DEPARTMENT OF TRANSPORTATION REVISION: 4

FEDERAL AVIATION ADMINISTRATION DATE: 03/20/2009

WASHINGTON, D.C.

M A S T E R M I N I M U M E Q U I P M E N T L I S T

AGUSTA HELICOPTER
A-109 SERIES (EXCEPT A-109S)

/S/
STEVEN SORICH
CHAIRMAN, FLIGHT OPERATIONS
EVALUATION BOARD (FOEB)

FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS DIVISION
FORT WORTH AIRCRAFT EVALUATION GROUP (FTW-AEG)
2601 MEACHAM BOULEVARD
FORT WORTH, TEXAS 76193-0270

TELEPHONE: (817) 222-5270
FAX: (817) 222-5295

A-109 Series (Except A-109S)

Table of Contents

Log of Revisions

Rev. No.	Date	Page Numbers	Initial
ORIGINAL	09/21/1984		
1	04/23/1990	ALL PAGES	
1a		HIGHLIGHTS OF REV., DEFINITIONS	
1a		21-1,22-1,23-1,24-1,25-1	
1a		25-2,26-1,27-1,28-1,28-2	
1a		29-1,30-1,31-1,32-1,33-1	
1a		33-2,34-1,34-2,34-3,34-4	
1a		34-5,35-1,52-1,65-1,73-1	
1a		77-1,79-1	
2	01/10/2000	HIGHLIGHTS OF REV., DEFINITIONS	
2	01/10/2000	21-1,22-1,23-1,24-1,25-1	
2	01/10/2000	25-2,26-1,27-1,28-1,28-2	
2	01/10/2000	29-1,30-1,31-1,32-1,33-1	
2	01/10/2000	33-2,34-1,34-2,34-3,34-4	
2	01/10/2000	35-1,52-1,65-1,73-1,77-1	
2	01/10/2000	79-1	
3	06/18/2002	HIGHLIGHTS OF REV., DEFINITIONS	
3	06/18/2002	GUIDELINES	
3	06/18/2002	21-1,23-1,24-1,25-1,26-1	
3	06/18/2002	28-1,28-2,28-3,34-3	
4	03/20/2009	ALL PAGES	

A-109 Series (Except A-109S)

Control Page

SYSTEM	PAGE	REV NO.	CURRENT DATE
Cover Page	-	4	03/20/2009
Table of Contents	I	4	03/20/2009
Log of Revisions	II	4	03/20/2009
Control Page	III	4	03/20/2009
Highlights of Changes	IV	4	03/20/2009
Definitions	VII	14	08/26/2008
Preamble	XV	2	06/14/1989
Guidelines for (O) & (M) Procedures	XVII	4	03/20/2009
21	21-1	4	03/20/2009
22	22-1	4	03/20/2009
23	23-1	4	03/20/2009
24	24-1	4	03/20/2009
25	25-1	4	03/20/2009
25	25-2	4	03/20/2009
26	26-1	4	03/20/2009
27	27-1	4	03/20/2009
28	28-1	4	03/20/2009
28	28-2	4	03/20/2009
28	28-3	4	03/20/2009
29	29-1	4	03/20/2009
30	30-1	4	03/20/2009
31	31-1	4	03/20/2009
32	32-1	4	03/20/2009
33	33-1	4	03/20/2009
33	33-2	4	03/20/2009
34	34-1	4	03/20/2009
34	34-2	4	03/20/2009
34	34-3	4	03/20/2009
34	34-4	4	03/20/2009
35	35-1	4	03/20/2009
52	52-1	4	03/20/2009
65	65-1	4	03/20/2009
73	73-1	4	03/20/2009
77	77-1	4	03/20/2009
79	79-1	4	03/20/2009

Highlights of Change

EFFECTIVE ABOVE DATE, the A-109 Series Master Minimum Equipment List has been revised. Please replace all pages with revision #4 for a complete up-to-date MMEL. Minor grammatical and spelling corrections and page format changes are not highlighted.

DEFINITIONS

Revised in accordance with PL-25, Definitions.

ATA 21 AIR CONDITIONING

Item 21-1: Revised description of the system. Added (M) procedure and revised the proviso.

Item 21-3: Revised the proviso.

ATA 22 AUTO FLIGHT

Item 22-1: Deleted relief for IFR.

ATA 23 COMMUNICATIONS

Item 23-1: Revised proviso.

Items 23-4 & 5: Revised in accordance with PL-29, Master Minimum Equipment List (MMEL) Requirements for Cockpit Voice Recorder (CVR).

Item 23-7: Added in accordance with PL-9, Public Address System, Crewmember Interphone and Alerting Systems.

Item 23-8: Provided relief for External Loud Speaker.

ATA 24 ELECTRICAL POWER

Item 24-7: Revised number required for dispatch.

ATA 25 EQUIPMENT/FURNISHINGS

Item 25-2: Added proviso.

Item 25-8: Revised in accordance with PL-120, Master Minimum Equipment List (MMEL) Requirements for Emergency Locator Transmitters (ELT).

Item 25-11: Added in accordance with PL-116, Non-Essential Equipment and Furnishings (NEF).

Highlights of Change Continued

ATA 26 FIRE PROTECTION

Item 26-3: Added proviso in accordance with PL-75, Portable Fire Extinguisher MMEL Requirements.

Item 26-4: Provided relief for Baggage Smoke Detector.

ATA 28 FUEL

Item 28-2: Required by certification regulations.

ATA ICE AND RAIN

Items 30-2&4 2): Revised description in column 1.

Item 30-3: Deleted proviso.

ATA 32 LANDING GEAR

Items 32-1,2&6: Revised provisos.

Item 30-7: Provided relief for Nose Wheel Unlock Warning System.

ATA 33 LIGHTS

Item 33-11: Provided relief for Helicopter Emergency Egress Lighting System (HEELS).

