



# MD80

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## MEL PROCEDURES MANUAL

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ENAC APPROVAL

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This manual is effective for the following aircraft:

REG. N°	S/N°	FUS. N°	VESSEL NAME
IDACR	49975	1775	CARRARA
IDACS	53053	1806	MARATEA
IDACT	53054	1856	VALTELLINA
IDACU	53055	1857	BRINDISI
IDACV	53056	1880	RICCIONE
IDACY	53059	1942	NOVARA
IDACZ	53058	1927	CASTELFIDARDO
IDAND	53061	1957	TRANI
IDANF	53062	1960	SASSARI
IDANG	53176	1972	BENEVENTO
IDANH	53177	1973	MESSINA
IDANQ	53181	2005	LECCE
IDANU	53204	2009	TRAPANI
IDANW	53206	2034	SIENA
IDATC	53222	2080	FOGGIA
IDATE	53217	2053	GROSSETO
IDATG	53225	2086	AREZZO
IDATI	53218	2060	SIRACUSA
IDATM	53230	2106	CIVIDALE DEL FRIULI
IDATQ	53233	2110	MODENA
IDATS	53235	2113	FOLIGNO
IDATU	53220	2073	VERONA
IDAVT	49552	1597	COMO

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The letter "D" indicates deleted pages.  
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3	20 MAR 09	01 - MEL	ITEM 23-9 Communications Systems.	Following page 01-23-4
4	20 MAR 09	01 - MEL	ITEM 23-14 ACARS.	Preceding page 01-23-5
35	20 MAR 09	01 - MEL	ITEM 25-32 Emergency Locator Transmitter	Following page 01-25-6
36	20 MAR 09	01 - MEL	ITEM 34-53 Low Visibility Operations/ Category III	Following page 01-34-10
37	20 MAR 09	02 - MAINT.	ITEM 34-53 Low Visibility Operations/ Category III	Following page 02-34-6
39	20 MAR 09	01 - MEL	Deletion of Items: -52-14 (FWD Cabin and Gallery Doors) -52 -15 ( AFT Cabin Door/TAILCONE Exit)	Following page 01-52-4
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**ENAC APPROVAL**
**DATE:**

## RECORD OF REVISION

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## AIRPLANE DISPATCH WITH LAVATORIES AND/OR GALLEY EQUIPMENT INOPERATIVE

As a Company policy, in order to ensure a high level of passengers comfort, it has been established that airplane **dispatch from FCO is not allowed with any lavatory and/or oven (when are supposed to be used in flight) inoperative**, unless a specific extension will be delivered by a mutual agreement between Captain and the Engineer on Duty.

Furthermore, Cabin Attendants at the end of the flight must report to the Captain any kind of failure affecting lavatories and/or ovens to be recorded into the Aeroplane Technical Logbook.

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## 1. INTRODUCTION

The MEL PROCEDURES MANUAL (MPM) approved by ENAC (Ente Nazionale Aviazione Civile) in compliance with Joint Aviation Authorities (JAA) regulations, permits dispatch of the airplane for **revenue flights** with certain items or components inoperative provided an acceptable level of safety is maintained by appropriate operation, by a transfer of the function to another operating component, or by reference to other instruments or components providing the required information.

**Training and Ferry Flight** may be dispatched, when necessary, with less than the equipment herein specified, provided all equipment required to assure airworthiness and all equipment expected to be utilized in the flight are operable.

In order to operate a Technical Ferry Flight, a "Permit to Fly" must be obtained from ENAC (see relevant procedure in the operator's "Continuing Airworthiness Management Exposition" - CAME - manual).

### NOTES

- *The provisos of the MEL are applicable until the airplane starts to move on its own power.*
- *For dispatch with secondary airframe or engine parts missing, refer to the "CONFIGURATION DEVIATION LIST" (CDL) Section 3 of this MPM.*

## 2. CONTENTS OF MEL

The MEL contains only those items of airworthiness significance which may be inoperative prior to dispatch, provided limitations and appropriate procedures are observed. Equipment obviously basic to airplane airworthiness such as wings, rudder, flaps, etc., is not listed and must be operative for all flights.

It is important to note that:

ALL ITEMS WHICH ARE RELATED TO THE AIRWORTHINESS OF THE AIRPLANE AND NOT INCLUDED IN THE LIST ARE **AUTOMATICALLY REQUIRED TO BE OPERATIVE**.

Equipment **obviously not required** for safe operation of the airplane, such as galley equipment, ash trays, etc., are defined as "Passenger Convenience Items" (see part 5 "Definitions" of this preamble).

### NOTE

*The MEL does not specify the equipment required to conduct Cat I, Cat II or Cat III operations.*

*Refer to Chapter 1 GENERAL LIMITATIONS: CATEGORY I/II/IIIA/IIIB OPERATIONS - LIST OF REQUIRED EQUIPMENT.*

To provide both maintenance personnel with an univocal and easy tool for updating their application databases, and flight dispatchers with an alert input anytime a/c performance constraints must be applied to the flight plan, a numeric code (TRIM code) is assigned to each a/c dispatch condition, even though multiple, and printed in Column 1 in bold italics type within round brackets (**xxx**), aligned with the specific Repair Time Interval.

Whenever a dispatch condition has an operational impact on flight planning the TRIM code is underlined as well (**xxx**).


It must be pointed out that the attribution of this code to each equipment of the detailed list appearing below the "Passengers Convenience Items" MEL item, present in Chapter 25 - Equipment, has no effect on any kind of operation, since it is used only by maintenance to monitor a complete and updated situation of all those cabin equipment having influence on passenger comfort only.

## 3. CRITERIA FOR DISPATCH

**Repair time intervals:** the inoperative systems or components, deferred in accordance with the MEL, must be repaired at or prior to the "repair time intervals" established by the following letter designators, inserted in the "Item column", adjacent to column "2" (Number Installed):

A (Category A) - Items in this category shall be repaired within the "repair time interval" specified in the "Remarks and/or Exceptions" column.

(Continued)

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### 3. CRITERIA FOR DISPATCH (Cont'd)

B (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 “Aeroplane Technical Logbook”. For example, if it were recorded at 10 a.m. on January 26th, the three day interval would begin at midnight the 26th and end at midnight the 29th.

C (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 “Aeroplane Technical 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.

D (Category D) – Items in this category shall be repaired within one hundred and twenty (120) consecutive calendar days, excluding the day the malfunction was recorded in the “Aeroplane Technical Logbook”.

The categorization of “repair time interval” limits indicated by “A”, “B”, “C” or “D” gives a deadline for each MEL item.

In unpredictable circumstances, which do not allow to comply with the prescribed “repair time interval”, these limits, excepting for Category “A”, may be exceptionally extended (see part 4 “Maintenance Action” of this preamble). The Captain of the flight shall be notified of any extension beyond the prescribed “repair time interval” deadline limit by an entry in both the “Aeroplane Technical Logbook” and the “Anomalie Compatibili” list.

The decision of the Captain of the flight to have allowable inoperative items corrected prior to flight **will take precedence** over the provisos contained in the MEL.

The Captain may request requirements above the minimum listed whenever, in his judgment, such added equipment is essential to the safety of a particular flight under the special conditions prevailing at the time. However, he shall never accept requirements below.

Before dispatching an airplane with multiple MEL items inoperative, it must be checked that any interface or interrelationship between inoperative items will not result in a degradation in the level of safety and/or an undue increase in crew workload. It is particularly in this area of multiple discrepancies and especially discrepancies in related systems, that good judgment, based on the circumstances of the case, including climatic and enroute conditions, must be used.

In case of any doubt whether the airplane can safely be dispatched for a specific flight, airline designated responsible bodies must be contacted (“Ingegnere di Servizio” for DTT and “Settore a/m MD-80”/ “Tecnico Operativo” for DVT).

### 4. MAINTENANCE ACTION

Every effort shall be made by maintenance to correct all technical irregularities as early as practicable, **but in any case repair should be accomplished within the “repair time interval” limits and/or according to the procedures of the operator’s “CAME” Manual approved by ENAC.**

The decision of the Captain to comply with the appropriate MEL requirements and to post-pone maintenance activity in conformity with “repair time intervals” will supersede any other intention.

The Captain must be informed by maintenance as soon as practicable, should it be impossible to repair the inoperative item prior to departure.


Whenever an airplane is released by maintenance for dispatch with items inoperative, the following is required:

- The “Aeroplane Technical Logbook” aboard the airplane must contain a detailed description of inoperative item(s), special advise to the flight crew, if necessary, and information about corrective actions taken.
- If inadvertent operation could produce a hazard, such equipment must be rendered inoperative (physically) as given in the appropriate Maintenance Procedures.

“Maintenance Procedure Required” intervention time interval definition, as specified by manufacturer, is:

every day;  
prior to each departure;  
other interval.


**The specification of these interval is listed in the M.E.L. Remarks or Exceptions; in case of no specification reported, the Maintenance Procedure is applied only when the anomaly is recorded on the ATL.**

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## 5. DEFINITIONS

For the purpose of these regulations the following definitions shall apply:

- a) Throughout the MEL, the item sequence of FAA approved DC9 Master MEL has been retained. Therefore item numbers followed by the words "NOT APPLICABLE" refer to items listed in the FAA approved DC9 Master MEL but not installed in the AZ airplanes.
- b) "Item" (column 1) means the equipment, system, component or function listed in the "item" column.
- c) "Repair time interval" (column 2) is the time within which the inoperative systems or components must be repaired as established by the corresponding letter designator (A, B, C, or D).
- d) "Number installed" (column 3) is the number (quantity) of items normally installed in the airplane. This number represents the airplane configuration considered in developing this MEL.
- e) "Number required for dispatch" (column 4) is the minimum number (quantity) of items required for operation provided the conditions specified in column "5" are met.
- f) Dash (-) in columns "3" and "4" indicates a variable quantity.
- g) "Remarks and/or Exceptions" (column 5) includes a statement either prohibiting or permitting operation with a specific number of items inoperative, condition and limitations for such operation and appropriate notes.
- h) Each inoperative item must be placarded to inform and remind the crew members and maintenance personnel of the equipment condition.
- i) "Passenger Convenience Items" means those items related to passenger convenience, comfort, or entertainment such as, but not limited to, galley equipment, ash trays, stereo equipment, overhead reading lamps, etc.
- j) DAY operation is any flight conducted from the point of take-off to landing between 30 minutes before sunrise and 30 minutes after sunset.
- k) "Visible Moisture" means an atmospheric environment containing water in any form that can be seen in natural or artificial light; for example, cloud, fog, rain, sleet, hail, or snow.
- l) "Visual Meteorological Conditions" (VMC) - The atmospheric environment is such that would allow a flight to proceed under the Visual Flight Rule (VFR) applicable to the flight. This does not preclude operating under Instrument Flight Rules (IFR).
- m) "Maintenance Procedure Required" means that maintenance actions are required prior to operation with the listed item inoperative and are covered by specific procedures in the Sections 2 & 4 of the MD-80 MPM.
- n) "Flight Day" means a 24 hour period (from midnight to midnight) either Universal Coordinated Time (UCT) or local time, as established by the operator, during which at least one flight is initiated for the affected airplane.
- o) "Inoperative" - anytime a system and/or component malfunctions to the extent that it does not accomplish its intended purpose and/or is not consistently functioning within its designed limits or tolerances.
- p) "Deleted" in the Remarks column after a sequence item indicates that item was previously listed but is now required to be operative if installed in the affected airplane.
- q) "Refer to item ....." reported in the Remarks column means that the entire item which we are referring to must be accomplished (Remarks, Crew Operating Procedure and Maintenance Procedure included).
- r) "Day of Discovery" is the calendar day an equipment/instrument malfunction was recorded in the ATL. This day is excluded from the calendar days specified in the MEL for the repair of an inoperative item of equipment. This provision is applicable to all MEL items, i.e., categories "A.B.C. and D".

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- s) "Combustible Material" refers to material which is capable of catching fire and burning. In particular: if a MEL item prohibits loading of combustible material, no material may be loaded except the following:
- 1) Fly away kits (excluding e.g. cans of hydraulic fluid, cleaning solvents, batteries, capacitors, chemical generators etc.); and
  - 2) Inflight service material (return catering – only closed catering trolleys/boxes, no newspapers, no alcohol or duty free goods).
- t) Cabin Attendant Seat" is a seat in the aeroplane cabin which meets the following conditions:
- 1) Where the certification of the cabin requires this seat to be occupied by a qualified cabin crew member as specified in the Operations Manual.
  - 2) This seat is a part of the station to which a qualified cabin crew member is to be assigned for the flight; and
  - 3) The qualified cabin crew member assigned to the station is a member of the minimum cabin crew designated for the flight.

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## SECTION 1

### MINIMUM EQUIPMENT LIST

**This MEL Incorporates Revisions up to 37 of the FAA Master MEL**

**ENAC APPROVAL n. 000308 / OOR dated 13/01/2009**

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22	AUTOMATIC FLIGHT CONTROL .....	01-22-1 to 5/6
23	COMMUNICATIONS .....	01-23-1 to 6
24	ELECTRICAL POWER .....	01-24-1 to 5/6
25	EQUIPMENT/FURNISHINGS .....	01-25-1 to 6
26	FIRE PROTECTION .....	01-26-1 to 3/4
27	FLIGHT CONTROLS .....	01-27-1 to 6
28	FUEL .....	01-28-1 to 4
29	HYDRAULIC POWER .....	01-29-1 to 3/4
30	ICE AND RAIN PROTECTION .....	01-30-1 to 4
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32	LANDING GEAR .....	01-32-1/2
33	LIGHTS .....	01-33-1 to 7/8
34	NAVIGATION .....	01-34-1 to 10
35	OXYGEN .....	01-35-1 to 3/4
36	PNEUMATIC .....	01-36-1 to 2
38	WATER/WASTE .....	01-38-1/2
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74	IGNITION .....	01-74-1/2
76	ENGINE CONTROL .....	01-76-1/2
77	ENGINE INDICATING .....	01-77-1/2
78	EXHAUST .....	01-78-1/2
79	OIL .....	01-79-1/2
80	STARTING .....	01-80-1/2

2 Repair Time Interval		3 Number installed			
1 Item				4 Number required for dispatch	5 Remarks and/or Exceptions
<b>21 AIR CONDITIONING</b>					
<b>-1</b> Air Conditioning System <b>(1)</b>	C	2	1		May be inoperative provided: 1) The airplane remains at or below FL 250, and 2) Associated Flow Control Valve is deactivated CLOSED.  <b>Crew Operating Procedure</b> - Turn on operative pack. - Turn off the affected pack.  TAKEOFF / LANDING - Set packs on EPR on both engines.  <i>NOTE: TRC will provide EPR setting for engine with operative pack .</i> <i>Autothrottle may be used.</i>  DESCENT - During descent above 15000 ft, adjust thrust on engine supplying high pressure bleed as required in order to assure normal cabin differential pressure (approx 21 psi in air cond supply press indicator).  <b>Maintenance Procedure Required</b>
	<b>(2)</b>	C	2	0	May be inoperative provided: 1) Flight is conducted in an unpressurized configuration, and 2) Ram Air Valve System is operative. 3) Associated Flow Control Valve is deactivated CLOSED.  <b>Crew Operating Procedure</b>  <i>NOTE: Refer to O.M. General Basic 8.10 Page 5 "FLIGHT WITH DEPRESSURIZED CABIN".</i>  BEFORE TAKEOFF - Move cabin pressure control lever down to manual position, depress and rotate the cabin pressure control wheel to INCR (VALVE CLOSE) position. - Move the ram air switch to ON.  TAKEOFF/LANDING - Set packs off EPR on both engines. - To avoid passenger discomfort, limit climb and descent rates to 500 fpm. - If radio rack fans should become inoperative limit use of radio components to minimum number required.

(Continued)

2 Repair Time Interval		3 Number installed	
1 Item		4 Number required for dispatch	5 Remarks and/or Exceptions
<b>21 AIR CONDITIONING</b> (Cont'd)			
-1 Air Conditioning System (Cont'd)			<p><i>NOTE: TRC, ART and autothrottle may be used. However, when CL, CR or MCT are selected, the TRC will indicate a NO MODE and a flag will appear in the EPRLIM readout. The TRC will display the correct EPR behind the flag.</i></p> <p><b>Maintenance Procedure Required</b></p>
-2 Air Conditioning Supply (3) Temperature High Indicating System	C	2 1	<p>May be inoperative provided:</p> <p>1) Associated Air Conditioning Supply System is operated in HP BLD OFF, and</p> <p>2) The remaining Air Conditioning System and Air Conditioning Supply Systems operate normally.</p> <p><b>Maintenance Procedure Required</b></p>
(4)	C	2 1	<p>May be inoperative provided associated Air Conditioning System is not used. Refer to item 21-1.</p>
(5)	C	2 0	<p>May be inoperative provided both Air Conditioning Systems are not used. Refer to item 21-1.</p>
(6)	C	2 0	<p>May be inoperative provided:</p> <p>1) Both Air Conditioning Systems remaining HP BLD OFF, and</p> <p>2) Flight is conducted in an unpressurized configuration.</p> <p><b>Crew Operating Procedure</b></p> <p><i>NOTE: Refer to O.M. General Basic 8.10 Page 5 "FLIGHT WITH DEPRESSURIZED CABIN".</i></p> <ul style="list-style-type: none"> <li>- Select manual cabin pressure control and move the cabin pressure control wheel to full DECR (VALVE OPEN) position.</li> <li>- Use both air conditioning systems in HP BLD OFF position.</li> </ul> <p><i>NOTE: For passengers comfort limit climb and descent rates to 500 fpm.</i></p> <p><b>Maintenance Procedure Required</b></p>
-3 Air Conditioning Supply Pressure Indicating System (7)	C	2 1	<p>One may be inoperative provided associated Pressure Regulator and Flow Control Valves are operative.</p> <p><b>Maintenance Procedure Required</b></p>
-4 Cabin / Cabin Supply Temperature Indicating System (8)	C	1 0	<p>May be inoperative provided:</p> <p>1) Both Air Conditioning System Shutdown Thermal Switches are operative, and</p> <p>2) Cockpit/Cabin Compartment Auto Temperature Control Systems are operative.</p> <p><b>Maintenance Procedure Required</b></p>



2 Repair Time Interval		3 Number installed			
1 Item				4 Number required for dispatch	5 Remarks and/or Exceptions
<b>21 AIR CONDITIONING</b> (Cont'd)					
<b>-5</b> Air Conditioning Automatic Shutoff System	<u>(9)</u>	C	1 0		May be inoperative provided: 1) Both Air Conditioning Systems are turned off prior to takeoff and turned on as per Crew Operating Procedure, and 2) Landing Light Auto Retract System is considered inoperative.  <b>Crew Operating Procedure</b> Leave the air conditioning shutoff switch in OVRD position for the entire flight.  Refer to item 33-7c for possible performance penalties.  <b>BEFORE TAKEOFF</b> - Turn both packs off. - Set packs off EPR on both engines. - Cabin may be ventilated by ram air valve.  <b>TAKEOFF</b> - When reaching 1500 ft AGL, one at a time turn both packs on. - If engine failure occurs, do not turn packs on until slats retraction is completed. - Ram air valve should be closed after takeoff.  <b>DESCENT</b> - Set 3000 ft AGL in the landing altitude window so that cabin is unpressurized when the packs are turned off.  <b>APPROACH</b> In view of possible one engine go-around: - Turn both packs off. - Set pack off EPR on both engines in case of go-around. - Cabin may be ventilated by ram air valve.  <b>Maintenance Procedure Required</b>
<b>-6</b> NOT APPLICABLE					
<b>-7</b> Air Conditioning Flow Control Valve	<u>(10)</u>	C	2 0		May be inoperative provided: 1) Affected valve is CLOSED, and 2) Associated Air Conditioning System is not used. Refer to item 21-1.
<b>-8</b> Air Conditioning Pressure Regulator Valve	<u>(11)</u>	C	2 0		May be inoperative provided: 1) Associated Air Conditioning flow control valve remains CLOSED, and 2) Associated Air Conditioning System is not used. Refer to item 21-1.

2 Repair Time Interval		3 Number installed			
1 Item				4 Number required for dispatch	5 Remarks and/or Exceptions
<b>21 AIR CONDITIONING</b> (Cont'd)					
<b>-9</b> Ram Air Valve	(12)	C	1	0	May be inoperative in the OPEN position provided the two ground air conditioning check valves (located between left and right air conditioning duct connection) are operative.
	(13)	C	1	0	<b>Maintenance Procedure Required</b> May be inoperative in the CLOSED position provided both Air Conditioning Systems are operative.
<b>-10</b> Compressor Discharge and Turbine Inlet Thermal Switches	(14)	C	4	0	<b>Maintenance Procedure Required</b> May be inoperative provided affected Air Conditioning System is not operated prior to becoming airborne and is turned off prior to landing.
					<b>Crew Operating Procedure</b> <u>One Pack Affected:</u>  BEFORE TAKEOFF <ul style="list-style-type: none"> <li>- Leave on operative pack.</li> <li>- Turn off affected pack.</li> <li>- Set packs on EPR on both engines.</li> </ul> <i>NOTE: TRC will provide EPR setting for engine with operative pack.</i> <i>Autothrottle may be used.</i> TAKEOFF <ul style="list-style-type: none"> <li>- When reaching 1500 ft AGL, turn affected pack on.</li> </ul> APPROACH <ul style="list-style-type: none"> <li>- Turn off affected pack.</li> <li>- Set packs on EPR on both engines in case of go-around.</li> </ul> <u>Both Packs Affected</u> BEFORE TAKEOFF <ul style="list-style-type: none"> <li>- Turn both packs off.</li> <li>- Set packs off EPR on both engines.</li> <li>- Cabin may be ventilated by ram air valve.</li> </ul> TAKEOFF <ul style="list-style-type: none"> <li>- When reaching 1500 ft AGL, one at a time turn both packs on.</li> <li>- Ram air valve should be closed after takeoff.</li> </ul> DESCENT <ul style="list-style-type: none"> <li>- Set 3000 ft AGL in the landing altitude window so that cabin is unpressurized when the packs are turned off.</li> </ul> APPROACH <ul style="list-style-type: none"> <li>- Turn both packs off.</li> <li>- Set pack off EPR on both engines in case of go-around.</li> <li>- Cabin may be ventilated by ram air valve.</li> </ul> <b>Maintenance Procedure Required</b>

2 Repair Time Interval		3 Number installed			
1 Item				4 Number required for dispatch	5 Remarks and/or Exceptions
<b>21 AIR CONDITIONING</b> (Cont'd)					
-11 Conditioned Air Ducting Thermal Switch	(15)	C	2	0	May be inoperative provided associated Air Conditioning System is not used. Refer to item 21-1.
-12 Heat Exchangers Cooling Fan	(16)	C	2	0	May be inoperative provided affected Air Conditioning System is not operated prior to becoming airborne and is turned off prior to landing.  <b>Crew Operating Procedure</b>  Refer to C.O.P. item 21-10.  <b>Maintenance Procedure Required</b>
-13 Air Conditioning Water Separator	(17)	C	2	0	May be inoperative provided the associated Air Conditioning System is not used. Refer to item 21-1.
-14 Ground Air Conditioning Check Valve	(490)	C	2	1	May be inoperative OPEN provided: 1) Associated Ground Conditioned Air Connector Door is CLOSED and LATCHED, and 2) Airplane remains at or below FL 250.
	(18)	C	2	0	May be inoperative OPEN provided: 1) Associated Ground Conditioned Air Connector Door is CLOSED and LATCHED, and 2) Flight is conducted in an unpressurized configuration.  <b>Crew Operating Procedure</b> <i>NOTE: Refer to O.M. General Basic 8.10 Page 5 "FLIGHT WITH DEPRESSURIZED CABIN".</i> - Pull the CABIN PRESSURE CONTROL c/b's (H2, J2, U22, W 22). - Select manual cabin pressure control and move the cabin pressure control wheel to full DECR (VALVE OPEN) position. - Use normal air conditioning procedure. <i>NOTE: For passengers comfort limit climb and descent rates to 500 fpm.</i>  <b>Maintenance Procedure Required</b>
	(19)	C	2	0	May be inoperative CLOSED for pressurized flight.

2 Repair Time Interval		3 Number installed	
1 Item		4 Number required for dispatch	5 Remarks and/or Exceptions
<b>21 AIR CONDITIONING</b> (Cont'd)			
-15 Heat Exchangers Cooling Air Diverter Valve	(20)	C 2 1	Left valve may be inoperative provided: 1) Failure causes the ram air door to be closed (Fan Air Cooling only position), 2) Flight altitude is limited to FL 250 or below, and 3) The left Air Conditioning System is selected OFF prior to becoming airborne.  <b>Crew Operating Procedure</b> Refer to C.O.P. item 21-1. <i>NOTE: Left pack may be used after landing.</i>
	(21)	C 2 0	<b>Maintenance Procedure Required</b> May be inoperative provided. 1) Failure causes the fan air door(s) to be closed (Ram Air Cooling only position), 2) Affected Air Conditioning System is not operated prior to becoming airborne, and 3) Associated Air Conditioning System is turned OFF prior to landing.  <b>Crew Operating Procedure</b> Refer to C.O.P. item 21-10.  <b>Maintenance Procedure Required</b>
-16 NOT APPLICABLE			
-17 NOT APPLICABLE			
-18 Radio Rack Venturi Restrictor Valve			Deleted
-19 Radio Rack Fan Off Annunciator System	(22)	C 1 0	May be inoperative provided an audible check is made for satisfactory fan operation <b>prior to each takeoff</b> .  <b>Maintenance Procedure Required</b>
-20 NOT APPLICABLE			

2 Repair Time Interval		3 Number installed	
1 Item		4 Number required for dispatch	5 Remarks and/or Exceptions
<b>21 AIR CONDITIONING</b> (Cont'd)			
<b>-21 Radio Rack Cooling (23)</b> Fan Primary and Standby	C	2 0	May be inoperative provided: 1) Both Air Conditioning Systems are available for pressurized flight, 2) The radio rack switch is placed in VENTURI (overboard) position, and 3) Ground operation of electronic equipment is limited to a maximum of 45 minutes.  <i>NOTE: Effect on live animal and temperature sensitive cargo transport should be considered.</i> <i>Advice appropriate personnel.</i>  <b>Crew Operating Procedure</b> If both radio rack cooling fans are inoperative, ground operation of electronic equipment is limited to 45 minutes.  <b>Maintenance Procedure Required</b>
a) Primary Fan (24)	C	1 0	May be inoperative provided Standby Fan is operative.  <i>NOTE: Effect on live animal and temperature sensitive cargo transport should be considered.</i> <i>Advice appropriate personnel.</i>  <b>Maintenance Procedure Required</b>
b) Standby Fan (25)	C	1 0	May be inoperative provided Primary Fan is operative.
<b>-22 NOT APPLICABLE</b>			
<b>-23 Radio Rack Fan and (26)</b> Standby Radio Rack Fan Check Valve	C	2 1	May be inoperative CLOSED provided associated fan circuit breakers remain OPEN.  <b>Maintenance Procedure Required</b>
(27)	C	2 0	May be inoperative provided: 1) Both Air Conditioning Systems are available for pressurized flight, 2) The Radio Rack switch is placed in VENTURI (overboard) position, and 3) Ground operation of electronic equipment is limited to a maximum of 45 minutes.  <i>NOTE: Effect on live animal and temperature sensitive cargo transport should be considered.</i> <i>Advice appropriate personnel.</i>  <b>Maintenance Procedure Required</b>

2 Repair Time Interval			3 Number installed		
1 Item				4 Number required for dispatch	5 Remarks and/or Exceptions
21 AIR CONDITIONING (Cont'd)					
-24 Dual Cabin Pressure Automatic Control System	(28)	B	2	1	
	(29)	B	2	0	May be inoperative provided: 1) Manual pressurization system is operative, and 2) Autopilot is operative in all axes (pitch, yaw, roll). <b>Crew Operating Procedure</b> Apply Cond Proc MANUAL PRESSURIZATION CONTROL. <b>Maintenance Procedure Required</b>
	(30)	B	2	0	May be inoperative provided: 1) Flight is conducted in an unpressurized configuration, and 2) Cabin Air Outflow Valve remains OPEN. <b>Crew Operating Procedure</b>  <i>NOTE: Refer to O.M. General Basic 8.10 Page 5 "FLIGHT WITH DEPRESSURIZED CABIN".</i> - Select manual cabin pressure control wheel to full DECR (VALVE OPEN) position. - Use normal air conditioning procedure. <i>NOTE: For passengers comfort limit climb and descent rates to 500 fpm.</i>
-25 Cabin Air Outflow Valve	(31)	C	1	0	May be inoperative provided: 1) Flight is conducted in an unpressurized configuration, 2) Cabin Air Outflow Valve is secured OPEN, and 3) Extended overwater flight (an operation over water at a horizontal distance of more than 50 nautical miles from the nearest shoreline) is prohibited. <b>Crew Operating Procedure</b> <i>NOTE: Refer to O.M. General Basic 8.10 Page 5 "FLIGHT WITH DEPRESSURIZED CABIN".</i> - Select manual cabin pressure control and move the cabin pressure control wheel to full DECR (VALVE OPEN) position. - Use normal air conditioning procedure. <i>NOTE: For passengers comfort limit climb and descent rates to 500 fpm.</i> <b>Maintenance Procedure Required</b>


2 Repair Time Interval		3 Number installed			
1 Item				4 Number required for dispatch	5 Remarks and/or Exceptions
<b>21 AIR CONDITIONING</b> (Cont'd)					
<b>-26</b> Cabin Pressure Relief Valve	<u>(32)</u>	C	2	0	May be inoperative provided: <ol style="list-style-type: none"> <li>1) Flight is conducted in an unpressurized configuration.</li> <li>2) Cabin Air Outflow Valve is secured OPEN, and</li> <li>3) Extended overwater flight (an operation over water at a horizontal distance of more than 50 nautical miles from the nearest shoreline) is prohibited.</li> </ol> <p><b>Crew Operating Procedure</b></p> <p><i>NOTE: Refer to O.M. General Basic 8.10 Page 5 "FLIGHT WITH DEPRESSURIZED CABIN".</i></p> <ul style="list-style-type: none"> <li>- Select manual cabin pressure control and move the cabin pressure control wheel to full DECR (VALVE OPEN) position.</li> <li>- Use normal air conditioning procedure.</li> </ul> <p><i>NOTE: For passengers comfort limit climb and descent rates to 500 fpm.</i></p> <p><b>Maintenance Procedure Required</b></p>
<b>-27</b> Cabin Altitude Warning System	<u>(33)</u>	C	1	0	May be inoperative provided the airplane remains at or below 10000 feet MSL.
a) CABIN ALT Light	<u>(34)</u>	C	1	0	May be inoperative provided aural warning is operative.
b) Aural Warning	<u>(35)</u>	C	1	0	May be inoperative provided CABIN ALT light is operative.
<b>-28</b> CABIN ALT and DIFF PRESS Indicator	<u>(36)</u>	C	1	0	May be inoperative provided: <ol style="list-style-type: none"> <li>1) Flight is conducted in an unpressurized configuration, and</li> <li>2) The Cabin Air Outflow Valve remains OPEN.</li> </ol> <p><b>Crew Operating Procedure</b></p> <p><i>NOTE: Refer to O.M. General Basic 8.10 Page 5 "FLIGHT WITH DEPRESSURIZED CABIN".</i></p> <ul style="list-style-type: none"> <li>- Check CABIN PRESSURE CONTROL c/b's (H2, J2, U22, W22) pulled.</li> <li>- Check cabin pressure control lever down to manual position, and outflow valve position indicator to full DECR (VALVE OPEN) position.</li> <li>- Use normal air conditioning procedures.</li> </ul> <p><i>NOTE: For passenger comfort limit climb and descent rates to 500 fpm.</i></p> <p><b>Maintenance Procedure Required</b></p>

(Continued)

2 Repair Time Interval		3 Number installed			
1 Item				4 Number required for dispatch	5 Remarks and/or Exceptions
<b>21 AIR CONDITIONING</b> (Cont'd)					
<b>-28 CABIN ALT and DIFF PRESS Indicator (Cont'd)</b>					
a) CABIN ALT Indication	<b>(37)</b>	C	1	0	May be inoperative provided: 1) Cabin DIFF PRESS portion of the indicator is operative, and 2) A chart is used to convert cabin differential pressure to cabin altitude.  <b>Crew Operating Procedure</b> Use conversion chart on O.M./B Vol. 1 page 02-35-01/02.
b) DIFF PRESS Indication	<b>(38)</b>	C	1	0	May be inoperative provided: 1) CABIN ALT portion of the indicator is operative, and 2) A chart is used to convert cabin altitude to cabin differential pressure.  <b>Crew Operating Procedure</b> Use conversion chart on O.M./B Vol. 1 page 02-35-01/02.
<b>-29 CABIN CLIMB Indicator</b>					
	<b>(39)</b>	C	1	0	May be inoperative provided all other components of the cabin pressurization control system are operative.  <b>Maintenance Procedure Required</b>
	<b>(40)</b>	C	1	0	May be inoperative provided: 1) Flight is conducted in an unpressurized configuration, and 2) The Cabin Air Outflow Valve remains OPEN.  <i>NOTE: The additional cabin climb indicator may be inoperative without restrictions.</i>  <b>Crew Operating Procedure</b>  <i>NOTE: Refer to O.M. General Basic 8.10 Page 5 "FLIGHT WITH DEPRESSURIZED CABIN".</i> - Check CABIN PRESSURE CONTROL c/b's (H2, J2, U22, W22) pulled. - Check cabin pressure control lever down to manual position and outflow valve position indicator to full DECR (VALVE OPEN) position. - Use normal air conditioning procedures.  <i>NOTE: For passenger comfort limit climb and descent rates to 500 fpm.</i>  <b>Maintenance Procedure Required</b>



2 Repair Time Interval		3 Number installed			
1 Item				4 Number required for dispatch	5 Remarks and/or Exceptions
<b>21 AIR CONDITIONING</b> (Cont'd)					
<b>-30</b> Cockpit/Cabin Auto Temperature Control System <b>(41)</b>	C	2	0		May be inoperative provided: 1) The associated Manual Temperature Control System is operative, and 2) Cabin/Duct/Supply Temperature Indicating Systems are operative; <b>Maintenance Procedure Required</b>
<b>(42)</b>	C	2	0		May be inoperative provided the associated Air Conditioning System is not used. Refer to item 21-1.
<b>-31</b> L/R Temperature Control Valve Position Indicating System <b>(43)</b>	C	2	0		May be inoperative provided the associated Automatic Temperature Control System is operative.
<b>-32</b> NOT APPLICABLE					
<b>-33</b> Cockpit/Cabin Temperature Control Valve <b>(44)</b>	C	2	0		May be inoperative provided associated Air Conditioning System is not used. Refer to item 21-1.
<b>-34</b> Water Separator Temperature Control Valve <b>(45)</b>	C	2	0		May be inoperative provided associated Air Conditioning System is not used. Refer to item 21-1.
<b>-35</b> Tail Compt Temperature High Indicating System					Deleted
<b>-36</b> Turbine By-Pass (Nozzle Shut-Off) Valve <b>(46)</b>	C	2	1		May be inoperative in the CLOSED position provided flight altitude is limited to FL 250 or below. <b>Crew Operating Procedure</b> Operate both A/C sys for comfort; affected pack provides less flow than normal.
<b>(47)</b>	C	2	0		May be inoperative provided associated valve is secured OPEN. <b>Crew Operating Procedure</b> Both packs are operable. <b>Maintenance Procedure Required</b>

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2 Repair Time Interval	3 Number installed	4 Number required for dispatch	5 Remarks and/or Exceptions
1 Item			
<b>21 AIR CONDITIONING</b> (Cont'd)			
-37 Air Conditioning Pilot Pressure Regulator <b>(48)</b>	C 2 0		May be inoperative provided associated Air Conditioning System is not used. Refer to item 21-1.
-38 NOT APPLICABLE			
-39 Air Conditioning Pressure Regulator Ground Control Valve Solenoid <b>(49)</b>	C 2 0		May be inoperative in the OPEN position. <b>Maintenance Procedure Required</b>
<b>(50)</b>	C 2 0		May be inoperative in the CLOSED position provided associated Air Conditioning System is not used. Refer to item 21-1. <b>Maintenance Procedure Required</b>
-40 Dual Cabin Pressure Control System			Combined with item 21-24
-41 Bleed Air Cleaner System <b>(52)</b>	D 2 0		
-42 Cockpit Instruments Cooling Fan <b>(54)</b>	C 1 0		May be inoperative provided: 1) At least one Air Conditioning System is operating whenever EFIS Display Units are operating and, 2) When ambient temperature is above 32° C, at least one Air Conditioning System must be operated with FULL COLD selected.
			<i>NOTE: 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.</i>
-43 Cabin Air Recirculation Fan <b>(55)</b>	C 1 0		
-44 Mid Cargo Compartment Heating Fan <b>(56)</b>	C 1 0		

2 Repair Time Interval		3 Number installed			
1 Item				4 Number required for dispatch	5 Remarks and/or Exceptions
<b>21 AIR CONDITIONING</b> (Cont'd)					
<b>-45</b> Altitude Bias Control	<u>(57)</u>	C	2	0	<p>May be inoperative in the no-flow-to-ambient position (no altitude bias) provided the flight altitude is limited to FL 250 or below.</p> <p><b>Crew Operating Procedure</b></p> <p>Operate both packs normally. In the event of subsequent loss of pack, climb and cruise pack operation will be normal, but in descent, cabin altitude may climb. In this event, advance thrust lever on engine supplying remaining pack until pressure on air conditioning supply pressure indicator stops increasing (approximately 21 psi). Cabin altitude should not exceed 8000 feet. When airplane descends sufficiently so that the cabin stops climbing and starts descending, increase the cabin rate and hold the airplane at altitude until the cabin descends to normal values. Then continue normally.</p>
	<u>(58)</u>	C	2	0	<p><b>Maintenance Procedure Required</b></p> <p>May be inoperative in the flow-to-ambient position (altitude bias on).</p> <p><i>NOTE: The packs may be used to enhance passenger comfort.</i></p> <p><i>With large passenger loads the cabin may become warm at the end of flight. Pressurization capability is not affected.</i></p>
					<p><b>Maintenance Procedure Required</b></p>
<b>-46</b> Left Heat Exchanger Ram Air Exhaust Control System	<u>(59)</u>	D	1	0	<p>May be inoperative provided the Exhaust Flow Control valve remains OPEN.</p>
	<u>(60)</u>	C	1	0	<p><b>Maintenance Procedure Required</b></p> <p>May be inoperative provided:</p> <ol style="list-style-type: none"> <li>1) The Exhaust Flow Control Valve remains CLOSED, and</li> <li>2) The left Air Conditioning System is not used.</li> </ol> <p>Refer to item 21-1.</p>
	<u>(61)</u>	C	1	0	<p><b>Maintenance Procedure Required</b></p> <p>May be inoperative provided:</p> <ol style="list-style-type: none"> <li>1) The Exhaust Flow Control Valve remains CLOSED, and</li> <li>2) The left Air Conditioning System is operated only in flight with RAT of 10° C or less.</li> </ol> <p><b>Crew Operating Procedure</b></p> <p>Left Air Conditioning System may be used only in flight with RAT of 10°C or less.</p> <p><b>Maintenance Procedure Required</b></p>

2 Repair Time Interval		3 Number installed				
1 Item					4 Number required for dispatch	5 Remarks and/or Exceptions
<b>21 AIR CONDITIONING (Cont'd)</b>						
<b>-47</b> Cockpit Temperature Control 130° F Limit System	<b>(62)</b>	C	1	0		May be inoperative with the thermal switch failed in the CLOSED position provided power is restored to the "more heat" side of the temperature control valve.
	<b>(63)</b>	C	1	0		<b>Maintenance Procedure Required</b> May be inoperative failed OPEN. <b>Maintenance Procedure Required</b>
<b>-48</b> NOT APPLICABLE						
<b>-49</b> Cockpit Instrument Cooling Fan Flow Indicator	<b>(64)</b>	C	1	0		
<b>-50</b> NOT APPLICABLE						
<b>-51</b> NOT APPLICABLE						
<b>-52</b> FWD Cargo Compartment Heater System	<b>(65)</b>	C	1	0		May be inoperative provided system is DEACTIVATED.  <i>NOTE: Effect on live animal and temperature sensitive cargo transport should be considered.</i> <i>Advice appropriate personnel.</i> <b>Maintenance Procedure Required</b>
<b>-53</b> AHRU Tray Mounted Cooling Fans	<b>(66)</b>	C	-	0		

2 Repair Time Interval		3 Number installed	
1 Item		4 Number required for dispatch	5 Remarks and/or Exceptions
<b>22 AUTOMATIC FLIGHT CONTROL</b>			
-1 NOT APPLICABLE			
-2 NOT APPLICABLE			
-3 Elevator and Aileron Drive Servo <b>(67)</b>	C	2 0	May be inoperative provided: 1) At least one automatic cabin pressurization system is operative for pressurized flight, 2) Associated autopilot axis computer is not used, and 3) Enroute operations (RVSM) and/or approach minimums do not require its use.
-4 NOT APPLICABLE			
-5 NOT APPLICABLE			
-6 NOT APPLICABLE			
-7 Central Air Data Computer			Deleted
-8 Mach Trim Compensator Switch <b>(68)</b>	C	1 0	May be inoperative provided flight speed is restricted to $M_{MO} = .78 M$ .  <b>Crew Operating Procedure</b> Prior to flight, place mach trim compensator switch to OVRD position.
-9 NOT APPLICABLE			
-10 AP Off Light <b>(69)</b>	C	2 1	May be inoperative provided: 1) Pilot controlling the airplane with the autopilot has the operative one, and 2) Autopilot is not used below 1500 ft AGL.
<b>(70)</b>	B	2 0	May be inoperative provided: 1) Autopilot is not engaged in any axis, 2) At least one automatic cabin pressurization system is operative for pressurized flight, and 3) Enroute operations (RVSM) and/or approach minimums do not require its use. Refer to item 22-15 a).
-11 AUTOPILOT REL Button <b>(71)</b>	C	2 1	May be inoperative provided: 1) Pilot controlling the airplane with the autopilot has the operative button, and 2) Autopilot is not used below 1500 ft AGL.
<b>(72)</b>	B	2 0	May be inoperative provided: 1) Autopilot is not engaged in any axis, 2) At least one automatic cabin pressurization system is operative for pressurized flight, and 3) Enroute operations (RVSM) and/or approach minimums do not require its use. Refer to item 22-15 a).

