF for an instant such that the fault does not latch, and the applicable slat can be confirmed to be stationary in the position where the intermittent indication was observed, then pull and secure the Stall Warning Asymmetry Mode circuit breaker.

6. Set flaps to the position which produces the faulty indication.
 7. Verify that the leading edge and trailing edge devices are in the correct position.
 8. Verify normal operation of both Stall Warning Systems:

NOTE: For -700 and -800 aircraft, if the inoperative slat indication occurs at more than one flap position, repeat the procedure to verify normal operation of both Stall Warning Systems at Flaps 0, Flaps 1 and Flaps 10.
 For -900ER aircraft, if the inoperative slat indication occurs at more than one flap position, repeat the procedure to verify normal operation of both Stall Warning Systems at Flaps 0, Flaps 1 and Flaps 30.

- Verify that hydraulic system B pressure is between 2900 and 3100 psi.
 - Push and hold STALL WARNING TEST NO. 1 and NO. 2 switch on the stall warning test module (P5 Overhead Panel).
 - Check that the control column stick shakers operate normally.
 - If both stick shakers fail to operate normally, pull and secure the Stall Warning Asymmetry Mode circuit breaker on the P18-2 Panel if not already accomplished in step 5 above, and then repeat test in steps B and C.
9. If the stick shaker tests are normal the airplane can be dispatched.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
27-00-07	Auto Speed Brake System "DISP.APPR.REQ'D."	Y	1	0	C (O)(M) May be inoperative provided: a) System is deactivated, b) Performance corrections are applied, and c) Speed Brake Load Alleviation System (if installed) is considered inop and deferred per MEL 27-00-20.

MEL ITEM	TAB LOCATION	PLACARD TEXT
27-00-07	SPEED BRAKE ARMED Light	Auto Speed Brake System INOP

(O) PROCEDURES

Speedbrakes must be manually deployed for a rejected takeoff (RTO).

1. Prior to takeoff, ensure that the speed brake lever is in the full down detent.
2. Extend speedbrakes manually for rejected takeoff or landing.
 - a. For rejected takeoff:
 - 1) Simultaneously close the thrust levers, disengage the autothrottles and apply maximum manual wheel brakes or verify operation of RTO autobrakes.
 - 2) Manually raise speed brake lever.
 - 3) Apply the maximum amount of reverse thrust consistent with conditions.
 - b. For landing, use the SPEED BRAKE DO NOT ARM non-normal checklist.
3. The autobrakes may not disarm when the speed brake lever is stowed. Auto brakes can be disarmed by positioning the AUTO BRAKE select switch to OFF, applying brakes manually or advancing the thrust levers.

27-00-07	AUTO SPEED BRAKE SYSTEM
EFFECTIVITY	-700/-800
FLIGHT PLANNING REQUIREMENTS	None
NOTES	None
AWABS	Performance corrections have been applied.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF None LANDING Use RWY ALLOWABLE LANDING WT for "MANUAL SPEED BRAKES" in ALM – Airport Section.

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27-00-07	AUTO SPEED BRAKE SYSTEM
EFFECTIVITY	-900ER
FLIGHT PLANNING REQUIREMENTS	None
NOTES	None
AWABS	Performance corrections have been applied.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF Reduce RATOW by 1,600 lbs. LANDING Reduce RWY ALLOWABLE LANDING WT by 15,000 lbs.

(M) PROCEDURES

1. Verify manual speed brake operation.

NOTE: For -900ER, extend flaps prior to moving speed brake lever beyond the FLIGHT DETENT position.

2. Pull and secure the FLIGHT CONTROL AUTO SPEED BRAKE circuit breaker on the P6 Panel.
3. For ships 3601-3610, 3701-3743, and all -900 aircraft, the Speed Brake Load Alleviation System is considered inoperative and deferred per [MEL 27-00-20](#).

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
27-00-08A	Flap Load Limiter System (-800) "DISP.APPR.REQ'D."	Y	1	0	C (O) May be inoperative provided: a) Flaps are not extended beyond Flaps 30 at gross weights above 93,995 lbs.(42,635 kg), and b) Flaps are not extended beyond Flaps 15 at gross weights above 104,875 lbs. (47,570 kg).
27-00-08B	Flap Load Limiter System (-700) "DISP.APPR.REQ'D."	Y	1	0	C (O) May be inoperative provided: a) Flaps are not extended beyond Flaps 30 at gross weights above 93,480 lb (42,401 kg), and b) Flaps are not extended beyond Flaps 15 at gross weights above 104,403 lb (47,356 kg).
27-00-08C	Flap Load Limter System (-900ER) "DISP.APPR.REQ'D"	Y	1	0	C (O) May be inoperative provided: a) Flaps are not extended beyond Flaps 30 at landing gross weights above 105,800 lbs, b) Flaps are not extended beyond Flaps 15 at landing gross weights above 113,400 lbs, c) Flaps are not extended beyond Flaps 10 at landing gross weights above 135,600 lbs, d) Flaps are not extended beyond Flaps 15 at takeoff gross weights above 155,600 lbs, and e) Flaps are not extended beyond Flaps 5 at takeoff gross weights above 176,000 lbs.

MEL ITEM	TAB LOCATION	PLACARD TEXT
27-00-08A	Near Flap Position Indicator	Flap Load Limiter System INOP
27-00-08B	Near Flap Position Indicator	Flap Load Limiter System INOP
27-00-08C	Near Flap Position Indicator	Flap Load Limiter System INOP

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(O) PROCEDURES

27-00-08A

27-00-08A FLAP LOAD LIMITER SYSTEM	
EFFECTIVITY	-800
FLIGHT PLANNING REQUIREMENTS	None
NOTES	None
AWABS	Performance corrections have been applied.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF None LANDING – Flaps 40 Structural Landing Weight is restricted to 93,995 lbs. LANDING – Flaps 30 Structural Landing Weight is restricted to 104,875 lbs.

27-00-08B

27-00-08B FLAP LOAD LIMITER SYSTEM	
EFFECTIVITY	-700
FLIGHT PLANNING REQUIREMENTS	None
NOTES	None
AWABS	Performance corrections have been applied.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF None LANDING – Flaps 40 Structural Landing Weight is restricted to 93,480 lbs. LANDING – Flaps 30 Structural Landing Weight is restricted to 104,403 lbs.

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27-00-08C

27-00-08C	FLAP LOAD LIMITER SYSTEM
EFFECTIVITY	-900ER
FLIGHT PLANNING REQUIREMENTS	None
NOTES	None
AWABS	Performance corrections have been applied.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF – Flaps 25 Structural Takeoff Weight is restricted to 155,600 lbs. TAKEOFF – Flaps 10 and Flaps 15 Structural Takeoff Weight is restricted to 176,000 lbs. LANDING – Flaps 40 Structural Landing Weight is restricted to 105,800 lbs. LANDING – Flaps 30 Structural Landing Weight is restricted to 113,400 lbs. LANDING – Flaps 15 Structural Landing Weight is restricted to 135,600 lbs.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
27-00-09	Control Wheel Trim Switches "DISP.APPR.REQ'D."	Y	2	1	B One may be inoperative on non-flying pilots side provided: a) Stabilizer trim system operates normally on flying pilots side, and b) Approach minimums do not require their use, <u>HUD used for approach</u> CAT II/III – Requires Captains switch operative <u>HUD not used for approach</u> CAT II/III – Requires One operative

MEL ITEM	TAB LOCATION	PLACARD TEXT
27-00-09	Near Associated Stabilizer Trim Position Placard on Control Stand	____ Control Wheel Trim Switch INOP

OPERATIONS NOTE

Consideration must be given for operations with low time pilots. Refer to Airway Manual, Procedures, Section 3.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
27-00-10	FEEL DIFF PRESS Light System	N	1	0	B (M) May be inoperative provided: a) Elevator feel system is verified to operate normally, and b) Verification is repeated ONCE EACH FLIGHT DAY. (Log Book Entry Required) Repetitive Check Required (Yellow Placard)

MEL ITEM	TAB LOCATION	PLACARD TEXT
27-00-10	Elevator FEEL DIFF PRESS Light	Elevator FEEL DIFF PRESS Light INOP

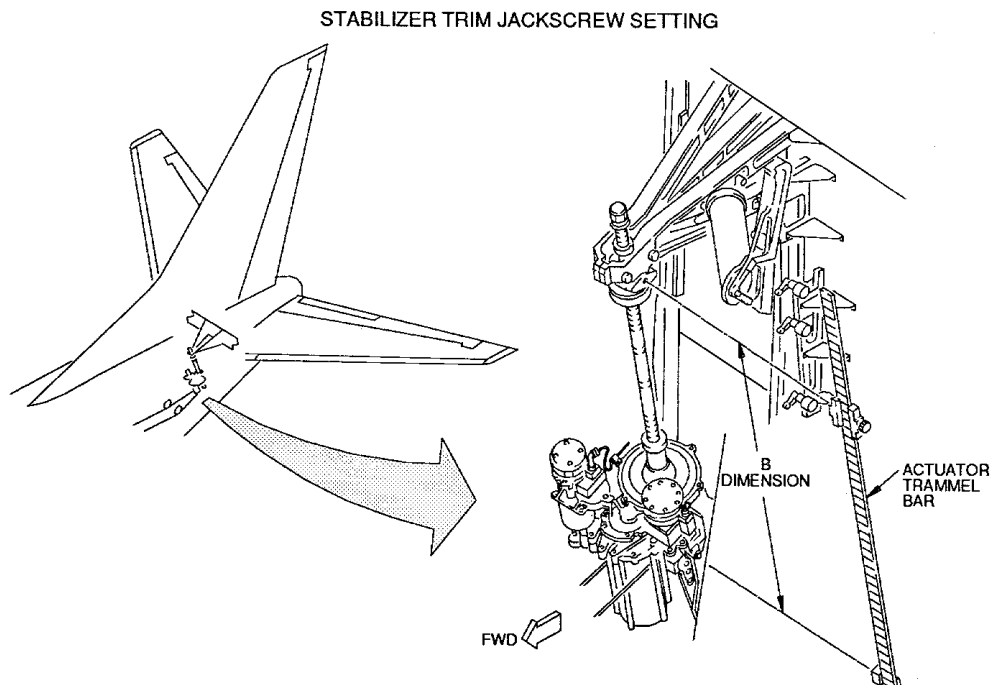
(M) PROCEDURES

Verify that the feel system is operative:

1. On -900ER aircraft only, pull ELEVATOR FEEL LIMIT circuit breaker on the P6-2 panel.
2. Pressurize the elevator hydraulic systems A and B.

CAUTION: MAKE SURE PERSONNEL ARE CLEAR OF THE HORIZONTAL TAIL AND ARE AWARE THAT HYDRAULIC SYSTEMS ARE PRESSURIZED.

3. Use the stabilizer trim switches to set the stabilizer to 4 units of trim.
4. Set the FLT CONTROL A and B switches to OFF.



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5. Verify that the horizontal stabilizer "B" dimension is 39.89 ± 0.01 inches.
6. Set Mach trim actuator at null position.
7. Check for pressure leakage in feel pitot system as follows:

- a. Apply a seal to the drain hole in each feel pitot tube on the vertical fin.
- b. Remove the drain plugs from the system A and B pitot lines.

NOTE: The pitot lines are located below the elevator feel computer.

- c. Connect the pressure gage lines from the air pressure regulator to the drain holes of the pitot lines.

CAUTION: DO NOT RAISE TEST PRESSURE ABOVE 5.0 PSI (437 KNOTS) AT ANY TIME DURING TEST.

- d. Connect the pressure lines from air pressure regulator to both pitot probes on the vertical fin.
 - e. Pressurize the pitot system to 4.8 ± 0.1 psi (429 ± 4 knots).
 - f. Turn the shutoff valve in the air pressure regulator to off.
 - g. Make sure the pressure does not decrease more than 0.3 psi (12 knots) during a 2-minute period.
 - h. Reduce the pitot pressure to zero.
8. Set the FLT CONTROL A and B switches to ON.
 9. Pressurize the pitot system to 2.47 ± 0.05 psi (315 ± 3 knots).

CAUTION: DO NOT RAISE TEST PRESSURE ABOVE 5.0 PSI (437 KNOTS) AT ANY TIME DURING TEST.

10. Apply masking tape on the tail cone along the direction of the right elevator trailing edge travel.

NOTE: Elevator travel measuring tool may be used in lieu of tape method.

11. Move the captain's control column lightly to put the elevator system in the neutral position.

NOTE: Make sure that the control columns are not disturbed from this position during the next step.

12. Mark the actual elevator trailing edge neutral position on the masking tape.

13. Set FLT CONTROL B switch to OFF and leave FLT CONTROL A switch in the ON position.

14. Move the captain's control column slowly with a push/pull type spring scale applied to the center of the control wheel to the elevator positions as shown in the table below.

NOTE: Make sure the force to hold the control column is as shown in the table below.

ELEVATOR POSITION	COLUMN FORCE
1.20 ± 0.05 inches up	38.0 ± 4.0 lbs
1.20 ± 0.05 inches down	38.0 ± 4.0 lbs

15. Position FLT CONTROL A switch to OFF and FLT CONTROL B switch to ON.
16. Do step 14 again.

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17. Restore the airplane to its usual condition:

- a. Ensure that all tools used during testing are removed.
- b. Remove all masking tape.
- c. Remove seals from the drain holes in each vertical fin pitot probe.
- d. Remove the pressure gage lines from systems A and B drain lines.
- e. Install the drain plugs to the systems A and B drain lines.
- f. Remove regulated air pressure lines from both vertical fin pitot probes.
- g. Close all circuit breakers opened during testing. On -900ER aircraft only, close ELEVATOR FEEL LIMIT circuit breaker on the P6-2 panel.
- h. Restore airplane to normal hydraulic configuration
- i. Remove electrical power if no longer required.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
27-00-11	Auto Slat Fail Light System	N	1	0	C
					(M) May be inoperative provided: a) Auto slat systems are verified to operate normally, and b) Verification is repeated every two flight days. (Log Book Entry Required) Repetitive Check Required (Yellow Placard)

MEL ITEM	TAB LOCATION	PLACARD TEXT
27-00-11	AUTO SLAT FAIL Light	Auto Slat Fail Light INOP

(M) PROCEDURES

Verify that the Stall Management Yaw Damper Computers (SMYD) located on the E3 Electronic Shelf do not have any faults stored.

1. Open the electronic equipment access door.
2. Do the EXISTING FAULTS test on the SMYD BITE:
 - a. Push the ON/OFF switch.
 - b. Push the YES switch when the display shows EXISTING FAULTS? Make sure the display shows NO FAULTS.
 - c. Push the MENU switch.
 - d. Push the ON/OFF switch.
3. Close the electronic equipment access door.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
27-00-12	Auto Slat Systems	Y	2	1 C	(O) May be inoperative provided: a) Remaining auto slat system is checked to operate normally, and b) Auto slat fail light operates normally.

MEL ITEM	TAB LOCATION	PLACARD TEXT
27-00-12	AUTO SLAT FAIL Light	____ Auto Slat Fail System INOP

(O) PROCEDURES

Isolate Inoperative Auto Slat System:

1. Pull the AUTO SLAT NO. 1 DC circuit breaker for the Number 1 system, located on the P6-2 Panel.
2. Verify that the remaining auto slat system and AUTO SLAT FAIL light operate normally as follows:
 - a. Press and release a system annunciator panel on the lightshield. AUTO SLAT FAIL light, FLT CONT annunciator and MASTER CAUTION light will illuminate.
 - b. Press and release a MASTER CAUTION light on the lightshield. AUTO SLAT FAIL light, FLT CONT annunciator and MASTER CAUTION light will extinguish.
 - c. Illumination of the affected lights when recalled and extinguishing when reset verifies that remaining auto slat system and the AUTO SLAT FAIL light operate normally.
 - 1) If Number 2 system operates normally, proceed to step 3 to determine whether system Number 1 is inoperative.
 - 2) If Number 2 is verified to be inoperative, reset AUTO SLAT NO. 1 DC circuit breaker, pull and secure the AUTO SLAT NO. 2 DC circuit breaker, and placard accordingly. Do not proceed to step 3.
3. Pull the AUTO SLAT NO. 2 DC circuit breaker for the Number 2 system, located on the P6-2 Panel.
4. Verify that the remaining auto slat system and AUTO SLAT FAIL light operate normally as follows:
 - a. Press and release a system annunciator panel on the lightshield. AUTO SLAT FAIL light, FLT CONT annunciator and MASTER CAUTION light will illuminate.
 - b. Press and release a MASTER CAUTION light on the lightshield. AUTO SLAT FAIL light, FLT CONT annunciator and MASTER CAUTION light will extinguish.
 - c. Illumination of the affected lights when recalled and extinguishing when reset verifies that remaining auto slat system and the AUTO SLAT FAIL light operate normally.
 - 1) If Number 1 is verified to be inoperative, reset the AUTO SLAT NO. 2 DC circuit breaker, pull and secure the AUTO SLAT NO. 1 DC circuit breaker, and placard accordingly.



NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
27-00-13A	Stall Warning System (-800 without speed brake load alleviation) "DISP.APPR.REQ'D."	N	2	1	C (M) May be inoperative provided remaining system is verified to operate normally PRIOR TO EACH DEPARTURE. Repetitive Check Required (Yellow Placard)
27-00-13B	Stall Warning System (-700, -800, -900ER with speed brake load alleviation) "DISP.APPR.REQ'D."	N	2	1	C (M) No. 1 SMYD may be inoperative provided remaining system is verified to operate normally PRIOR TO EACH DEPARTURE. Repetitive Check Required (Yellow Placard)
27-00-13C	Stall Warning System (-700) "DISP.APPR.REQ'D."	N	2	1	C (O)(M) No. 2 SMYD may be inoperative provided: a) Remaining stall warning system is verified to operate normally PRIOR TO EACH DEPARTURE, b) Defer speedbrake load alleviation (if equipped) per MEL item 27-00-20, c) Speedbrake handle forces are normal from full down position to full up position, d) Airspeed does not exceed 265 KIAS when inflight gross weight is in excess of 143,000 lb. (64,863 kg.), and e) Severe turbulent air penetration speed is 265 KIAS or 0.76 Mach, whichever is lower, when inflight gross weight is in excess of 143,000 lb. (64,863 kg.). Repetitive Check Required (Yellow Placard) -OR-
		N	2	1	C (O)(M) No. 2 SMYD may be inoperative provided: a) Remaining stall warning system is verified to operate normally PRIOR TO EACH DEPARTURE, b) Defer speedbrake load alleviation (if equipped) per MEL item 27-00-20, c) Speedbrake handle forces are normal from full down position to full up position, and d) Takeoff weight does not exceed 144,500 lb. (65,544 kg.). Repetitive Check Required (Yellow Placard)

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NUMBER INSTALLED			NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD			REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION			REMARKS OR EXCEPTIONS
27-00-13D	Stall Warning System (-800 with speed brake load alleviation) "DISP.APPR.REQ'D."	N 2	1	C (O)(M) No. 2 SMYD may be inoperative provided: a) Remaining stall warning system is verified to operate normally PRIOR TO EACH DEPARTURE, b) Defer speedbrake load alleviation (if equipped) per MEL item 27-00-20, c) Speedbrake handle forces are normal from full down position to full up position, d) Airspeed does not exceed 265 KIAS when inflight gross weight is in excess of 155,000 lb. (70,306 kg.), and e) Severe turbulent air penetration speed is 265 KIAS or 0.76 Mach, whichever is lower, when inflight gross weight is in excess of 155,000 lb. (70,306 kg.). Repetitive Check Required (Yellow Placard) -OR-
		N 2	1	C (O)(M) No. 2 SMYD may be inoperative provided: a) Remaining stall warning system is verified to operate normally PRIOR TO EACH DEPARTURE, b) Defer speedbrake load alleviation (if equipped) per MEL item 27-00-20, c) Speedbrake handle forces are normal from full down position to full up position, and d) Takeoff weight does not exceed 156,500 lb. (70,987 kg.). Repetitive Check Required (Yellow Placard)

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
27-00-13E	Stall Warning System (-900ER) "DISP.APPR.REQ'D."	N	2	1	C (O)(M) No. 2 SMYD may be inoperative provided: a) Remaining stall warning system is verified to operate normally PRIOR TO EACH DEPARTURE, b) Defer speedbrake load alleviation (if equipped) per MEL item 27-00-20, c) Speedbrake handle forces are normal from full down position to full up position, d) Airspeed does not exceed 265 KIAS when inflight gross weight is in excess of 170,000 lb. (77,110 kg.), and e) Severe turbulent air penetration speed is 265 KIAS or 0.76 Mach, whichever is lower, when inflight gross weight is in excess of 170,000 lb. (77,110 kg.). Repetitive Check Required (Yellow Placard) -OR-
		N	2	1	C (O)(M) No. 2 SMYD may be inoperative provided: a) Remaining stall warning system is verified to operate normally PRIOR TO EACH DEPARTURE, b) Defer speedbrake load alleviation (if equipped) per MEL item 27-00-20, c) Speedbrake handle forces are normal from full down position to full up position, and d) Takeoff weight does not exceed 171,500 lb. (77,791 kg.). Repetitive Check Required (Yellow Placard)

MEL ITEM	TAB LOCATION	PLACARD TEXT
27-00-13A	Associated Stall Warning Test Switch	____ Stall Warning System INOP
27-00-13B	Associated Stall Warning Test Switch	____ Stall Warning System INOP
27-00-13C	Associated Stall Warning Test Switch	____ Stall Warning System INOP
27-00-13D	Associated Stall Warning Test Switch	____ Stall Warning System INOP
27-00-13E	Associated Stall Warning Test Switch	____ Stall Warning System INOP

CONTINUED NEXT PAGE

(O) PROCEDURES

27-00-13C

27-00-13C STALL WARNING SYSTEMS *USE WITH AIRSPEED LIMITATION*	
EFFECTIVITY	-700
FLIGHT PLANNING REQUIREMENTS	Airspeed does not exceed 265 KIAS when inflight gross weight is in excess of 143,000 lbs.
NOTES	None
AWABS	Airspeed does not exceed 265 KIAS when inflight gross weight is in excess of 143,000 lbs.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF None
	LANDING None

27-00-13C STALL WARNING SYSTEMS *USE WITH TAKEOFF WEIGHT LIMITATION*	
EFFECTIVITY	-700
FLIGHT PLANNING REQUIREMENTS	None
NOTES	None
AWABS	Performance corrections have been applied.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF None
	LANDING None
	OTHER CORRECTIONS (Manual Weight & Balance Worksheet only) Enter Structural Takeoff Weight of 144,500 lbs. under Aircraft Weight Limitations.

CONTINUED NEXT PAGE

27-00-13D

27-00-13D STALL WARNING SYSTEMS *USE WITH AIRSPEED LIMITATION*	
EFFECTIVITY	-800 with Speed Brake Load Alleviation System
FLIGHT PLANNING REQUIREMENTS	Airspeed does not exceed 265 KIAS when inflight gross weight is in excess of 155,000 lbs.
NOTES	None
AWABS	Airspeed does not exceed 265 KIAS when inflight gross weight is in excess of 155,000 lbs.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF None
	LANDING None

27-00-13D STALL WARNING SYSTEMS *USE WITH TAKEOFF WEIGHT LIMITATION*	
EFFECTIVITY	-800 with Speed Brake Load Alleviation System
FLIGHT PLANNING REQUIREMENTS	None
NOTES	None
AWABS	Performance corrections have been applied.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF None
	LANDING None
	OTHER CORRECTIONS (Manual Weight & Balance Worksheet only) Enter Structural Takeoff Weight of 156,500 lbs. under Aircraft Weight Limitations.

CONTINUED NEXT PAGE

27-00-13E

27-00-13E STALL WARNING SYSTEMS *USE WITH AIRSPEED LIMITATION*	
EFFECTIVITY	-900ER
FLIGHT PLANNING REQUIREMENTS	Airspeed does not exceed 265 KIAS when inflight gross weight is in excess of 170,000 lbs.
NOTES	None
AWABS	Airspeed does not exceed 265 KIAS when inflight gross weight is in excess of 170,000 lbs.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF None
	LANDING None

27-00-13E STALL WARNING SYSTEMS *USE WITH TAKEOFF WEIGHT LIMITATION*	
EFFECTIVITY	-900ER
FLIGHT PLANNING REQUIREMENTS	None
NOTES	None
AWABS	Performance corrections have been applied.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF None
	LANDING None
OTHER CORRECTIONS (Manual Weight & Balance Worksheet only) Enter Structural Takeoff Weight of 171,500 lbs. under Aircraft Weight Limitations.	

(M) PROCEDURES

27-00-13A, 27-00-13B, 27-00-13C, 27-00-13D, 27-00-13E

1. Deactivate the inoperative stall warning system:
 - a. For stall warning system no. 1:
 - 1) Pull and secure P18-2 Panel circuit breaker STICK SHAKER LEFT.
 - 2) If the Captain's PLI, lower barber pole or lower amber band symbols show erroneous data, pull and secure P18-2 Panel circuit breaker SMYD-1 SNSR EXC AC.

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- b. For stall warning system no. 2:
 - 1) Pull and secure P6-1 Panel circuit breaker STICK SHAKER RIGHT.
 - 2) If the First Officer's PLI, lower barber pole or lower amber band symbols show erroneous data, pull and secure P6-1 Panel circuit breaker SMYD-2 SNSR EXC AC.
2. For speedbrake load alleviation system equipped aircraft, No. 2 SMYD relief only:
Pull and secure the circuit breaker AUTOSTOW for the speedbrake on the P6-2 Panel.

NOTE: The speedbrake load alleviation system is also inoperative when dispatching with stall warning system No. 2 inop (defer per [MEL item 27-00-20](#)).
3. Opening either SMYD SNSR EXC AC circuit breakers deactivates the following systems. Defer each applicable system:
 - a. The associated Auto Slat System per [MEL item 27-00-12](#).
 - b. The associated PLI per [MEL item 34-00-38](#).
 - c. The associated Upper / Lower Barber Poles, Upper / Lower Amber Bands per [MEL item 34-00-02A](#).
 - d. The associated Mach Trim System per [MEL item 22-00-05B](#).
 - e. The associated Autopilot System per [MEL item 22-00-01](#).
 - f. The associated Flight Director System per [MEL item 34-00-12](#).
 - g. With either SMYD SNSR EXC AC circuit breaker open, the PSEU will indicate a dispatchable fault per [MEL item 32-00-17A](#).
4. If circuit breaker SMYD-1 SNSR EXC AC was pulled in step 1, it will deactivate the following systems. Defer each applicable system:
 - a. Yaw damper per [MEL item 22-00-03A](#),
 - b. Heads Ups Display System (HUD) see [MEL item 34-00-44](#) will lose maximum and minimum operation speeds, stick shaker speed and stick shaker angle of attack indications.
5. PRIOR TO EACH DEPARTURE, verify normal operation of the remaining Stall Warning System:
 - a. Press and hold the applicable STALL WARNING TEST switch on the stall warning test module (P5-18).
 - b. Verify control column stick shaker operates normally.
 - c. With one Stall Warning System operating normally, the airplane may be dispatched.
6. If both stall warning systems fail to test, accomplish the following:
 - a. If Hydraulic System B is not pressurized, pressurize the system and test the stall warning systems.
 - b. If Hydraulic System B pressure is normal and both systems do not test properly:
 - 1) Pull and secure the STALL WARN ASYM MODE circuit breaker on the P18-2 Panel and repeat the stall warning test.
 - 2) If one system operates normally, the airplane may be dispatched.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD					REPAIR CATEGORY
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
27-00-14	Rudder Trim Indicator	Y	1	0	C (O) May be inoperative provided: a) Rudder trim actuator is checked to operate normally, and b) Rudder trim is checked to be centered PRIOR TO EACH DEPARTURE. Repetitive Check Required (Yellow Placard)

MEL ITEM	TAB LOCATION	PLACARD TEXT
27-00-14	Rudder Trim Indicator	Rudder Trim Indicator INOP

(O) PROCEDURES

1. Pressurize rudder hydraulic systems A and B.
2. Do a test of the rudder trim actuator:
 - a. Turn the rudder trim knob to the NOSE LEFT position.
 - b. Observe that the captain's left rudder pedal moves forward and right rudder pedal moves aft.
 - c. Turn the rudder trim knob to the NOSE RIGHT position.
 - d. Observe that captain's left rudder pedal moves aft and right rudder pedal moves forward.
3. Do a test of the rudder trim centering:
 - a. Turn the rudder trim knob in appropriate direction until the captain's rudder pedals are aligned with each other.
 - b. Make sure that the rudder is centered (in the neutral position). If not, use rudder trim until rudder is centered.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
27-00-16	SPEED BRAKES EXTENDED Light	Y	1	0	C (M) May be inoperative provided speedbrakes are verified to operate normally.

MEL ITEM	TAB LOCATION	PLACARD TEXT
27-00-16	SPEED BRAKES EXTENDED Light	SPEED BRAKES EXTENDED Light INOP

(M) PROCEDURES

1. Hydraulic Power on.
2. Verify that wheel chocks are in place.
3. Place the SPEED BRAKE lever in the DOWN position.
4. Visually verify that flight and ground spoilers are all down.
5. Place SPEED BRAKE lever in the FLIGHT DETENT.
6. Visually verify that ground spoilers and flight spoilers deploy.
7. Place SPEED BRAKE lever in the DOWN position.
8. Visually verify that flight and ground spoilers are all down.
9. Verify that stabilizer trim is in the green band.
10. Position flaps to a takeoff position.
11. Release the parking brake.
12. Advance both thrust levers beyond 60 degrees.
13. Verify that Takeoff Configuration Warning Horn does not sound.
14. Retard thrust levers to idle.
15. Return airplane to its normal configuration, i.e., set parking brake and retract flaps.
16. If the SPEEDBRAKES EXTENDED light remains illuminated while on the ground, extinguish it by removing the light bulb OR cover the light.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS
27-00-17	Wheel to Rudder Interconnect System (WTRIS)	Y	1	0	C	

MEL ITEM	TAB LOCATION	PLACARD TEXT
27-00-17	Flight Control A/B Hydraulic Switches	Wheel to Rudder Interconnect System INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
27-00-20A	Speed Brake Load Alleviation System (-700) "DISP.APPR.REQ'D."	Y	1	0	C (O)(M) May be inoperative provided : a) Speedbrake handle forces are normal from the full down to the full up position, b) Airspeed does not exceed 265 KIAS when the inflight gross weight is in excess of 143,000 lb. (64,863 kg.), c) Severe turbulent air penetration speed is 265 KIAS or 0.76 Mach, whichever is lower, when the inflight gross weight is in excess of 143,000 lb. (64,863 kg.), and d) Automatic Speed Brake System is considered inoperative and deferred per MEL 27-00-07 . OR
		Y	1	0	C (O)(M) May be inoperative provided: a) Speedbrake handle forces are normal from the full down to the full up position, and b) Takeoff weight does not exceed 143,500 lb. (65,090 kg.).
27-00-20B	Speed Brake Load Alleviation System (-800) "DISP.APPR.REQ'D."	Y	1	0	C (O)(M) May be inoperative provided : a) Speedbrake handle forces are normal from the full down to the full up position, b) Airspeed does not exceed 265 KIAS when the inflight gross weight is in excess of 155,000 lb. (70,306 kg.), c) Severe turbulent air penetration speed is 265 KIAS or 0.76 Mach, whichever is lower, when the inflight gross weight is in excess of 155,000 lb. (70,306 kg.), and d) Automatic Speed Brake System is considered inoperative and deferred per MEL 27-00-07 . OR
		Y	1	0	C (O)(M) May be inoperative provided: a) Speedbrake handle forces are normal from the full down to the full up position, and b) Takeoff weight does not exceed 155,500 lb. (70,533 kg.).

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
27-00-20C	Speed Brake Load Alleviation System (-900ER) "DISP.APPR.REQ'D."	Y	1	0	C (O)(M) May be inoperative provided : a) Speedbrake handle forces are normal from the full down to the full up position, b) Airspeed does not exceed 265 KIAS when the inflight gross weight is in excess of 170,000 lb. (77,110 kg.), c) Severe turbulent air penetration speed is 265 KIAS or 0.76 Mach, whichever is lower, when the inflight gross weight is in excess of 170,000 lb. (77,110 kg.), and d) Automatic Speed Brake System is considered inoperative and deferred per MEL 27-00-07 . OR
		Y	1	0	C (O)(M) May be inoperative provided: a) Speedbrake handle forces are normal from the full down to the full up position, and b) Takeoff weight does not exceed 170,500 lb. (77,337 kg.).

MEL ITEM	TAB LOCATION	PLACARD TEXT
27-00-20A	Spoiler Handle	Speed Brake Load Alleviation System INOP
27-00-20B	Spoiler Handle	Speed Brake Load Alleviation System INOP
27-00-20C	Spoiler Handle	Speed Brake Load Alleviation System INOP

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(O) PROCEDURES

27-00-20A, 27-00-20B, 27-00-20C

Refer to [MEL 27-00-07 Operations Procedure](#) for procedures applicable to the automatic speed brake system if necessary.

27-00-20A SPEED BRAKE LOAD ALLEVIATION SYSTEM *USE WITH AIRSPEED LIMITATION*	
EFFECTIVITY	-700
FLIGHT PLANNING REQUIREMENTS	Airspeed does not exceed 265 KIAS when inflight gross weight is in excess of 143,000 lbs.
NOTES	None
AWABS	Airspeed does not exceed 265 KIAS when inflight gross weight is in excess of 143,000 lbs.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF None
	LANDING None

27-00-20A SPEED BRAKE LOAD ALLEVIATION SYSTEM *USE WITH TAKEOFF WEIGHT LIMITATION*	
EFFECTIVITY	-700
FLIGHT PLANNING REQUIREMENTS	None
NOTES	None
AWABS	Performance corrections have been applied.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF None
	LANDING None
	OTHER CORRECTIONS (Manual Weight & Balance Worksheet only) Enter Structural Takeoff Weight of 143,500 lbs. under Aircraft Weight Limitations.

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27-00-20B SPEED BRAKE LOAD ALLEVIATION SYSTEM *USE WITH AIRSPEED LIMITATION*	
EFFECTIVITY	-800
FLIGHT PLANNING REQUIREMENTS	Airspeed does not exceed 265 KIAS when inflight gross weight is in excess of 155,000 lbs.
NOTES	None
AWABS	Airspeed does not exceed 265 KIAS when inflight gross weight is in excess of 155,000 lbs.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF None
	LANDING None

27-00-20B SPEED BRAKE LOAD ALLEVIATION SYSTEM *USE WITH TAKEOFF WEIGHT LIMITATION*	
EFFECTIVITY	-800
FLIGHT PLANNING REQUIREMENTS	None
NOTES	None
AWABS	Performance corrections have been applied.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF None
	LANDING None OTHER CORRECTIONS (Manual Weight & Balance Worksheet only) Enter Structural Takeoff Weight of 155,500 lbs. under Aircraft Weight Limitations.

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27-00-20C SPEED BRAKE LOAD ALLEVIATION SYSTEM *USE WITH AIRSPEED LIMITATION*	
EFFECTIVITY	-900ER
FLIGHT PLANNING REQUIREMENTS	Airspeed does not exceed 265 KIAS when inflight gross weight is in excess of 170,000 lbs.
NOTES	None
AWABS	Airspeed does not exceed 265 KIAS when inflight gross weight is in excess of 170,000 lbs.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF None
	LANDING None

27-00-20C SPEED BRAKE LOAD ALLEVIATION SYSTEM *USE WITH TAKEOFF WEIGHT LIMITATION*	
EFFECTIVITY	-900ER
FLIGHT PLANNING REQUIREMENTS	None
NOTES	None
AWABS	Performance corrections have been applied.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF None
	LANDING None
	OTHER CORRECTIONS (Manual Weight & Balance Worksheet only) Enter Structural Takeoff Weight of 170,500 lbs. under Aircraft Weight Limitations.

(M) PROCEDURES

27-00-20A, 27-00-20B, 27-00-20C

The Speedbrake Load Alleviation System may be inoperative due to mechanical failures, electrical failures (including failure of the system actuator in the center control stand), or due to the SMYD in the #2 position generating an autostow fault. In any of these cases, pull and secure the circuit breaker for speed brake AUTOSTOW, on the P6-2 panel.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
27-00-21	STBY RUD ON Light	Y	1	0	C (O)(M) May be inoperative provided: a) Rudder is verified to operate normally on hydraulic system A and B independently, b) Standby hydraulic pump is verified to operate normally, and c) Rudder force fight monitor is deactivated.

MEL ITEM	TAB LOCATION	PLACARD TEXT
27-00-21	Near STBY RUD ON Light	STBY RUD ON Light INOP

(O) PROCEDURES

- Verify that the rudder operates normal on hydraulic system A and B:
 - Pressurize hydraulic systems A and B.
 - Set FLT CONTROL A switch ON and FLT CONTROL B switch OFF.
 - Verify normal rudder pedal forces by pushing captain's left rudder pedal forward (while holding tiller to prevent tire scrub) until it touches the stop and hold.
 - Have ground observer confirm that rudder travels left.
 - Release left rudder pedal and verify normal rudder pedal forces by pushing the captain's right rudder pedal forward (while holding tiller to prevent tire scrub) until it touches the stop and hold.
 - Have ground observer confirm the rudder travels right.
 - Release captain's right rudder pedal.
 - Have ground observer confirm that rudder returns to neutral.
 - Set FLT CONTROL B switch ON and FLT CONTROL A switch OFF.
 - Repeat steps C through H above.
- Verify that the standby hydraulic pump is operating normally by either:
 - Verifying that the standby hydraulic pump can be heard turning on then either FLT CONTROL A or B switches are placed in the STBY RUD position.
OR
 - With one FLT CONTROL switch placed in the STBY RUD position (other FLT CONTROL switch OFF), repeat steps 1 C through 1 H above.
- Return FLT CONTROL switches to normal position for flight.

(M) PROCEDURES

Open and collar the FORCE FIGHT MON circuit breaker on the P6-2 panel.

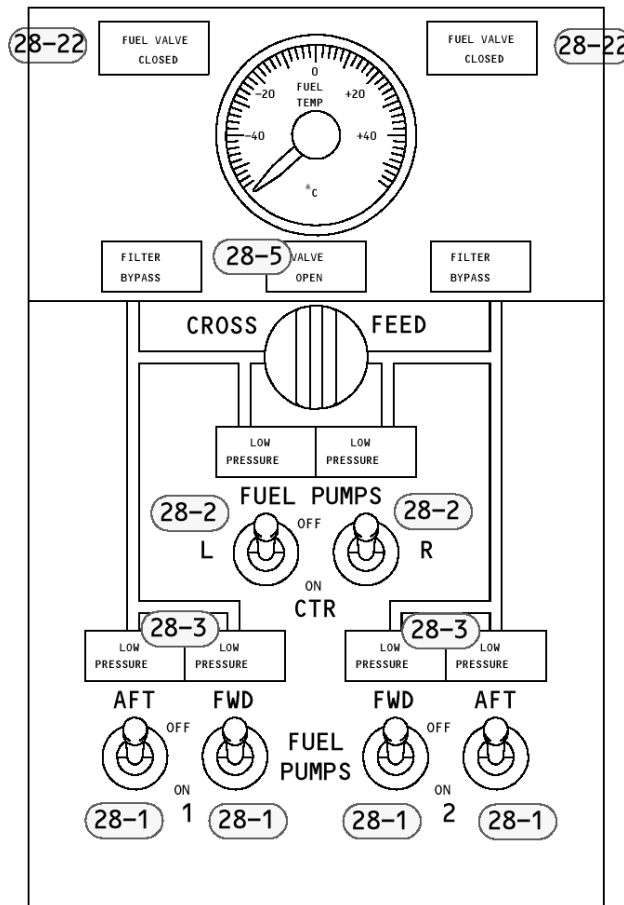
NOTE: If the STBY RUD ON light is inoperative ON, verify light extinguishes after pulling circuit breaker.

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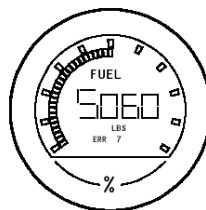
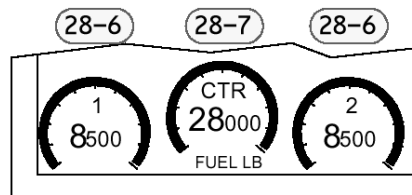
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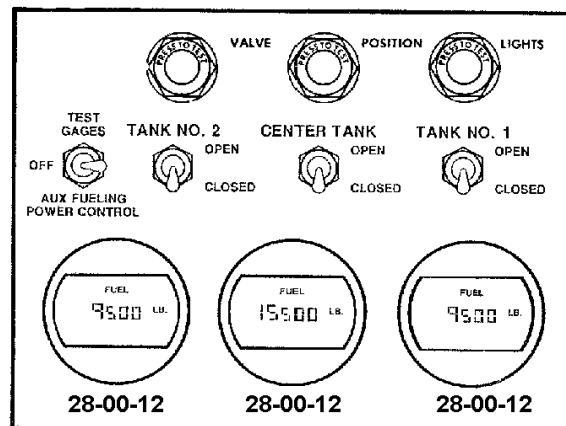
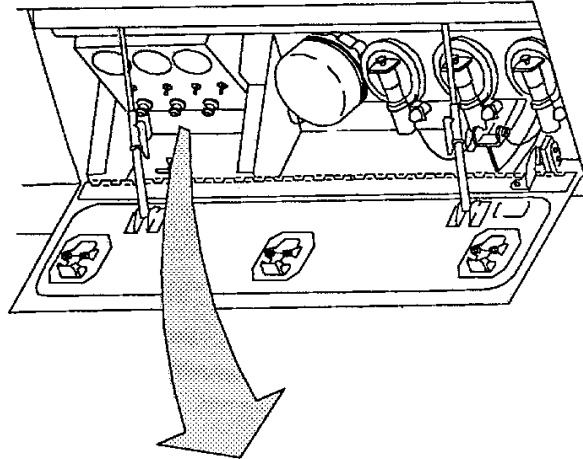
FUEL CONTROL PANELS



FUEL QUANTITY INDICATIONS



**PRESSURE FUELING SYSTEM
(RIGHT WING)**



EXTERNAL FUELING PANEL

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
28-00-01A	Fuel Boost Pumps (Main Tanks) Aft Pumps "DISP.APPR.REQ'D."	N	2	1	C (O)(M) Except for ER operations (ETOPS) beyond 120 minutes, may be inoperative provided: a) Both main tank forward pumps operates normally, b) At start of takeoff, fuel quantity in associated tank is not less 7,500 lb., c) A minimum fuel quantity of 2,500 lb. is maintained in associated tank and fuel is considered unusable, and d) Boost pump is deactivated. NOTE: The B737-700, -800, & -900ER AOM Vol 1 requires lateral imbalance between main tanks 1 and 2 to be zero.
28-00-01B	Fuel Boost Pumps (Main Tanks) Forward Pumps "DISP.APPR.REQ'D."	N	2	1	C (O)(M) Except for ER operations (ETOPS) beyond 120 minutes, may be inoperative provided: a) Both main tank aft pumps operates normally, b) At start of takeoff, fuel quantity in associated tank is not less 4,800 lb., c) A minimum fuel quantity of 1,800 lb. is maintained in associated tank and fuel is considered unusable, and d) Boost pump is deactivated. NOTE: The B737-700, -800, & -900ER AOM requires scheduling an equal amount of unusable fuel in each wing.

MEL ITEM	TAB LOCATION	PLACARD TEXT
28-00-01A	Associated Fuel Boost Pump Switch	____ Main Tank AFT Fuel Boost Pump INOP
28-00-01B	Associated Fuel Boost Pump Switch	____ Main Tank FWD Fuel Boost Pump INOP

(O) PROCEDURES

28-00-01A, 28-00-01B

1. Turn the affected boost pump switch (overhead panel) OFF.

NOTE: Flight Manual Limitations concerning lateral fuel imbalance must be observed.

2. The minimum fuel requirements for affected boost pump will assure that the operative boost pump and suction feed inlet remain submerged during rotation to high nose up attitudes during takeoff or go around. In the event the second boost pump in a tank fails, the engine will operate satisfactorily on suction feed. With both tank 1 boost pumps inoperative, APU operation may become unreliable at altitudes above 25,000 feet.

NOTE: At high altitude, thrust deterioration or engine flameout may occur without fuel pump boost pressure.

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(M) PROCEDURES

28-00-01A, 28-00-01B

Pull and secure the affected BOOST PUMP circuit breaker on the P91/P92 Distribution Panel located in the E & E Compartment.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
28-00-02A	Fuel Boost Pumps (Center Tank) "DISP.APPR.REQ'D."	N	2	1	C (M) May be inoperative provided: a) Tank remains empty, and b) Boost pump is deactivated.
28-00-02B	Fuel Boost Pumps (Center Tank) "DISP.APPR.REQ'D."	N	2	1	C (O)(M) May be inoperative with center tank fueled provided: a) Fuel quantity remaining in main wing tanks is adequate to reach a suitable airport if remaining center pump fails at any time, b) Maximum zero fuel weight limit is reduced by center tank fuel weight, c) Effect on aircraft balance, in event fuel cannot be used is accounted for, d) LOW PRESS light of operating center fuel tank pump operates normally, e) Center tank quantity indication operates normally, and f) Boost pump is deactivated.
28-00-02C	Fuel Boost Pumps (Center Tank) "DISP.APPR.REQ'D."	N	2	0	C (M) May be inoperative provided: a) Center tank quantity indication operates normally, b) Center tank remains empty or fuel is included as part of zero fuel weight and fuel must be considered unusable, and c) Boost pump is deactivated. NOTE: Fuel loading limitations must be observed.
28-00-02D	Universal Fault Interrupter (UFI) (For aircraft with EA 12-468684-03) "DISP.APPR.REQ'D."	N	2	0	C (O)(M) May be inoperative provided associated center tank boost pump is considered inoperative and deferred per MEL 28-00-02 .

