

JABATAN BOMBA DAN PENYELAMAT MALAYSIA

DOCUMENT TITLE	AIRCRAFT MAINTENANCE PROGRAMME	AIRCRAFT TYPE	LEONARDO S.p.A HELICOPTERS A109E				
AMP REF.	JBPM/CAMO/AMP/A109E	ISSUE	3	REVISION	0	DATE	1 NOV 2023

7.3.5 FUEL / OIL SYSTEM CONTAMINATION CHECKS

- 1) OEM maintenance recommendation available. Refer to AMP section 1.1.10.24 No.9, 32, 42 and section 1.1.10.32 No.1 for the maintenance recommendation by OEM.

7.3.6 PRESSURE VESSELS

- 1) No pressure vessels installed on the aircraft due to aircraft not pressurised.

7.3.7 SEAT BELTS AND HARNESSSES

- 1) OEM maintenance recommendation available. Refer to AMP section 1.1.10.19 No.19, 20 for the maintenance recommendation by OEM.

7.3.8 VITAL POINTS AND CONTROL SYSTEMS

- a) To minimise the risk of multiple errors and to prevent omissions, the person or organisation performing maintenance should ensure that:
 - (1) every maintenance task is signed off only after completion;
 - (2) the grouping of tasks for the purpose of sign-off allows critical steps to be clearly identified; and
 - (3) any work performed by personnel under supervision (i.e. temporary staff, trainees) is checked and signed off by an authorised person.
- b) To minimise the possibility of an error being repeated in identical tasks that involve removal/installation or assembly/disassembly of several components of the same type fitted to more than one system, whose failure could have an impact on safety, the person or organisation performing maintenance should plan different persons to perform identical tasks in different systems. However, when only one person is available, then this person should perform reinspection of the tasks as described below.
- c) The following critical maintenance tasks should primarily be reviewed to assess their impact on safety shall be subject to independent inspection:
 - (1) tasks that may affect the control of the aircraft, flight path and attitude, such as installation, rigging and adjustments of flight controls;
 - (2) aircraft stability control systems (autopilot, fuel transfer);
 - (3) tasks that may affect the propulsive force of the aircraft, including installation of aircraft engines, propellers and rotors; and

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(4) overhaul, calibration or rigging of engines, propellers, transmissions and gearboxes.

d) Refer table below on the list of critical tasks:

NO.	DESCRIPTION	REFERENCE	REMARK
CRITICAL TASKS			
1.	Main Rotor Blade Removal / Install	Install	MM Section 62-11-06 -
2.	Main Rotor Servoactuator Removal / Install	Install	MM Section 63-21-14 -
3.	Tail Rotor Driveshaft Removal / Install	Install	MM Section 65-11-09 -
4.	Tail Rotor Servo Removal / Install	Install	MM Section 67-21-21 -
5.	Tail Rotor Blade Removal / Install	Install	MM Section 64-11-06 -
6.	Nose Landing Gear Removal / Install	Install	MM Section 32-21-07 -
7.	Main Landing Gear Removal / Install	Left MLG Install	MM Section 32-11-10 -
8.		Right MLG Install	MM Section 32-11-10 -
9.	Elevator Removal / Install	Install	MM Section 55-21-06 -
10.	MGB Driveshaft Removal / Install	No. 1 Driveshaft Install	MM Section 63-11-05 -
11.		No. 2 Driveshaft Install	MM Section 63-11-05 -

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NO.	DESCRIPTION	REFERENCE	REMARK
CRITICAL TASKS			
12.	Vibration Absorber System	Inspection	MM Section 18-61-07
13.	Wheel Brake System	Detail Inspection	MM Section 32-41-17A
14.	Elevator	Detail Inspection	MM Section 55-21-07
15.	Main Rotor Blade	Inspection and Repair Limits	MM Section 62-11-08
16.		Tip Cap - Special Visual Inspection	MM Section 62-11-28
17.	Main Rotor Head Installation	Inspection	MM Section 62-21-14
18.	Beanie	Install	MM Section 62-21-13
19.	Scissor Attachment Flange	Install	MM Section 62-21-13
20.	Bottom Conical Ring	Install	MM Section 62-21-13
21.	Rotating Control	Rotating Control Play Check	MM Section 62-31-07
22.		Pitch Change Link Play Check	MM Section 62-31-08
23.		Swashplate Special Inspection	MM Section 62-31-24
24.	Pitch Change Link	Install	MM Section 62-31-11

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NO.	DESCRIPTION	REFERENCE	REMARK	
CRITICAL TASKS				
25.		Rotating Scissors Play Check	MM Section 62-31-09	-
26.	Rotating Scissors	Assemble	MM Section 62-31-15	-
27.		Install	MM Section 62-31-15	-
28.		Centering Support	Install	MM Section 62-31-15
29.	Boot Support	Assemble	MM Section 62-31-25A	-
30.		Install	MM Section 62-31-23	-
31.	Main Rotor Damper Attachment	Install	MM Section 62-21-26	-
32.	Main Rotor Elastomeric Bearing	Install	MM Section 62-21-54	-
33.	Tail Rotor Head	Install	MM Section 64-21-06	-
34.	Slider Assembly	Assemble	MM Section 64-31-06 and 64-31-06C	-
35.	Bearing Support	No. 1 and 2 Install	MM Section 65-11-17	-
36.	Main Rotor Servoactuator	Servoactuator Attachment Bolt - Detail Inspection	MM Section 67-21-11	-

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NO.	DESCRIPTION	REFERENCE	REMARK
CRITICAL TASKS			
37.	Duplex Bearing	Inspection	MM Section 63-21-17 -

e) Independent inspection is one possible error-capturing method. It consists of an inspection performed by an 'independent qualified person' of a task carried out by an 'authorised person', taking into account that:

- (1) The 'authorised person' is the person who performs the task or supervises the task and assumes the full responsibility for the completion of the task in accordance with the applicable maintenance data.
- (2) The 'independent qualified person' is the person who performs the independent inspection and attests the satisfactory completion of the task and that no deficiencies have been found.
- (3) The maintenance release is issued by the 'authorised person' after the independent inspection has been carried out satisfactorily.
- (4) The work card system should record the identification of each person, the date and the details of the independent inspection, as necessary, before the maintenance release is issued.

f) Complex task is defined as task requiring two or more of the following stages: removal, installation, repair, and assembly. Refer below on the list of complex task:

NO.	DESCRIPTION	REFERENCE	REMARK
COMPLEX TASKS			
1.	Main Rotor Head Removal / Install	Removal	MM Section 62-21-13 -
2.		Install	MM Section 62-21-13 Critical Task
3.	Main Transmission Removal / Install	Removal	MM Section 63-21-25 -
4.		Install	MM Section 63-21-25 Critical Task

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NO.	DESCRIPTION	REFERENCE	REMARK
COMPLEX TASKS			
5.	Engine	No. 1 Removal	MM Section 71-01-09 -
6.		No. 1 Install	MM Section 71-01-09 Critical Task
7.		No. 2 Removal	MM Section 71-01-09 -
8.		No. 2 Install	MM Section 71-01-09 Critical Task
9.	90° Gearbox Removal / Install	Removal	MM Section 65-21-06 -
10.		Install	MM Section 65-21-06 Critical Task
11.	Top Conical Ring	Removal	MM Section 62-21-13 -
12.		Install	MM Section 62-21-13 Critical Task
13.	Housing and Slider Group	Removal	MM Section 64-31-06 -
14.		Install	MM Section 64-31-06 Critical Task