2 Repair Time Interval			3 Number installed		
1 Item				4 Number required for dispatch	5 Remarks and/or Exceptions
22 AUTOMATIC FLIGHT CONTROL (Cont'd)					
-12 THROTTLE OFF Light	(73)	C	2	1	May be inoperative provided pilot using autothrottle has operative THROTTLE OFF Light.
	(74)	C	2	0	May be inoperative provided associated ATS is not used.
-13 NOT APPLICABLE					
-14 Digital Flight Guidance System Computer	(75)	C	2	1	May be inoperative provided approach minimums do not require its use.
	(76)	B	2	0	May be inoperative provided: 1) VMC exist at departure airport, en route and are forecast to exist at destination airport at time of arrival, 2) At least one automatic cabin pressurization system is operative for pressurized flight, 3) The limitation specified in item 22-15, "a" through "o", Remarks section (column 5) are met, and 4) Enroute operations (RVSM) do not require its use.
-15 Digital Flight Guidance System Functions					
a) Automatic Pilot	(77)	C	2	1	
	(78)	B	2	0	May be inoperative provided: 1) At least one automatic cabin pressurization system is operative for pressurized flight, and 2) Enroute operations and/or approach procedures are not predicated on use of the autopilot. NOTES: - Associated FD system may be affected. - RVSM operations are not allowed.
1) ALT Hold	(590)	C	2	1	May be inoperative provided Altitude Alert System/Warning is operative.
	(79)	B	2	0	May be inoperative provided: 1) Enroute operations do not require its use, and 2) Altitude Alert System/Warning is operative. NOTE: RVSM operations are not allowed.
(Continued)					

(Continued)

2 Repair Time Interval		3 Number installed	
1 Item			4 Number required for dispatch
<b>22 AUTOMATIC FLIGHT CONTROL</b> (Cont'd)			5 Remarks and/or Exceptions
<b>-15 Digital Flight Guidance System Functions</b> (Cont'd)			
a) Automatic Pilot (Cont'd)			
2) Altitude (85)	C	2	0
Preselect Mode (arming function)			
3) Vert Speed (86)	C	2	0
4) IAS/MACH Hold (87)	C	2	0
5) NOT APPLICABLE			
6) VNAV (89)	C	2	0
7) VOR/LOC (90)	C	2	0
8) ILS (91)	C	2	0
			May be inoperative provided approach procedures are not predicated on its use.
9) Autoland (92)	C	2	0
			May be inoperative provided approach procedures are not predicated on its use.
10) HDG Hold (80)	C	2	1
(491)	B	2	0
11) HDG Sel (81)	C	2	0
12) TURB Mode (82)	C	2	0
13) NAV Mode (83)	C	2	0
14) FMS OVRD (84)	C	2	0
b) Automatic Throttle (93)	C	2	0
			May be inoperative provided approach procedures are not predicated on its use.
c) Speed Control (94)	C	2	0
d) Flight Director			
			Refer to item 34-16.
(Continued)			

2 Repair Time Interval		3 Number installed			
1 Item				4 Number required for dispatch	5 Remarks and/or Exceptions
<b>22 AUTOMATIC FLIGHT CONTROL (Cont'd)</b>					
<b>-15 Digital Flight Guidance System Functions (Cont'd)</b>					
e) Automatic Reserve Thrust (ART)					Refer to item 73-8.
f) Yaw Damper <b>(97)</b>	C	2	0		May be inoperative provided actuator remains installed.  <b>Crew Operating Procedure</b> When yaw damper is inoperative, the yaw damper switch should be in the OVRD position.  <b>Maintenance Procedure Required</b>
g) Mach Trim <b>(98)</b>	C	2	0		May be inoperative provided: 1) The actuator is verified in the RETRACTED position, and 2) Flight speed is restricted to $M_{MO} = .78 M$ .  <b>Crew Operating Procedure</b> Mach Trim Comp switch should be in OVRD.  <b>Maintenance Procedure Required</b>
h) Altitude Alerting					Refer to item 34-28.
i) Thrust Rating/EPR Limit					Refer to item 34-9.
j) Flight Mode Annunciator (FMA) <b>(101)</b>	C	2	1		May be inoperative provided: 1) PF using the F/D and/or A/P and/or ATS has an operative FMA, and 2) Approach procedures are not predicated on use of the A/P, F/D or ATS. Refer to item 22-15 a).
<b>(102)</b>	B	2	0		May be inoperative provided: 1) VMC conditions exist at departure airport, enroute and are forecast to exist at destination airport at time of arrival, and 2) F/D, A/P, and ATS are not used and, 3) Enroute operations (RVSM) do not require its use. Refer to item 22-15 a).  <i>NOTE: Inoperative Flight Director and A/P Engaged Blue Annunciators do not render FMA inoperative.</i>
(Continued)					



2 Repair Time Interval		3 Number installed				
1 Item					4 Number required for dispatch	5 Remarks and/or Exceptions
<b>22 AUTOMATIC FLIGHT CONTROL (Cont'd)</b>						
<b>-15 Digital Flight Guidance System Functions (Cont'd)</b>						
k) EPR Synchronizer						Refer to item 76-1b.
l) FMA Flight Director Engaged Blue Annunciators <b>(104)</b>	D	2	0		<b>Crew Operating Procedure</b>	Determine FD on/off status from FD switch position.
m) FMA A/P 1 and A/P 2 Engaged Blue Annunciators <b>(105)</b>	D	4	0			
n) Heading Select Digits <b>(106)</b>	C	3	0			All digits may be inoperative provided heading information is displayed on both Navigation Displays (ND) or Primary Flight Displays (PFD).
o) Auto Pitch Trim <b>(107)</b>	C	2	0			May be inoperative provided: 1) It is verified that Manual Alternate Trim is operative, and 2) alternate procedures are established and used if Autopilot is to be used for approach and landing.
<b>Crew Operating Procedure</b>						
- 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.						
- In flight, trim aircraft manually prior to engaging autopilot.						
- Monitor the AP TRIM (amber) lights on the FMA while the Autopilot is engaged.						
- If the Autopilot is to be used for landing, manually trim the aircraft and track glideslope at final approach speed prior to Autopilot engagement.						
<b>-16 NOT APPLICABLE</b>						
<b>-17 TO/GA Palm Switches (108)</b>	C	2	0			May be inoperative provided approach procedures are not predicated on its use.
<b>-18 Dual Rudder Drive Servo (109)</b>	C	1	0			May be inoperative provided the Autopilot is not used in Takeoff, ILS, Autoland, and Go-Around modes.


2 Repair Time Interval		3 Number installed	
1 Item		4 Number required for dispatch	5 Remarks and/or Exceptions
<b>23 COMMUNICATIONS</b>			
-1 Audio Control Panel (110)	D	3 2	One required at each occupied flight crew position.
-2 Cockpit Speaker (111)	C	2 1	May be inoperative provided an operative headset is provided for each person on cockpit duty.
-3 Handheld Microphone (112)	D	3 2	One required at each occupied flight crew position. <i>NOTE: For Observer Seat Microphone refer to item 25-13.</i>
-4 Oxygen Mask Microphone (113)	D	3 2	One required at each occupied flight crew position. <i>NOTE: Refer also to item 25-13.</i>
-5 Headset (114)	D	3 2	One required at each occupied flight crew position. <i>NOTE: Refer also to item 25-13.</i>
-6 Passenger Address System (115)	A	1 0	May be inoperative provided: 1) Cabin Attendant's interphone and Cabin Call systems are operative, 2) Flight attendant alerting system (audio and visual) operates normally, and 3) Repairs are made within three (3) flight days. <i>NOTES:</i> - Any station function(s) that operate normally may be used. - The system is not required for all cargo operations.  <b>Crew Operating Procedure</b> - <b>Before take-off.</b> The cabin attendants will be directed to make a direct voice communication with all passengers. All preflight announcements will be completed prior to takeoff and the flight crew will be notified. A portable megaphone may be used for making these announcements. - <b>Emergency.</b> The Captain will notify the Chief attendant and he, in turn, will notify each cabin attendant to make a direct voice communication with all passengers. A portable megaphone may be used for making these announcements.
a) Lavatory Speakers (535)	C	- -	May be inoperative provided associated RETURN TO CABIN Signs operate normally.
-7 Flight Interphone External jack			Refer to item 23-8 c).

2 Repair Time Interval		3 Number installed	
1 Item		4 Number required for dispatch	5 Remarks and/or Exceptions
<b>23 COMMUNICATIONS</b> (Cont'd)			
<b>-8 Service Interphone System</b>			
a) Cockpit-to-Cabin/ (520) Cabin-to-Cockpit, functions	B	4 3	One may be inoperative in the AFT zone provided: 1) Flight deck to cabin and cabin to flight deck interphone functions operate normally on at least two of the cabin handsets. The FWD Attendants' Panel interphone function must always be operative, and 2) Operative cabin stations have operative flight attendant seats, and 3) Alternate communications procedures between the affected flight attendant station(s) are established and used. <i>NOTE: Any station function(s) that operates normally may be used.</i> <b>Crew Operating Procedure</b> - Cabin-to-Cockpit function inop: Use cabin-to-cockpit alerting system and PA system, as per company security and emergency procedures, to communicate with the flight crew if access to cockpit is restricted.
b) Cabin-to-Cabin (536) function	B	3 2	May be inoperative provided: 1) Cabin to cabin interphone functions operate normally on at least two of the cabin handsets. The FWD Attendants' Panel interphone function must always be operative, and 2) Alternate communications procedures between the affected flight attendants stations are established and used. <i>NOTE: Any station function(s) that operates normally may be used.</i> <b>Crew Operating Procedure</b> - Cabin-to-Cabin function inop: Use cabin-to-cabin alerting system and/or PA system, as per company security and emergency procedures, to communicate with the cabin crew.
c) Cockpit-to-Ground/(537) Ground-to-Cockpit (Flight Interphone)	C	1 0	Flight interphone flight deck to ground/ground to flight deck function may be inoperative provided: 1) Alternate procedures described in the Crew Operating Procedure are used, and 2) Nose gear/forward fuselage service interphone jack operates normally. <b>Crew Operating Procedure</b> Use service interphone and/or ICAO hand signals.

(Continued)

2 Repair Time Interval		3 Number installed	
1 Item		4 Number required for dispatch	5 Remarks and/or Exceptions
<b>23 COMMUNICATIONS</b> (Cont'd)			
<b>-8 Service Interphone System</b> (Cont'd)			
d) Cockpit-to-Ground/(538) Ground-to-Cockpit (Service Interphone)	C	1 0	Service interphone flight deck to ground/ground to flight deck function may be inoperative provided: 1) Alternate procedures described in the Crew Operating Procedure are used, and 2) Nose gear/forward fuselage flight interphone jack operates normally. <b>Crew Operating Procedure</b> Use flight interphone and/or ICAO hand signals.
(539)	B	1 0	May be inoperative provided alternate procedures described in the Crew Operating Procedure are used. <b>Crew Operating Procedure</b> Use ICAO hand signals.
e) Flight Deck Call Light (540)	B	1 0	May be inoperative provided the flight deck chime operates normally. <i>NOTE: The flight deck chime must always be operative.</i>
f) Flight Attendant Call Light (541)	B	1 0	May be inoperative provided PA system operates normally. <i>NOTE: Passenger to Attendant Call System is considered a passenger convenience item.</i>
g) Flight Attendant Chime (542)	B	1 0	May be inoperative provided: 1) PA system operates normally, 2) Lavatory Smoke Detection System red lights are operative, and 3) Alternate procedures for contacting flight attendants are established and used. <i>NOTE: Passenger to Attendant Call System is considered a passenger convenience item.</i> <b>Crew Operating Procedure</b> Use PA System and/or Service Interphone System, according to company security and emergency procedures, to communicate with the Cabin Attendant.
(Continued)			


2 Repair Time Interval		3 Number installed	
1 Item		4 Number required for dispatch	
<b>23 COMMUNICATIONS</b> (Cont'd)		5 Remarks and/or Exceptions	
<b>-8 Service Interphone System</b> (Cont'd)			
h) Pilot to Mechanic <b>(543)</b> Call System (Mechanic Call)	C	1 0	May be inoperative provided alternate normal and emergency operations procedures are established and used.  <b>Crew Operating Procedure</b> Use hand/lights signals.
i) Mechanic to Pilot <b>(544)</b> Call System (Pilot Call)	C	1 0	May be inoperative provided alternate normal and emergency operations procedures are established and used.  <b>Crew Operating Procedure</b> Use hand/lights signals.
l) NOT APPLICABLE			
m) Cabin Attendant <b>(545)</b> Handsets	B	3 2	Except the FWD Cabin Attendant Handset, one may be inoperative provided: 1) Operative handsets are located at operative flight attendant seats, and 2) Alternate communication procedures described in the Crew Operating Procedure are used.  <b>Crew Operating Procedure</b> When PA or Interphone communications are required, the Cabin Attendant, assigned to the station with inoperative handset, should use the megaphone or the nearest operative handset according to company security and emergency procedures.
<b>-9 Communication Systems</b>			
a) VHF Comm			
1) Frequency <b>(119)</b> Transfer Light	C	4 0	
2) Frequency <b>(120)</b> Transfer Switch	C	2 0	
3) Frequency <b>(529)</b> Selectors	C	4 2	One per each VHF Comm must operate normally.
4) Frequency <b>(530)</b> Indicators	C	4 2	One per each VHF Comm must operate normally.

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### ITEM 23-9 Communications Systems

The item **23-9** has been modified as follows:

2 Repair Time Interval		3 Number installed	
1 Item		4 Number required for dispatch	5 Remarks and/or Exceptions
<b>- 9 Communications Systems</b>			
a) VHF Comm <b>(600)</b>	C	3 2	One may be inoperative provided it is not powered by the Emergency AC Bus, Emergency DC Bus, Battery Bus, Battery Direct Bus, or the DC Transfer Bus.  VHF # 1 must be operative.  VHF # 2 may be inoperative provided VHF # 3 is operative.  VHF # 3 inoperative renders the full ACARS/CPDLC/VHF#3 system inoperative. Refer to item 23-14.
1) Frequency Transfer Light <b>(119)</b>	C	4 0	
2) Frequency Transfer Switch <b>(120)</b>	C	2 0	
3) Frequency Selectors <b>(529)</b>	C	4 2	One per each VHF Comm must operate normally.
4) Frequency Indicators <b>(530)</b>	C	4 2	One per each VHF Comm must operate normally.

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**ITEM 23-14 ACARS**

The item **23-14** has been modified as follows:

2 Repair Time Interval			3 Number installed			
1 Item			4 Number required for dispatch			5 Remarks and/or Exceptions
<b>- 14 ACARS</b>						
	<b>(601)</b>	D	1	0		May be inoperative provided procedures do not require its use.
	<b>(602)</b>	C	1	0		May be inoperative provided alternate procedures are established and used.  <b>Crew Operating Procedure</b> Use conventional communication means.
a) ACARS computer	<b>(603)</b>	C	1	0		The full system (VHF3 + ACARS + CPDLC) is inoperative.
b) ACARS printer	<b>(604)</b>	C	1	0		May be inoperative. The system may be used, all messages will be accessible during flight through MCDU.
c) ACARS light	<b>(605)</b>	C	1	0		May be inoperative provided ACARS messages are manually monitored.
d) ATC light	<b>(606)</b>	C	2	0		May be inoperative provided CPDLC messages are manually monitored.
e) ACARS/CPDLC/VHF3 control panel	<b>(607)</b>	C	1	0		The full system (VHF3 + ACARS + CPDLC) is inoperative.

2 Repair Time Interval		3 Number installed	
1 Item		4 Number required for dispatch	5 Remarks and/or Exceptions
<b>23 COMMUNICATIONS</b> (Cont'd)			
-10 NOT APPLICABLE			
-11 Static Dischargers			Refer to CDL.
-12 Megaphone			Refer to item 25-3.
-13 High Frequency <b>(531)</b> (HF) Communications System (if installed)	D	1 0	May be inoperative provided procedures do not require its use.
-14 NOT APPLICABLE			
-15 Service Interphone Alerting System (Call Light/ Call Chime)			Refer to item 23-8.
-16 Cockpit Voice <b>(532)</b> Recorder (CVR) System	A	1 0	May be inoperative provided: 1) It is not reasonably practicable to repair or replace CVR before the commencement of the flight. and 2) The DFDR is operative, and 3) Repair or replacements are made within 72 elapsed hours or eight (8) flight legs, whichever comes first.
-17 Pre-Recorded <b>(128)</b> Passenger Announcement System.	D	1 0	May be inoperative provided the alternate procedures described in the Crew Operating Procedure are used.  <b>Crew Operating Procedure</b> - <b>Before take-off.</b> The Cabin Attendant shall make a direct voice communication with all passengers. The PA system or powered megaphone may be used for making these announcements. The flight crew shall be notified when pre-flight announcements have been completed. - <b>Emergency.</b> The Captain will notify the Chief Cabin Attendant to make a direct voice communication with all passengers. The PA system or powered megaphone may be used for making these announcements.
-18 NOT APPLICABLE			
-19 Maintenance <b>(129)</b> Interphone System	C	1 0	
a) Maintenance <b>(492)</b> Interphone Jacks	D	- 2	



2 Repair Time Interval		3 Number installed		
1 Item			4 Number required for dispatch	5 Remarks and/or Exceptions
<b>23 COMMUNICATIONS</b> (Cont'd)				
<b>-20 Captain/First Officer Push-To-Talk Switches</b>				
a) Control Wheel PTT Switches <b>(130)</b>	C	2	0	May be inoperative provided: 1) Associated Audio Selector Panel PTT Switch operates normally, and 2) Associated switch is deactivated. <b>Maintenance Procedure Required</b>
b) Audio Selector Panel PTT Switches <b>(131)</b>	C	3	0	May be inoperative provided: 1) A separate PTT switch operates normally at affected crew station, and 2) Associated switch is verified electrically failed open. <b>Maintenance Procedure Required</b>
<b>-21 Cockpit Pedestal Handset</b>				Refer to item 23-8.
<b>-22 Cabin Interphone Handsets</b>				Refer to item 23-8.

2 Repair Time Interval		3 Number installed		
1 Item			4 Number required for dispatch	5 Remarks and/or Exceptions
<b>24 ELECTRICAL POWER</b>				
<b>-1</b> AC Electrical Power Generation and Control	a) Engine (134)	B	2	1
	Generator System (includes CSD units)			<p>May be inoperative provided:</p> <ol style="list-style-type: none"> <li>1) APU generator is operating and furnishing power to the associated bus,</li> <li>2) All other components of the electrical power system (except the external power system) are operative,</li> <li>3) AC Cross-Tie Relay must be in AUTO position, and</li> <li>4) Affected side CSD is disconnected.</li> </ol> <p><b>Crew Operating Procedure</b></p> <ul style="list-style-type: none"> <li>- Position GEN switch of the inoperative generator to OFF.</li> <li>- Start the APU and position the related APU BUS switch to ON (the APU BUS switch for operating generator should be OFF).</li> <li>- Disconnect the CSD of the inoperative generator.</li> <li>- Required "block fuel" must be increased by 100 Kg per hour of flight to take into account the APU fuel consumption.</li> </ul> <p><b>Maintenance Procedure Required</b></p>
	b) APU (135)	C	1	0
	Generator System			<p>May be inoperative provided:</p> <ol style="list-style-type: none"> <li>1) Both engine driven generators are operative, and</li> <li>2) AC Cross-Tie Relay is operative.</li> </ol>
<b>-2</b> External Power System	(136)	C	1	0
				<p>May be inoperative provided:</p> <ol style="list-style-type: none"> <li>1) Procedures are developed to isolate affected components from the rest of the electrical distribution system, and</li> <li>2) External Power Receptacle is placarded "DO NOT CONNECT ELECTRICAL POWER."</li> </ol> <p><b>Maintenance Procedure Required</b></p>
<b>-3</b> AC Cross-Tie Relay	(137)	C	1	0
				<p>May be inoperative provided:</p> <ol style="list-style-type: none"> <li>1) The AC Cross-Tie Relay is open,</li> <li>2) Both engine driven generators are operative,</li> <li>3) The APU generator is available to power either bus,</li> <li>4) APU is operating during flight, and</li> <li>5) Both APU bus switches are ON.</li> </ol> <p><b>Crew Operating Procedure</b></p> <ul style="list-style-type: none"> <li>- Select the AC BUS X-TIE switch to OPEN</li> <li>- Required "block fuel" must be increased by 100 Kg per hour of flight to take into account the APU fuel consumption.</li> <li>- Prior to takeoff verify APU operating and both APU left and right bus switches are ON.</li> </ul> <p><b>Maintenance Procedure Required</b></p>

2 Repair Time Interval		3 Number installed	
1 Item		4 Number required for dispatch	
<b>24 ELECTRICAL POWER</b> (Cont'd)		5 Remarks and/or Exceptions	
-4 Emergency Power Transfer Relay (AC and DC)		Deleted	
-5 Ground Service External Power Relay (138)	C 1 0		
-6 AC Ground Service Tie Relay		Deleted	
-7 Battery Charger		Deleted	
-8 GEN OFF Annunciation (139)	C 3 1	May be inoperative provided: 1) One of the two operating generators supplying power to the bus has an operative annunciator light, and 2) The operating and supplying power generator with an inoperative annunciator light has an operative AC Load-meter system.  <b>Crew Operating Procedure</b> Monitor the AC Load meter of the associated generator. <i>NOTE: A generator off condition turns on MASTER CAUTION lights.</i>	
-9 AC BUS OFF Annunciation		Deleted	
-10 AC BUS OFF Inputs to MASTER CAUTION Light		Deleted	
-11 AC Frequency Meter System (140)	C 1 0	May be inoperative provided electrical power from each generator can be applied to its associated bus after engine restart from a complete engine shutdown.	
(141)	C 1 0	May be inoperative provided, if dispatch is based on APU Generator, APU Generator system power can be applied to desired bus after restart of APU form a complete shutdown.  <b>Crew Operating Procedure</b> - After engine start verify both L and R GEN OFF annunciators are off and/or AC loadmeters indicate normal value. - If dispatch is based on use of APU generator: After engine start, shutdown APU. Place APU bus switch for operating generator to OFF. Restart APU. Verify appropriate APU L or R power in use light is on.	

2 Repair Time Interval		3 Number installed	
1 Item		4 Number required for dispatch	5 Remarks and/or Exceptions
<b>24 ELECTRICAL POWER</b> (Cont'd)			
<b>-12 AC VOLTS Meter System</b>			Deleted
<b>-13 AC LOAD Meter System</b>			
a) Engine Generator <b>(546)</b>	B	2 1	May be inoperative provided: 1) Associated generator is not used, and 2) APU generator load meter is operative.
b) APU Generator <b>(547)</b>	C	1 0	May be inoperative provided: 1) Associated generator is considered inoperative and is not used, and 2) Both engine generator load meters are operative. 3) AC Cross-Tie Relay is operative
<b>-14 CSD Oil (548)</b> Temperature Indicating System	B	2 1	May be inoperative provided associated CSD is considered inoperative. Refer to item 24-1.
a) CSD Oil <b>(144)</b> Temperature Rise System	C	2 0	
<b>-15 CSD OIL PRESS (145)</b> LOW Annunciation	C	2 0	
<b>-16 NOT APPLICABLE</b>			
<b>-17 CSD Air/Oil Heat (549)</b> Exchanger	B	2 1	May be inoperative provided associated engine driven generator is considered inoperative. Refer to item 24-1.
<b>-18 Transformer/Rectifier (147)</b> (T/R)	B	4 3	May be inoperative provided affected T/R is disconnected from the electrical system.  <b>Crew Operating Procedure</b> - If the Right T/R No. 2 is inoperative, the ground service power must not be used. - Monitor the remaining loadmeter on affected side.  <b>Maintenance Procedure Required</b>
<b>-19 DC Cross-Tie</b>			Deleted
<b>-20 Batteries</b>			Deleted
<b>-21 BATT Switch</b>			Deleted
<b>-22 Ground Refueling Circuit (Battery Powered)</b>			Refer to item 28 - 18.
<b>-23 DC BUS OFF Annunciation</b>			Deleted
<b>-24 DC TRANSFER BUS OFF Annunciation</b>			Deleted
<b>-25 DC BUS OFF Input to MASTER CAUTION Light</b>			Deleted

2 Repair Time Interval		3 Number installed	
1 Item		4 Number required for dispatch	5 Remarks and/or Exceptions
<b>24 ELECTRICAL POWER</b> (Cont'd)			
-26 DC LOAD Meter (148)	C	4 3	May be inoperative provided DC BUS OFF light is not illuminated.  <b>Crew Operating Procedure</b> - Monitor DC VOLTS for affected bus. - Monitor operating half of dual load meter for indication of shared load and verify DC BUS OFF light is not illuminated.
-27 DC VOLTS/AMPS Meter			Deleted
-28 AC and DC EMER BUS OFF Annunciations			Deleted
-29 EMER LIGHT NOT ARMED Annunciation			Refer to item 33-26.
-30 Emergency Inverter			Deleted
-31 Emergency Electrical Power System (AC and DC) And EMER PWR IN USE Light			Deleted
-32 NOT APPLICABLE			
-33 AC CROSSTIE LOCKOUT Annunciation (149)	C	1 0	May be inoperative provided AC cross-tie lockout reset is accomplished prior to each flight.  <b>Crew Operating Procedure</b> Prior to each flight after engine start, move the switch to RESET then release.
-34 EXT PWR NOT IN USE Light (White) (150)	C	1 0	
-35 EXT PWR AVAIL Lights (Blue) (151)	C	3 0	
-36 EXT PWR L/R/GS In Use Lights (Blue) (152)	C	3 0	
-37 APU PWR AVAIL Lights (Blue) (153)	C	2 0	May be inoperative provided APU GEN OFF annunciation is verified operative prior to each departure.  <b>Crew Operating Procedure</b> - With engines and APU running move both APU L and R BUS switches to OFF and verify APU GEN OFF annunciation appears on Overhead Annunciator Panel. - Select APU L BUS switches to ON and observe APU GEN OFF annunciation remains illuminated. - Select L GEN switch to OFF and observe L AC BUS OFF annunciation remains extinguished and APU GEN OFF annunciator extinguishes - Return switches to their normal position.

(Continued)

2 Repair Time Interval		3 Number installed			
1 Item				4 Number required for dispatch	5 Remarks and/or Exceptions
<b>24 ELECTRICAL POWER</b> (Cont'd)					
<b>-37</b> APU PWR AVAIL Lights (Blue) (Cont'd)	(154)	C	2	0	May be inoperative provided APU generator is not used. Refer to item 24-1.
	(155)	C	2	0	May be inoperative provided: 1) AC VOLTS Meter is operative, and 2) FREQUENCY CPS Meter is operative.  <b>Crew Operating Procedure</b> - Verify APU Generator voltage and frequency output is within limits by placing AC VOLT/FREQ Selector to APU position. - Monitor APU voltage and frequency throughout the flight.
<b>-38</b> APU PWR L/R/GS In Use Lights (Blue)	(156)	C	3	0	May be inoperative provided the L/R AC BUS OFF annunciations are operative if APU electrical power is to be used.
<b>-39</b> Battery Charger System Annunciator (B.C. 1303)	(550)	C	3	0	May be inoperative provided: 1) BATT AMPS Meter is used to verify the battery is not discharging, and 2) BATT VOLT Meter is used to verify the battery voltage is normal.
<b>-40</b> Galley Power and Control	(591)	C	-	0	May be inoperative provided affected galley power is deactivated.  <b>Maintenance Procedure Required</b>

2 Repair Time Interval		3 Number installed			
1 Item				4 Number required for dispatch	5 Remarks and/or Exceptions
<b>25 EQUIPMENT/FURNISHING</b>					
-1 Life Vests or Flotation Means <b>(157)</b>	D	-	-		A life vest or approved individual flotation means shall be provided for each occupant.
a) Life Vests Spare <b>(592)</b>	D	10	5		May be inoperative or missing provided required distribution is maintained.
-2 Lower Cargo Compartment Removable Liners <b>(589)</b>	A	-	0		1) May be inoperative or missing provided associated FWD, MID or AFT cargo compartment remains empty, and 2) Repairs are made within ten (10) flight days. <i>NOTE: Does not preclude the carriage of empty cargo compartment containers, pallets.</i>
-3 Megaphone					Deleted
-4 Rear Entrance Door Strap <b>(159)</b>	C	1	0		May be inoperative or missing provided: 1) A Cabin Attendant is positioned on the rear door jump seat, and 2) A passenger announcement is made to stay clear of the rear door until the door is open.
-5 Crew Member Shoulder Harness					
a) Pilot and Co-Pilot					Deleted
b) Observer's Seat					Refer to item 25-13.
-6 Cabin Attendant Seats (Single or dual position) <b>(160)</b>	B	3	2		One seat or assembly (dual position) may be inoperative provided: 1) Affected seat or seat assembly is not occupied, 2) Cabin Attendant(s) displaced by inoperative seat(s) occupies either an adjacent flight attendant seat or passenger seat most accessible to the inoperative seat(s), so as most effectively perform assigned duties, 3) Alternate procedures are established and used as stated below in the Crew Operating Procedure, 4) Folding type seat stows automatically or is secured in the retracted position, and 5) Passenger seat(s) assigned to the Cabin Attendant(s) is placarded "FOR CABIN ATTENDANT ONLY/POSTO RISERVATO AGLI ASSISTENTI DI VOLO".  <b>NOTES:</b> - An automatic folding seat that will not stow automatically is considered inoperative. - A Cabin Attendant seat position with an inoperative or missing seat restraint system is considered inoperative. - When operating with inoperative seats, consider the locations and combinations of seats to ensure that the proximity to exits and distribution requirements of the applicable JAR are met. Refer to O.M./B 04.30 Crew Emergency Duties. - 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.

(Continued)

2 Repair Time Interval		3 Number installed	
1 Item		4 Number required for dispatch	5 Remarks and/or Exceptions
<b>25 EQUIPMENT/FURNISHING</b>			
<b>-6</b> Cabin Attendant Seats (Single or dual position) (Cont'd)			<p><b>Crew Operating Procedure</b></p> <p>The displaced Cabin Attendant(s) must be alert to apply the standard emergency duties when an emergency evacuation is required.</p> <p><b>Maintenance Procedure Required</b></p>
<b>-7</b> "Fasten Seat Belt (161) While Seated" Placard	C	-	One or more may be illegible or missing provided a legible placard is readable from occupied passenger seat.
<b>-8</b> Cabin Attendant Seat Lap Belt			Combined with item 25-6.
<b>-9</b> Cabin Emergency (162) Flashlight Holder/Flashlight	C	5	<p>May be inoperative or missing provided the minimum required Cabin Attendant has an operative flashlight readily available at the assigned position.</p> <p><i>NOTE: Individual flashlight, supplied as personal equipment, may be used.</i></p>
<b>-10</b> Passenger Seats (163)	C	-	<p>May be inoperative provided:</p> <ol style="list-style-type: none"> <li>1) Seat does not block an Emergency Exit,</li> <li>2) Seat does not restrict any passenger from access to the main airplane aisle, and</li> <li>3) The affected seat(s) are blocked and placarded "DO NOT OCCUPY".</li> </ol> <p><b>NOTES:</b></p> <p>-A seat with an inoperative seat belt is considered inoperative.</p> <p>-Affected seat(s) may include the seat behind and/or adjacent outboard seat.</p> <p><b>Maintenance Procedure Required</b></p>
a) Recline (164) Mechanism	C	-	<p>May be inoperative and seat occupied, provided seat is secured in the up-right position.</p> <p><b>Maintenance Procedure Required</b></p>
b) Underseat (165) Baggage Restraining Bars	C	-	<p>May be inoperative provided:</p> <ol style="list-style-type: none"> <li>1) Baggage is not stowed under seat with inoperative restraining bar,</li> <li>2) Associated seat is placarded "DO NOT STOW BAGGAGE UNDER THIS SEAT", and</li> <li>3) Procedures are established to alert Cabin Crew of inoperative restraining bar.</li> </ol> <p><b>Crew Operating Procedure</b></p> <p>Advice Cabin Crew to inform passengers occupying seat with affected bar and passengers behind the seat with the affected bar not to stow baggage under the seat.</p> <p><b>Maintenance Procedure Required</b></p>



2 Repair Time Interval		3 Number installed	
1 Item		4 Number required for dispatch	5 Remarks and/or Exceptions
<b>25 EQUIPMENT/FURNISHING</b> (Cont'd)			
<b>-10 Passenger Seats</b> (Cont'd)			
c) Arm Rests <b>(493)</b>	C	-	<p>May be inoperative:</p> <ol style="list-style-type: none"> <li>1) Arm rest does not block an Emergency Exit,</li> <li>2) Arm rest does not restrict any passenger from access to the main aircraft aisle. and</li> <li>3) For an Armrest with a recline mechanism, seat is secured in the upright position.</li> </ol> <p><b>Maintenance Procedure Required</b></p>
<b>-11 Overhead Storage (166)</b> Bin(s) Latches / Cabin and Galley Storage Compartment / Closets	C	-	<p>May be inoperative provided:</p> <ol style="list-style-type: none"> <li>1) Procedures are established to secure compartment CLOSED,</li> <li>2) Compartment is not used for storage of emergency equipment, and</li> <li>3) Affected compartment is not used for storage of any item(s) except for those permanently affixed.</li> </ol> <p><i>NOTE: If no partitions are installed, the entire overhead storage compartment is considered one bin.</i></p> <p><b>Maintenance Procedure Required</b></p>
<b>-12 Passenger Convenience Item(s)</b>		-	<p>0</p> <p>Passenger convenience items as expressed in this MEL, are those related to passenger convenience, comfort or entertainment such as, but not limited to, galley equipment, ash trays, overhead reading lamps. Items addressed elsewhere in this document shall not be included.</p> <p>Operating and Maintenance Procedures may be required and included in the appropriate document.</p>
a) Passenger seat (except items addressed elsewhere) <b>(494)</b>		-	0
b) Ovens <b>(495)</b>		-	0
c) Audio Equipment <b>(496)</b>		-	0
d) Lavatory (Waiste drainage, faucet) <b>(497)</b>		-	0
e) Galley Equipment (boiler, etc.) <b>(498)</b>		-	0
f) Cabin Others (except items, addressed elsewhere) <b>(499)</b>		-	0
g) Galley Others <b>(500)</b>		-	0
h) Lavatory Others (except items, addressed elsewhere) <b>(501)</b>		-	0
			<p><i>NOTE: Exterior Lavatory Door Ash Trays are not considered Convenience Items.</i></p>

2 Repair Time Interval		3 Number installed	
1 Item		4 Number required for dispatch	5 Remarks and/or Exceptions
<b>25 EQUIPMENT/FURNISHING</b> (Cont'd)			
-13 Forward Observer (168) Seat (Including associated equipment)	A	1 0	May be inoperative provided: 1) It is not required for minimum Flight Crew, and 2) Forward Observer Seat is available with the required minimum safety equipment (safety belt and oxygen) and acceptable to the ENAC inspector for the performance of official duties, and 3) Repairs are made within two (2) flight days.  <b>NOTES</b> - These provisos are intended to provide for occupancy of the above seats by an ENAC Inspector when the minimum safety equipment (safety belt and oxygen) is functional and the Inspector determines the conditions to be acceptable. - The Captain will determine if the minimum safety equipment is functional for other persons authorized to occupy the forward observer seat.
-14 NOT APPLICABLE			
-15 NOT APPLICABLE			
-16 C/M-1 and C/M-2 Seat Adjustment System			Deleted
-17 First Aid Kits (FAK) (169)	A	2 2	One of the required first aid kits may be incomplete for a maximum of 2 calendar days. The "minimum required" medical supplies (product types and quantities) must be always available.  <b>Crew Operating Procedure</b> Cross-check actual kit's content with "minimum required" medical supplies (product types and quantities) identified by an * in the specific list inside the FAK(refer to G.B. App. D).

2 Repair Time Interval		3 Number installed	
1 Item		4 Number required for dispatch	5 Remarks and/or Exceptions
<b>25 EQUIPMENT/FURNISHING</b> (Cont'd)			
<b>-18</b> Underseat Baggage Restraining Bars			Combined with item 25-10.
<b>-19</b> Forward Cargo Compartment Thermal Barrier <b>(170)</b>	D	1 0	May be damaged or missing. <i>NOTE: Effects on live animal and temperature sensitive transport should be considered.</i> <i>Advice appropriate personnel.</i>
<b>-20</b> NOT APPLICABLE			
<b>-21</b> NOT APPLICABLE			
<b>-22</b> Galley/Lavatory Waste Receptacle Access Doors/Covers			
a) Galley Waste Receptacle Access Doors/Covers <b>(551)</b>	C	- -	May be inoperative provided: 1) Associated container is empty, 2) Receptacle access is secured to prevent waste introduction into the compartment, and 3) Procedures are established to insure that sufficient waste receptacles are available to accommodate all waste that may be generated on a flight. <b>Crew Operating Procedure</b> Advice Cabin Crew to use alternate waste receptacle to accommodate all waste that may be generated on the flight. <b>Maintenance Procedure Required</b>
b) Lavatory Waste Receptacle Access Doors/Covers <b>(552)</b>	C	- -	May be inoperative provided: 1) Associated waste container is empty. 2) Lavatory is used only by crewmembers, and 3) Associated lavatory entrance door is locked closed and placarded: INOPERATIVE - DO NOT ENTER. <i>NOTE: These provisions are not intended to prohibit lavatory use or inspection by crewmembers.</i> <b>Maintenance Procedure Required</b>
<b>-23</b> Exterior Lavatory Door Ashtray <b>(503)</b>	A	- -	One Aft Exterior Lavatory Door Ashtray may be missing, provided it is replaced within ten (10) calendar days.
<b>-24</b> NOT APPLICABLE			

2 Repair Time Interval			3 Number installed		
1 Item			4 Number required for dispatch		
<b>25 EQUIPMENT/FURNISHING</b> (Cont'd)			5 Remarks and/or Exceptions		
<b>-25</b> Main Cabin/Galley Entry Door Restraining Straps <b>(553)</b>	D	-	0	May be inoperative or missing provided related door(s) is leaved closed when the stair is not available.	
<b>-26</b> Escape Slide <b>(554)</b>	A	4	3	May be inoperative or missing. The affected exit must be considered inoperative, therefore the related limitation must be observed. Refer to item 52-13 or 52-14.	
<b>-27</b> Escape Lines				Deleted	
<b>-28</b> Crash Axe <b>(555)</b>	C	1	0	May be missing provided the crow bar is available.	
<b>-29</b> Smoke Goggles <b>(556)</b>	C	3	-	One pair must be available for each required flight crew member.	
<b>-30</b> Protective Gloves <b>(557)</b>	C	1	0		
<b>-31</b> Crowbar <b>(558)</b>	C	1	0	May be missing provided the crash axe is available.	
<b>-32</b> Emergency Radio Beacon Transmitter <b>(559)</b>	A	1	0	May be inoperative provided repairs are made within six (6) further flights.	

<b>Alitalia MD-80</b> MEL PROCEDURES MANUAL	Minimum Equipment List <b>25 – EQUIPMENT/FURNISHING</b>	T.R. 35
		20 MAR 09

**ITEM 25-32 EMERGENCY RADIO BEACON TRANSMITTER**

The item 25-32 has been modified as follows :

2. Repair Time Interval		3. Number installed	
1. Item			4. Number required for dispatch
			5. Remarks and/or Exceptions
-32 Emergency Locator Transmitter			Deleted

2 Repair Time Interval		3 Number installed			
1 Item				4 Number required for dispatch	5 Remarks and/or Exceptions
<b>26 FIRE PROTECTION</b>					
<b>-1 Engine Fire Detection Systems</b>					
a) Detection Loops <b>(177)</b>	C	4	2		One complete loop (A or B) on each engine may be inoperative.  <b>Crew Operating Procedure</b> Select unaffected system.  <b>Maintenance Procedure Required</b>
b) Test Feature <b>(178)</b>	C	2	1		May be inoperative on an inoperative loop.
<b>-2 APU Fire Detection Systems</b>					
a) Detection Loops <b>(179)</b>	C	2	1		One complete loop (A or B) may be inoperative.  <b>Crew Operating Procedure</b> Select unaffected system.  <b>Maintenance Procedure Required</b>
<b>(180)</b>	C	2	0		Loops (A and B) may be inoperative provided APU is not used. Refer to item 49-1.
b) Test Feature <b>(181)</b>	C	2	1		May be inoperative on an inoperative loop.
<b>-3 Fire Extinguisher Systems</b>					Deleted
<b>-4 Engine and APU Fire Extinguisher AGENT LOW Light</b>					
a) Cockpit Extinguisher AGENT LOW Lights <b>(470)</b>	C	2	1		May be inoperative provided: 1) Associated bottle pressure is verified normal <b>prior to each flight</b> , and 2) Procedures are established for discharging the bottle with the the operative AGENT LOW light first.  <b>Crew Operating Procedure</b> In case of fire, discharge the bottle with the operative AGENT LOW light first.  <b>Maintenance Procedure Required</b>
b) APU Ground Control Panel AGENT LOW Light <b>(471)</b>	C	2	0		May be inoperative provided associated cockpit agent low light operates normally.  <b>Maintenance Procedure Required</b>
<b>(472)</b>	C	2	0		May be inoperative provided associated bottle pressure is verified normal.
<b>-5 APU Ground Fire Warning Horn (183)</b>	C	1	0		May be inoperative provided the system is monitored in the cockpit during APU operation.  <b>Crew Operating Procedure</b> When APU is operating monitor operation in the cockpit.

2 Repair Time Interval		3 Number installed			
1 Item				4 Number required for dispatch	5 Remarks and/or Exceptions
<b>26 FIRE PROTECTION (Cont'd)</b>					
<b>-6 Lavatory Fire Extinguisher System</b>	<b>(184)</b>	C	-	-	For each lavatory, the Lavatory Fire Extinguisher System may be inoperative provided Lavatory Smoke Detector System operates normally.
	<b>(185)</b>	C	-	-	<b>Maintenance Procedure Required</b> For each lavatory, the Lavatory Fire Extinguisher System may be inoperative provided: <ol style="list-style-type: none"> <li>1) Lavatory waste receptacle is empty,</li> <li>2) Associated lavatory door is locked CLOSED and placarded "INOPERATIVE DO NOT ENTER", and</li> <li>3) Lavatory is used only by crew members.</li> </ol> <b>Crew Operating Procedure</b> Lavatory door locked closed does not preclude lavatory inspection and/or use by crew members. <b>Maintenance Procedure Required</b>
<b>-7 Lavatory Smoke Detection System</b>	<b>(186)</b>	C	-	-	For each lavatory, the lavatory Smoke Detection System may be inoperative provided: <ol style="list-style-type: none"> <li>1) Lavatory waste receptacle is empty,</li> <li>2) Associated lavatory door is locked CLOSED and placarded "INOPERATIVE DO NOT ENTER", and</li> <li>3) Lavatory is used only by crew members.</li> </ol> <b>Crew Operating Procedure</b> Lavatory door locked closed does not preclude lavatory inspection and/or use by crew members. <b>Maintenance Procedure Required</b>
<b>-8 NOT APPLICABLE</b>					
<b>-9 Portable Fire Extinguisher</b>	<b>(188)</b>	D	5	4	May be inoperative or missing provided: <ol style="list-style-type: none"> <li>1) The cockpit fire extinguisher is operative,</li> <li>2) The inoperative fire extinguisher is tagged inoperative, removed from the installed location, and placed out of sight so it can not be mistaken for a functional unit, and</li> <li>3) Required distribution is maintained.</li> </ol> <b>Maintenance Procedure Required</b>
<b>-10 Lower Cargo Compartment Smoke Detection / Fire Suppression System</b>	<b>(189)</b>	C	1	0	May be inoperative provided associated FWD, MID or AFT cargo compartment remains empty.  <b>NOTES:</b> <ul style="list-style-type: none"> <li>- Does not preclude the carriage of empty cargo compartment containers, pallets.</li> <li>- If BTL 1, BTL 2, the metering valve, or the diverter valve are inoperative, the entire suppression system is considered inoperative.</li> </ul>

(Continued)





2 Repair Time Interval		3 Number installed	
1 Item			4 Number required for dispatch
<b>27 FLIGHT CONTROLS</b>			5 Remarks and/or Exceptions
-1 Primary Longitudinal Trim Actuator Motor			Deleted
-2 Alternate Longitudinal Trim Actuator Motor			Deleted
-3 Primary Longitudinal Motor Control Contactor			Deleted
-4 Primary Longitudinal Trim Brake Control Relay			Deleted
-5 Primary Longitudinal Trim Control Wheel Switch			Deleted
-6 Primary Longitudinal Trim Brake Manual Override Switch			Deleted
-7 Alternate Longitudinal Trim Motor Control Relay (Up Trim/Down Trim) <b>(191)</b>	C	2 0	May be inoperative provided: 1) Manual Alternate Trim is verified operative, and 2) Alternate procedures are established and used if Autopilot is to be used for Approach and Landing.  <b>Crew Operating Procedure</b> - Trim airplane manually prior to engage autopilot. - Monitor AP TRIM light on FMA's while autopilot is engaged; if light comes on re-trim by alternate longitudinal trim switch (which does not require A/P disconnect), or disconnect the autopilot, trim manually, and then re-engage the autopilot.  <b>Maintenance Procedure Required</b>
-8 Relay, Alternate Longitudinal Trim, Brake Control			Deleted
-9 Alternate Longitudinal Trim Motor, Manual Override Switch			Deleted
-10 Alternate Longitudinal Trim Brake, Manual Override Switch			Deleted

2 Repair Time Interval		3 Number installed	
1 Item		4 Number required for dispatch	5 Remarks and/or Exceptions
<b>27 FLIGHT CONTROLS</b> (Cont'd)			
-11 Alternate Longitudinal Trim, Motor Limit Switch (192)	C	2 0	May be inoperative provided the alternate system otherwise operates normally.  <b>Maintenance Procedure Required</b>  Deleted
-12 Cylinder Assembly, Hydraulic Power Elevator			Deleted
-13 Valve Assembly, Hydraulic Power Control, Elevator			Deleted
-14 Elevator Power On Indicating System (193)	C	1 0	May be inoperative provided: 1) All other hydraulic pressure and quantity indicators and warning lights are operative, and 2) Associated hydraulic accumulator pressure is normal.  <b>Maintenance Procedure Required</b>  Deleted
-15 Flap Control Valve (Dual)			Deleted
-16 Flap Control Valve, 2-Speed			Deleted
-17 Flaps Position Indicating System (194)	C	2 1	May be inoperative provided: 1) It is verified that flaps are operative through their normal operating range, and 2) Visual inspection <b>before each takeoff</b> verifies that both flaps are in takeoff position and no asymmetry exists.  <b>Crew Operating Procedure</b> <b>Before each takeoff</b> perform a check, in coordination with Ground Personnel, to verify that flaps are operative through their full range, then that both flaps are set in take off position and that no asymmetry exists.  <b>Maintenance Procedure Required</b>  Deleted
-18 Valve and Spoiler Hydraulic Cylinder Assembly			Deleted

2 Repair Time Interval		3 Number installed	
1 Item		4 Number required for dispatch	5 Remarks and/or Exceptions
<b>27 FLIGHT CONTROLS</b> (Cont'd)			
<b>-19 Automatic Ground Spoiler System</b>	<b>(195)</b>	C 1 0	<p>May be inoperative provided:</p> <ol style="list-style-type: none"> <li>1) Autoland is not used, and</li> <li>2) Limitations in the Crew Operating Procedure, as stated below, are applied.</li> </ol> <p><i>NOTE: If only the Main Landing Gear Wheel Spin-up feature is inoperative (evidenced by the spoiler failing to automatically deploy on landing without intervention of AUTO SPOILER FAIL annunciation) only the LANDING portion of the Crew Operating Procedure must be applied.</i></p> <p><b>Crew Operating Procedure</b></p> <p><b>TAKEOFF</b></p> <ul style="list-style-type: none"> <li>- Takeoff is not allowed on WET or Contaminated (SSW) runways.</li> <li>- Reduce PTOW by 2900 kg.</li> </ul> <p><b>LANDING</b></p> <ul style="list-style-type: none"> <li>- Landing is not allowed on Contaminated (SSW) runways</li> <li>- DRY runway Reduce runway length limited weight by 8100 kg, or increase the required landing field length by 470 ft.</li> <li>- WET runway Reduce runway length limited weight by 8700 kg, or increase the required landing field length by 540 ft.</li> <li>- After the main gear contacts the ground, extend manually the spoiler.</li> </ul> <p><i>NOTE: Weight limitation on T.O. is provided since in this condition the ground spoiler actuator is deactivated in flight mode. This means that, in case of R.T.O., if manual deployment operation is not carried out properly (up, aft, up), only the flight spoilers would extend resulting in an increased stopping distance.</i></p> <p><b>Maintenance Procedure Required</b></p>

2 Repair Time Interval		3 Number installed	
1 Item		4 Number required for dispatch	5 Remarks and/or Exceptions
<b>27 FLIGHT CONTROLS</b> (Cont'd)			
<b>-20</b> Ground (Inboard) Spoiler System <b>(196)</b>	C	1 0	May be inoperative provided: <ol style="list-style-type: none"> <li>Both inboard spoilers are in the retracted position, and</li> <li>The ground spoiler valves have electrical plugs disconnected, and</li> <li>Limitations in the Crew Operating Procedure, as stated below, are applied.</li> </ol> <p><b>Crew Operating Procedure</b></p> <p><b>TAKEOFF</b></p> <ul style="list-style-type: none"> <li>Takeoff is not allowed on WET or Contaminated (SSW) runways.</li> <li>Takeoff with flaps 0 to 10 is not allowed.</li> <li>Reduce PTOW by 1800 kg.</li> </ul> <p><b>LANDING</b></p> <ul style="list-style-type: none"> <li>Landing is not allowed on Contaminated (SSW) runways</li> <li>WET and DRY runways               <ul style="list-style-type: none"> <li>Flaps 28 - Reduce runway length limited weight by 7800 kg, or increase the required landing field length by 450 ft.</li> <li>Flaps 40 - Reduce runway length limited weight by 5900 kg, or increase the required landing field length by 350 ft.</li> </ul> </li> </ul> <p><b>Maintenance Procedure Required</b></p> <p>Deleted</p> <p>Deleted</p> <p>Deleted</p> <p>Deleted</p> <p>Deleted</p> <p><i>NOTE : The parking brake input may be inoperative if PARKING BRAKES ON annunciator system is inoperative. Refer to item 32-8.</i></p>
<b>-21</b> Rudder, Integral Control Hydraulic Cylinder Assembly			Deleted
<b>-22</b> Rudder, Hydraulic Shut-Off Valve Assembly			Deleted
<b>-23</b> Rudder, Limiter System			
a) Speed Rudder Throw Limiter			Deleted
b) RUDDER TRAVEL UNRESTRICTED Light			Deleted
<b>-24</b> RUDDER CONTROL MAN Annunciation			Deleted
<b>-25</b> Takeoff Warning System			Deleted

2 Repair Time Interval		3 Number installed			
1 Item				4 Number required for dispatch	5 Remarks and/or Exceptions
<b>27 FLIGHT CONTROLS</b> (Cont'd)					
<b>-26 Control Surface Dampers</b>					
a) Rudder <b>(197)</b>	C	2	1		May be inoperative provided all four aileron dampers are operative.
b) Aileron <b>(198)</b>	C	4	2		One Damper may be inoperative on each aileron.
c) Elevator					Deleted
<b>-27 Slat Disagreement Annunciator</b>					Deleted
<b>-28 NOT APPLICABLE</b>					
<b>-29 SPOILER/FLAP EXTEND Annunciator</b> <b>(199)</b>	C	1	0		
<b>-30 AUTO SPOILER FAIL Annunciator</b> <b>(200)</b>	C	1	0		May be inoperative provided: 1) The automatic ground spoiler system is not used, 2) Inboard ground spoiler system is considered inoperative, and 3) Limitations in the Crew Operating Procedure, as stated below, are applied.
<b>Crew Operating Procedure</b>					
<b>TAKEOFF</b>					
- Takeoff is not allowed on WET or Contaminated (SSW) runways.					
- Takeoff with flaps 0 to 10 is not allowed.					
- Reduce PTOW by 4700 kg.					
<b>LANDING</b>					
- Landing is not allowed on Contaminated (SSW) runways.					
- DRY runway					
Flaps 28 - Reduce runway length limited weight by 15900 kg, or increase the required landing field length by 920 ft.					
Flaps 40 - Reduce runway length limited weight by 14000 kg, or increase the required landing field length by 820 ft.					
- WET runway					
Flaps 28 - Reduce runway length limited weight by 16500 kg, or increase the required landing field length by 990 ft.					
Flaps 40 - Reduce runway length limited weight by 14600 kg, or increase the required landing field length by 890 ft.					
- After the main gear contacts the ground, extend manually the spoiler.					
<b>Maintenance Procedure Required</b>					

2 Repair Time Interval		3 Number installed	
1 Item		4 Number required for dispatch	5 Remarks and/or Exceptions
<b>27 FLIGHT CONTROLS</b> (Cont'd)			
<b>-31 NOT APPLICABLE</b>			
<b>-32 Spoiler Deployed (201)</b> Annunciator System	A	1 0	May be inoperative provided: 1) Spoiler surfaces are visually verified stowed after control system check and before each takeoff, and 2) Repair is made within one flight day. <b>Crew Operating Procedure</b> Visually verify that spoilers are stowed prior to each takeoff after control surface preflight check.
<b>-33 NOT APPLICABLE</b>			
<b>-34 Stabilizer Motion Indicator, Sensor and Horn</b>			Deleted
<b>-35 Auto Slat System</b>			Deleted
<b>-36 Slat LAND Light (202)</b>	C	1 0	May be inoperative provided slat input to Takeoff Warning System is operative. <b>Maintenance Procedure Required</b>
<b>-37 Slat TAKEOFF Light (203)</b>	C	1 0	May be inoperative provided: 1) Slat input to Takeoff Warning System is operative, 2) Slats are visually checked in proper takeoff position before departing the ramp, and 3) Flaps/slats are not operated after the required visual check has been made without a subsequent visual check before takeoff. <b>Crew Operating Procedure</b> Do not move flaps/slats on ground after visual inspection is completed. <b>Maintenance Procedure Required</b>
<b>-38 Post Stall Recovery (204)</b> System	C	1 0	May be inoperative provided system is deactivated. <b>Maintenance Procedure Required</b>
<b>-39 Throttle Arming Switches for Takeoff Warning System</b>			Deleted
<b>-40 Primary (205)</b> Longitudinal Trim Actuator Heater Blanket	C	1 0	
<b>-41 Dial-A-Flap System (206)</b>	C	1 0	May be inoperative provided: 1) Movable detent is in the stowed position, 2) Fixed flap detent system operates normally, and 3) Both flap indicating systems are operative.

