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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. **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.
9. **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.
10. **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/CDL Format Section).
11. **Deactivated and Secured** - The specified component must be put into an acceptable condition for safe flight. An acceptable method of deactivating and/or securing will be established by the operator.

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12. **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.

13. **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, A330:

- Airbus aircraft equipped with Electronic Centralized Aircraft Monitoring (ECAM) provide different levels of system condition messages {WARNING (red), CAUTION (amber)}. On A319/320 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, 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) 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.
14. **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.
 15. **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.
 16. **Extended Overwater Operation or Flight** - An operation overwater at a horizontal distance of more than 50 nautical miles from the nearest shoreline.
 17. **Flight Cycle** - One aircraft takeoff and subsequent landing.
 18. **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.
 19. **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.
 20. **Heavy Maintenance Visit (HMV)** - As used in this MEL is a scheduled L/H/M, PSV, HMV or C-check.
 21. **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).
 22. **Instrument Meteorological Conditions (IMC)** - Meteorological conditions such as to require the flight to be conducted under Instrument Flight Rules.
 23. **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).
 24. **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).
 25. **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 should 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.
 26. **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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27. **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
 - 2) 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.
 - 3) 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.
 - 4) Category II - A precision approach to no less than RVR 1000 (300m) and a DH of no less than 100 ft. (Autoland required)
 - 5) 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.

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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.

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 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

1. MEL/CDL Number and Title.
2. Effectivity: Aircraft affected by the subject MEL/CDL item.
3. 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.
4. Notes: Other pertinent information applicable to this MEL item.
5. 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 and higher checks, maintenance personnel will review past log book entries back to the last recorded Service or higher check to ensure that all MEL/CDL items that have not been previously cleared by corrective action are listed in the current open MEL/CDL Item list. Maintenance 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).

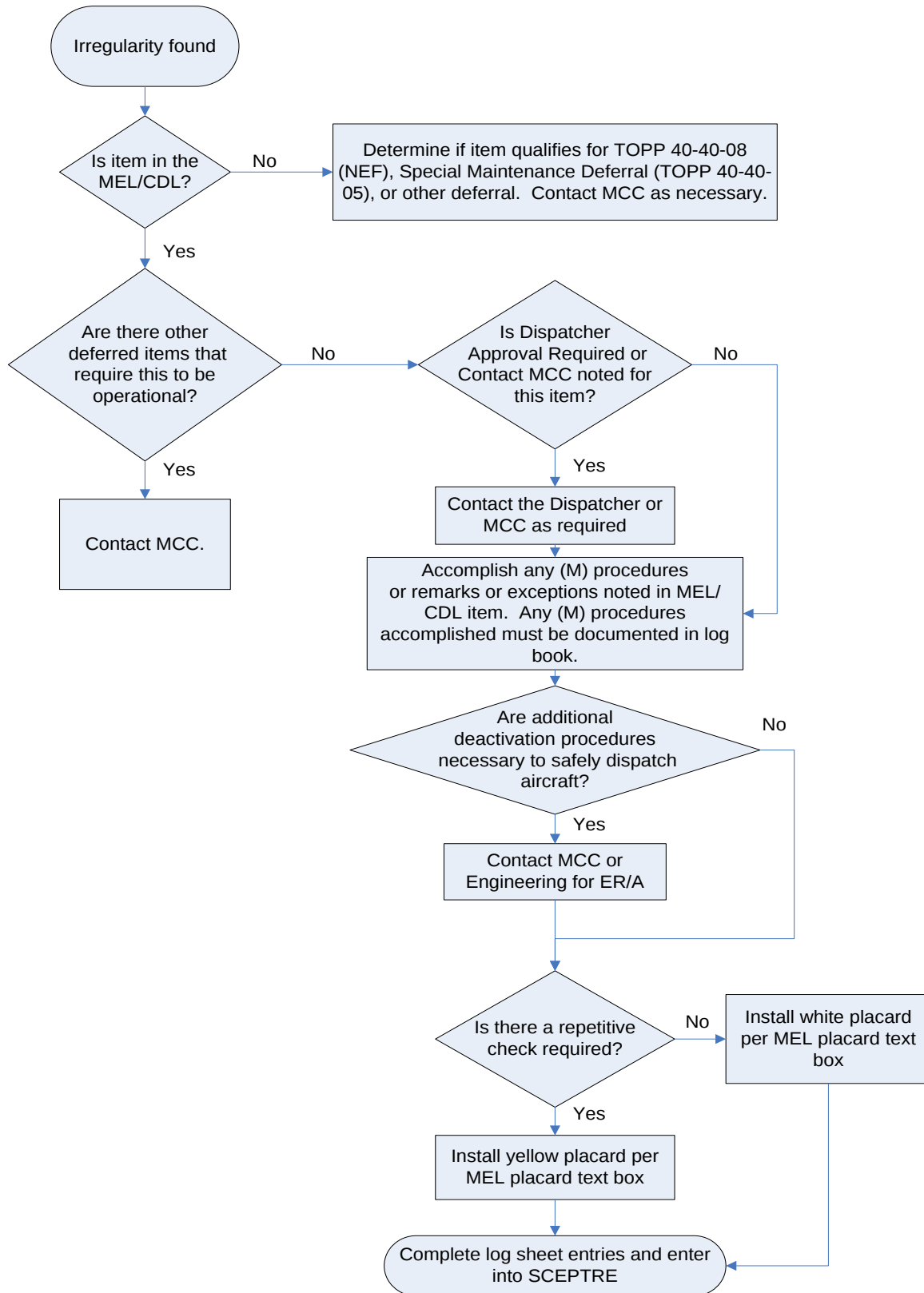
NOTE: If it is determined that a Repair Category 'A' item cannot be cleared prior to flight release from layover, the mechanic assigned to the aircraft must call Aircraft Routing, ATL, ext. 5-0222, to determine if there is sufficient flight time remaining to allow the aircraft to reach the next layover,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

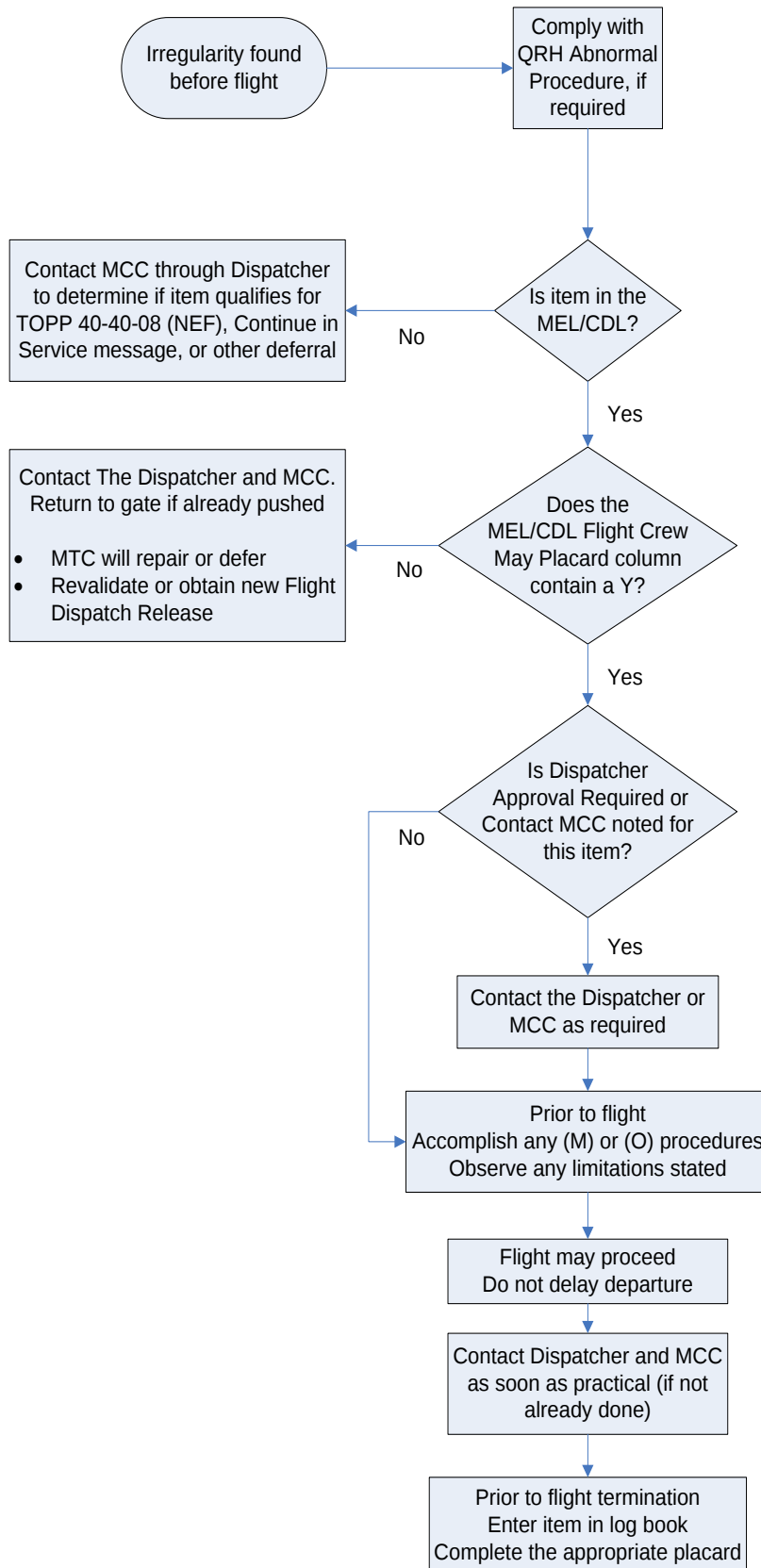
Pilots may document and install the appropriate placard when the MEL/CDL item denotes a 'Y' in the 'Flight Crew may Placard' columns, or when authorized under the NEF Program (see TOPP 40-40-08). In this case, the pilots may perform any required (M) or (O) procedures. To document an MEL/CDL item, the 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 Placard Instruction Table, this manual) must be completed prior to flight termination.

Ensure the irregularity is documented in the IRF block of the aircraft log (see TOPP 50-10-05). Under the direction of the MCC, complete the IRO section of the log page. Flight crews completing the deferral will include the captain's name and employee number and the phrase "Flight Crew Installed Placard at (station)" in the IRO block. The SIGNATURE block will subsequently be signed by an 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 may 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 equipage 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 system on deferral. 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 SID/STAR	RNAV ENROUTE
22-17-01: Autopilot Disengage Warning Lights	0 ❶	0 ❶
22-14-01: Autopilot Control Wheel Disengage Switches	0 ❶	0 ❶
22-01-02: Autopilot OR 34-24-01: Flight Director Systems	1 OR 1	1 OR 1
22-01-02: DFGC – FMS NAV Mode	1	0
22-01-04: Flight Mode Annunciators	1 ❷	0
34-52-01: Distance Measuring Equipment	1	1
34-20-01: Mode Selector MAP Positions	1	1
34-63-01: FMS – Computer	1	1
34-63-01: FMS – MCDU	1	1
34-63-01: FMS NAV Database	1	0
34-63-01: FMS NAV Database (current)	0 ❸	0 ❸

❶ At least one Flight Director required

❷ NAV Mode Annunciation required

❸ Authorized if MEL 34-63-01D NAV Database “O” procedure is successfully accomplished.

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EOAP Message List

This section provides a quick reference between the electronic messages which are displayed on the Electronic Overhead Annunciator Panel (EOAP) and the MD-90 Minimum Equipment List. This cross reference is for guidance only and may not include all messages, nor does it consider all possible combinations of system faults which might cause a message to illuminate.

Each message is associated with one of eight different system cue lights. These cue lights will flash four times each time one of the messages associated with that cue light is illuminated. If a new message occurs but is not visible due to the display area being completely filled, the associated cue light will remain illuminated continuously. These eight cue lights are as follows:

Electrical	-	ELEC
Ice	-	ICE
Engine	-	ENG
Controls	-	CONT
Miscellaneous	-	MISC
Hydraulics	-	HYD
Status	-	STATUS
Doors	-	DOOR

All of these lights are amber except for the STATUS cue light which is blue.

Each message is also categorized according to level of importance. There are five levels of alerts which are defined as follows:

<u>Level</u>	<u>Type</u>	<u>Description</u>
1	Master Warning	Red annunciation which indicates immediate crew action is required. The red MASTER WARNING lights on the glareshield will also come on.
2	Master Caution	Amber message which requires immediate crew awareness and future corrective action. The amber MASTER CAUTION lights on the glareshield will also come on. NOTE: Individual caution messages will remain illuminated until the condition has been corrected.
3	Caution	Amber message which requires immediate crew awareness but may or may not require future corrective action. The MASTER CAUTION lights will not be illuminated.
4	Advisory	Blue message intended to provide information to the crew which is advisory only.
5	Status	Amber message which is not displayed on the screen until the STATUS cue button is depressed. This type of message requires no flight crew action but may require some future maintenance action. The blue STATUS cue light illuminates whenever one of these type of faults is detected.

It should not be assumed that dispatch relief is automatically available for every message with a MEL item cross-referenced. The provisions of each MEL item must always be complied with whenever that item is dispatched inoperative, and this section alone should not be used as any type of authority to dispatch the aircraft.

Note that the dispatch procedures given for a particular MEL item will often (but not always) include some means of clearing the given message from the EOAP prior to dispatch. None of the messages associated with the STATUS cue light are cleared prior to dispatch, and these messages will remain in the STATUS buffer of the EOAP but will be hidden from view unless the STATUS cue light is pushed.

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MESSAGE	CUE LIGHT	POSSIBLE MEANING	ALERT LEVEL	MEL ITEM CROSS REFERENCE
10 DEG RUD RESTRICT	CONT	The rudder stop limiter is deployed at an airspeed below the normal retracted speed.	Caution	None
ACCESS COMPT DOOR	DOOR	Access Compartment Door not closed and latched.	Caution	52-70-01
ACS FAULT	CONT	Clapper spring assemblies failed check.	Caution	None
AFT CABIN DOOR	DOOR	Aft Cabin Door open or unlatched.	Caution	52-70-01
AFT CARGO DOOR	DOOR	Aft Cargo Door not closed and latched.	Caution	52-70-01
AFT GALLEY DOOR	DOOR	Aft Galley Door open and unlocked.	Caution	52-70-01
AFT STAIRWAY DOOR	DOOR	Aft Stairway Door unlatched.	Caution	52-70-01
AIR COND LOW FLOW	MISC	Insufficient Air Conditioning Flow or excessive fuselage leakage exists.	Master Caution	21-51-01 21-51-02
AIRFL ICE PRES ABNML	ICE	Low or unbalanced pressure in wing ducts or low pressure in horizontal stabilizer duct.	Master Caution	30-11-01 30-11-05 30-11-06
ANTI-ICE FAULT	ICE	Generic message indicating loss of anti-icing capability to left or right strake.	Caution	30-11-08
ANTI-ICE SUPPLY HIGH	ICE	Excessive duct pressure.	Master Caution	30-10-01 30-11-05 30-11-06
ANTI-SKID FAULT	HYD	Fault detected which could result in a reduction in or a loss of system redundancy.	Caution	32-45-01
APU AC PWR FAULT	ELEC	Generic message indicating a potential AC power loss could occur. Caution messages will remain illuminated until the condition has been corrected.	Master Caution	24-21-01 24-26-04 24-26-05 24-51-07
APU ELEC SYSTEM FAIL	ELEC	APU generator de-energized, has no output, or has exceeded critical operating temperature.	Status	24-21-01
APU FAULT	MISC	APU system fault exists that could cause damage to the APU or degrade its performance.	Master Caution	49-10-01 49-71-01
APU FIRE DET FAULT	ENG	Both APU fire detect loop systems inoperative.	Master Caution	26-12-01 49-10-01
APU GEN BRG FAIL	ELEC	One or both main bearings have failed in the APU generator.	Caution	24-21-01 24-21-03 24-21-05
APU GEN DIODE FAIL	ELEC	One or more APU generator rotating rectifier diodes have failed.	Caution	24-21-01 24-21-02 24-21-06
APU GEN FAIL	ELEC	APU generator de-energized, has no output, or has exceeded critical operating temperature.	Status	24-21-01 24-26-04

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MESSAGE	CUE LIGHT	POSSIBLE MEANING	ALERT LEVEL	MEL ITEM CROSS REFERENCE
APU GEN FEEDER FAULT	ELEC	Feeder fault detected on APU generator feeders.	Status	24-21-01 24-51-07
APU GEN OFF	ELEC	APU generator power available and auxiliary power relay is open.	Master Caution	24-26-01 24-51-01
APU GEN OVERHEAT	ELEC	APU generator temperature exceeded maximum normal, but not critical, operating limits.	Status	24-21-01 24-26-05
APU OIL PRESS LOW	MISC	APU oil pressure below normal.	Master Caution	49-10-01 49-71-01
AUTO BRAKE FAIL	HYD	Malfunction of auto brake system.	Master Caution	32-46-01 32-46-02
AUTO SLAT FAIL	CONT	Auto slat system malfunction.	Master Caution	None
AUTO SPOILER FAIL	CONT	Malfunction in ground spoiler system or when system is armed and only one main gear senses ground contact.	Caution	27-61-01 27-62-01 27-65-01
BATTERY BUS OFF	ELEC	Battery bus is de-energized.	Caution	None
BKUP RUD LIM FAULT	CONT	After landing, the rudder stop limiter was retracted at an airspeed greater than deployment speed.	Caution	None
CAWS FAIL	MISC	Central aural warning system failed.	Caution	31-51-01
CENTER FUEL PRESS LO	ENG	Reduction or loss of fuel pressure across either center tank boost pump.	Master Caution	28-44-01 28-22-02
DC BUS OFF	ELEC	Respective DC bus de-energized.	Master Caution	None
DC XFER BUS OFF	ELEC	DC transfer bus is de-energized.	Master Caution	None
DFDAU MALFUNCTION	MISC	DFDAU critical failure detected.	Caution	31-31-01 31-31-02
DFDR MALFUNCTION	MISC	DFDR critical failure detected.	Caution	31-31-01
DRAIN MAST HEAT	MISC	One of the three drain masts is not powered.	Caution	30-72-01
ELEC COMPT DOOR	DOOR	Electric Compartment Door not closed and latched.	Caution	52-70-01
ELEC FAULT	ELEC	An electrical failure has occurred which does not have a discreet message.	Caution	None
ELEV CONTROLS MANUAL	CONT	The elevators are in manual mode.	Master Caution	None

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MESSAGE	CUE LIGHT	POSSIBLE MEANING	ALERT LEVEL	MEL ITEM CROSS REFERENCE
ELEV LD FEEL INOP	CONT	Both channels of the ACU are inoperative.	Master Caution	None
ELEVATOR SPLIT	CONT	The left or right elevator positions differ by 5° or more.	Master Caution	None
EMER LIGHT NOT ARMED	ELEC	Emergency light switch in OFF position.	Caution	33-51-03
EMER POWER ON	ELEC	Emergency power is in use.	Master Caution	None
EMER PWR AUTO FAULT	ELEC	Emergency power switch in ARM position and EPCU unsuccessfully attempted to switch to emergency power automatically.	Master Caution	None
EMER PWR SW OFF	ELEC	Emergency power switch in OFF position.	Caution	None
ENG SYNC FAULT	ENG	Engine synchronizer actuator is in the N1 position and the actuator has reached the end of its travel or has failed.	Caution	22-01-02 76-12-03
ENGINE SYNC ON	ENG	ENG SYNC selector is in N1 position with landing gear handle down.	Caution	22-01-02 76-12-02
FIRE LOOP INOP	ENG	One of two fire loops for an engine or APU indicates a fault.	Caution	26-11-01
FLT RECORDER OFF	MISC	Recorder de-energized or BIT requirements not met.	Caution	31-31-01
FUEL LEVEL LOW	ENG	Fuel quantity level of approximately 2500 pounds in either main wing tank.	Master Caution	28-43-01
FWD CABIN DOOR	DOOR	Forward Cabin Door not closed and latched.	Caution	52-70-01
FWD CARGO DOOR	DOOR	Forward Cargo Door not closed and latched.	Caution	52-70-01
FWD GALLEY DOOR	DOOR	Fwd Galley Door open or unlocked.	Caution	52-70-01
FWD STAIRWAY DOOR	DOOR	Forward Stairway Door not closed and latched.	Caution	52-70-01
GPWS FAIL	MISC	Ground proximity warning system inoperative.	Caution	34-45-01
ICE FOD ALERT	ICE	Presence of ice buildup on wing upper surface-ground advisory only.	Master Caution	30-81-01
ICE FOD DETECT INOP	ICE	Wing ice FOD alert system inoperative.	Caution	30-81-01

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MESSAGE	CUE LIGHT	POSSIBLE MEANING	ALERT LEVEL	MEL ITEM CROSS REFERENCE
IRS-1 BATTERY FAIL	MISC	Battery will not support IRU-1 should normal power be lost.	Caution	None
IRS-1 NO AIR	MISC	Loss of cooling air to IRU-1.	Caution	None
IRS-1 ON BATTERY	MISC	IRU-1 on battery power.	Caution	None
IRS-2 BATTERY FAIL	MISC	Battery will not support IRU-2 should normal power be lost.	Caution	None
IRS-2 NO AIR	MISC	Loss of cooling air to IRU-2.	Caution	None
IRS-2 ON BATTERY	MISC	IRU-2 on battery power.	Caution	None
L AC BUS OFF	ELEC	Left generator bus de-energized.	Master Caution	None
L AC PWR FAULT	ELEC	Generic message indicating a potential left electrical system power loss could occur. Caution messages will remain illuminated until the condition has been corrected.	Master Caution	24-11-01 24-21-01 24-26-04 24-26-05 24-51-07
L AIR COND TEMP HIGH	MISC	Left air conditioning pneumatic air supply temperature above normal.	Master Caution	21-51-01 21-58-01
L BUS FEEDER FAULT	ELEC	Feeder fault detected on left generator bus.	Status	24-51-06
L BUS TIE LOCKOUT	ELEC	Left bus tie relay locked out from closing.	Caution	None
L CONV OVERHEAT	ELEC	Left VSCF converter temperature above maximum normal, but not critical, operating limits.	Status	24-11-01 24-21-01
L EEC FAULT	ENG	Generic message indicating left EEC has detected a time limited left engine dispatch fault. Caution messages will remain illuminated until the condition has been corrected.	Caution	73-21-01 73-32-02 75-24-01 75-31-01 79-21-01
L EEC NO PERF PNLTY	ENG	Left EEC has detected a time limited dispatch fault with no associated aircraft performance penalties.	Status	73-21-01
L EEC PERF PNLTY 1	ENG	Left EEC has detected a time limited dispatch fault associated with the Air/Oil Heat Exchanger Air Valve.	Status	73-21-01 79-21-01
L EEC PERF PNLTY 2	ENG	Left EEC has detected a time limited dispatch fault associated with the Active Clearance Control System.	Status	73-21-01 75-24-01
L EEC PERF PNLTY 3	ENG	Left EEC has detected a time limited dispatch fault associated with the Compressor 2.5 Stage Stability Bleed Valve.	Status	73-21-01 75-31-01

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MESSAGE	CUE LIGHT	POSSIBLE MEANING	ALERT LEVEL	MEL ITEM CROSS REFERENCE
L EEC PERF PNLTY 4	ENG	Left EEC has detected a time limited dispatch fault associated with the FADEC Fuel System Thermocouple.	Status	73-21-01 73-32-02
L EEC PERF PNLTY 5	ENG	Left EEC has detected a time limited dispatch fault associated with the EEC Nosegear Ground Sense Signal.	Status	73-21-01 32-24-01
L EEC/EDP BUS FAIL	ENG	One left EEC channel has failed at the EDP.	Caution	None
L ELEC SYS FAIL	ELEC	Left generator de-energized, has no output, or has shut down due to generator oil pressure below critical operating condition or oil temperature exceeded critical value or converter temperature exceeding critical operating limits.	Status	24-21-01 24-26-04
L ENG FIRE DET FAULT	ENG	Both left engine fire detect loop systems inoperative.	Master Caution	None
L ENG FUEL OFF	ENG	Left FMU fuel-on/off valve in off position.	Caution	None
L ENG MANUAL START	ENG	Communications between DFGC and EEC have failed.	Master Caution	80-11-02 80-11-03 80-11-05
L ENG START ABORTED	ENG	Left EEC detects an abnormal start.	Caution	80-11-04
L ENG SYSTEM FAIL	ENG	EEC has detected a non-dispatchable left engine fault.	Caution	None
L ENG VALVE	ICE	Disagreement between left engine anti-ice valve and switch position.	Caution	30-14-02 30-14-03
L ENGINE OVERSPEED	ENG	EEC detects left engine rotor speed beyond maximum limit.	Caution	None
L ENGINE SURGE	ENG	EEC detects left engine compressor surge or starting stall.	Master Caution	None
L FUEL FIL PRES DROP	ENG	Differential pressure at left main engine fuel system filter.	Master Caution	73-34-01
L GEN BRG FAIL	ELEC	One or both main bearings have failed in the left VSCF generator.	Caution	24-21-01 24-21-03 24-21-05
L GEN DIODE FAIL	ELEC	One or more left generator rotating rectifier diodes have failed.	Caution	24-21-01 24-21-02 24-21-06

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MESSAGE	CUE LIGHT	POSSIBLE MEANING	ALERT LEVEL	MEL ITEM CROSS REFERENCE
L GEN FAIL	ELEC	Left generator de-energized, has no output, or has shut down due to generator oil pressure below critical operating condition or oil temperature exceeded critical value or converter temperature exceeding critical operating limits.	Status	24-21-01 24-26-04
L GEN FEEDER FAULT	ELEC	Feeder fault detected on left generator system feeders.	Status	24-21-01 24-51-07
L GEN OFF	ELEC	Left generator relay de-energized.	Master Caution	24-21-08 24-26-01
L GEN OIL FILTER	ELEC	Left VSCF generator oil filter clogged and bypass valve has opened.	Master Caution	24-12-02 24-21-01 24-21-04
L GEN OIL PRESS	ELEC	Left VSCF generator oil pressure below minimum, but not critical, operating limits.	Status	24-12-01 24-21-01
L GEN OVERHEAT	ELEC	Left VSCF generator temperature exceeded maximum, but not critical, operating limits.	Status	24-21-01 24-26-05
L HYD PRESS LOW	HYD	Hydraulic pressure in left spoiler supply system below normal.	Master Caution	None
L HYD TEMP HIGH	HYD	Left hydraulic reservoir fluid temperature above normal.	Master Caution	None
L ICE FOD ALERT	ICE	Presence of ice buildup on wing upper surface.	Caution	30-81-01 30-81-02
L ICE FOD SYS INOP	ICE	Wing ice FOD detection system inoperative.	Caution	30-81-01 30-81-03
L ICE PROT TEMP HIGH	ICE	Left pneumatic crossfeed duct temperature is above normal.	Master Caution	30-11-02
L ICE PROT TEMP LOW	ICE	Left pneumatic crossfeed duct temperature is below normal.	Caution	30-11-03
L INBD ANTI-SKID	HYD	Malfunction of anti-skid protection for left inboard wheel.	Caution	None
L INLET FUEL PRES LO	ENG	Fuel supply pressure at left engine is low.	Master Caution	73-33-01
L OIL PRESS LOW	ENG	Left engine oil pressure is low.	Master Caution	79-34-01
L OIL STRAINER CLOG	ENG	Differential pressure across left main engine oil system filter.	Master Caution	79-36-01
L OUTBD ANTI-SKID	HYD	Malfunction of anti-skid protection for left outboard wheel.	Caution	None

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MESSAGE	CUE LIGHT	POSSIBLE MEANING	ALERT LEVEL	MEL ITEM CROSS REFERENCE
L PNEU SYSTEM FAULT	MISC	Excessive supply pressure from left pressure regulator and shutoff valve and/or high stage valve.	Caution	36-11-03 36-11-06 36-11-08 36-22-01
L REV PRESSURIZED	ENG	EEC auto restow commanded or EEC detects left isolation valve failure.	Master Caution	78-32-01 78-33-08
L REVERSER ACCUM LOW	ENG	Hydraulic pressure at left reverser accumulator is low.	Status	78-33-05
L REVERSER FAULT	ENG	EEC determined left thrust reverser cannot be deployed.	Status	78-32-01 78-33-03
L START VALVE OPEN	ENG	Left start valve not fully closed.	Caution	80-11-01 80-11-02
L START VALVE OPEN - A	ENG	Left start valve not fully closed - 'A' ignition system selected.	Caution	80-11-01 80-11-02
L START VALVE OPEN - B	ENG	Left start valve not fully closed - 'B' ignition system selected.	Caution	80-11-01 80-11-02
L STATOR VANE FAIL	ENG	Left stator vane actuator failed-safe.	Master Caution	None
L STRAKE FAULT	ICE	Loss of heating capability to left strake.	Status	30-11-08 30-13-01 30-20-01 30-22-02
LAVATORY SMOKE	MISC	Smoke detected in one of the lavatories.	Caution	26-14-01 26-25-01
LEFT ENG BB VIB HI	ENG	Left broad based tracked vibration high.	Status	77-32-01
LEFT ENG N1 VIB HI	ENG	Left N1 tracked vibration high.	Status	77-32-01
LEFT ENG N2 VIB HI	ENG	Left N2 tracked vibration high.	Status	77-32-01
LEFT ENG VIB HIGH	ENG	High left engine vibration.	Caution	77-32-01 77-32-02
MACH TRIM FAULT	CONT	Mach trim system is inoperative.	Caution	22-22-01 22-22-02 22-22-03
MACH TRIM OFF	CONT	Mach trim switch is in OFF position.	Caution	22-22-01 22-22-02 22-22-03
MID CARGO DOOR	DOOR	Mid Cargo Door not closed and latched.	Caution	52-70-01

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MESSAGE	CUE LIGHT	POSSIBLE MEANING	ALERT LEVEL	MEL ITEM CROSS REFERENCE
MWCC	MISC	Master warning caution controller fault.	Caution	None
NO BKUP RUD LIM	CONT	Backup rudder limiter failure along with failure of the primary rudder limiter.	Caution	None
PARKING BRAKES ON	HYD	Parking brakes are set.	Caution	32-43-01
PITOT/STALL HEAT OFF	ICE	METER SEL & HEAT selector in OFF or with selector other than Off, loss of electrical power to one or more pitot tube or stall angle of attack heaters.	Master Caution	30-31-01 30-31-03 30-32-01 30-33-01 30-34-01
PRIMARY RUD LIM FAULT	CONT	A discrepancy exists between actual and programmed limit.	Master Caution	None
PUSHER DUMPED	MISC	Post stall pusher system disengaged by dump switch or "G" switch.	Caution	27-33-01
PUSHER FAIL	MISC	Post stall pusher system malfunction or failure.	Master Caution	27-33-01
PYLON FLAP FAULT	CONT	Left and right pylon flap up and down switches are not in agreement or are not in correct position with respect to the elevator.	Caution	27-37-01
R AC BUS OFF	ELEC	Right generator bus de-energized.	Master Caution	None
R AC PWR FAULT	ELEC	Generic message indicating a potential right electrical system power loss could occur. Caution messages will remain illuminated until the condition has been corrected.	Master Caution	24-11-01 24-21-01 24-26-04 24-26-05 24-51-07
R AIR COND TEMP HIGH	MISC	Right air conditioning pneumatic air supply temperature above normal.	Master Caution	21-51-01 21-58-01
R BUS FEEDER FAULT	ELEC	Feeder fault detected on right generator bus.	Status	24-51-06
R BUS TIE LOCKOUT	ELEC	Right bus tie relay locked out from closing.	Caution	None
R CONV OVERHEAT	ELEC	Right VSCF converter temperature above maximum normal, but not critical, operating limits.	Status	24-11-01
R EEC FAULT	ENG	EEC has detected a time limited right engine dispatch fault. Caution messages will remain illuminated until the condition has been corrected.	Caution	73-21-01 73-32-01 75-24-01 75-31-01 79-21-01
R EEC NO PERF PNLTY	ENG	Right EEC has detected a time limited dispatch fault with no associated aircraft performance penalties.	Status	73-21-01

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MESSAGE	CUE LIGHT	POSSIBLE MEANING	ALERT LEVEL	MEL ITEM CROSS REFERENCE
R EEC PERF PNLTY 1	ENG	Right EEC has detected a time limited dispatch fault associated with the Air/Oil Heat Exchanger Air Valve.	Status	73-21-01 79-21-01
R EEC PERF PNLTY 2	ENG	Right EEC has detected a time limited dispatch fault associated with the Active Clearance Control System.	Status	73-21-01 75-24-01
R EEC PERF PNLTY 3	ENG	Right EEC has detected a time limited dispatch fault associated with the Compressor 2.5 Stage Stability Bleed Valve.	Status	73-21-01 75-31-01
R EEC PERF PNLTY 4	ENG	Right EEC has detected a time limited dispatch fault associated with the FADEC Fuel System Thermocouple.	Status	73-21-01 73-32-01
R EEC PERF PNLTY 5	ENG	Right EEC has detected a time limited dispatch fault associated with the Right EEC Nosegear Ground Sense Signal.	Status	73-21-01 32-24-01
R EEC/EDP BUS FAIL	ENG	One right EEC channel has failed at the EDP.	Caution	None
R ELEC SYS FAIL	ELEC	Right generator de-energized, has no output, or has shut down due to generator oil pressure below critical operating condition or oil temperature exceeded critical value or converter temperature exceeding critical operating limits.	Status	24-21-01 24-26-04
R ENG FIRE DET FAULT	ENG	Both right engine fire detect loop systems inoperative.	Master Caution	None
R ENG FUEL OFF	ENG	Right FMU fuel-on/-off valve in off position.	Caution	None
R ENG MANUAL START	ENG	Communications between DFGC and EEC have failed.	Master Caution	80-11-02 80-11-03 80-11-05
R ENG START ABORTED	ENG	Right EEC detects an abnormal start.	Caution	80-11-04
R ENG SYSTEM FAIL	ENG	EEC has detected a non-dispatchable right engine fault.	Caution	None
R ENG VALVE	ICE	Disagreement between right engine anti-ice valve and switch position.	Caution	30-14-02 30-14-03
R ENGINE OVERSPEED	ENG	EEC detects right engine rotor speed beyond maximum limit.	Caution	None
R ENGINE SURGE	ENG	EEC detects right engine compressor surge or starting stall.	Master Caution	None
R FUEL FIL PRES DROP	ENG	Differential pressure at right main engine fuel system filter.	Master Caution	73-34-01

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MESSAGE	CUE LIGHT	POSSIBLE MEANING	ALERT LEVEL	MEL ITEM CROSS REFERENCE
R GEN BRG FAIL	ELEC	One or more main bearings have failed in the right VSCF generator.	Caution	24-21-01 24-21-03 24-21-05
R GEN DIODE FAIL	ELEC	One or more right generator rotating rectifier diodes have failed.	Caution	24-21-01 24-21-02 24-21-06
R GEN FAIL	ELEC	Right generator de-energized, has no output or has shut down due to generator oil pressure below critical operating condition or oil temperature exceeded critical value or converter temperature exceeded critical operating limits.	Caution	24-21-01 24-26-04
R GEN FEEDER FAULT	ELEC	Feeder fault detected on right generator system feeders.	Status	24-21-01 24-51-07
R GEN OFF	ELEC	Right generator relay de-energized.	Master Caution	24-21-07 24-26-01
R GEN OIL FILTER	ELEC	Right VSCF generator oil filter clogged and bypass valve has opened.	Caution	24-12-02 24-21-01 24-21-04
R GEN OIL PRESS	ELEC	Right VSCF generator oil pressure below minimum, but not critical, operating limits.	Status	24-12-01 24-21-01
R GEN OVERHEAT	ELEC	Right VSCF generator temperature exceeded maximum, but not critical, operating limits.	Status	24-21-01 24-26-05
R HYD PRESS LOW	HYD	Hydraulic pressure in right spoiler supply system below normal.	Master Caution	29-31-01
R HYD TEMP HIGH	HYD	Right hydraulic reservoir fluid temperature above normal.	Master Caution	None
R ICE FOD ALERT	ICE	Presence of ice buildup detected on upper wing surface.	Caution	30-81-01 30-81-02
R ICE FOD SYS INOP	ICE	Wing ice FOD detection system inoperative.	Caution	30-81-01 30-81-03
R ICE PROT TEMP HIGH	ICE	Right pneumatic crossfeed duct temperature is above normal.	Master Caution	30-11-02
R ICE PROT TEMP LOW	ICE	Right pneumatic crossfeed duct temperature is below normal.	Caution	30-11-03
R INBD ANTI-SKID	HYD	Malfunction of anti-skid protection for right inboard wheel.	Caution	None
R INLET FUEL PRES LO	ENG	Fuel supply pressure at right engine is low.	Master Caution	73-33-01
R OIL PRESS LOW	ENG	Right engine oil pressure is low.	Master Caution	79-34-01

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MESSAGE	CUE LIGHT	POSSIBLE MEANING	ALERT LEVEL	MEL ITEM CROSS REFERENCE
R OIL STRAINER CLOG	ENG	Differential pressure across right main engine oil system filter.	Master Caution	79-36-01
R OUTBD ANTI-SKID	HYD	Malfunction of anti-skid protection for right outboard wheel.	Caution	None
R PNEU SYSTEM FAULT	MISC	Excessive supply pressure from right pressure regulator and shutoff valve and/or high stage valve.	Caution	36-11-03 36-11-06 36-11-08 36-22-01
R REV PRESSURIZED	ENG	EEC auto restow commanded or EEC detects right isolation valve failure.	Master Caution	78-32-01 78-33-08
R REVERSER ACCUM LOW	ENG	Hydraulic pressure at right reverser accumulator is low.	Status	78-33-05
R REVERSER FAULT	ENG	EEC determined right thrust reverser cannot be deployed.	Status	78-32-01 78-33-03
R START VALVE OPEN	ENG	Right start valve not fully closed.	Caution	80-11-01 80-11-02
R START VALVE OPEN - A	ENG	Right start valve not fully closed - 'A' ignition system selected.	Caution	80-11-01 80-11-02
R START VALVE OPEN - B	ENG	Right start valve not fully closed - 'B' ignition system selected.	Caution	80-11-01 80-11-02
R STATOR VANE FAIL	ENG	Right stator vane actuator fail-safed.	Master Caution	None
R STRAKE FAULT	ICE	Loss of heating capability to right strake.	Status	30-11-08 30-13-01 30-20-01 30-22-02
RADIO FAN OFF	MISC	In flight, primary and standby fans inoperative with radio rack switch in FAN. On ground, primary fan is inoperative.	Caution	21-21-01 21-21-03
RIGHT ENG BB VIB HI	ENG	Right broad based tracked vibration high.	Status	77-32-01
RIGHT ENG N1 VIB HI	ENG	Right N1 tracked vibration high.	Status	77-32-01
RIGHT ENG N2 VIB HI	ENG	Right N2 tracked vibration high.	Status	77-32-01
RIGHT ENG VIB HIGH	ENG	High right engine vibration.	Caution	77-32-01 77-32-02

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MESSAGE	CUE LIGHT	POSSIBLE MEANING	ALERT LEVEL	MEL ITEM CROSS REFERENCE
RUDDER CONTROL MANUAL	HYD	No hydraulic power to rudder.	Master Caution	None
SNGL ELEV FEEL FAULT	CONT	One channel of the ACU is inoperative.	Caution	None
SPEED BRAKE EXTENDED	CONT	Speedbrakes extended with flaps extended beyond 6°.	Caution	27-64-01
SPOILER DEPLOYED	CONT	Either ground spoiler extended in flight or any spoiler deployed more than 10° ±2° on ground with spoiler/speedbrake lever stowed.	Caution	27-61-02
SPOILER FLAP EXTEND	CONT	Speedbrakes extended with flaps extended beyond 6°.	Master Caution	27-64-01
STALL IND FAILURE	MISC	Any system channel is inoperative or malfunctioning or post stall pusher system is shut off by pushing STICK PUSHER PUSH TO INHIBIT light or by reduction in G forces.	Caution	27-33-01
STRAKE FAULT	ICE	Generic message indicating loss of anti-icing capability to left or right strake	Caution	30-11-08 30-13-01 30-20-01 30-22-02
TAIL TEMP FAULT	MISC	Both channels of the tail temperature high controller unable to detect tail temperature is high.	Caution	None
TAILCONE UNSAFE	DOOR	Tailcone not fully engaged or locked.	Caution	53-52-01
TAKEOFF WARNING FAIL	MISC	Takeoff warning not available when both throttles advanced for takeoff and FLAP/ SLAT handle not in agreement with value set in FLAP/CG windows or HORIZ STAB not set in green band or slats not extended or spoiler handle not in RETRACT detent or parking brake is set.	Caution	None
TIE BUS FEEDER FAULT	ELEC	Feeder fault in the tie bus.	Caution	None
TRANSPONDER INOP	MISC	Selected transponder has failed.	Caution	34-54-01
WINDSHEAR INOP	MISC	Windshear detection and guidance not available and PFD-PLI not displayed.	Caution	34-47-01 34-47-02
WINDSHIELD OVERTEMP	ICE	One or all windshield panes are overheated.	Caution	30-41-01
YAW DAMP OFF	CONT	Yaw damper is not operating.	Caution	22-21-01

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MESSAGE	CUE LIGHT	POSSIBLE MEANING	ALERT LEVEL	MEL ITEM CROSS REFERENCE
AC EMER BUS OFF	RED	AC emergency bus de-energized.	Master Warning	None
APU FIRE	RED	APU fire detection system activated.	Master Warning	26-12-02 49-10-01
APU STARTER ON	BLUE	APU starter is engaged.	Advisory	49-10-01 49-71-01
CABIN ALT	RED	Cabin altitude has exceeded 10,000 feet.	Master Warning	21-31-01 21-33-01
CABIN OXYGEN ON	BLUE	All cabin oxygen door latches activated.	Advisory	35-22-01 35-21-01
DC EMER BUS OFF	RED	DC emergency bus de-energized.	Master Warning	None
ELEVATOR AT LIMIT	BLUE	Both elevators are at a limit stop position.	Advisory	27-34-01
ENGINES COOL	BLUE	90 second cooling time has elapsed.	Advisory	77-42-01
IRS-1 ATT MODE	BLUE	Back-up attitude mode selected for IRS-1.	Advisory	None
IRS-2 ATT MODE	BLUE	Back-up attitude mode selected for IRS-2.	Advisory	None
L ENG ANTI-ICE ON	BLUE	Left engine anti-ice switch in the ON position.	Advisory	30-14-01
L ENG IGN ON	BLUE	Left engine ignition system in use.	Advisory	74-20-01
L TAIL TEMP HIGH	RED	Overheat condition detected in left aft accessory compartment or left pylon.	Master Warning	None
R ENG ANTI-ICE ON	BLUE	Right engine anti-ice switch in the ON position.	Advisory	30-14-01
R ENG IGN ON	BLUE	Right engine ignition system in use.	Advisory	74-20-01
R TAIL TEMP HIGH	RED	Overheat condition detected in right aft accessory compartment or right pylon.	Master Warning	None
RAIN REPELLENT RESERVE IN USE	BLUE	Rain repellant switch has been momentarily moved to the RES position.	Advisory	30-44-01 30-44-02
TAIL DE-ICE ON	BLUE	De-icing heat selected for horizontal stabilizer leading edge.	Advisory	30-12-01
WING ANTI-ICE ON	BLUE	Anti-ice heat selected for wing leading edge.	Advisory	30-11-04

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11-00-01	Aircraft Placards/Markings Repair Installed	11-2
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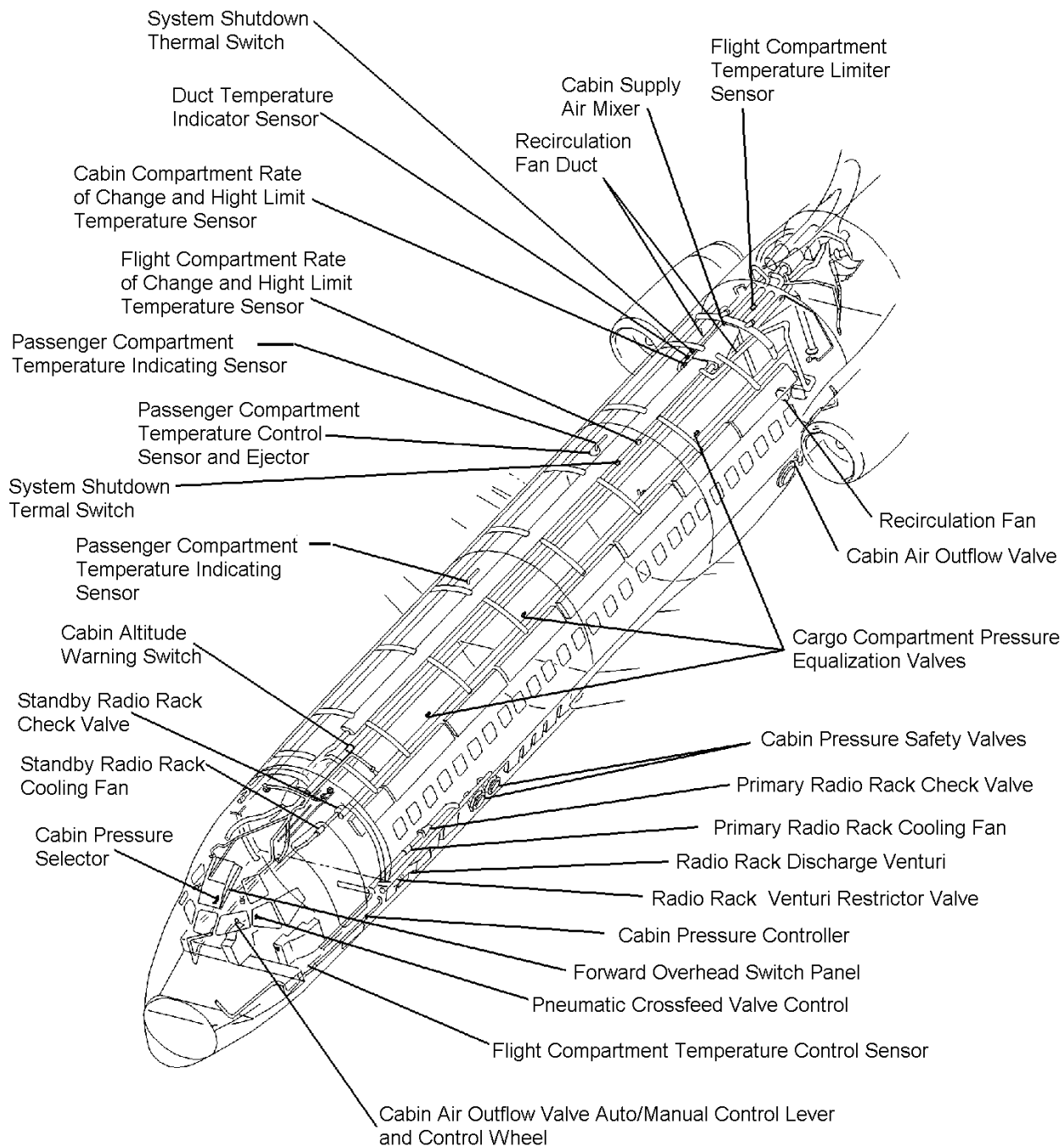
NUMBER INSTALLED			NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD			REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
11-00-01	Aircraft Placards/Markings Repair Installed "Contact MCC" Administrative Control Item	N	-	-	Item may only be used to track repair provided: a) MCC determines that placard is FAA required, b) Install repair per TOPP 40-40-05, c) Enter in logbook repair is applied per TOPP 40-40-05, and d) Enter in logbook 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).

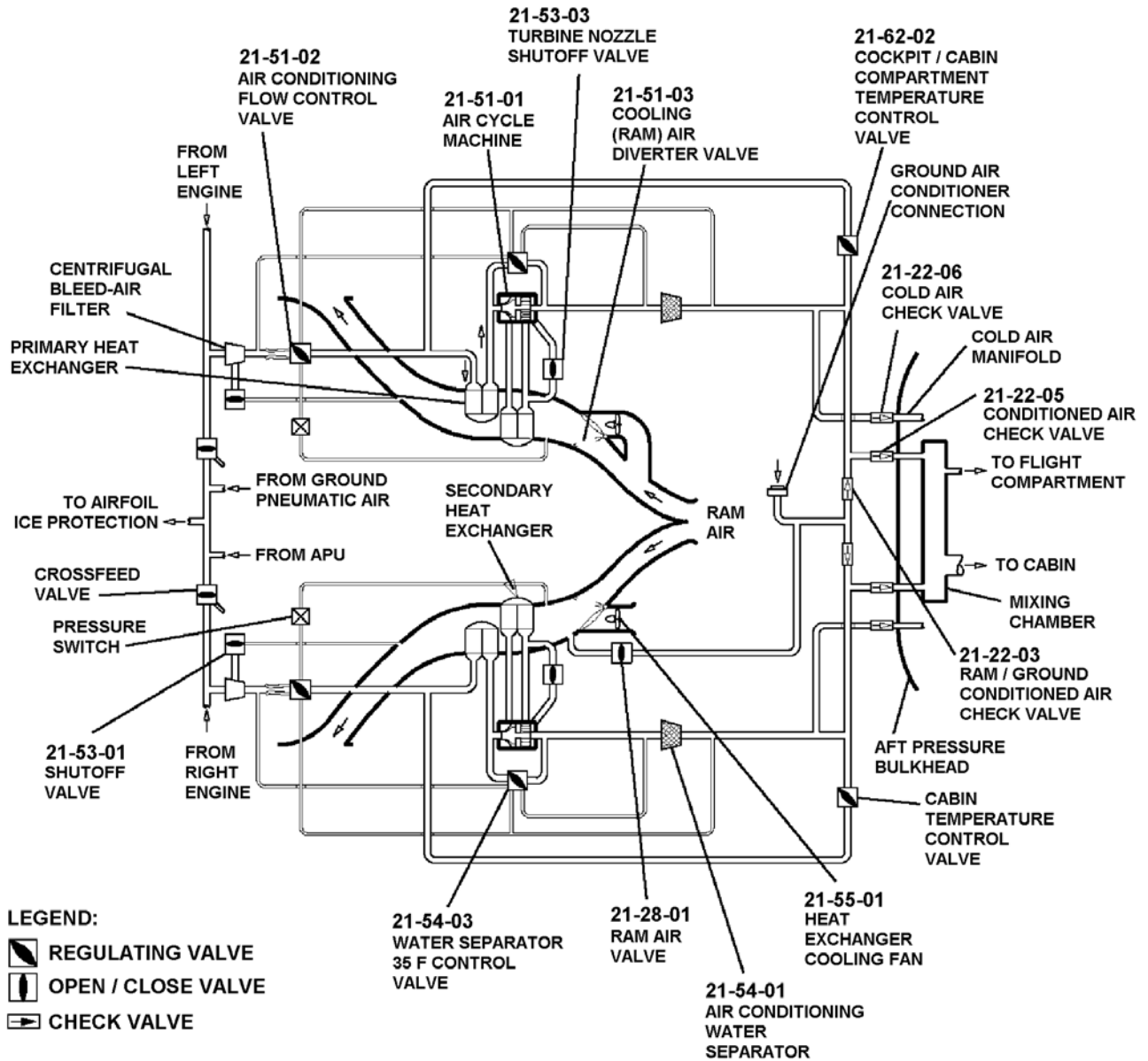
MEL ITEM	TAB LOCATION	PLACARD TEXT
11-00-01	Logbook	_____ REPAIRED PER TOPP 40-40-05

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
RADIO RACK COOLING FANS					
21-21-01A	Radio Rack Cooling Fans "DISP.APPR.REQ'D."	Y	2	0	C (O)(M) May be inoperative provided: a) Both Air Conditioning systems are available for pressurized flight, b) Radio rack cooling selector switch remains in VENTURI, c) Outside air temperature does not exceed 90 degrees F, and d) Ground operation of electronic equipment is limited to a maximum of 45 minutes.
21-21-01B	Primary Fan "DISP.APPR.REQ'D."	N	1	0	C (O)(M) May be inoperative provided Standby Fan is operative.
21-21-01C	Standby Fan	N	1	0	C May be inoperative provided Primary Fan is operative.

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-21-01A	Radio Rack Venturi / Fan Switch	Primary / Standby Radio Rack Cooling Fans INOP
21-21-01B	Radio Rack Venturi / Fan Switch	Primary Radio Rack Cooling Fan INOP
21-21-01C	Radio Rack Venturi / Fan Switch	Standby Radio Rack Cooling Fan INOP

(O) PROCEDURES

21-21-01A

1. Limit ground operation of electronic equipment to 45 minutes.

NOTE 1: Applying ground conditioned air directly into the E&E compartment through the E&E compartment door for at least 15 minutes will reset the 45 minute time limit requirement. To reduce the possibility of exceeding the 45 minute time limit requirement, it is recommended that ground conditioned air be applied directly into the E&E compartment until push back.

NOTE 2: OR, removing all aircraft electrical power or operating using only Ground Service electrical power with avionics turned off for at least 15 minutes will reset the 45 minute time limit requirement.

NOTE 3: Confirm E&E compartment door is closed prior to push back.

2. No live animals or temperature sensitive cargo is allowed in forward cargo compartment.

21-21-01B

1. On aircraft with the Standard Flight Deck, if RADIO FAN OFF alert illuminates in flight, select RADIO RAXCK fan switch to VENTURI. On aircraft with the Enhanced Flight Deck, if AVNCS AIR FLOW OFF alert illuminates in flight, select AVNCS FAN switch to OVRD.
2. No live animals or temperature sensitive cargo is allowed in forward cargo compartment.

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(M) PROCEDURES

21-21-01A

1. Verify both Air Conditioning Systems are available for pressurized flight.
2. On aircraft with the Standard Flight Deck, select RADIO RACK switch to VENTURI. On aircraft with the Enhanced Flight Deck, ensure AVNCS FAN switch to OVRD.
3. Pull and secure RADIO RACK FAN) and STANDBY RADIO RACK FAN circuit breakers:

<u>Circuit Breaker (CB#)</u>	<u>Panel</u>	<u>Location</u>
RADIO RACK FAN OA (B1-78)	EPC CBP	H-4
RADIO RACK FAN OB (B1-79)	EPC CBP	H-5
RADIO RACK FAN OC (B1-80)	EPC CBP	H-6
RADIO RACK FAN STANDBY OA (B1-859)	EPC CBP	J-4
RADIO RACK FAN STANDBY OB (B1-860)	EPC CBP	J-5
RADIO RACK FAN STANDBY OC (B1-861)	EPC CBP	J-6

4. Limit ground operation of electronic equipment to 45 minutes.
 - 1) Option 1
 - a. Applying ground conditioned air directly into the E&E compartment through the E&E compartment door for at least 15 minutes. This resets the 45 minute time limit requirement.

NOTE: To reduce the possibility of exceeding the 45 minute time limit requirement, it is recommended that ground conditioned air be applied directly into the E&E compartment until push back.

- b. Perform a Return to Service (RTS)/repair any equipment indicating a fault during the cool down period and/or dispatch per MMEL.
 - c. Close E&E compartment door prior to push back.

2) Option 2

- a. Remove all aircraft electrical power or operating using only Ground Service electrical power with avionics turned off to allow the E&E equipment to cool for at least 15 minutes. This resets the 45 minute time limit requirement.
 - b. Perform a Return to Service (RTS)/repair any equipment indicating a fault during the cool down period and/or dispatch per MMEL.
 - c. Close E&E compartment door prior to push back.

NOTE: No live animals or temperature sensitive cargo is allowed in forward cargo compartment.

21-21-01B

1. Check that the RADIO RACK FAN CAUTION (B1-82 EPC CBP Location U-29) circuit breaker is in.
2. In the avionics compartment, check that the RIGHT RADIO FAN OFF light on the GEN CONT RACK is not on (verifies Standby Fan operation).
3. Pull and secure the RADIO RACK FAN circuit breakers (all three phases see above table).
4. Verify that the RADIO FAN OFF alert (AVNCS AIR FLOW OFF alert on EFD-equipped aircraft) in the cockpit is illuminated.

NOTE: No live animals or temperature sensitive cargo is allowed in forward cargo compartment.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
21-21-02A	Radio Rack & Standby Radio Rack Fan Check Valves "DISP.APPR.REQ'D."	N	2	1 C	(O)(M) May be inoperative CLOSED provided associated fan circuit breaker remains open.
21-21-02B	Radio Rack & Standby Radio Rack Fan Check Valves "DISP.APPR.REQ'D."	N	2	0 C	(O)(M) May be inoperative provided: a) Both Air Conditioning Systems are available for pressurized flight, b) Radio rack cooling selector switch remains in VENTURI, c) Outside air temperature does not exceed 90 degrees F, and d) Ground operation of electronic equipment is limited to a maximum of 45 minutes.

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-21-02A	Radio Rack Venturi / Fan Switch	___ Fan Check Valve INOP
21-21-02B	Radio Rack Venturi / Fan Switch	Radio / Standby Radio Rack Fan Check Valves INOP

(O) PROCEDURES

21-21-02A

If RADIO FAN OFF is illuminated in flight, select RADIO RACK switch to VENTURI.

21-21-02B

1. Limit ground operation of electronic equipment to 45 minutes.

NOTE 1: Applying ground conditioned air directly into the E&E compartment through the E&E compartment door for at least 15 minutes will reset the 45 minute time limit requirement. To reduce the possibility of exceeding the 45 minute time limit requirement, it is recommended that ground conditioned air be applied directly into the E&E compartment until push back.

NOTE 2: OR, removing all aircraft electrical power or operating using only Ground Service electrical power with avionics turned off for at least 15 minutes will reset the 45 minute time limit requirement.

NOTE 3: Confirm E&E compartment door is closed prior to push back.

NOTE: No live animals or temperature sensitive cargo is allowed in forward cargo compartment.

2. On aircraft with the Standard Flight Deck, select RADIO RACK switch to VENTURI. On aircraft with the Enhanced Flight Deck, ensure AVNCS FAN switch to OVRD).

CONTINUED NEXT PAGE

(M) PROCEDURES

21-21-02A

1. Primary Radio Rack Fan Check Valve inoperative in the closed position:
 - a. Check that the RADIO RACK FAN CAUTION (B1-82 EPC CBP Location U-29) circuit breaker is in.
 - b. In the avionics compartment, check that the RIGHT RADIO FAN OFF light on the GEN CONT RACK is not on (verifies Standby Fan operation).
 - c. Pull and secure the RADIO RACK FAN circuit breakers (all three phases).

<u>Circuit Breaker (CB#)</u>	<u>Panel</u>	<u>Location</u>
RADIO RACK FAN OA (B1-78)	EPC CBP	H-4
RADIO RACK FAN OB (B1-79)	EPC CBP	H-5
RADIO RACK FAN OC (B1-80)	EPC CBP	H-6

- d. Verify that the RADIO FAN OFF alert (AVNCS AIR FLOW alert on EFD-equipped aircraft) in the cockpit is illuminated.

NOTE: No live animals or temperature sensitive cargo is allowed in forward cargo compartment.

2. Standby Radio Rack Fan Check Valve inoperative in the closed position:
 - a. Pull and secure RADIO RACK FAN STANDBY circuit breakers to disable the Standby Radio Rack Fan (all three phases).

<u>Circuit Breaker (CB#)</u>	<u>Panel</u>	<u>Location</u>
RADIO RACK FAN OA (B1-78)	EPC CBP	H-4
RADIO RACK FAN OB (B1-79)	EPC CBP	H-5
RADIO RACK FAN OC (B1-80)	EPC CBP	H-6

- b. Verify that the RADIO FAN OFF alert (AVNCS AIR FLOW alert on EFD-equipped aircraft) in the cockpit is not illuminated. (Verifies primary radio rack fan operation).

21-21-02B

1. Both Radio Rack Fan Check Valve and Standby Radio Rack Fan Check Valve inoperative in the closed position or one or both inoperative open:
 - a. Verify both air conditioning systems are available for pressurized flight.
 - b. On aircraft with the Standardized Flight Deck, select the RADIO RACK switch to VENTURI. On aircraft with the Enhanced Flight Deck, select AVNCS FAN switch to OVRD.
 - c. With both check valves inoperative closed. Pull and secure RADIO RACK FAN and RADIO RACK FAN STANDBY circuit breakers (all three phases on both fans, as listed in the tables above).
 - d. Limit ground operation of electric equipment to 45 minutes.

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1) Option 1

- a. Applying ground conditioned air directly into the E&E compartment through the E&E compartment door for at least 15 minutes. This resets the 45 minute time limit requirement.

NOTE: To reduce the possibility of exceeding the 45 minute time limit requirement, it is recommended that ground conditioned air be applied directly into the E&E compartment until push back.

- b. Perform a Return to Service (RTS)/repair any equipment indicating a fault during the cool down period and/or dispatch per MMEL.
- c. Close E&E compartment door prior to push back.

2) Option 2

- a. Remove all aircraft electrical power or operating using only Ground Service electrical power with avionics turned off for at least 15 minutes. This resets the 45 minute time limit requirement.
- b. Perform a Return to Service (RTS)/repair any equipment indicating a fault during the cool down period and/or dispatch per MMEL.
- c. Close E&E compartment door prior to push back.

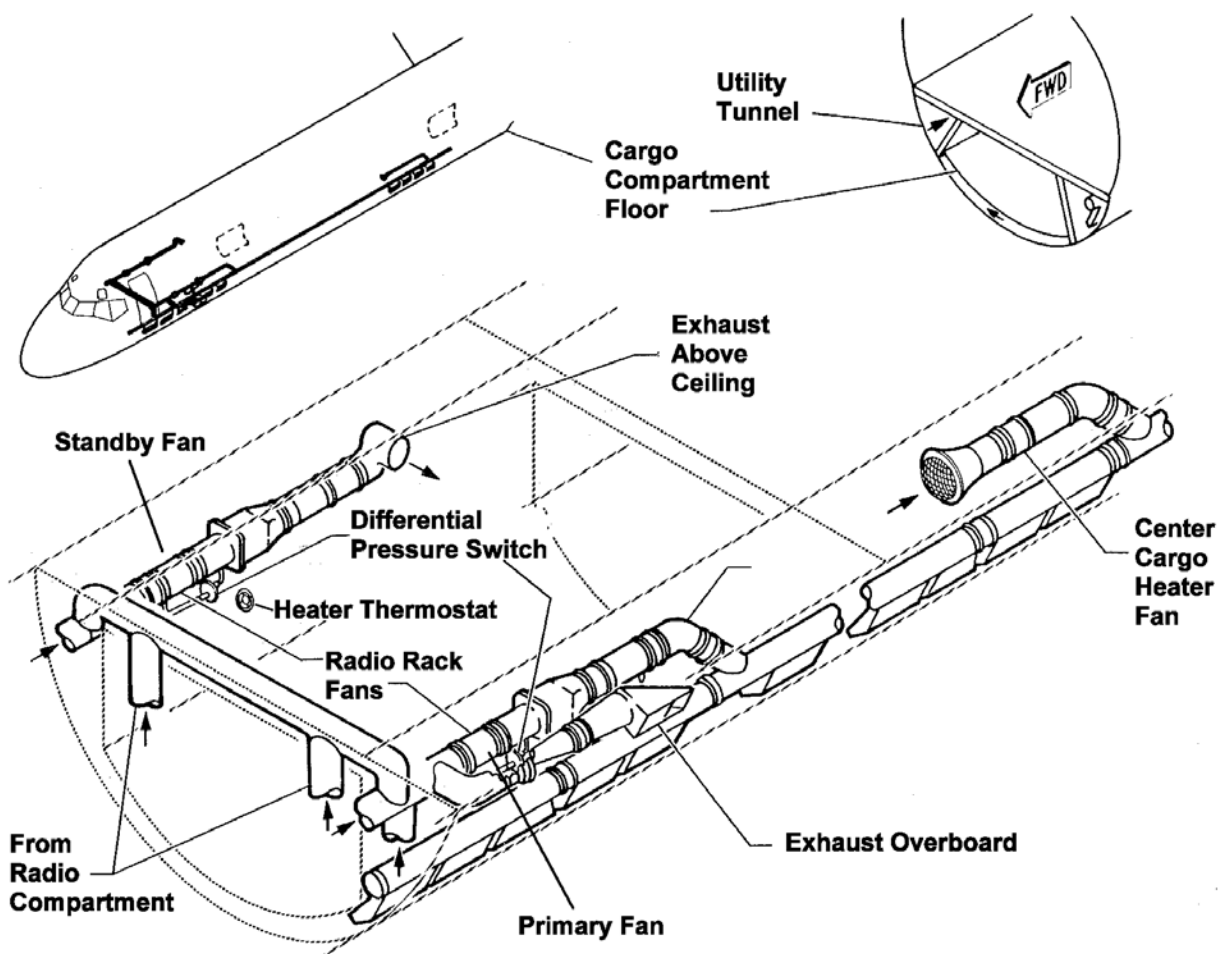
NOTE: No live animals or temperature sensitive cargo is allowed in forward cargo compartment.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH			
FLIGHT CREW MAY PLACARD			N	1	0	REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION	REMARKS OR EXCEPTIONS					
21-21-03	RADIO FAN OFF Annunciator System	(M) May be inoperative provided an audible check is made for satisfactory Radio Rack Fan operation PRIOR TO EACH DEPARTURE (Log Book Entry Required). Repetitive Check Required (Yellow Placard).					

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-21-03	Radio Rack Venturi / Fan Switch	RADIO RACK FAN OFF Light INOP

(M) PROCEDURES

Listen for Primary and Standby fan operation either in the avionics compartment, or through the left and right lining panels in the forward cargo compartment.



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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH			
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY			
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS	
21-22-01	Cabin Air Recirculation Fan	Y	1	0	C	(M) May be inoperative or missing provided Cabin Air Recirculation System is deactivated.	

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-22-01	AIR CONDITIONING Control Panel	Cabin Air Recirculation Fan INOP

(M) PROCEDURES

Pull and secure the one RECIRCULATING FAN CONTROL and three RECIRCULATION FAN circuit breakers located on the EPC circuit breaker panel (J-7,J-8,J-9,J-10) (EPC panel located behind captains seat).

Nomenclature	Location on Center EPC	Circuit Breaker
Recirculating Fan Control	J-7	B1-776
Recirculating Fan	J-8	B1-1081
Recirculating Fan	J-9	B1-1082
Recirculating Fan	J-10	B1-1083

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
21-22-02	Cabin Air Recirculation Fan Filter	Y	1	0	C (M) May be inoperative or missing provided Cabin Air Recirculation System is deactivated.

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-22-02	AIR CONDITIONING Control Panel	1. Cabin Air Recirculation Fan Filter INOP / Missing 2. Cabin Air Recirculation Fan Deactivated

(M) PROCEDURES

Pull and secure the three RECIRCULATION FAN circuit breakers located on the EPC circuit breaker panel (J-8,J-9,J-10) (EPC panel located behind captains seat).

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
21-22-03A	Ram / Ground Conditioned Air Check Valves "DISP.APPR.REQ'D."	N	2	1 C	(O)(M) May be inoperative OPEN provided: a) Associated Air Conditioning System is not used, and b) The airplane remains at or below FL 250.
21-22-03B	Ram / Ground Conditioned Air Check Valves "DISP.APPR.REQ'D."	N	2	0 C	(O)(M) May be inoperative OPEN provided: a) Ground Conditioned Air Connector Door is CLOSED and LATCHED, b) Flight is conducted in an unpressurized configuration, c) Ram Air Valve System is operative, and d) Air Conditioning Systems are not used.
21-22-03C	Ram / Ground Conditioned Air Check Valves	Y	2	0 C	May be inoperative CLOSED.

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-22-03A	Cabin Pressure Control Panel	___ Ram / Ground A/C Check Valve INOP OPEN
21-22-03B	Cabin Pressure Control Panel	___ Ram / Ground A/C Check Valve(s) INOP OPEN
21-22-03C	Cabin Pressure Control Panel	___ Ram / Ground A/C Check Valve(s) INOP CLOSED

(O) PROCEDURES

21-22-03A

Limit flight altitude to a maximum of FL 250.

21-22-03B

1. Refer to [QRH](#), Non-Normal Checklist, Section 2, Air Systems, Unpressurized Flight.
2. Limit flight altitude to a maximum of 10,000 ft. MSL.

(M) PROCEDURES

21-22-03A , 21-22-03B

1. Select the affected AIR COND SUPPLY switch to OFF.
2. Ensure that the Aft Ground Conditioned Air Door is closed and latched.

 DELTA	MD-90 Minimum Equipment List	ATA 21 Air Conditioning	R13 04/27/15 Page 21-13
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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
21-22-04A	Forward Ground Conditioned Air Check Valves "DISP.APPR.REQ'D."	N	2	0	C (O)(M) May be inoperative provided: a) Forward Ground Connector Flapper is operative, b) Forward Ground Connector Door is CLOSED and LATCHED, and c) The airplane remains at or below FL 250.
21-22-04B	Forward Ground Conditioned Air Check Valves "DISP.APPR.REQ'D."	N	2	0	C (O)(M) May be inoperative provided: a) Flight is conducted in an unpressurized configuration, b) Ram Air Valve System is operative, and c) Air Conditioning Systems are not used.

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-22-04A	Cabin Pressure Control Panel	___Fwd Ground A/C Check Valve(s) INOP CLOSED
21-22-04B	Cabin Pressure Control Panel	___Fwd Ground A/C Check Valve(s) INOP

(O) PROCEDURES

21-22-04A

Limit flight altitude to a maximum of FL 250.

21-22-04B

1. Refer to [QRH](#), Non-Normal Checklist, Section 2, Air Systems, Unpressurized Flight.
2. Limit flight altitude to a maximum of 10,000 ft. MSL.

(M) PROCEDURES

21-22-04A

1. Verify that no flow is escaping past Forward Ground Connector Flapper by pressurizing the aircraft as follows:
 - a. Manually close the Outflow Valve.
 - b. Close all aircraft doors and windows.
 - c. Using engines, APU, or ground pneumatic source, pressurize aircraft to 7 psig. Using an external observer, verify no flow at the forward ground connector port.
2. Ensure the Forward Ground Connector Door is properly closed and latched.

21-22-04B

Select both AIR COND SUPPLY switches to OFF and placard switches, "DO NOT USE."

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
21-22-05	Conditioned Air Check Valves	N	2	0	C May be inoperative OPEN provided both Ram / Ground Conditioned Air Check Valves are operative if the Air Conditioning Systems are to be used.

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-22-05	Cabin Pressure Control Panel	____ Conditioned Air Check Valve(s) INOP OPEN

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH			
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY			
ITEM NO.		NAME / DESCRIPTION				REMARKS OR EXCEPTIONS	
21-22-06	Cold Air Check Valves	N	2	0	C	May be inoperative OPEN provided both Ram / Ground Conditioned Air Check Valves are operative if the Air Conditioning Systems are to be used.	

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-22-06	Cabin Pressure Control Panel	____ Cold Air Check Valve(s) INOP OPEN

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
21-26-01	Cockpit Instrument Cooling Fan	Y	1	0 C	(O) May be inoperative provided at least one Air Conditioning System is operating whenever EFIS display units are operating. When ambient temperature is above 90 degrees F, at least one Air Conditioning System must be operated with FULL COLD selected.

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-26-01	FLOW Indicator (Upper Ctr Inst Pnl)	Cockpit Instrument Cooling Fan INOP

(O) PROCEDURES

NOTE: EFIS Display Units are operating (even if the display units are turned down) whenever power is being supplied to the 115 VAC left and / or Right Busses.

1. Operate at least one Air Conditioning Pack (preferably the left pack) whenever electrical power is being supplied to the 115 VAC left and / or Right Busses.
2. If outside air temperature is above 90° F, rotate knob on Cockpit Temperature Selector to COLD and verify associated Temperature Control Valve Position Indication moves fully to COLD position.
3. If practical, heat output of display units may be reduced by rotating PFD and ND control knobs on EFIS control panels fully counter-clockwise past the detent to the OFF position.

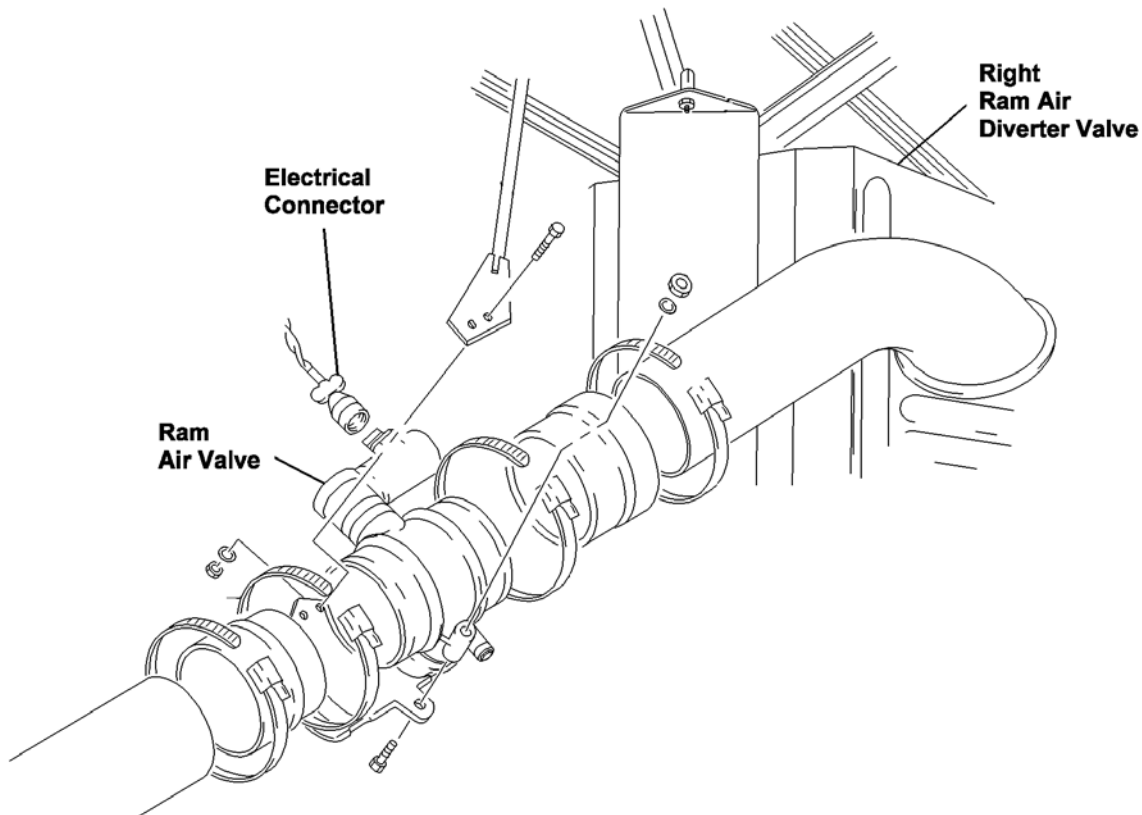
NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
21-26-02	Cockpit Instrument Cooling Fan Flow Indicator	Y	1	0	C

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-26-02	FLOW Indicator (Upper Ctr Inst Pnl)	Cockpit Instrument Cooling Fan Flow Indicator INOP

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD			0	REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION	N		C	REMARKS OR EXCEPTIONS	
21-28-01A	Ram Air Valve	N		1	C	May be inoperative provided: a) Ram Air Valve is OPEN, and b) All Ground Air Conditioning Check Valves are operative.
21-28-01B	Ram Air Valve	N	1	0	C	May be inoperative provided: a) Ram Air Valve is CLOSED, and b) Both Air Conditioning Systems are operative.

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-28-01A	RAM AIR Switch	Ram Air Valve INOP OPEN
21-28-01B	RAM AIR Switch	Ram Air Valve INOP CLOSED



NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH			
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY			
ITEM NO. NAME / DESCRIPTION					REMARKS OR EXCEPTIONS		
21-31-01A	Automatic Cabin Pressure Control Systems	Y	2	1	C		
21-31-01B	Automatic Cabin Pressure Control Systems	Y	2	0	C	(O)(M) May be inoperative provided: a) Manual pressurization system is operative, and b) Autopilot is operative in all axes (pitch, roll, and yaw).	
21-31-01C	Automatic Cabin Pressure Control Systems “DISP.APPR.REQ’D.”	Y	2	0	C	(O)(M) May be inoperative provided: a) Flight is conducted in an unpressurized configuration, and b) Cabin Air Outflow Valve remains OPEN.	

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-31-01A	Cabin Pressure Control Panel	___Auto Cabin Pressure Controller System INOP
21-31-01B	Cabin Pressure Control Panel	Both Auto Cabin Pressure Controller Systems INOP
21-31-01C	Cabin Pressure Control Panel	Both Auto Cabin Pressure Controller Systems INOP

(O) PROCEDURES

21-31-01B

Refer to [QRH](#), Non-Normal Checklist, Section 2, Air Systems, Manual Pressurization Control.

21-31-01C

1. Refer to [QRH](#), Non-Normal Checklist, Section 2, Air Systems, Unpressurized Flight.
2. Limit flight altitude to a maximum of 10,000 ft. MSL.

(M) PROCEDURES

21-31-01B

1. Pull and secure the 115 VAC and 28 VDC CABIN PRESSURE CONTROL circuit breakers (J-2, H-2, U-22, W-22).
2. In the cockpit, select manual cabin pressure control and move the Cabin Pressure Manual Control System (wheel / lever) aft to the full aft decrease position.

21-31-01C

1. Pull and secure the 115 VAC and 28 VDC CABIN PRESSURE CONTROL circuit breakers (J-2, H-2, U-22, W-22).
2. In the cockpit, select manual cabin pressure control and move the Cabin Pressure Manual Control System (wheel / lever) aft to the full aft decrease position.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS
	CABIN ALTITUDE WARNING SYSTEM					
21-33-01A	Cabin Altitude Warning System “DISP.APPR.REQ’D.”	Y	1	0	C	May be inoperative provided the airplane remains at or below 10,000 feet MSL.
21-33-01B	Cabin Altitude Warning Light	Y	1	0	C	May be inoperative provided Cabin Altitude Aural Warning System is operative.
21-33-01C	Cabin Altitude Aural Warning	N	1	0	C	May be inoperative provided Cabin Altitude Warning Light System is operative.

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-33-01A	Cabin Pressure Control Panel	Cabin Altitude Warning System INOP
21-33-01B	Cabin Pressure Control Panel	Cabin Altitude Warning Light INOP
21-33-01C	Cabin Pressure Control Panel	Cabin Altitude Aural Warning INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
	CABIN ALTITUDE AND DIFFERENTIAL PRESSURE INDICATOR				
21-33-02A	Cabin Altitude and Differential Pressure Indicator "DISP.APPR.REQ'D."	N	1	0	C (O)(M) May be inoperative provided: a) Flight is conducted in an unpressurized configuration, and b) The Cabin Air Outflow Valve is secured OPEN.
21-33-02B	ALTITUDE Indication	Y	1	0	C (O) May be inoperative provided: a) Cabin DIFFERENTIAL PRESSURE portion of the indicator is operative, and b) A chart is provided to the crew to convert cabin differential pressure to cabin altitude.
21-33-02C	DIFFERENTIAL PRESSURE Indication	Y	1	0	C (O) May be inoperative provided: a) Cabin ALTITUDE portion of the indicator is operative, and b) A chart is provided to the crew to convert cabin altitude to cabin differential pressure.

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-33-02A	CAB ALT / DIFF PRESS Indicator	Cabin Alt and Diff Pressure Indicator INOP
21-33-02B	CAB ALT / DIFF PRESS Indicator	Cabin Altitude Indication INOP
21-33-02C	CAB ALT / DIFF PRESS Indicator	Cabin Differential Pressure Indication INOP

(O) PROCEDURES

21-33-02A

- Refer to [QRH](#), Non-Normal Checklist, Section 2, Air Systems, Unpressurized Flight.
- Limit flight altitude to a maximum of 10,000 ft. MSL.

21-33-02B

When cabin altitude information is required, consult conversion chart on overhead panel.

21-33-02C

When differential pressure information is required, consult conversion chart on overhead panel.

(M) PROCEDURES

21-33-02A

- Pull and secure the 115 VAC and 28 VDC CABIN PRESSURE CONTROL circuit breakers (H-2, J-2, U-22, W-22) (EPC panel located behind captains seat).
- In the cockpit, select manual cabin pressure control by moving the CABIN ALT control lever to the manual (down) position.
- Press down and rotate the control wheel aft to fully open the Outflow Valve.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS
21-33-03A	Cabin Rate-of-Climb Indicator	Y	1	0	C	May be inoperative provided all other components of the cabin pressurization control system are operative.
21-33-03B	Cabin Rate-of-Climb Indicator “DISP.APPR.REQ’D.”	N	1	0	C	(O)(M) May be inoperative provided: a) Flight is conducted in an unpressurized configuration, and b) The Cabin Air Outflow Valve remains OPEN.

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-33-03A	CABIN CLIMB Indicator	Cabin Rate of Climb Indicator INOP
21-33-03B	CABIN CLIMB Indicator	Cabin Rate of Climb Indicator INOP

(O) PROCEDURES

21-33-03B

1. Refer to [QRH](#), Non-Normal Checklist, Section 2, Air Systems, Unpressurized Flight.
2. Limit flight altitude to a maximum of 10,000 ft. MSL.

(M) PROCEDURES

21-33-03B

1. Pull and secure the 115 VAC and 28 VDC CABIN PRESSURE CONTROL circuit breakers (H-2, J-2, U-22, W-22) (EPC panel located behind captains seat).
2. In the cockpit, select manual cabin pressure control by moving the CABIN ALT control lever to the manual (down) position.
3. Press down and rotate the control wheel aft to fully open the Outflow Valve.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
21-34-01	Cabin Air Outflow Valve "DISP.APPR.REQ'D."	N	1	0	C (O)(M) May be inoperative provided: a) Flight is conducted in an unpressurized configuration, and b) The Cabin Air Outflow Valve is secured OPEN.

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-34-01	Cabin Pressure Control Panel	Cabin Air Outflow Valve INOP

(O) PROCEDURES

1. Refer to [QRH](#), Non-Normal Checklist, Section 2, Air Systems, Unpressurized Flight.
2. Limit flight altitude to a maximum of 10,000 ft. MSL.

(M) PROCEDURES

1. Pull and secure the 115 VAC and 28 VDC CABIN PRESSURE CONTROL circuit breakers (H-2, J-2, U-22, W-22) (EPC panel located behind captains seat).
2. In the cockpit, select manual cabin pressure control by moving the CABIN ALT control lever to the manual (down) position.
3. Press down and rotate the control wheel aft to fully open the Outflow Valve.
4. At the outflow valve, verify that the valve is approximately in the full open position and locked by the manual control in the cockpit. Push on the butterfly valve toward closed (upward). It will normally rotate, stretching the manual cable, about 30° and spring return to full open ±30°. Attempt to force the nozzle valve similarly toward closed. If it is similarly restrained open ±2 inches at the tip, the valve can be considered secured in the open position.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
21-34-02	Cabin Pressure Safety Valves "DISP.APPR.REQ'D."	N	2	0	C (O)(M) May be inoperative provided: a) Flight is conducted in an unpressurized configuration, and b) The Cabin Air Outflow Valve remains OPEN.

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-34-02	Cabin Pressure Control Panel	____ Cabin Pressure Safety Valve(s) INOP

(O) PROCEDURES

1. Refer to [QRH](#), Non-Normal Checklist, Section 2, Air Systems, Unpressurized Flight.
2. Limit flight altitude to a maximum of 10,000 ft. MSL.

(M) PROCEDURES

1. Pull and secure the 115 VAC and 28 VDC CABIN PRESSURE CONTROL circuit breakers (H-2, J-2, U-22, W-22) (EPC panel located behind captains seat).
2. In the cockpit, select manual cabin pressure control by moving the CABIN ALT control lever to the manual (down) position.
3. Press down and rotate the control wheel aft to fully open the Outflow Valve.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
21-42-01	Mid Cargo Compartment Heating Fan	Y	1	0	C (M) May be inoperative provided heating is not required for cargo being carried.

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-42-01	RADIO RACK Switch	Mid Cargo Compartment Heating Fan INOP

(M) PROCEDURES

Pull and secure the three (3) CARGO COMPARTMENT HEATER FAN circuit breakers.

Circuit Breaker (CB#)	Panel	Location
CARGO COMPARTMENT HEATER FAN (B1-865)	Center EPC (Behind Captains Seat)	Row H
CARGO COMPARTMENT HEATER FAN (B1-866)	Center EPC (Behind Captains Seat)	Row H
CARGO COMPARTMENT HEATER FAN (B1-867)	Center ECP (Behind Captains Seat)	Row H

NOTE: Heating is not required in the Mid Cargo Compartment, temp sensitive cargo is carried only in the forward cargo compartment.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
21-42-02	Forward Cargo Compartment Heating System "DISP.APPR.REQ'D."	Y	1	0	C (O)(M) May be inoperative provided system is deactivated.

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-42-02	RADIO RACK Switch	FWD Cargo Compartment Heater System INOP

(O) PROCEDURES

No live animals or temperature sensitive cargo is allowed in forward cargo compartment.

(M) PROCEDURES

Pull and secure the three (3) CARGO COMPARTMENT HEATER circuit breakers.

Circuit Breaker (CB#)	Panel	Location
CARGO COMPARTMENT HEATER (B1-655)	Center EPC (Behind Captains Seat)	J-12
CARGO COMPARTMENT HEATER (B1-656)	Center EPC (Behind Captains Seat)	J-13
CARGO COMPARTMENT HEATER (B1-657)	Center ECP (Behind Captains Seat)	J-14

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
21-51-01A	Air Conditioning Systems "DISP.APPR.REQ'D."	N	2	1	C (O)(M) May be inoperative provided: a) The aircraft remains at or below FL 250, and b) Affected Flow Control Valve is deactivated CLOSED.
21-51-01B	Air Conditioning Systems "DISP.APPR.REQ'D."	N	2	0	C (O)(M) May be inoperative provided: a) Flight is conducted in an unpressurized configuration, b) Ram Air Valve System is operative, and c) Affected Flow Control Valve is deactivated CLOSED.

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-51-01A	Associated A/C SUPPLY Switch	____ A/C System INOP
21-51-01B	1. Associated A/C SUPPLY Switches 2. RAM AIR Switch	1. ____ A/C Systems INOP 2. Use Ram Air Valve in ON Position

(O) PROCEDURES

21-51-01A

Limit flight altitude to a maximum of FL 250.

21-51-01B

1. Refer to [QRH](#), Non-Normal Checklist, Section 2, Air Systems, Unpressurized Flight.
2. Limit flight altitude to a maximum of 10,000 ft. MSL.

(M) PROCEDURES

21-51-01A

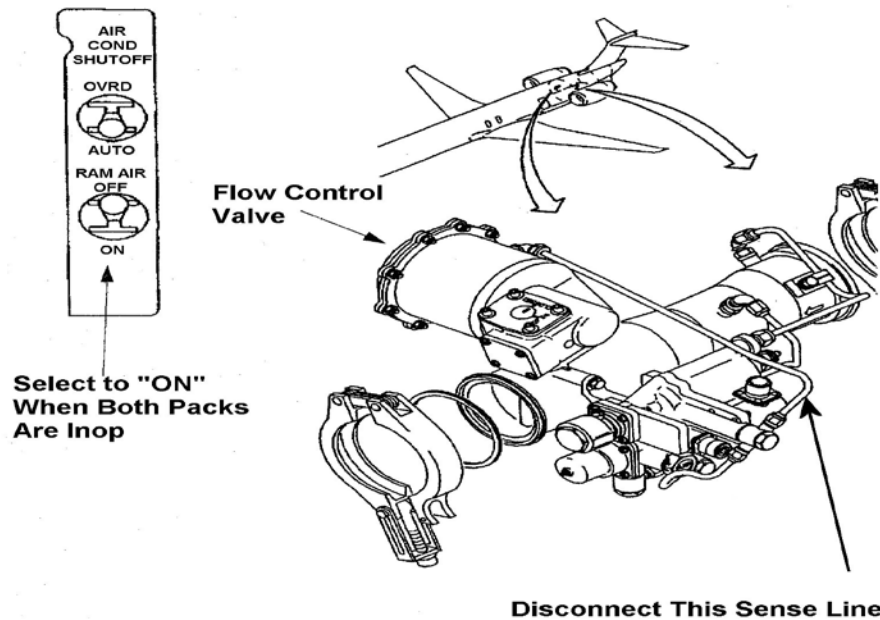
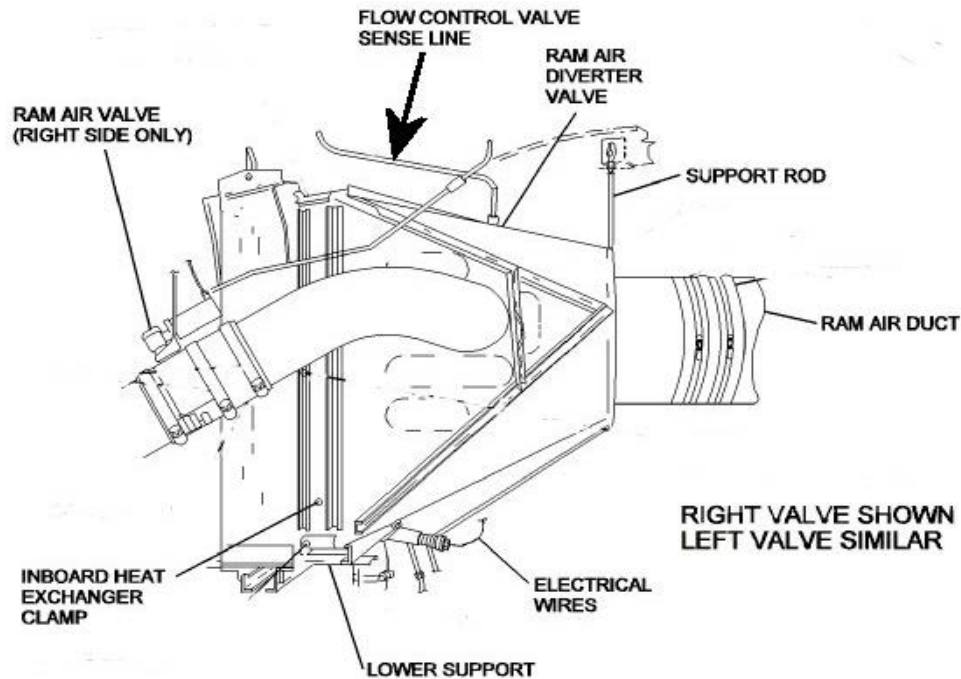
1. Select the affected AIR COND SUPPLY switch to OFF.
2. Disconnect the affected ram air sense line from Air Conditioning Flow Control Valve. The sense line may be disconnected from the Heat Exchanger (preferred), or at the Flow Control Valve. Make an entry in the aircraft log as to which location the sense line was disconnected.
3. Pressurize pneumatic ducts, i.e., run APU, etc., and open crossfeed valves. Shut off operative pack and verify that affected pack is producing no flow by feeling at open cockpit air conditioning outlets.