MEL ITEM	TAB LOCATION	PLACARD TEXT
28-00-02A	Associated Fuel Boost Pump Switch	____ Center Tank Fuel Boost Pump INOP
28-00-02B	Associated Fuel Boost Pump Switch	____ Center Tank Fuel Boost Pump INOP
28-00-02C	Associated Fuel Boost Pump Switch	____ Center Tank Fuel Boost Pump(s) INOP
28-00-02D	Associated Fuel Boost Pump Switch	____ Universal Fault Interrupter INOP

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(O) PROCEDURES

28-00-02B

1. Verify that the zero fuel weight and balance limitations have been accounted for.
2. Adjust the zero fuel weight of the airplane by including the weight of center fuel tank, or adjust the maximum zero fuel weight by subtracting the weight of center tank fuel.
3. Fuel usage takeoff condition:
 - a. Position the CROSSFEED selector to the closed position.
 - b. Position the AFT and FWD main tank FUEL PUMP switches to ON for all operating main pumps.
4. Verify that the operating center tank FUEL PUMP switch is in the OFF position.
NOTE: Fuel CONFIG alert may be displayed with fuel in the center tank.
5. After takeoff:
 - a. If the center tank contains usable fuel, position the operating center tank FUEL PUMP switch to ON.
 - b. Position the CROSSFEED selector to the open position.
6. For aircraft NOT equipped with an Auto Shutoff System or Universal Fault Interrupter System:
 - a. Both center tank fuel pumps must be selected OFF when center tank fuel quantity reaches approximately 1,000 pounds during climb and cruise.
 - b. Both center tank fuel pumps must be selected OFF when center tank fuel quantity reaches approximately 3,000 pounds during descent and landing.
7. When the center tank LOW PRESSURE light illuminates:
 - a. Position the operating center tank FUEL PUMP switch to OFF.
 - b. Position the CROSSFEED selector to the closed position.

NOTE: Prior to the center tank LOW PRESSURE light illuminating, a fuel imbalance between the main tanks may be indicated as a result of differences in fuel pump output pressures when operating with Climb, cruise, descent and landing:

28-00-02D

If one center tank fuel boost pump is considered inoperative, use MEL 28-00-02B (O) procedures.

(M) PROCEDURES

28-00-02A, 28-00-02B, 28-00-02C

1. Position the associated CTR FUEL switch OFF.
2. Pull and secure the associated center tank fuel pump circuit breaker on the Power Distribution Panel P91 or P92.

28-00-02D

Defer the center tank fuel boost pump(s) per MEL 28-00-02B or 28-00-02C as needed.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
	FUEL BOOST PUMP LOW PRESSURE WARNING LIGHT SYSTEMS				
28-00-03A	Main Tank Pump Low Pressure Warning Light Systems "DISP.APPR.REQ'D."	N	4	3	C (O)(M) May be inoperative provided: a) Associated fuel pump is considered inoperative and deferred per MEL 28-00-01, and b) MASTER CAUTION lights and FUEL system annunciator light are verified to operate normally.
28-00-03B	Main Tank Pump Lights	Y	4	3	C May be inoperative provided: a) Both pumps in associated tank operate normally, and b) Associated tank quantity indicator operates normally.
28-00-03C	Main Tank Pump Lights "DISP.APPR.REQ'D."	Y	4	3	C May be inoperative for an associated inoperative pump.
28-00-03D	Center Tank Pump Low Pressure Warning Light Systems "DISP.APPR.REQ'D."	N	2	1	C (O)(M) May be inoperative provided: a) Associated fuel pump is considered inoperative and deferred per MEL 28-00-02, and b) MASTER CAUTION lights and FUEL system annunciator light are verified to operate normally.
28-00-03E	Center Tank Pump Low Pressure Warning Light Systems "DISP.APPR.REQ'D."	Y	2	0	C May be inoperative provided: a) Center tank fuel is not required for flight, b) Center tank fuel boost pumps are turned off, c) Center tank remains empty or maximum zero fuel weight calculations are adjusted by weight of center tank fuel, and d) Effect on aircraft balance is accounted for.
28-00-03F	Center Tank Pump Lights	N	2	0	C (O)(M) May be inoperative provided: a) Center tank fuel quantity indicator operates normally, and b) MASTER CAUTION lights and FUEL system annunciator light are verified to operate normally.

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MEL ITEM	TAB LOCATION	PLACARD TEXT
28-00-03A	Associated Boost Pump LOW PRESSURE Warning Light	____ Main Tank Fuel Boost Pump LOW PRESSURE Warning Lights System INOP
28-00-03B	Affected Boost Pump LOW PRESSURE Warning Light	____ Main Tank Fuel Boost Pump LOW PRESSURE Warning Light(s) INOP
28-00-03C	Affected Boost Pump LOW PRESSURE Warning Light	____ Main Tank Fuel Boost Pump LOW PRESSURE Warning Lights System INOP
28-00-03D	Associated Boost Pump LOW PRESSURE Warning Light	____ Center Tank Fuel Boost Pump LOW PRESSURE Warning Lights System INOP
28-00-03E	Affected Boost Pump LOW PRESSURE Warning Light(s)	____ Center Tank Fuel Boost Pump LOW PRESSURE Warning Light(s) INOP
28-00-03F	Affected Boost Pump LOW PRESSURE Warning Light(s)	____ Center Tank Fuel Boost Pump LOW PRESSURE Warning Light(s) INOP

(O) PROCEDURES

28-00-03A

Observe [MEL item 28-00-01](#) REMARKS OR EXCEPTIONS requirements and the Operational requirements when dispatching with a fuel boost pump low pressure warning system inoperative and the associated fuel pump is not used.

28-00-03D

Observe [MEL item 28-00-02](#) REMARKS OR EXCEPTIONS requirements and the Operational requirements when dispatching with a fuel boost pump low pressure warning system inoperative and the associated fuel pump is not used.

28-00-03F

When dispatching with one or both center tank fuel pump LOW PRESSURE lights inoperative and center tank fuel is to be used, position the two CTR FUEL PUMPS switches to OFF when both the MASTER CAUTION lights and the FUEL system annunciator panel light illuminate as a result of center tank fuel depletion.

(M) PROCEDURES

28-00-03A

Verify the MASTER CAUTION lights and FUEL system annunciator light operate normally in affected main tank.

1. Reset the MASTER CAUTION lights by pressing either Master Caution light module.
2. Set fuel boost pump switches in affected fuel tank to OFF.
3. Confirm MASTER CAUTION lights and FUEL system annunciator panel light illuminate.

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28-00-03D, 28-00-03F

Verify the MASTER CAUTION lights and FUEL system annunciator light operate normally.

1. (Ships 3701-3771)
 - a. Set the two CTR FUEL PUMPS switches to OFF.
 - b. Pull and secure the associated circuit breakers for both center pumps on Power Distribution Panel P91 and P92.
 - c. Reset MASTER CAUTION lights by pressing either MASTER CAUTION light module.
 - d. Set the two CTR FUEL PUMPS switches to ON.
 - e. Confirm MASTER CAUTION lights and FUEL system annunciator panel light illuminate.
 - f. Set the two CTR FUEL PUMPS switches to OFF.
 - g. Close the associated circuit breakers for both center pumps on Power Distribution Panel P91 and P92.
 - h. Reset MASTER CAUTION lights by pressing either MASTER CAUTION light module.
2. (Ships 3601-3610, 3772,3773, 3801-3900)
 - a. Set the two CTR FUEL PUMPS switches to OFF.
 - b. Pull and secure the associated center tank fuel boost pump circuit breaker for the center tank pump on Power Distribution Panel P91 or P92.
 - c. Reset MASTER CAUTION lights by pressing either MASTER CAUTION light module.
 - d. Set the associated center tank fuel boost pump switch to ON.
 - e. Confirm MASTER CAUTION lights and FUEL system annunciator panel light illuminate after approximately 10 seconds.
 - f. Set the associated center tank fuel boost pump switch to OFF.
 - g. Close the associated circuit breaker on Power Distribution Panel P91 and P92.
 - h. Reset MASTER CAUTION lights by pressing either MASTER CAUTION light module.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
28-00-04	APU Fuel Valve "DISP.APPR.REQ'D."	N	1	0	C (O)(M) Except for ER operations (ETOPS), may be inoperative provided: a) APU is not used, and b) Valve is deactivated closed.

MEL ITEM	TAB LOCATION	PLACARD TEXT
28-00-04	APU Start Switch	1. APU Fuel Valve INOP 2. Do NOT Use APU

(O) PROCEDURES

1. Dispatch is not allowed if the APU is required by other procedures.
2. APU must not be started.

(M) PROCEDURES

Deactivate the APU fuel shutoff valve:

1. Pull and secure the following circuit breakers on the P6 Panel:
 - a. AUX POWER UNIT CONT
 - b. APU FIRE SW POWER
2. Locate valve on the left wing rear spar in the wheel well.
3. Remove, cap and stow the electrical connector.
4. If necessary, use manual override handle to close valve.
5. Lockwire manual override handle in closed position.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
28-00-05	Crossfeed VALVE OPEN Light	N	1	0	C (M) Except for ER operations (ETOPS), may be inoperative provided: a) Crossfeed valve is verified to operate normally, and b) Fuel quantity indication for both main tanks operates normally.

MEL ITEM	TAB LOCATION	PLACARD TEXT
28-00-05	Fuel Crossfeed VALVE OPEN Light	Fuel Crossfeed VALVE OPEN Light INOP

(M) PROCEDURES

1. Gain access to the crossfeed valve located on the right wing rear spar. Access is through the right wheel well.
2. Observe that the position indicator (manual override) handle indicates proper position as the valve switch is activated.
3. Both Main Tank fuel quantity indicators must operate normally for dispatch with the Crossfeed valve OPEN light inoperative.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
28-00-06	Flight Deck Fuel Quantity Indicators (Main Tanks) "DISP.APPR.REQ'D."	Y	2	1	C (O)(M) Except for ER operations (ETOPS), may be inoperative provided: a) All boost pumps in associated tank operate normally, b) Fuel flow meters operate normally, c) Center tank indicator operates normally, d) Flight crew periodically computes fuel remaining, and e) Fuel quantity in associated tank is verified by an alternate means PRIOR TO EACH DEPARTURE. Repetitive Check Required (Yellow Placard)

MEL ITEM	TAB LOCATION	PLACARD TEXT
28-00-06	1. Main Tank Fuel Quantity Indicator 2. Refuel Panel Main Tank Indicator	1. Cockpit Main Tank Fuel Quantity Indicator INOP 2. Refuel Main Tank Indicator INOP

NOTE 1: Inoperative flight deck fuel quantity indications may also affect refueling control panel quantity indications. Refer to [MEL item 28-00-12](#) for inoperative refueling control panel quantity indications.

NOTE 2: Fuel LOW alert and fuel IMBAL alert may not be displayed when appropriate.

(O) PROCEDURES

- Gross weight calculations will be erroneous until the current fuel on board (FOB) and Zero Fuel Weight (ZFW) are entered via the FMC Performance Page. Once FOB and ZFW are entered, the Flap Maneuvering Speeds on the speed tape, fuel remaining at destination, and additional FMC data will be valid. Periodic updating of the current FOB is required for FMC information to remain valid.

NOTE: For optimum use of VNAV during climb out and descent, the fuel on board should be updated just prior to takeoff and at the top of descent.

- Fuel flow meters will keep track of the fuel burn and is intended to ensure that the pilot will notice an abnormal fuel feed situation and correct the resulting lateral unbalance. The following charts are examples of methods that accomplish this requirement and are valid with the crossfeed valve remaining closed or open. Operate with the crossfeed valve closed unless otherwise required.
- The objective of the following chart is to assure that the fuel being consumed is coming from the intended tank. A verification of the fuel source can be made by comparing the fuel quantity change in 6 minutes to 1/10 of the fuel flow on the engine, or engines, feeding from that tank. For example, when using center tank fuel, if the rate of quantity decrease in the center tank is one half of the sum of the fuel flow for the engines, one engine is feeding from a wing tank.

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4. Fuel flow meters will keep track of the fuel burn and is intended to ensure that the pilot will notice an abnormal fuel feed situation and correct the resulting lateral unbalance. The following charts are examples of methods that accomplish this requirement and are valid with the crossfeed valve remaining closed or open. Operate with the crossfeed valve closed unless otherwise required.
5. The objective of the following chart is to assure that the fuel being consumed is coming from the intended tank. A verification of the fuel source can be made by comparing the fuel quantity change in 6 minutes to 1/10 of the fuel flow on the engine, or engines, feeding from that tank. For example, when using center tank fuel, if the rate of quantity decrease in the center tank is one half of the sum of the fuel flow for the engines, one engine is feeding from a wing tank.

AIRPLANES WITH FUEL USED INDICATORS

EXAMPLE CHART 1

	EXAMPLE	ACTUAL
1. INITIAL FUEL LOAD	28,000	
2. FUEL REMAINING IN TANKS (TOTAL)	7,000	
TANK 1	7,000	
CENTER	0	
TANK 2	INOP	
3. FUEL USED BY ENGINES: (TOTAL)	13,300	
ENGINE #1	6,600	
ENGINE #2	6,700	
4. FUEL USED BY APU		
2HRS @ 150 LBS/HR	300	
5. TOTAL FUEL USED (3 PLUS 4)	13,600	
6. TOTAL FUEL ACCOUNTED FOR (2 PLUS 5)	20,600	
7. FUEL REMAINING (1 MINUS 6)	7,400	

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AIRPLANES WITHOUT FUEL USED INDICATORS

EXAMPLE CHART 2

Compare the precomputed fuel remaining against the actual fuel remaining. If the differences are unaccounted for and exceed 1000 pounds, perform the appropriate procedures to re-establish the proper fuel distribution.

Initial Fuel Load 22,000

FUEL QUANTITY				
CHECKPOINTS	CENTER (Planned)	WINGS (Planned)	CENTER (Actual)	WINGS (Actual)
TAKEOFF	3200	9400		
TOP OF CLIMB	0	9000		
POINT A	0	7900		
POINT B	0	6800		
POINT C	0	5700		
POINT D	0	4600		
BEGIN DESCENT	0	3500		
BEGIN APPROACH	0	3100		

Computation of fuel remaining can stop at top of descent if it is obvious that one has adequate fuel remaining. If weather, ATC or other problems cause concern, continue taking fuel flow and time reading at appropriate intervals.

(M) PROCEDURES

1. PRIOR TO EACH DEPARTURE, verify alternate fueling procedures have been accomplished.
2. Install second MCO placard in a conspicuous location at the fueling station and place MCO tab on, or adjacent to, the inoperative indicator.
3. For alternate fueling procedures, refer to the following sections of the [Fueling Procedures Manual](#):

B737.40	B737 Inoperative Gauge
B737.94.0	B737 Stick Chart Procedures
B737.94.X	B737 Fuel Stick Charts (charts for sticks 1-8)

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
28-00-07A	Flight Deck Fuel Quantity Indicator (Center Tank) "DISP.APPR.REQ'D."	Y	1	0	C (O) May be inoperative provided: a) One center tank boost pump operates normally, b) Center tank remains empty.
28-00-07B	Flight Deck Fuel Quantity Indicator (Center Tank) (A/C 3601-3610, 3772, 3773, 3801-3900, and 3701-3771 with Universal Fault Interrupter Installed) "DISP.APPR.REQ'D."	Y	1	0	C (O)(M) Except for ER operations (ETOPS), may be inoperative provided: a) Both center tank boost pumps operate normally, b) Fuel quantity in center tank is verified by an alternate means PRIOR TO EACH DEPARTURE. Repetitive Check Required (Yellow Placard)

MEL ITEM	TAB LOCATION	PLACARD TEXT
28-00-07A	1. Center Tank Fuel Quantity Indicator 2. Refuel Panel Center Tank Indicator	1. Cockpit Center Tank Fuel Quantity Indicator INOP 2. Refuel Center Tank Indicator INOP
28-00-07B	1. Center Tank Fuel Quantity Indicator 2. Refuel Panel Center Tank Indicator	1. Cockpit Center Tank Fuel Quantity Indicator INOP 2. Refuel Center Tank Indicator INOP

NOTE 1: Inoperative flight deck fuel quantity indications may also affect refueling control panel quantity indications. Refer to [MEL item 28-00-12](#) for inoperative refueling control panel quantity indications.

NOTE 2: The FQIS will send a "no valid data" signal to the FMC if it detects a fuel quantity system error. There is no need to deactivate the FQIS input to the FMC. Flight crews can manually enter current fuel on board via the FMC PERF INIT page to calculate reference speeds or fuel remaining at destination. Periodic manual updating is required for information to remain valid.

(O) PROCEDURES

28-00-07A

1. The automatic flight VNAV mode will not be available.
2. If VNAV capability is desired during approach, enter current fuel on-board into the FMC at top of descent.

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28-00-07B

1. Verify fuel remaining in the center tank using the fuel used indicators or the operative tank indicators.
2. Gross weight calculations will be erroneous until the current fuel on board (FOB) and Zero Fuel Weight (ZFW) are entered via the FMC Performance Page. Once FOB and ZFW are entered, the Flap Maneuvering Speeds on the speed tape, fuel remaining at destination, and additional FMC data will be valid. Periodic updating of the current FOB is required for FMC information to remain valid.

NOTE: For optimum use of VNAV during climb out and descent, the fuel on board should be updated just prior to takeoff and at the top of descent.

(M) PROCEDURES

28-00-07B

1. PRIOR TO EACH DEPARTURE, verify alternate fueling procedures have been accomplished.
2. Install second MCO placard in a conspicuous location at the fueling station and place MCO tab on, or adjacent to, the inoperative indicator.
3. For alternate fueling procedures, refer to the following sections of the [Fueling Procedures Manual](#):

B737.40	B737 Inoperative Gauge
B737.94.0	B737 Stick Chart Procedures
B737.94.X	B737 Fuel Stick Charts (charts for sticks 1-8)

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
28-00-08	Fuel Temperature Indicator	Y	1	0 C	May be inoperative provided Total Air Temperature or Ram Air Temperature is substituted as an indication of fuel temperature.

MEL ITEM	TAB LOCATION	PLACARD TEXT
28-00-08	Fuel Temperature Indicator	Fuel Temperature Indicator INOP

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
28-00-09	Fuel Quantity Totalizer	Y	1	0	C

MEL ITEM	TAB LOCATION	PLACARD TEXT
28-00-09	1. Fuel Totalizer Indicator 2. FMS CDU 3. AFCS MCP VNAV Mode Switch	1. Fuel Quantity Totalizer INOP 2. FMS Gross Weight Calculation INOP 3. AFCS VNAV Mode INOP

NOTE 1: The FMC CDU will display a VERIFY GW AND FUEL message if the FMC receives no data or receives a “no valid data” signal from the Fuel Quantity Processor Unit (FQPU). There is no need to deactivate the FQIS input to the FMC. Flight crews may manually enter current fuel on board via the FMC Performance Page to calculate reference speeds or fuel remaining at destination. Periodic manual updating is required for information to be valid.

NOTE 2: If VNAV capability is desired during approach, enter current fuel on board into FMC at top of decent.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
28-00-10A	Pressure Fueling System	Y	1	0	C (M) May be inoperative provided alternate procedures are used.
28-00-10B	Fueling Manifold Check Valves	N	-	0	C (M) May be inoperative provided associated fueling shutoff valve is verified to operate normally.
28-00-10C	Fueling Shutoff Valves	Y	3	0	C (M) May be inoperative closed provided: a) Associated fueling Manifold Check Valve operates normally, and b) Alternate procedures are used.
28-00-10D	Refuel Panel Fueling Power Control Switch	Y	1	0	C May be inoperative off provided refuel panel indicator test switch operates normally in AUX FUELING POWER CONTROL position or FUEL DOOR SWITCH BYPASS position, as applicable.

MEL ITEM	TAB LOCATION	PLACARD TEXT
28-00-10A	1. Cockpit Fuel System Panel 2. Pressure Fueling Panel	Pressure Fueling System INOP
28-00-10B	1. Cockpit Fuel System Panel 2. Pressure Fueling Panel	____ Fueling Manifold Check Valves INOP
28-00-10C	1. Cockpit Fuel System Panel 2. Pressure Fueling Panel	____ Fueling Shutoff Valve(s) INOP
28-00-10D	1. Cockpit Fuel System Panel 2. Pressure Fueling Panel	Refuel Panel Fueling Power Control Switch INOP

(M) PROCEDURES

28-00-10A, 28-00-10C

Fueling shutoff valve(s) and float switch(es) inoperative.

1. Verify that the fuel load for the associated tank does not exceed tank capacity.
2. Manually open fuel shutoff valve(s).

CAUTION: OVERFILL PROTECTION IS INOPERATIVE. THE PRESSURE FUELING SYSTEM WILL NOT STOP THE REFUEL OPERATION AT A SET FUEL QUANTITY. STOP THE FUELING SOURCE AT THE DESIRED QUANTITY FOR THE ASSOCIATED TANK.

3. Push manual override button
4. Refuel the associated tank, release the manual override button at the desired fuel quantity. Refer to the [Fueling Procedures Manual](#), B737.20, B737 Pressure Refueling and B737.40, B737 Inoperative gauge.
5. Stop the fuel source pump and disconnect the refueling nozzle.

28-00-10B

1. Ensure that the associated fueling shutoff valve operates normally.
2. Observe that the associated valve's position light illuminates and extinguishes normally during refueling.
3. After refueling nozzle is disconnected, visually check for fuel leakage.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
28-00-12	Refueling Control Panel Quantity Indicators	Y	3	0	C (M) May be inoperative provided fuel quantity in associated tank is verified by an alternate means PRIOR TO EACH DEPARTURE. Repetitive Check Required (Yellow Placard)

MEL ITEM	TAB LOCATION	PLACARD TEXT
28-00-12	1. Cockpit Fuel System Panel 2. Affected Refuel Panel Indicator(s)	Refueling Control Panel ____ Tank Quantity Indicator(s) INOP

(M) PROCEDURES

NOTE: Use of this MEL item is limited to deferral of malfunctioning fueling panel quantity indicators. If flight deck fuel quantity indications are also inoperative, use MEL item [28-00-06](#) for main tanks, or [28-00-07](#) for center tank. Flight deck fuel quantity indications may be used as the alternate means to verify actual tank fuel quantity when dispatched under this MEL item.

1. PRIOR TO EACH DEPARTURE, verify alternate fueling procedures have been accomplished.
2. Install second MCO placard in a conspicuous location at the fueling station and place MCO tab on, or adjacent to, the inoperative indicator.
3. For alternate fueling procedures, refer to the following sections of the [Fueling Procedures Manual](#):

B737.40	B737 Inoperative Gauge
B737.94.0	B737 Stick Chart Procedures
B737.94.X	B737 Fuel Stick Charts (charts for sticks 1-8)

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
28-00-16	Fuel Measuring Sticks / Dripsticks	Y	-	0	C (M) May be inoperative provided: a) Fuel quantity is verified by an acceptable procedure, and b) No evidence of fuel leakage exists.

MEL ITEM	TAB LOCATION	PLACARD TEXT
28-00-16	1. Cockpit Fuel System Panel 2. Associated Fuel Quantity Indicator on Refueling Panel	____ Fuel Measuring Sticks / Dripstick(s) INOP

(M) PROCEDURES

NOTE: Use the fuel quantity indicating system to fuel airplane. If fuel quantity indications are inoperative, refer to MEL item [28-00-06](#), [28-00-07](#), or [28-00-12](#) as applicable.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH			
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY			
ITEM NO.	NAME / DESCRIPTION						REMARKS OR EXCEPTIONS
28-00-21	Fuel Quantity Test Switch	Y	1	0	C		

MEL ITEM	TAB LOCATION	PLACARD TEXT
28-00-21	Fuel Quantity Test Switch	Fuel Quantity Test System INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
28-00-22	SPAR VALVE CLOSED Lights	N	2	0	C
(M) May be inoperative provided: a) Associated valve is verified to operate normally PRIOR TO THE FIRST FLIGHT OF THE DAY (Log Book Entry Required), and b) Crossfeed VALVE OPEN light operates normally. Repetitive Check Required (Yellow Placard)					

MEL ITEM	TAB LOCATION	PLACARD TEXT
28-00-22	Affected SPAR VALVE CLOSED Light(s)	____ SPAR VALVE CLOSED Light(s) INOP

(M) PROCEDURE

PRIOR TO THE FIRST FLIGHT OF THE DAY

Verify that the affected valve operates normally per Spar Valve Closed Light Deactivation Procedure (AMM 28-00-00/901)

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
28-00-25A	Center Tank Fuel Boost Pump Automatic Shutoff System (A/C3601-3610,3772,3773, 3801-3900) "DISP.APPR.REQ'D."	N	2	0	C May be inoperative provided associated center tank fuel boost pump is considered inoperative and deferred per MEL 28-00-02 .
28-00-25B	Center Tank Fuel Boost Pump Automatic Shutoff System (A/C3601-3610,3772,3773, 3801-3900) "DISP.APPR.REQ'D."	Y	2	0	C (O) May be inoperative provided: a) Center tank remains empty, and b) Associated Center Tank Fuel Boost Pump is not used.
28-00-25C	Center Tank Fuel Boost Pump Automatic Shutoff System (A/C3601-3610,3772,3773, 3801-3900) "DISP.APPR.REQ'D."	Y	2	0	C May be inoperative with center tank fueled provided: a) Both center tank fuel boost pump Low Pressure Warning Light Systems operate normally, b) Center tank fuel quantity indication operates normally, c) Center tank fuel boost pumps must not be ON unless personnel are available in the flight deck to monitor low pressure lights, d) For ground operations, center tank fuel boost pump switches must not be positioned to ON unless the center tank fuel quantity exceeds 1,000 pounds (453 kg), except when defueling or transferring fuel, e) Center tank fuel boost pumps are OFF for takeoff if center tank fuel is less than 5,000 pounds (2,300 kg) with airplane readied for initial taxi, f) Both center tank fuel boost pumps are selected OFF when center tank fuel quantity reaches 1,000 pounds (453 kg) of fuel during climb and cruise, g) Both center tank fuel boost pumps are selected OFF when center tank fuel quantity reaches 3,000 pounds (1,400 kg) of fuel during descent and landing, h) Both center tank fuel boost pumps are positioned OFF at first indication of fuel pump low pressure, (Continued next page)

CONTINUED NEXT PAGE

NUMBER INSTALLED		NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD		REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION		REMARKS OR EXCEPTIONS
			(Continued from previous page) i) Center tank fuel boost pumps may be positioned ON when established in cruise flight if the center tank contains more than 1000 lbs (453 Kg) of fuel, j) If the main tanks are not full, the zero fuel gross weight of the airplane plus the weight of center tank fuel may exceed the maximum zero fuel weight by up to 5,000 pounds (2,300 kg) for takeoff, climb and cruise and up to 3,000 pounds (1,400 kg) for descent and landing, provided that the effects of balance (CG) have been considered, and k) Defueling with passengers on board is prohibited.

MEL ITEM	TAB LOCATION	PLACARD TEXT
28-00-25A	Adjacent to associated Center Tank Fuel Boost Pump Switch(es)	___ Center Tank Fuel Boost Pump(s) Automatic Shutoff System(s) INOP
28-00-25B	Adjacent to associated Center Tank Fuel Boost Pump Switch(es)	___ Center Tank Fuel Boost Pump(s) Automatic Shutoff System(s) INOP DO NOT USE ___ Center Tank Fuel Boost Pump(s)
28-00-25C	Adjacent to associated Center Tank Fuel Boost Pump Switch(es)	___ Center Tank Fuel Boost Pump(s) Automatic Shutoff System(s) INOP

(O) PROCEDURES

28-00-25B

Set the associated CTR FUEL PUMP switch to OFF.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
28-00-26	Fuel Shutoff Valve Battery and Charger (Engine Spar Valve)	Y	1	0	D (M) May be inoperative provided the system is deactivated.

MEL ITEM	TAB LOCATION	PLACARD TEXT
28-00-26	Adjacent to associated Center Tank Fuel Boost Pump Switch(es)	Fuel Shutoff Valve Battery and Charger INOP.

(M) PROCEDURES

Pull and secure the FUEL SHUTOFF VALVES PWR PACK circuit breaker on the P6-3 Panel.

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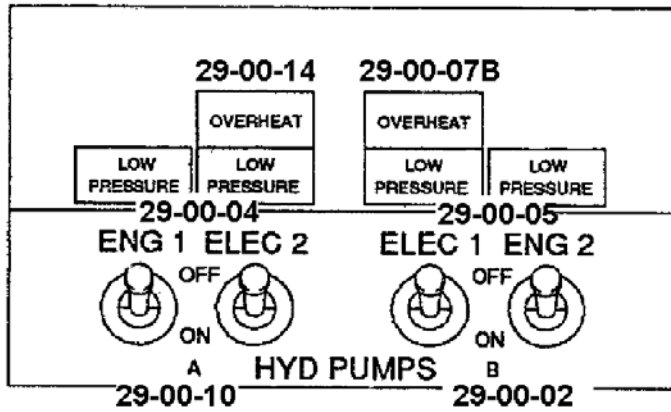
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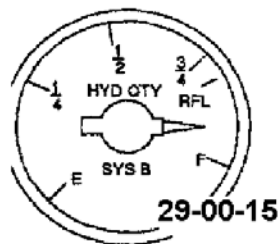
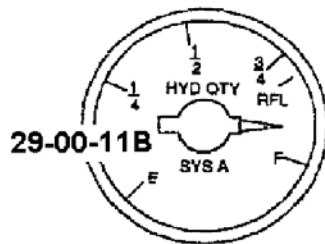
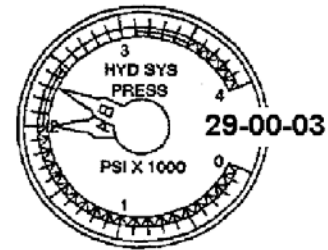
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29-00-02	System B Engine Driven Hydraulic Pump Depressurization Function.....	29-5
29-00-03	System Pressure Indications (A and B)	29-6
29-00-04	System A Pump Low Pressure Indication Systems	29-7
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29-00-09	Hydraulic Quantity Low Level Light System (Standby System)	29-10
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HYDRAULIC CONTROL PANEL



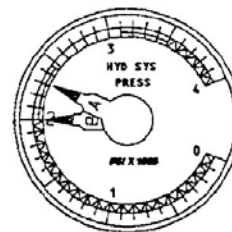
HYDRAULIC PRESSURE AND QUANTITY INDICATORS



HYDRAULIC PRESSURE/QUANTITY INDICATORS



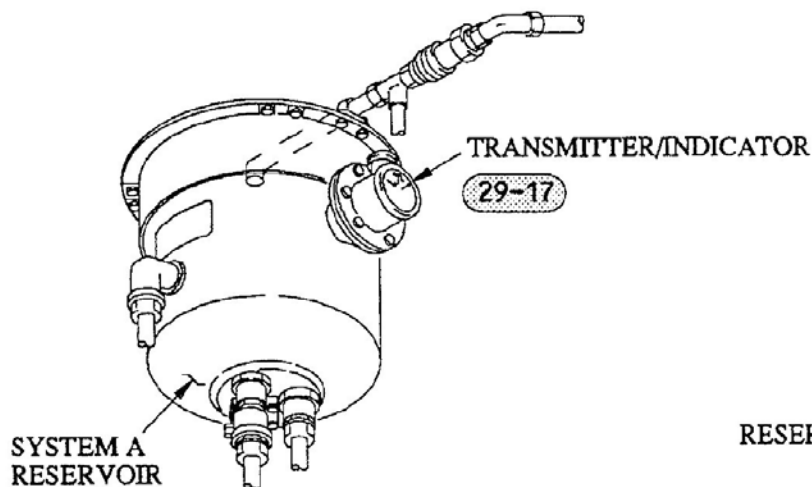
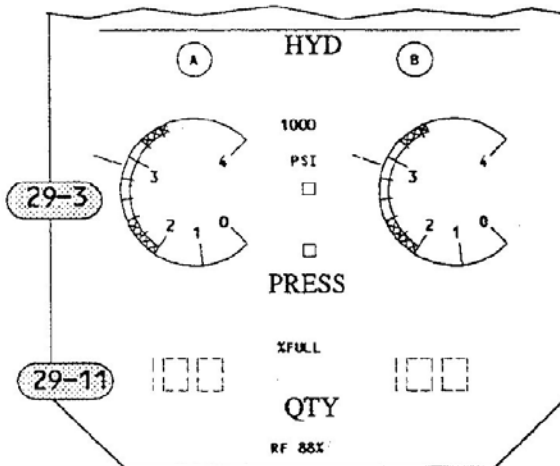
HYD BRAKE PRESSURE
MMEL ITEM 29-6 MOVED
TO MMEL ITEM 32-13



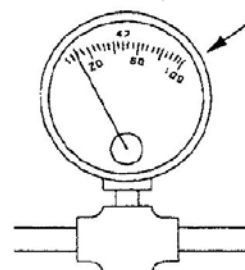
29-3



29-11

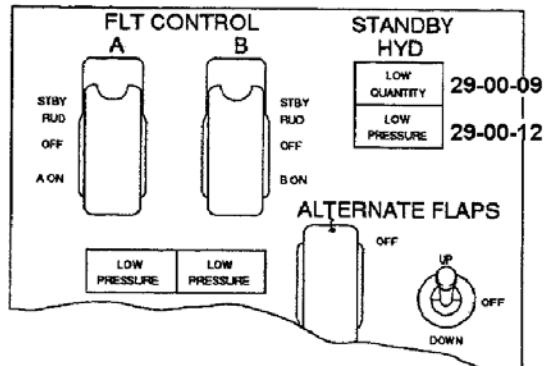
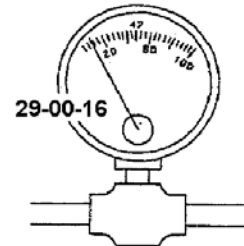
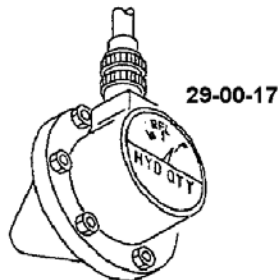
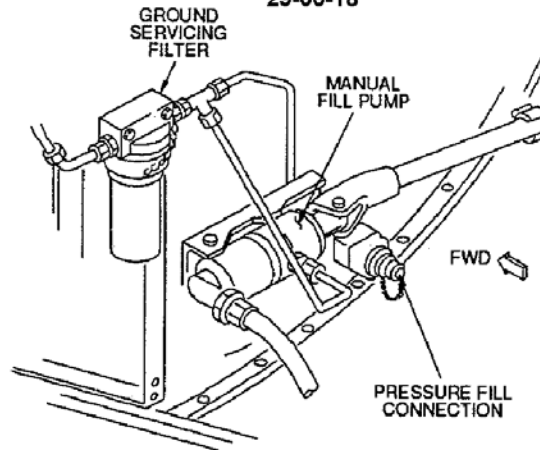
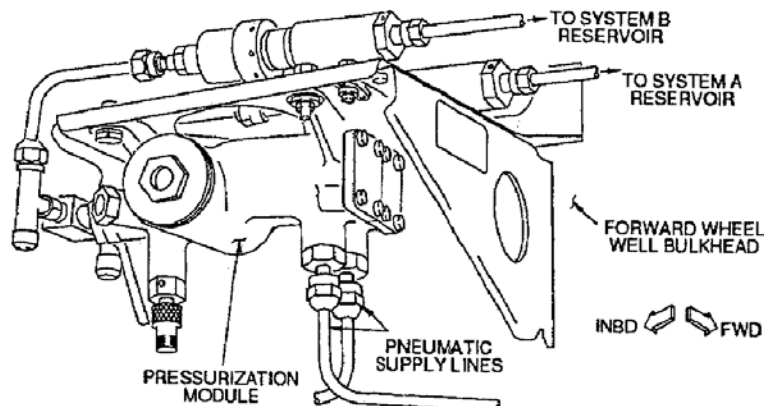


FWD BULKHEAD WHEEL WELL



29-16

SYSTEMS A AND B
RESERVOIR PRESSURIZATION GAGE

FLIGHT CONTROL PANEL

HYDRAULIC RESERVOIR AIR PRESSURE INDICATOR(S) WHEEL WELL

HYDRAULIC QUANTITY INDICATOR(S) WHEEL WELL

RESERVOIR FILL SYSTEM WHEEL WELL
29-00-18

**29-00-13
HYDRAULIC RESERVOIR PRESSURIZATION SYSTEM**


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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
29-00-02	System B Engine Driven Hydraulic Pump Depressurization Function	Y	1	0	C

MEL ITEM	TAB LOCATION	PLACARD TEXT
29-00-02	Hyd System B ENG 2 Pump Switch	System B Engine Driven Hydraulic Pump Depressurization Function INOP

NOTE: To avoid damage to steering components or towing equipment with System B hydraulics is used for steering, install nose gear steering lockout pin in steering depressurization valve when airplane is to be pushed back or towed with engines operating.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
29-00-03	System Pressure Indications (A and B)	Y	2	1 C	(O) May be inoperative provided: a) System pressure is checked PRIOR TO EACH DEPARTURE, and b) All hydraulic low pressure lights operate normally. Repetitive Check Required (Yellow Placard)

MEL ITEM	TAB LOCATION	PLACARD TEXT
29-00-03	Near Primary Engine Display	____ Hyd System Pressure Indication INOP

(O) PROCEDURES

System A Pressure Verification:

Verify that Flight Control LOW PRESSURE light for system A extinguishes when hydraulic system is pressurized.

System B Pressure Verification:

1. With Systems A and B depressurized, verify that the brake pressure indicator shows less than 2800 psi. If not, apply brakes and pressure should drop.
2. Select flight control and spoiler switches OFF.
3. Pressurize System B hydraulics with ELEC 1.
4. Verify that the brake pressure increases to between 2800 psi and 3200 psi.
5. Select spoiler switch ON.
6. Verify the Flight Control LOW PRESSURE light for system B is illuminated.
7. Select flight control switch ON.
8. Verify the Flight Control LOW PRESSURE light for system B extinguishes
9. Restore airplane to its required configuration.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
29-00-04	System A Pump Low Pressure Indication Systems	Y	2	1	C (O) May be inoperative provided output of associated pump is checked PRIOR TO EACH DEPARTURE. Repetitive Check Required (Yellow Placard)

MEL ITEM	TAB LOCATION	PLACARD TEXT
29-00-04	Associated LOW PRESSURE Light	System A Pump LOW PRESSURE Indication System INOP

(O) PROCEDURES

ENG 1 LOW PRESSURE LIGHT INOPERATIVE:

1. Dry motor or start No. 1 engine.
2. Position ENG 1 hydraulic pump switch ON, ELEC 2 hydraulic pump switch OFF, and flight control and spoiler switches OFF.
3. Verify system A pressure is between 2800 psi and 3200 psi.
4. Restore airplane to its required configuration.

ELEC 2 LOW PRESSURE LIGHT INOPERATIVE:

1. Place GEN 2 switch to ON and verify the associated TRANSFER BUS OFF light is extinguished.
2. Position ELEC 2 hydraulic pump switch ON, ENG 1 hydraulic pump switch OFF, and flight control and spoiler switches OFF.
3. Verify system A pressure is between 2800 psi and 3200 psi.
4. Restore airplane to its required configuration.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH			
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY			
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS	
29-00-05	System B Pump Low Pressure Indication Systems	Y	2	1	C	(O) May be inoperative provided output of associated pump is checked PRIOR TO EACH DEPARTURE. Repetitive Check Required (Yellow Placard)	

MEL ITEM	TAB LOCATION	PLACARD TEXT
29-00-05	Associated LOW PRESSURE Light	System B Pump LOW PRESSURE Indication System INOP

(O) PROCEDURES

ELEC 1 LOW PRESSURE LIGHT INOPERATIVE:

1. Place GEN 1 switch to ON and verify the associated TRANSFER BUS OFF light is extinguished.
2. Position ELEC 1 hydraulic pump switch ON, ENG 2 hydraulic pump switch OFF, and flight control and spoiler switches OFF.
3. Verify system B pressure is between 2800 psi and 3200 psi.
4. Restore airplane to its required configuration.

ENG 2 LOW PRESSURE LIGHT INOPERATIVE:

1. Dry motor or start No. 2 engine.
2. Position ENG 2 hydraulic pump switch ON, ELEC 1 hydraulic pump switch OFF, and flight control and spoiler switches OFF.
3. Verify system B pressure is between 2800 psi and 3200 psi.
4. Restore airplane to its required configuration.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS
29-00-07	System A and B Overheat Lights	Y	2	0	C	May be inoperative provided associated Low Pressure light operates normally.

MEL ITEM	TAB LOCATION	PLACARD TEXT
29-00-07	Affected System A / B OVERHEAT Light(s)	Hyd System A / B OVERHEAT Light(s) INOP

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
29-00-09	Hydraulic Quantity Low Level Light System (Standby System)	Y	1	0	C
					(M) May be inoperative provided quantity is verified adequate PRIOR TO EACH DEPARTURE. Repetitive Check Required (Yellow Placard)

MEL ITEM	TAB LOCATION	PLACARD TEXT
29-00-09	Standby Hyd LOW QUANTITY Light	Standby System LOW QUANTITY Light INOP

(M) PROCEDURES

1. If the Master Caution light is illuminated due to an inoperative low level quantity switch in the standby system, disconnect and stow the cannon plug to the quantity switch. Maintenance is Required and the Flight Crew May NOT Placard.
2. PRIOR TO EACH DEPARTURE: With flaps/leading edge devices retracted, spoilers down, and all control surfaces in neutral position, verify that Hydraulic System B gauge or indication indicates more than "RFL" or "RF", as applicable (6.9 U.S. gallons).

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
29-00-10	System A Engine Driven Hydraulic Pump Depressurization Function	Y	1	0	C

MEL ITEM	TAB LOCATION	PLACARD TEXT
29-00-10	Associated System A Pump Switch	System A Engine Driven Hydraulic Pump Depressurization Function INOP

NOTE: To avoid damage to steering components or towing equipment, install nose gear steering lockout pin in steering depressurization valve when airplane is to be pushed back or towed with engines operating.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
29-00-11	System A Quantity Indication System (Flight Deck)	Y	1	0	C (M) May be inoperative provided: a) Quantity is verified adequate PRIOR TO EACH DEPARTURE, b) System pressure indication operates normally, and c) Pump low pressure lights operate normally. Repetitive Check Required (Yellow Placard)

MEL ITEM	TAB LOCATION	PLACARD TEXT
29-00-11	Near Primary Engine Display	Cockpit System A Hyd Quantity Indication INOP

(M) PROCEDURES

Make sure Hydraulic System A Reservoir quantity is adequate:

- Verify that:
 - Flaps/leading edge devices are retracted.
 - Spoilers are down.
 - All flight controls are in neutral position
 - Thrust reversers are stowed.
- Verify fluid quantity by checking the hydraulic quantity indicator mounted on the System A reservoir, visible from the fluid filling station located in the right main gear well.
- If quantity is low, Maintenance is Required and the Flight Crew May NOT Placard.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
29-00-12	Standby System LOW PRESSURE Light	Y	1	0	C (M) May be inoperative provided: a) Standby System low quantity light operates normally, b) Output of Standby Pump is verified adequate PRIOR TO EACH DEPARTURE, and c) Both system B pumps operate normally. Repetitive Check Required (Yellow Placard)

MEL ITEM	TAB LOCATION	PLACARD TEXT
29-00-12	Standby Hyd System LOW PRESSURE Light	Standby Hyd System LOW PRESSURE Light INOP

(M) PROCEDURES

BEFORE ENGINE START:

1. Verify that the LOW QUANTITY light illuminates when the LIGHTS test switch is positioned to TEST.
2. Get ground clearance to extend the leading edge flaps.
3. Position the Alternate Flaps master switch to ARM.
4. Momentarily place the Alternate Flaps position switch to the DOWN position. Verify that the LE FLAPS TRANSIT followed by LE FLAPS EXT lights illuminate.
5. Return Both ALTERNATE FLAPS Master switches to OFF.
6. Position GRD INTERCONNECT:
 - a. Turn System B hydraulic pump (ELEC 1) ON and check that the LOW PRESSURE light extinguishes. Leave the pumps on until L.E. flaps are up.
 - b. After engine start verify that System B engine hydraulic pump LOW PRESSURE light extinguishes.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
29-00-13	Hydraulic Reservoir Pressurization System Sources	N	2	1 C	(M) One pressure source may be inoperative provided reservoir can be pressurized by remaining source.