2 Repair Time Interval		3 Number installed	
1 Item		4 Number required for dispatch	5 Remarks and/or Exceptions
<b>28 FUEL</b>			
-1 L/R Main Tank Fuel Pump <u>(207)</u>	C	4 2	<p>May be inoperative provided:</p> <ol style="list-style-type: none"> <li>1) Inoperative Fuel Pumps are not in the same tank,</li> <li>2) When two Fuel Pumps are inoperative, the remaining Fuel Pumps are powered from separate AC Bus Systems,</li> <li>3) Increase planned trip fuel for each inoperative fuel pump as follows: <ul style="list-style-type: none"> <li>- 265 kg for each inoperative FWD main tank pump,</li> <li>- 150 kg for each inoperative AFT main tank pump.</li> </ul> </li> </ol> <p><b>Crew Operating Procedure</b> Inoperative pump sw(s) must be left in off position. If two pumps are inoperative, go-around is not recommended if there is less than 460 kg indicated in either main tank.</p> <p><b>Maintenance Procedure Required</b></p>
-2 Center Tank Fuel Pump <u>(208)</u>	C	2 0	<p>May be inoperative provided:</p> <ol style="list-style-type: none"> <li>1) All cockpit fuel quantity displays are operative, and</li> <li>2) Fuel (if any) in the center tank is considered unusable and fuel weight considered as payload.</li> <li>3) Operating zero fuel weight does not exceed maximum allowable zero fuel weight, less the amount of unusable fuel, and</li> <li>4) Associated pumps are deactivated.</li> </ol> <p><b>Crew Operating Procedure</b> Inoperative pump sw(s) must be left in off position. Restrict (i.e. move to the right side) the FWD operational limit of balance chart by the moment index value corresponding to the fuel quantity in the center tank (see table of delta moment index/ballast fuel center tank, page 14-40-10 O.M./B Vol. 2).</p> <p><b>Maintenance Procedure Required</b></p>
-3 Start Pump <u>(209)</u>	C	1 0	<p><b>Crew Operating Procedure</b> Use external or APU power for AC boost pumps operation during engine or APU start.</p>
a) Start Pump Automatic Function <u>(210)</u>	D	1 0	<p>May be inoperative provided the pump operates properly in ON and OFF position.</p>
-4 Engine Fire Shutoff Valve			Deleted
-5 Fuel X-Feed Valve			Deleted
-6 Fueling Station Control Panel <u>(211)</u>	C	1 0	<p>May be inoperative provided an accepted alternate refueling procedure is used.</p> <p><b>Maintenance Procedure Required</b></p>
-7 NOT APPLICABLE			

2 Repair Time Interval		3 Number installed			
1 Item				4 Number required for dispatch	5 Remarks and/or Exceptions
<b>28 FUEL (Cont'd)</b>					
<b>-8 Fuel Quantity Indicating System (Cockpit)</b>					
a) Channels A & B <b>(212)</b>	C	2	1		<p>May be inoperative provided:</p> <ol style="list-style-type: none"> <li>1) All cockpit fuel quantity displays are operative on the remaining channel,</li> <li>2) Both fuel used readouts are operative, and</li> <li>3) All fuel tank pumps are operative.</li> </ol> <p><b>Crew Operating Procedure</b> If additional fuel quantity display fails enroute:</p> <ul style="list-style-type: none"> <li>- Turn on both pumps in the affected tank(s) for duration of flight.</li> <li>- Monitor fuel usage with fuel used readouts.</li> </ul>
b) L & R Main Tank Displays <b>(213)</b>	C	2	1		<p>May be inoperative on both channels provided:</p> <ol style="list-style-type: none"> <li>1) Remaining main tank and center tank fuel quantity displays in the cockpit are operative on both channels,</li> <li>2) Fuel Flow readouts for associated engine is operative,</li> <li>3) Both fuel used readouts are operative, and</li> <li>4) Fuel quantity in the associated tank is verified by an alternate method.</li> </ol> <p><b>Crew Operating Procedure</b></p> <ul style="list-style-type: none"> <li>- Disregard total fuel and gross weight displays.</li> <li>- In flight, after center tank is empty, monitor main tank fuel usage using fuel used readouts.</li> </ul> <p><b>Maintenance Procedure Required</b></p>
c) CTR Tank Display <b>(214)</b>	C	1	0		<p>May be inoperative on both channels provided:</p> <ol style="list-style-type: none"> <li>1) Fuel (if any) in center tank is considered to be UNUSABLE,</li> <li>2) Both cockpit main tank fuel quantity displays are operative on both channels,</li> <li>3) Both fuel used readouts are operative,</li> <li>4) Fuel quantity in center tank is verified by an alternate method <b>before each flight</b>, and</li> <li>5) Fuel weight in center tank is considered as payload.</li> </ol> <p><b>Crew Operating Procedure</b></p> <ul style="list-style-type: none"> <li>- Restrict (i.e. move to the right side) the FWD operational limit of balance chart by the moment index value corresponding to the fuel quantity in the center tank (see table of delta moment index/ballast fuel center tank, page 14-10-09 O.M./B Vol. 2).</li> <li>- Disregard total fuel and gross weight displays.</li> <li>- In flight, monitor fuel used indications and verify equal to main tank fuel usage.</li> <li>- If fuel used does not match main tank depletion, turn on center tank pumps.</li> </ul> <p><b>Maintenance Procedure Required</b></p>

(Continued)



2 Repair Time Interval		3 Number installed				
1 Item					4 Number required for dispatch	5 Remarks and/or Exceptions
<b>28 FUEL (Cont'd)</b>						
<b>-8 Fuel Quantity Indicating System (Cockpit) (Cont'd)</b>						
c) CTR Tank Display (Cont'd) <b>(215)</b>	C	1	0			May be inoperative on both channels and fuel in center tank considered USABLE provided: <ol style="list-style-type: none"> <li>Both center tank fuel pumps are operative,</li> <li>Both main tank fuel quantity displays are operative on both channels,</li> <li>Both fuel used readouts are operative,</li> <li>Both engine INLET FUEL PRES LO annunciations are operative, and</li> <li>Fuel quantity in center tank is verified by an alternate accepted method.</li> </ol> <b>Crew Operating Procedure</b> <ul style="list-style-type: none"> <li>Disregard total fuel and gross weight displays.</li> <li>In flight, monitor fuel used indications and verify no fuel transfer from main tanks until fuel used equals quantity of fuel in center tank.</li> <li>If main tank fuel is used prematurely (failure of center tank fuel pump), turn off main tank fuel pumps one at a time and verify engine INLET FUEL PRES LO annunciations remain off.</li> <li>After center tank is empty, leave one center tank fuel pump on for duration of flight to prevent engines flame out in case of undetected fuel leak into center tank from main tanks.</li> </ul> <b>Maintenance Procedure Required</b>
d) NOT APPLICABLE						
e) Fuel System Test <b>(477)</b>	C	1	0			May be inoperative provided: <ol style="list-style-type: none"> <li>All Cockpit Fuel Quantity Displays are operative,</li> <li>Both Fuel Used Indications are operative, and</li> <li>Quantity of fuel in the tank is determined by an alternate accepted method.</li> </ol> <b>Maintenance Procedure Required</b>
<b>-9 NOT APPLICABLE</b>						
<b>-10 FUEL TANK TOTALIZING System and Gross Weight Readout</b> <b>(216)</b>	C	1	0			May be inoperative provided: <ol style="list-style-type: none"> <li>Procedures do not require its use, and</li> <li>Other associated systems (PMS, FMS) are considered.</li> </ol>
<b>-11 CENTER FUEL PRESS LO Annunciator System</b> <b>(217)</b>	C	1	0			

2 Repair Time Interval		3 Number installed				
1 Item					4 Number required for dispatch	5 Remarks and/or Exceptions
<b>28 FUEL (Cont'd)</b>						
-12 Magnesticks (Main and Center Tanks) <b>(218)</b>	C	9	0			May be inoperative or missing provided fuel quantity is determined by other accepted method.  <b>Maintenance Procedure Required</b>
-13 NOT APPLICABLE						
-14 NOT APPLICABLE						
-15 NOT APPLICABLE						
-16 Fueling Station, FUEL QUANTITY Repeater Display <b>(223)</b>	C	3	0			May be inoperative provided the fuel quantity in associated tanks is verified by an alternate accepted method.  <b>Maintenance Procedure Required</b>
-17 Fueling Station, Fuel Cap <b>(224)</b>	D	1	0			May be inoperative or missing provided: 1) Refueling receptacle is free of contamination <b>prior to each refueling</b> , and 2) No leakage exists after refueling.  <b>Maintenance Procedure Required</b>
-18 Ground Refueling Circuit (Battery Powered) <b>(225)</b>	C	1	0			
-19 Aircraft Systems Electronic Display Panel (ESDP) (Fuel, Oil, Hydraulic, etc.)						Refer to item 31-7.
-20 Fueling Station, Fuel Quantity Test Switch <b>(227)</b>	C	1	0			May be inoperative provided Cockpit Fuel Quantity Test Button & Channel Selector is operative.  <b>Maintenance Procedure Required</b>

2 Repair Time Interval		3 Number installed	
1 Item		4 Number required for dispatch	5 Remarks and/or Exceptions
<b>29 HYDRAULIC POWER</b>			
-1 NOT APPLICABLE			
-2 Hydraulic Brake Accumulator			Deleted
-3 Hydraulic Reverser System Accumulator			Combined with item 78-1.
-4 Elevator Augmentor Power System Accumulator			<b>Maintenance Procedure Required</b> Deleted
-5 Right Engine Driven (228) Hydraulic Pump	B 1 0		May be inoperative provided all other hydraulic pumps are operative.  <b>Crew Operating Procedure</b> - Switch the Right Engine Hydraulic Pump to off and the other hydraulic pumps as follows:  TAKEOFF and LANDING Transfer Hydraulic Pump ..... ON Left Engine Hydraulic Pump ..... HI Auxiliary Hydraulic Pump ..... ON  AFTER TAKEOFF Transfer Hydraulic Pump ..... OFF Left Engine Hydraulic Pump ..... LOW Auxiliary Hydraulic Pump ..... ON - Refer to Special Operations "Right Engine Hydraulic Pump Inoperative" O.M./B Vol. 2 Chap. 08-50.
-6 Auxiliary Hydraulic Pump			Deleted
-7 NOT APPLICABLE			
-8 NOT APPLICABLE			
-9 Valve, Hydraulic Pressure Reducer, Spoiler			Deleted


2 Repair Time Interval		3 Number installed	
1 Item		4 Number required for dispatch	
<b>29 HYDRAULIC POWER</b> (Cont'd)		5 Remarks and/or Exceptions	
-10 Valve, Relief, Low Pressure Reservoir		Deleted	
-11 Spoiler Shutoff and System Depressurization Valve		Deleted	
-12 Hydraulic Fire Shutoff Valve		Deleted	
-13 Relief Valve		Deleted	
-14 NOT APPLICABLE			
-15 Relief, Return, Hydraulic Elevator Power Valve		Deleted	
-16 HYD PRESS Indicating System		Deleted	
-17 BRAKE PRESS Indicating System		Deleted	
-18 Right Hydraulic Low Pressure Annunciator (229)	C	1	0
-19 Thrust Reverser Accumulator Low Annunciators		Combined with item 78-1.	
-20 Left Hydraulic Temperature High Annunciator (230)	C	1	0
-21 HYD FLUID QUANTITY Indicating System (231)	C	2	0
		May be inoperative provided associated reservoir quantity is checked <b>prior to each departure</b> .	
		<b>Crew Operating Procedure</b>	
		Check hydraulic system pressure frequently during flight.	
		<b>Maintenance Procedure Required</b>	

2 Repair Time Interval		3 Number installed		
1 Item			4 Number required for dispatch	5 Remarks and/or Exceptions
<b>29 HYDRAULIC POWER</b> (Cont'd)				
<b>-22</b> Engine Driven Pump <b>(232)</b> Depressurization Valve - Low Pressure Control	C	2	0	May be inoperative provided the HI pressure and OFF controls functions are both operative.  <b>Crew Operating Procedure</b> Select the ENG HYD PUMP switch(es) to HI for entire flight.
<b>-23</b> Hydraulic Power Transfer Unit				Deleted
<b>-24</b> Aircraft System Electronic Display Panel (ESDP) (Fuel, Oil, Hydraulic, etc.)				Refer to item 31-7.
<b>-25</b> Hydraulic Reservoir <b>(478)</b> Ground Service Hand pumps	D	2	0	

<b>Alitalia</b> Compagnia Aerea Italiana <b>MD-80</b> MEL PROCEDURES MANUAL	Minimum Equipment List <b>30 - ICE AND RAIN PROTECTION</b>	REV.	01-30-1
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2 Repair Time Interval		3 Number installed			
1 Item				4 Number required for dispatch	5 Remarks and/or Exceptions
<b>30 ICE AND RAIN PROTECTION</b>					
-1 ENG ANTI-ICE ON Light	(234)	C	2	0	
-2 Engine Anti - Ice VALVE Annunciator Signal Input	(235)	C	6	5	May be inoperative provided associated Engine Anti - Ice Valve is considered inoperative.
-3 Engine Anti-Ice Valves	(236)	C	6	5	May be inoperative provided: 1) It is verified that the associated valve is CLOSED, and 2) Flight is not made in known or forecast icing conditions.  <b>Maintenance Procedure Required</b>
	(237)	A	6	5	May be inoperative provided: 1) It is verified that the associated valve is OPEN, 2) EPR corrections and performance penalties, as stated below, in the Crew Operating Procedure, are applied if required, and 3) Repairs are made within five flight days.  <b>Crew Operating Procedure</b> Refer to Special Operations "Engine Anti-Ice Valve Inoperative" O.M./B Vol 2 Ch. 08-60.  <b>Maintenance Procedure Required</b>
-4 Pitot Heater(s)					
a) CAPT, F/O	(238)	B	2	1	May be inoperative provided: 1) Flight is made in day VMC only, and 2) Flight is not made in visible moisture or in known or forecast icing conditions.
b) AUX	(239)	B	1	0	May be inoperative provided flight is not made in visible moisture or known or forecast icing conditions.
c) RUD LIM	(240)	C	1	0	May be inoperative provided flight is not made in known or forecast icing conditions.
-5 Anti-icing Heaters Ammeter System	(241)	C	1	0	May be inoperative provided: 1) All heaters, with the exception of the rudder limiter heater, are verified to be operating <b>before each takeoff</b> , and 2) PITOT/STALL HEATER OFF annunciator light system is operative.  <b>Maintenance Procedure Required</b>

2 Repair Time Interval		3 Number installed			4 Number required for dispatch	5 Remarks and/or Exceptions
1 Item						
<b>30 ICE AND RAIN PROTECTION (Cont'd)</b>						
<b>-6</b>	Static Port Heaters <u>(242)</u>	C	4	0	May be inoperative except when arrival and departure airport temperatures are +5°C or below and runways are covered with slush or standing water.	
<b>-7</b>	Angle of Attack Transducer Vane Heater <u>(243)</u>	C	2	0	May be inoperative provided flight is not made in known or forecast icing conditions.	
<b>-8</b>	Ram Air Temp Probe Heater <u>(244)</u>	C	1	0	May be inoperative provided flight is not made in known or forecast icing conditions.	
<b>-9</b>	Rudder Limit Pitot Heater				Combined with item 30-4.	
<b>-10</b>	Potable Water Service Access Panel Heater <u>(245)</u>	C	1	0		
<b>-11</b>	Airfoil Ice Protection Pressure Abnormal Annunciator System <u>(246)</u>	C	1	0	May be inoperative provided flight is not made in known or forecast icing conditions.	
<b>-12</b>	Airfoil Ice Protection Supply Pressure High Annunciator System <u>(247)</u>	C	1	0	May be inoperative provided flight is not made in known or forecast icing conditions.	
<b>-13</b>	Ice Protection Temperature High Annunciator System <u>(248)</u>	C	2	0	May be inoperative provided flight is not made in known or forecast icing conditions.	
<b>-14</b>	Ice Protection Temperature Low, Annunciator System <u>(249)</u>	C	2	0	May be inoperative provided flight is not made in known or forecast icing conditions.	
<b>-15</b>	WING ANTI-ICE ON Light <u>(250)</u>	C	1	0	May be inoperative provided TAIL DE-ICE ON Light is operative.	
	<u>(251)</u>	C	1	0	May be inoperative provided flight is not made in known or forecast icing conditions.	
<b>-16</b>	TAIL DE-ICE ON Light <u>(252)</u>	C	1	0	May be inoperative provided WING ANTI-ICE ON Light is operative.	
	<u>(253)</u>	C	1	0	May be inoperative provided flight is not made in known or forecast icing conditions.	

 <b>MD-80</b> MEL PROCEDURES MANUAL	Minimum Equipment List <b>30 - ICE AND RAIN PROTECTION</b>	REV. <b>0</b>	01-30-3 20 MAR 09
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2 Repair Time Interval	3 Number installed			4 Number required for dispatch	
1 Item					5 Remarks and/or Exceptions
<b>30 ICE AND RAIN PROTECTION (Cont'd)</b>					
-17 Ice Protection Shut-Off Valve (Wing and Tail) <u>(254)</u>	C	2	0		May be inoperative provided: 1) Pneumatic crossfeed valves are CLOSED after engine start, and 2) Flight is not made in known or forecast icing conditions. <b>Maintenance Procedure Required</b>
-18 Airfoil Anti-icing Pressure Regulator and Shutoff Valve <u>(255)</u>	C	1	0		May be inoperative provided: 1) Pneumatic crossfeed valves are CLOSED after engine start, and 2) Flight is not made in known or forecast icing conditions. <b>Maintenance Procedure Required</b>
-19 Fuselage and Wheel Well Overheat System <u>(256)</u>	C	1	0		May be inoperative provided: 1) Airfoil ice protection is not used, and 2) Flight is not made in known or forecast icing conditions. <b>Maintenance Procedure Required</b>
-20 Windshield Heat System a) Anti-Ice <u>(257)</u>	C	1	0		May be inoperative provided: 1) Windshield anti-fog system is operative, and 2) Flight is not made in known or forecast icing conditions. <i>NOTE: See O.M./B Vol. 2 Ch. 1 - Limitations - for speed and altitude restrictions for cracked or uncracked configurations.</i> <b>Maintenance Procedure Required</b>
b) Anti-Fog <u>(258)</u>	C	1	0		May be inoperative provided windshield anti-ice system is operative. <i>NOTE: Clearview and/or eyebrow window anti-fog system may be inoperative.</i> <b>Maintenance Procedure Required</b>
-21 Windshield Wiper System (If Second System Installed) <u>(259)</u>	C	2	0		May be inoperative provided airplane is not operated in precipitation within 5 nautical miles of the airport of takeoff or intended landing.
a) Slow Speed <u>(260)</u>	C	2	0		May be inoperative provided FAST speed is operative.
b) Fast Speed <u>(261)</u>	C	2	0		May be inoperative provided SLOW speed is operative.
c) Park Function <u>(262)</u>	C	2	0		May be inoperative for all flight conditions provided the blade(s) can be positioned in a location that will not obstruct forward vision.



 <b>MD-80</b> MEL PROCEDURES MANUAL	Minimum Equipment List <b>30 - ICE AND RAIN PROTECTION</b>	REV.	01-30-4
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2 Repair Time Interval		3 Number installed	
1 Item		4 Number required for dispatch	5 Remarks and/or Exceptions
<b>30 ICE AND RAIN PROTECTION (Cont'd)</b>			
-22 NOT APPLICABLE			
-23 NOT APPLICABLE			
-24 Tail De-Ice Timer (264)	C	1 0	May be inoperative provided system can be operated manually. <b>Crew Operating Procedure</b> - If timer is failed off, hold tail de-ice button in for 2.5 minutes when required. - If timer is failed on, pull WING & TAIL VALVES c/b (M 24). When tail de-ice is required, reset c/b for 2.5 minute intervals.
(265)	C	1 0	May be inoperative provided flight is not made in known or forecast icing conditions.
-25 NOT APPLICABLE			
-26 Windshield Overheat Indicating System (266)	D	1 0	
-27 PITOT/STALL HEAT OFF Annunciator System (267)	C	1 0	May be inoperative provided: 1) Anti-icing heaters current ammeter system is operative, and 2) It is verified that the associated heaters are operative. <b>Crew Operating Procedure</b> The affected heaters may be verified operative by rotating METER SEL & HEAT selector to affected heater position and observing HEATER CURRENT meter indication.
-28 Galley Drain Mast Heater (268)	C	1 0	May be inoperative provided drain line to associated drain mast is disconnected or turned off. <b>Maintenance Procedure Required</b>
-29 Wing Ice Detection System (269)	C	1 0	May be inoperative provided hand feel inspection of the wing inboard upper surface is performed to assure the surface is free of ice. <b>Crew Operating Procedure</b> When the airplane is exposed to one or more of the following conditions: 1. ambient temperature 10°C or below with high humidity or visible moisture (rain, drizzle, sleet, snow, fog, etc.); 2. frost or ice is present on the lower surface of either wing; 3. fuel temperature in the main wing tanks is below 0°C associated to high humidity, or visible moisture; ask ground personnel to perform, if not already done after refuelling and/or deicing, a hand feel inspection of the wing upper surface.
<p style="text-align: center;"><b>NOTE</b>  <i>The physical check on wing upper surface may be made assuring that all tufts move freely.</i></p>			

2 Repair Time Interval		3 Number installed	
1 Item		4 Number required for dispatch	5 Remarks and/or Exceptions
<b>31 INSTRUMENTS</b>			
-1 C/M-1's Clock (270)	C	1 0	
-2 NOT APPLICABLE			
-3 Digital Flight Data Recorder			Combined with item 31-6.
-4 Cockpit Voice Recorder (CVR) System			Moved (See item 23-16).
-5 Central Aural Warning System			
a) Engine Fire Warning			Deleted
b) APU Fire Warning (272) Horn	C	1 0	May be inoperative provided during APU operations the system is monitored at the cockpit control panel.
<b>Crew Operating Procedure</b>			
When the APU Fire Warning is inoperative, monitor the APU Fire Light on the Overhead Annunciator Panel.			
c) Stall Warning			Deleted
d) Landing Gear Warning			Deleted
e) Takeoff Warning			Deleted
f) Altitude Alert Warning			Refer to item 34-28.
g) Cabin Altitude Warning			Refer to item 21-27.
h) Autopilot Disconnect Warning (273)	C	1 0	May be inoperative provided the autoland mode is not used.
<b>Crew Operating Procedure</b>			
Most failures will turn on the CAWS FAIL annunciator on the overhead annunciator panel. Also monitor the flight mode annunciator.			

2 Repair Time Interval		3 Number installed			4 Number required for dispatch	5 Remarks and/or Exceptions		
1 Item								
<b>31 INSTRUMENTS (Cont'd)</b>								
<b>-5 Central Aural Warning System (Cont'd)</b>								
i) Overspeed Warning <b>(274)</b>	B	1	0	May be inoperative provided: 1) Both Mach indications system are operative for flights conducted above FL 250, and 2) The following speed limitations are observed: M <sub>MO</sub> = 0.79 Mach above FL 250, V <sub>MO</sub> = 325 knots below FL 250. <b>Crew Operating Procedure</b>  When the Mach Overspeed Warning is inoperative, most failures will turn on the CAWS FAIL annunciator on the overhead annunciator panel. Monitor the Mach/Airspeed Indicators and observe airspeed limitations.				
j) Slat Overspeed Warning <b>(275)</b>	C	1	0	May be inoperative provided airspeed limitations are observed. <b>Crew Operating Procedure</b>  When the Slat Overspeed Warning is inoperative, most failures will turn on the CAWS FAIL annunciator on the overhead annunciator panel. Monitor the Mach/Airspeed Indicators and observe airspeed limitations.				
k) Horizontal Stabilizer Motion Warning				Deleted				
l) Speed Brake Warning <b>(276)</b>	C	1	0					
m) NOT APPLICABLE								
n) Voice Warnings <b>(277)</b>	C	-	0					
<b>-6 Airborne Integrated Data System (AIDS)</b>								
a) Digital Flight Data Recorder <b>(278)</b>	A	1	0	May be inoperative provided: 1) The cockpit voice recorder is operative, and 2) Repairs or replacements are made within 72 elapsed hours or eight (8) flight legs, whichever comes first. 3) It is not reasonably practicable to repair or replace DFDR before the commencement of the flight.				
b) PMR <b>(279)</b>	C	1	0					

2 Repair Time Interval		3 Number installed				
1 Item					4 Number required for dispatch	5 Remarks and/or Exceptions
<b>31 INSTRUMENTS (Cont'd)</b>						
<b>-7 Aircraft Systems Electronic Display Panel (ESDP) (Fuel, Oil, Hydraulic, Etc.)</b>						<i>NOTE: Relief may be provided in other MEL chapters for systems using this panel for display.</i>
a) Engine Oil Low <b>(280)</b> Pressure Caution (Amber) Lights (40 numeral)	C	2	0			May be inoperative provided: 1) Associated Overhead Engine Oil Pressure Low Annunciation is operative, and 2) Both Master Caution Lights are operative.
b) Engine Oil Low <b>(281)</b> Pressure Warning (Red) Lights (35 numeral)	C	2	1			May be inoperative provided: 1) Both Engine Oil Low Pressure Caution Lights are operative, 2) Associated Overhead Engine Oil Pressure Low Annunciation is operative, and 3) Both Master Caution Lights are operative.
c) Engine Oil High <b>(282)</b> Temperature Caution (Amber) Lights (135 numeral)	C	2	1			May be inoperative provided associated Engine Oil High Temperature Warning Light is operative.
d) Engine Oil High <b>(283)</b> Temperature Warning (Red) Lights (165 numeral)	C	2	1			May be inoperative provided associated Engine Oil High Temperature Caution Light is operative.
e) Hydraulic Quantity <b>(284)</b> Low Caution (Amber) Lights	C	2	1			May be inoperative provided affected light is placarded "4.3 QTS MINIMUM".
f) Flap Display <b>(285)</b> Scale Light Bars	C	72	71			One complete Horizontal Bar of the scale may be inoperative.  <i>NOTE: One complete Horizontal Bar consists of 3 Light Emitting Diodes.</i>

2 Repair Time Interval		3 Number installed	
1 Item		4 Number required for dispatch	5 Remarks and/or Exceptions
<b>32 LANDING GEAR</b>			
-1 Parking Brake			Deleted
-2 Dual Hydraulic Power Control Valve			Deleted
-3 NOT APPLICABLE			
-4 Anti-skid System (Including Annunciator Lights and Test Circuit)			Deleted
-5 Position and Warning System			Deleted
-6 Brake Temperature Sensor (286)	C	4 2	One required for each main gear. <b>Crew Operating Procedure</b> <ul style="list-style-type: none"> <li>- During cockpit preparation perform the test of single operative position, moving the brake selector to desired position and pushing the temperature test button. Observe OVHT light comes on.</li> <li>- Before takeoff check brake temperature on each operative position and verify OVHT light off.</li> </ul> <b>Maintenance Procedure Required</b>
-7 NOT APPLICABLE			
-8 PARKING BRAKES (287) ON Annunciator System	C	1 0	May be inoperative provided: 1) Alternate operations procedures are used for brake release, and 2) Alternate maintenance procedures are used to verify proper operation of Anti-Skid and Takeoff Warning Systems.  <i>NOTE: The parking brake input to takeoff warning system may be also inoperative.</i>  <b>Crew Operating Procedure</b> <ul style="list-style-type: none"> <li>- Verify that brake pedals are released prior to move.</li> <li>- Verify that ANTI-SKID lights are off prior to takeoff.</li> <li>- Turn anti-skid switch to OFF before setting parking brake.</li> </ul> <b>Maintenance Procedure Required</b>
-9 NOT APPLICABLE			
-10 Main Wheel Braking System			Deleted
-11 NOT APPLICABLE			
-12 Main Landing Gear WHEEL NOT TURNING Light (288)	C	1 0	

2 Repair Time Interval		3 Number installed	
1 Item			4 Number required for dispatch
<b>33 LIGHTS</b>			5 Remarks and/or Exceptions
-1 Cockpit and Instrument Lighting System (289)	C	-	- Individual lights may be inoperative provided remaining lights are: 1) Sufficient to clearly illuminate all required instruments, controls and other devices for which it is provided, 2) Positioned so that direct rays are shielded from flight crew eyes, 3) Lighting intensity can be controlled or preset to a satisfactory level for the expected flight conditions, and 4) Lighting configuration and intensity are acceptable to the flight crew.  <b>Crew Operating Procedure</b> - Utilize alternate lighting as required. - If thunderstorm light switch is inoperative adjust panel floodlights to required brightness.
-2 Cabin Interior Illumination (290)	C	-	- May be inoperative provided: 1) Sufficient lighting is operative for crew to perform required duties, and 2) Lighting configuration at dispatch is acceptable to the flight crew.
-3 Cargo Compartment Light System (291)	C	1	0
-4 Passenger Information System (NO SMOKING/FASTEN SEAT BELT/RETURN TO CABIN)			
a) Automatic System (292)	D	1	0
(293)	D	1	0
			May be inoperative provided: 1) Passenger address system is operative, 2) The Call System (aural signal) and the Service Interphone System are operative, and 3) Passenger Address System is used to alert the Cabin Attendants and to notify the passengers and Attendants when seat belts should be fastened and smoking is prohibited.
b) Manual System (294)	C	1	0
			May be inoperative provided: 1) Passenger address system is operative, 2) The Call System (aural signal) and the Service Interphone System are both operative, and 3) Passenger Address System is used to alert the Cabin Attendants and to notify the passengers and Attendants when seat belts should be fastened and smoking is prohibited.

(Continued)

2 Repair Time Interval		3 Number installed				
1 Item					4 Number required for dispatch	5 Remarks and/or Exceptions
<b>33 LIGHTS (Cont'd)</b>						
<b>-4 Passenger Information System (NO SMOKING/FASTEN SEAT BELT/RETURN TO CABIN) (Cont'd)</b>						
c) Lighted Signs	(295)	C	-	-		May be inoperative provided Passenger seats or lavatories from which a legible NO SMOKING/FASTEN SEAT BELT/RETURN TO CABIN sign cannot be readily seen are blocked and not occupied.  NOTE: These provisions are not intended to prohibit lavatory use of inspections by crewmember.
	(296)	C	-	-		<b>Maintenance Procedure Required</b> May be inoperative provided Passenger Address System is used to alert the Cabin Attendants and to notify the passengers and Attendants when seat belts should be fastened and smoking is prohibited.
<b>-5 Anti-Collision Light</b>	(297)	C	2	0		May be inoperative provided airplane is not operated at night.
(Top and Bottom Fuselage)						
	(298)	C	2	0		May be inoperative provided Wing Tip White Strobe/Anticollision lights are operative.
<b>-6 Wing/Nacelle Flood Light System</b>						
a) Wing Flood Lights	(299)	C	2	0		May be inoperative provided ground deicing procedure do not require their use.
						<b>Crew Operating Procedure</b> Utilize alternate lighting source for wing inspections as necessary.
b) Nacelle Flood Lights	(300)	C	2	0		
<b>-7 Landing Lights</b>						
a) Wing Landing Lights	(301)	C	2	0		May be inoperative provided airplane is not operated at night.
	(302)	C	2	0		May be inoperative provided both Nose Gear Lights are operative.
b) Nose Gear Lights	(303)	C	2	0		May be inoperative provided airplane is not operated at night.
	(304)	C	2	0		May be inoperative provided both Wing Landing Lights are operative.

(Continued)

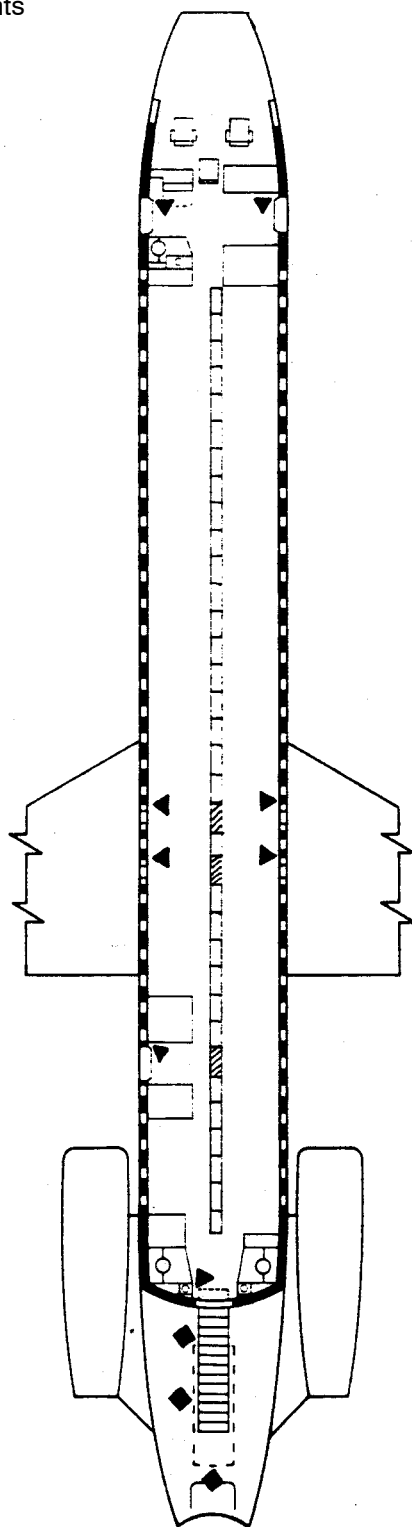
2 Repair Time Interval		3 Number installed	
1 Item		4 Number required for dispatch	5 Remarks and/or Exceptions
<b>33 LIGHTS (Cont'd)</b>			
<b>-7 Landing Lights (Cont'd)</b>			
c) Wing Light Retract <b>(305)</b>	C	2 0	May be inoperative provided Wing Landing Lights are not used.
<b>(306)</b>	C	2 0	May be inoperative provided: 1) Wing landing lights are extended and performance limited weights are reduced by the values shown below for each extended light:  TAKEOFF ..... 590 KG ENROUTE ..... 1180 KG APPROACH/LANDING ..... 500 KG and, 2) Takeoff speeds are determined using actual weight plus the weight penalty. (All other speeds are determined at actual weight).
<b>Crew Operating Procedure</b>			
- Apply penalties to performance limited weights, as shown above.			
- Apply appropriate takeoff speed corrections.			
- Increase planned trip fuel by 3.5% for both lights fixed extended (or by 1.75% for one light fixed extended).			
<b>-8 Ground Flood Lights (307)</b>	C	2 0	
<b>-9 Forward Position Light Bulbs (Wing Tip) (308)</b>	C	4 2	One bulb (red or green) must be operative on each wing tip for night operation.  <i>NOTE: Automatic Switching Position Light Assembly is considered operative if one bulb is illuminated per assembly during normal operations.</i>
<b>(309)</b>	C	4 0	May be inoperative provided airplane is not operated at night.
<b>-10 Aft Position Light Bulbs (Wing Tips, White) (310)</b>	C	4 2	One bulb must be operative on each wing tip for night operation.  <i>NOTE: Automatic Switching Position Light Assembly is considered operative if one bulb is illuminated per assembly during normal operations.</i>
<b>(311)</b>	C	4 0	May be inoperative provided airplane is not operated at night.
<b>-11 NOT APPLICABLE</b>			
<b>-12 Passenger Cabin Emergency Lighting System</b>			Deleted



2 Repair Time Interval		3 Number installed			
1 Item				4 Number required for dispatch	5 Remarks and/or Exceptions
<b>33 LIGHTS (Cont'd)</b>					
<b>-13</b>	NOT APPLICABLE				
<b>-14</b>	Main Gear Wheel (312) Visual Downlock Lights	C	2	0	May be inoperative provided airplane is not operated at night.
<b>-15</b>	MASTER WARNING (313) Light	C	2	1	
<b>-16</b>	MASTER CAUTION (314) Light	C	2	1	
<b>-17</b>	Door Warning Light System				Refer to item 52-7.
<b>-18</b>	NOT APPLICABLE				
<b>-19</b>	Cabin Standby (315) Lighting System	C	1	0	
<b>-20</b>	Exterior Emergency (316) Lighting System	B	1	0	May be inoperative for day operations.
<b>-21</b>	White Strobe/Anti- (317) Collision Lights (Forward and Aft Wing Tip)	C	4	0	May be inoperative provided both Anti-collision lights are operative.
	(318)	C	4	0	May be inoperative provided airplane is not operated at night.
<b>-22</b>	Service Area Lights				
	a) Wheel Well (319) Maintenance	C	3	0	
	b) Tail Compartment (594)	C	-	0	
	c) Fwd Accessory (595) Compartment	C	-	0	
	d) Water & Waste (596) Service Panel	C	-	0	
	e) Electrical & (597) Electronics Compartment	C	-	0	
<b>-23</b>	Logo Lights (320)	D	2	0	

2 Repair Time Interval		3 Number installed	
1 Item		4 Number required for dispatch	5 Remarks and/or Exceptions
<b>33 LIGHTS (Cont'd)</b>			
<b>-24 Floor Proximity Emergency Escape Path Marking System Lights</b>			
a) Longitudinal <b>(321)</b> Electroluminescent Lighting Strips (Green)	A - -		<p>One or more may be inoperative provided:</p> <ol style="list-style-type: none"> <li>1) None is adjacent to each other, and</li> <li>2) The most forward and rear end-strip are operative, and</li> <li>3) Repairs are made within two (2) flight days.</li> </ol> <p><b>Crew Operating Procedure</b> Cabin Attendants must be briefed on the situation.</p>
b) Longitudinal <b>(322)</b> Electroluminescent Lighting Strips (Orange)	A 3 2		<p>Only the lighting strip related to one overwing emergency exit may be inoperative provided repairs are made within two (2) flight days.</p> <p><b>Crew Operating Procedure</b> Cabin Attendants must be briefed on the situation.</p>
c) Electroluminescent <b>(323)</b> EXIT Identifiers (Green)	A 8 6		<p>May be inoperative only at the overwing emergency exit provided:</p> <ol style="list-style-type: none"> <li>1) The inoperative EXIT identifiers are not on the same side and,</li> <li>2) Repairs are made within two (2) flight days.</li> </ol> <p><b>Crew Operating Procedure</b> Cabin Attendants must be briefed on the situation.</p>
d) Tail Cone Zone <b>(324)</b> Electroluminescent Markings (Green)	A 3 2		<p>Only the electroluminescent marking nearby the tailcone slide pack may be inoperative provided repairs are made within two (2) flight days.</p> <p><b>Crew Operating Procedure</b> Cabin Attendants must be briefed on the situation.</p>

- **24** Floor Proximity Emergency Escape Path Marking System Lights (Cont'd)



LONGITUDINAL ELECTROLUMINESCENT LIGHTING STRIPS (GREEN)



LONGITUDINAL ELECTROLUMINESCENT LIGHTING STRIPS (ORANGE)



ELECTROLUMINESCENT EXIT IDENTIFIERS (GREEN)



TAIL CONE ZONE ELECTROLUMINESCENT MARKINGS (GREEN)

2	Repair Time Interval	3	Number installed
1	Item	4	Number required for dispatch
<b>33 LIGHTS (Cont'd)</b>		5	Remarks and/or Exceptions
<b>-25</b>	Electronic Overhead Annunciator Panel		
a)	Scroll Arrow Switch/Lights (325)	C 2 0	May be inoperative provided all of the Cue Switch/Lights are operative.
b)	Cue Switch/Lights (326)	C 8 2	May be inoperative provided : 1) MON and DOOR Cue Switch/Lights are operative, and 2) Scroll Arrow Switch/Lights are operative.
c)	Display Screen Character Matrix Lighting Units (327)	C - -	A maximum of 7 diodes (bulbs) per character matrix Lighting Unit (35 bulb unit) may be inoperative.  <i>NOTE: Each display screen consists of 6 rows of characters with 20 characters per row, totalling 120 Character Matrix Lighting Units.</i>
<b>-26</b>	EMERGENCY LIGHT (328) NOT ARMED Annunciation	B 1 0	May be inoperative provided it is determined that the Emergency Light System is armed.  <b>Crew Operating Procedure</b> With the airplane electrical system powered, place the Cabin Emer Lts switch in ARM position, pull out the EMERGENCY LIGHTS ARM & CHARGE c/b (connected to EMERGENCY DC BUS) located on the overhead circuit breaker panel and check the emergency lights come on.  Reset the EMERGENCY LIGHTS ARM & CHARGE c/b and check the emergency lights go out.
<b>-27</b>	NOT APPLICABLE		
<b>-28</b>	Annunciator/Warning Light Dimmer Function (329)	B 1 0	May be inoperative provided: 1) The airplane is not operated during daylight conditions if the Dimmer function is limited to the "DIM" position, and 2) The lighting configuration and intensity are acceptable to the flight crew based on the ambient light conditions expected for the duration of the intended flight.
<b>-29</b>	Overhead Annunciator Panel Light Positions (534)	B - 0	Inactive/unused light positions, on the WAAP, may be inoperative provided: 1) Affected light positions does not monitor any system in the current aircraft configuration, and 2) Affected light position is clearly identified to the flight crew.
			<b>Maintenance Procedure Required</b>

2 Repair Time Interval		3 Number installed			
1 Item				4 Number required for dispatch	5 Remarks and/or Exceptions
<b>34 NAVIGATION</b>					
-1 Stall Warning System					Deleted
-2 TAS/SAT Indicator					
a) TAS Indication (330)	D	1	0		NOTE: Other systems such as AHRS, DFGS, PMS and FMS may be affected.
b) SAT Indication (331)	D	1	0		May be inoperative provided RAT indication is operative.
-3 Mach Indication System (332)	C	2	1		May be inoperative provided: 1) Pilot flying airplane above FL 250 must have operative mach indicator, 2) An independent airspeed indicator is operative on each pilot's panel, 3) Overspeed visual and aural warning system is operative, and 4) Mach Trim compensator is operative. NOTE: Other systems such as DFGS, GPWS, PMS, FMS and TAS/SAT may be affected.
(333)	C	2	0		May be inoperative provided: 1) An independent airspeed indicator is operative on each pilot's panel, 2) Airplane is operated at or below FL 250, and 3) Overspeed warning system is operative. NOTE: Other systems such as DFGS, GPWS, PMS, FMS and TAS/SAT may be affected.
-4 Airspeed Command Bugs (334)	C	2	0		May be inoperative provided Autothrottle System controls airspeed to the selected airspeed displayed on the ATS control panel.
(335)	C	2	0		<b>Crew Operating Procedure</b> If autothrottles will not control to selected airspeed, disconnect autothrottles. May be inoperative provided autothrottle is not used.
-5 Overspeed Warning System					Combined with item 31-5.
-6 Altimeters					Deleted
-7 Standby Altimeter Vibrator					Deleted
-8 Instantaneous Vertical Speed Indicator					Deleted

2 Repair Time Interval		3 Number installed	
1 Item		4 Number required for dispatch	5 Remarks and/or Exceptions
<b>34 NAVIGATION (Cont'd)</b>			
-9 Ram Air Temperature (336) (RAT) / Thrust Rating System	C	1 0	<p>The RAT portion may be inoperative provided:</p> <ol style="list-style-type: none"> <li>1) SAT Indicating System or FMS SAT readout is available,</li> <li>2) Other systems affected by the RAT Probe (DFGS, CADC, Thrust Rating, FMS) are considered,</li> <li>3) Thrust Rating System portion is considered inoperative, and</li> <li>4) Procedures are established to verify engine power settings.</li> </ol> <p><b>Crew Operating Procedure</b>            Use SAT Indicator when temperature information is required. Convert SAT to RAT by using chart on O.M./B Vol.2 Cap.11-10.</p> <p><b>Maintenance Procedure Required</b></p>
	(337) C	1 0	<p>The EPR Limit/Thrust Rating portion may be inoperative provided:</p> <ol style="list-style-type: none"> <li>1) RAT or SAT Indication System or FMS SAT readout is available,</li> <li>2) The EPR Reference Bugs Automatic Mode is considered inoperative,</li> <li>3) EPR Limit Mode of the autothrottle is placarded inoperative, and is not used, and</li> <li>4) Procedures are established to verify engine power settings.</li> </ol> <p><b>Crew Operating Procedure</b>            Determine EPR limits by using charts on O.M./B Vol. 2 Cap. 11-20 and set EPR reference bugs manually. If autothrottle is used (Speed Select/Mach Select Modes), flight crew must ensure EPR does not exceed limits. Automatic EPR Limit bug will be invalid.</p>
-10 SAT Indication			Combined with item 34-2b.
-11 Horizon Indicators			Deleted
-12 Vertical Gyros (Excludes Standby Horizon)			Refer to item 34-38 for AHRS dispatch restrictions.
-13 NOT APPLICABLE			
-14 Directional Compass System Sensors (Excludes Standby - Magnetic - Compass)			Refer to item 34-38 for AHRS dispatch restrictions.