21-51-01B

1. Select the RAM AIR switch to ON.
2. Check that the ram air valve position indicator on the valve indicates that the ram air valve is in the open position.
3. Select both AIR COND SUPPLY switches to OFF.

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4. Disconnect the affected ram air sense line from Air Conditioning Flow Control Valve. The sense line may be disconnected from the Heat Exchanger (preferred), or at the Flow Control Valve. Make an entry in the aircraft log as to which location the sense line was disconnected.
5. Pressurize pneumatic ducts, i.e., run APU, etc., and open crossfeed valves. Verify that packs are producing no flow by feeling at open cockpit air conditioning outlets.



NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
21-51-02A	Air Conditioning Flow Control Valve "DISP.APPR.REQ'D."	N	2	1	C (O)(M) May be inoperative provided: a) Affected Flow Control Valve is CLOSED, b) Associated Air Conditioning System is not used, and c) The airplane remains at or below FL 250.
21-51-02B	Air Conditioning Flow Control Valve "DISP.APPR.REQ'D."	N	2	0	C (O)(M) May be inoperative provided: a) Flight is conducted in an unpressurized configuration, b) Ram Air Valve System is operative, and c) Affected Flow Control Valve is CLOSED.

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-51-02A	Associated A/C SUPPLY Switch	1. ____ A/C Flow Control Valve INOP 2. Do NOT Use ____ A/C System
21-51-02B	1. Associated A/C SUPPLY Switches 2. RAM AIR Switch	1. ____ A/C Flow Control Valve INOP 2. Do NOT Use A/C Systems 3. Use Ram Air Valve In ON Position

(O) PROCEDURES

21-51-02A

Limit flight altitude to a maximum of FL 250.

21-51-02B

1. Refer to [QRH](#), Non-Normal Checklist, Section 2, Air Systems, Unpressurized Flight.
2. Limit flight altitude to a maximum of 10,000 ft. MSL.

(M) PROCEDURES

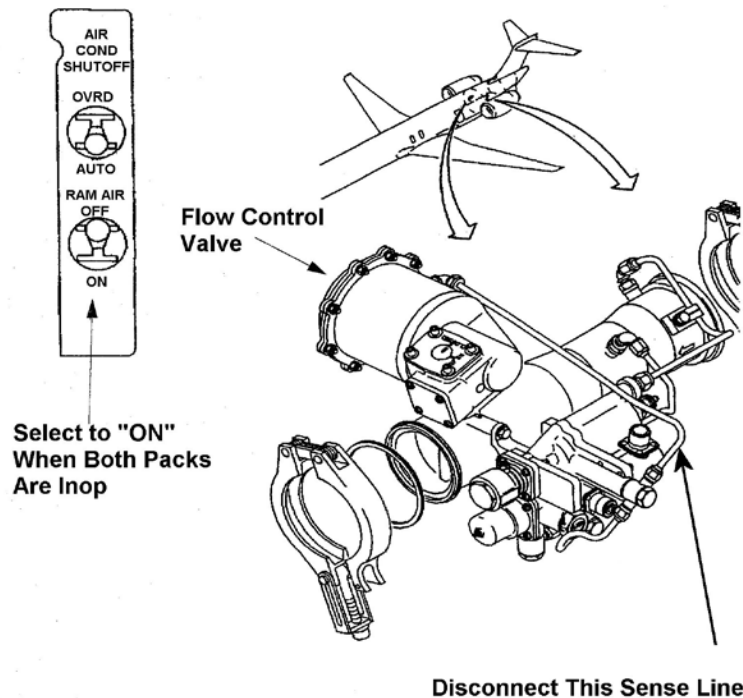
21-51-02A

1. Select the affected AIR COND SUPPLY switch to OFF.
2. Disconnect the affected ram air sense line from Air Conditioning Flow Control Valve. The sense line may be disconnected from the Heat Exchanger (preferred), or at the Flow Control Valve. Make an entry in the aircraft log as to which location the sense line was disconnected.
3. Pressurize pneumatic ducts, i.e., run APU, etc., and open crossfeed valves. Shut off operative pack and verify that affected pack is producing no flow by feeling at open cockpit air conditioning outlets.

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21-51-02B

1. Select the RAM AIR switch to ON.
2. Check that the ram air valve position indicator on the valve indicates that the ram air valve is in the open position.
3. Select both AIR COND SUPPLY switches to OFF.
4. Disconnect the affected ram air sense line from Air Conditioning Flow Control Valve. The sense line may be disconnected from the Heat Exchanger (preferred), or at the Flow Control Valve. Make an entry in the aircraft log as to which location the sense line was disconnected.
5. Pressurize pneumatic ducts, i.e., run APU, etc., and open crossfeed valves. Verify that packs are producing no flow by feeling at open cockpit air conditioning outlets.



NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
21-51-03A	Air Conditioning Cooling Air Diverter Valves (Flapper) "DISP.APPR.REQ'D."	N	2	1	C (O)(M) May be inoperative in the Fan Air Cooling only position provided: a) The affected Valve is in the Left Air Conditioning system, b) The airplane remains at or below FL 250, and c) Left Air Conditioning System is selected OFF before becoming airborne.
21-51-03B	Air Conditioning Cooling Air Diverter Valves (Flapper)	N	2	0	C (O)(M) May be inoperative in the Ram Air Cooling only position provided: a) The affected Air Conditioning System is not used prior to becoming airborne, and b) The affected Air Conditioning System is selected OFF before landing.

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-51-03A	Associated A/C SUPPLY Switch	1. ____ A/C Cooling Air Diverter Valve INOP 2. Do NOT Use ____ A/C System In Flight
21-51-03B	Associated A/C SUPPLY Switches	1. ____ A/C Cooling Air Diverter Valves INOP 2. Do NOT Use ____ A/C System Prior to T/O or Before Landing

(O) PROCEDURES

21-51-03A

1. Prior to takeoff, ensure that the left Air Conditioning Supply switch is OFF.
2. Limit flight altitude to a maximum of FL 250.
3. Left pack may be used after landing.

21-51-03B

1. Ensure affected Air Conditioning Supply switch(es) is (are) OFF while the aircraft is on the ground.
2. After takeoff, select Air Conditioning Supply switch(es) to AUTO or as required.
3. Prior to landing, select affected Air Conditioning Supply switch(es) to OFF.

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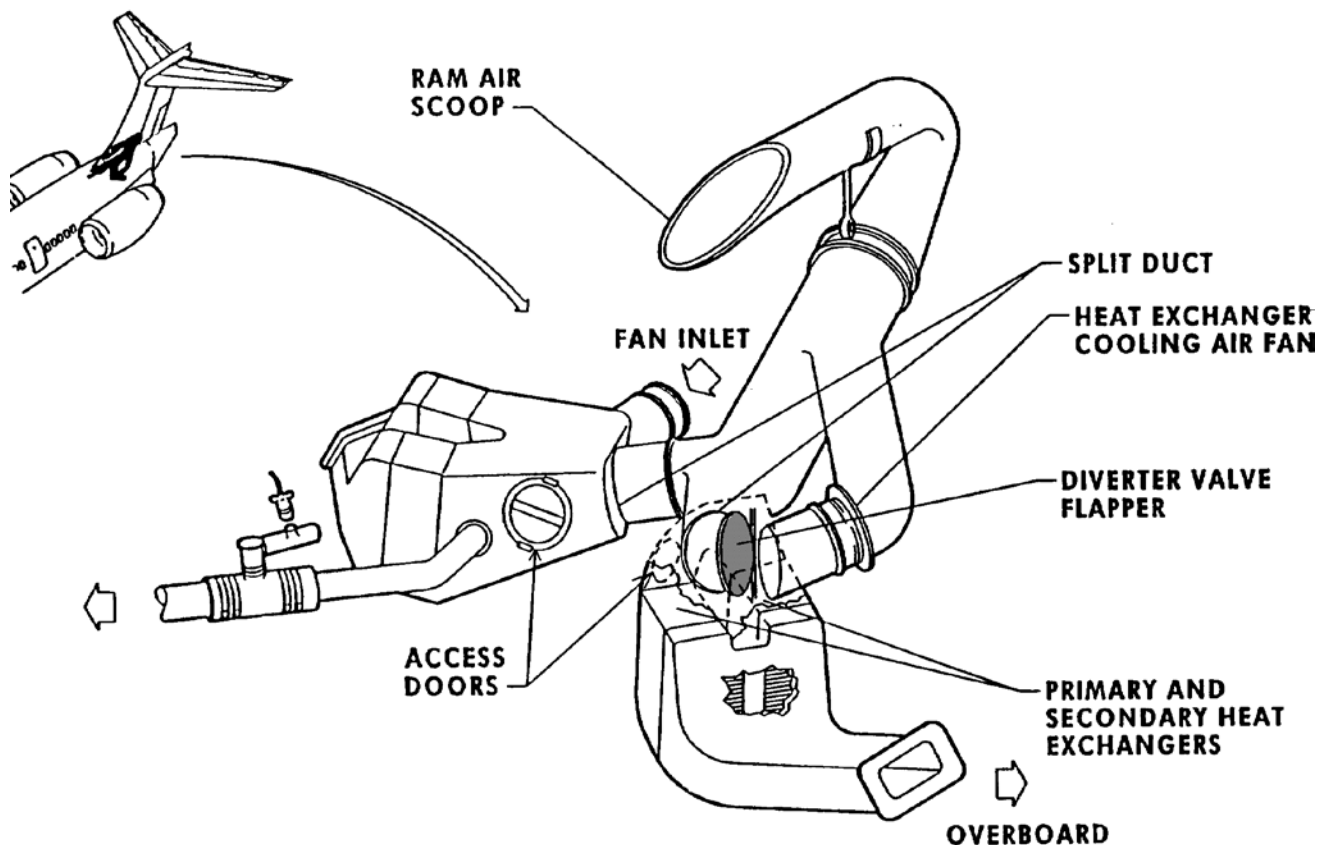
(M) PROCEDURES

21-51-03A

1. Ascertain whether valve failure causes the ram air door to be closed or whether the valve failure causes the fan air door to be closed.
2. If the fan air door is closed, the left pack should not be used on the ground. In the cockpit, select the left hand AIR CONDITIONING SUPPLY switch to OFF.
3. If the ram air door is closed, the left pack may be used as necessary on the ground.

21-51-03B

1. Ascertain whether valve failure causes the ram air door to be closed or whether the valve failure causes the fan air door to be closed.
2. If the fan air door is closed, the right pack should not be used on the ground. In the cockpit, select the right hand AIR CONDITIONING SUPPLY switch to OFF.
3. If the right ram air door is closed, the airplane may not be dispatched.



NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
21-52-02	Air Conditioning Flow Indicating Systems	Y	2	1 C	May be inoperative provided Pneumatic Manifold Pressure Indicating System is operative.

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-52-02	Affected A/C FLOW Indicator	____ A/C FLOW Indicator 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					
21-53-01	Bleed Air Cleaner System						

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-53-01	AIR CONDITIONING Control Panel	____ Bleed Air Cleaner System (s) INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
21-53-02	Compressor Discharge and Turbine Inlet Thermal Switches	N	4	0	C

(O)(M) May be inoperative provided:
a) Associated Air Conditioning System(s) are not operated before becoming airborne, and
b) Associated Air Conditioning System(s) are selected OFF before landing.

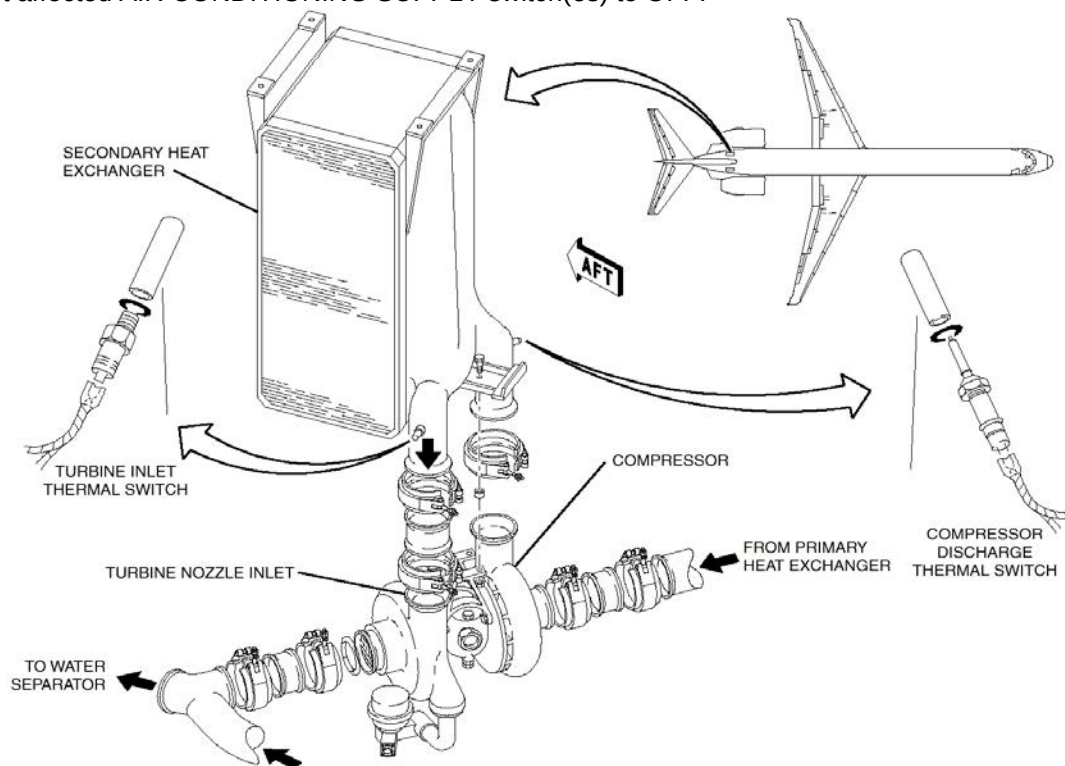
MEL ITEM	TAB LOCATION	PLACARD TEXT
21-53-02	Associated A/C SUPPLY Switch	1. ____ Compressor Discharge / Turbine Inlet Thermal Switches INOP 2. Do NOT Use ____ A/C System Prior to T/O or Before Landing

(O) PROCEDURES

1. Ensure affected AIR CONDITIONING SUPPLY switch(es) is (are) OFF while aircraft is on the ground.
2. After takeoff, select AIR CONDITIONING SUPPLY switch(es) to AUTO or as required.
3. Prior to landing select affected AIR CONDITIONING SUPPLY switch(es) to OFF.

(M) PROCEDURES

1. Disconnect and tie back connector(s) on affected thermal switches.
2. Select affected AIR CONDITIONING SUPPLY switch(es) to OFF.



NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
21-53-03A	Air Conditioning Turbine Nozzle Shutoff Valve "DISP.APPR.REQ'D."	N	2	1	C (O) May be inoperative CLOSED provided the airplane remains at or below FL 250.
21-53-03B	Air Conditioning Turbine Nozzle Shutoff Valve	N	2	0	C (M) May be inoperative provided associated Turbine Nozzle Shutoff Valve is secured OPEN.

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-53-03A	Associated A/C Supply Switch	___ A/C Turbine Nozzle Shutoff Valve INOP CLOSED
21-53-03B	Associated A/C Supply Switches	___ A/C Turbine Nozzle Shutoff Valve(s) INOP OPEN

(O) PROCEDURES

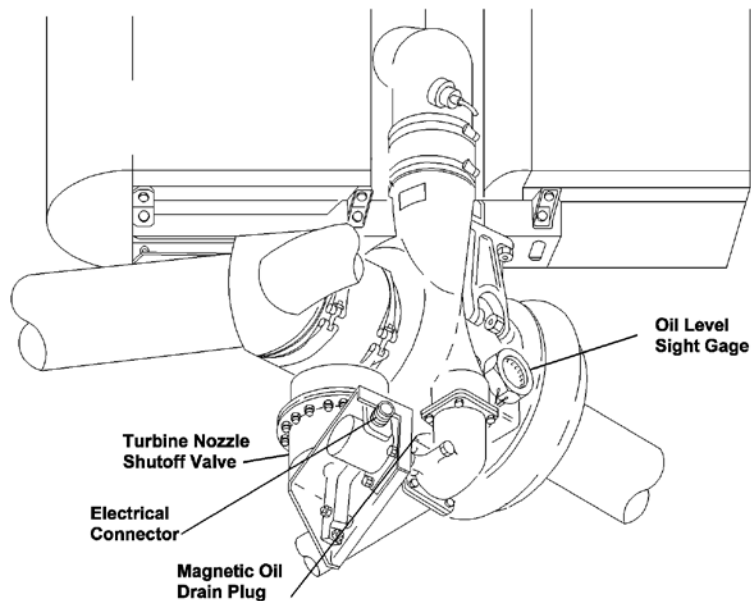
21-53-03A

Limit flight altitude to a maximum of FL 250.

(M) PROCEDURES

21-53-03B

Disconnect, cap, and stow connector on affected valve (s).



NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
21-54-01A	Air Conditioning Water Separators "DISP.APPR.REQ'D."	N	2	1	C (O) May be inoperative provided: a) Associated Air Conditioning System is not used, and b) The airplane remains at or below FL 250.
21-54-01B	Air Conditioning Water Separators "DISP.APPR.REQ'D."	N	2	0	C (O)(M) May be inoperative provided: a) Flight is conducted in an unpressurized configuration, b) Ram Air Valve System is operative, and c) Air Conditioning Systems are not used.

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-54-01A	Associated A/C SUPPLY Switch	1. ____ A/C Water Separator INOP 2. Do NOT Use ____ A/C System
21-54-01B	1. Associated A/C SUPPLY Switches 2. RAM AIR Switch	1. ____ A/C Water Separators INOP 2. Do NOT Use ____ A/C System 3. Use Ram Air Valve In ON Position

(O) PROCEDURES

21-54-01A

Limit flight altitude to a maximum of FL 250.

21-54-01B

1. Refer to [QRH](#), Non-Normal Checklist, Section 2, Air Systems, Unpressurized Flight.
2. Limit flight altitude to a maximum of 10,000 ft. MSL.

(M) PROCEDURES

21-54-01B

Select both AIR COND SUPPLY switches 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
21-54-02A	Water Separator 35 Degrees F Thermostats	N	2	0	C	May be inoperative provided the associated Air Conditioning Pack otherwise operates normally.
21-54-02B	Water Separator 35 Degrees F Thermostats “DISP.APPR.REQ’D.”	N	2	1	C	(O) May be inoperative provided: a) Associated Air Conditioning System is not used, and b) The airplane remains at or below FL 250.
21-54-02C	Water Separator 35 Degrees F Thermostats “DISP.APPR.REQ’D.”	N	2	0	C	(O)(M) May be inoperative provided: a) Flight is conducted in an unpressurized configuration, b) Ram Air Valve System is operative, and c) Air Conditioning Systems are not used.

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-54-02A	Associated A/C SUPPLY Switch	___ Water Separator 35° F Thermostats INOP
21-54-02B	Associated A/C SUPPLY Switch	1. ___ Water Separator 35° F Thermostats INOP 2. Do NOT Use ___ A/C System
21-54-02C	1. Associated A/C SUPPLY Switches 2. RAM AIR Switch	1. ___ Water Separator 35° F Thermostats INOP 2. Do NOT Use A/C Systems 3. Use Ram Air Valve In ON Position

(O) PROCEDURES

21-54-02B

Limit flight altitude to a maximum of FL 250.

21-54-02C

1. Refer to [QRH](#), Non-Normal Checklist, Section 2, Air Systems, Unpressurized Flight..
2. Limit flight altitude to a maximum of 10,000 ft. MSL.

(M) PROCEDURES

21-54-02C

Select both AIR COND SUPPLY switches 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
21-54-03A	Water Separator 35 Degree F Control Valves "DISP.APPR.REQ'D."	N	2	1 C	(O) May be inoperative provided: a) Associated Air Conditioning System is not used, and b) The airplane remains at or below FL 250.
21-54-03B	Water Separator 35 Degree F Control Valves "DISP.APPR.REQ'D."	N	2	0 C	(O)(M) May be inoperative provided: a) Flight is conducted in an unpressurized configuration, b) Ram Air Valve System is operative, and c) Air Conditioning Systems are not used.

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-54-03A	Associated A/C SUPPLY Switch	1. ____ Water Separator 35° F Valve INOP 2. Do NOT Use ____ A/C System
21-54-03B	1. Associated A/C SUPPLY Switches 2. RAM AIR Switch	1. ____ Water Separator 35° F Valves INOP 2. Do NOT Use A/C Systems 3. Use Ram Air Valve In ON Position

(O) PROCEDURES

21-54-03A

Limit flight altitude to a maximum of FL 250.

21-54-03B

1. Refer to [QRH](#), Non-Normal Checklist, Section 2, Air Systems, Unpressurized Flight.
2. Limit flight altitude to a maximum of 10,000 ft. MSL.

(M) PROCEDURES

21-54-03B

Select both AIR COND SUPPLY switches to OFF.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
21-55-01	Heat Exchanger Cooling Air Fans	Y	2	0	C (O)(M) May be inoperative provided: a) Associated Air Conditioning System is not operated before becoming airborne, and b) Associated Air Conditioning System is selected OFF before landing.

	TAB LOCATION	PLACARD TEXT
21-55-01	Associated A/C SUPPLY Switches	1. ____ Heat Exchanger Cooling Fan(s) INOP 2. Do NOT Use ____ A/C System Prior to T/O or After Landing

(O) PROCEDURES

1. Ensure affected AIR CONDITIONING SUPPLY switch is OFF while aircraft is on the ground.
2. After takeoff, select AIR CONDITIONING SUPPLY switch to AUTO.
3. Prior to landing select affected AIR CONDITIONING SUPPLY switch to OFF.

(M) PROCEDURES

Pull and secure affected Heat Exchanger Cooling Fan circuit breakers.

EFFECTIVE ON SHIPS 9201-9216 & 9237-9252			
	B1-253	0A LEFT HEAT EXCHANGER COOLING FAN	BEHIND CAPTAINS SEAT
LEFT	B1-255	0B LEFT HEAT EXCHANGER COOLING FAN	BEHIND CAPTAINS SEAT
	B1-257	0C LEFT HEAT EXCHANGER COOLING FAN	BEHIND CAPTAINS SEAT
	B1-659	LEFT HEAT EXCHANGER COOLING FAN CONTROL	H-10

EFFECTIVE ON SHIPS 9217-9236 & 9253-9265			
	B1-253	0A LEFT HEAT EXCHANGER COOLING FAN	BEHIND CAPTAINS SEAT
LEFT	B1-255	0B LEFT HEAT EXCHANGER COOLING FAN	BEHIND CAPTAINS SEAT
	B1-257	0C LEFT HEAT EXCHANGER COOLING FAN	BEHIND CAPTAINS SEAT
	B1-659	LEFT HEAT EXCHANGER COOLING FAN CONTROL	H-11

EFFECTIVE ON SHIPS 9201-9265			
	B1-254	0A RIGHT HEAT EXCHANGER COOLING FAN	BEHIND CAPTAINS SEAT
RIGHT	B1-256	0B RIGHT HEAT EXCHANGER COOLING FAN	BEHIND CAPTAINS SEAT
	B1-258	0C RIGHT HEAT EXCHANGER COOLING FAN	BEHIND CAPTAINS SEAT
	B1-660	RIGHT HEAT EXCHANGER COOLING FAN CONTROL	J-11

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
21-56-01	Air Conditioning Automatic Shut-Off System "DISP.APPR.REQ'D."	Y	1	0	C (O)(M) May be inoperative provided: a) Wing Landing Light Auto Extend/Retract System is considered inoperative and deferred per MEL 33-41-01, b) Both Air Conditioning Systems are selected OFF prior to takeoff, and c) Air Conditioning Systems are not selected ON until a minimum altitude of 400 feet AGL is attained.

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-56-01	A/C SUPPLY Switches	A/C Auto Shut-off System INOP

(O) PROCEDURES

1. If Wing Landing Lights are to be used, takeoff performance must consider the Auto Retract feature of the lights inoperative.
2. Prior to takeoff select both AIR CONDITIONING SUPPLY Switches to OFF.
3. After flap retraction, but not before 400 feet AGL altitude, select AIR CONDITIONING SUPPLY SWITCHES to AUTO.

(M) PROCEDURES

Open the AIR COND AUTO OFF & PURGING circuit breaker (U-28 EPC Panel) EPC Panel located behind the captain's seat.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
21-58-01A	AIR COND SUPPLY TEMP HI Annunciation Systems	Y	2	1	C (M) May be inoperative provided: a) Associated Air Conditioning Supply System is operated in HP BLD OFF, and b) Remaining Air Conditioning System and Air Conditioning Supply Systems are fully operational.
21-58-01B	AIR COND SUPPLY TEMP HI Annunciation Systems "DISP.APPR.REQ'D."	Y	2	1	C (O) May be inoperative provided: a) Associated Air Conditioning System is not used, and b) Airplane remains at or below FL 250.
21-58-01C	AIR COND SUPPLY TEMP HI Annunciation Systems	Y	2	0	C (M) May be inoperative provided: a) Compressor Discharge and Turbine Inlet Thermal Switches are fully operational, and b) Associated Pneumatic Supply System is fully operational.
21-58-01D	AIR COND SUPPLY TEMP HI Annunciation Systems "DISP.APPR.REQ'D."	Y	2	0	C (O)(M) May be inoperative provided: a) Flight is conducted in an unpressurized configuration, b) Ram Air Valve System is operative, and c) Air Conditioning Systems are not used.
21-58-01E	AIR COND SUPPLY TEMP HI Annunciation Systems "DISP.APPR.REQ'D."	Y	2	0	C (O)(M) May be inoperative provided: a) Both Air Conditioning Supply switches remain in HP BLD OFF, and b) Flight is conducted in an unpressurized configuration.

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-58-01A	Associated A/C SUPPLY Switch	1. ____ AIR COND TEMP HI Light INOP 2. Use ____ A/C System in HP BLD OFF position
21-58-01B	Associated A/C SUPPLY Switch	1. ____ AIR COND TEMP HI Light INOP 2. Do NOT Use ____ A/C System
21-58-01C	Associated A/C SUPPLY Switch	____ AIR COND TEMP HI Light INOP
21-58-01D	1. Associated A/C SUPPLY Switches 2. RAM AIR Switch	1. ____ AIR COND TEMP HI Light INOP 2. Do NOT Use A/C Systems 3. Use Ram Air Valve in ON Position
21-58-01E	Associated A/C SUPPLY Switches	1. ____ AIR COND TEMP HI Light INOP 2. A/C SUPPLY Switches remain in HP BLD OFF

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(O) PROCEDURES

21-58-01B

1. Select the affected Air Conditioning Supply switch to OFF.
2. Limit flight altitude to a maximum of FL 250.

21-58-01D

1. Select both Air Conditioning Supply switches to OFF.
2. Limit flight altitude to a maximum of 10,000 ft. MSL.
3. Refer to [QRH](#), Non-Normal Checklist, Section 2, Air Systems, Unpressurized Flight.

21-58-01E

1. Select both Air Conditioning Supply switches to HP BLEED OFF.
2. Limit flight altitude to a maximum of 10,000 ft. MSL.
3. Refer to QRH, Non-Normal Checklist, Section 2, Air Systems, Unpressurized Flight.

(M) PROCEDURES

21-58-01A, 21-58-01C, 21-58-01D, 21-58-01E

Pull and secure associated Supply Air Temp High circuit breakers (left U-26, or right W-26).

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
21-58-02A	Air Conditioning System Shutdown Thermal Switches "DISP.APPR.REQ'D."	N	2	1 C	(O) May be inoperative provided: a) Associated Air Conditioning System is not used, and b) The airplane remains at or below FL 250.
21-58-02B	Air Conditioning System Shutdown Thermal Switches "DISP.APPR.REQ'D."	N	2	0 C	(O)(M) May be inoperative provided: a) Flight is conducted in an unpressurized configuration, b) Ram Air Valve System is operative, and c) Air Conditioning Systems are not used.

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-58-02A	Associated A/C SUPPLY Switch	1. ____ A/C Shutdown Thermal Switches INOP 2. Do NOT Use ____ A/C System
21-58-02B	1. Associated A/C SUPPLY Switches 2. RAM AIR Switch	1. ____ A/C Shutdown Thermal Switches INOP 2. Do NOT Use ____ A/C System(s) 3. Use Ram Air Valve In ON Position

(O) PROCEDURES

21-58-02A

Limit flight altitude to a maximum of FL 250.

21-58-02B

1. Refer to [QRH](#), Non-Normal Checklist, Section 2, Air Systems, Unpressurized Flight.
2. Limit flight altitude to a maximum of 10,000 ft. MSL.

(M) PROCEDURES

21-58-02B

Select both AIR COND SUPPLY switches to OFF.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
21-62-01A	Cockpit / Cabin Compartment Auto Temperature Control Systems	Y	2	0	C (M) May be inoperative provided associated Manual Temperature Control System is operative.
21-62-01B	Cockpit / Cabin Compartment Auto Temperature Control Systems "DISP.APPR.REQ'D."	Y	2	1	C (O) May be inoperative provided: a) Associated Air Conditioning System is not used, and b) The airplane remains at or below FL 250.
21-62-01C	Cockpit / Cabin Compartment Auto Temperature Control Systems "DISP.APPR.REQ'D."	N	2	0	C (O)(M) May be inoperative provided: a) Flight is conducted in an unpressurized configuration, b) Ram Air Valve System is operative, and c) Air Conditioning Systems are not used.

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-62-01A	Associated CKPT / CABIN TEMP Selector	___ Compartment Auto Temperature Control Systems INOP
21-62-01B	1. Associated CKPT / CABIN TEMP Selector 2. Associated A/C SUPPLY Switch	1. ___ Compartment Auto Temperature Control Systems INOP 2. Do NOT Use ___ A/C System
21-62-01C	1. Associated CKPT / CABIN TEMP Selector 2. Associated A/C SUPPLY Switches 3. RAM AIR Switch	1. ___ Compartment Auto Temperature Control Systems INOP 2. Do NOT Use ___ A/C Systems 3. Use Ram Air Valve in ON Position

(O) PROCEDURES

21-62-01B

Limit flight altitude to a maximum of FL 250.

21-62-01C

1. Refer to [QRH](#), Non-Normal Checklist, Section 2, Air Systems, Unpressurized Flight.
2. Limit flight altitude to a maximum of 10,000 ft. MSL.

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(M) PROCEDURES

21-62-01A

1. Select associated air conditioning temperature control to MANUAL STOP.
2. Attempt to toggle valve toward hot and cold. If valve responds to toggling, (verified by the associated R VALVE or L VALVE position indication) the associated pack can be used with manual temperature control. Toggle valve as required.

21-62-01C

Select both AIR COND SUPPLY switches to OFF.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
21-62-02A	Cockpit / Cabin Compartment Temperature Control Valves "DISP.APPR.REQ'D."	Y	2	1	C (O) May be inoperative provided: a) Associated Air Conditioning System is not used, and b) The airplane remains at or below FL 250.
21-62-02B	Cockpit / Cabin Compartment Temperature Control Valves "DISP.APPR.REQ'D."	N	2	0	C (O)(M) May be inoperative provided: a) Flight is conducted in an unpressurized configuration, b) Ram Air Valve System is operative, and c) Air Conditioning Systems are not used.

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-62-02A	Associated A/C SUPPLY Switch	1. ____ Temperature Control Valve INOP 2. Do NOT Use ____ A/C System
21-62-02B	1. Associated A/C SUPPLY Switches 2. RAM AIR Switch	1. ____ Temperature Control Valve(s) INOP 2. Do NOT Use ____ A/C Systems 3. Use Ram Air Valve in ON Position

(O) PROCEDURES

21-62-02A

Limit flight altitude to a maximum of FL 250.

21-62-02B

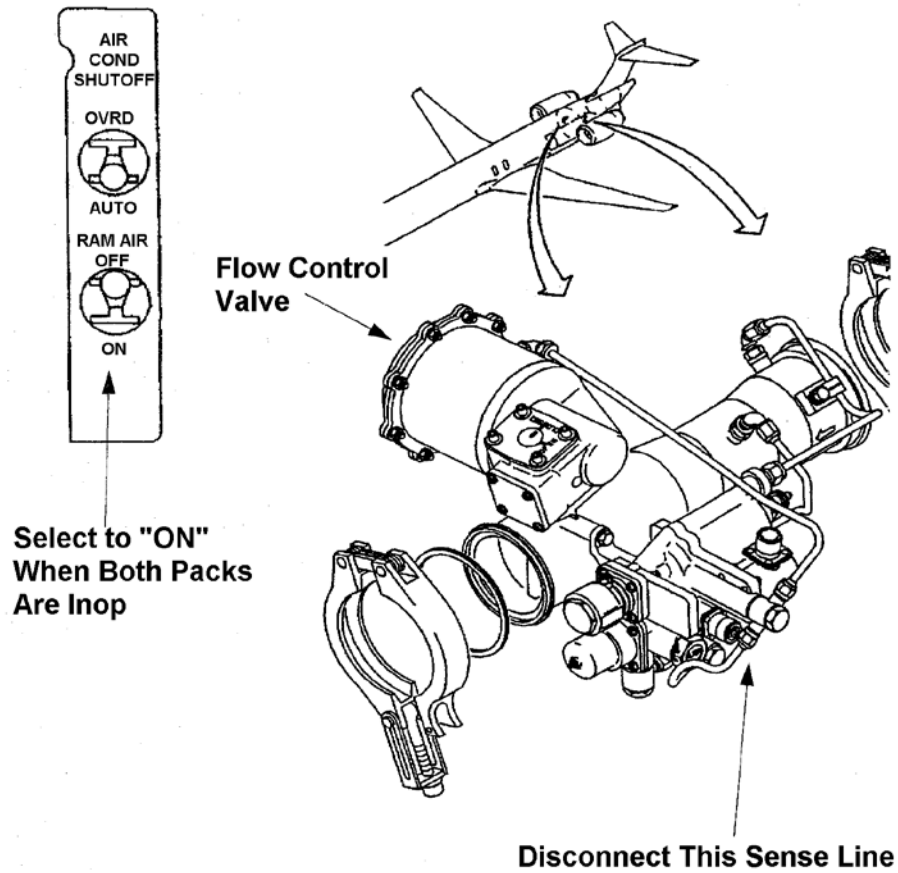
1. Refer to [QRH](#), Non-Normal Checklist, Section 2, Air Systems, Unpressurized Flight.
2. Limit flight altitude to a maximum of 10,000 ft. MSL.

(M) PROCEDURES

21-62-02B

1. Select the RAM AIR switch to ON.
2. Check that the ram air valve position indicator on the valve indicates that the ram air valve is in the open position.
3. Select both AIR COND SUPPLY switches to OFF.
4. Disconnect the ram air sense line from Air Conditioning Flow Control Valves. The sense lines may be disconnected from the Heat Exchanger (preferred), or at the Flow Control Valves. Make an entry in the aircraft log as to which location the sense lines were disconnected.
5. Pressurize pneumatic ducts, i.e., run APU, etc., and open crossfeed valves. Verify that packs are producing no flow by feeling at open cockpit air conditioning outlets.

CONTINUED NEXT PAGE



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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
21-62-03A	Cockpit Temperature Control 130 Degree F Limit System	N	1	0	C (M) May be inoperative provided a procedure is used to restore control of the Left Temperature Control Valve.
21-62-03B	Cockpit Temperature Control 130 Degree F Limit System "DISP.APPR.REQ'D."	N	1	0	C (O) May be inoperative provided: a) Left Air Conditioning System is not used, and b) The airplane remains at or below FL 250.

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-62-03A	CKPT TEMP Selector	Cockpit Temp. Control 130° F Limit System INOP
21-62-03B	CKPT TEMP Selector	1. Cockpit Temp. Control 130° F Limit System INOP 2. Do NOT Use Left A/C System

(O) PROCEDURES

21-62-03B

Limit flight altitude to a maximum of FL 250.

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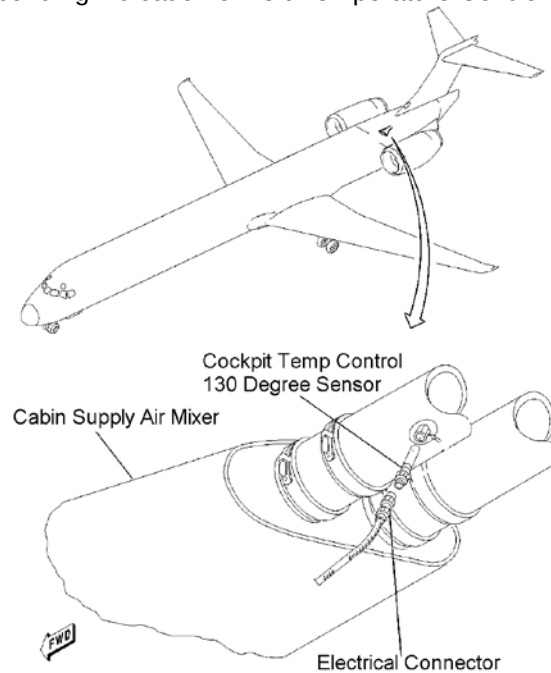
(M) PROCEDURES

21-62-03A

Comply with one of the following procedures:

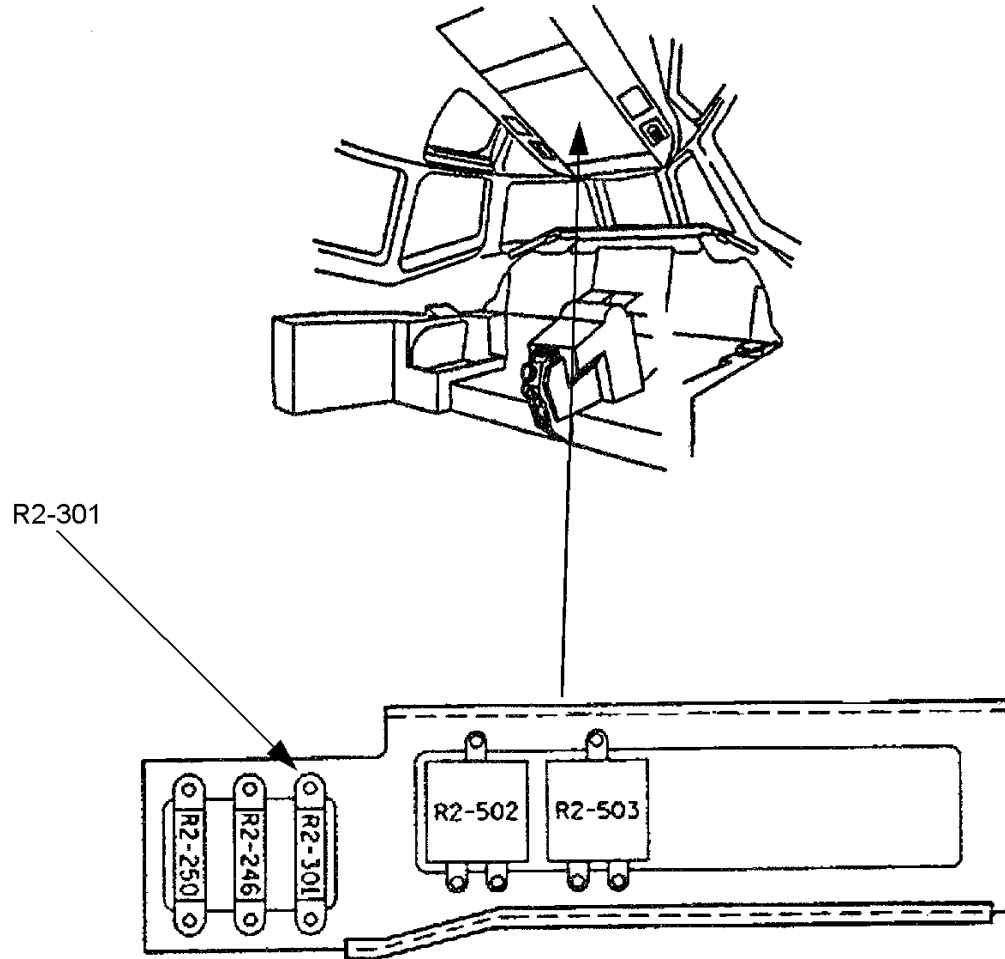
PROCEDURE I

1. Disconnect, cap, and stow 130° F sensor plug (P1-658).
2. Verify Cockpit Temperature Control is operative by manually selecting Cockpit Temperature to COLD and HOT and observing corresponding indication of Left Temperature Control Valve movement.

**CONTINUED NEXT PAGE**

POCEDURE II

1. Connect a jumper on relay R2-301 from pin A2 to A3.
2. Verify Cockpit Temperature Control is operative by manually selecting Cockpit Temperature to COLD and HOT and observing corresponding indication of Left Temperature Control Valve movement.



OVERHEAD PANEL RELAYS

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
21-63-01	Temperature Control Valve Position Indicating Systems	Y	2	0 C	May be inoperative provided the associated Automatic Temperature Control System is operative.

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-63-01	Affected Temperature Control Valve Indicator(s)	____ Temperature Control Valve Indicator(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
21-64-01	Cabin and Cabin Supply Temperature Indicating System	N	1	0	C (M) May be inoperative provided: a) Both Air Conditioning System Shutdown Thermal Switches are operative, and b) Cockpit/Cabin Compartment Auto Temperature Control Systems are operative.

MEL ITEM	TAB LOCATION	PLACARD TEXT
21-64-01	Cabin TEMP SEL Switch	CABIN TEMP Indicator INOP

(M) PROCEDURES

NOTE: If packs operated properly in AUTO mode during prior flight, this test may be omitted.

With packs operating in AUTO, select lower or higher temperature and verify correct pack response on pack valve position indicators.

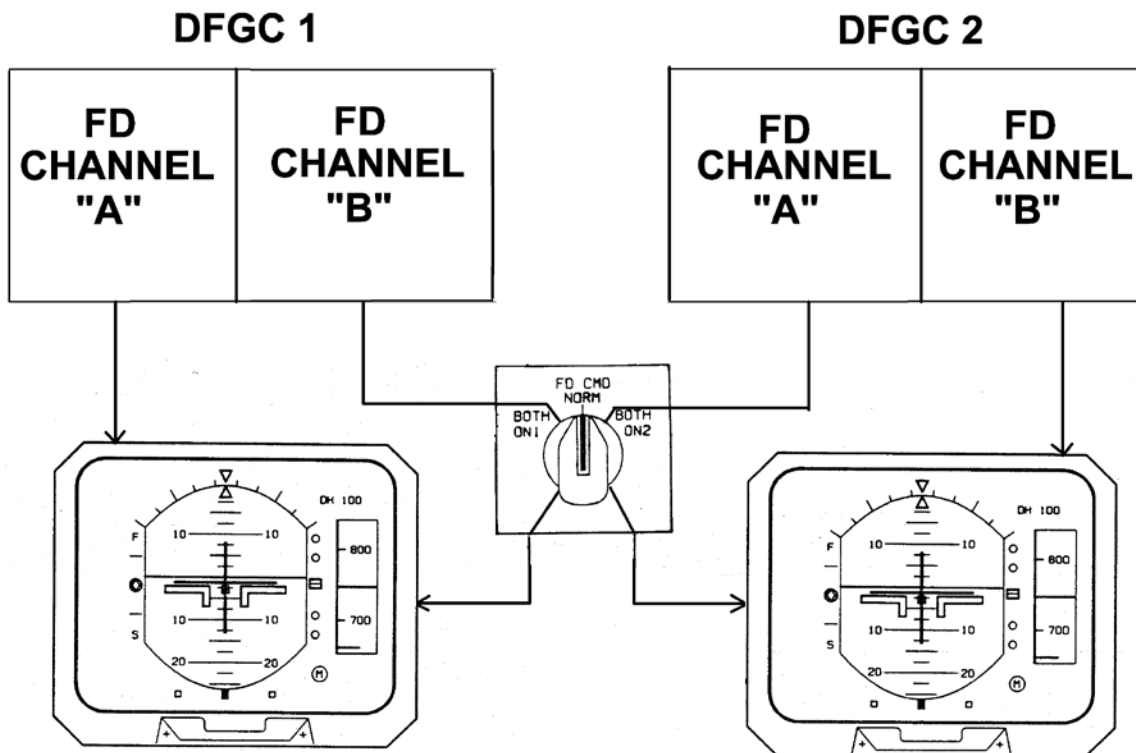
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NUMBER INSTALLED			NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD			REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION			REMARKS OR EXCEPTIONS
22-00-00L	LLM Category II/III Status "DISP.APPR.REQ'D." Administrative Control Item	N	-	(M) Aircraft restricted 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, and b) Practice Autolands are permitted if authorized by MCC.

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
22-01-01	Digital Flight Guidance System (DFGS) Computers "DISP.APPR.REQ'D."	Y	2	1 C	May be inoperative provided approach minimums do not require its use. NOTE 1: Approach minimums are not affected. NOTE 2: Place F/D CMD Switch to operative DFGC. <u>TAKEOFF</u> Captain's Flight Director must be operative with less than 1600 RVR (1/4 mile).

MEL ITEM	TAB LOCATION	PLACARD TEXT
22-01-01	DFGC Select Switch	____ DFGC INOP



NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO. NAME / DESCRIPTION					REMARKS OR EXCEPTIONS	
DIGITAL FLIGHT GUIDANCE SYSTEM (DFGS) FUNCTIONS						
22-01-02A	Autopilot “DISP.APPR.REQ’D.”	Y	2	1	C	NOTE: Associated Flight Director may be affected.
22-01-02B	Autopilot “DISP.APPR.REQ’D.”	Y	2	0	B	May be inoperative provided: a) At least one Automatic Cabin Pressure Control System is operative for pressurized flight, b) Enroute operations and/or approach minimums do not require its use, and c) RNAV operations do not require their use; refer to Navigation Equipment Tab (this manual) for RNAV Minimum Requirements . <u>CAT I (Non-ILS)</u> Not Authorized <u>CAT II/III - RVSM Operations</u> Not Authorized NOTE: CAT I (ILS) is authorized if at least one Flight Director System is operative.
22-01-02C	Altitude Hold Mode	Y	2	1	C	May be inoperative provided Altitude Alert System and Warning is operative.
22-01-02D	Altitude Hold Mode “DISP.APPR.REQ’D.”	Y	2	0	B	May be inoperative provided: a) Enroute operations do not require its use, and b) Altitude Alert System and Warning is operative. <u>RVSM Operations</u> Not Authorized
22-01-02E	Altitude Preselect Mode	Y	2	0	C	NOTE: Altitude Alert System may be affected.
22-01-02F	Vertical Speed Mode	Y	2	0	C	
22-01-02G	IAS/Mach Hold Mode	Y	2	0	C	
22-01-02H	VNAV Mode (FMS)	Y	2	0	C	
22-01-02I	VOR/LOC Mode	Y	2	0	C	
22-01-02J	ILS Capture Mode	Y	2	1	C	

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
	DIGITAL FLIGHT GUIDANCE SYSTEM (DFGS) FUNCTIONS (CONTINUED)				
22-01-02K	ILS Capture Mode "DISP.APPR.REQ'D."	Y	2	0	C May be inoperative provided approach minimums do not require its use. <u>CAT II/III</u> Not Authorized
22-01-02L	Autoland Mode	Y	2	1	C
22-01-02M	Autoland Mode "DISP.APPR.REQ'D."	Y	2	0	C May be inoperative provided approach minimums do not require its use. <u>CAT II/III</u> Not Authorized
22-01-02N	Heading Hold Mode	Y	2	0	C
22-01-02O	Heading Select Mode	Y	2	1	C
22-01-02P	Heading Select Mode	Y	2	0	B
22-01-02Q	Turbulence Mode	Y	2	0	C
22-01-02R	FMS NAV Mode "DISP.APPR.REQ'D."	Y	2	0	C May be inoperative provided: a) NAV Mode is not required for operations being conducted, and b) RNAV operations do not require their use; refer to Navigation Equipment Tab (this manual) for RNAV Minimum Requirements.
22-01-02S	FMS Override Mode	Y	2	0	C
22-01-02T	Auto Pitch Trim	Y	2	0	C (O) May be inoperative provided: a) It is verified that Manual Alternate Trim is operative, and b) Alternate procedures are used if Autopilot is to be used for approach and landing.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
	DIGITAL FLIGHT GUIDANCE SYSTEM (DFGS) FUNCTIONS (CONTINUED)				
22-01-02U	Autothrottles	Y	2	1	C
22-01-02V	Autothrottles "DISP.APPR.REQ'D."	Y	2	0	C
					(O) May be inoperative provided: a) Approach minimums do not require its use, b) Flight Director or Autopilot Altitude Hold, Heading Select, and Vertical Speed modes are available on at least one DFGC, and c) VNAV is considered inoperative and deferred per MEL 22-01-02H . <u>CAT II/III</u> Not Authorized
22-01-02W	Speed Control	Y	2	0	C

CONTINUED NEXT PAGE

MEL ITEM	TAB LOCATION	PLACARD TEXT
22-01-02A	Near A/P Engage Switch	___ Autopilot INOP
22-01-02B	Near A/P Engage Switch	___ Autopilot(s) INOP
22-01-02C	Near ALT HOLD Select Button	___ ALT Hold INOP
22-01-02D	Near ALT HOLD Select Button	___ ALT Hold INOP
22-01-02E	Near ALT Preselect Readout/ALT Set Knob	___ Altitude Preselect Mode INOP
22-01-02F	Near VERT Speed Select Button	___ Vert Speed INOP
22-01-02G	Near IAS / MACH Hold Select Button	___ IAS / MACH Hold INOP
22-01-02H	Near VNAV Select Button	___ VNAV INOP
22-01-02I	Near VOR LOC Select Button	___ VOR / LOC INOP
22-01-02J	Near ILS Select Button	___ ILS INOP
22-01-02K	Near ILS Select Button	___ ILS INOP
22-01-02L	Near AUTO LAND Select Button	___ Autoland INOP
22-01-02M	Near AUTO LAND Select Button	___ Autoland INOP
22-01-02N	Near HDG Readout/HDG Select Knob	___ HDG Hold INOP
22-01-02O	Near HDG Readout/HDG Select Knob	___ HDG SEL INOP
22-01-02P	Near HDG Readout/HDG Select Knob	___ HDG SEL INOP
22-01-02Q	Near TURB Mode Button	___ TURB Mode INOP
22-01-02R	Near NAV Mode Button	___ NAV Mode INOP
22-01-02S	Near FMS OVRD Mode Button	___ FMS OVRD INOP
22-01-02T	Near Pitch Control Wheel	Auto Pitch Trim INOP
22-01-02U	Near Autothrottle Switch	AUTO THROT INOP
22-01-02V	Near Autothrottle Switch	AUTO THROT INOP
22-01-02W	Near Autothrottle Speed/Mach Select Knob	Speed Control INOP

(O) PROCEDURES

22-01-02T

1. Verify Manual Alternate Trim functions properly by moving Alternate Trim Switch Levers on the center pedestal and observing movement of the longitudinal trim position indicator.
2. In flight, trim aircraft manually prior to engaging autopilot.
3. Monitor the AP TRIM (amber) lights on the FMA while the Autopilot is engaged.
4. If AP TRIM light comes on, re-trim by either of the following:
 - a. Operation of the alternate trim switches on the pedestal (which does not require Autopilot disconnect).

OR

 - b. Disconnect the Autopilot, manually trim the aircraft using the Control Wheel Trim Switches or LONG TRIM handles (suitcase handles) on the pedestal, and then re-engage the Autopilot.
5. If the Autopilot is to be used for landing, manually trim the aircraft and track glideslope at final approach speed prior to Autopilot engagement.

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22-01-02V

VNAV mode is unavailable without Autothrottle switch engaged; however, FMS VNAV data is available.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
22-01-03A	Yaw Damper	Y	2	0	C (O) May be inoperative provided the YAW DAMP Switch remains in the OVRD position.
22-01-03B	Mach Trim "DISP.APPR.REQ'D."	Y	2	0	C (O) May be inoperative provided flight speed is restricted to M _{MO} = .80M.
22-01-03C	Automatic Engine Synchronization	Y	2	0	C

MEL ITEM	TAB LOCATION	PLACARD TEXT
22-01-03A	Yaw Damp Switch	Yaw Damper INOP
22-01-03B	Mach Trim Switch	Mach Trim INOP
22-01-03C	ENG SYNC Selector	Auto Eng Sync INOP

(O) PROCEDURES

22-01-03A

Do not move the YAW DAMP Switch from the OVRD position. In the OFF position, the Autopilot, when engaged, will still attempt to command the Yaw Damper Actuator. In OVRD, power is always removed from the Yaw Damper Actuator.

22-01-03B

1. Prior to flight, select MACH TRIM COMP switch to OFF.
2. Restrict speed to Mmo = 0.80M.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS	
22-01-04A	Flight Mode Annunciators (FMA) “DISP.APPR.REQ’D.”	Y	2	1	C	(O) May be inoperative provided: a) The pilot controlling the airplane using the Flight Director and/or Autopilot and/or Autothrottle System has an operative FMA, b) Approach minimums do not require use of Autopilot, Flight Director, or Autothrottle, and c) RNAV operations do not require their use; refer to Navigation Equipment Tab (this manual) for RNAV Minimum Requirements . NOTE: Operations are restricted to Basic Turbo Jet Minimums. Refer to Airway Manual Ops 3 .
22-01-04B	Flight Mode Annunciators (FMA) “DISP.APPR.REQ’D.”	Y	2	0	C	(O) May be inoperative provided: a) VMC exists at departure airport, enroute, and are forecast to exist at destination airport at time of arrival, b) Flight Director, Autopilot and Autothrottle systems are not used, and c) RNAV operations do not require their use; refer to Navigation Equipment Tab (this manual) for RNAV Minimum Requirements . NOTE: Operations are restricted to Basic Turbo Jet Minimums. Refer to Airway Manual Ops 3 . <u>Autopilot coupled approaches</u> Not authorized <u>RVSM operations</u> Not authorized
22-01-04C	FMA Autopilot Engaged Blue Annunciators	Y	4	0	C	

MEL ITEM	TAB LOCATION	PLACARD TEXT
22-01-04A	Associated FMA Panel	____ FMA INOP
22-01-04B	Associated FMA Panel	____ FMA's INOP
22-01-04C	Associated FMA Panel	____ FMA ____ (A/P 1 and/or A/P 2) Engaged Blue Annunciators INOP

(O) PROCEDURES

22-01-04A, 22-01-04B

Refer to Remarks or Exceptions column.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
22-01-05	TOGA Palm Switches "DISP.APPR.REQ'D."	Y	2	0 C	May be inoperative provided: a) Approach minimums do not require its use, b) Both thrust levers are operated manually for takeoff, and c) Autopilot and Flight Director are not used below Minimum Descent Altitude or 500 feet, which ever is higher. <u>CAT I ILS</u> Not Authorized <u>CAT II/III</u> Not Authorized NOTE: Flight Director go-around and windshear guidance are not available with both TO/GO switches inoperative.

MEL ITEM	TAB LOCATION	PLACARD TEXT
22-01-05	Flight Guidance Control Panel	____ TOGA Palm Switch(es) INOP

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
22-01-06	Heading Select Digits	Y	3	0 C	All digits may be inoperative provided heading information is displayed on both Navigation Displays (ND) or Primary Flight Displays (PFD).

MEL ITEM	TAB LOCATION	PLACARD TEXT
22-01-06	HDG Readout/HDG Select Knob	____ Heading Select Digit INOP

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
22-12-01	Elevator and Aileron Drive Servos "DISP.APPR.REQ'D."	Y	2	0 C	May be inoperative provided: a) At least one Automatic Cabin Pressurization System is operative for pressurized flight, b) Autopilot is considered inoperative and deferred per MEL 22-01-02B , and c) Enroute minimums and/or approach minimums do not require its use. <u>CAT I (Non-ILS)</u> Not Authorized <u>CAT II/III RVSM Operations</u> Not Authorized

MEL ITEM	TAB LOCATION	PLACARD TEXT
22-12-01	Flight Guidance Control Panel	Elevator / Aileron Drive Servo(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
22-12-02	Dual Rudder Drive Servo "DISP.APPR.REQ'D."	Y	1	0	C May be inoperative provided: a) Autopilot is not used in Takeoff, ILS, Autoland, and Go-Around modes, and b) Enroute operations and/or approach minimums do not require its use. <u>CAT I (Non-ILS)</u> Not Authorized <u>CAT II/III</u> Not Authorized

MEL ITEM	TAB LOCATION	PLACARD TEXT
22-12-02	A/P Engage Switch	Dual Rudder Drive Servo INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
22-14-01A	Autopilot Disconnect Functions (Quick Release Controls) "DISP.APPR.REQ'D."	Y	2	1 C	May be inoperative provided: a) Pilot controlling the airplane with the autopilot has the operative switch, b) Autopilot is not used below 1500 feet AGL, and c) Enroute operations and/or approach minimums do not require its use. <u>CAT II/III</u> Not Authorized
22-14-01B	Autopilot Disconnect Functions (Quick Release Controls) "DISP.APPR.REQ'D."	Y	2	0 B	May be inoperative provided autopilot is not used. <u>CAT II/III - RVSM Operations</u> Not Authorized NOTE: CAT I (ILS) is authorized if at least one Flight Director System is operative.

MEL ITEM	TAB LOCATION	PLACARD TEXT
22-14-01A	Flight Guidance Control Panel	____ Autopilot Control Wheel Disengage Switch INOP
22-14-01B	Flight Guidance Control Panel	____ Autopilot Control Wheel Disengage Switch(es) INOP

NOTE: This MEL item is for the Autopilot Control Wheel Disengage Switch.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
22-17-01A	Autopilot Disengage Warning (OFF) Lights "DISP.APPR.REQ'D."	Y	2	1	C May be inoperative provided: a) Pilot controlling the aircraft with the autopilot has the operative light, b) Autopilot is not used below 1500 feet AGL, and c) Enroute operations and/or approach minimums do not require its use. <u>CAT I (Non-ILS)</u> Not Authorized <u>CAT II/III</u> Not Authorized
22-17-01B	Autopilot Disengage Warning (OFF) Lights "DISP.APPR.REQ'D."	Y	2	0	C May be inoperative provided: a) Autopilot is not engaged in any axis, b) At least one Automatic Cabin Pressurization System is operative for pressurized flight, c) Enroute operations and/or approach minimums do not require use of Autopilot, and d) RNAV operations do not require their use; refer to Navigation Equipment Tab (this manual) for RNAV Minimum Requirements. <u>CAT I (Non-ILS)</u> Not Authorized <u>CAT II/III RVSM Operations</u> Not Authorized

MEL ITEM	TAB LOCATION	PLACARD TEXT
22-17-01A	Autopilot Warning Light	____ Autopilot Disengage Warning Light INOP
22-17-01B	Autopilot Warning Light	____ Autopilot Disengage Warning 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
22-18-01A	Autothrottle OFF Lights	Y	2	1 C	May be inoperative provided pilot using Autothrottle has operative OFF light.
22-18-01B	Autothrottle OFF Lights "DISP.APPR.REQ'D."	Y	2	0 C	May be inoperative provided: a) Associated Autothrottle system is not used. b) Enroute operations and/or approach minimums do not require use of Autopilot. <u>CAT I (Non-ILS)</u> Not Authorized <u>CAT II/III</u> Not Authorized

MEL ITEM	TAB LOCATION	PLACARD TEXT
22-18-01A	Affected Autothrottle Warning Light	____ Autothrottle Off Light INOP
22-18-01B	Affected Autothrottle Warning Lights	____ Autothrottle Off 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
22-21-01	YAW DAMP OFF Annunciation System	Y	1	0 C	May be inoperative provided Yaw Damper is considered inoperative and deferred per MEL 22-01-03 .

MEL ITEM	TAB LOCATION	PLACARD TEXT
22-21-01	YAW DAMP Switch	1. Yaw Damp OFF Annunciation INOP 2. Do Not Use YAW DAMP

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
22-22-01	Mach Trim Compensation Switch "DISP.APPR.REQ'D."	Y	1	0 C	(O) May be inoperative provided flight speed is restricted to Mmo = .80M.

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MEL ITEM	TAB LOCATION	PLACARD TEXT
22-22-01	MACH TRIM COMP Switch	Mach Trim Compensation Switch INOP

(O) PROCEDURES

1. Prior to flight, select MACH TRIM COMP switch to OFF.
2. Restrict speed to Mmo = 0.80M.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
22-22-02	MACH TRIM FAULT Annunciation System "DISP.APPR.REQ'D."	Y	1	0	C (O) May be inoperative provided Mach Trim system is considered inoperative and deferred per MEL 22-01-03.

MEL ITEM	TAB LOCATION	PLACARD TEXT
22-22-02	MACH TRIM COMP Switch	1. MACH TRIM FAULT Annunciation INOP 2. Do Not Use Mach Trim

(O) PROCEDURES

1. Prior to flight, select MACH TRIM COMP switch to OFF.
2. Restrict speed to Mmo = 0.80M.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH			
FLIGHT CREW MAY PLACARD			Y	1	0	REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION	C				REMARKS OR EXCEPTIONS	
22-22-03	MACH TRIM OFF Annunciation System “DISP.APPR.REQ'D.”					(O) May be inoperative provided Mach Trim system is considered inoperative and deferred per MEL 22-01-03.	

MEL ITEM	TAB LOCATION	PLACARD TEXT
22-22-03	MACH TRIM COMP Switch	1. MACH TRIM OFF Annunciation INOP 2. Do Not Use Mach Trim

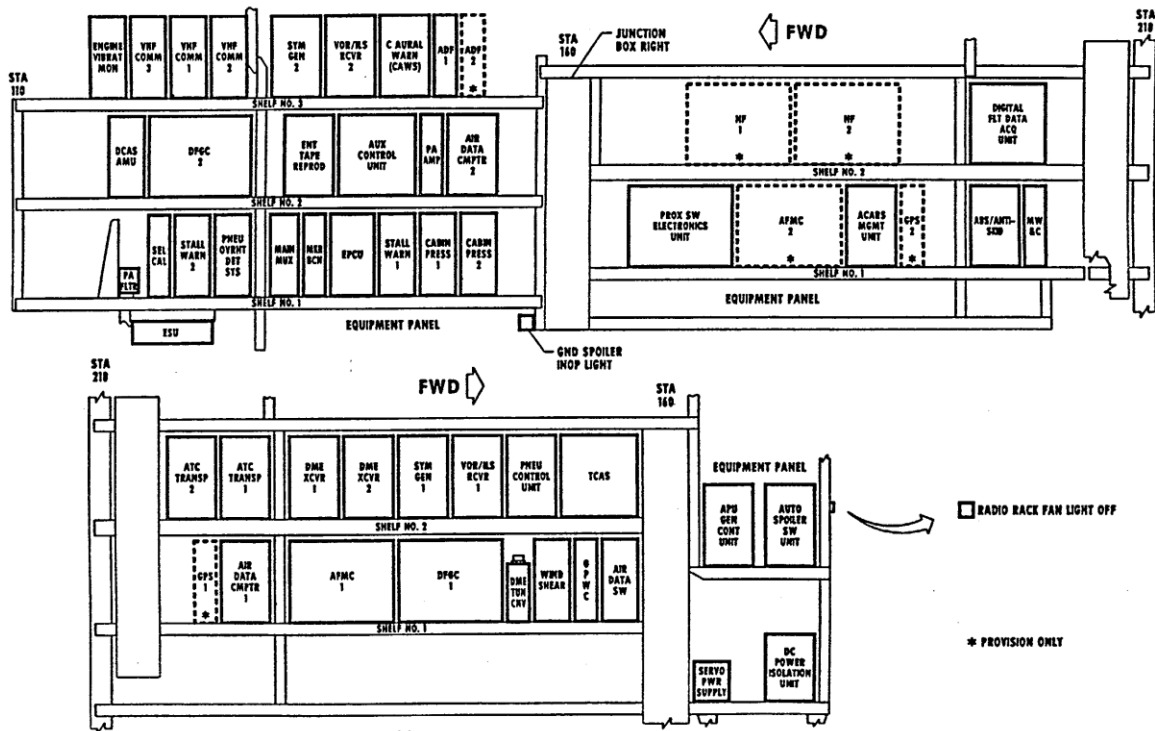
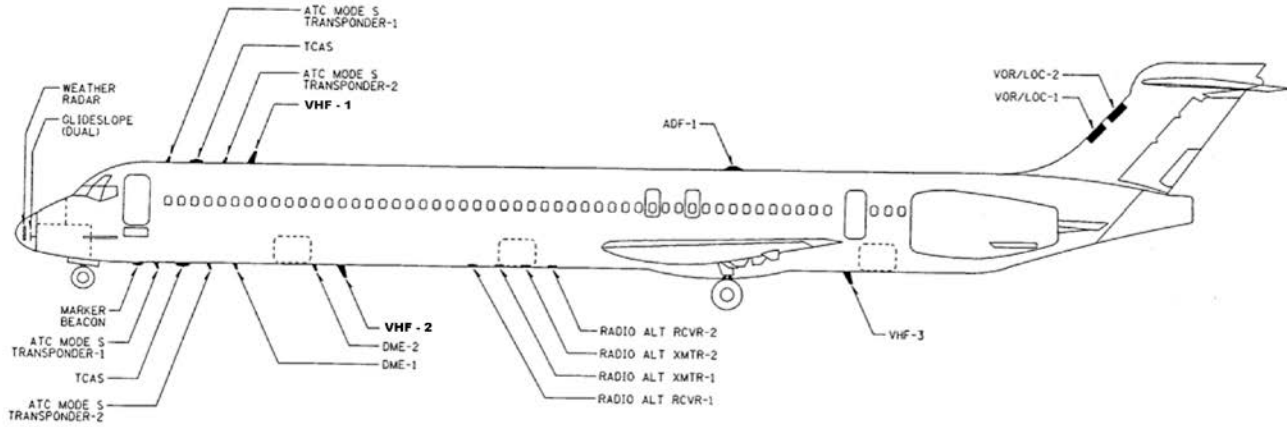
(O) PROCEDURES

1. Prior to flight, select MACH TRIM COMP switch to OFF.
2. Restrict speed to Mmo = 0.80M.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS	
COMMUNICATION SYSTEMS						
23-11-01A	#2 VHF Comm System "DISP.APPR.REQ'D."	Y	1	0	C	May be inoperative provided #1 and #3 VHF Comm Systems are operative.
23-11-01B	#3 VHF Comm System "DISP.APPR.REQ'D."	Y	1	0	C	May be inoperative provided: a) #1 and #2 VHF Comm Systems are operative and, b) ACARS is considered inoperative and deferred per MEL 23-24-01A.
23-11-01C	Frequency Transfer Light	Y	4	0	C	
23-11-01D	Frequency Transfer Switch	Y	2	0	C	
23-11-01E	Frequency Selectors	Y	4	1	C	One for No. 1 System must be operative.
23-11-01F	Frequency Indicators	Y	4	1	C	One for No. 1 System must be operative.

MEL ITEM	TAB LOCATION	PLACARD TEXT
23-11-01A	#2 VHF Comm Control Panel	#2 VHF Comm System INOP
23-11-01B	#3 VHF Comm Control Panel	#3 VHF Comm System INOP
23-11-01C	Affected VHF Comm Control Panel	____ VHF Comm Control Panel Frequency Transfer Light INOP
23-11-01D	Affected VHF Comm Control Panel	____ VHF Comm Control Panel Frequency Transfer Switch INOP
23-11-01E	Affected VHF Comm Control Panel	____ VHF Comm Control Panel Tuning INOP
23-11-01F	Affected VHF Comm Control Panel	____ VHF Comm Control Panel Frequency 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
23-22-01A	Selective Call System (SELCAL) "DISP.APPR.REQ'D."	Y	1	0	C (O) May be inoperative provided alternate procedures are used.
23-22-01B	Channels	Y	3	0	C (O) May be inoperative provided alternate procedures are used.

MEL ITEM	TAB LOCATION	PLACARD TEXT
23-22-01A	SELCAL Control Panel	SELCAL INOP
23-22-01B	SELCAL Control Panel	___ SELCAL Channel INOP

(O) PROCEDURES

23-22-01A, 23-22-01B

Monitor appropriate VHF frequency.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
ACARS SYSTEMS					
23-24-01A	ACARS Systems "DISP.APPR.REQ'D."	Y	1	0	C (O) May be inoperative provided alternate procedures are used. NOTE: Any portion of the system that is operative may be used.
23-24-01B	ACARS Automatic Engine Data Reporting System	Y	1	0	C (O) May be inoperative provided engine trend data is manually entered onto Engine Trend Data Sheets
23-24-01C	Printer	Y	1	0	C (O) May be inoperative provided alternate procedures are used. NOTE: Any portion of the system that is operative may be used.

MEL ITEM	TAB LOCATION	PLACARD TEXT
23-24-01A	ACARS Control Display Unit	ACARS INOP
23-24-01B	ACARS Control Display Unit	1. ACARS Automatic Engine Reporting INOP 2. Auto Engine Trend Data Report Not Xmitting - Record Data In Engine Performance Log
23-24-01C	ACARS Printer	ACARS Printer INOP

(O) PROCEDURES

23-24-01A, 23-24-01C

Refer to QRH, Non-Normal Checklist, Section 5, Communications, ACARS SYSTEM INOPERATIVE.

23-24-01B

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
23-31-01A	Passenger Address System (PA)	Y	1	0	B (O) May be inoperative provided: a) Alternate, Normal, and Emergency procedures are used, and b) Flight Attendant alerting system (audio and visual) operates normally. NOTE: Any station function(s) that operate normally may be used.
23-31-01B	Lavatory Speakers	Y	3	0	C (O) May be inoperative provided alternate procedures are used.

MEL ITEM	TAB LOCATION	PLACARD TEXT
23-31-01A	Captain's Audio Selector Panel	PA System INOP
23-31-01B	Aircraft Logbook	____ Lav Speaker INOP

(O) PROCEDURES

23-31-01A

1. Refer to In-flight Service Onboard Manual, Section 6, Inoperative P.A. Systems.
2. Refer to QRH, Non-Normal Checklist, Section 5, Communications, PA SYSTEM INOPERATIVE.

23-31-01B

Flight Attendant to knock on door and advise occupant.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS
23-31-02	Pre-Recorded Passenger Announcement System	Y	1	0	D	(O) May be inoperative provided alternate procedures are used.

MEL ITEM	TAB LOCATION	PLACARD TEXT
23-31-02	FWD Flight Attendant Panel	Pre-Recorded Passenger Announcement System INOP

(O) PROCEDURES

1. Before takeoff the cabin attendant shall make a direct voice communication with all passengers in each cabin.
2. The PA system or powered megaphone may be used for making these announcements.
3. The flight crew shall be notified when pre-flight announcements have been completed.
4. If the PRAM is announcing erroneously, selection of the STOP button on the PRAM Control Panel will stop the message being broadcast.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
	CREWMEMBER INTERPHONE SYSTEM				
23-41-01A	Flight Deck-to-Cabin Cabin-to-Flight Deck Functions	Y	-	1	B (O) May be inoperative provided: a) Operative station has an operative flight attendant seat (in addition to flight deck, FWD position must be operative), and b) Alternate communications procedures between the affected Flight Attendant stations(s) are used. NOTE: Any station functions that operate normally may be used.
23-41-01B	Cabin-to-Cabin Functions(s)	Y	2	0	B (O) May be inoperative provided alternate communications procedures between the affected Flight Attendant stations(s) are used. NOTE: Any station functions that operate normally may be used.
23-41-01C	Flight Deck-to-Ground	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 / forward fuselage service interphone jack operates normally.
23-41-01D	Flight Deck-to-Ground	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 / forward fuselage flight interphone jack operates normally.
23-41-01E	Flight Deck-to-Ground	Y	2	0	B (O) May be inoperative provided alternate procedures are used.
23-41-01F	Flight Deck Call Visual Alerting System (Call Light)	Y	1	0	B May be inoperative provided the flight deck chime operates normally. NOTE: The flight deck chime must always be operative.

CONTINUED NEXT PAGE

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
CREWMEMBER INTERPHONE SYSTEM (Continued)					
23-41-01G	Flight Attendant Call Visual Alerting System (Call Light)	Y	1	0	B May be inoperative provided PA system operates normally. NOTE: Passenger-to-Attendant Call System is considered a Nonessential Equipment and Furnishings (NEF) item.
23-41-01H	Flight Attendant Call Audio Alerting System (Chime)	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: Passenger-to-Attendant Call System is considered a Nonessential Equipment and Furnishings (NEF) item.
23-41-01I	Pilot to Mechanic Call System (Mechanic Call)	Y	1	0	C (O) May be inoperative provided Alternate, Normal and Emergency procedures are used.
23-41-01J	Mechanic to Pilot Call System (Pilot Call)	Y	1	0	C (O) May be inoperative provided Alternate, Normal and Emergency procedures are used.
23-41-01K	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.
23-41-01L	Cabin Attendant Handset	Y	3	2	B (O) May be inoperative provided: a) Two cabin handsets operate normally (FWD position must be operative), b) Operative handsets are located at an operative flight attendant seat, and c) Alternate communications procedures between the affected Flight Attendant stations are used. NOTE: Any handset(s) functions that operate normally may be used.

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MEL ITEM	TAB LOCATION	PLACARD TEXT
23-41-01A	1. Captain's Audio Selector Panel 2. Affected Flight Attendant Handset (If Applicable)	___ Flight Deck-to-Cabin, Cabin-to-Flight Deck Function(s) INOP
23-41-01B	Affected Flight Attendant Handset(s)	Cabin-to-Cabin Function(s) INOP
23-41-01C	Captain's Audio Selector Panel	Flight Interphone Flight Deck to Ground Function INOP
23-41-01D	Captain's Audio Selector Panel	Service Interphone Flight Deck to Ground Function INOP
23-41-01E	Captain's Audio Selector Panel	___ Interphone Flight Deck to Ground Function INOP
23-41-01F	Flight Deck Call Light	Flight Deck Call Light INOP
23-41-01G	FWD Flight Attendant Panel	Flight Attendant Call Light INOP
23-41-01H	FWD Flight Attendant Panel	Flight Attendant Chime INOP
23-41-01I	Call Switch	Mechanic Call INOP
23-41-01J	1. Captain's Audio Control Panel 2. Interphone Jack (Ext. Pwr Pnl)	Pilot Call INOP
23-41-01K	Flight Deck Handset	Flight Deck Handset INOP
23-41-01L	Affected Flight Attendant Handset	Cabin Attendant Handset INOP

(O) PROCEDURES

23-41-01A, 23-41-01B

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

23-41-01C, 23-41-01D, 23-41-01E, 23-41-01I, 23-41-01J

Refer to [FOM](#), Chapter 6, Communication.

23-41-01H

Use Service Interphone System and/or PA System to communicate with cabin crew.

23-41-01K

Use the Cabin Interphone / PA function of the Captain or F/O Audio Select Panel.

23-41-01L

Flight Attendant occupying inoperative jumpseat position will establish verbal communications with the Flight Attendant occupying the AFT/MID jumpseat, or use the AFT/MID handset, when communications are required.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
23-41-03A	Maintenance Interphone	Y	1	0	C
23-41-03B	Maintenance Interphone Jacks	Y	13	2	D

MEL ITEM	TAB LOCATION	PLACARD TEXT
23-41-03A	MAINTENANCE INTERPHONE Switch	Maintenance Interphone System INOP
23-41-03B	MAINTENANCE INTERPHONE Switch	____ Maintenance Interphone Jack(s) INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD			REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
23-51-01A	Audio Management Units (Digitally Controlled Audio System)(DCAS)	Y	4	2	C (O) May be inoperative provided: a) Captain's and First Officer's Audio Control Panels each control a separate operative AMU Channel, and b) Observer's seat is not required for an FAA inspector for performance of official duties.
23-51-01B	Audio Management Units (Digitally Controlled Audio System)(DCAS)	Y	4	2	A (O) May be inoperative provided: a) Captain's and First Officer's Audio Control Panels each control a separate operative AMU Channel, b) Observer's seat audio control panel is set to ALT, c) Observer's seat audio control panel is available and acceptable to the FAA inspector for performance of official duties, and d) Repairs are made within two (2) flight days.

MEL ITEM	TAB LOCATION	PLACARD TEXT
23-51-01A	Associated Audio Control Panel	____ Audio Management Unit (DCAS) INOP
23-51-01B	Associated Audio Control Panel	____ Audio Management Unit (DCAS) INOP

(O) PROCEDURES

23-51-01A, 23-51-01B

If the FAULT light on an Audio Control Panel is illuminated, press the ALT switchlight. Verify the FAULT light then extinguishes. If light does not extinguish, problem must be fixed.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH			
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY			
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS	
23-51-02	Audio Selector Panel (E & E Compartment)	N	1	0	D		

MEL ITEM	TAB LOCATION	PLACARD TEXT
23-51-02	E & E Audio Selector Panel	E & E Compartment Audio Selector Panel INOP

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS
23-51-03A	Audio Control Panel Selector Switchlights	Y	21	0	C	(O) May be inoperative provided associated function is verified to be selectable PRIOR TO EACH DEPARTURE. Repetitive Check Required (Yellow Placard)
23-51-03B	Audio Control Panel Selector Switchlights	Y	21	0	C	May be inoperative provided associated function is considered inoperative and deferred per appropriate MEL.

MEL ITEM	TAB LOCATION	PLACARD TEXT
23-51-03A	Affected Audio Control Panel	____ Audio Control Panel Selector Switchlights INOP
23-51-03B	Affected Audio Control Panel	____ Audio Control Panel Selector Switchlights INOP

(O) PROCEDURES

23-51-03A

If the function associated with an inoperative switchlight is to be used for the subsequent departure, verify it is selectable by switching in and out of it.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
23-51-04	Cockpit Communications Loudspeakers	Y	2	0	C May be inoperative provided an operative headset is provided for each person on cockpit duty.

MEL ITEM	TAB LOCATION	PLACARD TEXT
23-51-04	Associated Audio Selector Panel	____ Cockpit Loudspeakers INOP

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS
COCKPIT MICROPHONES						
23-51-05A	Handheld Microphones (Captain and First Officer)	Y	2	0	C	May be inoperative or missing provided associated handset / boom microphone operates normally.
23-51-05B	Boom Microphones “Contact MCC”	Y	2	0	A	May be inoperative provided: a) Flight Data Recorder operates normally, and b) Repairs are made within three (3) flight days.

MEL ITEM	TAB LOCATION	PLACARD TEXT
23-51-05A	Associated Audio Control Panel	____ Handheld Microphone(s) INOP
23-51-05B	Associated Audio Control Panel	____ Boom Microphone(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
23-51-07	Cockpit Headsets (Captain and First Officer)	Y	2	2	C May be inoperative provided each Flight Crewmember has an operational FAA approved headset at each station.

MEL ITEM	TAB LOCATION	PLACARD TEXT
23-51-07	Associated Audio Selector Panel	____ Cockpit Headsets INOP

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
23-51-08A	Flight Interphone External Jacks	Y	2	0	C May be inoperative provided Service Interphone is operative.
23-51-08B	Flight Interphone External Jacks	Y	2	0	C (O) May be inoperative provided alternate procedures are used.

MEL ITEM	TAB LOCATION	PLACARD TEXT
23-51-08A	1. Captain's Audio Control Panel 2. Flight Interphone Jack (Ext. Pwr Pnl)	____ Flight Interphone Jack(s) INOP
23-51-08B	1. Captain's Audio Control Panel 2. Flight Interphone Jack (Ext. Pwr Pnl)	____ Flight Interphone Jack(s) INOP

(O) PROCEDURES

23-51-08B

Refer to [FOM](#), Chapter 6, Communication.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
	CAPTAIN / FIRST OFFICER PUSH-TO-TALK SWITCHES				
23-51-09A	Control Wheel PTT Switches	N	2	0	C (M) May be inoperative provided: a) Associated Audio Selector Panel PTT switch operates normally, and b) Associated switch is deactivated.
23-51-09B	Audio Selector Panel PTT Switches	N	2	0	C (M) May be inoperative provided: a) Associated Control Wheel PTT switch operates normally, and b) Affected switch is verified electrically failed OPEN.

MEL ITEM	TAB LOCATION	PLACARD TEXT
23-51-09A	Associated Audio Control Panel	____ Control Wheel PTT Switch(es) INOP
23-51-09B	Affected Audio Control Panel	____ Audio Selector Panel PTT Switch(es) INOP

(M) PROCEDURES

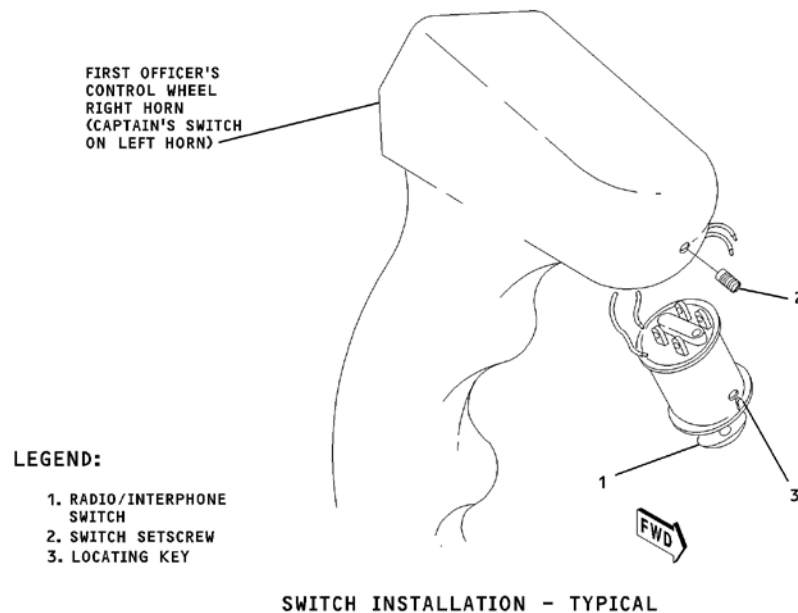
23-51-09A

1. Open the C/B's for the Flight Interphone, VHF Comm 1, 2, and 3.

Circuit Breaker (CB#)	Panel	Location
FLIGHT INTERPHONE (B10-47)	Emergency CBP (Overhead)	A-10
FLIGHT INTERPHONE (B10-386)	EPC CBP	T-42
VHF-1 (B10-7)	Emergency CBP (Overhead)	B-8
VHF-2 (B10-44)	EPC CBP	G-5
VHF-3 (B10-176)	EPC CBP	G-16

2. On the control wheel, remove the set screw.
3. Pull switch downward until electrical connections are out of control wheel horn and are accessible for removal.
4. Tag and disconnect wires from switch terminal, cap / cover exposed wires and stow within control wheel.
5. Reinsert deactivated switch into control wheel, and secure by tightening setscrew.
6. Reset the circuit breakers opened in step 1 above.

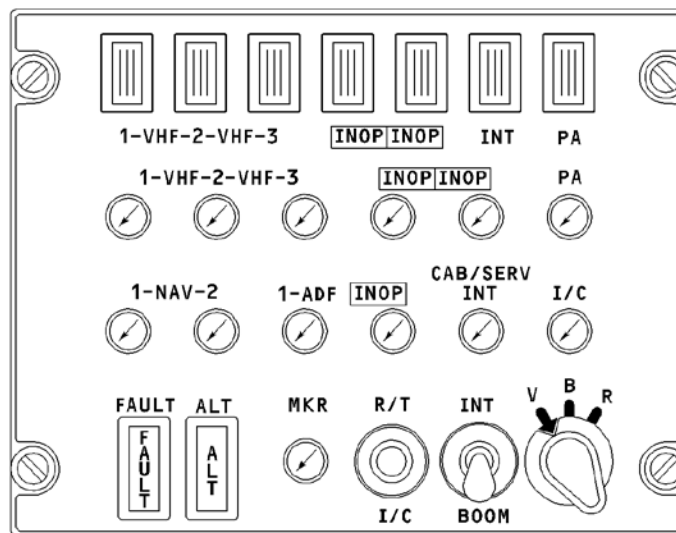
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23-51-09B

1. Select the PA Transmit switch on the associated Audio Control Panel.
2. Plug a headset into the associated Jack Panel.
3. Without keying the Control Wheel PTT Switch, speak into the headset boom microphone.
4. Verify voice transmission is not heard over the PA system. If voice transmission is NOT audible, affected switch is electrically failed in the OPEN position.

NOTE: Similar procedures can also be performed using the Flight Interphone System in lieu of the PA System.



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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
23-71-01	Cockpit Voice Recorder (CVR) System "Contact MCC"	Y	1	0	A May be inoperative provided: a) Flight DATA Recorder (FDR) is operative, and b) Repair is made within three (3) flight days.

MEL ITEM	TAB LOCATION	PLACARD TEXT
23-71-01	COCKPIT VOICE RECORDER Panel	CVR INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
23-00-90A	Passenger Video System/Inflight Entertainment (IFE) System (system deactivated)	Y	1	0	D (O)(M) May be inoperative provided system is deactivated. NOTE: Approval for flight must be obtained by MCC Shift Manager.
23-00-90B	Passenger Video System/Inflight Entertainment (IFE) System (partially operative)	Y	1	0	D (O) May be inoperative provided alternate procedures are used. NOTE 1: This item is for use when the IFE system is partially inoperative (i.e., zone inop, software load corrupt). For 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
23-00-90A	1. Video in use light. 2. FWD overhead panel	IFE Inoperative---'Do Not Use'
23-00-90B	1. Video in use light. 2. FWD overhead panel	IFE_____function(s) Inop

(O) PROCEDURES

23-00-90A, 23-00-90B

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

(M) PROCEDURES

23-00-90A

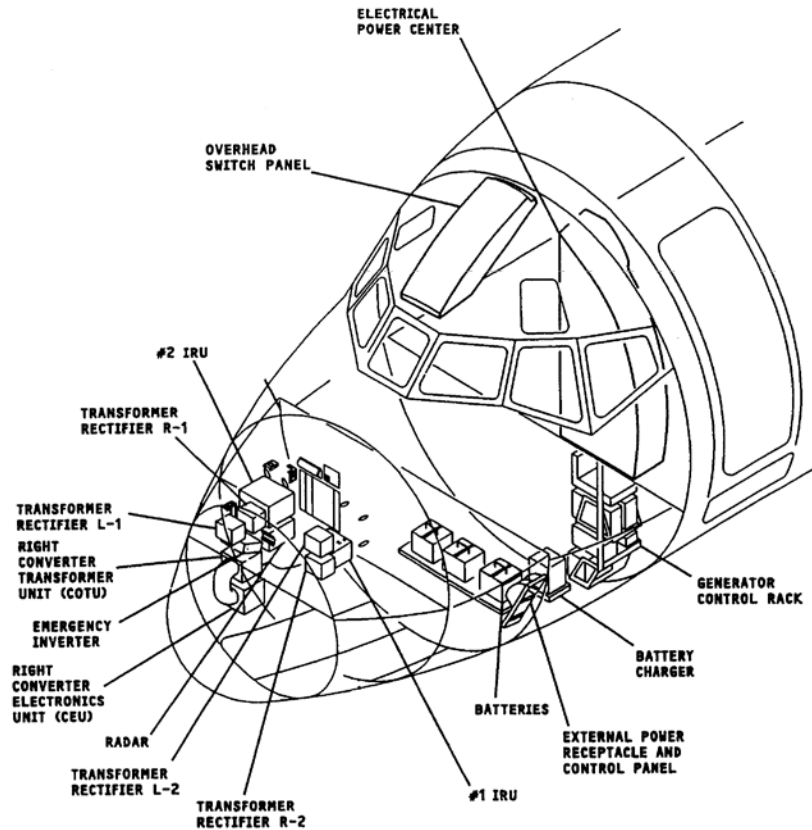
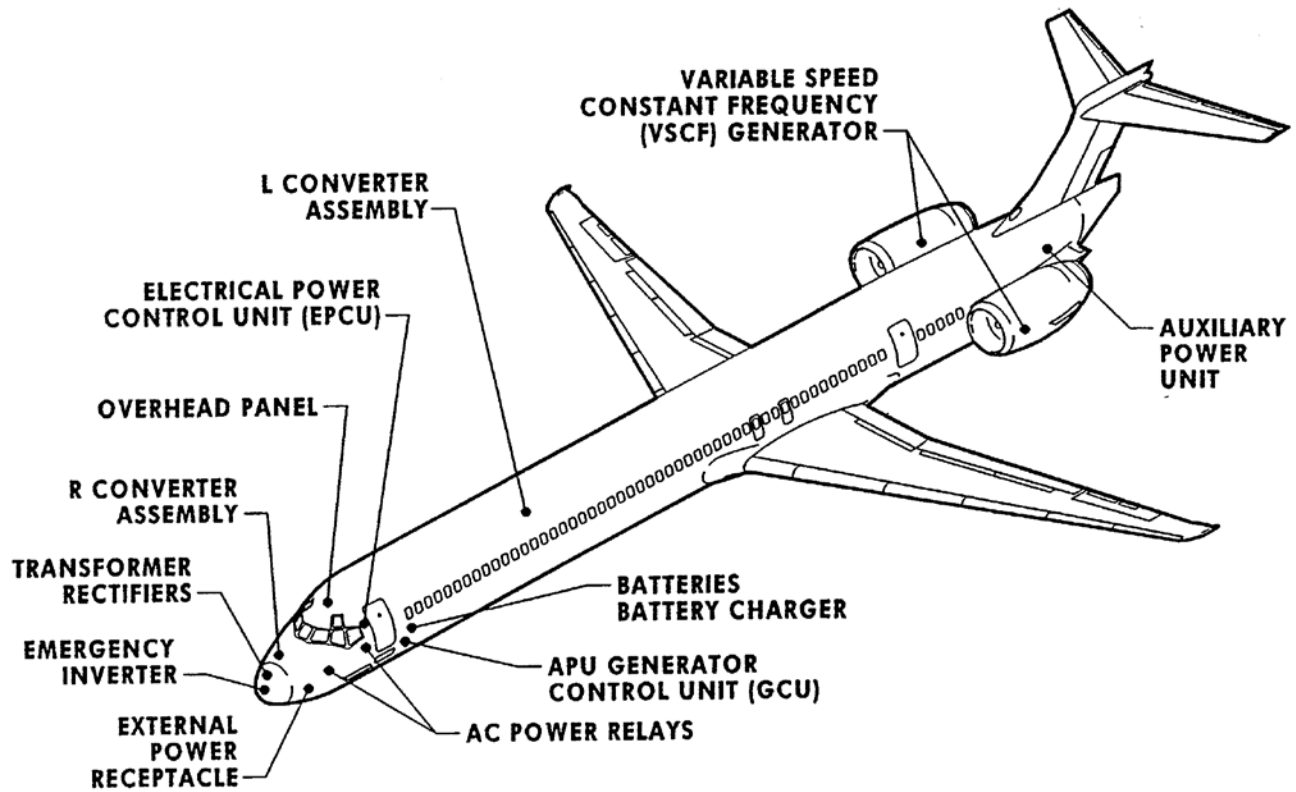
NOTE: This relief should only be applied if it is necessary to deactivate the IFE system for situations such as overheating or safety of flight. If the system is partially operative, then use the partially operative MEL relief; for example; if the wrong media software was loaded or the file server was corrupted the system would not operate normally but would not require deactivation. For individual IFE components see the Nonessential Equipment and Furnishings List (NEF) for deferral.