MEL ITEM	TAB LOCATION	PLACARD TEXT
29-00-13	Logbook	____ Hydraulic Reservoir Pressurization System Sources INOP

(M) PROCEDURES

1. Disconnect the pressurization supply line of the inoperative pneumatic source at the reservoir pressurization module or the restrictor cross fitting, as installed, located in the wheel well. Install a cap on the reservoir pressurization module or the restrictor cross fitting, as installed. Also install a cap on the disconnected pressurization supply line.
2. Pressurize pneumatic manifold.
3. Verify that the hydraulic reservoir air pressure gauges, located on the forward wheel well bulkhead, indicates the same pressure as the pneumatic duct pressure indicator, on the forward overhead panel.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
29-00-15	System B Quantity Indication System (Flight Deck)	Y	1	0	C (M) May be inoperative provided: a) Quantity is verified adequate PRIOR TO EACH DEPARTURE, b) System B pressure indication operates normally, and c) System B pump low pressure lights operate normally. Repetitive Check Required (Yellow Placard)

MEL ITEM	TAB LOCATION	PLACARD TEXT
29-00-15	System B Hyd Quantity Indicator	Cockpit System B Hyd Quantity Indicator INOP

(M) PROCEDURES

Make sure Hydraulic System B Reservoir quantity is adequate:

- Verify that:
 - Flaps/leading edge devices are retracted.
 - Spoilers are down.
 - All flight controls are in neutral position.
 - Thrust reversers are stowed.
- Verify fluid quantity by checking the hydraulic quantity indicator mounted on the System B reservoir, visible from the fluid filling station located in the right main gear well.
- If quantity is low, Maintenance is Required and the Flight Crew May NOT Placard.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS
29-00-16	Hydraulic Reservoir Air Pressure Indicator (Wheel Well)	Y	2	0	C	

MEL ITEM	TAB LOCATION	PLACARD TEXT
29-00-16	Logbook	Wheel Well Hydraulic Reservoir Air Pressure Indicator INOP

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
29-00-17	Hydraulic Reservoir Quantity Indicator (Wheel Well)	Y	2	0	C

MEL ITEM	TAB LOCATION	PLACARD TEXT
29-00-17	Logbook	Wheel Well Hydraulic ____ System Reservoir, Quantity Indicator INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH			
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY			
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS	
29-00-18	Hydraulic Reservoir Fill System (Wheel Well)	Y	1	0	C		

MEL ITEM	TAB LOCATION	PLACARD TEXT
29-00-18	Logbook	Wheel Well Hydraulic Reservoir Fill System INOP

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ATA 30 Contents

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30-00-05B	Aux Pitot Heater (Right Lower Probe).....	30-14
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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
30-00-01A	Wing Anti-Ice Valves "DISP.APPR.REQ'D."	N	2	0	C (O)(M) Except for ER operations (ETOPS) beyond 120 minutes, may be inoperative CLOSED provided aircraft is not operated in known or forecast icing conditions. Theater Restrictions may apply
30-00-01B	Wing Anti-Ice Valves "DISP.APPR.REQ'D."	N	2	1	C (O)(M) May be inoperative OPEN provided: a) Except for engine start, associated manifold is depressurized when outside temperature is above 50 degrees F (10 degrees C), b) Associated engine bleed thrust limits are followed when manifold is pressurized, c) Air conditioning and pressurization requirements are followed when one manifold is depressurized, and d) Performance corrections are applied. Theater Restrictions may apply

MEL ITEM	TAB LOCATION	PLACARD TEXT
30-00-01A	Wing Anti-Ice Switch	___ Wing Anti-Ice Valve(s) INOP
30-00-01B	Wing Anti-Ice Switch	___ Wing Anti-Ice Valve INOP

(O) PROCEDURES

30-00-01A

Refer to the Remarks or Exceptions column.

NOTE: Disconnecting the valve's electrical connector per the (M) PROCEDURE will cause the associated wing anti-ice VALVE OPEN light to illuminate (BRIGHT).

30-00-01B

NOTE: Disconnecting the valve's electrical connector per the (M) PROCEDURE will cause the associated wing anti-ice VALVE OPEN light to illuminate (BRIGHT).

- The appropriate engine bleed thrust limits to be used with the valve failed OPEN are the normal limits for wing anti-ice ON.
- No wing anti-ice ON decrements are published for takeoff, consequently the engine bleed to the affected manifold must be OFF for takeoff.
- To isolate the wing anti-ice system if needed:
 - Place the Isolation Valve Switch to the closed position
 - Place the Pack Switch on the affected side to the off position
 - Place the Engine Bleed Air Switch on the affected side to the off position
- The location of the wing anti-ice valve relative to the engine exhaust area prohibits personnel from accessing the valve when the associated engine is running.
- To ensure sufficient air for engine start, only one valve may be inoperative OPEN.
- The APU or ground air can be used to start one engine and the second engine (associated with open valve) then can be started by cross bleed from the first.

CONTINUED NEXT PAGE

30-00-01B WING ANTI-ICE VALVES	
EFFECTIVITY	-700
FLIGHT PLANNING REQUIREMENTS	Increase BLOCK FUEL by 2.8%.
NOTES	None
AWABS	Performance weight corrections have been applied. Verify AWABS V_1 is not less than minimum V_{mcg}. Takeoff is permitted with V_1 set equal to or greater than V_{mcg}. See ODM – Abnormal Section for Minimum Control Speed – Ground (V_{mcg}).
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF None LANDING Reduce LANDING CLIMB LIMIT WT by 3,500 lbs. OTHER CORRECTIONS Obtain V speeds from the ODM – Takeoff section. If the resulting V_1 is less than minimum V_{mcg}, takeoff is permitted with V_1 set equal to V_{mcg}. See ODM – Abnormal Section for Minimum Control Speed – Ground (V_{mcg}).

30-00-01B WING ANTI-ICE VALVES	
EFFECTIVITY	-800
FLIGHT PLANNING REQUIREMENTS	Increase BLOCK FUEL by 2.8%.
NOTES	None
AWABS	Performance weight corrections have been applied. Verify AWABS V_1 is not less than minimum V_{mcg}. Takeoff is permitted with V_1 set equal to or greater than V_{mcg}. See ODM – Abnormal Section for Minimum Control Speed – Ground (V_{mcg}).
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF None LANDING Reduce LANDING CLIMB LIMIT WT by 3,100 lbs. OTHER CORRECTIONS Obtain V speeds from the ODM – Takeoff section. If the resulting V_1 is less than minimum V_{mcg}, takeoff is permitted with V_1 set equal to V_{mcg}. See ODM – Abnormal Section for Minimum Control Speed – Ground (V_{mcg}).

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30-00-01B	WING ANTI-ICE VALVES
EFFECTIVITY	-900ER
FLIGHT PLANNING REQUIREMENTS	Increase BLOCK FUEL by 2.8%.
NOTES	None
AWABS	Performance weight corrections have been applied. Verify AWABS V_1 is not less than minimum V_{mcg} . Takeoff is permitted with V_1 set equal to or greater than V_{mcg} . See ODM – Abnormal Section for Minimum Control Speed – Ground (V_{mcg}).
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF None LANDING Reduce LANDING CLIMB LIMIT WT by 3,600 lbs. OTHER CORRECTIONS Obtain V speeds from the ODM – Takeoff section. If the resulting V_1 is less than minimum V_{mcg} , takeoff is permitted with V_1 set equal to V_{mcg} . See ODM – Abnormal Section for Minimum Control Speed – Ground (V_{mcg}).

(M) PROCEDURES

30-00-01A

NOTE 1: The wing anti-ice shutoff valves are located outboard of the engine in the leading edge of the wing.

NOTE 2: Access to the valves is through panels in the bottom of the wing leading edge.

NOTE 3: Personnel should not access valve when the associated engine is running because of the position of the valve relative to the engine exhaust area.

Accomplish the following prior to engine start:

- Open the following ANTI-ICE & RAIN circuit breaker for the affected engine on the P18-3 Panel:
 - ENG 1 & WING VALVE
 - ENG 2 & WING VALVE
- Remove access panel in bottom of wing leading edge.
- Manually move the valve to the CLOSED position by using the position indicator.
- Disconnect and stow electrical connector.
- Install access panel.
- Close the following ANTI-ICE & RAIN circuit breaker for the affected engine on the P18-3 Panel:
 - ENG 1 & WING VALVE
 - ENG 2 & WING VALVE

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30-00-01B

NOTE 1: The wing anti-ice shutoff valves are located outboard of the engine in the leading edge of the wing.

NOTE 2: Access to the valves is through panels in the bottom of the wing leading edge.

NOTE 3: Personnel should not access valve when the associated engine is running because of the position of the valve relative to the engine exhaust area.

FOR DISPATCH WITH LEFT VALVE OPEN ACCOMPLISH THE FOLLOWING:

PERFORM THE FOLLOWING WHEN USING APU BLEED AIR FOR ENGINE START:

1. Establish communications with the flight deck.
2. Open the following ANTI-ICE & RAIN circuit breakers for the affected engine on the P18-3 Panel:
 - ENG 1 & WING VALVE
 - ENG 2 & WING VALVE
3. Remove the access panel in the bottom of the wing leading edge.
4. Disconnect, cap, and stow electrical connector.
5. Manually move the valve to the CLOSED position by using the position indicator.
6. After personnel have been cleared from the engine hazard area, inform the flight deck that the RIGHT (NO. 2) engine may be started.
7. After the RIGHT engine has been started, request the flight deck to depressurize the left pneumatic duct (close isolation valve and APU bleed air valves).
8. After the flight deck reports that the left pneumatic duct is depressurized, manually move the valve to the open position by using the position indicator.
9. Install the access panel.
10. Close the following ANTI-ICE & RAIN circuit breakers for the affected engine on the P18-3 Panel:
 - ENG 1 & WING VALVE
 - ENG 2 & WING VALVE
11. After personnel have been cleared from the engine hazard area, inform the flight deck that the LEFT (No. 1) engine may be started (using engine crossbleed).

PERFORM THE FOLLOWING WHEN USING GROUND SERVICE AIR FOR ENGINE START:

1. Establish communications with the flight deck.
2. Open the following ANTI-ICE & RAIN circuit breakers for the affected engine on the P18-3 Panel:
 - ENG 1 & WING VALVE
 - ENG 2 & WING VALVE
3. Remove the access panel in the bottom of the wing leading edge.
4. Disconnect, cap, and stow electrical connector.
5. Manually move the valve to the open position by using the position indicator.
6. Install the access panel.
7. Close the following ANTI-ICE & RAIN circuit breakers for the affected engine on the P18-3 Panel:
 - ENG 1 & WING VALVE
 - ENG 2 & WING VALVE
8. After personnel have been cleared from the engine hazard area, inform the flight deck that the RIGHT (No. 2) engine may be started (Isolation valve closed) and then the LEFT (No. 1) engine (using engine crossbleed).

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FOR DISPATCH WITH RIGHT VALVE OPEN ACCOMPLISH THE FOLLOWING:

PERFORM THE FOLLOWING WHEN USING APU BLEED AIR FOR ENGINE START:

1. Establish communications with the flight deck.
2. Open the following ANTI-ICE & RAIN circuit breakers for the affected engine on the P18-3 Panel:
 - ENG 1 & WING VALVE
 - ENG 2 & WING VALVE
3. Remove the access panel in the bottom of the wing leading edge.
4. Disconnect, cap, and stow electrical connector.
5. Manually move the valve to the open position by using the position indicator.
6. Install access panel.
7. Close the following ANTI-ICE & RAIN circuit breakers for the affected engine on the P18-3 Panel.
 - ENG 1 & WING VALVE
 - ENG 2 & WING VALVE
8. After personnel have been cleared from the engine hazard area, inform the flight deck that the LEFT (No. 1) engine may be started (Isolation valve closed) and then the RIGHT (No. 2) engine (using crossbleed start).

PERFORM THE FOLLOWING WHEN USING GROUND SERVICE AIR FOR ENGINE START:

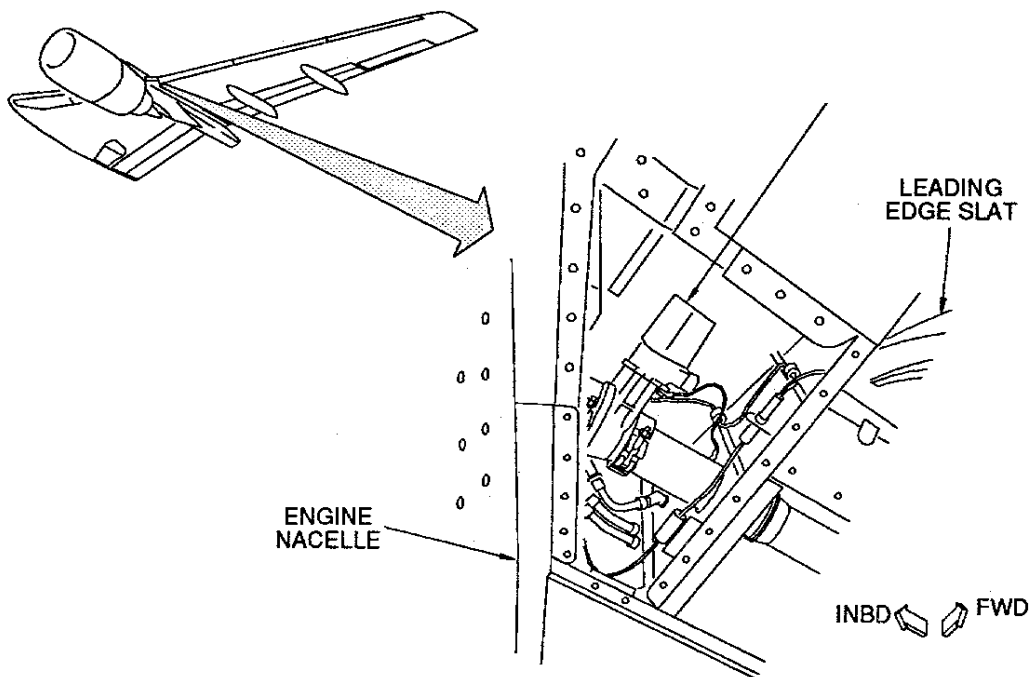
1. Open the following ANTI-ICE & RAIN circuit breakers for the affected engine on the P18-3 Panel:
 - ENG 1 & WING VALVE
 - ENG 2 & WING VALVE
2. Remove the access panel in the bottom of the wing leading edge.
3. Disconnect, cap, and stow electrical connector.
4. Manually move the valve to the closed position by using the position indicator.
5. After personnel have been cleared from the engine hazard area, inform the flight deck that the LEFT (No. 1) engine may be started.
6. After the LEFT engine has been started disconnect the ground air and request the flight deck to depressurize the right pneumatic duct (close isolation valve).
7. After the flight deck reports that the right pneumatic duct is depressurized, manually move the valve to the open position by using the position indicator.
8. Install access panel.
9. Close the following ANTI-ICE & RAIN circuit breakers for the affected engine on the P18-3 Panel:
 - ENG 1 & WING VALVE
 - ENG 2 & WING VALVE
10. After personnel have been cleared from the engine hazard area, inform the flight deck that the RIGHT (No. 2) engine may be started (using engine crossbleed).

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				LIMITATIONS / PROCEDURES
30-00-02	Wing Anti-Ice Valve Position Lights "DISP.APPR.REQ'D."	N	2	0	C (M) May be inoperative provided valve is verified to operate normally before operating in known or forecast icing conditions.

MEL ITEM	TAB LOCATION	PLACARD TEXT
30-00-02	Affected Wing Anti-Ice VALVE OPEN Light	___ Wing Anti-Ice Valve Position Light(s) INOP

(M) PROCEDURES

1. Gain access to the valve located in the wing leading edge just outboard of the engine.
2. Hold the wing anti-ice switch in the TEST or ON position.
3. Observe that the position indicator on the valve indicates OPEN.
4. Return the switch to the OFF position.
5. Observe that the position indicator on the valve indicates CLOSED.



NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
	ENGINE AND NOSE COWL ANTI-ICE VALVES				
30-00-03A	Engine and Nose Cowl Anti-Ice Valves "DISP.APPR.REQ'D."	N	2	1	C (M) Except for ER operations (ETOPS) beyond 120 minutes, may be inoperative CLOSED provided aircraft is not operated in known or forecast icing conditions. Theater Restrictions may apply
30-00-03B	Engine and Nose Cowl Anti-Ice Valves "DISP.APPR.REQ'D."	N	2	1	C (O)(M) May be inoperative LOCKED OPEN provided: a) Associated High Stage Valve is considered inoperative and deferred per MEL 36-00-09, b) Ambient temperature is below 100 degrees F (38 degrees C), c) A minimum of 60% N1 is maintained on associated engine during flight in icing conditions, and d) Performance corrections are applied. Theater Restrictions may apply

MEL ITEM	TAB LOCATION	PLACARD TEXT
30-00-03A	Associated Engine Anti-Ice Switch	____ Engine / Nose Cowl Anti-Ice Valve INOP Closed
30-00-03B	Associated Engine Anti-Ice Switch	____ Engine / Nose Cowl Anti-Ice Valve INOP Open

(O) PROCEDURES

30-00-03B

NOTE: Dispatching with an engine and nose cowl anti-ice valve inoperative OPEN will cause the associated COWL VALVE OPEN light to illuminate bright and, the associated thermal anti-ice (TAI) indication to also illuminate amber.

Takeoff above 37.7°C (100°F) is prohibited.

- Operate with the associated ENG ANTI-ICE switch in the OFF position.
- Apply adjustments to N1 limits and performance limited weights. Observe maximum operating temperature restrictions.
- Inflight, maintain a minimum of 60% N1 on the associated engine in icing conditions.
- During ground operations with the APU running, turn the engine bleed OFF whenever the associated engine is not running.
- All thrust rating limits except Takeoff and Go-Around, are reduced by 1.1% N1.
- At temperatures greater than 10°C (50°F), Takeoff and Go-Around thrust limits are reduced by 1.4% N1.

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30-00-03B	ENGINE AND NOSE COWL ANTI-ICE VALVES
EFFECTIVITY	All
FLIGHT PLANNING REQUIREMENTS	Reduce ENROUTE LIMIT WT by 4,000 lbs. Increase BLOCK FUEL by 1.3%. For flights in forecast icing conditions increase BLOCK FUEL by an additional: 2.0% for flights less than or equal to 1,000 nautical miles. 1.0% for flights greater than 1,000 nautical miles.
NOTES	Make a notation on the Flight Plan when Enroute Climb is limiting.
AWABS	Performance weight corrections have been applied. Obtain applicable N1 corrections from MEL.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF – TAT/OAT above 10°C (50°F) Reduce RATOW by 9,500 lbs. Reduce T/O CLIMB LIMIT by 9,500 lbs. TAKEOFF – TAT/OAT at or below 10°C (50°F) Reduce RATOW by 700 lbs. Reduce T/O CLIMB LIMIT by 700 lbs. LANDING – TAT/OAT above 10°C (50°F) Reduce RWY ALLOWABLE LANDING WT by 9,500 lbs. Reduce LANDING CLIMB LIMIT WT by 9,500 lbs. LANDING – TAT/OAT at or below 10°C (50°F) Reduce LANDING CLIMB LIMIT WT by 700 lbs. OTHER CORRECTIONS Obtain applicable N1 corrections from MEL.

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(M) PROCEDURES

ALLIED SIGNAL VALVE:

30-00-03A

1. Open the fan cowl panels and thrust reverser.
2. To position the shutoff valve in the CLOSED position:
 - a. Loosen the retaining screw on the manual locking assembly.
 - b. Move the hex shaft to the CLOSED position.
 - c. Slide the locking assembly up the shaft into the recess in the cover plate.
 - d. Tighten the retaining screw.
3. Close the fan cowl panels and thrust reverser.

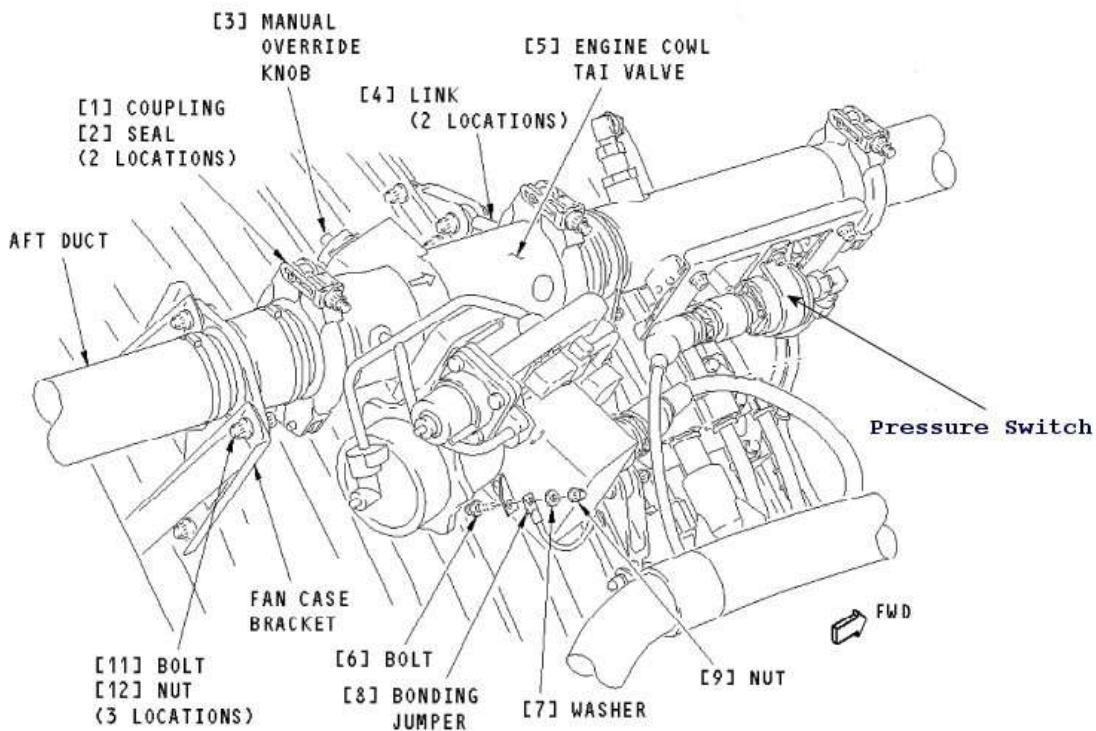
30-00-03B

NOTE: Dispatching with an engine and nose cowl anti-ice valve inoperative OPEN will cause the associated COWL VALVE OPEN light to illuminate bright and, the associated thermal anti-ice (TAI) indication to also illuminate amber.

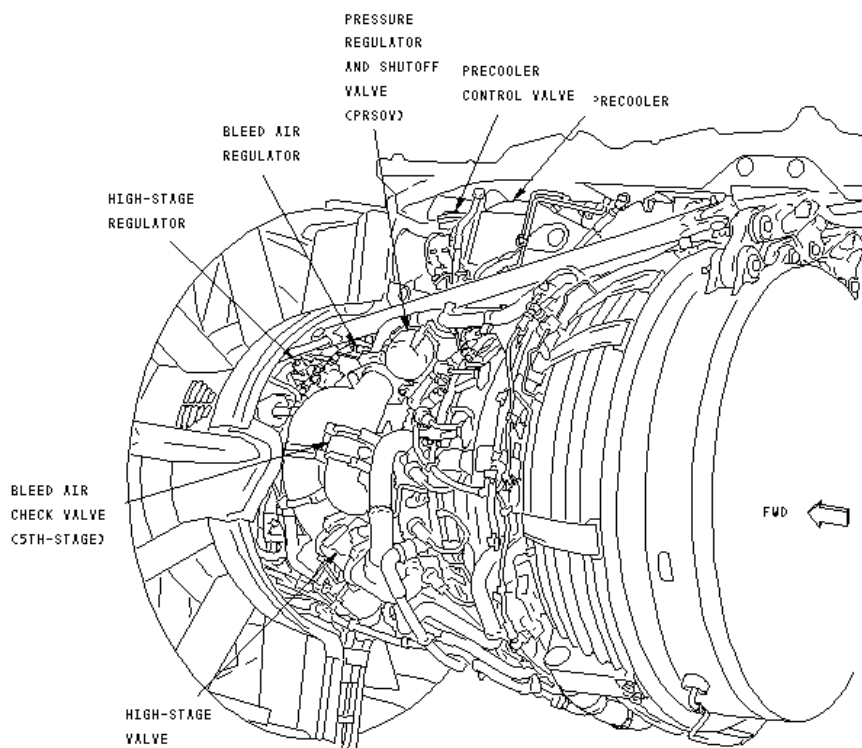
1. Open the fan cowl panels and thrust reverser.
2. To position the shutoff valve in the OPEN position:
 - a. Loosen the retaining screw on the manual locking assembly.
 - b. Move the hex shaft to the OPEN position.
 - c. Slide the locking assembly up the shaft into the recess in the cover plate.
 - d. Tighten the retaining screw.
3. Disconnect, cap and stow the electrical connector from the pressure switch.
4. Deactivate the associated High Stage Valve and defer per [MEL 36-00-09](#). To deactivate the High Stage Valve:
 - a. Manually wrench the High Stage Valve to the CLOSE position. The High Stage Valve is located on the left side of the engine high pressure compressor case, and is lower than the PRSOV, which looks very similar in appearance.
 - b. Loosen the position indicator screw.
 - c. Slide the lock into the recess in the cover plate.
 - d. Tighten the position indicator screw.
5. Close the fan cowl panels and thrust reverser.

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Nose Cowl TAI Valve



High Stage Valve



NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
30-00-04A	Engine and Nose Cowl Anti-Ice Valve Position Lights or TAI Indications	Y	2	0	C (O) May be inoperative provided proper valve operation is verified PRIOR TO EACH DEPARTURE. Repetitive Check Required (Yellow Placard)
30-00-04B	Engine and Nose Cowl Anti-Ice Valve Position Lights or TAI Indications	Y	4	2	C One valve position indication (either COWL VALVE OPEN light or TAI indication) for each engine may be inoperative provided other valve position indication for that engine operates normally.
30-00-04C	Engine and Nose Cowl Anti-Ice Valve Position Lights or TAI Indications "DISP.APPR.REQ'D."	N	2	1	C May be inoperative provided associated valve is inoperative and deferred per MEL 30-00-03A or 30-00-03B .

MEL ITEM	TAB LOCATION	PLACARD TEXT
30-00-04A	Affected VALVE OPEN Light(s)	___ Engine / Nose Cowl Anti-Ice Valve Position Light(s) INOP
30-00-04B	Affected VALVE OPEN Light(s)	___ Engine / Nose Cowl Anti-Ice Valve Position Light(s) INOP
30-00-04C	Affected VALVE OPEN Light	___ Engine / Nose Cowl Anti-Ice Valve Position Light INOP

(O) PROCEDURES

30-00-04A

1. Start the associated engine.
2. Wait for the engine to stabilize at idle.
3. Verify that the engine and apu bleed air switches are in the OFF position.
4. Verify that the ENG ANTI-ICE switch is in the OFF position.
5. Monitor the EGT:
 - a. Wait for the EGT to stabilize and record the temperature.

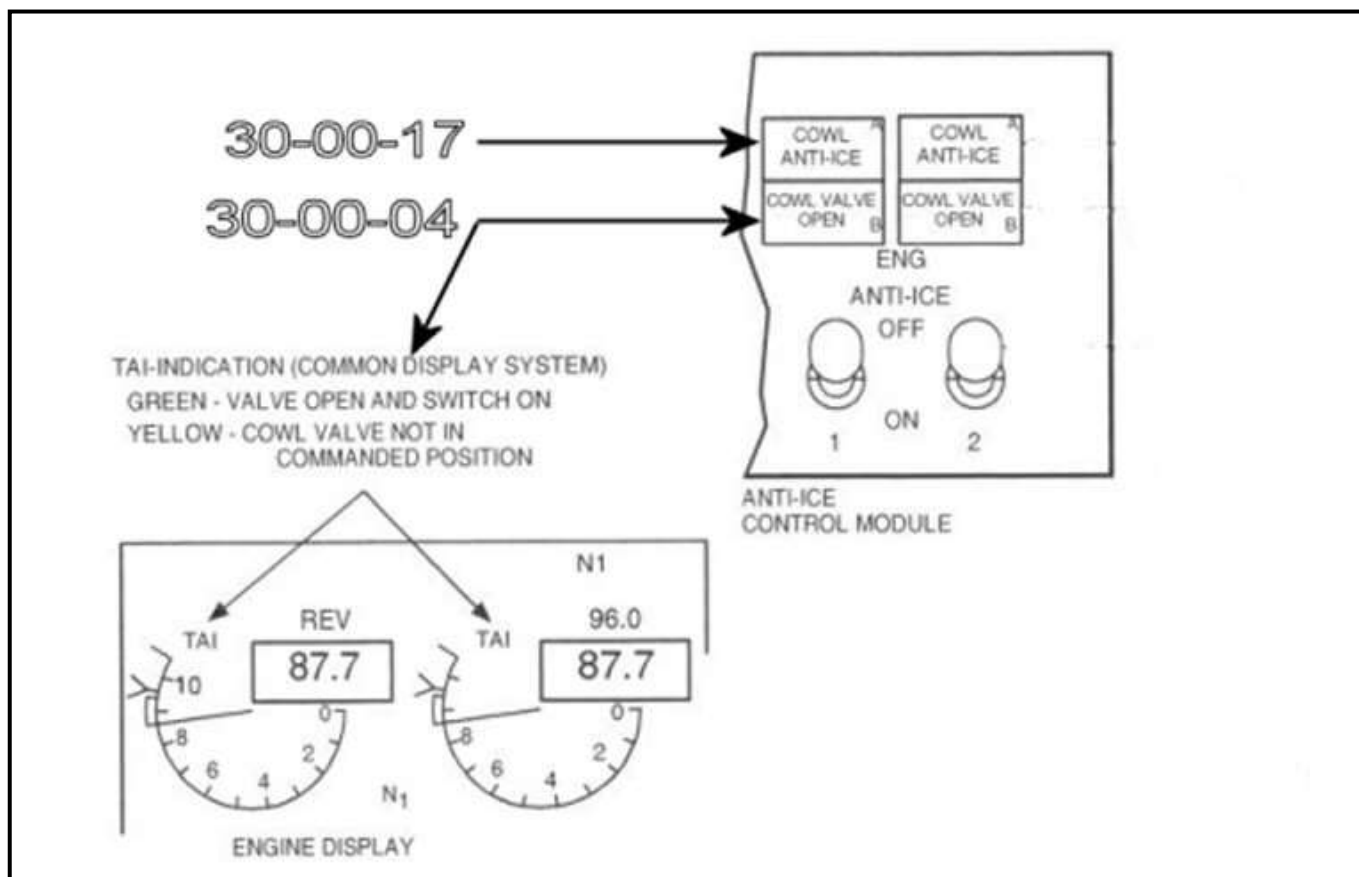
CAUTION: Limit cowl TAI operation to 30 seconds maximum.

- b. Place the ENG ANTI-ICE switch to the ON position.
- c. Wait for the EGT to stabilize and record the temperature.
- d. Position ENG ANTI-ICE switch to OFF.
- e. Wait for the EGT to stabilize and record the temperature.

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6. Verify that the following changes occurred:
 - a. The EGT increased by a minimum of 15 degrees C when the ENG ANTI-ICE switch was put in the ON position.
 - b. The EGT returned to the original idle temperature when the ENG ANTI-ICE switch was put in the OFF position.
7. Configure the airplane as needed for flight or shut down the engine if required.

NOTE: This MEL refers to the blue "COWL VALVE OPEN" lights and the "TAI" indication on the Engine Display.



NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS	
PITOT / STATIC PROBE HEATERS						
30-00-05A	Left / Right Pitot Heaters "DISP.APPR.REQ'D."	Y	2	1	B	Except for ER operations (ETOPS) beyond 120 minutes, may be inoperative for day VMC provided: a) Aux Pitot heater operates normally, b) Airplane is not operated in visible moisture, and c) Airplane is not operated in known or forecast icing conditions.
30-00-05B	Aux Pitot Heater (Right Lower Probe) "DISP.APPR.REQ'D."	Y	1	0	B	Except for ER operations (ETOPS) beyond 120 minutes, may be inoperative provided: a) Both Left and Right Pitot heaters operate normally, and b) Airplane is not operated in known or forecast icing conditions.

MEL ITEM	TAB LOCATION	PLACARD TEXT
30-00-05A	Associated Pitot Probe Heater Light	____ Pitot Heater INOP
30-00-05B	1. Associated Pitot Probe Heater Light 2. Static Source Selector	Aux Pitot Heater (Right Lower Probe) INOP Aux Pitot Heater (Right Lower Probe) INOP

OPERATIONS NOTES

1. With a Captain's or First Officer's Pitot Static (Upper) probe heater inoperative, operations are limited to day VMC, do not operate in visible moisture or in known or forecast icing conditions.
2. On airplanes equipped with static source selector and No. 1 or 2 Aux P/S (Lower) probe heater is inoperative, place the affected static source selector to the ALTERNATE position and placard OPERATE IN ALTERNATE.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
30-00-06	Vertical Stabilizer Pitot Heater (Elevator and Rudder Feel Systems) "DISP.APPR.REQ'D."	Y	2	1	B Except for ER operations (ETOPS) beyond 120 minutes, may be inoperative provided aircraft is not operated in known or forecast icing conditions.

MEL ITEM	TAB LOCATION	PLACARD TEXT
30-00-06	Associated ELEV PITOT Light	____ ELEV PITOT Heat INOP

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
30-00-07	Total Air Temperature Probe Heater "DISP.APPR.REQ'D."	Y	1	0	C Except for ER operations (ETOPS) beyond 120 minutes, may be inoperative provided aircraft is not operated in known or forecast icing conditions.

MEL ITEM	TAB LOCATION	PLACARD TEXT
30-00-07	Associated TEMP Probe Heater Light	Total Air Temperature Probe Heater INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH			
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY			
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS	
30-00-08	Angle of Attack Sensor Heater(s) / Stall Warning System Sensor Heater(s) / Alpha Vane Heater(s) "DISP.APPR.REQ'D."	Y	2	0	C	Except for ER operations (ETOPS) beyond 120 minutes, may be inoperative provided aircraft is not operated in known or forecast icing conditions.	

MEL ITEM	TAB LOCATION	PLACARD TEXT
30-00-08	Associated ALPHA VANE Light	____ AOA Vane / Sensor Heater INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
	PITOT, PITOT / STATIC AND TEMPERATURE PROBE HEATER LIGHTS				
30-00-09A	Amber (Heater Off) Lights Pitot and Pitot / Static "DISP.APPR.REQ'D."	Y	-	0	B (M) Except for ER operations (ETOPS) beyond 120 minutes, may be inoperative provided: a) Associated heater function is verified to operate normally, and b) Airplane is not operated in known or forecast icing conditions.
30-00-09B	Temp Probe	Y	-	0	C (M) May be inoperative provided associated heater function is verified to operate normally PRIOR TO EACH DEPARTURE. Repetitive Check Required (Yellow Placard)
30-00-09C	Temp Probe "DISP.APPR.REQ'D."	Y	-	0	C May be inoperative provided: a) Associated heater is inoperative, and b) Airplane is not operated in known or forecast icing conditions.

MEL ITEM	TAB LOCATION	PLACARD TEXT
30-00-09A	Affected Probe Heater Light(s)	___ Pitot or Pitot/Static Amber (Heater Off) Light(s) INOP
30-00-09B	Affected Probe Heater Light(s)	TEMP PROBE Amber (Heater Off) Light INOP
30-00-09C	Affected Probe Heater Light(s)	TEMP PROBE Amber (Heater Off) Light(s) INOP

(M) PROCEDURES

30-00-09A, 30-00-09B

Check affected probe heater as follows:

1. Station a ground observer at the associated probe heater and establish communications.
2. Apply electrical power to the aircraft.
3. Place the associated PROBE HEAT switch to the ON position.
4. To test the TAT probe heat, press and hold the TAT TEST switch.
5. Check that heat radiation can be detected from the associated probe, indicating that the heater is functioning. DO NOT TOUCH PROBE.

CAUTION: Do not place hand on probe. Temperatures are high enough to cause burns. Do not leave heater on longer than required. Heater life may be unnecessarily shortened.

5. If TAT probe heat was tested, release the TAT TEST switch.
6. Place the associated PROBE HEAT switch to the OFF/AUTO position.
7. Restore aircraft electrical system to normal.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO. NAME / DESCRIPTION					REMARKS OR EXCEPTIONS	
ELECTRICALLY HEATED WINDSHEILDS						
30-00-11A	No. 1 Window "DISP.APPR.REQ'D."	Y	2	1	C	Except for ER operations (ETOPS) beyond 120 minutes, one may be inoperative provided: a) Aircraft is not operated in known or forecast icing conditions, b) Both No. 2 window heaters operate normally, c) Windshield de-fog system operates normally, and d) Airspeed is limited to 250 KIAS below 10,000 feet MSL.
30-00-11B	No. 2 Window "DISP.APPR.REQ'D."	Y	2	1	C	May be inoperative provided: a) Both No.1 window heaters operate normally, b) Windshield de-fog system operates normally, and c) Airspeed is limited to 250 KIAS below 10,000 feet MSL.

MEL ITEM	TAB LOCATION	PLACARD TEXT
30-00-11A	Associated Window Heat Switch	____ Windshield Heat INOP
30-00-11B	Associated Window Heat Switch	____ Windshield Heat INOP

OPERATIONS NOTE

With No. 1 window heat inoperative, operate with the Windshield Air (pneumatic anti-fogging system) on when window heat is required.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH			
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY			
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS	
30-00-12	De-Fog System	Y	1	0	C		

MEL ITEM	TAB LOCATION	PLACARD TEXT
30-00-12	Captain's Windshield Air Control Knob	De-Fog System INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
30-00-13A	Windshield Wiper System "DISP.APPR.REQ'D."	Y	2	0	C (M) May be inoperative provided: a) Aircraft is not operated in precipitation within 5 statute miles of airport of takeoff or intended landing, and b) Approach minimums do not require their use, <u>HUD used for approach</u> CAT II/III – Not Authorized <u>HUD not used for approach</u> CAT II/III – Not Authorized
30-00-13B	Park Function	N	2	0	C May be inoperative for all flight conditions provided blade(s) can be positioned in a location that will not obstruct forward vision.
30-00-13C	Intermittent Speed Function	Y	2	0	C
30-00-13D	Low Speed Function	Y	2	0	C May be inoperative provided associated high speed function operate normally.
30-00-13E	High Speed Function	Y	2	1	C May be inoperative provided associated low speed function operates normally.
30-00-13F	High Speed Function "DISP.APPR.REQ'D."	Y	2	0	C May be inoperative provided both low speed functions operate normally and rain intensity is less than moderate.

MEL ITEM	TAB LOCATION	PLACARD TEXT
30-00-13A	Windshield Wiper Selector	____ Windshield Wiper System(s) INOP
30-00-13B	Windshield Wiper Selector	____ W/S Wiper(s) Park Function INOP
30-00-13C	Windshield Wiper Selector	____ W/S Wiper(s) Intermittent Speed Function INOP
30-00-13D	Windshield Wiper Selector	____ W/S Wiper(s) Low Speed Function INOP
30-00-13E	Windshield Wiper Selector	____ W/S Wiper High Speed Function INOP
30-00-13F	Windshield Wiper Selector	____ W/S Wiper(s) High Speed Function INOP

(M) PROCEDURES

30-00-13A

Conditional maintenance procedure. If wiper blade obstructs forward vision, the wiper blade may be relocated to the parked position. If this procedure is necessary, maintenance is required and flight crew may not placard.

1. Do this task: Windshield Wiper Arm Removal (AMM 30-42-31).
2. Do this task: Windshield Wiper Arm Installation (AMM 30-42-31).

NOTE: It is only necessary to put the wiper arm in the parked position and to apply the appropriate downward force on the wiper blade. The steps related to the sweep of the wiper arm are not necessary.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH			
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY			
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS	
30-00-17A	COWL ANTI-ICE Lights "DISP.APPR.REQ'D."	Y	2	1	C	Except for ER operations (ETOPS) beyond 120 minutes, may be inoperative provided aircraft is not operated in known or forecast icing conditions.	
30-00-17B	COWL ANTI-ICE Lights "DISP.APPR.REQ'D."	N	2	1	C	(O)(M) May be inoperative provided: a) Associated Cowl Anti-Ice Valve is locked OPEN and deferred per MEL 30-00-03B . b) Associated High Stage Valve is considered inoperative and deferred per MEL 36-00-09 .	

MEL ITEM	TAB LOCATION	PLACARD TEXT
30-00-17A	Affected COWL ANTI-ICE Light	___ COWL ANTI-ICE Light INOP
30-00-17B	Affected COWL ANTI-ICE Light	___ COWL ANTI-ICE Light INOP

(O) PROCEDURES

30-00-17B

See (O) procedures for 30-00-03B.

(M) PROCEDURES

30-00-17B

See (M) procedures for 30-00-03B, and 36-00-09.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
30-00-18A	Alpha Vane Heater Light Systems	Y	2	0	C (M) May be inoperative provided associated heater function operates normally and is verified PRIOR TO EACH DEPARTURE. Repetitive Check Required (Yellow Placard)
30-00-18B	Alpha Vane Heater Light Systems "DISP.APPR.REQ'D."	Y	2	0	C May be inoperative provided associated heater is considered inoperative and is deferred per MEL 30-00-08 .

MEL ITEM	TAB LOCATION	PLACARD TEXT
30-00-18A	Associated ALPHA VANE Heater Light	___ ALPHA VANE Heater Light INOP
30-00-18B	Associated ALPHA VANE Heater Light	___ ALPHA VANE Heater Light INOP

(M) PROCEDURES

30-00-18A

1. Station a ground observer at the associated vane heater and establish communications.
2. Apply electrical power to the aircraft.
3. Place the associated Pitot Static Heat switch to the ON position.
4. Check that heat radiation can be detected from the associated vane, indicating that heater is functioning.
DO NOT TOUCH VANE.

CAUTION: Do not place hand on probe. Temperatures are high enough to cause burns. Do not leave heater on longer than required. Heater life may be unnecessarily shortened.

5. Place the associated Pitot Static Heat switch to the OFF position.
6. Restore aircraft electrical system to normal.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
30-00-19	Drain Mast Heaters "DISP.APPR.REQ'D."	Y	2	0	C (M) May be inoperative provided water supply to associated components is secured off.

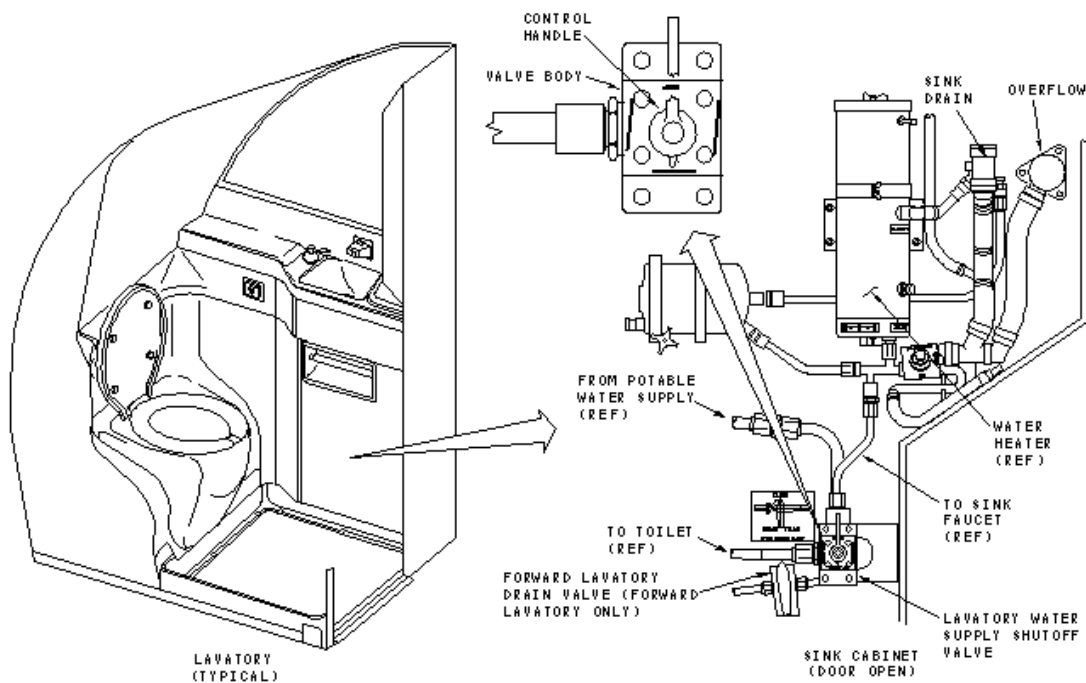
MEL ITEM	TAB LOCATION	PLACARD TEXT
30-00-19	Logbook	Both Drain Mast Heaters INOP

(M) PROCEDURES

1. Position the associated water supply valves accordingly (lavatory – 3 each to *TOILET ONLY*, galley or fountain valves OFF – 2 each) 5 total valves.
2. Turn off the water heater in any lavatory that has the water supply shutoff.
3. Ensure lavatory drain valve (in forward lav ONLY) is in the CLOSED (normal) position.
4. Deactivate both drain mast heaters by opening and collaring the following circuit breakers on the P- 18 panel: HEATERS DRAIN MAST AIR and HEATERS DRAIN MAST GND

NOTE: Pulling the above circuit breakers deactivates BOTH heaters, therefore, ALL sinks and all galley drains should not be used.

5. Placard all affected drains or sinks INOP.



ATA 31 Contents

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
31-00-01A	Clocks	Y	2	1 C	One may be inoperative at either pilot or copilot station.
31-00-01B	Automatic UTC Update Function	Y	2	0 C	(O) May be inoperative provided manual mode is set and operates normally.

MEL ITEM	TAB LOCATION	PLACARD TEXT
31-00-01A	Affected Clock	____ Clock INOP
31-00-01B	Affected Clock(s)	____ Clock Automatic UTC Update Function INOP

(O) PROCEDURES

31-00-01B

NOTE: When UTC time/date information is not being received from GPS, dashes will be displayed in clock's UTC time/date display.

To set manual mode on clock:

1. Select Manual Mode (MAN) with the "TIME/DATE" push button on the clock.
2. Manually set the correct time/date as required.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
31-00-02A	Flight Data Recorder (FDR) "DISP.APPR.REQ'D."	Y	1	0	A May be inoperative provided: a) Cockpit Voice Recorder (CVR) operates normally, b) Airplane may not depart from ATL, BOS, LAX, or SLC unless: 1. FDR failure occurs after pushback but prior to takeoff, or 2. FDR repair was attempted but was not successful. c) In those cases where repair is attempted but not successful, aircraft may be dispatched on a flight or series of flights but shall not continue beyond ATL, BOS, LAX, or SLC where repair must be accomplished prior to dispatch, d) It is required that MCC initiate a Corrective Action Required (CAR) for initial repair location (ATL, BOS, LAX, or SLC) at time of deferral and issue a second CAR for next designated airport if initial repair attempt was not successful, and e) Repairs are made within three flight days.
31-00-02B	DFDR Recording Parameters Required by 14 CFR "Contact MCC"	N	-	0	A Up to three (3) recording parameters may be inoperative provided: a) Cockpit Voice Recorder (CVR) operates normally, and b) Repairs are made within 20 calendar days. NOTE: Refer to TOPP 40-20-40 for a listing of DFDR parameters required by 14 CFR.
31-00-02C	DFDR Recording Parameters Not Required by 14 CFR "Contact MCC"	N	-	0	A May be inoperative provided repairs are made prior to the completion of the next heavy maintenance visit (PSV or higher). NOTE: Refer to TOPP 40-20-40 for a listing of DFDR parameters required by 14 CFR.

