

**JOINT AVIATION AUTHORITIES**

**MASTER MINIMUM EQUIPMENT LIST**

*Document No. AE 60.04.20.0 MMEL*

*PZL SW-4*

*Revision 0*

*06 / 05 / 2008*

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**MASTER MINIMUM EQUIPMENT LIST**

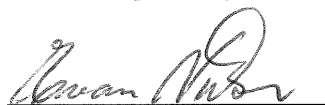
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*Type Certificate No: EASA.R.100*

*Revision 0*  
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This Master Minimum Equipment List (MMEL) is issued by the Joint Aviation Authorities (JAA) at the above revision and is recommended for approval as the basis of the preparation and approval of individual operator's Minimum Equipment Lists (MELs) for aircraft of this type as certified by the European Aviation Safety Agency and operated under the jurisdiction of JAA member states National Authorities.

Signed by



Evan Nielsen

for and on behalf of the JAA

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*Revision Record*

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MASTER MINIMUM EQUIPMENT LIST

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Preamble

This Master Minimum Equipment List is set in accordance to JAR-OPS 3: Commercial Air Transportation (Helicopters) requirements.

The following is applicable for authorized certificate holders operating under applicable operating rules. The aviation regulations require that all equipment installed on the aircraft in compliance with the Airworthiness Standards and the operating rules must be operative. However, the requirements 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 Type Certificate Holder and approved by the competent Authority to improve aircraft utilisation and thereby provide more convenient and economic air transportation for the public. The competent Authority approved MMEL includes those items of equipment related to airworthiness and operating requirements and other items of equipment which the Authority finds may be inoperative and yet maintain an acceptable level of safety by appropriate conditions and limitations.

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 authorised by the appropriate competent Authority. 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, permits operation of the aircraft with inoperative equipment.

Equipment not required by the operation being conducted and equipment in excess of airworthiness standards are included in the MEL with appropriate conditions and limitations. The MEL must not deviate from the Aircraft Flight Manual Limitations, Emergency Procedures or 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.

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*Preamble*  
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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 aviation regulations. The item is then either repaired or may be deferred per the MEL or other approved means acceptable to the competent Authority 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 aviation regulations. 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. The exposure to additional failures during continued operation with inoperative systems or components must also be considered. Wherever possible account has been taken in this MMEL of multiple inoperative items. However, it is unlikely that all possible combinations of this nature have been accounted for. Therefore, when operating with multiple inoperative items, the inter-relationships between those items and the effect on aircraft operation and crew workload must be considered.

Operators are to establish a controlled and sound repair program including the parts, personnel, facilities, procedures and schedules to ensure timely repair. This programme should identify the actions required for Maintenance discrepancy messages.

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

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*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.
- b. "Number Installed" (Column 3) 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., optional equipment items) a number is not required.

NOTE: Where the MMEL shows a variable number installed, the MEL must reflect the actual number installed or an alternate means of configuration control approved by the competent Authority.

- c. "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.

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 competent Authority.

- d. "Remarks or Exceptions" (Column 5) 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. "Rotorcraft Flight Manual" (RFM) is the document required for type certification and approved by Aircraft Certification Authorities. The approved RFM for the specific aircraft is listed on the applicable Type Certificate Data Sheet.



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3. "Authority" means the competent body responsible for the safety of Civil Aviation.
4. "Aviation regulations" means the applicable national regulations, airworthiness standards, and operating rules.
5. "As required by the operating rules" means that the listed item is subject to certain provisions (restrictive or permissive) expressed in the applicable operating rules. The number required by the rules must be operative. Items installed that are in excess of the rules may be permitted by the operator's MEL to be inoperative if not otherwise required by the MMEL.
6. "-" symbol in Column 3 and/or Column 4 indicates a variable number (quantity) of the item installed.

NOTE: Where the MMEL shows a variable number installed, the MEL must reflect the actual number installed or an alternate means of configuration control approved by the competent Authority.