Item 33-12: Provided relief for Searchlight (Retractable).

ATA 34 NAVIGATION

Items 34-1,2,3,4,6&7: Revised “Number Installed Column”.

Items 34-3&13: Revised description in Column 1.

Item 34-5: Deleted. Not installed in this aircraft.

Item 34-9: Required by certification regulations.

Item 34-14: Revised in accordance with PL-3, DME Systems MMEL Policy.

Item 34-19: Deleted proviso.

Item 34-20: Deleted by request of the Manufacturer.

Item 34-23: Provided relief for Enhanced Vision Systems.

A-109 SERIES (EXCEPT A-109S)

Highlights of Change Continued

ATA 52 DOORS

Item 52-4: Provided relief for Sponson Mounted Baggage Compartment Door Micro Camera.

ATA 77 ENGINE INDICATING

Item 77-2: Required by certification regulations.

Definitions

1. System Definitions.

System numbers are based on the Air Transport Association (ATA) Specification Number 100 and items are numbered sequentially.

a. "Item" (Column 1) means the equipment, system, component, or function listed in the "Item" column. Repair interval categories (A, B, C, and D) are listed on right side of column 1. Repair intervals are described in definition 22.

b. "Number Installed" (Column 2) is the number (quantity) of items normally installed in the aircraft. This number represents the aircraft configuration considered in developing this MMEL. Should the number be a variable (e.g., passenger cabin items) a number is not required.

c. "Number Required for Dispatch" (Column 3) is the minimum number (quantity) of items required for operation provided the conditions specified in Column 4 are met.

NOTE: Where the MMEL shows a variable number required for dispatch, the MEL must reflect the actual number required for dispatch or an alternate means of configuration control approved by the Administrator.

d. "Remarks or Exceptions" (Column 4) in this column includes a statement either prohibiting or permitting operation with a specific number of items inoperative, provisos (conditions and limitations) for such operation, and appropriate notes.

e. A vertical bar (change bar) in the margin indicates a change, addition or deletion in the adjacent text for the current revision of that page only. The change bar is dropped at the next revision of that page.

2. "Airplane/Rotorcraft Flight Manual" (AFM/RFM) is the document required for type certification and approved by the responsible FAA Aircraft Certification Office. The FAA approved AFM/RFM for the specific aircraft is listed on the applicable Type Certificate Data Sheet.

3. "As required by FAR" means that the listed item is subject to certain provisions (restrictive or permissive) expressed in the Federal Aviation Regulations operating rules. The number of items required by the FAR must be operative. When the listed item is not required by FAR it may be inoperative for time specified by repair category. The term “14 CFR” may be substituted for “FAR” in MMELs or operator MELs.

4. Each inoperative item must be placarded to inform and remind the crewmembers and maintenance personnel of the equipment condition.

NOTE: To the extent practical, placards should be located adjacent to the control or indicator for the item affected; however, unless otherwise specified, placard wording and location will be determined by the operator.

5. "-" symbol in Column 2 and/or Column 3 indicates a variable number (quantity) of the item installed.

6. "Deleted" in the remarks column after a sequence item indicates that the item was previously listed but is now required to be operative if installed in the aircraft.

7. As used in MMELs, "ER" refers to Extended Operations (ETOPS) of an airplane with operational approval to conduct ETOPS in accordance with the applicable regulations.

8. "Federal Aviation Regulations" (FAR) means the applicable portions of the Federal Aviation Act and Federal Aviation Regulations.

9. "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 aircraft.

10. "Icing Conditions" means an atmospheric environment that may cause ice to form on the aircraft (structural) or in the engine(s) (induction).

11. Alphabetical symbol in Column 4 indicates a proviso (condition or limitation) that must be complied with for operation with the listed item inoperative.

12. "Inoperative" means a system and/or component malfunction to the extent that it does not accomplish its intended purpose and/or is not consistently functioning normally within its approved operating limit(s) or tolerance(s).

13. "Notes:" in Column 4 provides additional information for crewmember or maintenance consideration. Notes are used to identify applicable material which is intended to assist with compliance, but do not relieve the operator of the responsibility for compliance with all applicable requirements. Notes are not a part of the provisos.

14. Inoperative components of an inoperative system: Inoperative items which are components of a system which is inoperative are usually considered components directly associated with and having no other function than to support that system. (Warning/caution systems associated with the inoperative system must be operative unless relief is specifically authorized per the MMEL).

15. "(M)" symbol indicates a requirement for a specific maintenance procedure which must be accomplished prior to operation with the listed item inoperative. Normally these procedures are accomplished by maintenance personnel; however, other personnel may be qualified and authorized to perform certain functions. Procedures requiring specialized knowledge or skill, or requiring the use of tools or test equipment should be accomplished by maintenance personnel. The satisfactory accomplishment of all maintenance procedures, regardless of who performs them, is the responsibility of the operator. Appropriate procedures are required to be published as part of the operator's manual or MEL.

16. "(O)" symbol indicates a requirement for a specific operations procedure which must be accomplished in planning for and/or operating with the listed item inoperative. Normally these procedures are accomplished by the flight crew; however,

other personnel may be qualified and authorized to perform certain functions. The satisfactory accomplishment of all procedures, regardless of who performs them, is the responsibility of the operator. Appropriate procedures are required to be published as a part of the operator's manual or MEL.

NOTE: The (M) and (O) symbols are required in the operator's MEL unless otherwise authorized by the Administrator.

17. "Deactivated" and "Secured" means that the specified component must be put into an acceptable condition for safe flight. An acceptable method of securing or deactivating will be established by the operator.

18. "Visual Flight Rules" (VFR) is as defined in FAR Part 91. This precludes a pilot from filing an Instrument Flight Rules (IFR) flight plan.

19. "Visual Meteorological Conditions" (VMC) means the atmospheric environment is such that would allow a flight to proceed under the visual flight rules applicable to the flight. This does not preclude operating under Instrument Flight Rules.