MEL ITEM	TAB LOCATION	PLACARD TEXT
31-00-02A	Flight Data Recorder Switch	Flight Data Recorder INOP
31-00-02B	Flight Data Recorder Switch	Flight Data Recorder ____ Parameter INOP
31-00-02C	Flight Data Recorder Switch	Flight Data Recorder ____ Parameter INOP

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MAINTENANCE NOTE

The following procedure may be used to confirm whether or not DFDAU faults affect the FDR or only the ACMS function:

1. Position the Flight Recorder Test Switch to the TEST position (on the DATA LOADER CONTROL PANEL).
2. If the Flight Recorder System OFF Light extinguishes, the fault does not affect the mandatory function of the FDR but does affect the ACMS function (MEL Item 31-00-07).
3. If the Flight Recorder System OFF light remains illuminated, the fault does affect the mandatory function of the FDR.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS
31-00-07A	Aircraft Condition Monitoring System (ACMS)	Y	1	0	D	(O) May be inoperative provided engine trend data is manually entered onto Engine Trend Data Sheets.
31-00-07B	Quick Access Recorder (QAR)	Y	1	0	D	

MEL ITEM	TAB LOCATION	PLACARD TEXT
31-00-07A	Logbook	Aircraft Condition Monitoring System INOP
31-00-07B	Logbook	Quick Access Recorder INOP

(O) PROCEDURES

31-00-07A

1. Refer to [TOPP 50-10-25](#).
2. Refer to FOM, Administration, Engine Performance Report.
3. Note on maintenance placard, enter "Auto Engine Trend Data Report not Xmitting-Record Data In Engine Performance Log".

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
COMMON DISPLAY SYSTEM (CDS)					
31-00-08A	Display Units (Lower DU)	Y	1	0	C (O) May be inoperative provided: a) All remaining DU's operate normally, and b) It is checked that engine display can be switch to an alternate DU.
31-00-08B	CDS MAINT Annunciation PFD/ND	Y	-	0	B May be dispatched with faults indicated by CDS MAINT annunciation.

MEL ITEM	TAB LOCATION	PLACARD TEXT
31-00-08A	Display Units (Lower DU)	Display Units (Lower DU) INOP
31-00-08B	Near Associated PFD/ND	____ PFD/ND CDS MAINT Annunciation Displayed

(O) PROCEDURES

31-00-08A

- Deactivate the lower display unit by pulling and securing circuit breakers 6E12 on the P6-1 panel to reduce display unit interference.
- Verify that engine indications can be manually selected to either Captain's or First Officer's inboard DU. Select Multi Function Display (MFD) on the Main Panel DU's.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
31-00-09	Remote Light Sensor System	Y	1	0	C May be inoperative provided all manual display brightness controls operate normally.

MEL ITEM	TAB LOCATION	PLACARD TEXT
31-00-09	Near Captain's Remote Light Sensor (Glareshield)	Remote Light Sensor System INOP

NUMBER INSTALLED					NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY			
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS	
31-00-10	Speed Reference Selector	Y	1	0	C	May be inoperative provided speeds can be set using CDU.	

MEL ITEM	TAB LOCATION	PLACARD TEXT
31-00-10	Speed Reference Selector	Speed Reference Selector INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
31-00-14A	TAKEOFF CONFIG Light	Y	2	0	C May be inoperative provided the associated CABIN ALTITUDE warning light operates normally.
31-00-14B	TAKEOFF CONFIG Light	Y	2	0	C (O) May be inoperative provided flight crew performs a briefing on cabin altitude warning indications and procedures before engine start PRIOR TO THE FIRST FLIGHT OF THE DAY or following any change of either flight crew member. (Logbook Entry Required) Repetitive Check Required (Yellow Placard)

MEL ITEM	TAB LOCATION	PLACARD TEXT
31-00-14A	Above Nav Display-adjacent to associated light	TAKEOFF CONFIG Light INOP
31-00-14B	Above Nav Display-adjacent to associated light	TAKEOFF CONFIG Light INOP

(O) PROCEDURES

31-00-14B

Perform Cabin Altitude Warning Indication Breifing using [MEL 21-00-11 \(O\) procedures](#).

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
32-00-02	Anti-Skid System "DISP.APPR.REQ'D."	Y	1	0	B (O)(M) May be inoperative provided: a) Associated Antiskid channel(s) is deactivated, b) Approach minimums do not require their use, and c) Performance corrections are applied. <u>HUD used for approach</u> CAT III – Not Authorized <u>HUD not used for approach</u> CAT II/III – Not Authorized

MEL ITEM	TAB LOCATION	PLACARD TEXT
32-00-02	Auto Brake Switch	1. Anti-Skid System INOP 2. Do Not Use Auto Brakes

(O) PROCEDURES

1. Refer to QRH Antiskid Inoperative Checklist.
2. Tailwind takeoffs are NOT authorized.
3. Reduced thrust takeoffs using the assumed temperature method are NOT authorized. TO1 and TO2 are permitted.
4. Turn the Autobrake System to the OFF position and do not use.
5. Extend speed brakes manually since automatic extension system may not be operative with Anti-Skid inoperative.
6. Plan to land on the longest runway at destination. Refer to the "MEL Support" tables in the Abnormal Section of the ODM for Dispatch Landing Distances.

CONTINUED NEXT PAGE

32-00-02 ANTI-SKID SYSTEM	
EFFECTIVITY	All
FLIGHT PLANNING REQUIREMENTS	None
NOTES	-700 AWABS Takeoff data is provided for DRY and WET skid resistant *grooved or PFC* runways only. Takeoffs using ICY, 25CTR, or 50CTR data are not authorized. -800 AWABS Takeoff data is provided for DRY runway conditions only. Takeoffs using SLP-WET, ICY, 25CTR, or 50CTR data are not authorized. -900ER AWABS Takeoff data is provided for DRY runway conditions only. Takeoffs using SLP-WET, ICY, 25CTR, or 50CTR data are not authorized.
AWABS	Performance corrections have been applied.
TAKEOFF PERFORMANCE WORKSHEET	Manual WDR not permitted with MEL 32-00-02.

(M) PROCEDURES

OPTION 1 - Deactivate Antiskid System **Without** System Bite Check:

1. Pull and secure the P6-3 Panel INBOARD ANTISKID and OUTBOARD circuit breakers.
2. Placard the Autobrake switch- AUTOBRAKE INOP- LEAVE OFF.

OPTION 2 - Deactivate Antiskid System **With** System Bite Check:

Maintenance is Required and Flight Crew May Not Placard

NOTE: If only one of the two antiskid channels is inoperative, the other channel may be left on to provide antiskid protection for the INBD or OUTBD wheels.

Identify faulty channel by performing maintenance BITE check as follows:

1. Gain access to the antiskid/autobrake control unit in the electronics bay E1-3.
2. Note all faults by pressing the PRESS/TEST - BIT switch to the BIT position until "TEST END".
3. Clear all faults by pushing RESET.
4. Note existing faults by pressing the PRESS/TEST - BIT switch to the BIT position until "TEST END".
5. Pull and secure P6-3 panel ANTISKID circuit breaker associated with existing faults.
6. Placard the Autobrake switch- AUTOBRAKE INOP- LEAVE OFF.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD			REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
32-00-03	Parking Brake Valve "DISP.APPR.REQ'D."	N	1	0	B (O)(M) May be inoperative provided: a) Antiskid is deactivated and deferred per MEL 32-00-02, b) Approach minimums do not require its use, and c) Performance corrections are applied. <u>HUD used for approach</u> CAT III – Not Authorized <u>HUD not used for approach</u> CAT II/III – Not Authorized

MEL ITEM	TAB LOCATION	PLACARD TEXT
32-00-03	1. Parking Brake Lever 2. Auto Brake Switch 3. AUTO SPOILERS Light	1. Parking Brake Valve INOP Closed 2. Do Not Use Auto Brakes 3. Do Not Use Auto Spoiler System

(O) PROCEDURES

NOTE: The parking brake operates normally with the parking brake valve inoperative closed.

1. Tailwind takeoffs are NOT authorized.
2. Reduced thrust takeoffs using the assumed temperature method are NOT authorized. TO1 and TO2 are permitted.
3. Verify that the anti-skid system is deactivated:
 - a. ANTISKID INBD and ANTISKID OUTBD circuit breakers are pulled and secured.
4. The auto brakes and auto spoilers are considered inoperative.
5. Use anti-skid inoperative braking procedure.
6. Extend speed brakes manually since automatic extension system is inoperative.

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32-00-03	PARKING BRAKE VALVE
EFFECTIVITY	All
FLIGHT PLANNING REQUIREMENTS	None
NOTES	-700 AWABS Takeoff data is provided for DRY and WET skid resistant *grooved or PFC* runways only. Takeoffs using ICY, 25CTR, or 50CTR data are not authorized. -800 AWABS Takeoff data is provided for DRY runway conditions only. Takeoffs using SLP-WET, ICY, 25CTR, or 50CTR data are not authorized. -900ER AWABS Takeoff data is provided for DRY runway conditions only. Takeoffs using SLP-WET, ICY, 25CTR, or 50CTR data are not authorized.
AWABS	Performance corrections have been applied.
TAKEOFF PERFORMANCE WORKSHEET	Manual WDR not permitted with MEL 32-00-03.

(M) PROCEDURES

Place the parking brake valve in the fully CLOSED position as follows:

1. Check that the landing gear ground lock pins are properly installed.
2. With electrical power on the aircraft and wheels chocked, release the parking brake.
3. Open the ANTI-SKID FAIL & PARKING BRAKE or LANDING GEAR PARKING BRAKE circuit breaker on the P6-3 Panel.
4. Deactivate the antiskid system:
 - a. Pull and secure the ANTISKID INBD and ANTISKID OUTBD circuit breakers.
5. Gain access to the parking brake valve and disconnect, cap, and stow the electrical connector at the valve.
6. Manually position the override lever on the valve to the fully closed (POS 2) position.
7. Close the ANTI-SKID FAIL & PARKING BRAKE or LANDING GEAR PARKING BRAKE circuit breaker on the P6-3 Panel.
8. With the parking brake released and the anti-skid deactivated, verify that the ANTI-SKID INOP light is on.
9. Place the autobrake switch to the OFF position.
10. Restore the aircraft to its required configuration.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
32-00-04	Parking Brake Light	N	1	0	C (M) May be inoperative provided parking brake shutoff valve is verified to operate normally.

MEL ITEM	TAB LOCATION	PLACARD TEXT
32-00-04	Parking Brake Warning Light	Parking Brake Warning Light INOP

(M) PROCEDURES

1. Check that landing gear ground lock pins are properly installed.
2. With electrical power on the aircraft and wheels chocked, set and release the parking brake.
3. Verify that the parking brake shutoff valve (located on the wheel well aft bulkhead) moves to the closed position (POS 2) when the parking brake is set and moves to the open position (POS 1) when the parking brake is released. These results indicate that the parking brake valve is operating normally.
4. The ANTISKID INOP light may illuminate when the parking brake is set. Check that ANTISKID INOP light extinguishes when parking brake is released. If ANTISKID INOP light does not extinguish when parking brake is released, [refer to MEL Item 32-00-02](#), Antiskid System.
5. Remove landing gear ground lock pins prior to dispatch.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
32-00-07A	Automatic Brake System "DISP.APPR.REQ'D."	N	1	0	C (M) May be inoperative provided system is deactivated and secured.
32-00-07B	Automatic Brake System "DISP.APPR.REQ'D."	Y	1	0	C May be inoperative provided: a) AUTOBRAKE DISARM or INOP light does not illuminate with auto-brake select switch in OFF position. b) Select switch is left in OFF position.

MEL ITEM	TAB LOCATION	PLACARD TEXT
32-00-07A	AUTO BRAKE Select Switch	Automatic Brake System INOP
32-00-07B	AUTO BRAKE Select Switch	Automatic Brake System INOP

(M) PROCEDURES

32-00-07A

If AUTOBRAKE DISARM or INOP light EXTINGUISHES with autobrake select switch in OFF, dispatch is allowed without deactivating the autobrake system (autobrake select switch in the OFF position).

If the AUTOBRAKE DISARM or INOP light ILLUMINATES with the autobrake select switch in the OFF position, perform the following:

- Depressurize hydraulic system B by applying and releasing brakes 10 times with approximately 3 seconds between each application.
 - Pull and secure the Autobrake/BITE 1 and Autobrake/BITE 2 circuit breakers.
- In the main gear wheel well, on the ceiling, locate the autobrake valve module V122 and deactivate the system by one of the two following methods

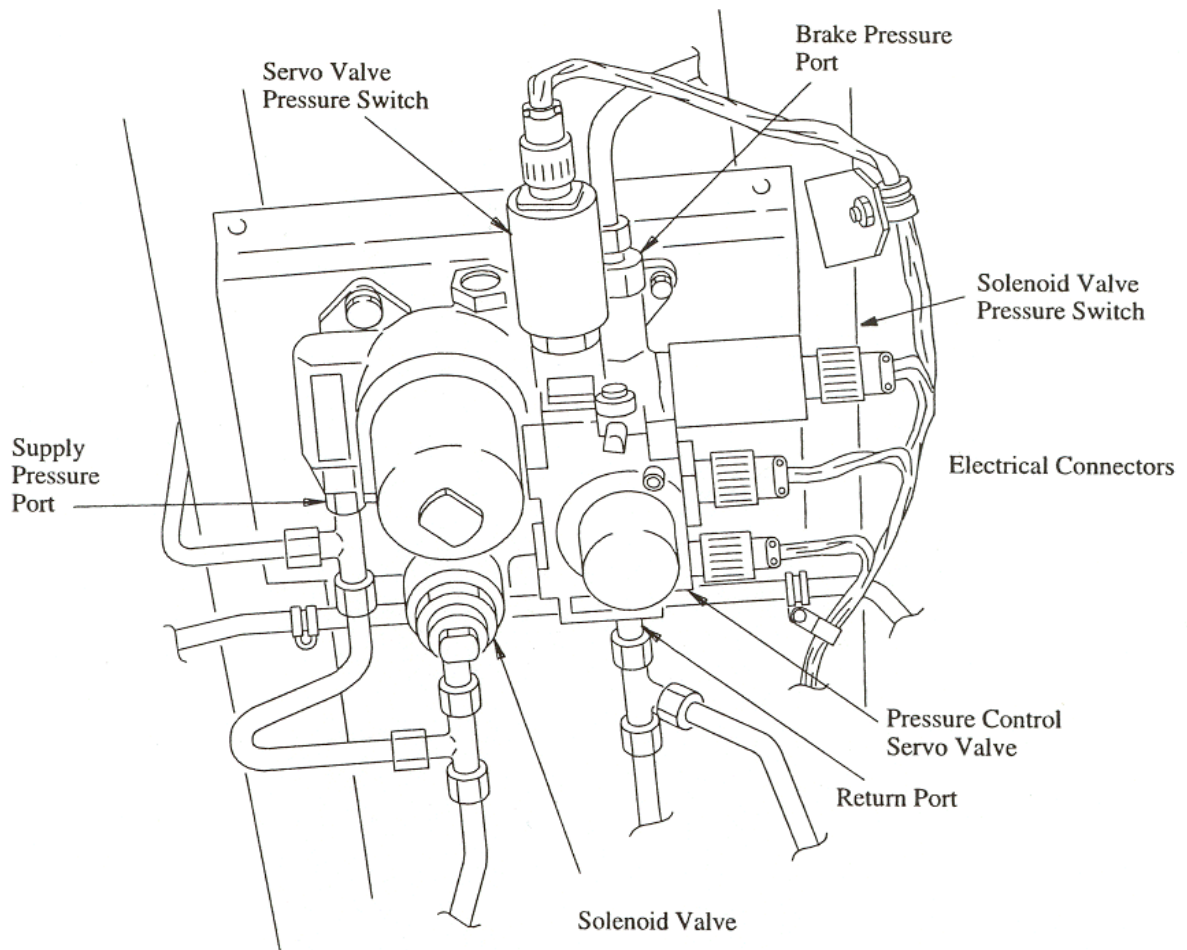
METHOD 1

- Remove, cap and stow the electrical connectors from the autobrake valve module.
- Remove the autobrake valve module and cap the supply pressure line.
- Connect the brake pressure line and the return line with a 3/8 inch section of tubing or flexible hose (prevents hydraulically locking the brake shuttle valves in the brakes off position).

METHOD 2

- Disconnect, cap, and stow electrical connectors D2570, D2572 and D2574.
 - Disconnect and plug the supply pressure line, and cap the supply pressure port on the valve module.
- Uncollar and close the Autobrake/BITE 1 and Autobrake/BITE 2 P6-3 Panel circuit breakers.
 - Repressurize the hydraulic systems and check vicinity of auto-brake valve for leaks.

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**AUTOBRAKE CONTROL MODULE**

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
32-00-08	Rudder Pedal Nose Wheel Steering System (Rotary Actuator)	N	1	0	C (O)(M) May be inoperative deactivated in disengage position provided: a) Operation of associated systems are not affected, and b) All takeoffs and landings are made by pilot occupying left seat.

MEL ITEM	TAB LOCATION	PLACARD TEXT
32-00-08	Near Nose Wheel Steering Tiller	Rudder Pedal Nose Wheel Steering System INOP

NOTE: Dispatch is only allowed with the rudder pedal nose wheel steering not operating (electrical rotary actuator inoperative in the disengage position). The rotary actuator cannot be manually positioned.

(O) PROCEDURES

NOTE: Pilots must use caution when using the nose wheel steering tiller (wheel) above 20 knots to avoid over-controlling the nose wheels resulting in possible loss of directional control.

Captain must be flying and the following procedures used:

Takeoff: Steer the aircraft by manipulating the steering wheel control until the rudder becomes effective between 40 and 60 kts. The F/O should assist by keeping the wings level and applying a light forward pressure on the control column until the tiller is no longer required for steering.

Landing: The Captain should use the rudder and steering wheel control as required during the landing roll. The F/O should assist by keeping the wings level and forward pressure on the control column.

(M) PROCEDURES

1. Put the airplane in the air mode (AMM 32-09-00/201) and wait at least 5 seconds.
2. Pull and secure the P6-3 Panel circuit breaker LANDING GEAR NOSE GEAR STEER.
3. Return the airplane to the ground mode (AMM 32-09-00/201).
4. Operate the rudder pedal steering and verify that the nose gear does not turn.
5. Operate rudder pedals and verify that the rudder operates normally.
6. Operate the tiller and verify that the nose gear steering operates normally.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS
32-00-09	Direct Reading Tire Pressure Gauge	Y	6	0	C	

MEL ITEM	TAB LOCATION	PLACARD TEXT
32-00-09	Logbook	Direct Reading Tire Pressure Gauge(s) INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
32-00-10	Alternate Anti-Skid Valves "DISP.APPR.REQ'D."	N	2	0	B
					(M) May be inoperative provided: a) Manual braking capability of alternate brake system is verified on associated wheels, and b) Approach minimums do not require their use. <u>HUD used for approach</u> CAT III – Not Authorized <u>HUD not used for approach</u> CAT II/III – Not Authorized

MEL ITEM	TAB LOCATION	PLACARD TEXT
32-00-10	ANTISKID INOP Light	ALT Antiskid Valve INOP

(M) PROCEDURES

- If the alternate anti-skid valve is inoperative, verify manual braking is available on the affected wheels with the alternate brake system as follows:
 - Provide electrical power to the aircraft.
 - Check wheel chocks are in place.
 - P6-3 Panel circuit breakers ANTISKID INBD and ANTISKID OUTBD are closed.
 - Depressurize hydraulic system B and provide hydraulic system A pressure.
 - Depress and release brake pedals several times.
 - Observe brake wear indicator pins for movement to insure that all brakes are operating normally.

IF BRAKES DO NOT OPERATE NORMALLY AFTER PERFORMING ABOVE STEPS:

- Open the following LANDING GEAR ANTISKID circuit breakers on the P6-3 Panel:
 - ANTI-SKID INBD
 - ANTI-SKID OUTBD
- Depress and release brake pedals several times.
- Observe brake wear indicator pins for movement to insure that all brakes are operating normally.
- If all brakes operate normally, the Anti-Skid system is considered inoperative and deferred per [MEL 32-00-02](#).
- If any brake remains inoperative, the aircraft can not be dispatched.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
32-00-12	Nose Wheel Steering Switch	N	1	0	C (M) May be inoperative provided; a) Nose wheel steering is powered by Hydraulic System A, and b) Landing gear transfer valve is verified to operate normally.

MEL ITEM	TAB LOCATION	PLACARD TEXT
32-00-12	Nose Wheel Steering Switch	Nose Wheel Steering Switch INOP

(M) PROCEDURES

Verify the landing gear transfer valve operates normally as follows:

TEST OF TRANSFER VALVE SOLENOIDS.

1. Supply electrical power to the aircraft.
2. Install landing gear pins.
3. Pressurize Hydraulic system A.
4. Following circuit breakers are to be closed on the P6-2 Panel:
 - a. 6C16 HYD SYS LDG GR SYS XFR VALVE PRI.
 - b. 6C15 HYD SYS LDG GR SYS XFR VALVE SEC.
5. Move the Landing gear lever to the DN position.
6. Push the ON/OFF switch on the PSEU panel on the E-11 shelf.
7. Push the down arrow until GROUND TESTS? is displayed, then press YES.
8. Push the down arrow until LGTV TEST? is displayed, then press YES.
9. Make sure the transfer valve passes the test.
10. Return aircraft to normal condition.

TEST OF TRANSFER VALVE OPERATION WHICH USES ALTERNATE STEERING.

1. Lift the nose of the airplane on jacks.
2. Make sure these circuit breakers on the P6-3 Panel are closed:
 - a. 6D17 Landing Gear Nose Gear Steer
 - b. 6C15 LANDING GEAR AIR/GND SYS 2
3. Make sure the ALT NOSE WHEEL STEERING switch on the P-1 Captain's Panel is in the NORM position.
4. Remove the lock pin from the towing lever and allow the lever to move to the NORMAL position.
5. Use hydraulic jack to compress the shock strut at least 3.5 inches.
6. Hydraulic System A:
 - a. Remove System A or System B power.
7. Hydraulic System B:
 - a. Pressurize System A or B power.

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CAUTION: The shock strut must be compressed at least 3.5 inches before you operate the nose wheel steering. If you operate the steering with the shock strut compressed less than 3.5 inches you will damage the centering cams in the nose gear.

8. Move the ALT NOSE WHEEL STEERING switch on the P-1 Captain's Panel to the ALT position.
9. Make sure the nose wheel steering operates:
 - a. Turn the nose gear steering wheel full travel in one direction, then the other direction, and then return it to center.
10. Move the ALT NOSE WHEEL STEERING switch on the P-1 Captain's Panel to the NORM position.
11. Make sure the nose wheel steering does not operate.
12. Hydraulic System B
 - a. Remove Hydraulic system A or B power.
13. Move the towing lever to the TOW position and install lock pin.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS	
	HYDRAULIC BRAKE PRESSURE INDICATOR					
32-00-13A	Wheel Well Brake Accumulator Indicator	Y	1	0	C	May be inoperative provided Flight Deck brake pressure indicator operates normally.
32-00-13B	Flight Deck HYD BRAKE PRESS Indication System	N	1	0	C	(M) May be inoperative provided brake accumulator charge is verified normal ONCE EACH FLIGHT DAY. (Log Book Entry Required) Repetitive Check Required (Yellow Placard)

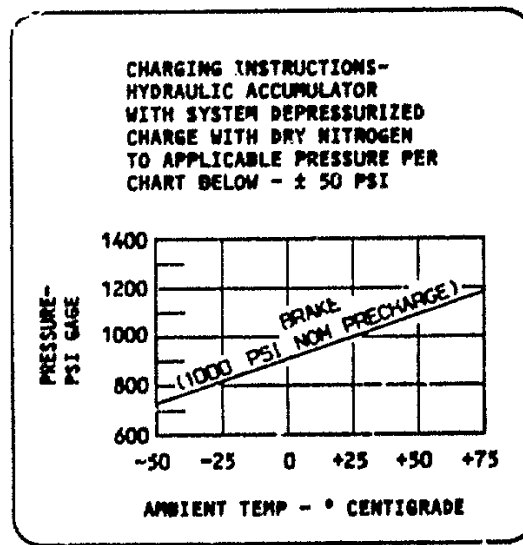
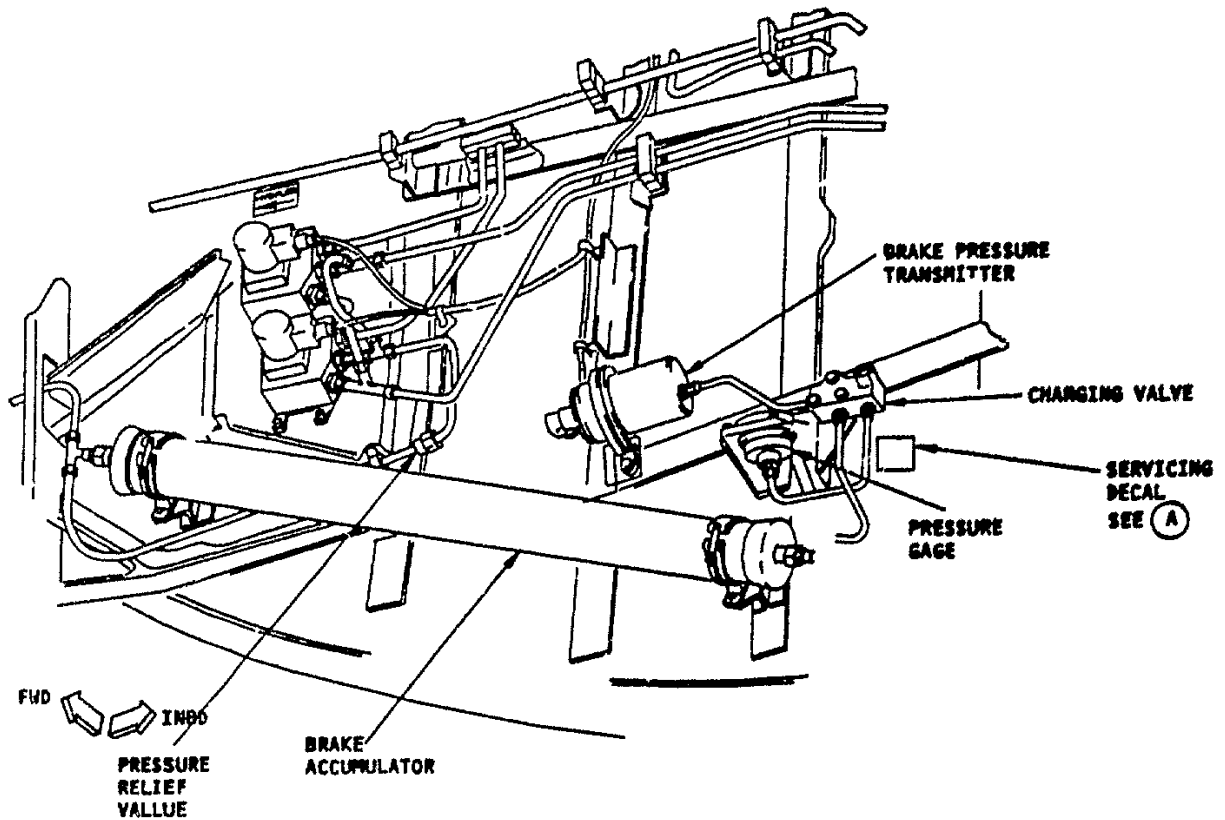
MEL ITEM	TAB LOCATION	PLACARD TEXT
32-00-13A	Flight Deck HYD BRAKE PRESS Indicator	Wheel Well Brake Accumulator Indicator(s) INOP
32-00-13B	Flight Deck HYD BRAKE PRESS Indicator	Flight Deck HYD BRAKE PRESS Indicator INOP

(M) PROCEDURES

32-00-13B

1. Chock wheels and release parking brakes.
2. Depressurize Hydraulic System A and B.
3. Apply and release brakes 10 times with approximately 3 seconds between each application.
4. Verify that the associated wheel well brake accumulator gauge pressure indication is within limits after 10 applications (refer to the wheel well placard).
5. Pressurize Hydraulic System A and B and verify that operative brake indicator is approximately 3000 psi.
6. Set the parking brakes.
7. Depressurize Hydraulic Systems A and B.

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(A)

BRAKE HYDRAULIC ACCUMULATOR SERVICING

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
32-00-14	Gear Retraction Braking System "DISP.APPR.REQ'D."	Y	1	0	C (O) May be inoperative provided; a) After takeoff, landing gear remains extended for two minutes before retraction, b) Takeoff performance is based on Landing Gear Extended, and c) Performance corrections are applied.

MEL ITEM	TAB LOCATION	PLACARD TEXT
32-00-14	Near Landing Gear Lever	Gear Retraction Braking System INOP

(O) PROCEDURES

- Reduced thrust takeoffs using the assumed temperature method are NOT authorized. TO1 and TO2 are permitted.
- Improved performance takeoffs are NOT authorized.
- VMO and MMO are restricted to 270 KIAS and .73 Mach while gear is extended.

32-00-14	GEAR RETRACTION BRAKING SYSTEM
EFFECTIVITY	All
FLIGHT PLANNING REQUIREMENTS	Increase BLOCK FUEL by 200 lbs.
NOTES	None
AWABS	Performance corrections have been applied.
TAKEOFF PERFORMANCE WORKSHEET	Manual WDR not permitted with MEL 32-00-14.

NUMBER INSTALLED			NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD			REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
	PROXIMITY SWITCH ELECTRONICS UNIT (PSEU) SYSTEM				
32-00-17A	PSEU Fault	N	-	0	C (M) May be dispatched with faults indicated by PSEU light provided PSEU is checked for faults PRIOR TO EACH DEPARTURE. (Log Book Entry Required) Repetitive Check Required (Yellow Placard)
32-00-17B	PSEU Fault	Y	-	0	C (M) May be dispatched with faults indicated by PSEU light provided PSEU light can be extinguished.
32-00-17C	PSEU Light	N	1	0	C (M) May be inoperative provided PSEU is checked for faults PRIOR TO EACH DEPARTURE. (Log Book Entry Required) Repetitive Check Required (Yellow Placard)
32-00-17D	SPSEU Light	N	1	0	C (M) May be inoperative provided SPSEU is checked for faults PRIOR TO EACH DEPARTURE. (Log Book Entry Required) Repetitive Check Required (Yellow Placard)

MEL ITEM	TAB LOCATION	PLACARD TEXT
32-00-17A	PSEU Light	PSEU Fault INOP
32-00-17B	PSEU Light	PSEU Fault INOP
32-00-17C	PSEU Light	PSEU Light INOP
32-00-17D	SPSEU Light	SPSEU Light INOP

(M) PROCEDURES

32-00-17A, 32-00-17C

1. Gain access to the PSEU through the forward access door.
2. Power the PSEU BITE Control Panel by pressing the ON/OFF switch.
3. EXISTING FAULTS? Will be displayed. Press the YES switch.
4. One of the following messages will be displayed:
 - a. NO FAULTS – airplane may be dispatched without further action.
 - b. DISPATCH FAULT or DISPATCH PER MEL – msg # 32-64003 – dispatch allowed for 10 days **unless msg #32-62009, 32-62109, 32-62010, 32-62110, or 32-62014 are also displayed.** If msg #32-62009, 32-62109, 32-62010, 32-62110, or 32-62014 are displayed, refer to [MEL item 32-00-21](#).
 - c. NO DISP FAULT or DO NOT DISPATCH – msg # 32- 64004 – dispatch is not allowed. If msg #32-62009, 32-62109, 32-62010, 32-62110, or 32-62014 are displayed, refer to [MEL item 32-00-21](#).

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32-00-17B

For dispatchable faults, extinguish the PSEU light by one of these three steps:

1. Pushing the MASTER CAUTION light, or
2. Setting the parking brake, or
3. Shutting down both engines.

32-00-17D

Check SPSEU BITE for faults:

1. Supply power to the airplane.
2. Gain access to the SPSEU through the electronic equipment access door.
3. Press the DISPLAY FAULT button to cycle through all faults that may be present.

NOTE: Fault codes 1-8 and B-E are NOT allowed for dispatch. Fault code A indicates a Tail Skid Overcurrent, refer to MEL 32-00-22. A blinking F is an indication that one or more faults are latched, but is not a fault code itself. Fault code 0 indicates that there are no faults.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION			REMARKS OR EXCEPTIONS	
32-00-19	Main Landing Gear Uplock Springs	N	4	3	B (O)(M) One spring on one main gear uplock mechanism may be missing provided landing gear lever remains in UP position for duration of flight until gear extension is required.

MEL ITEM	TAB LOCATION	PLACARD TEXT
32-00-19	Near Landing Gear Lever	Main Landing Gear Uplock Springs INOP

(O) PROCEDURES

After takeoff, leave landing gear lever in the UP position for the duration of the flight until gear extension is required.

(M) PROCEDURES

Remove the affected main landing gear uplock spring.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH			
FLIGHT CREW MAY PLACARD			N	2	0	REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION	REMARKS OR EXCEPTIONS					
32-00-20	Landing Gear Frangible Fitting						
					C	(M) May be broken or missing provided fitting is replaced with a hydraulic cap assembly.	

MEL ITEM	TAB LOCATION	PLACARD TEXT
32-00-20	Near Landing Gear Lever	Landing Gear Frangible Fitting INOP

(M) PROCEDURES

Remove the frangible fitting and nut and replace with a standard BACC14AD06JL or equivalent hydraulic cap assembly.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
32-00-21	Flap Landing Warning Switch, S138	N	1	0	C (M) Switch contacts normally in use may be inoperative provided: a) S138 switch is rewired using an alternate set of contacts, and b) PSEU BITE is used to verify normal operation of S138 switch.

MEL ITEM	TAB LOCATION	PLACARD TEXT
32-00-21	On Control Stand Near Flap Lever	Flap Landing Warning Switch INOP

(M) PROCEDURES

S138 switch is rewired and PSEU BITE is used to verify normal operation of the S138 switch (AMM 32-00-00/901).

1. Failure of the S138 switch is indicated by illumination of the PSEU fault light accompanied by fault message numbers 32-62009, 32-62010 or 32-62014 shown in the PSEU BITE.
2. Each fault message indicates a high resistance short to ground or disagreement between contacts as shown below:

Message	Associated Connector	Wire
32-62009	D10984 pin 48 S138 contact "3"	wire W8124-A-CC
32-62010	D10984 pin 49 S138 contact "18"	wire W8124-A-UU
32-62014	Disagreement between contacts "3" and "18"	

For a S138 switch with connector attached to D14730

Message	Associated Connector	Wire
32-62009	D10984 pin 48 S138 contact "C"	wire W8124-0506-20
32-62010	D10984 pin 49 S138 contact "U"	wire W8124-0511-20
32-62014	Disagreement between contacts "3" and "18"	

3. Refer to Wiring Diagram Manual 32-64-21 and wire list for available contacts. The wires for the contact set (center tap contact and normally open contact) may be cut from the S138 switch set and temporarily connected to an available set of contacts in the same switch as follows, until the switch can be replaced:
 - a. Select flaps full up.
 - b. Select an available set of contacts, after verifying that the normally open contact exhibits better than 10.0 mega-ohms isolation resistance to ground and to center tap.
 - c. Connect wire to selected set of contacts using approved waterproof splices per Standard Wiring Practices Manual.

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4. Cap and stow deactivated wires from S138 switch.
5. Test the S138 switch as follows:
 - a. Use the PSEU BITE panel to select the S138 switch through D10984 pin 48 and 49 and verify each position displays NO GND.
 - b. Select flaps 15.
 - c. Use the PSEU BITE panel to select the S138 switch through D10984 pin 48 and 49 and verify each position displays GND.
6. Alternate to step 3. For a S138 switch with connector attached to D14730. Refer to Wiring Diagram Manual 32-64-21 and wire list for available contacts. Refer to Standard Wiring Practices Manual for any established wiring procedures required. Remove the connector pins A and C, or U and S, from whichever is discrepant on the switch side.
 - a. Select flaps full up.
 - b. Select an available set of contacts, after verifying that the normally open contact exhibits better than 10.0 mega-ohms isolation resistance to ground and to center tap. Available set may be any of the switch NO and CT contacts on any available switch (i.e.: D and F, K and M, N and R).
 - c. Insert the connector pins removed from A and C, or U and S, into whichever set of connector pin locations previously selected above.
 - d. Plug connector holes with removed plugs from pins at newly used set of contacts.
 - e. Test the S138 switch as follows:
 - 1) Use the PSEU BITE panel to select the S138 switch through D10984 pin 48 and 49 and verify each position displays NO GND.
 - 2) Select flaps 15.
 - 3) Use the PSEU BITE panel to select the S138 switch through D10984 pin 48 and 49 and verify each position displays GND.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
32-00-22A	TWO POSITION TAIL SKID (-900ER) Retraction Mechanism "DISP.APPR.REQ'D"	N	1	0	C (O)(M) May be inoperative provided: a) Tail skid is secured in retracted position, and b) Performance corrections are applied.
32-00-22B	Retraction Mechanism "DISP.APPR.REQ'D"	N	1	0	C (O)(M) May be inoperative provided: a) Tail skid is secured in extended position, and b) Performance corrections are applied.
32-00-22C	Cartridge Core Assembly "DISP.APPR.REQ'D"	N	1	0	B (O)(M) May be inoperative provided: a) Detailed AMM inspection reveals no internal and external structural damage, b) Tail skid is secured in retracted position, and c) Appropriate performance adjustments are applied.

MEL ITEM	TAB LOCATION	PLACARD TEXT
32-00-22A	Near Landing Gear Actuator	Tail Skid Retraction Mechanism INOP Secured In Retracted Position
32-00-22B	Near Landing Gear Actuator	Tail Skid Retraction Mechanism INOP Secured In Extended Position
32-00-22C	Near Landing Gear Actuator	Tail Skid Retraction Mechanism INOP Secured in Retracted Position

(O) PROCEDURES

32-00-22A

NOTE: Landing Flap Setting 15 not authorized.

32-00-22A	TWO-POSITION TAIL SKID RETRACTION MECHANISM
EFFECTIVITY	-900ER
FLIGHT PLANNING REQUIREMENTS	None
NOTES	None
AWABS	Performance corrections have been applied.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF None LANDING Reduce RWY ALLOWABLE LANDING WT by 17,000 lbs. Reduce LANDING CLIMB LIMIT WT by 17,000 lbs.

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32-00-22B

32-00-22B	TWO-POSITION TAIL SKID RETRACTION MECHANISM
EFFECTIVITY	-900ER
FLIGHT PLANNING REQUIREMENTS	Increase BLOCK FUEL by 0.3%
NOTES	None
AWABS	Performance weight corrections have been applied. Increase V_1 , V_R , and V_2 by 2 KIAS.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF Reduce RATOW by 10,000 lbs. Reduce T/O CLIMB LIMIT WT by 10,000 lbs. LANDING None OTHER CORRECTIONS Increase V_1 , V_R , and V_2 by 2 KIAS.

32-00-22C

NOTE: Landing Flap Setting 15 not authorized.

32-00-22C	TWO-POSITION TAIL SKID RETRACTION MECHANISM
EFFECTIVITY	-900ER
FLIGHT PLANNING REQUIREMENTS	None
NOTES	None
AWABS	Performance corrections have been applied. AWABS Takeoff data is provided for DRY and WET skid resistant *grooved or PFC* runways only. Takeoffs using ICY, 25CTR, or 50 CTR data are not authorized.
TAKEOFF PERFORMANCE WORKSHEET	Manual WDR not permitted with MEL 32-00-22C.

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(M) PROCEDURES

32-00-22A

Secure the tail skid in the fully retracted position (AMM 32-00-00/901):

1. Open the stabilizer trim access door to get access to the tail skid assembly.
2. Do a general visual inspection of the tail skid hydraulic actuator for evidence of leaks or damage.
3. Do a general visual inspection of the tail skid linkage for evidence of corrosion or damage.
4. Remove the split rings and the REMOVE BEFORE FLIGHT streamer from the retractable tail skid lockout pin.
5. Install the retractable tail skid lockout pin in the lock links for the tail skid.

NOTE: When the tail skid is in the retracted position, the lockout pin is installed from the right to the left from inside the aft unpressurized compartment.

6. Install the lockpin, part of the retractable tail skid lockout pin, through the end of the retractable tail skid lockout pin.
7. Make sure the lockpin is closed.
8. Close the access panel.

32-00-22B

Secure the tail skid in the fully extended position (AMM 32-00-00/901):

1. Open the stabilizer trim access door to get access to the tail skid assembly.
2. Do a general visual inspection of the tail skid hydraulic actuator for evidence of leaks or damage.
3. Do a general visual inspection of the tail skid linkage for evidence of corrosion or damage.
4. Remove the split rings and the REMOVE BEFORE FLIGHT streamer from the retractable tail skid lockout pin.
5. Install the retractable tail skid lockout pin in the lock links for the tail skid.

NOTE: When the tail skid is in the extended position, the lockout pin is installed from the left to the right by reaching between the drag lever skirt and the fairing.

6. Install the lockpin, part of the retractable tail skid lockout pin, through the end of the retractable tail skid lockout pin.
7. Make sure the lockpin is closed.
8. Close the access panel.

32-00-22C

Secure the tail skid in the fully retracted position (AMM 32-00-00/201):

1. Remove the split rings and the REMOVE BEFORE FLIGHT streamer from the retractable tail skid lockout pin.
2. Open the stabilizer trim access door to get access to the tail skid assembly.
3. Do a general visual inspection of the tail skid hydraulic actuator for evidence of leaks or damage.
4. Do a general visual inspection of the tail skid linkage for evidence of leaks or damage.
5. Install the retractable tail skid lockout pin, in the lock links for the tail skid.

NOTE: When the tail skid is in the retracted position the lockout pin is installed from the right to the left from inside the aft unpressurized compartment.

6. Install the lockpin, part of the retractable tail skid lockout pin, through the end of the retractable tail skid lockout pin.
7. Make sure the lockpin is closed.
8. Close the access panel.

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NUMBER INSTALLED			NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD			REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION			REMARKS OR EXCEPTIONS
33-00-01	Cockpit / Flight Deck / Flight Compartment and Instrument Lighting System "DISP.APPR.REQ'D."	Y	-	C Individual lights may be inoperative provided: a) Remaining Lighting System lights are sufficient to clearly illuminate all required instruments, controls, and other devices for which it is provided, b) Remaining Lighting System lights are positioned so that direct rays are shielded from flight crewmember's eyes, c) Lighting configuration and intensity is acceptable to flight crew, and NOTE: Individual button/switch lights and/or annunciation/indications are excluded from this relief.

MEL ITEM	TAB LOCATION	PLACARD TEXT
33-00-01	Associated Indicator, Panel or Lighting Switch	____ Cockpit Instrument Lighting INOP

NOTE 1: This relief applies only to flight compartment and instrument lighting; it does not apply to warning, caution, or advisory lights.

NOTE 2: Cockpit emergency lights (background flood lights, white dome light(s) [some aircraft only have a F/O dome light installed], and standby compass light) may be inoperative for DAY OPERATIONS ONLY.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
33-00-02	Cabin Interior Illumination	Y	-	-	C Individual lights may be inoperative provided sufficient lighting remains for cabin attendants to perform their duties. NOTE: -900ER aircraft have emergency lights in the overwing exit sidewall assemblies that must remain operational when deferring this item.

MEL ITEM	TAB LOCATION	PLACARD TEXT
33-00-02	Flight Attendant Cabin Lighting Control Panel	___ Cabin Lights INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
	PASSENGER LIGHTED INFORMATION SIGNS AND NOTICE SYSTEM				
33-00-03A	Passenger Notice System ("NO SMOKING / FASTEN SEAT BELT / RETURN TO SEAT") Signs "DISP.APPR.REQ'D."	Y	-	-	C (M) May be inoperative provided: a) Associated passenger seat or lavatory is not occupied from which a passenger lighted information sign is not readily legible, and b) Associated seat or lavatory is blocked and placarded-DO NOT OCCUPY. NOTE: These conditions are not intended to prohibit lavatory use or inspections by crewmembers.
33-00-03B	Passenger Notice System ("NO SMOKING / FASTEN SEAT BELT / RETURN TO SEAT") Signs	Y	-	-	C (O) May be inoperative and associated passenger seat or lavatory may be occupied provided: a) PA system operates normally, and b) PA system is used to notify passengers and cabin crew when associated sign(s) are placed on or off.
33-00-03C	Aural Tone System	Y	1	0	C
33-00-03D	Flight Deck Automatic Function	Y	1	0	C (O) May be inoperative provided: a) Manual control function operates normally, and b) Alternate procedures are used.

MEL ITEM	TAB LOCATION	PLACARD TEXT
33-00-03A	Fasten Seat Belt Switch	____ Fasten Seat Belt / No Smoking Sign(s) INOP
33-00-03B	Fasten Seat Belt Switch	____ Fasten Seat Belt / No Smoking Sign(s) INOP
33-00-03C	Fasten Seat Belt Switch	____ Fasten Seat Belt / No Smoking Aural Tone INOP
33-00-03D	Fasten Seat Belt Switch	____ Fasten Seat Belt / No Smoking Auto Function INOP

(O) PROCEDURES

33-00-03B, 33-00-03D

Refer to the FOM for when the pilot in command shall notify passengers when seat belts should be fastened and smoking prohibited.

(M) PROCEDURES

33-00-03A

1. If required, install tapes or ropes of conspicuous contrasting colors to block access to unusable seats prior to boarding passengers.
2. Conspicuous signs or placards shall be placed in appropriate locations to indicate seats which are not to be occupied.