7. "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.
8. Alphabetical symbol in Column 5 indicates a proviso (condition or limitation) that must be complied with for operation with the listed item inoperative.
9. "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).
10. 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 MEL.)

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11. "(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 a part of the operator's manual or MEL.
  12. "(O)" symbol indicates a requirement for a specific operating 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 competent Authority.
13. "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 in accordance with MM and guidelines contained in this document.
  14. "Visual Flight Rules" (VFR) are defined in applicable operating and flight rules. This precludes a pilot from filing an Instrument Flight Rules (IFR) flight plan.
  15. "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.
  16. Three asterix (\*\*\*) in column 1 indicates an item which is a supplemental equipment and may have been installed in the aircraft. It should be noted that neither this definition nor the use of this symbol provides authority to install or remove an item from an aircraft.

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*Definitions*  
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17. Repair Intervals: All users of an MEL approved under applicable operating and flight rules 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.

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 record/logbook.

The letter designators are inserted in Column 2.

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*Guidelines for (O) & (M) Procedures*

In order to provide an adequate level of safety while providing relief for some items certain procedures must be established by the operator.

The following guidelines specify the objectives of the required procedures:

21-41 Air Conditioning

(M) Procedure for deactivating and securing system

*Check the system in accordance to Work Sheet 21.40-3.*

*Pull the breaker Cabin Heating Heat Valve 2 amp on the Circuit Breaker Panel.*

*Place the switch Heating Valve on Central Console To the Off position.*

*Tag and tie wrap all deactivated breakers and switches.*

21-42 Air Conditioning

(M) Procedure for deactivating and securing system

*Check the system in accordance to Work Sheet 21.40-3.*

*Check the sliding windows operative.*

*Pull the breaker Cabin Heating Heat Valve 2 amp on the Circuit Breaker Panel.*

*Pull the breaker Cabin Fan 10 amp on the Circuit Breaker Panel.*

*Place the switch Heating Valve on Central Console To the Off position.*

*Place the switch Fan on Central Console To the Off position.*

*Tag and tie wrap all deactivated breakers and switches.*

23-30 Communication

(O) Alternate procedure

23-50 Communication

(O) Alternate procedure for passenger notification

25-20 Equipment/Furnishings

(O) Alternate procedure for passenger notification

25-30 Equipment/Furnishings

(M) Procedure for deactivating and securing system

*Remove local absorbers in accordance to Work Sheet 25.30-1.*

26-20 Fire Protection

(M) Procedure for deactivating and securing system

*Pull two breakers Extinguisher 2 x 5 amp on the Circuit Breaker Panel.*

*Tag and tie wrap all deactivated breakers and tag and tie wrap switch Extinguisher on Instrument Panel.*

*Remove Pyrohead in accordance to Work Sheet 26.20-3 and secure.*

28-40 Fuel System

(O) Alternate procedure for fuel quantity demand

(M) Procedure for checking Reserve fuel amount warning light.

*Perform check of fuel gage indicator using Test push button.*

30-20 Ice Protection System

(O) Alternate procedure

30-30 Ice Protection System

(O) Alternate procedure

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*Guidelines for (O) & (M) Procedures  
(Continued)*

- 33-10 Lights
  - (O) Alternate procedure
- 33-40 Lights (1)
  - (O) Alternate procedure
- 33-40 Lights (2)
  - (O) Alternate procedures s/b established and used when the aircraft is on the ground with the engine(s) running and/or rotors turning.
- 34-12 Navigation
  - (O) Alternate procedure to use current time counter
- 34-14 Navigation
  - (O) Alternate procedure to use another source of OAT
- 34-41 Navigation
  - (O) Alternate procedure
- 34-50 Navigation
  - (O) Alternate procedure
- 34-54 Navigation
  - (O) Alternate procedure
- 52-00 Doors
  - (O) Procedure for checking doors
- 63-30 Main Shaft
  - (M) Procedure for verifying system
  - (M) Procedure for deactivating and securing system
  - Dismantle rotor brake system in accordance to Work Sheet 63.30-3 and 63.30-4.*
- 67-11 Flight Controls
  - (M) Procedure for verifying system
  - (M) Procedure for deactivating and securing system
  - Pull the breaker Trim 2 amp on the Circuit Breaker Panel.*
  - Tag and tie wrap all deactivated breakers and switches.
  - Dismantle Longitudinal control force gradient unit, Lateral control force gradient unit.
- 77-00 Power Plant Monitoring Instruments
  - (M) Procedure for verifying system
  - Tie wrap Brake Control Lever in Release position.