20. "Visible Moisture" means an atmospheric environment containing water in any form that can be seen in natural or artificial light; for example, clouds, fog, rain, sleet, hail, or snow.

21. "Passenger Convenience Items" means those items related to passenger convenience, comfort or entertainment such as, but not limited to, galley equipment, movie equipment, ash trays, stereo equipment, overhead reading lamps, etc.

22. Repair Intervals: All users of an MEL approved under FAR 121, 125, 129 and 135 must effect repairs of inoperative systems or components, deferred in accordance with the MEL, at or prior to the repair times established by the following letter designators:

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

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

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

Category D. Items in this category shall be repaired within one hundred and twenty (120) consecutive calendar days (2880 hours), excluding the day the malfunction was recorded in the aircraft maintenance log and/or record. The letter designators are inserted adjacent to Column 2.

An operator who has the authorization to use an MEL also has the authority to approve extensions to the maximum repair interval for category B and C items provided the responsible Flight Standards District Office (FSDO) is notified within 24 hours of the MEL extension. The operator is not authorized to extend A and D items in the MEL. Misuse of the MEL extension authority may result in the operators OpSpecs/Mspecs being amended by removing the authority for the operator to use the MEL extension authority and/or use an MEL.

23. Electronic fault alerting system – General

New generation aircraft display system fault indications to the flight crew by use of computerized display systems. Each aircraft manufacturer has incorporated individual design philosophies in determining the data that would be represented.

The following are customized definitions (specific to each manufacturer) to help determine the level of messages affecting the aircraft's dispatch status. When preparing the MEL document, operators are to select the proper Definition No. 23 for their aircraft, if appropriate.

a. BOEING (747-400, 757, 767, 777, 787)

Boeing airplanes equipped with Engine Indicating and Crew Alerting Systems (EICAS), provide different priority levels of system messages (WARNING, CAUTION, ADVISORY, STATUS and MAINTENANCE). Any messages that affects airplane dispatch status will be displayed at a STATUS message level or higher. The absence of an EICAS STATUS or higher level (WARNING, CAUTION, ADVISORY) indicates that the system/component is operating within its approved operating limits or tolerances.

System conditions that result only in a maintenance level message, i.e. no correlation with a higher level EICAS message, do not affect dispatch and do not require action other than as addressed within an operator’s standard maintenance program.

b. BOEING (B-717, MD-10, MD-11)

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

c. AIRBUS (A-300-600, A-310, A-318/319/320/321, A-330, A-340)

Airbus aircraft equipped with Electronic Centralized Aircraft Monitoring (ECAM) provide different levels of system condition messages (WARNING, CAUTION, STATUS, and ADVISORY). A-318/319/320/321, A-330, and A-340 also provide MAINTENANCE status messages. Any message that affects airplane dispatchability will normally be at the WARNING, CAUTION or STATUS level. MAINTENANCE messages (A-318/319/320/321, A-330, and A-340 only) are also indicated on ECAM Status Page below the white Maintenance label. A MAINTENANCE status (Class II) message on ECAM indicates the presence of a system fault which can be identified by CFDS (A-318/319/320/321) or CMS (A-330/A-340) interrogation. The systems are designed to be fault tolerant. For A-18/319/320/321, MAINTENENACE status (Class II) do not affect dispatch but are listed in the MMEL. Dispatch is allowed without specific conditions except for:

- BLUE RSVR MAINTENANCE status: If applicable, and
- AIR BLEED MAINTENANCE status: As applicable.

For the A-330 and A-340, MAINTENANCE status messages do not affect dispatch.

d. FOKKER (FK-100)

Fokker aircraft are equipped with Multi Function Display System (MFDS) which provides electronic message referring to the different priority levels of system information (WARNING (red), CAUTION (amber), AWARENESS (cyan) AND STATUS (white). Any messages that affect aircraft dispatch will be at the WARNING, CAUTION or AWARENESS level. In these cases the MEL must be verified for dispatch capability and maintenance may be required. System conditions that only require maintenance are not presented on the flight deck. These maintenance indications/messages may be presented on the Maintenance & Test Panel (MAP) or the Centralized Fault Display Unit (CFDU) and by dedicated Built In Test Evaluation (BITE) of systems.

e. CANADAIR (CL-65, CL-604)

Canadair aircraft equipped with Engine Indication and Crew Alerting Systems (EICAS) provide four classes of messages (WARNING, CAUTION, ADVISORY, and STATUS). Any message that affects aircraft dispatch will be at the WARNING, CAUTION, or STATUS level. System conditions that only require maintenance are not visible to the flight crew. These maintenance indications/messages are only activated by maintenance personnel using the Maintenance Diagnostics Computer.

f. EMBRAER (EMB-135/145, ERJ-170/190 Series)

The EMB-135/145 and ERJ-170/190 are equipped with an Engine Indicating and Crew Alerting System (EICAS) that provides three different message levels: WARNING, CAUTION, and ADVISORY. The ERJ-170/190 Series add STATUS messages. Failures that effect dispatchability are presented to the flight crew at one of these levels. Other failures may be presented only to the maintenance personnel on the Multi

Function Display (MFD) maintenance pages or through the download of the Central Maintenance Computer (CMC). System conditions that result only in a maintenance level message, i.e. no correlation with a higher level EICAS message, do not affect dispatch and do not require action other than as addressed within an operator's standard maintenance program.

g. GULFSTREAM (G-IV, G-V, GV-SP, and GIV-X, G-150 and G-200)

Gulfstream airplanes equipped with EICAS provide different priority levels of system messages: WARNING (red), CAUTION (amber), ADVISORY, STATUS and MAINTENANCE (cyan or blue). Any WARNING or CAUTION message affects airplane dispatch status and requires that the Airplane Flight Manual or the MEL be used to determine dispatch capability. STATUS messages which indicate a system failure (e.g., FMS 1 fail) require that the Airplane Flight Manual or the MEL be used to determine dispatch capability. MAINTENANCE messages do not affect airplane dispatch status. They indicate the presence of a system fault which can be identified by Maintenance Data Acquisition Unit (MDAU on the G-V) interrogation, Central Maintenance Computer (CMC on the GV-SP/GIV-X) interrogation or by reference to the Airplane Flight Manual.