- To deactivate the IFE System:
 - Turn the IFE Power Switch to the OFF position.
 - Pull and secure the Audio/Video Control breaker located on the Upper EPC panel.
- Install a placard on the IFE control panel stating "IFE Inoperative – Do not use".

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
24-11-01	L/R CONV OVERHEAT Annunciation Systems	Y	2	0	C
					(M) May be inoperative provided: a) It is verified that the fault is in the annunciation system, and b) The STATUS Cue Light on the EOAP is interrogated PRIOR TO EACH DEPARTURE for verification of all AC Power Faults. Repetitive Check Required (Yellow Placard)

MEL ITEM	TAB LOCATION	PLACARD TEXT
24-11-01	Associated Eng Generator Switch	___ CONV OVERHEAT Light INOP

(M) PROCEDURES

PRIOR TO EACH DEPARTURE, interrogate the STATUS Cue Light to ensure no additional AC Power Faults have occurred. If additional faults have occurred, refer to appropriate MEL relief for that item.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
24-12-01A	L/R GEN OIL PRESS Annunciation Systems "DISP.APPR.REQ'D."	Y	2	0	C (O)(M) May be inoperative provided: a) Performance penalties are applied, and b) PRIOR TO EACH DEPARTURE: 1. The STATUS Cue Light on the EOAP is interrogated for verification of all AC Power Faults, and 2. APU Generator System is operative and furnishing power to the associated bus. Repetitive Check Required (Yellow Placard)
24-12-01B	L/R GEN OIL PRESS Annunciation Systems "DISP.APPR.REQ'D."	N	2	1	B (O)(M) May be inoperative provided the associated AC Power Generating System is considered inoperative and deferred per MEL 24-21-01A .

MEL ITEM	TAB LOCATION	PLACARD TEXT
24-12-01A	Associated Eng Generator Switch	___ GEN OIL PRESS Light INOP
24-12-01B	Associated Eng Generator Switch	1. ___ GEN OIL PRESS Light INOP 2. Do Not Use ___ Generator

(O) PROCEDURES

24-12-01A

1. Start APU prior to takeoff and keep running APU until at least the first power reduction after takeoff.
2. Prior to initiating approach, restart APU and keep running APU until after landing.

24-12-01A	L/R GEN OIL PRESS ANNUNCIATION SYSTEMS
EFFECTIVITY	All
FLIGHT PLANNING REQUIREMENTS	Increase BLOCK FUEL by 235 lbs. per hour for APU usage.
NOTES	None
AWABS	Performance corrections have been applied.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF None LANDING None

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24-12-01B

1. Reset affected GEN switch to clear faults, then place affected GEN switch to OFF.
2. Prior to takeoff, verify APU is operating and furnishing power to the affected bus.
3. Ensure APU Generator Load does not exceed the following limits:

On Ground	1.0
In Flight	0.6
Maximum Operating Altitude	FL 370

(M) PROCEDURES

24-12-01A

PRIOR TO EACH DEPARTURE:

1. Interrogate the STATUS Cue Light to ensure no additional AC Power Faults have occurred. If additional faults have occurred, refer to appropriate MEL relief for that item.
2. Start APU. Move affected GEN Switch to OFF, and verify APU generator provides power to affected bus. Reset affected generator by momentarily moving switch to the reset position and then to ON.

24-12-01B

Ensure AC Power system is properly placarded in the cockpit so as to prevent inadvertent selection of the inoperative channel by the flight crew.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
24-12-02A	L/R GEN OIL FILTER Annunciation Systems	N	2	0	C (M) May be inoperative provided: a) The associated VSCF Generator Oil Filter is verified to be clean at least ONCE EACH FLIGHT DAY (Log Book Entry Required), and b) The STATUS Cue Light on the EOAP is interrogated PRIOR TO EACH DEPARTURE for verification of all AC Power Faults. Repetitive Check Required (Yellow Placard)
24-12-02B	L/R GEN OIL FILTER Annunciation Systems "Contact MCC"	Y	2	0	A May be inoperative provided: a) Associated VSCF Generator Oil Filter is considered inoperative and deferred per MEL 24-21-04 , and b) Repairs are made within fifty flight hours.

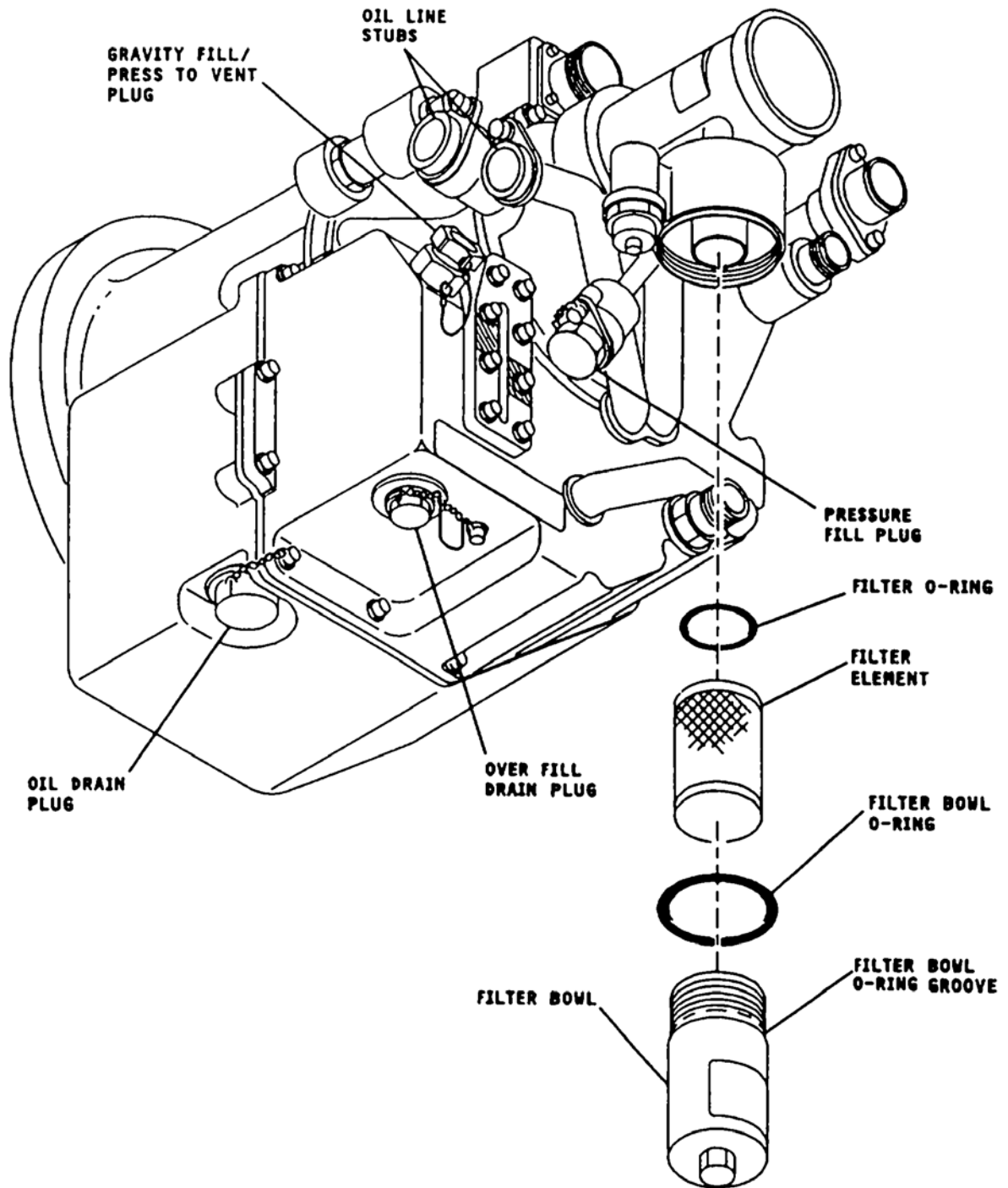
MEL ITEM	TAB LOCATION	PLACARD TEXT
24-12-02A	Associated Eng Generator Switch	___ GEN OIL FILTER Light INOP
24-12-02B	Associated Eng Generator Switch	___ GEN OIL FILTER Light INOP

(M) PROCEDURES

24-12-02A

- At least ONCE EACH FLIGHT DAY, remove filter element and inspect for contamination.
 - Remove filter.
 - Press press-to-vent plug to release internal pressure of generator cavity.
 - Place clean container in position below generator oil filter bowl to catch drained oil.
 - Remove safety wire from filter bowl. Discard filter bowl O-ring.
 - Inspect filter for contamination.
 - Install filter.
 - Apply engine oil to new filter O-ring supplied with filter element and install O-ring in groove on top of oil filter element
 - Install filter element onto generator housing.
 - Apply engine oil to new filter bowl O-ring and install O-ring on filter bowl.
 - Install filter bowl.
 - Torque filter bowl to 18 to 20 inch-pounds.
 - Safety wire filter bowl.
 - Push indicator button to be certain that the pressure differential indicator is reset.
 - Fill Generator with oil after filter replacement.
 - Do a leak check for the VSCF Generator oil filter. No leaks are permitted.
- PRIOR TO EACH DEPARTURE, interrogate the STATUS Cue Light to ensure no additional AC Power Faults have occurred. If additional faults have occurred, refer to appropriate MEL relief for that item.

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NUMBER INSTALLED			NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD			REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
AC ELECTRICAL POWER GENERATION AND CONTROL					
24-21-01A	Engine Generator Systems "DISP.APPR.REQ'D."	N	2	1	B
(O)(M) May be inoperative provided: a) APU Generator System is operative and furnishing power to the associated bus, b) APU and remaining (operative) VSCF Log Book history for past 30 days is reviewed and approved by MCC prior to deferral, c) ONCE EACH FLIGHT DAY (Log Book entry required), APU oil quantity is serviced to full, both VSCF Generators are serviced within the green band prior to deferral provided no mechanical failure has occurred that resulted in oil loss / leakage or the Shaft Plug procedure has not been accomplished, d) All other components of the electrical power system (except the external power system) are operative, e) EPCU faults are reviewed for flight leg 1 and recorded in the aircraft log book at next maintenance station, f) Bus Tie Switch on the affected side is in the AUTO position, and g) Performance penalties are applied. Repetitive Check Required (Yellow Placard)					
24-21-01B	APU Generator System "DISP.APPR.REQ'D."	Y	1	0	C
May be inoperative provided both Engine Generator Systems are operative.					

MEL ITEM	TAB LOCATION	PLACARD TEXT
24-21-01A	Associated Eng Generator Switch	____ Engine Generator INOP
24-21-01B	APU Start Switch	APU Generator INOP

(O) PROCEDURES

24-21-01A

- Place affected GEN Switch to OFF.
- Prior to takeoff, verify APU is operating and furnishing power to the affected bus.
- Ensure APU Generator Load does not exceed the following limits:

On Ground	1.0
In Flight	0.6
Maximum Operating Altitude	FL 370

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24-21-01A ENGINE GENERATOR SYSTEMS	
EFFECTIVITY	All
FLIGHT PLANNING REQUIREMENTS	Increase BLOCK FUEL by 235 lbs. per hour for APU usage.
NOTES	None
AWABS	Performance corrections have been applied.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF None
	LANDING None

(M) PROCEDURES

24-21-01A

ONCE EACH FLIGHT DAY:

1. Ensure AC Power system is properly placarded in the cockpit so as to prevent inadvertent selection of the inoperative channel by the flight crew.

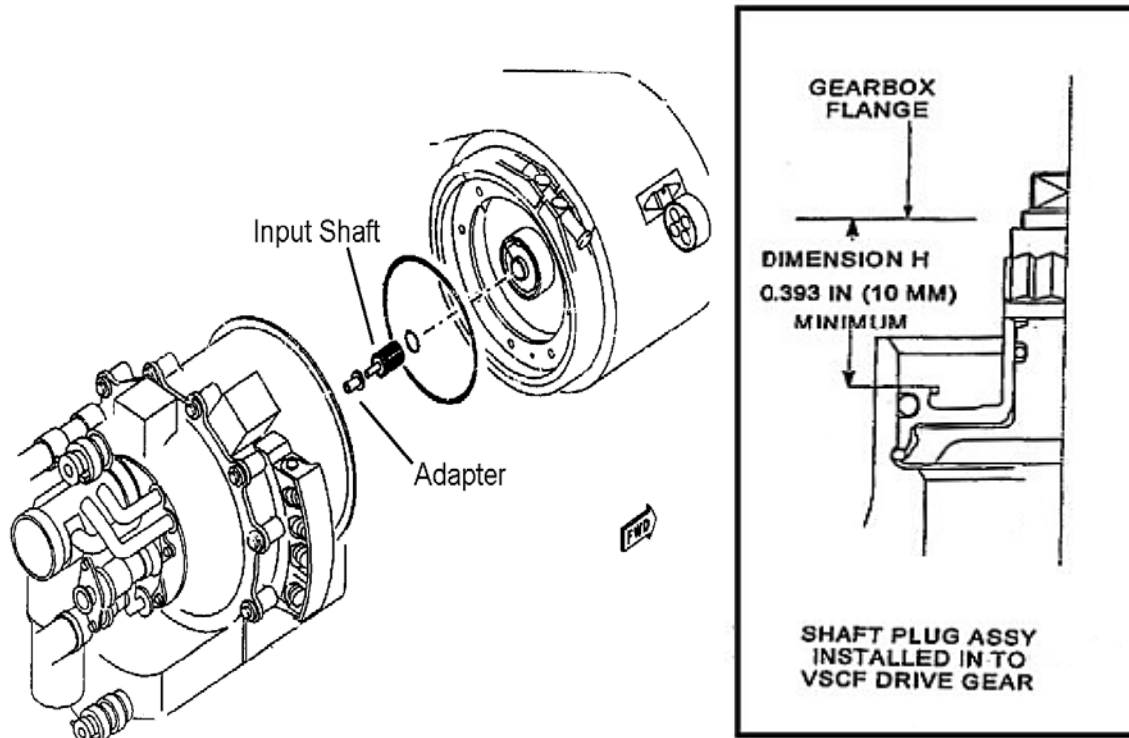
NOTE: A mechanical failure is suspect if any of the following messages are present on the EOAP:

GEN BRG FAIL, GEN OIL FILTER, GEN OIL PRESSURE, GEN OVERHEAT

2. If a mechanical failure has occurred that resulted in oil loss / leakage mechanically isolate the VSCF Generator from the Engine Gearbox.
 - a. Remove the affected VSCF Generator from the Engine Gearbox.
 - b. Remove and retain the VSCF Input Shaft. If the shaft is held by a retaining screw, insert a flat-bladed screwdriver into the shaft and rotate retaining screw 1/4 turn while pushing in on screw (shaft should not rotate).
 - c. Install the VSCF Input Shaft Ferry Plug (P/N 4AO416, located in gear pin pouch), into the Engine Gearbox female spline adapter for the VSCF Generator male input shaft, as follows:
 - 1) Prepare the shaft plug assembly as follows:
 - a) Verify the o-ring seals are installed on the retaining ring housing and on the shaft plug.
 - b) Tighten the nut until the mating faces of the nut, shaft plug, retaining ring, and retaining ring housing are touching. Make sure the retaining ring is evenly seated between the retaining ring housing and the shaft plug.

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- 2) Insert the pre-assembled shaft plug assembly into the VSCF Gearbox drive gear until it touches the ID spline in the gear.
- 3) Hold the retaining ring housing and torque the nut to between 290 and 370 in.-lbs.
- 4) Verify the plug assembly is seated tightly in the VSCF drive gear.



- d. Reinstall the affected VSCF Generator to the Engine Gearbox.

NOTE: With Shaft Plug assembly installed per these procedures, VSCF Generator need not be refilled with oil. Oil supply will be replenished when unit is returned to operational status.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
	GENERATOR RECTIFIER DIODES				
24-21-02A	Generator Rectifier Diodes	N	18	-	C (M) May be inoperative provided: a) Load carrying capability of the affected generator is verified to be adequate PRIOR TO EACH DEPARTURE (Log Book Entry Required), and b) Status Cue Light on the EOAP is interrogated PRIOR TO EACH DEPARTURE for verification of all AC Power Faults. Repetitive Check Required (Yellow Placard)
24-21-02B	Engine Generator Rectifier Diodes "DISP.APPR.REQ'D."	Y	12	6	B (O)(M) May be inoperative provided: a) Associated Engine Generator System is considered inoperative and deferred per MEL 24-21-01A, b) APU Generator System is operative and furnishing power to the associated bus, c) All other components of the electrical power system (except the external power system) are operative, and d) Bus Tie Switch on the affected side is in the AUTO position.
24-21-02C	APU Generator Rectifier Diodes "DISP.APPR.REQ'D."	Y	6	0	C (M) May be inoperative provided: a) APU Generator System is considered inoperative and deferred per MEL 24-21-01B, and b) Both Engine Generator Systems are operative.

MEL ITEM	TAB LOCATION	PLACARD TEXT
24-21-02A	Associated Eng Generator Switch / APU Start Switch	___ Generator Rectifier Diode(s) INOP
24-21-02B	Associated Eng Generator Switch	1. ___ Engine Generator Rectifier Diode(s) INOP 2. Do Not Use ___ Engine Generator
24-21-02C	APU Start Switch	1. ___ APU Generator Rectifier Diode(s) INOP 2. Do Not Use APU Generator

(O) PROCEDURES

24-21-02B

1. Place affected GEN Switch to OFF.
2. Prior to takeoff, verify APU is operating and furnishing power to the affected bus.

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3. Ensure APU Generator Load does not exceed the following limits:

On Ground	1.0
In Flight	0.6
Maximum Operating Altitude	FL 370

(M) PROCEDURES

24-21-02A

1. PRIOR TO EACH DEPARTURE, interrogate the STATUS Cue Light to ensure no additional AC Power Faults have occurred. If additional faults have occurred, refer to appropriate MEL relief for that item.
2. Perform the following steps to verify adequate load carrying capability of the affected generator(s):
 - a. Start both engines.
 - b. Select only the generator with the inoperative diode(s) ON. If more than one generator is affected, perform the following steps on each generator separately:
 - 1) Verify the AC Voltage/Frequency of the affected generator is within limits.
 - 2) Select the Right Electric Auxiliary Hydraulic Pump ON.
 - 3) Turn on all exterior lights, and all interior lights to maximum brightness.
 - 4) Set the AIR CONDITIONING SUPPLY Switches to the AUTO position.
 - 5) Set the AIR CONDITIONING CKPT and CABIN TEMP Switches to AUTO.
 - 6) Verify the AC Loadmeter for the affected generator system indicates a load near 1.0 units

CAUTION: If the AC Loadmeter indicates higher than 1.5 immediately reduce electrical loads to prevent damaging the affected electrical system.

- 7) After ten seconds, set the AIR CONDITIONING SUPPLY Switches to OFF.
- 8) If the test does not show that the affected generator can stay on line at the load applied above, the affected AC Power Generating System should be considered inoperative

24-21-02B, 24-21-02C

Ensure AC Power system is properly placarded in the cockpit so as to prevent inadvertent selection of the inoperative channel by the flight crew.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
	GENERATOR MAIN BEARINGS				
24-21-03A	Generator Main Bearings "Contact MCC"	Y	6	5	A (M) May be inoperative provided: a) STATUS Cue Light on the EOAP is interrogated PRIOR TO EACH DEPARTURE for verification of all AC Power Faults, and b) Repairs are made within thirty flight hours. Repetitive Check Required (Yellow Placard)
24-21-03B	Engine Generator Main Bearings "DISP.APPR.REQ'D."	Y	4	2	A (O)(M) Both may be inoperative on one generator (Left, or Right) provided: a) Associated Engine Generator System is considered inoperative and deferred per MEL 24-21-01A, and b) Repairs are made within thirty flight hours.
24-21-03C	APU Generator Main Bearings "DISP.APPR.REQ'D."	Y	2	0	A May be inoperative provided: a) APU Generator System is considered inoperative and deferred per MEL 24-21-01B, and b) Repairs are made within thirty flight hours.
24-21-03D	APU Generator Main Bearings "DISP.APPR.REQ'D."	Y	2	0	C May be inoperative provided the APU is not used.

MEL ITEM	TAB LOCATION	PLACARD TEXT
24-21-03A	Associated Eng Generator Switch / APU Start Switch	___ Generator Main Bearing INOP
24-21-03B	Associated Eng Generator Switch	1. ___ Engine Generator Main Bearing(s) INOP 2. Do Not Use ___ Engine Generator
24-21-03C	APU Start Switch	1. ___ APU Generator Main Bearings(s) INOP 2. Do Not Use APU Generator
24-21-03D	APU Start Switch	1. ___ APU Generator Main Bearings(s) INOP 2. Do Not Use APU

(O) PROCEDURES

24-21-03B

- Place affected GEN Switch to OFF.
- Prior to takeoff, verify APU is operating and furnishing power to the affected bus.
- Ensure APU Generator Load does not exceed the following limits:

On Ground	1.0
In Flight	0.6
Maximum Operating Altitude	FL 370

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(M) PROCEDURES

24-21-03A

PRIOR TO EACH DEPARTURE, interrogate the STATUS Cue Light to ensure no additional AC Power Faults have occurred. If additional faults have occurred, refer to appropriate MEL relief for that item.

24-21-03B

Ensure AC Power system is properly placarded in the cockpit so as to prevent inadvertent selection of the inoperative channel by the flight crew.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
24-21-04A	VSCF Generator Oil Filters "Contact MCC"	Y	2	0	A (M) May be inoperative provided: a) Repairs are made within fifty flight hours, and b) The STATUS Cue Light on the EOAP is interrogated PRIOR TO EACH DEPARTURE for verification of all AC Power Faults. Repetitive Check Required (Yellow Placard)
24-21-04B	VSCF Generator Oil Filters "DISP.APPR.REQ'D."	Y	2	1	B (O)(M) May be inoperative provided associated Engine Generator System is considered inoperative and deferred per MEL 24-21-01A .

MEL ITEM	TAB LOCATION	PLACARD TEXT
24-21-04A	Associated Eng Generator Switch	____ VSCF Generator Oil Filter(s) INOP
24-21-04B	Associated Eng Generator Switch	____ VSCF Generator Oil Filter INOP

(O) PROCEDURES

24-21-04B

- Place affected GEN Switch to OFF.
- Prior to takeoff, verify APU is operating and furnishing power to the affected bus.
- Ensure APU Generator Load does not exceed the following limits:

On Ground	1.0
In Flight	0.6
Maximum Operating Altitude	FL 370

(M) PROCEDURES

24-21-04A

PRIOR TO EACH DEPARTURE, interrogate the STATUS Cue Light to ensure no additional AC Power Faults have occurred. If additional faults have occurred, refer to appropriate MEL relief for that item.

24-21-04B

Ensure AC Power system is properly placarded in the cockpit so as to prevent inadvertent selection of the inoperative channel by the flight crew.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
	L/R/APU GEN BRG FAIL ANNUNCIATION SYSTEMS				
24-21-05A	L/R/APU GEN BRG FAIL Annunciation Systems "Contact MCC"	Y	3	2	A (M) May be inoperative provided: a) Associated Generator System is considered inoperative and deferred per MEL 24-21-01, b) STATUS Cue Light on the EOAP is interrogated PRIOR TO EACH DEPARTURE for verification of all AC Power Faults, and c) Repairs are made within thirty flight hours. Repetitive Check Required (Yellow Placard)
24-21-05B	L/R GEN BRG FAIL Annunciation Systems "DISP.APPR.REQ'D."	Y	2	1	A (O)(M) May be inoperative provided: a) Associated Engine Generator System is considered inoperative and deferred per MEL 24-21-01A, and b) Repairs are made within thirty flight hours.
24-21-05C	APU GEN BRG FAIL Annunciation Systems "DISP.APPR.REQ'D."	Y	1	0	A May be inoperative provided: a) APU Generator System is considered inoperative and deferred per MEL 24-21-01B, and b) Repairs are made within thirty flight hours.
24-21-05D	APU GEN BRG FAIL Annunciation Systems "DISP.APPR.REQ'D."	Y	1	0	C May be inoperative provided the APU is not used.

MEL ITEM	TAB LOCATION	PLACARD TEXT
24-21-05A	Associated Eng Generator Switch / APU Start Switch	____ GEN BRG FAIL Light INOP
24-21-05B	Associated Eng Generator Switch	1. ____ GEN BRG FAIL Light INOP 2. Do Not Use ____ Engine Generator
24-21-05C	APU Start Switch	1. APU GEN BRG FAIL Light INOP 2. Do Not Use APU Generator
24-21-05D	APU Start Switch	1. APU GEN BRG FAIL Light INOP 2. Do Not Use APU

(O) PROCEDURES

24-21-05B

1. Place affected GEN Switch to OFF.
2. Prior to takeoff, verify APU is operating and furnishing power to the affected bus.

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3. Ensure APU Generator Load does not exceed the following limits:

On Ground	1.0
In Flight	0.6
Maximum Operating Altitude	FL 370

(M) PROCEDURES

24-21-05A

PRIOR TO EACH DEPARTURE, interrogate the STATUS Cue Light to ensure no additional AC Power Faults have occurred. If additional faults have occurred, refer to appropriate MEL relief for that item.

24-21-05B

Ensure AC Power system is properly placarded in the cockpit so as to prevent inadvertent selection of the inoperative channel by the flight crew.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH			
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY			
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS	
	L/R/APU GEN DIODE FAIL ANNUNCIATION SYSTEMS						
24-21-06A	L/R/APU GEN DIODE FAIL Annunciation Systems	N	3	0	C	(M) May be inoperative provided: a) Load carrying capability of the affected generator is verified to be adequate PRIOR TO EACH DEPARTURE, and b) STATUS Cue Light on the EOAP is interrogated PRIOR TO EACH DEPARTURE (Log Book Entry Required) for verification of all AC Power Faults. Repetitive Check Required (Yellow Placard)	
24-21-06B	L/R GEN DIODE FAIL Annunciation Systems "DISP.APPR.REQ'D."	Y	2	1	B	(O)(M) May be inoperative provided the associated Engine Generator System is considered inoperative and deferred per MEL 24-21-01A .	
24-21-06C	APU GEN DIODE FAIL Annunciation System "DISP.APPR.REQ'D."	Y	1	0	C	May be inoperative provided: a) APU Generator System is not used, and b) Both Engine Generator Systems are operative.	

MEL ITEM	TAB LOCATION	PLACARD TEXT
24-21-06A	Associated Eng Generator Switch / APU Start Switch	___ GEN DIODE FAIL Light(s) INOP
24-21-06B	Associated Eng Generator Switch	1. ___ GEN DIODE FAIL Light INOP 2. Do Not Use ___ Engine Generator
24-21-06C	APU Start Switch	1. APU GEN DIODE FAIL Light INOP 2. Do Not Use APU Generator

(O) PROCEDURES

24-21-06B

- Place affected GEN Switch to OFF.
- Prior to takeoff, verify APU is operating and furnishing power to the affected bus.
- Ensure APU Generator Load does not exceed the following limits:

On Ground	1.0
In Flight	0.6
Maximum Operating Altitude	FL 370

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(M) PROCEDURES

24-21-06A

1. PRIOR TO EACH DEPARTURE, interrogate the STATUS Cue Light to ensure no additional AC Power Faults have occurred. If additional faults have occurred, refer to appropriate MEL relief for that item.
2. Perform the following steps to verify adequate load carrying capability of the affected generator(s):
 - a. Start both engines.
 - b. Select only the generator with the inoperative diode(s) ON. If more than one generator is affected, perform the following steps on each generator separately:
 - 1) Verify the AC Voltage/Frequency of the affected generator is within limits.
 - 2) Select the Right Electric Auxiliary Hydraulic Pump ON.
 - 3) Turn on all exterior lights, and all interior lights to maximum brightness.
 - 4) Set the AIR CONDITIONING SUPPLY Switches to the AUTO position.
 - 5) Set the AIR CONDITIONING CKPT and CABIN TEMP Switches to AUTO.
 - 6) Verify the AC Loadmeter for the affected generator system indicates a load near 1.0 units

CAUTION: If the AC Loadmeter indicates higher than 1.5 immediately reduce electrical loads to prevent damaging the affected electrical system.

- 7) After ten seconds, set the AIR CONDITIONING SUPPLY Switches to OFF.
- 8) If the test does not show that the affected generator can stay on line at the load applied above, the affected AC Power Generating System should be considered inoperative

24-21-06B

Ensure AC Power system is properly placarded in the cockpit so as to prevent inadvertent selection of the inoperative channel by the flight crew.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
24-21-07	Right Generator Relay (RGR) "DISP.APPR.REQ'D."	N	1	0	B
					(O)(M) May be inoperative provided: a) RGR failure isolates the Right Generating System output from the rest of the electrical distribution system, b) APU Generator System is operative and furnishing power to the Right AC Bus, c) APU oil quantity is serviced to full prior to deferral and ONCE EACH FLIGHT DAY (Log Book entry required), and d) Performance penalties are applied. Repetitive Check Required (Yellow Placard)

MEL ITEM	TAB LOCATION	PLACARD TEXT
24-21-07	Right Eng Generator Switch	Right Generator Relay INOP

(O) PROCEDURES

- Place affected GEN Switch to OFF.
- Prior to takeoff, verify APU is operating and furnishing power to the affected bus.
- Ensure APU Generator Load does not exceed the following limits:

On Ground	1.0
In Flight	0.6
Maximum Operating Altitude	FL 370

24-21-07	RIGHT GENERATOR RELAY (RGR)
EFFECTIVITY	All
FLIGHT PLANNING REQUIREMENTS	Increase BLOCK FUEL by 235 lbs. per hour for APU usage.
NOTES	None
AWABS	Performance corrections have been applied.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF None LANDING None

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(M) PROCEDURES

ONCE EACH FLIGHT DAY:

1. Start engines.
2. Move the R BUS TIE Switch to OPEN position.
3. Verify no load is indicated on the Right AC Loadmeter.
4. Move the R BUS TIE Switch to AUTO position and verify left generator powers right bus.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
24-21-08	Left Generator Relay (LGR) "DISP.APPR.REQ'D."	N	1	0	B
					(O)(M) May be inoperative provided: a) LGR failure isolates the Left Generator System output from the rest of the electrical distribution system, b) APU Generator System is operative and furnishing power to the Left AC Bus, c) APU oil quantity is serviced to full prior to deferral and ONCE EACH FLIGHT DAY (Log Book entry required), and d) Performance penalties are applied. Repetitive Check Required (Yellow Placard)

MEL ITEM	TAB LOCATION	PLACARD TEXT
24-21-08	Left Eng Generator Switch	Left Generator Relay INOP

(O) PROCEDURES

- Place affected GEN Switch to OFF.
- Prior to takeoff, verify APU is operating and furnishing power to the affected bus.
- Ensure APU Generator Load does not exceed the following limits:

On Ground	1.0
In Flight	0.6
Maximum Operating Altitude	FL 370

24-21-08	LEFT GENERATOR RELAY (LGR)
EFFECTIVITY	All
FLIGHT PLANNING REQUIREMENTS	Increase BLOCK FUEL by 235 lbs. per hour for APU usage.
NOTES	None
AWABS	Performance corrections have been applied.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF None
	LANDING None

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(M) PROCEDURES

ONCE EACH FLIGHT DAY:

1. Start engines.
2. Move the L BUS TIE Switch to OPEN position.
3. Verify no load is indicated on the Left AC Loadmeter.
4. Move the L BUS TIE Switch to AUTO position and verify right generator powers left bus.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
24-21-09	VSCF Heat Exchangers "DISP.APPR.REQ'D."	Y	2	1 B	(O)(M) May be inoperative provided associated Engine Generator System is considered inoperative and deferred per MEL 24-21-01A.

MEL ITEM	TAB LOCATION	PLACARD TEXT
24-21-09	Associated Eng Generator Switch	1. ____ VSCF Heat Exchanger INOP 2. Do Not Use ____ Engine Generator

(O) PROCEDURES

1. Place affected GEN Switch to OFF.
2. Prior to takeoff, verify APU is operating and furnishing power to the affected bus.
3. Ensure APU Generator Load does not exceed the following limits:

On Ground	1.0
In Flight	0.6
Maximum Operating Altitude	FL 370

(M) PROCEDURES

Ensure AC Power system is properly placarded in the cockpit so as to prevent inadvertent selection of the inoperative channel by the flight crew.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH			
FLIGHT CREW MAY PLACARD					REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS	
24-21-10	Galley Power and Control System	Y	-	0	C	(M) May be inoperative provided affected galley power is deactivated.	

MEL ITEM	TAB LOCATION	PLACARD TEXT
24-21-10	GALLEY Power Switch	___ Galley Electrical Power INOP

(M) PROCEDURES

Locate, pull and secure the circuit breaker(s) corresponding to affected galley/system.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS
24-26-01	L/R/APU GEN OFF Annunciation Systems	Y	3	1	C	(O) May be inoperative provided: a) One of the two operating generators supplying power to the bus has an operative annunciator, and b) The bus powering generator with an inoperative GEN OFF annunciation has an operative AC Loadmeter System.

MEL ITEM	TAB LOCATION	PLACARD TEXT
24-26-01	Associated Eng Generator Switch / APU Start Switch	____ GEN OFF Light(s) INOP

(O) PROCEDURES

Monitor the AC Loadmeter of the Generator associated with the inoperative annunciation.

NOTE: A generator failure will still illuminate the Master Caution lights.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
24-26-02	AC Frequency Meter System	Y	1	0	C

MEL ITEM	TAB LOCATION	PLACARD TEXT
24-26-02	AC Frequency Meter	AC 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
AC LOADMETER SYSTEMS					
24-26-03A	Engine Generator Loadmeter Systems "DISP.APPR.REQ'D."	Y	2	1 B	(O)(M) May be inoperative provided: a) Associated generator system is considered inoperative and deferred per MEL 24-21-01A, and b) APU generator load meter is operative.
24-26-03B	APU Loadmeter System "DISP.APPR.REQ'D."	Y	1	0 C	May be inoperative provided: a) Associated generator is not used, and b) Both engine generator systems are operative.

MEL ITEM	TAB LOCATION	PLACARD TEXT
24-26-03A	Affected AC Loadmeter	1. ____ AC Loadmeter INOP 2. Do Not Use ____ Generator
24-26-03B	APU AC Loadmeter	1. APU Loadmeter INOP 2. Do Not Use APU Generator

(O) PROCEDURES

24-26-03A

1. Reset affected Engine GEN switch to clear faults, then place affected GEN Switch to OFF.
2. Prior to takeoff, verify APU is operating and furnishing power to the affected bus.
3. Ensure APU Generator Load does not exceed the following limits:

On Ground	1.0
In Flight	0.6
Maximum Operating Altitude	FL 370

(M) PROCEDURES

24-26-03A

Ensure AC Power system is properly placarded in the cockpit so as to prevent inadvertent selection of the inoperative channel by the flight crew.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
24-26-04	L/R/APU GEN FAIL Annunciation Systems	Y	3	0	C (M) May be inoperative provided: a) It is verified that the fault exists in the annunciation system, and b) The STATUS Cue Light on the EOAP is interrogated PRIOR TO EACH DEPARTURE for verification of all AC Power Faults. Repetitive Check Required (Yellow Placard)

MEL ITEM	TAB LOCATION	PLACARD TEXT
24-26-04	Associated Eng Generator Switch / APU Start Switch	____ GEN FAIL Light(s) INOP

(M) PROCEDURES

PRIOR TO EACH DEPARTURE, interrogate the STATUS Cue Light to ensure no additional AC Power Faults have occurred. If additional faults have occurred, refer to appropriate MEL relief for that item.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
	L/R/APU GEN OVERHEAT ANNUNCIATION SYSTEMS				
24-26-05A	L/R GEN OVERHEAT Annunciation Systems "DISP.APPR.REQ'D."	Y	2	1	B (O)(M) May be inoperative provided the associated Engine Generator System is considered inoperative and deferred per MEL 24-21-01A .
24-26-05B	APU GEN OVERHEAT Annunciation Systems "DISP.APPR.REQ'D."	Y	1	0	C May be inoperative provided: a) APU Generator is not used, and b) Both Engine Generator systems are operative.

MEL ITEM	TAB LOCATION	PLACARD TEXT
24-26-05A	Associated Eng Generator Switch	1. ____ GEN OVERHEAT Light INOP 2. Do Not Use ____ Engine Generator
24-26-05B	APU Start Switch	1. APU GEN OVERHEAT Light INOP 2. Do Not Use APU Generator

(O) PROCEDURES

24-26-05A

1. Place affected GEN Switch to OFF.
2. Prior to takeoff, verify APU is operating and furnishing power to the affected bus.
3. Ensure APU Generator Load does not exceed the following limits:

On Ground	1.0
In Flight	0.6
Maximum Operating Altitude	FL 370

(M) PROCEDURES

24-26-05A

Ensure AC Power system is properly placarded in the cockpit so as to prevent inadvertent selection of the inoperative channel by the flight crew.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
24-27-02	Variable Speed Constant Frequency (VSCF) Converter Cooling Fans "DISP.APPR.REQ'D."	Y	2	1 B	(O) May be inoperative provided the associated generator is considered inoperative and deferred per MEL 24-21-01A.

MEL ITEM	TAB LOCATION	PLACARD TEXT
24-27-02	Associated Eng Generator Switch	1. ____ VSCF Converter Cooling Fans INOP 2. Do Not Use ____ Engine Generator

(O) PROCEDURES

1. Place affected GEN Switch to OFF.
2. Prior to takeoff, verify APU is operating and furnishing power to the affected bus.
3. Ensure APU Generator Load does not exceed the following limits:

On Ground	1.0
In Flight	0.6
Maximum Operating Altitude	FL 370

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
24-31-01	Transformer/ Rectifiers (TR)	Y	4	3	B (O)(M) May be inoperative provided the associated TR is disconnected from the electrical system.

MEL ITEM	TAB LOCATION	PLACARD TEXT
24-31-01	Associated DC Loadmeter	____ Transformer / Rectifier INOP

(O) PROCEDURES

Monitor remaining loadmeter on side with affected TR unit.

(M) PROCEDURES

Pull and secure the three associated circuit breakers for the affected unit.

C / B	C / B #	Location	Panel
Left T/R-1	B1-1016	K-1	EPC (Behind Captain's Seat)
	B1-1017	K-2	EPC (Behind Captain's Seat)
	B1-1018	K-3	EPC (Behind Captain's Seat)
Left T/R-2	B1-1013	K-4	EPC (Behind Captain's Seat)
	B1-1014	K-5	EPC (Behind Captain's Seat)
	B1-1015	K-6	EPC (Behind Captain's Seat)
Right T/R-1	B1-1019	L-1	EPC (Behind Captain's Seat)
	B1-1020	L-2	EPC (Behind Captain's Seat)
	B1-1021	L-3	EPC (Behind Captain's Seat)
Right T/R-2	B1-1022		Ground Service Bus (Left Console)
	B1-1023		Ground Service Bus (Left Console)
	B1-1024		Ground Service Bus (Left Console)

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
24-33-01	DC Loadmeters	Y	4	3 C	(O) May be inoperative provided the DC BUS OFF message is not displayed.

MEL ITEM	TAB LOCATION	PLACARD TEXT
24-33-01	Affected DC Loadmeter	____ DC Loadmeter INOP

(O) PROCEDURES

1. Monitor DC voltage for affected bus.
2. Monitor operating half of dual loadmeter.
3. Verify DC BUS OFF light is not illuminated.

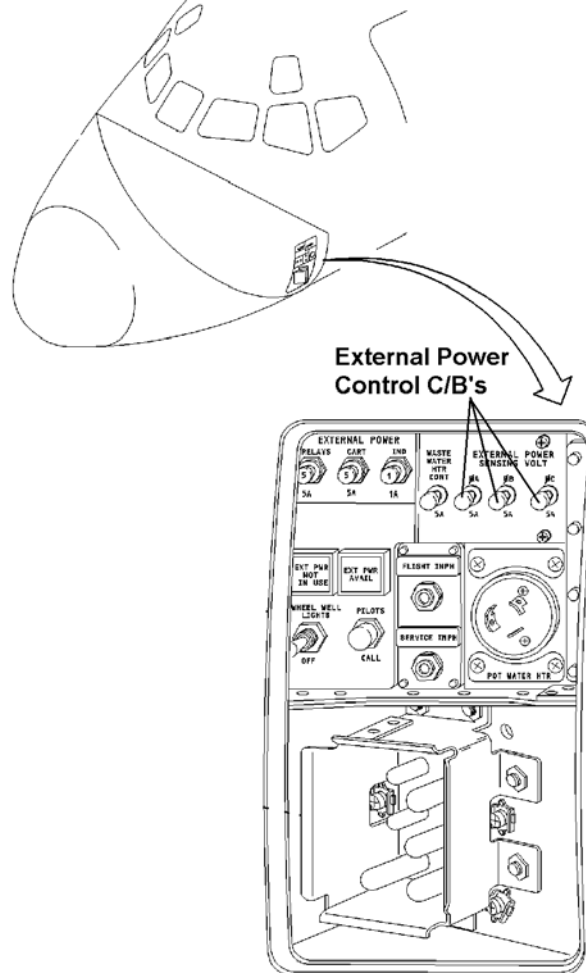
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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
24-41-01	External Power System "DISP.APPR.REQ'D."	Y	1	0	C (M) May be inoperative provided: a) Procedures are used to isolate affected components from the rest of the electrical distribution system, and b) External Power Receptacle is placarded "DO NOT CONNECT ELECTRICAL POWER".

MEL ITEM	TAB LOCATION	PLACARD TEXT
24-41-01	1. Near EXT PWR AVAIL Light on Overhead Panel 2. Near EXT PWR AVAIL Light on Ground Service Panel	External Power INOP

(M) PROCEDURES

1. Pull and secure the External Power Control circuit breakers on the External Power Panel.
2. Placard the External Power Receptacle "DO NOT CONNECT ELECTRICAL POWER".



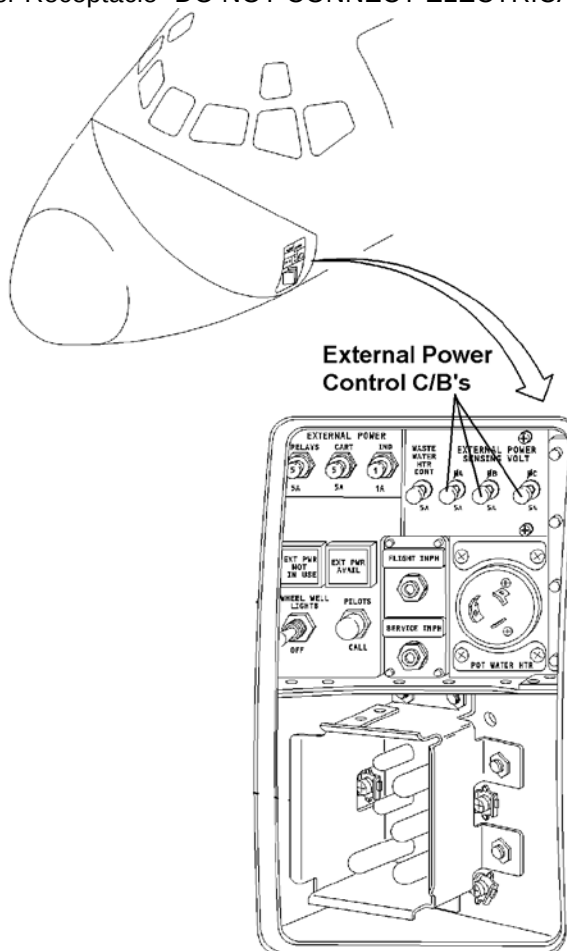
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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
24-41-02	Main External Power Relay (MEPR) "DISP.APPR.REQ'D."	Y	1	0	C (M) May be inoperative provided: a) Procedures are used to isolate the MEPR from the rest of the electrical distribution system, and b) External Power Receptacle is placarded "DO NOT CONNECT ELECTRICAL POWER".

MEL ITEM	TAB LOCATION	PLACARD TEXT
24-41-02	1. Near EXT PWR AVAIL Light on Overhead Panel 2. Near EXT PWR AVAIL Light on Ground Service Panel	1. Main External Power Relay INOP 2. Do Not Use External Pwr

(M) PROCEDURES

1. Pull and secure the External Power Control circuit breakers on the External Power Panel.
2. Placard the External Power Receptacle "DO NOT CONNECT ELECTRICAL POWER".



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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					
24-42-01	EXT PWR NOT IN USE Light (White)					NOTE: Verify appropriate EXT light illuminates when external power is connected to a bus.	

MEL ITEM	TAB LOCATION	PLACARD TEXT
24-42-01	EXT PWR NOT IN USE Light	EXT PWR NOT IN USE 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	
24-42-02	EXT PWR AVAIL Lights (Blue)	Y	3	0	C		

MEL ITEM	TAB LOCATION	PLACARD TEXT
24-42-02	Affected EXT PWR AVAIL Light(s)	____ EXT PWR AVAIL 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
24-51-01	Auxiliary Power Relay (APR) “DISP.APPR.REQ’D.”	Y	1	0	C	(M) May be inoperative provided APU Generator System is considered inoperative and deferred per MEL 24-21-01B and is isolated from the rest of the electrical distribution system.

MEL ITEM	TAB LOCATION	PLACARD TEXT
24-51-01	APU Start Switch	1. Auxiliary Power Relay INOP 2. Do Not Use APU Generator

(M) PROCEDURES

Ensure APU Electrical Power system is properly placarded in the cockpit so as to prevent its inadvertent selection by the flight crew.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
24-51-02	EXT Light (Blue) (Round BUS Lights)	Y	3	0	C

MEL ITEM	TAB LOCATION	PLACARD TEXT
24-51-02	Affected EXT Power In Use Light(s)	____ EXT PWR In Use 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
24-51-03A	APU PWR AVAIL Lights (Blue)	Y	2	0	C (O) May be inoperative provided APU GEN OFF message is verified operative PRIOR TO EACH DEPARTURE. Repetitive Check Required (Yellow Placard)
24-51-03B	APU PWR AVAIL Lights (Blue) "DISP.APPR.REQ'D."	Y	2	0	C May be inoperative provided the APU is not used.
24-51-03C	APU PWR AVAIL Lights (Blue)	Y	2	0	C May be inoperative provided: a) AC Voltmeter is operative, and b) AC Frequency Meter is operative.

MEL ITEM	TAB LOCATION	PLACARD TEXT
24-51-03A	Affected APU PWR AVAIL Light(s)	APU PWR AVAIL Light(s) INOP
24-51-03B	Affected APU PWR AVAIL Light(s)	1. APU PWR AVAIL Light(s) INOP 2. Do Not Use APU
24-51-03C	Affected APU PWR AVAIL Light(s)	APU PWR AVAIL Light(s) INOP

(O) PROCEDURES

24-51-03A

Verify APU GEN OFF message appears on the EOAP when the APU GEN switch is moved to OFF after starting APU.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
24-51-04	APU Lights (Blue) (Round BUS Lights)	Y	3	0	C May be inoperative provided the L/R AC BUS OFF messages are operative if APU electrical power is to be used.

MEL ITEM	TAB LOCATION	PLACARD TEXT
24-51-04	Affected APU Power In Use Light(s)	____ APU PWR In Use Light(s) INOP

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD					REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				C	REMARKS OR EXCEPTIONS
24-51-05	L/R GEN Lights (Blue) (Round BUS Lights)	Y				2

MEL ITEM	TAB LOCATION	PLACARD TEXT
24-51-05	Affected L/R GEN Power In Use Light(s)	____ GEN PWR In Use 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
24-51-06	L/R BUS FEEDER FAULT Annunciation Systems	Y	2	0	C (M) May be inoperative provided: a) It is verified that the fault is in the annunciation system, and b) The STATUS Cue Light on the EOAP is interrogated PRIOR TO EACH DEPARTURE for verification of all AC Power Faults. Repetitive Check Required (Yellow Placard)

MEL ITEM	TAB LOCATION	PLACARD TEXT
24-51-06	Associated BUS TIE Switch	____ BUS FEEDER FAULT Light(s) INOP

(M) PROCEDURES

1. PRIOR TO EACH DEPARTURE, interrogate the STATUS Cue Light to ensure no additional AC Power Faults have occurred. If additional faults have occurred, refer to appropriate MEL relief for that item.
2. If the associated generator is capable of powering its respective bus, then the fault is in the annunciation system.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
24-51-07A	L/R/APU GEN FEEDER FAULT Annunciation Systems	Y	3	0	C (M) May be inoperative provided: a) It is verified that the fault is in the annunciation system, and b) The STATUS Cue Light on the EOAP is interrogated PRIOR TO EACH DEPARTURE for verification of all AC Power Faults. Repetitive Check Required (Yellow Placard)
24-51-07B	L/R/APU GEN FEEDER FAULT Annunciation Systems "DISP.APPR.REQ'D."	Y	3	2	B (O)(M) May be inoperative provided the associated Engine Generator System is considered inoperative and deferred per MEL 24-21-01A .

MEL ITEM	TAB LOCATION	PLACARD TEXT
24-51-07A	Associated BUS TIE Switch	___ GEN FEEDER FAULT Light(s) INOP
24-51-07B	Associated BUS TIE Switch	___ GEN FEEDER FAULT Light(s) INOP

(O) PROCEDURES

24-51-07B

- Place affected GEN Switch to OFF.
- Prior to takeoff, verify APU is operating and furnishing power to the affected bus.
- Ensure APU Generator Load does not exceed the following limits:

On Ground	1.0
In Flight	0.6
Maximum Operating Altitude	FL 370

(M) PROCEDURES

24-51-07A

- PRIOR TO EACH DEPARTURE, interrogate the STATUS Cue Light to ensure no additional AC Power Faults have occurred. If additional faults have occurred, refer to appropriate MEL relief for that item.
- If the associated generator is capable of powering its respective bus, then the fault is in the annunciation system.

24-51-07B

Ensure AC Power system is properly placarded in the cockpit so as to prevent inadvertent selection of the inoperative channel by the flight crew.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO. NAME / DESCRIPTION					REMARKS OR EXCEPTIONS
OBSERVER SEAT					
25-15-01A	Observer Seat (Including Associated Equipment) “DISP.APPR.REQ’D.”	Y	1	0	A May be inoperative provided: a) A passenger seat in the passenger cabin is available to an FAA inspector for the performance of official duties, and b) Repairs are made within two (2) flight days.
25-15-01B	Observer Seat (Including Associated Equipment) “Contact MCC”	Y	1	0	A May be inoperative provided: a) The primary observer’s seat is available with the required minimum safety equipment (safety belt and oxygen), b) Is acceptable to the FAA inspector for the performance of official duties, and c) Repairs are made within two (2) flight days. NOTE 1: These provisos are intended to provide for occupancy of the above seats by an FAA inspector when the minimum safety equipment (oxygen and safety belt) is functional and the inspector determines the conditions to be acceptable. NOTE 2: The pilot-in-command will determine if the minimum safety equipment is functional for other persons authorized to occupy any observer seat.

MEL ITEM	TAB LOCATION	PLACARD TEXT
25-15-01A	Near Inoperative Equipment or Aircraft Logbook	Observer's Seat ____ INOP
25-15-01B	Near Inoperative Equipment or Aircraft Logbook	Observer's Seat ____ INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS
FLIGHT CREW SEATS						
25-15-02A	Lumbar Supports	Y	2	0	C	May be inoperative in the retracted position provided the seat is acceptable to the affected crewmember.
25-15-02B	Thigh Supports	Y	4	0	C	May be inoperative in the retracted position provided the seat is acceptable to the affected crewmember.
25-15-02C	Armrests	Y	4	2	B	One armrest on each seat may be inoperative or missing provided: a) Egress is not impaired, and b) Seat is acceptable to affected crewmember.
25-15-02D	Recline	N	2	0	A	(M) May be inoperative provided: a) Seat(s) is secured in an upright position acceptable to affected crewmember(s), and b) Repairs are made within two flight days.

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MEL ITEM	TAB LOCATION	PLACARD TEXT
25-15-02A	Aircraft Logbook	____ Seat Lumbar Support(s) INOP
25-15-02B	Aircraft Logbook	____ Seat Thigh Support(s) INOP
25-15-02C	Aircraft Logbook	____ Seat Armrest(s) INOP
25-15-02D	Aircraft Logbook	____ Seat Recline INOP

(M) PROCEDURES

25-15-02D

Ensure the seat is secured in an upright position by performing a functional test to verify the seat back cannot be moved.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH			
FLIGHT CREW MAY PLACARD			Y	-	-	REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION						REMARKS OR EXCEPTIONS
25-22-01	"Fasten Seat Belt While Seated" Signs or Placards (Unlighted)				C	Signs or placards may be illegible or missing provided a legible sign or placard is readable from each occupied passenger seat.	

MEL ITEM	TAB LOCATION	PLACARD TEXT
25-22-01	Aircraft Logbook	_____ Fasten Seat Belts While Seated Signs or Placards Missing / Illegible / INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
FLIGHT ATTENDANT SEATS (SINGLE OR DUAL POSITION)					
25-23-01A	Required Flight Attendant Seats "DISP.APPR.REQ'D." (Refer to In-flight Service Onboard Manual for Required Seat Locations)	Y	3	2	A (O)(M) One seat position or assembly (dual position) may be inoperative provided: a) Affected seat position or seat assembly is not occupied, b) Flight Attendant(s) displaced by inoperative seat(s) occupies either an adjacent flight attendant seat or the passenger seat which is most accessible to the inoperative seat(s), so as to most effectively perform assigned duties, c) Alternate procedures are used for displaced Flight Attendant(s) (Ref. In-flight Service Onboard Manual), d) Folding type seat stows automatically or is secured in the retracted position and is checked ONCE EACH FLIGHT DAY (LOG BOOK ENTRY REQUIRED), and e) Passenger seat assigned to flight attendant(s) is placarded "FOR FLIGHT ATTENDANT ONLY" , and f) Repairs are made within two flight days. 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. NOTE 3: If one side of a dual seat assembly is inoperative and a flight attendant is displaced to the adjacent seat, the adjacent seat must operate normally. Repetitive Check Required (Yellow Placard)
25-23-01B	Required Flight Attendant Seats "DISP.APPR.REQ'D." (Refer to In-flight Service Onboard Manual for Required Seat Locations)	Y	-	-	C (O) May be inoperative or missing provided: a) No passengers are carried, b) A maximum of 19 persons authorized by 14CFR for non-passenger-carrying operations are carried, c) Pilot in command has a means to provide notification when seat belts must be fastened, and d) Safety briefing is given prior to takeoff.

CONTINUED NEXT PAGE

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
	FLIGHT ATTENDANT SEATS (SINGLE OR DUAL POSITION) (Continued)				
25-23-01C	Excess Flight Attendant Seats "DISP.APPR.REQ'D." (Refer to In-flight Service Onboard Manual for Required Seat Locations)	Y	1	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 the 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)

MEL ITEM	TAB LOCATION	PLACARD TEXT
25-23-01A	Aircraft Logbook	____ Flight Attendant Seat INOP
25-23-01B	Aircraft Logbook	____ Flight Attendant(s) Seat INOP
25-23-01C	Aircraft Logbook	____ Flight Attendant(s) Seat INOP

(O) PROCEDURES

25-23-01A, 25-23-01B

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

25-23-01A, 25-23-01C

1. Flight Attendant Seat Position Inoperative: 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).
 - a. Secure in the retracted (fully stowed) position using high visibility tape.
 - b. Placard the inoperative 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 (Logbook Entry Required)

- c. Ensure seat has remained in the fully stowed position. If the 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
PASSENGER SEATS					
25-23-03A	Passenger Seats "DISP.APPR.REQ'D."	Y	-	0	C (M) May be inoperative provided: a) Seat does not block an Emergency Exit, b) Seat does not restrict any passenger from access to the 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 the required number of Flight Attendants. NOTE 3: Affected seats may include the seat behind and / or adjacent outboard seats. NOTE 4: MCC must contact Flight Control for coordination with ACS and the ROC to remove the seat from inventory until repaired.
25-23-03B	Passenger Seats "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 the required number of Flight Attendants. NOTE 2: MCC must contact Flight Control for coordination with ACS and the ROC to remove the seat from inventory until the seat(s) is reinstalled. NOTE 3: Seats with an inoperative or broken seat track attach fitting or seat frame damage affecting the integrity of the seat track attach fittings must be removed. Contact MCC.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
PASSENGER SEATS (Continued)					
25-23-03C	Recline Mechanism	N	-	0	D (M) May be inoperative and seat occupied provided seat is secured in the up-right position.
25-23-03D	Recline Mechanism	Y	-	0	D May be inoperative and seat occupied provided seat back is immovable in full upright position.
25-23-03E	Underseat Baggage Restraining Bars	Y	-	0	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 used to alert Cabin Crew of inoperative restraining bar.
25-23-03F	Armrest with Recline Mechanism	N	-	0	D (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) Seat is secured in full upright position.
25-23-03G	Armrest without Recline Mechanism	Y	-	0	D 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.

MEL ITEM	TAB LOCATION	PLACARD TEXT
25-23-03A	Aircraft Logbook	Passenger Seat(s) ____ INOP
25-23-03B	Aircraft Logbook	Passenger Seat(s) ____ Removed
25-23-03C	Aircraft Logbook	Recline Mechanism Seat(s) ____ INOP
25-23-03D	Aircraft Logbook	Recline Mechanism Seat(s) ____ INOP
25-23-03E	Aircraft Logbook	Underseat Baggage Restraining Bar Seat(s) ____ INOP
25-23-03F	Aircraft Logbook	Arm Rest Seat(s) ____ INOP
25-23-03G	Aircraft Logbook	Arm Rest Seat(s) ____ INOP

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(O) PROCEDURES

25-23-03B

25-23-03B	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 "Passenger Seat Assembly" in ALM – Weight and Balance Section.

25-23-03E

1. Advise cabin crew to ensure baggage is not stowed under seats with inoperative or missing Restraining Bars.
2. 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.

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(M) PROCEDURES

25-23-03A

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

- b) 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.
2. 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:
 - a) 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*.
 - b) 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.
 - c) 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.

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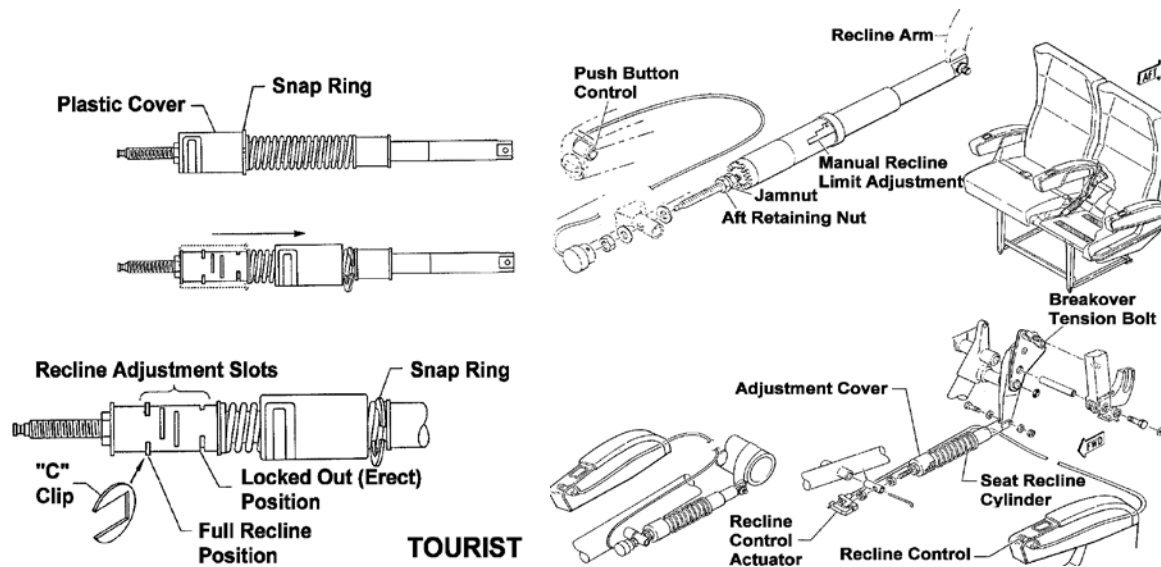
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25-23-03B

1. Ensure emergency escape path lighting meets minimum dispatch requirements (see [MEL item 33-51-01](#)).
2. Tie back/stow all electrical connectors, wires, phone connections, etc. for the affected seat.

25-23-03C, 25-23-03F

1. Stow inoperative seat(s).
2. Lock up-right by seat cylinder or by disconnecting seat cable at seat lock cylinder.



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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD					
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
25-24-01A	MID Scandinavian Cargo Loading System	N	1	0	D (M) May be inoperative provided system is deactivated by approved procedure.
25-24-01B	AFT Scandinavian Cargo Loading System	N	1	0	D (M) May be inoperative provided system is deactivated by approved procedure.

MEL ITEM	TAB LOCATION	PLACARD TEXT
25-24-01A	Aircraft Logbook	MID Cargo Loading System INOP
25-24-01B	Aircraft Logbook	AFT Cargo Loading System INOP

(M) PROCEDURES

25-24-01A, 25-24-01B

If Carpet/Belt can not be operated:

1. Remove all the locking pins at the moveable bulkheads lower edge.
2. Place the moveable bulkhead to its innermost position.
3. Place two of the lockpins in the pre-drilled holes on side rails.
4. Place the rest of the locking pins in any of the released forks at the moveable bulkhead.
5. Cover control switches with tape.

If Carpet/Belt can be operated:

1. Drive the Carpet/Belt with bulkhead attached to innermost position.
2. Cover control switches with tape.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
25-25-01A	Overhead Storage Bin(s) / Cabin and Galley Storage Compartment / Closets	Y	-	-	C (M) May be inoperative provided: a) Procedures are used to secure compartment CLOSED, b) Associated bin or compartment is prominently placarded DO NOT USE, c) Any emergency equipment located in affected compartment is considered inop and deferred per applicable MEL, and d) Affected compartment is not used for storage of any items(s) except for those permanently affixed. NOTE: If no partitions are installed, the entire overhead storage compartment is considered one bin.
25-25-01B	Overhead Storage Bin(s) / Cabin and Galley Storage Compartment / Closets	N	-	-	C (O)(M) May be inoperative provided: a) Affected door(s) is removed, b) Associated bin or compartment is not used for storage of any items, except those permanently affixed, c) Associated bin or compartment is prominently placarded DO NOT USE, d) Procedures are established and used to alert crew members and passengers of inoperative bins, and e) Passengers are briefed that associated bin or compartment is not used. NOTE 1: If no partitions are installed, the entire overhead storage compartment is considered one bin or compartment. NOTE 2: Any emergency equipment located in the associated compartment (permanently affixed) is available for use.
25-25-01C	Multi Latch/Quarter Turn Lug Installations	Y	-	-	C One latch/lug per compartment may be inoperative provided: a) Remaining latch(es)/lugs on affected compartment(s) operate normally, and b) If affected compartment is used for a galley cart, the cart remains empty.

MEL ITEM	TAB LOCATION	PLACARD TEXT
25-25-01A	Aircraft Logbook	____ Overhead Storage Bin(s) / Cabin and Galley Storage Compartment / Closets INOP
25-25-01B	Aircraft Logbook	____ Overhead Storage Bin(s) / Cabin and Galley Storage Compartment / Closets INOP
25-25-01C	Aircraft Logbook	____ Cabin, Galley Storage Compartment, and Galley Cart Latches INOP

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(O) PROCEDURES

25-25-01B

Flight Crew should insure that passengers are briefed not to use affected compartment.

(M) PROCEDURES

25-25-01A, 25-25-01B

1. Empty compartment (except for permanently affixed items).
2. For 25-25-01A: Using suitable pressure sensitive tape (i.e., bag bin tape, nylon or fiberglass reinforced tape, not masking tape, etc.), secure compartment CLOSED.
For 25-25-01B: Remove affected door.
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. For cabin equipment items that are relocated, comply with the following procedure:
 - a. Location placarding (if installed) of the affected item is removed or obscured.
 - b. Install temporary location placard on the outside of compartment / bin where the item was located denoting the new location.
 - c. Install temporary location placard on the outside of compartment / bin where the item has been relocated.
 - d. Note location of relocated equipment on aircraft logbook placard.

NUMBER INSTALLED		NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD			
ITEM NO.	NAME / DESCRIPTION	REMARKS OR EXCEPTIONS	
25-29-01	Nonessential 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 ashtrays are not considered NEF items.	

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
	GALLEY / CABIN / LAVATORY WASTE RECEPTACLE ACCESS DOORS / COVERS				
25-36-01A	Galley/Cabin Waste Receptacles Access Doors / Covers	Y	-	-	C (O)(M) May be inoperative provided: a) Associated waste container is empty, b) Receptacle access is secured to prevent waste introduction into the 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.
25-36-01B	Lavatory Waste Receptacles Access Doors / Covers "DISP. APPR. REQ'D."	Y	-	-	C (M) May be inoperative provided: a) Associated waste container is empty, b) Lavatory is used only by crewmembers, and c) 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
25-36-01A	Aircraft Logbook	____ Galley/Cabin Waste Receptacles Access Doors / Covers INOP
25-36-01B	Aircraft Logbook	____ Lavatory Waste Receptacles Access Doors / Covers INOP

(O) PROCEDURES

25-36-01A

Refer to the In-Flight Service On-Board Manual, Section 5 Standards and Regulations, Trash.

(M) PROCEDURES

25-36-01A

Refer to the Remarks or Exceptions column.

25-36-01B

1. Verify that the affected lavatory trash receptacle is empty.
2. Close and lock the associated lavatory door.
3. Placard lavatory door "INOPERATIVE - DO NOT ENTER" using "Inoperative Cabin Appearance" placard or equivalent.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
25-42-01	Exterior Lavatory Door Ashtrays "Contact MCC"	Y	-	-	A Up to 50 percent may be missing or inoperative provided they are replaced within three calendar days. NOTE: Interior lavatory ashtrays are considered Non-essential Equipment and Furnishings (NEF) items.

MEL ITEM	TAB LOCATION	PLACARD TEXT
25-42-01	Logbook	___ Exterior Lavatory Door Ashtrays Missing / INOP

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH				
FLIGHT CREW MAY PLACARD			Y	-	-	REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION	25-51-01				Lower Cargo Compartment Liners “DISP.APPR.REQ’D.”	C	REMARKS OR EXCEPTIONS

MEL ITEM	TAB LOCATION	PLACARD TEXT
25-51-01	Aircraft Logbook	Lower ____ Cargo Compartment INOP

NOTE: Cargo compartment liner is defined as all ceiling, sidewall, and bulkhead liners, and their associated design features, as well as all floor panels.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
25-61-01	Rear Entrance Door Strap	Y	1	0	C (O) May be inoperative or missing provided: a) Flight Attendant is positioned on the rear door jumpseat, and b) A passenger announcement is made to stay clear of rear door until the door is OPEN.

MEL ITEM	TAB LOCATION	PLACARD TEXT
25-61-01	Aircraft Logbook	Rear Entrance Door Strap INOP

(O) PROCEDURES

Before takeoff, passengers seated in aft most rows shall be instructed, by means of direct voice communication, to stay clear of the rear door until the door is open.

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NUMBER INSTALLED					NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD			REPAIR CATEGORY			
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS
25-61-02	Cabin Emergency Flashlights / Holders	Y	-	0	C	May be inoperative or missing provided cabin crewmember assigned to affected position has an operative flashlight readily available.

MEL ITEM	TAB LOCATION	PLACARD TEXT
25-61-02	Aircraft Logbook	____ Cabin Emergency Flashlight / Holder(s) INOP / Missing

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS	
25-63-02	Emergency Locator Transmitter (ELT)	Y	2	0	D	May be inoperative or missing.

MEL ITEM	TAB LOCATION	PLACARD TEXT
25-63-02	Aircraft Logbook	Emergency Locator Transmitter INOP

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
FLOTATION DEVICES					
25-64-01A	Life Vests (Passenger/Tourist Class/Observer) "DISP.APPR.REQ'D."	Y	-	-	D May be inoperative or missing provided extended overwater operations are not conducted.
25-64-01B	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 Observer 25-15-01A , Flight Attendant 25-23-01A , Passenger 25-23-03A .
25-64-01C	Spare Life Vest	Y	-	-	D May be inoperative or missing.
25-64-01D	Infant Life Vests (If Installed)	Y	-	-	D (O) May be inoperative or missing.

MEL ITEM	TAB LOCATION	PLACARD TEXT
25-64-01A	Aircraft Logbook	____ Life Vest(s) INOP / Missing
25-64-01B	Aircraft Logbook	____ Life Vest(s) INOP / Missing
25-64-01C	Aircraft Logbook	____ Spare Life Vest(s) INOP / Missing
25-64-01D	Aircraft Logbook	____ Infant Life Vest(s) INOP / Missing

NOTE: Unserviceable life vests must be removed from the cabin or stored in a location where they can not be mistaken for serviceable vests.

(O) PROCEDURES

25-64-01D

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.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
EMERGENCY MEDICAL EQUIPMENT					
25-65-01A	First Aid Kits "Contact MCC"	Y	3	2	A (O) May be incomplete, missing or inoperative provided: a) 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) Repair or replacements are made within 1 flight.
25-65-01B	First Aid Kit Seals	Y	3	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)
25-65-01C	AED (Automatic External Defibrillator) "Contact MCC"	Y	1	0	A (O) May be incomplete, missing or inoperative provided: a) 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) Repair or replacements are made within 1 flight.
25-65-01D	AED Bracket / Lock	Y	1	0	C
25-65-01E	EEMK (Enhanced Emergency Medical Kit)	Y	2	1	D (O) May be incomplete, missing or inoperative provided EEMK is resealed in a manner that will identify it as a unit that can not be mistaken for a fully serviceable unit.
25-65-01F	EEMK (Enhanced Emergency Medical Kit) "Contact MCC"	Y	2	0	A (O) May be incomplete, missing or inoperative provided: a) 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) Repair or replacements are made within 1 flight.
25-65-01G	EEMK Bracket / Lock	Y	1	0	C
25-65-01H	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
25-65-01A	Aircraft Logbook	____ First Aid Kit Incomplete / Missing / INOP
25-65-01B	Aircraft Logbook	____ First Aid Kit Seal(s) Broken
25-65-01C	Aircraft Logbook	AED Incomplete / Missing / INOP
25-65-01D	Aircraft Logbook	AED Bracket / Lock INOP
25-65-01E	Aircraft Logbook	EEMK Incomplete / Missing / INOP
25-65-01F	Aircraft Logbook	EEMK Incomplete / Missing / INOP
25-65-01G	Aircraft Logbook	EEMK Bracket / Lock INOP
25-65-01H	Aircraft Logbook	Red Pouch (Medical Accessory Pouch) INOP / Missing

(O) PROCEDURES

25-65-01A

After use, reseal with green seal and record in the CDL.

25-65-01B

If seal is broken, PRIOR TO EACH DEPARTURE, verify the First Aid Kit contains the following:

2 boxes Antiseptic Swabs(10 per box)	5 boxes 40 Inch Triangular Bandages (1 per box)
8 boxes 4 Inch Compress Bandages (1 per Box)	1 box Ammonia Inhalants(10 per Box)
4 boxes 4 inch Gauze Bandages (1 per box)	2 boxes Wire Splints (1 per box)
1 pair Bandage Scissors	2 rolls Adhesive Tape
1 box 1 inch Adhesive Bandages (16 per box)	1 pair Protective Gloves

25-65-01C

If seal is broken, reseal with green seal and record in the CDL.

25-65-01E, 25-65-01F

If seal is broken, reseal with green seal and record in the CDL.

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 mounts. 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

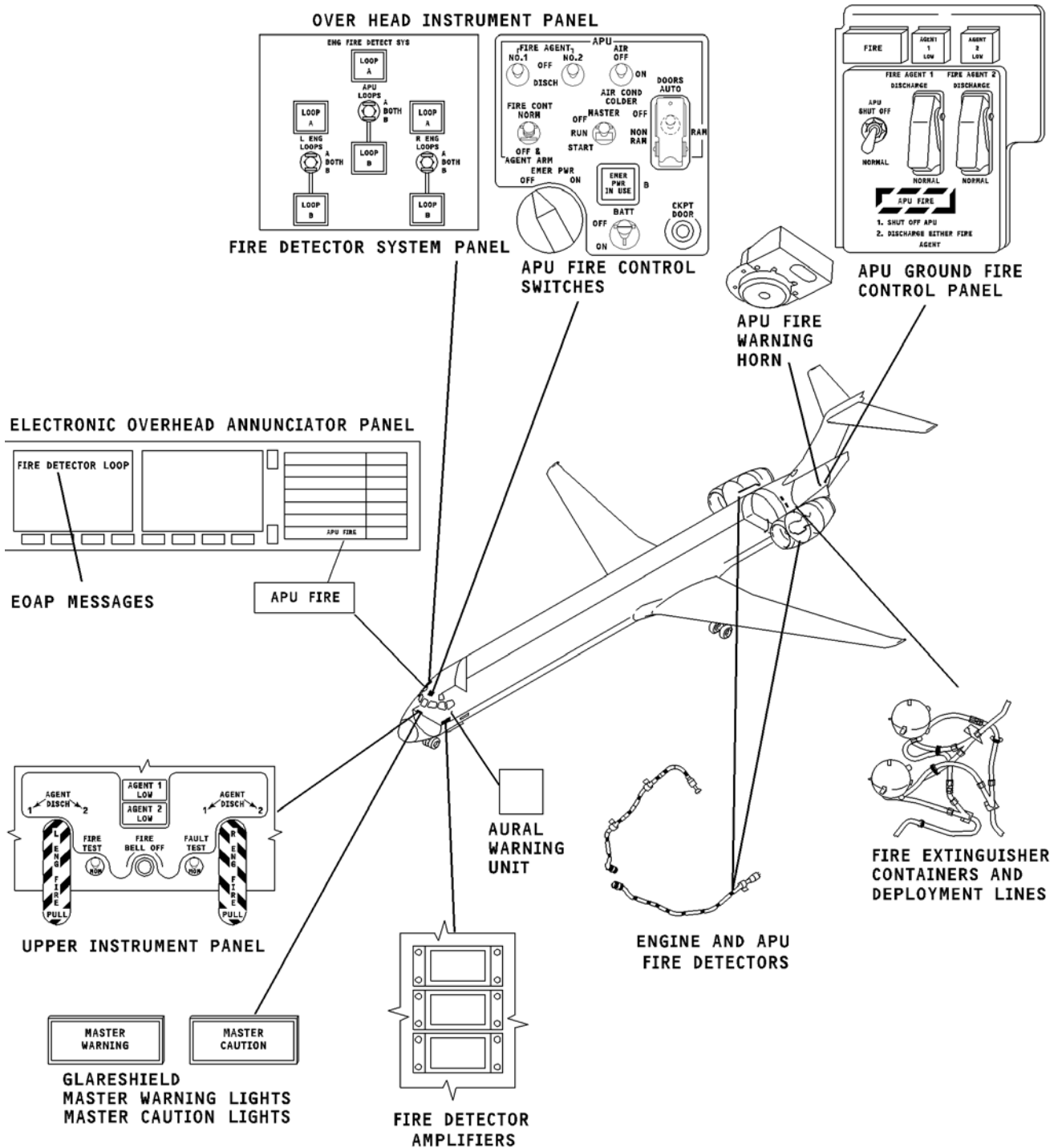
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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
26-11-01	Engine Fire Detection Systems / Loops "Contact MCC"	Y	4	2	C (O)(M) One complete loop (A or B) on each engine may be inoperative provided remaining (operative) loop history is verified with the MCC.

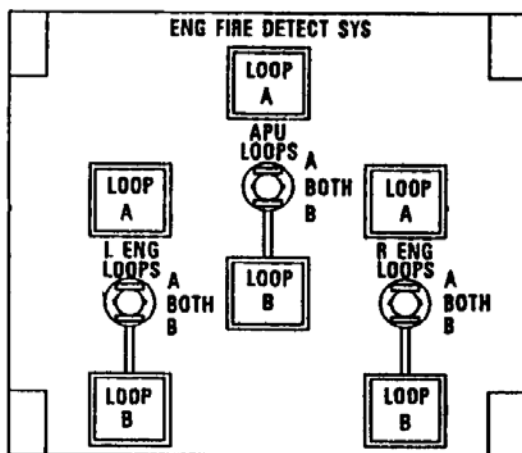
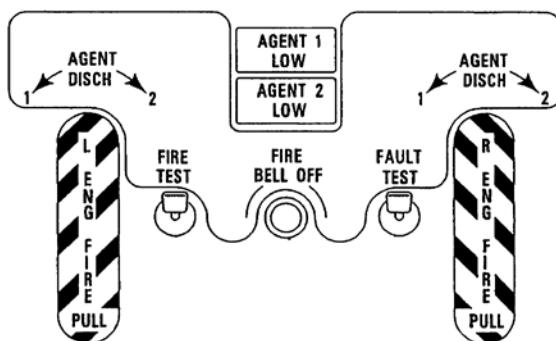
MEL ITEM	TAB LOCATION	PLACARD TEXT
26-11-01	Associated Loop Selector Switch(es)	___ Eng Fire Detection Loop(s) ___ INOP

(O) PROCEDURES

1. Verify LOOPS switch is in the position of the operative Loop.
2. Perform Fire Loops Test, as normal, to verify the selected loop is operative.

(M) PROCEDURES

1. Use the FAULT TEST switch to determine which loop has failed.
2. Isolate the inoperative Loop(s) by selecting the LOOPS switch to the opposite loop.
3. Verify associated ENG FIRE DET FAULT is not illuminated.



NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
	APU FIRE DETECTION SYSTEM				
26-12-01A	APU Fire Detection Loops	Y	2	1	C (O)(M) One complete Loop (A or B) may be inoperative.
26-12-01B	APU Fire Detection Loops "DISP.APPR.REQ'D."	Y	2	0	C (O) Both Loops (A and B) may be inoperative provided APU is considered inoperative and deferred per MEL 49-10-01.
26-12-01C	APU FIRE DET FAULT Annunciation System "DISP.APPR.REQ'D."	Y	1	0	C May be inoperative provided APU is considered inoperative and deferred per MEL 49-10-01.
26-12-01D	APU FIRE Annunciation System "DISP.APPR.REQ'D."	Y	1	0	C May be inoperative provided APU is considered inoperative and deferred per MEL 49-10-01.

MEL ITEM	TAB LOCATION	PLACARD TEXT
26-12-01A	Associated Loop Selector Switch	____ APU Fire Detection Loop INOP
26-12-01B	Associated Loop Selector Switch	1. ____ APU Fire Detection Loop(s) INOP 2. Do NOT Use APU
26-12-01C	APU Start Switch	1. APU FIRE DET FAULT Annunciation INOP 2. Do NOT Use APU
26-12-01D	APU Start Switch	1. APU FIRE Annunciation INOP 2. Do NOT Use APU

(O) PROCEDURES

26-12-01A

Perform Fire Loops Test, as normal, to verify the selected loop is operative.

26-12-01B

Refer to the Remarks or Exceptions column.

(M) PROCEDURES

26-12-01A

Select the APU LOOPS switch to the operative loop, and verify operative loop is functioning properly using the FIRE TEST switch.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH			
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY			
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS	
26-12-02	APU Fire Warning Horn (External Warning)	Y	1	0	C	(O) May be inoperative provided APU Fire Warning System is monitored in the cockpit during APU operation.	

MEL ITEM	TAB LOCATION	PLACARD TEXT
26-12-02	APU Start Switch	APU Fire Warning Horn INOP

(O) PROCEDURES

Refer to the Remarks or Exceptions column.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
26-14-01	Lavatory Smoke Detection and Warning Systems "DISP.APPR.REQ'D."	Y	3	0 C	(O)(M) May be inoperative provided associated: a) Lavatory waste receptacle is empty, b) 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
26-14-01	Aircraft Logbook	____ Lavatory Smoke Detection and Warning System(s) INOP

(O) PROCEDURES

Crewmembers may use lavatory and perform lavatory inspections.

(M) PROCEDURES

1. Verify that the affected lavatory trash receptacle is empty.
2. Close and lock the associated lavatory door.
3. Placard lavatory door "INOPERATIVE - DO NOT ENTER" using "Inoperative Cabin Appearance" placard or equivalent.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
	ENGINE AND APU FIRE EXTINGUISHER AGENT LOW LIGHTS				
26-21-01A	Flight Deck Extinguisher Agent Low Lights "Contact MCC"	N	2	1	C (O)(M) May be inoperative provided: a) Associated bottle pressure is verified normal PRIOR TO EACH DEPARTURE (Log Book Entry Required), and b) Procedures are used for discharging the bottle with the operative Agent Low light first. Repetitive Check Required (Yellow Placard)
26-21-01B	APU Ground Control Panel Agent Low Lights	Y	2	0	C May be inoperative provided associated flight deck agent low light operates normally.
26-21-01C	APU Ground Control Panel Agent Low Lights	N	2	0	C (M) May be inoperative provided associated bottle pressure is verified normal.

MEL ITEM	TAB LOCATION	PLACARD TEXT
26-21-01A	Affected AGENT LOW Light	____ Agent Low Light INOP
26-21-01B	Aircraft Logbook	____ APU Ground Control Panel Agent Low Light(s) INOP
26-21-01C	Aircraft Logbook	____ APU Ground Control Panel Agent Low Light(s) INOP

(O) PROCEDURES

26-21-01A

If extinguisher system is to be used, discharge bottle with operative AGENT LOW light first.

(M) PROCEDURES

26-21-01A, 26-21-01C

Comply with one of the following procedures:

Procedure I

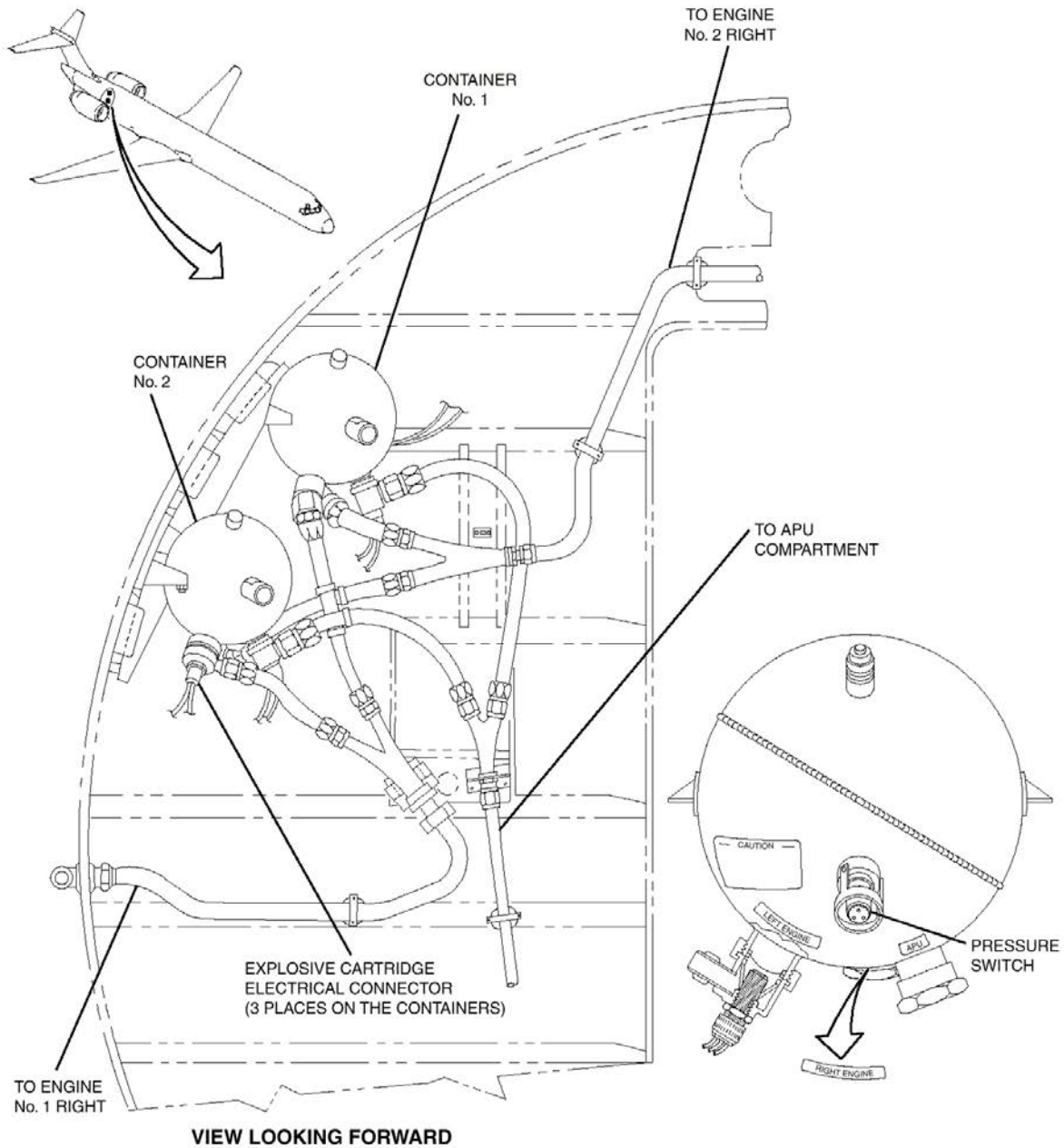
1. Disconnect the pressure switch electrical connector at the bottle.
2. Insert 1/16" Allen wrench in test socket of pressure switch. Using light finger pressure, actuate pressure switch by turning Allen wrench.
3. Verify pressure switch functions as follows:
 - a. Pins B to C - no continuity
 - b. Pins B to A - continuity
4. Release Allen wrench and verify switch returns to its normal position. Remove Allen wrench.

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5. Verify pressure switch functions as follows:
 - a. Pins B to C - continuity
 - b. Pins B to A - no continuity

Procedure II

Weigh agent container. The weight of the container (without discharge heads and squibs) should be within 1/2 lb. of the weight stamped on the container.



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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO. NAME / DESCRIPTION					REMARKS OR EXCEPTIONS	
APU FIRE SHUTOFF CONTROLS						
26-21-02A	Flight Deck "DISP.APPR.REQ'D."	Y	1	0	C	May be inoperative provided APU is considered inoperative and deferred per MEL 49-10-01.
26-21-02B	Exterior	Y	1	0	C	(O) May be inoperative provided APU operation is monitored in the cockpit.

MEL ITEM	TAB LOCATION	PLACARD TEXT
26-21-02A	APU Start Switch	1. Flight Deck APU Fire Shutoff Controls INOP 2. Do NOT Use APU
26-21-02B	APU Start Switch	Exterior APU Fire Shutoff Controls INOP

(O) PROCEDURES

26-21-02B

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	
	LOWER CARGO COMPARTMENT FIRE DETECTION / SUPPRESSION SYSTEM						
26-24-01A	Lower Cargo Compartment Fire Detection / Suppression System "DISP.APPR.REQ'D."	Y	1	0	C	(O) May be inoperative provided all cargo compartments remains empty, or is verified to contain only empty cargo handling equipment, ballast, and/or fly-away kits (see MEL/CDL Format Section). NOTE: If BTL 1, BTL 2, pressure switch, squib, or the control circuit are inoperative, the entire system is considered inoperative.	
26-24-01B	Detection Loops / Channels	Y	6	3	C	(O) One loop / channel (A or B) in each associated cargo compartment may be inoperative provided opposite loop in associated cargo compartment is verified to operate normally.	
26-24-01C	Detection Loops / Channels "DISP.APPR.REQ'D."	N	6	0	C	(O) Both loop / channel (A or B) in each associated cargo compartment may be inoperative provided associated cargo compartment remains empty, or verified to contain only empty cargo handling equipment, ballast, and/or FLY Away Kits (see MEL/ CDL Format Section).	
26-24-01D	Push and Auto/Man DSCH Lights (9218-9299 ONLY)	N	2	0	C	(M) May be inoperative provided associated test procedure is used ONCE EACH FLIGHT DAY to verify that the affected bottle(s) is properly charged. Repetitive Check Required (Yellow Placard)	
26-24-01E	Push and Auto/Man DSCH Lights "DISP.APPR.REQ'D." (9218-9299 ONLY)	Y	2	0	C	(O) May be inoperative provided that all cargo compartments remains empty, or is verified to contain only empty cargo handling equipment, ballast and/or FLY Away Kits (see MEL/CDL Format Section).	
26-24-01F	DET LEDs (9218-9299 ONLY)	Y	6	3	C	(O)(M) One LED for each cargo compartment may be inoperative provided the remaining LED on the control panel for the associated compartment is checked to operate normally PRIOR TO EACH DEPARTURE. 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	
LOWER CARGO COMPARTMENT FIRE DETECTION / SUPPRESSION SYSTEM (Continued)						
26-24-01G	FAIL LEDs (9218-9299 ONLY)	N	6	3	C	(O)(M) One LED for each cargo compartment may be inoperative provided the remaining LED on the control panel for the associated compartment is checked to operate normally PRIOR TO EACH DEPARTURE. Repetitive Check Required (Yellow Placard)
26-24-01H	Fault Panel (E&E compartment) (9218-9299 ONLY)	N	1	0	D	

MEL ITEM	TAB LOCATION	PLACARD TEXT
26-24-01A	Cargo Fire Control Panel	Cargo Compartment Smoke Detection / Suppression System INOP
26-24-01B	Adjacent to Cargo Fire Detector Loop Select Switch	___ Cargo Compartment Fire Detection Loop(s) ___ INOP
26-24-01C	Adjacent to Cargo Fire Detector Loop Select Switch	___ Cargo Compartment Fire Detection Loop(s) ___ INOP
26-24-01D	Adjacent to Push and Auto/Man DSCH Lights	Cargo Compartment Push and Auto/Man DSCH Light(s) ___ INOP
26-24-01E	Adjacent to Push and Auto/Man DSCH Lights	Cargo Compartment Push and Auto/Man DSCH Light(s) ___ INOP
26-24-01F	Adjacent to DET LEDs	Cargo Compartment DET LED(s) ___ INOP
26-24-01G	Adjacent to FAIL LEDs	Cargo Compartment FAIL LED(s) ___ INOP
26-24-01H	Cargo Fire Control Panel	Cargo Compartment Fault Panel (E&E compartment)

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(O) PROCEDURES

26-24-01A

Refer to MEL/CDL Format Section for cargo compartment loading restrictions.