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|--|--|----------------------------------|---------------------------|---|
| (1) System & Sequence Number<br>Item                                   | (2) Repair Interval                              |                                  |                           |   |
|  | (3) Number Installed                             |                                  |                           |   |
|  |  | (4) Number Required for Dispatch |                           |   |
|  |  |                                  | (5) Remarks or Exceptions |   |
| <p>21. <u>Air Conditioning</u></p> <p>21-41 Heating System<br/>***</p> | C  | 1                                | 0                         | <p>(M) May be inoperative provided:<br/> (a) Heated air is not required for defrosting/defogging,</p> <p style="text-align: center;"><b>AND</b></p> <p>(b) System is deactivated and secured,</p> <p style="text-align: center;"><b>AND</b></p> <p>(c) Ventilation system is operative or sliding windows are operative.</p>  |
| <p>21-42 Ventilation System</p>  | C  | 1                                | 0                         | <p>(M) May be inoperative provided:<br/> (a) Ventilation is not required for defrosting/defogging and ambient temperature is above +5 degrees C,</p> <p style="text-align: center;"><b>AND</b></p> <p>(b) Sliding windows are checked operative,</p> <p style="text-align: center;"><b>AND</b></p> <p>(c) Heating system and ventilation system is deactivated and secured.</p> |

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| (1) System & Sequence Number<br>Item  | (2) Repair Interval | (3) Number Installed                             | (4) Number Required for Dispatch | (5) Remarks or Exceptions   |
| 23. <u>Communication</u><br><br>23-30 Radio<br>Communications Systems<br>(FM, HF, UHF, VHF, etc.) | C                   | -  | 1                                | Any in excess of one, and not powered by an emergency bus, may be inoperative provided flights are conducted under VFR over routes navigated by reference to visual landmarks.  |
|   | A                   | -  | 1                                | (O) Any in excess of one of the two required Radio Communication Systems not powered by the emergency bus may be inoperative provided:<br><br>(a) The helicopter has not made more than one flight since the item was last serviceable,<br><br><b>AND</b><br><br>b) The commander has satisfied himself that, taking into account the latest information available as to the route/are and heliport to be used (including any planned diversion) and the weather conditions likely to be encountered, the flight can be made safely and in accordance with any relevant requirements of the appropriate air traffic control unit. |

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| (1) System & Sequence Number<br>Item | (2) Repair Interval | (3) Number Installed                             | (4) Number Required for Dispatch | (5) Remarks or Exceptions   |
| <b>23. <u>Communications</u></b>     |                     |  |                                  |   |
| <b>23-50 Crew ICS</b>                |                     |  |                                  |   |
| (1) single pilot operations          | B                   | -  | 1                                | (O) Any in excess of one accessible from the left pilot station maybe inoperative for single pilot operations.          |
| (2) dual pilot operations            | C                   | -  | 2                                | (O) Any in excess of two accessible from the left and right pilot stations maybe inoperative for dual pilot operations. |