Gulfstream mid-cabin airplanes (G-150, G-200) equipped with EICAS provide different priority levels of system messages: WARNING (red), CAUTION (amber), ADVISORY (green), and STATUS (white). The Airplane Flight Manual prohibits take off with any WARNING message displayed. CAUTION, ADVISORY and STATUS messages may affect airplane dispatch status and requires the Airplane Flight Manual or the MEL be used to determine dispatch capability. The airplane may dispatch with CAUTION, ADVISORY and STATUS messages that indicate proper system operation and are not illuminated due to a system failure (i.e. FUEL STBY PUMP ON when the pump is selected ON, GND A/B OUT with LAND selected on the ground, or APU GEN OFF with the switch OFF). MAINTENANCE and MAINTENANCE DATA STATUS messages do not affect airplane dispatch status. They indicate the presence of a system fault which can be retrieved from the Maintenance Diagnostics Computer. In all cases, the Airplane Flight Manual must be referenced and procedures compiled with for the displayed message prior to applying MEL dispatch relief.

h. De-HAVILLAND (DASH 8 SERIES 400)

Series 400 aircraft are equipped with a Caution/Warning Panel that annunciates all cautions and warnings. Advisory messages are displayed by the Electronic Indication System (EIS) or individual advisory lights supplied in the cockpit. "Class 1 failures" are failures that prevent continued operation of a specific Line Replacement Unit or channel and are annunciated via advisory messages: caution, warning or advisory lights in the flight compartment. Dispatch with such posted failures are to be in accordance with the MMEL. "Class 2 failures" are failures which do not prevent continued system function. These faults will not be annunciated to the flight crew and the absence of the higher level alert (warning, caution, advisory) indicates that the system/component is operating within its approved operating limits or tolerances. Such faults would be evident during maintenance interrogation performed during maintenance activities. Class 2 faults do not affect dispatch and will be listed in the Fault Isolation Manual (FIM). Class 2 faults will be left to the discretion of the operators when these faults are to be rectified.

24. "Administrative control item" means an item listed by the operator in the MEL for tracking and informational purposes. It may be added to an operator's MEL by approval of the Principal Operations Inspector provided no relief is granted, or provided conditions and limitations are contained in an approved document (i.e. Structural Repair Manual, airworthiness directive, etc.). If relief other than that granted by an approved document is sought for an administrative control item, a request must be submitted to the Administrator. If the request results in review and approval by the FOEB, the item becomes an MMEL item rather than an administrative control item.

25. "***" symbol in Column 1 indicates an item which is not required by regulation but which may have been installed on some models of aircraft covered by this MMEL. This item may be included on the operator's MEL after the approving office has determined that the item has been installed on one or more of the operator's aircraft. The symbol, however, shall not be carried forward into the operator's MEL. It should be noted that neither this policy nor the use of this symbol provide authority to install or remove an item from an aircraft.

26. "Excess Items" means those items that have been installed that are redundant to the requirements of the FARs.

27. "Day of Discovery" is the calendar day an equipment/instrument malfunction was recorded in the aircraft maintenance log and or record. This day is excluded from the calendar days or flight days specified in the MMEL for the repair of an inoperative item of equipment. This provision is applicable to all MMEL items, i.e., categories "A, B, C, and D."

28. "Considered Inoperative", as used in the provisos means that item must be treated for dispatch, taxi and flight purposes as though it were inoperative. The item shall not be used or operated until the original deferred item is repaired. Additional actins include: documenting the item on the dispatch release (if applicable), placarding, and complying with all remarks, exceptions, and related MMEL provisions, including any (M) and (O) procedures and observing the repair category.

29. "Is not used" in the provisos, remarks or exceptions for an MMEL item may specify that another item relieved in the MMEL “is not used.” In such cases, crewmembers should not activate, actuate, or otherwise utilize that component or system under normal operations. It is not necessary for the operators to accomplish the (M) procedures associated with the item. However, operational requirements must be complied with, and an additional placard must be affixed, to the extent practical, adjacent to the control or indicator for the item that is not used to inform crewmembers that a component or system is not used under normal operations.

30. Nonessential equipment and furnishings (NEF) are those items installed on the aircraft as part of the original type certification, supplemental type certificate, or other form of alteration that have no effect on the safe operation of flight and would not be required by the applicable certification rules or operational rules. They are those items that if inoperative, damaged or missing have no effect on the airplane’s ability to be operated safely under all operational conditions. These nonessential items may be installed in areas including, but not limited to, the passenger compartment, flight deck area, service areas, cargo areas, crew rest areas, lavatories, and galley areas. NEF items are not items already identified in the MEL or CDL of

the applicable airplane. They do not include items that are functionally required to meet the certification rule or for compliance with any operational rule. Operator's NEF process shall not provide for deferral of items within serviceable limits identified in the manufacture's maintenance manual or operator's approved maintenance program such as wear limits, fuel/hydraulic leak rates, oil consumption, etc. Cosmetic items that are fully serviceable but worn or soiled may be deferred under an operator's NEF process.