2 Repair Time Interval		3 Number installed			
1 Item				4 Number required for dispatch	
34 NAVIGATION (Cont'd)				5 Remarks and/or Exceptions	
-15 Standby (Magnetic) Compass	(338)	B	1	0	May be inoperative provided:  1) Two independent magnetic stabilized directional compass systems are operative, 2) AHRS and EFIS are operated in accordance with the Operating Limitations, and 3) All EFIS displays are operative, 4) Airplane is operated with dual independent navigation capability and under positive radar control by ATC on enroute portion of flight.
<b>Crew Operating Procedure</b> Flight Crew must ensure that planned routes comply with limitations.					
-16 Flight Director System	(95)	C	2	1	May be inoperative provided:  1) Each pilot's panel has complete Flight Director information from an independent source, and 2) Flight Director switch is not moved in flight.
	(96)	C	2	0	May be inoperative provided approach procedures are not predicated on its use.
-17 Distance Measuring Equipment (DME)	(339)	C	2	1	Only DME n. 2 may be inoperative.
-18 Marker Beacon System	(340)	C	1	0	May be inoperative provided approach procedures are not predicated on its use.
-19 Weather Radar System	(341)	C	1	0	May be inoperative when weather reports indicate that thunderstorms or other potentially hazardous weather conditions, which can be detected by weather radar, do not exist enroute.
a) NOT APPLICABLE					
b) Weather Radar Display	(479)	A	3	1	May be inoperative provided:  1) In case of two displays inoperative, the one installed on the Forward Pedestal is operative, and 2) Repairs or replacements are made within two flight days.
-20 ADF System	(342)	C	2	0	May be inoperative provided:  1) Enroute operations and/or approach minimums do not require its use, and 2) One DME, two VORs or alternative approach navigation equipments are operative.
	(480)	C	2	1	Refer to item 34-21 a).
	(528)	D	2	1	May be inoperative provided on any route, or part thereof, navigation is not based on the use of ADF System only.

2 Repair Time Interval		3 Number installed			
1 Item				4 Number required for dispatch	5 Remarks and/or Exceptions
<b>34 NAVIGATION (Cont'd)</b>					
<b>-21 VHF NAV Receivers (VOR/ILS)</b>					
a) VOR <b>(343)</b>	C	2	1		Only VHF NAV Receiver N.2 may be inoperative provided: 1) Both ADF receivers are operative, 2) ADF coverage is assured, and 3) The whole flight can be based on ADF procedures.
b) ILS <b>(344)</b> (Localizer and GP)	B	2	0		May be inoperative provided approach procedures are not predicated on its use. Low Visibility Procedures are affected.
<b>-22 ATC <b>(345)</b></b> Transponder/Altitude Reporting System	B	2	1		
<b>-23 Radio Altimeter System</b>					
a) Receiver/Transmitter Unit <b>(560)</b>	C	2	1		May be inoperative provided associated altimeter is deactivated. <b>NOTES:</b> - One radio altimeter is required to conduct ILS approaches using flight director and/or autopilot. - Inoperative number 1 radio altimeter renders the GPWS inoperative (refer to item 34-29). <b>Maintenance Procedure Required</b>
<b>(561)</b>	A	2	0		May be inoperative provided: 1) Approach procedures are not predicated on its use, 2) Associated Radio Altimeter system is deactivated, and 3) Repair is made within two (2) flight days. <b>NOTE 1: GPWS and TCAS have been rendered inoperative (refer to item 34-29 &amp; 34-43).</b> <b>NOTE 2: Aircraft will not engage Automatic Thrust Restoration (ATR) of the Digital Flight Guidance Computer (DFGC) with 2 Radio Altimeter R/T's inoperative.</b> <b>Maintenance Procedure Required</b>
b) Altitude Indication <b>(562)</b>	C	2	1		May be inoperative provided: 1) Associated receiver/ transmitter is verified to operate normally, and 2) Approach minimums do not require its use.
c) Decision Height (DH) / Minimum Decision Altitude (MDA) Indication <b>(563)</b>	C	2	1		May be inoperative provided approach minimums do not require its use.
<b>-24 NOT APPLICABLE</b>					
<b>-25 Stall Recognition Sys</b>					Deleted



2 Repair Time Interval		3 Number installed	
1 Item			4 Number required for dispatch
<b>34 NAVIGATION (Cont'd)</b>			
<b>-26</b> Navigation / Instrument Comparator, Monitor and Warning Systems <b>(348)</b>	C	1	0
5 Remarks and/or Exceptions			
May be inoperative provided approach procedures are not predicated on its use.			
<b>NOTES:</b>			
- <i>Autothrottle and Autopilot disconnect annunciations must be operative for an operative Autothrottle and Autopilot System.</i>			
- <i>Does not include power failure warning system.</i>			
<b>-27</b> Standby Horizon <b>(564)</b>	B	1	0
May be inoperative provided:			
1) Operations are conducted in Day VMC only, and			
2) Operations are not conducted into known or forecast over-the-top conditions (above a layer of clouds or other obscuring phenomena forming the ceiling in both IFR and VFR type operations).			
<b>-28</b> Altitude Alert System/Warning <b>(350)</b>	A	1	0
May be inoperative provided:			
1) Autopilot with altitude hold is operable,			
2) Enroute operations (RVSM) do not require its use, and			
3) Repair is made within three (3) flight days.			
<b>Crew Operating Procedure</b>			
- When operating using the Altitude Preselect mode of the Autopilot, monitor selected climb or descent and verify aircraft captures selected altitude.			
- When operating using the Altitude Hold mode of the Autopilot, monitor altitude and verify aircraft maintains selected altitude.			
<b>NOTES:</b>			
- <i>Altitude Hold mode will disengage when another pitch mode of the Autopilot is engaged or glideslope is captured.</i>			
- <i>RVSM operations are not allowed.</i>			
<b>-29</b> Ground Proximity Warning System <b>(351)</b>	A	1	0
May be inoperative provided:			
1) Crew operating procedure shown below is applied, and			
2) Repairs are made within two (2) flight days.			
<b>Crew Operating Procedure</b>			
Pilot not flying should monitor flight path during takeoff, approach, and landing, and alert the pilot flying if any of the following conditions exist:			
- Excessive descent rate.			
- Excessive terrain closure rate.			
- Altitude loss after takeoff or go-around.			
- Unsafe terrain clearance while not in the landing mode.			
- Deviation from glideslope.			
(Continued)			


2 Repair Time Interval		3 Number installed			
1 Item				4 Number required for dispatch	5 Remarks and/or Exceptions
<b>34 NAVIGATION (Cont'd)</b>					
<b>-29 Ground Proximity Warning System (Cont'd)</b>					
a) Terrain Avoidance Modes (Modes 1-4) <b>(352)</b>	A	-	0		May be inoperative provided: 1) Related Crew Operating Procedure is applied, and 2) Repairs are made within two (2) flight days.  <b>Crew Operating Procedure</b> Refer to C.O.P. item 34-29
b) Test Mode <b>(353)</b>	A	1	0		May be inoperative provided: 1) The GPWS is considered inoperative, and 2) Repairs are made within two (2) flight days. <b>Crew Operating Procedure</b> Refer to C.O.P. item 34-29
c) Glideslope Deviation (Mode 5) <b>(354)</b>	C	2	1		
d) Advisory Callouts <b>(355)</b>	C	1	0		May be inoperative provided related Crew Operating Procedure is applied. <b>Crew Operating Procedure</b> Refer to C.O.P. item 34-29
e) NOT APPLICABLE					
f) Enhanced modes: TAWS (TAD-TCF) <b>(504)</b>	A	1	0		May be inoperative provided: 1) The GPWS functions are operative, and 2) Repairs or replacements are made within ten (10) calendar days.
<b>-30 NOT APPLICABLE</b>					
<b>-31 NOT APPLICABLE</b>					
<b>-32 Central Air Data Computer</b>					Deleted
<b>-33 RAT Thrust Rating System</b>					Combined with item 34-9.
<b>-34 Instrument Switching System</b>					
a) Flight Director <b>(356)</b>	C	1	0		May be inoperative provided: 1) Each pilot's panel has complete Flight Director information from an independent source, and 2) Associated selector is not moved during flight.
b) VHF NAV <b>(357)</b>	C	1	0		May be inoperative provided: 1) Each pilot's panel has complete VOR/ILS information from an independent source, and 2) Associated selector is not moved during flight.
c) Attitude and Heading Reference System (AHRS) <b>(358)</b>	C	1	0		May be inoperative provided: 1) Each pilot's panel has complete Attitude and Heading information from an independent source, and 2) Associated selector is not moved in flight.

2 Repair Time Interval		3 Number installed	
1 Item		4 Number required for dispatch	5 Remarks and/or Exceptions
<b>34 NAVIGATION (Cont'd)</b>			
<b>-35 NOT APPLICABLE</b>			
<b>-36</b> Head-Up Flight Display System (Includes Optical Projector Unit/Combiner/Mounting Tray/HFDS Control Panel) <b>(359)</b>	C	1 0	May be inoperative provided approach/takeoff procedures do not require HFDS use. <i>NOTE: Cat IIIB Automatic Landing is not allowed.</i>  <b>Maintenance Procedure Required</b>
a) HFDS Caution Light (HCL) <b>(360)</b>	C	1 0	May be inoperative provided approach/takeoff procedures do not require HFDS use. <i>NOTES:</i> - HFDS is still operational. - Cat IIIB Automatic Landing is not allowed.  <b>Maintenance Procedure Required</b>
<b>-37 NOT APPLICABLE</b>			
<b>-38</b> Attitude and Heading Reference System (AHRS) <b>(362)</b>	C	3 2	May be inoperative provided each pilot's panel has independent primary attitude and heading information.  <i>NOTES:</i> - Cat IIIB Automatic Approach and Landing is not allowed. - AHRS Unit #1 inoperative renders TCAS inoperative (refer to item 34-43).
a) Normal Mode <b>(363)</b>	C	- 0	May be inoperative provided AHRS Units are properly aligned in Basic Mode prior to each departure.
<b>-39 RMI</b>			
a) Compass Card <b>(364)</b>	C	2 1	Compass card of one indicator may be inoperative provided: 1) The associated HSI card is operative, and 2) Both pilots have independent directional compass information.  Refer to item 34-21.
b) Bearing Pointer			
<b>-40 NOT APPLICABLE</b>			

2 Repair Time Interval		3 Number installed			
1 Item				4 Number required for dispatch	5 Remarks and/or Exceptions
<b>34 NAVIGATION (Cont'd)</b>					
<b>-41 Electronic Flight Instruments Systems (EFIS)</b>					
a) Mode Select Panels					
1) Mode Selector <b>(366)</b>	C	2	1		
MAP Positions					
<b>(367)</b>	C	2	0		May be inoperative provided the associated FMS system is considered inoperative and not used.
2) Mode Selector <b>(368)</b>	C	2	1		
PLAN Positions					
<b>(369)</b>	C	2	0		May be inoperative provided the associated FMS system is considered inoperative and not used.
3) ADF Bearing <b>(370)</b>	C	4	2		May be inoperative provided the associated ADF system is considered inoperative and not used.
Pointer Selectors					Refer to item 34-20.
4) Range <b>(371)</b>	C	2	0		May be inoperative provided the associated Navigation Instrument Radar Display is not required for operation being conducted.
Selectors					
5) NOT APPLICABLE					
6) N-AID, DATA, <b>(372)</b>	C	8	0		
ARPT and WPT Selectors					
7) N-AID, DATA, <b>(373)</b>	C	8	0		
ARPT, and WPT Selector Internal Lights					
b) Dimming Panels Compact Mode Selectors					
Deleted					
c) First Officer's <b>(374)</b>	A	1	0		May be inoperative provided:
Navigation Display (ND)					1) The Compact Mode is displayed on the First Officer's Primary Flight Display (PFD),
					2) Both Flight Directors must be operating in the normal mode,
					3) The Captain makes all takeoffs, approaches and landings,
					4) Approach minimums do not require its use,
					5) The Standby Attitude Indicator and Standby Magnetic Compass are operative, and
					6) Repairs are made within three flight days.
<b>NOTES:</b>					
- Review O.M./B Vol 2, Chap. 1 Limitations regarding operations with EFIS in Compact Mode.					
- Any Single Display Unit may be inoperative provided it is repositioned into the FO's ND prior dispatch.					

2 Repair Time Interval		3 Number installed			
1 Item				4 Number required for dispatch	5 Remarks and/or Exceptions
<b>34 NAVIGATION (Cont'd)</b>					
<b>-42</b> Flight Management System (FMS) <b>(375)</b>	C	1	0		Specific modes (LNAV, VNAV) or functions may be inoperative provided mode or function is not required for operations being conducted.
a) Computers <b>(376)</b>	C	2	0		May be inoperative provided the associated FMS system is not required for operations being conducted.
b) Multi-Function Control Display Units (MCDU) <b>(377)</b>	C	2	0		May be inoperative provided the associated MCDU is not required for operations being conducted.
c) Navigation Data Base <b>(378)</b>	A	2	0		May be out of currency provided: <ol style="list-style-type: none"> <li>1) Current Aeronautical Charts are used to verify Navigation Fixes prior to dispatch,</li> <li>2) Procedures are established and used to verify status and suitability of Navigation Facilities used to define route of flight,</li> <li>3) Approach Navigation Radios are manually tuned and identified, and</li> <li>4) Up-to-dating is made within ten calendar days.</li> </ol>
<b>-43</b> Traffic Alert/Collision Avoidance System (TCAS)					
a) TCAS System <b>(379)</b>	B	1	0		May be inoperative provided: <ol style="list-style-type: none"> <li>1) the system is deactivated and secured, and</li> <li>2) Enroute or approach do not require its use.</li> </ol> <b>Maintenance Procedure Required</b>
b) Combined TA and RA Dual Displays <b>(380)</b>	C	2	1		May be inoperative on the PNF side provided TA and RA elements and audio functions are operative on the PF side.
<b>-44</b> Windshear Detection and Guidance System <b>(381)</b>	B	1	0		May be inoperative provided associated Crew Operating Procedure is used.  <b>Crew Operating Procedure</b> <ol style="list-style-type: none"> <li>1) Refer to O.M./B Vol.2 Chap 08-20 for a review of windshear detection and recovery technique.</li> <li>2) Assess and minimize the probability of encountering windshear during takeoff/departure and approach/landing.</li> </ol> <b>Maintenance Procedure Required</b>
<b>-45</b> AHRS Basic Annunciator <b>(382)</b>	C	3	0		
<b>-46</b> EFIS Ground Speed Display <b>(383)</b>	C	2	0		

2 Repair Time Interval		3 Number installed			
1 Item				4 Number required for dispatch	5 Remarks and/or Exceptions
<b>34 NAVIGATION (Cont'd)</b>					
<b>-47</b> Metric Altimeter (if installed) <b>(384)</b>	C	1	0		May be inoperative provided alternate procedures for determining metric altitude are established and used if metric altitude information is required for the operations being conducted. <b>Crew Operating Procedure</b> If metric altitude information are required refer to conversion table O.M./B Vol.2 Chap11-10.
<b>-48</b> Global Positioning System (GPS) <b>(385)</b>	D	2	0		May be inoperative provided procedures are not predicated on its use.
<b>-49</b> Course Select Digits					Combined with item 34-50.
<b>-50</b> VHF Nav Panel Course Select Numbers <b>(386)</b>	C	-	0		May be inoperative provided information is displayed on both ND's or PFD's.
<b>-51</b> Decision Height Indication <b>(387)</b>	C	2	0		May be inoperative provided approach procedures are not predicated on its use.
<b>-52</b> Airspeed Reference Bugs (Excludes Command Bugs) <b>(388)</b>	C	8	0		May be damaged or missing provided associated Crew Operating Procedure is used. <i>NOTE: Refer to Item 34-4 for Airspeed Command Bugs.</i> <b>Crew Operating Procedure</b> - Prior to departure, flight crew should crosscheck/confirm V-speeds. - 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.

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**ITEM 34-53 LOW VISIBILITY OPERATIONS – CATEGORY III**


Add the subject item as follows:

<b>34-53 LOW VISIBILITY OPERATIONS CAPABILITY</b>  a) CATEGORY III A/B <b>(611)</b>	C	-	-	<b>Note:</b> <i>This item provides a means to downgrade aircraft Approach Capability, following a NOT satisfactory CAT III A/B Approach, and allows further <u>Simulated</u> CAT III A/B Approach for Re-qualification purposes.</i>
				<p>Low visibility approaches are authorized down to Category II actual weather condition (100/350 NO AUTOLAND).</p> <p><b>Crew Operating Procedures</b></p> <ol style="list-style-type: none"> <li>1) Simulated Category III approaches are allowed (refer to OM/A 8.5 pag. 12)</li> <li>2) Report autoland performance only in the <b>Remark</b> section (not in the autoland system box) of the Aeroplane Technical Logbook.</li> </ol> <p><b>Maintenance Procedure Required</b></p>


2 Repair Time Interval		3 Number installed			
1 Item				4 Number required for dispatch	5 Remarks and/or Exceptions
<b>35 OXYGEN</b>					
<b>-1 Flight Crew Oxygen System</b>					
a) Quick Donning Oxygen Mask/Regulator <b>(389)</b>	B	3	2	The observer's oxygen mask/regulator may be inoperative provided the observer is not present on board.	
b) Oxygen Flow Indicator <b>(390)</b>	B	3	2	The observer's oxygen flow indicator may be inoperative provided the observer is not present on board.	
c) Crew Oxygen Cylinder Pressure Indicator				Deleted	
d) OXY LINE PRESS Indicator <b>(566)</b>	C	1	0	May be inoperative provided: 1) Direct reading gauge on the crew oxygen bottle indicates adequate pressure, and 2) Flight crew oxygen system is verified to operate normally. <b>Crew Operating Procedure</b> Perform the Crew Oxy Cyl CHECK and the Oxygen System TEST as per O.M. B Vol. II pagg. 06-10-10 and 06-15-6.	
e) Oxygen cilinder Discharge Indicator <b>(567)</b>	C	1	0	May be damaged or missing provided flight crew oxygen system is verified to operate normally. <b>Crew Operating Procedure</b> Perform the Crew Oxy Cyl CHECK and the Oxygen System TEST as per O.M. B Vol. II pagg. 06-10-10 and 06-15-6.	
<b>-2 Passenger Oxygen System (391)</b>					
a) Automatic Door Opening Function <b>(392)</b>	B	1	0	May be completely inoperative for flight up to 10000 ft altitude. <b>Maintenance Procedure Required</b> May be inoperative provided: 1) All passenger oxygen mask access doors are CLOSED and LATCHED, 2) The manual mask release system is operative, and 3) Flight altitude is limited to FL 300 or below. <b>Maintenance Procedure Required</b>	
b) Manual Mask Release System <b>(393)</b>	B	1	0	May be inoperative provided Passenger Oxygen system is considered inoperative.	
c) Passenger Oxygen Mask Access Door Latch <b>(394)</b>	B	-	-	Individual door may be inoperative UNLATCHED provided: 1) Affected seats are blocked; <b>Maintenance Procedure Required</b>	

(Continued)



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		<b>0</b>	20 MAR 09

2 Repair Time Interval		3 Number installed	
1 Item		4 Number required for dispatch	5 Remarks and/or Exceptions
<b>35 OXYGEN (Cont'd)</b>			
<b>-2 Passenger Oxygen System (Cont'd)</b>			
c) Passenger Oxygen Mask Access Door Latch (Cont'd) <b>(395)</b>	B	- -	Individual door may be inoperative UNLATCHED provided: 1) Flight altitude is limited to FL 300 or below, and 2) Passengers occupying affected seats are briefed on access to oxygen masks. <b>Maintenance Procedure Required</b>
<b>(396)</b>	B	- -	Individual door may be inoperative in the LATCHED condition provided: 1) Affected seats are BLOCKED, and 2) If two or more inoperative doors are adjacent (forward and aft left and right), seat rows forward and aft of the inoperative doors are also blocked. <b>Maintenance Procedure Required</b>
d) PSU Oxygen Generator/Container <b>(598)</b>	B	- -	May be inoperative provided: 1) Associated oxygen door is CLOSED and masks secured, 2) Associated oxygen generators/containers are not leaking, 3) Affected seats are BLOCKED, and 4) If two or more inoperative oxygen generators/containers are adjacent (forward and aft, left and right), seat rows forward and aft of the inoperative oxygen generators/containers are also blocked. <b>Maintenance Procedure Required</b>
e) Lavatory Oxygen <b>(397)</b>	B	- -	May be inoperative provided: 1) Associated lavatory door is locked CLOSED and placarded "INOPERATIVE - DO NOT ENTER", and 2) Associated lavatory is not used for any purpose. <i>NOTE: These provisos are not intended to prohibit lavatory inspections by crewmembers.</i> <b>Maintenance Procedure Required</b>
<b>-3 CABIN OXYGEN ON Light (398)</b>	D	1 0	
<b>-4 First Aid Portable Oxygen Bottle (11 cu ft fitted with disposal mask) (399)</b>	C	4 2	May be unserviceable or missing provided: 1) One first aid portable oxygen bottle must be available for each unit (or part of unit) of 50 passengers. 2) In any case, serviceable bottles shall never be less than two. 3) Bottle not properly serviced is placarded inoperative, removed from the installed location and placed out of sight so it cannot be mistaken for a functional unit. <b>Maintenance Procedure Required</b>

 <b>MD-80</b> MEL PROCEDURES MANUAL	Minimum Equipment List <b>35 - OXYGEN</b>	REV.	01-35-3/4
		<b>0</b>	20 MAR 09

2 Repair Time Interval		3 Number installed	
1 Item		4 Number required for dispatch	
<b>35 OXYGEN (Cont'd)</b>		5 Remarks and/or Exceptions	
<b>-5 Smoke Hood</b>			
a) Cockpit		1	1
b) Cabin	(400) D	4	-
			One required operative for each required Cabin Attendant (as established in the O.M. General Basic) provided: 1) Inoperative Unit is tagged inoperative, removed from the installed location, and placed out of sight so it cannot be mistaken for a functional unit, 2) Location placarding of the affected unit is removed or obscured, and 3) Required distribution is maintained. <b>Maintenance Procedure Required</b>

2 Repair Time Interval		3 Number installed	
1 Item		4 Number required for dispatch	5 Remarks and/or Exceptions
<b>36 PNEUMATIC</b>			
-1 Pneumatic Pressure Indicating System (401)	C	1 0	May be inoperative provided ground pneumatic unit or a means is available for determining pneumatic pressure for main engine starting.  <b>Crew Operating Procedure</b> Operate one air conditioning system prior to engine start to determine that the air conditioning pressure is at least 28 psi.
-2 Pneumatic Pilot (Reference) Pressure Regulator (402)	C	2 1	May be inoperative provided associated Air Conditioning Supply System is operated in the HP BLD OFF mode.
-3 Ice Protection Temperature Control System (403)	C	2 0	May be inoperative provided flight is not made in known or forecast icing conditions.
(404)	C	2 1	May be inoperative provided flight is not made in known or forecast icing conditions.  <i>NOTE: If icing is inadvertently encountered, select only the fully operative airfoil ice protection system on.</i>
-4 Augmentation Valve (405)	C	2 1	May be inoperative provided: 1) Flight is not made in known or forecast icing conditions, 2) Associated pneumatic crossfeed valve is closed after engine start, and 3) Air conditioning supply system on the affected side is operated in HP BLD OFF mode.  <i>NOTE: If icing is inadvertently encountered, select only the fully operative airfoil ice protection system on.</i>
-5 Eighth Stage Pneumatic Check Valve (406)	C	2 1	<b>Maintenance Procedure Required</b>  May be inoperative provided: 1) Valve is failed in closed position, allowing engine start, 2) Flight altitude is limited to FL 250 or below, 3) Associated pneumatic crossfeed valve is closed after engine start, 4) Associated Air Conditioning Supply switch is OFF, 5) Associated Air Conditioning System is considered inoperative, and 6) Flight is not made in known or forecast icing conditions.  <b>Crew Operating Procedure</b> - Do not select airfoil ice protection system ON. - Refer to C. O. P. item 21-1.  <b>Maintenance Procedure Required</b>

2 Repair Time Interval		3 Number installed	
1 Item		4 Number required for dispatch	5 Remarks and/or Exceptions
<b>36 PNEUMATIC (Cont'd)</b>			
<b>-6</b> Ground Connection and Pneumatic Check Valve <b>(407)</b>	C	1 0	May be inoperative OPEN provided: 1) Flight is not made in known or forecast icing conditions, 2) APU Air switch is left in OFF position and placarded DO NOT USE, 3) APU Pneumatic Distribution System is considered inoperative, 4) Ground Pneumatic Unit is available for engine starting, 5) Pneumatic Crossfeed Valves are closed after engine start, and 6) Airfoil ice protection switches are OFF and placarded DO NOT USE.  <b>Crew Operating Procedure</b>  After each engine start move the related pneu crossfeed valve to close and leave them closed for the whole flight.  <b>Maintenance Procedure Required</b>
<b>(408)</b>	C	1 0	May be inoperative CLOSED.
<b>-7</b> Pneumatic Crossfeed Valve <b>(409)</b>	C	2 1	May be inoperative provided: 1) Flight is not made in known or forecast icing conditions, 2) Valve is secured in closed position after engine start, and 3) Valve quadrant is placarded LOCKED CLOSED.  <b>Crew Operating Procedure</b>  To start affected engine, have maintenance temporarily open the affected crossfeed valve.  <b>Maintenance Procedure Required</b>
<b>-8</b> Air Conditioning Supply 570° F Thermostat <b>(410)</b>	C	2 1	May be inoperative OPEN provided associated Air Conditioning Supply System is operated in HP BLD OFF mode.  <b>Crew Operating Procedure</b> - Operate affected Air Conditioning System in HP BLD OFF mode. - If icing conditions are encountered, select Engine and Airfoil Anti-ice both ON simultaneously.  <b>Maintenance Procedure Required</b>
<b>(411)</b>	C	2 0	May be inoperative provided associated thermostat is CLOSED.  <b>Crew Operating Procedure</b>  If icing conditions are encountered, select Engine and Airfoil Anti-ice both ON simultaneously.
<b>(412)</b>	C	2 0	May be inoperative provided associated thermostat is OPEN and DEACTIVATED.  <b>Crew Operating Procedure</b>  If icing conditions are encountered, select Engine and Airfoil Anti-ice both ON simultaneously.  <b>Maintenance Procedure Required</b>

2 Repair Time Interval		3 Number installed			
1 Item				4 Number required for dispatch	5 Remarks and/or Exceptions
<b>38 WATER AND WASTE</b>					
<b>-1 Potable Water System</b>	<b>(481)</b>	C	1 0		Individual components may be inoperative provided: 1) Associated components are deactivated or isolated, and 2) Associated system components are verified not to have leaks.  <i>NOTE: Any portion of the system which operates normally may be used.</i>
	<b>(482)</b>	C	1 0		<b>Maintenance Procedure Required</b>  May be inoperative provided: 1) System is drained, and 2) Procedures are established to ensure that system is not serviced.  <b>Maintenance Procedure Required</b>
<b>-2 Lavatory Waste System</b>	<b>(483)</b>	C	1 0		Individual components may be inoperative provided: 1) Associated components are deactivated or isolated, and 2) Associated system components are verified not to have leaks.  <i>NOTE: Any portion of the system which operates normally may be used.</i>
	<b>(484)</b>	C	1 0		<b>Maintenance Procedure Required</b>  Associated Lavatory System(s) may be inoperative provided: 1) Associated components are deactivated or isolated to prevent leaks, and 2) Associated lavatory door(s) is secured closed and placarded inoperative.  <i>NOTE: These provisos are not intended to prohibit inspections by crew members.</i>

2 Repair Time Interval		3 Number installed	
1 Item		4 Number required for dispatch	5 Remarks and/or Exceptions
<b>49 AIRBORNE AUXILIARY POWER</b>			
<b>-1</b> Auxiliary Power Unit (APU) <b>(413)</b>	C	1 0	May be inoperative provided: 1) APU is not required for Electrical Power or Pneumatic Supply, 2) Air Inlet Doors (ram and non-ram) are CLOSED, and 3) APU CONTROL c/b is secured. Refer to item 24-1 b). <b>Maintenance Procedure Required</b>
a) APU Electrical Power			Refer to item 24-1 b).
b) APU Pneumatic Power <b>(414)</b>	C	1 0	<b>Maintenance Procedure Required</b>
<b>-2</b> APU Annunciator System (Includes APU FIRE, OIL TEMP HI, OIL PRESS LOW Annunciations) <b>(415)</b>	C	1 0	May be inoperative provided APU is not used. Refer to item 49-1. <b>Maintenance Procedure Required</b>
<b>-3</b> APU FIRE CONT Switch <b>(416)</b>	C	1 0	May be inoperative provided APU is not used. Refer to item 49-1. <b>Maintenance Procedure Required</b>
<b>-4</b> APU FIRE SHUTOFF Switch (Exterior Panel) <b>(417)</b>	C	1 0	May be inoperative provided APU operation is monitored in the cockpit. <b>Crew Operating Procedure</b> Monitor APU operation on cockpit panel.
<b>-5</b> APU EGT Indicating System <b>(418)</b>	C	1 0	May be inoperative provided APU is considered inoperative and is not used. Refer to item 49-1. <b>Maintenance Procedure Required</b>
<b>-6</b> APU Pneumatic Check Valve <b>(419)</b>	C	1 0	May be inoperative OPEN provided: 1) Flight is not made in known or forecast icing conditions, 2) Pneumatic crossfeed valves are CLOSED after engine start, and 3) Air foil ice protection system is OFF and is considered inoperative.
<b>(420)</b>	C	1 0	May be inoperative CLOSED provided APU Air Switch remains OFF.

2 Repair Time Interval		3 Number installed			
1 Item				4 Number required for dispatch	5 Remarks and/or Exceptions
<b>49 AIRBORNE AUXILIARY POWER (Cont'd)</b>					
<b>-7</b> APU RPM Indicating System	(421)	C	1	0	May be inoperative provided APU is not used. Refer to item 49-1.
	(422)	C	1	0	May be inoperative provided: 1) APU is not started in flight, and 2) Frequency CPS meter is operative. Refer to item 24-1 b).
<b>-8</b> APU Bleed Load Control Valve	(423)	C	1	0	May be inoperative provided: 1) Valve is secured in closed position, and 2) APU air switch is selected OFF.  <b>Crew Operating Procedure</b> External and/or crossbleed pneumatic start is required. <b>Maintenance Procedure Required</b>
<b>-9</b> APU Air Inlet Door Actuator	(424)	C	1	0	May be inoperative provided: 1) APU RAM door is secured CLOSED, and 2) NON-RAM doors are secured full OPEN if APU operation is required or intended.  <b>Crew Operating Procedure</b> - During APU START closely monitor APU parameters. - Inflight start must be accomplished by means of the starter. <b>Maintenance Procedure Required</b>
	(425)	C	1	0	May be inoperative provided: 1) APU RAM door is secured CLOSED, 2) NON-RAM doors are secured CLOSED, and 3) APU is considered inoperative. Refer to item 49-1. <b>Maintenance Procedure Required</b>
<b>-10</b> APU STARTER ON Annunciator System	(426)	D	1	0	<b>Crew Operating Procedure</b> During APU START, place the Meter Selector to BATT VOLT and verify the starter engagement by observing the associated voltage indication drop, and subsequent disengagement by observing the voltage indication rise.
<b>-11</b> NOT APPLICABLE					
<b>-12</b> APU HOURMETER Indicator	(427)	C	1	0	
<b>-13</b> APU CYCLE Counter (If installed)	(428)	C	1	0	

2 Repair Time Interval		3 Number installed	
1 Item			4 Number required for dispatch
<b>52 DOORS</b>			
5 Remarks and/or Exceptions			
-1 NOT APPLICABLE			
-2 Main Entrance Stairway <b>(429)</b>	D	1 0	<p>May be inoperative provided the stairwell door is visually verified latched.</p> <p><b>Crew Operating Procedure</b>            If the stairway is removed:</p> <ul style="list-style-type: none"> <li>- Decrease the Basic Operating Weight (BOW) by 110 kg.</li> <li>- Increase Basic Operating Index (BOI) by 1 (one) unit.</li> </ul> <p><b>Maintenance Procedure Required</b></p>
a) Aft/Fwd Handrail Interlock Switch(es) <b>(430)</b>	D	2 0	<p>May be inoperative provided the stairway is retracted manually.</p> <p><i>NOTE: The electrical extension is still operational.</i></p> <p><b>Maintenance Procedure Required</b></p>
-3 Ventral Stairway <b>(431)</b>	D	1 0	<p>May be inoperative provided:</p> <ol style="list-style-type: none"> <li>1) Ventral Stairway is CLOSED and SECURED,</li> <li>2) Associated entrance door operates normally, and</li> <li>3) Ceiling/catwalk must be in the lowered position.</li> </ol> <p><b>Maintenance Procedure Required</b></p>
-4 Door Stop Screw <b>(432)</b>	C	- -	<p>One may be inoperative or missing on any passenger, service or cargo door provided flight is conducted unpressurized.</p> <p><b>Crew Operating Procedure</b>  <i>NOTE: Refer to O.M. General Basic 8.10 Page 5 "FLIGHT WITH DEPRESSURIZED CABIN".</i></p> <ul style="list-style-type: none"> <li>- Pull the CABIN PRESSURE CONTROL c/b's (H2, J2, U22, W22).</li> <li>- Select manual cabin pressure control and move the cabin pressure control wheel to full DECR (VALVE OPEN) position.</li> <li>- Use normal air conditioning procedure.</li> </ul> <p><i>NOTE: For passengers comfort limit climb and descent rates to 500 fpm.</i></p>
-5 NOT APPLICABLE			
-6 NOT APPLICABLE			




2 Repair Time Interval		3 Number installed			
1 Item				4 Number required for dispatch	5 Remarks and/or Exceptions
<b>52 DOORS</b> (Cont'd)					
<b>-7 Door Warning Lights System</b> (433) (Except TAILCONE UNSAFE)	C	1	0		May be inoperative for all associated doors provided it is verified by visual inspection that the associated door is CLOSED and LOCKED <b>prior to each departure.</b>  <b>Maintenance Procedure Required</b>
a) Forward Stairway Caution Indicator System (Fwd Cabin Attendant's Panel) (485)	C	1	0		May be inoperative provided the FORWARD STAIRWAY DOOR Annunciation System operates normally.
(486)	C	1	0		May be inoperative provided the Fwd Stairwell Door is verified by visual inspection to be CLOSED and LOCKED prior to each departure. <b>Crew Operating Procedure</b> Prior to each departure verify, by visual inspection, the Fwd Stairwell Door is CLOSED and LOCKED.
b) Ventral Stairway Caution Indicator System (Ventral Stairway Interior Control Panel) (487)	C	1	0		
<b>-8 NOT APPLICABLE</b>					
<b>-9 Enhanced Flight Deck Security Door Automatic Locking Systems</b> (508)	C	1	0		May be inoperative provided: 1) Automatic locking system is deactivated, 2) Door dead bolt operates normally and is used to lock the door, and 3) Alternate procedures are established and used for locking and unlocking the door using the dead bolt.  <b>Crew Operating Procedure</b> Operate door manually. Refer to O.M./B Abnormal Procedure COCKPIT DOOR LOCK FAIL LIGHT ON and O.M./A GB for Sterile Cockpit procedures.  <b>Maintenance Procedure Required</b>
a) Flight Deck Access Panel System (Keypad, Door Chime) (509)	C	1	0		May be inoperative provided: 1) Keypad is deactivated, and 2) Alternate procedures are established and used.  <b>Crew Operating Procedure</b> Make sure the Flight Deck Access System switch is in the OFF position (guard extended) when the flight deck door is used and before leaving the cockpit.  <b>Maintenance Procedure Required</b>

(Continued)

2 Repair Time Interval		3 Number installed			
1 Item				4 Number required for dispatch	5 Remarks and/or Exceptions
<b>52 DOORS</b> (Cont'd)					
<b>-9 Enhanced Flight Deck Security Door Automatic Locking Systems (Cont'd)</b>					
1) LEDs	(516)	C	3	0	May be inoperative provided alternate procedures are established and used.  <b>Crew Operating Procedure</b> Use interphone system to contact cockpit crew.
2) Door Bell Mode	(511)	C	1	0	May be inoperative provided alternate procedures are established and used.  <b>Crew Operating Procedure</b> Use interphone system to contact cockpit crew.
3) Switch Guard	(599)	C	1	0	May be inoperative or missing provided the flight deck door LOCK FAIL Light operates normally.
b) Flight Deck Door LOCK FAIL Light	(512)	C	1	0	May be inoperative provided automatic lock controls are verified to operate normally.  <b>Maintenance Procedure Required</b>
c) Flight Deck Door AUTO UNLK Light	(513)	C	1	0	May be inoperative provided: 1) Automatic lock controls are verified to operate normally, and 2) Door aural tone operates normally.  <b>Maintenance Procedure Required</b>
d) Flight Deck Door Lock Control Selector	(568)	A	1	0	May be inoperative provided: 1) Keypad is deactivated, and 2) Automatic lock is verified to operate normally, and 3) Alternate procedures are established and used, and 4) Repairs are made within three (3) calendar days.  <b>Crew Operating Procedure</b> At least two people must be permanently present in the cockpit throughout the entire flight. Use the DOOR KNOB to (mechanically) open the door from the cockpit. <i>Before the flight :</i> Cockpit crew will brief cabin crew that the UNLOCK function is inoperative. Alternate routine and emergency procedures will be established <b>before departure</b> in order to remind the cabin crew to use the cabin interphone system to communicate with cockpit crew to request access to the cockpit.  <i>NOTE: 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.</i>  <b>Maintenance Procedure Required</b>


2 Repair Time Interval		3 Number installed			
1 Item				4 Number required for dispatch	5 Remarks and/or Exceptions
<b>52 DOORS</b> (Cont'd)					
-10 Flight Deck Door Panel Pressure Relief Latches	(515)	A	4 0		May be inoperative provided :  1) Panels are in the latched position, 2) Automatic locking system operates normally, and 3) Repairs are made within two (2) flight days.  <b>Maintenance Procedure Required</b>
-11 Enhanced Flight Deck Security Door Dead Bolt	(517)	C	1 0		May be inoperative provided automatic lock controls operate normally.
-12 NOT APPLICABLE					
-13 NOT APPLICABLE					
-14 Fwd Cabin and Galley Doors	(518)	A	3 2		May be inoperative provided: 1) The aft cabin door, the walkway, the tail cone and related escape slide are operative, 2) The inoperative door must be closed, latched and placarded inoperative. The related EXIT sign, the electroluminescent EXIT identifier and the longitudinal electroluminescent orange strips (aft galley door only) must be hidden from view, 3) Maximum number of passengers is limited to 87 for forward cabin or galley door inoperative, and to 99 for aft galley door inoperative. Seats not occupied shall be in the vicinity of inoperative door, 4) Passengers shall not be seated in the row adjacent the overwing emergency exits but grouped near them, 5) Cabin attendants shall seat in the row adjacent the overwing emergency exits during taxi, takeoff and landing, 6) The passengers must be advised not to use the inoperative door, 7) The airplane may continue the flight, or series of flights, but shall not depart an airport where repairs or replacements can be made, and 8) Repairs are made within one (1) flight day.  <b>Maintenance Procedure Required</b>

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**DELETION OF ITEMS: -52-14 FWD and GALLEY DOOR CABIN DOOR  
-52-15 AFT CABIN DOOR/TAILCONE EXIT**

Revise the subject items as follows:

2. Repair Time Interval	3. Number installed
1. Item	4. Number required for dispatch
-14 FWD CABIN and GALLEY Doors	5. Remarks and/or Exceptions
	Deleted

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**DELETION OF ITEMS:** - 52-14 FWD and GALLEY DOOR CABIN DOOR  
- 52-15 AFT CABIN DOOR/TAILCONE EXIT

Revise the subject items as follows :

2. Repair Time Interval		3. Number installed	
1. Item		4. Number required for dispatch	5. Remarks and/or Exceptions
- 15 AFT CABIN Door / TAILCONE Exit			Deleted