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|---|-----|--|------------------|--|
| (1) System & Sequence Number<br>Item          | (2) | Repair Interval                                  |                  |  |
|   |     | (3)  | Number Installed |  |
|   |     |  | (4)              | Number Required for Dispatch   |
|   |     |  |                  | (5) Remarks or Exceptions  |
| <u>25. Equipment/Furnishings</u>              |     |  |                  |  |
| 25-20 Seats                                   |     |  |                  |  |
| (1) Pilot / Passenger Right Front Seat<br>*** | D   | -  | 0                | (O) May be inoperative provided:<br>(a) the seat is not required and is correctly stowed,<br><b>AND</b><br>(b) Placarded "DO NOT OCCUPY" |
| (2) Passenger Seats<br>***                    | D   | -  | 0                | (O) May be inoperative provided:<br>(a) The seat is not required and is correctly stowed.<br><b>AND</b><br>(b) Placarded "DO NOT OCCUPY" |
| 25-30 Local Vibration Absorber<br>***         | D   | 2  | 0                | (M) May be inoperative provided the inoperative damper is removed from aircraft.   |

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|---|---------------------|--|----------------------------------|--|
| (1) System & Sequence Number<br>Item  | (2) Repair Interval | (3) Number Installed                             | (4) Number Required for Dispatch | (5) Remarks or Exceptions  |
| <p>26. <u>Fire Protection</u></p> <p>26-20 Fire Fighting System<br/>***</p> | C                   | 1  | 0                                | (M) May be inoperative provided the system is deactivated and secured. |

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|--------------------------------------|--|---|---|---|--|---|---|--|
| (1) System & Sequence Number<br>Item | (2) Repair Interval                              |   |   |   |  |   |   |  |
|                                      | (3) Number Installed                             |   |   |   |  |   |   |  |
|                                      | (4) Number Required for Dispatch                 |   |   |   |  |   |   |  |
|                                      |  | (5) Remarks or Exceptions   |   |   |  |   |   |  |
| 28. <u>Fuel System</u>               |  |   |   |   |  |   |   |  |
| 28-40 Fuel System Control            | B  | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; text-align: center;">1</td> <td style="width: 10%; text-align: center;">0</td> <td style="padding: 5px;"> (O) (M) May be inoperative provided:<br/> (a) Fuel gauge indicator - Reserve fuel amount warning light is working,<br/><br/> <p style="text-align: center;"><b>AND</b></p> (b) Required fuel amount must be recalculated before flight in accordance to RFM,<br/><br/> <p style="text-align: center;"><b>AND</b></p> (c) Ensure that fuel tank is full-up before flight, </td> </tr> <tr> <td style="text-align: center;">B</td> <td style="text-align: center;">1</td> <td style="padding: 5px;"> (O) (M) May be inoperative provided:<br/> (a) Fuel gauge indicator - Reserve fuel amount warning light is working,<br/><br/> <p style="text-align: center;"><b>AND</b></p> (b) Required fuel amount must be recalculated before flight in accordance to RFM,<br/><br/> <p style="text-align: center;"><b>AND</b></p> (c) Note the fuel capacity relaying on flow meter on the fuel supply facility during refueling. </td> </tr> </table> | 1 | 0 | (O) (M) May be inoperative provided:<br>(a) Fuel gauge indicator - Reserve fuel amount warning light is working,<br><br><p style="text-align: center;"><b>AND</b></p> (b) Required fuel amount must be recalculated before flight in accordance to RFM,<br><br><p style="text-align: center;"><b>AND</b></p> (c) Ensure that fuel tank is full-up before flight, | B | 1 | (O) (M) May be inoperative provided:<br>(a) Fuel gauge indicator - Reserve fuel amount warning light is working,<br><br><p style="text-align: center;"><b>AND</b></p> (b) Required fuel amount must be recalculated before flight in accordance to RFM,<br><br><p style="text-align: center;"><b>AND</b></p> (c) Note the fuel capacity relaying on flow meter on the fuel supply facility during refueling. |
| 1                                    | 0  | (O) (M) May be inoperative provided:<br>(a) Fuel gauge indicator - Reserve fuel amount warning light is working,<br><br><p style="text-align: center;"><b>AND</b></p> (b) Required fuel amount must be recalculated before flight in accordance to RFM,<br><br><p style="text-align: center;"><b>AND</b></p> (c) Ensure that fuel tank is full-up before flight,  |   |   |  |   |   |  |
| B                                    | 1  | (O) (M) May be inoperative provided:<br>(a) Fuel gauge indicator - Reserve fuel amount warning light is working,<br><br><p style="text-align: center;"><b>AND</b></p> (b) Required fuel amount must be recalculated before flight in accordance to RFM,<br><br><p style="text-align: center;"><b>AND</b></p> (c) Note the fuel capacity relaying on flow meter on the fuel supply facility during refueling.  |   |   |  |   |   |  |