26-24-01B

(AIRCRAFT 9201-9217 ONLY)

1. Position loop selector switch to the operative system.
2. Verify selected system is operational using cargo fire warning test with loop selected as applicable.
3. Refer to [Operations Manual, Volume 1](#), Supplementary Procedures, Section 8, Fire Protection Section.

(AIRCRAFT 9218-9299 ONLY)

1. Perform a system test by pushing and holding the test button on the CDSCP (Cargo Detection/Suppression Control Panel) until the test sequence is complete, then release the test button.
2. Verify the operable loop FAIL LED for the associated compartment illuminates during the test sequence and then extinguishes after the test is complete.

26-24-01C

Refer to MEL/CDL Format Section for cargo compartment loading restrictions.

26-24-01E

Refer to MEL/CDL Format Section for cargo compartment loading restrictions.

26-24-01F

Verify that the (M) Procedure has been complied with.

26-24-01G

Verify that the (M) Procedure has been complied with.

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(M) PROCEDURES

26-24-01D

ONCE EACH FLIGHT DAY remove the affected extinguisher bottle(s) from the suppression rack and weigh bottle(s) to verify that they are within the specific tolerances for being charged. Refer to AMM.

26-24-01F

PRIOR TO EACH DEPARTURE

1. Perform a system test by pushing and holding the test button on the CDSCP (Cargo Detection/Suppression Control Panel) located on the over head panel in the cockpit until the test sequence is complete, then release the test button.
2. Verify the affected (failed) DET LED on CDSCP does not illuminate in system or lamp test and all CDSCP lights extinguish after the test is complete.

26-24-01G

PRIOR TO EACH DEPARTURE, perform a system test by pushing and holding the test button on the CDSCP (Cargo Detection/Suppression Control Panel) until the test sequence is complete, then release the test button.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS	
26-25-01A	Lavatory Fire Extinguisher Systems	Y	3	0	C	For each lavatory, the Lavatory Fire Extinguisher System may be inoperative provided associated Lavatory Smoke Detector System operates normally.
26-25-01B	Lavatory Fire Extinguisher Systems "DISP.APPR.REQ'D."	Y	3	0	C	(O)(M) For each lavatory, the lavatory fire extinguisher system may be inoperative provided: a) Lavatory Waste receptacle is empty, b) 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
26-25-01A	Aircraft Logbook	____ Lavatory Fire Extinguisher System(s) INOP
26-25-01B	Aircraft Logbook	____ Lavatory Fire Extinguisher System(s) INOP

(O) PROCEDURES

26-25-01B

Crewmembers may use lavatory and perform lavatory inspections.

(M) PROCEDURES

26-25-01B

1. Verify that the affected lavatory trash receptacle is empty.
2. Close and lock the associated lavatory door.
3. Placard lavatory door "INOPERATIVE - DO NOT ENTER" using "Inoperative Cabin Appearance" placard or equivalent.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
26-26-01	Portable Fire Extinguishers (Passenger Cabin Only) (All A/C except those with 160 Seat Passenger Configuration)	Y	4	3	C (M) One H ₂ O type extinguisher in any location or the aft-cabin HALON extinguisher may be inoperative provided the inoperative fire extinguisher is tagged inoperative, removed from the installed location, and placed out of sight so it cannot be mistaken for a functional unit. NOTE: The cockpit HALON extinguisher must be operative.

MEL ITEM	TAB LOCATION	PLACARD TEXT
26-26-01	Aircraft 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.

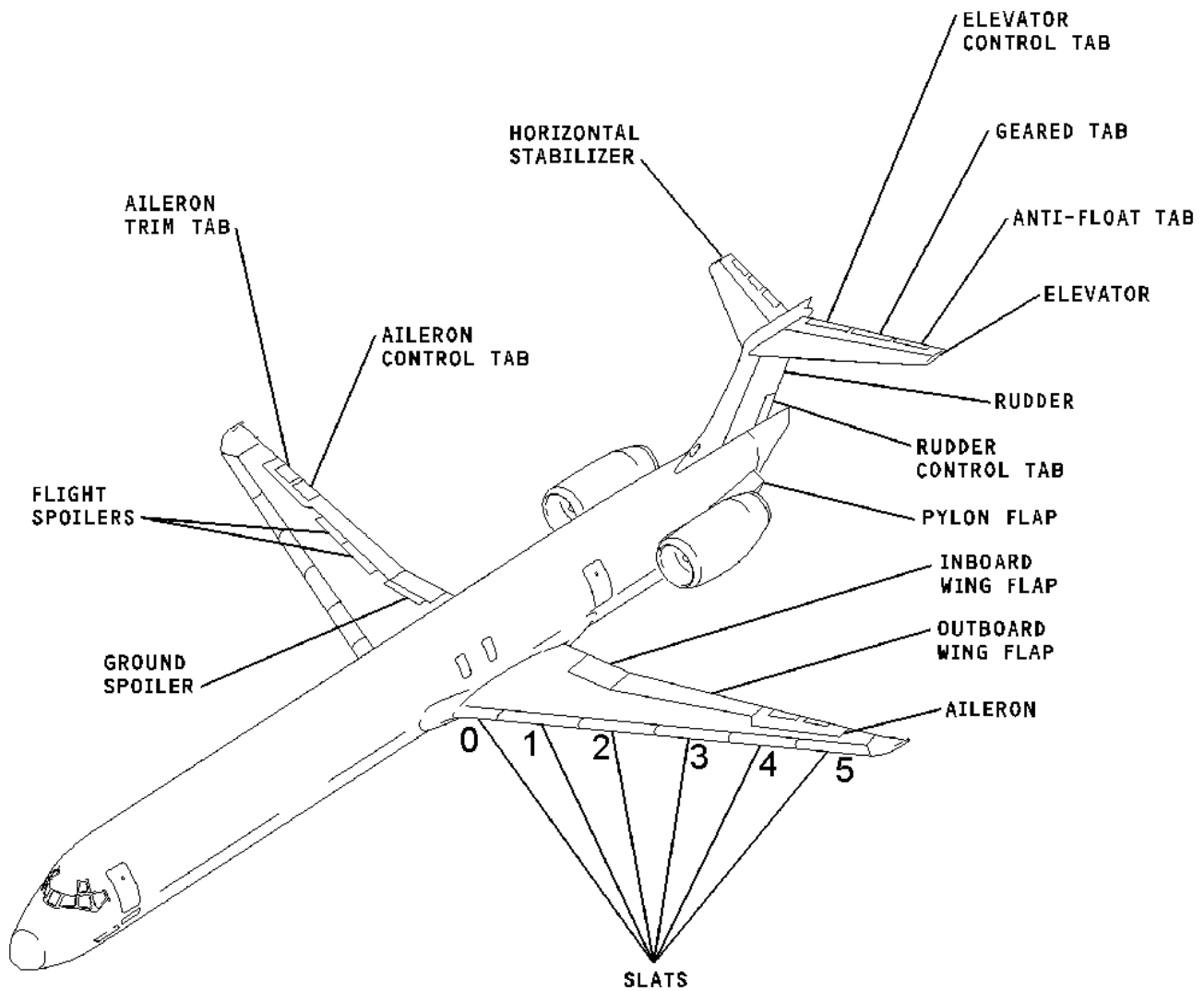
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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
	CONTROL SURFACE DAMPERS				
27-15-01A	Rudder Dampers	N	2	1	C
27-15-01B	Aileron Dampers	N	4	2	C
					One may be inoperative on each aileron.

MEL ITEM	TAB LOCATION	PLACARD TEXT
27-15-01A	Near Rudder Trim Knob	____ Rudder Damper INOP
27-15-01B	Near Aileron Trim Knob	____ Aileron Damper(s) INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
27-33-01	Post Stall Recovery System	N	1	0	C (M) May be inoperative provided the system is deactivated.

MEL ITEM	TAB LOCATION	PLACARD TEXT
27-33-01	Near Captain's STICK PUSHER Light	Stall Recovery System INOP

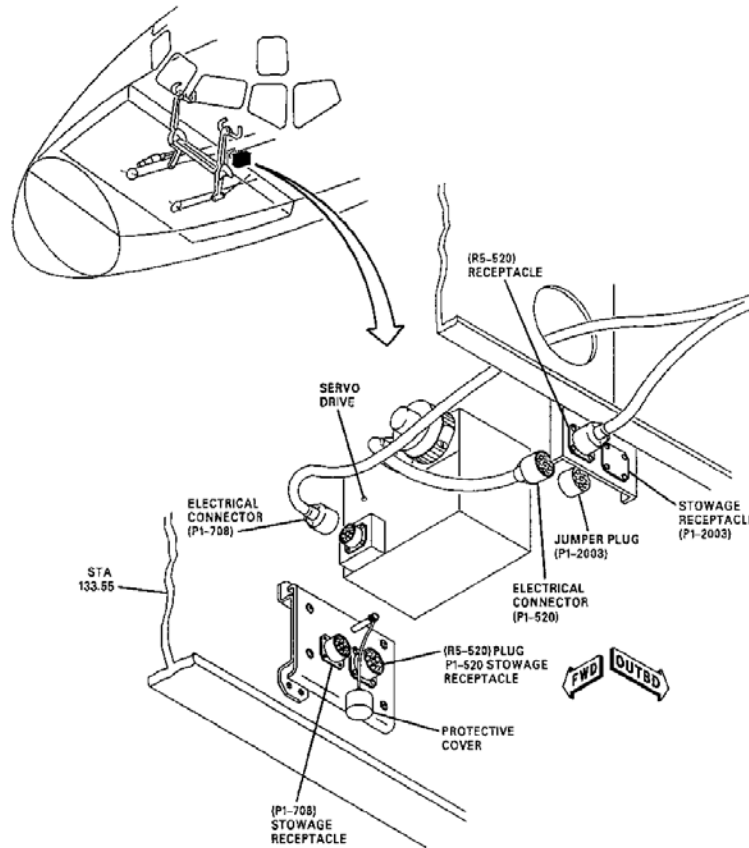
(M) PROCEDURES

If STICK PUSHER lights are on and/or PSRS has inadvertently actuated (either during self test or during aircraft operation), perform the following:

1. Remove plug from R5-520 (Sta. 148.55) and stow on dummy plug at Sta. 133.55.
2. Install P1-2003 Jumper Plug onto R5-520 (Sta. 148.55).

NOTE: Jumper plug must be installed on R5-520 for autopilot operation when PSRS is deactivated.

3. Remove P1-708 plug from servo receptacle and stow on dummy receptacle at Sta. 133.55.
4. Install dust cover on servo receptacle.



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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
27-34-01	ELEVATOR AT LIMIT Annunciation System	N	1	0	C (M) May be inoperative provided it is verified that the elevator and pylon flap are operable through their full range of travel PRIOR TO EACH DEPARTURE (Log Book Entry Required). Repetitive Check Required (Yellow Placard)

MEL ITEM	TAB LOCATION	PLACARD TEXT
27-34-01	Near ELEVATOR AT LIMIT Light	ELEVATOR AT LIMIT Annunciation INOP

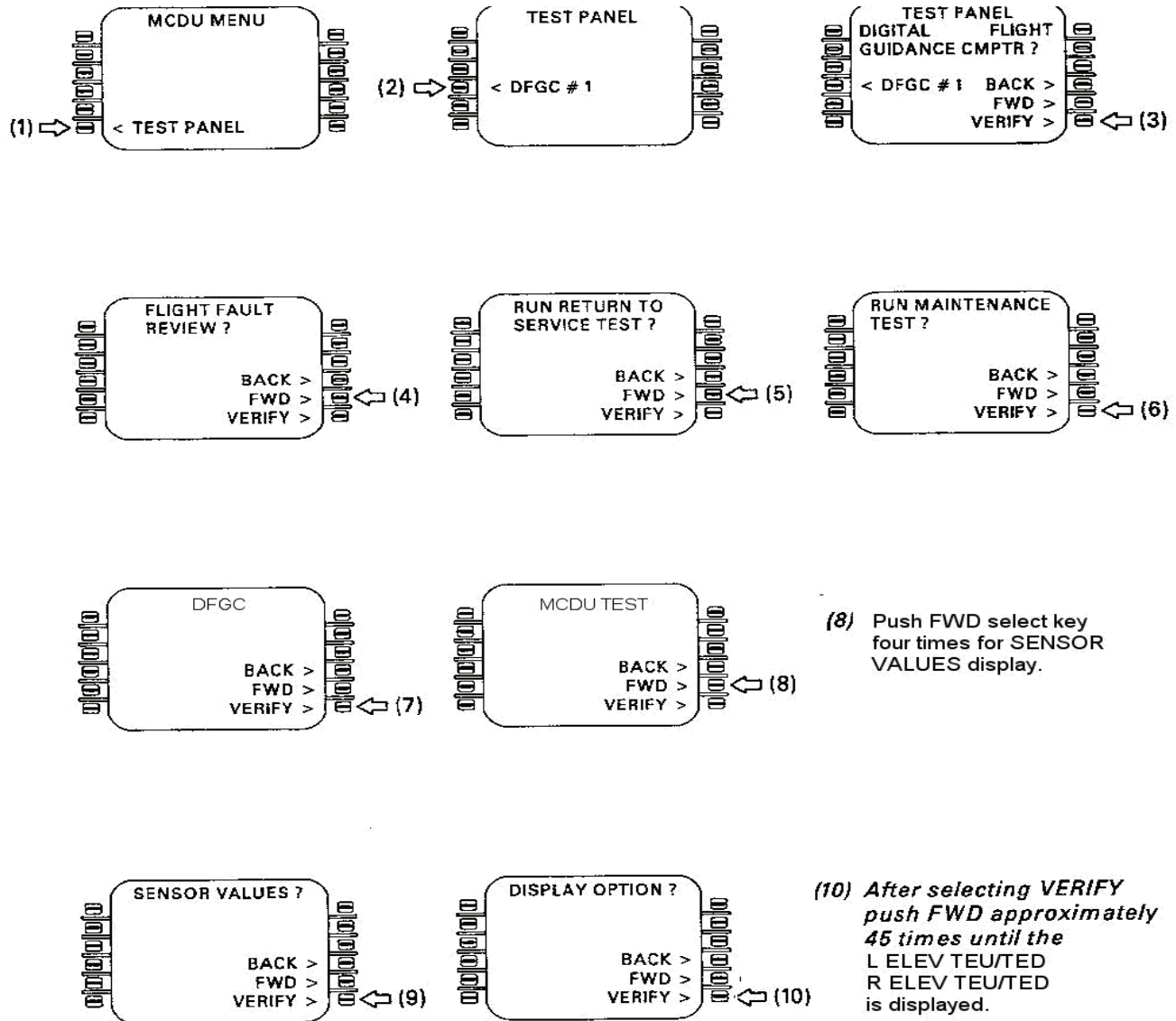
(M) PROCEDURES

PRIOR TO EACH DEPARTURE, verify that the elevator and pylon flap are operable through their full range of travel per one of the following procedures:

Procedure I

1. Interrogate the MCDU to the DFGC maintenance test.
2. Move the control column full forward, verify proper elevator position on the MCDU and visually verify pylon flap moves to its fully deflected position.
3. The Left and Right ELEVATOR POSITION SENSOR displays should be $16.5^{\circ} (\pm 2^{\circ})$.
4. Move the control column full aft, and verify proper elevator position on the MCDU.
5. The Left and Right ELEVATOR POSITION SENSOR displays should be $27^{\circ} (\pm 2^{\circ})$.

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Procedure II

1. Place an observer near the elevator.
2. With hydraulic systems powered, push either control column full forward against the stops.
3. Observer should verify that elevator trailing edge is deflected down approximately 16.5° (10 21/32 inches as measured from protruding head rivet in vertical fin to inboard end of elevator trailing edge), and pylon flap moves to its fully deflected position.
4. Pull either control column full aft against the stops.
5. Observer should verify that elevator trailing edge is deflected up approximately 27° (17 3/8 inches as measured from protruding head rivet in vertical fin to inboard end of elevator trailing edge), and pylon flap is not deflected.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
27-37-01	Pylon Pitch Augmentation System (PPAS) "DISP.APPR.REQ'D."	Y	2	0	C
(O)(M) May be inoperative provided: a) The aircraft Zero Fuel Weight Center of Gravity position is not within 5% MAC of the aft Center of Gravity limit, b) Pylon Flaps are in the faired position, c) It is verified that the elevator is operable through its full range of travel PRIOR TO EACH DEPARTURE, and d) Performance penalties are applied. Repetitive Check Required (Yellow Placard)					

MEL ITEM	TAB LOCATION	PLACARD TEXT
27-37-01	Near ELEVATOR AT LIMIT Light	Pylon Pitch Augmentation System INOP

(O) PROCEDURES

NOTE: PYLON FLAP DISAG Alert may be ignored if displayed during a Flight Control check.

27-37-01	PYLON PITCH AUGMENTATION SYSTEM (PPAS)
EFFECTIVITY	All
FLIGHT PLANNING REQUIREMENTS	None
NOTES	None
AWABS	AFT CG limitation applied.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF None LANDING None OTHER CORRECTIONS Verify ZFW MAC is not within 6 MAC UNITS of the aft CG limit.

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(M) PROCEDURES

PRIOR TO EACH DEPARTURE:

Verify that the elevator is operable through its full range of travel per one of the following procedures:

Procedure I (MCDU graphic located in [27-34-01](#))

1. Interrogate the MCDU to the DFGC maintenance test.
2. Move the control column full forward, verify proper elevator position on the MCDU.
3. The Left and Right ELEVATOR POSITION SENSOR displays should be $16.5^\circ (\pm 2^\circ)$.
4. Move the control column full aft, and verify proper elevator position on the MCDU.
5. The Left and Right ELEVATOR POSITION SENSOR displays should be $27^\circ (\pm 2^\circ)$.

Procedure II

1. Place an observer near the elevator.
2. With hydraulic systems powered, push either control column full forward against the stops.
3. Observer should verify that elevator trailing edge is deflected down approximately 16.5° (10 21/32 inches as measured from protruding head rivet in vertical fin to inboard end of elevator trailing edge).
4. Pull either control column full aft against the stops.
5. Observer should verify that elevator trailing edge is deflected up approximately 27° (17 3/8 inches as measured from protruding head rivet in vertical fin to inboard end of elevator trailing edge).

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
27-37-03	PYLON FLAP FAULT Disagree Indication "DISP.APPR.REQ'D."	N	1	0	C
(O)(M) May be inoperative provided: a) The aircraft Zero Fuel Weight Center of Gravity position is not within 5% MAC of the aft Center of Gravity limit, and b) It is verified that the elevator and pylon flap are operable through their full range of travel PRIOR TO EACH DEPARTURE (Log Book Entry Required). Repetitive Check Required (Yellow Placard)					

MEL ITEM	TAB LOCATION	PLACARD TEXT
27-37-03	Near EOAP	PYLON FLAP FAULT Disagree Annunciation INOP

(O) PROCEDURES

27-37-03	PYLON FLAP FAULT DISAGREE INDICATION
EFFECTIVITY	All
FLIGHT PLANNING REQUIREMENTS	None
NOTES	None
AWABS	AFT CG limitation applied.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF None LANDING None OTHER CORRECTIONS Verify ZFW MAC is not within 6 MAC UNITS of the aft CG limit.

(M) PROCEDURES

PRIOR TO EACH DEPARTURE, verify that the elevator and pylon flap are operable through their full range of travel. [Refer to MEL 27-34-01 for \(M\) procedures.](#)

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
27-43-01	Alternate Longitudinal Trim Motor Control Relays (Up Trim/Down Trim) "DISP.APPR.REQ'D."	Y	2	0	C (O)(M) May be inoperative provided: a) Manual Alternate Trim is verified operative, b) Mach Trim System is considered inoperative, deferred per MEL 22-01-03B, and c) Alternate procedures are used if Autopilot is to be used for approach and landing.

MEL ITEM	TAB LOCATION	PLACARD TEXT
27-43-01	A/P Engage Switch	____ Alternate Longitudinal Trim Motor Control Relay (Up Trim / Down Trim) INOP

(O) PROCEDURES

- Trim the aircraft manually prior to engaging the autopilot.
- Monitor AP TRIM/OUT OF TRIM light while AP is engaged.
- If light comes on, re-trim by either of the following:
 - Operation of the alternate longitudinal trim switch (which does not require AP disconnect),
OR
 - Disconnecting the autopilot, manually trimming with control wheel switches or LONG TRIM handles, and then re-engaging the autopilot.
- Restrict speed to Mmo = 0.80M.

(M) PROCEDURES

- Operate Captain's control wheel trim switches aircraft nose up (ANU) and aircraft nose down (AND). Verify movement of longitudinal trim position indicator.
- Operate First Officer's control wheel trim switches ANU and AND. Verify movement of longitudinal trim position indicator.
- Operate alternate trim switch levers on the pedestal ANU and AND. Verify movement of longitudinal trim position indicator.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
27-43-02	Alternate Longitudinal Trim Motor Up / Down Limit Switches	Y	2	0	C (M) May be inoperative provided Alternate Trim System otherwise functions normally.

MEL ITEM	TAB LOCATION	PLACARD TEXT
27-43-02	Near Alternate Longitudinal Trim Levers	____ Alternate Longitudinal Trim Motor Up / Down Limit Switches INOP

(M) PROCEDURES

1. Operate control wheel switch ANU and verify stabilizer travels to 14.5° ANU.
2. Operate control wheel switch AND and verify stabilizer travels to 2.1° AND.
3. Repeat steps (1) and (2) using alternate trim switch levers on the pedestal.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH			
FLIGHT CREW MAY PLACARD					REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION						REMARKS OR EXCEPTIONS
27-43-03	Primary Longitudinal Trim Actuator Heater Blanket	Y			1	0	D

MEL ITEM	TAB LOCATION	PLACARD TEXT
27-43-03	Near Longitudinal Trim Control Handles	Primary Longitudinal Trim Actuator Heater Blanket INOP

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
27-51-01	Dial-A-Flap System "DISP.APPR.REQ'D."	Y	1	0	C May be inoperative provided: a) Movable detent is in the STOWED position, b) Fixed Flap Detent System is operative, and c) Both Flap Position Indicating Systems are operative. NOTE: Only Flaps 11 and 15 will be available for takeoff with Dial-A-Flap System inoperative.

MEL ITEM	TAB LOCATION	PLACARD TEXT
27-51-01	Near Dial-A-Flap FLAP T.O. SEL Window	Dial-A-Flap System INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
27-54-01	Flap Position Indicating System	N	2	1 C	(O)(M) One may be inoperative provided: a) It is verified that flaps are operative through their normal operating range, and b) Visual inspection PRIOR TO EACH DEPARTURE verifies that flaps are in takeoff position, and no asymmetry exists. (Log Book Entry Required). Repetitive Check Required (Yellow Placard)

MEL ITEM	TAB LOCATION	PLACARD TEXT
27-54-01	Near Flap Position Indicator	____ Flap Indicating System INOP

(O) PROCEDURES

PRIOR TO EACH DEPARTURE:

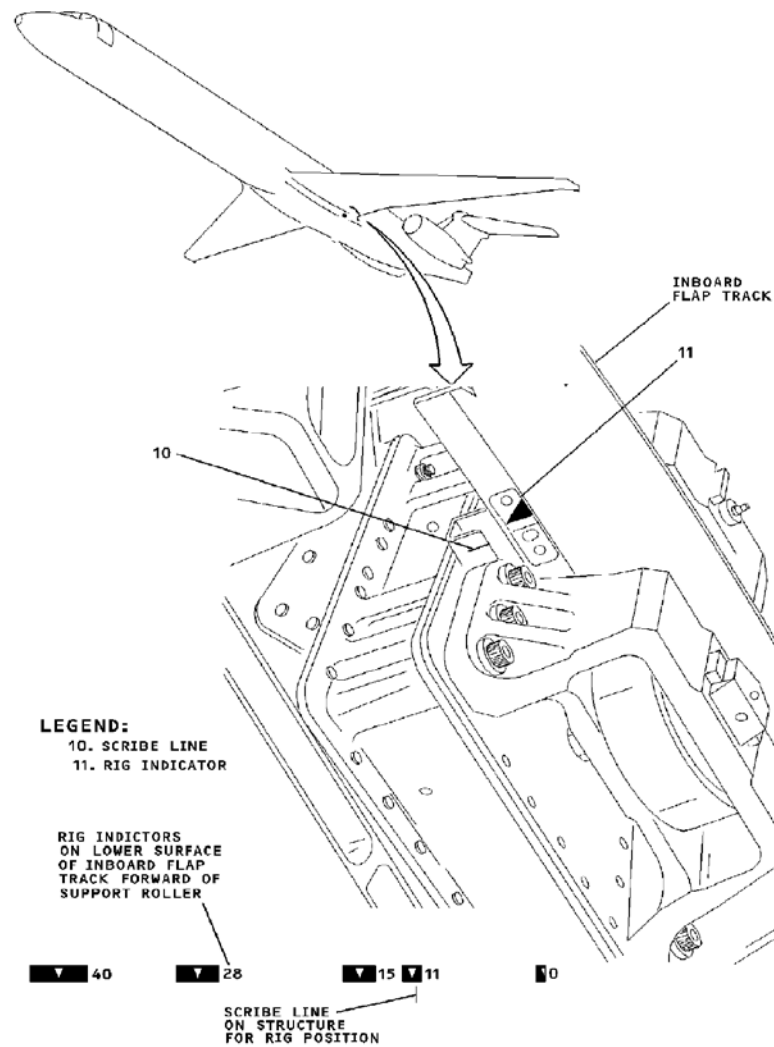
1. Aircraft to remain at gate until final WDR has been sent for take off settings.
2. Place flap handle in takeoff position.
3. Visually verify flaps are in takeoff position.
4. Visually verify flaps are not asymmetric,
5. Verify that flaps remain set in takeoff position following the Prior To Each Departure Check.

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(M) PROCEDURES

1. Operate flaps thru full operating range.
2. Visually verify flaps are in commanded position by checking the rig indicators on inboard flap tracks.
3. Visually verify flaps are not asymmetric.

(Log Book Entry Required)



NUMBER INSTALLED			NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD			REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
27-61-01	AUTOSPOILER FAIL Annunciation System "DISP.APPR.REQ'D."	N	1	0	C
					(O)(M) May be inoperative provided: a) Auto Ground Spoiler System is not used, b) Autobrake RTO mode is placarded "DO NOT USE FOR TAKEOFF", c) Enroute operations and/or approach minimums do not require its use, and d) Performance penalties are applied. CAT II/III Not Authorized

MEL ITEM	TAB LOCATION	PLACARD TEXT
27-61-01	1. Near EOAP 2. Near Speedbrake Lever 3. Autobrake Selector Switch	1. AUTO SPOILER FAIL Message INOP 2. Do Not Use Auto Ground Spoiler System 3. Do Not Use Autobrake RTO Mode 4. Do Not Use Autopilot Autoland mode

(O) PROCEDURES

1. With Autospoiler Actuator deactivated in the retracted (flight) position verify the speed brake detents (1/4, 1/2, 3/4, EXT) can be engaged.
2. Advance the throttles to verify the "AUTOBRAKE" aural takeoff warning does not sound.
3. Do not arm Autobrakes for takeoff and place Autobrake selector switch in "OFF" position for takeoff.
4. Apply the performance decrements for inoperative Auto Spoilers and for inoperative Inboard Ground Spoilers. The two penalties should be cumulatively imposed.

27-61-01	AUTO SPOILER FAIL ANNUNCIATION SYSTEM
EFFECTIVITY	All
FLIGHT PLANNING REQUIREMENTS	None
NOTES	None
AWABS	Performance corrections have been applied.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF 1. Reduce RATOW by 21,600 lbs. 2. Reduce T/O CLIMB LIMIT by 21,600 lbs. LANDING 1. See ALM – Airports Section for airport landing chart (AUTO AND INBD GRD SPOILERS INOP). 2. Reduce MAXIMUM QUICK TURNAROUND LANDING WEIGHT by 1,300 lbs. Refer to Flight Operations Manual (FOM) , Chapter 3, Quick Turnaround Landing Weight (QTLW) section to comply with associated limitations and procedures.

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NOTE: The Inboard Spoiler Panels may be left active in this situation, and inboard spoilers may be used for takeoffs and landings, as long as they are considered inoperative for the purpose of determining performance limited weights.

(M) PROCEDURES

1. Placard Spoilers "Manual Operation Only".
2. Placard Auto Ground Spoilers inoperative.
3. Placard Autobrakes "Do Not Use for Takeoff or Landing".
4. Place Autobrake selector switch in "OFF" position for takeoff.
5. Placard Autoland inoperative.
6. Auto spoiler actuator may be secured in its flight mode as follows:

Actuator failed in the **retracted** position, as indicated by placard on spoiler handle not visible with handle forward and down:

Pull and secure 115 VAC SPOILER CONTROL circuit breaker X-30 on EPC CBP (B1-243).

Actuator failed in the **extended** position, as indicated by placard on spoiler handle partially visible with handle forward and down.

Comply with one of the following procedures:

Procedure I

- 1) Squeeze the spoiler handle.
- 2) If the actuator retracts and the handle can be armed, deactivate the actuator by continuing to squeeze the spoiler handle and simultaneously pulling the 115 VAC SPOILER CONTROL circuit breaker X-30 on EPC CBP (B1-243).
- 3) After pulling and securing the circuit breaker, release the spoiler handle and verify the actuator remains retracted.

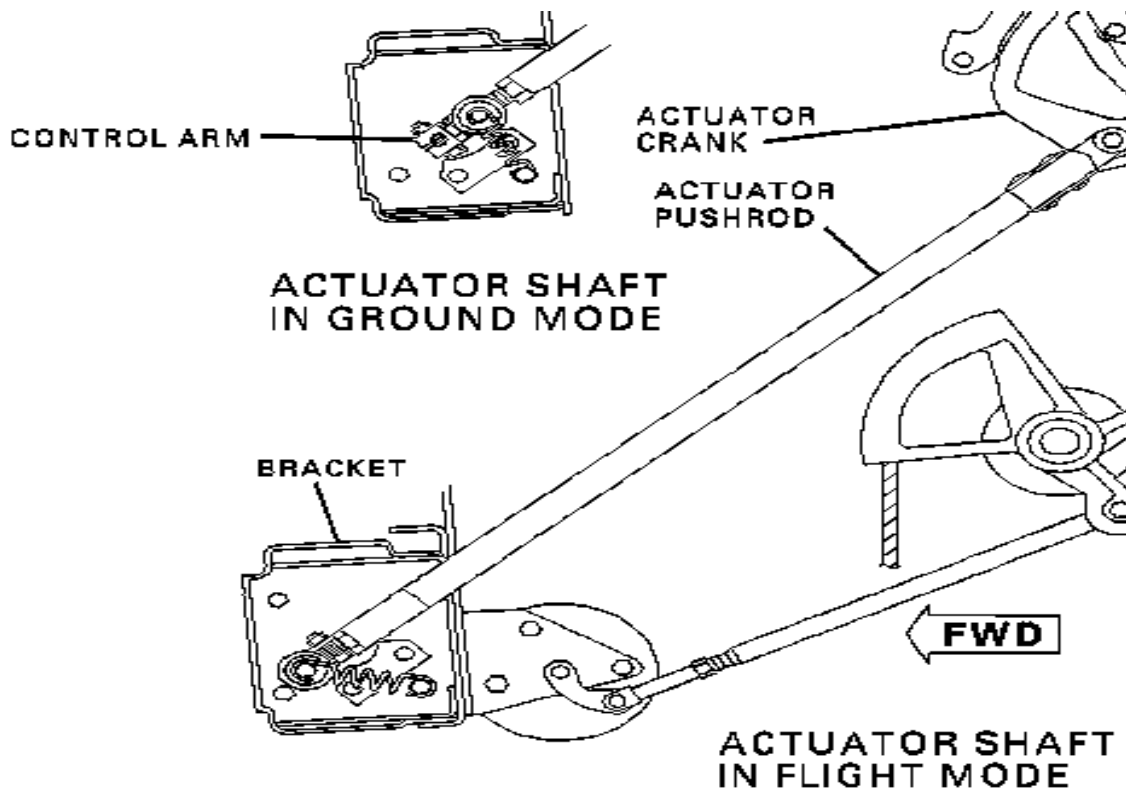
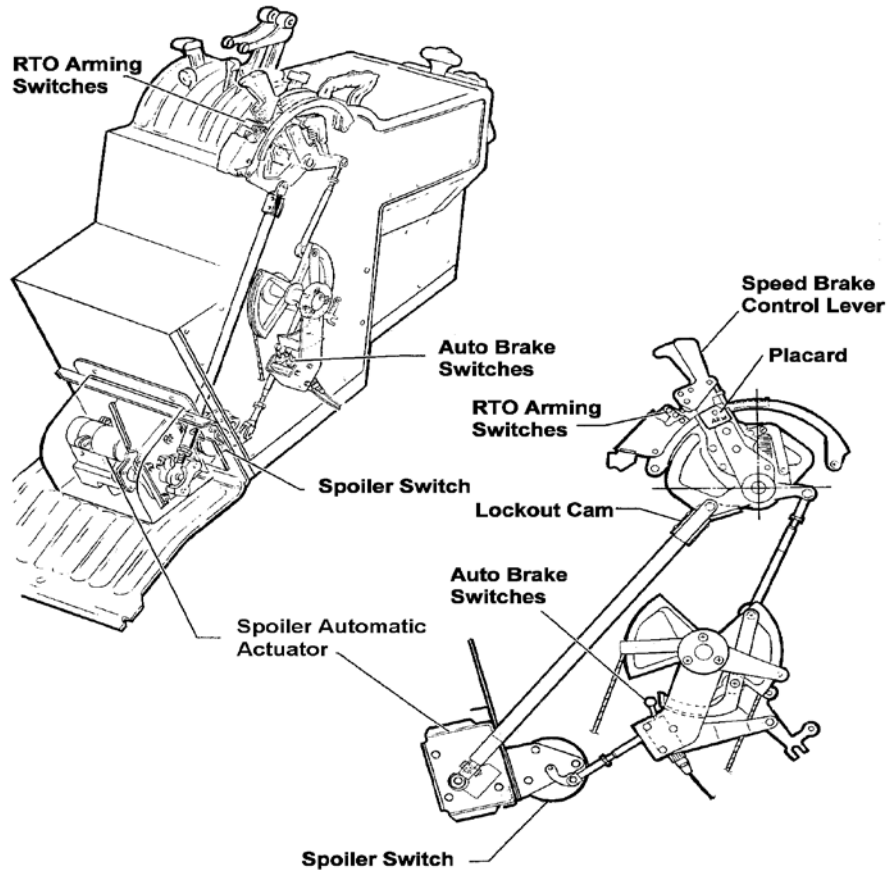
Procedure II

- 1) Pull LEFT / RIGHT GROUND CONTROL RELAY circuit breakers K-33 and L-33 on EPC CBP (B1-023 and B1-024).
- 2) Operate both Main Landing Gear Uplock Switches by placing ferrous material adjacent to sensors.
- 3) After actuator retracts, pull and secure 115 VAC SPOILER CONTROL circuit breaker X-30 on EPC CBP (B1-243).
- 4) Reset both Ground Control circuit breakers.

Procedure III

- 1) Pull and secure 115 VAC SPOILER CONTROL circuit breaker X-30 on EPC CBP (B1-243).
- 2) Remove cover from actuator.
- 3) Manually wrench actuator to retracted (in flight) position.
- 4) Replace actuator cover.
7. With Autospoiler Actuator deactivated in the retracted position verify the speed brake detents (1/4, 1/2, 3/4, EXT) can be engaged.
8. Perform takeoff warning integrity test of Speedbrake handle takeoff warning switch as follows:
 - a. Advance both throttles greater than 25% and insure "Autobrake" takeoff warning is not annunciated – no further action required.
 - b. If "Autobrake" takeoff warning is annunciated the Speedbrake handle takeoff warning switch/mechanism is in error indicating "ARMED" and adjustment/repair will be required. Reference [MD90 AMM Functional Test of the throttle switch 32-46-00-720-804](#).

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
27-61-02	SPOILER DEPLOYED Annunciation System	Y	1	0	B (O) May be inoperative provided spoiler surfaces are visually verified to be STOWED after control system check PRIOR TO EACH DEPARTURE. Repetitive Check Required (Yellow Placard)

MEL ITEM	TAB LOCATION	PLACARD TEXT
27-61-02	Near Overhead Annunciator Panel (EOAP)	Spoiler Deployed Annunciator INOP

(O) PROCEDURES

Refer to the Remarks or Exceptions column.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
	AUTO GROUND SPOILER SYSTEM				
27-62-01A	Auto Ground Spoiler System "DISP.APPR.REQ'D."	N	1	0	C (O)(M) May be inoperative provided: a) Performance penalties are applied, b) Autobrake System is not armed for takeoff, c) Autobrake RTO mode is placarded "DO NOT USE FOR TAKEOFF", d) Autobrakes are not armed for landing, e) Autoland is not used and is placarded inoperative, and f) Enroute operations and/or approach minimums do not require its use. CAT II/III Not Authorized
27-62-01B	RTO Spoiler Switches "DISP.APPR.REQ'D."	N	2	0	C (O) May be inoperative provided: a) Autobrake System is not armed for takeoff, and b) Autobrake RTO mode is placarded "DO NOT USE FOR TAKEOFF".
27-62-01C	Throttle Reverse Thrust Switches "DISP.APPR.REQ'D."	N	2	0	C (O) May be inoperative provided: a) Autobrake System is not armed for takeoff, and b) Autobrake RTO mode is placarded "DO NOT USE FOR TAKEOFF".

MEL ITEM	TAB LOCATION	PLACARD TEXT
27-62-01A	1. Near Speedbrake Lever 2. Autobrake Selector Switch 3. AUTO LAND Mode Select Button	1. Auto Ground Spoiler System INOP 2. Do Not Use Autobrake RTO Mode 3. Do Not Use Autopilot Autoland mode
27-62-01B	Near Speedbrake Lever	1. ____ RTO Spoiler Switches INOP 2. Do not use Autobrake RTO Mode
27-62-01C	Near Speedbrake Lever	1. ____ AGS Throttle Reverse Thrust Switch(es) INOP 2. Do not use Autobrake RTO Mode

(O) PROCEDURES

27-62-01A

1. With Autospoiler Actuator deactivated in the retracted (flight) position verify the speed brake detents (1/4, 1/2, 3/4, EXT) can be engaged.
2. Advance the throttles to verify the "AUTOBRAKE" aural takeoff warning does not sound.
3. Use manual spoilers for takeoff and for landing.
4. Do not arm Autobrakes for takeoff and place Autobrake selector switch in "OFF" position for takeoff.
5. If only the MLG Wheel Spinup feature is inoperative, there is no takeoff performance penalty.
6. Apply the following Performance Corrections if Auto Spoiler Actuator is not in Takeoff position (ground):

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27-62-01A	AUTO GROUND SPOILER SYSTEM
EFFECTIVITY	All
FLIGHT PLANNING REQUIREMENTS	None
NOTES	None
AWABS	Performance corrections have been applied.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF Reduce RATOW by 6,600 lbs. LANDING See ALM – Airports Section for airport landing chart (AUTO GRD SPOILERS INOP).

27-62-01B, 27-62-01C

Do not arm RTO spoilers or Autobrakes for takeoff.

NOTE 1: RTO Spoiler Switches do not affect Auto Spoiler Landing Mode and require no performance penalty.

NOTE 2: Throttle Reverse Thrust Switches do not affect Auto Spoiler Landing Mode and require no performance penalty.

(M) PROCEDURES

27-62-01A

1. Placard Spoilers "Manual Operation Only".
2. Placard Autobrakes "Do Not Use for Takeoff or Landing".
3. Place Autobrake selector switch in "OFF" position for takeoff.
4. Placard Autoland inoperative.
5. If only the MLG wheel spinup spoiler extension feature is inoperative, no further maintenance action is required. This would be evident by spoilers failing to automatically deploy on landing, but AUTOSPOILER FAIL message does not appear on EOAP.
6. If the Auto Ground Spoiler System is inoperative due to anything other than the main gear spoiler extension feature, RTO spoiler switches, or throttle reverse thrust switches, the automatic ground spoiler actuator must be rendered inoperative in its flight mode prior to dispatch. Failures of this nature would likely be evident via illumination of the AUTOSPOILER FAIL message and / or inability to arm auto spoilers prior to landing. Auto spoiler actuator may be secured in its flight mode as follows:

Actuator failed in the **retracted** position, as indicated by placard on spoiler handle not visible with handle forward and down:

Pull and secure 115 VAC SPOILER CONTROL circuit breaker X-30 on EPC CBP (B1-243).

Actuator failed in the **extended** position, as indicated by placard on spoiler handle partially visible with handle forward and down.

Comply with one of the following procedures:

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Procedure I

- 1) Squeeze the spoiler handle.
- 2) If the actuator retracts and the handle can be armed, deactivate the actuator by continuing to squeeze the spoiler handle and simultaneously pulling the 115 VAC SPOILER CONTROL circuit breaker X-30 on EPC CBP (B1-243).
- 3) After pulling and securing the circuit breaker, release the spoiler handle and verify the actuator remains retracted.

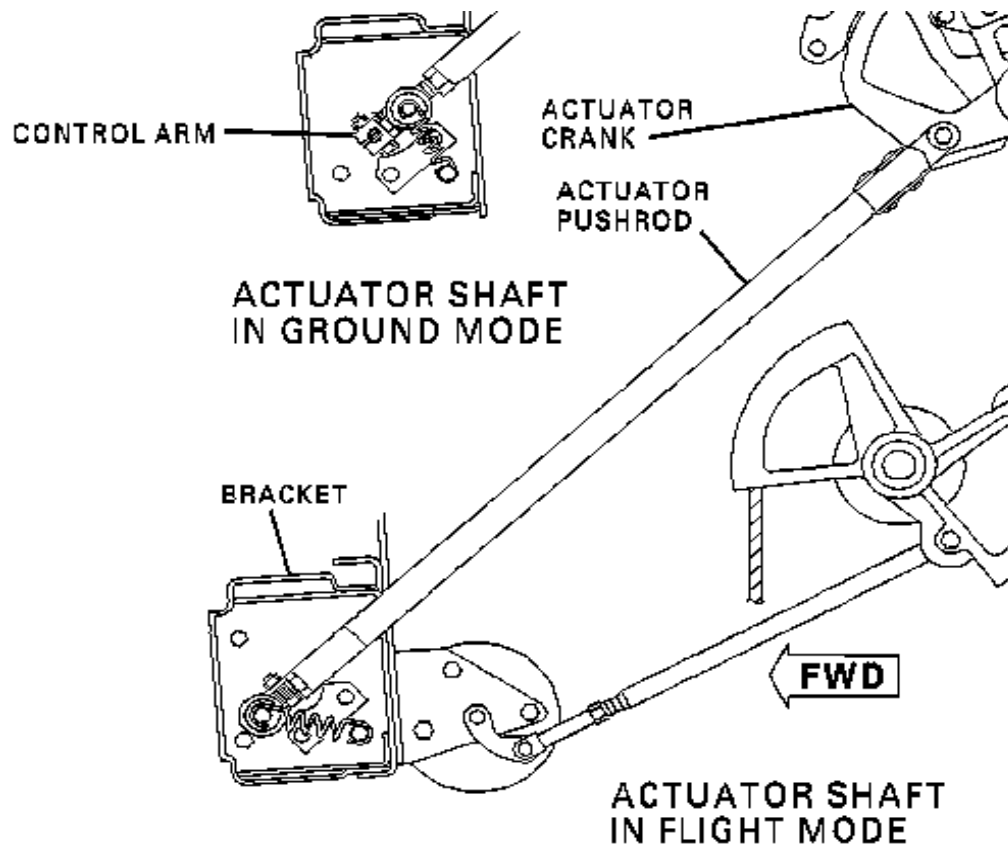
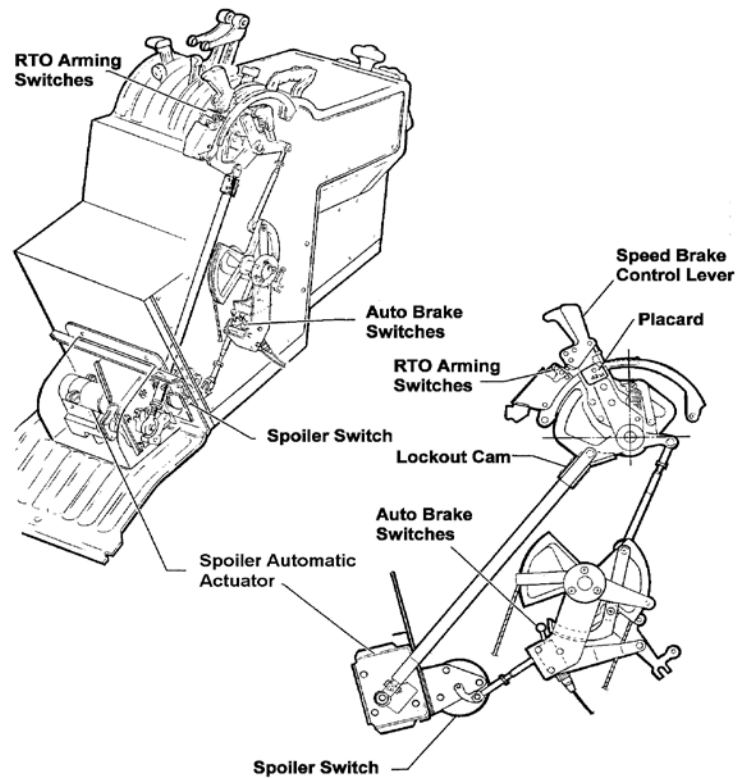
Procedure II

- 1) Pull LEFT / RIGHT GROUND CONTROL RELAY circuit breakers K-33 and L-33 on EPC CBP (B1-023 and B1-024).
- 2) Operate both Main Landing Gear Uplock Switches by placing ferrous material adjacent to sensors.
- 3) After actuator retracts, pull and secure 115 VAC SPOILER CONTROL circuit breaker X-30 on EPC CBP (B1-243).
- 4) Reset both Ground Control circuit breakers.

Procedure III

- 1) Pull and secure 115 VAC SPOILER CONTROL circuit breaker X-30 on EPC CBP (B1-243).
 - 2) Remove cover from actuator.
 - 3) Manually wrench actuator to retracted (in flight) position.
 - 4) Replace actuator cover.
7. With Autospoiler Actuator deactivated in the retracted position verify the speed brake detents (1/4, 1/2, 3/4, EXT) can be engaged.
 8. Perform takeoff warning integrity test of Speedbrake handle takeoff warning switch as follows:
 - a. Advance both throttles greater than 25% and insure "Autobrake" takeoff warning is not annunciated – no further action required.
 - b. If "Autobrake" takeoff warning is annunciated the Speedbrake handle takeoff warning switch/mechanism is in error indicating "ARMED" and adjustment/repair will be required. Reference [MD90 AMM Functional Test of the throttle switch 32-46-00-720-804](#).

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD					REPAIR CATEGORY
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
27-64-01	SPOILER/FLAP EXTENDED Annunciation System	Y	1	0	C

MEL ITEM	TAB LOCATION	PLACARD TEXT
27-64-01	Near Overhead Annunciator Panel (EOAP)	SPOILER / FLAP EXTEND Message INOP

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
27-65-01	Inboard Ground Spoiler System "DISP.APPR.REQ'D."	N	1	0	C (O)(M) May be inoperative provided: a) Both Inboard Spoilers are in the RETRACTED position, b) Both Ground Spoiler Control Valves have the electrical connectors disconnected and stowed, and c) Performance penalties are applied.

MEL ITEM	TAB LOCATION	PLACARD TEXT
27-65-01	Near Speedbrake Lever	Inboard Ground Spoiler System INOP

(O) PROCEDURES

27-65-01	INBOARD GROUND SPOILER SYSTEM
EFFECTIVITY	All
FLIGHT PLANNING REQUIREMENTS	None
NOTES	None
AWABS	Performance corrections have been applied.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF 1. Reduce RATOW by 15,000 lbs. 2. Reduce T/O CLIMB LIMIT by 15,000 lbs. LANDING 1. See ALM – Airports Section for airport landing chart (INBD GRD SPOILERS INOP). 2. Reduce MAXIMUM QUICK TURNAROUND LANDING WEIGHT by 1,300 lbs. Refer to Flight Operations Manual (FOM) , Chapter 3, Quick Turnaround Landing Weight (QTLW) section to comply with associated limitations and procedures.

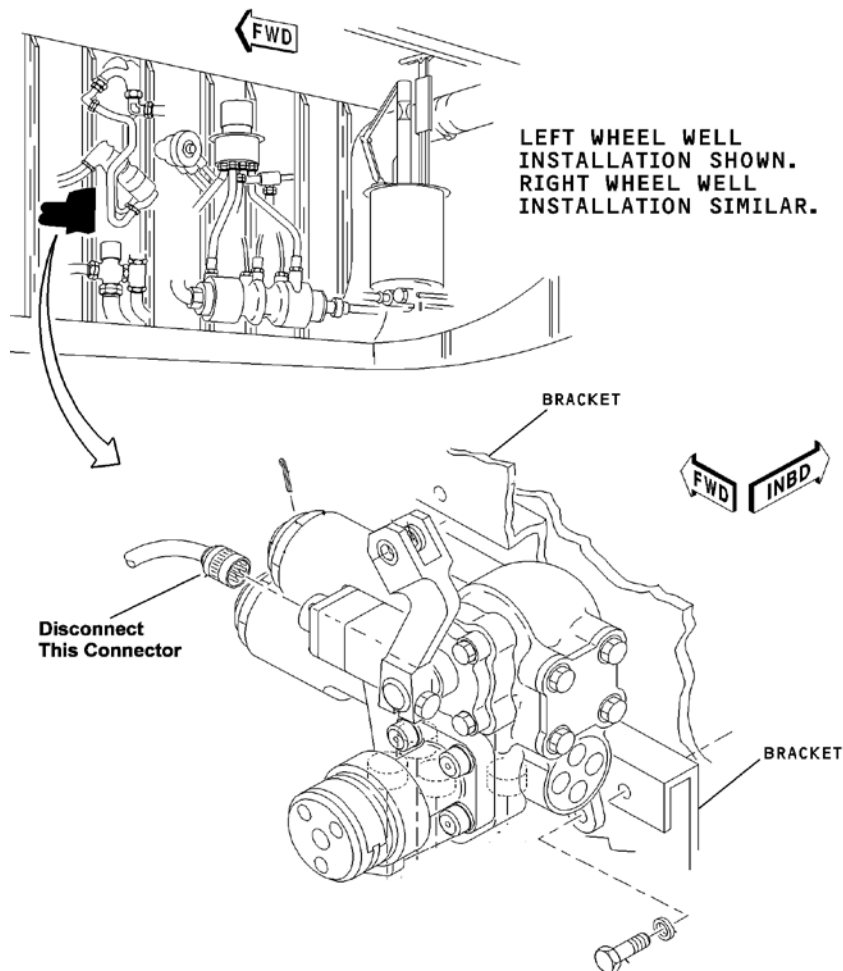
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(M) PROCEDURES

1. Verify Inboard Spoiler panels are fully retracted (flush with wing skin).
2. Disconnect and stow the electrical connectors of the right and left ground spoiler control valves, located in the respective MLG wheel wells.
3. Ensure that circuit breaker P-33 (B1-244) is closed (reset).

NOTE: If circuit breaker P-33 will not reset, dispatch is not allowed.

4. Operate spoilers and verify both inboard spoiler panels remain in the retracted position while mid and outboard panels extend.
 - a. Pressurize both hydraulic systems.
 - b. Operate spoilers by lifting up and pulling back on spoiler / speed brake lever to the EXT detent.
 - c. Verify both inboard spoiler panels remain retracted while the mid and outboard panels extend.



NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
27-65-03	In-flight Spoiler Lockout Mechanism Weight-On-Wheels Unlocking Input Solenoid "DISP.APPR.REQ'D."	Y	1	0	C (O)(M) May be inoperative provided: a) Autoland is not used, b) Autobrakes are not armed for landing, c) Performance penalties are applied, and d) Enroute operations and/or approach minimums do not require its use. CAT II/III Not Authorized

MEL ITEM	TAB LOCATION	PLACARD TEXT
27-65-03	1. Near Speedbrake Lever 2. AUTO LAND Select Button 3. Auto Brake System Control Pnl	1. In-flight Spoiler Lockout Mechanism Weight-On-Wheels Unlocking Input Solenoid INOP 2. Do Not Use Autoland 3. Do Not Arm Auto Brakes for Landing

(O) PROCEDURES

27-65-03	IN-FLIGHT SPOILER LOCKOUT MECHANISM WEIGHT-ON-WHEELS UNLOCKING INPUT SOLENOID
EFFECTIVITY	All
FLIGHT PLANNING REQUIREMENTS	None
NOTES	None
AWABS	Performance corrections have been applied.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF None LANDING – WET RUNWAY SHORTER THAN 9,000 FEET: Reduce RWY ALLOWABLE LANDING WT by 56,000 lbs. LANDING – DRY RUNWAY OR WET RUNWAY LONGER THAN 9,000 FEET: No penalties apply.

(M) PROCEDURES

1. Pull and secure SPOILER LOCKOUT circuit breaker (M-31 EPC Panel).
2. Placard Autobrakes "Do not use for landing", and placard Autoland mode inoperative.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
27-84-01	SLAT LAND Light	N	1	0	C (O)(M) May be inoperative provided slat input to Takeoff Warning System is operative. NOTE: SLAT LAND Light only requires one operative light bulb to be operative.

MEL ITEM	TAB LOCATION	PLACARD TEXT
27-84-01	Near Flap LAND Slat Advisory Light	Slat Land Light INOP

(O) PROCEDURES

Verify Slat Disagree light is off after selecting landing slats.

(M) PROCEDURES

1. Verify that circuit breakers P-38 and P-39 are closed.
2. Select left and right DC power ON.
3. Verify flaps/slats are up/retracted.
4. Select hydraulic power OFF.
5. Verify throttles in IDLE.
6. Set FLAP/SLAT handle to 0°/Ext.
7. Set TAKEOFF CONDTN FLAP thumbwheel to 0°.
8. Set TAKEOFF CONDTN CG thumbwheel so that LONG TRIM takeoff position indicator matches stabilizer position.
9. Release parking brake.
10. Set SPOILER lever to RET.
11. Advance both throttles. Takeoff warning should sound.
12. Select hydraulic power ON. When slats extend to mid-sealed position, takeoff warning should silence.
13. Set FLAP/slat handle to 15°/EXT. Takeoff warning should sound.
14. Set TAKEOFF CONDTN FLAP thumbwheel to 15°.
15. Set TAKEOFF CONDTN CG thumbwheel so that LONG TRIM takeoff position indicator matches stabilizer position. Takeoff warning should silence.
16. Return both throttles to idle and system controls to normal position.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
27-84-02	SLAT TAKEOFF Light	N	1	0	C
					(O)(M) May be inoperative provided: a) Slat input to Takeoff Warning System is operative, b) Visual inspection PRIOR TO EACH DEPARTURE (Log Book Entry Required) verifies that slats are in proper takeoff position, and c) Slats / flaps are not operated after the required visual check has been made without a subsequent visual check. Repetitive Check Required (Yellow Placard) NOTE: SLAT TAKEOFF Light only requires one operative light bulb to be operative.

MEL ITEM	TAB LOCATION	PLACARD TEXT
27-84-02	Near Flap T/O Slat Advisory Light	Slat Takeoff Light INOP

(O) PROCEDURES

1. PRIOR TO EACH DEPARTURE visually verify slats are in proper takeoff position.
2. Slats / flaps should not be moved on ground after visual check is complete.
 - a. If slats / flaps are moved, repeat visual check.

(M) PROCEDURES

1. Verify that circuit breakers P-38 and P-39 are closed.
2. Select left and right DC power ON.
3. Verify flaps/slats are up/retracted.
4. Select hydraulic power OFF.
5. Verify throttles in IDLE.
6. Set FLAP/SLAT handle to 0°/Ext.
7. Set TAKEOFF CONDTN FLAP thumbwheel to 0°.
8. Set TAKEOFF CONDTN CG thumbwheel so that LONG TRIM takeoff position indicator matches stabilizer position.
9. Release parking brake.
10. Set SPOILER lever to RET.
11. Advance both throttles. Takeoff warning should sound.
12. Select hydraulic power ON. When slats extend to mid-sealed position, takeoff warning should silence.
13. Set FLAP/slat handle to 15°/EXT. Takeoff warning should sound.
14. Set TAKEOFF CONDTN FLAP thumbwheel to 15°.
15. Set TAKEOFF CONDTN CG thumbwheel so that LONG TRIM takeoff position indicator matches stabilizer position. Takeoff warning should silence.
16. Return both throttles to idle and system controls to normal position.

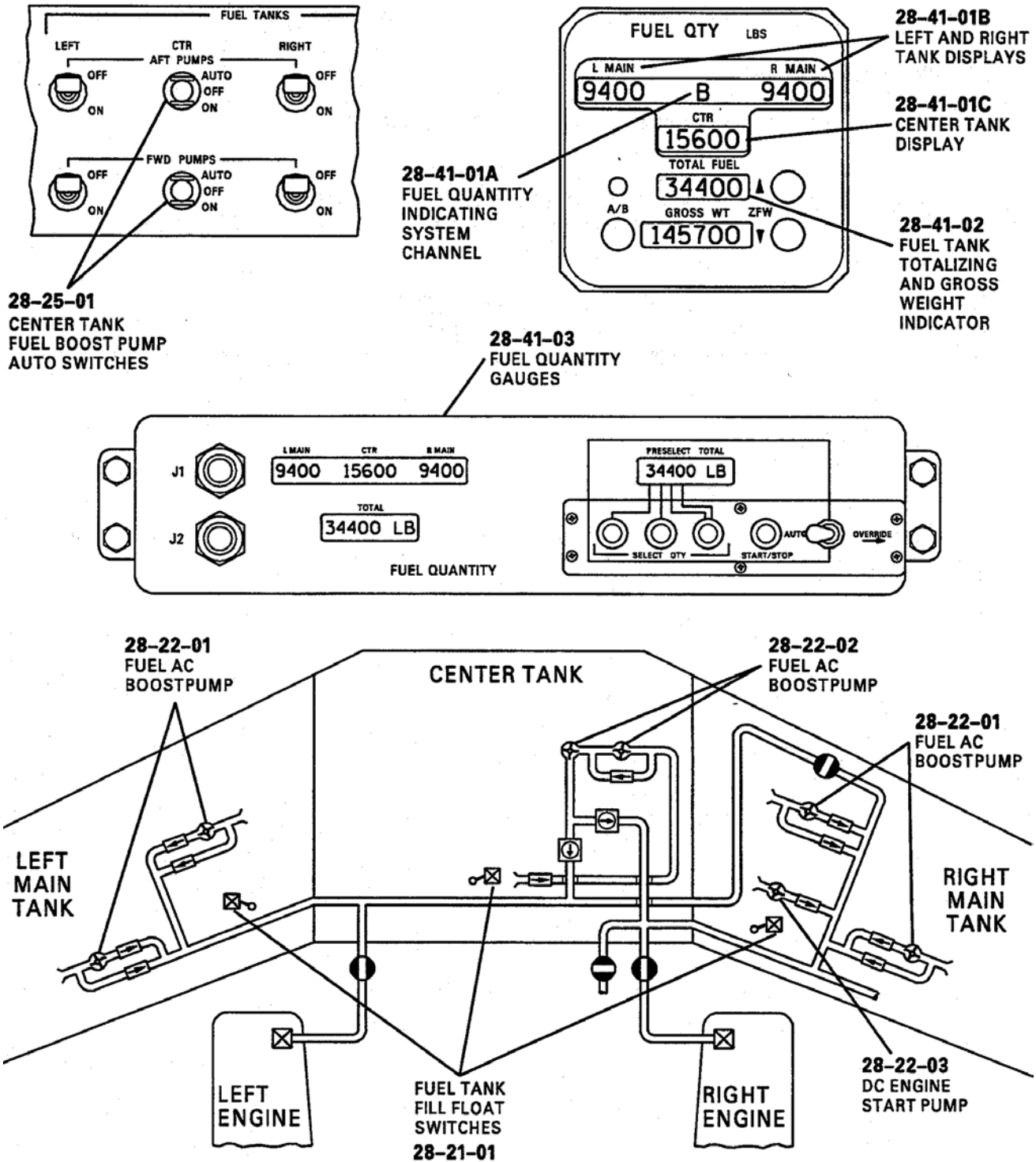
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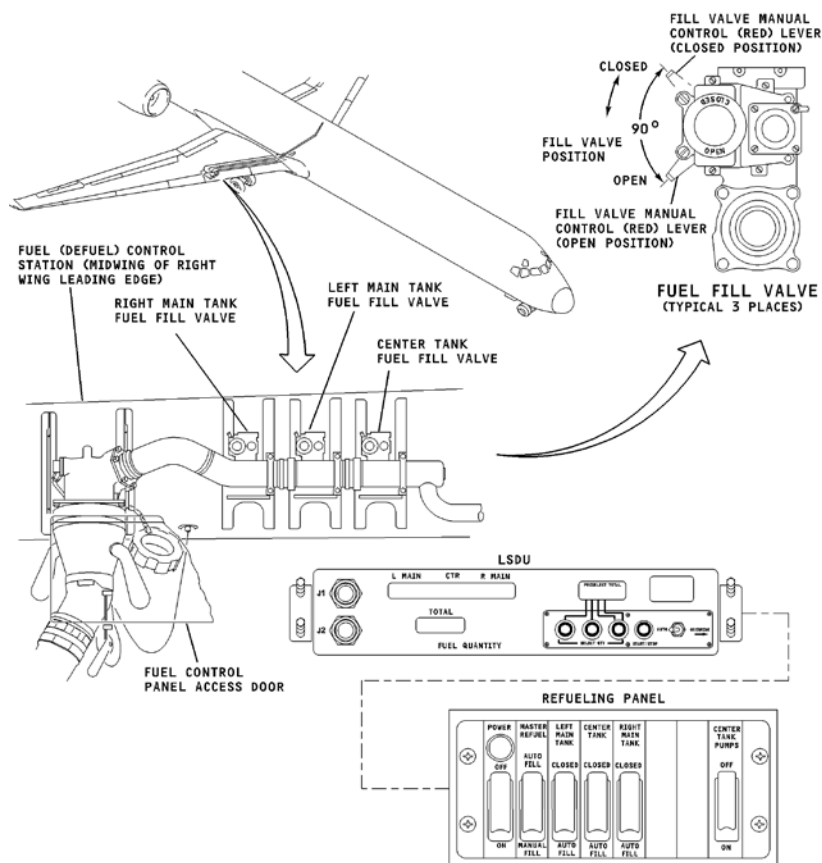
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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH			
FLIGHT CREW MAY PLACARD			Y	1	0	REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION						REMARKS OR EXCEPTIONS
28-21-01	Single Point Pressure Refueling System (Incl. Refueling Valves; Elect & Manual) "DISP.APPR.REQ'D."					C	(M) May be inoperative provided an accepted alternate refueling procedures is used.

MEL ITEM	TAB LOCATION	PLACARD TEXT
28-21-01	1. Aircraft Logbook 2. Pressure Fueling Control Panel	Pressure Fueling System INOP Or Fuel Valve INOP

(M) PROCEDURES

1. Refuel the associated tank, stopping the fuel source at the desired fuel quantity. [Refer to the Fueling Procedures Manual, MD90.20, MD-90 Pressure Fueling.](#)
2. Operate electrically-inoperative valves manually.



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NUMBER INSTALLED		NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD		REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION		REMARKS OR EXCEPTIONS
28-21-02	Fueling Bay Fuel Cap		Fueling Bay Fuel Cap no longer required per Delta Air Lines Engineering Authorization (E.A.) 02-450210-03 dated Oct. 4, 2005.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH			
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY			
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS	
28-21-03	Ground Refueling Relay	Y	1	0	C		

MEL ITEM	TAB LOCATION	PLACARD TEXT
28-21-03	1. Aircraft Logbook 2. Pressure Fueling Control Panel	Ground Refueling Relay INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
28-22-01	Main Tank Fuel AC Boost Pumps "DISP.APPR.REQ'D."	Y	4	2 C	(O)(M) May be inoperative provided: a) Inoperative Fuel Pumps are not in the same tank, b) When two Fuel Pumps are inoperative, the remaining Fuel Pumps are powered from separate AC Bus Systems, c) The combination of the Left FWD and Right AFT boost pumps may not be inoperative, d) Alternate Fuel Burn System is not used, and e) Increase planned trip fuel for each inoperative fuel pump as follows: 580 lbs. for each inoperative forward main tank pump. 330 lbs. for each inoperative aft main tank pump.

MEL ITEM	TAB LOCATION	PLACARD TEXT
28-22-01	Associated Fuel Boost Pump Switch	___ Main Tank Fuel AC Boost Pump(s) INOP

(O) PROCEDURES

- 580 pounds additional UNUSABLE fuel must be added to EACH Wing Tank with an inoperative FORWARD pump.
- 330 pounds additional UNUSABLE fuel must be added to EACH Wing Tank with an inoperative AFT pump.
- Ensure additional UNUSABLE fuel is in affected tank(s) prior to approach at destination.
- If two pumps are inoperative, go-around is not recommended if there is less than 1,000 lbs. indicated in either main tank.
- The combination of the Left FWD and Right AFT boost pumps may not be inoperative.

NOTE: Main Tank fuel lateral imbalance limitations remain applicable.

(M) PROCEDURES

- Set the associated Fuel Boost Pump Switch to OFF.
- Pull and secure the associated 115 VAC Phase A-C Fuel Boost Pump circuit breaker(s) for the inoperative pump(s).
- Verify additional fuel is added per Remarks above.

NOTE: Use the following chart to determine Boost Pump power source.

Circuit Breaker	Panel	Location	AC Bus System
Fuel Boost Pump LT, FWD	Upper EPC	J-23	Right AC
Fuel Boost Pump LT, AFT	Upper EPC	H-23	Left AC
Fuel Boost Pump RT, FWD	Upper EPC	H-19	Left AC
Fuel Boost Pump RT, AFT	Upper EPC	J-19	GROUND SERVICE

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
28-22-02	Center Tank Fuel AC Boost Pumps "DISP.APPR.REQ'D."	Y	2	0	C (M) One or both may be inoperative provided: a) All Cockpit Fuel Quantity Indicators are operative, b) Any fuel in Center Tank is considered unusable and is included in the zero fuel weight and center of gravity calculation as ballast fuel, and c) Alternate Fuel Burn System is not used.

MEL ITEM	TAB LOCATION	PLACARD TEXT
28-22-02	Associated Fuel Boost Pump Switch	1. ____ Center Tank Fuel AC Boost Pump(s) INOP 2. Do Not Use Alternate Fuel Burn

OPERATIONS NOTE:

The WDR delivered to the crew does not include unusable/ballast fuel in ZFWT. No manual corrections need to be made. Enter ZFWT from the WDR in the fuel panel and in the zero fuel weight block on the PERF INIT page.

(M) PROCEDURES

1. Set the associated Fuel Boost Pump Switch to OFF.
2. Pull and secure the associated 115 VAC Phase A-C Fuel Boost Pump circuit breaker(s) for the inoperative pump(s).
3. Verify additional fuel is added per Remarks above.

Circuit Breaker	Panel	Location
Fuel Boost Pump, CTR FWD	Upper EPC	H-21
Fuel Boost Pump, CTR AFT	Upper EPC	J-21

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD					REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION					
28-22-03	DC Start Pump	Y	1	0	C	(O) May be inoperative.

MEL ITEM	TAB LOCATION	PLACARD TEXT
28-22-03	DC Start Pump Switch	DC Start Pump INOP

(O) PROCEDURES

Use APU or external power to supply AC power to the fuel pumps for engine start, or use suction feed.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
28-25-01	Alternate Fuel Burn System (Ctr Tank Fuel Boost Pump Switches Auto Position)	Y	2	0	C

MEL ITEM	TAB LOCATION	PLACARD TEXT
28-25-01	Associated Center Tank Fuel Boost Pump Switch	____ Alternate Fuel Burn 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
	COCKPIT FUEL QUANTITY INDICATING SYSTEM				
28-41-01A	Channels (A & B)	Y	2	1	C (O) May be inoperative provided: a) All Cockpit Fuel Quantity Displays are operative on the remaining channel, b) Both Fuel Used Indications are operative, and c) All Fuel Tank Boost Pumps are operative.
28-41-01B	Left & Right Main Tank Displays	Y	2	1	C (O)(M) May be inoperative on both channels provided: a) Remaining Main Tank and Center Tank Fuel Quantity Displays in the cockpit are operative on both channels, b) Fuel Flow Rate Indication for associated engine is operative, c) Both Fuel Used Indications are operative, d) Fuel quantity in the associated tank is verified by an alternate method PRIOR TO EACH DEPARTURE, and e) Alternate Fuel Burn System is not used. NOTE: Fuel Totalizer Readings may not be accurate. Repetitive Check Required (Yellow Placard)
28-41-01C	Center Tank Display "DISP.APPR.REQ'D."	Y	1	0	C (O)(M) May be inoperative on both channels provided: a) Any fuel in the Center Tank is considered UNUSABLE and is included in the zero fuel weight and center of gravity calculation as ballast fuel, b) Both Cockpit Main Tank Fuel Quantity Displays are operative on both channels, c) Both Fuel Used Indications are operative, and d) Fuel quantity in the associated tank is verified by an alternate method PRIOR TO EACH DEPARTURE. 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
COCKPIT FUEL QUANTITY INDICATING SYSTEM (Continued)					
28-41-01D	Center Tank Display	Y	1	0	C (O)(M) May be inoperative on both channels provided: a) Fuel in the Center Tank is considered USABLE, b) Both Center Tank Fuel Boost Pumps are operative, c) Both Cockpit Main Tank Fuel Quantity Displays are operative on both channels, d) Both Fuel Used Indications are operative, e) Both Engine Inlet Fuel Pressure Low Annunciation Systems are operative, f) Quantity of fuel loaded into the Center Tank is verified by an alternate method PRIOR TO EACH DEPARTURE, g) Procedures are used for verifying when fuel in the Center Tank has been depleted, and h) Alternate Fuel Burn System is not used. Repetitive Check Required (Yellow Placard)
28-41-01E	Fuel System Test	Y	1	0	C (M) May be inoperative provided: a) All Cockpit Fuel Quantity Displays are operative, b) Both Fuel Used Indications are operative, and c) The quantity of fuel in the tank is determined by an alternate method PRIOR TO EACH DEPARTURE. Repetitive Check Required (Yellow Placard)

MEL ITEM	TAB LOCATION	PLACARD TEXT
28-41-01A	Cockpit Display Unit (CDU)	Channel ____ of Fuel Quantity Indicating System INOP
28-41-01B	Cockpit Display Unit (CDU)	____ Wing Main Tank Display INOP
28-41-01C	Cockpit Display Unit (CDU)	Center Tank Display INOP
28-41-01D	Cockpit Display Unit (CDU)	Center Tank Display INOP
28-41-01E	Cockpit Display Unit (CDU)	Fuel System Test INOP

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(O) PROCEDURES

28-41-01A

If additional fuel quantity indicators fail enroute:

1. PRIOR TO EACH DEPARTURE, verify alternate fueling procedures have been accomplished. If the magnastick method was used, verify the forward nose gear doors are closed and latched by pulling on the trailing edge of each door.
2. Turn on both pumps in affected tank(s) for duration of flight.
3. Monitor fuel usage with fuel used counters.

28-41-01B

1. PRIOR TO EACH DEPARTURE, verify alternate fueling procedures have been accomplished. If the magnastick method was used, verify the forward nose gear doors are closed and latched by pulling on the trailing edge of each door.
2. Disregard fuel totalizer and gross weight indicator.
3. In flight, after center tank is empty, monitor main tank fuel usage using fuel used counters.

28-41-01C

1. PRIOR TO EACH DEPARTURE, verify alternate fueling procedures have been accomplished. If the magnastick method was used, verify the forward nose gear doors are closed and latched by pulling on the trailing edge of each door.
2. Disregard fuel totalizer and gross weight indicator.
3. In flight, monitor fuel used indications and verify equal wing tank fuel usage.
4. If fuel used does not match wing tank depletion, turn on center tank pumps.

28-41-01D

1. PRIOR TO EACH DEPARTURE, verify alternate fueling procedures have been accomplished. If the magnastick method was used, verify the forward nose gear doors are closed and latched by pulling on the trailing edge of each door.
2. Disregard fuel totalizer and gross weight indicator.

The following procedures are used for determining when fuel in the Center Tank has been depleted:

3. In flight, monitor fuel used indicators and verify no fuel transfer from wing tanks until fuel used equals quantity of fuel in center tank.
4. If wing tank fuel is used prematurely (failure of a center tank boost pump), turn OFF main tank pumps one at a time and verify engine inlet pressure low lights remain off, if inlet LOW PRESS light illuminates (failure of both center tank boost pumps) turn all main tank pumps ON and consider any center tank fuel unusable.
5. After center tanks are empty, leave one center tank pump ON for duration of flight, and turn all main tank pumps ON.

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(M) PROCEDURES

28-41-01B, 28-41-01C, 28-41-01D

1. Install second placard in a conspicuous location at the fueling station and place tab on or adjacent to inoperative indicator.
2. For alternate fueling procedures, refer to the following sections of the [Fueling Procedures Manual](#):

M90.40	MD-90 Inoperative Gauge
M90.90.0	MD-90 Fuel Stick Charts
M90.90.X	Fuel Stick Charts

28-41-01E

1. PRIOR TO EACH DEPARTURE, verify the forward nose gear doors are closed and latched by pulling on the trailing edge of each door.
2. Install second placard in a conspicuous location at the fueling station and place tab on or adjacent to inoperative indicator.
3. For alternate fueling procedures, refer to the following sections of the [Fueling Procedures Manual](#):

M90.40	MD-90 Inoperative Gauge
M90.90.0	MD-90 Fuel Stick Charts
M90.90.X	Fuel Stick Charts

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
28-41-02	Fuel Tank Totalizing System and Gross Weight Indicator	Y	1	0 C	(O) May be inoperative provided alternate procedures for determining fuel quantity and gross weight are used. NOTE: FMS may be affected.

MEL ITEM	TAB LOCATION	PLACARD TEXT
28-41-02	Cockpit Display Unit (CDU)	Fuel Tank Totalizing System and Gross Weight Indicator INOP

(O) PROCEDURES

1. Add individual fuel quantities displayed for each tank to obtain total fuel loaded. Cross check total quantity onboard with other crewmembers.
2. Add total fuel quantity to zero fuel weight to obtain gross weight.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
28-41-03	Fueling Panel Fuel Quantity Indicators	Y	3	0	C (O) May be inoperative provided fuel quantity in associated tank is verified by an alternate accepted method PRIOR TO EACH DEPARTURE. Repetitive Check Required (Yellow Placard)

MEL ITEM	TAB LOCATION	PLACARD TEXT
28-41-03	1. Aircraft Logbook 2. Pressure Fueling Control Panel	____ Fueling Panel Fuel Quantity Indicator(s) INOP

(O) PROCEDURES

1. PRIOR TO EACH DEPARTURE, verify alternate fueling procedures have been accomplished. If the magnastick method was used, verify the forward nose gear doors are closed and latched by pulling on the trailing edge of each door.
2. Install second placard in a conspicuous location at the fueling station and place tab on or adjacent to inoperative indicator.
3. For alternate fueling procedures, refer to the following sections of the [Fueling Procedures Manual](#):

M90.40	MD-90 Inoperative Gauge
M90.90.0	MD-90 Fuel Stick Charts
M90.90.X	Fuel Stick Charts

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH			
FLIGHT CREW MAY PLACARD			Y	9	0	REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION	REMARKS OR EXCEPTIONS					
28-42-01	Dripless Fuel Measuring Sticks (Magnasticks)						
							(O) May be inoperative or missing provided fuel quantity is determined by other acceptable means.

MEL ITEM	TAB LOCATION	PLACARD TEXT
28-42-01	Aircraft Logbook	____ Magnastick(s) INOP

(O) PROCEDURES

Use fuel quantity indicating system to fuel airplane. If quantity indications are inoperative, refer to MEL item [28-41-01](#) or [28-41-03](#) 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
28-43-01	FUEL LEVEL LOW Annunciation System	Y	1	0	C May be inoperative provided Alternate Fuel Burn System is not used.

MEL ITEM	TAB LOCATION	PLACARD TEXT
28-43-01	Near Overhead Annunciator Panel (EOAP)	1. FUEL LEVEL LOW Annunciator INOP 2. Do Not Use Alternate Fuel Burn

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION			C	REMARKS OR EXCEPTIONS	
28-44-01	CENTER FUEL PRESS LO Annunciation System	Y			2	0

MEL ITEM	TAB LOCATION	PLACARD TEXT
28-44-01	Near Center Tank Fuel Boost Pump Switches	1. CENTER FUEL PRESS LO Annunciation INOP 2. Do Not Use Alternate Fuel Burn

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
28-45-01	Fuel Temperature Indicating System	Y	2	0	C (O) May be inoperative provided alternate compliance procedures are used regarding ice formation on upper wing surfaces.

MEL ITEM	TAB LOCATION	PLACARD TEXT
28-45-01	Affected Fuel Temperature Indicator	Fuel Temperature Indicator INOP

(O) PROCEDURES

Unless Primary Overwing Ice Detection System ([MEL 30-81-01](#)) is also inoperative, no alternate compliance procedures are required.

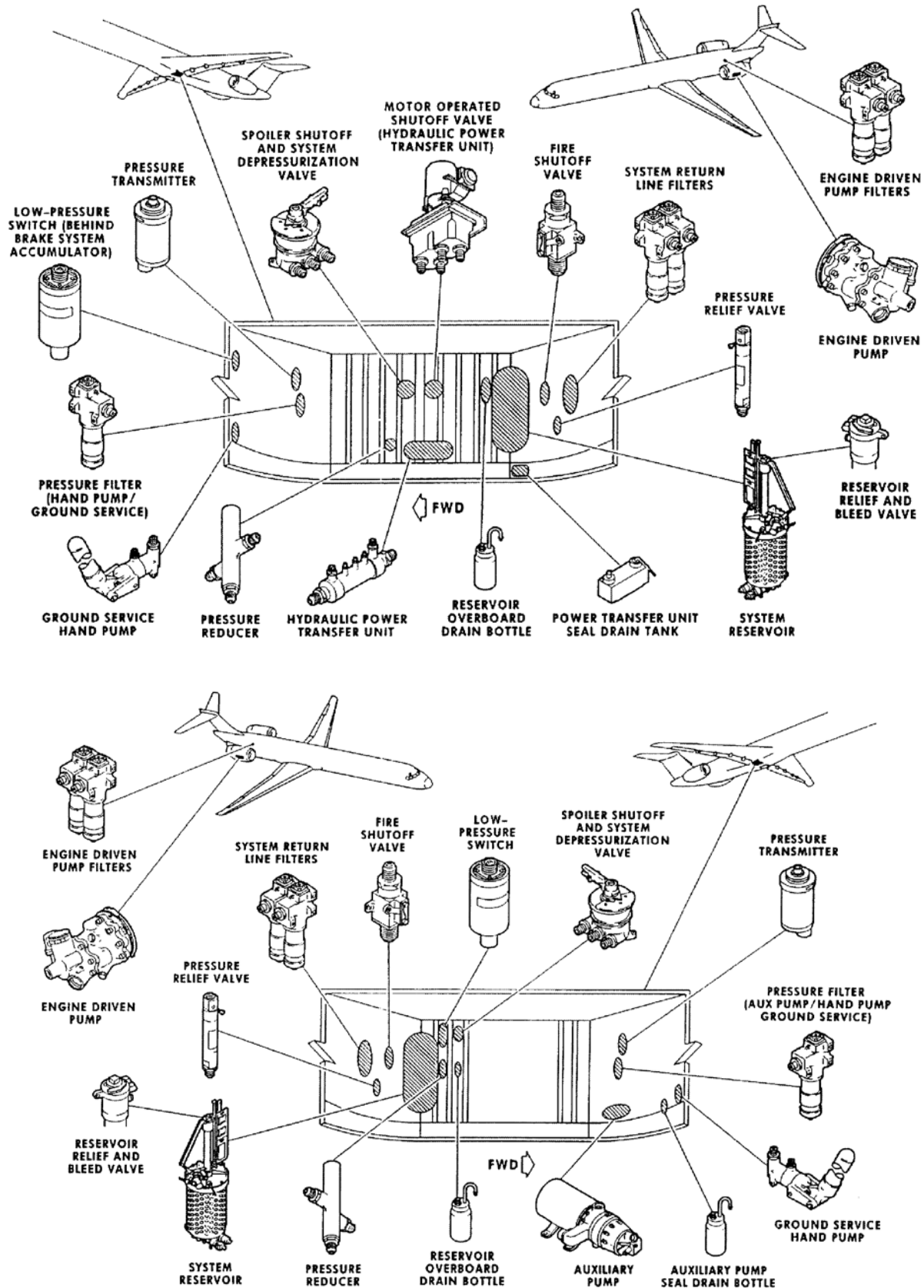
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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
29-23-01	Hydraulic Reservoir Ground Service Handpumps	N	2	0	C

MEL ITEM	TAB LOCATION	PLACARD TEXT
29-23-01	Aircraft Logbook	____ Hydraulic Reservoir Ground Service Handpump(s) INOP

NUMBER INSTALLED					NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY			
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS	
29-31-01	R HYD PRESS LOW Annunciator System	Y	1	0	C		

MEL ITEM	TAB LOCATION	PLACARD TEXT
29-31-01	Near Overhead Annunciator Panel (EOAP)	Right Hydraulic Low Pressure Annunciator INOP

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
29-32-01	Hydraulic Quantity Indicating Systems "Contact MCC"	N	2	0	C (O)(M) May be inoperative provided associated reservoir is checked PRIOR TO EACH DEPARTURE (Log Book Entry Required). Repetitive Check Required (Yellow Placard)

MEL ITEM	TAB LOCATION	PLACARD TEXT
29-32-01	Associated Hydraulic Quantity Indicator(s)	____ Hydraulic Quantity Indicating System(s) INOP

(O) PROCEDURES

Check hydraulic system pressure frequently during flight.

(M) PROCEDURES

Check associated hydraulic system reservoir for proper fluid level before each flight.

1. Bleed air from reservoir.

NOTE: Air must be bled from reservoir with reservoir in a pressurized condition before an accurate fluid level check can be made. After bleeding air from the reservoir, the reservoir fluid level can be checked with the system either fully pressurized or completely depressurized.

2. Observe fluid level pointer with relation to fill levels indicator scales on reservoir fill levels instruction.
3. If the hydraulic system is fully pressurized, read the respective reservoir fill levels instruction plate lower scale, placarded:
4. HYDRAULIC PRESSURE 3000 PSI; if the system is completely depressurized, read the upper scale, placarded:
5. HYDRAULIC PRESSURE ZERO PSI. Complete depressurization requires subsystem depressurization with accumulators at the correct initial nitrogen precharge, otherwise fluid over-service will result.
6. The figures on the edge of the fill levels instruction plate indicate in US quarts measurement, the approximate quantity of fluid contained in the reservoir when in either a pressurized or depressurized condition with respect to the position of the reservoir fluid level pointer.

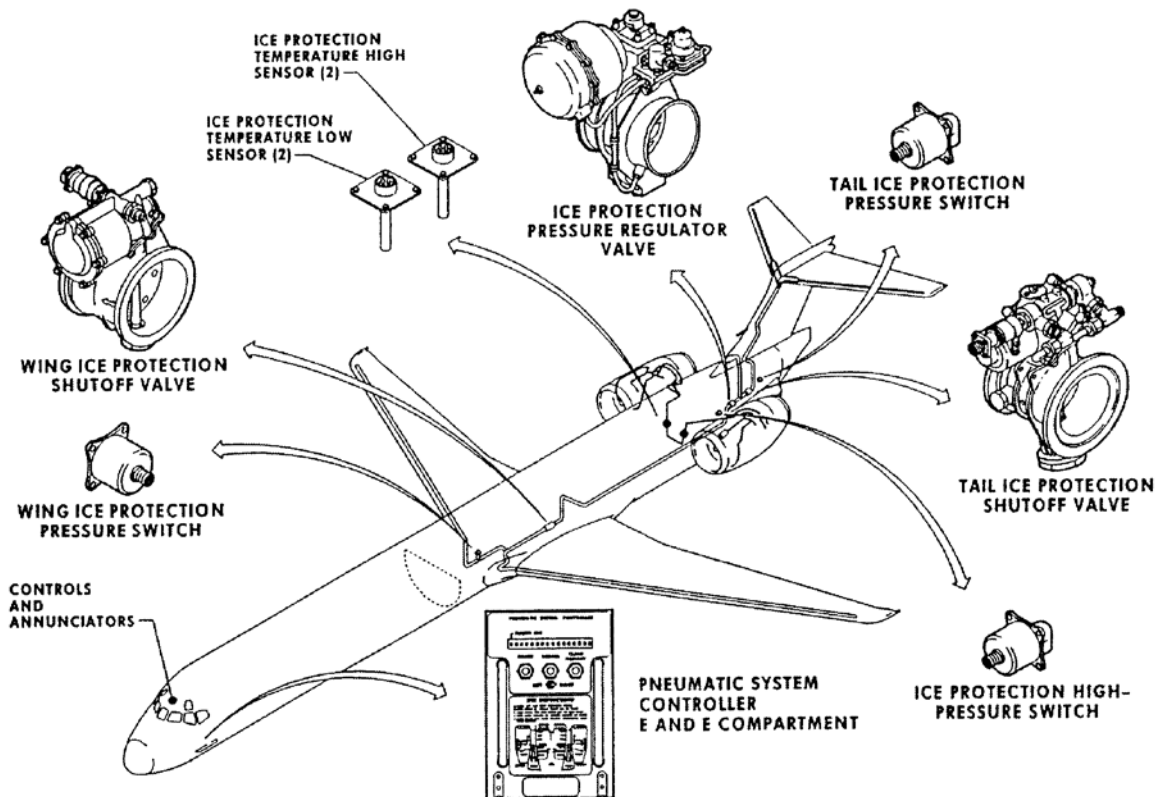
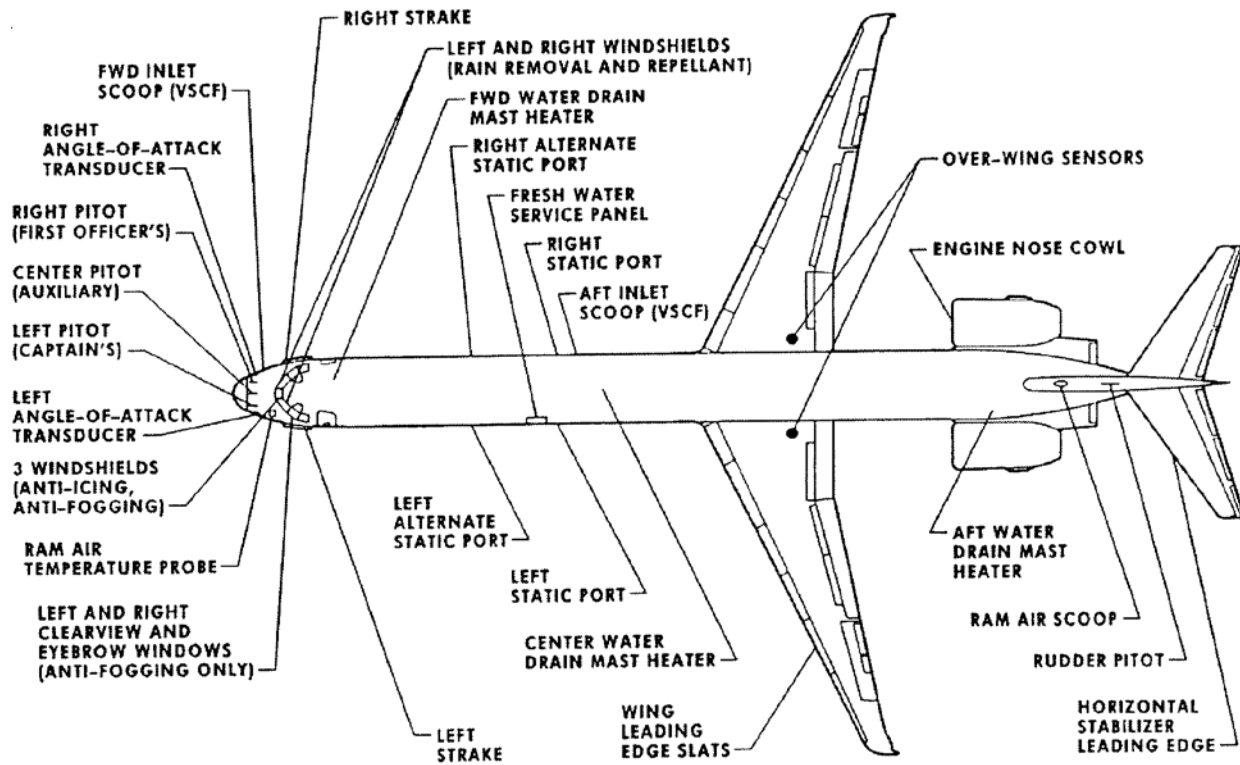
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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
30-10-01	ANTI-ICE SUPPLY HIGH Annunciation System "DISP.APPR.REQ'D."	Y	1	0	C May be inoperative provided flight is not made in known or forecast icing conditions.

MEL ITEM	TAB LOCATION	PLACARD TEXT
30-10-01	Near Overhead Annunciator Panel (EOAP)	ANTI-ICE SUPPLY HIGH 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
30-11-01	AIRFL ICE PRES ABNML Annunciation System “DISP.APPR.REQ’D.”	Y	1	0	C	May be inoperative provided flight is not made in known or forecast icing conditions.