A-109 Series (Except A-109S)

Preamble

The following is applicable for authorized certificate holders operating under Federal Aviation Regulations (FAR) Parts 121, 125, 129, 135: The FAR require that all equipment installed on an aircraft in compliance with the Airworthiness Standards and the Operating Rules must be operative. However, the Rules also permit the publication of a Minimum Equipment List (MEL) where compliance with certain equipment requirements is not necessary in the interests of safety under all operating conditions. Experience has shown that with the various levels of redundancy designed into aircraft, operation of every system or installed component may not be necessary when the remaining operative equipment can provide an acceptable level of safety. A Master Minimum Equipment List (MMEL) is developed by the FAA, with participation by the aviation industry, to improve aircraft utilization and thereby provide more convenient and economic air transportation for the public. The FAA approved MMEL includes those items of equipment related to airworthiness and operating regulations and other items of equipment which the Administrator finds may be inoperative and yet maintain an acceptable level of safety by appropriate conditions and limitations; it does not contain obviously required items such as wings, flaps, and rudders. The MMEL is the basis for development of individual operator MELs which take into consideration the operator's particular aircraft equipment configuration and operational conditions. Operator MELs, for administrative control, may include items not contained in the MMEL; however, relief for administrative control items must be approved by the Administrator. An operator's MEL may differ in format from the MMEL, but cannot be less restrictive than the MMEL. The individual operator's MEL, when approved and authorized, permits operation of the aircraft with inoperative equipment.

Equipment not required by the operation being conducted and equipment in excess of FAR requirements are included in the MEL with appropriate conditions and limitations. The MEL must not deviate from the Aircraft Flight Manual Limitations, Emergency Procedures or with Airworthiness Directives. It is important to remember that all equipment related to the airworthiness and the operating regulations of the aircraft not listed on the MMEL must be operative.

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

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

The MEL provides for release of the aircraft for flight with inoperative equipment. When an item of equipment is discovered to be inoperative, it is reported by making an entry in the Aircraft Maintenance Record/Logbook as prescribed by FAR. The item is then either repaired or may be deferred per the MEL or other approved means acceptable to the Administrator prior to further operation. MEL conditions and limitations do not relieve the operator from determining that the aircraft is in condition for safe operation with items of equipment inoperative.

When these requirements are met, an Airworthiness Release, Aircraft Maintenance Record/Logbook entry, or other approved documentation is issued as prescribed by FAR. Such documentation is required prior to operation with any item of equipment inoperative.

Operators are responsible for exercising the necessary operational control to ensure that an acceptable level of safety is maintained. When operating with multiple inoperative items, the interrelationships between those items and the effect on aircraft operation and crew workload will be considered.

Operators are to establish a controlled and sound repair program including the parts, personnel, facilities, procedures, and schedules to ensure timely repair.

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

Guidelines for (O) & (M) Procedures

The FOEB has identified a need for certain procedures to provide an adequate level of safety while providing relief for some items. Those procedures must be established by the operator. The following guidelines specify the objectives of the required procedures:

21-1	(M)	Procedure to deactivate and secure system.
21-2	(M)	Procedure to deactivate and secure system.
21-3	(M)	Procedure to deactivate and secure system.
23-3	(O)	Limitations and alternate procedures to communicate with passengers.
24-2	(M)	Procedure to deactivate and secure generator.
26-3	(M)	Procedure to deactivate and secure system.
32-1	(M)	Procedure to secure landing gear down.
32-2	(M)	Procedure to secure landing gear down.
32-3	(M)	Procedure to secure landing gear down.
32-6	(M)	Fabricate and install a device to prevent the landing gear handle from being raised.
33-6 b	(O)	Alternate procedure for passenger notification.
65-1	(M)	Procedure to inspect, deactivate, and secure system.

SYSTEM & SEQUENCE NUMBERS	1. ITEM		2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
21 AIR CONDITIONING					
1. ***	Environmental Control System	C	-	0	(M) May be inoperative provided heater air is not required for defrosting/defogging, and the system is deactivated and secured.
2. ***	Environmental Control Unit	C	-	0	(M) May be inoperative provided system is deactivated and secured.
3. ***	Heater	C	-	0	(M) May be inoperative provided heater air is not required for defrosting/defogging, and the system is deactivated and secured.
4.	Vent Blower				Deleted

SYSTEM & SEQUENCE NUMBERS	1. ITEM		2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
22 AUTO FLIGHT					
1. ***	Stability Augmentation System (SAS)	C	-	0	May be inoperative for VFR. Deleted. |
2. ***	Attitude Hold	C	-	0	May be inoperative for VFR.

SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
23 COMMUNICATIONS					
1.	Communications Systems (FM, HF, UHF, VHF, etc.)	D	-	0	Two VHF Transceivers required for IFR per RFM (except A-109E). Any in excess of those required, may be inoperative provided it is not powered by an Emergency Bus or equivalent and not required for Emergency Procedures.
2.	Crew Intercommunication System (ICS)	B	2	1	One may be inoperative for VFR.
3. ***	Cabin Speaker/ Passenger Interphone System	A	-	0	(O) May be inoperative provided: a) Alternate normal and emergency procedures and/or operating restrictions are established and utilized, b) Appropriate oral briefing is given to passengers, and c) Aircraft may continue flight or a series of flights for a maximum of 15 hours. OR d) For non-passenger carrying operations.
		C			
4. ***	Cockpit Voice Recorder (CVR) With FDR Installed	A	1	0	May be inoperative provided: a) Flight Data Recorder (FDR) operates normally, and b) Repairs are made within three flight days.
5. ***	Cockpit Voice Recorder (CVR) Without FDR Installed	A	1	0	May be inoperative provided repairs are made within three flight days.
6. ***	Hoist Operator ICS	C	-	0	May be inoperative provided hoist operator is not required.
7. ***	Passenger config. (Including Pre-recorded Passenger Announcement System, Passenger Digital Briefing System, (etc).	B	-	0	(O) May be inoperative provided: Alternate normal and emergency procedures and/or operating restrictions are established and used.
8. ***	External Loud Speaker	C	-	0	

SYSTEM & SEQUENCE NUMBERS	1. ITEM		2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
24 ELECTRICAL POWER					
1.	Battery				Deleted
2.	Starter/Generator	B	2	1	(M) One generator may be inoperative for day VFR provided the inoperative generator is deactivated. |
3.	Ammeter, Dual Indicator	C	1	0	One indicator needle may be inoperative.
4.	Voltmeter, AC/DC Dual Indicator S/N 7101 to S/N 7165				Deleted
5.	Voltmeter, Dual DC Indicator S/N 7166 and subsequent				Deleted
6.	Voltmeter, Dual Indicator S/N 7166 and subsequent				Deleted
7.	Inverters S/N 7130 and subsequent (Except A-109E Model)				Deleted
		B	3	2	One may be inoperative for IFR provided RFM limitations are complied with.
		B	3	1	May be inoperative for VFR. |
	A-109E Model	B	2	1	One may be inoperative for VFR provided RFM limitations are complied with.