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|---|---------------------|--|----------------------------------|---|
| (1) System & Sequence Number Item       | (2) Repair Interval | (3) Number Installed                             | (4) Number Required for Dispatch | (5) Remarks or Exceptions   |
| <b>30. <u>Ice Protection System</u></b> |                     |  |                                  |   |
| 30-20 Engine Air Inlet Heating System   |                     |  |                                  |   |
| (1) Day Operations                      | C                   | 1  | 0                                | (O) May be inoperative provided:<br>(a) Known and forecast conditions for flight are for ambient temperatures above +5 degrees C (41 degrees F),<br><br><b>AND</b><br><br>(b) <b>No visible moisture.</b>   |
| (2) Night Operations                    | C                   | 1  | 0                                | (O) May be inoperative provided known and forecast conditions for flight are for ambient temperatures above +10 degrees C (50 degrees F).   |
| 30-30 Pitot Tube Heating System         | C                   | 1  | 0                                | (O) May be inoperative provided:<br>(a) <b>Operations are carried out in day VFR only</b> and known and forecast conditions for flight are for ambient temperatures above +5 degrees C (41 degrees F),<br><br><b>AND</b><br><br>(b) <b>No visible moisture.</b> |

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|--------------------------------------|---------------------|--|----------------------------------|---|
| (1) System & Sequence Number<br>Item | (2) Repair Interval | (3) Number Installed                             | (4) Number Required for Dispatch | (5) Remarks or Exceptions   |
| <b>33. <u>Lights</u></b>             |                     |  |                                  |   |
| <b>33-10 Cabin Lights</b>            |                     |  |                                  |   |
| (1) Cabin Flood-type Light           | D                   | 1  | 0                                | (O) May be inoperative for day operations.                                |
|                                      | D                   | 1  | 0                                | (O) May be inoperative provided passengers are not carried.               |
| (2) Cockpit Spot Light               | C                   | 1  | 0                                | (O) May be inoperative for day operations.                                |
|                                      | C                   | 1  | 0                                | (O) May be inoperative provided the procedures do not required to use it. |

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|--|--|---|
| (1) System & Sequence Number<br>Item   | (2) Repair Interval                              |   |
| 33. <u>Lights</u><br><br>33-10 Cabin Lights<br>(3) Cockpit Instrument &<br>Panel Lighting System | (3) Number Installed                             |   |
|  | (4) Number Required for Dispatch                 |   |
|  | (5) Remarks or Exceptions                        |   |
|  | B  | <div style="display: flex; align-items: center;"> <div style="margin-right: 10px;">-</div> <div style="margin-right: 10px;">0</div> <div> <p>(O) One or more may be inoperative for day operations provided:</p> <p>(a) Sufficient lighting is operative to make each required instrument, control and other device for which it is provided easily readable,<br/> <b>AND</b></p> <p>(b) Direct rays and reflections do not impair visibility either inside or outside aircraft,<br/> <b>AND</b></p> <p>(c) Lighting intensity can be controlled or pre-set to a satisfactory level for expected flight conditions,<br/> <b>AND</b></p> <p>(d) Lighting configuration at dispatch is acceptable to flight crew,</p> </div> </div> |