MEL ITEM	TAB LOCATION	PLACARD TEXT
30-11-01	AIR FOIL Anti-Ice Switch	AIRFOIL ICE PROT PRESSURE ABNORMAL 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
30-11-02	L/R ICE PROT TEMP HIGH Annunciation Systems "DISP.APPR.REQ'D."	Y	2	0	C May be inoperative provided flight is not made in known or forecast icing conditions.

MEL ITEM	TAB LOCATION	PLACARD TEXT
30-11-02	Near Overhead Annunciator Panel (EOAP)	____ ICE PROTECT TEMP HIGH 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
30-11-03	L/R ICE PROT TEMP LOW Annunciation Systems "DISP.APPR.REQ'D."	Y	2	0 C	May be inoperative provided flight is not made in known or forecast icing conditions.

MEL ITEM	TAB LOCATION	PLACARD TEXT
30-11-03	Near Overhead Annunciator Panel (EOAP)	___ ICE PROTECT TEMP LOW 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
30-11-04A	WING ANTI-ICE ON Annunciation System "DISP.APPR.REQ'D."	Y	1	0	C May be inoperative provided: a) TAIL DE-ICE ON Annunciation is operative, and b) 40 degrees of flaps in icing conditions is not required for the flight, or runway of intended use.
30-11-04B	WING ANTI-ICE ON Annunciation System "DISP.APPR.REQ'D."	Y	1	0	C May be inoperative provided flight is not made in known or forecast icing conditions.

MEL ITEM	TAB LOCATION	PLACARD TEXT
30-11-04A	Near Overhead Annunciator Panel (EOAP)	WING ANTI-ICE ON Light INOP
30-11-04B	Near Overhead Annunciator Panel (EOAP)	WING ANTI-ICE ON 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
30-11-05	Ice Protection Shutoff Valves (Wing and Tail) "DISP.APPR.REQ'D."	Y	2	0	C May be inoperative provided: a) Pneumatic Crossfeed Valves are CLOSED after engine start, and b) Flight is not made in known or forecast icing conditions.

MEL ITEM	TAB LOCATION	PLACARD TEXT
30-11-05	AIR FOIL Anti-Ice Switch	___ Ice Protection Shutoff Valve(s) INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
	AIRFOIL ANTI-ICING PRESSURE REGULATOR SYSTEM				
30-11-06A	Regulator / Shutoff Valve "DISP.APPR.REQ'D."	N	1	0	C (M) May be inoperative provided: a) Pneumatic Crossfeed Valves are CLOSED after engine start, and b) Flight is not made in known or forecast icing conditions.
30-11-06B	40 Flap Simultaneous Wing / Tail Actuation System "DISP.APPR.REQ'D."	N	1	0	C (M) May be inoperative provided 40 degrees of flaps is not used in icing conditions.

MEL ITEM	TAB LOCATION	PLACARD TEXT
30-11-06A	AIR FOIL Anti-Ice Switch	Airfoil Anti-Icing Pressure Regulator INOP
30-11-06B	AIR FOIL Anti-Ice Switch	40 Flap Simultaneous Wing / Tail Actuation System INOP

(M) PROCEDURES

30-11-06A

Pull and secure the SUPPLY AIR PRESSURE REGULATOR C/B (N-21 EPC Panel) to ensure valve does not open.

30-11-06B

1. Pull and secure the SUPPLY AIR PRESSURE REGULATOR C/B (N-21 EPC Panel).
2. If there is evidence that the regulator valve will not close, perform either procedure I or II:

Procedure I

Disconnect the electrical connector from the tail shutoff valve. Coil and stow wires. This prevents opening this valve.

Procedure II

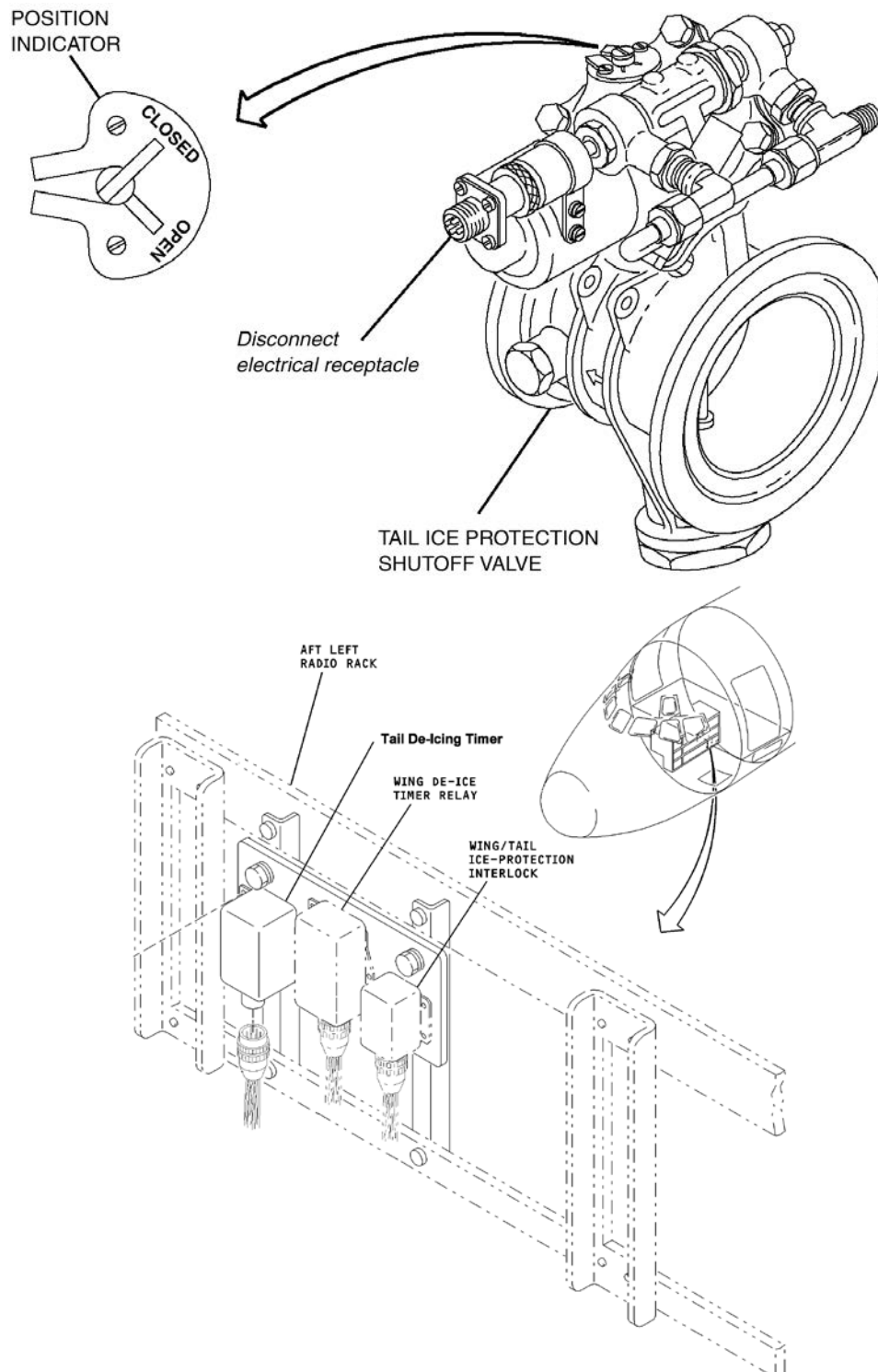
Close valve using one of the following methods:

1. Manually wrench valve closed.
2. Lock valve closed by turning locking hex nut.

OR

Ground the wire going to pin C of the Tail De-Icing Timer. This will energize the solenoid to the wing anti-icing shutoff valve to close that valve.

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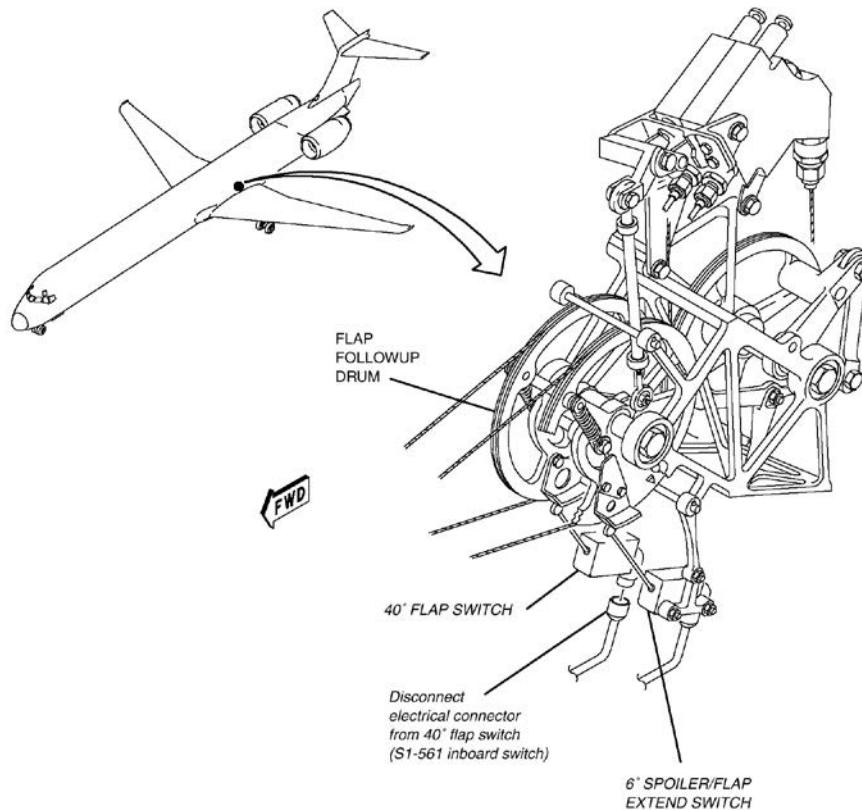


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If the system is inoperative such that wing and tail ice protection are simultaneously applied when flaps are less than 40 degrees, deactivate system as follows:

1. Gain access to the 40° Flap Switch (S1-561) located behind access panel in Left MLG Wheel Well (Sta. 720L).
2. Remove connector from Switch, and coil and stow wires.
3. Pull and secure both Ground Control Relay circuit breakers (K-33 and L-33 EPC Panel).
4. With electrical power available, flaps retracted, Pneumatic Crossfeed Valves opened, and with no pneumatic supply, select airfoil ice protection ON. Observe WING ANTI-ICE ON annunciation appears, but TAIL DE-ICE ON annunciation does not. Note that several other EOAP messages will also be present.
5. Press TAIL DE-ICE button on overhead panel, and observe TAIL DE-ICE ON annunciation illuminates, and WING ANTI-ICE ON annunciation extinguishes.
6. If Steps 3 and 4 were unsuccessful, gain access to HORIZONTAL STABILIZER RELAYS A and B (R2-545 and R2-546) located behind the Upper Overhead Panel in the cockpit. Determine which relay has shorted to ground or failed closed, and deactivate relay. If relay status is indeterminable, disconnect both relays. Repeat steps 3 and 4 to verify Ice Protection System functions normally when 40° Flaps are not selected.
7. When completed, reset both Ground Control Relay circuit breakers (K-33 and L-33 EPC Panel).

If the system is inoperative such that wing and tail ice protection are not simultaneously applied when flaps are at 40 degrees, placard 40° Flap detent on the cockpit pedestal. No further maintenance action is required.



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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
30-11-07	Fuselage and Wheel Well Overheat System "DISP.APPR.REQ'D."	Y	1	0	C May be inoperative provided: a) Airfoil Ice Protection System is not used, and b) Flight is not made in known or forecast icing conditions.

MEL ITEM	TAB LOCATION	PLACARD TEXT
30-11-07	AIR FOIL Anti-Ice Switch	Fuselage and Wheel Well Overheat 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
30-11-08	ANTI-ICE FAULT Annunciation System "DISP.APPR.REQ'D."	Y	1	0	C May be inoperative provided flight is not made in known or forecast icing conditions.

MEL ITEM	TAB LOCATION	PLACARD TEXT
30-11-08	ICE PROTECTION Panel	ANTI-ICE FAULT Annunciation INOP

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
30-12-01A	TAIL DE-ICE ON Annunciation System "DISP.APPR.REQ'D."	Y	1	0	C May be inoperative provided: a) WING ANTI-ICE ON Annunciation is operative, and b) 40 degrees of flaps in icing conditions is not required for the flight, or runway of intended use.
30-12-01B	TAIL DE-ICE ON Annunciation System "DISP.APPR.REQ'D."	Y	1	0	C May be inoperative provided flight is not made in known or forecast icing conditions.

MEL ITEM	TAB LOCATION	PLACARD TEXT
30-12-01A	Near Overhead Annunciator Panel (EOAP)	TAIL DE-ICE ON Light INOP
30-12-01B	Near Overhead Annunciator Panel (EOAP)	TAIL DE-ICE ON 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
30-12-02A	Tail De-Ice Timer	Y	1	0	C (O) May be inoperative provided Tail De-Ice System can be operated manually.
30-12-02B	Tail De-Ice Timer "DISP.APPR.REQ'D."	Y	1	0	C May be inoperative provided, flight is not made in known or forecast icing conditions.

MEL ITEM	TAB LOCATION	PLACARD TEXT
30-12-02A	TAIL De-Ice Button	Tail De-Ice Timer INOP
30-12-02B	TAIL De-Ice Button	Tail De-Ice Timer INOP

(O) PROCEDURES

30-12-02A

Push and hold the TAIL DE-ICE Button for approximately 2 1/2 minutes.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
30-13-01	Electric Strake Heaters "DISP.APPR.REQ'D."	Y	2	0 C	May be inoperative provided flight is not made in known or forecast icing conditions.

MEL ITEM	TAB LOCATION	PLACARD TEXT
30-13-01	ICE PROTECTION Panel	____ Strake Heater(s) INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO. NAME / DESCRIPTION					REMARKS OR EXCEPTIONS	
30-14-01A	L/R ENG ANTI-ICE ON Annunciation Systems (Blue)	Y	2	0	C	(M) May be inoperative provided affected Engine Anti-Ice Valve is verified to function properly PRIOR TO EACH DEPARTURE. Repetitive Check Required (Yellow Placard)
30-14-01B	L/R ENG ANTI-ICE ON Annunciation Systems (Blue) “DISP.APPR.REQ’D.”	Y	2	0	C	May be inoperative provided flight is not made in known or forecast icing conditions.

MEL ITEM	TAB LOCATION	PLACARD TEXT
30-14-01A	Near Affected Engine ANTI-ICE ON Light (Blue)	____ Engine ANTI-ICE ON Light INOP
30-14-01B	Near Affected Engine ANTI-ICE ON Light (Blue)	____ Engine ANTI-ICE ON Light INOP

(M) PROCEDURES

30-14-01A

1. Operate engine on side associated with inoperative annunciation system.
2. Select associated ENG Anti-ice switch ON.
3. Observe EPR drop and verify associated L or R ENG VALVE message is not displayed.
4. Select associated ENG Anti-Ice switch OFF.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
30-14-02A	L/R ENG VALVE Annunciation System "DISP.APPR.REQ'D."	N	2	1	C (M) May be inoperative provided: a) It is verified that the associated Inlet Cowl Anti-Ice Valve is CLOSED, and b) Flight is not made in known or forecast icing conditions.
30-14-02B	L/R ENG VALVE Annunciation System "DISP.APPR.REQ'D."	N	2	1	C (O)(M) May be inoperative provided: a) It is verified that the associated Inlet Cowl Anti-Ice Valve is OPEN, and b) Deferred per MEL 30-14-03B .

MEL ITEM	TAB LOCATION	PLACARD TEXT
30-14-02A	Associated Engine Anti-Ice Switch	1. ____ Eng Anti-Ice Valve Annunciator INOP 2. ____ Inlet Cowl A/I Valve secured CLOSED
30-14-02B	Associated Engine Anti-Ice Switch	1. ____ Eng Anti-Ice Valve Annunciator INOP 2. ____ Inlet Cowl A/I Valve secured OPEN

(O) PROCEDURES

30-14-02B

- Do not use Autothrottles for Takeoff or for Max Continuous Thrust below 24,000 feet pressure altitude.
- For temperatures below 7.7°C, select Engine or Engine and Airfoil Ice Protection ON. For temperatures above 7.7°C, Engine Ice Protection should remain OFF.
- Use of Reduced Takeoff Thrust or Derate 1 or Derate 2 EPR settings is not permitted in this condition.
- Set EPR on the engine with the inoperative Valve by correcting downward the EPR Limit displayed on the TRP by the appropriate Δ EPR given in the ODM – Abnormal section.
- EPR on the engine with the operative Valve may either be set to the EPR Limit displayed on the TRP, or to the value determined in step 4.

NOTE 1: Interpolation may be used to determine Δ EPR values at intermediate altitudes, if required.

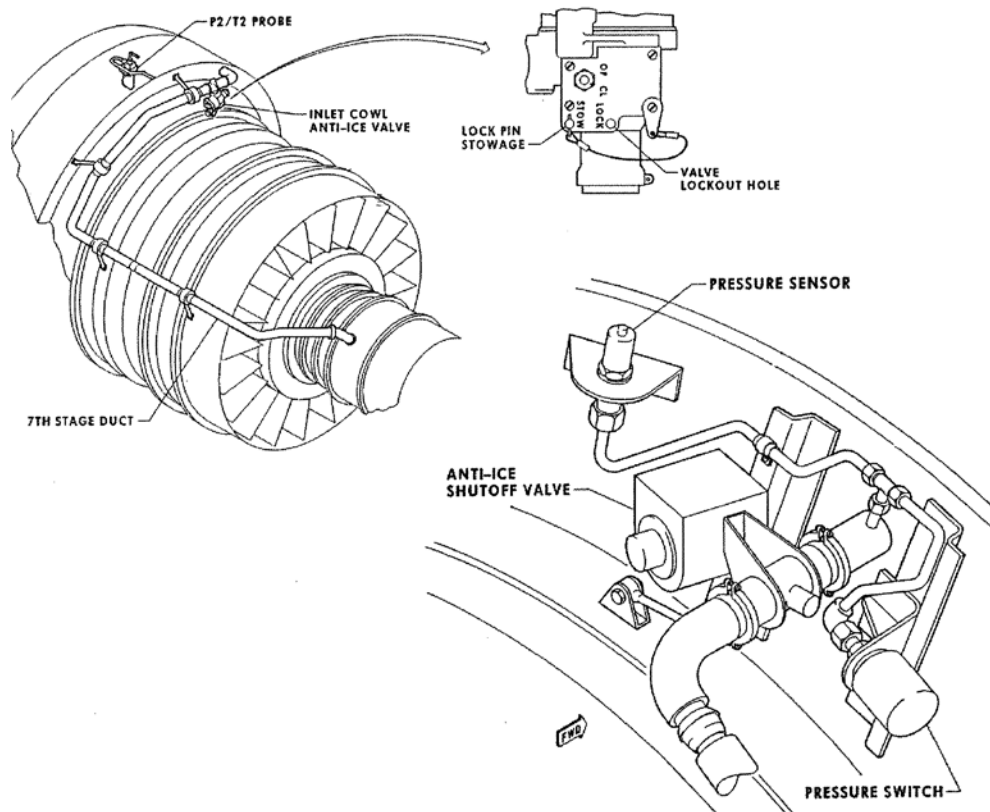
NOTE 2: No EPR correction is necessary above 24,000 feet pressure altitude.

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(M) PROCEDURES

30-14-02A, 30-14-02B

1. Gain access to associated Inlet Cowl Anti-Ice Valve, which is located behind the Inlet Cowl rear bulkhead.
2. Observe indicated position of valve, and manually wrench valve either full open or full closed, as desired.
3. Insert Valve Lockout Pin into the lockout lever to secure valve in desired position.



NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
30-14-03A	Inlet Cowl Anti-Ice Regulator / Shutoff Valves "DISP.APPR.REQ'D."	N	2	1	C (M) May be inoperative provided: a) It is verified that the valve is CLOSED, and b) Flight is not made in known or forecast icing conditions.
30-14-03B	Inlet Cowl Anti-Ice Regulator / Shutoff Valves "DISP.APPR.REQ'D."	N	2	1	C (O)(M) May be inoperative provided: a) It is verified that the valve is OPEN, and b) Appropriate performance corrections are applied.

MEL ITEM	TAB LOCATION	PLACARD TEXT
30-14-03A	Associated Engine Anti-Ice Switch	____ Inlet Cowl Anti-Ice Regulator / Shutoff Valve INOP CLOSED
30-14-03B	Associated Engine Anti-Ice Switch	____ Inlet Cowl Anti-Ice Regulator / Shutoff Valve INOP OPEN

(O) PROCEDURES

NOTE: L/R ENG VALVE annunciation may be displayed on the EOAP when the associated L/R ANTI-ICE Switch does not reflect the OPEN/CLOSED dispatch condition of the inoperative valve. This annunciation should be disregarded.

30-14-03B

- Do not use Autothrottles for Takeoff or for Max Continuous Thrust below 24,000 feet pressure altitude.
- For temperatures below 7.7°C, select Engine or Engine and Airfoil Ice Protection ON. For temperatures above 7.7°C, Engine Ice Protection should remain OFF.
- Use of Reduced Takeoff Thrust or Derate 1 or Derate 2 EPR settings is not permitted in this condition.
- Set EPR on the engine with the inoperative Valve by correcting downward the EPR Limit displayed on the TRP by using the appropriate table in the [ODM](#) – Abnormal section.
- EPR on the engine with the operative Valve may either be set to the EPR Limit displayed on the TRP, or to the value determined in step 4.

NOTE 1: Interpolation may be used to determine Δ EPR values at intermediate altitudes, if required.

NOTE 2: No EPR correction is necessary above 24,000 feet pressure altitude.

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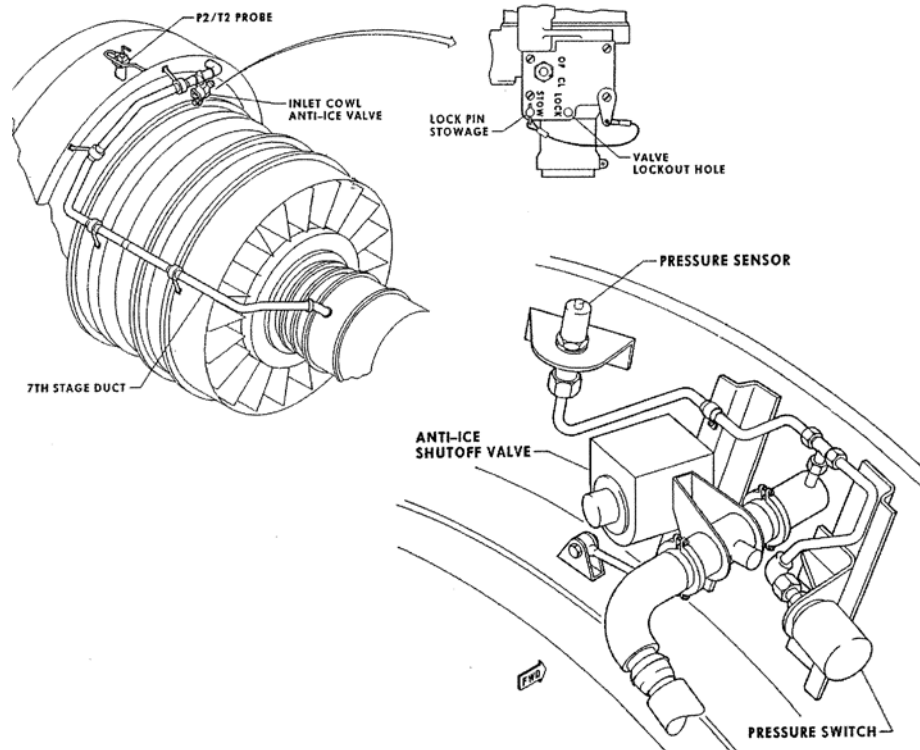
30-14-03B	INLET COWL ANTI-ICE REGULATOR/SHUTOFF VALVES
EFFECTIVITY	All
FLIGHT PLANNING REQUIREMENTS	- For temperatures below 46°F at departure airport, reduce ENROUTE LIMIT WT by 11,500 lbs. - For temperatures at or above 46°F at departure airport, reduce ENROUTE LIMIT WT by 17,200 lbs. - Increase BLOCK FUEL by 3.5%.
NOTES	Make a notation on the Flight Plan when Enroute Climb is limiting.
AWABS	- Performance weight corrections have been applied. - Apply EPR corrections as shown in the ODM – Abnormal section.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF – OAT below 46°F - Reduce RATOW by 10,600 lbs. - Reduce T/O CLIMB LIMIT by 10,600 lbs. TAKEOFF – OAT at or above 46°F - Reduce RATOW by 18,700 lbs. - Reduce T/O CLIMB LIMIT by 18,700 lbs. LANDING – OAT below 46°F - Reduce RWY ALLOWABLE LANDING WT by 7,400 lbs. - Reduce LANDING CLIMB LIMIT WT by 7,400 lbs. LANDING – OAT at or above 46°F - Reduce RWY ALLOWABLE LANDING WT by 13,000 lbs. - Reduce LANDING CLIMB LIMIT WT by 13,000 lbs. OTHER CORRECTIONS - Determine V-Speeds from ODM Takeoff Section charts for applicable Thrust/Flap setting and enter with the actual takeoff weight increased by the MEL takeoff weight penalty as determined by temperature. - Apply EPR corrections as shown in the ODM – Abnormal section.

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(M) PROCEDURES

30-14-03A, 30-14-03B

1. Gain access to inoperative Valve, which is located behind the Inlet Cowl rear bulkhead.
2. Observe indicated position of valve, and manually wrench valve either full open or full closed, as desired.
3. Insert Valve Lockout Pin into the lockout lever to secure valve in desired position.



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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
30-20-02	Strake Ice Protection System "DISP.APPR.REQ'D."	Y	1	0	C May be inoperative provided flight is not made in known or forecast icing conditions.

MEL ITEM	TAB LOCATION	PLACARD TEXT
30-20-02	ICE PROTECTION Panel	Strake Ice Protection 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
30-22-02	VSCF Inlet Scoop Heaters "DISP.APPR.REQ'D."	Y	2	0 C	May be inoperative provided flight is not made in known or forecast icing conditions.

MEL ITEM	TAB LOCATION	PLACARD TEXT
30-22-02	ICE PROTECTION Panel	____ VSCF Inlet Scoop Heater(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
	PITOT HEATERS					
30-31-01A	Capt. and F/O Pitot Heaters “DISP.APPR.REQ'D.”	Y	2	1	B	May be inoperative provided: a) Flight is made in day VMC only, and b) Flight is not made in visible moisture or in known or forecast icing conditions.
30-31-01B	Aux Pitot Heater “DISP.APPR.REQ'D.”	Y	1	0	B	May be inoperative provided flight is not made in visible moisture or in known or forecast icing conditions.
30-31-01C	Rudder Limiter Pitot Heater “DISP.APPR.REQ'D.”	Y	1	0	C	May be inoperative provided flight is not made in known or forecast icing conditions.

MEL ITEM	TAB LOCATION	PLACARD TEXT
30-31-01A	Near Meter Select & Heat Switch	____ Pitot Heater INOP
30-31-01B	Near Meter Select & Heat Switch	Auxiliary Pitot Heater INOP
30-31-01C	Near Meter Select & Heat Switch	Rudder Limiter Pitot Heater INOP

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
30-31-03	PITOT/STALL HEATER OFF Annunciation System	Y	1	0 C	(M) May be inoperative provided: a) Anti-Icing Heaters Ammeter System is operative, and b) It is verified that the associated heaters are operative.

MEL ITEM	TAB LOCATION	PLACARD TEXT
30-31-03	Near Overhead Annunciator Panel (EOAP)	PITOT / STALL HEATER OFF Light INOP

(M) PROCEDURES

To verify heater operation, rotate the METER SEL and HEAT Switch to the CAPT, AUX, and F/O PITOT, RUD LIM, L and R STALL PROBE positions and check for current draw on the Heater Current Meter.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
30-32-01	Static Port Heaters "DISP.APPR.REQ'D."	Y	4	0 C	May be inoperative except when arrival and departure airport temperatures are +5 degrees C or below and runway is covered with slush or standing water.

MEL ITEM	TAB LOCATION	PLACARD TEXT
30-32-01	Near Meter Select & Heat Switch	____ Static Port Heater(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
30-33-01	Ram Air Temp Probe Heater “DISP.APPR.REQ’D.”	Y	1	0	C	May be inoperative provided flight is not made in known or forecast icing conditions.

MEL ITEM	TAB LOCATION	PLACARD TEXT
30-33-01	Near Meter Select & Heat Switch	Ram Air Temp Probe Heater INOP

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
30-34-01	Stall Warning Vane Heaters "DISP.APPR.REQ'D."	Y	2	0	C May be inoperative provided flight is not made in known or forecast icing conditions.

MEL ITEM	TAB LOCATION	PLACARD TEXT
30-34-01	Near Meter Select & Heat Switch	____ AOA Vane Heater(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
30-35-01	Anti-Icing Heaters Ammeter System	Y	1	0 C	(M) May be inoperative provided: a) All heaters with exception of the Rudder Limiter Heater are verified to be operating PRIOR TO EACH DEPARTURE, and b) PITOT/STALL HEAT OFF Annunciation System is operative. Repetitive Check Required (Yellow Placard)

MEL ITEM	TAB LOCATION	PLACARD TEXT
30-35-01	Near Heater Current Meter (Ammeter)	Anti-Icing Heaters Ammeter System INOP

(M) PROCEDURES

1. Select the air data sensor to be checked with METER SEL & HEAT switch, and feel the sensor with bare hand to make certain element is functioning. CAUTION: Pitot Tubes Are HOT.
2. To verify RAT, pull left Ground Control circuit breaker (K-33).
3. Upon completion of check, reset circuit breaker.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
WINDSHIELD HEAT SYSTEM					
30-41-01A	Anti-Fog System (Incl. 3 windshields, 2 clearview and 2 upper eyebrow windows)	Y	1	0	C (M) May be inoperative provided Windshield Anti-Ice System is operative.
30-41-01B	Anti-Ice System (Includes left, center, and right windshields) "DISP.APPR.REQ'D."	Y	1	0	C (O)(M) May be inoperative provided: a) Anti-Fog System is operative, b) Flight is not made in known or forecast icing conditions, and c) Speed restrictions are applied.

MEL ITEM	TAB LOCATION	PLACARD TEXT
30-41-01A	Windshield ANTI-FOG Switch	Windshield / Window Anti-Fog System INOP
30-41-01B	Windshield ANTI-ICE Switch	Windshield Anti-Ice System INOP

(O) PROCEDURES

30-41-01B

Above 10,000 feet -- no restrictions
Below 10,000 feet -- do not exceed 315 KIAS

(M) PROCEDURES

30-41-01A

1. Turn Anti-Ice switch to ON.
2. Conduct hand feel check to verify anti-ice operation.

NOTE: If ambient temperatures are high, it may be necessary to cool cockpit when conducting this check.

30-41-01B

1. Pull and secure associated Windshield Heat CB.

LEFT	B1-332	X-24	EPC Panel	Behind Captain's Seat
RIGHT	B1-334	Z-24	EPC Panel	Behind Captain's Seat
CENTER	B1-333	X-25	EPC Panel	Behind Captain's Seat

2. Turn Anti-Fog switch to ON.
3. Conduct hand feel check to verify Anti-Fog operation.

NOTE: Anti-Fog system will not turn on unless cockpit is cooled below 90°F.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO. NAME / DESCRIPTION					REMARKS OR EXCEPTIONS	
WINDSHIELD WIPER SYSTEM						
30-43-01A	Windshield Wiper System “DISP.APPR.REQ'D.”	Y	1	0	C	May be inoperative provided airplane is not operated in precipitation within 5 nautical miles of the airport of takeoff or intended landing.
30-43-01B	Fast Speed	Y	2	0	C	May be inoperative provided associated Slow Speed is operative.
30-43-01C	Slow Speed	Y	2	0	C	May be inoperative provided associated Fast Speed is operative.
30-43-01D	Park Function	Y	2	0	C	May be inoperative for all flight conditions provided the blade(s) can be positioned in a location that will not obstruct forward vision.

MEL ITEM	TAB LOCATION	PLACARD TEXT
30-43-01A	Windshield WIPER Switch	____ Windshield Wiper System(s) INOP
30-43-01B	Windshield WIPER Switch	____ Windshield Wiper(s) FAST Speed INOP
30-43-01C	Windshield WIPER Switch	____ Windshield Wiper(s) SLOW Speed INOP
30-43-01D	Windshield WIPER Switch	____ Windshield Wiper(s) PARK Function INOP

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH			
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY			
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS	
30-44-01	Liquid Rain Removal System (Rain Repellent)	Y	1	0	D		

MEL ITEM	TAB LOCATION	PLACARD TEXT
30-44-01	Near RAIN REPELLENT Pushbuttons	Rain Repellent INOP

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD					REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION					
30-44-02	RAIN REPELLANT RESERVE IN USE Annunciation System	Y	1	0	D	

MEL ITEM	TAB LOCATION	PLACARD TEXT
30-44-02	Near Overhead Annunciator Panel (EOAP)	RAIN REPELLANT RESERVE IN USE 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
30-72-01	Galley / Lavatory Drain Mast Heaters "DISP.APPR.REQ'D."	N	2	0	C (M) May be inoperative provided: a) Drain line to associated drain mast is disconnected, or turned OFF, and b) Associated Sink(s) are blocked off to prevent their use.

MEL ITEM	TAB LOCATION	PLACARD TEXT
30-72-01	Aircraft Logbook	___ Galley / Lav Drain Mast Heater(s) INOP

(M) PROCEDURES

1. Disconnect and plug drain line from affected galley at the sink.
2. Shut off water supply to affected galley and plug sink drain.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD					REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION					
30-74-01	Water Service Panel Heater	Y	1	0	C	

MEL ITEM	TAB LOCATION	PLACARD TEXT
30-74-01	Aircraft Logbook	Water Service Panel Heater INOP

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
30-81-01	Primary Overwing Ice Detection System	Y	1	0	C (O)(M) May be inoperative provided alternate procedures are used.

MEL ITEM	TAB LOCATION	PLACARD TEXT
30-81-01	Near Overhead Annunciator Panel (EOAP)	Primary Overwing Ice Detection System INOP

(O) PROCEDURES

- Refer to [Operations Manual, Volume 1](#), Supplementary Procedures
 - Section 3, Anti-ice, Rain Tactile Wind Inspection.
- The wing surfaces must be physically checked for ice when the airplane has been exposed to conditions conducive to ice formation. Takeoff must not be initiated unless the flight crew verifies that a visual check and a physical (hands-on) check of the wing upper surfaces have been accomplished, and that the wing is clear of ice accumulation when any of the following conditions occur.
 - Both fuel tank temperatures are below 0°C when the aircraft has been on the ground for less than 4 hours or 4°C when the aircraft has been on the ground for more than 4 hours;
 - If fuel tank temperatures are not available and the ambient temperature is 10°C or below and high humidity (3°C or less temperature dewpoint spread) or visible moisture (rain, drizzle, sleet, snow, fog with 1 mile visibility or less, etc.) or runways and taxiways are wet;
 - When frost or ice is present on the lower surface of either wing;
 - After completion of deicing.

(M) PROCEDURES

Pull and secure ICE FOD DETECT (Ice Detection, Wing) circuit breaker (M-34 EPC Panel).

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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
30-81-02	L/R ICE FOD ALERT Annunciation System				C	May be inoperative provided the Wing Ice Detection System is considered inoperative and deferred per MEL 30-81-01 .	

MEL ITEM	TAB LOCATION	PLACARD TEXT
30-81-02	Near Overhead Annunciator Panel (EOAP)	____ ICE FOD ALERT Annunciation(s) INOP

	MD-90 Minimum Equipment List	ATA 30 Ice and Rain Protection	R13 04/27/15 Page 30-39
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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
30-81-03	L/R ICE FOD SYS INOP Annunciation System	Y	2	0	C May be inoperative provided the Wing Ice Detection System is considered inoperative and deferred per MEL 30-81-01 .

MEL ITEM	TAB LOCATION	PLACARD TEXT
30-81-03	Near Overhead Annunciator Panel (EOAP)	___ ICE FOD SYS INOP Annunciation(s) INOP

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31-51-01E	Speed Brake Warning Horn	31-7
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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS
AIRCRAFT SYSTEMS ELECTRONIC DISPLAY PANEL (ESDP)				NOTE: Additional relief may be provided in other ATA Chapters for systems using this panel for display.		
31-11-01A	Engine Oil Low Pressure Caution (Amber) Lights	Y	2	0	C	May be inoperative provided: a) Associated Overhead Engine Oil Pressure Low Annunciation is operative, and b) Both Master Caution Lights are operative.
31-11-01B	Engine Oil Low Pressure Warning (Red) Lights	Y	2	1	C	May be inoperative provided: a) Both Engine Oil Low Pressure Caution Lights are operative, b) Associated Overhead Engine Oil Pressure Low Annunciation is operative, and c) Both Master Caution Lights are operative.
31-11-01C	Engine Oil High Temperature Caution (Amber) Lights	Y	2	1	C	May be inoperative provided associated Engine Oil High Temperature Warning Light is operative.
31-11-01D	Engine Oil High Temperature Warning (Red) Lights	Y	2	1	C	May be inoperative provided associated Engine Oil High Temperature Caution Light is operative.
31-11-01E	Hydraulic Quantity Low Caution (Amber) Lights	Y	2	1	C	May be inoperative provided affected light is placarded as follows: Right System -- "9 Qts. Minimum" Left System -- "7 Qts. Minimum"
31-11-01F	Flap Display Scale Light Bars	Y	66	33	C	May be inoperative provided the diode bars above and below the inoperative bar are operative (except when the top most and bottom most bar is inoperative, the adjacent bar must be operative). NOTE: One complete Horizontal Bar consists of 3 Light Emitting Diodes. A Bar may be considered operative as long as one diode is operative.
31-11-01G	Flap Display Scale Light Bars	Y	66	17	C	All Bars on one side may be inoperative provided the affected Flap Position Indicating System is considered inoperative and deferred per MEL 31-11-01F .

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MEL ITEM	TAB LOCATION	PLACARD TEXT
31-11-01A	System Display Panel	___ Engine Oil Low Pressure Caution Light(s) INOP
31-11-01B	System Display Panel	___ Engine Oil Low Pressure Warning Light INOP
31-11-01C	System Display Panel	___ Engine Oil High Temperature Caution Light INOP
31-11-01D	System Display Panel	___ Engine Oil High Temperature Warning Light INOP
31-11-01E	System Display Panel	1. ___ Hydraulic Quantity Low Caution Light INOP 2. Right System -- "9 Qts. Minimum" Left System -- "7 Qts. Minimum"
31-11-01F	System Display Panel	___ Flap Display Scale Light Bar(s) INOP
31-11-01G	System Display Panel	___ Flap Display Scale Light Bar(s) INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD			2	REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION	Y		1	C	REMARKS OR EXCEPTIONS
31-21-01	Clocks (Cockpit)					NOTE: If Captains clock is inoperative, FMS may be affected.

MEL ITEM	TAB LOCATION	PLACARD TEXT
31-21-01	Affected Clock	____ Clock INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
31-31-01A	Flight DATA Recorder (FDR) System -Includes- (FDR) function of combined Voice and Flight Data Recorder (CVFDR) "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, MSP or SLC unless: 1) The FDR failure occurs after pushback but prior to takeoff, or 2) The FDR repair was attempted but not successful. c) In those cases where repair is attempted but not successful, the aircraft may be dispatched on a flight or series of flights but shall not continue beyond ATL, MSP or SLC where repair must be accomplished prior to dispatch, d) It is required that the MCC initiate a Corrective Action Required (CAR) for the initial repair location (ATL, MSP or SLC) at the time of deferral and issue a second CAR for the next designated airport if the initial repair attempt was not successful, and e) Repairs are made within three (3) flight days.
31-31-01B	DFDR Recording Parameters Required By FAR "Contact MCC"	N	-	0	A May be inoperative provided: a) Cockpit Voice Recorder (CVR) operates normally, and b) Repairs are made within 20 calendar days. NOTE: Refer to FLIGHT DATA RECORDER PARAMETER VERIFICATION MANUAL for a listing of DFDR parameters required by FAR.
31-31-01C	DFDR Recording Parameters Not Required By FAR "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 FLIGHT DATA RECORDER PARAMETER VERIFICATION MANUAL for a listing of DFDR parameters required by FAR.

MEL ITEM	TAB LOCATION	PLACARD TEXT
31-31-01A	FLT RCDR Switch	Flight Data Recorder INOP
31-31-01B	FLT RCDR Switch	Flight Data Recorder ____ Parameter INOP
31-31-01C	FLT RCDR Switch	Flight Data Recorder ____ Parameter INOP

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
31-31-02	Aircraft DATA Acquisition System (ADAS)	Y	1	0 C	(O) May be inoperative provided engine trend data is manually entered onto Engine Trend Data Sheets.

MEL ITEM	TAB LOCATION	PLACARD TEXT
31-31-02	Captain's MCDU	1. Aircraft DATA Acquisition System (ADAS) INOP 2. Auto Engine Trend Data Report Not Xmitting-Record Data In Engine Performance Log

(O) PROCEDURES

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
	CENTRAL AURAL WARNING SYSTEM (CAWS)				
31-51-01A	APU Fire Warning Horn	Y	1	0	C (O) May be inoperative provided system is monitored in the cockpit during APU operations.
31-51-01B	Autopilot Disconnect Warning Tone "DISP.APPR.REQ'D."	Y	1	0	C (O) May be inoperative provided: a) Autoland mode is not used, and b) Enroute operations and/or approach minimums do not require its use. <u>CAT I (Non-ILS)</u> Not Authorized <u>CAT II/III</u> Not Authorized
31-51-01C	Slat Overspeed Warning Clacker	Y	1	0	C (O) May be inoperative provided airspeed limitations are observed.
31-51-01D	SELCAL Chime	Y	1	0	C May be inoperative provided SELCAL light is operative.
31-51-01E	Speed Brake Warning Horn	Y	1	0	C
31-51-01F	Voice Warnings (Verbal)	Y	-	0	C May be inoperative provided procedures do not require its use.

MEL ITEM	TAB LOCATION	PLACARD TEXT
31-51-01A	APU Start Switch	CAWS APU Fire Warning Horn INOP
31-51-01B	A/P Engage Switch	CAWS Autopilot Disconnect Warning INOP
31-51-01C	Near Slat Advisory Lights	CAWS Slat Overspeed Warning INOP
31-51-01D	SELCAL Control Panel	SELCAL Chime INOP
31-51-01E	Near Speedbrake Lever	CAWS Speed Brake Warning INOP
31-51-01F	Overhead Annunciator Panel (EOAP)	CAWS Voice Warning Function INOP

(O) PROCEDURES

31-51-01A

Monitor the APU Fire annunciator on the overhead annunciator panel when the APU is in use.

31-51-01B

1. Monitor the Flight Mode Annunciator while autopilot is engaged.
2. Do not use autoland mode of the autopilot.

31-51-01C

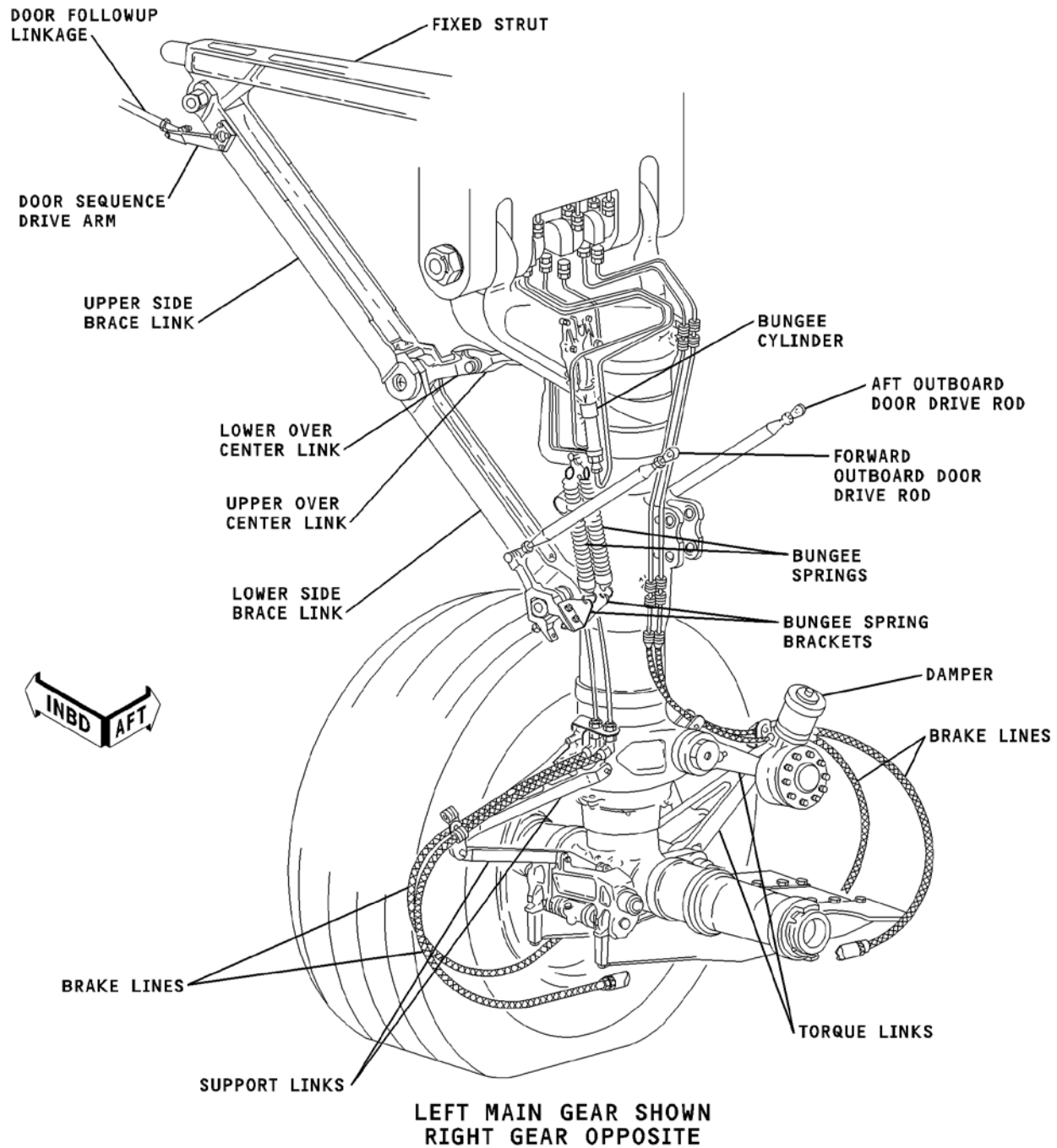
Monitor the Mach/Airspeed Indicators and observe air speed limits placarded on the main instrument panel.

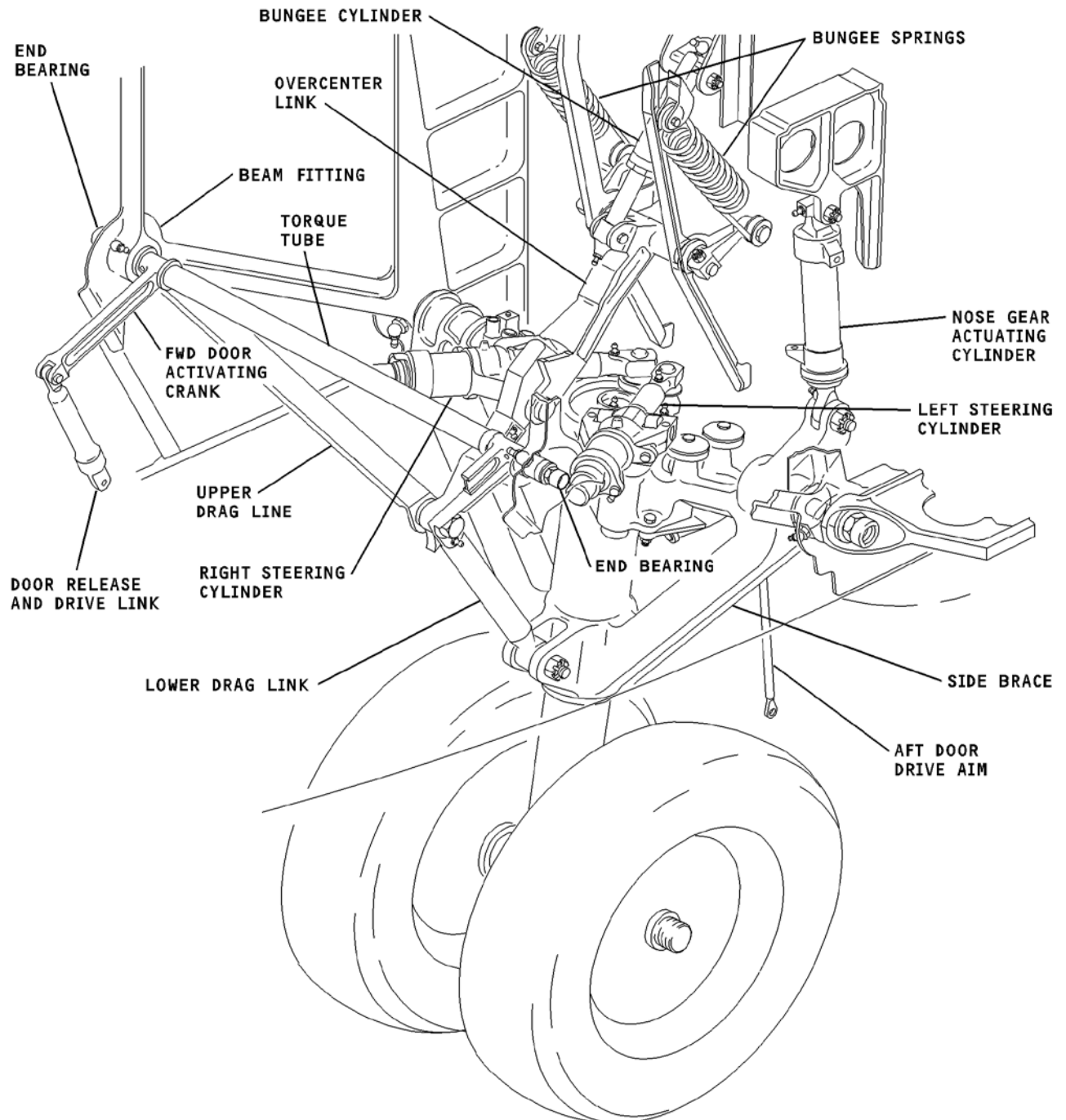
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ATA 32 Contents

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
32-24-01	EEC Nose Gear Ground Sensing Signal "DISP.APPR.REQ'D."	Y	2	0	A (O) May be inoperative provided: a) Status Cue Light on EOAP is selected after the affected engine is started PRIOR TO EACH DEPARTURE, b) Repairs are made within 10 days, and c) Performance penalties are applied. Repetitive Check Required (Yellow Placard)

MEL ITEM	TAB LOCATION	PLACARD TEXT
32-24-01	Near Overhead Annunciator Panel (EOAP)	EEC Nose Gear Ground Sensing Signal INOP

(O) PROCEDURES

PRIOR TO EACH DEPARTURE:

1. Select STATUS Cue Light on EOAP after the affected engine is started.
2. If L or R EEC NO PERF PNLTy message appears on EOAP, aircraft may dispatch with no further action required.
3. If a L or R EEC PERF PENALTY 5 message appears on EOAP, performance corrections must be applied.

32-24-01	EEC NOSE GEAR GROUND SENSING SIGNAL
EFFECTIVITY	All
FLIGHT PLANNING REQUIREMENTS	None
NOTES	None
AWABS	Performance corrections have been applied.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF None LANDING Reduce RWY ALLOWABLE LANDING WT by 19,000 lbs.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
32-43-01	PARKING BRAKES ON Annunciation System	N	1	0	C (O)(M) May be inoperative provided: a) Alternate procedures are used for brake release, and b) Alternate maintenance procedures are used to verify proper operation of the Anti-Skid and Takeoff Warning Systems.

MEL ITEM	TAB LOCATION	PLACARD TEXT
32-43-01	Near Overhead Annunciator Panel (EOAP)	PARKING BRAKES ON Annunciator System INOP

(O) PROCEDURES

1. Prior to moving aircraft, verify that PARK BRAKE control is released and brake pedals have normal travel.
2. Verify that anti-skid lights are off prior to takeoff.
3. When parking brakes are required, turn anti-skid OFF before setting brakes.

(M) PROCEDURES

PARKING BRAKE ON annunciation OFF with parking brakes set:

1. Chock aircraft wheels.
2. Release parking brake.
3. Place ANTI-SKID switch to ARM.
4. Open (pull) PARKING BRAKE CONTROL circuit breaker (M-36 EPC Panel).
5. Verify all ANTI-SKID annunciations illuminate.
6. Close (reset) PARKING BRAKE CONTROL circuit breaker.
7. Verify all ANTI-SKID annunciation are off.

PARKING BRAKES ON annunciation ON with parking brakes released:

1. Chock aircraft wheels.
2. Open (pull) PARKING BRAKE CONTROL circuit breaker (M-36 EPC Panel).
3. Gain access to Parking Brake Switch (S1-130) located under floor panels below pilot's rudder pedals. Disconnect connector from parking brake switch, and jumper connector pin A to pin B.
4. Close (reset) PARKING BRAKE CONTROL circuit breaker.
5. Place ANTI-SKID switch to ARM, and ANTI-SKID TEST CKT Switch to the TEST position for at least 10 seconds..
6. Verify all ANTI-SKID annunciations illuminate on the EOAP.
7. Release test switch, and verify PARKING BRAKE ON annunciation and ANTI-SKID annunciations are all OFF.

NOTE 1: With Parking Brake Switch jumpered, setting the parking brake will only hold the brakes for a limited period. Wheel chocks should be used when parking, and should be put in place as soon as practical.

NOTE 2: On aircraft with parking brake switch S1-130 wired to voice recorder erase function, alternate procedures will be required to erase CVR.

NUMBER INSTALLED			NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD			REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
	ANTISKID SYSTEM				NOTE: Antiskid System must be operational for dispatch; however, failures of system subcomponents are allowed as listed below. None of the following failures affect Antiskid System performance.
32-45-01A	Antiskid Air/Ground Switches "Contact MCC"	N	2	0	C (M) May be inoperative provided the Antiskid Control Unit is interrogated PRIOR TO EACH DEPARTURE (Log Book Entry Required) for verification of all Antiskid faults. Repetitive Check Required (Yellow Placard)
32-45-01B	Antiskid Return Line Shutoff Valves "Contact MCC"	N	2	1	B (M) May be inoperative provided: a) Affected Valve is secured in the OPEN position, and b) Antiskid Control Unit is interrogated PRIOR TO EACH DEPARTURE (Log Book Entry Required) for verification of all Antiskid faults. Repetitive Check Required (Yellow Placard)
32-45-01C	Antiskid Control Unit IRU Signals "Contact MCC"	N	2	0	C (M) May be inoperative provided the Antiskid Control Unit is interrogated PRIOR TO EACH DEPARTURE (Log Book Entry Required) for verification of all Antiskid faults. Repetitive Check Required (Yellow Placard)

MEL ITEM	TAB LOCATION	PLACARD TEXT
32-45-01A	ANTI-SKID Switch	Antiskid Air/Ground Switch(s) INOP
32-45-01B	ANTI-SKID Switch	Antiskid Return Line Shutoff Valve INOP
32-45-01C	ANTI-SKID Switch	Antiskid Control Unit IRU Signal(s) INOP

(M) PROCEDURES

32-45-01A, 32-45-01C

PRIOR TO EACH DEPARTURE:

1. Check that the ANTI SKID INBOARD POWER (B1-212: EPC CBP Location P-40) and ANTI SKID OUTBOARD POWER (B1-213: EPC CBP Location T-38) circuit breakers are in, and the Antiskid Switch on the overhead panel is in the ARM position.
2. Gain access to the Antiskid/Autobrake Control Unit located in the Aft Radio Rack.
3. Press any of the four buttons on the front of the Unit. If FAULT STATUS is not displayed, press the MENU BACK button until it is displayed.
4. Press the MENU FORWARD button and observe the first LRU fault. Verify the fault displayed is one of the following:

NLG OLEO SW L	IRU-1	AS SOV L HYD
NLG OLEO SW R	IRU-2	AS SOV R HYD

CONTINUED NEXT PAGE

- Press the NEXT button and scroll through the messages until the END OF FAULTS message appears. If messages other than one of those above appears, or if any antiskid alert other than ANTISKID FAULT appears on the EOAP, dispatch is not allowed until repairs are made.

32-45-01B

- Pull PARK BRAKE CONTROL circuit breaker.
- Access affected Valve in the respective MLG wheel well.
- Disconnect electrical connector from valve.
- Install a jumper wire between pins C and D on the connector. Secure connector as appropriate.
- Move manual lever to OPEN position, and lockwire lever in this position.
- Reset the PARK BRAKE CONTROL circuit breaker.

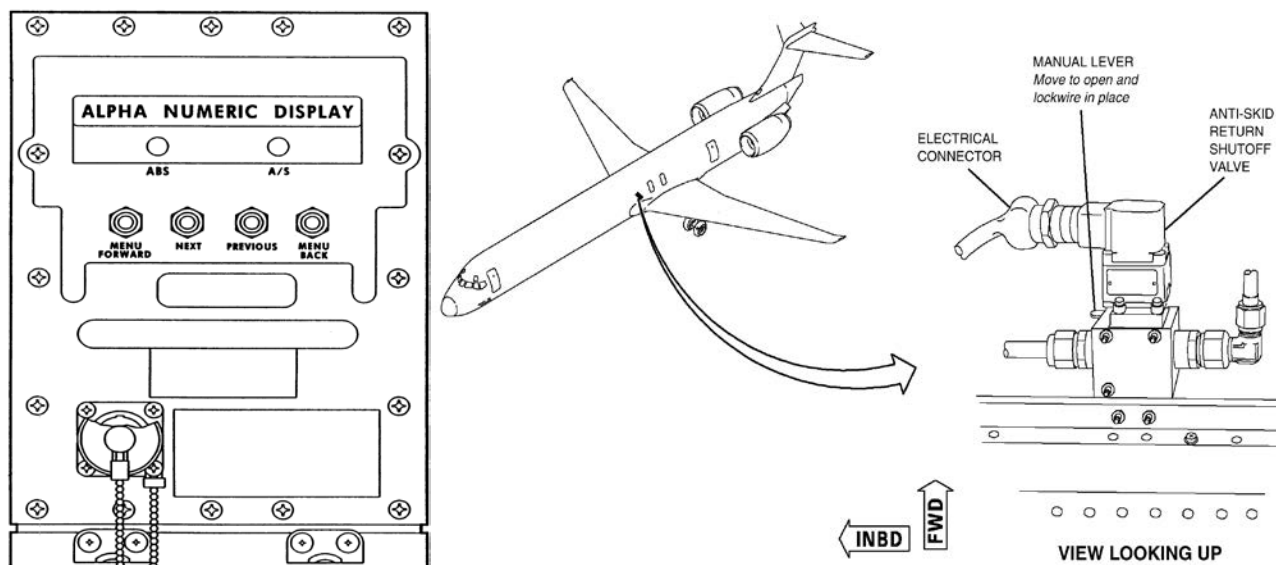
CAUTION: With Antiskid Return Line Shutoff Valve locked OPEN, setting the parking brake will only hold the brakes for a limited period. Wheel chocks should be used when parking, and should be put in place as soon as practical.

PRIOR TO EACH DEPARTURE:

- Check that the ANTI SKID INBOARD POWER (B1-212: EPC CBP Location P-40) and ANTI SKID OUTBOARD POWER (B1-213: EPC CBP Location T-38) circuit breakers are in, and the Antiskid Switch on the overhead panel is in the ARM position.
- Gain access to the Antiskid/Autobrake Control Unit located in the Aft Radio Rack.
- Press any of the four buttons on the front of the Unit. If FAULT STATUS is not displayed, press the MENU BACK button until it is displayed.
- Press the MENU FORWARD button and observe the first LRU fault. Verify the fault displayed is one of the following:

NLG OLEO SW L	IRU-1	AS SOV L HYD
NLG OLEO SW R	IRU-2	AS SOV R HYD

- Press the NEXT button and scroll through the messages until the END OF FAULTS message appears. If messages other than one of those above appears, or if any antiskid alert other than ANTISKID FAULT appears on the EOAP, dispatch is not allowed until repairs are made.



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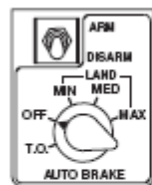
NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
32-46-01	Auto Brake System "DISP.APPR.REQ'D."	Y	1	0	C (O)(M) May be inoperative provided: a) PRIOR TO TAKEOFF, Auto Brake ARM/DISARM Switch remains in the DISARM position, and b) Auto Brake System is deactivated. Repetitive Check Required (Yellow Placard)

MEL ITEM	TAB LOCATION	PLACARD TEXT
32-46-01	Auto Brake System Control Pnl	Auto Brake System INOP

(O) PROCEDURES

- Auto Spoilers to be armed for takeoff:
 - Prior to takeoff place AUTO BRAKE selector to T/O position.
 - After takeoff move AUTO BRAKE selector to OFF.
- Auto Spoilers **not** to be armed for takeoff
 - Verify AUTO BRAKE selector is OFF.

NOTE: There is no performance penalty if Auto Spoilers are operative but not used for takeoff. Performance penalties only apply when the Auto Spoilers are inoperative and placarded per Item [27-62-01](#).



Auto Spoilers Not Armed for Takeoff



Auto Spoilers Armed For Takeoff

(M) PROCEDURES

PRIOR TO TAKEOFF:

- Pull and secure the AUTO BRAKE SYSTEM and AUTO BRAKE ANNUNCIATION circuit breakers (R-30 and P-30) on the EPC Circuit Breaker Panel.
- Place AUTO BRAKE ARM/DISARM switch to DISARM.
- Placard the AUTO BRAKE ARM/DISARM switch appropriately so as to prevent its use.
- Place AUTO BRAKE selector 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
32-46-02	AUTO BRAKE FAIL Annunciation System "DISP.APPR.REQ'D."	Y	1	0	C (O)(M) May be inoperative provided the Auto Brake System is considered inoperative and deferred per MEL 32-46-01.

MEL ITEM	TAB LOCATION	PLACARD TEXT
32-46-02	Auto Brake System Control Pnl	1. AUTO BRAKE FAIL Annunciation INOP 2. Do Not Use Auto Brake System

(O) PROCEDURES

1. Prior to takeoff place AUTO BRAKE selector to T/O position.
2. After takeoff move AUTO BRAKE selector to OFF.

(M) PROCEDURES

1. Pull and secure the AUTO BRAKE SYSTEM and AUTO BRAKE ANNUNCIATION circuit breakers (R-30 and P-30) on the EPC Circuit Breaker Panel.
2. Place AUTO BRAKE ARM/DISARM switch to DISARM.
3. Place AUTO BRAKE selector 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
32-47-01	Brake Temperature Monitoring System "DISP.APPR.REQ'D."	Y	1	0	C (O) May be inoperative provided Performance DATA for brake temperature limitations is applied.

MEL ITEM	TAB LOCATION	PLACARD TEXT
32-47-01	Near Brake Temperature Gauge	Brake Temperature Monitoring System INOP

(O) PROCEDURES

NOTE 1: If ground time is to exceed 40 minutes no further action is required.

NOTE 2: This procedure ensures the fuseplug integrity but not necessarily brake energy capability. As an alternative refer to "2" below.

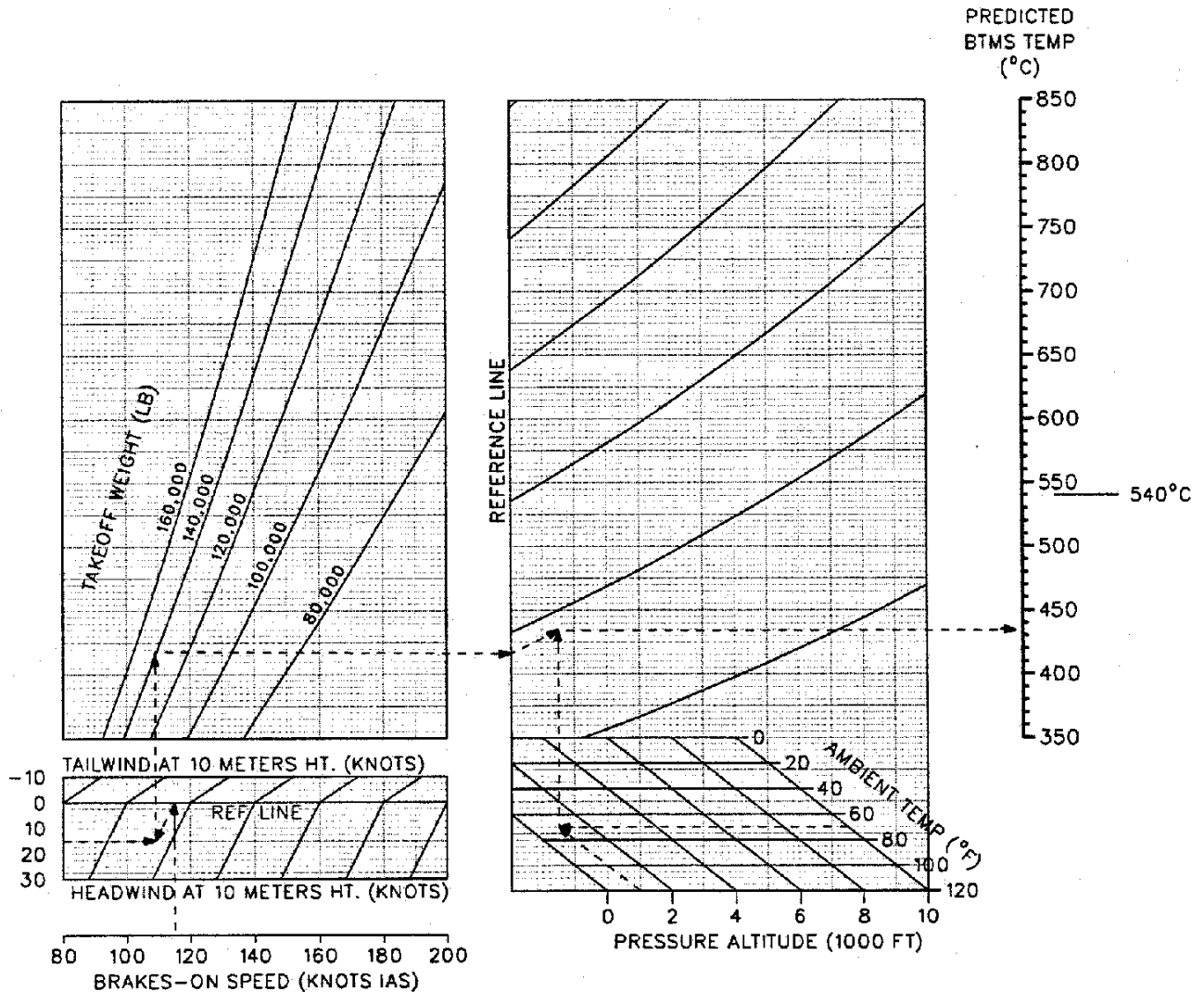
1. If ground time is less than 40 minutes, quick turn-around is permitted if landing weight is at or below the weight determined from the MD-90 ODM, Abnormal, Brake Cooling, Maximum Quick Turn-Around Landing Weight.
2. As an alternative, the chart on the following page entitled "MD-90 Landing Brake Temperature Estimation Chart" may be used to predict brake temperature after landing in lieu of the BTMS. Obtain a predicted BTMS temperature from this chart, and use this in conjunction with the MD-90 ODM, Abnormal Brake Cooling, Maximum Takeoff Brake Temperature – C.
3. If an RTO is conducted and another takeoff attempt is desired, the chart on the following page entitled "MD-90 RTO Brake Temperature Estimation Chart" may be used to predict brake temperature. Obtain a predicted BTMS temperature from this chart, and use this in conjunction with the MD-90 ODM, Abnormal Brake Cooling, Maximum Takeoff Brake Temperature – C.

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MD-90 RTO BRAKE TEMPERATURE ESTIMATION CHART ABS BRAKE P/N 5012193

NOTES:

BASED ON FULLY WORN BRAKES, ONE ENGINE OUT
AND MAXIMUM REVERSE THRUST.



NOTE: FUSEPLUGS MAY ACTIVATE WHEN BTMS EXCEEDS 540° C.

EXAMPLE:

TAKEOFF WEIGHT	= 140,000 LB
BRAKES-ON SPEED	= 115 KNOTS IAS
WIND SPEED	= 15 KT HEADWIND
AMBIENT CONDITIONS	= 1000 FT, 70°F
ESTIMATED BTMS TEMP	= 435°C

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MD-90 LANDING BRAKE TEMPERATURE ESTIMATION CHART
ABS BRAKE P/N 5012193

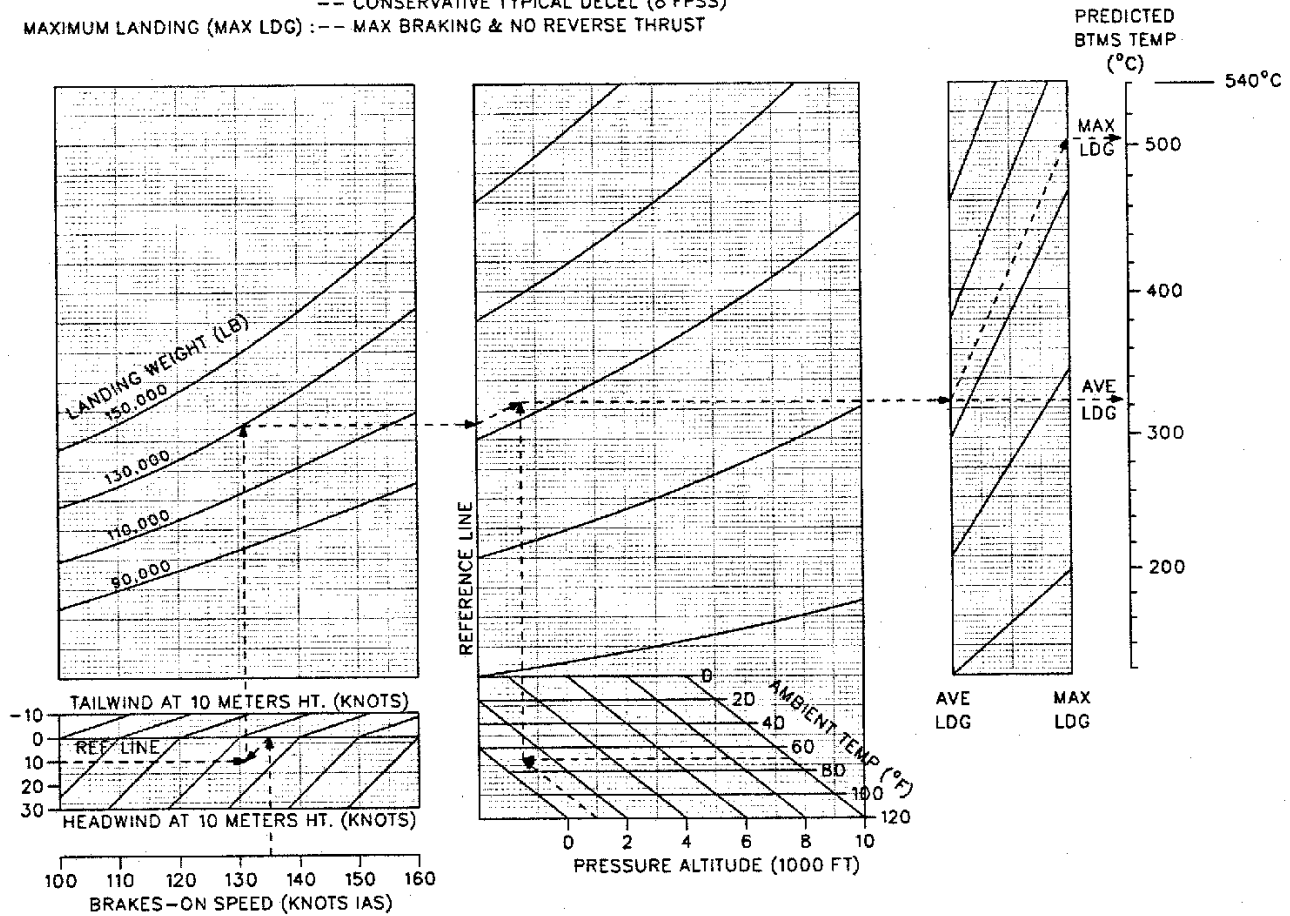
NOTES:

BASED ON FULLY WORN BRAKES.

AVERAGE LANDING (AVE LDG) : -- 2 ENG MAX ALLOWABLE REVERSE THRUST

-- CONSERVATIVE TYPICAL DECEL (8 FPSS)

MAXIMUM LANDING (MAX LDG) : -- MAX BRAKING & NO REVERSE THRUST



NOTE: FUSEPLUGS MAY ACTIVATE WHEN BTMS EXCEEDS 540° C.

EXAMPLE:

LANDING WEIGHT = 130,000 LB
BRAKES-ON SPEED = 135 KNOTS IAS
WIND SPEED = 10 KT HEADWIND
AMBIENT CONDITIONS = 1000 FT, 70°F
ESTIMATED BTMS TEMP = 325°C FOR AVE LDG
= 505°C FOR MAX LDG

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
32-47-02	Tire Pressure Gauges	Y	6	0	C

MEL ITEM	TAB LOCATION	PLACARD TEXT
32-47-02	Aircraft Logbook	____ Tire Pressure Gauges(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
	ELECTRONIC OVERHEAD ANNUNCIATOR PANEL (EOAP)				
33-11-01A	Scroll Switch/ Lights	Y	2	0	C May be inoperative provided all of the Cue Switch/Lights are operative.
33-11-01B	Cue Switch/ Lights	Y	8	2	C Six may be inoperative provided: a) The STATUS and DOOR Cue Switch/Lights are operative, and b) The Scroll Switch/Lights are operative.
33-11-01C	Display Screen Character Matrix Lighting Units	Y	-	-	C A maximum of 7 diodes (bulbs) per Character Matrix Lighting Unit (35 bulb unit) may be inoperative. NOTE: Each display screen consists of 6 rows of characters with 20 characters per row, totaling 120 Character Matrix Lighting Units.

MEL ITEM	TAB LOCATION	PLACARD TEXT
33-11-01A	Near Overhead Annunciator Panel (EOAP)	EOAP Scroll Switch / Light(s) INOP
33-11-01B	Near Overhead Annunciator Panel (EOAP)	EOAP Cue Switch / Light(s) INOP
33-11-01C	Near Overhead Annunciator Panel (EOAP)	EOAP Display Screen Character Matrix Lighting Unit(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
33-11-02	Annunciator/Warning Light Dimmer Function "DISP. APPR.REQ'D"	Y	1	0	B May be inoperative provided: a) Airplane is not operated during daylight conditions if the Dimmer function is limited to the "DIM" position, and b) Lighting configuration and intensity are acceptable to the flight crew based on the ambient light conditions expected for the duration of the intended flight.

MEL ITEM	TAB LOCATION	PLACARD TEXT
33-11-02	Adjacent to dimmer switch	Dimmer Function INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH			
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY			
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS	
33-12-01	Master Warning Lights	Y	2	1	C		

MEL ITEM	TAB LOCATION	PLACARD TEXT
33-12-01	Affected Master Warning Light	____ Master Warning 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	
33-12-02	Master Caution Lights	Y	2	1	C		

MEL ITEM	TAB LOCATION	PLACARD TEXT
33-12-02	Affected Master Caution Light	____ Master Caution Light INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD			REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
33-13-01	Cockpit Flight Deck / Flight Compartment and Instrument Lighting Systems	Y	-	-	C Individual lights may be inoperative provided remaining lights are: a) Not on Emergency Bus, b) Sufficient to clearly illuminate all required instruments, controls, and other devices for which it is provided, c) Positioned so that direct rays are shielded from flight crewmembers eyes, and d) Lighting configuration and intensity is acceptable to the flight crew. NOTE 1: This relief applies only to flight compartment and instrument lighting; it does not apply to warning, caution, advisory lights, or cockpit emergency lights. NOTE 2: If thunderstorm light switch is inoperative, use alternate thunderstorm lights or adjust panel flood lights to required brightness.

MEL ITEM	TAB LOCATION	PLACARD TEXT
33-13-01	Associated Indicator, Panel or Lighting Switch	____ Cockpit / Instrument Lighting INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD						REPAIR CATEGORY
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS
CABIN INTERIOR LIGHTING						
33-20-01A	Cabin Interior Illumination (Except ceiling or sidewall lights)	Y	-	-	C	May be inoperative provided: a) Sufficient lighting is operative for cabin crew to perform required duties, and b) Lighting configuration at dispatch is acceptable to the flight crew.
33-20-01B	Cabin Interior Ceiling	Y	-	-	C	Two general lighting ceiling LED light bars may be inoperative provided: a) At least two light bars in longitudinal direction are operative in between, b) All adjacent ceiling and sidewall light bars around (incl. diagonal located light bars) are operative, and c) No more than four LED light bars (ceiling and sidewall) are inoperative per cabin zone.
33-20-01C	Cabin Interior Sidewall	Y	-	-	C	Two adjacent general lighting sidewall LED light bars may be inoperative provided: a) At least two light bars in longitudinal direction are operative in between, b) All adjacent sidewall and ceiling light bars around (incl. diagonal located Light bars) are operative, and c) No more than four LED light bars (ceiling and sidewall) are inoperative per cabin zone.

MEL ITEM	TAB LOCATION	PLACARD TEXT
33-20-01A	Flight Attendant Cabin Lighting Control Panel	____ Cabin Lights INOP
33-20-01B	Flight Attendant Cabin Lighting Control Panel	____ Cabin Ceiling Lights INOP
33-20-01C	Flight Attendant Cabin Lighting Control Panel	____ Cabin Interior Sidewall Lights INOP

NUMBER INSTALLED			NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD			REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
	PASSENGER NOTICE SYSTEM (NO SMOKING/ FASTEN SEAT BELT/RETURN TO CABIN)				
33-28-01A	Automatic System	Y	1	0	C (O) May be inoperative provided Manual Passenger Notice System is operative.
33-28-01B	Manual System	Y	1	0	C (O) May be inoperative provided: a) The Passenger Address System is operative, b) Crew Call Chimes and Cabin Interphone Systems are operative, and c) Procedures are established for alerting the Flight Attendants and notifying passengers by use of the Public Address System when seat belts should be fastened.
33-28-01C	Lighted Signs "DISP.APPR.REQ'D."	Y	-	-	C (O) May be inoperative provided passenger or Flight Attendant seats or lavatories from which a legible Fasten Seat Belt/Return To Cabin sign cannot be readily seen are blocked and not occupied.
33-28-01D	Lighted Signs	Y	-	-	C (O) May be inoperative provided procedures are established for alerting Flight Attendants and notifying passengers by use of the Public Address System when seat belts should be fastened.

MEL ITEM	TAB LOCATION	PLACARD TEXT
33-28-01A	Fasten Seat Belt Switch	Automatic Fasten Seat Belt Signs INOP
33-28-01B	Fasten Seat Belt Switch	Manual Fasten Seat Belt Signs INOP
33-28-01C	Fasten Seat Belt Switch	___ Fasten Seat Belt Sign(s) INOP
33-28-01D	Fasten Seat Belt Switch	___ Fasten Seat Belt Sign(s) INOP

(O) PROCEDURES

33-28-01A

Operate the system manually.

33-28-01B, 33-28-01C, 33-28-01D

Pilots will alert the flight attendants by interphone and they will notify passengers by use of the Public Address System when seat belts should be fastened.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
33-31-01	Cargo Compartment Lighting Systems	Y	-	0	C

MEL ITEM	TAB LOCATION	PLACARD TEXT
33-31-01	Aircraft Logbook	____ Cargo Compartment Light Systems INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
33-32-01	Main Gear Wheel Position Inspection Lights "DISP.APPR.REQ'D."	Y	2	0 C	May be inoperative provided airplane is not operated at night.

MEL ITEM	TAB LOCATION	PLACARD TEXT
33-32-01	Aircraft Logbook	____ Main Gear Wheel Position Inspection 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
SERVICE AREA LIGHTS					
33-32-02A	Wheel Well Inspection Lights	Y	3	0	C
33-32-02B	Tail Compartment Lights	Y	3	0	C
33-32-02C	Fwd Accessory Compartment Lights	Y	1	0	C
33-32-02D	Water & Waste Service Panel Lights	Y	3	0	C
33-32-02E	E & E Compartment Lights	Y	3	0	C

MEL ITEM	TAB LOCATION	PLACARD TEXT
33-32-02A	Aircraft Logbook	____ Wheel Well Maintenance Inspection Light(s) INOP
33-32-02B	Aircraft Logbook	____ Tail Compartment Light(s) INOP
33-32-02C	Aircraft Logbook	____ Fwd Accessory Compartment Light(s) INOP
33-32-02D	Aircraft Logbook	____ Water & Waste Service Panel Light(s) INOP
33-32-02E	Aircraft Logbook	____ E & E Compartment Light(s) INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS
LANDING LIGHTS						
33-41-01A	Wing Lights	Y	2	0	C	May be inoperative provided both Nose Gear Lights are operative.
33-41-01B	Wing Lights “DISP.APPR.REQ'D.”	Y	2	0	C	May be inoperative provided airplane is not operated at night.
33-41-01C	Nose Gear Lights	Y	2	0	C	May be inoperative provided both Wing Lights are operative.
33-41-01D	Nose Gear Lights “DISP.APPR.REQ'D.”	Y	2	0	C	May be inoperative provided airplane is not operated at night.
33-41-01E	Nose Gear Lights	N	2	0	C	(M) May be inoperative provided both Wing Lights are operative.
33-41-01F	Nose Gear Lights “DISP.APPR.REQ'D.”	N	2	0	C	(M) May be inoperative provided airplane is not operated at night.
33-41-01G	Wing Landing Light Extend/Retract System	N	2	0	C	(M) May be inoperative provided: a) Associated Landing Light is considered inoperative and deferred per MEL 33-41-01A, b) Associated Landing Light is secured RETRACTED, and c) Nose Gear Lights are operative.
33-41-01H	Wing Landing Light Extend/Retract System “DISP.APPR.REQ'D.”	N	2	0	C	(M) May be inoperative provided: a) Associated Landing Light is considered inoperative and deferred per MEL 33-41-01B, b) Associated Landing Light is secured RETRACTED, and c) Airplane is not operated at night.
33-41-01I	Wing Landing Light Extend/Retract System “DISP.APPR.REQ'D.”	Y	2	0	C	(O)(M) May be inoperative provided a) Associated Landing Light is secured EXTENDED, and b) Performance penalties are applied.

MEL ITEM	TAB LOCATION	PLACARD TEXT
33-41-01A	Associated Wing Light Switch(es)	___ Wing Landing Light(s) INOP
33-41-01B	Associated Wing Light Switch(es)	___ Wing Landing Light(s) INOP
33-41-01C	Nose Gear Light Switch	___ Nose Gear Landing Light(s) INOP
33-41-01D	Nose Gear Light Switch	___ Nose Gear Landing Light(s) INOP
33-41-01E	Nose Gear Light Switch	___ Nose Gear Landing Light(s) INOP
33-41-01F	Nose Gear Light Switch	___ Nose Gear Landing Light(s) INOP
33-41-01G	Associated Wing Light Switches	___ Wing Landing Light(s) INOP Retracted
33-41-01H	Associated Wing Light Switches	___ Wing Landing Light(s) INOP Retracted
33-41-01I	Associated Wing Light Switches	___ Wing Landing Light(s) INOP Extended

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(O) PROCEDURES

33-41-01I

1. If excessive buffet occurs during cruise, decrease speed as necessary for comfort.

33-41-01I	WING LANDING LIGHT EXTEND/RETRACT SYSTEM
EFFECTIVITY	All
FLIGHT PLANNING REQUIREMENTS	1. Reduce ENROUTE LIMIT WT by 2,600 lbs per light extended. 2. Increase BLOCK FUEL by 1.75% for one light extended or 3.5% for both lights extended.
NOTES	Make a notation on the Flight Plan when Enroute Climb is limiting.
AWABS	Performance corrections have been applied.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF 1. Reduce RATOW by 2,200 lbs per light extended. 2. Reduce T/O CLIMB LIMIT by 2,200 lbs per light extended. LANDING 1. Reduce RWY ALLOWABLE LANDING WT by 1,000 lbs per light extended. 2. Reduce LANDING CLIMB LIMIT WT by 1,000 lbs per light extended. OTHER CORRECTIONS 1. Determine V-Speeds from ODM Takeoff Section charts for applicable Thrust/Flap setting and enter with the actual takeoff weight increased by the MEL takeoff weight penalty of 2,100 lbs per light extended. 2. Determine all other speeds at actual operating weight.

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(M) PROCEDURES

33-41-01E, 33-41-01F

1. Nose Gear Lights Inoperative:

- A. If the nose gear lights are inoperative due to cracked or broken lamps, they may be secured if desired, as follows:

- 1) Pull and secure the associated nose gear light circuit breaker as follows:

<u>Circuit Breaker (CB#)</u>	<u>Panel</u>	<u>Location</u>
LEFT NOSE GEAR LANDING & TAXI (B1-19)	EPC CBP	K-14
RIGHT NOSE GEAR LANDING & TAXI (B1-20)	EPC CBP	L-14

- 2) Carefully remove or secure any loose pieces of broken glass.
- 3) Beginning on one side of the lamp, cover the cracked or broken landing lamp with strips of metalized "speed" tape ensuring approximately 50% overlap between adjacent strips until the entire surface area of the lamp lens is covered. Apply one strip of tape, around the outside edge of the lamp and housing, ensuring there is approximately one inch of overlap to the lamp housing. It is acceptable to use preformed tape that provides the same coverage.

33-41-01G, 33-41-01H

1. Wing Landing Light Extend/Retract System inoperative:

- A. If lights are failed in the retracted position, they may be secured in the retracted position, if desired, using the following procedure:

- 1) Pull and secure the appropriate Wing Landing Light and Wing Landing Light Control circuit breakers:

<u>Circuit Breaker (CB#)</u>	<u>Panel</u>	<u>Location</u>
LEFT WING LANDING LIGHT (B1-13)	EPC CBP	K-12
LEFT WING LANDING LIGHT CONT (B1-14)	EPC CBP	K-13
RIGHT WING LANDING LIGHT (B1-15)	EPC CBP	L-12
RIGHT WING LANDING LIGHT CONT (B1-16)	EPC CBP	L-13

- B. If lights are failed in the extended position, they may be secured in the retracted position, if desired, using the following procedure:

- 1) Pull and secure the appropriate Wing Landing Light and Wing Landing Light Control circuit breakers:

<u>Circuit Breaker (CB#)</u>	<u>Panel</u>	<u>Location</u>
LEFT WING LANDING LIGHT (B1-13)	EPC CBP	K-12
LEFT WING LANDING LIGHT CONT (B1-14)	EPC CBP	K-13
RIGHT WING LANDING LIGHT (B1-15)	EPC CBP	L-12
RIGHT WING LANDING LIGHT CONT (B1-16)	EPC CBP	L-13

- 2) Remove the 12 attaching screws and drop landing light assembly from wingtip. Disconnect electrical connector. Coil and stow aircraft wiring.
- 3) Detach landing light cover from mounting plate assembly by removing appropriate screws and lockwashers.
- 4) Loosen the six screws to the gear case assembly until the worm gear is free of the sector gear.
- 5) Manually retract the landing light lamp and tighten the screws to the gear case assembly.
- 6) Secure the landing light cover to the mounting plate assembly with screws and lockwashers.

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- 7) Re-install light assembly in wing tip with the 12 attaching screws.
 - 8) If lamp will not stay closed, install aluminum or stainless steel tab extending over the lamp retaining ring using the landing light assembly aft attaching screw or other suitable screw.
- C. If the wing lights are inoperative due to cracked or broken lamps they may be secured if desired, as follows:
- 1) Carefully remove any loose pieces of broken glass.
 - 2) Beginning on one side of the lamp, cover the cracked or broken landing lamp with strips of metalized "speed" tape ensuring approximately 50% overlap between adjacent strips until the entire surface area of the lamp lens is covered. Apply one strip of tape, around the outside edge of the lamp and housing, ensuring there is approximately one inch of overlap to the lamp housing. It is acceptable to use preformed tape that provides the same coverage.

33-41-011

1. Wing Landing Light Extend/ Retract System Inoperative:

- A. If lights are failed in the extended position and are to remain in the extended position for the flight, pull and secure the appropriate Wing Landing Light Control circuit breakers:

<u>Circuit Breaker (CB#)</u>	<u>Panel</u>	<u>Location</u>
LEFT WING LANDING LIGHT CONT (B1-14)	ECP CBP	K-13
RIGHT WING LANDING LIGHT CONT (B1-16)	ECP CBP	L-13

NUMBER INSTALLED					NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS
33-42-01A	Anti-Collision Beacon Lights (Fuselage-Red) “DISP.APPR.REQ'D.”	Y	2	0	C	May be inoperative provided airplane is not operated at night.
33-42-01B	Anti-Collision Beacon Lights (Fuselage-Red)	Y	2	0	C	May be inoperative provided wing tip White Strobe / Anti-Collision Lights are operative.

MEL ITEM	TAB LOCATION	PLACARD TEXT
33-42-01A	Anti-Collision Light Switch	____ Anti-Collision Light(s) INOP
33-42-01B	Anti-Collision Light Switch	____ Anti-Collision Light(s) INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS	
33-42-02A	Fixed Forward Position Light Bulbs (Wing Tips)	Y	4	2	C	One Bulb (red or green) must be operative on each wing tip. NOTE: Each wingtip Forward Position Light assembly has two bulbs, only one operates at a time. The aft bulb will illuminate when the forward bulb fails.
33-42-02B	Fixed Forward Position Light Bulbs (Wing Tips) "DISP.APPR.REQ'D."	Y	4	0	C	May be inoperative provided airplane is not operated at night.