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3. For an individual sign inoperative, an observer with normal vision should sit in the passenger seat(s) which is normally serviced by the sign and determine if both a "NO SMOKING" and "FASTEN SEAT BELT" sign can be read from the seat(s). In tests conducted at Boeing for the FAA, a sign was considered "readily legible" if enough of the sign could be seen to identify it. Example: "NO SMOK" and "FASTEN SEAT B" would be considered readily legible.

NUMBER INSTALLED					NUMBER REQUIRED FOR DISPATCH			
FLIGHT CREW MAY PLACARD					REPAIR CATEGORY			
ITEM NO.	NAME / DESCRIPTION	Y			-	0	C	REMARKS OR EXCEPTIONS
33-00-04A	Lower Cargo Compartment Light Systems (Fwd / Aft)							
33-00-04B	Light Lens (A/C 3701-3771, 3801-3900)		N	-				0
33-00-04C	Light Lens (A/C 3601-3610, 3772, 3773)	N	-	-	C	Any number from aft lower cargo compartment and one from forward lower cargo compartment may be broken/missing provided associated light bulb is removed.		

MEL ITEM	TAB LOCATION	PLACARD TEXT
33-00-04A	Logbook	____ Cargo Compartment Light Systems INOP
33-00-04B	Logbook	____ Cargo Compartment Light Lens Missing / INOP
33-00-04C	Logbook	____ Cargo Compartment Light Lens Missing / INOP

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
33-00-05	High Intensity or Strobe Lights System	Y	1	0	C

MEL ITEM	TAB LOCATION	PLACARD TEXT
33-00-05	Strobe Light Switch	____ Strobe Light System INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
33-00-06A	Anti-Collision Beacons	Y	2	0	C May be inoperative for night operations provided wing tip and tail strobe lights are installed and operate normally.
33-00-06B	Anti-Collision Beacons "DISP.APPR.REQ'D."	Y	2	0	C May be inoperative for day operations.

MEL ITEM	TAB LOCATION	PLACARD TEXT
33-00-06A	Anti-Collision Light Switch	____ Anti-Collision Light(s) INOP
33-00-06B	Anti-Collision Light Switch	____ Anti-Collision Light(s) INOP

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
33-00-07	Wing Illumination Lights "DISP.APPR.REQ'D."	Y	2	0	C (O) May be inoperative provided ground de-icing procedures do not require their use.

MEL ITEM	TAB LOCATION	PLACARD TEXT
33-00-07	Wing Light Switch	____ Wing Illumination Light(s) INOP

(O) PROCEDURES

Adequate lighting must be available for ground deice operations at night.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS	
33-00-08A	Landing Lights	Y	4	2	C	One may be inoperative on each side provided one of two operating lights is in fixed position.
33-00-08B	Landing Lights "DISP.APPR.REQ'D."	Y	4	0	C	May be inoperative for day operations.
33-00-08C	Retractable Light Extend / Retract Motors "DISP.APPR.REQ'D."	Y	2	0	C	(O)(M) May be inoperative provided: a) Light is in extended position, b) Light illuminates normally, and c) Performance corrections are applied.
33-00-08D	Retractable Light Extend / Retract Motors "DISP.APPR.REQ'D."	Y	2	0	C	(O) May be inoperative provided: a) Associated light is considered inop and deferred per MEL 33-00-08(A or B), and b) Appropriate performance adjustments are applied when associated light is not in the fully retracted position.
33-00-08E	Landing Lights – LED Array	Y	4	2	C	One may be inoperative on each side provided Taxi Light is deferred per MEL 33-00-09B.
33-00-08F	Landing Lights – LED Array	Y	4	2	C	Both may be inoperative on one side provided: a) The Runway Turn Off light on the same side operates normally, and b) Taxi Light is deferred per MEL 33-00-09B.
33-00-08G	Landing Lights – LED Array "DISP.APPR.REQ'D."	Y	4	0	C	May be inoperative for day operations provided Taxi Light is deferred per MEL 33-00-09B.

MEL ITEM	TAB LOCATION	PLACARD TEXT
33-00-08A	Associated Landing Light Switch(es)	____ Landing Light(s) INOP
33-00-08B	Associated Landing Light Switch(es)	____ Landing Light(s) INOP
33-00-08C	Associated Landing Light Switch(es)	____ Retractable Light Extend / Retract Motor(s) INOP
33-00-08D	Associated Landing Light Switch(es)	____ Retractable Light Extend / Retract Motor(s) INOP
33-00-08E	Associated Landing Light Switch(es)	____ Landing Light LED Array INOP
33-00-08F	Associated Landing Light Switch(es)	____ Landing Light INOP
33-00-08G	Associated Landing Light Switch(es)	____ Landing Light(s) INOP

(O) PROCEDURES

33-00-08C, 33-00-08D

The retractable landing lights may be inoperative in the extended position with no effect on flight characteristics.

CONTINUED NEXT PAGE

33-00-08C RETRACTABLE LIGHT EXTEND/RETRACT MOTORS	
EFFECTIVITY	All
FLIGHT PLANNING REQUIREMENTS	Reduce ENROUTE LIMIT WT by 1500 lbs for each inoperative light. Increase BLOCK FUEL by 1.0% for each inoperative light.
NOTES	Make a notation on the Flight Plan when Enroute Climb is limiting.
AWABS	Performance corrections have been applied.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF None
	LANDING None

33-00-08D

The retractable landing lights may be inoperative in any position with no effect on flight characteristics.

33-00-08D RETRACTABLE LIGHT EXTEND/RETRACT MOTORS	
EFFECTIVITY	All
FLIGHT PLANNING REQUIREMENTS	Reduce ENROUTE LIMIT WT by 1500 lbs for each inoperative light. Increase BLOCK FUEL by 1.0% for each inoperative light.
NOTES	Make a notation on the Flight Plan when Enroute Climb is limiting.
AWABS	Performance corrections have been applied.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF None
	LANDING None

(M) PROCEDURES

33-00-08C

With the landing light(s) extend/retract motor inoperative, compare the light position with the operative light's position. If the light is not in the extended position, the light (lamp) is considered to be inoperative.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
33-00-09A	Taxi Light	Y	1	0	C
33-00-09B	Taxi Light - LED Array	Y	4	0	C
					May be inoperative provided Landing Lights are deferred per MEL 33-00-08E , 33-00-08F or 33-00-08G .

MEL ITEM	TAB LOCATION	PLACARD TEXT
33-00-09A	Taxi Light Switch	Taxi Light INOP
33-00-09B	Taxi Light Switch	Taxi Light INOP

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
33-00-10	Runway Turn Off Lights	Y	2	0	C

MEL ITEM	TAB LOCATION	PLACARD TEXT
33-00-10	Associated Runway Turn Off Light Switch	Runway Turn Off Lights INOP

NUMBER INSTALLED					NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD			REPAIR CATEGORY			
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS
33-00-11A	Wing Tip Position Lights "DISP.APPR.REQ'D."	Y	4	0	C	May be inoperative for day operations.
33-00-11B	Wing Tip Position Light Bulbs / Lamps / LED Modules	Y	8	4	C	Any except following minimum may be inoperative for night operations: a) One stationary red wing tip bulb, b) One stationary green wing tip bulb, and c) One stationary white tail light at each wing tip position.

MEL ITEM	TAB LOCATION	PLACARD TEXT
33-00-11A	Position Light Switch	____ Wing Tip Position Light(s) INOP
33-00-11B	Position Light Switch	____ Wing Tip Position Light Bulb(s) / Lamp(s) / LED Module(s) INOP

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
33-00-14	Exterior Emergency Lighting System "DISP.APPR.REQ'D."	Y	1	0	B May be inoperative for day operations.

MEL ITEM	TAB LOCATION	PLACARD TEXT
33-00-14	Emergency Exit Light Switch	Exterior Emergency Lighting System INOP

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD			REPAIR CATEGORY			
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS	
	INTERIOR EMERGENCY EXIT LIGHTING SYSTEM					
33-00-15A	Emergency Aisle Lights	Y	-	-	C	Light assemblies installed above aisle may be inoperative provided no two adjacent (opposite side) light assemblies are inoperative.
33-00-15B	Flight Deck Exit Light "DISP.APPR.REQ'D."	Y	1	0	C	May be inoperative for day operations.

MEL ITEM	TAB LOCATION	PLACARD TEXT
33-00-15A	Emergency Exit Light Switch	___ Interior Emergency Exit Aisle Light Assembly(s) INOP
33-00-15B	Emergency Exit Light Switch	Flight Deck Exit Light INOP

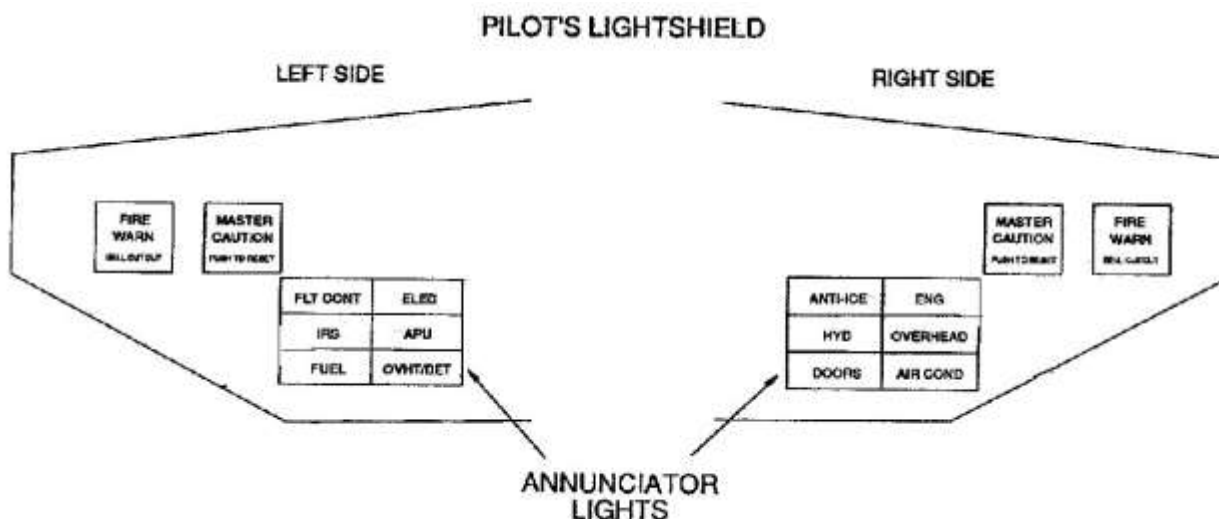
NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
33-00-16A	System Annunciator Lights, Left and Right (Pilot's Light Shield)	Y	12	-	C (O) One light may be inoperative for an operating system.
33-00-16B	System Annunciator Lights, Left and Right (Pilot's Light Shield)	Y	12	-	C May be inoperative for an associated inoperative system.

MEL ITEM	TAB LOCATION	PLACARD TEXT
33-00-16A	Affected System Annunciator Light	___ System Annunciator Light INOP
33-00-16B	Affected System Annunciator Light	___ System Annunciator Light INOP

(O) PROCEDURES

33-00-16A

1. Check that associated system indicator light(s) on associated panel operates normally.
2. Placard the inoperative System Annunciator Light "LIGHT INOP".
3. If the MASTER CAUTION light illuminates with no annunciator light (for dispatch with a light extinguished) OR with no additional annunciator light (for dispatch with a light illuminated), it can be assumed that the system with the placard 'Light Inop' is affected.
4. Just prior to descent, check the associated panel for any light indications associated with the system annunciator which is inoperative.



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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
33-00-17	Flight Deck Master Lights Test and Individual Light's Press-To-Test Features	Y	-	-	C (O) May be inoperative provided intended function of associated light(s) is verified ONCE EACH FLIGHT DAY. (Log Book Entry Required) Repetitive Check Required (Yellow Placard)

MEL ITEM	TAB LOCATION	PLACARD TEXT
33-00-17	Associated Annunciator Light	____ Master Lights Test or ____ Light PTT Feature INOP

(O) PROCEDURES

1. If the master test feature fails to illuminate a light(s), press the affected light(s) and confirm the push-to-test feature causes the bulb(s) to illuminate.
2. If the individual push-to-test feature also fails to illuminate a light(s), perform an appropriate operational or system test and verify that the affected light illuminates as intended.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
	WHEEL WELL LIGHTS				
33-00-18A	Dome Service Lights	Y	3	0	C
33-00-18B	Inspection Flood Lights	Y	2	0	D

MEL ITEM	TAB LOCATION	PLACARD TEXT
33-00-18A	Logbook	____ Wheel Well Dome Service Light(s) INOP
33-00-18B	Logbook	____ Wheel Well Inspection Flood Light(s) INOP

MAINTENANCE AND OPERATIONS NOTE

33-00-18A

One light in nose wheel well and one each in main wheel well.

33-00-18B

One in each main wheel well.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
33-00-19	Floor Proximity Emergency Escape Path Marking System	Y	1	1	C
					Must be operative except as provided: a) For Seat Mounted Modules: - Red - 50% may be inoperative per module. One bulb may be inoperative where there is a single module installed. One module may be inoperative where there are dual modules installed on each seat. - One bulb in each module may be inoperative where there are dual modules installed on each seat. b) Two (2) lamps in each emergency exit identifier and / or floodlights must be operative.

MEL ITEM	TAB LOCATION	PLACARD TEXT
33-00-19	Emergency Exit Light Switch	____ Emergency Escape Path Marking Light(s) INOP

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION			REMARKS OR EXCEPTIONS	
33-00-20	LOGO Light System	Y	1	0	D

MEL ITEM	TAB LOCATION	PLACARD TEXT
33-00-20	Adjacent to LOGO Light Switch	LOGO Light System INOP

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
33-00-23	Master Dim System	Y	1	0	B Dim function may be inoperative provided: a) TEST and BRT functions operate normally, b) Except during light test, switch is placed in BRT, and c) Light intensity is acceptable to flight crew.

MEL ITEM	TAB LOCATION	PLACARD TEXT
33-00-23	Master Dim Switch	Master Dim System INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
33-00-25	Service Area Light Systems (Nose, Electrical Equipment, Air Conditioning, Aft Accessory, APU, Tailcone Compartments and Fueling Panel)	Y	-	0	C

MEL ITEM	TAB LOCATION	PLACARD TEXT
33-00-25	Associated Service Area Light Switch	___ Service Area Light(s) INOP

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NUMBER INSTALLED			NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD			REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION			REMARKS OR EXCEPTIONS
34-00-00L	LLM Category II/III Status (Lower Landing Minimums) "DISP.APPR.REQ'D." Administrative Control Item	N	-	(M) May be inoperative provided Aircraft restricted to CAT I due to AMT is non-AFQ authorized. NOTE: This Item Number is only used for deferring the CAT II/III status of the aircraft and MCC authorization is required prior to its useage or removal. <u>HUD not used for approach</u> CAT II/III – Not Authorized <u>HUD used for approach</u> CAT I ILS, CAT II/III

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-00-00L	Adjacent to each PFD	CAT II/III Not Authorized without HUD.

(M) PROCEDURES

1. Create a new log page in the aircraft logbook using the appropriate MEL Item Number (contact MCC for instructions).
2. The deferral code LLM must also be entered on the log page and the placard when deferring this item.
3. MCC authorization is required prior to its usage or removal.

NUMBER INSTALLED			NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD			REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION			REMARKS OR EXCEPTIONS
34-00-10R	RNP-10 Status "DISP.APPR.REQ'D." Administrative Control Item	N	-	(M) Authorized by MCC when: a) RNP-10 airspace operations cannot be used, and b) No specific MEL item applies. NOTE 1: Dispatch to remove equipment code "R" and NAV code "RNP10 from the flight plan. NOTE 2: This Item Number is only used for deferring the RNP-10 status of the aircraft and MCC authorization is required prior to its usage or removal. <u>RNP-10 Operations</u> Not Authorized

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-00-10R	Adjacent To Each EADI	RNP-10 AIRSPACE OPERATIONS NOT AUTHORIZED.

(M) PROCEDURES

1. Create a new log page in the aircraft logbook using the appropriate MEL Item Number (contact MCC for instructions).
2. The deferral code RNP must also be entered on the log page and the placard when deferring this item.
3. MCC authorization is required prior to its usage or removal.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
34-00-01A	Mach / Airspeed Indications	Y	2	1	C May be inoperative provided one Mach / Airspeed warning and Mach trim system operates normally.
34-00-01B	Mach / Airspeed Indications "DISP.APPR.REQ'D."	Y	2	0	C May be inoperative provided: a) Aircraft remains at or below FL 280, and b) Airspeed remains at or below 320 KIAS.

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-00-01A	Near Associated PFD	____ Mach Indications INOP
34-00-01B	Near Captains PFD	____ Mach Indications INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS
	MACH / AIRSPEED WARNING SYSTEMS					
34-00-02A	Maximum Operating Speed Indication	Y	2	1	C	May be inoperative provided clacker warning system operates normally and is independent from Mach Indicator.
34-00-02B	Clacker	Y	2	1	C	
34-00-02C	Clacker "DISP.APPR.REQ'D."	Y	2	0	B	Systems may be inoperative provided; a) Both Mach indicators operate normally, b) 330 KIAS /.76 Mach airspeed limitations are observed, and c) If overspeed warning occurs earlier than scheduled during flight, speed must remain below point at which warning occurs.
34-00-02D	Clacker "DISP.APPR.REQ'D."	Y	2	0	B	Systems may be inoperative provided; a) Both Mach indicators operate normally, b) 330 KIAS /.76 Mach airspeed limitations are observed, and c) If overspeed warning occurs below .76 Mach, system must be deactivated by pulling associated circuit breaker (# 1 system P18-2, # 2 system P6-1) and observe speed limits.

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-00-02A	Near Associated PFD	____ Maximum Operating Speed Indication INOP
34-00-02B	Near Associated PFD	____ Mach / Airspeed Warning System Clacker INOP
34-00-02C	Near Captain's PFD	____ Mach / Airspeed Warning System Clacker INOP
34-00-02D	Near Captain's PFD	____ Mach / Airspeed Warning System Clacker INOP

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
34-00-03	Standby Altimeter Vibrator "DISP.APPR.REQ'D."	Y	1	0	C May be inoperative provided VMC exists at departure and arrival airports.

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-00-03	Standby Altimeter Indicator	Standby Altimeter Vibrator INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH			
FLIGHT CREW MAY PLACARD			1	0	REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION	Y			C	REMARKS OR EXCEPTIONS	
34-00-04	Static Air Temperature Indication						

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-00-04	Near Primary Engine Display Unit	Static Air Temperature Indication INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
34-00-05	Total Air Temperature Indication	Y	1	0	C May be inoperative provided an alternate air temperature indication (i.e. PDC, FMS, SAT) operates normally.

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-00-05	Near Associated Display Unit	Total Air Temperature Indication INOP

OPERATIONS NOTE:

With static air temperature available, the following table may be used to determine TAT:

TEMPERATURE CONVERSION STATIC AIR - TOTAL AIR

INDICATED MACH NUMBER												
	.50	.60	.68	.70	.72	.74	.76	.78	.80	.82	.84	.86
SAT °C	TOTAL AIR TEMPERATURE °C											
40	56	62	69	70								
35	51	57	64	65	66	68	70					
30	45	52	58	59	61	63	65	67	68	70		
25	40	47	52	54	56	57	59	61	63	64	66	68
20	35	41	47	48	50	51	53	55	57	58	60	63
15	30	36	42	43	44	46	48	49	51	53	55	57
10	24	31	36	37	38	40	43	44	46	47	49	51
5	19	25	31	32	33	35	37	38	40	41	43	45
0	13	20	25	26	28	29	31	33	34	36	38	40
-5	8	14	20	21	22	24	26	27	29	30	32	34
-10	3	9	14	15	17	19	20	22	23	25	26	28
-15	-2	3	9	10	11	13	14	16	17	19	21	23
-20	-7	-2	3	4	6	7	9	10	12	13	15	17
-25	-12	-7	-3	-1	0	2	3	5	6	8	9	11
-30	-18	-12	-8	-7	-5	-4	-2	1	1	2	4	6
-35	-23	-17	-13	-12	-10	-9	-8	-7	-5	-4	-2	0
-40	-28	-23	-18	-17	-16	-15	-13	-12	-11	-9	-7	-6
-45	-34	-29	-24	-23	-21	-20	-19	-17	-16	-14	-13	-11
-50	-39	-34	-29	-28	-27	-26	-24	-23	-21	-20	-19	-17
-55	-44	-39	-35	-34	-32	-31	-30	-28	-27	-26	-24	-23
-60	-49	-45	-40	-39	-38	-37	-35	-34	-33	-31	-30	-28
-65	-55	-50	-46	-45	-43	-42	-41	-40	-38	-37	-36	-34
-70	-60	-55	-51	-50	-49	-48	-47	-45	-44	-43	-41	-40

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
34-00-07A	Standby Horizon Indicator (Standby Attitude) "DISP.APPR.REQ'D."	Y	1	0	B May be inoperative provided a) Operations are conducted in Day VMC only, and b) Operations are not conducted into known or forecast over-the-top conditions.
34-00-07B	ILS Indication	Y	1	0	D

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-00-07A	Standby Horizon Indicator	Standby Horizon Indicator INOP
34-00-07B	Standby Horizon Indicator	Standby Horizon Indicator ILS Indication INOP

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH			
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY			
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS	
34-00-08	Angle of Attack Indications	Y	2	0	C		

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-00-08	Near Associated PFD	____ Angle of Attack Indication INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
34-00-11	Standby Magnetic Compass (Non-Stabilized Magnetic Compass) "DISP.APPR.REQ'D."	Y	1	0	B (O) May be inoperative provided: a) Any combination of two stabilized compass systems gyro or INS (IRU) are operative, and b) Aircraft is operated with dual independent navigation capability, and under positive radar control by ATC on enroute portion of flight.

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-00-11	Standby Magnetic Compass	Standby Magnetic Compass INOP

(O) PROCEDURES

Refer to the Remarks or Exceptions column.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
34-00-12A	Flight Director Systems "DISP.APPR.REQ'D."	Y	2	1	C May be inoperative provided takeoff and approach minimums do not require its use, <u>HUD used for approach</u> CAT I ILS/II/III – Flight Director displayed on F/Os PFD required for cross check. <u>HUD not used for approach</u> CAT II/III – Not Authorized <u>TAKEOFF</u> Captain's Flight Director must be operative with visibility less than 1600 RVR (1/4 mile).
34-00-12B	Flight Director Systems "DISP.APPR.REQ'D."	Y	2	0	C May be inoperative provided: a) For takeoff, visibility at departure runway is not less than 1600 RVR (1/4 mile), b) Approach minimums do not require their use, and c) RNAV operations do not require their use; refer to Navigation Equipment Tab (this manual) for RNAV Minimum Requirements . <u>HUD used for approach</u> CAT I Non-ILS/ILS/II/III – Not Authorized <u>HUD not used for approach</u> CAT I ILS/II/III – Not Authorized

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-00-12A	Associated MCP Flight Director Switch	____ Flight Director System INOP
34-00-12B	Associated MCP Flight Director Switch(es)	____ Flight Director System(s) INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD			REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
34-00-13	Distance Measuring Equipment Systems "DISP.APPR.REQ'D."	Y	2	1	D May be inoperative provided: a) Approach minimums do not require its use, and b) RNAV operations do not require their use; refer to Navigation Equipment Tab (this manual) for RNAV Minimum Requirements . <u>HUD used for approach</u> Check Approach Plate for restrictions <u>HUD not used for approach</u> Check Approach Plate for restrictions

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-00-13	Associated Navigational Display	____ DME System INOP

MAINTENANCE NOTE

1. If desired, the inoperative DME may be deactivated by pulling and securing the associated DME circuit breaker on the P6 or P18 panel.
2. The FMC will perform DME/DME position updates using a single operative DME.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
34-00-14	Marker Beacon Receiver System "DISP.APPR.REQ'D."	Y	1	0	C May be inoperative provided approach minimums do not require its use, <u>HUD used for approach</u> Check Approach Plate for restrictions <u>HUD not used for approach</u> Check Approach Plate for restrictions

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-00-14	Captain's Marker Beacon Lights	Marker Beacon System INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
34-00-15A	Weather Radar "DISP.APPR.REQ'D."	Y	1	0	B (O) May be inoperative provided: a) Weather radar is not required by 14 CFR, and b) Alternate procedures are established and used. NOTE: No person may dispatch an aircraft in IFR or night VFR conditions when current weather reports indicate that thunderstorms, or other potentially hazardous weather conditions that can be detected with airborne weather radar, may reasonably be expected along route to be flown. Theater Restrictions may apply
34-00-15B	Windshear Detection and Avoidance System (Predictive)	Y	-	0	B (O) May be inoperative provided alternate procedures are established and used.
34-00-15C	Windshear Detection and Avoidance System (Predictive) "DISP.APPR.REQ'D."	Y	-	0	C (O) May be inoperative provided: a) Alternate procedures are established and used, and b) Windshear Warning and Guidance System (Reactive) operates normally.
34-00-15D	Autotilt/Multiscan Function (-700, -900ER) (3772, 3773)	Y	1	0	C May be inoperative provided manual tilt function operates normally.

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-00-15A	Captain's Navigational Display Unit	Weather Radar INOP
34-00-15B	Captain's Navigational Display Unit	Predictive Windshear Detection and Avoidance System INOP
34-00-15C	Captain's Navigational Display Unit	Predictive Windshear Detection and Avoidance System INOP
34-00-15D	Captain's Navigational Display Unit	WX Radar Autotilt/Multiscan Function INOP

(O) PROCEDURES

34-00-15A, 34-00-15B, 34-00-15C

1. Refer to the Remarks or Exceptions Column.
2. Refer to the Ops Manual Volume 1, Maneuvers Section, Windshear Considerations and Windshear Recovery Procedures.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
VHF NAVIGATION SYSTEMS					
34-00-17A	VOR Systems "DISP.APPR.REQ'D."	Y	2	1	C Right (No.2) may be inoperative provided approach minimums do not require its use, <u>HUD used for approach</u> CAT II/III – Not Authorized <u>HUD not used for approach</u> CAT II/III – Not Authorized
34-00-17B	ILS Systems "DISP.APPR.REQ'D."	Y	2	1	C Right (No.2) may be inoperative provided approach minimums do not require its use, <u>HUD used for approach</u> CAT II/III – Not Authorized <u>HUD not used for approach</u> CAT II/III – Not Authorized

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-00-17A	Associated Nav Control Panel	____ VOR System INOP
34-00-17B	Associated Nav Control Panel	____ ILS System INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS
34-00-18A	ATC Transponder and Automatic Altitude Reporting Systems	Y	2	1	C	
34-00-18B	ATC Transponder and Automatic Altitude Reporting Systems "DISP.APPR.REQ'D."	Y	2	0	B	Both may be inoperative provided: a) Operations do not require its use, and b) Prior to flight, approval is obtained from ATC facilities having jurisdiction over planned route of flight. NOTE: TCAS will be inoperative. <u>RVSM Operations</u> Not Authorized

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-00-18A	Transponder Control Panel	____ ATC Transponder / Mode C INOP
34-00-18B	Transponder Control Panel	1. ____ ATC Transponder / Mode C INOP 2. TCAS INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
34-00-20	Radio Altimeter Systems "DISP.APPR.REQ'D."	Y	2	1 C	(O)(M) May be inoperative deactivated provided: a) Approach minimums or operating procedures do not require its use, b) RNAV operations do not require their use; refer to Navigation Equipment Tab (this manual) for RNAV Minimum Requirements, c) Associated autopilot is not used for approach and landing, d) Autothrottle is not used for approach and landing, and e) Associated Flight director is not used for approach and landing. NOTE: An invalid radio altimeter signal will generate a dispatchable PSEU fault. Defer per MEL 32-00-17. <u>HUD used for approach</u> CAT II/III – Not Authorized <u>HUD not used for approach</u> CAT II/III – Not Authorized

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-00-20	Associated PFD	____ Radio Altimeter System INOP

(O) PROCEDURES

- For RNAV off the runway operations, ensure the Flight Director selected as Master corresponds to the operative Radio Altimeter, or LNAV will not engage properly on takeoff below 400'. During climb, cruise and approach, LNAV should operate normally, regardless of which Flight Director is Master.
- For any ILS or localizer-based approach, ensure the Flight Director selected as Master for the approach corresponds to the operative Radio Altimeter.
- Do not use the Autopilot associated with the inoperative Radio Altimeter for approach and landing.
- Do not use the Autothrottle for approach and landing with either Radio Altimeter inoperative.
- With a Radio Altimeter inoperative, the respective Flight Director steering commands will be lost at LOC and G/S capture. If the #1 Radio Altimeter is inoperative, the HUD Guidance Cue will disappear at LOC or G/S capture. These steering command losses are normal and do not require maintenance action.
- If the remaining Radio Altimeter fails during flight, the Flight Director system (AFDS) limits bank angle to a maximum of eight degrees in all roll modes. Use of the Autopilot or Flight Director system is at the discretion of the flight crew, since the AFDS may not command sufficient bank angle to execute proper departure and/or approach maneuvers, or make enroute course changes within airspace limitations.
- With a Radio Altimeter inoperative, the PSEU light may illuminate for several minutes during taxi and then extinguish.
- On some aircraft an invalid signal from radio altimeter No. 1 will result in failure of both stick shakers to self test.

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(M) PROCEDURES

1. Pull and secure the associated P6-1 / P18-1 Panel Radio Altimeter circuit breaker to deactivate the inoperative radio altimeter.

NOTE: With one radio altimeter deactivated, the SPEED BRAKE DO NOT ARM light will illuminate on the ground when speed brake handle is moved from the DOWN detent.

2. An invalid radio altimeter signal will generate a dispatchable PSEU fault. [Defer per MEL 32-00-17](#).

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
34-00-23	True Airspeed Indication "DISP.APPR.REQ'D."	Y	2	0 C	May be inoperative.

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-00-23	Associated ND	____ True Airspeed Indication INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
	ALTITUDE ALERTING SYSTEM				
34-00-25A	Altitude Alerting System "DISP.APPR.REQ'D."	Y	1	0	A (O) May be inoperative provided: a) Autopilot with altitude hold and altitude capture is operative, b) Enroute operations do not require its use, c) Repairs are made within three flight days, and d) Airplane does not depart from a Delta maintenance station. RVSM Operations Not Authorized
34-00-25B	Aural Alert "DISP.APPR.REQ'D."	Y	-	0	C May be inoperative provided: a) Visual alert operates normally, and b) Auto-pilot with altitude hold and altitude capture operates normally.
34-00-25C	Visual Alert "DISP.APPR.REQ'D."	Y	-	0	C May be inoperative provided: a) Aural alert operates normally, and b) Auto-pilot with altitude hold and altitude capture operates normally.

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-00-25A	AFCS MCP Altitude Selector	Altitude Alerting System INOP
34-00-25B	AFCS MCP Altitude Selector	Altitude Alerting Aural Alert System INOP
34-00-25C	AFCS MCP Altitude Selector	Altitude Alerting Visual Alert System INOP

(O) PROCEDURES

34-00-25A

1. Use the autopilot and altitude hold for all operations for which it is appropriate.
2. Cross-check Captain's and First Officer's altitude displays upon reaching and departing assigned altitude. Periodically cross-check altitude indications when maintaining an assigned altitude.
3. Flight crew must be aware that the usual alerts for altitude deviations will not occur.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
	GROUND PROXIMITY WARNING SYSTEM (GPWS)				
34-00-26A	GPWS System "DISP.APPR.REQ'D."	Y	1	0	A (O)(M) May be inoperative provided: a) GPWS is deactivated, b) Alternate procedures are established and used, c) Repairs are made within two flight days, and d) RNAV operations do not require their use; refer to Navigation Equipment Tab (this manual) for RNAV Minimum Requirements .
34-00-26B	Terrain Avoidance Warning (Modes 1 thru 4) "Contact MCC"	Y	4	0	A (O) May be inoperative provided: a) Alternate procedures are established and used, and b) Repairs are made within two flight days.
34-00-26C	Test Mode "DISP.APPR.REQ'D."	Y	1	0	A (O)(M) May be inoperative provided: a) GPWS is deactivated, b) Alternate procedures are established and used, c) Repairs are made within two flight days, and d) RNAV operations do not require their use; refer to Navigation Equipment Tab (this manual) for RNAV Minimum Requirements .
34-00-26D	Glideslope Deviation (Mode 5)	Y	2	0	B
34-00-26E	Advisory Callouts Minimums, Minimums	Y	1	0	B (O) May be inoperative provided standard callouts are used.
34-00-26F	Windshear Warning and Flight Guidance System (Reactive)	Y	1	0	B (O) May be inoperative provided alternate procedures are established and used.
34-00-26G	Windshear Warning and Flight Guidance System (Reactive) "DISP.APPR.REQ'D."	Y	1	0	C (O) May be inoperative provided: a) Alternate procedures are established and used, and b) Windshear Detection and Avoidance System (Predictive) operates normally.
34-00-26H	Terrain Mode (EGPWS / Enhanced Mode) "DISP.APPR.REQ'D."	Y	1	0	B (O) May be inoperative provided: a) Alternate procedures are established and used, and b) RNAV operations do not require their use; refer to Navigation Equipment Tab (this manual) for RNAV Minimum Requirements . Theater Restrictions may apply
34-00-26I	Terrain Displays	Y	2	1	C
34-00-26J	Terrain Displays	Y	2	0	B

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MEL ITEM	MCO TAB LOCATION	MCO PLACARD TEXT
34-00-26A	GPWS Test Switch	GPWS INOP
34-00-26B	GPWS Test Switch	GPWS Modes 1 thru 4 INOP
34-00-26C	GPWS Test Switch	GPWS Test Mode INOP
34-00-26D	GPWS Test Switch	GPWS Mode 5 INOP
34-00-26E	GPWS Test Switch	GPWS Minimums, Minimums Advisory Callouts INOP
34-00-26F	Captains' Navigational Display	GPWS Reactive Windshear Warning Mode INOP
34-00-26G	Captains' Navigational Display	GPWS Reactive Windshear Warning Mode INOP
34-00-26H	GPWS Test Switch	Terrain Mode (EGPWS / Enhanced Mode) INOP
34-00-26I	GPWS Test Switch	Terrain Display Functions INOP
34-00-26J	GPWS Test Switch	Terrain Display Functions INOP

(O) PROCEDURES

34-00-26A, 34-00-26B, 34-00-26C, 34-00-26E, 34-00-26H

- Review Standard Callout procedures. Refer to Operations Manual, Volume 1, Normal Procedures, Introduction, Standard Callouts.
- Preflight briefing to include review of terrain and/or obstructions in the proximity of the departure and arrival airports.
- Pilot not flying should monitor flight path during takeoff, approach and landing, and alert the pilot flying if any of the following conditions exist:
 - Excessive descent rate.
 - Excessive terrain closure rate.
 - Altitude loss after takeoff or go-around.
 - Unsafe terrain clearance while not in the landing mode.
 - Deviation from glideslope.

34-00-26F, 34-00-26G

- Refer to QRH, Non-Normal Maneuvers, Windshear.
- Review Standard Callout procedures. Refer to Operations Manual, Volume 1, Normal Procedures, Introduction, Standard Callouts.

(M) PROCEDURES

34-00-26A, 34-00-26C

Pull and secure GPWS circuit breaker located on the P18-1 Panel

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
34-00-31	Speed Cursor Remote Drive	Y	1	0	C

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-00-31	Captains' PFD	Speed Cursor Remote Drive INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
34-00-32	Instrument Transfer Switching System	Y	1	0	C (O) May be inoperative provided: a) Associated instruments operate normally from isolated sources, and b) Inoperative switches are not moved during flight.

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-00-32	Instrument Transfer Control Panel	Instrument Transfer Switching System INOP

(O) PROCEDURES

Refer to the Remarks or Exceptions column.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
INERTIAL REFERENCE SYSTEMS					
34-00-35A	Inertial Reference Systems (IRS) "DISP.APPR.REQ'D."	Y	2	1	B (O) Except for ER operations (ETOPS), one may be inoperative provided: a) Remaining IRS operates normally and is used for both Attitude Indications, VSI's and heading information on both PFD and NDs, b) Flight is restricted to day VMC, c) Standby Magnetic Compass operates normally, d) Standby Horizon Indicator or ISFD attitude display operates normally, e) Autopilots (any mode) are not used, f) The Automatic Brake System is considered inoperative and deferred per MEL 32-00-07A, and g) RNAV operations do not require their use; refer to Navigation Equipment Tab (this manual) for RNAV Minimum Requirements . <u>RVSM Operations</u> Not Authorized
34-00-35B	IRS Data Display (Aft Overhead Panel)	Y	1	0	C May be inoperative provided one FMS CDU operates normally.
34-00-35C	IRS Ground Crew Call Horn	Y	1	0	C

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-00-35A	IRS Mode Selector Unit	___ IRS INOP
34-00-35B	IRS Data Display	IRS Data Display INOP
34-00-35C	IRS Data Display	IRS Ground Crew Call Horn INOP

(O) PROCEDURES

34-00-35A

- Place the IRS mode selector switch for the inoperative IRS to OFF.
- Use the remaining IRS for both attitude, heading and vertical speed indications.
- Verify remaining IRS is operating normally by observing attitude and heading flags on pilot's and copilot's ADI, ND, HSI and RDMI are out of view.
- Flight is restricted to day VMC.
- Verify that Standby Magnetic Compass operates normally.
- Verify Standby Horizon Indicator operates normally.
- When dispatching with one IRU inoperative, do not use the autopilots in any mode.
- Do not use TO/GA mode of Flight Director.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD					REPAIR CATEGORY	REMARKS OR EXCEPTIONS
ITEM NO.	NAME / DESCRIPTION					
FLIGHT MANAGEMENT COMPUTER SYSTEM (FMCS)						
34-00-36A	FMC Alert Lights "DISP.APPR.REQ'D."	Y	2	1	C	May be inoperative provided FMC is not used for autopilot guidance during the approach.
34-00-36B	FMC Alert Lights "DISP.APPR.REQ'D."	Y	2	0	C	May be inoperative provided: a) FMC is not used for autopilot guidance, and b) RNAV operations do not require their use; refer to Navigation Equipment Tab (this manual) for RNAV Minimum Requirements .
34-00-36C	Computer "DISP.APPR.REQ'D."	Y	2	1	C	(O) May be inoperative provided RNAV operations do not require its use; refer to Navigation Equipment Tab (this manual) for RNAV Minimum Requirements . Theater Restrictions may apply
34-00-36D	Computer "DISP.APPR.REQ'D."	Y	2	0	C	(O) Except for ER operations (ETOPS), may be inoperative provided: a) IRS display unit (on aft overhead panel) operates normally, b) Speed Reference Selector operates normally, and c) RNAV operations do not require their use; refer to Navigation Equipment Tab (this manual) for RNAV Minimum Requirements . Theater Restrictions may apply
34-00-36E	MCDU "DISP.APPR.REQ'D."	Y	2	1	C	May be inoperative provided: a) Enroute procedures do not require its use, and b) RNAV operations do not require their use; refer to Navigation Equipment Tab (this manual) for RNAV Minimum Requirements . Theater Restrictions may apply
34-00-36F	MCDU "DISP.APPR.REQ'D."	Y	2	0	C	(O) Except for ER operations (ETOPS), may be inoperative provided: a) IRS display unit (on aft overhead panel) operates normally, b) Speed Reference Selector operates normally, and c) RNAV operations do not require their use; refer to Navigation Equipment Tab (this manual) for RNAV Minimum Requirements . Theater Restrictions may apply

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
	FLIGHT MANAGEMENT COMPUTER SYSTEM (FMCS) (Continued)				
34-00-36G	Navigation Databases "DISP.APPR.REQ'D."	Y	2	0	C
					(O) May be out of currency provided: a) Current aeronautical charts or current Nav Database is used to verify navigation fixes PRIOR TO EACH DEPARTURE, b) Pilot or Flight Control use charts or RVAL tool to verify status and suitability of navigation facilities used to define route of flight, c) Approach navigation radios are manually tuned and identified, and d) Dispatch will not file a flight plan requiring RNAV data that is identified as changed within the current database. Refer to Navigation Equipment Tab (this manual) for RNAV Minimum Requirements. Theater Restrictions may apply Repetitive Check Required (Yellow Placard)

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-00-36A	Affected FMC Alert Light	___ FMC Alert Lights INOP
34-00-36B	Affected FMC Alert Light(s)	___ FMC Alert Light(s) INOP
34-00-36C	Associated FMCS	FMCS Computer INOP
34-00-36D	Captain's FMCS	FMCS Computer INOP
34-00-36E	Affected FMCS MCDU	___ MCDU INOP
34-00-36F	Affected FMCS MCDU(s)	___ MCDU(s) INOP
34-00-36G	Captain's FMCS	FMCS Navigation Database Not Current

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(O) PROCEDURES

34-00-36C

With one FMC inoperative, operating with the FMC Source Select Switch selected to the operational FMC (BOTH ON L or BOTH ON R) is required to accomplish all Flight Management Computing tasks.

34-00-36D, 34-00-36F

1. Refer to the Remarks or Exceptions Column.
2. If both MCDUs are inoperative, refer to the Operations Manual, Volume 1, Supplementary Procedures section, Flight Management, Navigation, FMC INOPERATIVE.

34-00-36G

Select the route to be flown from the (non-current) data base. Check the intended route against current Jeppesen pages for agreement of all navigation data, using applicable departure, enroute and arrival charts or [RVAL tool](#). If all information agrees, the FMS may be used normally on the route which was checked. Each new route must be checked in the same manner. Any time the FMS data does not agree with current Jeppesen information, manual tuning and course selection must be accomplished.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS
34-00-38	Pitch Limit Indication (PLI)	Y	2	0	C	

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-00-38	Associated PFD	____ Pitch Limit Indication INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
	TRAFFIC COLLISION AND AVOIDANCE SYSTEM (TCAS)				
34-00-40A	Traffic Collision and Avoidance System (TCAS) "DISP.APPR.REQ'D."	Y	1	0	B (O)(M) May be inoperative provided: a) Routing restrictions for TCAS are observed, and b) System is deactivated and secured. Theater restrictions may apply
34-00-40B	Combined Traffic Alert (TA) and Resolution Advisory(RA) Dual Display	Y	2	1	C (O) May be inoperative on non- flying pilot side provided: a) TA and RA visual display is operative on flying pilot side, and b) TA and RA audio function is operative on flying pilot side.
34-00-40C	Resolution Advisory (RA) Display System(s)	Y	2	1	C (O) May be inoperative on non-flying pilot side.
34-00-40D	Resolution Advisory (RA) Display System(s) "DISP.APPR.REQ'D."	Y	2	0	C (O) May be inoperative provided: a) Traffic Alert (TA) visual display and audio functions are operative, b) TA only mode is selected by crew, and c) Enroute or approach procedures do not require its use.
34-00-40E	Traffic Alert (TA) Display System(s) "DISP.APPR.REQ'D."	Y	1	0	C (O) May be inoperative provided: a) RA visual display and audio functions are operative, and b) Enroute or approach procedures do not require its use.
34-00-40F	Audio Functions "DISP.APPR.REQ'D."	Y	1	0	B May be inoperative provided enroute or approach procedures do not require use of TCAS.
34-00-40G	Airspace Selection Function	Y	-	0	C

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-00-40A	TCAS Control Panel	TCAS INOP
34-00-40B	Associated Navigational Display	____ TCAS TA / VSI TA / RA Dual Display INOP
34-00-40C	Associated Navigational Display	____ TCAS RA Display System(s) INOP
34-00-40D	Associated Navigational Display	____ TCAS RA Display System(s) INOP
34-00-40E	Associated Navigational Display	____ TCAS TA Display System INOP
34-00-40F	Associated Navigational Display	TCAS Audio Functions INOP
34-00-40G	Associated Navigational Display	TCAS Airspace Selection Function INOP

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(O) PROCEDURES

34-00-40A

TCAS must be operative on routes outbound from the Continental United States to destinations outside the Continental United States, except Canada.

34-00-40B, 34-00-40C, 34-00-40D, 34-00-40E

Monitor the operative indications and advisories and respond as appropriate.

(M) PROCEDURES

34-00-40A

Pull and secure the TCAS circuit breaker on the P18-1 Panel.