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|---|---------------------|--|----------------------------------|--|
| (1) System & Sequence Number<br>Item                                    | (2) Repair Interval | (3) Number Installed                             | (4) Number Required for Dispatch | (5) Remarks or Exceptions  |
| <b>33. Lights</b>   |                     |  |                                  |  |
| 33-30 Electric supply<br>(1) Luggage Compartment<br>Light               | D                   | 1  | 0                                | May be inoperative.  |
| (2) Power Supply Sockets<br>(Cabin Compartment,<br>Luggage Compartment) | D                   | 2  | 0                                | May be inoperative.  |
| 33-40 Navigation Lights<br>(1) Navigation / position<br>Light System    | C                   | -  | 0                                | One or more may be inoperative for day operations.   |
|   | A                   | -  | -                                | (O) One or more may be inoperative for a single night flight provided:<br><br>(a) The appropriate ATC unit has been informed before departure,<br><br><b>AND</b><br><br>(b) The anti-collision light system is operative,<br><br><b>AND</b><br><br>(c) The landing light system is operative |

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|---|----------------------|--|---|--|
| (1) System & Sequence Number<br>Item                                      | (2) Repair Interval  |  |   |  |
|   | (3) Number Installed |  |   |  |
|   |                      | (4) Number Required for Dispatch                 |   |  |
|   |                      |  |   | (5) Remarks or Exceptions  |
| <b>33. <u>Lights</u></b>  |                      |  |   |  |
| 33-40 Navigation Lights<br>(2) Anti-Collision Light System (Strobe Light) | B                    | 1  | 0 | One or more may be inoperative for day operations.   |
|   | A                    | -  | - | (O) One or more may be inoperative for a single night flight provided:<br><br>(a) The appropriate ATC unit has been informed before departure,<br><br><b>AND</b><br><br>(b) The navigation light system is operative,<br><br><b>AND</b><br><br>(c) The landing light system is operative |
| (3) Landing Light   | C                    | -  | 0 | One or more may be inoperative for daylight operations.  |
|   | C                    | -  | 1 | Any in excess of one adjustable landing light may be inoperative for night operations.   |



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|--|---------------------|--|----------------------------------|---|
| (1) System & Sequence Number Item  | (2) Repair Interval | (3) Number Installed                             | (4) Number Required for Dispatch | (5) Remarks or Exceptions   |
| <b>34. <u>Navigation</u></b>   |                     |  |                                  |   |
| 34-10 Rate of Climb Indicator  | B                   | 1  | 0                                | May be inoperative provided the flight is conducted by day under VFR over routes navigated by reference to visual landmarks.  |
| 34-12 Clock Displaying Hours, Minutes, and Seconds with Sweep - Second Pointer or Digital Presentation | C                   | 1  | 0                                | (O) May be inoperative provided an accurate clock is operative on the flight deck indicating the time in hours, minutes and seconds and is plainly visible to, and usable by, any pilot at the pilot's station. |
| 34-14 OAT / Outside Air Temperature Indicator  | C                   | 1  | 0                                | (O) May be inoperative provided another air temperature indication is operative that is convertible to OAT.   |
| 34-21 Attitude Indicator<br>***  | C                   | 1  | 0                                | May be inoperative for day VFR operations.  |
| 34-24 Direction Gyrocompass<br>***   | C                   | 1  | 0                                | May be inoperative for day VFR operations.  |

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| (1) System & Sequence Number<br>Item | (2) Repair Interval                              |   |
|                                      | (3) Number Installed                             |   |
|                                      | (4) Number Required for Dispatch                 |   |
|                                      |  | (5) Remarks or Exceptions   |
| 34. <u>Navigation</u>                |  |   |
| 34-41 Radar Altimeter<br>***         | D     1     0                                    | May be inoperative provided over water operations are not conducted.  |
|                                      | A     -     0                                    | (O) May be inoperative provided:<br><br>(a) No more than 6 hours shall be flown over water since the radio altimeter was found to be inoperative,<br><br><b>AND</b><br><br>(b) A maximum of 24 hours have elapsed since the radio altimeter was found to be inoperative,<br><br><b>AND</b><br><br>(c) The aircraft shall not fly overwater at an altitude of less than 500 feet except for take-off and landing,<br><br><b>AND</b><br><br>(d) The helicopter shall not descend below 500 feet on approach to landing overwater unless the landing site is clearly visible to the pilot. |