MEL ITEM	TAB LOCATION	PLACARD TEXT
33-42-02A	Position / Strobe Light Switch	____ Forward Position Light(s) INOP
33-42-02B	Position / Strobe Light Switch	____ Forward Position Light(s) INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
33-42-03A	Fixed Aft Position Light Bulbs (Wing Tips, White)	Y	4	2 C	One Bulb (white) must be operative on each wing tip. NOTE: Each wingtip Aft Position Light assembly has two bulbs, only one operates at a time. The lower bulb will illuminate when the upper bulb fails.
33-42-03B	Fixed Aft Position Light Bulbs (Wing Tips, White) "DISP.APPR.REQ'D."	Y	4	0 C	May be inoperative provided airplane is not operated at night.

MEL ITEM	TAB LOCATION	PLACARD TEXT
33-42-03A	Position / Strobe Light Switch	____ Aft Position Light(s) (Wing Tip) INOP
33-42-03B	Position / Strobe Light Switch	____ Aft Position Light(s) (Wing Tip) INOP

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS
33-42-05A	White Strobe / Anti-Collision Lights (Forward and Aft Wing Tips)	Y	4	2	C	May be inoperative provided all Fuselage Red Anti-Collision Beacon Lights are operative.
33-42-05B	White Strobe / Anti-Collision Lights (Forward and Aft Wing Tips) "DISP.APPR.REQ'D."	Y	4	0	C	May be inoperative provided airplane is not operated at night.

MEL ITEM	TAB LOCATION	PLACARD TEXT
33-42-05A	Position / Strobe Light Switch	____ White Strobe / Anti-Collision Light(s) INOP
33-42-05B	Position / Strobe Light Switch	____ White Strobe / Anti-Collision Light(s) INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
	WING AND NACELLE ILLUMINATION LIGHT SYSTEMS				
33-43-01A	Wing Illumination Lights "DISP.APPR.REQ'D."	Y	2	0	C (O) May be inoperative provided ground deicing procedures do not require their use.
33-43-01B	Nacelle Illumination Lights	Y	2	0	C

MEL ITEM	TAB LOCATION	PLACARD TEXT
33-43-01A	Wing / Nacelle Light Switch	____ Wing Illumination Light(s) INOP
33-43-01B	Wing / Nacelle Light Switch	____ Nacelle Illumination Light(s) INOP

(O) PROCEDURES

33-43-01A

Utilize alternate lighting source for wing inspections as necessary.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH			
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY			
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS	
33-43-02	Ground Floodlights	Y	2	0	C		

MEL ITEM	TAB LOCATION	PLACARD TEXT
33-43-02	Associated Flood Light Switch(es)	____ Flood Light(s) INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD			Y	2	0	REPAIR CATEGORY
ITEM NO.	NAME / DESCRIPTION	REMARKS OR EXCEPTIONS				
33-44-01	Tail Illumination (Logo) Lights					

MEL ITEM	TAB LOCATION	PLACARD TEXT
33-44-01	Associated Flood Light Switch(s)	____ Tail Illumination (Logo) Light(s) INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS	
	FLOOR PROXIMITY EMERGENCY ESCAPE PATH LIGHTING					
33-51-01A	Floor Proximity Emergency Escape Path Marking System Lights	Y	1	1	C	Must be operative except as provided: a) Three (3) of the five (5) lamps for each emergency exit identifier may be inoperative, and b) Three (3) of the five (5) lamps for each area floodlights may be inoperative.
33-51-01B	Floor Proximity Emergency Escape Path Photoluminescent Strips	N	-	-	C	Each of the photoluminescent strips of an aisle maybe: inoperative or missing up to a length of 0,25m (10 inches) provided: a) The inoperative or missing parts are not directly opposite each other, b) The inoperative or missing parts are not closer together than 2,0m (78.74 inches), and c) There are no more than 4 such inoperative or missing parts.

MEL ITEM	TAB LOCATION	PLACARD TEXT
33-51-01A	1. Flight Deck Emergency Light Switch 2. Fwd F/A Panel Emergency Light Switch	____ Emergency Escape Path Marking Light(s) INOP
33-51-01B	1. Flight Deck Emergency Light Switch 2. Fwd F/A Panel Emergency Light Switch	____ Emergency Escape Path Photoluminescent Strips INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH			
FLIGHT CREW MAY PLACARD			Y	1	0	REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION	REMARKS OR EXCEPTIONS					
33-51-02	Exterior Emergency Illumination System “DISP.APPR.REQ'D.”	May be inoperative provided airplane is not operated at night.					

MEL ITEM	TAB LOCATION	PLACARD TEXT
33-51-02	Emergency Light Switch	Exterior Emergency Illumination 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
33-51-03	EMER LIGHT NOT ARMED Annunciation System	Y	1	0	B (O) May be inoperative provided it is verified that the Emergency Light System is ARMED PRIOR TO EACH DEPARTURE. Repetitive Check Required (Yellow Placard)

MEL ITEM	TAB LOCATION	PLACARD TEXT
33-51-03	Emergency Light Switch	____ Emergency Light Not Armed Annunciator INOP

(O) PROCEDURES

PRIOR TO EACH DEPARTURE:

1. With EMER LTS switch in ARM position open EMER LIGHTS ARM AND CHARGE circuit breaker (A-14 Overhead Panel).
2. Observe cockpit emergency light illuminates.
3. Close circuit breaker and verify lights go out.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH			
FLIGHT CREW MAY PLACARD			1	0	REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION	Y			C	REMARKS OR EXCEPTIONS	
33-52-01	Cabin Standby Lighting System						

MEL ITEM	TAB LOCATION	PLACARD TEXT
33-52-01	Near Emergency Power Control Switch	Cabin Standby 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
34-00-00L	LLM Category II/III Status (Lower Landing Minimums) "DISP.APPR.REQ'D." Administrative Control Item	N	-	(O)(M) 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 usage or removal. <u>CAT II/III</u> Not Authorized

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-00-00L	Adjacent to each PFD.	CAT II/III NOT AUTHORIZED

(O) PROCEDURES

CAT II - Not Authorized.
CAT III - Not Authorized.

(M) PROCEDURES

1. The AMT will be instructed by MCC to create a new log page in the aircraft logbook using the appropriate MEL Item Number.
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.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH			
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY			
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS	
34-12-02	Standby Altimeter Vibrator	Y	1	0	C		

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-12-02	Standby Altimeter Indicator	Standby Altimeter Vibrator INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
34-13-01A	Mach Indication System	Y	2	1	C (O) May be inoperative provided: a) Pilot flying airplane above FL 250 has an operative mach indication, b) Airspeed indicators are independently operative on each pilot's panel, c) Overspeed Warning System is operative, and d) Mach Trim System is operative. NOTE: Affects on other systems (TAS/SAT, DFGS, FMS, etc.) should be considered.
34-13-01B	Mach Indication System "DISP.APPR.REQ'D."	Y	2	0	C (O) May be inoperative provided: a) Airspeed indicators are independently operative on each pilots panel, b) Airplane remains at or below FL 250, and c) Overspeed Warning System is operative. NOTE: Affects on other systems (TAS/SAT, DFGS, FMS, etc.) should be considered.

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-13-01A	Associated Mach Airspeed Indicator	____ Mach Indicator INOP
34-13-01B	Associated Mach Airspeed Indicator	____ Mach Indicator(s) INOP

(O) PROCEDURES

34-13-01A, 34-13-01B

Refer to Remarks or Exceptions column.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD			REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
34-13-02	Overspeed Warning System "DISP.APPR.REQ'D."	Y	1	0	B (O) May be inoperative provided: a) Both Mach Indication Systems are operative for flights conducted above FL 250, and b) The following speed limitations are observed: Mmo - .79 Mach above FL 250. Vmo - 325 KIAS below FL 250.

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-13-02	Capt's Mach Airspeed Indicator	Overspeed Warning System INOP

(O) PROCEDURES

Refer to Remarks or Exceptions column.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH			
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY			
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS	
34-15-01	True Airspeed Indication	Y	1	0	C	NOTE: Other systems such as DFGS and FMS may be affected.	

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MEL ITEM	TAB LOCATION	PLACARD TEXT
34-15-01	True Airspeed / Static Air Temperature Indicator	True Airspeed 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
34-15-02	Static Air Temperature Indication	Y	1	0	C	(O) May be inoperative provided Total Air Temperature (TAT) System is operative.

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-15-02	True Airspeed / Static Air Temperature Indicator	Static Air Temperature Indicator INOP

(O) PROCEDURES

Use Total Air Temperature indicator when temperature information is required.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
34-16-01A	Air Speed Command Bugs	Y	2	0	C (O) May be inoperative provided Autothrottle System controls airspeed to the selected airspeed displayed on the Flight Guidance Control Panel.
34-16-01B	Air Speed Command Bugs "DISP.APPR.REQ'D."	Y	2	0	C May be inoperative provided: a) Autothrottles are not used, and b) Enroute operations and/or approach minimums do not require its use. <u>CAT II/III</u> Not Authorized

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-16-01A	Associated Mach Airspeed Indicator	___ Air Speed Command Bug(s) INOP
34-16-01B	Associated Mach Airspeed Indicator	___ Air Speed Command Bug(s) INOP

(O) PROCEDURES

34-16-01A

If autothrottles do not control selected airspeed, disconnect autothrottles.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH			
FLIGHT CREW MAY PLACARD			Y	-	0	REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION	REMARKS OR EXCEPTIONS					
34-16-02	Airspeed Indicator External Reference Bugs (Excludes Command Bugs)	(O) May be damaged or missing provided alternate procedures are used.					

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-16-02	Associated Mach / Airspeed Indicator	____ Airspeed Indicator External Reference Bugs Missing

(O) PROCEDURES

1. Prior to departure, flight crew should crosscheck/confirm V-speed.
2. If Airspeed Command Bug is also inoperative, at least one External Reference Bug should be available on each Airspeed Indicator. This should be set to V2 prior to takeoff, and to final approach speed prior to approach/landing.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
ALTITUDE ALERTING SYSTEMS					
34-17-01A	Altitude Alerting Systems "DISP.APPR.REQ'D."	Y	2	0	A (O) May be inoperative provided: a) Autopilot with altitude hold, and altitude capture operates normally, b) Enroute operations, i.e. RVSM, do not require its use, c) Airplane does not depart from a designated airport (ATL,MSP & SLC) where repair or replacement can be made, and d) Repairs are made within 3 flight days. <u>RVSM Operations</u> Not Authorized
34-17-01B	Aural Alert	Y	1	0	C May be inoperative provided: a) Visual alert operates normally, and b) Auto-pilot with altitude hold and altitude capture operates normally.
34-17-01C	Visual Alert	Y	2	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
34-17-01A	Associated Altimeter	Altitude Alerting Systems INOP
34-17-01B	Associated Altimeter	Aural Alert INOP
34-17-01C	Associated Altimeter	Visual Alert INOP

(O) PROCEDURES

Refer to REMARKS OR EXCEPTIONS.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO. NAME / DESCRIPTION						REMARKS OR EXCEPTIONS
ELECTRONIC FLIGHT INSTRUMENT SYSTEM (EFIS)						
34-20-01A	Mode Selector MAP Position	Y	2	1	C	
34-20-01B	Mode Selector MAP Position “DISP.APPR.REQ'D.”	Y	2	0	C	May be inoperative provided: a) Associated FMS is not used, and b) RNAV operations do not require their use, refer to Navigation Equipment Tab (this manual) for RNAV Minimum Requirements.
34-20-01C	Mode Selector PLAN Position	Y	2	1	C	
34-20-01D	Mode Selector PLAN Position “DISP.APPR.REQ'D.”	Y	2	0	C	May be inoperative provided the associated FMS is not used.
34-20-01E	Bearing Pointer Selectors	Y	2	0	C	May be inoperative provided associated RDMI pointer(s) is operative.
34-20-01F	Range Selectors “DISP.APPR.REQ'D.”	Y	2	0	C	May be inoperative provided associated Navigation Instrument Radar Display is not required for operations being conducted.
34-20-01G	N-AID, DATA, ARPT, and WPT Selectors	Y	8	0	C	
34-20-01H	N-AID, DATA, ARPT, and WPT Selectors Internal Switchlights	Y	8	0	C	

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
ELECTRONIC FLIGHT INSTRUMENT SYSTEM (EFIS) (Continued)					
34-20-01I	First Officer's Navigation Display (ND) "DISP.APPR.REQ'D."	Y	1	0	A (O) May be inoperative provided: a) Compact Mode is displayed on the First Officer's Primary Flight Display (PFD), b) Both Flight Directors are operating in the normal mode, c) Captain makes all takeoffs, approaches, and landings, d) Approach minimums do not require its use, e) Standby Attitude Indicator and Non-Stabilized Magnetic Compass are operative, and f) Repairs are made within three flight days. <u>CAT II/III</u> Not Authorized
34-20-01J	Ground Speed Display	Y	2	0	C
34-20-01K	Decision Height Indication "DISP.APPR.REQ'D."	Y	2	0	C May be inoperative provided enroute operations and/or approach minimums do not require its use. <u>CAT II/III</u> Not Authorized

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MEL ITEM	TAB LOCATION	PLACARD TEXT
34-20-01A	Associated EFIS Mode Control Panel	____ Mode Selector MAP Position INOP
34-20-01B	Associated EFIS Mode Control Panel(s)	____ Mode Selector MAP Position(s) INOP
34-20-01C	Associated EFIS Mode Control Panel	____ Mode Selector PLAN Position INOP
34-20-01D	Associated EFIS Mode Control Panel(s)	____ Mode Selector PLAN Position(s) INOP
34-20-01E	Associated EFIS Mode Control Panel(s)	____ Bearing Pointer Selector(s) INOP
34-20-01F	Associated EFIS Mode Control Panel(s)	Range Selector(s) INOP
34-20-01G	Associated EFIS Mode Control Panel(s)	N-AID, DATA, ARPT and WPT Data Selector(s) INOP
34-20-01-H	Associated EFIS Mode Control Panel(s)	N-AID, DATA, ARPT and WPT Selector Internal Light(s) INOP
34-20-01I	Affected Navigation Display (ND)	First Officers ND INOP
34-20-01J	Affected Primary Flight Display (PFD)	____ Ground Speed Display(s) INOP
34-20-01K	Affected Radio Altimeter Indicator	____ Decision Height Indication(s) INOP

(O) PROCEDURES

34-20-01I

1. Do not select the Compact Mode on the Captain's PFD in flight except for a display failure.
2. Refer to [Operations Manual](#), Volume 1, Limitations, Operating Limitations, Flight Instruments, Displays.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
34-21-02	VHF Nav Panel Course Select Numbers	Y	6	0	C May be inoperative provided information is displayed on both Nav Displays (ND) or Primary Flight Displays (PFD).

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-21-02	Affected VHF Nav Control Panel	____ VHF Nav Course Select Number(s) INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
34-24-01A	Flight Director Systems "DISP.APPR.REQ'D."	Y	2	1	C (O) May be inoperative provided: a) Each panel has complete Flight Director information from an independent source, and b) Flight Director CMD switch is not moved in flight. <u>TAKEOFF</u> Captain's Flight Director must be operative with less than 1600 RVR (1/4 mile). <u>CAT II/III</u> Not Authorized
34-24-01B	Flight Director Systems "DISP.APPR.REQ'D."	Y	2	0	C May be inoperative provided: a) For takeoff, visibility at the departure runway is not less than 1600RVR (1/4 mile), b) Enroute operations and/or approach minimums do not require its use, and c) RNAV operations do not require their use, refer to Navigation Equipment Tab (this manual) for RNAV Minimum Requirements . <u>CAT II/III</u> Not Authorized NOTE: CAT I (ILS) is authorized if at least one Autopilot is operative.

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-24-01A	Flight Director Command (FD CMD) Switch	____ Flight Director, Ch ____ INOP
34-24-01B	Associated Flight Director Switches	____ Flight Director System(s) INOP

(O) PROCEDURES

34-24-01A

1. Place Flight Director Command Selector to the operable side.
2. Do not move FD CMD switch from its selected position in flight.

NOTE: Any Flight Director mode or function which operates normally may be used.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
34-26-01	Instrument Switching Systems (Flight Director)	Y	1	0 C	May be inoperative provided: a) Each pilot's panel has complete Flight Director information from an independent source, and b) Associated switch is not moved during flight.

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-26-01	Flight Director Command Switch	Flight Director Switching INOP in ____ Position

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
34-26-02	Navigation Instrument Comparator, Monitor, and Warning Systems "DISP.APPR.REQ'D."	Y	1	0 C	May be inoperative provided approach minimums do not require its use. NOTE: Autothrottle and Autopilot disconnect annunciations must be operative for an operative Autothrottle and Autopilot System. <u>CAT II/III</u> Not Authorized

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-26-02	Flight Mode Annunciator Panel	Navigation / Instrument Comparator, Monitor and Warning Systems INOP

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS
34-27-01	Slip Indicator	Y	4	1	C	

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-27-01	Associated PFD / ND	Slip Indicator(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
34-28-01	Standby Attitude Indication (Gyro Horizon) "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.

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-28-01	Standby Horizon Indicator	Standby Horizon 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
34-29-01	Non-Stabilized Magnetic Compass (Standby) "DISP.APPR.REQ'D."	Y	1	0 C	(O) May be inoperative provided: a) Any combination of two independent magnetic stabilized directional compass systems or IRU are operative, b) AFM Limitations regarding Electronic Flight Instrument Systems (EFIS) and optional equipment are applied, and c) Airplane 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
34-29-01	Aircraft Logbook	Standby Compass INOP

(O) PROCEDURES

1. Flight Crew must ensure that planned routes comply with limitations.
2. Refer to [Operations Manual](#), Volume 1, Limitations, Operating Limitations, Flight Management, Navigation.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
				REMARKS OR EXCEPTIONS		
ITEM NO.	NAME / DESCRIPTION					
34-31-01	Marker Beacon System “DISP.APPR.REQ'D.”	Y	1	0	C	May be inoperative provided approach minimums do not require its use.

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-31-01	Aircraft Logbook	Marker Beacon INOP

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
34-32-01	VHF Navigation Systems (VOR / ILS / GS) "DISP.APPR.REQ'D."	Y	2	1 C	No. 2 VHF Navigation System may be inoperative provided enroute operations and/or approach minimums do not require its use. <u>CAT II/III</u> Not Authorized NOTE: One or more of these systems may be required as noted on the approach plate.

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-32-01	Associated VHF Nav Control Panel	No. 2 VHF Navigation INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
34-41-01A	Weather Radar System "DISP.APPR.REQ'D."	Y	1	0	C 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 be reasonably be expected along the route to be flown.
34-41-01B	Weather Radar Displays	Y	-	1	C NOTE: Item for Predictive Windshear Mode deleted. See item 34-47-01 for Reactive Windshear relief.

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-41-01A	Weather Radar Indicator	Weather Radar INOP
34-41-01B	Affected Weather Radar Display(s)	Weather Radar Display(s) INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
	RADIO ALTIMETER SYSTEMS				
34-42-01A	Radio Altimeter Systems "DISP.APPR.REQ'D."	Y	2	0	A (M) May be inoperative provided: a) Enroute operations and/or approach minimums do not require its use, and b) Repairs are made within two (2) flight days. NOTE: An inoperative Number 1 Radio Altimeter will cause the GPWS, PWS and the Auto Cutback Feature of the FMS to be inoperative. <u>CAT II/III</u> Not Authorized NOTE: If both radio altimeter systems are inoperative, then CAT I ILS and CAT II/III are not authorized.
34-42-01B	Radio Altimeter Indication "DISP.APPR.REQ'D."	Y	4	0	C May be inoperative provided enroute operations and/or approach minimums do not require its use. NOTE 1: One RA indication must be operative for CAT I to be authorized. NOTE 2: A minimum of one RA indication must be operative on each side for CAT II/III to be authorized.

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-42-01A	1. Radio Altimeter Indicator(s) 2. GPWS Test Switch (if number 1, or both, system(s) is deferred)	1. ____ Radio Altimeter R/T(s) INOP 2. GPWS INOP (if number 1, or both, system(s) is deferred)
34-42-01B	Affected Radio Altimeter Indicator(s)	____ Radio Altimeter Indication(s) INOP

OPERATIONS NOTE:

With Nbr. 1 Radio Altimeter deactivated, landing gear aural warning may sound regardless of altitude when the following conditions exist:

- Landing gear is not down & locked,
- Throttles in idle position, and
- Airspeed less than 210 knots

Aural warning can be silenced if flaps are not in approach configuration (less than 26.0 degrees).

Aircraft will not engage Automatic Thrust Restoration (ATR) of the Digital Flight Guidance Computer (DFGC) with 2 Radio Altimeter R/T's inoperative.

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(M) PROCEDURES

34-42-01A

Pull and secure Number 1 circuit breaker F-17 (for system 1), and Number 2 circuit breaker F-2 (for system 2) EPC panel.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
	GROUND PROXIMITY WARNING SYSTEM (GPWS)				
34-45-01A	Ground Proximity Warning System "Contact MCC"	Y	1	0	A (O) May be inoperative provided: a) Alternate procedures are used, and b) Repairs are made within two flight days.
34-45-01B	Terrain Avoidance Modes (Modes 1 - 4) "Contact MCC"	Y	4	0	A (O) May be inoperative provided: a) Alternate procedures are used, and b) Repairs are made within two flight days.
34-45-01C	Test Mode "Contact MCC"	Y	1	0	A May be inoperative provided: a) The GPWS is considered inoperative and deferred per MEL 34-45-01A, and b) Repairs are made within two flight days.
34-45-01D	Glideslope Deviation Mode Lights (Mode 5)	Y	2	1	C
34-45-01E	Glideslope Deviation Mode Lights (Mode 5)	Y	2	0	B
34-45-01F	Advisory Callouts (Mode 6)	Y	1	0	C (O) May be inoperative provided procedures are used.
34-45-01G	Enhanced Modes (EGPWS)	Y	-	0	B

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-45-01A	GPWS Test Switch	GPWS INOP
34-45-01B	GPWS Test Switch	GPWS Modes 1 thru 4 INOP
34-45-01C	GPWS Test Switch	GPWS Test Mode INOP
34-45-01D	GPWS Test Switch	___ GPWS Glideslope Deviation (Mode 5) INOP
34-45-01E	GPWS Test Switch	GPWS Glideslope Deviation (Mode 5) INOP
34-45-01F	GPWS Test Switch	GPWS Advisory Callouts (Mode 6) INOP
34-45-01G	GPWS Test Switch	Enhanced GPWS Mode INOP

(O) PROCEDURES

34-45-01A, 34-45-01B, 34-45-01F

Pilot not flying should monitor the flight path during takeoff, approach, and landing, and alert the pilot flying if any of the following conditions exist:

1. Excessive descent rate.
2. Excessive terrain closure rate.
3. Altitude loss after takeoff or go-around.
4. Unsafe terrain clearance while not in the landing mode.
5. Deviation from glideslope.

NOTE: With GPWS inoperative, the Auto Cutback Feature of the FMS will be inoperative.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
	TRAFFIC ALERT / COLLISION AVOIDANCE SYSTEM (TCAS)				
34-46-01A	TCAS System "DISP.APPR.REQ'D."	Y	1	0	B (O)(M) May be inoperative provided: a) System is deactivated and secured, and b) Theater Restrictions May Apply.
34-46-01B	Combined TA and RA Dual Displays	Y	2	1	C (O) One may be inoperative provided: a) TA and RA visual display is operative on the flying pilot side, and b) TA and RA audio function is operative on the flying pilot side.
34-46-01C	Resolution Advisory (RA) Display System(s)	Y	2	1	C (O) May be inoperative on non-flying pilot side.
34-46-01D	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 the crew, and c) Enroute or approach procedures do not require its use.
34-46-01E	Traffic Alert Display System(s) "DISP.APPR.REQ'D."	Y	2	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.
34-46-01F	Audio Functions "DISP.APPR.REQ'D."	Y	1	0	B (O) May be inoperative provided enroute or approach procedures do not require use of TCAS.

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-46-01A	TCAS/Transponder Control Panel	TCAS INOP
34-46-01B	Associated TA / VSI	____ TCAS Combined TA and RA Dual Display INOP
34-46-01C	Associated TA / VSI	____ TCAS RA Display System INOP
34-46-01D	Associated TA / VSI	____ TCAS RA Display System(s) INOP
34-46-01E	Associated TA / VSI	____ TCAS TA Display System(s) INOP
34-46-01F	TCAS/Transponder Control Panel	TCAS Audio INOP

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(O) PROCEDURES

34-46-01A, 34-46-01F

TCAS must be operative on routes outbound from the Continental United States to destinations outside the Continental United States, except Canada.

34-46-01B

1. Verify TA and RA elements and audio functions are operative on flying pilot side.
2. Verify TA and RA displays are visible to the flying pilot.

34-46-01C

Corrective action based on Resolution Advisories should be implemented by pilot with the operative RA display.

34-46-01D

Operate with the Function Selector of the Mode S/TCAS Control Unit in the TA position.

34-46-01E

Verify all RA Display and audio functions are operative. (This is displayed on the Weather Radar Indicator)

(M) PROCEDURES

34-46-01A

Pull and secure TCAS computer circuit breaker (K-8) or (H-16).

NOTE: With TCAS System inoperative, the Auto Cutback Feature of the FMS will 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
34-47-01	Windshear System "DISP.APPR.REQ'D."	Y	1	0 B	(O) May be inoperative provided alternate procedures are used.

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-47-01	Captain's Windshear Alert Light	Reactive Windshear INOP

(O) PROCEDURES

1. Refer to [Volume 1](#), SP.16, Windshear and the [FCTM](#) for a review of windshear detection and escape/recovery techniques during takeoff/departure and approach/landing.
2. Flight crew must use Standard Callout procedures to assure flight crew awareness of airplane configuration, speed, altitude and flight path.
 - a. Refer to [Operations Manual, Volume 1](#), Normal Procedures, Standard Callouts.
3. Assess and minimize the probability of encountering windshear during takeoff/departure and approach/landing.

NOTE: With Windshear System inoperative, the Auto Cutback Feature of the FMS will 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
34-47-02	WINDSHEAR INOP Annunciation System "DISP.APPR.REQ'D."	Y	1	0	C (O) May be inoperative provided alternate procedures are used.

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-47-02	Captain's Windshear Alert Light	WINDSHEAR INOP Annunciation System INOP

(O) PROCEDURES

Consider the Windshear System inoperative. [Refer to Volume 1](#), SP.16, Windshear and the [FCTM](#) for a review of windshear detection and escape/recovery techniques during takeoff/departure and approach/landing.

NOTE: With Windshear System inoperative, the Auto Cutback Feature of the FMS will 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	
RADIO DISTANCE MAGNETIC INDICATION (RDMI) SYSTEMS						
34-51-01A	Compass Cards	Y	2	1	C	May be inoperative provided: a) Associated Nav Display compass information is operative, and b) Both pilots have independent Directional Compass information.
34-51-01B	Bearing Pointers	Y	4	0	C	
34-51-01C	DME Display	Y	4	0	C	

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-51-01A	Associated RDMI	____ RDMI Compass Card INOP
34-51-01B	Associated RDMI	____ RDMI Bearing Pointers INOP
34-51-01C	Associated RDMI	____ RDMI DME Display INOP

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
34-52-01	Distance Measuring Equipment (DME) 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 its use, refer to Navigation Equipment Tab (this manual) for RNAV Minimum Requirements.

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-52-01	Associated RDMI DME Indicator	____ DME System INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD			REPAIR CATEGORY			
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS	
	AUTOMATIC DIRECTION FINDING SYSTEM (ADF)					
34-53-01A	ADF Systems “DISP.APPR.REQ’D.”	Y	1	0	C	May be inoperative unless required for the approach or route to be flown. NOTE: One or more of these systems may be required as noted on the approach plate.
34-53-01B	ADF Frequency Selectors “DISP.APPR.REQ’D.”	Y	-	0	C	May be inoperative unless required for the approach or route to be flown. NOTE: One or more of these systems may be required as noted on the approach plate.
34-53-01C	ADF Frequency Selectors “DISP.APPR.REQ’D.”	Y	2	0	C	May be inoperative unless required for the approach or route to be flown. NOTE: One or more of these systems may be required as noted on the approach plate.

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-53-01A	ADF Control Panel	____ ADF INOP
34-53-01B	Affected ADF Frequency Selector Knob	____ ADF Frequency Selector INOP
34-53-01C	Affected ADF Frequency Selector Knob(s)	____ ADF Frequency Selector INOP

OPERATIONS NOTE:

With one ADF inoperative, the ADF/ANT/OFF switch is moved to OFF on the inoperative ADF.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
34-54-01A	ATC Transponder and Automatic Altitude Reporting Systems	Y	2	1	D
34-54-01B	ATC Transponder and Automatic Altitude Reporting Systems "DISP.APPR.REQ'D."	Y	2	0	B

May be inoperative provided:
a) Enroute operations do not require their use, and
b) Prior to flight, approval is obtained from ATC facilities having jurisdiction over the planned route of flight.

RVSM Operations
Not Authorized

NOTE: TCAS will be inoperative.

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-54-01A	Transponder Control Panel	____ ATC Transponder / Mode C INOP
34-54-01B	Transponder Control Panel	1. ____ ATC Transponder / Mode C INOP 2. TCAS will be inoperative

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
34-58-01A	Global Positioning System (GPS) "DISP.APPR.REQ'D."	Y	-	0	C (O) May be inoperative provided alternate procedures are established and used.
34-58-01B	Global Positioning System (GPS) "DISP.APPR.REQ'D."	Y	-	0	D May be inoperative provided procedures do not require its use.

MEL ITEM	TAB LOCATION	PLACARD TEXT
34-58-01A	MCDU Display	Global Positioning System (GPS) INOP
34-58-01B	MCDU Display	Global Positioning System (GPS) INOP

(O) PROCEDURES

34-58-01A

If GPS is installed as the primary source for long range navigation information, ensure route to be flown does not rely on long range navigation information unless an alternate source is available.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS	
	FLIGHT MANAGEMENT SYSTEMS (FMS)					
34-63-01A	Flight Management Systems (FMS) "DISP.APPR.REQ'D."	Y	1	0	C	Specific modes (LNAV, VNAV) or functions may be inoperative provided: a) Mode or function is not required for operations being conducted, and b) RNAV operations do not require its use, refer to Navigation Equipment Tab (this manual) for RNAV Minimum Requirements .
34-63-01B	Computers "DISP.APPR.REQ'D."	Y	-	0	C	May be inoperative provided: a) Associated FMS is not required for operations being conducted, and b) RNAV operations do not require its use, refer to Navigation Equipment Tab (this manual) for RNAV Minimum Requirements .
34-63-01C	Multi-Function Control Display Units (MCDU)	Y	2	1	C	May be inoperative provided associated MCDU is not required for operations being conducted. NOTE: Flight DATA Recorder and IRS alignment requires data input through one MCDU.
34-63-01D	Navigation Database "DISP.APPR.REQ'D."	Y	1	0	C	(O) May be out of currency provided: a) Current Aeronautical Charts are used to verify Navigation Fixes PRIOR TO EACH DEPARTURE, b) Database will be validated by Flight Control using RVAL Tool , c) Approach Navigation Radios are manually tuned and identified, and d) RNAV operations do not require its use, refer to Navigation Equipment Tab (this manual) for RNAV Minimum Requirements . Repetitive Check Required (Yellow Placard)

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MEL ITEM	TAB LOCATION	PLACARD TEXT
34-63-01A	Captain's MCDU	Flight Management System INOP
34-63-01B	1. Captain's MCDU 2. GPWS Terrain Override FAIL Switchlight	1. FMS Computer INOP 2. EGPWS INOP
34-63-01C	Affected MCDU	_____ MCDU INOP
34-63-01D	Captain's MCDU	FMS Navigation Database INOP / Out of Date

OPERATIONS NOTE:

1. If dispatched with FMS inoperative, you will need to select the ARC or ROSE mode. Choosing either will allow you to get heading information on the NAV Display.
2. With (1) FMC inoperative and for aircraft with operative FMS switching provisions, place the FMS selector (If installed) on the OVHD panel to the operative FMC.
If there is no FMS selector on the OVHD panel, the aircraft does not have dual FMC's installed.

(O) PROCEDURES

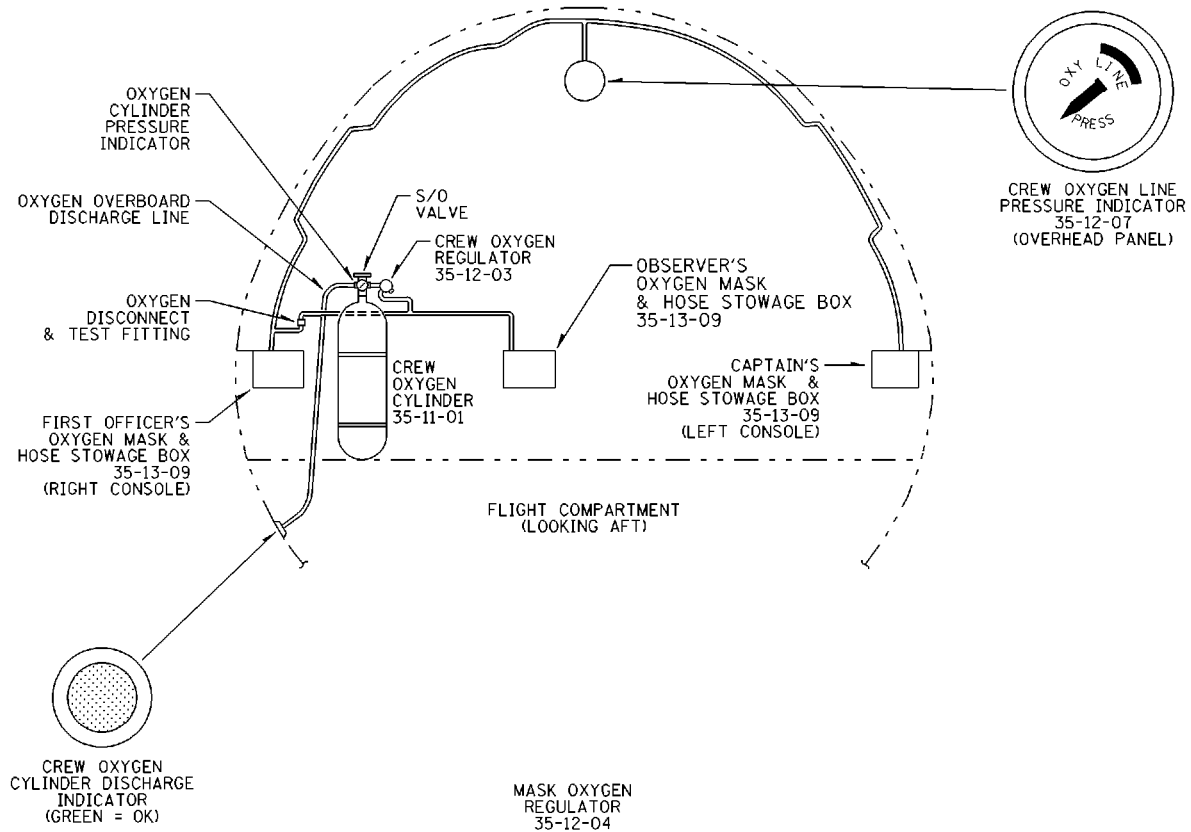
34-63-01D

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. 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
CREW OXYGEN SYSTEM					
35-11-01A	Oxygen Line Pressure Gauge (Overhead Panel)	Y	1	0	C (O) May be inoperative provided: a) Direct reading gauge on the crew oxygen bottle indicates normal pressure, and b) Crew oxygen system is checked PRIOR TO EACH DEPARTURE. Repetitive Check Required (Yellow Placard)
35-11-01B	Green Blow Out Disk	Y	1	0	C (O) May be damaged or missing.

MEL ITEM	TAB LOCATION	PLACARD TEXT
35-11-01A	Oxygen Line Pressure Gauge	Oxygen Line Pressure Gauge INOP
35-11-01B	Aircraft Logbook	Green Oxygen Blow Out Disk Missing

(O) PROCEDURES

35-11-01A

1. Ensure crew oxygen cylinder contains sufficient oxygen supply for dispatch.
 - a. Verify that the direct reading gauge on the crew oxygen bottle indicates normal pressure.

NOTE: The pressure gauge indicates cylinder pressure with the shutoff valve in either the open or closed position.

2. Verify shutoff valve is in the open position on the crew oxygen cylinder.
3. Refer to the [Operations Manual, Volume 1](#), Supplementary Procedures, Airplane General, Emergency Equipment, Doors, Windows, Oxygen Mask and Interphone Test.

35-11-01B

1. Ensure crew oxygen cylinder contains sufficient oxygen supply for dispatch.
 - a. Verify that the direct reading gauge on the crew oxygen bottle indicates normal pressure.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
PASSENGER OXYGEN SYSTEM					
35-21-01A	Passenger Oxygen System "DISP.APPR.REQ'D."	Y	1	0	B (O) May be inoperative provided: a) The flight is not conducted where the minimum enroute altitude is above 14,000 ft. MSL, b) Both Air Conditioning Packs operate normally, c) All other components of the pressurization system operate normally, d) The airplane remains at or below FL 250, e) Portable oxygen units are provided for 10% of the passengers, and f) Passengers are appropriately briefed.
35-21-01B	Passenger Oxygen System "DISP.APPR.REQ'D."	Y	1	0	B (O) May be inoperative provided flight is conducted at or below 10,000 ft. MSL.
35-21-01C	Automatic Door Opening Function "DISP.APPR.REQ'D."	N	1	0	C (O)(M) May be inoperative provided: a) All oxygen doors are CLOSED and LATCHED, b) Manual Oxygen Door Deploy System is operative, and c) The airplane remains at or below FL 300.
35-21-01D	Oxygen Compartment Doors "DISP.APPR.REQ'D."	N	-	0	B (M) May be inoperative provided: a) Associated oxygen door is UNLATCHED and masks secured, and b) Associated seats are blocked.
35-21-01E	Oxygen Compartment Doors "DISP.APPR.REQ'D."	N	-	0	B (O)(M) May be inoperative provided: a) Associated oxygen door is UNLATCHED and masks secured, b) Passengers occupying associated seats are briefed on access to oxygen masks, and c) The airplane remains at or below FL 300.
35-21-01F	Oxygen Compartment Doors "DISP.APPR.REQ'D."	N	-	0	B (M) May be inoperative provided: a) Associated Oxygen Door is LATCHED, and b) Associated seats are BLOCKED.

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NUMBER INSTALLED			NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD			REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
	PASSENGER OXYGEN SYSTEM (Continued)				
35-21-01G	PSU Oxygen Generator / Container "DISP.APPR.REQ'D."	N	-	-	B (M) May be inoperative provided: a) Associated oxygen door is CLOSED and masks secured, b) Associated oxygen generators / containers are not leaking, and c) Associated seats are BLOCKED.
35-21-01H	Lavatory Oxygen "DISP.APPR.REQ'D."	Y	3	0	C May be inoperative provided: a) Associated lavatory door is locked CLOSED and placarded "INOPERATIVE – DO NOT ENTER", and b) Associated lavatory is not used for any purpose. NOTE: These provisos are not intended to prohibit lavatory inspections by crewmembers.

NOTE: These provisos are not intended to prohibit lavatory inspections by crewmembers.

MEL ITEM	TAB LOCATION	PLACARD TEXT
35-21-01A	Passenger Oxygen Mask Switch	Passenger Oxygen System INOP
35-21-01B	Passenger Oxygen Mask Switch	Passenger Oxygen System INOP
35-21-01C	Passenger Oxygen Mask Switch	Automatic Door Opening Function of Passenger Oxygen System INOP
35-21-01D	Passenger Oxygen Mask Switch	___ Oxygen Compartment Doors INOP
35-21-01E	Passenger Oxygen Mask Switch	___ Oxygen Compartment Doors INOP
35-21-01F	Passenger Oxygen Mask Switch	___ Oxygen Compartment Doors INOP
35-21-01G	Passenger Oxygen Mask Switch	___ Oxygen Generator INOP
35-21-01H	Passenger Oxygen Mask Switch	___ Lavatory Oxygen INOP

(O) PROCEDURES

35-21-01A

1. Verify minimum enroute altitude is not greater than 14,000 feet MSL.
2. Limit flight altitude to a maximum of FL 250.
3. Modify passenger briefing to accommodate this operation.

35-21-01B

Limit flight altitude to a maximum of 10,000 ft. MSL.

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35-21-01C

Limit flight altitude to a maximum of FL 300.

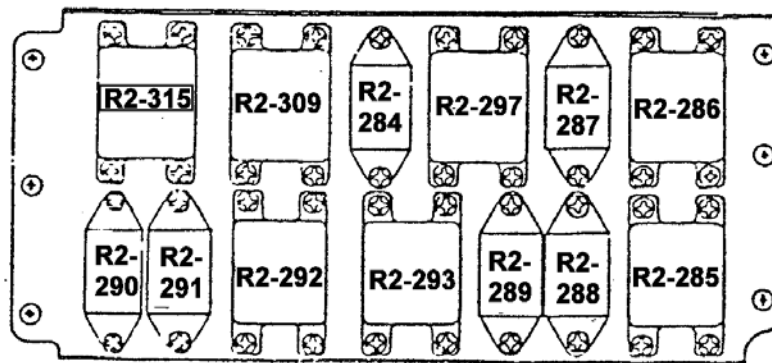
35-21-01E

1. No procedure required if affected seats are blocked.
2. If affected seats are occupied, limit flight altitude to a maximum of FL 300, and brief passengers on access to masks.

(M) PROCEDURES

35-21-01C

1. Remove the ground wire from terminal X2 of oxygen mask eject relay R2-315. The relay is located in the E & E Compartment Stairwell Relay Panel.
2. Close doors and reopen using OXY MASK EJECT switch.
3. Block seats for any doors which did not open.
4. Close remaining doors.
5. Install placard in cockpit next to OXY MASK EJECT switch to state Auto Opening Feature is inoperative.



E / E Stairwell Relay Panel

35-21-01D, 35-21-01E

1. Block off affected seat(s) if aircraft is to be flown above FL 300.
2. If affected seat(s) is to be occupied, secure door(s) in the closed position in a manner which will allow quick access by passengers in the event oxygen is required.

35-21-01F, 35-21-01G

Block off affected seats and placard door(s).

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
35-22-01	CABIN OXYGEN ON Annunciation System (Advisory)	Y	1	0	C

MEL ITEM	TAB LOCATION	PLACARD TEXT
35-22-01	Cabin Oxygen On Light (EOAP)	CABIN OXYGEN ON 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
35-31-01A	Portable Oxygen Dispensing Units (Bottle and Mask) "Contact MCC" (All A/C except those with 160 Seat Passenger Configuration)	Y	5	3	C (O)(M) May be inoperative provided: a) Remaining bottles are distributed evenly throughout the passenger cabin, b) Bottles not properly serviced are replaced, serviced, or removed at the next available maintenance facility, and c) Maintenance Control Center is notified regarding the unserviceable bottle and location of the removed mask assembly.
35-31-01B	Portable Oxygen Dispensing Units (Bottle and Mask) "Contact MCC" (A/C with 160 Seat Passenger Configuration)	Y	5	4	C (O)(M) May be inoperative provided: a) Remaining bottles are distributed evenly throughout the passenger cabin, b) Bottles not properly serviced are replaced, serviced, or removed at the next available maintenance facility, and c) Maintenance Control Center is notified regarding the unserviceable bottle and location of the removed mask assembly.

MEL ITEM	TAB LOCATION	PLACARD TEXT
35-31-01A	Aircraft Logbook	____ Portable Oxygen Dispensing Unit(s) INOP
35-31-01B	Aircraft Logbook	____ Portable Oxygen Dispensing Unit(s) INOP

(O) PROCEDURES

35-31-01A, 35-31-01B

Ensure cabin crew (Flight Leader) is notified of the unserviceable bottle and its location.

(M) PROCEDURES

35-31-01A, 35-31-01B

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.
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.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
35-35-01	Protective Breathing Equipment (PBE) Seals (Smoke Hood Red Rope Seals)	Y	6	- C	(M) Seals may be broken or missing. NOTE: All PBE's must be airworthy.

MEL ITEM	TAB LOCATION	PLACARD TEXT
35-35-01	Aircraft Logbook	___ PBE Smoke Hood Seal(s) Broken / Missing

(M) PROCEDURES

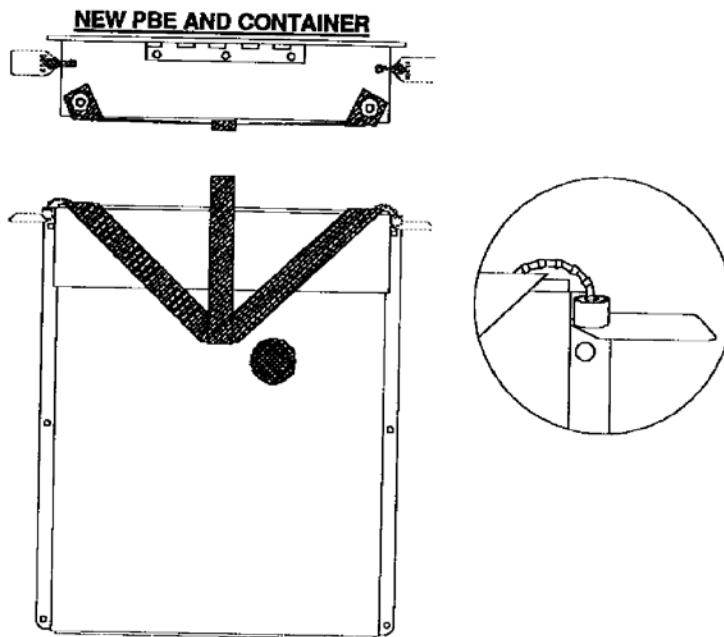
ONE SEAL BROKEN OR MISSING:

With one seal missing, the PBE is airworthy.

NOTE: Install the 2nd seal prior to flight or at the next available Delta maintenance station.
(Spare seals are located in the Aircraft Log Book.)

BOTH SEALS BROKEN OR MISSING: Maintenance is required and Flight Crew may not placard.

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, replace the PBE.



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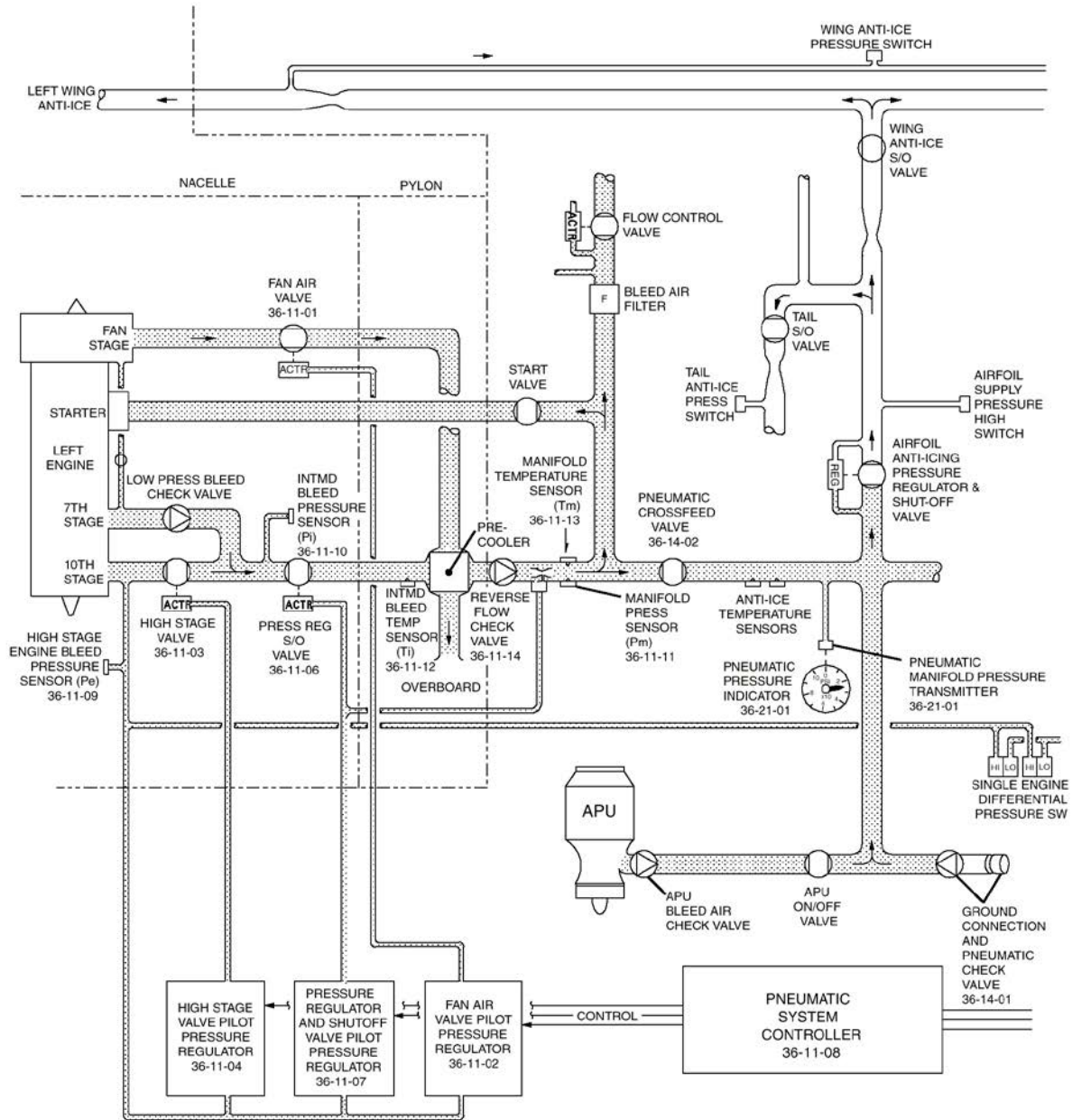
SEAL REPLACEMENT

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.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
36-11-01A	Fan Air Valve "DISP.APPR.REQ'D."	N	2	1	C (O)(M) May be inoperative provided: a) Affected Valve is in the CLOSED position, b) Associated Pneumatic Crossfeed Valve is CLOSED after engine start, c) Flight is not made in known or forecast icing conditions, d) Associated Air Conditioning Supply Switch is OFF, and e) Associated Air Conditioning System is considered inoperative and deferred per MEL 21-51-01A.
36-11-01B	Fan Air Valves "DISP.APPR.REQ'D."	N	2	0	C (O)(M) May be inoperative provided: a) Affected Valves are in the CLOSED position, b) Associated Pneumatic Crossfeed Valves are CLOSED after engine start, c) Flight is not made in known or forecast icing conditions, d) Both Air Conditioning Supply Switches are OFF, and e) Both Air Conditioning Systems are considered inoperative and deferred per MEL 21-51-01B.
36-11-01C	Fan Air Valve "DISP.APPR.REQ'D."	N	2	1	C (O)(M) May be inoperative provided: a) Affected Valve is inoperative in the OPEN position, b) Flight is not made in known or forecast icing conditions, and c) Performance penalties are applied.
36-11-01D	Fan Air Valves "DISP.APPR.REQ'D."	N	2	0	C (O)(M) May be inoperative provided: a) Affected valves are inoperative in the OPEN position, b) Flight is not made in known or forecast icing conditions, and c) Performance penalties are applied.

MEL ITEM	TAB LOCATION	PLACARD TEXT
36-11-01A	1. Associated Pneumatic Crossfeed Valve Lever 2. Associated A/C SUPPLY Switch	1. ____ Fan Air Valve INOP CLOSED 2. Close ____ Pneumatic X-feed After Engine Start 3. Do Not Use ____ A/C System
36-11-01B	1. Pneumatic Crossfeed Valve Levers 2. A/C SUPPLY Switches	1. Fan Air Valves INOP CLOSED 2. Close both Pneumatic X-feed After Engine Start 3. Do Not Use A/C Systems
36-11-01C	Ice Protection Panel	____ Fan Air Valve INOP OPEN
36-11-01D	Ice Protection Panel	____ Fan Air Valve(s) INOP OPEN

CONTINUED NEXT PAGE

(O) PROCEDURES

36-11-01A

1. Flight is not permitted in known or forecast icing conditions.
2. Close affected crossfeed valve after engine start.
3. Select affected air conditioning supply switch to OFF.
4. Limit flight altitude to a maximum of FL 250.

36-11-01B

1. Flight is not permitted in known or forecast icing conditions.
2. Close crossfeed valves after engine start.
3. Select air conditioning supply switches to OFF.
4. Refer to [QRH](#), Non-Normal Checklist, Section 2, Air Systems, Unpressurized Flight.
5. Limit flight altitude to a maximum of 10,000 ft. MSL.

36-11-01C

1. Flight is not permitted in known or forecast icing conditions.
2. Close crossfeed valves after engine start.
3. Apply the following Performance Corrections:

36-11-01C	FAN AIR VALVE
EFFECTIVITY	All
FLIGHT PLANNING REQUIREMENTS	1. Reduce ENROUTE LIMIT WT by 6,300 lbs. 2. Increase BLOCK FUEL by 3.0%.
NOTES	Make a notation on the Flight Plan when Enroute Climb is limiting.
AWABS	Performance corrections have been applied.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF 1. Reduce RATOW by 4,200 lbs. 2. Reduce T/O CLIMB LIMIT by 4,200 lbs. LANDING 1. Reduce RWY ALLOWABLE LANDING WT by 2,000 lbs. 2. Reduce LANDING CLIMB LIMIT WT by 2,000 lbs. OTHER CORRECTIONS 1. Determine V-Speeds from ODM Takeoff Section charts for applicable Thrust/Flap setting and enter with the actual takeoff weight increased by the MEL takeoff weight penalty of 4,200 lbs. 2. Determine all other speeds at actual operating weight.

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36-11-01D

1. Flight is not permitted in known or forecast icing conditions.
2. Close crossfeed valves after engine start.
3. Apply the following Performance Corrections:

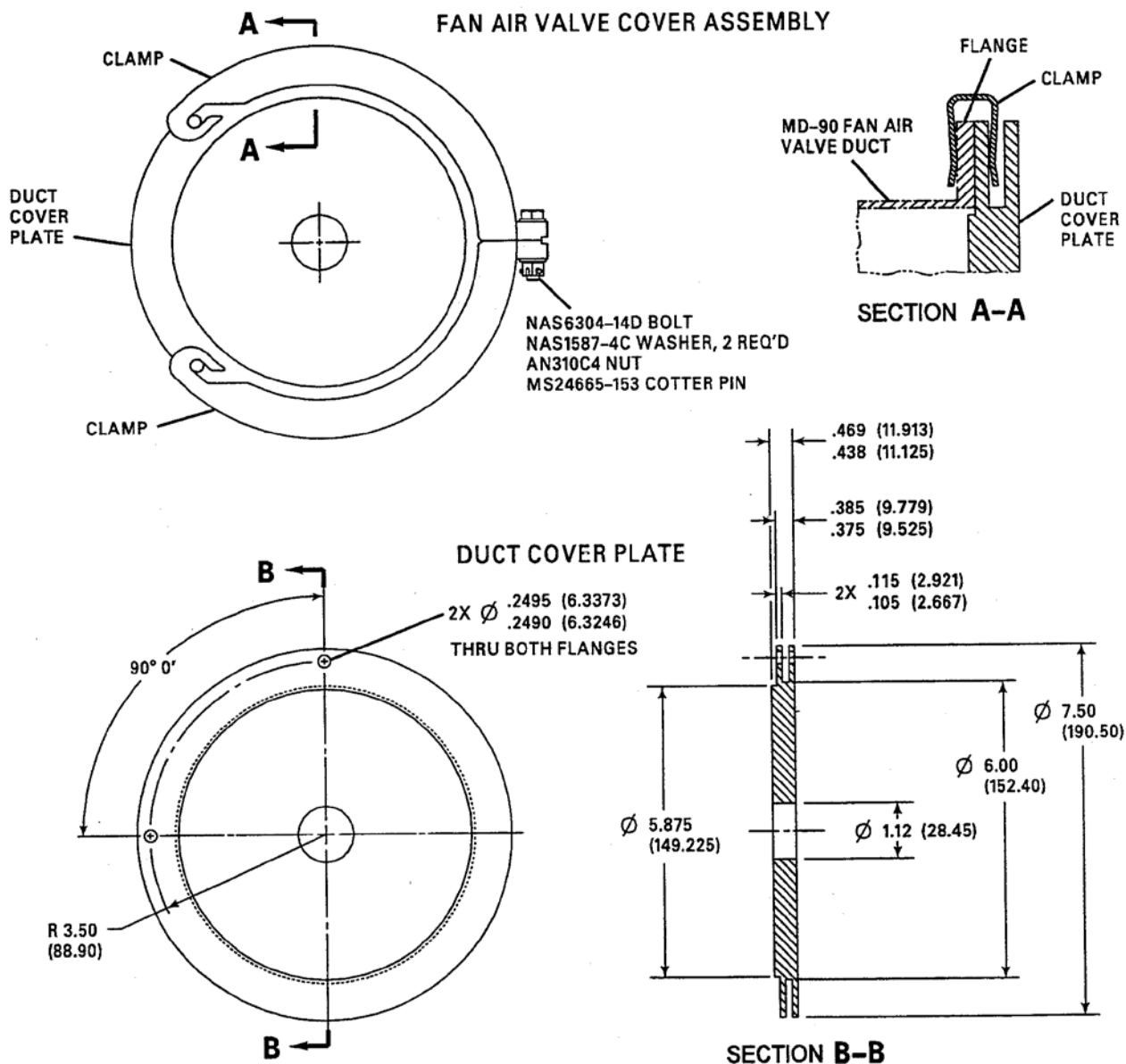
36-11-01D	FAN AIR VALVES
EFFECTIVITY	All
FLIGHT PLANNING REQUIREMENTS	1. Reduce ENROUTE LIMIT WT by 12,500 lbs. 2. Increase BLOCK FUEL by 6.0%.
NOTES	Make a notation on the Flight Plan when Enroute Climb is limiting.
AWABS	Performance corrections have been applied.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF 1. Reduce RATOW by 8,400 lbs. 2. Reduce T/O CLIMB LIMIT by 8,400 lbs. LANDING 1. Reduce RWY ALLOWABLE LANDING WT by 4,000 lbs. 2. Reduce LANDING CLIMB LIMIT WT by 4,000 lbs. OTHER CORRECTIONS 1. Determine V-Speeds from ODM Takeoff Section charts for applicable Thrust/Flap setting and enter with the actual takeoff weight increased by the MEL takeoff weight penalty of 8,400 lbs. 2. Determine all other speeds at actual operating weight.

(M) PROCEDURES

36-11-01A, 36-11-01B

Install the Fan Air Valve Duct Cover Assembly at the inlet to the associated precooler.

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MATERIAL: 17-4 PH STAINLESS STEEL
HEAT TREAT TO H900
PER DPS 5.00

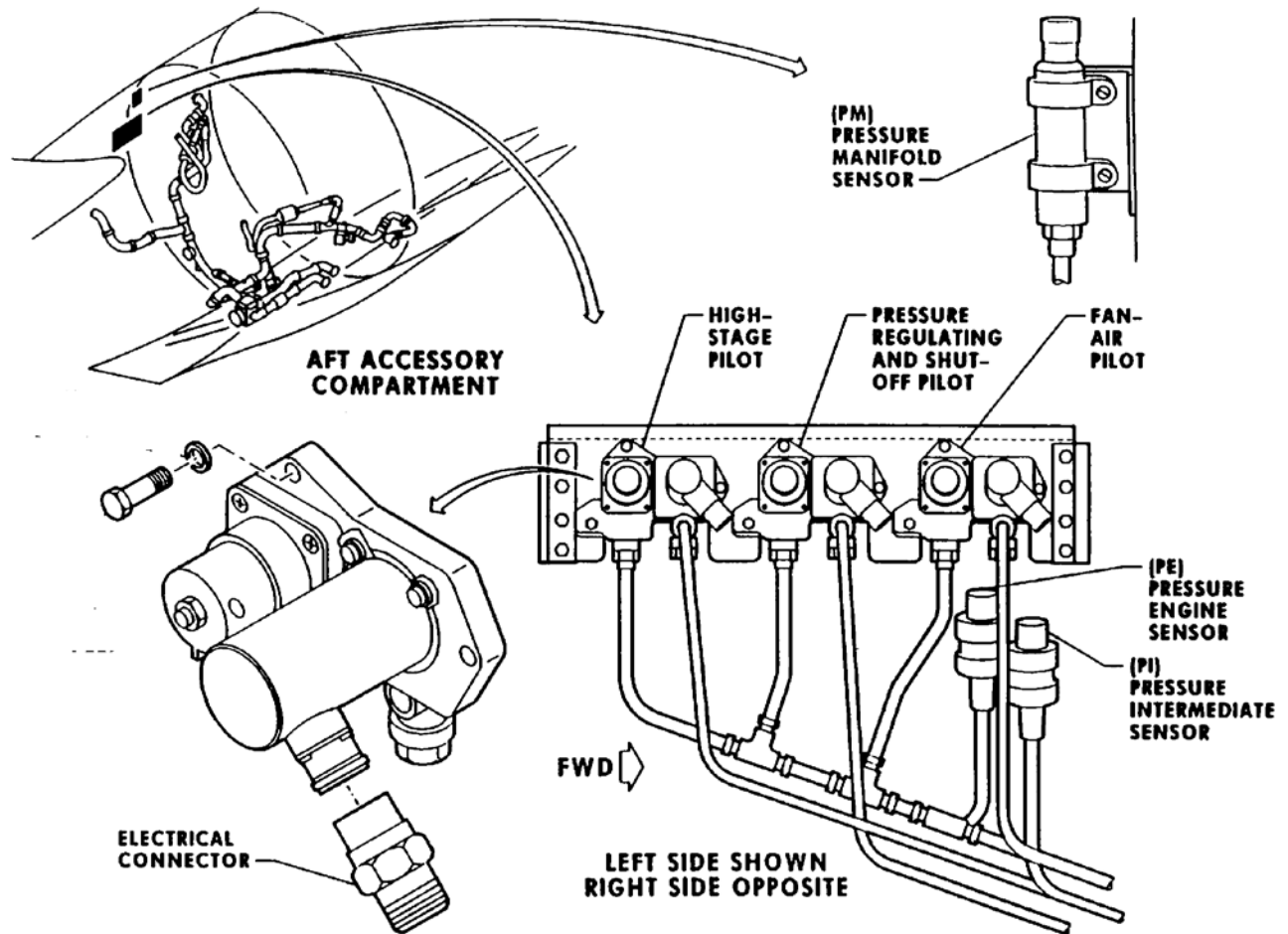
TOLERANCES: ANGLES $\pm 0^\circ 30'$
3 PLACE DECIMAL $\pm .015$ (0.38)
2 PLACE DECIMAL $\pm .03$ (0.8)

NOTE: UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE
IN INCHES. METRIC SYSTEM EQUIVALENTS IN
PARENTHESES ARE IN MILLIMETERS.

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36-11-01C, 36-11-01D

Disconnect the associated electrical connector from the fan air valve pilot pressure regulator. The valve will be spring-driven full open



NUMBER INSTALLED			NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD			REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
36-11-02A	Fan Air Valve Pilot Pressure Regulators "DISP.APPR.REQ'D."	N 2	1	C	(O)(M) May be inoperative provided: a) Affected valve is in the CLOSED position, b) Associated Pneumatic crossfeed Valve is CLOSED after engine start, c) Flight is not made in known or forecast icing conditions, d) Associated Air Conditioning Supply Switch is OFF, and e) Associated Air Conditioning System is considered inoperative and deferred per MEL 21-51-01A .
36-11-02B	Fan Air Valve Pilot Pressure Regulators "DISP.APPR.REQ'D."	N 2	0	C	(O)(M) May be inoperative provided: a) Associated valves are in the CLOSED position, b) Associated Pneumatic crossfeed Valves are CLOSED after engine start, c) Flight is not made in known or forecast icing conditions, d) Both Air Conditioning Supply Switches are OFF, and e) Both Air Conditioning Systems are considered inoperative and deferred per MEL 21-51-01B .
36-11-02C	Fan Air Valve Pilot Pressure Regulators "DISP.APPR.REQ'D."	N 2	1	C	(O)(M) May be inoperative provided: a) Affected valve is in the OPEN position, b) Flight is not made in known or forecast icing conditions, and c) Performance penalties are applied .
36-11-02D	Fan Air Valve Pilot Pressure Regulators "DISP.APPR.REQ'D."	N 2	0	C	(O)(M) May be inoperative provided: a) Associated valves are in the OPEN position, b) Flight is not made in known or forecast icing conditions, and c) Performance penalties are applied .

MEL ITEM	TAB LOCATION	PLACARD TEXT
36-11-02A	1. Associated Pneumatic Crossfeed Valve Lever 2. Associated A/C SUPPLY Switch	1. ____ Fan Air Valve Pilot Pressure Regulator INOP 2. Close ____ Pneumatic X-feed After Engine Start 3. Do Not Use ____ A/C System
36-11-02B	1. Pneumatic Crossfeed Valve Levers 2. A/C SUPPLY Switches	1. Fan Air Valve Pilot Pressure Regulators INOP 2. Close both Pneumatic X-feed After Engine Start 3. Do Not Use A/C Systems

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MEL ITEM	TAB LOCATION	PLACARD TEXT
36-11-02C	Ice Protection Panel	____ Fan Air Valve Pilot Pressure Regulators INOP
36-11-02D	Ice Protection Panel	____ Fan Air Valve Pilot Pressure Regulator(s) INOP

(O) PROCEDURES

36-11-02A

1. Flight is not permitted in known or forecast icing conditions.
2. Close affected crossfeed valve after engine start.
3. Select affected air conditioning supply switch to OFF.
4. Limit flight altitude to a maximum of FL 250.

36-11-02B

1. Flight is not permitted in known or forecast icing conditions.
2. Close crossfeed valves after engine start.
3. Select air conditioning supply switches to OFF.
4. Refer to [QRH](#), Non-Normal Checklist, Section 2, Air Systems, Unpressurized Flight.
5. Limit flight altitude to a maximum of 10,000 ft. MSL.

36-11-02C

1. Flight is not permitted in known or forecast icing conditions.
2. Close crossfeed valves after engine start.
3. Apply the following Performance Corrections:

36-11-02C	FAN AIR VALVE PILOT PRESSURE REGULATORS
EFFECTIVITY	All
FLIGHT PLANNING REQUIREMENTS	1. Reduce ENROUTE LIMIT WT by 6,300 lbs. 2. Increase BLOCK FUEL by 3.0%.
NOTES	Make a notation on the Flight Plan when Enroute Climb is limiting.
AWABS	Performance corrections have been applied.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF 1. Reduce RATOW by 4,200 lbs. 2. Reduce T/O CLIMB LIMIT by 4,200 lbs. LANDING 1. Reduce RWY ALLOWABLE LANDING WT by 2,000 lbs. 2. Reduce LANDING CLIMB LIMIT WT by 2,000 lbs. OTHER CORRECTIONS 1. Determine V-Speeds from ODM Takeoff Section charts for applicable Thrust/Flap setting and enter with the actual takeoff weight increased by the MEL takeoff weight penalty of 4,100 lbs. 2. Determine all other speeds at actual operating weight.

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36-11-02D

1. Flight is not permitted in known or forecast icing conditions.
2. Close crossfeed valves after engine start.
3. Apply the following Performance Corrections:

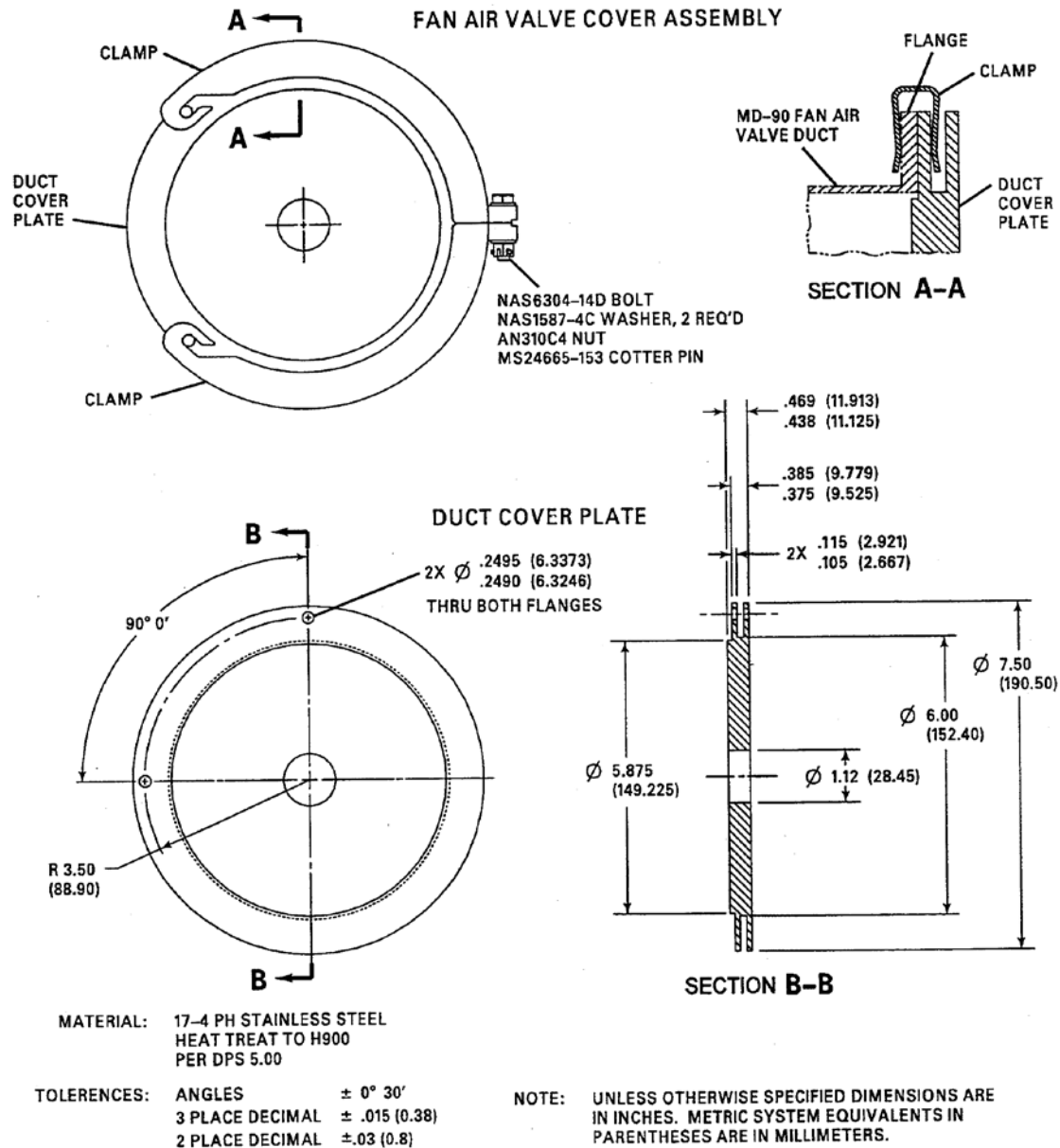
36-11-02D	FAN AIR VALVE PILOT PRESSURE REGULATORS
EFFECTIVITY	All
FLIGHT PLANNING REQUIREMENTS	1. Reduce ENROUTE LIMIT WT by 12,500 lbs. 2. Increase BLOCK FUEL by 6.0%.
NOTES	Make a notation on the Flight Plan when Enroute Climb is limiting.
AWABS	Performance corrections have been applied.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF 1. Reduce RATOW by 8,400 lbs. 2. Reduce T/O CLIMB LIMIT by 8,400 lbs. LANDING 1. Reduce RWY ALLOWABLE LANDING WT by 4,000 lbs. 2. Reduce LANDING CLIMB LIMIT WT by 4,000 lbs. OTHER CORRECTIONS 1. Determine V-Speeds from ODM Takeoff Section charts for applicable Thrust/Flap setting and enter with the actual takeoff weight increased by the MEL takeoff weight penalty of 8,200 lbs. 2. Determine all other speeds at actual operating weight.

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(M) PROCEDURES

36-11-02A, 36-11-02B

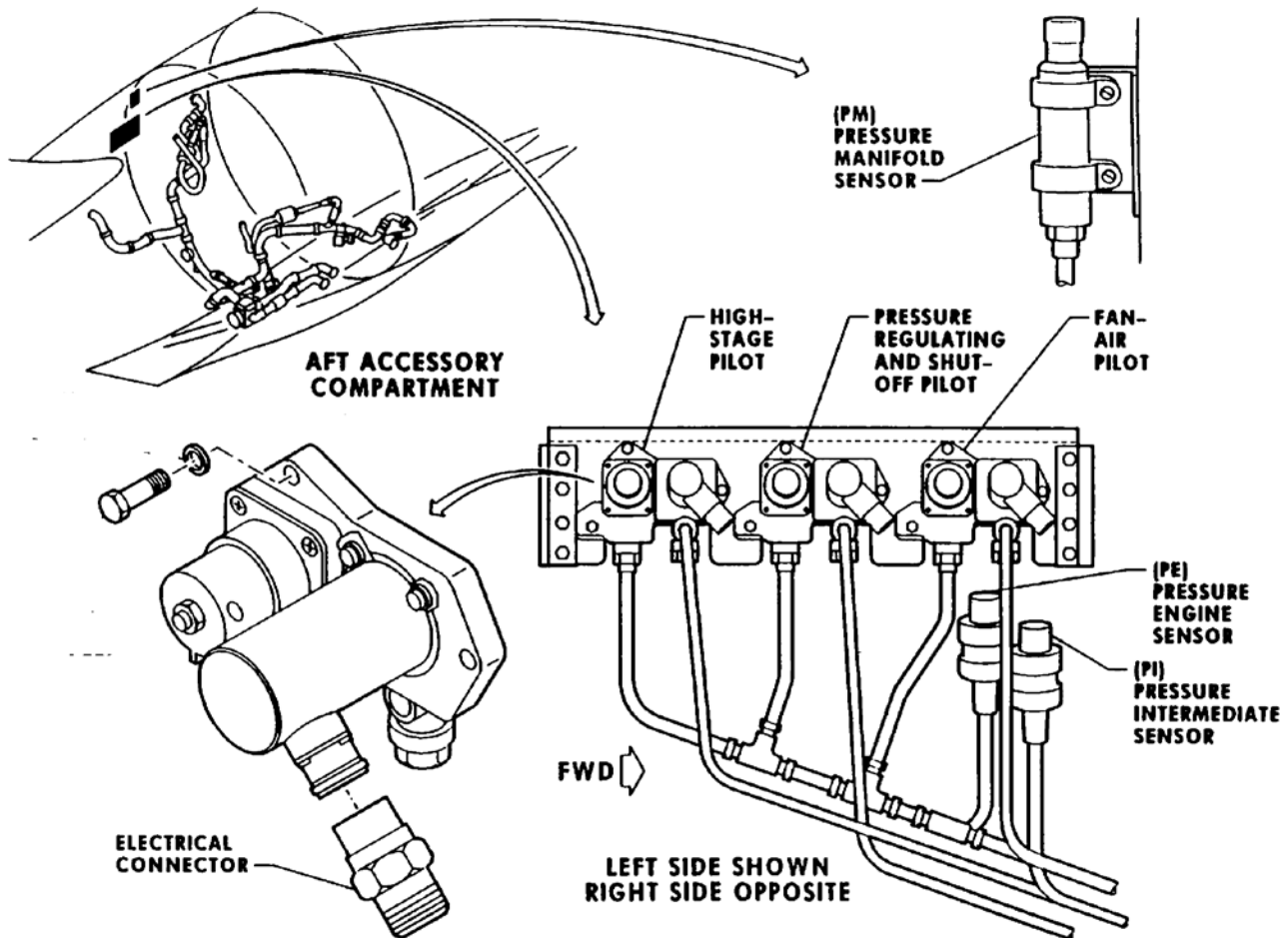
Install the Fan Air Valve Duct Cover Assembly at the inlet to the associated precooler.



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36-11-02C, 36-11-02D

Disconnect the associated electrical connector from the fan air valve pilot pressure regulator. The valve will be spring-driven full open.



NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
36-11-03A	High Stage Valve "DISP.APPR.REQ'D."	N	2	1	C (O)(M) May be inoperative CLOSED provided: a) Affected Valve is secured in the CLOSED position, b) Flight is not made in known or forecast icing conditions, and c) Associated Pneumatic Crossfeed Valve is CLOSED after engine start.
36-11-03B	High Stage Valve "DISP.APPR.REQ'D."	N	2	0	C (O)(M) May be inoperative OPEN provided: a) Flight is not made in known or forecast icing conditions, b) Associated Pneumatic Crossfeed Valve is CLOSED after engine start, c) Both Air Conditioning Supply Switches remain OFF, and d) Both Air Conditioning Systems are considered inoperative and deferred per MEL 21-51-01B .

MEL ITEM	TAB LOCATION	PLACARD TEXT
36-11-03A	Associated Pneumatic Crossfeed Valve Lever	1. ____ High Stage Valve INOP CLOSED 2. Close ____ Pneumatic X-feed After Engine Start
36-11-03B	1. Pneumatic Crossfeed Valve Levers 2. A/C SUPPLY Switches	1. High Stage Valves INOP CLOSED 2. Close both Pneumatic X-feed After Engine Start 3. Do Not Use A/C Systems

(O) PROCEDURES

36-11-03A

- Flight is not permitted in known or forecast icing conditions.
- Close affected crossfeed valve after engine start.
- Select air conditioning supply on affected side to HP BLD OFF.
- If icing is inadvertently encountered, select airfoil ice protection ON. Open only the pneumatic crossfeed valve associated with the operative High Stage Valve.

36-11-03B

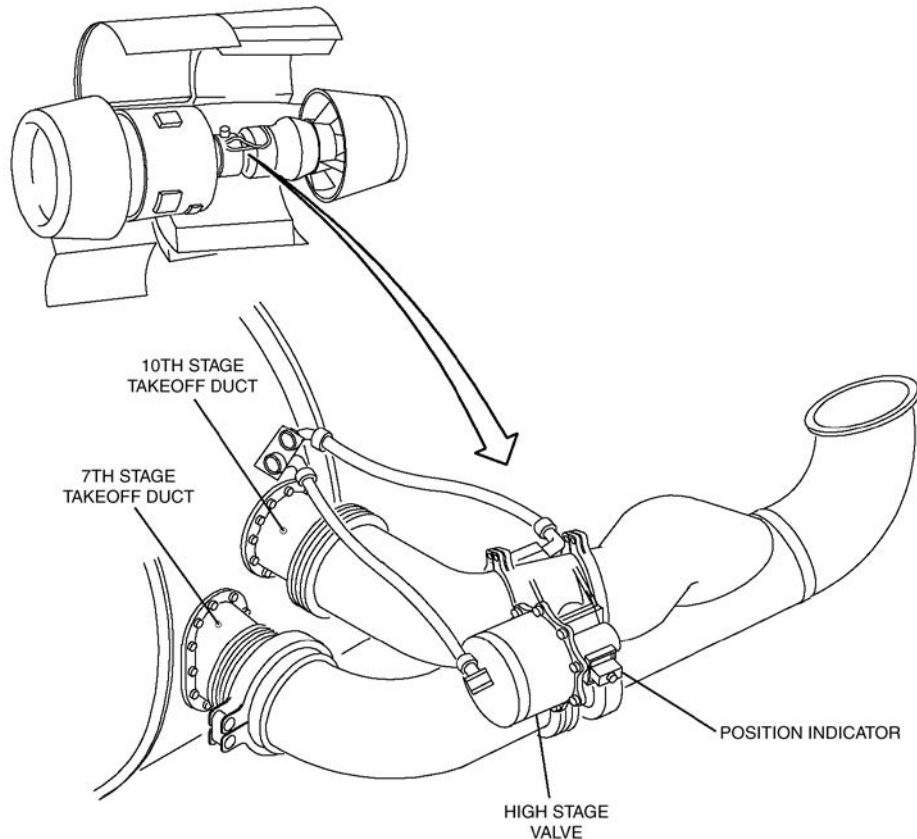
- Flight is not permitted in known or forecast icing conditions.
- Close affected crossfeed valve after engine start.
- Select both air conditioning supply switches to OFF.
- Refer to [QRH](#), Non-Normal Checklist, Section 2, Air Systems, Unpressurized Flight.
- Limit flight altitude to a maximum of 10,000 ft. MSL.

CONTINUED NEXT PAGE

(M) PROCEDURES

36-11-03A

1. Disconnect electrical connector from High Stage Pilot Valve located in the aft accessory compartment.
2. Gain access to the High Stage Valve.
3. The High Stage Valve is normally spring-loaded closed, and its position can be verified from a visual indicator on the valve. Manually secure the valve in the closed position as follows.
 - a. Loosen the position indicator/retaining screw.
 - b. Slide the lock into the recess in the cover plate.
 - c. Tighten the position indicator/retaining screw.



36-11-03B

Select both AIR CONDITIONING SUPPLY switches to OFF.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
36-11-04A	High Stage Valve Pilot Pressure Regulator "DISP.APPR.REQ'D."	N	2	1	C (O)(M) May be inoperative provided: a) Associated High Stage Valve is secured in the CLOSED position, b) Flight is not made in known or forecast icing conditions, and c) Associated Pneumatic Crossfeed Valve is CLOSED after engine start.
36-11-04B	High Stage Valve Pilot Pressure Regulator "DISP.APPR.REQ'D."	N	2	0	C (O)(M) May be inoperative provided: a) Flight is not made in known or forecast icing conditions, b) Associated Pneumatic Crossfeed Valve is CLOSED after engine start, c) Both Air Conditioning Supply Switches remain OFF, and d) Both Air Conditioning Systems are considered inoperative and deferred per MEL 21-51-01B.

MEL ITEM	TAB LOCATION	PLACARD TEXT
36-11-04A	Associated Pneumatic Crossfeed Valve Lever	1. ____ High Stage Valve Pilot Pressure Regulator INOP 2. Close ____ Pneumatic X-feed After Engine Start
36-11-04B	1. Pneumatic Crossfeed Valve Levers 2. A/C SUPPLY Switches	1. High Stage Valves Pilot Pressure Regulator INOP 2. Close both Pneumatic X-feed After Engine Start 3. Do Not Use A/C Systems

(O) PROCEDURES

36-11-04A

1. Flight is not permitted in known or forecast icing conditions.
2. Close affected crossfeed valve after engine start.
3. Select air conditioning supply on affected side to HP BLD OFF.
4. If icing is inadvertently encountered, select airfoil ice protection ON. Open only the pneumatic crossfeed valve associated with the operative High Stage Valve.

36-11-04B

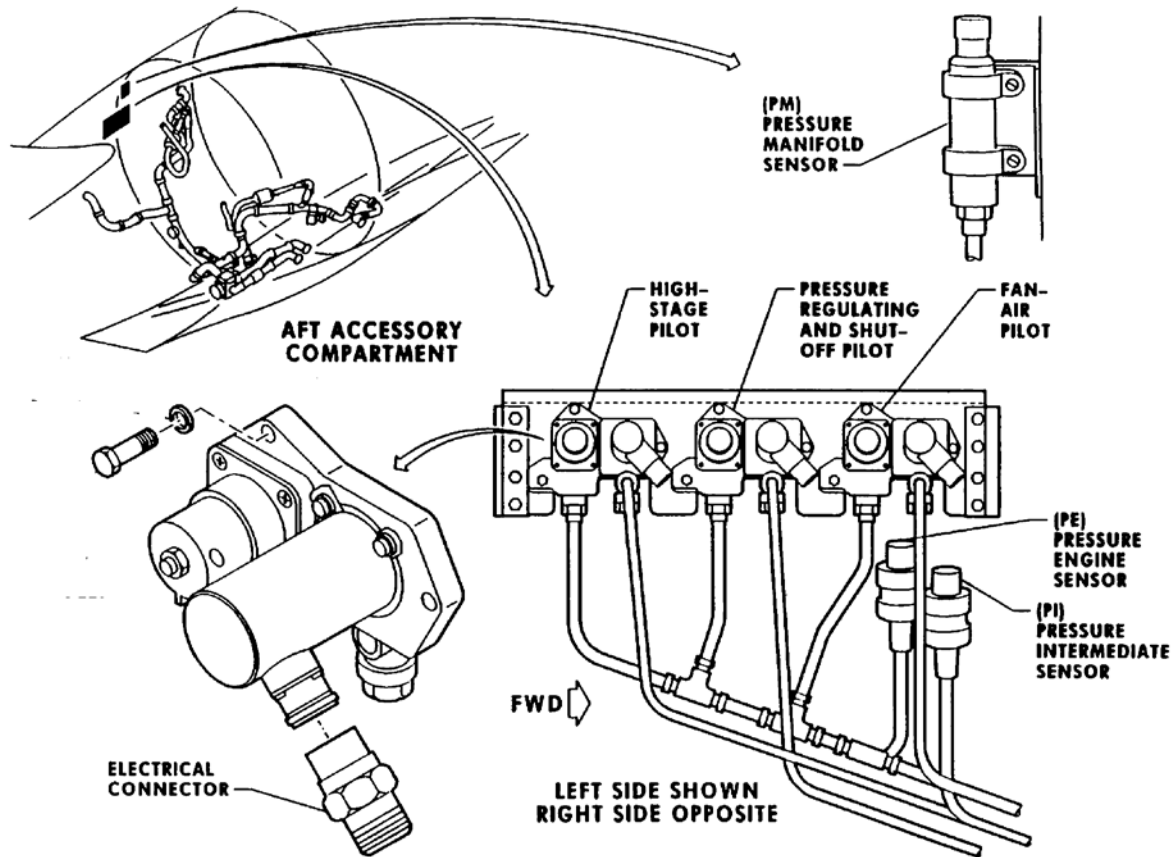
1. Flight is not permitted in known or forecast icing conditions.
2. Close affected crossfeed valve after engine start.
3. Select both air conditioning supply switches to OFF.
4. Refer to [QRH](#), Non-Normal Checklist, Section 2, Air Systems, Unpressurized Flight.
5. Limit flight altitude to a maximum of 10,000 ft. MSL.

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(M) PROCEDURES

36-11-04A

1. Disconnect electrical connector from High Stage Pilot Valve located in the aft accessory compartment.
2. Gain access to the High Stage Valve.
3. The High Stage Valve is normally spring-loaded closed, and its position can be verified from a visual indicator on the valve. Manually secure the valve in the closed position as follows.
 - a. Loosen the position indicator/retaining screw.
 - b. Slide the lock into the recess in the cover plate.
 - c. Tighten the position indicator/retaining screw.



36-11-04B

Select both AIR CONDITIONING SUPPLY switches to OFF.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
36-11-06A	Pressure Regulator and Shutoff Valve (PRSOV) "DISP.APPR.REQ'D."	N	2	1	C (O) May be inoperative provided: a) Associated Pneumatic Crossfeed Valve is CLOSED after engine start, b) Flight is not made in known or forecast icing conditions, c) Associated Air Conditioning Supply Switch is OFF, and d) Associated Air Conditioning System is not used.
36-11-06B	Pressure Regulator and Shutoff Valve (PRSOV) "DISP.APPR.REQ'D."	N	2	0	C (O) May be inoperative provided: a) Associated Pneumatic Crossfeed Valves are CLOSED after engine start, b) Flight is not made in known or forecast icing conditions, c) Both Air Conditioning Supply Switches are OFF, and d) Both Air Conditioning Systems are not used.

MEL ITEM	TAB LOCATION	PLACARD TEXT
36-11-06A	1. Associated Pneumatic Crossfeed Valve Lever 2. Associated A/C SUPPLY Switch	1. ____ PRSOV INOP 2. Close ____ Pneumatic X-feed After Engine Start 3. Do Not Use ____ A/C System
36-11-06B	1. Pneumatic Crossfeed Valve Levers 2. A/C SUPPLY Switches	1. PRSOV INOP 2. Close both Pneumatic X-feed After Engine Start 3. Do Not Use A/C Systems

(O) PROCEDURES

36-11-06A

1. Flight is not permitted in known or forecast icing conditions.
2. Close affected crossfeed valve after engine start.
3. Select affected air conditioning supply switch to OFF.
4. Limit flight altitude to a maximum of FL 250.

36-11-06B

1. Flight is not permitted in known or forecast icing conditions.
2. Close crossfeed valves after engine start.
3. Select air conditioning supply switches to OFF.
4. Refer to [QRH](#), Non-Normal Checklist, Section 2, Air Systems, Unpressurized Flight.
5. Limit flight altitude to a maximum of 10,000 ft. MSL.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
36-11-07A	Pressure Regulator and Shutoff Valve Pilot Pressure Regulator "DISP.APPR.REQ'D."	N	2	1	C (O) May be inoperative provided: a) Associated Pneumatic Crossfeed Valve is CLOSED after engine start, b) Flight is not made in known or forecast icing conditions, c) Associated Air Conditioning Supply Switch is OFF, and d) Associated Air Conditioning System is considered inoperative and deferred per MEL 21-51-01.
36-11-07B	Pressure Regulator and Shutoff Valve Pilot Pressure Regulator "DISP.APPR.REQ'D."	N	2	0	C (O) May be inoperative provided: a) Associated Pneumatic Crossfeed Valves are CLOSED after engine start, b) Flight is not made in known or forecast icing conditions, c) Both Air Conditioning Supply Switches are OFF, and d) Both Air Conditioning Systems are considered inoperative and deferred per MEL 21-51-01B.

MEL ITEM	TAB LOCATION	PLACARD TEXT
36-11-07A	1. Associated Pneumatic Crossfeed Valve Lever 2. Associated A/C SUPPLY Switch	1. ____ PRSOV Pilot Pressure Regulator INOP 2. Close ____ Pneumatic X-feed After Engine Start 3. Do Not Use ____ A/C System
36-11-07B	1. Pneumatic Crossfeed Valve Levers 2. A/C SUPPLY Switches	1. PRSOV Pilot Pressure Regulators INOP 2. Close both Pneumatic X-feed After Engine Start 3. Do Not Use A/C Systems

(O) PROCEDURES

36-11-07A

1. Flight is not permitted in known or forecast icing conditions.
2. Close affected crossfeed valve after engine start.
3. Select affected air conditioning supply switch to OFF.
4. Limit flight altitude to a maximum of FL 250.