SYSTEM & SEQUENCE NUMBERS	1. ITEM		2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
25	EQUIPMENT/FURNISHINGS				
1.	Personnel Flotation				Deleted.
2. ***	Helicopter Flotation Devices	C	-	0	As required by FAR. |
3.	Passenger Seat Belts and/or Shoulder Harness	C	-	0	One for each occupied seat. If belt and/or shoulder harness is inoperative or missing, seat must be blocked and placarded.
4.	Crewmember Shoulder Harness	B	2	1	If harness becomes inoperative and is required by FARs, seat must be blocked and placarded.
5. ***	First Aid Kit	D	-	-	Any in excess of those required by FAR may be incomplete or missing provided required distribution is maintained.
6. ***	Cargo Suspension System	C	-	0	
7. ***	Hoist	C	-	0	
8. ***	Emergency Locator Transmitter (ELT)				
	Survival Type ELTs	D	-	-	Any in excess of those required by FAR may be inoperative or missing. |
	Fixed ELTs	A	-	0	May be inoperative or missing provided repairs are made within 90 days. |
		D	-	-	Any in excess of those required by FAR may be inoperative or missing. |
9. ***	EMS Equipment	C	-	0	May be inoperative provided system is deactivated and secured. (M) and/or (O) procedures may be required and included in the air carrier's appropriate document.

AIRCRAFT: AGUSTA HELICOPTER A-109 Series (Except A-109S)	REVISION NO: 4 DATE: 03/20/2009	PAGE: 25-2

1. SYSTEM & SEQUENCE NUMBERS / ITEM	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
25 EQUIPMENT/FURNISHINGS			
10. Passenger Convenience Item(s)			DELETED
11. *** Non-Essential Equipment & Furnishings (NEF)	-	0	May be inoperative, damaged, or missing provided that the item(s) is deferred in accordance with the operator’s NEF deferral program. The NEF program, procedures, and process are outlined in the operators (insert name) Manual. (M) and (O) procedures, if required, must be available to the flight crew and included in the operator’s appropriate document. NOTE: EXTERIOR LAVATORY DOOR ASH TRAYS ARE NOT CONSIDERED NEF ITEMS.

SYSTEM & SEQUENCE NUMBERS	1. ITEM		2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
26	FIRE PROTECTION				
1.	Engine Fire Warning System				Deleted.
2. ***	Portable Fire Extinguisher	D	-	1	Any in excess of those required by FAR may be inoperative or missing provided: a) The inoperative fire extinguisher is tagged inoperative, removed from the installed location, and placed out of sight so it cannot be mistaken for a functional unit, and b) Required distribution is maintained.
3. ***	Engine Fire Extinguisher System (For Non Category "A" Operations)	B	-	0	(M) May be inoperative, provided the inoperative system is deactivated and secured.
4. ***	Baggage Smoke Detector	B	-	0	

SYSTEM & SEQUENCE NUMBERS	1. ITEM		2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
27	FLIGHT CONTROLS				
1.	Force Trim System	C	1	0	May be inoperative for VFR. NOTE: With copilot's cyclic removed, jumper is required for force trim operation on pilot's cyclic.

SYSTEM & SEQUENCE NUMBERS	1. ITEM		2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
28	FUEL				
1.	Airframe Fuel Boost Pump:				
	1) S/N 7101 thru 7129	B	2	1	One may be inoperative for VFR provided: a) Both Fuel Boost Pump Caution Systems (Item 28-6.1) are operative, b) RFM Limitations are complied with.
	2) S/N 7130 and subsequent (Excluding A109E Model)	B	4	2	One may be inoperative in each tank for VFR.
	3) A109E Model	B	2	1	
2.	Fuel Quantity Indicator				Deleted.
3.	Fuel Crossfeed System				Deleted.
4.	Low Fuel Caution System				Deleted.

SYSTEM & SEQUENCE NUMBERS	1. ITEM		2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
28	FUEL				
5.	Fuel Pressure Indicator (Excluding A109E Model)	C	1	0	May be inoperative provided Fuel Boost Pump Caution System (Item 28-6.3) is operative.
	1) A109E Model	B	2	0	May be inoperative provided Fuel Boost Pump Caution System (Item 28-6.3) is operative.
6.	Fuel Boost Pump Caution System				
	1) S/N 7101 thru 7129	C	2	1	One system may be inoperative provided both Boost Pumps (Item 28-1.1) are operative.
	2) S/N 7130 and subsequent(Excluding A109E Model)	B	4	3	One system may be inoperative provided respective Fuel Boost Pump (Item 28-1.2) is inoperative.
	3) A109E Model	B	2	0	May be inoperative provided Fuel Pressure indicating System (Item 28-5.1) is operative.

SYSTEM & SEQUENCE NUMBERS	1. ITEM		2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
28	FUEL				
7. ***	Extended Range (ER) Fuel Tank Indicating System (Excluding A109E Model)	C	-	0	May be inoperative provided: a) Flight is not predicated on its use, and b) Quantity (Weight) of fuel in ER tank is verified prior to flight.
	a) A109E Model	C	-	0	May be inoperative provided: a) Flight is not predicated on its use, and b) Total Quantity (Weight) in fuel system is verified prior to flight.
8. ***	Fuel Flow Indicator	C	-	0	May be inoperative provided flight is not predicated on its use.