2 Repair Time Interval		3 Number installed	
1 Item		4 Number required for dispatch	5 Remarks and/or Exceptions
<b>52 DOORS</b> (Cont'd)			
<b>-15 Aft Cabin Door/ Tailcone Exit</b>	<b>(519)</b>	A 1 0	<p>The Aft Cabin Door and/or Tail Cone Exit may be inoperative provided:</p> <ol style="list-style-type: none"> <li>1) The fwd cabin and galley doors and related escape slides are operative,</li> <li>2) The door must be closed latched and placarded inoperative. The related EXIT signs and electroluminescent EXIT identifiers (Floor Proximity Emergency Escape Path) must be hidden from view,</li> <li>3) Maximum number of passengers is limited to 99, and seats not occupied shall be in the vicinity of inoperative door,</li> <li>4) During taxi, takeoff and landing one Cabin Attendant must be seated near the aft galley door exit, one on the fwd Cabin Attendant's seat, and one in the aft cabin door seat,</li> <li>5) The passengers must be advised not to use the inoperative door,</li> <li>6) The airplane may continue the flight, or series of flights, but shall not depart an airport where repairs or replacements can be made, and</li> <li>7) Repairs are made within one (1) flight day.</li> </ol> <p><i>NOTE: In the mail flight configuration the aft cabin door and/or tailcone may be inoperative if no P.T. inspectors or other personnel are carried on board.</i></p> <p><b>Maintenance Procedure Required</b></p>

2 Repair Time Interval		3 Number installed	
1 Item		4 Number required for dispatch	5 Remarks and/or Exceptions
<b>53 FUSELAGE</b>			
<b>-1 TAILCONE UNSAFE (436) Annunciation System</b>	<b>C</b>	<b>1 0</b>	<p>May be inoperative provided prior to each takeoff:</p> <ol style="list-style-type: none"> <li>1) Tailcone lockpins are verified to be properly seated and rotated within the lock,</li> <li>2) Tailcone locking cable is properly secured, and</li> <li>3) No evidence of slack exists on cable leads.</li> </ol> <p><i>NOTE: System includes Tailcone Release Mechanism Decal located over slot in tail exit door frame.</i></p> <p><b>Maintenance Procedure Required</b></p>

2 Repair Time Interval

1 Item

**56 WINDOWS**

3 Number installed

4 Number required for dispatch

5 Remarks and/or Exceptions

*NOTE: The information related to the windows were deleted from the MEL.  
Allowable damage and degradation are detailed in the Maintenance Manual which is the most appropriate document.*



2 Repair Time Interval		3 Number installed			
1 Item				4 Number required for dispatch	5 Remarks and/or Exceptions
<b>73 ENGINE FUEL AND CONTROL</b>					
<b>-1 Fuel Flow System</b>					
a) FUEL FLOW/ FUEL USED (Complete Indication) <b>(437)</b>	B	2	1		May be inoperative provided: <ol style="list-style-type: none"> <li>1) N1, N2 and EPR Indicating Systems are operative for associated engine, and</li> <li>2) Fuel Quantity Displays are operative on all tanks containing usable fuel.</li> </ol> <p><b>Crew Operating Procedure</b></p> <p><i>NOTE: Fuel burn rate and fuel quantity use may be inhibited with one or both Fuel Flow Indicators inoperative. 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.</i></p> <p>Closely monitor EGT on affected engine during start.</p>
b) FUEL FLOW Indicator <b>(438)</b>	B	2	1		May be inoperative provided N1, N2, EPR and Main Tank Fuel Quantity Indicating Systems are operative for associated engine. <p><b>Crew Operating Procedure</b></p> <p><i>NOTE: Fuel burn rate and fuel quantity use may be inhibited with one or both Fuel Flow Indicators inoperative. 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.</i></p> <p>Closely monitor EGT on affected engine during start.</p>
c) FUEL USED Readout <b>(439)</b>	C	2	0		May be inoperative provided Fuel Quantity Displays are operative on all tanks containing usable fuel.
d) FUEL FLOW /USED Selector Button (EFIS Airplanes) <b>(440)</b>	C	1	0		May be inoperative provided: <ol style="list-style-type: none"> <li>1) Fuel Used Indicators are not used, and</li> <li>2) Fuel Flow Indicators are operative.</li> </ol>
e) Fuel Used Reset System <b>(441)</b>	C	1	0		May be inoperative provided Fuel Used indicators are not used.
<b>-2 Fuel Temperature Indicating System (442)</b>	C	2	0		May be inoperative provided: <ol style="list-style-type: none"> <li>1) RAT indicator is operative, and</li> <li>2) Associated FUEL HEAT ON Annunciator System is operative.</li> </ol>

(Continued)

2 Repair Time Interval		3 Number installed	
1 Item		4 Number required for dispatch	5 Remarks and/or Exceptions
<b>73 ENGINE FUEL AND CONTROL (Cont'd)</b>			
<b>-2 Fuel Temperature Indicating System (Cont'd)</b>			
<p><b>Crew Operating Procedure</b></p> <p>If available use other Fuel Temp Indicator as reference for fuel heater usage.          Monitor illumination of FUEL HEAT ON Lt and oil temperature rise to ascertain that fuel heating is taking place.          In flight, if any doubt exists about the fuel temperature, or if both indicators are inoperative apply the following:</p> <ul style="list-style-type: none"> <li>- If refilled fuel temp was above 5°C insert fuel heater at RAT below -15°C.</li> <li>- If refilled fuel temp was below 5°C insert fuel heater at RAT below -5°C.</li> </ul> <p>In these cases, repeat fuel heating every 30 min of flight. If very low temperature conditions exist, apply fuel heat just prior the final phase of flight.</p> <p><i>NOTE: Prior to apply the fuel heat, check the oil temperature since a rise will occur.</i></p>			
<b>-3 Inlet Fuel Pressure Low Annunciator System (444)</b>	C	2 1	May be inoperative provided: <ol style="list-style-type: none"> <li>1) Both main tank boost pumps of the affected engine are verified operative prior to each flight, and</li> <li>2) Both center tank boost pumps are verified operative prior to each flight if fuel is carried in center tank.</li> </ol> <p><b>Crew Operating Procedure</b></p> <p>Verify operation of affected main tank boost pump by modifying the fuel system test during cockpit preparation as follows:</p> <ul style="list-style-type: none"> <li>- Select fuel crossfeed lever ON.</li> <li>- Turn off both main tank pumps associated with the inoperative INLET FUEL PRES LO Annunciation and both center tank pumps.</li> <li>- Operate affected wing tank pumps one at a time, nothing that the operative INLET FUEL PRES LO Annunciation goes off.</li> </ul>
<b>(443)</b>	C	2 1	May be inoperative provided Center Tank Fuel Pump Low Pressure Warning System is installed and operative.
<b>-4 Fuel Filter Pressure Drop Annunciator System (445)</b>	B	2 1	May be inoperative provided: <ol style="list-style-type: none"> <li>1) It is verified that the malfunction is in the annunciator system,</li> <li>2) Associated engine fuel heat system is operating normally, and</li> <li>3) Associated fuel temperature indicating system is operative.</li> </ol> <p><b>Crew Operating Procedure</b></p> <p>Turn the fuel heat on once every 30 minutes when fuel temperature is 0°C or lower.</p> <p><b>Maintenance Procedure Required</b></p>

2 Repair Time Interval		3 Number installed	
1 Item		4 Number required for dispatch	5 Remarks and/or Exceptions
<b>73 ENGINE FUEL AND CONTROL (Cont'd)</b>			
<b>-5 Fuel Heat On Annunciator System</b> <b>(446)</b>	C	2 0	<p>May be inoperative provided associated fuel temperature indicating system is operative.</p> <p><b>Crew Operating Procedure</b> Observe fuel temperature rise following fuel heat switch actuation.</p>
<b>-6 Fuel Heat System</b>			
a) Timer <b>(447)</b>	C	2 0	<p>May be inoperative provided associated fuel heat valve is controllable from the cockpit.</p> <p><b>Crew Operating Procedure</b> Monitor fuel temperature indicator. Hold fuel heat switch ON for one minute when required.</p> <p><b>Maintenance Procedure Required</b></p>
b) Valve <b>(448)</b>	C	2 1	<p>May be inoperative provided:</p> <ol style="list-style-type: none"> <li>1) The failed valve is secured CLOSED,</li> <li>2) Flight duration and altitude are such that fuel temperature will not drop below 5°C, and</li> <li>3) Associated fuel temperature indicating system is operative.</li> </ol> <p><b>Crew Operating Procedure</b></p> <ul style="list-style-type: none"> <li>- It is recommended that operations be restricted when ambient temperature will drop below 5°C or lower during takeoff and approach (the ram air temperature rises at takeoff and approach speed is small).</li> <li>- Plan flight so that fuel tank temperature will not drop below 5°C.</li> </ul> <p><i>NOTE: Cockpit fuel temperature indicators reflect fuel temperature at the fuel pump, between stages and down stream of the heat exchanger. The fuel in the tanks may be at significantly lower temperature.</i></p> <ul style="list-style-type: none"> <li>- The chart on the following page may be used to select minimum speeds and maximum altitude for planned flight assuming the fuel temperature in the tanks is 5°C before takeoff.</li> <li>- In flight ram air temperature rise is used to maintain fuel tank temperature at 5°C or above when the ambient temperature is lower.</li> <li>- Enter the chart at a desired cruise altitude, and move vertically to the forecast SAT at that altitude. Then, move left to find the minimum airspeed at that given altitude and temperature condition required to maintain RAT at or above + 5 °C.</li> </ul>

(Continued)

2 Repair Time Interval 1 Item  <b>73 ENGINE FUEL AND CONTROL</b> (Cont'd)  <b>-6 Fuel Heat System</b> (Cont'd)  b) Valve (Cont'd)	3 Number installed  4 Number required for dispatch  5 Remarks and/or Exceptions  <div style="margin-left: 20px;">           - By plotting as series of temperature/altitude points on this graph and connecting these points, a lower boundary will be defined. Airspeed must be maintained at or above this limit.             - In flight, if fuel temperature decreases below 5°C decrease altitude or increase speed as required to increase temperature.         </div> <p><b>Maintenance Procedure Required</b></p>
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Estimated Minimum Speed Required to Maintain RAT at or above 5° C

Example:     Given the following forecast temperatures:

10000 ft.	0° C (ISA + 6° C)	20000 ft.	-20° C (ISA + 4.5° C)
15000 ft.	-9° C (ISA + 5° C)	25000 ft.	-29° C (ISA + 5.5° C)

It is desired to cruise at 20000 feet. By entering the chart at 20000 feet and connecting with the -20° C SAT line, we can see that the flight crew must maintain at least 325 kts.

**NOTE:**    *Normal Climb Schedule can be followed since the large quantity of fuel in the tanks at takeoff combined with the relatively short duration of the climb will prevent fuel temperature from dropping significantly.*

2 Repair Time Interval		3 Number installed		
1 Item			4 Number required for dispatch	5 Remarks and/or Exceptions
<b>73 ENGINE FUEL AND CONTROL (Cont'd)</b>				
-7 Approach Idle Control System				Deleted
-8 Automatic Reserve Thrust (ART) <b>(449)</b>	C	1 0		<b>Crew Operating Procedure</b> When ART is inoperative the ART switch must be in the OFF position. (See O.M./B Vol. 2, Chap. 11 for EPR settings for either maximum or flexible takeoff thrust).

2 Repair Time Interval		3 Number installed	
1 Item		4 Number required for dispatch	5 Remarks and/or Exceptions
<b>74 IGNITION</b>			
<b>-1 NOT APPLICABLE</b>			
<b>-2 Ignition System</b>	<b>(450)</b>	C 4 2	<p>May be inoperative provided both inoperative systems are not on the same engine.</p> <p><b>Crew Operating Procedure</b></p> <ul style="list-style-type: none"> <li>- Use operative ignition system for start, takeoff and landing.</li> <li>- Avoid exposure to icing conditions in excess of 10 minutes.</li> </ul>

2 Repair Time Interval		3 Number installed			4 Number required for dispatch	5 Remarks and/or Exceptions
1 Item						
<b>76 ENGINE CONTROLS</b>						
-1 Automatic Engine Synchronization System	(451)	C	1	0		May be inoperative provided: 1) Engine Sync Selector remains OFF, and 2) Engine synchronizer c/b is pulled and collared.  <b>Crew Operating Procedure</b> Place eng sync selector to OFF.  <b>Maintenance Procedure Required</b>
a) N1 or N2 Mode	(452)	C	1	0		May be inoperative provided affected mode is not used.  <b>Crew Operating Procedure</b> Do not operate eng sync selector in affected mode(s).
b) EPR mode	(453)	C	1	0		May be inoperative provided: 1) Eng Sync Selector OFF position is not used in flight, and 2) ENG SYNC c/b is open for takeoff and landing.  <b>Crew Operating Procedure</b> Open ENG SYNC c/b (T 40 or T39 as applicable) for takeoff and landing.
c) ENG SYNC ON Light	(454)	C	1	0		

2 Repair Time Interval		3 Number installed			
1 Item				4 Number required for dispatch	5 Remarks and/or Exceptions
<b>77 ENGINE INDICATING</b>					
<b>-1 EPR Indicating System</b>					
a) Pointer Indicator					Deleted
b) Digital Readout <b>(455)</b>	C	2	0		
c) EPR Limit Reference Bug Automatic Mode <b>(456)</b>	C	2	0		May be inoperative provided the Manual Mode of the associated indicator is operative.
d) EPR Limit Reference Bug Manual Mode <b>(457)</b>	C	2	0		May be inoperative provided the Automatic Mode of the associated indicator is operative.
<b>-2 EGT Indicator</b>					Deleted
<b>-3 N<sub>1</sub> RPM Indicating System <b>(458)</b></b>	B	2	1		May be inoperative provided N <sub>2</sub> , Fuel Flow and EPR indicating systems are operative for associated engine. <i>NOTE: Automatic Reserve Thrust System (ART) may be inoperative.</i>  <b>Crew Operating Procedure</b> Ask for a visual confirmation of N <sub>1</sub> rotation during each start procedure.  <i>NOTE: Verification that EPR, N<sub>2</sub> and Fuel Flow indications are in reasonable agreement with the same indications of the engine with the operative N<sub>1</sub>, will provide good assurance of proper engine operation.</i>
<b>-4 N<sub>2</sub> RPM Indicating System <b>(459)</b></b>	B	2	1		May be inoperative provided N <sub>1</sub> , Fuel Flow and EPR indicating systems are operative for associated engine.  <b>Crew Operating Procedure</b> During engine start, monitor oil pressure and/or N <sub>1</sub> RPM increasing to be sure N <sub>2</sub> shaft is rotating. Move fuel Shutoff lever to ON at 5% N <sub>1</sub> RPM and release Eng Start switch at 12 ÷ 20% N <sub>1</sub> RPM.
<b>-5 NOT APPLICABLE</b>					
<b>-6 Automatic Engine Synchronization System</b>					Refer to item 76-1
<b>-7 Electronic Engine Display Panel (EEDP)</b>					<i>NOTE: Relief may be provided in other MEL chapters for systems using this panel for display.</i>



2 Repair Time Interval		3 Number installed	
1 Item		4 Number required for dispatch	5 Remarks and/or Exceptions
<b>78 EXHAUST</b>			
-1 Thrust Reverser System (Includes Accumulators and REVERSER ACCUM LOW Annunciation) <b>(460)</b>	C	2 1	Except for takeoff and landing on contaminated (SSW) runways (refer to Special Operations O.M./B Vol.2 Chap 08-30) may be inoperative provided: 1) No external leakage exists in associated accumulator, and 2) Associated Reverser is DEACTIVATED and STOWED.  <b>Crew Operating Procedure</b> - Verify REVERSE UNLOCK Light is not illuminated. - Antiskid system must be operative and utilized for landing. - Use operative reverser normally within limits of directional controllability. - On WET runways reduce PTOW from runway table by 1%.  <b>Maintenance Procedure Required</b>
-2 Engine Reverse Unlock Light Indicating System <b>(463)</b>	C	2 1	May be inoperative provided reversers are checked for proper stowage in the retracted position <b>before departure</b> .  <b>Maintenance Procedure Required</b>
-3 Engine Reverse Thrust Light Indicating System <b>(464)</b>	C	2 0	May be inoperative provided associated engine reverser interlock system is operative.  <b>Crew Operating Procedure</b> Ascertain that reverse lever cannot be actuated past interlock stop until reversers are deployed.  <b>Maintenance Procedure Required</b>

2 Repair Time Interval		3 Number installed	
1 Item		4 Number required for dispatch	5 Remarks and/or Exceptions
<b>79 OIL</b>			
-1 Oil Pressure Indicating System			Deleted
-2 Oil Pressure Low (465) Annunciator System	B	2 1	May be inoperative provided the associated Quantity Indicator is operative.  <b>Crew Operating Procedure</b> Monitor oil pressure, temperature and quantity indications.
-3 Oil Quantity (466) Indicating System	B	2 0	May be inoperative provided: 1) Associated engine oil quantity is checked (visual or dip stick check) before each flight, and 2) There is no evidence of above normal oil consumption or leakage, and 3) Associated engine OIL PRESS LOW Annunciation is operative.  <b>Crew Operating Procedure</b> For normal and abnormal procedures rely on oil pressure and temperature indications, and oil pressure annunciator systems.  <b>Maintenance Procedure Required</b>
-4 Oil Temperature Indicating System			Deleted
-5 Oil Strainer (467) Clogging Annunciator System	B	2 1	May be inoperative provided the Main Oil Filter/Strainer is inspected once each flight day and is verified to be clean.  <b>Maintenance Procedure Required</b>
-6 Aircraft Systems Electronic Display Panel (ESDP)			Refer to item 31-7.

2 Repair Time Interval		3 Number installed	
1 Item			4 Number required for dispatch
<b>80 STARTING</b>			5 Remarks and/or Exceptions
-1 START VALVE (468) OPEN Annunciator System	C	2 0	<p>May be inoperative provided it is verified that affected start valve is CLOSED after starting.</p> <p><b>Crew Operating Procedure</b> During engine start observe the opening and closing of the valve by a drop and an increase of the pneu pressure. After releasing the engine start switch the pneumatic crossfeed lever should be closed.</p> <p><b>Maintenance Procedure Required</b></p>
-2 Starter Valve (469)	C	2 0	<p>May be inoperative CLOSED.</p> <p><b>Crew Operating Procedure</b> Apply Cond. Proc. MANUAL STARTER VALVE OPERATION.</p> <p><b>Maintenance Procedure Required</b></p>

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# M.E.L. MAINTENANCE PROCEDURES

This Revision incorporates all changes  
 published with Revision up to and including  
 Rev. 37 of the Master M.E.L. FAA and  
 Revision 18 of the Dispatch Deviation Guide  
 (DDG) Boeing (Boeing M.E.L. Procedure  
 Manual).

<b>Alitalia</b> MD-80 Compagnia Aerea Italiana <b>MEL PROCEDURES MANUAL</b>	MAINTENANCE PROCEDURES <b>PREAMBLE</b>	Rev. <b>0</b>	02-00-2 20 MAR 09
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## 1. General

The M.E.L. Maintenance Procedures section contains the maintenance procedures to be performed in case of faulty system or component to allow normal aircraft dispatch as requested in the M.E.L.

This section also contains placard installations to inform crew members and maintenance personnel on system/component condition and specific entries in the Aircraft Technical Logbook and in “Elenco delle Anomalie Compatibili”.

**WARNING:** WHERE THE M.E.L. DOES NOT CALL OUT THE SPECIFIC STATEMENT “MAINTENANCE PROCEDURE REQUIRED” THE MAINTENANCE PERSONNEL MUST INSTALL A PLACARD “INOP” CLOSE TO THE APPLICABLE CONTROLS OR INDICATORS AND MAKE AN ENTRY IN THE “ELENCO DELLE ANOMALIE COMPATIBILI”.

**WARNING:** “REFER TO ITEM ... “REPORTED IN THE REMARKS COLUMN IN THE SECTION 1 MEANS THAT THE ENTIRE ITEM WHICH WE ARE REFERING TO MUST BE ACCOMPLISHED (REMARKS, CREW OPERATING PROCEDURES AND MAINTENANCE PROCEDURES INCLUDED).

Following final repair, placards installed close to the controls/indicators, will be removed, an entry in the Aircraft Technical Logbook will be made and relevant item will be deleted from “Elenco delle Anomalie Compatibili”.


## 2. Inoperative system/component identifying placards

Printed red placards quoting the relevant maintenance procedures or placards DYMO red tape made have to be used.

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## CHAPTER 21

<u>MEL</u>	<u>SUBJECT</u>	<u>PAGE</u>	<u>REV.</u>	<u>Rev. Date</u>	<u>SOURCE</u>
21-1	Air Conditioning System	1	6	21 APR 05	DC9 MPM R.17
21-2	Air Conditioning Supply Temperature High Indicating Systems	2	6	21 APR 05	DC9 MPM R.17
21-3	Air Conditioning Supply Pressure Indicating System	3	6	21 APR 05	DC9 MPM R.17
21-4	Cabin/Cabin Supply Temperature Indicating System	4	6	21 APR 05	DC9 MPM R.17
21-5	Air Conditioning Automatic Shut-Off System	5	6	21 APR 05	DC9 MPM R.17
21-9	Ram Air Valve	6	6	21 APR 05	AZA EXP
21-10	Compressor Discharge and Turbine Inlet Thermal Switches	7	6	21 APR 05	DC9 MPM R.17
21-12	Heat Exchanger Cooling Air Fans	8	6	21 APR 05	DC9 MPM R.17
21-14	Ground Air Conditioning Check Valve	9	6	21 APR 05	DC9 MPM R.17
21-15	Heat Exchanger Cooling Air Diverter Valves	10	6	21 APR 05	DC9 MPM R.17
21-19	Radio Rack Fan Off Annunciator System	11	6	21 APR 05	DC9 MPM R.17
21-21	Radio Rack Cooling Fan - Primary and Standby	12	6	21 APR 05	DC9 MPM R.17
21-21-a)	Radio Rack Cooling Fan - Primary Fan	13	6	21 APR 05	DC9 MPM R.17
21-23	Radio Rack Fan and Standby Radio Rack Fan Check Valve	14	6	21 APR 05	DC9 MPM R.17
21-24	Dual Cabin Pressure Automatic Control Systems	16	6	21 APR 05	DC9 MPM R.17
21-25	Cabin Air Outflow Valve	17	6	21 APR 05	DC9 MPM R.17
21-26	Cabin Pressure Relief Valve	18	6	21 APR 05	DC9 MPM R.17
21-28	Cabin Altitude and Differential Pressure Indicator	19	6	21 APR 05	DC9 MPM R.17
21-29	Cabin Climb Indicator	20	6	21 APR 05	DC9 MPM R.17
21-30	Cockpit/Cabin Auto Temperature Control System	21	6	21 APR 05	DC9 MPM R.17
21-36	Turbine By-Pass Valve (Turbine Nozzle Shut-Off Valve)	22	6	21 APR 05	DC9 MPM R.17
21-39	Air Conditioning Pressure Regulator Ground Control Valve Solenoid	23	6	21 APR 05	AZA EXP
21-45	Altitude Bias Control	24	6	21 APR 05	AZA EXP
21-46	Left Heat Exchanger Air Exhaust Control System	25	6	21 APR 05	DC9 MPM R.17
21-47	Cockpit Temperature Control 130°F Limit System	26	6	21 APR 05	DC9 MPM R.17
21-52	Fwd Cargo Compartment Heater System	27	6	21 APR 05	DC9 MPM R.17

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## CHAPTER 22

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22-15-f)	Digital Flight Guidance System Functions - Yaw Damper	1	6	21 APR 05	DC9 MPM R.17
22-15-g)	Digital Flight Guidance System Functions - Mach Trim	2	6	21 APR 05	DC9 MPM R.17

## CHAPTER 23


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23-20-a)	Captain/First Officer Push-To-Talk Switches – Control Wheel PTT Switches	1	6	21 APR 05	DC9 MPM R.17
23-20-b)	Captain/First Officer Push-To-Talk Switches – Audio Selector Panel PTT Switches	2	6	21 APR 05	DC9 MPM R.17

## CHAPTER 24

<u>MEL</u>	<u>SUBJECT</u>	<u>PAGE</u>	<u>REV.</u>	<u>Rev. Date</u>	<u>SOURCE</u>
24-1-a)	Engine Generator System (Includes CSD units)	1	4	21 APR 05	DC9 MPM R.17
24-2	External Power System	2	4	21 APR 05	DC9 MPM R.17
24-3	AC Cross-Tie Relay	3	4	21 APR 05	DC9 MPM R.17
24-18	Transformer Rectifiers (T/R)	4	4	21 APR 05	DC9 MPM R.17
24-40	Galley Power and Control	5	4	21 APR 05	DC9 MPM R.17

## CHAPTER 25

<u>MEL</u>	<u>SUBJECT</u>	<u>PAGE</u>	<u>REV.</u>	<u>Rev. Date</u>	<u>SOURCE</u>
25-6	Cabin attendant seat	1	6	21 APR 05	ALI EXP
25-10	Passenger seats	2	6	21 APR 05	ALI EXP
25-10-(a)	Passenger seats – Recline mechanism	3	6	21 APR 05	ALI EXP
25-10-(b)	Passenger seats – Underseat baggage restraining bars	4	6	21 APR 05	ALI EXP
25-10-(c)	Passenger seats – Arm rests	5	6	21 APR 05	ALI EXP
25-11	Overhead storage bin latches/cabin and galley storage compart/closets	6	6	21 APR 05	ALI EXP
25-22-(a)	Galley waste receptacle access doors/covers	7	6	21 APR 05	DC9 MPM R.17
25-22-(b)	Lavatory waste receptacle access doors/covers	8	6	21 APR 05	DC9 MPM R.17

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## CHAPTER 26

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26-1-a	Engine Fire Detection System	1	6	21 APR 05	DC9 MPM R.17
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26-4-a	Engine and APU Fire Extinguisher Agent Low Light - Cockpit extinguisher Agent Low Light	3	6	21 APR 05	DC9 MPM R.17
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30-18	Arfoil Anti-Icing Pressure Regulator and Shutoff Valve	5	6	21 APR 05	DC9 MPM R.17
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## **MEL - MAINTENANCE PROCEDURE N° 21-1**

### **AIR CONDITIONING SYSTEM**

#### **PLACARD**

Placard affected air conditioning supply switch with "INOPERATIVE".

#### **MAINTENANCE PROCEDURE**

1. Dispatch with one Air Conditioning System inoperative:
  - A. Select the affected AIR CONDITIONING SUPPLY switch to OFF.
  - B. Disconnect the affected ram air sense line from air conditioning flow control valve.
  - C. 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.
2. Dispatch with both Air Conditioning Systems inoperative:
  - A. Select the RAM AIR switch to ON.
  - B. Select both AIR CONDITIONING SUPPLY switches to OFF.
  - C. Disconnect the ram air sense lines from air conditioning flow control valves.
  - D. Check that the ram air valve position indicator on the valve indicates that the ram air valve is in the open position.
  - E. 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.
3. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 21-2**

### **AIR CONDITIONING SUPPLY TEMPERATURE HIGH INDICATING SYSTEMS**

#### **PLACARD**

On annunciator panel install a placard "RIGHT (LEFT) AIR COND SUPPLY TEMP HIGH SYSTEM INOP" or "RIGHT AND LEFT AIR COND SUPPLY TEMP HIGH SYSTEMS INOP" as appropriate.

#### **MAINTENANCE PROCEDURE**

1. Dispatch with one Air Conditioning Supply Temperature High Indicating System inoperative:
  - A. Open appropriate L or R SUPPLY AIR TEMP HIGH CAUTION circuit breaker.
  - B. If the affected Pack is not to be used, select the affected AIR CONDITIONING SUPPLY switch to OFF, 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 flight deck air conditioning outlets.
2. Dispatch with both Air Conditioning Supply Temperature High Indicating Systems inoperative:
  - A. Open L and R SUPPLY AIR TEMP HIGH CAUTION circuit breakers.
  - B. Select the RAM AIR switch to ON.
  - C. Select both AIR CONDITIONING SUPPLY switches to OFF.
  - D. Pressurize pneumatic ducts, i.e., run APU, etc., and open crossfeed valves. Verify that packs are producing no flow by feeling at open flight deck air conditioning outlets.
3. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".



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## **MEL - MAINTENANCE PROCEDURE N° 21-3**

### **AIR CONDITIONING SUPPLY PRESSURE INDICATING SYSTEM**

#### **PLACARD**

On overhead Air Conditioning panel install a placard "AIR COND PRESSURE INDICATING INOP" near the inoperative pressure indicator.

#### **MAINTENANCE PROCEDURE**

1. Air Conditioning Supply Pressure Indicating System inoperative:
  - A. Select associated AIR CONDITIONING SUPPLY switch to AUTO.
  - B. Place one throttle to full forward (takeoff) position if APU bleed air will be used in next step.
  - C. Pressurize associated pneumatic system to at least 35 psig using main engine, APU, or pneumatic ground cart. (Do not use AIR COND COLDER position of APU AIR switch).
  - D. Visually inspect valve position indicators of the associated pressure regulator and flow control valve and verify both valves are modulating, i.e., not full open.
2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 21-4**

### **CABIN/CABIN SUPPLY TEMPERATURE INDICATING SYSTEM**

#### **PLACARD**

On overhead air conditioning panel install a placard "CABIN/DUCT/SUPPLY TEMPERATURE INDICATION INOP" near cabin temperature indicator.

#### **MAINTENANCE PROCEDURE**

1. Cabin/Duct/Supply Temperature Indicating System inoperative:
  - A. With packs operating in AUTO, select lower or higher temperature and verify correct pack response on pack valve position indicators.

**NOTE:** If packs operated properly in AUTO mode during prior flight, this test should be omitted.
2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 21-5**

### **AIR CONDITIONING AUTOMATIC SHUT-OFF SYSTEM**

#### **PLACARD**

On overhead air cond panel install a placard "AIR CONDITIONING AUTO SHUTOFF SYSTEM INOP" near AIR COND SHUOFF Switch.

#### **MAINTENANCE PROCEDURE**

1. Air Conditioning Automatic Shut-off System inoperative:
  - A. Open AIR CONDITIONING AUTO OFF & PURGING circuit breaker. (B1-259) (U28)
2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 21-9**

### **RAM AIR VALVE**

### **ALITALIA EXPERIENCE**

#### **PLACARD**

Placard affected Ram Air Switch "INOP".

#### **MAINTENANCE PROCEDURE**

Ram Air Valve Inoperative OPEN

1. Check ground air conditioning check valves are operative as per M.M. 21-20-9 "Adjustment/Test".
2. Open and collar Ram Air Valve circuit breaker (J3).
3. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

Ram Air Valve Inoperative CLOSED

1. Open and collar Ram Air Valve circuit breaker (J3).
2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 21-10**

### **COMPRESSOR DISCHARGE AND TURBINE INLET THERMAL SWITCHES**

#### **PLACARD**

On overhead air cond panel install a placard "COMPRESSOR DISCHARGE AND TURBINE INLET THERMAL SWITCHES INOP" near affected AIR COND SUPPLY Switch.

#### **MAINTENANCE PROCEDURE**

1. Compressor Discharge or Turbine Inlet Thermal Switches inoperative:
  - A. Disconnect and tie back connector(s) on affected thermal switches.
  - B. Select affected AIR CONDITIONING SUPPLY switch to OFF.
2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 21-12**

### **HEAT EXCHANGER COOLING AIR FANS**

#### **PLACARD**

On overhead air cond panel install a placard "HEAT EXCHANGER COOLING AIR FANS INOP" near affected AIR COND SUPPLY Switch.

#### **MAINTENANCE PROCEDURE**

1. Heat Exchanger Cooling Air Fan inoperative:
  - A. Open affected heat exchanger cooling fan circuit breaker.
  - B. Select affected AIR CONDITIONING SUPPLY switch to OFF.
2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 21-14**

### **GROUND AIR CONDITIONING CHECK VALVE**

#### **PLACARD**

Placard the affected Air Cond Supply switch with "DO NOT PRESS SYS AT PARK AREA".

#### **MAINTENANCE PROCEDURE**


1. Ground Air Conditioning Check Valve(s) inoperative OPEN:
  - A. Assure that the ground conditioned air door is closed and latched.
2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 21-15**

### **HEAT EXCHANGER COOLING AIR DIVERTER VALVES**



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## **MEL - MAINTENANCE PROCEDURE N° 21-19**

### **RADIO RACK FAN OFF ANNUNCIATOR SYSTEM**

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## **MEL - MAINTENANCE PROCEDURE N° 21-21**

### **RADIO RACK COOLING FAN - PRIMARY AND STANDBY**

#### **PLACARD**

On overhead AIR COND PNL install a placard "RADIO RACK COOLING FANS (PRIMARY AND STBY) INOP" near RADIO RACK Switch.

#### **MAINTENANCE PROCEDURE**

1. Both primary fan and standby fan inoperative:
  - A. Verify both air conditioning systems are available for pressurized flight.
  - B. Select RADIO RACK switch to VENTURI.
  - C. Open RADIO RACK FAN and STANDBY RADIO RACK FAN circuit breakers (all three phases on both fans).
  - D. Limit ground operation of electronic equipment to 45 minutes.
  - E. Advise appropriate personnel of possible inadequate heating for animals and temperature sensitive cargo in forward cargo compartment.
2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 21-21-a)**

### **RADIO RACK COOLING FAN - PRIMARY FAN**

#### **PLACARD**

On overhead AIR COND PNL install a placard "RADIO RACK COOLING FANS (PRIMAR) INOP" near RADIO RACK Switch.

#### **MAINTENANCE PROCEDURE**

1. Primary fan only is inoperative:
  - A. Check that RADIO RACK FAN CAUTION circuit breaker is in.
  - B. In the avionics compartment, check that the RIGHT RADIO FAN OFF light on the GEN CONTRACK is not on.
  - C. Open RADIO RACK FAN circuit breakers (all three phases).
  - D. Verify that the RADIO FAN OFF light in the cockpit is illuminated.
  - E. Advise appropriate personnel of possible inadequate heating for animals and temperature sensitive cargo in forward cargo compartment.
2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 21-23**

### **RADIO RACK FAN AND STANDBY RADIO RACK FAN CHECK VALVE**

#### **PLACARD**

On overhead AIR COND PNL install a placard "RADIO RACK FAN CHECK VALVE INOP" near RADIO RACK Switch.

On overhead AIR COND PNL install a placard "STANDBY RADIO RACK FAN CHECK VALVE INOP" near RADIO RACK Switch.

On overhead AIR COND PNL install a placard "RADIO RACK FAN CHECK VALVE AND STANDBY RADIO RACK FAN CHECK VALVE INOP" near RADIO RACK Switch.

#### **MAINTENANCE PROCEDURE**

1. Radio Rack Fan Check Valve inoperative in the closed position:
  - A. Check that RADIO RACK FAN CAUTION 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. Open RADIO RACK FAN circuit breakers (all three phases).
  - D. Verify that the RADIO FAN OFF light in the cockpit is illuminated.
  - E. Advise appropriate personnel of possible inadequate heating for animals and temperature sensitive cargo in forward cargo compartment.
  - F. On overhead AIR COND PNL install a placard "RADIO RACK FAN CHECK VALVE INOP" near RADIO RACK Switch.
2. Standby Radio Rack Fan Check Valve inoperative in closed position:
  - A. Open STANDBY RADIO RACK FAN circuit breakers (all three phases).
  - B. Verify that the RADIO FAN OFF light in the cockpit is not illuminated. (Verifies radio rack fan operation).
  - C. On overhead AIR COND PNL install a placard "STANDBY RADIO RACK FAN CHECK VALVE INOP" near RADIO RACK Switch.

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3. 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. Select RADIO RACK switch to VENTURI.
  - C. When both check valves are inoperative closed, open RADIO RACK FAN and STANDBY RADIO RACK FAN circuit breakers (all three phases on both fans).
  - D. Limit ground operation of electronic equipment to 45 minutes.
  - E. Advise appropriate personnel of possible inadequate heating for animals and temperature sensitive cargo in forward cargo compartment.
  - F. On overhead AIR COND PNL install a placard "RADIO RACK FAN CHECK VALVE AND STANDBY RADIO RACK FAN CHECK VALVE INOP" near RADIO RACK Switch.
4. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 21-24**

### **DUAL CABIN PRESSURE AUTOMATIC CONTROL SYSTEMS**

#### **PLACARD**

Near CABIN PRESSURE CONTROL selector install a placard □AUTOMATIC CABIN PRESSURE INOP".

#### **MAINTENANCE PROCEDURE**

1. Dispatch for pressurized flight with Automatic Cabin Pressure Control completely inoperative:
  - A. Open the 115 VAC and 28 VDC CABIN PRESSURE CONTROL circuit breakers.
  - B. In the cockpit, select manual cabin pressure control and move the cabin pressure manual control system (wheel/lever) aft to the full decrease position. Systems with a lever control (lollipop) additionally require that the lever be rotated 90° to lock it in the full decrease position.
  - C. Verify the autopilot is operative and controllable in all axes.
2. Dispatch for unpressurized flight with Automatic Cabin Pressure Control completely inoperative:
  - A. Open the 115 VAC and 28 VDC CABIN PRESSURE CONTROL circuit breakers.
  - B. In the cockpit, select manual cabin pressure control and move the cabin pressure manual control system (wheel/lever) aft to the full decrease position. Systems with a lever control (lollipop) additionally require that the lever be rotated 90° to lock it in the full decrease position.
3. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 21-25**

### **CABIN AIR OUTFLOW VALVE**

#### **PLACARD**

Install the placard "DO NOT MOVE AUTO/MAN PRESS CONTROL SYS" near cabin pressure control wheel.

#### **MAINTENANCE PROCEDURE**

1. Cabin Air Outflow Valve inoperative:
  - A. Open the 115 VAC and 28 VDC CABIN PRESSURE CONTROL circuit breakers.
  - B. In the cockpit, select manual cabin pressure control and move the cabin pressure manual control system (wheel/lever) aft to the full decrease position
  - C. 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.
2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 21-26**

### **CABIN PRESSURE RELIEF VALVE**

#### **PLACARD**

Install the placard "DO NOT MOVE AUTO/MAN PRESS CONTROL SYS" near cabin pressure control wheel.

#### **MAINTENANCE PROCEDURE**

1. Cabin Pressure Safety Valve inoperative:
  - A. Open the 115 VAC and 28 VDC CABIN PRESSURE CONTROL circuit breakers.
  - B. In the cockpit, select manual cabin pressure control and move the cabin pressure manual control system (wheel/lever) aft to the full decrease position
2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".



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## **MEL - MAINTENANCE PROCEDURE N° 21-28**

### **CABIN ALTITUDE AND DIFFERENTIAL PRESSURE INDICATOR**

#### **ALITALIA EXPERIENCE**

#### **PLACARD**

Placard the Cabin Alt. Ind. or the Delta P Ind. as required, as follows: "CABIN ALT IND INOP" or "DIFF PRESS IND INOP".

Placard the Cabin Alt. and Differential Pressure Indicator as follows: "CABIN ALT IND AND DIFF PRESS IND INOP".

#### **MAINTENANCE PROCEDURE**

1. Cabin Altitude or Differential Pressure Indicator inoperative, pressurized flight:
  - A. Placard the Cabin Alt. Ind. or the Delta P Ind. as required, as follows: "CABIN ALT IND INOP" or "DIFF PRESS IND INOP".
2. Cabin Altitude and Differential Pressure Indicator inoperative, unpressurized flight:
  - A. Open and collar 115 VAC and 28 VDC CABIN PRESSURE CONTROL circuit breakers.
  - B. In the cockpit, select manual cabin pressure control and move the cabin pressure manual control system (wheel/lever) aft to the full decrease position.
  - C. 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  $\pm 30^\circ$ . Attempt to force the nozzle valve similarly toward closed. If it is similarly restrained open  $\pm 2$  inches at the tip, the valve can be considered secured in the open position.
  - D. Placard the Cabin Alt. and Differential Pressure Indicator as follows: "CABIN ALT IND AND DIFF PRESS IND INOP".
3. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 21-29**

### **CABIN CLIMB INDICATOR**

#### **PLACARD**

Install a placard "INOP" on CABIN RATE OF CLIMB Indicator.

#### **MAINTENANCE PROCEDURE**

1. Cabin Rate-of-Climb Indicator inoperative - pressurized flight:
  - A. Verify proper operation of the cabin pressurization control system.
2. Cabin Rate-of-Climb Indicator inoperative - unpressurized flight:.
  - A. Open the 115 VAC and 28 VDC CABIN PRESSURE CONTROL circuit breakers.
  - B. In the cockpit, select manual cabin pressure control and move the cabin pressure manual control system (wheel/lever) aft to the full decrease position. Systems with a lever control (lollipop) additionally require that the lever be rotated 90° to lock it in the full decrease position.
  - C. 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.
3. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 21-30**

### **COCKPIT/CABIN AUTO TEMPERATURE CONTROL SYSTEM**

#### **PLACARD**

Select affected temperature selector switch to manual "STOP" and placard it as follows "USE MAN MODE ONLY".

#### **MAINTENANCE PROCEDURE**

1. Dispatch with one Cockpit/Cabin Compartment Auto Temperature Control System inoperative and associated Air Conditioning System not used:
  - A. Select affected AIR CONDITIONING SUPPLY switch to OFF.
  - B. Placard switch appropriately so as to prevent its use.
  - C. 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.
2. Dispatch with both Cockpit/Cabin Compartment Auto Temperature Control Systems inoperative and Air Conditioning Systems not used:
  - A. Select the RAM AIR switch to ON.
  - B. Select both AIR CONDITIONING SUPPLY switches to OFF.
  - C. Placard switches appropriately so as to prevent their use.
  - D. 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.

**NOTE:** If desired, associated manual temperature control may be verified operative as follows:

- A. Select associated air conditioning temperature control to MANUAL STOP.
  - B. Attempt to toggle valve toward hot and cold. If valve responds to toggling, (as indicated by the associated R VALVE or L VALVE position gage movement in the same direction) the associated pack can be used with manual temperature control. Toggle the valve as required.
3. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 21-36**

### **TURBINE BY-PASS VALVE (TURBINE NOZZLE SHUT-OFF VALVE)**

#### **PLACARD**

Placard the APU AIR switch with "AIR COND COLDER INOP".

#### **MAINTENANCE PROCEDURE**

1. Turbine Nozzle Shut-off Valve inoperative in open position:
  - A. Remove and tie back connectors on affected valve(s).
2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 21-39**

### **AIR CONDITIONING PRESSURE REGULATOR GROUND CONTROL VALVE SOLENOID**

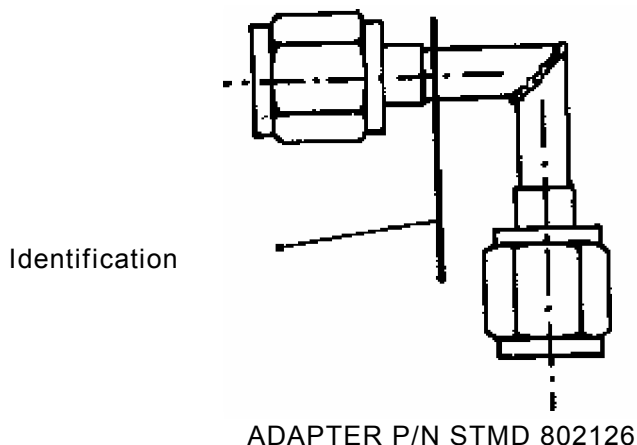
#### **ALITALIA EXPERIENCE**


#### **PLACARD**

Placard Air Conditioning panel with "PRESS REG CTL VLV INOP CLOSED (OPEN)".

#### **MAINTENANCE PROCEDURE**

1. AIR CONDITIONING PRESSURE REGULATOR GROUND CONTROL VALVE SOLENOID INOPERATIVE CLOSED:
  - A. Select affected air conditioning SUPPLY switch to OFF.
  - B. Remove and tie back affected connector on respective valve.
  - C. Remove valve and leave fasteners on board.
  - D. Install adapter P/N STMD8O2126 (see Figure) in lieu of respective valve.
  - E. Pressurize pneumatic ducts, i.e., run APU, etc, and open crossfeed valve.
  - F. Select the affected air conditioning SUPPLY switch to AUTO.
  - G. Check all connections for leaks by sound and feeling.
  - H. Placard Air Conditioning panel with "PRESS REG CTL VLV INOP CLOSED".
2. AIR CONDITIONING PRESSURE REGULATOR GROUND CONTROL VALVE SOLENOID INOPERATIVE OPEN:
  - A. Placard Air Conditioning panel with "PRESS REG CTL VLV INOP OPEN".
3. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".



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## **MEL - MAINTENANCE PROCEDURE N° 21-45**

### **ALTITUDE BIAS CONTROL**

### **ALITALIA EXPERIENCE**

#### **PLACARD**

Placard the AIR COND panel "BIAS VLV LOCKED OPEN/CLOSED".

#### **MAINTENANCE PROCEDURE**

1. With respective pack running, at the altitude bias control valve feel for control leakage to ambient.
  - A. The presence of flow indicates that valve is locked open (altitude bias on).
  - B. No flow indicates the valve is locked closed (no altitude bias).
2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 21-46**

### **LEFT HEAT EXCHANGER AIR EXHAUST CONTROL SYSTEM**



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## **MEL - MAINTENANCE PROCEDURE N° 21-47**

### **COCKPIT TEMPERATURE CONTROL 130°F LIMIT SYSTEM**

#### **PLACARD**

On overhead AIR COND PNL Install a placard "COCKPIT TEMPERATURE CONTROL 130° F LIMITER SENSOR INOP" near cockpit temperature sensor.