36-11-07B

1. Flight is not permitted in known or forecast icing conditions.
2. Close crossfeed valves after engine start.
3. Select air conditioning supply switches to OFF.
4. Refer to [QRH](#), Non-Normal Checklist, Section 2, Air Systems, Unpressurized Flight.
5. Limit flight altitude to a maximum of 10,000 ft. MSL.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
36-11-08A	Pneumatic System Controller Channels "DISP.APPR.REQ'D."	N	2	1	C (O)(M) May be inoperative provided: a) Power is removed from associated PSC Channel, b) The associated Fan Air Valve is considered inoperative in the OPEN position and deferred per MEL 36-11-01C, c) Associated Pneumatic Crossfeed Valve is CLOSED after engine start, d) Flight is not made in known or forecast icing conditions, e) Associated Air Conditioning Supply Switch is OFF, and f) Associated Air Conditioning System is not used.
36-11-08B	Pneumatic System Controller Channels "DISP.APPR.REQ'D."	N	2	0	C (O)(M) May be inoperative provided: a) Power is removed from both PSC Channels, b) Both Fan Air Valves are considered inoperative in the OPEN position and deferred per MEL 36-11-01D, c) Both Pneumatic Crossfeed Valves are CLOSED after engine start, d) Flight is not made in known or forecast icing conditions, e) Both Air Conditioning Supply Switch are OFF, and f) Both Air Conditioning Systems are not used.

MEL ITEM	TAB LOCATION	PLACARD TEXT
36-11-08A	1. Associated Pneumatic Crossfeed Valve Lever 2. Associated A/C SUPPLY Switch	1. Pneumatic System Controller Channel ____ INOP 2. Close ____ Pneumatic X-feed After Engine Start 3. Do Not Use ____ A/C System
36-11-08B	1. Pneumatic Crossfeed Valve Levers 2. A/C SUPPLY Switches	1. Both Pneumatic System Controller Channels INOP 2. Close both Pneumatic X-feed After Engine Start 3. Do Not Use A/C Systems

(O) PROCEDURES

36-11-08A

1. Flight is not permitted in known or forecast icing conditions.
2. Close affected crossfeed valve after engine start.
3. Select affected air conditioning supply switch to OFF.
4. Limit flight altitude to a maximum of FL 250.

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36-11-08B

1. Flight is not permitted in known or forecast icing conditions.
2. Close crossfeed valves after engine start.
3. Select air conditioning supply switches to OFF.
4. Refer to [QRH](#), Non-Normal Checklist, Section 2, Air Systems, Unpressurized Flight.
5. Limit flight altitude to a maximum of 10,000 ft. MSL.

(M) PROCEDURES

36-11-08A, 36-11-08B

1. Pull and secure appropriate PNEUMATIC SYS CONTROL L or R circuit breaker (R) T-26 or (L) S-26 located on EPC Panel.
2. Place affected pneumatic crossfeed valve closed after engine start.
3. Select affected air conditioning supply 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
36-11-09	High Stage Bleed Pressure Sensor (Pe)	Y	2	0	D	

MEL ITEM	TAB LOCATION	PLACARD TEXT
36-11-09	Ice Protection Panel	____ High Stage Bleed Pressure Sensor (Pe) INOP

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
36-11-10	Intermediate Bleed Pressure Sensor (Pi) "DISP.APPR.REQ'D."	N	2	0	C (O)(M) May be inoperative provided the associated High Stage Valve (s) is (are) considered inoperative in the CLOSED position and deferred per MEL 36-11-03 .

MEL ITEM	TAB LOCATION	PLACARD TEXT
36-11-10	1. Associated Pneumatic Crossfeed Valve Levers 2. Associated A/C SUPPLY Switches	1. ____ Intermediate Bleed Pressure Sensor (Pi) INOP 2. Close ____ Pneumatic X-feed After Engine Start 3. ____ A/C SUPPLY Switch to HP BLEED OFF

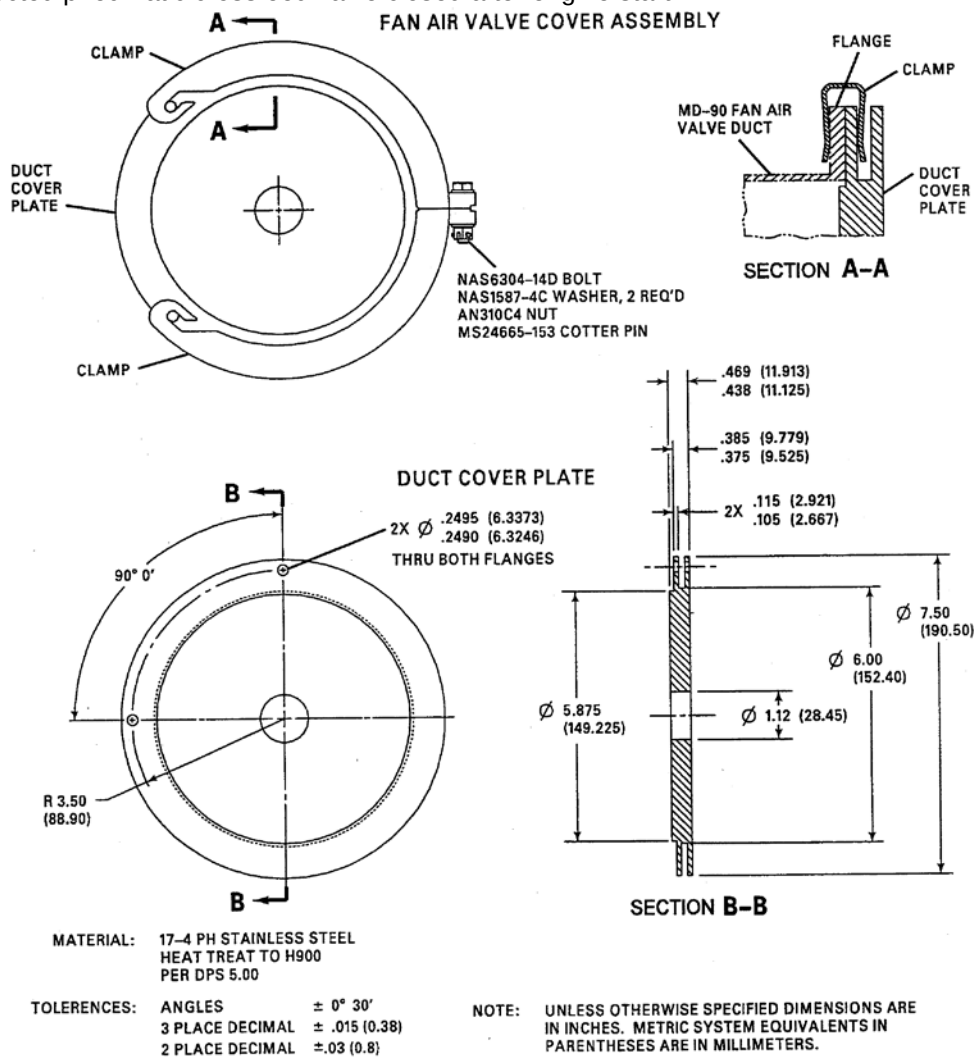
(O) PROCEDURES

1. Flight is not permitted in known or forecast icing conditions.
2. Close affected crossfeed valve after engine start.
3. Select air conditioning supply on affected side to HP BLD OFF.
4. If icing is inadvertently encountered, select airfoil ice protection ON. Open only the pneumatic crossfeed valve associated with the operative High Stage Valve.

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(M) PROCEDURES

1. Install the Fan Air Valve Duct Cover Assembly at the inlet to the associated precooler.
2. Place affected pneumatic crossfeed valve closed after engine start.



NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
36-11-11A	Manifold Pressure Sensor (Pm) "DISP.APPR.REQ'D."	N	2	1	C (O)(M) May be inoperative provided: a) Associated Pneumatic Crossfeed Valve is CLOSED after engine start, b) Flight is not made in known or forecast icing conditions, c) Associated Air Conditioning Supply Switch is OFF, and d) Associated Air Conditioning System is not used.
36-11-11B	Manifold Pressure Sensor (Pm) "DISP.APPR.REQ'D."	N	2	0	C (O)(M) May be inoperative provided: a) Both Pneumatic Crossfeed Valves are CLOSED after engine start, b) Flight is not made in known or forecast icing conditions, c) Both Air Conditioning Supply Switches are OFF, and d) Both Air Conditioning Systems are not used.

MEL ITEM	TAB LOCATION	PLACARD TEXT
36-11-11A	1. Associated Pneumatic Crossfeed Valve Lever 2. Associated A/C SUPPLY Switch	1. ____ Manifold Pressure Sensor (Pm) INOP 2. Close ____ Pneumatic X-feed After Engine Start 3. Do Not Use ____ A/C System
36-11-11B	1. Pneumatic Crossfeed Valve Levers 2. A/C SUPPLY Switches	1. Manifold Pressure Sensors (Pm) INOP 2. Close both Pneumatic X-feed After Engine Start 3. Do Not Use A/C Systems

(O) PROCEDURES

36-11-11A

1. Flight is not permitted in known or forecast icing conditions.
2. Close affected crossfeed valve after engine start.
3. Select affected air conditioning supply switch to OFF.
4. Limit flight altitude to a maximum of FL 250.

36-11-11B

1. Flight is not permitted in known or forecast icing conditions.
2. Close crossfeed valves after engine start.
3. Select air conditioning supply switches to OFF.
4. Refer to [QRH](#), Non-Normal Checklist, Section 2, Air Systems, Unpressurized Flight.
5. Limit flight altitude to a maximum of 10,000 ft. MSL.

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(M) PROCEDURES

36-11-11A, 36-11-11B

1. Place affected pneumatic crossfeed valve closed after engine start.
2. Select affected air conditioning supply 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
36-11-12	Intermediate Bleed Temperature Sensor (Ti) "DISP.APPR.REQ'D."	Y	2	0 C	May be inoperative provided: a) Associated Pneumatic Crossfeed Valve is CLOSED after engine start, and b) Flight is not made in known or forecast icing conditions.

MEL ITEM	TAB LOCATION	PLACARD TEXT
36-11-12	Associated Pneumatic Crossfeed Valve Lever	1. ____ Intermediate Bleed Temperature Sensor(s) INOP 2. Close ____ Pneumatic X-feed After Engine Start



NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
36-11-13A	Manifold Temperature Sensor (Tm) "DISP.APPR.REQ'D."	N	2	1	C (O)(M) May be inoperative provided: a) Associated Sensor is deactivated, b) Associated Fan Air Valve is considered inoperative in the OPEN position, and deferred per MEL 36-11-01C, c) Associated Pneumatic Crossfeed Valve is CLOSED after engine start, and d) Flight is not made in known or forecast icing conditions.
36-11-13B	Manifold Temperature Sensor (Tm) "DISP.APPR.REQ'D."	N	2	0	C (O)(M) May be inoperative provided: a) Associated Sensor is deactivated, b) Associated Fan Air Valves are considered inoperative in the OPEN position, and deferred per MEL 36-11-01D, c) Associated Pneumatic Crossfeed Valves are CLOSED after engine start, and d) Flight is not made in known or forecast icing conditions.
36-11-13C	Manifold Temperature Sensor (Tm) "DISP.APPR.REQ'D."	N	2	1	C (O) May be inoperative provided: a) Associated Sensor is not deactivated, b) Associated Fan Air Valve is considered inoperative in the OPEN position, and deferred per MEL 36-11-01C, c) Associated Pneumatic Crossfeed Valves are CLOSED after engine start, d) Flight is not made in known or forecast icing conditions, e) Associated Air Conditioning Supply Switch is OFF, and f) Associated Air Conditioning System is not used.
36-11-13D	Manifold Temperature Sensor (Tm) "DISP.APPR.REQ'D."	N	2	0	C (O) May be inoperative provided: a) Associated Sensor is not deactivated, b) Associated Fan Air Valve is considered inoperative in the OPEN position, and deferred per MEL 36-11-01D, c) Associated Pneumatic Crossfeed Valves are CLOSED after engine start, d) Flight is not made in known or forecast icing conditions, e) Both Air Conditioning Supply Switches are OFF, and f) Both Air Conditioning Systems are not used.

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MEL ITEM	TAB LOCATION	PLACARD TEXT
36-11-13A	Associated Pneumatic Crossfeed Valve Lever	1. ____ Manifold Temperature Sensor INOP 2. Close ____ Pneumatic X-feed After Engine Start
36-11-13B	Associated Pneumatic Crossfeed Valve Lever(s)	1. ____ Manifold Temperature Sensor(s) INOP 2. Close ____ Pneumatic X-feed(s) After Engine Start
36-11-13C	1. Pneumatic Crossfeed Valve Lever 2. A/C SUPPLY Switches	1. ____ Manifold Temperature Sensor INOP 2. Close ____ Pneumatic X-feed After Engine Start 3. Do Not Use ____ A/C System
36-11-13D	1. Pneumatic Crossfeed Valve Levers 2. A/C SUPPLY Switches	1. ____ Manifold Temperature Sensor(s) INOP 2. Close ____ Pneumatic X-feed(s) After Engine Start 3. Do Not Use A/C Systems

(O) PROCEDURES

36-11-13A, 36-11-13B

1. Flight is not permitted in known or forecast ice conditions
2. Close affected crossfeed valve after engine start.

36-11-13C

1. Flight is not permitted in known or forecast ice conditions.
2. Close affected crossfeed valve after engine start.
3. Select affected air conditioning supply switch to OFF.
4. Limit flight altitude to a maximum of FL 250.

36-11-13D

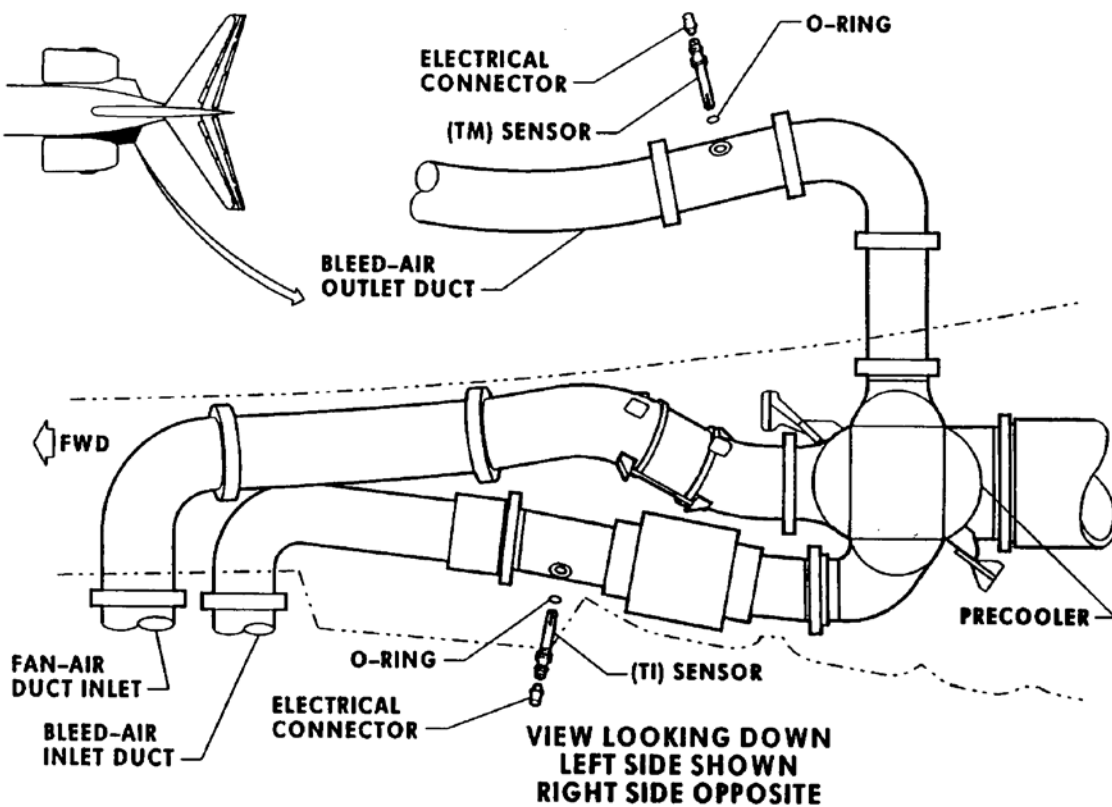
1. Flight is not permitted in known or forecast ice conditions.
2. Close crossfeed valves after engine start.
3. Select air conditioning supply switches to OFF.
4. Refer to [QRH](#), Non-Normal Checklist, Section 2, Air Systems, Unpressurized Flight.
5. Limit flight altitude to a maximum of 10,000 ft. MSL.

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(M) PROCEDURES

36-11-13A, 36-11-13B

1. Locate the affected Tm sensor in the Tail Accessory Compartment on the Bleed air outlet adjust just inboard of the precooler.
2. Disconnect the electrical connector from the sensor. Coil and stow aircraft wiring.
3. Select affected air conditioning supply 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
36-11-14	Reverse Flow Check Valve "DISP.APPR.REQ'D."	Y	2	0 C	(O)(M) May be inoperative provided: a) Associated Pneumatic Crossfeed Valve is CLOSED after engine start, and b) Flight is not made in known or forecast icing conditions.

MEL ITEM	TAB LOCATION	PLACARD TEXT
36-11-14	Associated Pneumatic Crossfeed Valve Lever	1. ____ Reverse Flow Check Valve(s) INOP 2. Close ____ Pneumatic X-feed After Engine Start

(O) PROCEDURES

Refer to Remarks or Exceptions column.

(M) PROCEDURES

Refer to Remarks or Exceptions column.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
36-11-15	Economy Mode Altitude Switch	Y	1	0 C	

MEL ITEM	TAB LOCATION	PLACARD TEXT
36-11-15	Ice Protection Panel	Economy Mode Altitude Switch 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					
36-11-16	Flow Biasing Servo						

MEL ITEM	TAB LOCATION	PLACARD TEXT
36-11-16	Ice Protection Panel	___ Flow Biasing Servo(s) INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
36-14-01A	Ground Connection and Pneumatic Check Valve "DISP.APPR.REQ'D."	Y	1	0	C (O) May be inoperative OPEN provided: a) Flight is not made in known or forecast icing conditions, b) APU Air Control Switch is OFF and placarded "DO NOT USE", c) APU Pneumatic Distribution System is not used, d) Engine Start on both engines is accomplished using ground Start Air, e) Pneumatic Crossfeed Valves are CLOSED after engine start and before external pneumatic source is removed, and f) Airfoil Ice Protection Switch is OFF and placarded "DO NOT USE".
36-14-01B	Ground Connection and Pneumatic Check Valve	Y	1	0	C May be inoperative CLOSED.

MEL ITEM	TAB LOCATION	PLACARD TEXT
36-14-01A	1. APU AIR Switch 2. Associated Pneumatic Crossfeed Valve Lever 3. Airfoil Ice Protection Switch	1. Ground Connection / Pneumatic Check Valve INOP 2. Do Not Use APU Air 3. Close Pneumatic X-feed Valves After Engine Start and Before Ground Start Connection is removed 4. Do Not Use Airfoil Ice Protection
36-14-01B	Near Pneumatic Pressure Indicator	Ground Connection / Pneumatic Check Valve INOP

(O) PROCEDURES

36-14-01A

1. Flight is not permitted in known or forecast icing conditions.
2. Select APU air switch to OFF.
3. Close pneumatic crossfeed valves after engine start.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
36-14-02	Pneumatic Crossfeed Valves "DISP.APPR.REQ'D."	N	2	1	C (O)(M) May be inoperative provided: a) Flight is not made into known or forecast icing conditions, and b) Associated Pneumatic Crossfeed Valve is CLOSED after engine start using an alternate procedure.

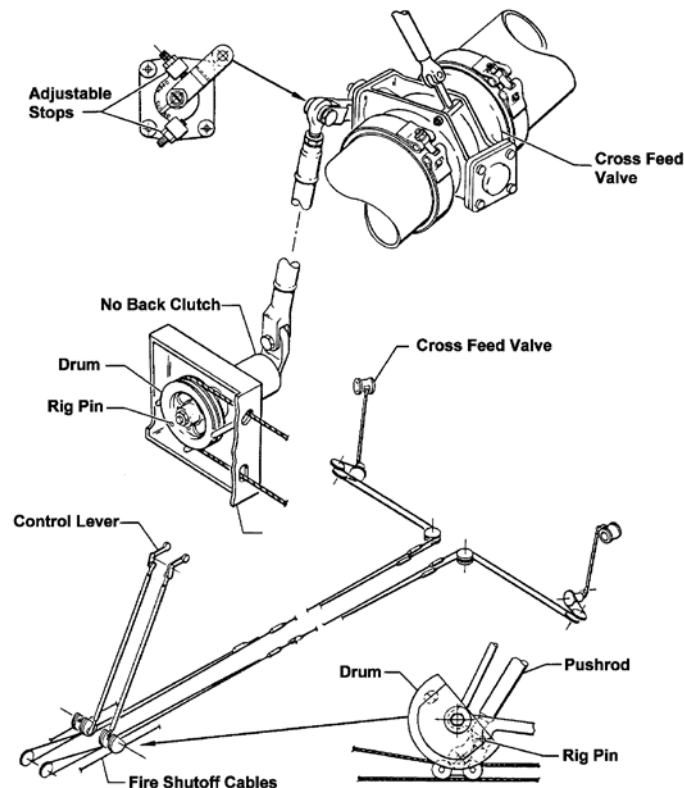
MEL ITEM	TAB LOCATION	PLACARD TEXT
36-14-02	Associated Pneumatic Crossfeed Valve Lever	___ Pneumatic Crossfeed Valve INOP

(O) PROCEDURES

1. To start affected engine, have maintenance temporarily open the affected crossfeed valve.
2. After engine start, instruct maintenance to secure affected crossfeed valve in closed position.
3. Flight is not permitted in known or forecast icing conditions.

(M) PROCEDURES

1. Disconnect pushrod at the valve and wiring valve in closed position.
2. Valve will have to be opened to allow for engine start on affected engine upon pilot's instruction.
3. After engine start, secure affected crossfeed valve in closed position coordinating action with pilot.



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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
36-21-01	Pneumatic Pressure Indicating System	Y	1	0	C

MEL ITEM	TAB LOCATION	PLACARD TEXT
36-21-01	Near Pneumatic Pressure Indicator	Pneumatic Pressure Indicator INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
36-22-01A	L/R PNEU SYSTEM FAULT Annunciator System "DISP.APPR.REQ'D."	N	2	1	C (O) May be inoperative provided: a) Associated Pneumatic Crossfeed Valve is CLOSED after engine start, b) Flight is not made in known or forecast icing conditions, c) Associated Air Conditioning Supply Switch is OFF, and d) Associated Air Conditioning System is not used.
36-22-01B	L/R PNEU SYSTEM FAULT Annunciator System "DISP.APPR.REQ'D."	N	2	0	C (O) May be inoperative provided: a) Associated Pneumatic Crossfeed Valve is CLOSED after engine start, b) Flight is not made in known or forecast icing conditions, c) Both Air Conditioning Supply Switches are OFF, and d) Both Air Conditioning Systems are not used.

MEL ITEM	TAB LOCATION	PLACARD TEXT
36-22-01A	1. Associated Pneumatic Crossfeed Valve Lever 2. Associated A/C SUPPLY Switch	1. ____ PNEU SYSTEM FAULT Annunciator INOP 2. Close ____ Pneumatic X-feed After Engine Start 3. Do Not Use ____ A/C System
36-22-01B	1. Pneumatic Crossfeed Valve Levers 2. A/C SUPPLY Switches	1. ____ PNEU SYSTEM FAULT Annunciator INOP 2. Close both Pneumatic X-feed After Engine Start 3. Do Not Use A/C Systems

(O) PROCEDURES

36-22-01A

1. Flight is not permitted in known or forecast icing conditions.
2. Close affected crossfeed valve after engine start.
3. Select affected air conditioning supply switch to OFF.
4. Limit flight altitude to a maximum of FL 250.

36-22-01B

1. Flight is not permitted in known or forecast icing conditions.
2. Close crossfeed valves after engine start.
3. Select air conditioning supply switches to OFF.
4. Refer to [QRH](#), Non-Normal Checklist, Section 2, Air Systems, Unpressurized Flight.
5. Limit flight altitude to a maximum of 10,000 ft. MSL.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
36-23-01	Pneumatic Overheat Detection System (PODS)	N	8	4	C
					(M) One loop (A or B) may be inoperative in each sector (Left Pylon, Right Pylon, Left Tail Compartment, Right Tail Compartment) provided PODS Controller is interrogated at least ONCE EACH FLIGHT DAY (Log Book Entry Required). Repetitive Check Required (Yellow Placard)

MEL ITEM	TAB LOCATION	PLACARD TEXT
36-23-01	Near Overhead Annunciator Panel (EOAP)	Loop ____ of ____ Sector Pneumatic Overheat Detection System (PODS) INOP

(M) PROCEDURES

NOTE: Aircraft may be dispatched with the TAIL TEMP FAULT message present on the flight deck provided specific PODS Sensor faults are verified per the following procedures. Refer to the MD-90 Fault Isolation Manual Section 36-23 for procedures to identify and clear nuisance faults.

Interrogate PODS Controller at least ONCE EACH FLIGHT DAY as follows:

1. Gain access to the PODS Controller located in the forward radio rack.
2. Follow instructions on the face of the controller to perform PODS BITE Check.
3. PODS Sensor failures will be identified on the BITE display by a message such as C LEFT (or RIGHT) PYLON SENSR XXYA FAIL or C LEFT (or RIGHT) TAIL SENSR XXYA FAIL , where the XXYA digits indicate specific sensor location, and the A or B at the end of the message indicates the affected Loop.
4. Verify no more than one loop within any detection zone is faulted. If both loops within any zone are indicated as faulted, aircraft is not dispatchable without maintenance action.

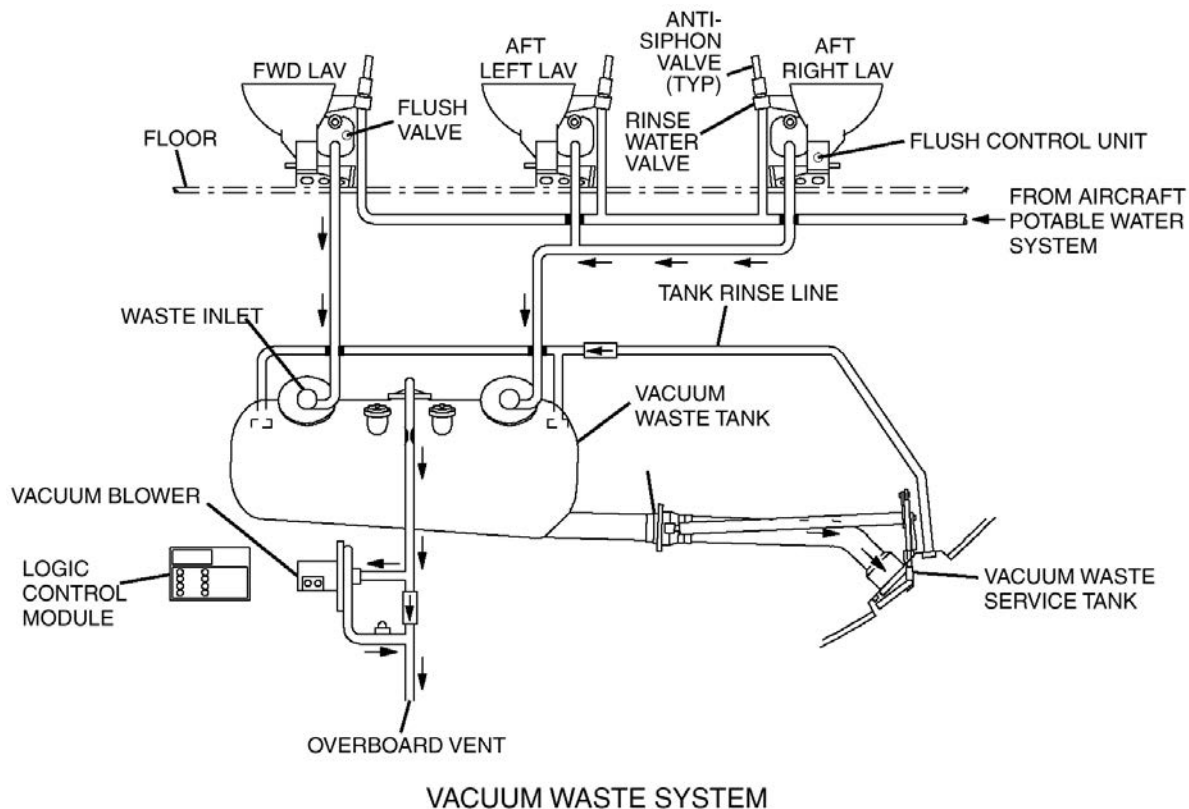
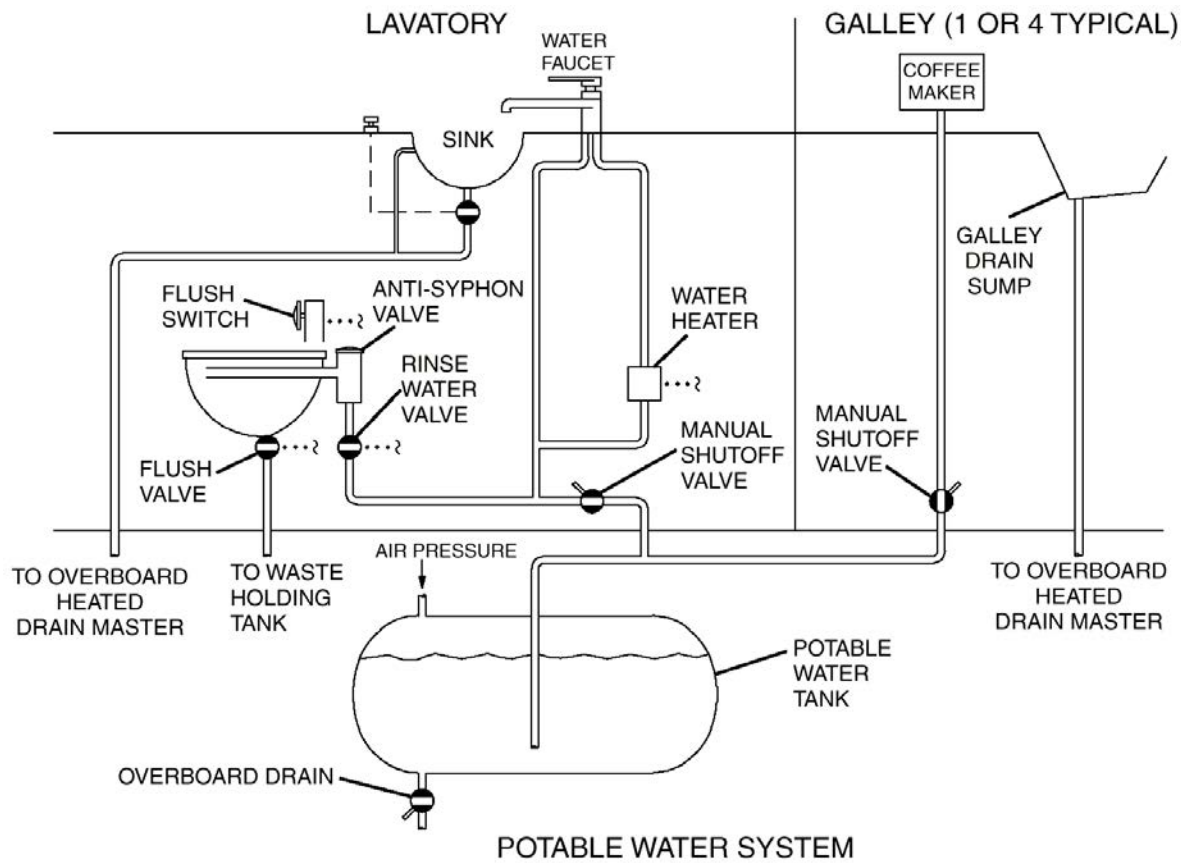
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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
38-10-01A	Potable Water Systems "DISP.APPR.REQ'D."	N	-	-	C (M) Individual components may be inoperative provided: a) Associated components are deactivated or isolated, and b) Associated system components are verified not to have leaks. NOTE 1: Any portion of the system which operates normally may be used.
38-10-01B	Potable Water Systems "DISP.APPR.REQ'D."	N	-	-	C (O)(M) May be inoperative provided: a) System is drained, b) Procedures are used to ensure that system is not serviced, and c) Performance Corrections are applied, NOTE: Provide a source of potable water and moist towelettes (or equivalent) for passenger needs.

MEL ITEM	TAB LOCATION	PLACARD TEXT
38-10-01A	Aircraft Logbook	Potable Water System ____ INOP
38-10-01B	Aircraft Logbook	Potable Water System INOP

CONTINUED NEXT PAGE

(O) PROCEDURES

38-10-01B	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 .

38-10-01B

Captain to brief Lead Flight Attendant/Purser:

1. To pour a small bottle/cup of water down each lavatory toilet hourly to prevent clogging.
2. Galley water and coffee makers cannot be used.

(M) PROCEDURES

38-10-01A

1. Deactivate inoperative system component(s) and isolate as necessary.
2. Ensure system is properly serviced.
3. Check deactivated components(s) for leakage. No leakage allowed.

38-10-01B

1. Drain potable water tank.
2. Placard all lavatories and galleys appropriately, using "Inoperative Cabin Appearance" placard or equivalent, so as to prevent their use.
3. Install INOPERATIVE – DO NOT SERVICE placard on the inside of exterior service panel to ensure system is not serviced.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
38-31-01A	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 the system which operates normally may be used.
38-31-01B	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) The 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.
38-31-01C	Lavatory Waste Systems Vacuum Blowers "DISP.APPR.REQ'D."	N	1	0	C (O)(M) May be inoperative provided: a) Vacuum blower is deactivated, and b) Lavatories are not used on the ground or at flight altitudes below 16,000 feet. NOTE: Toilets will not flush on the ground or at altitudes below 16,000 feet MSL. Toilets will flush normal above 16,000 feet MSL due to aircraft differential pressure.

MEL ITEM	TAB LOCATION	PLACARD TEXT
38-31-01A	Aircraft Logbook	Lavatory Waste System ____ INOP
38-31-01B	Aircraft Logbook	____ Lavatory INOP
38-31-01C	Aircraft Logbook	____ Lavatory Vacuum Blower INOP

OPERATIONS NOTE

No changes to security procedures or passenger seating are required for an inoperative forward lavatory.

(O) PROCEDURES

38-31-01C

Captain to brief Purser / FL that Flight Attendants are to lock affected lavatories below 16,000 feet and unlock affected lavatories above 16,000 feet.

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(M) PROCEDURES

38-31-01A

Inoperative individual lavatory waste system components:

1. Deactivate inoperative system component(s) and isolate as necessary.
2. Ensure system is properly serviced.
3. Check deactivated components(s) for leakage. No leakage is allowed.
4. If lavatory servicing panel leak is known, suspected, or reported, use MEL item 38-31-01B.

38-31-01B

Inoperative lavatory waste system:

1. Deactivate inoperative system components(s) as necessary. No leakage is allowed.
2. For known, suspected, or reported leaks at a lavatory servicing panel, associated waste tank must be drained per AMM 12-14-02.
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.

38-31-01C

Pull and secure the associated VACUUM WASTE DISPOSAL Blower circuit breakers located on the GROUND SERVICE BUS Circuit Breaker Panel (Left Console / Captain's left sidewall).

Circuit Breaker	Panel	Equipment No.
VAC/W BLOWER CONTROL	GROUND SERVICE BUS CBP	B1-1150
VACUUM BLOWER	GROUND SERVICE BUS CBP	B1-1151

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
38-33-01	Vacuum Waste Logic Control Module	Y	1	0	C
					(M) May be inoperative provided: a) Procedures are established to override the Vacuum Waste LCM, and b) Waste tank is serviced PRIOR TO EACH DEPARTURE from a station where Delta maintenance is on duty. Repetitive Check Required (Yellow Placard)

MEL ITEM	TAB LOCATION	PLACARD TEXT
38-33-01	Aircraft Logbook	Vacuum Waste Logic Control Module INOP

(M) PROCEDURES

PRIOR TO EACH DEPARTURE:

1. Pull and secure Logic Control Module circuit breaker (located on the AC GROUND SERVICE BUS).
2. Verify waste tank is emptied prior to departing a station where Delta maintenance is on duty.

NOTE: This does not preclude ACS from servicing waste tank at other times deemed necessary.

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**THERE ARE NO ATA 45 ITEMS IN THE MD-90
MINIMUM EQUIPMENT LIST**

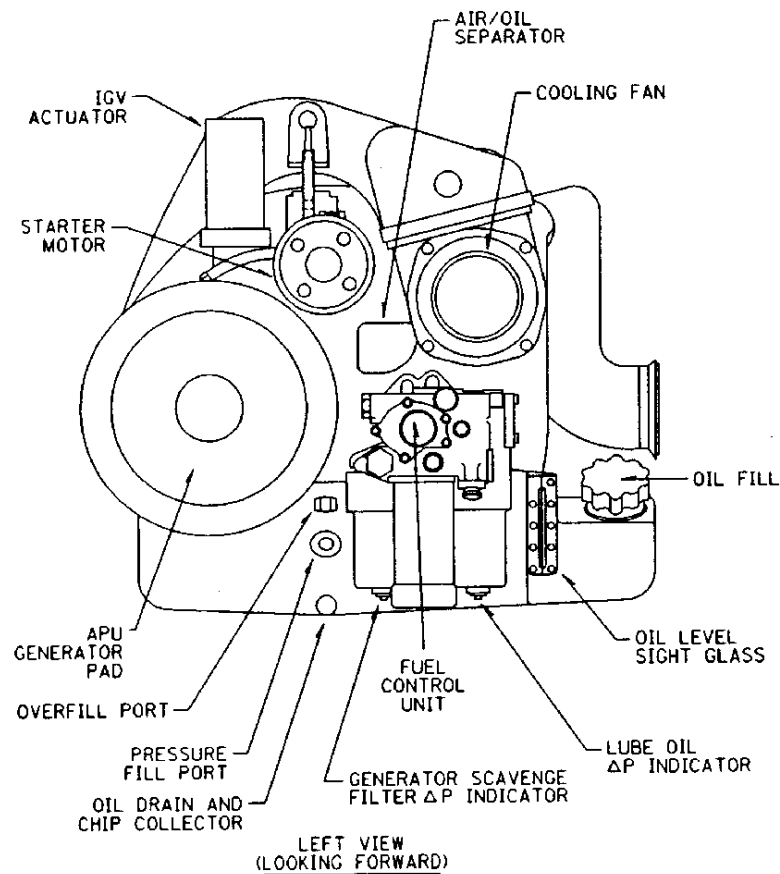
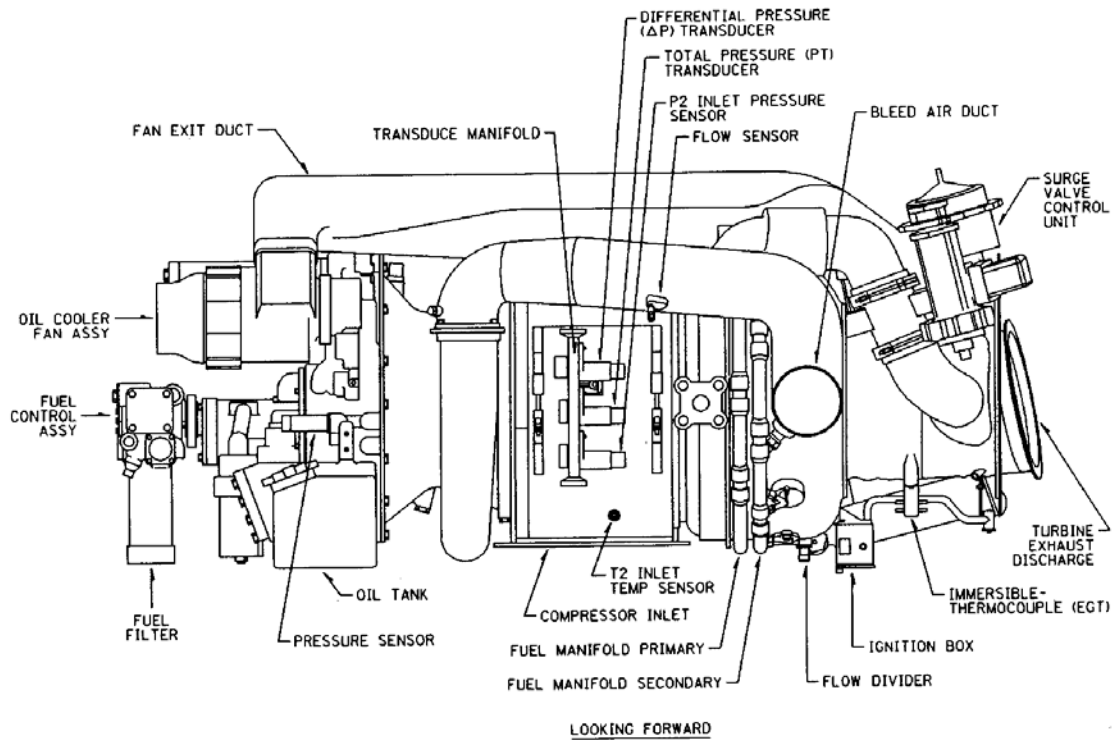
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49-71-01	APU FAULT Annunciation SYSTEM.....	49-13
49-71-02	APU OIL PRESS LOW Annunciation System.....	49-14
49-71-03A	APU Tachometer System.....	49-15
49-72-01A	APU Exhaust Gas Temperature Indicating System	49-16
49-75-01	APU DATA Memory Module	49-17

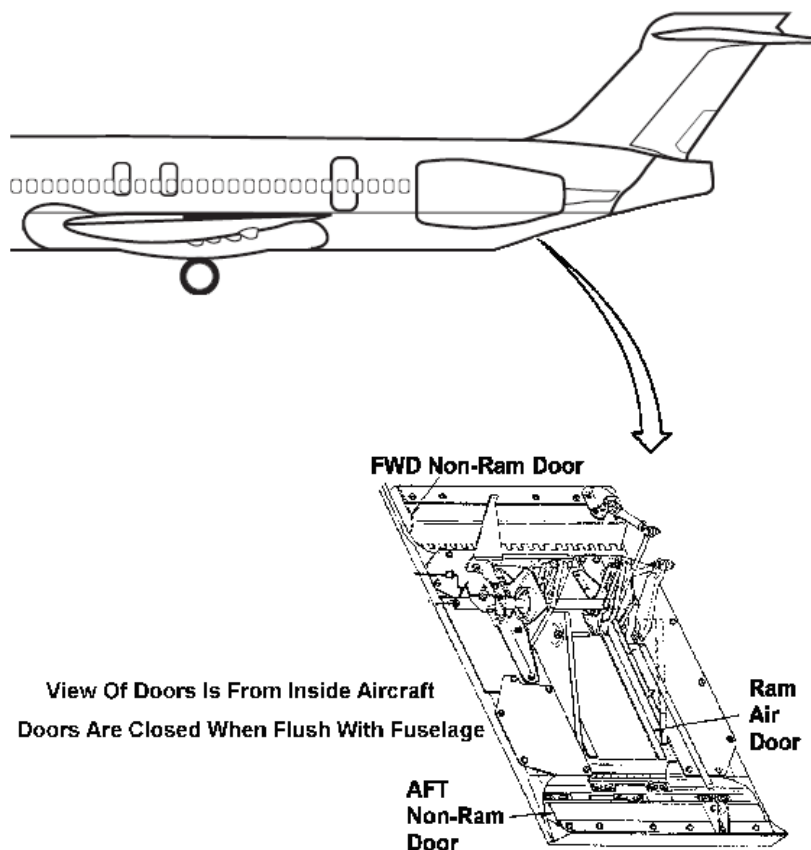


NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
49-10-01	Auxiliary Power Unit (APU) "DISP.APPR.REQ'D."	Y	1	0	C (M) May be inoperative provided: a) APU is not required for Electrical Power, b) Air Inlet Doors (Ram and Non-Ram) are CLOSED, and c) APU Control Circuit Breaker is pulled and secured.

MEL ITEM	TAB LOCATION	PLACARD TEXT
49-10-01	APU Start Switch	APU INOP

(M) PROCEDURES

1. Verify Ram and both Non-Ram doors are closed.
2. Pull and secure APU Control Circuit Breaker located (B-22) on Overhead Panel.
3. Pull and secure APU Door Control Circuit Breaker located (U-39) on lower UPC.



NUMBER INSTALLED			NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD			REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION			REMARKS OR EXCEPTIONS
49-17-01A	APU Air Inlet Door Actuator	N 1	0 C	(O)(M) May be inoperative provided: a) APU RAM door is secured CLOSED, b) NON-RAM doors are secured full OPEN if APU operation is required or intended, and c) APU Generator Load inflight does not exceed the following limits: <u>Loadmeter Reading</u> Above 25,000 feet 0.0 20,000 to 25,000 feet 0.6 Below 20,000 feet 0.6
49-17-01B	APU Air Inlet Door Actuator "DISP.APPR.REQ'D."	N 1	0 C	(M) May be inoperative provided: a) APU RAM door is secured CLOSED, b) NON-RAM doors are secured CLOSED, and c) APU is not used.

MEL ITEM	TAB LOCATION	PLACARD TEXT
49-17-01A	APU Start Switch	APU Air Inlet Door Actuator INOP
49-17-01B	APU Start Switch	1. APU Air Inlet Door Actuator INOP 2. Do Not Use APU

(O) PROCEDURES

NOTE: With the non-ram doors secured open, the APU cannot be windmill started in flight and AC power must be available for electrical inflight starting

49-17-01A

1. If APU Generator is required for dispatch due to an inoperative Main Engine Electrical Power Generating System being inoperative, do not exceed FL 250.
2. Monitor APU Generator Load inflight to ensure load does not exceed limits.

(M) PROCEDURES

49-17-01A

1. Secure actuator in position with Ram Door closed and Non-Ram Doors open.
2. The APU inlet doors locking tool may be used when the APU door actuator fails in the closed position and replacement actuator is not readily available.

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3. The locking tool has the capability of positioning and locking the inlet door shaft in any position from 0° (all doors closed) to 180° (ram door open). The door mechanism must be secured in the 62° to 70° position (non-ram door open) for APU operation and 0° when the APU is not to be operated. It should be noted that, with the non-ram doors secured open, the APU cannot be windmill started in flight and AC power must be available for electrical inflight starting.

a. Installation of APU Inlet Door Locking Tool.

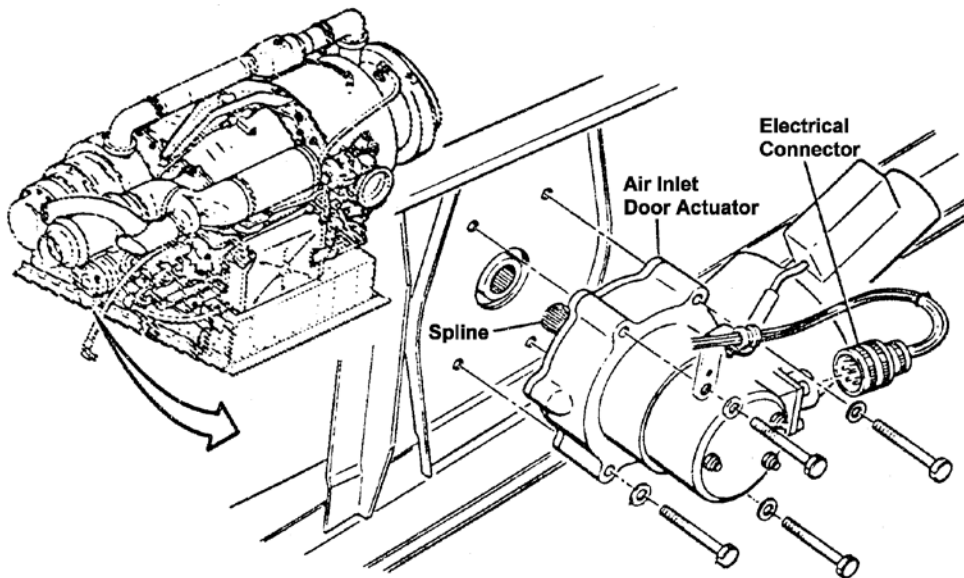
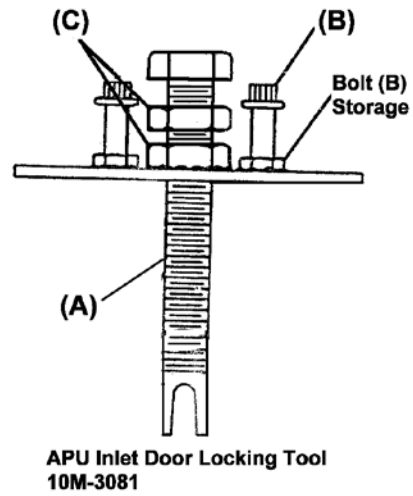
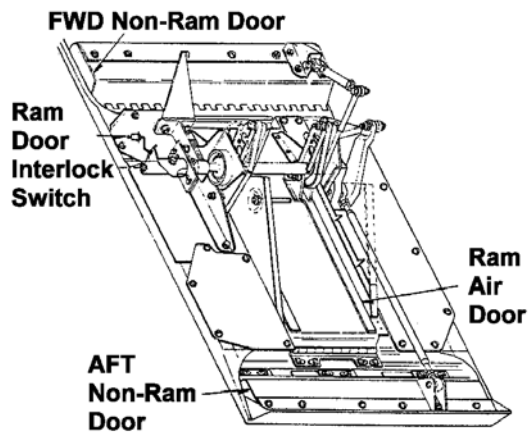
- 1) Remove the APU Door Inlet Door Actuator.
- 2) Position tool on APU inlet box actuator mounting surface and rotate bolt (A) until slot in end of bolt slips over bolt transversing inlet door drive shaft splined adapter.
- 3) Make certain locking tool is flush against mounting surface and lock in place with two bolts (B).
- 4) Rotate bolt (A) until inlet doors are in desired position and lock in place by tightening jamnut (C).

NOTE 1: If desired, jamnut may be locked wired, if provisions are made available.

NOTE 2: With ram door secured closed and non-ram doors open, APU may be started electrically but cannot be windmill started.

NOTE 3: APU windmilling may cause oil transfer to APU gear case. Therefore, run APU to transfer oil back to tank before checking oil level.

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49-17-01B

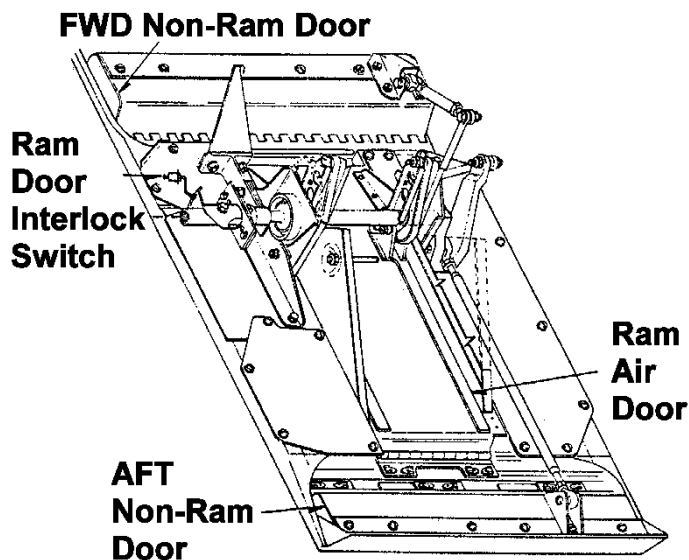
1. Secure actuator in position with Ram and Non-Ram Doors closed.
2. The APU inlet doors locking tool may be used when the APU door actuator fails in the closed position and replacement actuator is not readily available.
3. The locking tool has the capability of positioning and locking the inlet door shaft in any position from 0° (all doors closed) to 180° (ram door open). Secure the door mechanism in the 0° (all doors closed) position.

a. Installation of APU Inlet Door Locking Tool.

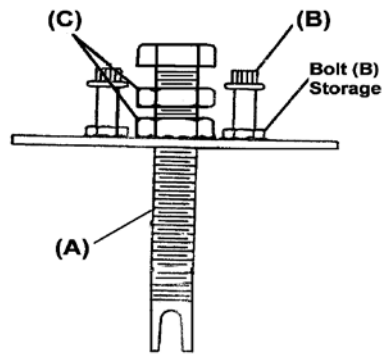
- 1) Remove the APU Door Inlet Door Actuator.
- 2) Position tool on APU inlet box actuator mounting surface and rotate bolt (A) until slot in end of bolt slips over bolt transversing inlet door drive shaft splined adapter.
- 3) Make certain locking tool is flush against mounting surface and lock in place with two bolts (B).
- 4) Rotate bolt (A) until inlet doors are in desired position and lock in place by tightening jamnut (C).

NOTE 1: If desired, jamnut may be locked wired, if provisions are made available.

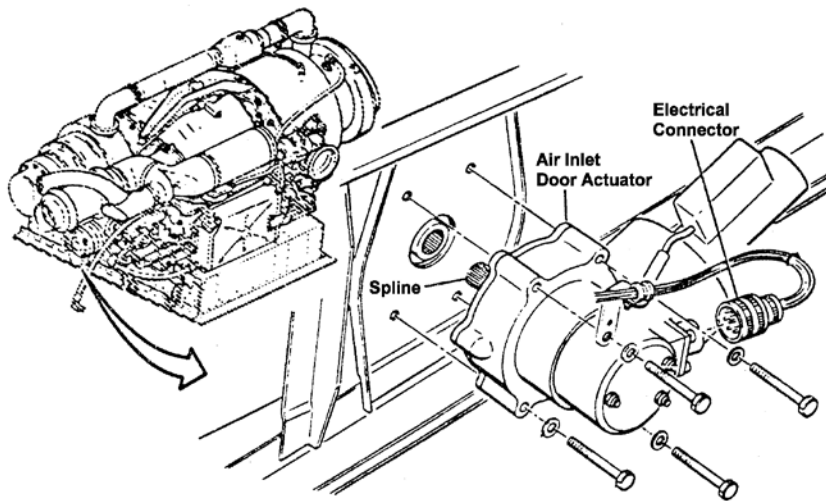
NOTE 2: APU windmilling may cause oil transfer to APU gear case. Therefore, run APU to transfer oil back to tank before checking oil level.



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APU Inlet Door Locking Tool
10M-3081



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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
49-44-01	APU STARTER ON Annunciation System	Y	1	0 C	

MEL ITEM	TAB LOCATION	PLACARD TEXT
49-44-01	APU Start Switch	APU STARTER ON 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
49-51-01A	APU Pneumatic Check Valve	N	1	0	C (M) May be inoperative OPEN provided it is verified that the APU Air On / Off Valve is functioning normally if the APU Air is to be used.
49-51-01B	APU Pneumatic Check Valve "DISP.APPR.REQ'D."	N	1	0	C May be inoperative CLOSED provided APU Pneumatic Distribution System is not used.

MEL ITEM	TAB LOCATION	PLACARD TEXT
49-51-01A	APU AIR Switch	APU Pneumatic Check Valve INOP OPEN
49-51-01B	APU AIR Switch	1. APU Pneumatic Check Valve INOP CLOSED 2. Do Not Use APU Air

(M) PROCEDURES

49-51-01A

1. Start APU.
2. Select APU Bleed Air ON, and verify pneumatic pressure on cockpit indicator.
3. Select APU Bleed Air OFF, and verify pneumatic pressure goes to zero.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
49-51-02A	APU Air On/Off Valve "DISP.APPR.REQ'D."	Y	1	0	C (O)(M) May be inoperative CLOSED provided: a) APU Air Control Switch remains OFF, and b) APU Pneumatic Distribution System is not used.
49-51-02B	APU Air On/Off Valve	N	1	0	C (O)(M) May be inoperative OPEN provided the APU Pneumatic Check Valve is operative.

MEL ITEM	TAB LOCATION	PLACARD TEXT
49-51-02A	APU AIR Switch	1. APU Air On/Off Valve INOP CLOSED 2. Do Not Use APU Air
49-51-02B	APU AIR Switch	APU Air On/Off Valve INOP OPEN

(O) PROCEDURES

49-51-02A

Use external pneumatic source and/or engine crossbleed for starting engines.

49-51-02B

Monitor APU EGT during ice protection system operation.

NOTE: A high APU EGT indication may indicate bleed air loss from subsequent APU system failures resulting in inadequate anti-ice capability.

(M) PROCEDURES

49-51-02A

Procedure I

Verify APU Air On/Off valve is in closed position by observing no airflow to pneumatic system with APU operating.

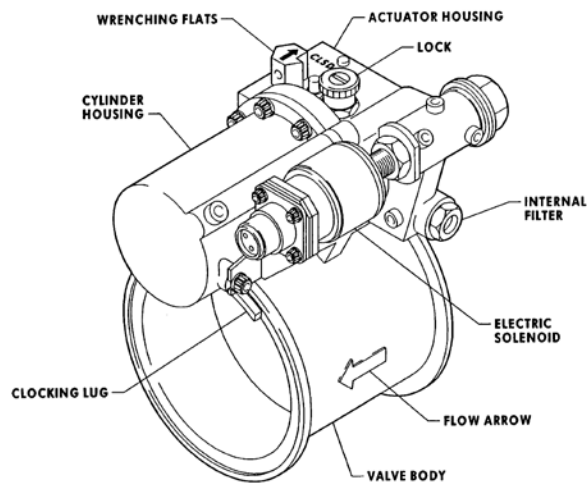
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Procedure II Maintenance is required and Flight Crew may not placard.

1. Verify APU Air On/Off valve is in closed position by viewing position indication on the valve housing.
2. Obtain access to pneumatic shutoff valve located under the third step down from the top of the aft stairway.
3. Disconnect electrical connector from valve solenoid, and stow connector.
4. If valve does not close, manually wrench valve closed, and lock valve by positioning lockout lever to the engaged position.
5. Placard APU Air Control Switch in the cockpit "Do Not Use."

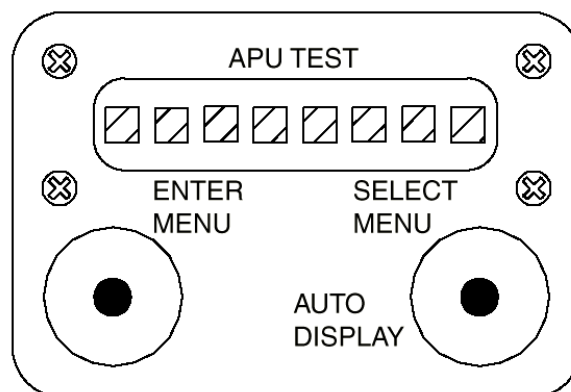


49-51-02B

1. Access APU Remote BITE Display (RBD) in the aft cargo compartment.
2. Verify no fault messages appear related to the Surge Control Valve.

NOTE: After engine start, and with Air Conditioning Packs ON, APU will automatically shut down if check valve is inoperative.

**REMOTE BITE DISPLAY
(AFT CARGO COMPARTMENT)**



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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
49-71-01	APU FAULT Annunciation SYSTEM "DISP.APPR.REQ'D."	Y	1	0 C	May be inoperative provided APU is considered inoperative and deferred per MEL 49-10-01.

MEL ITEM	TAB LOCATION	PLACARD TEXT
49-71-01	APU Start Switch	1. APU FAULT Annunciator Light INOP 2. Do Not Use APU

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS
49-71-02	APU OIL PRESS LOW Annunciation System “DISP.APPR.REQ'D.”	Y		1	0	C

MEL ITEM	TAB LOCATION	PLACARD TEXT
49-71-02	APU Start Switch	1. APU OIL PRESS LOW Light INOP 2. Do Not Use APU

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
49-71-03A	APU Tachometer System	Y	1	0	C May be inoperative provided APU FAULT message is not annunciated.
49-71-03B	APU Tachometer System "DISP.APPR.REQ'D."	Y	1	0	C May be inoperative provided APU is considered inoperative and deferred per MEL 49-10-01 .

MEL ITEM	TAB LOCATION	PLACARD TEXT
49-71-03A	APU Tachometer (RPM Gauge)	APU Tachometer System INOP
49-71-03B	APU Start Switch	1. APU Tachometer INOP 2. Do Not Use APU

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
49-72-01A	APU Exhaust Gas Temperature Indicating System	Y	1	0	C May be inoperative provided APU FAULT message is not annunciated.
49-72-01B	APU Exhaust Gas Temperature Indicating System "DISP.APPR.REQ'D."	Y	1	0	C May be inoperative provided APU is considered inoperative and deferred per MEL 49-10-01 .

MEL ITEM	TAB LOCATION	PLACARD TEXT
49-72-01A	APU EGT Indicator	APU EGT Indicator INOP
49-72-01B	APU Start Switch	1. APU EGT Indicator INOP 2. Do Not Use APU

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
49-75-01	APU DATA Memory Module	N	1	0	D May be inoperative or missing provided maintenance programs do not require its use.

MEL ITEM	TAB LOCATION	PLACARD TEXT
49-75-01	Aircraft Logbook	APU Data Memory Module INOP / Missing

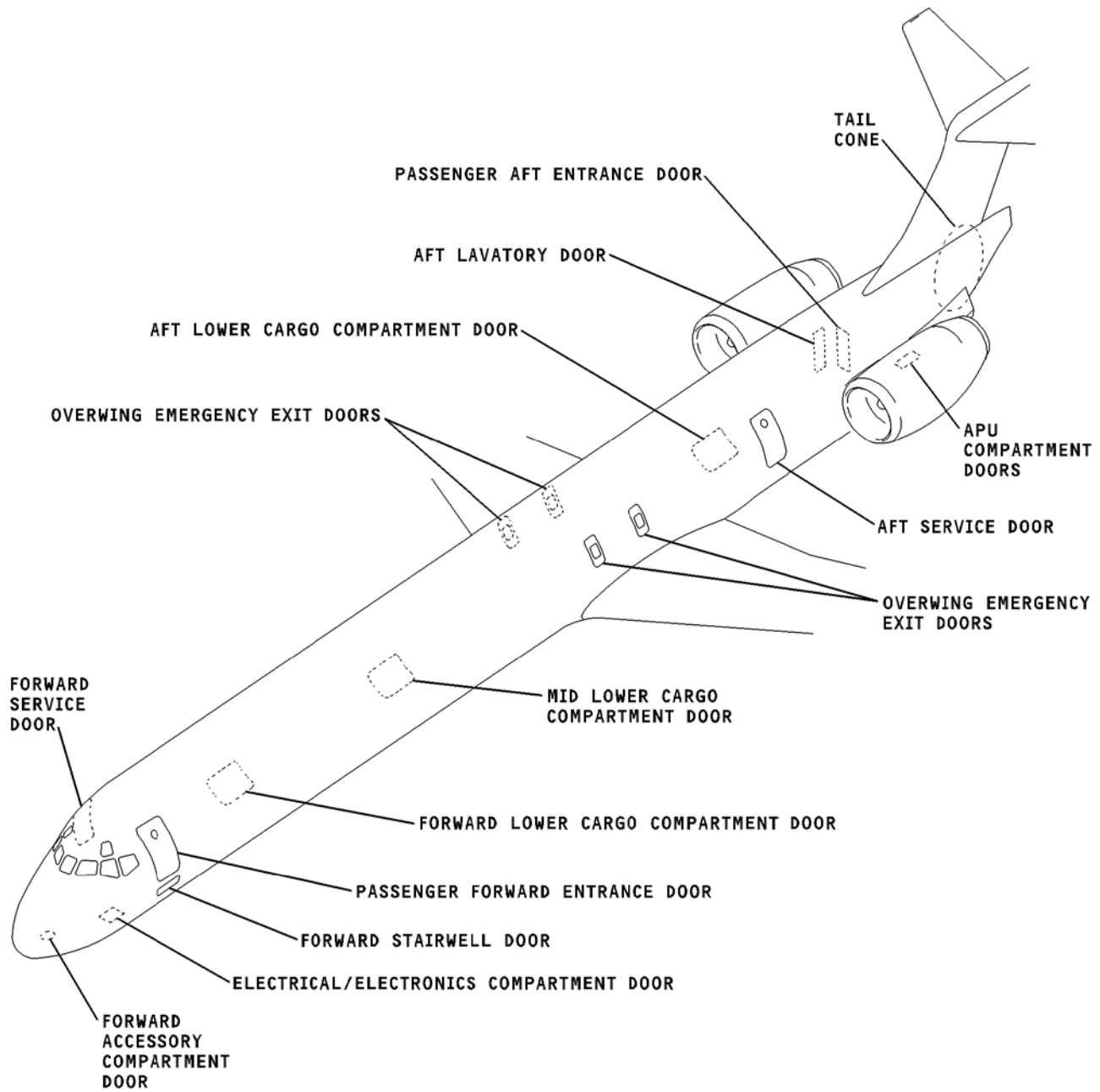
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52-54-02C	Flight Deck Access Panel (Keypad) LEDs	52-4
52-54-02D	Flight Deck Access Panel (Keypad) Aural Tone (Beep)	52-4
52-54-02E	Flight Deck Door Control Panel LOCK FAIL Light	52-4
52-54-02F	Flight Deck Door Control Panel AUTO UNLK Light	52-4
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52-54-04E	Switch Guard.....	52-9
52-54-04F	Flight Deck Door LOCK FAIL Light	52-9
52-54-04G	Flight Deck Door AUTO UNLK Light	52-9
52-54-04H	Flight Deck Door Lock Control Selector.....	52-9
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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
52-11-01	Door Stop Screws "DISP.APPR.REQ'D."	N	-	-	C (O) One door stop screw may be inoperative or missing on any passenger, service, or cargo door provided flight is conducted in an unpressurized configuration.

MEL ITEM	TAB LOCATION	PLACARD TEXT
52-11-01	Near EOAP	____ Door Stop Screw INOP/Missing

(O) PROCEDURES

1. Refer to [QRH](#), Non-Normal Checklist, Section 2, Air Systems, Unpressurized Flight.
2. Limit flight altitude to 10,000 feet MSL or below.

	MD-90 Minimum Equipment List	ATA 52 Doors	R12 08/28/14 Page 52-4
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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
	ENHANCED SECURITY FLIGHT DECK DOOR AUTOMATIC LOCKING SYSTEM (AIRCRAFT 9201-9219 TIMCO)				
52-54-02A	Enhanced Security Flight Deck Door Automatic Locking / Access / Control Systems	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 the door, and c) Alternate procedures are used for locking and unlocking the door using the dead bolt.
52-54-02B	Flight Deck Access Panel System (Keypad)	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 the door, and c) Alternate procedures are used for locking and unlocking the door using the dead bolt.
52-54-02C	Flight Deck Access Panel (Keypad) LEDs	Y	3	0	C (O) May be inoperative provided the cabin crew is notified of this condition.
52-54-02D	Flight Deck Access Panel (Keypad) Aural Tone (Beep)	Y	1	0	C (O) May be inoperative provided the cabin crew is notified of this condition.
52-54-02E	Flight Deck Door Control Panel LOCK FAIL Light	Y	1	0	C (M) May be inoperative provided: a) Automatic lock controls are verified to operate normally, and b) Door sonalert operates normally.
52-54-02F	Flight Deck Door Control Panel AUTO UNLK Light	Y	1	0	C (M) May be inoperative provided: a) Automatic lock controls are verified to operate normally, and b) Door sonalert operates normally.
52-54-02G	Flight Deck Door Lock Control Selector	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 the door, and c) Alternate procedures are used for locking and unlocking the door using the dead bolt.

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	MD-90 Minimum Equipment List	ATA 52 Doors	R13 04/27/15 Page 52-5
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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
ENHANCED SECURITY FLIGHT DECK DOOR AUTOMATIC LOCKING SYSTEM (Continued)					
52-54-02H	Flight Deck Door Control Sonalert	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 the door, and c) Alternate procedures are used for locking and unlocking the door using the dead bolt.
52-54-02I	Flight Deck Door Strike Assembly	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 the door, and c) Alternate procedures are used for locking and unlocking the door using the dead bolt.

MEL ITEM	TAB LOCATION	PLACARD TEXT
52-54-02A	Flight Deck Door Control Panel	Flight Deck Door Automatic Locking / Access / Control Systems INOP
52-54-02B	Flight Deck Door Control Panel	Flight Deck Access Panel System (Keypad) INOP
52-54-02C	Flight Deck Door Control Panel	Flight Deck Access Panel (Keypad) _____ LED(s) INOP
52-54-02D	Flight Deck Door Control Panel	Flight Deck Access Panel (Keypad) Aural Tone (Beep) INOP
52-54-02E	Flight Deck Door Control Panel	Flight Deck Door Control Panel LOCK FAIL Light INOP
52-54-02F	Flight Deck Door Control Panel	Flight Deck Door Control Panel AUTO UNLK Light INOP
52-54-02G	Flight Deck Door Control Panel	Flight Deck Door Lock Control Selector INOP
52-54-02H	Flight Deck Door Control Panel	Flight Deck Door Control Sonalert INOP
52-54-02I	Flight Deck Door Control Panel	Flight Deck Door Strike Assembly INOP

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(O) PROCEDURES

52-54-02A, 52-54-02B, 52-54-02G, 52-54-02H, 52-54-02I

Refer to [QRH](#), Non-Normal Checklist, Section 1, Airplane General, LOCK FAIL 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.

52-54-02C

During preflight briefing, advise the Flight Leader of the following procedures for inoperative keypad LEDs:

1. Red LED Inoperative – Cabin crew to communicate with flight crew via interphone to confirm cockpit door lock status as necessary.
2. Green LED Inoperative – Sixty seconds after the correct access code is entered on the keypad, the yellow LED will extinguish and the door will unlock for 5 seconds.
3. Yellow LED Inoperative – Sixty seconds after correct access code is entered on the keypad, the green LED will illuminate and the door will unlock for 5 seconds.

NOTE 1: Door is set to open 60 seconds after correct access code is entered on keypad. Depending on keypad LED failure, a watch may be used to time the unlock sequence.

NOTE 2: Audible cues, such as cockpit door unlock tone and mechanical sounds of the door lock solenoid releasing, may aid in determining when cockpit door is unlocked.

52-54-02D

Ensure cabin crew (Flight Leader) is notified of the inoperative function of the keypad. Aural feedback (beep) will not be provided when making keypad entries.

(M) PROCEDURES

52-54-02A, 52-54-02B, 52-54-02G, 52-54-02H, 52-54-02I

(AIRCRAFT 9201-9216)

1. Pull and secure the following circuit breakers to deactivate automatic locking system:

<u>Circuit Breaker</u>	<u>Panel Location</u>	<u>Row</u>
RAS KEYPAD (B1-454)	Lower EPC	P-24
RAS CNTL (B10-9045)	Lower EPC	T-36

CONTINUED NEXT PAGE

(AIRCRAFT 9217)

- Pull and secure the following circuit breakers to deactivate automatic locking system:

<u>Circuit Breaker</u>	<u>Panel Location</u>	<u>Row</u>
Cockpit Door Unlock (B1-454)	Lower EPC	P-24
Cockpit door (B10-9045)	Lower EPC	T-36

(AIRCRAFT 9218-9219)

- Pull and secure the following circuit breaker to deactivate automatic locking system:

<u>Circuit Breaker</u>	<u>Panel Location</u>	<u>Row</u>
Cockpit Door Unlock (B1-454)	Lower EPC	P-24

52-54-02E, 52-54-02F

Verify normal operations of the automatic lock controls (excluding inoperative light or lights) by performing the following:

- Enter access code in the remote access system (RAS) keypad.
 - Make sure AUTO UNLK lights on the flight deck door control panel and aural warning sounds.
 - Make sure keypad amber LED lights.
- Select DENY on the flight deck door control panel switch.
 - Make sure AUTO UNLK light goes out.
 - Make sure there is no aural warning at 30 seconds.
 - Make sure keypad red LED lights.
- Select UNLK on the flight deck door control panel switch. Push in switch.
- Turn flight deck door control panel switch CCW and hold.
 - Make sure continuous aural warning sounds.
 - Make sure LOCK FAIL lights.
- Release flight deck door control panel switch.
 - Make sure switch returns to AUTO position.
 - Make sure aural warning stops.
 - Make sure LOCK FAIL light goes out.

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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					
52-54-03	Enhanced Security Flight Deck Door Dead Bolt	(M) May be inoperative provided automatic lock controls operate normally.					

MEL ITEM	TAB LOCATION	PLACARD TEXT
52-54-03	Flight Deck Door Control Panel	Flight Deck Door Dead Bolt INOP

(M) PROCEDURES

Verify normal operations of the automatic lock controls by performing the following:

1. Enter access code in the remote access system (RAS) keypad.
 - a. Make sure AUTO UNLK lights on the flight deck door control panel and aural warning sounds.
 - b. Make sure keypad amber LED lights.
2. Select DENY on the flight deck door control panel switch.
 - a. Make sure AUTO UNLK light goes out.
 - b. Make sure there is no aural warning at 30 seconds.
 - c. Make sure keypad red LED lights.
3. Select UNLK on the flight deck door control panel switch. Push in switch.
4. Turn flight deck door control panel switch CCW and hold.
 - a. Make sure continuous aural warning sounds.
 - b. Make sure LOCK FAIL lights.
5. Release flight deck door control panel switch.
 - a. Make sure switch returns to AUTO position.
 - b. Make sure aural warning stops.
 - c. Make sure LOCK FAIL light goes out.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH			
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY			
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS	
	ENHANCED SECURITY FLIGHT DECK DOOR AUTOMATIC LOCKING SYSTEM / ACCESS / CONTROL SYSTEMS (AIRCRAFT 9220-9299 C&D)						
52-54-04A	Enhanced Flight Deck 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 the door, and c) Alternate procedures are used for locking and unlocking the door using the dead bolt.	
52-54-04B	Flight Deck Access Panel System (Keypad Door Chime)	Y	1	0	C	(O)(M) May be inoperative provided: a) Keypad is deactivated, and b) Alternate procedures are used.	
52-54-04C	Flight Deck Access Panel (Keypad) LEDs	Y	3	0	C	(O) May be inoperative provided the cabin crew is notified of this condition.	
52-54-04D	Door Bell Mode	Y	1	0	C	(O) May be inoperative provided the cabin crew is notified of this condition.	
52-54-04E	Switch Guard	Y	1	0	C	May be inoperative provided the flight deck door LOCK FAIL light operates normally.	
52-54-04F	Flight Deck Door LOCK FAIL Light	Y	1	0	C	(M) May be inoperative provided automatic lock controls are verified to operate normally.	
52-54-04G	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.	
52-54-04H	Flight Deck Door Lock Control Selector	Y	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.	

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MEL ITEM	TAB LOCATION	PLACARD TEXT
52-54-04A	Flight Deck Door Control Panel	Flight Deck Door Automatic Locking / Access / Control Systems INOP
52-54-04B	Flight Deck Door Control Panel	Flight Deck Access Panel System (Keypad) INOP
52-54-04C	Flight Deck Door Control Panel	Flight Deck Access Panel (Keypad) ____ LED(s) INOP
52-54-04D	Flight Deck Door Control Panel	Flight Deck Access Panel (Keypad) Aural Tone (Beep) INOP
52-54-04E	Flight Deck Door Control Panel	Flight Deck Door Control Panel Switch Guard
52-54-04F	Flight Deck Door Control Panel	Flight Deck Door Control Panel LOCK FAIL Light INOP
52-54-04G	Flight Deck Door Control Panel	Flight Deck Door AUTO UNLK Light
52-54-04H	Flight Deck Door Control Panel	Flight Deck Door Control Selector INOP

(O) PROCEDURES

52-54-04A, 52-54-04B, 52-54-04H

Refer to [QRH](#), Non-Normal Checklist, Section 1, Airplane General, LOCK FAIL for procedures to follow when flight deck security door automatic locking system or components are inoperative.

NOTE 1: 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.

NOTE 2: If the keypad has been deactivated, make sure the Flight Deck Access System switch is in the OFF position (guard extended) when flight deck door is closed and the flight deck not occupied.

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52-54-04C

During preflight briefing, advise the Flight Leader of the following procedures for inoperative keypad LEDs:

1. Red LED Inoperative – Cabin crew to communicate with flight crew via interphone to confirm cockpit door lock status as necessary.
2. Green LED Inoperative – Sixty seconds after the correct access code is entered on the keypad, the yellow LED will extinguish and the door will unlock for 5 seconds.
3. Yellow LED Inoperative – Sixty seconds after correct access code is entered on the keypad, the green LED will illuminate and the door will unlock for 5 seconds.

NOTE 1: Door is set to open 60 seconds after correct access code is entered on keypad. Depending on keypad LED failure, a watch may be used to time the unlock sequence.

NOTE 2: Audible cues, such as cockpit door unlock tone and mechanical sounds of the door lock solenoid releasing, may aid in determining when cockpit door is unlocked.

52-54-04D

Ensure cabin crew (Flight Leader) is notified of the inoperative function of the keypad. Aural feedback (beep) will not be provided when making keypad entries.

(M) PROCEDURES

52-54-04A, 52-54-04B

1. Pull and secure the following circuit breaker to deactivate automatic locking system:

<u>Circuit Breaker</u>	<u>Panel Location</u>	<u>Row</u>
Cockpit Door Unlock (B1-454)	Lower EPC	P-24

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52-54-04A

For deactivating the automatic locking system:

- a. Position 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).

52-54-04B

For deactivating the keypad:

- a. Open the circuit breaker for the flight deck door lock.
- b. Remove the keypad.
- c. Disconnect the electrical connector from the keypad.
- d. Install the keypad.
- e. Close the circuit breaker for the flight deck door lock.

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).

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).

52-54-04F

For verifying automatic lock controls are 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. Position the Flight Deck Door Lock selector AUTO.
- d. 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).
- e. Enter keypad access code and verify the door chime sounds.
- f. Position the Flight Deck Door Lock selector DENY.
- g. Before the DENY time delay has expired, enter the keypad access code and verify the door chime does not sound.
- h. Position and hold Flight Deck Door Lock selector UNLKD.
- i. 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).
- j. Position the Flight Deck Door Lock selector AUTO.
- k. 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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52-54-04G

For verifying AUTO UNLK System 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. Position the Flight Deck Door Lock selector AUTO.
- d. 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).
- e. Enter keypad access code and verify the door chime sounds.
- f. Position the Flight Deck Door Lock selector DENY.
- g. Before the DENY time delay has expired, enter the keypad access code and verify the door chime does not sound.
- h. Position and hold Flight Deck Door Lock selector UNLKD.
- i. 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).
- j. Position the Flight Deck Door Lock selector AUTO.
- k. 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).

52-54-04H

For deactivating the keypad:

- a. Open the circuit breaker for the flight deck door lock.
- b. Remove the keypad.
- c. Disconnect the electrical connector from the keypad.
- d. Install the keypad.
- e. Close the circuit breaker for the flight deck door lock.

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
52-62-01	Ventral Airstairs	N	1	0	C (M) May be inoperative provided: a) Ventral Airstairs are CLOSED and SECURED, b) Associated Rear Entrance/Exit door is operative, and c) Emergency Walkway Ceiling / (Catwalk) is in the LOWERED position.

MEL ITEM	TAB LOCATION	PLACARD TEXT
52-62-01	Near EOAP	Ventral Airstairs INOP

(M) PROCEDURES

1. Tape access door secured closed.
2. Install placard (INOP) on the exterior handle access panel.
3. If Catwalk will not latch in the lowered position:
 - a. Secure catwalk to adjacent structure with safety wire or equivalent means.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
52-70-01A	Door Warning Annunciator Systems (Includes all DOOR Annunciations except Tailcone Annunciation)	Y	1	0	C (O)(M) May be inoperative for all associated doors provided it is verified by visual inspection that the associated door is CLOSED and LOCKED PRIOR TO EACH DEPARTURE. Repetitive Check Required (Yellow Placard).
52-70-01B	Fwd Stair Caution Indicator System (Fwd Stair Panel)	Y	1	0	C May be inoperative provided the Fwd Stairway Door Annunciation System operates normally.
52-70-01C	Fwd Stair Caution Indicator System (Fwd Stair Panel)	Y	1	0	C (O) May be inoperative provided the Fwd Stairwell Door is verified by visual inspection to be CLOSED and LOCKED PRIOR TO EACH DEPARTURE. Repetitive Check Required (Yellow Placard)
52-70-01D	Ventral Stairway Caution Indicator System (Aft Stair Panel)	Y	1	0	C

MEL ITEM	TAB LOCATION	PLACARD TEXT
52-70-01A	Near EOAP	____ Door Warning Annunciator INOP
52-70-01B	Near EOAP	Fwd Stair Caution Indicator System INOP
52-70-01C	Near EOAP	Fwd Stair Caution Indicator System INOP
52-70-01D	Near EOAP	Ventral Stairway Caution Indicator INOP

(O) PROCEDURES

52-70-01A, 52-70-01C

Refer to the Remarks or Exceptions column.

(M) PROCEDURES

52-70-01A

PRIOR TO EACH DEPARTURE

Determine by visual inspection that affected door is closed and locked.

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53-52-01A	TAILCONE UNSAFE Annunciation System.....	53-3

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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	-	(O)(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 1: Dispatch to remove flight plan equipment code "W". NOTE 2: This Item Number is only used for deferring the RVSM status of the aircraft and MCC authorization is required 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

(O) PROCEDURES

- RVSM operations – Not Authorized.
- Limit altitude to FL280 or below.

(M) PROCEDURES

- The AMT will be instructed by MCC to create a new log page in the aircraft logbook using the appropriate MEL Item Number.
- The deferral code VSM must also be entered on the log page and the placard when deferring this item.
- 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
53-52-01A	TAILCONE UNSAFE Annunciation System "DISP.APPR.REQ'D."	Y	1	0	C May be inoperative provided Airplane is operated in day VMC only. NOTE 1: System includes Tailcone Release Mechanism Decal located over slot in tail exit door frame. NOTE 2: If Tailcone Release Mechanism Decal has been punctured, apply tape over the decal to enable verification of system integrity.
53-52-01B	TAILCONE UNSAFE Annunciation System "Contact MCC"	N	1	0	A (M) May be inoperative provided: a) Tailcone lockpins are verified to be properly seated and rotated within the lock, b) Tailcone locking cable is properly secured, c) No evidence of slack exists on cable leads, and d) System is repaired within 2 flight days. NOTE: System includes Tailcone Release Mechanism Decal located over slot in tail exit door frame.

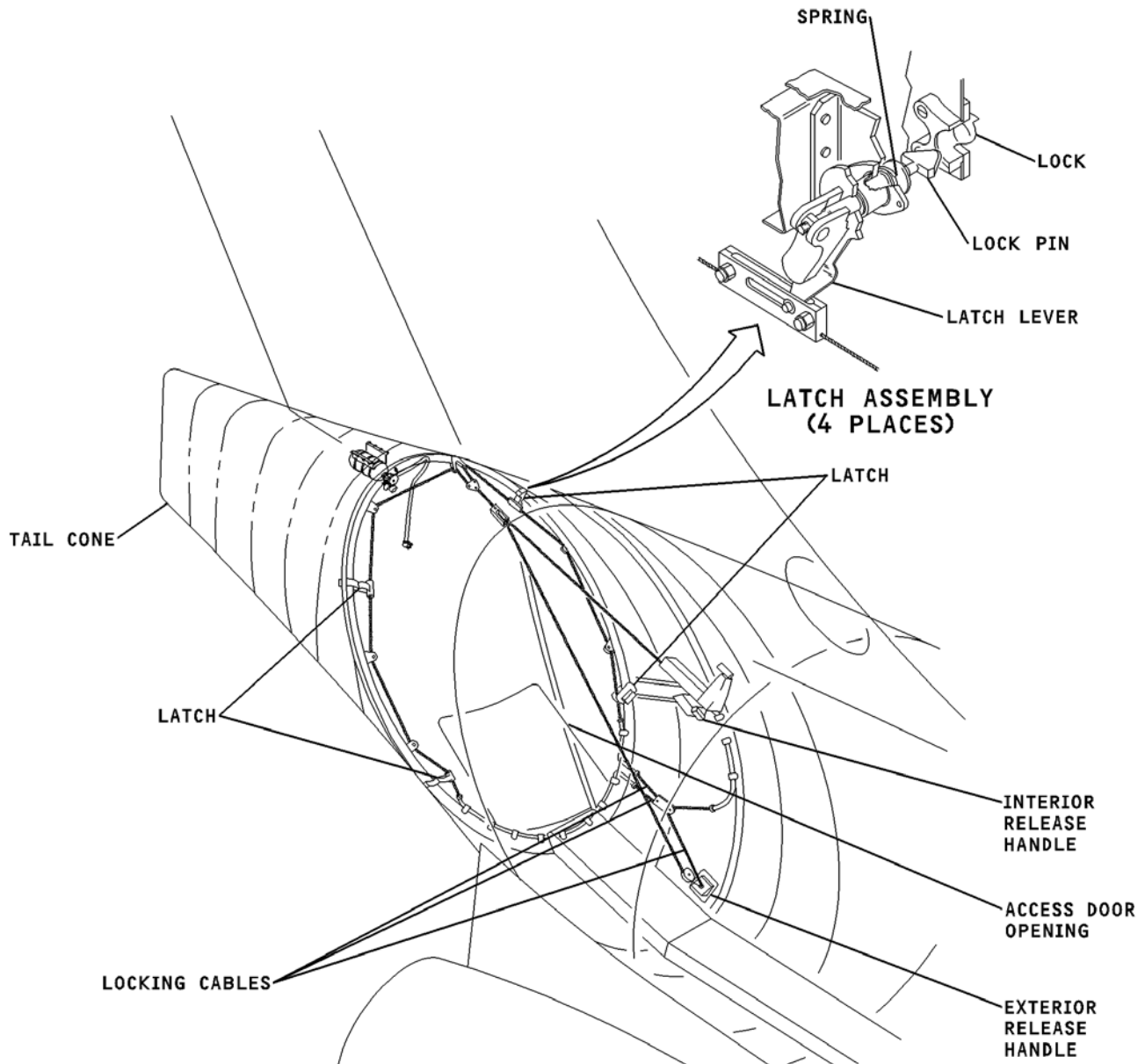
MEL ITEM	TAB LOCATION	PLACARD TEXT
53-52-01A	Near EOAP	TAILCONE UNSAFE Annunciator INOP
53-52-01B	Near EOAP	TAILCONE UNSAFE Annunciator INOP

(M) PROCEDURES

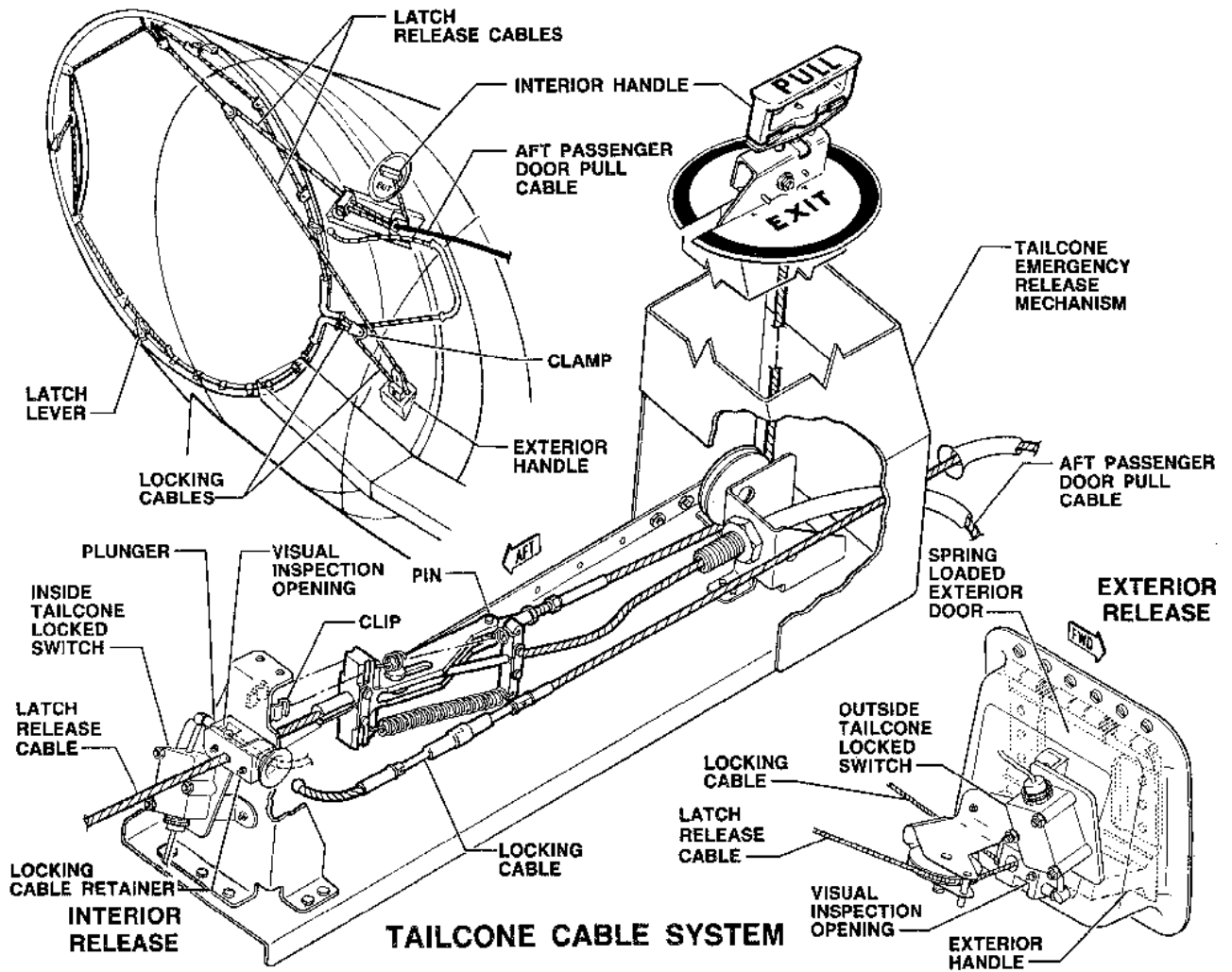
53-52-01B

1. Gain access to tailcone compartment.
2. Visually verify lockpins are seated and rotated within the lock.
3. Verify that locking cable is properly secured by pulling sharply on all four leads of the cable at the clamp located just to the left of centerline and forward of the tailcone mating flange. All four leads must be taut with no evidence of slack or tendency to uncouple.
4. If Tailcone Release Mechanism Decal has been punctured, apply a layer of tape over punctured decal.