AIRCRAFT: AGUSTA HELICOPTER A-109 Series (Except A-109S)	REVISION NO: 4 DATE: 03/20/2009	PAGE: 29-1

SYSTEM & SEQUENCE NUMBERS	1. ITEM		2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
29	HYDRAULIC POWER				
1.	Servo Control Systems				Deleted.
2.	Servo Hydraulic Pressure Indicator				Deleted.
3.	Servo Caution Lights				Deleted.
	HYDRAULIC POWER – UTILITY				
4.	Utility Hydraulic Power System				Deleted.
5.	Normal Pressure Indicator				Deleted.
6.	Emergency Pressure Indicator				Deleted.
7.	Utility Hydraulic Pressure Caution Light				Deleted.
8.	Main and Emergency Charging Lights S/N 7256 and subsequent	C	2	0	May be inoperative provided pilot monitors hydraulic pressure indicators.
9.	Emergency Pressure Caution Light S/N7256 and subsequent				Deleted.

SYSTEM & SEQUENCE NUMBERS	1. ITEM		2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
30	ICE AND RAIN PROTECTION				
1.	Pitot Tube Heat	C	-	0	May be inoperative provided: a) Flight is in VFR conditions, b) Ambient temperatures are above +4 degrees C (39 degrees F), and c) Operations are not conducted in visible moisture.
2.	Engine Anti-Ice System (except A-109E).	B	2	0	May be inoperative provided outside temperatures are at +4 degrees C (39 degrees F) or above.
3. ***	Windshield Wiper System	C	-	0	
4.	Engine Anti-ice (De-ice Lights)				
	1) ENG DE ICE Advisory Lights(A109C only)	B	2	0	May be inoperative provided: a) Flight is in VFR conditions, b) Ambient temperatures are above +4 degrees C (39 degrees F), and c) Operations are not conducted in visible moisture.
	2) ENG DE ICE Caution Lights (All others, except A-109E)	B	2	0	May be inoperative provided: a) Flight is in VFR conditions, b) Ambient temperatures are above +4 degrees C (39 degrees F), and c) Operations are not conducted in visible moisture.

AIRCRAFT: AGUSTA HELICOPTER A-109 Series (Except A-109S)	REVISION NO: 4 DATE: 03/20/2009	PAGE: 31-1

SYSTEM & SEQUENCE NUMBERS	1. ITEM	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
31	INDICATING/RECORDING SYSTEMS			
1.	Clock Displaying Hours, Minutes, and Seconds with Sweep-Second Pointer or Digital Presentation — C	-	1	Operative clock must be located on the instrument panel in a position that makes it plainly visible to, and usable by, any pilot at his station.
	C	-	0	May be inoperative for VFR provided Elapsed Timer is installed and operative.
2. ***	Elapsed Timer — C	-	0	May be inoperative provided Clock is operative.
3. ***	Hour Meter — C	-	0	
4. ***	Aircraft/Engine Monitoring System — C	-	0	
5. ***	Cockpit Voice Recorder			Moved to ATA Section 23.
6. ***	Flight Data Recorder — A	-	0	May be inoperative provided: a) Cockpit Voice Recorder(CVR) operates normally, b) Aircraft is not dispatched from a designated airport where repairs or replacements can be made, and c) Repairs are made within three flight days.
	1) DFDR Recording Parameters not required by FAR. — C	-	0	

SYSTEM & SEQUENCE NUMBERS	1. ITEM		2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
32	LANDING GEAR				
1.	Landing Gear Extension/Retraction System	C	1	0	(M) May be inoperative provided: a) Landing gear handle is secured in the down position, b) Deleted, and c) RFM airspeed limitations for gear down operations are complied with.
2.	Landing Gear Position Indicating System	B	1	0	(M) May be inoperative provided: a) Landing gear handle is secured in the down position, b) Deleted, and c) RFM airspeed limitations for gear down operations are complied with.
3. ***	Landing Gear Up Caution System(with radio altimeter) (Audio/ Voice, Visual)	C	-	0	(M) May be inoperative provided: a) Landing gear handle is secured in the down position. b) RFM airspeed limitations for gear down operations are complied with.
4.	Nose Wheel Lock				Deleted.
5.	Parking Brake				Deleted.
6.	Landing Gear Emergency Extension System	C	1	0	(M) May be inoperative provided: a) Landing gear handle is secured in the down position, b) Deleted, and c) RFM airspeed limitations for gear down operations are complied with.
7. ***	Nose Wheel Unlock Warning System	C	-	0	

1. SYSTEM & SEQUENCE NUMBERS / ITEM		2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
33 LIGHTS				
1. Position Light System	C	1	0	May be inoperative for day operations.
2. Anti-Collision Light System	B	1	0	May be inoperative for day operations.
3. Landing Lights	C	-	0	May be inoperative for day operations.
4. Cockpit Instrument Lighting System	C	-	-	Individual lights may be inoperative provided remaining lights are: a) Sufficient to clearly illuminate all required instruments, controls, and other devices for which it is provided, b) Positioned so that direct rays are shielded from flight crewmembers eyes, and c) Lighting configuration and intensity is acceptable to the flight crew.
5. Overhead Map Lights	C	2	1	
	C	2	0	May be inoperative for day VFR operations.

SYSTEM & SEQUENCE NUMBERS	1. ITEM		2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
33	LIGHTS				
6.	Passenger Notice System (Fasten Seat Belt-No Smoking)	B	-	0	(O) May be inoperative provided: a) Passengers are not carried. b) Alternate procedures are used for passenger notification. c) Public address system is installed and operative.
7. ***	Strobe Light System	C	-	0	
8. ***	Cabin Lighting System	C	-	0	May be inoperative provided: a) For day operations. b) Inoperative lights do not exceed fifty (50) percent of the total installed.
9. ***	External Utility Light(s)	C	-	0	
10. ***	Supplemental Lighting System	C	-	0	
11. ***	Helicopter Emergency Egress Lighting System (HEELS)	C	-	0	
12. ***	Searchlight (Retractable)	C	-	0	May be inoperative for day operations.
		C	-	0	May be inoperative for night operations if the landing light is operational.