NOTE: Do **not** pull the W/S, TCAS, GPWS Audio circuit breaker, as this will inhibit the Windshear and GPWS Audio.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH			
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY			
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS	
34-00-43	Radio Height Alert	Y	2	0	C		

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-00-43	Associated PFD(s)	____ Radio Height Alert INOP

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
34-00-44	Head-Up Display System (HUD/HGS) "DISP.APPR.REQ'D."	Y	1	0	C May be inoperative provided approach minimums do not require its use, SA ILS CAT I Approaches – Not Authorized NOTE: Any mode which operates normally may be used

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-00-44	HGS Control Panel	HGS INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH			
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY			
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS	
34-00-45	Global Positioning System (GPS) "DISP.APPR.REQ'D."	Y	2	0	C	May be inoperative provided RNAV operations do not require their use; refer to Navigation Equipment Tab (this manual) for RNAV Minimum Requirements . Theater restrictions may apply	

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-00-45	Captains' Flight Management Computer Control Display Unit	_____ GPS INOP

NUMBER INSTALLED			NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD			REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
	EFIS CONTROL PANEL MAP SWITCHES				
34-00-48A	POS	Y 2	1	C	
34-00-48B	STA	Y 2	1	C	
34-00-48C	ARPT	Y 2	1	C	
34-00-48D	DATA	Y 2	1	C	
34-00-48E	WPT	Y 2	1	C	
34-00-48F	Decision Height/Mins Selector "DISP.APPR.REQ'D."	Y 2	0	C	May be inoperative provided approach procedures do not require its use. <u>CAT II/III</u> Not Authorized

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-00-48A	Associated EFIS Control Panel	EFIS Control Panel POS Switch INOP
34-00-48B	Associated EFIS Control Panel	EFIS Control Panel STA Switch INOP
34-00-48C	Associated EFIS Control Panel	EFIS Control Panel ARPT Switch INOP
34-00-48D	Associated EFIS Control Panel	EFIS Control Panel DATA Switch INOP
34-00-48E	Associated EFIS Control Panel	EFIS Control Panel WPT Switch INOP
34-00-48F	Associated EFIS Control Panel	EFIS Control Panel Decision Height/Mins Selector INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
34-00-49	Right IRS DC Power Supply System "DISP.APPR.REQ'D."	Y	1	0	B (O) May be inoperative provided: a) Remaining IRS Mode Selector Unit lights are not illuminated, b) Autopilot dual channel mode is not used during approach, and c) Approach minimums do not require its use, <u>HUD used for approach</u> CAT II/III – Not Authorized <u>HUD not used for approach</u> CAT II/III – Not Authorized

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-00-49	Right IRS DC FAIL Light	Right IRS DC Power Supply system INOP

(O) PROCEDURES

1. If Left IRS DC FAIL light illuminates during flight, assume that both IRS DC FAIL lights are illuminated.
2. Refer to the Operations Manual, Volume 2, Section 11, IRS DC FAIL.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO. NAME / DESCRIPTION					REMARKS OR EXCEPTIONS	
INTEGRATED STANDBY FLIGHT DISPLAY (ISFD) SYSTEM						
34-00-54A (ISFD) Attitude Display "DISP.APPR.REQ'D."		Y	1	0	B	May be inoperative provided: a) Operations are conducted in Day VMC only, and b) Operations are not conducted into known or forecast Over-The-Top conditions.
34-00-54B (ISFD) ILS Indication		Y	1	0	D	
34-00-54C (ISFD) Heading Display		Y	1	0	C	
34-00-54D (ISFD) Dedicated Battery		Y	1	0	C	

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-00-54A	Integrated Standby Flight Display	Integrated Standby Flight Display (ISFD) Attitude Indication INOP
34-00-54B	Integrated Standby Flight Display	Integrated Standby Flight Display (ISFD) ILS Indication INOP
34-00-54C	Integrated Standby Flight Display	Integrated Standby Flight Display (ISFD) Heading Indication INOP
34-00-54D	Integrated Standby Flight Display	Integrated Standby Flight Display (ISFD) Dedicated Battery INOP(ISFD)

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS
34-00-55	Vertical Situation Display (VSD) System	Y	1	0	D	May be inoperative provided procedures do not require its use.

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-00-55	On Affected ND(s)	Vertical Situation Display System INOP

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS	
34-00-56	Global Navigation Satellite Landing System (GLS)	Y	2	0	D	May be inoperative provided approach minimums do not require its use.

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-00-56	Overhead IRS Panel	GLS system INOP

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
35-00-02A	Passenger Service Units (PSU's) "DISP.APPR.REQ'D."	Y	-	-	B (M) May be inoperative provided: a) Associated seats are blocked and placarded to prevent occupancy, and b) Units operate normally for all usable lavatory and flight attendant locations.
35-00-02B	Automatic Presentation "DISP.APPR.REQ'D."	N	1	0	C (O)(M) May be inoperative provided: a) Alternate deployment system is verified to operate normally, and b) Aircraft remains at or below FL 300.
35-00-02C	Door Latches "DISP.APPR.REQ'D."	N	-	-	B (M) Automatic opening feature of door latch(es) may be inoperative unlatched, and taped closed provided: a) PSU oxygen system operates normally, b) Flight remains at or below FL 250, and c) Passenger(s) occupying the seat(s) with inoperative door latch(es) are briefed on oxygen mask procedure.

MEL ITEM	TAB LOCATION	PLACARD TEXT
35-00-02A	PASS OXYGEN Switch	____ Passenger Service Unit(s) (PSU) INOP
35-00-02B	PASS OXYGEN Switch	Passenger Oxygen Automatic Presentation INOP
35-00-02C	PASS OXYGEN Switch	____ PSU Door Latch(es) INOP

(O) PROCEDURES

35-00-02B

1. Deploy passenger masks manually using the PASS OXYGEN Switch or Actuation / Reset Handle (if installed).
2. Flight altitude is limited to FL 300.

(M) PROCEDURES

35-00-02A

1. Close the inoperative door and secure it using adhesive tape.
2. Rope, tie, tape or otherwise block the seats with the inoperative units against passenger use. Do likewise if inoperative unit is in a lavatory.
3. Placard the blocked off seats or lavatory - "NOT TO BE OCCUPIED".

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35-00-02B

1. Apply electrical power to the aircraft.
2. Pull down the test stop buttons on all service units and turn approximately 90 degrees. If service units do not have test buttons, install adhesive tape approximately 4 inches long to prevent the door from fully opening.
3. On the P5 aft overhead panel, push the PASS OXYGEN switch to on, verify the PASS OXY ON Light illuminates and both MASTER CAUTION light and the OVERHEAD annunciator lights illuminate.
4. Verify that the mask box doors in the passenger cabin, including lavatories are against the stop buttons or against the adhesive tape.
5. Open the OXYGEN SYSTEM IND circuit breaker on the P18 panel.
6. Wait 10 seconds and close the OXYGEN SYSTEM IND circuit breaker.
 - a. Verify that the OVERHEAD annunciator light on the P7 lightshield is off, both MASTER CAUTION lights are off and no other annunciator light is on, the PASS OXY ON light is off.
7. Hold the mask door in its position, turn the test stop button 90 degrees and release the button.
8. Push the test stop button up until you hear the sound of a click and then release the test stop button.
 - a. Service units without the test button, push the door up till you hear the click and reset indicator pin.
9. Return aircraft to normal condition.

35-00-02C

DOOR LATCH(ES) INOPERATIVE UNLATCHED:

1. Verify that the related generator has not been expended. Color band will be black if generator has been expended and generator must be replaced.
2. Tape door closed. Fashion the tape such that a non adhesive "handle", approximately 4 inches long, is left pendant. This "handle" will be used in case of need by the passenger to strip the securing tape down, thus allowing the door to fall open.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
OXYGEN PRESSURE INDICATORS					
35-00-03A	Crew Indicator "Contact MCC"	N	1	0	C (M) May be inoperative provided all cylinder indicators are checked to verify that oxygen supply is above minimum required for flight PRIOR TO EACH DEPARTURE. (Logbook Entry Required) Repetitive Check Required (Yellow Placard)
35-00-03B	Overpressure Discharge Indication Disk	Y	1	0	C (O) May be damaged or missing.

MEL ITEM	TAB LOCATION	PLACARD TEXT
35-00-03A	Crew Oxygen Pressure Indicator	Crew Oxygen Pressure Indicator INOP
35-00-03B	Crew Oxygen Pressure Indicator	Crew Oxygen Overpressure Discharge Indication Disk INOP / MISSING

(O) PROCEDURES

35-00-03B

1. When dispatching with the overpressure discharge indication disk damaged or missing, verify that oxygen pressure is adequate for dispatch.
 - a. Observe system pressure using the flight deck crew and passenger (if installed) oxygen pressure indicator on the aft overhead panel, or using the pressure indicator on the external service panel (if installed), or oxygen cylinder.

(M) PROCEDURES

35-00-03A

Pressure must be verified at the oxygen bottle. Minimum supply required for flight is 1000 PSI.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
35-00-04A	Portable Oxygen Dispensing Units (-800, -900ER) (Bottle and Mask) "Contact MCC"	Y	-	-	D (O)(M) May be inoperative provided: a) Required distribution of serviceable bottles is maintained throughout aircraft, b) Bottles not properly serviced are considered inoperative and must be replaced, serviced, or removed from aircraft at next available maintenance facility, and c) Maintenance Control Center is notified regarding affected bottle. NOTE: Reference charts in the (M) procedure for minimum number of full oxygen bottles required for dispatch.
35-00-04B	Portable Oxygen Dispensing Units (-700) (Bottle and Mask) "Contact MCC"	Y	-	3	D (O)(M) May be inoperative provided: a) Required distribution of serviceable bottles is maintained throughout aircraft, b) Bottles not properly serviced are considered inoperative and must be replaced, serviced, or removed from aircraft at next available maintenance facility, and c) Maintenance Control Center is notified regarding affected bottle.

MEL ITEM	TAB LOCATION	PLACARD TEXT
35-00-04A	Logbook	____ Portable Oxygen Dispensing Units INOP
35-00-04B	Logbook	____ Portable Oxygen Dispensing Units INOP

(O) PROCEDURES

35-00-04A, 35-00-04B

Ensure cabin crew (Flight Leader) is notified of the unserviceable bottle and its location.

(M) PROCEDURES

35-00-04A, 35-00-04B

1. Ensure serviceable bottles are evenly distributed throughout the cabin.
2. Remove mask/hose assembly from the unserviceable unit. Secure the mask in a location where it can be retrieved at the next available maintenance facility.
 - a. Disconnect mask assembly from oxygen cylinder outlet by rotating hose fitting 1/2 turn and pulling out.

CONTINUED NEXT PAGE

3. Place a piece of masking tape over the pressure gage of oxygen bottle and label INOP. Position the unserviceable cylinder in holder and fasten quick release clamp.
4. Using tape or other suitable means, cover affected oxygen bottle location placarding.

NOTE: For locations with two oxygen bottles installed, do NOT cover placard if remaining bottle is operative.

Portable Oxygen Requirements – Minimum for Dispatch

ER (ETOPS) CONFIGURED -900 A/C		
Minimum Number of full oxygen bottles required based on duration of flight for which an enroute alternate is not available.		
For Non-ER (ETOPS) operations	For ER (ETOPS) operations up to 120 minutes	For ER (ETOPS) operations beyond 120 minutes
4	5	8

NON- ER (ETOPS) CONFIGURED -800 and -900 A/C
Minimum Number of full oxygen bottles required.
4

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
35-00-05A	Passenger Oxygen System "DISP.APPR.REQ'D."	Y	1	0	B (O)(M) May be inoperative provided: a) Flight remains at or below FL 250, b) Flight is not conducted where minimum enroute altitude is above 14,000 feet MSL, c) Both air conditioning packs operate normally, d) Remaining components of pressurization system operate normally, e) Portable oxygen units are provided for 10% of passengers, based on installed portable oxygen bottles, and f) Passengers are appropriately briefed.
35-00-05B	Passenger Oxygen System "DISP.APPR.REQ'D."	Y	1	0	B May be inoperative provided flight is conducted at or below 10,000 ft. MSL.

MEL ITEM	TAB LOCATION	PLACARD TEXT
35-00-05A	PASS OXYGEN Switch	Passenger Oxygen System INOP
35-00-05B	PASS OXYGEN Switch	Passenger Oxygen System INOP

(O) PROCEDURES

35-00-05A

Refer to the Remarks or Exceptions Column.

(M) PROCEDURES

35-00-05A

Refer to the Remarks or Exceptions Column.

Example, Proviso e) 4 installed bottles, 40 passengers.

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NUMBER INSTALLED			NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD			REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION			REMARKS OR EXCEPTIONS
35-00-06	PBE Smoke Hood Seals (Cockpit and Passenger Cabin)	Y	-	C (M) May be broken or missing.

MEL ITEM	TAB LOCATION	PLACARD TEXT
35-00-06	Logbook	____ PBE Smoke Hood Seal(s) Broken / Missing

(M) PROCEDURES

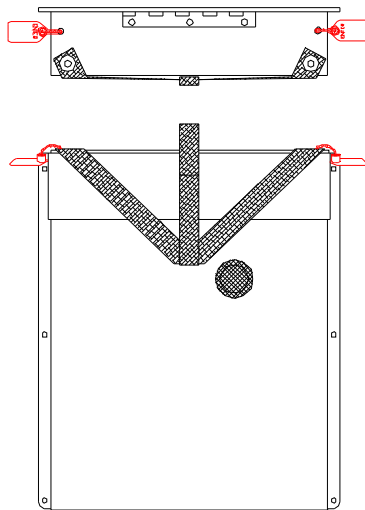
ONE SEAL BROKEN OR MISSING:

1. With one seal missing, the PBE is airworthy.

NOTE: Install the 2nd seal prior to flight or at the next available Delta maintenance station.

BOTH SEALS BROKEN OR MISSING:

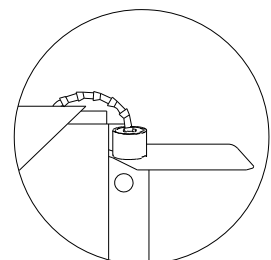
1. With both seals missing, remove the PBE and inspect for obvious damage (punctures, rips in pouch etc.).
2. If no obvious damage is found, reseal PBE in container.
3. If PBE is damaged, Maintenance is Required and flight crew may not placard.



SEAL REPLACEMENT:

NOTE: Replacement seals located in the Log Book Pouch.

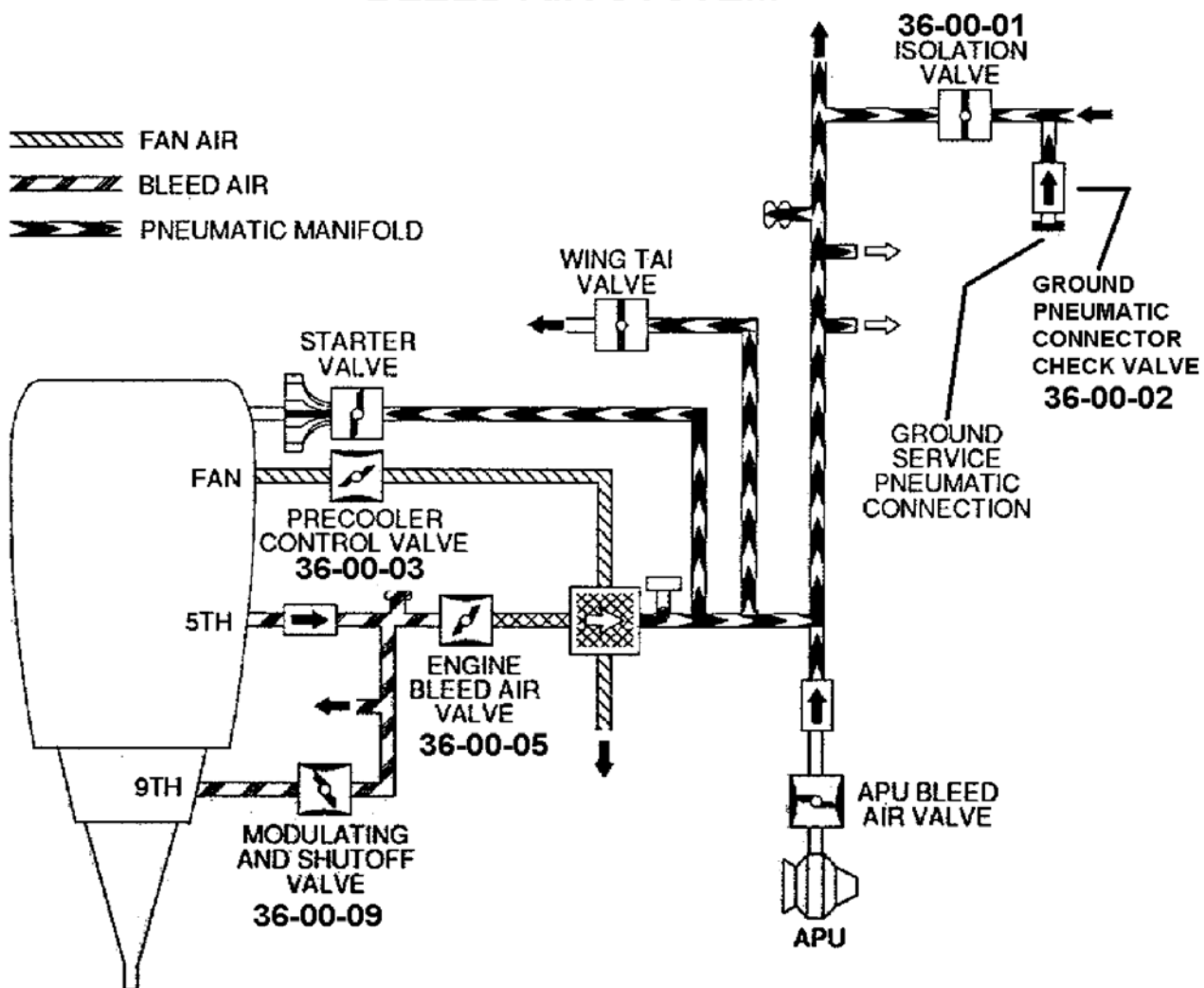
1. Thread tail of seal through container side, then through the hole in the door, and finally through the "ENTER" side of the seal flag.
2. If both seals are being replaced, start both seals before tightening.
3. Pull seal tight to tamper proof the door in the closed position.
4. Cut off tail protruding through the flag.



ATA 36 Contents

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BLEED AIR SYSTEM



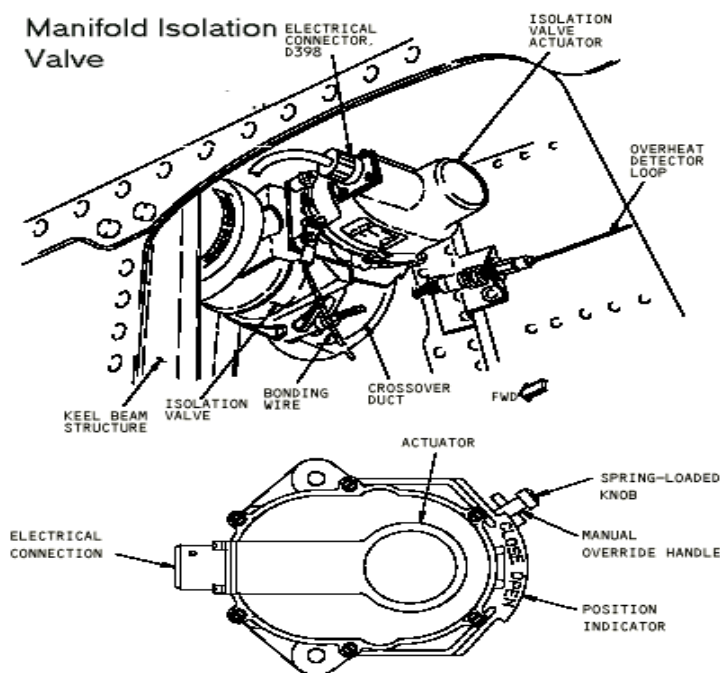
NUMBER INSTALLED			NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD			REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION			REMARKS OR EXCEPTIONS
36-00-01	Manifold Isolation Shutoff Valve "DISP.APPR.REQ'D."	N 1	0 C	(M) Except for ER operations (ETOPS) beyond 120 minutes, may be inoperative provided: a) Valve remains CLOSED except for engine start, and b) Aircraft is not operated in known or forecast icing conditions.

MEL ITEM	TAB LOCATION	PLACARD TEXT
36-00-01	ISOLATION VALVE Switch	Manifold Isolation Shutoff Valve INOP

(M) PROCEDURES

1. Position both Engine Bleed Switches and Pack Switches to OFF.
2. Gain access to the valve through the left air conditioning equipment bay door. If necessary remove the air conditioning duct segment located in front of keel beam access hole.
3. After engine start, remove, cap and stow the connector from the bleed air isolation valve located within the forward keel beam.
4. Manually move valve to the closed position using the manual override handle.

NOTE: With the isolation valve closed, two separate air sources (i.e. the APU and a ground source) must be used to start the engines. To avoid having to use two sources, the isolation valve may be manually opened for a cross-bleed start and then manually closed after the engines are started.



NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH			
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY			
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS	
36-00-02A	Ground Pneumatic Connector Check Valve "DISP.APPR.REQ'D."	N	1	0	C	(O)(M) Except for ER operations (ETOPS) beyond 120 minutes, may be inoperative OPEN provided: a) Right pneumatic manifold remains depressurized after starting right engine, b) Aircraft is not operated in known or forecast icing conditions, and c) Altitude remains at or below FL 250.	
36-00-02B	Ground Pneumatic Connector Check Valve	N	1	0	C	May be inoperative in CLOSED position.	

MEL ITEM	TAB LOCATION	PLACARD TEXT
36-00-02A	Pneumatic System Control Panel	Ground Pneumatic Connector Check Valve INOP Open
36-00-02B	Pneumatic System Control Panel	Ground Pneumatic Connector Check Valve INOP Closed

NOTE 1: With the ground pneumatic check valve inoperative CLOSED, use APU air for starting engines.

NOTE 2: With the ground pneumatic check valve inoperative OPEN, the right engine can only be started using a ground pneumatic source.

(O) PROCEDURES

36-00-02A

NOTE: When dispatching with a single engine bleed on for takeoff (airplane pressurized), V1(MCG) should be determined based on AC packs OFF. Takeoff performance should be based on packs AUTO. Refer to ODM, Abnormal Section, MEL Support, Minimum Control Speed, VMCA Chart.

1. Following engine start, depressurize the right pneumatic duct prior to removing the ground pneumatic source. Operate airplane with:

- Right bleed OFF
- Right pack OFF
- Isolation valve CLOSE

2. Operate the left pack using the left engine bleed or APU bleed with isolation valve CLOSE.

NOTE 1: At altitudes 17,000 feet and below, increased airflow will occur when flaps are extended (takeoff and landing) and the APU is used instead of engine bleed to supply bleed air to the operating pack. Refer to Volume 1, Supplementary Procedures for NO ENGINE BLEED TAKEOFF AND LANDING.

NOTE 2: With the PACK switch in AUTO, the pack will operate in the high flow mode when the APU is used as the bleed source.

3. Maximum altitude is FL 250.

(M) PROCEDURES

36-00-02A

1. Use a ground pneumatic source for starting the right engine.
2. Prior to removing the ground pneumatic source, verify with the flight crew that the right pneumatic duct is depressurized (right engine bleed OFF and isolation valve CLOSE).
3. Ground pneumatic source will be required at down line stations if the right engine is shutdown.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
36-00-03A	Precooler Control Valves "DISP.APPR.REQ'D."	Y	2	0	C (O) Except for ER operations (ETOPS) beyond 120 minutes, may be inoperative in any position provided: a) Associated engine bleed shutoff valve remains CLOSED, b) Aircraft is not operated in known or forecast icing conditions, and c) Flight level restrictions are applied.
36-00-03B	Precooler Control Valves "DISP.APPR.REQ'D."	N	2	0	C (O)(M) Except for ER operations (ETOPS) beyond 120 minutes, may be inoperative full open provided: a) Airplane is not operated in known or forecast icing conditions, and b) Performance corrections are applied.

MEL ITEM	TAB LOCATION	PLACARD TEXT
36-00-03A	Pneumatic System Control Panel	Precooler Control Valve(s) INOP
36-00-03B	Pneumatic System Control Panel	Precooler Control Valve(s) INOP

(O) PROCEDURES

36-00-03A

LEFT ENGINE BLEED UNUSABLE:

- Limit altitude to FL 250.
- For increased airflow at altitudes below 17,000 feet, operate the left pack using the APU bleed air, the right pack using the right engine bleed and the isolation valve CLOSE.
- At altitudes above 17,000 feet operate with the APU bleed air OFF.
- Operate the left pack using the right engine bleed, the right pack OFF and isolation valve OPEN.

RIGHT ENGINE BLEED UNUSABLE:

- Limit altitude to FL 250.
- Operate the left pack using the left engine bleed, right pack OFF, and isolation valve CLOSE.

NOTE: At altitudes of 17,000 feet and below, increased airflow will occur when the flaps are extended (takeoff and landing) and the APU is used instead of engine bleed to supply bleed air to the operating pack. Refer to Operations Manual, Volume I, Supplementary Procedures, No Engine Bleed Takeoff and Landing Procedure.

TWO ENGINE BLEEDS UNUSABLE:

- Limit altitude to 17,000 feet MSL.
- Operate the left pack using APU bleed and isolation valve CLOSE.
- Refer to Operations Manual, Volume I, Supplementary Procedures, No Engine Bleed Takeoff and Landing Procedure.

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36-00-03B

36-00-03B PRECOOLER CONTROL VALVES	
EFFECTIVITY	-700/-800
FLIGHT PLANNING REQUIREMENTS	Reduce ENROUTE LIMIT WT by 1,530 lbs. per inoperative valve. Increase BLOCK FUEL by 0.4% per inoperative valve.
NOTES	Make a notation on the Flight Plan when Enroute Climb is limiting.
AWABS	Performance corrections have been applied.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF Reduce RATOW by 1,120 lbs. per inoperative valve. Reduce T/O CLIMB LIMIT by 1,120 lbs. per inoperative valve. LANDING Reduce RWY ALLOWABLE LANDING WT by 1,120 lbs. per inoperative valve. Reduce LANDING CLIMB LIMIT WT by 1,120 lbs. per inoperative valve.

36-00-03B PRECOOLER CONTROL VALVES	
EFFECTIVITY	-900ER
FLIGHT PLANNING REQUIREMENTS	Reduce ENROUTE LIMIT WT by 1,615 lbs. per inoperative valve. Increase BLOCK FUEL by 0.4% per inoperative valve.
NOTES	Make a notation on the Flight Plan when Enroute Climb is limiting.
AWABS	Performance corrections have been applied.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF Reduce RATOW by 1,180 lbs. per inoperative valve. Reduce T/O CLIMB LIMIT by 1,180 lbs. per inoperative valve. LANDING Reduce RWY ALLOWABLE LANDING WT by 1,180 lbs. per inoperative valve. Reduce LANDING CLIMB LIMIT WT by 1,180 lbs. per inoperative valve.

(M) PROCEDURES

36-00-03B

Deactivate precooler control valve in full open position by completing the following procedure:

1. Set each engine lever in the CUTOFF position.
2. Remove pressure from the pneumatic system (AMM 36-00-00/201).
3. Deactivate the leading edge slats in the retracted position (AMM 27-81-00/201).
4. Deactivate the associated thrust reverser (AMM 78-31-00/201).
5. Gain access to the precooler control valve by opening the appropriate thrust reverser (AMM 78-31-00/201).

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6. Remove the supply pressure sense line between the precooler control valve, bleed air regulator, and intersection manifold duct (AMM 36-12-02/401).
7. On the precooler control valve supply port, remove tubing fitting union J522P53 and replace with undrilled tubing fitting union C36002-1.
8. Reinstall the supply pressure sense line between the precooler control valve, bleed air regulator, and intersection manifold duct (AMM 36-12-02/401).
9. Supply pressure to pneumatic system using supply pressure upstream of PRSOV and perform a leak check of all distributed tubing fittings using snoop leak detector or equivalent soap solution (AMM 36-00-00/201).
10. Verify that the visual position indicator on the precooler control valve indicates that the valve is in the full open position.
11. Remove pressure from the pneumatic system (AMM 36-00-00/201).
12. Close thrust reverser (AMM 78-31-00/201).
13. Activate thrust reverser (AMM 78-31-00/201).
14. Activate leading edge slats (AMM 27-81-00/201).

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD			1	REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION	Y		C	REMARKS OR EXCEPTIONS
36-00-04	Pneumatic Pressure Indication Systems				0

MEL ITEM	TAB LOCATION	PLACARD TEXT
36-00-04	Pneumatic Pressure Indicator	Pneumatic Pressure Indicator INOP

(O) PROCEDURES

With the START VALVE OPEN lights, the crew can verify that the engine start valve has closed by noting that the START VALVE OPEN lights have extinguished.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
36-00-05	Engine Bleed Air Shutoff Valves (PRSOV) "DISP.APPR.REQ'D."	N	2	0	C (O)(M) Except for ER operations (ETOPS) beyond 120 minutes, may be inoperative provided: a) Valve is secured CLOSED before engine start, b) Aircraft is not operated in known or forecast icing conditions, and c) Flight level restrictions are applied.

MEL ITEM	TAB LOCATION	PLACARD TEXT
36-00-05	Associated Engine Bleed Switch(es)	Engine Bleed Air Shutoff Valve(s) INOP

(O) PROCEDURES

1. Do not dispatch into known or forecast icing conditions.
2. After engine start, position the associated engine BLEED switch to OFF.

LEFT BLEED INOPERATIVE:

1. Limit altitude to FL 250.
2. For increased airflow at altitudes below 17,000 feet, operate the left pack using the APU bleed air, the right pack using the right engine bleed and the isolation valve CLOSE.
3. At altitudes above 17,000 feet operate with the APU bleed air OFF.
4. Operate the left pack using the right engine bleed, the right pack OFF and isolation valve OPEN.

RIGHT BLEED INOPERATIVE:

1. Limit altitude to FL 250.
2. Operate the left pack using the left engine bleed, right pack OFF, and isolation valve CLOSE.

NOTE 1: At altitudes of 17,000 feet and below, increased airflow will occur when the flaps are extended (takeoff and landing) and the APU is used instead of engine bleed to supply bleed air to the operating pack. Refer to Operations Manual, Volume I, Supplementary Procedures, No Engine Bleed Takeoff and Landing Procedure.

TWO ENGINE BLEEDS INOPERATIVE:

1. Limit altitude to 17,000 feet MSL.
2. Operate the left pack using APU bleed and isolation valve CLOSE.
3. Refer to Operations Manual, Volume I, Supplementary Procedures, No Engine Bleed Takeoff and Landing Procedure.

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(M) PROCEDURES

1. Open the fan duct cowl and thrust reversers. (Ensure all precautionary measures are taken with cowl, slats and thrust reversers.)
2. Lock the engine bleed air valve in the CLOSED position:
 - a. Turn the override nut to align the position indicator with the CLOSED position.
 - b. Loosen the lock screw/knob bolt and push in locking knob to lock valve in closed position.
 - c. Retighten lock screw/knob bolt.
3. Close the fan duct cowl and thrust reversers.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
36-00-06	Dual Bleed Light System	Y	1	0	C
					(O) May be inoperative provided: a) APU bleed air is not used in flight, and b) APU bleed valve is closed PRIOR TO EACH DEPARTURE. Repetitive Check Required (Yellow Placard)

MEL ITEM	TAB LOCATION	PLACARD TEXT
36-00-06	1. DUAL BLEED Light 2. APU Bleed Switch	1. DUAL BLEED Light System INOP 2. Do NOT Use APU Bleed In Flight

NOTE: If the APU is inoperative or the APU Air has not been used on the ground, the Repetitive Check is Not Required.

(O) PROCEDURES

Prior to takeoff verify that the APU bleed valve is closed using the following procedure:

1. Place isolation valve switch in CLOSE position.
2. With the APU running, turn off the APU bleed.
3. Turn off the left pack and left engine bleed.
4. Observe that the left pneumatic duct pressure decreases to less than or equal to 10 PSI.
5. Reinstall the left engine bleed, left pack, and isolation valve as required.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
36-00-08	Engine Bleed Trip Off Lights "DISP.APPR.REQ'D."	Y	2	0	C (O) Except for ER operations (ETOPS) beyond 120 minutes, may be inoperative provided: a) Associated engine bleed is not used except for engine start, b) Aircraft is not operated in known or forecast icing conditions, and c) Flight level restrictions are applied.

MEL ITEM	TAB LOCATION	PLACARD TEXT
36-00-08	Affected Engine BLEED TRIP OFF Light(s)	Engine BLEED TRIP OFF Light(s) INOP

(O) PROCEDURES

After engine start, position the associated engine BLEED switch to OFF.

LEFT ENGINE BLEED UNUSABLE:

1. Limit altitude to FL 250.
2. For increased airflow at altitudes below 17,000 feet, operate the left pack using the APU bleed air, the right pack using the right engine bleed and the isolation valve CLOSE.
3. At altitudes above 17,000 feet operate with the APU bleed air OFF.
4. Operate the left pack using the right engine bleed, the right pack OFF and isolation valve OPEN.

RIGHT ENGINE BLEED UNUSABLE:

1. Limit altitude to FL 250.
2. Operate the left pack using the left engine bleed, right pack OFF, and isolation valve CLOSE.

NOTE 1: At altitudes of 17,000 feet and below, increased airflow will occur when the flaps are extended (takeoff and landing) and the APU is used instead of engine bleed to supply bleed air to the operating pack. Refer to Operations Manual, Supplementary Procedures, No Engine Bleed Takeoff and Landing Procedure.

TWO ENGINE BLEEDS UNUSABLE:

1. Limit altitude to 17,000 feet MSL.
2. Operate the left pack using APU bleed and isolation valve CLOSE.
3. Refer to Volume 1, No Engine Bleed Takeoff and Landing Procedure.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
36-00-09	High Stage Valves "DISP.APPR.REQ'D."	N	2	1 C	(M)(O) May be inoperative locked CLOSED provided a minimum of 60% N1 is maintained on associated engine during flight in icing conditions.

MEL ITEM	TAB LOCATION	PLACARD TEXT
36-00-09	Associated Engine Bleed Switch	Engine High Stage Valve INOP

(O) PROCEDURES

Apply the following fuel mileage decrement to account for flight in icing conditions which require a minimum of 60% N1 on the associated engine:

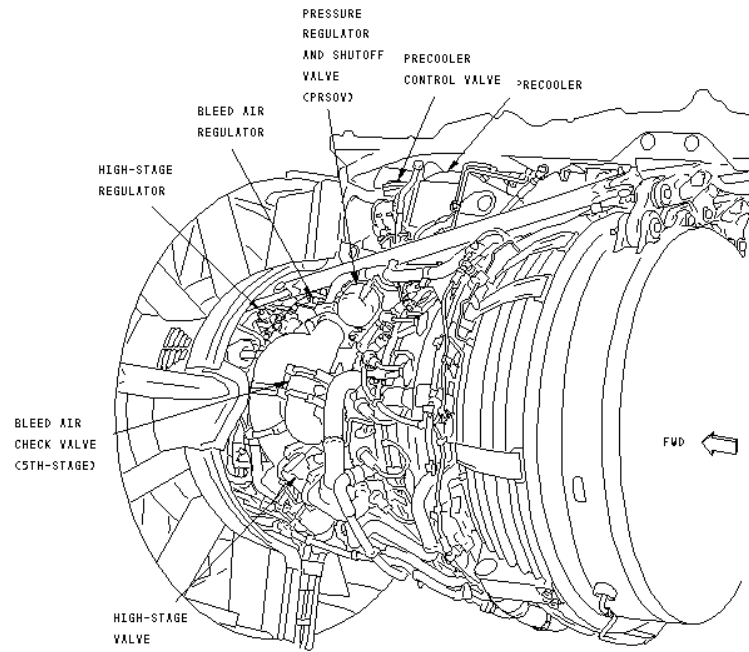
36-00-09	HIGH STAGE VALVES
EFFECTIVITY	All
FLIGHT PLANNING REQUIREMENTS	Increase BLOCK FUEL by 2.0%.
NOTES	None
AWABS	Performance corrections have been applied.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF None LANDING None

(M) PROCEDURES

NOTE: Only one high stage valve may be locked in the closed position for dispatch. Dispatch with the opposite high stage valve locked closed under MEL item 30-3 is not allowed.

- Start lever in the CUTOFF position.
- Remove pressure from the pneumatic system.
- Open fan cowl and thrust reverser.
- Manually lock closed the high stage valve.
 - Manually wrench the high stage valve to the CLOSE position.
 - Loosen the position indicating screw.
 - Slide the lock into the recess in the cover plate.
 - Tighten the position indicating screw.
- Close fan cowl and thrust reverser.

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Pneumatic System on the Engine/Strut Component Location

 DELTA	B737 Minimum Equipment List	ATA 38 Water / Waste	R10 12/28/09 Page 38-1

ATA 38 Contents

38-00-01A	Potable Water Systems.....	38-2
38-00-02A	Lavatory Waste Systems	38-4

NUMBER INSTALLED			NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD			REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION			REMARKS OR EXCEPTIONS
38-00-01A	Potable Water Systems "DISP.APPR.REQ'D."	N 1	0	C (M) Individual components may be inoperative provided: a) Associated components are deactivated or isolated, and b) Associated system components are verified not to have leaks. NOTE: Any portion of system which operates normally may be used.
38-00-01B	Potable Water Systems "DISP.APPR.REQ'D."	N 1	0	C (M)(O) May be inoperative provided: a) System is drained, b) Procedures are established to ensure that system is not serviced, and c) Performance Corrections are applied.

MEL ITEM	TAB LOCATION	PLACARD TEXT
38-00-01A	Logbook	Potable Water System ____ INOP
38-00-01B	Logbook	Potable Water System INOP

(O) PROCEDURES

38-00-01B

38-00-01B	POTABLE WATER SYSTEMS
EFFECTIVITY	All
FLIGHT PLANNING REQUIREMENTS	None
NOTES	None
AWABS	Performance corrections have been applied.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF None LANDING None OTHER CORRECTIONS (Manual Weight & Balance Worksheet only) Use OEW correction for "Drain Potable Water System" in ALM – Weight and Balance Section.

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(M) PROCEDURES

38-00-01A

Inoperative individual components:

1. Deactivate or isolate inoperative components.
2. Verify associated system components do not have leaks.

38-00-01B

Inoperative potable water system:

1. Drain potable water system.
2. Install additional placard on the inside of exterior potable water service panel(s) not to service potable water system.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
38-00-02A	Lavatory Waste Systems "DISP.APPR.REQ'D."	N	-	-	C (M) Individual components may be inoperative provided: a) Associated components are deactivated or isolated, and b) Associated system components are verified not to have leaks. NOTE: Any portion of system which operates normally may be used.
38-00-02B	Lavatory Waste Systems "DISP.APPR.REQ'D."	N	-	-	C (M) Associated lavatory system(s) may be inoperative provided: a) Associated components are deactivated or isolated to prevent leaks, b) Pilot-in-Command will determine if flight duration is acceptable with a FWD lavatory unusable, and c) Associated lavatory door(s) is secured closed and placarded INOPERATIVE – DO NOT ENTER. NOTE: These provisions are not intended to prohibit inspections by crewmembers.

MEL ITEM	TAB LOCATION	PLACARD TEXT
38-00-02A	Logbook	Lavatory Waste System ____ INOP
38-00-02B	Logbook	____ Lavatory INOP

OPERATIONS NOTE

No changes to security procedures or passenger seating are required for an inoperative forward lavatory.

(M) PROCEDURES

38-00-02A

Inoperative individual lavatory waste system components:

1. Deactivate inoperative system component(s) and isolate as necessary per AMM 38-32-00.
2. Ensure system is properly serviced.
3. Check deactivated component(s) for leakage. No leakage is allowed.
4. If a lavatory servicing panel leak is known, suspected, or reported, use MEL item 38-00-02B.

38-00-02B

Inoperative lavatory waste system:

1. Deactivate inoperative system component(s) as necessary per AMM 38-32-00. No leakage is allowed.
2. For known, suspected, or reported leaks at a lavatory servicing panel, associated waste tank must be drained per AMM 12-17-01.
3. Lock lavatory door closed and install an INOPERATIVE – DO NOT ENTER placard on the exterior of the associated lavatory door.
4. Install additional INOPERATIVE – DO NOT SERVICE placard on the interior of exterior service panel, as applicable.

ATA 46 Contents

46-00-02	Onboard Network System (ONS) (-900ER)	46-2

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD			REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
46-00-02	Onboard Network System (ONS) (-900ER)	Y	1	0	D May be inoperative provided procedures do not require its use.

MEL ITEM	TAB LOCATION	PLACARD TEXT
46-00-02	Logbook	_____ Onboard Network System INOP

 DELTA	B737 Minimum Equipment List	ATA 47 Inert Gas System	R10 12/28/09 Page 47-1

ATA 47 Contents

47-00-01A	Nitrogen Generation System (NGS).....	47-2
47-00-01B	Nitrogen Generation Degraded	47-2

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS	
47-00-01A	Nitrogen Generation System (NGS)	N		1	0	A
47-00-01B	Nitrogen Generation Degraded	Y	1	0	C	

MEL ITEM	TAB LOCATION	PLACARD TEXT
47-00-01A	Aircraft Logbook	Nitrogen Generation System INOP
47-00-01B	Aircraft Logbook	Nitrogen Generation System Degraded

(M) PROCEDURES

47-00-01A

For either the amber operability indicator light or for no operability indicator lights illuminated, deactivate the NGS shutoff valve in the closed position (AMM 47-00-00/901).

 DELTA	B737 Minimum Equipment List	ATA 49 Auxiliary Power Unit (APU)	R21 02/22/16 Page 49-1

ATA 49 Contents

AUXILIARY POWER UNIT (APU)	49-2
49-00-01A Auxiliary Power Unit	49-2
49-00-01B APU System – Cold Soak Not Verified	49-2
49-00-01C APU System – Cold Soak Not Verified	49-2
49-00-02 APU Annunciator LOW OIL PRESSURE and OVER SPEED Lights	49-4
49-00-04A APU Annunciator MAINT Light.....	49-5
49-00-04B APU Annunciator MAINT Light.....	49-5
49-00-05 APU EGT Indicator	49-6
49-00-06A APU Inlet Door	49-7
49-00-07A APU Bleed Air Valve	49-11
49-00-09A APU Surge Control Valve.....	49-12
49-00-12 APU Annunciator FAULT Light	49-13
49-00-15A Start Power Unit (SPU)	49-14
49-00-15B AC / DC Start Systems.....	49-14
49-00-16A Start Converter Unit.....	49-15
49-00-16B Voltage Regulation Function	49-15

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
AUXILIARY POWER UNIT (APU)					
49-00-01A	Auxiliary Power Unit "DISP.APPR.REQ'D."	Y	1	0	C
(O) Except for ER operations (ETOPS), may be inoperative provided: a) Procedures do not require its use, and b) Visual confirmation is made that no damage has occurred to APU exhaust area. NOTE: Use of coastal routing is recommended for operations from Alaska "to" 48 contiguous states. Theater Restrictions may apply					
49-00-01B	APU System – Cold Soak Not Verified "DISP.APPR.REQ'D." Administrative Control Item	Y	1	1	A
(O) Inflight verification of cold soak start capability has not been accomplished. ER (ETOPS) operations Not Authorized: a) APU is shut down before takeoff and remains OFF until cold soak start is attempted, b) Cold soak inflight start of APU may be accomplished after at least two flight hours at or above FL270, and c) Verification is accomplished within 6 flight cycles.					
49-00-01C	APU System – Cold Soak Not Verified "DISP.APPR.REQ'D." Administrative Control Item	N	1	1	A
(O)(M) Inflight verification of cold soak start capability has not been accomplished. ER (ETOPS) operations Authorized: a) APU oil quantity is serviced to full, b) APU is started on the ground, c) APU remains operating throughout the ETOPS portion of the flight, d) Authorization limited to one flight, and e) Performance Corrections are applied.					

MEL ITEM	TAB LOCATION	PLACARD TEXT
49-00-01A	APU Start Switch	APU INOP
49-00-01B	APU Start Switch	APU System - Cold Soak Not Verified
49-00-01C	APU Start Switch	APU System - Cold Soak Not Verified

CONTINUED NEXT PAGE

	B737 Minimum Equipment List	ATA 49 Auxiliary Power Unit (APU)	R22 03/17/16 Page 49-3

(O) PROCEDURES

49-00-01A

Communication between the Captain and ground personnel is required prior to start. Refer to the B737 Operations Manual Volume 1 Supplementary Procedures Section 7 “Starting with Ground Air Source.”

NOTE: Due to ACS safety concerns, when the APU is inoperative, it is preferred the left engine be started at the gate. Exceptions to start cart location and engine to be started are permitted as operational requirements dictate, but the plan must be coordinated and clearly understood by both flight deck and ground personnel prior to start. The second engine start must be delayed until after pushback.

1. External electrical and an alternate air source is required for normal starting.
2. Perform a visual inspection, from the ground, of the tailcone area and adjacent control surfaces. Inspection is to confirm that there is no evidence of heat damage or delamination evident from blistering paint and/or discoloration typically caused by a APU tailpipe fire or torching start.

49-00-01B

1. APU is shut down before takeoff.
2. The start attempt must be initiated at the top of descent or at such time that will ensure a 2-hour cold soak at FL270 or above. Refer to Volume 1, Supplementary Procedures, Engines, APU.
3. In-flight start data will be entered into the Aircraft Log Book by the flight crew.

49-00-01C

1. Start APU prior to pushback.
2. The APU must remain operating throughout the ETOPS portion of the flight.

NOTE: APU fuel consumption is approximately 180 lbs per hour while airborne.

49-00-01C	APU SYSTEM – COLD SOAK NOT VERIFIED
EFFECTIVITY	All
FLIGHT PLANNING REQUIREMENTS	Increase BLOCK FUEL by 180 lbs. per hour for APU usage.
NOTES	None
AWABS	Performance corrections have been applied.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF None LANDING None

(M) PROCEDURES

49-00-01C

Service APU oil to full.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH			
FLIGHT CREW MAY PLACARD			REPAIR CATEGORY				
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS	
49-00-02	APU Annunciator LOW OIL PRESSURE and OVER SPEED Lights	Y	2	0	C	May be inoperative provided APU Auto Shutdown System operates normally.	

MEL ITEM	TAB LOCATION	PLACARD TEXT
49-00-02	OVER SPEED Light(s)	OVER SPEED Light(s) INOP

NOTE: APU Auto Shutdown may be checked by starting and shutting down the APU normally.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
49-00-04A	APU Annunciator MAINT Light	N	1	0	C (M) May be inoperative and APU used provided APU oil quantity is checked ONCE EACH FLIGHT DAY (Log Book Entry Required) Repetitive Check Required (Yellow Placard)
49-00-04B	APU Annunciator MAINT Light "DISP.APPR.REQ'D"	Y	1	0	C May be inoperative provided APU is not used.

MEL ITEM	TAB LOCATION	PLACARD TEXT
49-00-04A	MAINT Light	APU MAINT Light INOP
49-00-04B	MAINT Light	APU MAINT Light INOP

(M) PROCEDURES

49-00-04A

Once each flight day, verify APU oil level is satisfactory for dispatch (AMM 12-13-31/301).

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
49-00-05	APU EGT Indicator "DISP.APPR.REQ'D."	Y	1	0	C May be inoperative.