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**THERE ARE NO ATA 56 ITEMS IN THE MD-90
MINIMUM EQUIPMENT LIST**

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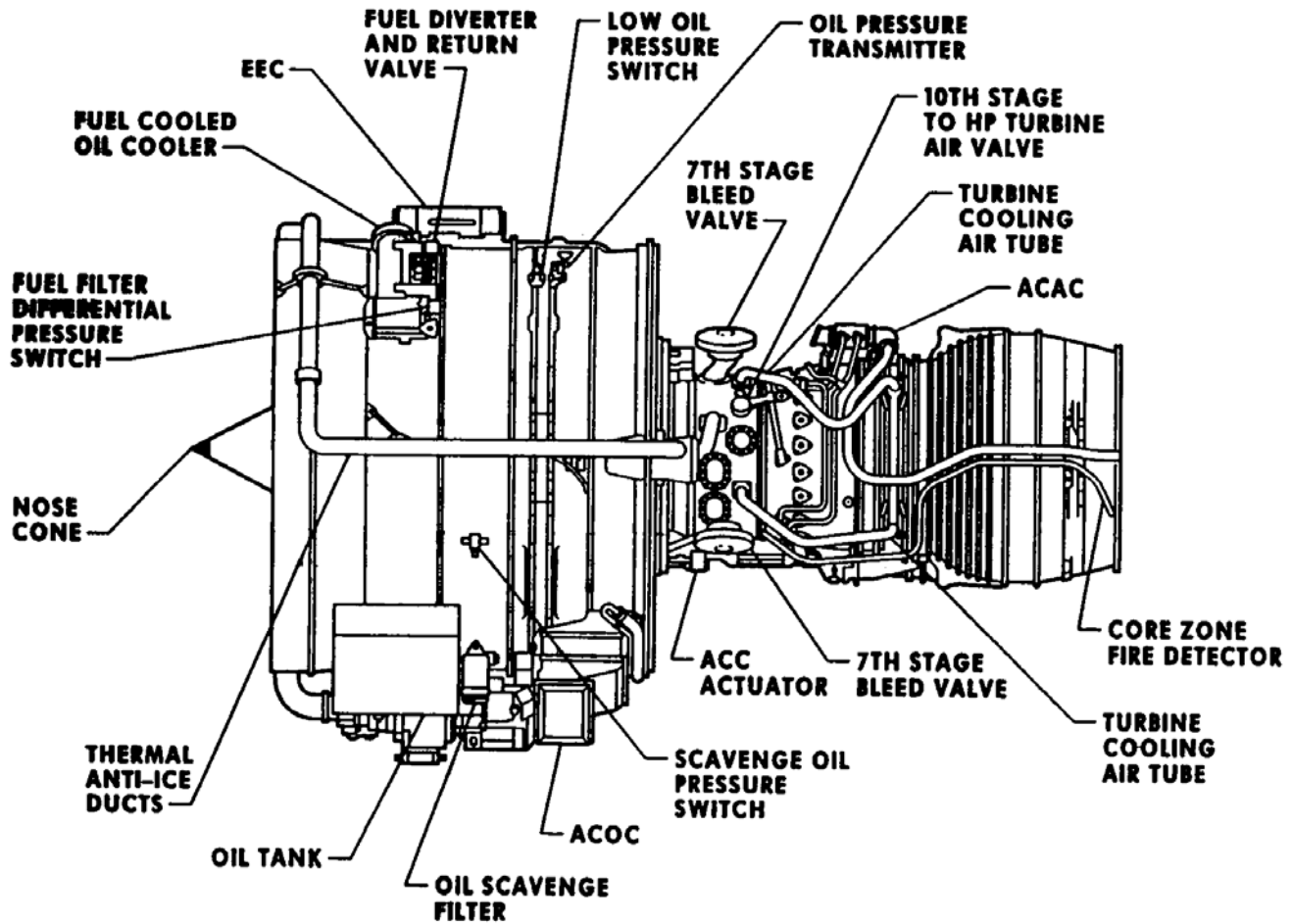
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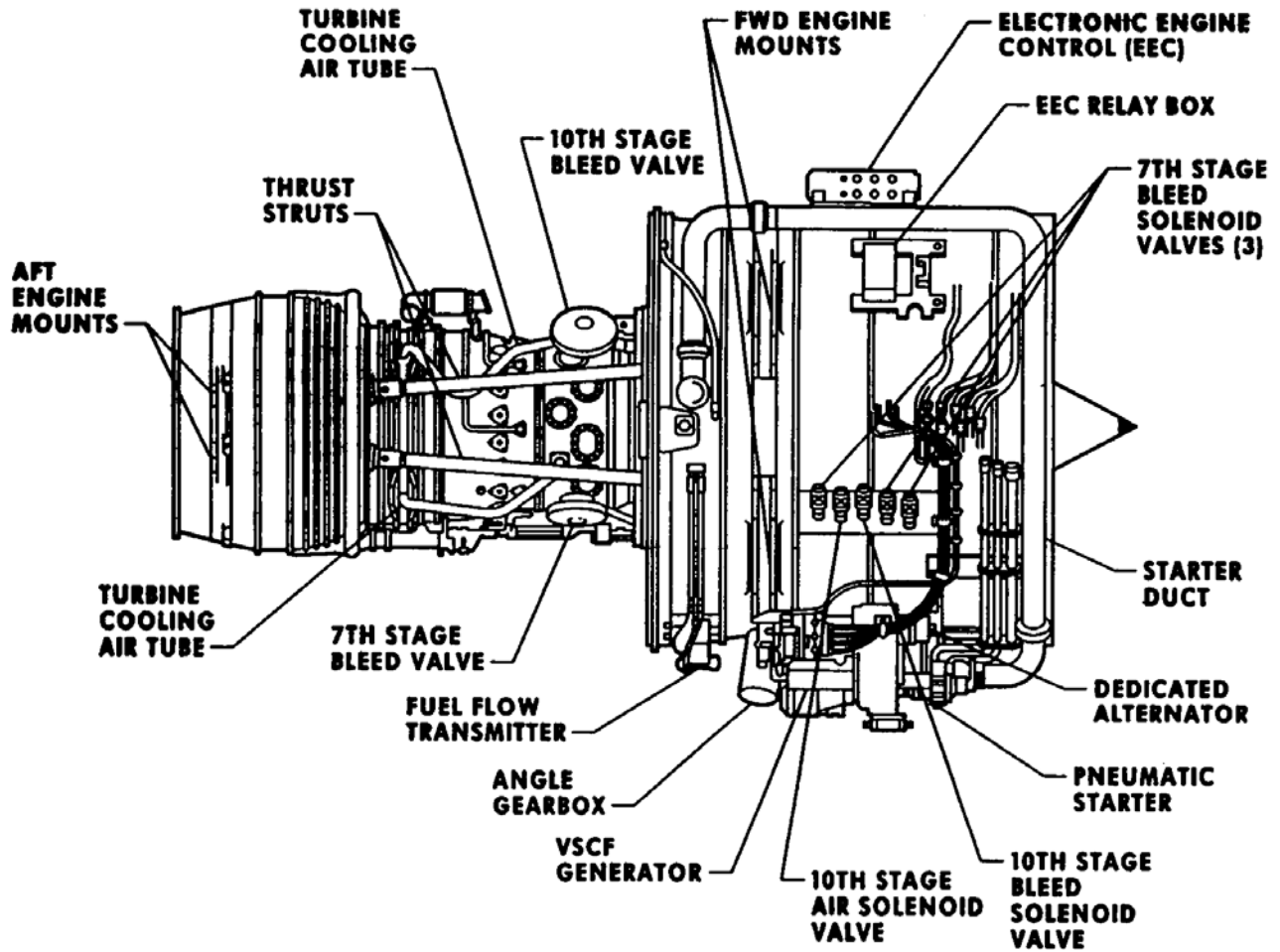
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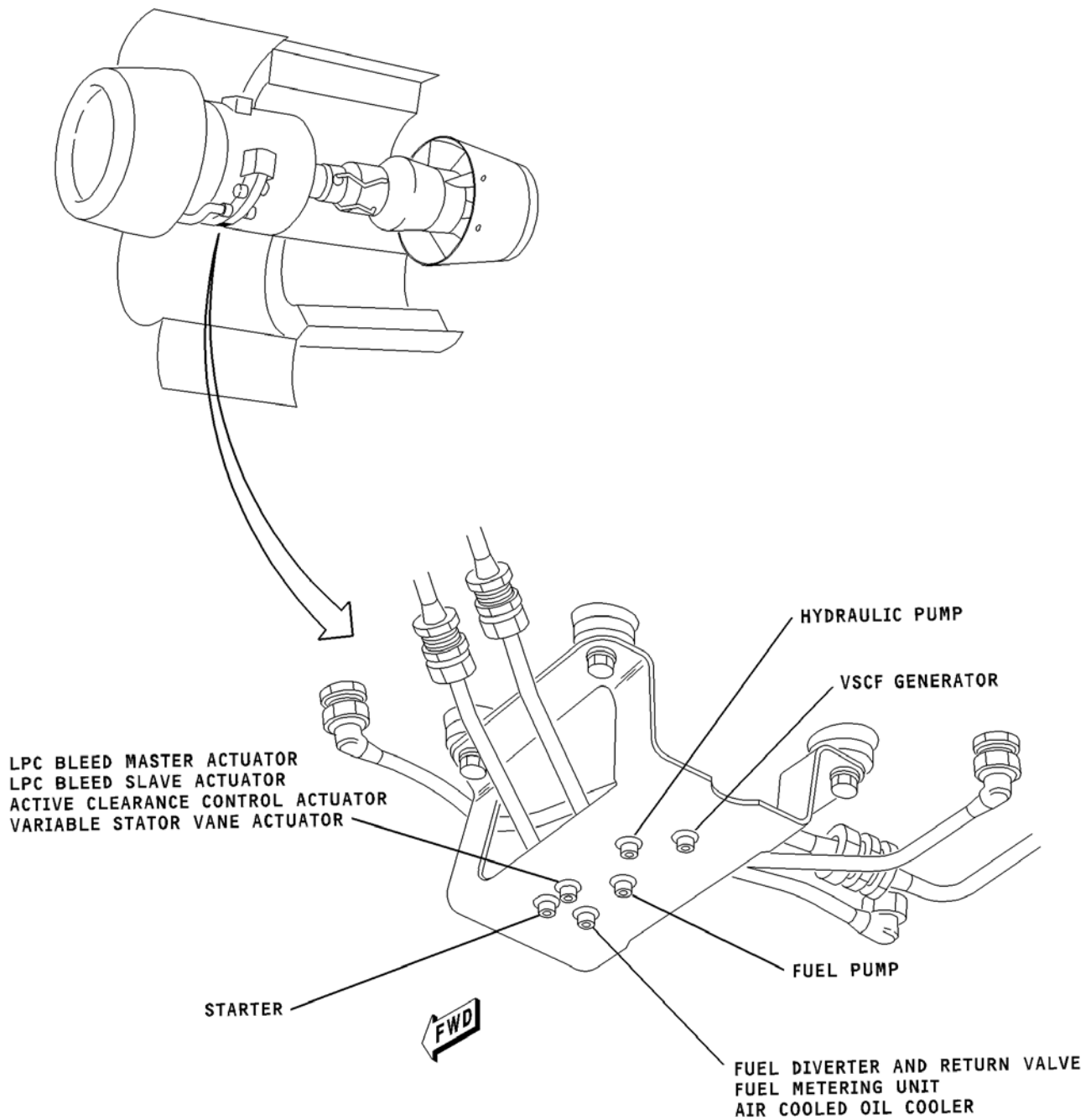
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ENGINE LEFT SIDE COMPONENT LOCATIONS



ENGINE RIGHT SIDE COMPONENT LOCATIONS



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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
73-14-01	Fuel Return-To-Tank System (RTT)	Y	2	0 C	May be inoperative provided both cockpit wing tank fuel quantity displays are operative. NOTE 1: Refer to Operations Manual, Volume 1, Supplementary Procedures, Section 16, Adverse Weather, regarding ice on upper wing surface. NOTE 2: To reduce ice formation on the upper wing surface the Alternate Burn Schedule may be used. Refer to Operations Manual, Volume 1, Alternate Burn Schedule.

MEL ITEM	TAB LOCATION	PLACARD TEXT
73-14-01	Near Fuel Boost Pumps	Fuel Return-To-Tank System INOP

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
	ELECTRONIC ENGINE CONTROL (EEC) SYSTEM				
73-21-01A	L / R EEC PERF PENALTY 1 Message “DISP.APPR.REQ’D.”	Y	2	-	A (O)(M) May be dispatched with EEC faults provided: a) PRIOR TO EACH DEPARTURE, select STATUS Cue Light on EOAP after the affected engine is started, b) Repairs are made within 10 days, and c) Performance penalties are applied. Repetitive Check Required (Yellow Placard)
73-21-01B	L / R EEC PERF PENALTY 2 Message “DISP.APPR.REQ’D.”	Y	2	-	A (O)(M) May be dispatched with EEC faults provided: a) PRIOR TO EACH DEPARTURE, select STATUS Cue Light on EOAP after the affected engine is started, b) Repairs are made within 10 days, and c) Performance penalties are applied. Repetitive Check Required (Yellow Placard)
73-21-01C	L / R EEC PERF PENALTY 3 Message “DISP.APPR.REQ’D.”	Y	2	-	A (O)(M) May be dispatched with EEC faults provided: a) PRIOR TO EACH DEPARTURE, select STATUS Cue Light on EOAP after the affected engine is started, b) Repairs are made within 10 days, and c) Performance penalties are applied. Repetitive Check Required (Yellow Placard)
73-21-01D	L / R EEC PERF PENALTY 4 Message “DISP.APPR.REQ’D.”	Y	2	-	A (O)(M) May be dispatched with EEC faults provided: a) PRIOR TO EACH DEPARTURE, select STATUS Cue Light on EOAP after the affected engine is started, b) Repairs are made within 10 days, and c) Performance penalties are applied. 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
	ELECTRONIC ENGINE CONTROL (EEC) SYSTEM (Continued)				
73-21-01E	L / R EEC PERF PENALTY 5 Message "DISP.APPR.REQ'D."	Y	2	-	A (O)(M) May be dispatched with EEC faults provided: a) PRIOR TO EACH DEPARTURE, select STATUS Cue Light on EOAP after the affected engine is started, b) Repairs are made within 10 days, and c) Performance penalties are applied. Repetitive Check Required (Yellow Placard)
73-21-01F	COMBINED EEC PERF PENALTY Messages "DISP.APPR.REQ'D."	Y	2	-	A (O)(M) May be dispatched with EEC faults provided: a) PRIOR TO EACH DEPARTURE, select STATUS Cue Light on EOAP after the affected engine is started, b) Repairs are made within 10 days, and c) Performance penalties are applied. Repetitive Check Required (Yellow Placard)
73-21-01G	L / R EEC NO PERF PENALTY Message "Contact MCC"	Y	2	-	A (M) May be dispatched with EEC faults provided: a) PRIOR TO EACH DEPARTURE, select STATUS Cue Light on EOAP after the affected engine is started, and b) Repairs are made within 10 days. Repetitive Check Required (Yellow Placard)
73-21-01H	CLASS III Faults "Contact MCC"	Y	2	-	A May be dispatched with EEC faults provided repairs are made within 500 flight hours.

MEL ITEM	TAB LOCATION	PLACARD TEXT
73-21-01A	Near EOAP	____ EEC Fault
73-21-01B	Near EOAP	____ EEC Fault
73-21-01C	Near EOAP	____ EEC Fault
73-21-01D	Near EOAP	____ EEC Fault
73-21-01E	Near EOAP	____ EEC Fault
73-21-01F	Near EOAP	____ EEC Fault
73-21-01G	Near EOAP	____ EEC Fault
73-21-01H	Near EOAP	____ EEC Fault

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(O) PROCEDURES

73-21-01A	L/R EEC PERF PENALTY 1 MESSAGE – AIR/OIL HEAT EXCHANGER AIR VALVE
EFFECTIVITY	All
FLIGHT PLANNING REQUIREMENTS	1. Reduce ENROUTE LIMIT WT by 3,400 lbs. 2. Increase BLOCK FUEL by 0.75%.
NOTES	Make a notation on the Flight Plan when Enroute Climb is limiting.
AWABS	Performance corrections have been applied.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF 1. Reduce RATOW by 4,200 lbs. 2. Reduce T/O CLIMB LIMIT by 4,200 lbs. LANDING 1. Reduce RWY ALLOWABLE LANDING WT by 2,900 lbs. 2. Reduce LANDING CLIMB LIMIT WT by 2,900 lbs. OTHER CORRECTIONS 1. Determine V-Speeds from ODM Takeoff Section charts for applicable Thrust/Flap setting and enter with the actual takeoff weight increased by the MEL takeoff weight penalty of 4,200 lbs. 2. Determine all other speeds at actual operating weight.

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73-21-01B	L/R EEC PERF PENALTY 2 MESSAGE – ACC SYSTEM
EFFECTIVITY	All
FLIGHT PLANNING REQUIREMENTS	1. Reduce ENROUTE LIMIT WT by 1,700 lbs. 2. Increase BLOCK FUEL by 0.75%.
NOTES	Make a notation on the Flight Plan when Enroute Climb is limiting.
AWABS	Performance corrections have been applied.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF 1. Reduce RATOW by 1,700 lbs. 2. Reduce T/O CLIMB LIMIT by 1,700 lbs. LANDING 1. Reduce RWY ALLOWABLE LANDING WT by 1,500 lbs. 2. Reduce LANDING CLIMB LIMIT WT by 1,500 lbs. OTHER CORRECTIONS 1. Determine V-Speeds from ODM Takeoff Section charts for applicable Thrust/Flap setting and enter with the actual takeoff weight increased by the MEL takeoff weight penalty of 1,700 lbs. 2. Determine all other speeds at actual operating weight.

73-21-01C	L/R EEC PERF PENALTY 3 MESSAGE – 2.5 STAGE STABILITY BLEED VALVE
EFFECTIVITY	All
FLIGHT PLANNING REQUIREMENTS	Increase BLOCK FUEL by 2.25%.
NOTES	None
AWABS	1. Performance weight corrections have been applied. 2. Increase V₁ and V_R by 2 knots.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF None LANDING None OTHER CORRECTIONS Increase V₁ and V_R by 2 knots.

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73-21-01D L/R EEC PERF PENALTY 4 MESSAGE – FADEC FUEL SYSTEM

EFFECTIVITY All

FLIGHT PLANNING REQUIREMENTS Increase BLOCK FUEL by 2%.

NOTES None

AWABS Performance corrections have been applied.

TAKEOFF PERFORMANCE WORKSHEET
TAKEOFF
None

LANDING

Reduce RWY ALLOWABLE LANDING WT by 18,000 lbs.

73-21-01E L/R EEC PERF PENALTY 5 MESSAGE – EEC NOSE GEAR GND SENSE

EFFECTIVITY All

FLIGHT PLANNING REQUIREMENTS None

NOTES None

AWABS Performance corrections have been applied.

TAKEOFF PERFORMANCE WORKSHEET
TAKEOFF
None

LANDING

Reduce RWY ALLOWABLE LANDING WT by 19,000 lbs.

73-21-01F COMBINED EEC PERF PENALTY MESSAGES

EFFECTIVITY All

FLIGHT PLANNING REQUIREMENTS
1. Reduce ENROUTE LIMIT WT by 4,400 lbs.
2. Increase BLOCK FUEL by 3.25%.

NOTES Make notation on Flight Plan when Enroute Climb is limiting.

AWABS
1. Performance weight corrections have been applied.
2. Increase V_1 and V_R by 2 knots.

TAKEOFF PERFORMANCE WORKSHEET
TAKEOFF
1. Reduce RATOW by 5,100 lbs.
2. Reduce T/O CLIMB LIMIT by 5,100 lbs.

LANDING

1. Reduce RWY ALLOWABLE LANDING WT by 19,000 lbs.
2. Reduce LANDING CLIMB LIMIT WT by 3,300 lbs.

OTHER CORRECTIONS

1. Determine V_1 , V_R , and V_2 Speeds from ODM Takeoff Section charts for applicable Thrust/Flap setting and enter with the actual takeoff weight increased by the MEL takeoff weight penalty of 5,100 lbs.
2. Next, increase V_1 and V_R by 2 knots.

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(M) PROCEDURES

PRIOR TO EACH DEPARTURE:

73-21-01A, 73-21-01B, 73-21-01C, 73-21-01D, 73-21-01E, 73-21-01F, 73-21-01G

1. If L or R EEC NO PERF PNLTY message appears on EOAP, aircraft may dispatch with no further action required.
2. If a L or R EEC PERF PENALTY (1-5) message appears on EOAP, performance corrections must be applied.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
73-23-03	Engine Idle Control System "DISP.APPR.REQ'D."	Y	2	0 C	(O) May be inoperative in the Approach (High) Idle Mode provided appropriate performance correction data is used.

NOTE: Existence of this fault would be evidenced by appearance of the associated L/R ENG IGN ON blue annunciator on the EOAP.

MEL ITEM	TAB LOCATION	PLACARD TEXT
73-23-03	1. Associated N ₂ Indicator 2. Near L/R ENG IGN ON Light (EOAP)	____ Engine Idle Control System(s) INOP

(O) PROCEDURES

- Excess taxi speeds may be controlled with reverse thrust at idle, as necessary.
- Utilize caution when taxiing in this condition, especially where slick pavement, excessive slope, or heavy crosswinds may be a factor.

NOTE 1: With one or both engines failed in the Approach (Hi) Idle mode, flight crews need to be aware of increased distance requirements during descent and approach operations. Plan all crossing restrictions, approach, descents and configuration changes taking into account higher engine idle speeds.

NOTE 2 Engine(s) will remain in approach (Hi) Idle during landing roll.

NOTE 3 At high altitude airports with cold ambient temperatures, idle EPR as high as 1.2 may be encountered. In order to minimize the possibility of FOD, consideration should be given to stowing thrust reversers when a safe stop is assured.

73-23-03	ENGINE IDLE CONTROL SYSTEM
EFFECTIVITY	All
FLIGHT PLANNING REQUIREMENTS	Increase BLOCK FUEL by 2.0%.
NOTES	None
AWABS	Performance corrections have been applied.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF - Reduce RATOW by 2,800 lbs. - Reduce T/O CLIMB LIMIT by 2,800 lbs. LANDING - Reduce RWY ALLOWABLE LANDING WT by 14,000 lbs. - Reduce LANDING CLIMB LIMIT WT by 14,000 lbs.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
FUEL FLOW SYSTEMS					
73-31-01A	Fuel Flow Rate / Fuel Used (Complete Indication)	Y	2	1	B (O) May be inoperative provided associated engine N1, N2, EPR and Fuel Quantity Indications are operative on all tanks containing usable fuel.
73-31-01B	Fuel Flow Rate Indications	Y	2	1	B (O) May be inoperative provided N1, N2, EPR and Wing Main Tank Fuel Quantity Indicating Systems are operative for associated engine.
73-31-01C	Fuel Used Indications	Y	2	0	C May be inoperative provided Fuel Quantity Indications are operative on all tanks containing usable fuel.
73-31-01D	Fuel Flow/Used Selector Button	Y	1	0	C May be inoperative provided: a) Fuel Used Indications are considered inoperative, b) Fuel Flow Rate Indications are operative, and c) Fuel Quantity Indications are operative on all tanks containing usable fuel.
73-31-01E	Fuel Used Reset System	Y	1	0	C May be inoperative provided: a) Fuel Used Indications are considered inoperative, and b) Fuel Quantity Indications are operative on all tanks containing usable fuel.

MEL ITEM	TAB LOCATION	PLACARD TEXT
73-31-01A	Near Fuel Flow/Used Readouts on EDP	____ Fuel Flow Rate / Fuel Used INOP
73-31-01B	Near Fuel Flow/Used Readouts on EDP	____ Fuel Flow Rate Indication INOP
73-31-01C	Near Fuel Flow/Used Readouts on EDP	____ Fuel Used Indicator(s) INOP
73-31-01D	Near Fuel Flow/Used Readouts on EDP	____ Fuel Flow/Used Selector INOP
73-31-01E	Near Fuel Used Rest Button on EDP	____ Fuel Used Reset System INOP

(O) PROCEDURES

NOTE: If one or both fuel flow indicator inputs to AFMC go invalid the following may result. Both TOTALIZER and CALCULATED fields on the PROGRESS 2/2 page, PERF INIT will display blanks for fuel weight, and VNAV guidance will be disallowed.

73-31-01A, 73-31-01B

Closely monitor EGT on associated engine during engine start.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
73-32-02	FADEC Fuel Temperature Engine Idle Control "DISP.APPR.REQ'D."	Y	2	- A	(O) May be inoperative provided: a) PRIOR TO EACH DEPARTURE, STAUS Cue Light on EOAP is selected after the affected engine is started, b) Repairs are made within 10 days, and c) Performance penalties are used. Repetitive Check Required (Yellow Placard)

MEL ITEM	TAB LOCATION	PLACARD TEXT
73-32-02	Near EOAP	____ FADEC Fuel Temperature Engine Idle Control INOP

(O) PROCEDURES

PRIOR TO EACH DEPARTURE:

1. Select STATUS Cue Light on EOAP after the affected engine is started.
2. If L or R EEC NO PERF PNLTY message appears on EOAP, aircraft may dispatch with no further action required.
3. If L or R EEC PERF PENALTY 4 message appears on EOAP, performance corrections must be applied.

NOTE: If item 73-21-01D is used in conjunction with this item, and performance corrections apply, only the corrections for one item should be applied. Performance corrections are not cumulative for these items (73-32-02 and 73-21-01D).

73-32-02	FADEC FUEL TEMPERATURE ENGINE IDLE CONTROL
EFFECTIVITY	All
FLIGHT PLANNING REQUIREMENTS	Increase BLOCK FUEL by 2.0% per affected engine.
NOTES	None
AWABS	Performance corrections have been applied.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF None LANDING Reduce RWY ALLOWABLE LANDING WT by 18,000 lbs.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
73-33-01A	L/R INLET FUEL PRES LOW Annunciator System	Y	2	1	C
					(O) May be inoperative provided: a) Both wing tank boost pumps for affected engine are functionally checked PRIOR TO EACH DEPARTURE, and b) The CENTER FUEL PRES LOW Annunciation System is operative if usable fuel is carried in the center tank. Repetitive Check Required (Yellow Placard)
73-33-01B	L/R INLET FUEL PRES LOW Annunciator System	Y	2	1	C
					(O) May be inoperative provided: a) Both wing tank boost pumps for affected engine are functionally checked PRIOR TO EACH DEPARTURE, and b) Both center tank boost pumps are functionally checked PRIOR TO EACH DEPARTURE if usable fuel is carried in the center tank. Repetitive Check Required (Yellow Placard)

MEL ITEM	TAB LOCATION	PLACARD TEXT
73-33-01A	Near Fuel Boost Pump Switches	___ INLET FUEL PRES LOW Annunciation INOP
73-33-01B	Near Fuel Boost Pump Switches	___ INLET FUEL PRES LOW Annunciation INOP

(O) PROCEDURES

73-33-01A

- Proper operation of affected wing tank boost pumps may be verified, if desired, by modifying Operations Manual, Volume 1, BEFORE START fuel pump check procedure as follows:
 - Select FUEL X-FEED lever ON.
 - Turn off both wing tank pumps associated with the operative INLET FUEL PRESS LOW light and both center tank pumps.
 - Operate affected wing tank pumps one at a time, noting that operative INLET FUEL PRESS LOW light goes off.

73-33-01B

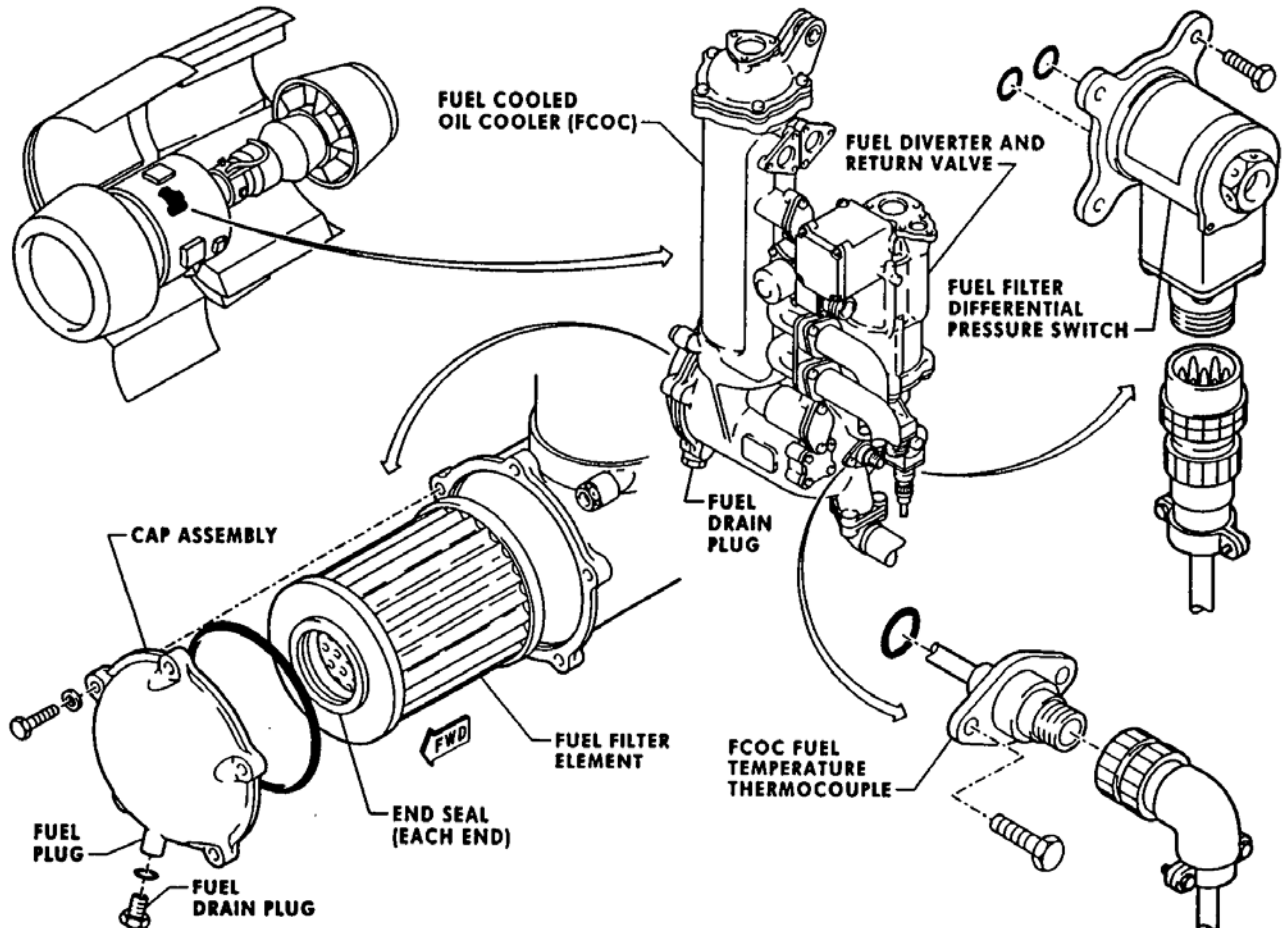
- Proper operation of affected wing and center tank boost pumps may be verified, if desired, by modifying Operations Manual, Volume 1, BEFORE START fuel pump check procedure as follows:
 - Select FUEL X-FEED lever ON.
 - Turn off both wing tank pumps associated with the operative INLET FUEL PRESS LOW light and both center tank pumps.
 - Operate affected wing tank pumps one at a time, noting that operative INLET FUEL PRESS LOW light goes off.
 - If usable fuel is carried in the center tank, operate center tank pumps one at a time, noting that operative INLET FUEL PRESS LOW light goes off.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
73-34-01	L/R FUEL FIL PRES DROP Annunciator Systems	N	2	1 B	(M) May be inoperative provided it is verified that the malfunction is in the annunciator system.

MEL ITEM	TAB LOCATION	PLACARD TEXT
73-34-01	Near EOAP	___ L/R FUEL FIL PRES DROP Annunciation INOP

(M) PROCEDURES

Inspect Fuel Filter element. Verify filter element is clean.



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ATA 74 Contents

74-20-01	Ignition Systems	74-2
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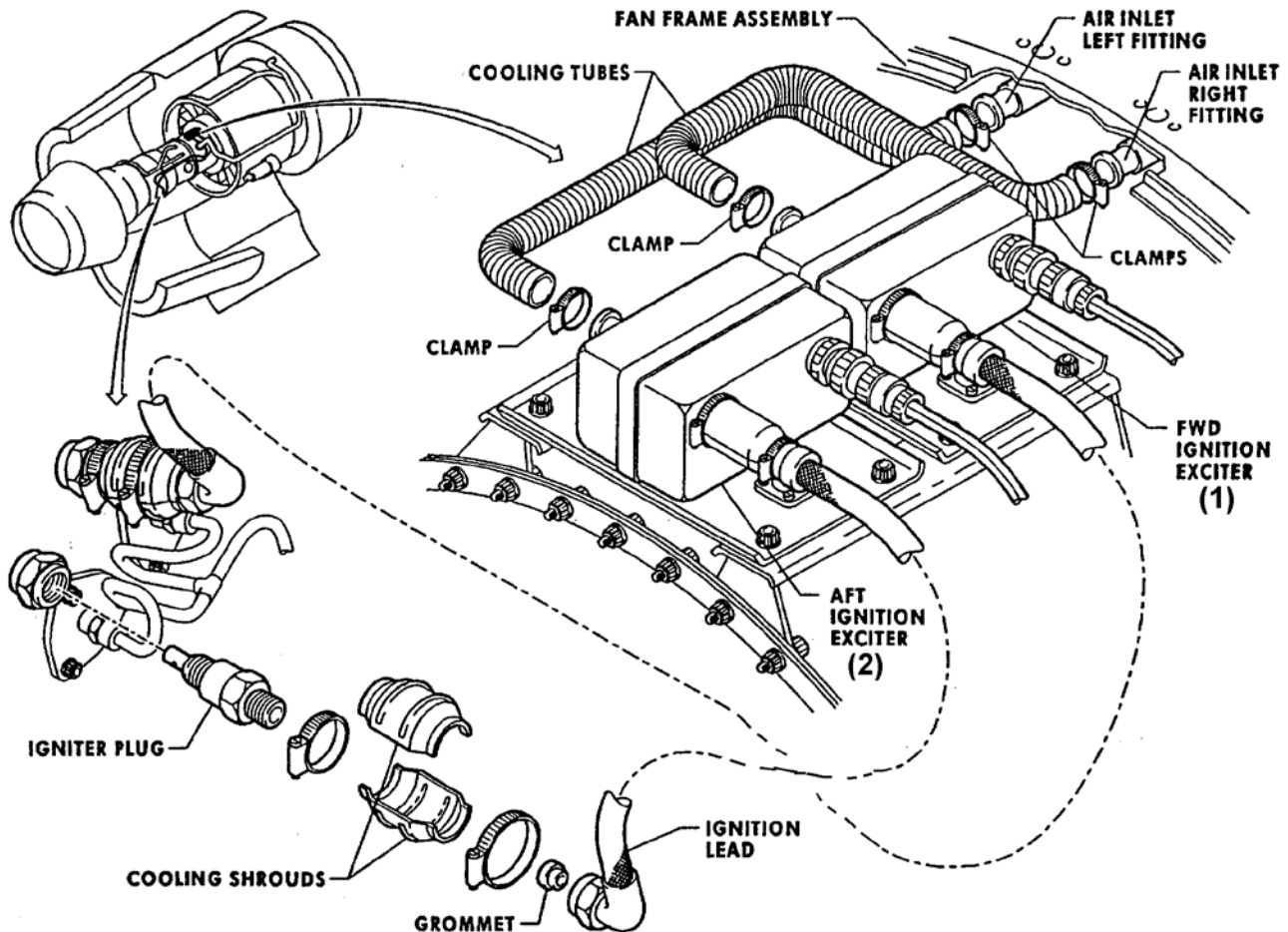
	MD-90 Minimum Equipment List	ATA 74 Ignition	R13 04/27/15 Page 74-2
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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
74-20-01	Ignition Systems	Y	4	2	C (O) Two may be inoperative provided both inoperative systems are not on the same engine.

MEL ITEM	TAB LOCATION	PLACARD TEXT
74-20-01	Associated IGN Switch(es)	___ Ignition System(s) INOP

(O) PROCEDURES

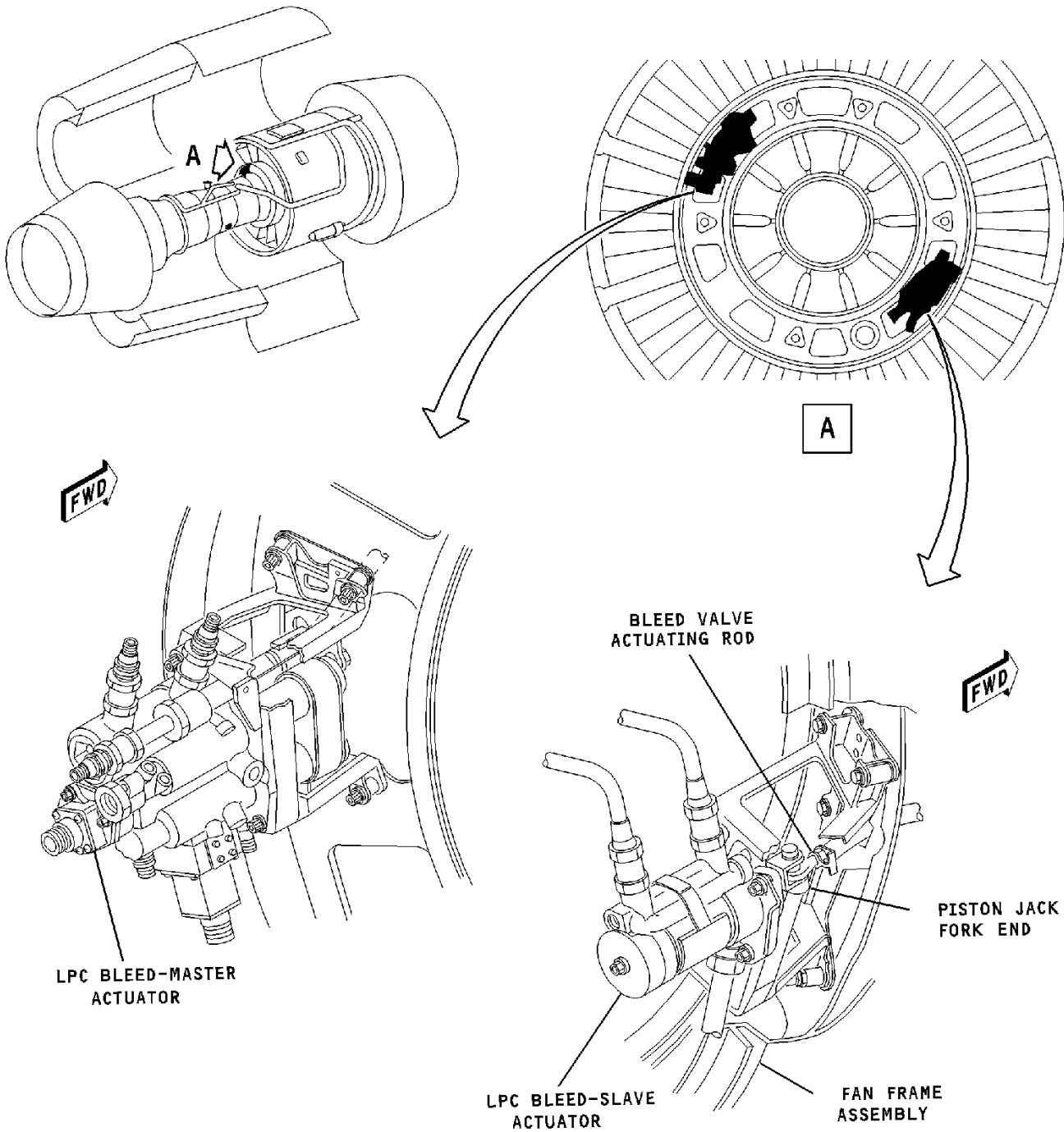
Refer to the Operations Manual, Volume 1, Supplementary Procedures, Engines, APU, MD-90 Manual Start Procedure.



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ATA 75 Contents

75-24-01	Active Clearance Control System	75-3
75-31-01	Compressor 2.5 Stage Stability Bleed Valve	75-4



NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
75-24-01	Active Clearance Control System "DISP.APPR.REQ'D."	Y	2	- A	(O) May be inoperative provided: a) PRIOR TO EACH DEPARTURE Status Cue Light on the EOAP is selected after the affected engine is started, b) Repairs are made within 10 days, and c) Performance penalties are used. Repetitive Check Required (Yellow Placard)

MEL ITEM	TAB LOCATION	PLACARD TEXT
75-24-01	Near EOAP	____ Active Clearance Control System(s) INOP

(O) PROCEDURES

PRIOR TO EACH DEPARTURE:

1. Select STATUS Cue Light on EOAP after the affected engine is started.
2. If L or R EEC NO PERF PNLTY message appears on EOAP, aircraft may dispatch with no further action required.
3. If L or R EEC PERF PENALTY 2 message appears on EOAP, performance corrections must be applied.

NOTE: If item [73-21-01B](#) is used in conjunction with this item, and performance corrections apply, only the corrections for one item should be applied. Performance corrections are not cumulative for these items (75-24-01 and 73-21-01B).

75-24-01	ACTIVE CLEARANCE CONTROL SYSTEM
EFFECTIVITY	All
FLIGHT PLANNING REQUIREMENTS	1. Reduce ENROUTE LIMIT WT by 1,700 lbs. 2. Increase BLOCK FUEL by 0.75% per affected engine.
NOTES	Make notation on Flight Plan when Enroute Climb is limiting.
AWABS	Performance corrections have been applied.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF 1. Reduce RATOW by 1,700 lbs. 2. Reduce T/O CLIMB LIMIT by 1,700 lbs. LANDING 1. Reduce RWY ALLOWABLE LANDING WT by 1,500 lbs. 2. Reduce LANDING CLIMB LIMIT WT by 1,500 lbs. OTHER CORRECTIONS 1. Determine V-Speeds from ODM Takeoff Section charts for applicable Thrust/Flap setting and enter with the actual takeoff weight increased by the MEL takeoff weight penalty of 1,700 lbs. 2. Determine all other speeds at actual operating weight.

NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
75-31-01	Compressor 2.5 Stage Stability Bleed Valve "DISP.APPR.REQ'D."	Y	2	- A	(O) May be inoperative provided: a) PRIOR TO EACH DEPARTURE Status Cue Light on the EOAP is selected after the affected engine is started, b) Repairs are made within 10 days, and c) Performance penalties are used. Repetitive Check Required (Yellow Placard)

MEL ITEM	TAB LOCATION	PLACARD TEXT
75-31-01	Near EOAP	____ Compressor 2.5 Stage Stability Bleed Valve(s) INOP

(O) PROCEDURES

PRIOR TO EACH DEPARTURE:

1. Select STATUS Cue Light on EOAP after the affected engine is started.
2. If L or R EEC NO PERF PNLTY message appears on EOAP, aircraft may dispatch with no further action required.
3. If L or R EEC PERF PENALTY 3 message appears on EOAP, performance corrections must be applied.

NOTE: If item [73-21-01C](#) is used in conjunction with this item, and performance corrections apply, only the corrections for one item should be applied. Performance corrections are not cumulative for these items (75-31-01 and 73-21-01C).

75-31-01	COMPRESSOR 2.5 STAGE STABILITY BLEED VALVE
EFFECTIVITY	All
FLIGHT PLANNING REQUIREMENTS	Increase BLOCK FUEL by 2.25% per affected engine.
NOTES	None
AWABS	1. Performance weight corrections have been applied. 2. Increase V_1 and V_R by 2 knots.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF None LANDING None OTHER CORRECTIONS Increase V_1 and V_R by 2 knots.

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ATA 76 Contents

76-12-02	ENG SYNC FAULT Annunciation System	76-2
76-12-03	ENG SYNC ON Annunciation System	76-3

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS
76-12-02	ENG SYNC FAULT Annunciation System	Y	1	0	C	(O) May be inoperative provided ENGINE SYNC Switch remains OFF.

MEL ITEM	TAB LOCATION	PLACARD TEXT
76-12-02	ENG SYNC Selector	ENG SYNC FAULT Annunciation INOP

(O) PROCEDURES

Do not move the ENG SYNC switch from the OFF position.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
76-12-03	ENG SYNC ON Annunciation System	Y	1	0	C (O) May be inoperative provided ENGINE SYNC Switch remains OFF.

MEL ITEM	TAB LOCATION	PLACARD TEXT
76-12-03	ENG SYNC Selector	ENG SYNC ON Annunciation INOP

(O) PROCEDURES

Do not move the ENG SYNC switch from the OFF position.

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	MD-90 Minimum Equipment List	ATA 77 Engine Indicating	R6 04/26/10 Page 77-1
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ATA 77 Contents

77-11-01	N1 Tachometer Indicating Systems	77-2
	ENGINE PRESSURE RATIO INDICATING SYSTEMS	77-3
77-13-01A	Digital EPR Readouts.....	77-3
77-13-01B	EPR Limit Bugs Automatic Mode	77-3
77-13-01C	EPR Limit Bugs Manual Mode	77-3
77-13-01D	EPR Command Bugs (T Bugs)	77-3
77-32-01	Engine Vibration Monitoring Systems	77-4
77-32-02	L/R ENG VIB HIGH Annunciation Systems	77-5
77-42-01	ENGINES COOL Annunciation System	77-6

	MD-90 Minimum Equipment List	ATA 77 Engine Indicating	R13 04/27/15 Page 77-2
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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS
77-11-01	N1 Tachometer Indicating Systems	Y	2	1	B	(O) May be inoperative provided N2, EPR, and Fuel Flow Indicating Systems are operative for associated engine.

MEL ITEM	TAB LOCATION	PLACARD TEXT
77-11-01	Engine Display Panel	____ N ₁ Tach INOP

(O) PROCEDURES

Visually confirm positive N1 rotation during each engine start.

	MD-90 Minimum Equipment List	ATA 77 Engine Indicating	R13 04/27/15 Page 77-3
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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH			
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY			
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS		
ENGINE PRESSURE RATIO INDICATING SYSTEMS							
77-13-01A	Digital EPR Readouts	Y			2	0	C
77-13-01B	EPR Limit Bugs Automatic Mode	Y	2		0	C	May be inoperative provided the Manual Mode of the associated indicator is operative.
77-13-01C	EPR Limit Bugs Manual Mode	Y	2	0	C	May be inoperative provided the Automatic Mode of the associated indicator is operative.	
77-13-01D	EPR Command Bugs (T Bugs)	Y	2	0	C	May be inoperative provided Digital EPR Readouts are operative.	

MEL ITEM	TAB LOCATION	PLACARD TEXT
77-13-01A	Engine Display Panel	____ Digital EPR Readout(s) INOP
77-13-01B	Engine Display Panel	____ EPR Limit Bug(s) Automatic Mode INOP
77-13-01C	Engine Display Panel	____ EPR Limit Bug(s) Manual Mode INOP
77-13-01D	Engine Display Panel	____ EPR Command Bug(s) (T Bugs) INOP

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS
77-32-01	Engine Vibration Monitoring Systems	Y	2	0	C	May be inoperative provided N1, EPR and Fuel Flow Indicating Systems are operative for associated engine.

MEL ITEM	TAB LOCATION	PLACARD TEXT
77-32-01	Engine VIB Indicator	Engine Vibration Monitoring System(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
77-32-02	L/R ENG VIB HIGH Annunciation Systems	Y	2	0	C May be inoperative provided N1, EPR and Fuel Flow Indicating Systems are operative for associated engine.

MEL ITEM	TAB LOCATION	PLACARD TEXT
77-32-02	Engine VIB Indicator	____ L/R ENG VIB HIGH Annunciation INOP

	MD-90 Minimum Equipment List	ATA 77 Engine Indicating	R13 04/27/15 Page 77-6
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NUMBER INSTALLED					NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS
77-42-01	ENGINES COOL Annunciation System	Y	1	0	C	(O) May be inoperative provided alternate procedures are used.

MEL ITEM	TAB LOCATION	PLACARD TEXT
77-42-01	Near EOAP	ENGINES COOL Light INOP

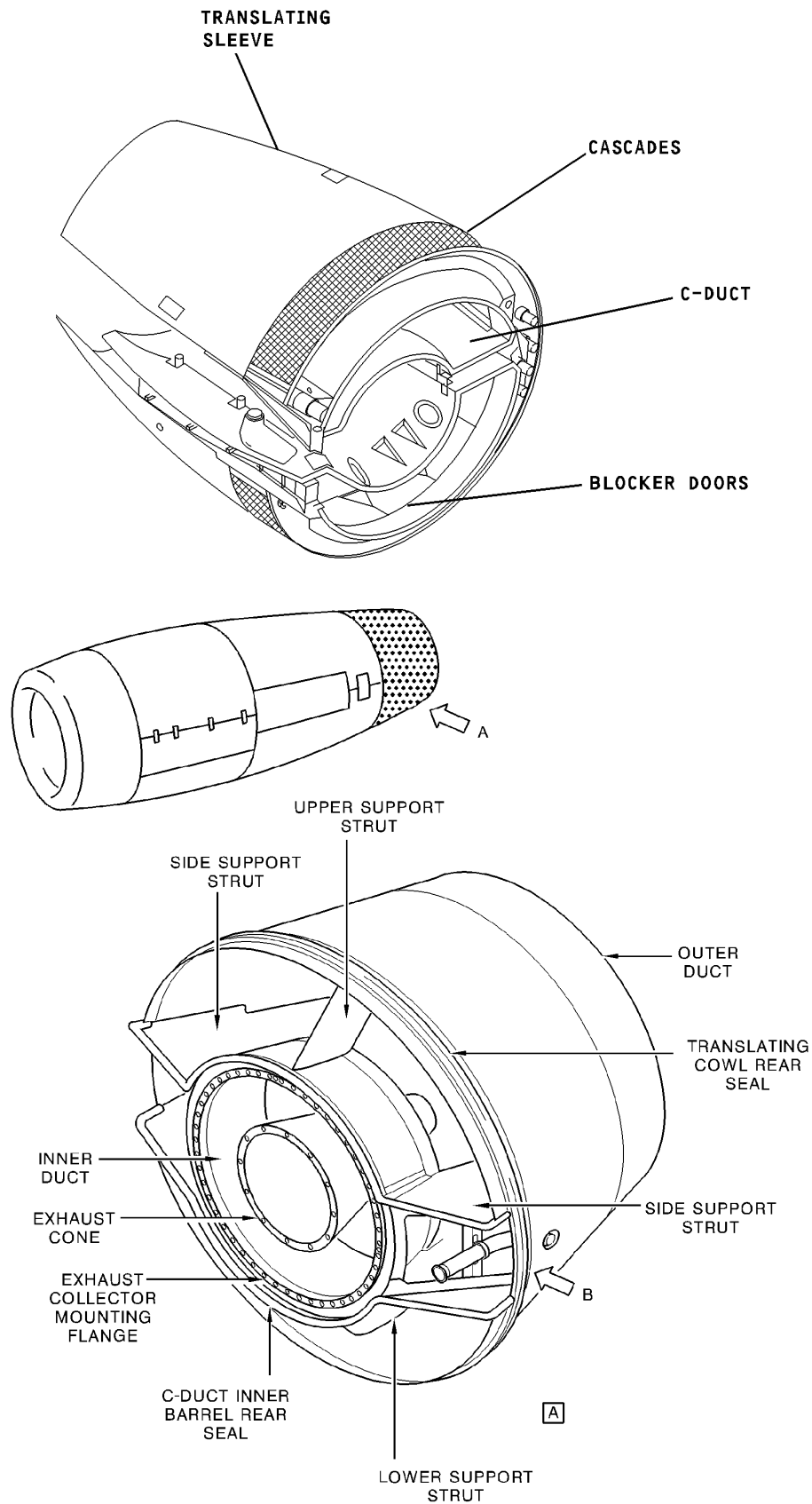
(O) PROCEDURES

Allow engines are to cool down three minutes prior to shutdown.

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ATA 78 Contents

78-32-01	Thrust Reverser Systems.....	78-3
78-33-01	Engine REVERSE UNLOCK Light Indicating System	78-5
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78-33-03	L/R REVERSER FAULT Annunciation Systems.....	78-7
78-33-04	Thrust Reverser System Accumulators.....	78-8
78-33-05	L/R REVERSER ACCUM LOW Annunciation System	78-9
78-33-06A	Thrust Reverser Stow and Lock Sensors.....	78-10
78-33-07	Thrust Reverser Permission Switch	78-12
78-33-08	L/R REV PRESSURIZED Annunciation System.....	78-13
78-33-09	Thrust Reverser Linear Variable Differential Transformers (LVDT).....	78-14



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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
78-32-01	Thrust Reverser Systems "DISP.APPR.REQ'D."	N	2	1	C (O)(M) May be inoperative provided inoperative reverser is DEACTIVATED and STOWED.

MEL ITEM	TAB LOCATION	PLACARD TEXT
78-32-01	Associated Reverse Thrust / Reverser Unlock Light	____ Thrust Reverser INOP

(O) PROCEDURES

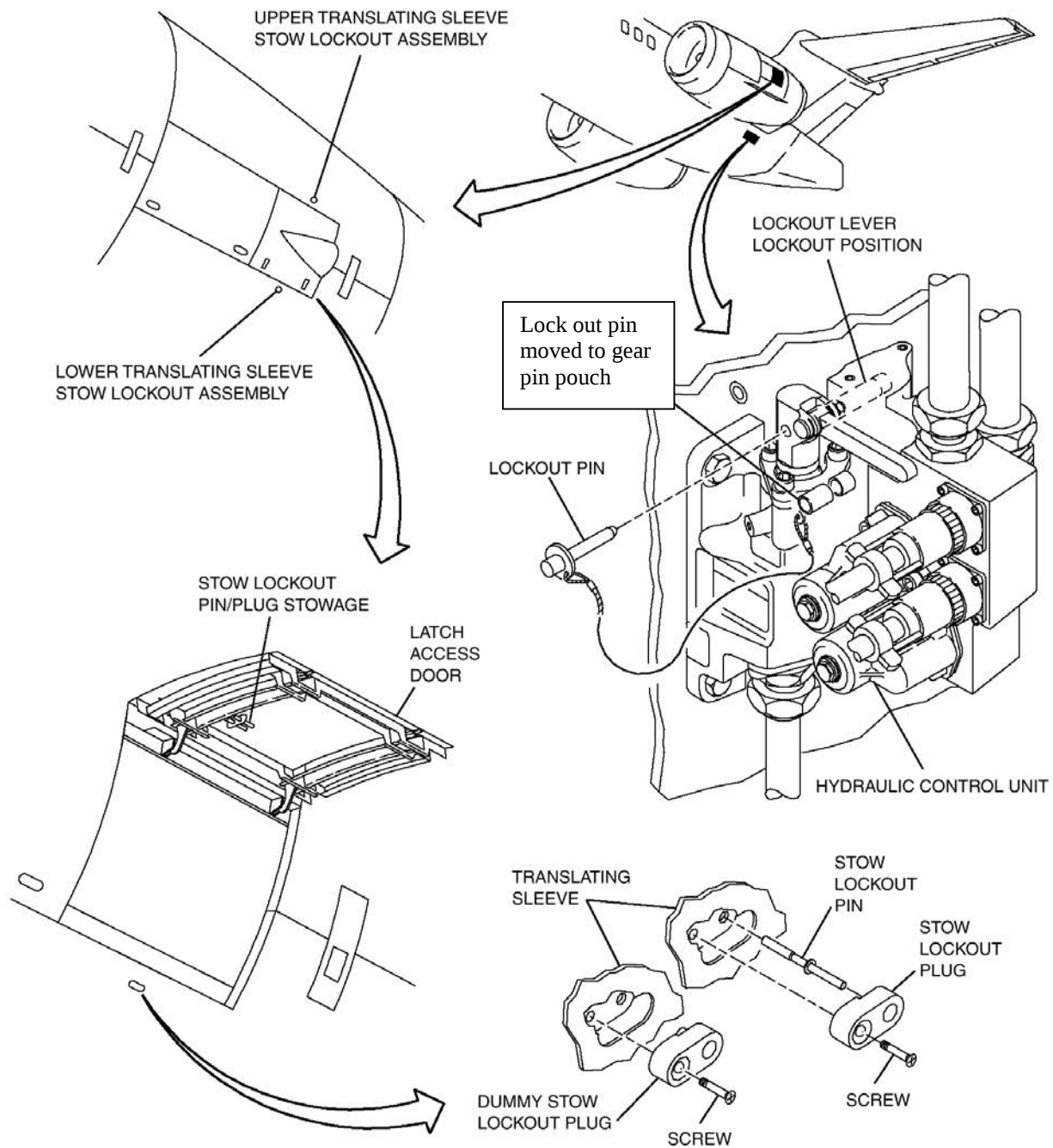
Use unaffected reverser within limits of directional controllability.

(M) PROCEDURES

1. Bite the EEC and record the (CLM) Clear Language Message and associated fault acronym in the aircraft log book before reverser deactivation.
2. Open the thrust reverser hydraulic control unit (HCU) access panel.
3. Move the lockout lever on the HCU to the lockout position.
4. Remove the HCU lockout pin from the canvas pouch in the gear pin pouch of the aircraft and install it in the lockout hole of the HCU.
5. If necessary, manually move the thrust reverser translating sleeves to the fully retracted position.
6. Lock the upper and lower translating sleeves, as follows:
 - a. Remove the dummy plug from the stow lockout assembly on the outside of each translating sleeve.
 - b. Remove the stow lockout pin and associated plug from the pin stowage bracket (located on the interior of the latch access door) and install it in the stow lockout assembly.
 - c. Install the dummy plug into the pin stowage bracket on the latch access door.
7. Close the HCU access panel and latch access door.
8. Open associated REVERSER UNLOCK ADVISORY circuit breaker and REVERSE THRUST ADVISORY circuit breaker.

Circuit Breaker (CB#)	Panel	Location
LEFT REVERSER UNLOCK ADVISORY (B1-73)	EPC CBP	S-29
LEFT REVERSE THRUST ADVISORY (B1-452)	EPC CBP	S-30
RIGHT REVERSER UNLOCK ADVISORY (B1-74)	EPC CBP	T-29
RIGHT REVERSE THRUST ADVISORY (B1-453)	EPC CBP	T-30

CONTINUED NEXT PAGE



NOTE: Left Side Shown Right Side Similar.

NOTE: The HCU lockout pin is no longer located in the stowage hole of the HCU but is now located in a canvas bag in the gear pin pouch of the aircraft.

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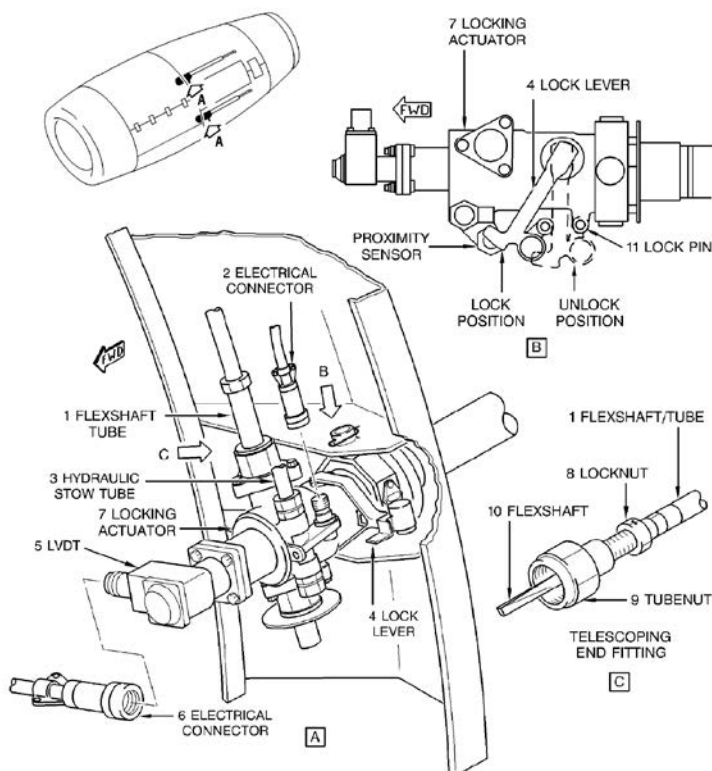
NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
78-33-01	Engine REVERSE UNLOCK Light Indicating System "Contact MCC"	N	2	0	C
					(M) May be inoperative provided: a) Affected Light is extinguished, b) Associated Engine REVERSE THRUST indication is operative, and c) Associated thrust reverser is inspected for proper stowage in the RETRACTED position PRIOR TO EACH DEPARTURE (Log Book Entry Required). Repetitive Check Required (Yellow Placard)

MEL ITEM	TAB LOCATION	PLACARD TEXT
78-33-01	Affected Reverse Unlock Light	___ Engine Reverse Unlock Light INOP

(M) PROCEDURES

PRIOR TO EACH DEPARTURE:

1. Pull and secure the associated REVERSE UNLOCK ADVISORY circuit breaker (S-29 or T-29 EPC panel),
2. Open associated engine Fan Cowls, and observe the Thrust Reverser Locking Actuators are in their "locked" position.



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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
78-33-02	Engine REVERSE THRUST Light Indicating System	Y	2	0 C	(M) May be inoperative provided: a) Affected Light is extinguished, and b) Associated REVERSE UNLOCK Light is operative.

MEL ITEM	TAB LOCATION	PLACARD TEXT
78-33-02	Affected Reverse Thrust Light	____ Engine Reverse Thrust Light(s) INOP

(M) PROCEDURES

Pull and secure the associated REVERSE THRUST circuit breaker (S-30 or T-30).

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
78-33-03	L/R REVERSER FAULT Annunciation Systems "DISP.APPR.REQ'D."	N	2	1 C	(O)(M) May be inoperative provided associated reverser is considered inoperative and is DEACTIVATED, STOWED and deferred per MEL 78-32-01 .

MEL ITEM	TAB LOCATION	PLACARD TEXT
78-33-03	Affected Reverse Thrust Light	____ REVERSER FAULT Annunciator INOP

(O) PROCEDURES

Use unaffected reverser within limits of directional controllability.

(M) PROCEDURES

Deactivate, stow and defer reverser per [MEL 78-32-01](#).

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS
78-33-04	Thrust Reverser System Accumulators	N	2	0	C	(O)(M) May be inoperative provided no external leakage exists.

MEL ITEM	TAB LOCATION	PLACARD TEXT
78-33-04	Associated Reverse Thrust / Reverser Unlock Light	____ T/R Accumulator(s) INOP

(O) PROCEDURES

NOTE: A "L or R REV ACCUM LOW" EOAP message will/may display an associated EOAP message L or R REVERSER FAULT. These messages will clear with the application of hydraulic pressure.

No effect on normal operations. Both reversers may be used.

(M) PROCEDURES

1. Inspect affected accumulator and associated hydraulic lines for leaks.
2. If leaks exists, disconnect and secure supply line from affected Accumulator.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH			
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY			
ITEM NO. NAME / DESCRIPTION						REMARKS OR EXCEPTIONS	
78-33-05	L/R REVERSER ACCUM LOW Annunciation System	N	2	0	C	(O)(M) May be inoperative provided associated Thrust Reverser Accumulator is considered inoperative.	

MEL ITEM	TAB LOCATION	PLACARD TEXT
78-33-05	Associated Reverse Thrust / Reverser Unlock Light	____ REVERSER ACCUM LOW Annunciator(s) INOP

(O) PROCEDURES

NOTE: A "L or R REV ACCUM LOW" EOAP message will/may display an associated EOAP message L or R REVERSER FAULT. These messages will clear with the application of hydraulic pressure.

No effect on normal operations. Both reversers may be used.

(M) PROCEDURES

1. Inspect affected accumulator and associated hydraulic lines for leaks.
2. If leaks exists, disconnect and secure supply line from affected Accumulator.

	MD-90 Minimum Equipment List	ATA 78 Exhaust	R13 04/27/15 Page 78-10
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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
78-33-06A	Thrust Reverser Stow and Lock Sensors	N	4	2	C (M) One sensor may be inoperative on each operative thrust reverser provided: a) Associated REVERSE UNLOCK Light is operative, and b) Associated thrust reverser is inspected for proper stowage in the RETRACTED position PRIOR TO EACH DEPARTURE (Log Book Entry Required). Repetitive Check Required (Yellow Placard)
78-33-06B	Thrust Reverser Stow and Lock Sensors "DISP.APPR.REQ'D."	N	4	1	C (O)(M) May be inoperative provided the thrust reverser with two inoperative sensors is DEACTIVATED, STOWED and deferred per MEL 78-32-01 .

MEL ITEM	TAB LOCATION	PLACARD TEXT
78-33-06A	Associated Reverse Thrust / Reverser Unlock Light	____ T/R Stow and Lock Sensor(s) INOP
78-33-06B	Associated Reverse Thrust / Reverser Unlock Light	1. ____ T/R Stow and Lock Sensors(s) INOP 2. ____ Thrust Reverser INOP

O) PROCEDURES

78-33-06B

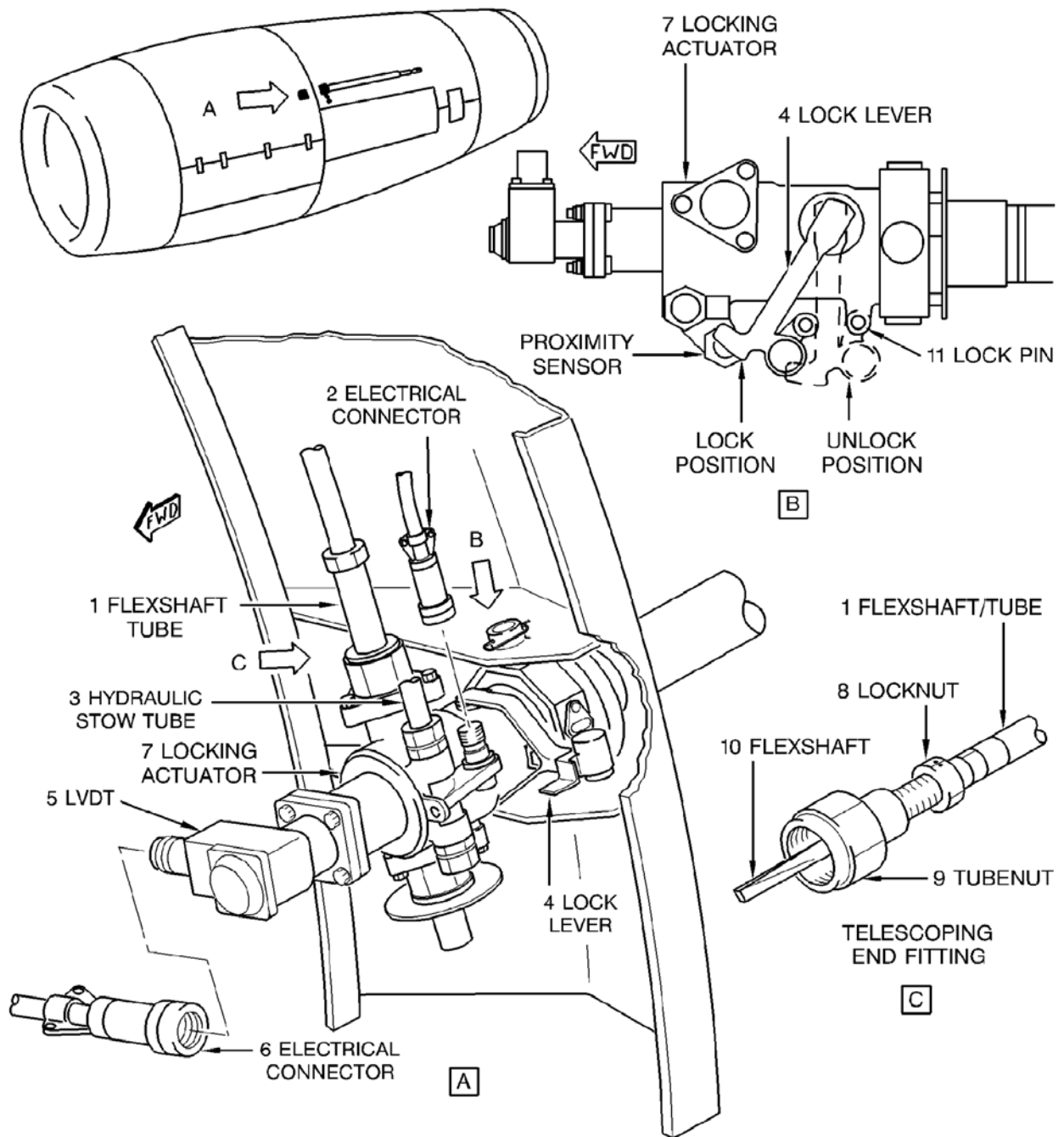
Use unaffected reverser within limits of directional controllability.

(M) PROCEDURES

78-33-06A

1. PRIOR TO EACH DEPARTURE (Log Book Entry Required), open associated engine Fan Cowls, and observe the Thrust Reverser Locking Actuators are in their "locked" position.

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78-33-06B

Deactivate, stow and defer reverser per [MEL 78-32-01](#).

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
78-33-07	Thrust Reverser Permission Switch "DISP.APPR.REQ'D."	N	4	2	C (O)(M) One or both may be inoperative on ONE reverser provided associated thrust reverser is considered inoperative and deferred per MEL 78-32-01 .

MEL ITEM	TAB LOCATION	PLACARD TEXT
78-33-07	Associated Reverse Thrust / Reverser Unlock Light	____ Thrust Reverser Permission Switch(es) INOP

(O) PROCEDURES

Use unaffected reverser within limits of directional controllability.

(M) PROCEDURES

Deactivate, stow and defer reverser per [MEL 78-32-01](#).

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
78-33-08	L/R REV PRESSURIZED Annunciation System "DISP.APPR.REQ'D."	N	2	1 C	(O)(M) May be inoperative provided the associated Thrust Reverser System is considered inoperative and is DEACTIVATED, STOWED and deferred per MEL 78-32-01 .

MEL ITEM	TAB LOCATION	PLACARD TEXT
78-33-08	Associated Reverse Thrust / Reverser Unlock Light	____ REV PRESSURIZED Annunciation System INOP

(O) PROCEDURES

Use unaffected reverser within limits of directional controllability.

(M) PROCEDURES

Deactivate, stow and defer reverser per [MEL 78-32-01](#).

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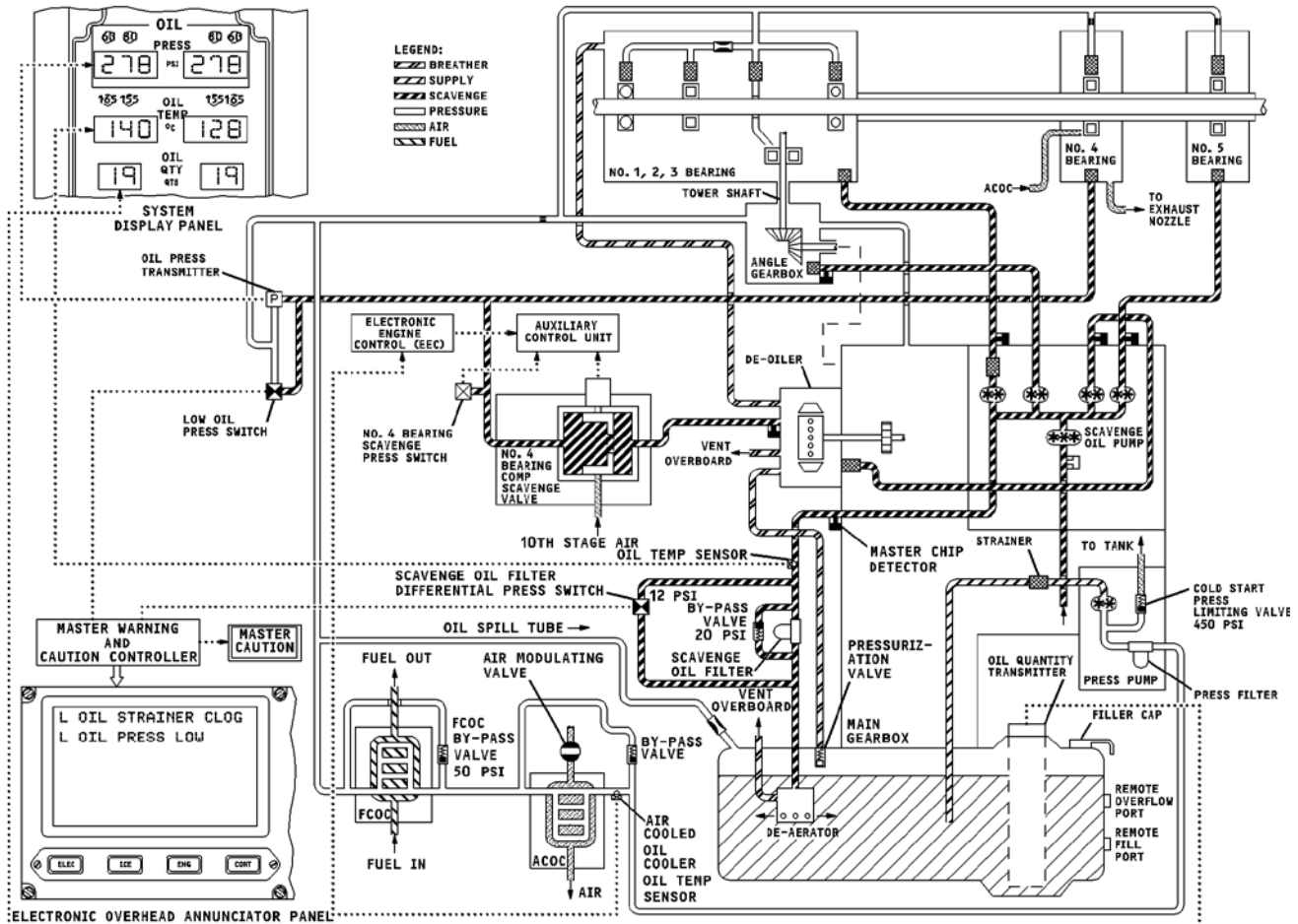
NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH			
FLIGHT CREW MAY PLACARD					REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION						REMARKS OR EXCEPTIONS
78-33-09	Thrust Reverser Linear Variable Differential Transformers (LVDT)	Y			4	2	C

MEL ITEM	TAB LOCATION	PLACARD TEXT
78-33-09	Associated Reverse Thrust / Reverser Unlock Light	____ LVDT(s) INOP

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79-21-01	Air Cooled Oil Cooler Air Valves	79-3
79-31-01	Engine Oil Quantity Indicating Systems.....	79-4
79-34-01	L/R OIL PRESSURE LOW Annunciation Systems.....	79-5
79-36-01	L/R OIL STRAINER CLOG Annunciation Systems.....	79-6



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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
79-21-01	Air Cooled Oil Cooler Air Valves "DISP.APPR.REQ'D."	Y	2	- A	(O) May be inoperative provided: a) PRIOR TO EACH DEPARTURE STATUS Cue Light on EOAP is selected after the affected engine is started, b) Repairs are made within 10 days, and c) Performance penalties are used. Repetitive Check Required (Yellow Placard)

MEL ITEM	TAB LOCATION	PLACARD TEXT
79-21-01	Near EOAP	___ Air Cooled Oil Cooler Air Valve(s) INOP

(O) PROCEDURES

PRIOR TO EACH DEPARTURE:

1. Select STATUS Cue Light on EOAP after the affected engine is started.
2. If L or R EEC NO PERF PNLTy message appears on EOAP, aircraft may dispatch with no further action required.
3. If L or R EEC PERF PENALTY 1 message appears on EOAP, performance corrections must be applied.

NOTE: If item 73-21-01A is used in conjunction with this item, and performance corrections apply, only the corrections for one item should be applied. Performance corrections are not cumulative for these items (79-21-01 and 73-21-01A).

79-21-01	AIR COOLED OIL COOLER AIR VALVES
EFFECTIVITY	All
FLIGHT PLANNING REQUIREMENTS	1. Reduce ENROUTE LIMIT WT by 3,400 lbs. 2. Increase BLOCK FUEL by 0.75% per affected valve.
NOTES	Make notation on Flight Plan when Enroute Climb is limiting.
AWABS	Performance corrections have been applied.
TAKEOFF PERFORMANCE WORKSHEET	TAKEOFF 1. Reduce RATOW by 4,200 lbs. 2. Reduce T/O CLIMB LIMIT by 4,200 lbs. LANDING 1. Reduce RWY ALLOWABLE LANDING WT by 2,900 lbs. 2. Reduce LANDING CLIMB LIMIT WT by 2,900 lbs. OTHER CORRECTIONS 1. Determine V-Speeds from ODM Takeoff Section charts for applicable Thrust/Flap setting and enter with the actual takeoff weight increased by the MEL takeoff weight penalty of 4,200 lbs. 2. Determine all other speeds at actual operating weight.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
79-31-01	Engine Oil Quantity Indicating Systems	N	2	0	B
					(O)(M) May be inoperative provided: a) Associated engine oil quantity is verified (visual or dip stick check) filled to recommended capacity PRIOR TO EACH DEPARTURE (Log Book Entry Required), and b) Associated Engine OIL PRESS LOW Annunciation System is operative. Repetitive Check Required (Yellow Placard)

MEL ITEM	TAB LOCATION	PLACARD TEXT
79-31-01	System Display Panel	___ Engine Oil Quantity Indicator(s) INOP

NOTE: 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.

(O) PROCEDURES

1. Verify that engine oil quantity has been checked.
2. Monitor engine oil pressure, temperature, and pressure caution systems.

(M) PROCEDURES

Check (visual or dipstick) oil quantity within 30 minutes of engine shutdown.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS
79-34-01	L/R OIL PRESSURE LOW Annunciation Systems	Y	2	1	B	(O) May be inoperative provided associated Engine Oil Quantity Indicating System is operative.

MEL ITEM	TAB LOCATION	PLACARD TEXT
79-34-01	Near EOAP	____ Engine OIL PRESSURE LOW Light INOP

(O) PROCEDURES

Monitor engine oil pressure, temperature, and quantity indications.

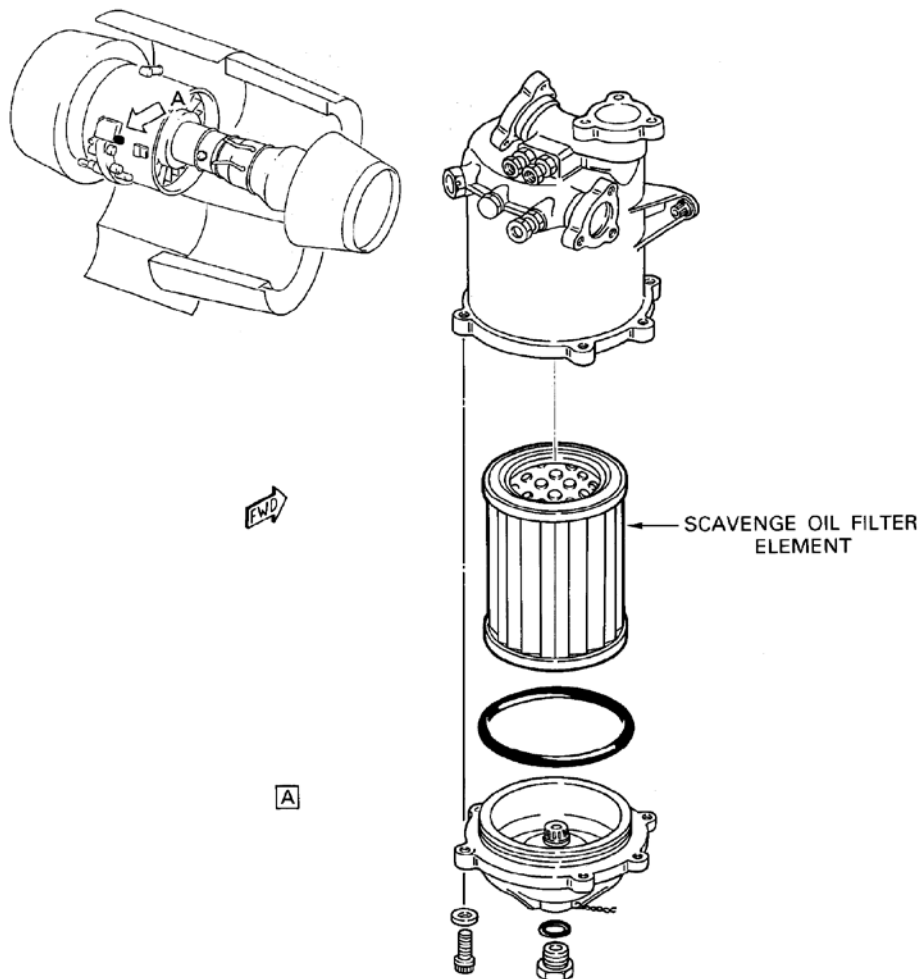
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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
79-36-01	L/R OIL STRAINER CLOG Annunciation Systems	N	2	1 B	(M) May be inoperative provided the Scavenge oil filter (screen) is inspected ONCE EACH FLIGHT DAY and verified to be clean. (Log Book Entry Required) Repetitive Check Required (Yellow Placard)

MEL ITEM	TAB LOCATION	PLACARD TEXT
79-36-01	Near EOAP	____ Engine OIL STRAINER CLOG Light INOP

(M) PROCEDURES

1. Inspect oil filter and verify it is clear.
2. Clean oil filter thoroughly.
3. Inspect oil filter at least ONCE EACH FLIGHT DAY.



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ATA 80 Contents

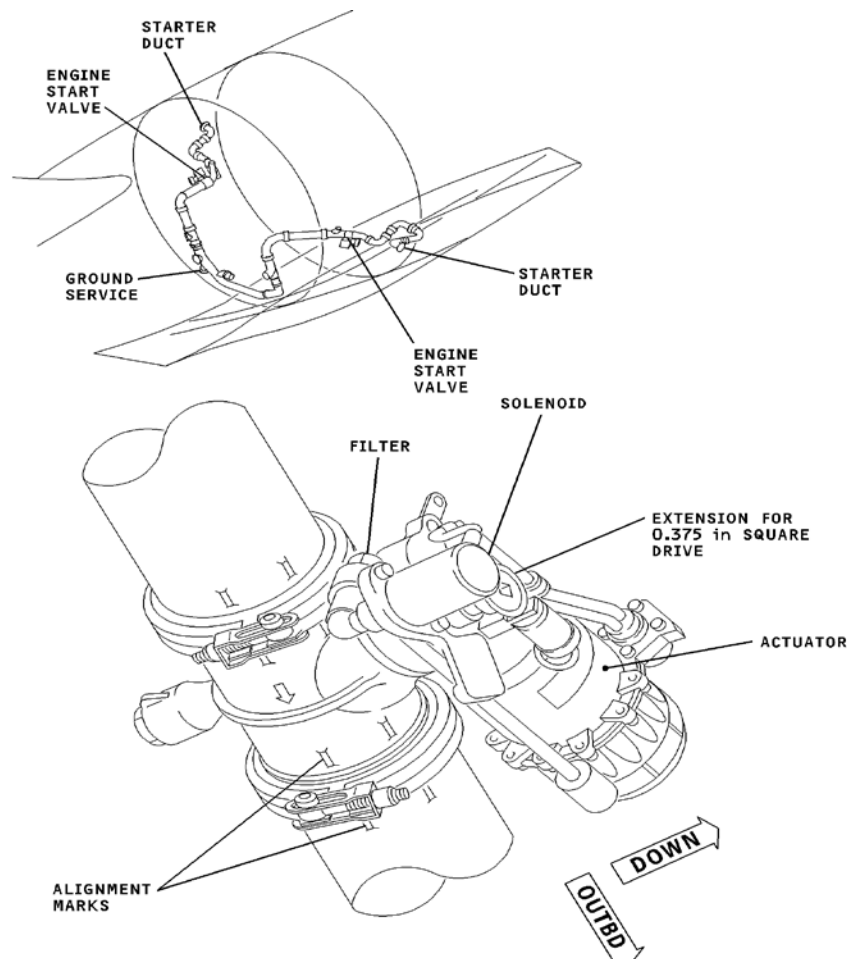
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80-11-02A	Valves.....	80-3
80-11-02B	Solenoid Coils	80-3
80-11-03	L/R ENG MANUAL START Annunciation Systems	80-4
80-11-04	L/R ENG START ABORTED Annunciation Systems.....	80-5
80-11-05	Starter Control System	80-6
80-11-06	L/R Engine Start Switch Internal Switchlight.....	80-7

NUMBER INSTALLED			NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD			REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
80-11-01	L/R START VALVE OPEN Annunciation Systems	N 2	0	C	(M) May be inoperative provided it is verified that the associated Starter Shutoff Valve is CLOSED AFTER STARTING. Repetitive Check Required (Yellow Placard)

MEL ITEM	TAB LOCATION	PLACARD TEXT
80-11-01	Near EOAP	___ START VALVE OPEN Light(s) INOP

(M) PROCEDURES

1. Prior to engine start (with fuel lever off), press the ENG Cue light on the EOAP and verify the associated L or R ENG FUEL OFF message appears. Absence of this message indicates a probable EEC/MWCC Bus failure (non-dispatchable).
2. After engine start, visually verify Start Valve position indicator on the valve housing indicates valve is closed.



NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
STARTER SHUTOFF SYSTEM					
80-11-02A	Valves	N 2	0	C	(M) Valve may be inoperative CLOSED provided: a) Alternate starting procedures are used, and b) Associated Igniter System operates normally.
80-11-02B	Solenoid Coils	N 4	2	C	

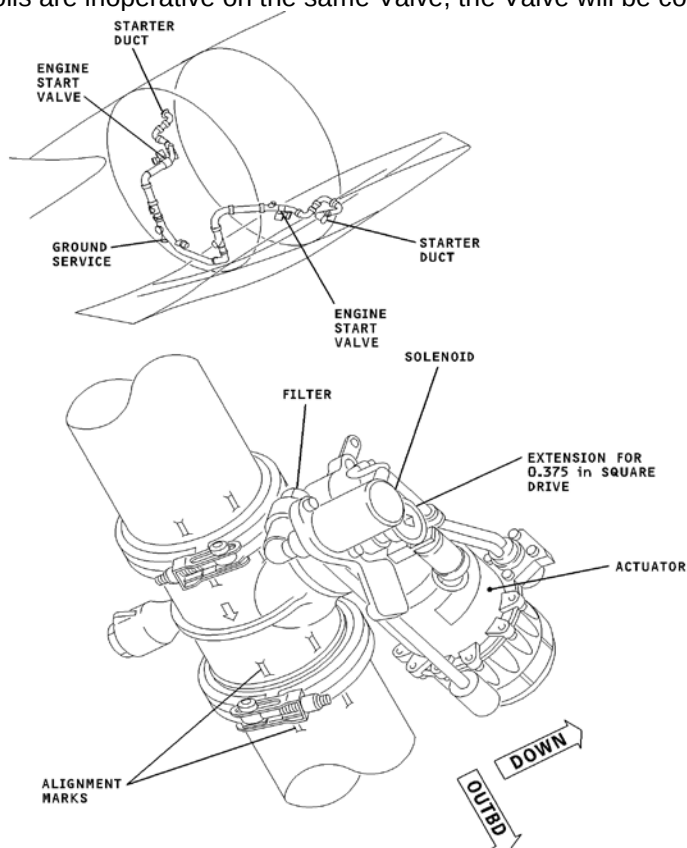
MEL ITEM	TAB LOCATION	PLACARD TEXT
80-11-02A	Associated Engine Start Switch	____ Starter Valve(s) INOP
80-11-02B	Associated Engine Start Switch	____ Starter Valve Solenoid Coil(s) INOP

(M) PROCEDURES

80-11-02A

1. Open starter control valve manually using a 0.375 inch (3/8) square drive extension bar.
2. Advise flight crew to start engine using manual starting procedures.
3. When engine N2 reaches stabilized idle, close starter control valve.

NOTE: If two Solenoid Coils are inoperative on the same Valve, the Valve will be considered inoperative.



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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
80-11-03	L/R ENG MANUAL START Annunciation Systems	Y	2	0 C	(M) May be inoperative provided alternate starting procedures are used.

MEL ITEM	TAB LOCATION	PLACARD TEXT
80-11-03	Near EOAP	____ L/R ENG MANUAL START Light INOP

(M) PROCEDURES

1. If Automatic Start System functions normally, it may be utilized. Advise flight crew to monitor engine parameters during the start.
2. If Automatic Start System does not function normally, advise flight crew that Auto start feature is not available. Refer to the [Operations Manual, Volume 1, Supplementary Procedures](#), Engines, APU, MD-90 Manual Start Procedure.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
80-11-04	L/R ENG START ABORTED Annunciation Systems	Y	2	0	C (M) May be inoperative provided alternate starting procedures are used.

MEL ITEM	TAB LOCATION	PLACARD TEXT
80-11-04	Near EOAP	____ ENG MANUAL START Light(s) INOP

(M) PROCEDURES

1. If Automatic Start System functions normally, it may be utilized. Advise flight crew to monitor engine parameters during the start.
2. If Automatic Start System does not function normally, advise flight crew that Auto start feature is not available. Refer to the [Operations Manual, Volume 1, Supplementary Procedures](#), Engines, APU, MD-90 Manual Start Procedure.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH	
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY	
ITEM NO.	NAME / DESCRIPTION				REMARKS OR EXCEPTIONS
80-11-05	Starter Control System	Y	2	0 C	(O) Automatic Start System may be inoperative provided manual start procedures are used.

MEL ITEM	TAB LOCATION	PLACARD TEXT
80-11-05	Associated Engine Start Switch	____ Starter Control System(s) INOP

(O) PROCEDURES

Refer to the [Operations Manual, Volume1, Supplementary Procedures](#), Engines, APU, MD-90 Manual Start Procedure.

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NUMBER INSTALLED				NUMBER REQUIRED FOR DISPATCH		
FLIGHT CREW MAY PLACARD				REPAIR CATEGORY		
ITEM NO.	NAME / DESCRIPTION					REMARKS OR EXCEPTIONS
80-11-06	L/R Engine Start Switch Internal Switchlight	Y	2	0	C	

MEL ITEM	TAB LOCATION	PLACARD TEXT
80-11-06	Associated Engine Start Switch	____ Engine Start Switch Internal Switchlight(s) INOP

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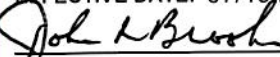
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Revision 14 complies with FAA MD-90 MMEL revision 10a, dated 09/17/2012.

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John R. Brooke
Principal Operations Inspector

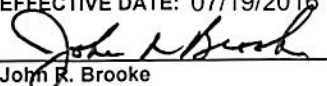
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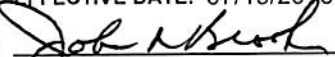
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