SYSTEM & SEQUENCE NUMBERS	1. ITEM		2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
34	NAVIGATION				
1.	Airspeed Indicator	B	2	1	Copilot's may be inoperative for single pilot VFR.
2.	Sensitive Altimeter Adjustable for Barometric Pressure	B	2	1	Copilot's may be inoperative for single pilot VFR.
3.	Attitude Direction Indicator (ADI)or Electronic Attitude Direction Indicator (EADI)	B	2	1	Copilot's may be inoperative for single pilot VFR.
					Deleted
4.	Horizontal Situation Indicator(HSI)or Electronic Horizontal Situation Indicator (EHSI)	B	2	1	Copilot's may be inoperative for single pilot operations.
5.	Gyroscopic Rate of Turn Indicator				Deleted
6.	Magnetic Direction	C	2	1	Copilot's may be inoperative.
7.	Slip-Skid Indicator	B	2	1	Copilot's may be inoperative.

1. SYSTEM & SEQUENCE NUMBERS / ITEM		2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
34 NAVIGATION				
8. Instantaneous Vertical Speed Indicator (IVSI) or Vertical Speed Indicator (VSI)	B	-	-	Copilot's may be inoperative for single pilot operations. Pilot's must be operative for Category "A" operations and for IFR.

AIRCRAFT: AGUSTA HELICOPTER A-109 Series (Except A-109S)	REVISION NO: 4 DATE: 03/20/2009	PAGE: 34-3

SYSTEM & SEQUENCE NUMBERS	1. ITEM		2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
34	NAVIGATION				
9.	OAT/Free Air Temperature				Deleted. |
10. ***	Navigation Systems (VOR, ILS, ADF, Long Range, etc.)	C	-	0	AS required by FAR.
11. ***	Transponder	C	-	-	As required by FAR.
12. ***	Radio Altimeter	C	-	0	
13. ***	Standby Attitude Indicator.	B	-	0	As required by FAR. |
14. ***	DME	C	-	0	As required for IFR per applicable RFM.
15. ***	Thunderstorm Detection System	C	-	0	As required by FAR.
16. ***	Weather Radar System	C	-	0	As required by FAR.
17. ***	Altitude Encoding System	C	-	0	As required by FAR.
18. ***	Marker Beacon	C	-	0	May be inoperative provided navigation is not predicated on its use.
19. ***	Flight Director	C	-	0	Deleted. |

SYSTEM & SEQUENCE NUMBERS	1. ITEM		2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
34	NAVIGATION				
	Electronic Flight Instrument System (EFIS)				
20. ***	Active Matrix Crystal Display (AMLCD)				Deleted. ITEMS 34-24 THROUGH ITEMS 34-43 PERTAINING TO TWO PILOT PANEL EQUIPPED AIRCRAFT HAVE BEEN DELETED.
21. ***	Moving Map Display	C	-	0	
22. ***	Traffic Alert/Advisory Systems (i.e. TCAS, TCAD, TAS, etc.)	C	-	0	
23 ***	Max-Viz EVS-1000 Enhanced Vision System (STC No. SR02150NY)	C	-	0	

SYSTEM & SEQUENCE NUMBERS	1. ITEM	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
35	OXYGEN			
1. ***	Oxygen System and Masks C	-	0	As required by FAR.

SYSTEM & SEQUENCE NUMBERS	1. ITEM		2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
52	DOORS				
1.	External Power Door Caution Light	C	1	0	May be inoperative provided a visual check verifies that the door is closed and latched prior to flight.
2.	Door Caution System	C	-	0	May be inoperative provided a visual check verifies that the door is closed and latched prior to flight.
3.	Baggage Door Caution System	C	-	0	May be inoperative provided a visual check verifies that the door is closed and latched prior to flight.
4. ***	Sponson Mounted Baggage Compartment Door Micro Camera	C	-	0	

SYSTEM & SEQUENCE NUMBERS	1. ITEM		2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
65	ROTORS				
1. ***	Rotor Brake System	C	-	0	(M) May be inoperative provided: a) Maintenance inspection determines Rotor Disc is free, and b) System is deactivated and secured.
2.	Rotor RPM Warning System (visual and audio)				Deleted.
3.	Transmission Oil Hot Caution System				Deleted.
4.	Transmission Low Oil Pressure Caution System				Deleted.
5.	Transmission Chip Caution System				Deleted.
6.	Tail Rotor Gear Box Chip Caution System				Deleted.

SYSTEM & SEQUENCE NUMBERS	1. ITEM	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
73	ENGINE FUEL & CONTROL			
1.	Engine Trim System			Deleted.

SYSTEM & SEQUENCE NUMBERS	1. ITEM		2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
77	ENGINE INDICATING				
1.	Tachometer Triple Indicator (N2,NR)	B	1	0	One or both N2's may be inoperative provided respective engine torque is operative. The NR must be operative.
2.	Dual Torque Indicator				Deleted |
3.	Engine N1 Tachometer				Deleted.
4.	Engine Low (RPM) Warning System				Deleted.
5.	Turbine Outlet Temperature (TOT)				Deleted.

1. SYSTEM & SEQUENCE NUMBERS / ITEM	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
79 ENGINE OIL			
1. Oil Temperature Indicator			Deleted.
2. Oil Pressure Indicator			Deleted.
3. Engine Chip Detector System			Deleted.
4. High Oil Temperature Caution System			Deleted.
5. Low Oil Pressure Caution System			Deleted.