MEL ITEM	TAB LOCATION	PLACARD TEXT
49-00-05	APU EGT Indicator	APU EGT Indicator INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
49-00-06A	APU Inlet Door "DISP.APPR.REQ'D."	N	1	0	C (O)(M) May be inoperative OPEN provided performance corrections are applied.
49-00-06B	APU Inlet Door "DISP.APPR.REQ'D."	Y	1	0	C (O)(M) Except for ER operations (ETOPS), may be inoperative in any other position if APU is not used and performance corrections are applied.

MEL ITEM	TAB LOCATION	PLACARD TEXT
49-00-06A	APU Start Switch	APU Inlet Door INOP OPEN
49-00-06B	APU Start Switch	APU Inlet Door INOP

(O) PROCEDURES

NOTE: If the inlet door is inoperative in the CLOSED position then the performance penalties do not apply. If re-positioning of the inlet door is necessary to achieve the closed position, Maintenance is Required and Flight Crew May NOT Placard.

49-00-06A

- Starting the APU requires Maintenance action.
- Do not turn the APU off unless the APU is no longer required or Maintenance is available.
- The following penalties are used to account for the increased drag resulting from the APU inlet door being inoperative in the open position (either fully or partially open) and APU not running.

49-00-06A	APU INLET DOOR
EFFECTIVITY	-700/-800
FLIGHT PLANNING REQUIREMENTS	Reduce ENROUTE LIMIT WT by 830 lbs. Increase BLOCK FUEL by 2.8%.
NOTES	Make a notation on the Flight Plan when Enroute Climb is limiting.
AWABS	Performance corrections have been applied.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF Reduce RATOW by 410 lbs. Reduce T/O CLIMB LIMIT by 410 lbs. LANDING Reduce LANDING CLIMB LIMIT WT by 410 lbs.

CONTINUED NEXT PAGE



49-00-06A APU INLET DOOR

EFFECTIVITY -900ER

FLIGHT PLANNING REQUIREMENTS Reduce ENROUTE LIMIT WT by 960 lbs.
Increase BLOCK FUEL by 2.8%.

NOTES Make a notation on the Flight Plan when Enroute Climb is limiting.

AWABS Performance corrections have been applied.

TAKEOFF PERFORMANCE WORKSHEET

TAKEOFF
Reduce RATOW by 500 lbs.
Reduce T/O CLIMB LIMIT by 500 lbs.

LANDING
Reduce LANDING CLIMB LIMIT WT by 500 lbs.

49-00-06B

1. Dispatch is not allowed if the APU is required by other procedures.
2. APU must not be started.

49-00-06B APU INLET DOOR – PARTIALLY OPEN

EFFECTIVITY -700/-800

FLIGHT PLANNING REQUIREMENTS Reduce ENROUTE LIMIT WT by 830 lbs.
Increase BLOCK FUEL by 2.8%.

NOTES Make a notation on the Flight Plan when Enroute Climb is limiting.

AWABS Performance corrections have been applied.

TAKEOFF PERFORMANCE WORKSHEET

TAKEOFF
Reduce RATOW by 410 lbs.
Reduce T/O CLIMB LIMIT by 410 lbs.

LANDING
Reduce LANDING CLIMB LIMIT WT by 410 lbs.

CONTINUED NEXT PAGE

49-00-06B	APU INLET DOOR – PARTIALLY OPEN
EFFECTIVITY	-900ER
FLIGHT PLANNING REQUIREMENTS	Reduce ENROUTE LIMIT WT by 960 lbs. Increase BLOCK FUEL by 2.8%.
NOTES	Make a notation on the Flight Plan when Enroute Climb is limiting.
AWABS	Performance corrections have been applied.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF Reduce RATOW by 500 lbs. Reduce T/O CLIMB LIMIT by 500 lbs. LANDING Reduce LANDING CLIMB LIMIT WT by 500 lbs.

(M) PROCEDURES

49-00-06A

NOTE: With the APU Inlet Door inoperative in the OPEN position the APU may be used.

1. APU switch is OFF.
2. Pull and secure the AUX POWER UNIT CONT and APU FIRE SW POWER circuit breakers.
3. Open the stabilizer trim access door.
4. Position the air inlet door in the fully open position.
5. Close the stabilizer trim access door.
6. Close the AUX POWER UNIT CONT and APU FIRE SW POWER circuit breakers.

49-00-06B

INLET DOOR CLOSED

NOTE: If the inlet door is inoperative in the CLOSED position then the performance penalties do not apply. If re-positioning of the inlet door is necessary to achieve the closed position, Maintenance is Required and Flight Crew May NOT Placard.

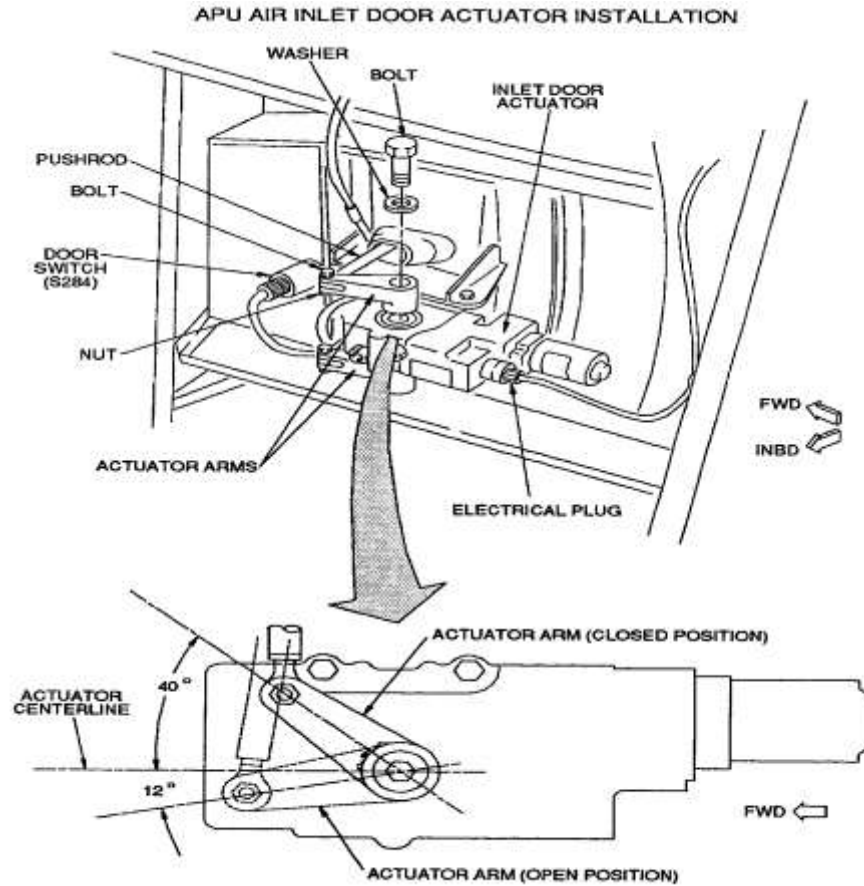
1. Make sure the APU switch is off.
2. Pull and secure the AUX POWER UNIT CONT, AUX POWER UNIT SCU FAN POWER, APU FIRE SW POWER, and APU START CONV circuit breakers.
3. Open the stabilizer trim access door.
4. Put the air inlet door in the closed position.
5. Close the stabilizer trim access door.

INLET DOOR OTHER THAN CLOSED POSITION

NOTE: When the inlet door is inoperative in any position other than closed, performance penalties apply.

CONTINUED NEXT PAGE

1. Make sure APU switch is off
2. Pull and secure the AUX POWER UNIT CONT, AUX POWER UNIT SCU FAN POWER, APU FIRE SW POWER, and APU START CONV circuit breakers.



NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
49-00-07A	APU Bleed Air Valve "DISP.APPR.REQ'D."	N	1	0	C (M) May be inoperative closed. NOTE: APU may be used to provide electrical power.
49-00-07B	APU Bleed Air Valve "DISP.APPR.REQ'D."	Y	1	0	C (O) Except for ER operations (ETOPS), may be inoperative provided: a) APU bleed air check valve operates normally, and b) APU is not operated.

MEL ITEM	TAB LOCATION	PLACARD TEXT
49-00-07A	APU Bleed Switch	APU Bleed Air System INOP Closed
49-00-07B	1. APU Bleed Switch 2. APU Start Switch	1. APU Bleed Air System INOP 2. Do NOT Use APU

(O) PROCEDURES

49-00-07B

NOTE: With the APU Bleed Valve failed OPEN, the DUAL BLEED light will be illuminated with the Engine 1 Bleed Air Switch **ON** or the Engine 2 Bleed Air Switch **ON** with the Isolation Valve Switch in the **OPEN** position. The Master Caution light will also be illuminated. This is a normal indication.

1. Dispatch is not allowed if the APU is required by other procedures.
2. APU must not be started.

(M) PROCEDURES

49-00-07A

Determine the position of APU bleed air valve by using either the Input Monitoring page of APU BITE TEST or the following procedure (AMM 49-00-00/901):

1. Make sure the APU BLEED switch on the P-5 overhead panel is OFF.
2. Gain access to APU bleed air valve and look at the two indications on the position switch.
 - a. If the indication on the bleed air valve shows OPEN, APU must be considered inoperative.
 - b. If the indication on the bleed air valve shows CLOSED, APU may be used for electrical power only.
3. Close the APU cowl door.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
49-00-09A	APU Surge Control Valve "DISP.APPR.REQ'D."	Y	1	0	C May be inoperative in OPEN position provided APU bleed air is not used. NOTE: APU may be used to provide electrical power.
49-00-09B	APU Surge Control Valve "DISP.APPR.REQ'D."	Y	1	0	C (O) Except for ER operations (ETOPS), may be inoperative in CLOSED position provided APU is not used.

MEL ITEM	TAB LOCATION	PLACARD TEXT
49-00-09A	APU Bleed Switch	APU Surge Bleed Valve INOP Open
49-00-09B	APU Bleed Switch	APU Surge Bleed Valve INOP Closed

(O) PROCEDURES

1. Dispatch is not allowed if the APU is required by other procedures.
2. APU must not be started.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH			
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY			
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS	
49-00-12	APU Annunciator FAULT Light	Y	1	0	C		

MEL ITEM	TAB LOCATION	PLACARD TEXT
49-00-12	FAULT Light	APU Annunciator FAULT Light INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
49-00-15A	Start Power Unit (SPU) "DISP.APPR.REQ'D."	N	1	0	C (M) Except for ER operations (ETOPS), may be inoperative provided procedures do not require use of APU.
49-00-15B	AC / DC Start Systems	Y	2	1	C

MEL ITEM	TAB LOCATION	PLACARD TEXT
49-00-15A	APU Switch	APU INOP
49-00-15B	APU Switch	APU AC / DC Start INOP

(M) PROCEDURES

49-00-15A

1. Position the APU switch (P5 Panel) OFF.
2. Pull and secure the following circuit breakers:
 - a. P6-4 Panel AUX POWER UNIT CONT
 - b. P6-4 Panel AUX POWER UNIT SCU FAN POWER
 - c. P6-2 Panel APU FIRE SW POWER
 - d. P91 Panel APU START CONV
3. Disconnect, cap and stow the battery type connector to the SPU, located on the E2-2 shelf in the EE bay.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
49-00-16A	Start Converter Unit "DISP.APPR.REQ'D."	N	1	0	C (M) Except for ER operations (ETOPS), May be inoperative provided procedures do not require use of APU.
49-00-16B	Voltage Regulation Function "DISP.APPR.REQ'D."	Y	1	0	C Except for ER operations (ETOPS), may be inoperative provided APU generator is not used for electrical power. NOTE: APU may be used as a pneumatic source.

MEL ITEM	TAB LOCATION	PLACARD TEXT
49-00-16A	APU Switch	APU Start Converter Unit INOP
49-00-16B	APU Generator Switch	1. APU Voltage Regulation Function INOP 2. Do Not Use APU Generator

(M) PROCEDURES

49-00-16A

1. Position the APU switch (P5 Panel) OFF.
2. Pull and secure the following circuit breakers:
 - a. P6-4 Panel AUX POWER UNIT CONT
 - b. P6-4 Panel AUX POWER UNIT SCU FAN POWER
 - c. P6-2 Panel APU FIRE SW POWER
 - d. P91 Panel APU START CONV

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
DOOR WARNING LIGHT SYSTEM					
52-00-03A	Entry / Service / Cargo / Equip / Mid-Exit	Y	-	0	C (M) May be inoperative provided door(s) are verified closed and locked PRIOR TO EACH DEPARTURE. Repetitive Check Required (Yellow Placard)
52-00-03B	Overwing	N	-	0	C (M) May be inoperative provided PRIOR TO EACH DEPARTURE (Log Book Entry Required): a) Associated door is verified closed and latched, and b) Associated Flight lock is verified to operate normally. Repetitive Check Required (Yellow Placard)

MEL ITEM	TAB LOCATION	PLACARD TEXT
52-00-03A	Affected Door Warning Light(s)	____ Door Warning Light INOP
52-00-03B	Overwing Door Warning Light	____ Overwing Door Warning Light INOP

MAINTENANCE AND OPERATIONS NOTES:

NOTE 1: The EQUIP Light is powered by the Forward Compartment and Electrical / Electronics Door Switches. Ensure both doors are closed.

NOTE 2: If two or more entry / service door warning lights are inoperative due to failed door sensors, the overwing exit flight lock system will not function properly. [Refer to MEL item 52-00-15.](#)

(M) PROCEDURES

52-00-03A

Refer to the Remarks or Exceptions column.

52-00-03B

1. Check PSEU bite and verify that there are no faults associated with the overwing exit doors.
2. If Flight Lock Failed Open faults are present, dispatch using MEL 52-00-15.

NUMBER INSTALLED			NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD			REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION			REMARKS OR EXCEPTIONS
	LEFT MAIN CABIN DOOR PRESSURE STOP FITTINGS			
52-00-05A	Forward Entry Door "DISP.APPR.REQ'D."	N	-	B (O)(M) One per door may be broken or missing provided: a) There are no visible defects on other fittings for associated door, b) Pressure differential does not exceed 6.0 psi, c) Digital cabin pressure control system AUTO or ALTN control mode operates normally, d) Alternate procedures are established and used, and e) Limit altitude to FL270.
52-00-05B	Aft Entry Door "DISP.APPR.REQ'D."	N	-	B (O)(M) One per door may be broken or missing provided: a) There are no visible defects on other fittings for associated door, b) Pressure differential does not exceed 3.4 psi, c) Digital cabin pressure control system AUTO or ALTN control mode operates normally, d) Alternate procedures are established and used, and e) Limit altitude to FL170.

MEL ITEM	TAB LOCATION	PLACARD TEXT
52-00-05A	Cabin Pressure Control Panel	Forward Entry Door Pressure Fitting(s) Broken / Missing
52-00-05B	Cabin Pressure Control Panel	Aft Entry Door Pressure Fitting(s) Broken / Missing

NOTE 1: A door pressure stop consists of two mating stop fittings, one being attached to the door and the other attached to the fuselage.

NOTE 2: Either or both stop fittings may be broken or missing at a single door pressure stop location.

(O) PROCEDURES

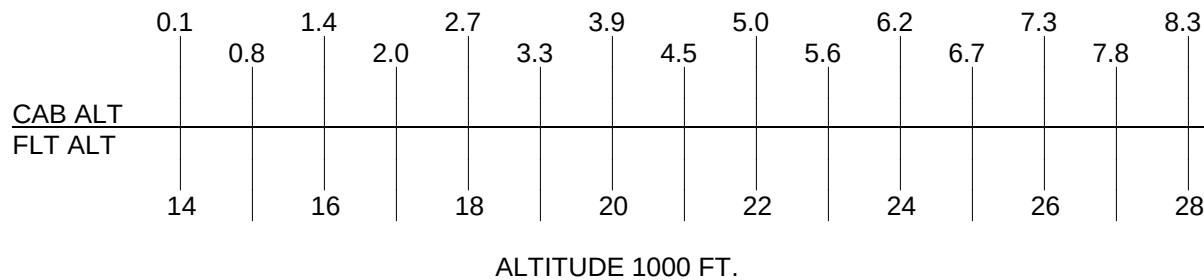
52-00-05A

1. Enroute altitude should be limited to 27,000 feet so that a cabin altitude of 8,000 feet can be maintained.
2. Pressure differential must not exceed 6.0 PSI. Monitor differential pressure indicator during climb.
3. Digital pressurization system must be operated in the AUTO or ALT mode.
4. To ensure that the correct pressure differential is not exceeded, select cabin altitude in accordance with the appropriate schedule shown below.

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DIFFERENTIAL PRESSURE SCHEDULES

6.0 PRESS DIFFERENTIAL

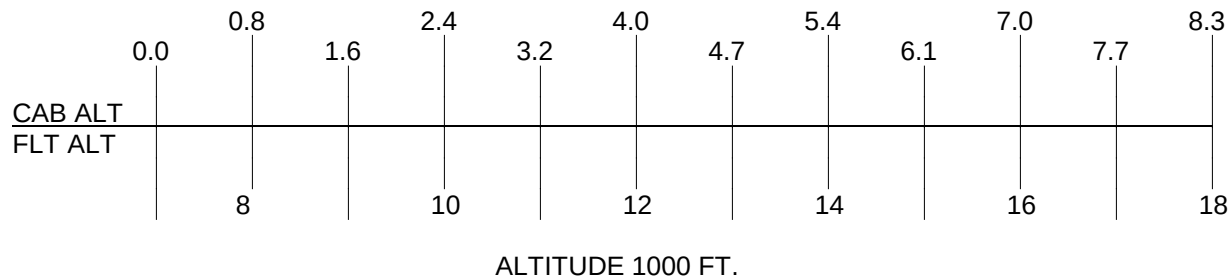


52-00-05B

1. Enroute altitude should be limited to 17,000 feet so that a cabin altitude of 8,000 feet can be maintained.
2. Pressure differential must not exceed 3.4 PSI. Monitor differential pressure indicator during climb.
3. Digital pressurization system must be operated in the AUTO or ALT mode.
4. To ensure that the correct pressure differential is not exceeded, select cabin altitude in accordance with the appropriate schedule shown below.

DIFFERENTIAL PRESSURE SCHEDULES

3.4 PRESS DIFFERENTIAL



(M) PROCEDURES

52-00-05A, 52-00-05B

Visually inspect remaining fittings for possible defects on affected door(s), body frames and sills.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
52-00-06A	Lower Cargo Doors Pressure Stop Fittings "Contact MCC"	N	24	22	A (M) Any one may be broken or missing on each door or frame provided: a) No defects are visible on other fittings for associated door, b) Cabin pressure AUTO mode operates normally, c) Adjacent stop fittings are inspected within 25 flights, and d) Not more than 50 flights are made before completion of repairs or replacements.
52-00-06B	Lower Cargo Doors Pressure Stop Fittings (3701-3771, 3801-3900) "DISP.APPR.REQ'D."	N	24	20	C (O)(M) Two may be broken or missing on each door or frame provided airplane is operated in an unpressurized configuration at or below 10,000 feet MSL.
52-00-06C	Lower Cargo Doors Pressure Stop Fittings (3601-3610, 3772, 3773) "DISP.APPR.REQ'D."	N	24	20	C (O)(M) Two may be broken or missing on each door or frame provided: a) Flight is conducted in an unpressurized configuration, and b) Procedures are established and used to ensure lower forward cargo compartment remains empty, or is verified to contain only empty cargo handling equipment, ballast (ballast may be loaded in ULDs), and/or Fly Away Kits (see MEL Instructions).

MEL ITEM	TAB LOCATION	PLACARD TEXT
52-00-06A	Cabin Pressure Control Panel	____ Cargo Door Pressure Stop Fitting(s) INOP
52-00-06B	Cabin Pressure Control Panel	____ Cargo Door Pressure Stop Fitting(s) INOP
52-00-06C	Cabin Pressure Control Panel	____ Cargo Door Pressure Stop Fitting(s) INOP

NOTE 1: A door pressure stop consists of two mating stop fittings, one being attached to the door and the other attached to the fuselage. The number installed shown above is the number of stop locations.

NOTE 2: For pressurized flight, either or both stop fittings may be broken or missing at a single door pressure stop location.

NOTE 3: For unpressurized flight, either or both stop fittings may be broken or missing at two door pressure stop locations.

(O) PROCEDURES

52-00-06B, 52-00-06C

- Limit altitude to 10,000 feet MSL for passenger flights.
- Non-passenger flights above 10,000 feet MSL require flight crew to be on oxygen.
- Maintain main outflow valve open.
- To avoid passenger discomfort, limit climb and descent rates to 500 FPM.

CONTINUED NEXT PAGE

5. The following steps can be taken to improve both passenger cabin and crew compartment temperatures:
- If possible, pre-condition the cabin to a low temperature prior to dispatch. A low initial cabin temperature will result in a lower peak temperature.
 - Maintain the highest allowable flight altitude.
 - Minimize cabin heat load by pulling the shades down and turning off unnecessary lights.
 - Recirculation Fan(s) AUTO.
 - Because of reduced ventilation rate (with both packs inoperative), consideration should be given to flight duration and passenger load so that excessive cabin temperatures may be avoided. Estimated stabilized temperatures at the end of 30 minutes flight are as follows:

Limit number of passengers to 45

TAT	NO. OF PASS	PASS. CABIN TEMPERATURE		CREW CABIN TEMPERATURE	
		°F	°C	°F	°C
-1	0	50	10	70	21
-1	45	70	21	75	24
10	0	70	21	90	32
10	45	80	27	95	35
21	0	90	32	110	43
21	45	95	35	110	43
32	0				
32	45				

6. To maintain isolated bleed sources, position the isolation valve switch to CLOSE.

(M) PROCEDURES

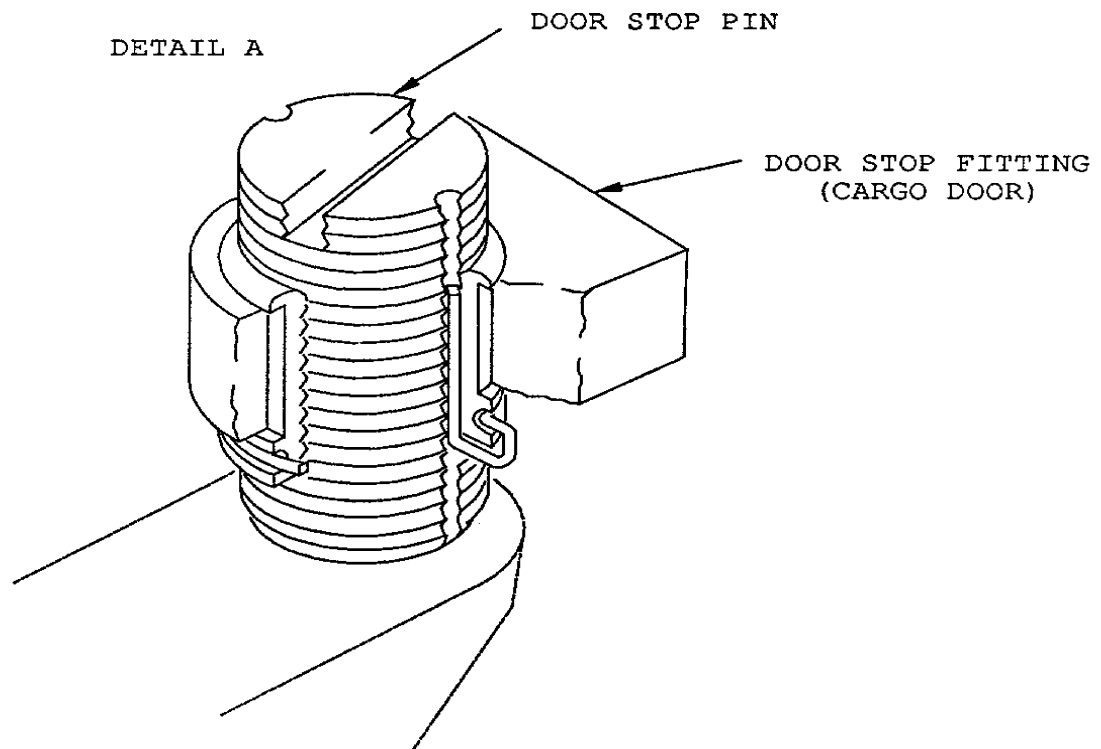
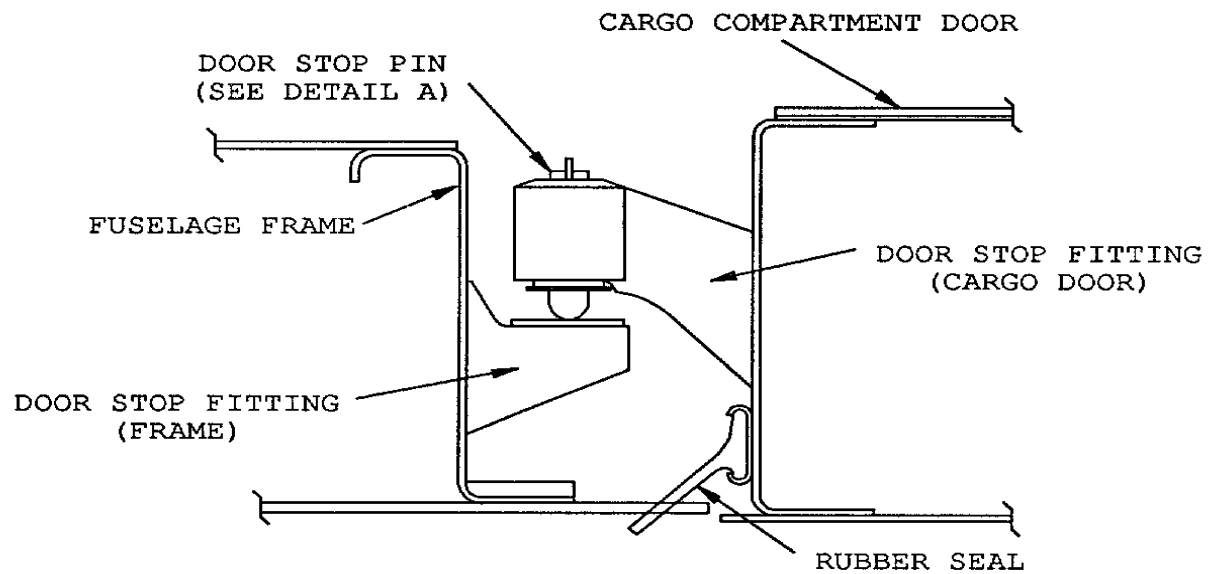
52-00-06A

Visually inspect remaining fittings for possible defects on affected door, body frames and sills.

52-00-06B, 52-00-06C

- Visually inspect remaining fittings for possible defects on affected door, body frames and sills.
- Configure airplane for unpressurized flight by using the manual mode of the Cabin Pressure Control System to position the outflow valve to the full open position. Hold outflow valve toggle switch in the OPEN position for 30 seconds.

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LOWER CARGO DOOR PRESSURE STOP FITTINGS

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS
52-00-07	Entry / Service Door Hold-Open Latch Release Lever	Y	4	0	C	

MEL ITEM	TAB LOCATION	PLACARD TEXT
52-00-07	Door Warning Light Panel	_____ Door Hold-Open Latch Release Lever INOP

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
52-00-09	Lower Cargo Doors Door Balance Mechanism	N	2	0	C (M) May be inoperative provided a safety hold open device is used when door is in open position.

MEL ITEM	TAB LOCATION	PLACARD TEXT
52-00-09	Logbook	____ Cargo Door Balance Mechanism INOP

(M) PROCEDURES

Refer to the Remarks or Exceptions column.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
52-00-14A	Lower Cargo Doors Hold Open Mechanism/Device	N	2	0	C (M) May be inoperative provided door balance mechanism operates normally.
52-00-14B	Lower Cargo Doors Hold Open Mechanism/Device "DISP.APPR.REQ'D."	N	2	0	C (M) May be inoperative provided cargo compartment remains empty, or is verified to contain only empty cargo handling equipment, ballast, and/or flyaway kits (see MEL Instructions).

MEL ITEM	TAB LOCATION	PLACARD TEXT
52-00-14A	Logbook	____ Cargo Door Hold Open Mechanism INOP
52-00-14B	Logbook	____ Cargo Door Hold Open Mechanism INOP

(M) PROCEDURES

52-00-14A

Use a safety hold open device when associated door is in the open position.

52-00-14B

Use a safety hold open device when associated door is in the open position for inspection to ensure cargo compartment is empty.

NUMBER INSTALLED			NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD			REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION			REMARKS OR EXCEPTIONS
52-00-15	Overwing Exit Flight Lock System "DISP.APPR.REQ'D."	N	- 0	C (O)(M) May be inoperative provided: a) Each affected exit is verified to be capable of being unlatched and opened PRIOR TO EACH DEPARTURE (Log Book Entry Required), and b) A Delta employee is designated to remain seated in passenger seat nearest affected exit when cabin differential pressure is less than 4.0 psi. Repetitive Check Required (Yellow Placard)

MEL ITEM	TAB LOCATION	PLACARD TEXT
52-00-15	Door Warning Light Panel	Overwing Exit Flight Lock System INOP

(O) PROCEDURES

- Each affected door must be monitored by a Delta Employee when cabin differential pressure is less than 4.0 psi to ensue door handle is not operated by passengers.
- Flight crew must inform the Delta Employee, who will be seated next to the affected door, when monitoring is required and how to monitor the door.

(M) PROCEDURES

NOTE: After performing the following maintenance procedure, the PSEU may indicate nuisance non-dispatchable flight lock switch fault(s) after using the airplane battery to power up the airplane. Fault codes 52-72106(L Fwd), 52-72107(L), 52-72108(R), 52-72109(R Fwd) may appear depending on which door was deferred. In this instance fault(s) can be cleared by performing AMM task 32-09-00-860-802 paragraph D.(5).(a)-(e).

- Verify the associated exit is capable of being unlatched and opened.
- Deactivate the flight lock including input to Master Caution System as follows:
 - Disconnect, cap and stow the associated PSEU connector wire from the table below:

AFFECTED OVERWING EXIT	ASSOCIATED CONNECTOR	REMOVE WIRE (CAP & STOW) FROM PIN NUMBER
-700 Left	D10986	Pin 20
-700 Right	D10988	Pin 02
-800, -900ER Left Aft	D10986	Pin 20
-800, -900ER Left Forward	D10986	Pin 53
-800, -900ER Right Aft	D10988	Pin 02
-800, -900ER Right Forward	D10988	Pin 52

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3. Disable the door fault indication for the applicable door as follows:

- a. Pull and secure the following P6-3 circuit breakers: PSEU PRI (located at 6D1), and PSEU ALTN (located at 6D2).
- b. Access the PSEU through the forward access door.
- c. Add a 20 AWG jumper wire between the pins of the applicable connector using the table below:

AFFECTED OVERWING EXIT	ASSOCIATED CONNECTOR	PIN NUMBERS TO BE JUMPERED
-700 Left	D10986	Pin 40 to Pin 20
-700 Right	D10988	Pin 53 to Pin 02
-800, -900ER Left Aft	D10986	Pin 40 to Pin 20
-800, -900ER Left Forward	D10986	Pin 40 to Pin 53
-800, -900ER Right Aft	D10988	Pin 53 to Pin 02
-800, -900ER Right Forward	D10988	Pin 53 to Pin 52

- 1) Cut the insulation of the wire to the applicable Pin A a sufficient length away from the connector and add a splice.
- 2) Add a jumper wire to the applicable Pin A.
- 3) If necessary, use a moisture proof splice as shown in (SWPM 20-30-12).
- 4) Use an applicable contact.
- 5) Insert the jumper wire to the applicable Pin B.
- 6) Cap and stow the wire that has been removed.

4. Deactivate the light lock input to Master Caution as follows:

- a. Provide electrical power to the airplane.
- b. Open P6-2 Panel circuit breakers OVERWING FLIGHT LOCK LEFT and OVERWING FLIGHT LOCK RIGHT.
- c. Ensure there is no pneumatic power to the engine starters.
- d. Open P6-3 Panel circuit breakers FUEL SPAR VALVE ENG 1 and FUEL SPAR VALVE ENG 2.
- e. Open P6-2 Panel circuit breakers ENGINE 2 IGNITION RIGHT and ENGINE 2 IGNITION LEFT.
- f. Open P6-1 Panel circuit breaker WEATHER RADAR RT.

CAUTION: Do not perform this test with engines running as it could cause injury to persons and/or damage to equipment.

- g. Ensure both engine start switches are in the OFF position.
- h. Position both engine start levers to IDLE position for a minimum of 5 minutes.
- i. Ensure that 3 of the 4 entry/service doors are closed.

WARNING: ENSURE THE CIRCUIT BREAKER FOR THE WEATHER RADAR SYSTEM ARE OPEN BEFORE THE THRUST LEVERS ARE MOVED. THE FORWARD MOVEMENT OF A THRUST LEVER CAN CAUSE THE AUTOMATIC OPERATION OF THE WEATHER RADAR SYSTEM. THE OPERATION OF THIS SYSTEM CAN CAUSE SERIOUS INJURY TO PERSONS AND DAMAGE TO EQUIPMENT IN THE AREA OF THE NOSE RADOME.

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- j. Push both engine thrust levers fully forward.
- k. Press the Master Caution switch to deactivate the light and turn off the Emergency Exit lights (P-5).
- l. If the Master Caution switch light is activated, the Emergency Exit lights (P-5) should be on.
- m. Pull both engine thrust levers back to idle.
- n. Remove collars and close P6-2 panel circuit breakers OVERWING FLIGHT LOCK LEFT and OVERWING FLIGHT LOCK RIGHT.
- o. Push both engine thrust levers fully forward.
- p. Make sure all of the Emergency Exit Door lights are off.
- q. Press Master Caution recall.
- r. Make sure the PSEU light is off.
- s. For the overwing exit doors that are not faulty, do these steps to check the flight lock solenoid:
 - 1) Make sure the Master Caution light, PSEU light and all door warning lights on the P-5 panel are off.
 - 2) Remove the Emergency Exit Door handle cover.

WARNING: MAKE SURE PERSONS OR EQUIPMENT ARE CLEAR OF THE DOOR BEFORE THE DOOR HANDLE IS RELEASED. THE DOOR IS SPRING-LOADED TO OPEN AUTOMATICALLY. THIS CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

- 3) Pull down on the Emergency Exit Door handle and make sure the door is locked.

NOTE: Handle movement is only 15 degrees with the flight lock solenoid engaged.

- 4) Make sure the OVERWING light on the P-5 panel is on.
- 5) Stow the Emergency Exit Door handle.
- 6) Make sure the OVERWING light on the P-5 panel is off.
- t. Remove collars and close P6-3 panel circuit breakers FUEL SPAR VALVE ENG 1 and FUEL SPAR VALVE ENG 2.
- u. Remove collars and close P6-2 panel circuit breakers ENGINE 2 IGNITION RIGHT and ENGINE 2 IGNITION LEFT.
- v. Remove collar and close P6-1 panel circuit breaker WEATHER RADAR RT.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
	ENHANCED FLIGHT DECK SECURITY DOOR AUTOMATIC LOCKING SYSTEM				
52-00-17A	Flight Deck Security Door Automatic Locking System	Y	1	0	C (O)(M) May be inoperative provided: a) Automatic locking system is deactivated, b) Door dead bolt operates normally and is used to lock door, and c) Alternate procedures are used for locking and unlocking door using the dead bolt.
52-00-17B	Flight Deck Access Panel System (Keypad, Door Chime)	N	1	0	C (O)(M) May be inoperative provided: a) Keypad is deactivated, and b) Alternate procedures are used.
52-00-17C	LEDs	Y	3	0	C (O) May be inoperative provided alternate procedures are used.
52-00-17D	Flight Deck Door LOCK FAIL Light	Y	1	0	C (M) May be inoperative provided automatic lock controls are verified to operate normally.
52-00-17E	Flight Deck Door AUTO UNLK Light	Y	1	0	C (M) May be inoperative provided: a) Automatic lock controls are verified to operate normally, and b) Door chime operates normally.
52-00-17F	Flight Deck Door Lock Control Selector	N	1	0	C (O)(M) May be inoperative provided: a) Keypad is deactivated, b) Automatic lock is verified to operate normally, and c) Alternate procedures are used.

MEL ITEM	TAB LOCATION	PLACARD TEXT
52-00-17A	Flight Deck Door Control Panel	Flight Deck Door Automatic Locking System INOP
52-00-17B	Flight Deck Door Control Panel	Flight Deck Access Panel System ____ INOP
52-00-17C	Flight Deck Door Control Panel	Flight Deck Door Keypad ____ LED(s) INOP
52-00-17D	Flight Deck Door Control Panel	Flight Deck Door LOCK FAIL Light INOP
52-00-17E	Flight Deck Door Control Panel	Flight Deck Door AUTO UNLK Light INOP
52-00-17F	Flight Deck Door Control Panel	Flight Deck Door Lock Control Selector INOP

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(O) PROCEDURES

52-00-17A, 52-00-17B, 52-00-17C, 52-00-17F

Refer to QRH for procedures to follow when flight deck security door automatic locking system or components are inoperative.

NOTE: The FAA has authorized the use of the deadbolt for MEL dispatch. Disregard "For Ground Use Only" placard when dispatched under this MEL and procedures require use of the deadbolt.

(M) PROCEDURES

52-00-17A

For deactivating the automatic locking system:

1. Position the flight deck access system switch OFF (guard extended).

NOTE: LOCK FAIL light will remain illuminated when the flight deck access system switch is in the OFF position (guard extended).

52-00-17B

For deactivating the keypad:

1. Open the circuit breaker for the flight deck door lock.
2. Disconnect the keypad electrical connector at the chime module side.
3. Close the circuit breaker for the flight deck door lock.

NOTE: When flight deck door is closed with the flight deck not occupied, make sure the Flight Deck Access System switch is in the OFF position (guard extended).

52-00-17D, 52-00-17E

For verifying automatic lock controls are operating normally:

1. With the flight deck door open, supply electrical power on the airplane.
2. Position Flight Deck Access System switch NORM (guard closed).
3. Position the Flight Deck Door Lock selector AUTO.
4. Verify the electric strike is in the locked position (solenoid pin in the electric strike will be extended up such that you can not rotate the strike).
5. Enter keypad access code and verify the door chime sounds.
6. Position the Flight Deck Door Lock selector DENY.
7. Before the DENY time delay has expired, enter the keypad access code and verify the door chime does not sound.
8. Position and hold Flight Deck Door Lock selector UNLKD.
9. Verify the electric strike is in the unlocked position (solenoid pin in the electric strike will retract down such that you can rotate the strike).
10. Position the Flight Deck Door Lock selector AUTO.
11. Verify the electric strike is in the locked position (solenoid pin in the electric strike will be extended up such that you can not rotate the strike).

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	B737 Minimum Equipment List	ATA 52 Doors	R16 03/26/13 Page 52-16

52-00-17F

1. For deactivating the keypad:

- a. Open the circuit breaker for the flight deck door lock.
- b. Disconnect the keypad electrical connector at the chime module side.
- c. Close the circuit breaker for the flight deck door lock.

NOTE: When flight deck door is closed with the flight deck not occupied, make sure the Flight Deck Access System switch is in the OFF position (guard extended).

2. For verifying automatic lock is operating normally:

- a. With the flight deck door open, supply electrical power on the airplane.
- b. Position Flight Deck Access System switch NORM (guard closed).
- c. Verify the electric strike is in the locked position (solenoid pin in the electric strike will be extended up such that you can not rotate the strike).
- d. Position Flight Deck Access System switch OFF (guard extended).
- e. Verify the electric strike is in the unlocked position (solenoid pin in the electric strike will retract down such that you can rotate the strike).
- f. Position Flight Deck Access System switch NORM (guard closed).
- g. Verify the electric strike is in the locked position (solenoid pin in the electric strike will be extended up such that you can not rotate the strike).

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
52-00-18	Flight Deck Security Door Dead Bolt	Y	1	0	C May be inoperative provided automatic lock controls operate normally.

MEL ITEM	TAB LOCATION	PLACARD TEXT
52-00-18	Flight Deck Door Control Panel	Flight Deck Door Dead Bolt INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
52-00-20	Flight Deck Door Panel Pressure Relief Latches "Contact MCC"	N	2	0	A May be inoperative in latched position provided repairs are made within two flight days.

MEL ITEM	TAB LOCATION	PLACARD TEXT
52-00-20	Flight Deck Door Control Panel	Flight Deck Door Panel Pressure Relief Latches INOP

 DELTA	B737 Minimum Equipment List	ATA 52 Doors	R19 03/12/15 Page 52-19

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
52-00-22	Flight Deck Door Hold Open Device (e.g. Door Stop, Foot Plunger, etc.)	Y	1	0	D

MEL ITEM	TAB LOCATION	PLACARD TEXT
52-00-22	Flight Deck Door Hold Open Device	Flight Deck Door Hold Open Device INOP

 DELTA	B737 Minimum Equipment List	ATA 52 Doors	R10 12/28/09 Page 52-20

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 DELTA	B737 Minimum Equipment List	ATA 53 Fuselage	R11 04/19/10 Page 53-1

ATA 53 Contents

53-00-00V	RVSM Status.....	53-2

NUMBER INSTALLED			NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD			REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION			REMARKS OR EXCEPTIONS
53-00-00V	RVSM Status "DISP.APPR.REQ'D." Administrative Control Item	N	-	(M) Authorized by MCC when: a) RVSM operations cannot be used, b) No specific MEL item applies, and c) The aircraft must remain at or below FL280. NOTE: This SYS/SEQ number is to be used for deferring the RVSM Status of the aircraft. This number also requires Maintenance Control's authorization prior to its usage or removal. <u>RVSM Operations</u> Not Authorized

MEL ITEM	TAB LOCATION	PLACARD TEXT
53-00-00V	Adjacent To Each PFD	RVSM OPERATIONS NOT AUTHORIZED

(M) PROCEDURES

1. Create a new log page in the aircraft logbook using the appropriate MEL Item Number (contact MCC for instructions).
2. The deferral code VSM must also be entered on the log page and the placard when deferring this item.
3. MCC authorization is required prior to its usage or removal.

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**THERE ARE NO ATA 56 ITEMS IN THE B737-700/800
MINIMUM EQUIPMENT LIST.**

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 DELTA	B737 Minimum Equipment List	ATA 73 Engine Fuel & Control	R10 12/28/09 Page 73-1

ATA 73 Contents

73-00-04	Fuel Filter Differential Pressure Warning Systems	73-2
73-00-05	Fuel Flow Indication Systems	73-3
73-00-06	Fuel Used Indicators	73-4
73-00-10	Fuel Control ENG VALVE CLOSED Indicating System.....	73-5
	ELECTRONIC ENGINE CONTROL (EEC).....	73-6
73-00-11	Normal (ON) Mode	73-6
73-00-12	Electronic Engine Control (EEC) Alternate Power Supply System	73-9
73-00-90A	Short Time Fault.....	73-10
73-00-90B	Long Time Fault	73-10

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
73-00-04	Fuel Filter Differential Pressure Warning Systems	N	2	1	C (M) May be inoperative provided malfunction is verified to be in warning system.

MEL ITEM	TAB LOCATION	PLACARD TEXT
73-00-04	Associated Fuel FILTER BYPASS Light	____ Fuel Filter Differential Pressure Warning System INOP

OPERATIONS NOTE

If the remaining FILTER BYPASS light illuminates, assume both engine fuel filters have an impending bypass condition. The FILTER BYPASS light associated with the deferral may illuminate during flight and can be considered unreliable.

(M) PROCEDURES

1. Verify that the malfunction is in the fuel filter bypass warning system:
 - a. If the FILTER BYPASS light illuminates with the engine not operating, the fuel filter bypass warning system is faulty. Proceed to step 2 below to replace the fuel filter.

NOTE: To energize the system with the engine not operating, position the Engine START Switch to CONT.
 - b. If the FILTER BYPASS light does NOT illuminate with the engine not operating, perform the following:
 - 1) If Fuel FILTER BYPASS light was ON prior to engine shutdown, check EEC BITE-RECENT FAULTS for a "FUEL FILTER SIGNALS DISAGREE" fault message (AMM 73-21-00). If this fault message is present, proceed to step 2 below to replace the fuel filter. If the fault message is not present, use FIM 73-05 Task 801 – Fuel FILTER BYPASS Light is ON, to identify if there is a malfunction in the fuel filter bypass warning system.

NOTE: Other EEC fault messages may need to be addressed prior to dispatch.
 - 2) Check DEU for fault messages. A CDS MAINT message may indicate a DEU fault that affects the fuel filter bypass indication.

NOTE: A CDS FAULT must be addressed prior to dispatch.
 - 3) If Fuel FILTER BYPASS light is inoperative OFF, do EEC TEST, AMM task 73-21-00-700-804-F00.

NOTE: Remaining indication lights in the EEC test should illuminate normally.
2. Replace fuel filter with a new filter (AMM 73-11-02).

NOTE: One flight is permitted prior to filter replacement provided that fuel drained from filter housing drain plug is free of visible, gross contamination.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
73-00-05	Fuel Flow Indication Systems	Y	2	1	C One may be inoperative provided: a) N1, N2 for associated engine operate normally, and b) Both main tank fuel quantity indicators operate normally.

MEL ITEM	TAB LOCATION	PLACARD TEXT
73-00-05	Near Primary Engine Display	____ Fuel Flow Indicator INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS	
73-00-06	Fuel Used Indicators	Y	2	0	C	

MEL ITEM	TAB LOCATION	PLACARD TEXT
73-00-06	Near Primary Engine Display	____ Fuel Used Indicator(s) INOP

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH			
FLIGHT CREW MAY PLACARD			Y	2	0	REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION						REMARKS OR EXCEPTIONS
73-00-10	Fuel Control ENG VALVE CLOSED Indicating System					C	(M) May be inoperative provided associated valve is verified to operate normally.