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|--|-------------------------------------|--|----------------------------------|--|
| (1) System & Sequence Number<br>Item   | (2) Repair Interval                 | (3) Number Installed                             | (4) Number Required for Dispatch | (5) Remarks or Exceptions  |
| <p>34. <u>Navigation</u></p> <p>34-50 Navigation Systems (VOR, LOC, ILS, GS, ADF, GPS)<br/>***</p> | <p>A</p> <p>-</p> <p>D</p> <p>-</p> | <p>-</p> <p>-</p> <p>-</p>                       | <p>-</p> <p>-</p> <p>-</p>       | <p>(O) No more than one of the navigation equipment systems carried in accordance with the requirements of JAR-OPS 3.865, may be inoperative provided:</p> <p>(a) The helicopter has not made more than one flight since the item was last serviceable,</p> <p style="text-align: center;"><b>AND</b></p> <p>(b) The commander has satisfied himself that, taking into account the latest information available as to the route/area and heliport to be used (including any planned diversion) and the weather conditions likely to be encountered, the flight can be made safely and in accordance with any relevant requirements of the appropriate air traffic control unit.</p> <p>Any in excess of those required may be inoperative.</p> |

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| (1) System & Sequence Number<br>Item                  | (2) Repair Interval | (3) Number Installed                             | (4) Number Required for Dispatch | (5) Remarks or Exceptions  |
| 34. <u>Navigation</u>                                 |                     |  |                                  |  |
| 34-54 Transponder, Altitude<br>Encoding System<br>*** | A                   | -  | 0                                | (O) May be inoperative provided agreement can be obtained from all ATC authorities along the route or any planned diversion, to a place where repairs can be made. |
|   | D                   | -  | -                                | Any in excess of those required for the route to be flown may be inoperative.  |

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| (1) System & Sequence Number<br>Item | (2) Repair Interval | (3) Number Installed                             | (4) Number Required for Dispatch | (5) Remarks or Exceptions  |
| 52. <u>Doors</u>                     |                     |  |                                  |  |
| 52-00 Key door locks                 | C                   | 4  | 0                                | (O) May be inoperative provided it is verified by opening and closing attempt that doors can be open - closed and locked by external and internal handles. |

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| (1) System & Sequence Number<br>Item                      | (2) Repair Interval | (3) Number Installed                             | (4) Number Required for Dispatch | (5) Remarks or Exceptions   |
| 63. <u>Main Shaft</u><br><br>63-30 MR Brake System<br>*** | C                   | 1  | 0                                | (M) May be inoperative provided:<br>(a) Inspection verifies that the main rotor<br>can be rotated freely,<br><br><p align="center"><b>AND</b></p> (b) Rotor brake system is deactivated<br>and secured. |

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| (1) System & Sequence Number<br>Item | (2) Repair Interval | (3) Number Installed                             | (4) Number Required for Dispatch | (5) Remarks or Exceptions   |
| 67. <u>Flight Controls</u>           |                     |  |                                  |   |
| 67-11 Cyclic Stick Trim System       | C                   | 1  | 0                                | (M) May be inoperative provided:<br>(a) For VFR operations,<br><p align="center"><b>AND</b></p> (b) Inspection verifies that the cyclic stick can be moved freely.<br><p align="center"><b>AND</b></p> (c) System is deactivated and disassembled and secured |

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| (1) System & Sequence Number<br>Item   | (2) Repair Interval | (3) Number Installed                             | (4) Number Required for Dispatch | (5) Remarks or Exceptions   |
| <u>77. Power Plant Monitoring Instruments</u><br><br>77-00 MR Brake system<br>"ON" Caution Light System<br>*** | C                   | 1  | 0                                | (M) May be inoperative provided:<br>(a) Inspection verifies that the main rotor<br>can be rotated freely,<br><br><p align="center"><b>AND</b></p> (b) Rotor brake system is deactivated<br>and secured. |