#### **MAINTENANCE PROCEDURE**

1. Cockpit Temperature Control Limit System inoperative - open circuit on relay R2-301 between pins A2 and A3 (loss of "more heat" control):

##### **OPTION I**

- A. Connect a jumper on relay R2-301 from pin A2 to A3.
- B. 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.

##### **OPTION II**

- A. Disconnect 130 °F sensor (plug P1-658). Coil and stow wires.
  - B. 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.
2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 21-52**

### **FWD CARGO COMPARTMENT HEATER SYSTEM**

#### **PLACARD**

On overhead AIR COND PNL Install a placard "FWD CARGO COMPARTMENT HEATER SYSTEM INOP".

#### **MAINTENANCE PROCEDURE**

1. Forward Cargo Compartment Heater System inoperative:
  - A. Pull and collar Cargo Compartment Heater circuit breakers (B1-655, B1-656, and B1-657 located on upper EPC circuit breaker panel).
  - B. Advise appropriate personnel of possible inadequate heating for animals and temperature sensitive cargo in forward cargo compartment.
2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 22-15-f)**

### **DIGITAL FLIGHT GUIDANCE SYSTEM FUNCTIONS – YAW DAMPER**

#### **PLACARD**

Put a placard “YAW DAMPER INOP” on the Overhead Panel, near the Yaw Damper Switch.

#### **MAINTENANCE PROCEDURE**

##### 1. Yaw Damper inoperative.

A. None required.

**NOTE:** For yaw damper failures, aircraft trim drag will be minimized if the yaw damper is in the neutral position. The following procedure may be used to neutralize the yaw damper.

- (1) Hydraulics on, rudder pedals aliogned and zero rudder trim.
- (2) Yaw damper switch OFF and autopilot switch OFF.
- (3) Visually check that rudder is aligned with upper trailing edge of stabilizer.
- (4) If rudder is not aligned, yaw damper actuator can be positioned to neutral by manually cranking the adjustment screw. (See MM Chapter 22-13-01, Fig. 201, for lacion of adjustment screw).
- (5) With rudder aligned, select and leave YAW DAMP switch in OVRD.

##### 2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 22-15-g)**

### **DIGITAL FLIGHT GUIDANCE SYSTEM FUNCTIONS – MACH TRIM**

#### **PLACARD**

Put a placard "MACH TRIM INOP" near SPD/MACH knob .

#### **MAINTENANCE PROCEDURE**

1. Mach Trim inoperative.
  - A. Select MACH TRIM COMP switch to OVRD and verify Mach Trim Compensator Indicator on right control column is fully retracted.
2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 23-20-a)**

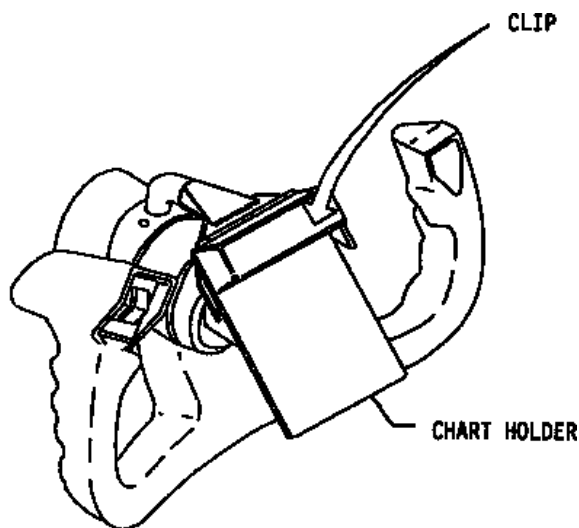
### **CAPTAIN/FIRST OFFICIER PUSH-TO-TALK SWITCHES** **CONTROL WHEEL PTT SWITCHES**

#### **PLACARD**

Put a placard "CONTROL WHEEL PTT SWITCH INOP" over the Captain/First Officer CONTROL WHEEL CLIP (Ref. Fig.1)

#### **MAINTENANCE PROCEDURE**

1. Dispatch with Control Wheel PTT Switch inoperative.
  - A. Open the following circuit breakers:  
-FLIGHT INTERPHONE -1 and -2 (B10-47 e B10-386)  
-VHF COMM -1 and -2 (B10-7 and B10-44)
  - B. On control wheel, remove the PTT Switch setscrew.
  - C. Pull switch downward until electrical connections are out of control wheel horn and are accessible for removal.
  - D. Tag and disconnect wires from switch terminal, and stow within control wheel.
  - E. Reinsert deactivated switch into control wheel, and secure by tightening setscrew.
  - F. Reset FLIGHT INTERPHONE and VHF COMM circuit breaker.
2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".



**Fig. 1 - CONTROL WHEEL**



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## **MEL - MAINTENANCE PROCEDURE N° 22-15-g)**

### **CAPTAIN/FIRST OFFICIER PUSH-TO-TALK SWITCHES** **AUDIO SELECTOR PANEL PTT SWITCHES**

#### **PLACARD**

Put a placard affected switch appropriately "AUDIO CONTROL PANEL PTT SWITCH INOP", so as to prevent its use.

#### **MAINTENANCE PROCEDURE**

1. Dispatch with Audio Control Panel or other PTT Switch inoperative.
  - A. With electrical power on the airplane, select the PA Transmit switch on the associated Audio Control Panel.
  - B. Plug a headset into the associated Jack Panel.
  - C. Without keying the Control Wheel PTT Switch, speak into the headset boom microphone. 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.

2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 24-1-(a)**

### **ENGINE GENERATOR SYSTEM (INCLUDES CSD UNITS)**

#### **PLACARD**

On electrical panel adjacent the affected CSD disconnect switch, apply a placard "AC GENERATOR INOP"

#### **MAINTENANCE PROCEDURE**

1. Generator System inoperative:
  - A. If CSD is affected, disconnect CSD with engine operating at idle or above

**NOTE:** If it is necessary to continue a flight with the transmission disconnected, it is recommended that the transmission be serviced to the normal oil fill level.

2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 24-2**

### **EXTERNAL POWER SYSTEM**

#### **PLACARD**

On electrical panel adjacent the EXT PWR SWITCH, apply a placard "EXTERNAL POWER SYSTEM INOP".

#### **MAINTENANCE PROCEDURE**

1. External Power System inoperative:
  - A. Placard External Power Receptacle "DO NOT CONNECT ELECTRICAL POWER."
  - B. Pull and collar External Power Control c/b's (B1-233, B1-234, and B1-235) on the upper left circuit breaker panel in the EE compartment.
  - C. If a short circuit (high current) condition is suspected which would affect other aircraft systems, maintenance personnel should attempt to troubleshoot and isolate the problem using the procedures in the Douglas Maintenance Manual (M/M Chapt. 24, 24-40-00).
2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 24-3**

### **AC CROSS-TIE RELAY**

#### **PLACARD**

On electrical panel, adjacent to AC BUS X-TIE switch, apply a placard "AC CROSS TIE RELAY INOP"

#### **MAINTENANCE PROCEDURE**

1. Cross-Tie Relay inoperative:
  - A. Select AC BUS X-TIE switch to OPEN.
  - B. Apply power to left or right bus from APU, ground cart, or engine and verify other bus remains unpowered.
2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 24-18**

### **TRANSFORMER/RECTIFIERS (T/R)**

#### **PLACARD**

On electrical panel apply a placard "LEFT TR #1, Left TR #2, Right TR #1, or Right TR #2 INOP".

#### **MAINTENANCE PROCEDURE**

1. Transformer/Rectifier inoperative:
  - A. Open the 3 circuit breakers for the affected unit labeled Left TR #1, Left TR #2, Right TR #1, or Right TR #2.
2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 24-40**


### **GALLEY POWER AND CONTROL**

#### **PLACARD**

On affected galley apply a placard as appropriate.

#### **MAINTENANCE PROCEDURE**

1. Pull and collar the circuit breaker(s) corresponding to affected galley/system.
2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 25-6**

### **CABIN ATTENDANT SEAT**

#### **ALITALIA EXPERIENCE**

#### **PLACARD**

As appropriate

#### **MAINTENANCE PROCEDURE**

1. Flight attendant seat inoperative:
  - A: Secure inoperative seat(s) in stowed position.
  - B: Placard inoperative seat(s) "DO NOT OCCUPY/NON OCCUPARE"
  - C: Placard "FOR FLIGHT ATTENDANT USE ONLY/POSTO RISERVATO AGLI ASSISTENTI DI VOLO" the passenger seat(s) nearest to the defective cabin attendant seat or assembly (dual position) and assigned to the cabin attendant.

**NOTE** :If necessary, placard can be replaced by head rest towel quoting: "CREW ONLY".
2. Make an applicable entry in "Aircraft Technical Logbook", "Aircraft Cabin Logbook" and in "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 25-10**

### **PASSENGER SEATS**

### **ALITALIA EXPERIENCE**

#### **PLACARD**

Placard inoperative seat "INOPERATIVE, DO NOT OCCUPY - INOPERATIVO, NON OCCUPARE"

#### **MAINTENANCE PROCEDURE**

1. Passenger seat inoperative with recline mechanism operative:

- A. Secure affected seat in upright position.

**NOTA:** A seat with inoperative seat belt is considered inoperative.

2. Make an applicable entry in "Aircraft Technical Logbook", "Aircraft Cabin Logbook" and in "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 25-10-(a)**

### **PASSENGER SEATS – RECLINE MECHANISM**

#### **ALITALIA EXPERIENCE**

#### **PLACARD**

As appropriate

#### **MAINTENANCE PROCEDURE**

1. Passenger seat with recline mechanism inoperative:
  - A. Recline mechanism inoperative and secured in upright position.
    - (1) Placard seat: "SEAT UNABLE TO RECLINE / SCHIENALE NON RECLINABILE"

**NOTE** : Seat may be occupied.
  - B. Recline mechanism inoperative in other than the upright position.
    - (1) Secure seat in the breakover position with a strap or rope such that it cannot move during flight and placard seat: "DO NOT OCCUPY / NON OCCUPARE"

OR

    - (2) If seat is stuck in the reclined position, block off seats row aft inoperative seat and placard entire row: "DO NOT OCCUPY / NON OCCUPARE."
2. Make an applicable entry in "Aircraft Technical Logbook", "Aircraft Cabin Logbook" and in "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 25-10-(b)**

### **PASSENGER SEATS – UNDERSEAT BAGGAGE RESTRAINING BARS**

#### **ALITALIA EXPERIENCE**

#### **PLACARD**

Placard the associated seat "DO NOT STOW BAGGAGE UNDER THIS SEAT - NON STIVARE BAGAGLI SOTTO QUESTA POLTRONA"

#### **MAINTENANCE PROCEDURE**

1. Passenger seat with baggage restraining bars inoperative:

**WARNING:** do not stow baggage under seat

- A. Remove the restraining bar and associated parts, if they restrict any passenger from access to the main aircraft aisle or possible injury may occur.
  - B. Advise cabin crew to ensure baggage is not stowed under seats with inoperative or missing restraining bars.
  - C. Advise cabin crew to inform passengers occupying seat with affected bar and passenger behind the affected bar not to stow baggage under the associated seat
2. Make an applicable entry in "Aircraft Technical Logbook", "Aircraft Cabin Logbook" and in "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 25-10-(c)**

### **PASSENGER SEATS – ARM RESTS**

#### **ALITALIA EXPERIENCE**

#### **PLACARD**

Placard the associated seat "DO NOT OCCUPY / NON OCCUPARE"

#### **MAINTENANCE PROCEDURE**

1. Passenger Seat Arm rest inoperative:
  - A. Secure affected arm rest with a strap in appropriate position such that it cannot move during flight
  - B. Advise cabin crew to inform passengers occupying seat with associated arm rest is inoperative.

OR

Remove the arm rest and associated parts, if they restrict any passenger from access to the main aircraft aisle or possible injury may occur.
2. Make an applicable entry in "Aircraft Technical Logbook", "Aircraft Cabin Logbook" and in "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 25-11**

### **OVERHEAD STORAGE BIN LATCHES/CABIN AND GALLEY STORAGE COMPARTMENT/CLOSETS**

#### **ALITALIA EXPERIENCE**

#### **PLACARD**

Placard "INOP" affected overhead storage bin or storage compartment

#### **MAINTENANCE PROCEDURE**

1. Bin or storage compartment inoperative:
  - A. Apply a strip of high speed adhesive tape between the door and the bin or storage compartment structure, passing over the malfunctioning latch, as necessary to secure the door in the closed position.
2. Make an applicable entry in "Aircraft Technical Logbook", "Aircraft Cabin Logbook" and in "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 25-22-(a)**

### **GALLEY WASTE RECEPTACLE ACCESS DOORS/COVERS**

#### **PLACARD**

Placard affected Container appropriately so as to prevent its use.

#### **MAINTENANCE PROCEDURE**

1. Galley Waste Receptacle Access Doors/Covers:
  - A. Empty the affected waste container.
  - B. Secure associated access door closed
  
2. Make an applicable entry in "Aircraft Technical Logbook", "Aircraft Cabin Logbook" and in "Elenco Anomalie Compatibili".



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## **MEL - MAINTENANCE PROCEDURE N° 25-22-(b)**

### **LAVATORY WASTE RECEPTACLE ACCESS DOORS/COVERS**

#### **PLACARD**

placard affected lavatory door: INOPERATIVE - DO NOT ENTER

#### **MAINTENANCE PROCEDURE**

1. Lavatory Waste Receptacle Access Doors/Covers:
  - A. Empty the affected waste container.
  - B. Secure associated access door closed
  - C. Close and lock the lavatory door
2. Make an applicable entry in "Aircraft Technical Logbook", "Aircraft Cabin Logbook" and in "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 26-1-a**

### **ENGINE FIRE DETECTION SYSTEM - DETECTION LOOPS**

#### **PLACARD**

On ENGINE FIRE panel apply a placard "ENGINE FIRE DETECTION SYSTEM (A OR B) INOP" near relevant switch.

#### **MAINTENANCE PROCEDURE**

1. Engine Fire Detection System (A or B) inoperative:
  - A. Select LOOPS switch to operative system.
  - B. Verify selected system is operational using cockpit LOOPS A TEST or LOOPS B TEST switches as applicable.
2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 26-2-a)**

### **APU FIRE DETECTION SYSTEM - DETECTION LOOPS**

#### **PLACARD**

On APU FIRE panel apply a placard " APU FIRE DETECTION SYSTEM (A OR B) INOP" near relevant switch

#### **MAINTENANCE PROCEDURE**

1. APU Fire Detective System (A or B) inoperative:
  - A. Verify selected system is operational using cockpit LOOPS A TEST or LOOPS B TEST switches as applicable.
2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 26-4-a)**

### **ENGINE AND APU FIRE EXTINGUISHER AGENT LOW LIGHT - COCKPIT EXTINGUISHER AGENT LOW LIGHT**

#### **PLACARD**

On APU FIRE panel apply a placard " APU FIRE DETECTION SYSTEM (A OR B) INOP" near relevant switch.

#### **MAINTENANCE PROCEDURE**

**NOTE:** Dispatch with Extinguisher Agent Low Light inoperative - before each flight:

1. Verify bottle pressure by conducting the pressure switch continuity test. Successful completion of the test verifies bottle is pressurized.
  - A. Disconnect the pressure switch electrical connector at the bottle.
  - B. Insert 1/16" Allen wrench in test socket of pressure switch. Using light finger pressure, actuate pressure switch by turning Allen wrench.
  - C. Verify pressure switch functions as follows:
    - (1) Pins B to C - no continuity
    - (2) Pins B to A - continuity
  - D. Release Allen wrench and verify switch returns to its normal position. Remove wrench.
  - E. Verify pressure switch functions as follows:
    - (1) Pins B to C - continuity
    - (2) Pins B to A - no continuity
2. If Step A above is unsuccessful, or as an alternative, weight the affected fire 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.
3. Make an entry in the Technical Log Book and put a note in the "Elenco delle Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 26-4-b)**

### **ENGINE AND APU FIRE EXTINGUISHER AGENT LOW LIGHT - APU GROUND CONTROL AGENT PANEL LOW LIGHT**

#### **PLACARD**

Put a placard "INOP - DISCH THE OTHER SYS FIRST" near the inoperative light.

#### **MAINTENANCE PROCEDURE**

**NOTE:** Dispatch with Extinguisher Agent Low Light inoperative - before each flight:

1. Verify bottle pressure by conducting the pressure switch continuity test. Successful completion of the test verifies bottle is pressurized.
  - A. Disconnect the pressure switch electrical connector at the bottle.
  - B. Insert 1/16" Allen wrench in test socket of pressure switch. Using light finger pressure, actuate pressure switch by turning Allen wrench.
  - C. Verify pressure switch functions as follows:
    - (1) Pins B to C - no continuity
    - (2) Pins B to A - continuity
  - A. Release Allen wrench and verify switch returns to its normal position. Remove wrench.
  - B. Verify pressure switch functions as follows:
    - (1) Pins B to C - continuity
    - (2) Pins B to A - no continuity
2. If Step A above is unsuccessful, or as an alternative, weight the affected fire 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.
2. Make an entry in the Technical Log Book and put a note in the "Elenco delle Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 26-6**

### **LAVATORY FIRE EXTINGUISHER SYSTEM**

#### **PLACARD**

Put a placard "INOP - DISCH THE OTHER SYS FIRST" near the inoperative light.

#### **MAINTENANCE PROCEDURE**

1. Lavatory Fire Extinguisher System inoperative and Lavatory Smoke Detection System Operative.
  - A. Check Smoke Detection System operativity as per M.M. Chpt. 26-10-07 Page Block 200.
  - B. Placard lavatory door ☐ FIRE EXT. SYS. INOP".
  - C. Make an entry in the Technical Log Book and put a note in the "Elenco delle Anomalie Compatibili".
2. Lavatory Fire Extinguisher System inoperative and Lavatory Smoke Detection System also Inoperative.
  - A. Verify that the affected lavatory trash receptacle is empty.
  - B. Close and lock the associated lavatory door.
  - C. Placard lavatory door "INOPERATIVE/DO NOT USE - INOPERATIVA/NON USARE".
3. Make an entry in the Technical Log Book and put a note in the "Elenco delle Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 26-7**

### **LAVATORY SMOKE DETECTION SYSTEM**

#### **PLACARD**

If affected Lavatory door is to be locked closed, placard affected door, "INOPERATIVE - DO NOT ENTER".

#### **MAINTENANCE PROCEDURE**

1. Lavatory Smoke Detection System inoperative and Lavatory Fire Detection System also inoperative:
  - A. Verify that the affected lavatory trash receptacle is empty.
  - B. Close and lock the associated lavatory door.
2. Make an entry in the Technical Log Book and put a note in the "Elenco delle Anomalie Compatibili".



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## **MEL - MAINTENANCE PROCEDURE N° 26-9**

### **PORTABLE FIRE EXTINGUISHER**

#### **PLACARD**

Put a placard "FIRE EXT. MISSING" near fire extinguisher installation.

#### **MAINTENANCE PROCEDURE**

1. Remove inoperative fire extinguisher from its installed location and tag it "NOOPERATIVE/DO NOT USE - INOPERATIVO/NON USARE".
2. Place inoperative fire extinguisher out of sight so it can not be mistaken for a functional unit.
3. Check that fire extinguishers required distribution in the A/C is maintained.
4. Make an entry in the Technical Log Book and put a note in the "Elenco delle Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 26-10-b)**

### **LOWER CARGO COMPARTMENT SMOKE DETECTION/FIRE SUPPRESSION - FAULT LIGHT ON SDFSS PANEL**

#### **PLACARD**

Put a placard in cockpit, on SDFSS panel, quoting "SMOKE DETECTION/FIRE SUPPRESSION SYSTEM - FAULT LIGHT INOP".

#### **MAINTENANCE PROCEDURE**

1. Perform Fire Maintenance Unit (CFMU) self test by pushing TEST button.
2. Make an entry in the Technical Log Book and put a note in the "Elenco delle Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 26-10-c)**

### **LOWER CARGO COMPARTMENT SMOKE DETECTION/FIRE SUPPRESSION - SMOKE DETECTORS**

#### **PLACARD**

Put a placard in cockpit, on CFMU panel, quoting "SMOKE DETECTION/FIRE SUPPRESSION SYSTEM - FAULT LIGHT INOP".

#### **MAINTENANCE PROCEDURE**

1. Ascertain that remaining smoke detector, in the relevant detector enclosure, operates normally as per MD80 AMMS, P.B. 500. (see following fig. 1)
2. Make an entry in the Technical Log Book and put a note in the "Elenco delle Anomalie Compatibili".

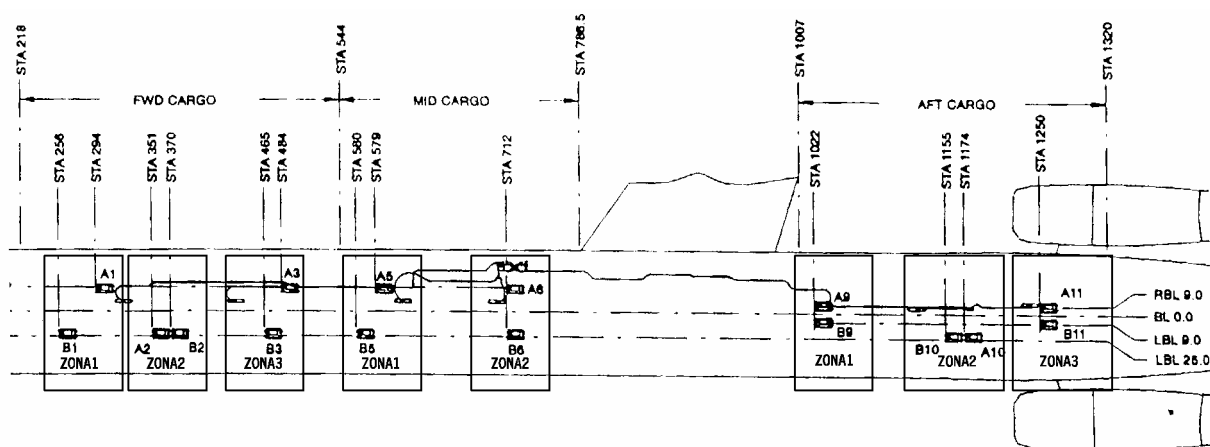


Fig. 1 - Smoke Detector Locations.

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## **MEL - MAINTENANCE PROCEDURE N° 26-11**

### **LOWER CARGO COMPARTMENT FIRE SUPPRESSION SYSTEM (IF INSTALLED)**

#### **PLACARD**

Put a placard in cockpit, on CFMU panel, quoting "LOWER CARGO COMPARTMENT FIRE SUPPRESSION SYSTEM INOP".

#### **MAINTENANCE PROCEDURE**

1. Combined with Item 26-10.
2. Make an entry in the Technical Log Book and put a note in the "Elenco delle Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 27-7**

### **ALTERNATE LONGITUDINAL TRIM MOTOR CONTROL RELAYS (UP TRIM/DOWN TRIM)**

#### **PLACARD**

Apply a placard "A/P TRIM INOP" near to autopilot panel

#### **MAINTENANCE PROCEDURE**

1. Alternate Longitudinal Trim Motor Control Relay autopilot input inoperative:
  - A. 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.
  - B. Trim aircraft manually prior to engaging autopilot.
  - C. Monitor AP TRIM/OUT OF TRIM light while AP is engaged.
  - D. If light comes on, retrim by either of the following:
    - 1) Operation of the alternate longitudinal trim switch (which does not require Autopilot disconnect), or
    - 2) Disconnecting the autopilot, manually trimming with control wheel switches or LONG TRIM handles, and then re-engaging the Autopilot.
  - E. If the Autopilot is to be used for landing, manually trim the aircraft and track glideslope at final approach speed prior to Autopilot engagement.
2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 27-11**

### **ALTERNATE LONGITUDINAL TRIM MOTOR UP/DOWN LIMIT SWITCHES**

#### **PLACARD**

On the central pedestal near ALT LONG TRIM lever install a placard quoting "ALT LONG TRIM SWITCH INOP"

#### **MAINTENANCE PROCEDURE**

1. Alternate Longitudinal Trim Motor Limit Switch inoperative:
  - A. Verify primary longitudinal trim functions normally.
    - 1) Operate control wheel switch ANU and verify ANU travel available is 12,2° ANU
    - 2) Operate control wheel switch AND and verify AND travel available is 2,1° AND.
  - B. Verify alternate trim functions normally.
    - 1) Operate alternate trim switches on the pedestal and verify ANU and AND travel available is 12,2° ANU and 2,1° AND.
2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 27-14**

### **ELEVATOR POWER ON INDICATION SYSTEM**

#### **PLACARD**

Placard pilot's overhead annunciator panel near elevator power on light "LIGHT INOP".

#### **MAINTENANCE PROCEDURE**

1. Elevator Power On Indicating System inoperative:
  - A. With all hydraulic pumps off:
    - 1) Verify R&L HYD PRESS LOW lights are on.
    - 2) Verify R&L HYD FLUID QUANTITY gages indicate in normal range.
    - 3) Verify R&L HYD PRESS gages indicate zero pressure.
    - 4) Open elevator bypass valve to deplete elevator accumulator.
    - 5) NA
    - 6) Verify accumulator gage indicates 2000 + 50 psi.
    - 7) Close elevator bypass valve.
  - B. Place Aux. pump switch to ON and verify R HYD PRESS LOW light goes out and R HYD PRESS gage indicates at least 2800 psi.
  - C. Place TRANS or ALT pump switch to ON and verify L HYD PRESS LOW light goes out and L HYD PRESS gage reaches at least 2000 psi for Series 80.  
**NOTE:** Steps B and C need not be conducted if equivalent preflight procedures are used.
  - D. Move pilot control column to the full forward position and visually verify operation of the elevators.
2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".



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## **MEL - MAINTENANCE PROCEDURE N° 27-17**

### **FLAP POSITION INDICATING SYSTEM**

#### **PLACARD**

Install a placard near flap position indicator on the center instrument panel quoting: "L (or) R POSITION INDICATOR INOP".

#### **MAINTENANCE PROCEDURE**

1. One Flap Indicating System inoperative:
  - A. Operate flaps thru full operating range.
  - B. Visually verify flaps are in commanded position.
  - C. Visually verify flaps do not have an asymmetry.
2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 27-19**

### **AUTO GROUND SPOILER SYSTEM**

#### **PLACARD**

On the pedestal near speedbrake lever install a placard quoting "AUTO GROUND SPOILER INOP MANUAL OPERATION ONLY"

#### **MAINTENANCE PROCEDURE**

1. Auto Ground Spoiler System inoperative:
  - A. If only the Main gear spin-up spoiler extension feature is inoperative, no further maintenance action is required. This would be evident by spoilers failing to automatically deploy on landing, but AUTO SPOILER DO NOT USE light remains extinguished.
  - B. 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. This would likely be evident via illumination of the AUTO SPOILER DO NOT USE light and/or inability to arm auto spoilers prior to takeoff or landing. This may be accomplished as follows:
    - 1) Actuator retracted (red armed placard on spoiler handle not visible with handle forward and down).
      - a. Pull and collar 115VAC SPOILER CONTROL circuit breaker (B1-243)
    - 2) Actuator extended (red armed placard on spoiler handle partially visible with handle forward and down.)

#### **OPTION 1**

N/A

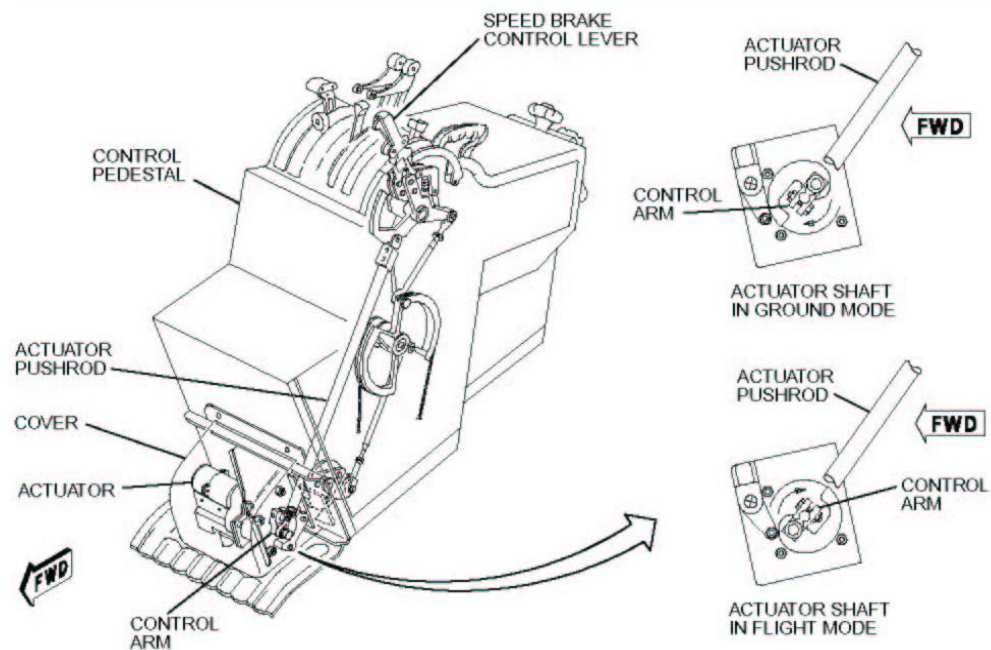
#### **OPTION 2**

- a. Pull both ground control circuit breakers on EPC circuit breaker panel
- b. Operate right MLG uplock switch. Aircrafts serie 80 have proximity sensors and require ferrous metal adjacent to sensor.
- c. Verify actuator retracts by observing the red armed placard on the spoiler handle to not be visible with the handle forward and down. After actuator retracts, pull and collar 115 VAC SPOILER CONTROL circuit breaker (B1-243)
- d. Reset both ground control circuit breakers

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### OPTION 3

- a. Pull and collar 115VAC SPOILER CONTROL circuit breaker (B1-243)
- b. Remove cover from actuator. Refer to following figure.
- c. Manually wrench actuator to retracted (in-flight) position
- d. Replace actuator cover



MEL ITEM 27-19

2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 27-20**

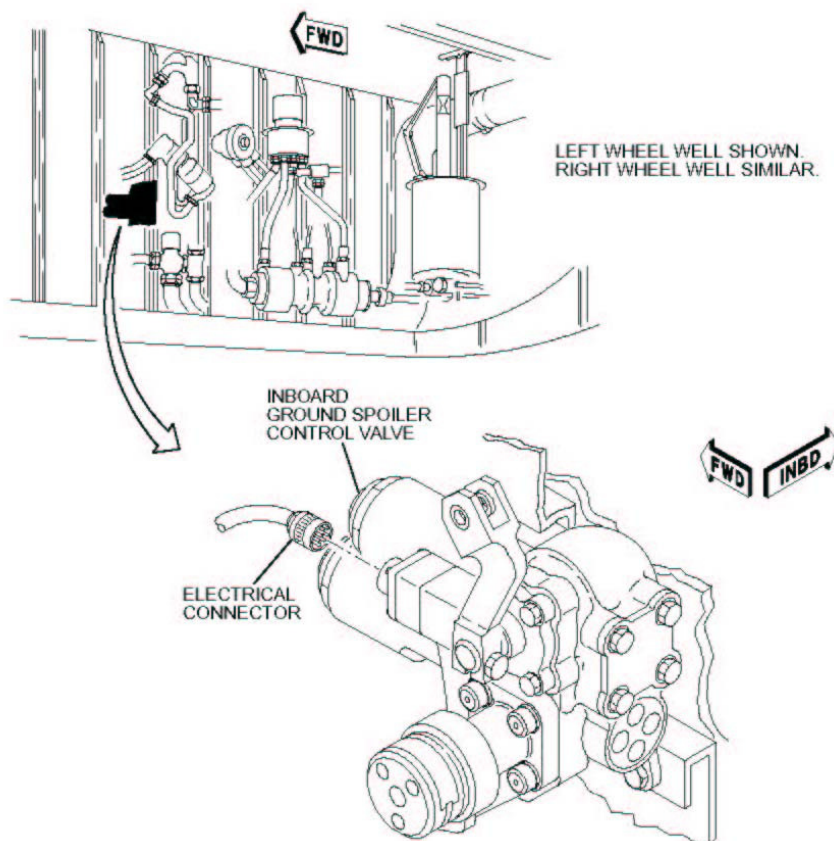
### **INBOARD GROUND SPOILER SYSTEM**

#### **PLACARD**

On the pedestal near speedbrake lever install a placard quoting "INBOARD GROUND SPOILER SYS INOP"

#### **MAINTENANCE PROCEDURE**

1. Inboard Ground Spoiler System inoperative:
  - A. Verify inboard spoiler panels are in retracted position (flush with wing skin).
  - B. NA
    - 1) NA
    - 2) NA
  - C. On Series 80 aircraft:
    - 1) Disconnect and stow electrical connectors of the right and left ground spoiler control valves. Refer to following figure.
  - D. Operate spoilers and verify both inboard spoiler panels remain in retracted position while mid and outboard panels extend.
2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".



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## **MEL - MAINTENANCE PROCEDURE N° 27-30**

### **AUTO SPOILER DO NOT USE LIGHT**

#### **PLACARD**

As appropriate. Placard spoilers MANUAL OPERATION ONLY.

#### **MAINTENANCE PROCEDURE**

1. AUTO SPOILER DO NOT USE light inoperative:
  - A. Deactivate Auto Spoiler Actuator per Maintenance Procedures 27-19 and 27-20.
  - B. On the pedestal, near speedbrake lever, install a placard quoting "INBOARD GROUND SPOILERS INOP"
  - C. On the pedestal, near speedbrake lever, install a placard quoting "AUTO GROUND SPOILERS INOP"
  - D. Placard "INOP" the AUTO SPOILER DO NOT USE light
  - E. Inform Flight Dispatch that the AFM performance decrements for inoperative Auto Spoilers and for inoperative Inboard Ground Spoilers must be applied (AFM Appendix 3). The two penalties should be cumulatively imposed.
2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 27-36**

### **SLAT LAND LIGHT**

#### **PLACARD**

On the annunciator panel near slat land light apply a placard quoting "SLAT LAND LIGHT INOP".

#### **MAINTENANCE PROCEDURE**

1. Slat Land Light inoperative:
  - A. Verify that circuit breakers B1-827 and B1-832 are closed.
  - B. Select left and right DC power ON.
  - C. Verify flaps/slats are up/retracted.
  - D. Select hydraulic power OFF.
  - E. Verify throttles in IDLE.
  - F. Set FLAP/SLAT handle to 0°/EXT.
  - G. Set TAKEOFF CONDTN FLAP thumbwheel to 0°.
  - H. Set TAKEOFF CONDTN CG thumbwheel so that LONG TRIM takeoff position indicator matches stabilizer position.
  - I. Release parking brake.
  - J. Set SPOILER lever to RET.
  - K. Advance either or both throttles. Takeoff warning should sound.
  - L. Select hydraulic power ON. When slats extend to mid position, takeoff warning should silence.
  - M. Set FLAP/SLAT handle to 15°/EXT. Takeoff warning should sound.
  - N. Set TAKEOFF CONDTN FLAP thumbwheel to 15°.
  - O. Set TAKEOFF CONDTN CG thumbwheel so that LONG TRIM takeoff position indicator matches stabilizer position. Takeoff warning should silence.
  - P. Return system controls to normal position.
2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 27-37**

### **SLAT TAKEOFF LIGHT**

#### **PLACARD**

On the annunciator panel near slat takeoff light apply a placard quoting "SLAT TAKEOFF LIGHT INOP".

#### **MAINTENANCE PROCEDURE**

1. Slat Takeoff Light inoperative:
  - A. Verify that circuit breakers B1-827 and B1-832 are closed.
  - B. Select left and right DC power ON.
  - C. Verify flaps/slats are up/retracted.
  - D. Select hydraulic power OFF.
  - E. Verify throttles in IDLE.
  - F. Set FLAP/SLAT handle to 0°/EXT.
  - G. Set TAKEOFF CONDTN FLAP thumbwheel to 0°.
  - H. Set TAKEOFF CONDTN CG thumbwheel so that LONG TRIM takeoff position indicator matches stabilizer position.
  - I. Release parking brake.
  - J. Set SPOILER lever to RET.
  - K. Advance either or both throttles. Takeoff warning should sound.
  - L. Select hydraulic power ON. When slats extend to mid position, takeoff warning should silence.
  - M. Set FLAP/SLAT handle to 15°/EXT. Takeoff warning should sound.
  - N. Set TAKEOFF CONDTN FLAP thumbwheel to 15°.
  - O. Set TAKEOFF CONDTN CG thumbwheel so that LONG TRIM takeoff position indicator matches stabilizer position. Takeoff warning should silence.
  - P. Return system controls to normal position.
2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 27-38**

### **POST STALL RECOVERY SYSTEM**

#### **PLACARD**

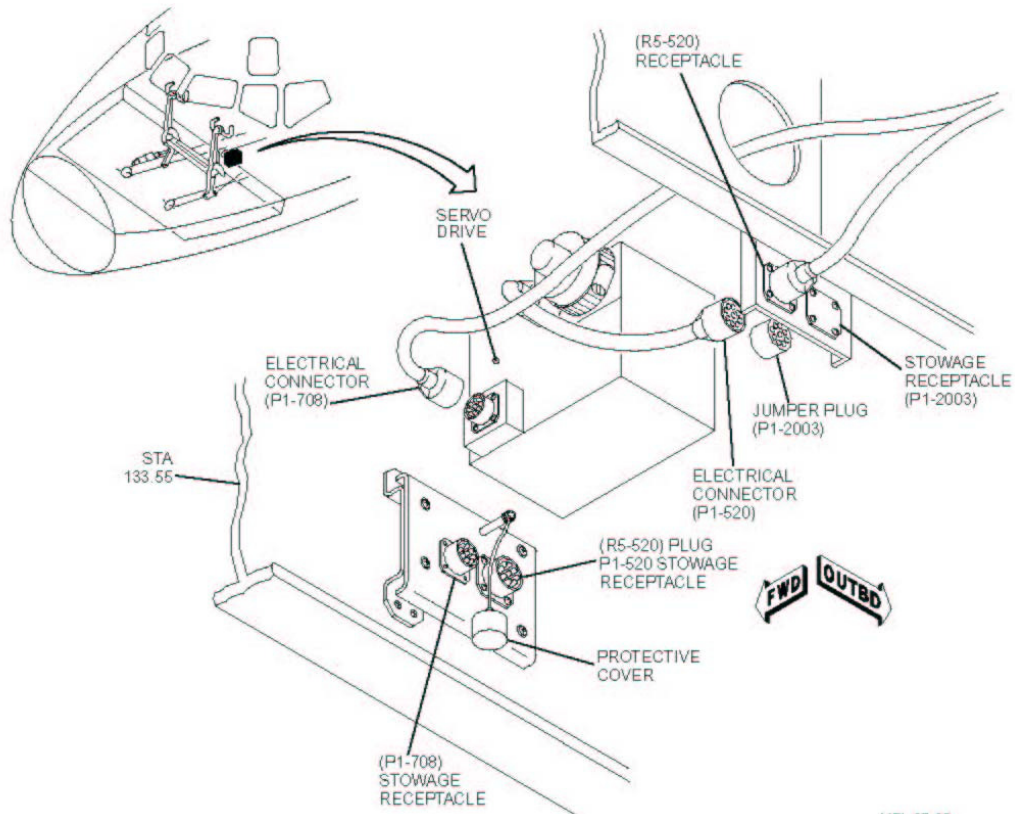
Adjacent the STICK PUSHER LIGHT SWITCHS, apply a placard "POST STALL RECOVERY SYSTEM INOP".

#### **MAINTENANCE PROCEDURE**

1. Post Stall Recovery System inoperative:
  - A. If STICK PUSHER lights are on and/or PSRS has inadvertently actuated (either during SELF TEST or during aircraft operation), perform the following steps (and refer to figure on the following page):
    - 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.
2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".





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## **MEL - MAINTENANCE PROCEDURE N° 28-1**

### **MAIN TANK FUEL AC BOOST PUMP**

#### **PLACARD**

Put a placard "L/R MAIN TANK FUEL AC BOOST PUMP INOP" on FUEL panel in cockpit.

#### **MAINTENANCE PROCEDURE**

1. Add additional fuel to each tank with inoperative pump as follows:
  - A. 265 kg (580 lbs) for each inoperative FWD main tank pump.
  - B. 150 kg (330 Lbs) for each inoperative AFT main tank pump.
2. Inform "FLIGHT DISPATCH" about additional fuel loaded on each tank.
3. Make an entry in the Technical Log Book and put a note in the "Elenco delle Anomalie Compatibili".

**NOTE:** On MD80 aircraft equipped to utilize the Alternate Fuel Burn Loading Schedule may still be used in accordance with limitations stated in the MD80 Airplane Flight Manual.

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## **MEL - MAINTENANCE PROCEDURE N° 28-2**

### **CENTER TANK FUEL AC BOOST PUMP**

#### **PLACARD**

Put a placard "CTR TANK FUEL AC BOOST PUMP INOP" on FUEL panel in cockpit.

#### **MAINTENANCE PROCEDURE**

1. Set associated CTR Tank Fwd/Aft Boost Pump Switch to OFF
2. Pull and collar the associated CTR Tank Fwd/Aft Boost Pump CB(s).

**NOTE:** MD-80's have 1 RCCB for each CTR and AFT Fuel Boost Pump.

3. Inform "FLIGHT DISPATCH" that:
  - A. Any fuel in Center Tank is considered UNUSABLE
  - B. Auxiliary Tank Fuel which transfers to the Center Tank is considered UNUSABLE
  - C. Series 80 actual operating zero fuel weight does not exceed max allowable operating zero fuel weight, less the amount of unusable fuel.
  - D. Alternate Fuel Burn System is not used
  - E. ER operations are not conducted.
4. Make an entry in the Technical Log Book and put a note in the "Elenco delle Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 28-6**

### **FUELING STATION CONTROL PANEL**

#### **PLACARD**

As indicated in MAINTENANCE PROCEDURE

#### **MAINTENANCE PROCEDURE**

1. Single Point Fueling System inoperative:

##### OPTION 1

- A. If possible, use the single point fueling system.
- B. Operate electrically-inoperative valves, manually.
- C. Put a placard "VALVE INOP IN ELECTRICAL MODE"" on fueling station control panel.
- D. Make an entry in Airplane Technical Logbook, and put a note in the Elenco delle Anomalie Compatibili with the following statement: perform maintenance procedure option 1 every time aircraft refueling is required.

##### OPTION 2

- A. Use overwing fueling system.
- B. Open defueling valve and turn on appropriate boost pump to transfer fuel as required.
- C. Put a placard "INOP" on fueling station control panel
- D. Make an entry in "Airplane Technical Logbook", and put a note in the "Elenco delle Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 28-8-b**

### **COCKPIT FUEL QUANTITY INDICATING SYSTEM - L&R MAIN TANK DISPLAYS**

#### **PLACARD**

Placard "INOP" affected fuel quantity indicator.

#### **MAINTENANCE PROCEDURE**

1. Determine quantity of residual fuel or fuel loaded into affected tank by:
  - A. Using fuel measuring sticks (Ref M.M. 12-10-01) and/or
  - B. Filling with a known quantity.
2. Make an entry in "Technical Log Book", and put a note in the "Elenco delle Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 28-8-c**

### **COCKPIT FUEL QUANTITY INDICATING SYSTEM - CTR TANK DISPLAY**

#### **PLACARD**

Placard "INOP" affected fuel quantity indicator.

#### **MAINTENANCE PROCEDURE**

1. Determine quantity of residual fuel or fuel loaded into affected tank by:
  - A. Using fuel measuring sticks (Ref M.M. 12-10-01) and/or
  - B. Filling with a known quantity.
2. Make an entry in "Technical Log Book", and put a note in the "Elenco delle Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 28-8-e**

### **COCKPIT FUEL QUANTITY INDICATING SYSTEM - FUEL SYSTEM TEST**

#### **PLACARD**

Placard ☐INOP" affected fuel quantity indicator.0.

#### **MAINTENANCE PROCEDURE**

1. Determine quantity of residual fuel or fuel loaded into affected tank by:
  - A. Using fuel measuring sticks (Ref M.M. 12-10-01) and/or
  - B Filling with a known quantity.
2. Make an entry in Technical Log Book, and put a note in the "Elenco delle Anomalie Compatibili"



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## **MEL - MAINTENANCE PROCEDURE N° 28-12**

### **MAGNESTICKS - MAIN AND CENTER TANK**

#### **PLACARD**

Placard "INOP" affected fuel quantity indicator.

#### **MAINTENANCE PROCEDURE**

1. During fueling determine quantity of fuel in affected tank by using quantity gages in cockpit or at wing refueling station and/or by filling affected tank with a known quantity of fuel.
  - A. Check that there is no evidence of leakage around associated drip stick.
2. Make an entry in "Technical Log Book", and put a note in the "Elenco delle Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 28-16**

### **FUELING STATION - FUEL QUANTITY REPEATER DISPLAY**

#### **PLACARD**

Placard "INOP" fuel gauge on fueling station control panel.

#### **MAINTENANCE PROCEDURE**

1. Determine quantity of residual fuel or fuel loaded into affected tank by using cockpit fuel quantity readouts or magnesticks (Ref M.M. 12-10-01).
2. Make an entry in "Technical Log Book", and put a note in the "Elenco delle Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 28-17**

### **FUELING STATION - FUEL CAP**

#### **PLACARD**

Placard "INOP" fuel gauge on fueling station control panel.