MEL ITEM	TAB LOCATION	PLACARD TEXT
73-00-10	Affected Fuel Control ENG VALVE CLOSED Lights	Fuel Control ENG VALVE CLOSED Lights INOP

(M) PROCEDURES

Verify associated fuel shutoff valve operates normally as follows:

1. Pull and secure the P6-3 Panel ENGINE FUEL ENGINE (1/2) HPSOV IND circuit breaker.
2. Start the engine and allow it to stabilize.
3. Open the associated engine P6-3 Panel SPAR VALVE ENG circuit breaker.
4. Position engine start lever to CUTOFF.
5. Verify that the engine immediately decelerates.
6. Close the P6-3 Panel SPAR VALVE ENG circuit breaker.

 DELTA	B737 Minimum Equipment List	ATA 73 Engine Fuel & Control	R19 03/12/15 Page 73-6

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
	ELECTRONIC ENGINE CONTROL (EEC)				
73-00-11	Normal (ON) Mode "DISP.APPR.REQ'D."	Y	2	0	C (O) May be inoperative provided: a) Both engines are operated in ALTERNATE mode, and b) Performance corrections are applied.

MEL ITEM	TAB LOCATION	PLACARD TEXT
73-00-11	Associated Engine Panel EEC Mode Switches	____ EEC Normal Mode INOP

ENGINE CONTROL Lights must operate normally and be extinguished for dispatch.

(O) PROCEDURES

NOTE: Maximum rated thrust may be reached at a reduced thrust lever position.

1. Position both EEC Mode switches to ALTN.
2. Do not use FMC-computed takeoff thrust N1 values. Refer to Operational Data Manual (ODM), ABNORMAL Section, EEC Normal Mode Inoperative to obtain V speed adjustments and EEC Alternate Mode Takeoff Thrust N1 for takeoff thrust N1 values.
3. Adjust V speeds as appropriate and enter the corrected V speeds into the FMS.
4. Set N1 values manually for both engines using the N1 Set Knob on the forward panel.
5. Set takeoff thrust manually. Use of Assumed Temperature reduced thrust takeoffs is NOT authorized.
6. Autothrottles may be used following takeoff.
7. For -700 only: Takeoff thrust derates utilizing thrust levels down to and including TO1 (24K) are Permissible.
8. For -700 only: TO1 (24K) thrust derate must be used for takeoff when takeoff weight is less than 125,000 lbs. For weights above 125,000 lbs, TO (26k) thrust may be used for take off.
9. For -800 only: TO (26K) thrust must be used for takeoff.

This item requires manual N1 settings and V-speed corrections by the flight crew.

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73-00-11 ELECTRONIC ENGINE CONTROL (EEC) NORMAL(ON) MODE	
EFFECTIVITY	-700
FLIGHT PLANNING REQUIREMENTS	None
NOTES	None
AWABS	1. Performance weight corrections have been applied. 2. Refer to ODM – Abnormal section for Takeoff thrust N1 settings and V-speed corrections.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF 1. Reduce RATOW by 10,600 lbs. 2. Reduce T/O CLIMB LIMIT by 10,900 lbs.
	LANDING None
	OTHER CORRECTIONS Refer to ODM – Abnormal section for Takeoff thrust N1 settings and V-speed corrections.

73-00-11 ELECTRONIC ENGINE CONTROL (EEC) NORMAL(ON) MODE	
EFFECTIVITY	-800
FLIGHT PLANNING REQUIREMENTS	None
NOTES	None
AWABS	1. Performance weight corrections have been applied. 2. Refer to ODM – Abnormal section for Takeoff thrust N1 settings and V-speed corrections.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF 1. Reduce RATOW by 11,000 lbs. 2. Reduce T/O CLIMB LIMIT by 11,000 lbs.
	LANDING None
	OTHER CORRECTIONS Refer to ODM – Abnormal section for Takeoff thrust N1 settings and V-speed corrections.

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73-00-11	ELECTRONIC ENGINE CONTROL (EEC) NORMAL (ON) MODE

EFFECTIVITY	-900ER

FLIGHT PLANNING REQUIREMENTS	None

NOTES	None

AWABS	Performance weight corrections have been applied. Refer to ODM – Abnormal section for Takeoff thrust N1 settings and V-speed corrections.

TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF Reduce RATOW by 12,700 lbs. Reduce T/O CLIMB LIMIT by 12,700 lbs.

	LANDING None

	OTHER CORRECTIONS Refer to ODM – Abnormal section for Takeoff thrust N1 settings and V-speed corrections.

	B737 Minimum Equipment List	ATA 73 Engine Fuel & Control	R19 03/12/15 Page 73-9

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
73-00-12	Electronic Engine Control (EEC) Alternate Power Supply System	N	4	3	A (M) May be inoperative deactivated provided repairs are made within 5 flight days.

MEL ITEM	TAB LOCATION	PLACARD TEXT
73-00-12	Engine Control Panel	EEC

NOTE: Dispatch is not allowed with ENGINE CONTROL light(s) illuminated or inoperative.

MAINTENANCE (M)

Deactivate inoperative EEC Alternate Power Supply System (AMM 73-00-00/901)

1. For number 1 engine:
 - a. Pull and secure the P18-2 panel circuit breaker ENG 1 ALTN PWR CHAN A or ENG 1 ALTN PWR CHAN B, as appropriate.
2. For number 2 engine:
 - a. Pull and secure the P6-2 panel circuit breaker ENG 2 ALTN PWR CHAN A or ENG 2 ALTN PWR CHAN B, as appropriate.

NUMBER INSTALLED					NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD			REPAIR CATEGORY			
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS
73-00-90A	Short Time Fault “Contact MCC”	N	-	0	A	May be dispatched with EEC BITE-RECENT FAULTS, SHORT TIME, provided repairs are made within 5 flight days.
73-00-90B	Long Time Fault “Contact MCC”	N	-	0	A	May be dispatched with EEC BITE-RECENT FAULTS, LONG TIME, provided repairs are made within 10 flight days.

MEL ITEM	TAB LOCATION	PLACARD TEXT
73-00-90A	Engine Control Panel	EEC Short Time Fault Displayed
73-00-90B	Engine Control Panel	EEC Long Time Fault Displayed

ATA 74 Contents

	IGNITION SYSTEMS	74-2
74-00-01A	Left Ignition Systems	74-2
74-00-01B	Left Ignition Systems	74-2
74-00-01C	Right Ignition Systems.....	74-2
74-00-01D	Right Ignition Systems.....	74-2

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD			REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
IGNITION SYSTEMS					
74-00-01A	Left Ignition Systems	Y	2	1	B May be inoperative provided: a) Ignition Select Switch remains in BOTH position, and b) Right ignition systems operate normally.
74-00-01B	Left Ignition Systems	Y	2	0	C (O) Except for ER operations (ETOPS), may be inoperative provided: a) Ignition Select Switch remains in BOTH position, and b) Associated engine right ignition system operates normally.
74-00-01C	Right Ignition Systems	N	2	1	B (O)(M) One may be inoperative provided: a) Ignition Select Switch remains in BOTH position, b) Left ignition system operates normally, and c) Associated engine left igniter is connected to AC Standby Bus by an acceptable configuration.
74-00-01D	Right Ignition Systems	N	2	0	C (O)(M) Except for ER operations (ETOPS), may be inoperative provided: a) Ignition Select Switch remains in BOTH position, b) Associated engine left ignition system operates normally, and c) Associated engine left igniter is connected to AC Standby Bus by an acceptable configuration.

MEL ITEM	TAB LOCATION	PLACARD TEXT
74-00-01A	Associated Engine Start Switch(es)	____ Left Ignition System(s) INOP
74-00-01B	Associated Engine Start Switch(es)	____ Left Ignition System(s) INOP
74-00-01C	Associated Engine Start Switch(es)	____ Right Ignition System(s) INOP
74-00-01D	Associated Engine Start Switch(es)	____ Right Ignition System(s) INOP

(O) PROCEDURES

74-00-01B, 74-00-01C, 74-00-01D

Normal operation of the operable ignition system may be confirmed as follows:

1. Position ignition switch to IGN R for starting the associated engine.
2. After engine start, position ignition switch to IGN BOTH.

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	B737 Minimum Equipment List	ATA 74 Engine Ignition	R20 11/20/15 Page 74-3

(M) PROCEDURES

74-00-01C, 74-00-01D

NOTE: Dispatch is not permitted if the ignition failure is due to an EEC Right Igniter Fault.

If the Right Ignition System(s) is inoperative, connect the Left Igniter to AC Standby Bus:

1. Pull and secure the following C/B's on the P-18-2 Panel:
 - a. For # 1 Engine, ENGINE 1 IGN RIGHT and ENGINE 1 IGN LEFT.
2. Pull and secure the following C/B's on the P-6-2 Panel:
 - b. For # 2 Engine, ENGINE 2 IGN RIGHT and ENGINE 2 IGN LEFT.
3. Verify that start levers are in the CUTOFF position and start switches in the OFF position.
4. Open fan cowl on affected engine.

WARNING: MAKE SURE THE IGNITION EXCITERS ARE DE-ENERGIZED BEFORE WORKING ON THE IGNITION SYSTEM. WAIT FOR A MINIMUM OF FIVE MINUTES TO RELEASE THE HIGH VOLTAGE FROM IGNITION EXCITER.

5. Disconnect LEFT/RIGHT power supply cables from the LEFT/RIGHT ignition exciter.
6. Connect cables as follows:
 - a. LEFT power supply cable to RIGHT exciter.
 - b. RIGHT power supply cable to LEFT exciter.
7. Close C/B's on the P18-2 and/or P6-2 Panel(s).
8. Perform Audible Test of Ignition System – EEC BITE.
9. Close fan cowl.

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 DELTA	B737 Minimum Equipment List	ATA 75	R10 12/28/09 Page 75-1

**THERE ARE NO ATA 75 ITEMS IN THE B737-700/800
MINIMUM EQUIPMENT LIST.**

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 DELTA	B737 Minimum Equipment List	ATA 76	R10 12/28/09 Page 76-1

**THERE ARE NO ATA 76 ITEMS IN THE B737-700/800
MINIMUM EQUIPMENT LIST.**

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ATA 77 Contents

	N1 TACHOMETERS	77-2
77-00-02A	Reference N1 Bugs	77-2
77-00-02B	N1 Manual Set Indication	77-2
77-00-05	Vibration Indicating Systems.....	77-3

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
N1 TACHOMETERS					
77-00-02A	Reference N1 Bugs	Y	2	1	C
77-00-02B	N1 Manual Set Indication	Y	2	0	C

MEL ITEM	TAB LOCATION	PLACARD TEXT
77-00-02A	Engine Display Control Unit	N1 Tachometers Reference N1 Bugs INOP
77-00-02B	Engine Display Control Unit	N1 Tachometers Manual Set Indication INOP

 DELTA	B737 Minimum Equipment List	ATA 77 Engine Indicating	R19 03/12/15 Page 77-3

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS
77-00-05	Vibration Indicating Systems	Y	2	1	C	

MEL ITEM	TAB LOCATION	PLACARD TEXT
77-00-05	Secondary Engine Control Display Unit	____ Vibration Indicating System INOP

 DELTA	B737 Minimum Equipment List	ATA 77 Engine Indicating	R10 12/28/09 Page 77-4

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	B737 Minimum Equipment List	ATA 78 Engine Exhaust	R19 03/12/15 Page 78-1

ATA 78 Contents

78-00-01	Thrust Reverser Systems.....	78-2
78-00-07	REVERSER Lights (Aft Overhead Panel)	78-9

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
78-00-01	Thrust Reverser Systems "DISP.APPR.REQ'D."	N	2	1 C	(O)(M) May be inoperative provided: a) Thrust reverser is locked in forward thrust position, and b) Performance corrections are applied.

MEL ITEM	TAB LOCATION	PLACARD TEXT
78-00-01	Primary Engine Display Unit	____ Thrust Reverser INOP

NOTE: The REVERSER light on the P5 overhead panel may illuminate.

(O) PROCEDURES

78-00-01

1. During landing rollout, differential braking may be required to maintain directional control.
2. This item requires a manual V_1 reduction by the flight crew. Refer to the AWABS section of the Performance Correction Box (or Takeoff Performance Worksheet section if dispatching with manual WDR) for details.

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	B737 Minimum Equipment List	ATA 78 Engine Exhaust	R19 03/12/15 Page 78-3

78-00-01	THRUST REVERSER SYSTEMS
EFFECTIVITY	-700
FLIGHT PLANNING REQUIREMENTS	None
NOTES	None
AWABS	Performance weight corrections have been applied. For Wet and Contaminated runways, reduce the AWABS V_1 by 2 KIAS. If the resulting V_1 is less than minimum V_{mcg}, takeoff is permitted with V_1 set equal to V_{mcg}. See ODM – Abnormal Section for Minimum Control Speed – Ground (V_{mcg}). For Dry runways, no V_1 speed correction is necessary.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF - Wet and Contaminated Runways Reduce RATOW by 2,200 lbs. TAKEOFF - Dry Runways None LANDING None OTHER CORRECTIONS For Wet and Contaminated runways, reduce the ODM – Takeoff section V_1 by 2 KIAS. If the resulting V_1 is less than minimum V_{mcg}, takeoff is permitted with V_1 set equal to V_{mcg}. See ODM – Abnormal Section for Minimum Control Speed – Ground (V_{mcg}). For Dry runways, no V_1 speed correction is necessary.

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	B737 Minimum Equipment List	ATA 78 Engine Exhaust	R19 03/12/15 Page 78-4

78-00-01	THRUST REVERSER SYSTEMS
EFFECTIVITY	-800
FLIGHT PLANNING REQUIREMENTS	None
NOTES	None
AWABS	1. Performance weight corrections have been applied. 2. For Wet and Contaminated runways, reduce the AWABS V_1 by 2 KIAS. If the resulting V_1 is less than minimum V_{mcg}, takeoff is permitted with V_1 set equal to V_{mcg}. See ODM – Abnormal Section for Minimum Control Speed – Ground (V_{mcg}). 3. For Dry runways No V_1 speed correction is necessary.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF – Wet and Contaminated Runways Reduce RATOW by 2,300 lbs. TAKEOFF – Dry Runways None LANDING None OTHER CORRECTIONS 1. For Wet and Contaminated runways, reduce the ODM – Takeoff section V_1 by 2 KIAS. If the resulting V_1 is less than minimum V_{mcg}, takeoff is permitted with V_1 set equal to V_{mcg}. See ODM – Abnormal Section for Minimum Control Speed – Ground (V_{mcg}). 2. For Dry runways No V_1 speed correction is necessary.

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78-00-01 THRUST REVERSER SYSTEMS	
EFFECTIVITY	-900ER
FLIGHT PLANNING REQUIREMENTS	None
NOTES	None
AWABS	Performance weight corrections have been applied. For Wet and Contaminated runways, reduce the AWABS V_1 by 2 KIAS. If the resulting V_1 is less than minimum V_{mcg}, takeoff is permitted with V_1 set equal to V_{mcg}. See ODM – Abnormal Section for Minimum Control Speed – Ground (V_{mcg}). For Dry runways, no V_1 speed correction is necessary.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF - Wet and Contaminated Runways Reduce RATOW by 2,000 lbs. TAKEOFF - Dry Runways None LANDING None OTHER CORRECTIONS For Wet and Contaminated runways, reduce the ODM – Takeoff section V_1 by 2 KIAS. If the resulting V_1 is less than minimum V_{mcg}, takeoff is permitted with V_1 set equal to V_{mcg}. See ODM – Abnormal Section for Minimum Control Speed – Ground (V_{mcg}). For Dry runways, no V_1 speed correction is necessary.

(M) PROCEDURES

BITE the EAU and record any faults in the aircraft logbook before thrust reverser deactivation.

The deactivation pins are located in the landing gear pin pouch. Deactivate and secure the affected thrust reverser using the following procedure:

NOTE: There are two procedures that can be used to make sure the sync locks are in the locked position. The first one is used if the thrust reverser can be stowed and deployed with hydraulic power. The second is used if the thrust reverser will not stow or deploy with hydraulic power.

PROCEDURE 1

THRUST REVERSERS THAT WILL DEPLOY AND STOW WITH HYDRAULIC POWER, PERFORM THESE STEPS TO MAKE SURE THAT THE SYNC LOCKS WILL LOCK

- Applicable engine, make sure that the start lever is in the CUTOFF position.
- Applicable engine thrust lever is in the idle position.
- Applicable engine reverse thrust lever is forward and down in the retract (stow) position.

CONTINUED NEXT PAGE

WARNING: MAKE SURE PERSONS AND EQUIPMENT ARE CLEAR OF ALL CONTROL SURFACES BEFORE YOU SUPPLY HYDRAULIC POWER.AILERONS, RUDDERS, ELEVATORS, FLAPS, SPOILERS AND THE THRUST REVERSERS CAN MOVE QUICKLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

2. Pressurize applicable hydraulic system:
 - a. Hydraulic System A, Nbr 1 engine.
 - b. Hydraulic System B, Nbr 2 engine.

WARNING: MAKE SURE THAT ALL PERSONS AND EQUIPMENT ARE CLEAR OF THE AREA AFT OF THE APPLICABLE THRUST REVERSER. INJURY TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

3. Slowly move the applicable reverse thrust lever up and aft to extend (deploy) the thrust reverser.
4. Pull and secure the applicable sync lock circuit breaker.
 - a. ENG NO. 1, P18-2 Panel, ENGINE 1 THRUST REVERSER SYNC LOCK.
 - b. ENG NO. 2, P6-2 Panel, ENGINE 2 THRUST REVERSER SYNC LOCK.
5. Slowly move the applicable reverse thrust lever down and forward to the retract (stow) position.
6. Make sure that the thrust reverser sleeves do not retract (stow).

NOTE: This is the indication that the sync locks are in the locked position.

7. Slowly move the applicable reverse thrust lever up and aft to the extend (deploy) position.
8. Close the applicable ENGINE THRUST REVERSER SYNC LOCK circuit breaker.

PERFORM THE FOLLOWING STEPS TO RESET THE EAU TO CLEAR THE DEPLOY AND STOW FAULTS THAT WERE SET IN THE PREVIOUS STEPS.

1. Gain access to the EAU, located in the Electronic Equipment Bay, E3-2 shelf.
2. Push and hold the FAULT RESET button on the EAU for a minimum of two seconds.
3. Slowly move the applicable reverse thrust lever down and forward to retract (stow) the thrust reverser.
4. Pull and secure the applicable circuit breakers:
 - a. ENGINE NO. 1,
 - 1) P18-2 Panel, ENGINE 1 THRUST REVERSER CONT
 - 2) P18-2 Panel, ENGINE 1 THRUST REVERSER SYNC LOCK
 - b. ENGINE NO. 2,
 - 1) P6-2 Panel, ENGINE 2 THRUST REVERSER CONT
 - 2) P6-2 Panel, ENGINE 2 THRUST REVERSER SYNC LOCK

5. Install two deactivation pins in the left and two deactivation pins in the right thrust reverser sleeves on the applicable engine. Make sure that the deactivation pins go through deactivation pin holes and into the aft cascade support ring. Tighten the deactivation pins to approximately 152-168 pound-inches.

NOTE: You must install two deactivation pins in each of the thrust reverser sleeves. The upper deactivation pin protrudes approximately 1.75 inches. The lower deactivation pin protrudes approximately 0.50 inches from the outer cowl.

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6. Close the Electronic Equipment Bay Access Door.
7. Lockwire the reverse thrust lever to the applicable forward thrust lever.

PROCEDURE 2

THRUST REVERSERS THAT WILL NOT DEPLOY AND STOW WITH HYDRAULIC POWER

1. Perform the following steps to verify that there is no power to the sync locks:
2. Pull and secure the applicable circuit breakers:
 - a. ENGINE NO. 1, P18-2 Panel, ENGINE 1 THRUST REVERSER SYNC LOCK.
 - b. ENGINE NO. 2, P6-2 Panel, ENGINE 2 THRUST REVERSER SYNC LOCK.
3. Check the EAU to verify there is no power to the sync lock:
 - a. Gain access to the EAU, located in the Electronic Equipment Bay, E3-2 shelf.
 - b. Push and hold the T/R STOW FAULTS switch for the applicable engine.
 - c. Make sure that all of the lights come on for approximately one second.
 - d. Take note of these SYNC LOCK PWR LIGHTS for the applicable engine:
 - 1) V148 L SLEEVE SYNC LOCK PWR.
 - 2) V150 R SLEEVE SYNC LOCK PWR.
4. Release the T/R STOW FAULT switch.
5. Close the Electronic Equipment Bay Access Door.

IF SYNC LOCK PWR LIGHTS GO OFF:

1. Pull and secure the applicable circuit breaker:
 - a. ENGINE NO. 1, P18-2 Panel, ENGINE 1 THRUST REVERSER CONT.
 - b. ENGINE NO. 2, P6-2 Panel, ENGINE 2 THRUST REVERSER CONT.
2. Install two deactivation pins in the left and two deactivation pins in the right thrust reverser sleeves on the applicable engine. Make sure that the deactivation pins go through deactivation pin holes and into the aft cascade support ring. Tighten the deactivation pins to approximately 152-168 pound-inches.

NOTE: You must install two deactivation pins in each of the thrust reverser sleeves. The upper deactivation pin protrudes approximately 1.75 inches. The lower deactivation pin protrudes approximately 0.50 inches from the outer cowl.

3. Lockwire the reverse thrust lever to the applicable forward thrust lever.

IF SYNC LOCK PWR LIGHTS STAY ON:

1. Pull and secure the applicable circuit breaker:
 - a. ENGINE NO. 1, P18-2 Panel, ENGINE 1 THRUST REVERSER CONT.
 - b. ENGINE NO. 2, P6-2 Panel, ENGINE 2 THRUST REVERSER CONT.

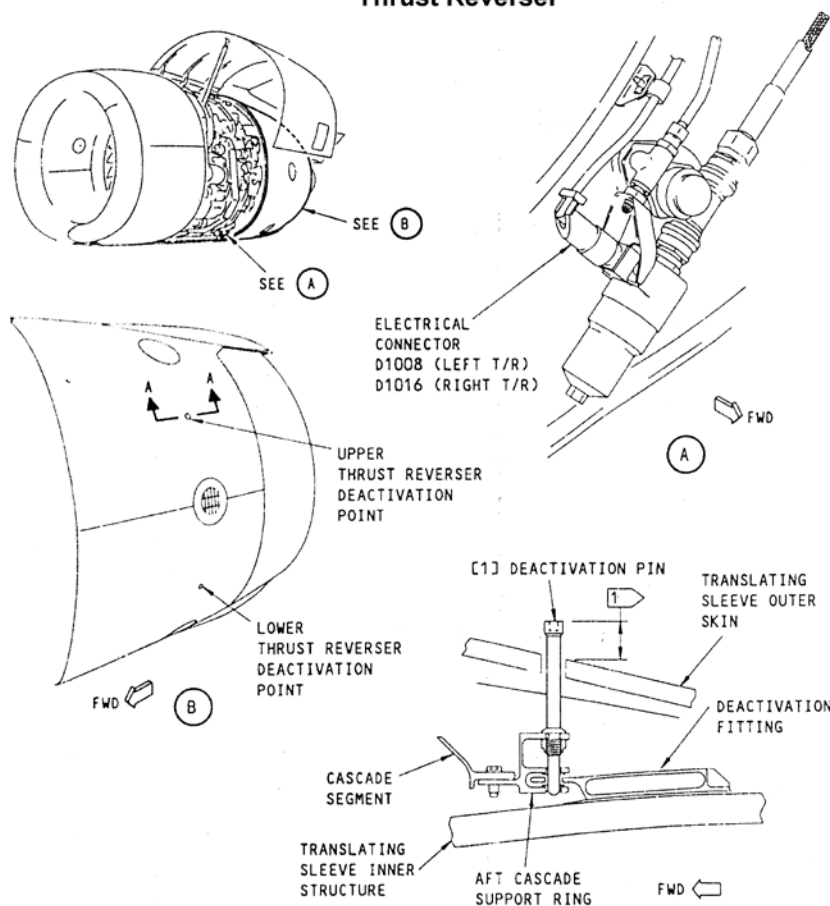
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2. Open applicable engine fan cowl.
3. Disconnect the electrical connectors from the sync locks on the left and right thrust reversers on the applicable engine. Protect the electrical connectors.
 - a. Left thrust reverser, electrical connector D1008.
 - b. Right thrust reverser, electrical connector D1016.
4. Secure the electrical connectors to the thrust reverser with tywrap or tape.
5. Install two deactivation pins in the left and two deactivation pins in the right thrust reverser sleeves on the applicable engine. Make sure that the deactivation pins go through deactivation pin holes and into the aft cascade support ring. Tighten the deactivation pins to approximately 152-168 pound-inches.

NOTE: You must install two deactivation pins in each of the thrust reverser sleeves. The upper deactivation pin protrudes approximately 1.75 inches. The lower deactivation pin protrudes approximately 0.50 inches from the outer cowl.

6. Close applicable engine fan cowl.
7. Lockwire the reverse thrust lever to the applicable forward thrust lever.

-800 Thrust Reverser



NOTE: LEFT THRUST REVERSER IS SHOWN,
RIGHT THRUST REVERSER IS THE SAME.

- 1** UPPER DEACTIVATION PIN - APPROXIMATELY 1.75 INCHES (44.5mm)
LOWER DEACTIVATION PIN - APPROXIMATELY 0.50 INCH (12.7mm)

Thrust Reverser Sleeve Deactivation

 DELTA	B737 Minimum Equipment List	ATA 78 Engine Exhaust	R19 03/12/15 Page 78-9

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
78-00-07	REVERSER Lights (Aft Overhead Panel) "DISP.APPR.REQ'D."	N	2	1 C	(O)(M) May be inoperative provided: a) Associated reverser is locked in closed (forward thrust) position, and b) Performance corrections are applied.

MEL ITEM	TAB LOCATION	PLACARD TEXT
78-00-07	Primary Engine Display Unit	____ REVERSER Light INOP

(O) PROCEDURES

- During landing rollout, differential braking may be required to maintain directional control.
- This item requires a manual V_1 reduction by the flight crew. Refer to the AWABS section of the Performance Correction Box (or Takeoff Performance Worksheet section if dispatching with manual WDR) for details.

78-00-07	REVERSER LIGHTS (AFT OVERHEAD PANEL)
EFFECTIVITY	-700
FLIGHT PLANNING REQUIREMENTS	None
NOTES	None
AWABS	- Performance weight corrections have been applied. - For Wet and Contaminated runways, reduce the AWABS V_1 by 2 KIAS. If the resulting V_1 is less than minimum V_{mcg}, takeoff is permitted with V_1 set equal to V_{mcg}. See ODM – Abnormal Section for Minimum Control Speed – Ground (V_{mcg}). - For Dry runways No V_1 speed correction is necessary.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF – Wet and Contaminated Runways Reduce RATOW by 2,200 lbs. TAKEOFF – Dry Runways None LANDING None OTHER CORRECTIONS - For Wet and Contaminated runways, reduce the ODM – Takeoff section V_1 by 2 KIAS. If the resulting V_1 is less than minimum V_{mcg}, takeoff is permitted with V_1 set equal to V_{mcg}. See ODM – Abnormal Section for Minimum Control Speed – Ground (V_{mcg}). - For Dry runways No V_1 speed correction is necessary.

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78-00-07	REVERSER LIGHTS (AFT OVERHEAD PANEL)
EFFECTIVITY	-800
FLIGHT PLANNING REQUIREMENTS	None
NOTES	None
AWABS	1. Performance weight corrections have been applied. 2. For Wet and Contaminated runways, reduce the AWABS V_1 by 2 KIAS. If the resulting V_1 is less than minimum V_{mcg}, takeoff is permitted with V_1 set equal to V_{mcg}. See ODM – Abnormal Section for Minimum Control Speed – Ground (V_{mcg}). 3. For Dry runways No V_1 speed correction is necessary.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF – Wet and Contaminated Runways Reduce RATOW by 2,300 lbs. TAKEOFF – Dry Runways None LANDING None OTHER CORRECTIONS 1. For Wet and Contaminated runways, reduce the ODM – Takeoff section V_1 by 2 KIAS. If the resulting V_1 is less than minimum V_{mcg}, takeoff is permitted with V_1 set equal to V_{mcg}. See ODM – Abnormal Section for Minimum Control Speed – Ground (V_{mcg}). 2. For Dry runways No V_1 speed correction is necessary.

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78-00-07 REVERSER LIGHTS (AFT OVERHEAD PANEL)	
EFFECTIVITY	-900ER
FLIGHT PLANNING REQUIREMENTS	None
NOTES	None
AWABS	Performance weight corrections have been applied. For Wet and Contaminated runways, reduce the AWABS V_1 by 2 KIAS. If the resulting V_1 is less than minimum V_{mcg} , takeoff is permitted with V_1 set equal to V_{mcg} . See ODM – Abnormal Section for Minimum Control Speed – Ground (V_{mcg}). For Dry runways, no V_1 speed correction is necessary.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF – Wet and Contaminated Runways Reduce RATOW by 2,000 lbs. TAKEOFF – Dry Runways None LANDING None OTHER CORRECTIONS For Wet and Contaminated runways, reduce the ODM – Takeoff section V_1 by 2 KIAS. If the resulting V_1 is less than minimum V_{mcg}, takeoff is permitted with V_1 set equal to V_{mcg}. See ODM – Abnormal Section for Minimum Control Speed – Ground (V_{mcg}). For Dry runways, no V_1 speed correction is necessary.

(M) PROCEDURES

BITE the EAU and record any faults in the aircraft logbook before thrust reverser deactivation.

The deactivation pins are located in the landing gear pin pouch. Deactivate and secure the affected thrust reverser using the following procedure:

NOTE: There are two procedures that can be used to make sure the sync locks are in the locked position. The first one is used if the thrust reverser can be stowed and deployed with hydraulic power. The second is used if the thrust reverser will not stow or deploy with hydraulic power.

1. Thrust Reversers that will Deploy and Stow with hydraulic power, perform these steps to make sure that the sync locks will lock:
 - a. Applicable engine, make sure that the start lever is in the CUTOFF position.
 - b. Applicable engine thrust lever is in the idle position.
 - c. Applicable engine reverse thrust lever is forward and down in the retract (stow) position.

WARNING: MAKE SURE PERSONS AND EQUIPMENT ARE CLEAR OF ALL CONTROL SURFACES BEFORE YOU SUPPLY HYDRAULIC POWER. AILERONS, RUDDERS, ELEVATORS, FLAPS, SPOILERS AND THE THRUST REVERSERS CAN MOVE QUICKLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

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	B737 Minimum Equipment List	ATA 78 Engine Exhaust	R19 03/12/15 Page 78-12

2. Pressurize applicable hydraulic system:
 - a. Hydraulic System A, Nbr 1 engine.
 - b. Hydraulic System B, Nbr 2 engine.

WARNING: MAKE SURE THAT ALL PERSONS AND EQUIPMENT ARE CLEAR OF THE AREA AFT OF THE APPLICABLE THRUST REVERSER. INJURY TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

3. Slowly move the applicable reverse thrust lever up and aft to extend (deploy) the thrust reverser.
4. Pull and secure the applicable sync lock circuit breaker.
 - a. ENGINE NO. 1, P18-2 Panel, ENGINE 1 THRUST REVERSER SYNC LOCK.
 - b. ENGINE NO. 2, P6-2 Panel, ENGINE 2 THRUST REVERSER SYNC LOCK.
5. Slowly move the applicable reverse thrust lever down and forward to the retract (stow) position.
6. Make sure that the thrust reverser sleeves do not retract (stow).

NOTE: This is the indication that the sync locks are in the locked position.

7. Slowly move the applicable reverse thrust lever up and aft to the extend (deploy) position.
8. Close the applicable ENGINE THRUST REVERSER SYNC LOCK circuit breaker.

PERFORM THE FOLLOWING STEPS TO RESET THE EAU TO CLEAR THE DEPLOY AND STOW FAULTS THAT WERE SET IN THE PREVIOUS STEPS.

1. Gain access to the EAU, located in the Electronic Equipment Bay, E3-2 shelf.
2. Push and hold the FAULT RESET button on the EAU for a minimum of two seconds.
3. Slowly move the applicable reverse thrust lever down and forward to retract (stow) the thrust reverser.
4. Pull and secure the applicable circuit breaker:
 - a. ENGINE NO. 1, P18-2 Panel, ENGINE 1 THRUST REVERSER CONT and ENGINE 1 THRUST REVERSER SYNC LOCK.
 - b. ENGINE NO. 2, P6-2 Panel, ENGINE 2 THRUST REVERSER CONT and ENGINE 2 THRUST REVERSER SYNC LOCK.
5. Install two deactivation pins in the left and two deactivation pins in the right thrust reverser sleeves on the applicable engine. Make sure that the deactivation pins go through deactivation pin holes and into the aft cascade support ring. Tighten the deactivation pins to approximately 152-168 pound-inches.

NOTE: You must install two deactivation pins in each of the thrust reverser sleeves. The upper deactivation pin protrudes approximately 1.75 inches. The lower deactivation pin protrudes approximately 0.50 inches from the outer cowl.

6. Close the Electronic Equipment Bay Access Door.
7. Lockwire the reverse thrust lever to the applicable forward thrust lever.

THRUST REVERSERS THAT WILL NOT DEPLOY AND STOW WITH HYDRAULIC POWER.

1. Perform the following steps to verify that there is no power to the sync locks:
2. Pull and secure the applicable circuit breaker:
 - a. ENGINE NO.1, P18-2 Panel, ENGINE 1 THRUST REVERSER SYNC LOCK.
 - b. ENGINE NO.2, P6-2 Panel, ENGINE 2 THRUST REVERSER SYNC LOCK.

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3. Check the EAU to verify there is no power to the sync lock:
 - a. Gain access to the EAU, located in the Electronic Equipment Bay, E3-2 shelf.
 - b. Push and hold the T/R STOW FAULTS switch for the applicable engine.
 - c. Make sure that all of the lights come on for approximately one second.
 - d. Make sure that these lights go off for the applicable engine.
 - 1) V148 L SLEEVE SYNC LOCK PWR.
 - 2) V150 R SLEEVE SYNC LOCK PWR.

4. Release the T/R STOW FAULT switch.
5. Close the Electronic Equipment Bay Access Door.

SYNC LOCK PWR LIGHTS GO OFF:

1. Pull and secure the applicable circuit breaker:
 - a. ENGINE NO. 1, P18-2 Panel, ENGINE 1 THRUST REVERSER CONT.
 - b. ENGINE NO. 2, P6-2 Panel, ENGINE 2 THRUST REVERSER CONT.
2. Install two deactivation pins in the left and two deactivation pins in the right thrust reverser sleeves on the applicable engine. Make sure that the deactivation pins go through deactivation pin holes and into the aft cascade support ring. Tighten the deactivation pins to approximately 152-168 pound-inches.

NOTE: You must install two deactivation pins in each of the thrust reverser sleeves. The upper deactivation pin protrudes approximately 1.75 inches. The lower deactivation pin protrudes approximately 0.50 inches from the outer cowl.

3. Lockwire the reverse thrust lever to the applicable forward thrust lever.

SYNC LOCK PWR LIGHTS STAY ON:

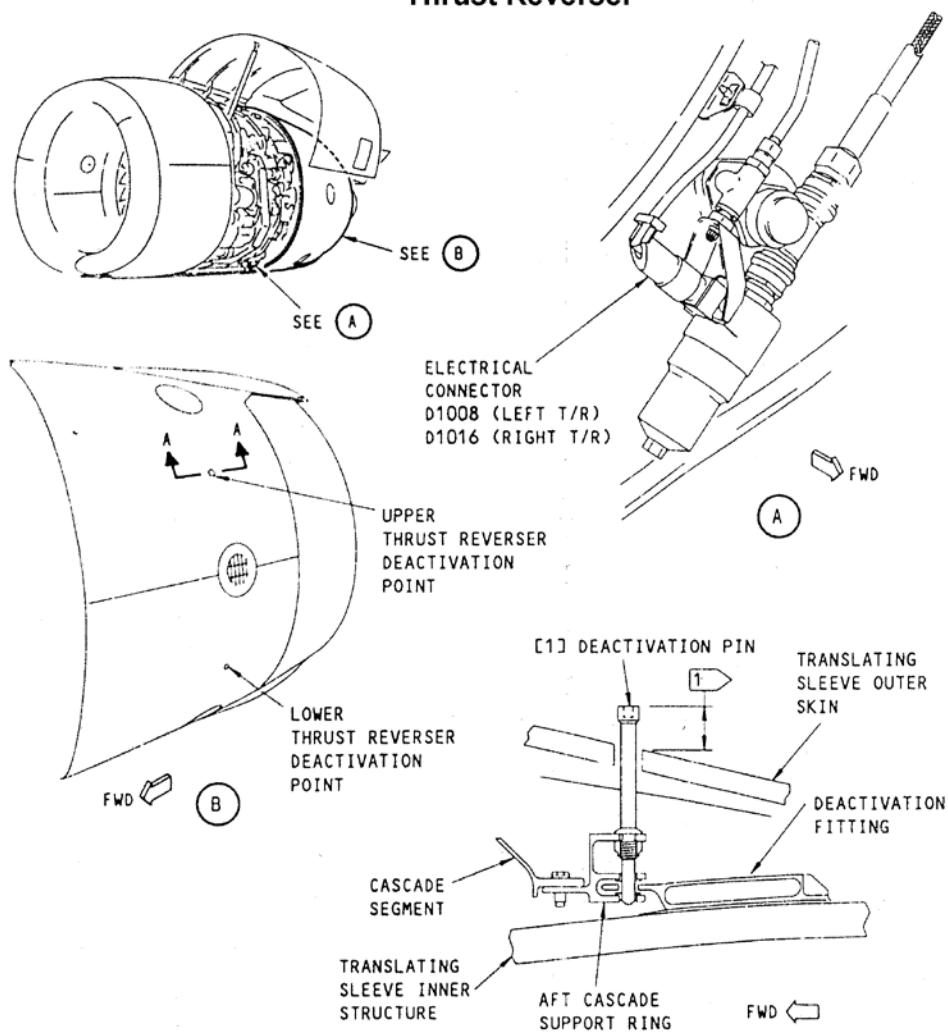
1. Pull and secure the applicable circuit breaker:
 - a. ENGINE NO. 1, P18-2 Panel, ENGINE 1 THRUST REVERSER CONT.
 - b. ENGINE NO. 2, P6-2 Panel, ENGINE 2 THRUST REVERSER CONT.
2. Open applicable engine fan cowl.
3. Disconnect the electrical connectors from the sync locks on the left and right thrust reversers on the applicable engine. Protect the electrical connectors.
 - a. Left thrust reverser, electrical connector D1008.
 - b. Right thrust reverser, electrical connector D1016.
4. Secure the electrical connectors to the thrust reverser with tywrap or tape.
5. Install two deactivation pins in the left and two deactivation pins in the right thrust reverser sleeves on the applicable engine. Make sure that the deactivation pins go through deactivation pin holes and into the aft cascade support ring. Tighten the deactivation pins to approximately 152-168 pound-inches.

NOTE: You must install two deactivation pins in each of the thrust reverser sleeves. The upper deactivation pin protrudes approximately 1.75 inches. The lower deactivation pin protrudes approximately 0.50 inches from the outer cowl.

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6. Close applicable engine fan cowls.
7. Lockwire the reverse thrust lever to the applicable forward thrust lever.

-800 Thrust Reverser



NOTE: LEFT THRUST REVERSER IS SHOWN,
RIGHT THRUST REVERSER IS THE SAME.

A-A

- 1 UPPER DEACTIVATION PIN - APPROXIMATELY 1.75 INCHES (44.5mm)
LOWER DEACTIVATION PIN - APPROXIMATELY 0.50 INCH (12.7mm)

Thrust Reverser Sleeve Deactivation

	B737 Minimum Equipment List	ATA 79 Engine Oil	R10 12/28/09 Page 79-1

ATA 79 Contents

79-00-01	Oil Quantity Indication Systems	79-2
79-00-02	Oil Filter Bypass Warning Systems.....	79-3
79-00-04	Oil Low Pressure Warning Systems.....	79-4

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
79-00-01	Oil Quantity Indication Systems "Contact MCC"	N	2	1 B	(M) Except for ER operations (ETOPS), may be inoperative provided: a) Oil Tank is filled to maximum recommended capacity PRIOR TO EACH DEPARTURE (Logbook Entry Required), b) There is no evidence of above normal oil consumption or leakage, and c) Associated low oil pressure warning system operates normally. Repetitive Check Required (Yellow Placard)

MEL ITEM	TAB LOCATION	PLACARD TEXT
79-00-01	Secondary Engine Display Unit	____ Oil Quantity Indicator INOP

(M) PROCEDURES

1. Remove filler cap and fill tank to lip of filler port (ref. AMM 12-13-11 for servicing procedures and limitations).
2. The AMM specifies time limits for oil servicing after engine shutdown. If it is necessary to run or dry motor the engine prior to servicing, the flight crew may accomplish this task if qualified maintenance personnel are not available.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
79-00-02	Oil Filter Bypass Warning Systems "Contact MCC"	N	2	1	C (M) May be inoperative provided: a) Malfunction is in the warning system, b) Magnetic chip Detector is inspected for presence of contaminants, c) Oil supply filter pop-out indicator is not extended, and d) Oil filter is inspected for presence of contaminants WITHIN ONE FLIGHT DAY and ONCE EACH FLIGHT DAY thereafter. (Logbook Entry Required) Repetitive Check Required (Yellow Placard)

MEL ITEM	TAB LOCATION	PLACARD TEXT
79-00-02	Primary Engine Display Unit	___ Oil Filter Bypass Warning System INOP

OPERATIONS NOTE

The FILTER BYPASS light associated with the deferral may illuminate during flight and can be considered unreliable.

(M) PROCEDURES

Delayed accomplishment of the initial oil filter inspection may be permitted only with MCC approval.

- Verify the malfunction is in the bypass warning system:
 - Verify presence of fault code 79-n112x on the FMC CDU (AMM 73-21-00/501).
 - If fault code 79-n112x is not present, access the CDU INPUT MONITORING / OIL FILTER screen on the FMC CDU and verify FILTER BYPASS state is "CLOGGED", which corresponds to the following FILTER INPUTS displayed on the FMC CDU: Switch 1 (Channels A and B) OPEN, Switch 2 (Channels A and B) CLOSED.
- Inspect Magnetic Chip detector for contaminants (AMM 79-00-00/601).
- Verify the oil supply filter pop-out indicator is not extended (AMM 79-00-00/601).
- If Magnetic Chip Detector inspection reveals no contaminants and oil supply filter pop-out indicator is not extended, then scavenge oil filter inspection may be delayed to later within the flight day.

WITHIN ONE FLIGHT DAY and ONCE EACH FLIGHT DAY thereafter:

Inspect oil filter for contamination (AMM 79-00-00/901):

- Remove the scavenge oil filter element (AMM 79-21-06/401).
- Visually inspect the scavenge oil filter element. If the filter element is not contaminated, the malfunction is in the bypass warning system.
- Visually inspect the scavenge oil filter element for contaminants once each flight day.

CAUTION: Use your hands only, do not use a tool to tighten the filter bowl. Damage to the Filter Assembly can occur.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION			REMARKS OR EXCEPTIONS		
79-00-04	Oil Low Pressure Warning Systems	Y		2	0	B

MEL ITEM	TAB LOCATION	PLACARD TEXT
79-00-04	Secondary Engine Display Unit	____ Oil Low Pressure Warning System(s) INOP

 DELTA	B737 Minimum Equipment List	ATA 80 Engine Starting	R10 12/28/09 Page 80-1

ATA 80 Contents

80-00-01	Starter Valve Open Indications	80-2
80-00-02	Engine Starter Auto Cutout	80-3
80-00-03	Starter Valves.....	80-4

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
80-00-01	Starter Valve Open Indications	Y	2	1 C	(O) May be inoperative provided it is checked AFTER ENGINE START that associated valve is closed. Repetitive Check Required (Yellow Placard)

MEL ITEM	TAB LOCATION	PLACARD TEXT
80-00-01	Primary Engine Display Unit	____ Starter Valve Open Indications INOP

(O) PROCEDURES

Check that the associated start valve is closed after engine start.

- Use normal start procedures except for the following:
 - Prior to selecting ENGINE START switch to GRD position note the duct pressure.
 - As ENGINE START switch moves to OFF, verify that duct pressure returns to the pre-start value or higher.
- Dispatch is not allowed under the provisions of this MEL item if duct pressure returns to a lower value than the prestart value. In this case, shutdown engines.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
80-00-02	Engine Starter Auto Cutout	Y	2	0	C May be inoperative provided crew manually selects Start Switch OFF at 55% N2.

MEL ITEM	TAB LOCATION	PLACARD TEXT
80-00-02	Associated Engine Start Switch	____ Engine Starter Auto Cutout INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
80-00-03	Starter Valves "Contact MCC"	N	2	1 C	(O)(M) Except for ER operations (ETOPS), may be inoperative provided: a) Associated start valve indication operates normally, and b) Manual override start procedures are used.

MEL ITEM	TAB LOCATION	PLACARD TEXT
80-00-03	Associated Engine Start Switch	____ Starter Valve(s) INOP

(O) PROCEDURES and (M) PROCEDURES

CAUTION: Positive communication between personnel in flight compartment and ground maintenance personnel is mandatory.

1. Establish interphone communication between personnel on ramp and in flight compartment.

CAUTION: Manual operation of start valve without air pressure in inlet duct may damage valve.

2. Perform normal start procedure with the following additions:
3. When placing the associated engine start switch to the GRD position, instruct the ground crew to open the start valve by inserting a 3/8 inch square drive extension through the start valve manual override guide port, and rotating the butterfly valve 90 degrees clockwise to the OPEN position. Maintain the valve in the OPEN position.
4. Inform the ground crew when N2 is rotating.
5. When N2 RPM indicates 56% instruct the ground crew to close the start valve.
6. Verify that the start switch moves to OFF and the duct pressure increases to the prestart value.

NOTE 1: For an inflight engine start, with an engine shut down more than one hour, a windmill start may not be possible.

NOTE 2: If an inflight engine start is necessary, a crossbleed start will not be available on the associated engine. Ensure that airspeed is sufficient for a windmill start.

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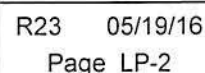
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