#### **MAINTENANCE PROCEDURE**

1. Check that refueling receptacle is free of contamination before each refueling.
2. Check that no leakage exists after refueling.
3. Make an entry in "Technical Log Book", and put a note in the "Elenco delle Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 28-20**

### **REFUELING PANEL FUEL QUANTITY TEST SWITCH**

#### **PLACARD**

On the Refueling Panel, apply a placard " INOP " on quantity test switch.

#### **MAINTENANCE PROCEDURE**

##### 1. Refueling Panel Fuel Quantity Test Switch inoperative:

###### A. Switch failed in the non-test position:

- (1) Use Cockpit Fuel Quantity Test Switch to perform test function.

###### B. Switch failed in the test position:

##### OPTION 1

- (1) The ground refueling circuit breakers will be pulled to eliminate power to the test circuit. The fuel quantity gages will be monitored from the cockpit during refueling. Testing will be accomplished by resetting and pulling the ground refueling circuit breakers.

##### OPTION 2

- (2) Disconnect the switch wires to the relay circuit and apply a jumper from the switch wires to the relay circuit to perform the test function. Coil and stow the wires upon completion of the test.

##### 2. Make an entry in "Technical Log Book", and put a note in the "Elenco delle Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 29-21**


### **HYDRAULIC QUANTITY INDICATING SYSTEM**

#### **PLACARD**

On the affected hydraulic quantity indicator(s), apply a placard "INOP".

#### **MAINTENANCE PROCEDURE**

1. Hydraulic Fluid Quantity System inoperative:
  - A. Check each hydraulic system reservoir for proper fluid level before each flight.
2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 30-3**

### **ENGINE ANTI-ICE VALVES**

#### **DC9 MPM R. 17** **ALITALIA EXPERIENCE**

#### **PLACARD**

Placard the ENGINE ANTI-ICE VALVE switch on the ANTI ICE panel "A.I. VLV LOCKED CLOSED".

Placard the ENGINE ANTI-ICE VALVE switch on the ANTI ICE panel "VALVE INOP IN CLOSED POSITION".

Placard the ENGINE ANTI-ICE VALVE switch on the ANTI ICE panel "A.I. VLV LOCKED OPEN".

#### **MAINTENANCE PROCEDURE**

1. One Engine Anti-Ice Valve Failed in the Closed position.
  - A. Verify at the valve that the failed valve is closed position.
  - B. Disconnect electrical connector on the inoperative valve. Coil and stow wires.
  - C. Select engine anti-ice switches ON and OFF and verify that the anti-ice valve lights do not remain illuminated.
  - D. Placard the ENGINE ANTI-ICE VALVE switch on the ANTI ICE panel "A.I. VLV LOCKED CLOSED".

#### 2. Engine Anti-Ice Duct Cracked

**NOTE:** Anti-ice system can be inoperative due to anti-ice duct cracks upstream of the anti-ice shut-off valve. This kind of failure is considered as an anti-ice valve failed in the OPEN position. The following procedure applies in such a case.

- A. Remove aft duct (Ref. 75-10-5) connecting anti-ice valve and 13° stage air manifold.
- B. Install plate P/N AZ 21356 on 13° stage air manifold flange. Reinstall clamp and tighten at indicated torque value.

**NOTE:** Plate surface with bigger diameter must face manifold flange.  
After accomplishing above operations, check if it is possible to reinstall rear duct

without securing it to plate. If check is positive, install the duct on anti-ice valve, leaving open the apposite end. Secure the duct to the engine. If check is negative, send the duct to FCO, specifying the reason and place of removal.

- C. Secure anti-ice valve to engine bracket. Disconnect valve electrical plug; coil and stow wires.
- D. Test relevant warning system (Ref. 75-10-00 page 501).
- E. Placard the ENGINE ANTI-ICE VALVE switch on the ANTI ICE panel "VALVE INOP IN CLOSED POSITION".

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3. One Engine Anti-Ice Valve Failed in the Open position.
  - A. Verify at the valve that the failed valve is open position.
  - B. Disconnect electrical connector on the inoperative valve. Coil and stow wires.
  - C. Select engine anti-ice switches ON and OFF and verify that the engine anti-ice valve lights do not remain illuminated.
  - D. Placard the ENGINE ANTI-ICE VALVE switch on the ANTI ICE panel "A.I. VLV LOCKED OPEN".
4. Make an applicable entry in Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 30-5**

### **ANTI-ICING HEATERS AMMETER SYSTEM**

#### **PLACARD**

On Forward overhead panel Install a plakard "INOP" on HEATER CURRENT Meter .

#### **MAINTENANCE PROCEDURE**

1. Air Data Sensor Heater Current Meter Inoperative:
  - A. With current meter inoperative, 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.
2. Put an appropriate entry in Aircraft Technical Log Book and in the " Elenco Anomalie Compatibili.

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## **MEL - MAINTENANCE PROCEDURE N° 30-17**

### **ICE PROTECTION SHUTOFF VALVE (WING AND TAIL)**

#### **ALITALIA EXPERIENCE**

#### **PLACARD**

Placard the CROSSFEED VALVE CONTROL LEVERS "KEEP VALVES CLOSED AFTER ENG START".

#### **MAINTENANCE PROCEDURE**

1. Open and collar "AIRFOIL ADVISORY & PRESS ABN CAUTION" circuit breaker.
2. Make an applicable entry in Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 30-18**

### **AIRFOIL ANTI-ICING PRESSURE REGULATOR AND SHUTOFF VALVE**

#### **PLACARD**

Placard the CROSSFEED VALVE CONTROL LEVERS "KEEP VALVES CLOSED AFTER ENG START".

#### **MAINTENANCE PROCEDURE**

- 1 Main Regulator/Shutoff Valve:
  - A. Perform the following steps in the event there is evidence that the regulator valve won't close.
    - 1) Disconnect the electrical connector from the tail shutoff valve. Coil and stow wires. This prevents opening this valve.
    - 2) On those airplanes with a non-automatic tail de-ice system, ground the wire going to pin 4 of the Tail De-Icing Timer. This will energize the solenoid to the Wing Anti-Icing Shutoff valve to close that valve.
    - 3) On those airplanes with an automatic tail de-ice system, 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.
2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 30-20-a)**

### **WINDSHIELD HEAT SYSTEM - ANTI-ICE**

#### **PLACARD**

On Forward overhead panel Install a placard "INOP" on WINDSHIELD ANTI-ICE Switch

#### **MAINTENANCE PROCEDURE**

1. Windshield Anti-Ice Inoperative:
  - A. Turn ANTI-FOG switch to ON.
  - B. Conduct hand feel check to verify anti-fog operation.

**NOTE:** Anti-fog will not turn on unless cockpit is cooled below 90°F (32.2°C).

2. Put an appropriate entry in Aircraft Technical Log Book and in the " Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 30-20-b)**

### **WINDSHIELD HEAT SYSTEM - ANTI-FOG**

#### **PLACARD**

On Forward overhead panel Install a placard "INOP" on WINDSHIELD ANTI-FOG Switch

#### **MAINTENANCE PROCEDURE**

##### 1. Windshield Anti-Fog Inoperative:

- A. Turn ANTI-ICE switch to ON.
- B. 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.

##### 2. Put an appropriate entry in Aircraft Technical Log Book and in the " Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 30-28**

### **GALLEY DRAIN MAST HEATERS**

#### **PLACARD**

Placard "INOP" respective faucets.

#### **MAINTENANCE PROCEDURE**

1. Galley Drain Mast Heaters Inoperative:

- A. Disconnect and plug drain line from affected galley at the sink.
- B. Shut off water supply to affected galley and plug sink drain.

**NOTE:** If affected Drain Mast Heat is associated with a galley, Ice Blu Drawer drain should also be plugged, as appropriate.

2. Put an appropriate entry in Aircraft Technical Log Book and in the " Elenco Anomalie Compatibili".



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## **MEL - MAINTENANCE PROCEDURE N° 32-6**

### **BRAKE TEMPERATURE SENSOR**

#### **ALITALIA EXPERIENCE**

#### **PLACARD**

In flight compartment placard below brake temperature indicator/selector module as follows:  
"L/O OR L/I BRAKE TEMPERATURE INOP" For left landing gear and/or  
"R/O OR R/I BRAKE TEMPERATURE INOP" For right landing gear

#### **MAINTENANCE PROCEDURE**

1. The following procedure is applicable when one brake temperature sensor on each main gear is inoperative to permit normal a/c dispatchability as required by MD80 M.E.L.

NOTE: One failed open temperature sensor precludes the brake temperature indication in ALL position of the selector on brake temperature selector indicator module.

- A. Disconnect connector from affected (failed open) brake temperature sensor. Install a jumper from pin A to pin B of disconnected connector. Cap and stow the jumpered connector.

LH		RH	
OUT	INB	INB	OUT
P1-331	P1-332	P1-330	P1-329

2. Put an applicable entry in the Aircraft Technical Log Book and in the Elenco Anomalie Compatibili.

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## **MEL - MAINTENANCE PROCEDURE N° 32-8**

### **PARKING BRAKES ON ANNUNCIATOR SYSTEM**

#### PLACARD

On annunciator panel, apply a placard "PARKING BRAKE ON INOP".

#### MAINTENANCE PROCEDURE

1. PARKING BRAKE ON light OFF with parking brakes set:
  - A. Chock aircraft wheels.
  - B. Release parking brake.
  - C. Place ANTI-SKID switch to ARM.
  - D. Open (pull) PARKING BRAKE CONTROL circuit breaker (B1-216).
  - E. Verify all ANTI-SKID lights illuminate.
  - F. Close (reset) PARKING BRAKE CONTROL circuit breaker (B1-216).
  - G. Verify all ANTI-SKID lights are off.
2. PARKING BRAKE ON light ON with parking brakes released:
  - A. Chock aircraft or set parking brakes.
  - B. Open (pull) PARKING BRAKE CONTROL circuit breaker (B1-216).
  - C. Place ANTI-SKID switch to OFF.
  - D. Proceed as follows:
    - 1) On aircraft with parking brake switch (S1-130) wired directly to dual control valves (S2-9 thru S2-12) and to takeoff warning horn
      - a. Disconnect connector from parking brake switch (S1-130) and jumper connector pin A to pin B and pin G to pin H
    - 2) N/A
    - 3) N/A
  - E. Place ANTI-SKID switch to ARM.
  - F. Verify all ANTI-SKID lights illuminate.
  - G. Close (reset) PARKING BRAKE CONTROL circuit breaker (B1-216).

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H. Verify PARKING BRAKES ON light and ANTI-SKID lights are off.

NOTES: If the above procedures are unsuccessful the anti-skid system should be considered inoperative. See Item 32-4.

NOTES: With failures in the parking brake light circuit, parking brakes may not set unless ANTI-SKID switch is placed to OFF.

NOTES

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## **MEL - MAINTENANCE PROCEDURE N° 33-4 c)**

### **PASSENGER INFORMATION SYSTEM "NO SMOKING/FASTEN SEAT BELT/ RETURN TO CABIN" SIGNS** **ALITALIA EXPERIENCE**

#### **PLACARD**

Conspicuous signs or placards "DO NOT OCCUPY/NON OCCUPARE" or/and "DO NOT ENTER/VIETATO ENTRARE" shall be placed in appropriate locations to indicate seats which are not to be occupied by passengers or cabin attendants and/or affected lavatory.

#### **MAINTENANCE PROCEDURE**

1. Tapes or ropes of conspicuous contrasting colors must be installed to block access to unusable seats and affected lavatory door should be blocked closed prior to boarding of passengers.
2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 33-29**

### **OVERHEAD ANNUNCIATOR PANEL LIGHT POSITIONS**

#### **PLACARD**

Placard annunciator light position in affected locations "INOP".

#### **MAINTENANCE PROCEDURE**

1. Use applicable Wire Diagram Manual (WDM) for the airplane tail/fuselage number to verify affected annunciator light position is deactivated or unused (does not monitor any system) in the current configuration of affected aircraft.
2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".



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## **MEL - MAINTENANCE PROCEDURE N° 34-09**

### **RAT AIR TEMPERATURE (RAT) / THRUST RATING SYSTEM**

#### **PLACARD**

Put a placard " EPR Limit Mode INOP" near the Thrust Rating Panel (TRP)

#### **MAINTENANCE PROCEDURE**

1. RAT Portion of RAT/Thrust Rating System (Series 30, 40, 50, 80) inoperative:
  - A. Evaluate the effect of the inoperative component on related system.
2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 34-23-a)**

### **RADIO ALTIMETER SYSTEM – RECEIVER/TRASMITTER UNIT**

#### **PLACARD**

Put a placard “R/A 1 INOP and/or R/A 2 INOP” on the right-hand side of the affected PFD's.

#### **MAINTENANCE PROCEDURE**

1. Receiver/Trasmitter (R/T) Unit Inoperative.

**NOTE:** Inoperative N° 1 R/A renders the GPWS inoperative.

**NOTE:** If the two R/A's are inoperative the GPWS and TCAS are inoperative.

- A. Pull and collar affected Radio Altimeter circuit breaker :  
RADIO ALTIMETER R/T-1 (B1-105) and/or RADIO ALTIMETER R/T-2 (B1-106).

2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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### **MEL - MAINTENANCE PROCEDURE N° 34-36**

**(ORIGINATED BY ALITALIA - SEXTANT GNSS/HFDS MMEL Z1305425-065)**

**HEAD-UP FLIGHT DISPLAY SYSTEM - OPTICAL PROJECTOR UNIT (LEFT CANOPY)**  
**COMBINER OPTICAL UNIT (LEFT CANOPY)**  
**MOUNTING TRAY (LEFT CANOPY)**

#### **PLACARD**

Put a placard "HFDS INOP" on the Head-Up Control Panel (HCP).

#### **MAINTENANCE PROCEDURE**

1. If OPU is removed, perform the follow:
  - A. Remove the Combiner Optical Unit (COU).
  - B. Install the Mounting Tray cover P/N 59810591.
2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

<b>Alitalia</b> MD-80 <small>Compagnia Aerea Italiana</small> <b>MEL PROCEDURES MANUAL</b>	<b>MAINTENANCE PROCEDURES</b> <b>34-NAVIGATION</b>	Rev. <b>0</b>	02-34-4 20 MAR 09
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**MEL - MAINTENANCE PROCEDURE N° 34-36-a)**  
**(ORIGINATED BY ALITALIA - SEXTANT GNSS/HFDS MMEL Z1305425-065)**

**HEAD-UP FLIGHT DISPLAY SYSTEM -HFDS CAUTION LIGHT (HCL)**

**PLACARD**

Put a placard "HFDS CAUTION LIGHT INOP" on Head-up Control Panel.

**MAINTENANCE PROCEDURE**

1. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 34-43-a)**

### **TRAFFIC ALERT/COLLISION AVOIDANCE SYSTEM (TACS) – TCAS SYSTEM**

#### **PLACARD**

Put a placard "TCAS INOP" on ATC/TCAS Control Panel.

#### **MAINTENANCE PROCEDURE**

1. Traffic Alert/Collision Avoidance System inoperative:
  - A. Pull and collar TCAS computer circuit breaker (B10-456).
  - B. Deselect TCAS on the Mode S/TCAS Control Unit.
2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 34-44**


### **WINDSHEAR ALERTING AND GUIDANCE SYSTEM**

#### **PLACARD**

Put a PLACARD "INOPERATIVE" below Captain and First Officer's WINDSHEAR WARNING & CAUTION LIGHTS.

#### **MAINTENANCE PROCEDURE**

1. Windshear Alerting and Guidance System (WAGS) inoperative:
  - A. Pull and collar WAGS computer circuit breaker (B10-436 - WINDSHEAR COMPUTER) - position L7.
2. Make an applicable entry in the "Aircraft Technical Log Book" and in the "Elenco delle Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 34-53**

### **LOW VISIBILITY OPERATIONS CAPABILITY**

#### **MAINTENANCE PROCEDURE**

#### **TO DOWNGRADE AIRPLANE APPROACH CAPABILITY FOLLOWING A NON SATISFACTORY CAT III A/B APPROACH**

1. Send a telex to Ingegnere di Servizio and Troubleshooting Department containing the following data:

- Airplane registration mark
- Date
- Flight Number
- Airport
- Actual weather condition and autoland system
- Referenced Aircraft Technical Log Book

The telex layout is present on ARCO system

2. Take actions as per AMM to fix the fault :

A- If the failure is CONFIRMED and:

- a) following components replacements the Return To Service is GO, dispatch the airplane.
- b) the fixing of fault is NOT possible OR the Return To Service is NO GO following components replacements, downgrade the airplane to CAT II NO AUTOLAND and dispatch it as per applicable MEL with the opening of relevant Anomalia Compatibile

B- If the failure is NOT CONFIRMED, downgrade the airplane to CAT II NO AUTOLAND and dispatch it as per applicable MEL with the opening of relevant Anomalia Compatibile. Furthermore, request a Simulated CAT III A/B approach inserting on the Aircraft Technical Log Book the following entry " PLEASE PERFORM CAT III A/B APPROACH AND FILL-OUT ALL DATA IN REMARKS BOX"

#### **TO RE-QUALIFY AIRPLANE APPROACH CAPABILITY**

1. Check for the CAT III A/B Simulated approach result in the proper remarks box of the Aircraft Technical Log Book :

- A- If the result is SATISFACTORY, remove the Anomalia Compatibile and re-qualify the airplane approach capability to CAT III A/B. Send a telex to Ingegnere di Servizio and Troubleshooting Department to notify the airplane re-qualification.
- B- If the result is NOT SATISFACTORY, keep the airplane approach capability downgraded to CAT II NO AUTOLAND. Advice and cooperate with the Troubleshooting Department to take all the actions needed to re-qualify the airplane. Remove the Anomalia Compatibile and re-qualify the airplane approach capability to CAT III A/B. Send a telex to Ingegnere di Servizio and Troubleshooting Department to notify the airplane re-qualification.



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## **MEL - MAINTENANCE PROCEDURE N° 35-2**

### **PASSENGER OXYGEN SYSTEM**

#### **PLACARD**

In cockpit, put a placard "PASSENGER OXYGEN SYSTEM INOP" near OXY MASK EJECT switch.

#### **MAINTENANCE PROCEDURE**

1. Inform "FLIGHT DISPATCH" that the flight must be limited to FL 100 or below.
2. Make an entry in the Technical Log Book and put a note in the "Elenco delle Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 35-2-a**

### **PASSENGER OXYGEN SYSTEM - AUTOMATIC DOOR OPENING FUNCTION**

#### **PLACARD**

Placard the blocked off seats "INOPERATIVE/DO NOT USE - INOPERATIVA/NON USARE"

or

Install a placard "AUTO OPEN. FUNCTION INOP" in cockpit, next to OXY MASK EJECT switch.

#### **MAINTENANCE PROCEDURE**

1. Auto Opening Function Inoperative - All doors open with cabin altitude less than 14000 ft MSL:
  - A. Remove the ground wire from terminal X2 of oxygen mask eject relay R2-315. This relay is located in E&E Compartment Stairwell Relay panel.
  - B. Close door and reopen using OXY MASK EJECT switch.
  - C. Block seats for any doors which did not open.
  - D. Close remaining doors.
  - E. Placard the blocked off seats "INOPERATIVE/DO NOT USE - INOPERATIVA/NON USARE".
  - F. Inform "FLIGHT DISPATCH" that the flight must be limited to FL 300 or below.
  - G. Make an entry in the Technical Log Book and put a note in the "Elenco delle Anomalie Compatibili".
2. Auto Opening Function Inoperative - Doors will not open automatically.
  - A. Open doors using OXY MASK EJECT switch.
  - B. Block seats for any doors which did not open.
  - C. Close remaining doors.
  - D. Placard the blocked off seats "INOPERATIVE/DO NOT USE - INOPERATIVA/NON USARE".
  - E. Install a placard "AUTO OPEN. FUNCTION INOP" in cockpit, next to OXY MASK EJECT switch.
  - F. Inform "FLIGHT DISDPATCH" that the flight must be limited to FL 300 or below.
3. Make an entry in the Technical Log Book and put a note in the "Elenco delle Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 35-2-c**

### **PASSENGER OXYGEN SYSTEM - PASSENGER OXYGEN MASK ACCESS DOOR LATCH**

#### **PLACARD**

Placard the blocked off seat ☐ INOPERATIVE/DO NOT USE - INOPERATIVA/NON USARE"

#### **MAINTENANCE PROCEDURE**

1. Individual door(s) inoperative in the unlatched condition.
  - A. No flight altitude limitations.
    - (1) Block off affected seat(s).
    - (2) Close inoperative door(s) and secure it using adhesive tape.
    - (3) Make an entry in "Technical Log Book", and put a note in the "Elenco delle Anomalie Compatibili".
  - B. Flight altitude limited to FL 300 or below.
    - (1) Using adhesive tape, secure door(s) in the close position in a manner which will allow quick access by passengers in the event oxygen is required.
    - (2) Inform FLIGHT DISPATCH that the flight must be limited to FL 300 or below.
    - (3) Make an entry in "Technical Log Book", and put a note in the "Elenco delle Anomalie Compatibili".
2. Individual door(s) inoperative in the latched condition.
  - A. Block off affected seat(s).
  - B. If two or more inoperative doors are adjacent (forward and aft, left and right), seat rows forward and aft of the inoperative doors are also blocked.
3. Make an entry in "Technical Log Book", and put a note in the "Elenco delle Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 35-2-d**

### **PASSENGER OXYGEN SYSTEM – PSU OXYGEN GENERATOR/CONTAINER**

#### **PLACARD**

placard affected Doors appropriately. "INOPERATIVE/DO NOT USE - INOPERATIVA/NON USARE"..

#### **MAINTENANCE PROCEDURE**

1. Block off affected seats and placard door(s)
2. Make an entry in the Technical Log Book and put a note in the "Elenco delle Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 35-2-e**

### **PASSENGER OXYGEN SYSTEM - LAVATORY OXYGEN**

#### **PLACARD**

Placard lavatory door "INOPERATIVE/DO NOT USE - INOPERATIVA/NON USARE"..

#### **MAINTENANCE PROCEDURE**

1. Close and lock the associated lavatory door.
2. Make an entry in the Technical Log Book and put a note in the "Elenco delle Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 35-4**

### **FIRST AID PORTABLE OXYGEN BOTTLE (11 CUFT FITTED WITH DISPOSABLE MASK - CABIN)**

#### **PLACARD**

Put a placard quoting ☐ OXY BTL MISSING" near bottle location.

#### **MAINTENANCE PROCEDURE**

1. Tag the inoperative bottle "INOPERATIVE/DO NOT USE - INOPERATIVO/NON USARE", remove it from the installed location and place out of sight so it can not be mistaken for a functional unit.

**ATTENTION:** PUT THE INOPERATIVE UNIT INTO AN OVERHEAD STOWAGE BIN, OR INTO ANOTHER AVAILABLE STORAGE COMPARTMENT, FAR FROM ORIGINAL LOCATION.

2. Ascertain that serviceable bottles are uniformly distributed in cabin and that one serviceable bottle, fitted with disposable mask, must be available for each unit (or part of unit) of 50 passenger.
3. Make an entry in the Technical Log Book and put a note in the "Elenco delle Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 35-5**

### **PROTECTIVE BREATHING EQUIPMENT - SMOKE HOOD**

#### **PLACARD**


Put a placard quoting "OXY BTL MISSING" near bottle location.

#### **MAINTENANCE PROCEDURE**

1. A. Tag the inoperative smoke hood ☐ INOPERATIVE/DO NOT USE - INOPERATIVO/NON USARE", remove it from the installed location and place out of sight so it can not be mistaken for a functional unit.

**ATTENTION:** PUT THE INOPERATIVE UNIT INTO AN OVERHEAD STOWAGE BIN, OR INTO ANOTHER AVAILABLE STORAGE COMPARTMENT, FAR FROM ORIGINAL LOCATION.

2. B. Ascertain that serviceable Smoke Hoods are uniformly distributed in cabin and that one serviceable unit is available for each required Cabin Attendant (as defined in the Manuale Operativo).
3. C. Make an entry in the Technical Log Book and put a note in the "Elenco delle Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 36-4**

### **AUGMENTATION VALVE**

### **ALITALIA EXPERIENCE**

#### **PLACARD**

Placard the affected Air Foil Ice Protect Sys switch with "DO NOT USE L(R) PNEU SYS FOR ICE PROTECTION".

#### **MAINTENANCE PROCEDURE**

1. Placard the affected Air Foil Ice Protect Sys switch with "DO NOT USE L(R) PNEU SYS FOR ICE PROTECTION".
2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 36-5**

### **EIGHT STAGE PNEUMATIC CHECK VALVE**

#### **ALITALIA EXPERIENCE**

#### **PLACARD**

Placard crossfeed valve "DO NOT OPEN".

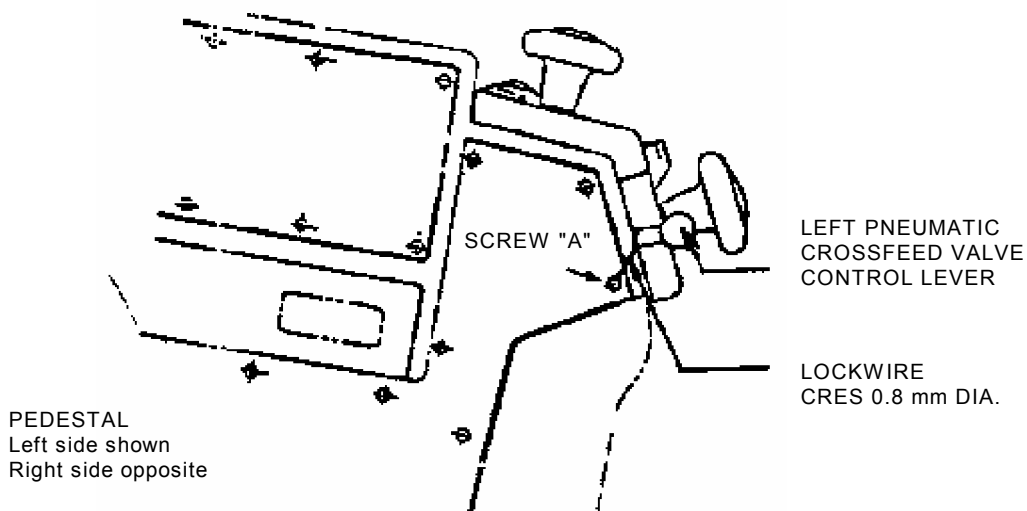
Put a placard in flight compartment quoting "8° STG CHK VLV INOP".

#### **MAINTENANCE PROCEDURE**

1. Eighth Stage Pneumatic Check Valve failed:
  - A. Remove upstream V-band clamp from check valve.
  - B. Insert plate P/N AZ 24401 between check valve flange and 8th stage manifold flange.
  - C. Install removed V-band clamp on check valve and tighten to a torque of 70 inch pounds.

**CAUTION:    SINCE THIS PROCEDURE CAUSES DAMAGES TO V-BAND CLAMP, WHEN THE FAILURE IS ELIMINATED, IT WILL BE NECESSARY TO REPLACE DEFORMED V-BAND CLAMP.**

- D. Place affected pneumatic crossfeed valve closed and placard it "DO NOT OPEN".
  - E. Select affected air conditioning supply switch OFF and secure it by lockwire to "A" screw on pedestal as show on figure.
2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".



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## **MEL - MAINTENANCE PROCEDURE N° 36-6**

### **GROUND CONNECTION AND PNEUMATIC CHECK VALVE**

#### **ALITALIA EXPERIENCE**

#### **PLACARD**

Placard CROSS-FEED valves levers "DO NOT MOVE FROM CLOSE POS."

Placard APU AIR switch "APU PNEU SYS INOP".

Placard AIR FOIL switch "DO NOT USE".

#### **MAINTENANCE PROCEDURE**

1. Ground Connection and Pneumatic Valve inoperative open.
  - A. Put the valve lever in the CLOSE position.
  - B. Put "APU AIR" switch in OFF position.
  - C. Put "AIR FOIL" switch in OFF position.
2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 36-7**

### **PNEUMATIC CROSSFEED VALVE**

**DC9 MPM R. 17**  
**ALITALIA EXPERIENCE**

#### **PLACARD**

Placard the valve quadrant in aft pedestal "LOCKED CLOSED".

#### **MAINTENANCE PROCEDURE**

1. Pneumatic Crossfeed Valve inoperative:

**NOTE:** Valve will have to be temporarily opened to allow APU to start affected engine upon pilot's instruction.

- A. After engine start, disconnect pushrod at the valve. Secure crossfeed valve in closed position by wire-locking the butterfly actuating arm to the mechanical stop. Stainless steel lock wire diameter: 0,8 mm. minimum.

2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 36-8**


### **AIR CONDITIONING SUPPLY 570° F THERMOSTAT**

#### **PLACARD**

On overhead AIR COND PNL Install a placard "AIR CONDITIONING SUPPLY 570° F THERMOSTAT INOP".

#### **MAINTENANCE PROCEDURE**

1. One or both Air Conditioning Supply 570° Thermostat(s) inoperative in OPEN position:
  - A. Disconnect air conditioning pilot pressure regulator sense line from 570°F thermostat.
  - B. Cap and secure sense line.
  - C. Cap thermostat.
2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 38-1 (Cod Trim 481)**

### **POTABLE WATER SYSTEMS**

#### **PLACARD**

As appropriate

#### **MAINTENANCE PROCEDURE**

**NOTA:** The Potable Water System may still be used with failed components provided affected components are isolated from the rest of the system. The following guidelines may be used along with the appropriate MD80 AMM section 38-11-00 to isolate unusable portions of the system.

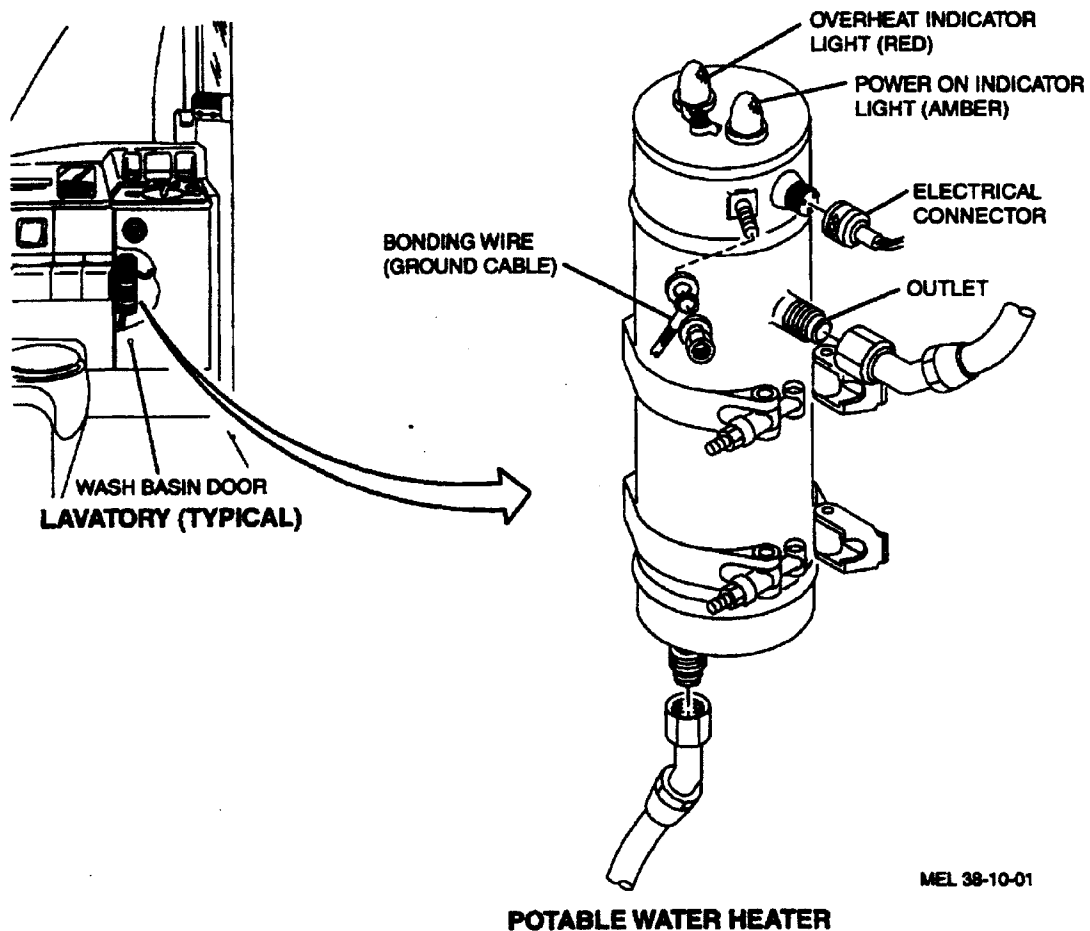
**NOTA:** any system leakage must be cleaned up prior to subsequent dispatch.

1. Dispatch with undetermined supply line leak or blockage, or other failure which would render entire system unusable:
  - A. Drain potable water tank per instructions of the appropriate MD80 AMM section 38-11-00
  - B. Placard all lavatories and galleys appropriately so as to prevent their use.
2. Dispatch with supply line leak or blockage which affects water supply to entire system (i.e. supply line leak, overboard drain valve failure, water line heater failure, etc.)
  - A. Drain potable water tank per instructions of the appropriate MD80 AMM section 38-11-00.
  - B. Placard lavatory/galley sink faucets and toilets appropriately so as to prevent their use

**NOTA:** sink drains may still be used provided drain mast heaters are operative. Bottled water may be substituted for potable tank supply.
3. Dispatch with supply line leak or blockage which affects supply to one outlet (toilet, sink, coffee maker, etc.):
  - A. Manually close the supply valve closest upstream of the affected area. Each lavatory and galley has a supply valve which may be closed to isolate that area.
  - B. Placard affected lavatory or galley appropriately so as to prevent its use
4. Dispatch with failed lavatory water heater:
  - A. If lavatory water is too hot, pull and collar associated lavatory water heater circuit breaker.
  - B. Placard hot water supply inoperative

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5. Make an applicable entry in "Aircraft Technical Logbook", "Aircraft Cabin Logbook" and in "Elenco Anomalie Compatibili".



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## **MEL - MAINTENANCE PROCEDURE N° 38-1 (Cod Trim 482)**

### **POTABLE WATER SYSTEMS**

#### **ALITALIA EXPERIENCE**

#### **PLACARD**

Put a placard "WATER SYSTEM INOPERATIVE - DO NOT FILL" on external service panel located on the left side of the aircraft between the forward passenger door and wing

#### **MAINTENANCE PROCEDURE**

1. Potable water system inoperative:
  - A. Drain potable water tank per instructions of the appropriate MD80 AMM section 38-11-00
2. Make an applicable entry in "Aircraft Technical Logbook", "Aircraft Cabin Logbook" and in "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 38-2**

### **LAVATORY WASTE SYSTEM**

#### **PLACARD**

As appropriate

#### **MAINTENANCE PROCEDURE**

**NOTA:** any lavatory which functions normally may still be used provided failed components are isolated from the rest of the system, and inoperative lavatories are placarded appropriately.

**NOTA:** any waste system leakage must be cleaned up prior to subsequent dispatch.

1. Dispatch with undetermined lavatory waste line leak or blockage, or other failure which would render entire system unusable:
  - A. drain waste tank per instructions of the appropriate MD80 AMM, section 12-14-02.
  - B. Placard all lavatories and galleys appropriately so as to prevent their use.
2. Dispatch with individual toilet components inoperative which render the affected toilet unusable (i.e. flush control unit, rinse water valve, etc.):
  - A. Placard affected lavatory appropriately so as to prevent its use.
3. Make an applicable entry in "Aircraft Technical Logbook", "Aircraft Cabin Logbook" and in "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 49-1**

### **AUXILIARY POWER UNIT (APU)**

#### **PLACARD**

Placard the APU panel with "APU INOP".

#### **MAINTENANCE PROCEDURE**

1. Auxiliary Power Unit Inoperative:
  - A. Verify ram and both non-ram doors are closed.
  - B. Pull and collar APU Control Circuit Breaker located on Overhead Panel.
2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 49-1-b)**

### **AUXILIARY POWER UNIT (APU) - APU PNEUMATIC POWER**

#### **ALITALIA EXPERIENCE**

#### **PLACARD**

Placard the APU air switch with "APU PNEU POWER INOP".

#### **MAINTENANCE PROCEDURE**

1. APU Pneumatic Power inoperative.

**NOTE:** The following procedure must be applied when the APU Bleed Load Control Valve is inoperative. The APU Bleed Load Control Valve is normally closed when the solenoid is de-energized.

- A. Secure APU Bleed Load Control Valve in closed position by removing the solenoid connector and stow it to the close structure.
2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 49-2**

### **APU ANNUNCIATOR LIGHT SYSTEM**

#### **ALITALIA EXPERIENCE**

#### **PLACARD**

Placard the failed annunciator light "INOP".

Placard APU panel "DO NOT OPERATE APU".

#### **MAINTENANCE PROCEDURE**

1. Placard the failed annunciator light "INOP".
2. Placard APU panel "DO NOT OPERATE APU".
3. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".



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## **MEL - MAINTENANCE PROCEDURE N° 49-3**

### **APU FIRE CONTROL SWITCH**

#### **ALITALIA EXPERIENCE**

#### **PLACARD**

Placard the APU FIRE CONT SWITCH "INOP".

Placard APU panel "DO NOT OPERATE APU".

#### **MAINTENANCE PROCEDURE**

1. Placard the APU FIRE CONT SWITCH "INOP".
2. Placard APU panel "DO NOT OPERATE APU".
3. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 49-5**

### **APU EGT INDICATING SYSTEM**

#### **ALITALIA EXPERIENCE**

#### **PLACARD**

Placard the APU panel "DO NOT OPERATE APU".

Placard the APU EGT indicator "INOP".

#### **MAINTENANCE PROCEDURE**

1. Placard the APU panel "DO NOT OPERATE APU".
2. Placard the APU EGT indicator "INOP".
3. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 49-8**

### **APU BLEED LOAD CONTROL VALVE**

#### **PLACARD**

Placard the APU panel with "LOAD VLV INOP".

#### **MAINTENANCE PROCEDURE**

1. APU Bleed Load Control Valve inoperative:
  - A. Verify valve is in closed position as indicated by no airflow to pneumatic system with APU operating. This may be accomplished by observing a zero pressure indication on the pneumatic manifold pressure gage located on the cockpit overhead panel.
  - B. Remove electrical connector from load control valve solenoid and secure connector to adjacent structure.
2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 49-9**

### **APU AIR INLET DOOR ACTUATOR**

#### **PLACARD**

Placard he INLET DOOR switch on overhead panel with "INOP CLOSED (OPEN)".

#### **MAINTENANCE PROCEDURE**

**NOTE:** With ram door secured closed and non-ram doors open, APU may be started electrically but cannot be windmill started.

1. APU Air Inlet Door inoperative:

A. APU operation required:

- (1) Secure actuator in position with ram door closed and non-ram doors open.

B. APU operation not required:

- (1) Secure actuator in position with ram door closed (Non-ram doors may be open or closed).

**NOTE1:** APU windmilling may cause oil transfer to APU gear case. Therefore, run APU to transfer oil back to tank before checking oil level.

**NOTE2:** One method of locking doors in position is described in following procedure.

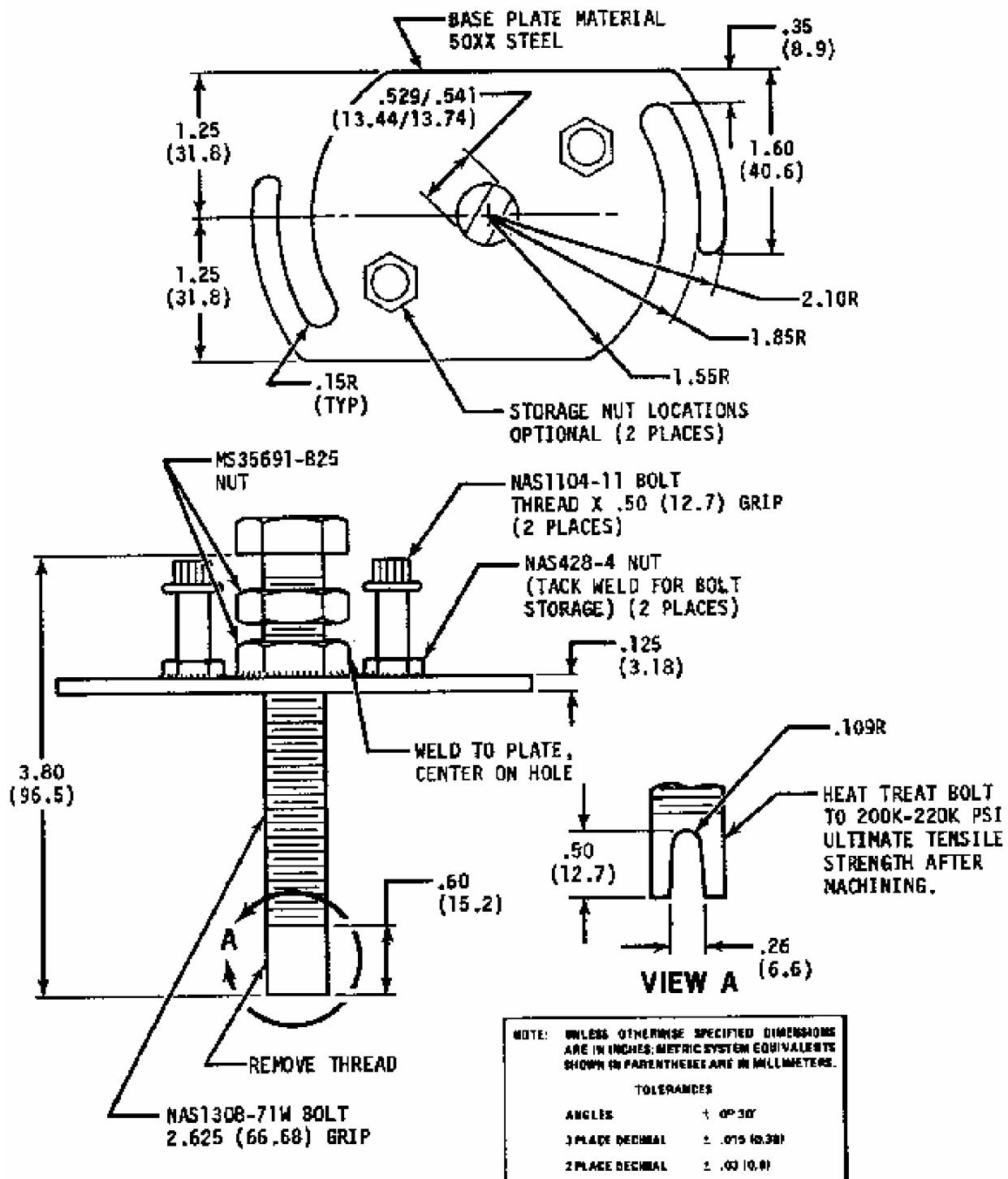
- (2) Replace the failed actuator with a inlet door locking tool by following procedure and enclosed figure.

**NOTE:** This tool has the capability of positioning and locking the inlet door shaft in any position from 0 degrees (all doors closed) to 180 degrees (ram door open). Per Minimum Equipment List (MEL), however, the mechanism must be secured in the 62 to 70 degree position (non-ram doors open) for APU operation and 0 degrees when the APU is not to be operated. Operators are reminded 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) Install the tool (See Figure 1):

- 1 Position the plate on the APU inlet box actuator mounting face by rotating the P/N NAS1308-71W bolt so P/N AN4C14A bolt traversing the inlet door drive shaft splined adapter assembly (P/N 49I6501-50I) slips into the slot machined into the end of the NAS bolt.
- 2 Rotate the P/N NAS1308-71W bolt until the plate is firm against the mount face and secure in place with two (2) p/n NAS1104-11 bolts.

- 3 Rotate the P/N NAS1308-71W bolt until inlet doors are in desired position and lock in place by tightening the floating P/N MS35691-825 nut against the anchored one. If desired, the floating nut can be lockwired if provisions are made available.
2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".



Inlet Door Locking Tool Installation  
Figure 1

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## **MEL - MAINTENANCE PROCEDURE N° 52-2**

### **MAIN ENTRANCE STAIRWAY**

#### **PLACARD**

As appropriate

- apply a placard "STAIR INOP/SCALA INOPERATIVA" near the inboard and the outboard door handle.
- apply a placard "MECHANICAL INTERLOCK INOPERATIVE/INTERBLOCCO MECCANICO INOPERATIVO" near the inboard and the outboard door handle.

#### **MAINTENANCE PROCEDURE**

1. Forward Airstairs inoperative
  - A. Stairs not removed:
    - (1) Manually stow stairs.
    - (2) Close and latch exterior stair door.
  - B. Stairs removed:
    - (1) Close and latch exterior stair door.
    - (2) Load stair or 240 lbs. of ballast in baggage bin N.1, or
    - (3) Recompute aircraft CG.
2. Mechanical interlock inoperative:
  - A. Verify stairwell door is latched after closing.
3. Make an entry in "Aircraft Technical Logbook", "Aircraft Cabin logbook" and in "Elenco Anomalie Compatibili" that Main Entrance Stairway has been visually verified latched.

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## **MEL - MAINTENANCE PROCEDURE N° 52-2-(a)**

### **MAIN ENTRANCE STAIRWAY – AFT/FWD HANDRAIL INTERLOCK SWITCH(ES)**

#### **AMM MD80 52-61-00 (F.(2))**

#### **PLACARD**

None

#### **MAINTENANCE PROCEDURE**

1. Manually retract passenger forward stairway:

**WARNING:** RESTRAIN INNER HANDRAILS FROM RETRACTING RAPIDLY. DURING LAST TWO FEET OF RETRACTION, KEEP FINGERS FROM BENEATH HANDRAIL AND RESTRAIN HANDRAIL BY HOLDING END FITTING (BANANA LINK). FAILURE TO COMPLY MAY CAUSE INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT

- A. Place external power switch to OFF.
- B. Push handrail manual release lever, pull handrail up approximately 1/4 inch (6.35 mm) to disengage detent, then manually retract handrails. Hold handrails while retracting to prevent a sudden retraction.
- C. Close passenger forward entrance door.
- D. Place detent latch in unlocked position.
- E. Stand on bottom step and pull (jerk) handrail down to disengage carriage roller from detent.
- F. Lift up on bottom step and push up and in until stairwell door starts closing.

**WARNING:** WHEN CLOSING EXTERNAL STAIR DOOR CONTROL HANDLE, DO NOT GRASP HANDLE. USE PALM OF HAND ONLY

- G. push in stairwell door until within 1/2 inch (12.7 mm) of faired. Push in external handle until stairwell door is latched, and both door and handle are flush to fuselage.
- H. Visually check from electrical/electronic compartment that stairway door is closed and latched properly.

**NOTE :** passenger entrance door cannot be locked until stairway door is closed and latched.

2. Make an entry in "Aircraft Technical Logbook", "Aircraft Cabin logbook" and in "Elenco Anomalie Compatibili" that stairway has been retracted manually



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## **MEL - MAINTENANCE PROCEDURE N° 52-3**

### **VENTRAL STAIRWAY**

#### **PLACARD**

Apply a placard "STAIR INOP/SCALA INOPERATIVA" near the inboard and the outboard handle.

#### **MAINTENANCE PROCEDURE**

1. Catwalk will not latch in the lowered position:
  - A. Secure catwalk to adjacent structure with safety wire or equivalent means.
2. Make an entry in "Aircraft Technical Logbook", "Aircraft Cabin logbook" and in "Elenco Anomalie Compatibili" that Ventral Stairway is closed and secured

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## **MEL - MAINTENANCE PROCEDURE N° 52-7**

### **DOOR WARNING LIGHTS SYSTEM**

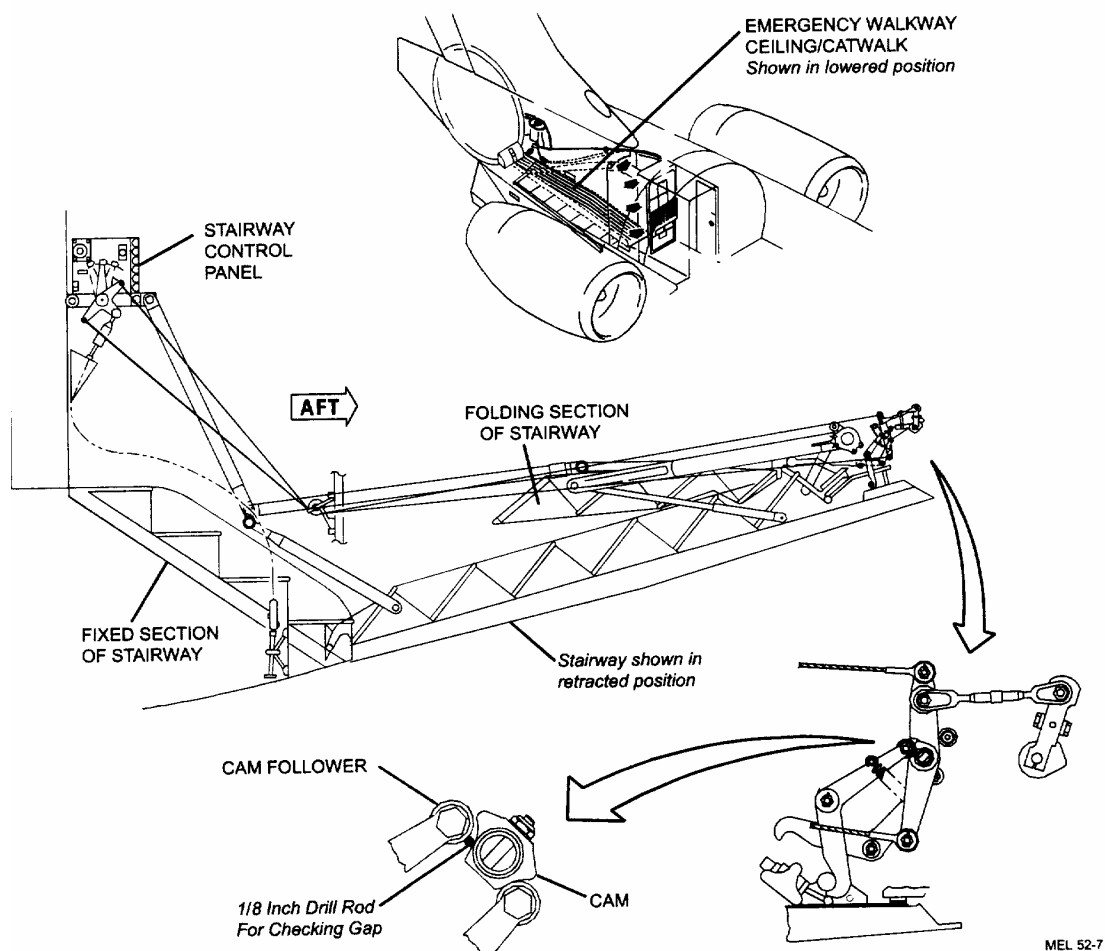
#### **PLACARD**

Apply a placard " DOOR WARNING LIGHT INOPERATIVE/LUCE AVVISO PORTA INOPERATIVA " on the lower right side of the annunciator panel.

#### **MAINTENANCE PROCEDURE**

1. Door Warning Lights inoperative:
  - A. Determine by visual inspection that affected door is closed and locked.
  - B. To determine that the passenger aft entrance stair door is locked in the closed position, verify approximately 1/8 inch gap between cam followers and cams as shown in the Figure on the following page.

**NOTE** : If the latch hooks have partially engaged the stair rollers, the gap between cam followers and cams will be approximately one inch. If the latch hooks are closed, but the stair door is not in the closed position, the gap between the cam followers and cams will be zero.
2. Make an entry in "Aircraft Technical Logbook", "Aircraft Cabin logbook" and in "Elenco Anomalie Compatibili" that Door N°... has been verified closed and locked prior to departure.



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## **MEL - MAINTENANCE PROCEDURE N° 52-9**

### **ENHANCED FLIGHT DECK SECURITY DOOR AUTOMATIC LOCKING SYSTEMS**

#### **PLACARD**

In flight deck RH side, on DCM panel (Door Control Module) apply a placard "INOP"

#### **MAINTENANCE PROCEDURE**

1. 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).

2. Put an applicable entry in "Aircraft Technical Logbook", "Aircraft Cabin Logbook" and in "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 52-9-(a)**

### **FLIGHT DECK ACCESS PANEL SYSTEM (KEYPAD, DOOR CHIME)**

#### **PLACARD**

Put a warning notice, on the LH side of the door, to tell the persons that the keypad is deactivated.

#### **MAINTENANCE PROCEDURE**

1. 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.

**NOTE** : when flight deck door is closed with the flight deck not occupied, make sure the Flight Deck Access System switch is in the OFF position (guard extended)

2. Put an applicable entry in "Aircraft Technical Logbook", "Aircraft Cabin Logbook" and in "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 52-9-(b)**

### **FLIGHT DECK DOOR LOCK FAIL LIGHT**

#### **PLACARD**

On the overhead panel apply a placard "LOCK FAIL LIGHT INOP"

#### **MAINTENANCE PROCEDURE**

1. 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).
2. Put an applicable entry in "Aircraft Technical Logbook", "Aircraft Cabin Logbook" and in "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 52-9-(c)**

### **FLIGHT DECK DOOR AUTO UNLK LIGHT**

#### **PLACARD**

On the overhead panel apply a placard "LOCK FAIL LIGHT INOP"

#### **MAINTENANCE PROCEDURE**

1. 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).
2. Put an applicable entry in "Aircraft Technical Logbook", "Aircraft Cabin Logbook" and in "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 52-9-(d)**

### **FLIGHT DECK DOOR LOCK CONTROL SELECTOR**

#### **PLACARD**

As appropriate

- put a warning notice, on the LH side of the door, to tell the persons that the keypad is deactivated.
- in flight deck RH side, on DCM panel (Door Control Module) apply a placard "LOCK CONTROL SELECTOR INOP"

#### **MAINTENANCE PROCEDURE**

1. 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.

**NOTE** : when flight deck door is closed with the flight deck not occupied, make sure the Flight Deck Access System switch is in the OFF position (guard extended)

2. For verifying automatic lock is operating normally:

- A. With the flight deck door open, supply electrical power on the airplane
- B. Position Flight Deck Access System switch NORM (guard closed).
- C. Verify the electric strike is in the locked position (solenoid pin in the electric strike will be extended up such that you can not rotate the strike).
- D. Position Flight Deck Access System switch OFF (guard extended).
- E. Verify the electric strike is in the unlocked position (solenoid pin in the electric strike will retract down such that you can rotate the strike).
- F. Position Flight Deck Access System switch NORM (guard closed).
- G. Verify the electric strike is in the locked position (solenoid pin in the electric strike will be extended up such that you can not rotate the strike).

3. Put an applicable entry in "Aircraft Technical Logbook", "Aircraft Cabin Logbook" and in "Elenco Anomalie Compatibili".



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## **MEL - MAINTENANCE PROCEDURE N° 52-10**

### **FLIGHT DECK DOOR PANEL PRESSURE RELIEF LATCHES**

#### **PLACARD**

As appropriate

#### **MAINTENANCE PROCEDURE**

1. Put an applicable entry in "Aircraft Technical Logbook", "Aircraft Cabin Logbook" and in "Elenco Anomalie Compatibili".

<b>Alitalia</b> MD-80 Compagnia Aerea Italiana <b>MEL PROCEDURES MANUAL</b>	MAINTENANCE PROCEDURES <b>52 - DOORS</b>	Rev. <b>0</b>	02-52-12 20 MAR 09
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## **MEL - MAINTENANCE PROCEDURE N° 52-14**

### **FWD CABIN AND GALLEY DOORS**


#### **ALITALIA EXPERIENCE**

#### **PLACARD**

As appropriate

#### **MAINTENANCE PROCEDURE**

1. If a Fwd Cabin or Galley Doors is inoperative provide:
  - A. Check that the aft cabin door, the walkway, the tail cone and related escape slide are operative.
  - B. The inoperative door must be closed, latched and conspicuous barrier strap or rope and a well visible notice, bearing the words "EXIT NOT OPERATIVE/USCITA NON OPERATIVA" shall be placed across the inoperative door.  
The related EXIT sign, the electroluminescent orange strips (aft galley door only) must be hidden from view.
  - C. Seats not occupied shall be in the vicinity of inoperative door. Conspicuous signs and placards quoting "DO NOT OCCUPY/NON OCCUPARE" shall be placed in appropriate locations indicating these seats are not to be occupied by passengers.
  - D. Notify to flight dispatch the unable booking seats positions.
2. Put an applicable entry in "Aircraft Technical Logbook", "Aircraft Cabin Logbook" and in "Elenco Anomalie Compatibili".

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		20 MAR 09

**DELETION OF MAINTENANCE PROCEDURES RELATED TO ITEMS:**


- 52-14 FWD and GALLEY DOOR CABIN DOOR
- 52-15 AFT CABIN DOOR/TAILCONE EXIT

Revise the subject items as follows :

**MEL- MAINTENANCE PROCEDURE N° 52-14**

**FWD CABIN AND GALLEY DOORS**

**Procedure DELETED**

 <b>MD-80</b> MEL PROCEDURES MANUAL	MAINTENANCE PROCEDURES <b>52 – DOORS</b>	T.R. 40-2 20 MAR 09
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**DELETION OF MAINTENANCE PROCEDURES RELATED TO ITEMS:**

- 52-14 FWD and GALLEY DOOR CABIN DOOR
- 52-15 AFT CABIN DOOR/TAILCONE EXIT

Revise the subject items as follows :

**MEL- MAINTENANCE PROCEDURE N° 52-15**

**AFT CABIN DOOR / TAILCONE EXIT**

**Procedure DELETED**

<b>Alitalia</b> MD-80 Compagnia Aerea Italiana <b>MEL PROCEDURES MANUAL</b>	MAINTENANCE PROCEDURES <b>52 - DOORS</b>	Rev. <b>0</b>	02-52-13 20 MAR 09
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## **MEL - MAINTENANCE PROCEDURE N° 52-15**

### **AFT CABIN DOOR/TAILCONE EXIT**


#### **ALITALIA EXPERIENCE**

#### **PLACARD**

As appropriate

#### **MAINTENANCE PROCEDURE**

1. If Aft Cabin Door/Tail Cone Exit is inoperative provide:
  - A. Check that the main cabin and galley doors and related escape slides are operative.
  - B. The door must be closed latched and conspicuous barrier strap or rope and a well visible notice, bearing the words "EXIT NOT OPERATIVE/USCITA NON OPERATIVA" shall be placed across the inoperative door.  
The related EXIT signs and electroluminescent EXIT identifiers (Floor Proximity Emergency Escape Path) must be hidden from view.
  - C. Seats not occupied shall be in the vicinity of inoperative door. Conspicuous signs and placards quoting "DO NOT OCCUPY/NON OCCUPARE" shall be placed in appropriate locations indicating these seats are not to be occupied by passengers.
  - D. Notify to flight dispatch the unable booking seats positions
2. Put an applicable entry in "Aircraft Technical Logbook", "Aircraft Cabin Logbook" and in "Elenco Anomalie Compatibili".

 <b>MD-80</b> Compagnia Aerea Italiana <b>MEL PROCEDURES MANUAL</b>	MAINTENANCE PROCEDURES <b>52 - DOORS</b>	Rev. <b>0</b>	02-52-14 20 MAR 09
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<b>Alitalia</b> MD-80 Compagnia Aerea Italiana <b>MEL PROCEDURES MANUAL</b>	MAINTENANCE PROCEDURES <b>53-FUSELAGE</b>	Rev. <b>0</b>	02-53-1 20 MAR 09
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## **MEL - MAINTENANCE PROCEDURE N° 53-1**

### **TAILCONE MISSING/UNSAFE ANNUNCIATOR SYSTEM**

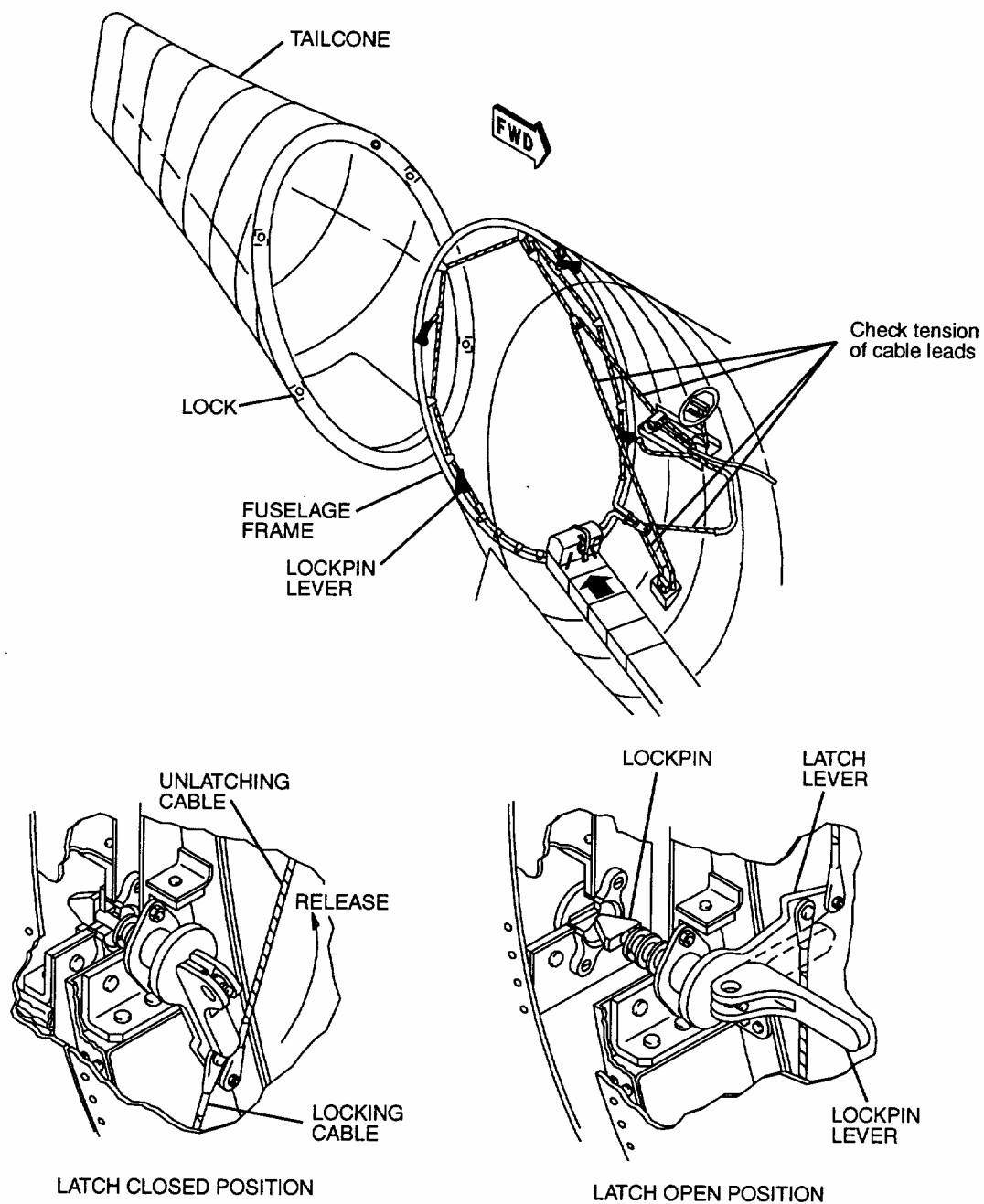
#### **PLACARD**

On Annunciator Pannel install a placard "TAILCONE ANNUNCIATOR SYS INOP"

#### **MAINTENANCE PROCEDURE**

1. Tailcone Missing Annunciator System inoperative -- dispatch into day VMC:
  - A. No additional maintenance action required.
2. Dispatch with Tailcone Missing Annunciator System inoperative in other than day VMC conditions:
  - A. Gain access to tailcone compartment.
  - B. Visually verify lockpins are seated and rotated within the lock.
  - C. 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 (ref: Douglas Maintenance Manual Chapter 53-50-03). All four leads must be taut with no evidence of slack or tendency to uncouple. Refer to figure 1 on following page.
3. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".





MEL 53-1

Figure 1 – MEL MP 53-1

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<b>Alitalia</b> MD-80 Compagnia Aerea Italiana <b>MEL PROCEDURES MANUAL</b>	MAINTENANCE PROCEDURES <b>73 -ENGINE FUEL &amp; CONTROL</b>	Rev. <b>0</b>	02-73-1 20 MAR 09
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## **MEL - MAINTENANCE PROCEDURE N° 73-4**

### **FUEL FILTER PRESSURE DROP ANNUNCIATOR SYSTEM**

#### **PLACARD**

Apply a placard "FUEL FILTER PRESSURE DROP ANNUNCIATOR SYS INOP".

#### **MAINTENANCE PROCEDURE**

1. Fuel Filter Pressure Drop Caution System inoperative:
  - A. Clean fuel Filter.
2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

<b>Alitalia</b> MD-80 <small>Compagnia Aerea Italiana</small> <b>MEL PROCEDURES MANUAL</b>	<b>MAINTENANCE PROCEDURES</b> <b>73 -ENGINE FUEL &amp; CONTROL</b>	Rev. <b>0</b>	02-73-2 20 MAR 09
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## **MEL - MAINTENANCE PROCEDURE N° 73-6-a)**

### **FUEL HEAT SYSTEM - TIMER**

#### **AZ EXPERIENCE**

#### **PLACARD**

Apply a placard "FUEL HEAT TIMER INOP" on related breaker.

#### **MAINTENANCE PROCEDURE**

1. Open "FUEL HEAT TIMER" breaker.
2. Put an applicable entry in the Aircraft Technical Log Book and in the Elenco Anomalie Compatibili.

<b>Alitalia</b> MD-80 Compagnia Aerea Italiana <b>MEL PROCEDURES MANUAL</b>	MAINTENANCE PROCEDURES <b>73 -ENGINE FUEL &amp; CONTROL</b>	Rev. <b>0</b>	02-73-3 20 MAR 09
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## **MEL - MAINTENANCE PROCEDURE N° 73-6-b)**

### **FUEL HEAT SYSTEM - VALVE**

#### **PLACARD**

Apply a placard "FUEL HEAT VALVE INOP" on the FUEL HEAT switch.

#### **MAINTENANCE PROCEDURE**

1. Fuel Heat System Valve inoperative:
  - A. Gain access to the Valve, located on the forward lower right side of the engine.
  - B. If Valve is failed open, manually close Valve by moving the external valve position indicator to the closed position.
  - C. Wire the position indicator into place to secure the Valve.
  - D. Pull and collar the appropriate circuit breakers for the affected Valve, as follows:
    - (1) Left Engine:
      - (a) FUEL HEAT LEFT CONTROL (B1-47)
      - (b) LEFT FUEL HEAT ON ADVISORY (B1-49)
    - (2) Right Engine:
      - (a) FUEL HEAT RIGHT CONTROL (B1-48)
      - (b) RIGHT FUEL HEAT ON ADVISORY (B1-50)
2. Put an applicable entry in the Aircraft Technical Log Book and in the Elenco Anomalie Compatibili.

<b>Alitalia</b> MD-80 <small>Compagnia Aerea Italiana</small> <b>MEL PROCEDURES MANUAL</b>	<b>MAINTENANCE PROCEDURES</b> <b>73 -ENGINE FUEL &amp; CONTROL</b>	Rev. <b>0</b>	02-73-4 20 MAR 09
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<b>Alitalia</b> MD-80 Compagnia Aerea Italiana <b>MEL PROCEDURES MANUAL</b>	MAINTENANCE PROCEDURES <b>76 -ENGINE CONTROLS</b>	Rev. <b>0</b>	02-76-1 20 MAR 09
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## **MEL - MAINTENANCE PROCEDURE N° 76-1**

### **AUTOMATIC ENGINE SYNCHRONIZATION SYSTEM**


#### **PLACARD**

On forward overhead panel, near Eng Sync selector apply a placard "AUTOMATIC ENGINE SYNCHRONIZATION SYS INOP".

#### **MAINTENANCE PROCEDURE**

1. Automatic Engine Synchronization System inoperative:
  - A. Place ENG SYNC Switch to OFF.
  - B. Pull and collar ENG SYNC circuit breaker.
2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".



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<b>Alitalia</b> MD-80 Compagnia Aerea Italiana <b>MEL PROCEDURES MANUAL</b>	MAINTENANCE PROCEDURES <b>78-ENGINE EXHAUST</b>	Rev. <b>0</b>	02-78-1 20 MAR 09
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## **MEL - MAINTENANCE PROCEDURE N° 78-1**

### **THRUST REVERSER SYSTEM (INCLUDES ACCUMULATORS AND REVERSER ACCUM LOW ANNUNCIATOR)**

#### **PLACARD**

Apply a placard "L or R T/R SYS INOP" near the thrust reverser lever on pedestal.

#### **MAINTENANCE PROCEDURE**

1. Visually verify Thrust Reverser Doors are fully closed. When properly closed, upper and lower doors should be faired at the leading edge, and Engine Reverse Unlock Light will be extinguished.

**NOTE:** If Reverser Doors are not fully closed, attempt to restow the affected Thrust Reverser by cycling the affected Reverse Thrust Lever (with hydraulic power available) from forward idle, to reverse, and back to forward idle.

**NOTE:** If Reverser Doors appear to be faired but Engine Reverse Unlock Light does not extinguish, refer to MMEL Item 78-2 for dispatch relief requirements for the Engine REVERSER UNLOCK Light Indicating System (Standard Flight Deck).

2. Visually verify that the overcenter links on both sides of the affected Reverser are over center

**NOTE:** The links, carriage, and other Thrust Reverser actuation hardware can be viewed in the vicinity of the aft Stang Fairings and through access holes in the Beam assembly. Refer to the figure on the following page.

3. Visually inspect all visible portions of the driver links, idler links, overcenter links, carriage assembly, beam assembly, and guide rods, for integrity and security as follows:
  - A. Verify none of the above hardware is fractured or cracked.
  - B. Ensure all bolt and nut attachments, including cotter pins or other attachment retention devices, between links, carriage assembly, and beam are present.
  - C. Verify the carriage assembly is attached to the guide rods and that the guide rods are not bent.

**NOTE:** If damage to any of the above components is detected, or if affected reverser fails to properly stow, refer to DC-9 / MD-80 Maintenance Manual for appropriate repair instructions prior to further flight.

<b>Alitalia</b> MD-80 Compagnia Aerea Italiana <b>MEL PROCEDURES MANUAL</b>	<b>MAINTENANCE PROCEDURES</b> <b>78-ENGINE EXHAUST</b>	Rev. <b>0</b>	02-78-2 20 MAR 09
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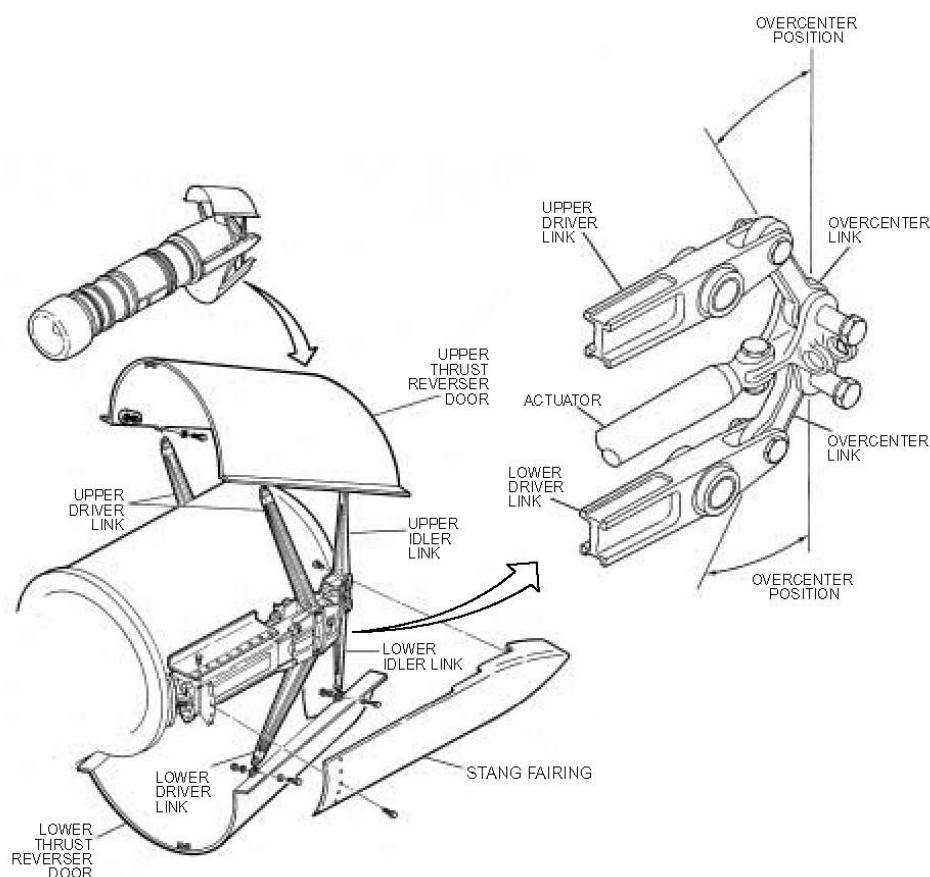


Figura1

4. Deactivate affected reverser as follows:
  - A. Open the Reverser Hydraulic Control Valve Access Door.
  - B. Pull Control Valve Handle out to Dump position and hold.
  - C. Insert lockpin to retain the handle in the Dump position. Secure lockpin in place using safety retaining pin (if installed) or with lockwire.
  - D. Close Access Door.

5. N/A

**NOTE:** Gain access to accumulator and verify there are no external leakage in associated accumulator.

6. Pull and collar affected Reverser Accumulator Low Pressure Caution circuit breaker.
7. Secure affected Thrust Reverser Lever to throttle in stowed position using plastic straps or safety wire or tape, to prevent inadvertent lever movement.

**NOTE:** On airplanes with RTO Auto Spoilers installed, affected Reverser Lever may remain unsecured, so as to allow for use of Auto Spoiler RTO Mode. If Reverser Lever is subsequently moved, repeat steps 1 through 3 above prior to further dispatch, to ensure Reverser remains stowed.

8. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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## **MEL - MAINTENANCE PROCEDURE N° 78-2**

### **ENGINE REVERSER UNLOCK LIGHT INDICATING SYSTEM**

#### **AZ EXPERIENCE**

#### **PLACARD**

On central panel, apply a placard "L or R REV UNLOCK LIGHT INOP" on the related light.

#### **MAINTENANCE PROCEDURE**

1. "ENG REV UNLOCK" light inoperative:
  - A. Move thrust reverser lever to T/R position and make sure that T/R doors are opened (T/R deployed). When T/R is deployed, check for security of installation and for loose or missing fasteners of the two mechanical latching brackets (one on the upper T/R door and other on the lower T/R door) of the relative T/R.

**CAUTION:** IF FAILURE IS FOUND, DEACTIVATE T/R PER MEL 78-1

- B. Move thrust reverser lever to positive thrust position and check that the T/R doors are closed and locked (T/R stowed).
  - C. Following each Reverser Actuation:
    - (1) Verify affected upper and lower T/R doors are faired at leading edge.
    - (2) Verify that the over-center links are over center.
2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

<b>Alitalia</b> MD-80 <small>Compagnia Aerea Italiana</small> <b>MEL PROCEDURES MANUAL</b>	<b>MAINTENANCE PROCEDURES</b> <b>78-ENGINE EXHAUST</b>	Rev. <b>0</b>	02-78-4 20 MAR 09
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## **MEL - MAINTENANCE PROCEDURE N° 78-3**

### **ENGINE REVERSER THRUST LIGHT INDICATING SYSTEM**

#### **PLACARD**

Apply a placard "L or R or BOTH ENG REVERSE THRUST LIGHT INOP"..

#### **MAINTENANCE PROCEDURE**

1. Engine Reverser Thrust Light inoperative:
  - A. Ascertain that reverser lever cannot be actuated past interlock stop until reversers are deployed.
2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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<b>Alitalia</b> MD-80 <small>Compagnia Aerea Italiana</small> <b>MEL PROCEDURES MANUAL</b>	<b>MAINTENANCE PROCEDURES</b> <b>79-OIL</b>	Rev. <b>0</b>	02-79-1 20 MAR 09
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## **MEL - MAINTENANCE PROCEDURE N° 79-3**

### **OIL QUANTITY INDICATING SYSTEM**

#### **PLACARD**

On central instrument panel, apply a placard "OIL QTY IND SYS INOP".

#### **MAINTENANCE PROCEDURE**

1. Engine Oil Quantity Indicating System inoperative:
  - A. Check (visual or dipstick) oil quantity within 30 minutes of shutdown.
  - B. Check airplane flight log and maintenance records to make sure oil consumption is within limits.
2. Put an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".



<b>Alitalia</b> MD-80 Compagnia Aerea Italiana <b>MEL PROCEDURES MANUAL</b>	MAINTENANCE PROCEDURES <b>79-OIL</b>	Rev. <b>0</b>	02-79-2 20 MAR 09
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## **MEL - MAINTENANCE PROCEDURE N° 79-5**

### **OIL STRAINER CLOGGING ANNUNCIATOR SYSTEM**

#### **PLACARD**

On annunciator panel, apply a placard "L or R OIL STRAINER CLOGGING LIGHT INOP" on the related light.

#### **MAINTENANCE PROCEDURE**

1. Engine L or R OIL STRAINER CLOGGING caution light inoperative:
  - A. Inspect and clean Main Oil Filter/Strainer.
  - B. If Annunciator is illuminated continuously or becomes intermittent, consider removing connector from associated engine oil differential pressure switch, and coil/stow connector appropriately.
  - C. Check Main Oil Filter/Strainer at least once each flight day.
2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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<b>Alitalia</b> MD-80 Compagnia Aerea Italiana <b>MEL PROCEDURES MANUAL</b>	MAINTENANCE PROCEDURES <b>80-STARTING</b>	Rev. <b>0</b>	02-80-1 20 MAR 09
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## **MEL - MAINTENANCE PROCEDURE N° 80-1**

### **START VALVE OPEN ANNUNCIATOR SYSTEM**

#### **PLACARD**

Placard the ANNUNCIATOR PANEL with "STARTER VALVE OPEN LIGHT INOP".

#### **MAINTENANCE PROCEDURE**

1. START VALVE OPEN Annunciator inoperative OFF (not illuminated when start valve is open):
  - A. Start affected engine.
  - B. Check that starter valve closes after engine start.
  - C. If starter valve remains open, deactivate the start valve as follows:
    - (1) Disconnect the control air line at the valve port.
    - (2) Install a plug in the control air line and secure the control air line.
    - (3) Install a cap on the start valve control air port.
    - (4) Close valve using manual override handle located on valve.
2. START VALVE OPEN Annunciator inoperative ON (continuously illuminated after start valve commanded closed).
  - A. Open the appropriate engine lower cowl door.
  - B. Deactivate the start valve as follows:
    - (1) Disconnect the control air line at the valve port.
    - (2) Install a plug in the control air line and secure the control air line.
    - (3) Install a cap on the start valve control air port.
  - C. For engine start, open the start valve using the manual hex head feature.
  - D. Coordinate with the flight crew to close the valve after engine start.
  - E. Verify that the starter valve external position indicator indicates the valve is CLOSED and that no air discharge from the starter exhaust outlet after starting.
3. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

<b>Alitalia</b> MD-80 Compagnia Aerea Italiana <b>MEL PROCEDURES MANUAL</b>	MAINTENANCE PROCEDURES <b>80-STARTING</b>	Rev. <b>0</b>	02-80-2 20 MAR 09
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## **MEL - MAINTENANCE PROCEDURE N° 80-2**

### **STARTER VALVE**

#### **PLACARD**


Placard the CONTROL START VALVE switch with "START VLV INOP".

#### **MAINTENANCE PROCEDURE**

1. Starter Valve failed in closed position:

**CAUTION: DO NOT USE THE STARTER VALVE "MANUAL OVERRIDE BUTTON" FOR VALVE OPENING. THIS AVOID UNCOMMANDED START VALVE OPENING.**


- A. For engine start, open the start valve using the manual hex head feature.
  - B. Coordinate with the flight crew to close the valve after engine start.
  - C. Verify that the starter valve external position indicator indicates the valve is CLOSED and that no air discharge from the starter exhaust outlet after starting.
2. Make an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili".

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### SECTION 3

#### CONFIGURATION DEVIATION LIST

-	GENERAL LIMITATION .....	03-01-1/2
23	COMMUNICATIONS .....	03-23-1/2
30	ICE AND RAIN PROTECTION .....	03-30-1/2
32	LANDING GEAR .....	03-32-1/2
33	LIGHTS .....	03-33-1/2
53	FUSELAGE .....	03-53-1/2
54	NACELLE/PYLONS .....	03-54-1/2
57	WINGS .....	03-57-1 to 3/4

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This Configuration Deviation List contains additional certificate limitations for operations of the MD-80 airplane without certain secondary airframe and engine parts as listed herein. The Limitations in the MD-80 Operations Manual are applicable except as amended in this appendix.

The associated limitations must be listed on a placard affixed in the cockpit in clear view of the pilot in command and other appropriate crew member(s).

Operation with those missing parts requiring a reduction of VMO/MMO is permitted only when the airplane has the air-speed limit speed hand and the Mach airspeed warning system programmed for the altitude/speed schedule specified for the applicable missing part.

The pilot in command will be notified of each operation with a missing part(s) by listing the missing part(s) in the "Aeroplane Technical Logbook".

If an additional part is lost in flight the airplane may not depart the airport at which it landed following this event until it again complies with the limitation of this appendix. This, of course, does not preclude the issuance of a ferry permit to allow the airplane to be flown to a point where the necessary repairs or replacements can be made.

No more than one part for any one sub-system may be missing unless specifically designated combinations are indicated.

Unless otherwise specified herein, parts from different sub-systems may be missing. The performance penalties are cumulative unless specifically designated penalties for combination of missing parts are indicated.

Items identified as Group 1 items are those which, when missing, results in a small but negligible weight penalty. A total of three items identified as Group 1 or other negligible items may be missing with no performance penalty. When Group 1 or other negligible items in excess of three exist, the weight penalty of 40 kilograms per item is applied to takeoff, enroute, and landing weights.

Takeoff performance decrements are applicable to takeoff gross weight which are limited by structural limit, field length, first segment climb, second segment climb, final segment climb, or takeoff flight path.

Landing performance decrements are applicable to landing gross weights which are limited by structural limit, landing field length, landing climb, or approach climb.

Enroute performance decrements are applicable to operations which are limited by one engine inoperative enroute climb or driftdown requirements.

The parts within each system are identified by functional description and, when necessary, by subsystem part numbers.

All items that require a Maintenance Procedure, are identified with a "Maintenance Procedures Required" statement in the column 4 "Remarks and/or Exceptions".

The required CDL Maintenance Procedures are collected in the Section 4 of this Manual.

#### NOTE


*Weight reduction imposed throughout the Configuration Deviation List shall be applied to the Performance Limited Weights shown in the following AOM Vol 2 Section:*

- Takeoff: Section 09-20 or "Runway Weight Limitations" table:
- Enroute: Section 09-30:
- Landing: Section 09-40 or "Runway Weight Limitations" table.

Item	A. Required for all flight conditions except as provided in column B.
<b>23 COMMUNICATIONS</b>  <b>23-60-01 (569)</b> Static Dischargers	B. Remarks and/or Exception  Zero required.





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Item	A. Required for all flight conditions except as provided in column B.	
<b>32 LANDING GEAR</b>		B. Remarks and/or Exception
<b>32-10-01 (572)</b> Main Landing Gear Spray Deflector	2	The main landing gear spray deflectors may be removed provided there are dry runways at the departure and destination airports.
<b>32-12-03 (587)</b> Main Landing Gear Debris Deflector	0	The main landing gear debris deflectors may be missing with no limitation.
<b>32-20-01 (573)</b> Nose Wheel Spray Deflector	1	The nose wheel spray deflector may be removed provided there are dry runways at the departure and destination airports.
<b>32-20-02 (588)</b> Nose Landing Gear Debris Deflector	0	The nose landing gear debris deflectors may be missing with no limitation.
<b>32-40-01 (574)</b> Brake Return Spring Capsules	32	No more than two (2) capsules may be missing from any brake assembly and these not from adjacent locations.  <b>Maintenance Procedure Required</b>

Item			A. Required for all flight conditions except as provided in column										
			B. Remarks and/or Exceptions										
33 LIGHTS													
33-42-02	Fixed Aft Position Light Lens Covers	(608)	2	<p>May be missing.</p> <p>If the position Light Bulbs and/or White Strobe/Anti-Collision Lights are inoperative, refer to MEL Item 33-10 and/or 33-21 for the appropriate dispatch restrictions.</p> <p>If the Position Light Bulbs and/or White Strobe/Anti-Collision Lights are to be removed, electrical connector must be stowed and associated Circuit Breaker must be pulled and collared.</p> <p>Performance Limited Weights must be reduced as follows:</p> <table><tr><td>Takeoff</td><td>64 Kg</td><td>per Lens Cover</td></tr><tr><td>Enroute</td><td>75 Kg</td><td>per Lens Cover</td></tr><tr><td>Landing</td><td>35 Kg</td><td>per Lens Cover</td></tr></table>	Takeoff	64 Kg	per Lens Cover	Enroute	75 Kg	per Lens Cover	Landing	35 Kg	per Lens Cover
Takeoff	64 Kg	per Lens Cover											
Enroute	75 Kg	per Lens Cover											
Landing	35 Kg	per Lens Cover											
33-42-03	Fixed Forward Position Light Lens Covers	(609)	2	<p>May be missing.</p> <p>If the position Light Bulbs and/or White Strobe/Anti-Collision Lights are inoperative, refer to MEL Item 33-9 and/or 33-21 for the appropriate dispatch restrictions.</p> <p>If the Position Light Bulbs and/or White Strobe/Anti-Collision Lights are to be removed, electrical connector must be stowed and associated Circuit Breaker must be pulled and collared.</p> <p>Performance Limited Weights must be reduced as follows:</p> <table><tr><td>Takeoff</td><td>318 Kg</td><td>per Lens Cover</td></tr><tr><td>Enroute</td><td>318 Kg</td><td>per Lens Cover</td></tr><tr><td>Landing</td><td>168 Kg</td><td>per Lens Cover</td></tr></table>	Takeoff	318 Kg	per Lens Cover	Enroute	318 Kg	per Lens Cover	Landing	168 Kg	per Lens Cover
Takeoff	318 Kg	per Lens Cover											
Enroute	318 Kg	per Lens Cover											
Landing	168 Kg	per Lens Cover											
33-44-01	Logo Lights	(610)	2	Group 1									



Item	A. Required for all flight conditions except as provided in column B.	
<b>54 NACELLE/PYLONS</b>  <b>54-20-01 (579)</b> Pylon Trailing Edge	2	B. Remarks and/or Exception  Group 1

Item	A. Required for all flight conditions except as provided in column B.	
<b>57 WINGS</b>		B. Remarks and/or Exception
<b>57-30-01 (580)</b> Leading Edge Slat Track Cutout Doors	24	Up to five (5) per side may be missing. Performance limited weights must be reduced by: <div style="margin-left: 40px;">             Takeoff                250 Kg / door              Landing                200 Kg / door           </div> Take off speeds must correspond to the actual TOW increased by 250 Kg / door. For all other conditions, use the speeds determined at the actual weights.
<b>57-30-02 (581)</b> Small Lower Doors at Aileron Hinges	6	Group 1
<b>57-30-03 (582)</b> Slat Anti-icing Duct Cutout Upper Doors	2	One door may be missing. Performance limited weights must be reduced by: <div style="margin-left: 40px;">             Takeoff                1000 Kg              Landing                800 Kg           </div> Take off speeds must correspond to the actual TOW increased by 1000 Kg. For all other conditions, use the speeds determined at the actual weights.
<b>57-30-04 (583)</b> Lower Slat Track Cover Doors	30	Up to five (5) per side may be missing. Performance limited weights must be reduced by: <div style="margin-left: 40px;">             Takeoff                200 Kg / door              Landing                200 Kg / door           </div> Take off speeds must correspond to the actual TOW increased by 200 Kg / door. For all other conditions, use the speeds determined at the actual weights.

Item	A. Required for all flight conditions except as provided in column B.	
<b>57 WINGS</b>  <b>57-30-05 (584)</b> Metal Slat Segment Seals   		

Item	A. Required for all flight conditions except as provided in column B.					
<div>57 WINGS</div> <div>57-50-02 (586)</div> <div>Bent Up Trailing Edge (BUTE) Aft Articulated Section</div>	10	<div>B. Remarks and/or Exception</div> <div>One or more may be missing.</div> <div>Performance limited weights must be reduced by:</div> <table><tr><td>Takeoff</td><td>600 Kg / BUTE</td></tr><tr><td>Enroute</td><td>650 Kg / BUTE</td></tr></table> <div>Takeoff speeds must correspond to the actual TOW increased by 600 Kg / BUTE.</div> <div>For all other conditions use the speeds determined at the actual weights.</div> <div><div>CAUTION</div><div>Items 57-30-01, 57-30-03, 57-30-04, 57-30-05, 57-50-01 and 57-50-02 may be missing simultaneously in any combination. The associated performance penalties are additive for each missing item when items are missing in combination.</div></div>	Takeoff	600 Kg / BUTE	Enroute	650 Kg / BUTE
Takeoff	600 Kg / BUTE					
Enroute	650 Kg / BUTE					

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## **C.D.L. MAINTENANCE PROCEDURES**



<b>Alitalia</b> MD-80 <small>Compagnia Aerea Italiana</small> <b>MEL PROCEDURES MANUAL</b>	C.D.L. MAINTENANCE PROCEDURES <b>PREAMBLE</b>	Rev.	04-00-2
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## 1. General

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Printed red placards quoting the relevant maintenance procedures or placards DYMO red tape made have to be used.

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## **MEL - MAINTENANCE PROCEDURE N° 32-40-01**

### **BRAKE RETURN SPRING CAPSULES**

#### **PLACARD**

On the center pedestal install a placard quoting "BRAKE RETURN SPRING CAPSULE(S) MISSING".

#### **MAINTENANCE PROCEDURE**

**NOTE:** No more than 2 capsules may be missing from any brake assembly and these not from adjacent location.

1. Pressurize both hydraulic systems so normal system and return pressure can be applied to the brakes.
2. Perform a visual inspection while the brakes are being applied and released to assure the brakes are releasing properly.
3. Put an applicable entry in the Aircraft Technical Log Book and in the "Elenco Anomalie Compatibili", specifying to replace the affected brake assy at main base