

Section IV
NORMAL PROCEDURES

4-1. PREFLIGHT REQUIREMENTS

1. Have a thorough understanding of operating limitations. (Refer to Section II.)
2. Service the helicopter as required. (Refer to Aircraft Handling, Servicing and Maintenance, Section VII.)
3. Determine that the helicopter loading is within limits. Refer to Section II and VI
4. Check the helicopter performance data. Refer to Sections V, VI and VIII.
5. Perform a pilot's preflight inspection prior to each flight.

NOTE: Refer to the applicable Lycoming Operator's and Maintenance Manuals listed in Related Publications and Directives table, Section II, Basic HMI for detailed requirements on daily inspection of the engine.

It is the prerogative and responsibility of the helicopter operator or owner to increase the extent and/or frequency of inspection to promote safe operation when unusual local conditions (environment, utilization, etc.) dictate.

Refer to HMI for complete periodic inspection criteria (Appendix B, Tables B2 and B3).

4-2. PILOT'S PREFLIGHT INSPECTION

Visually check the following items for wear, general condition and obvious damage. Damage is defined as any condition that is not normal or not within limits. Examples of conditions to look for are: inoperable equipment, excessive leakage, discoloration due to heat, dents, cracks, punctures, abrasion, chaffing, galling, nicks and evidence of corrosion. These are the most common types of damage; however, do not limit inspection to the above conditions.

- 1. If discrepancies are noted perform further inspection prior to flight.
- 2. Flight is prohibited when unrepaired damage exists which makes the rotorcraft unairworthy.

WARNING

GROUND RESONANCE MAY RESULT IF HELICOPTER IS OPERATED WHEN THE LANDING GEAR DAMPERS ARE NOT IN GOOD OPERATING CONDITION. (REFER TO BASIC HMI, SECTION 12 FOR DETAILED INSPECTIONS.)

EXTERIOR
NOSE AREA ①

- | | |
|--|------------------------|
| 1. Aircraft tiedowns and covers | REMOVED |
| 2. Aircraft attitude for weak or damaged oleos | CHECK |
| <u>NOTE:</u> With fuel tank full, observe stance of helicopter. Normal stance is slightly nose up. | |
| 3. Canopy for condition and cleanliness | CHECK |
| 4. Battery | INSPECT |
| 5. OAT thermometer sun shield | NO OBSTRUCTIONS |
| 6. Induction system and fairing | NO OBSTRUCTIONS |

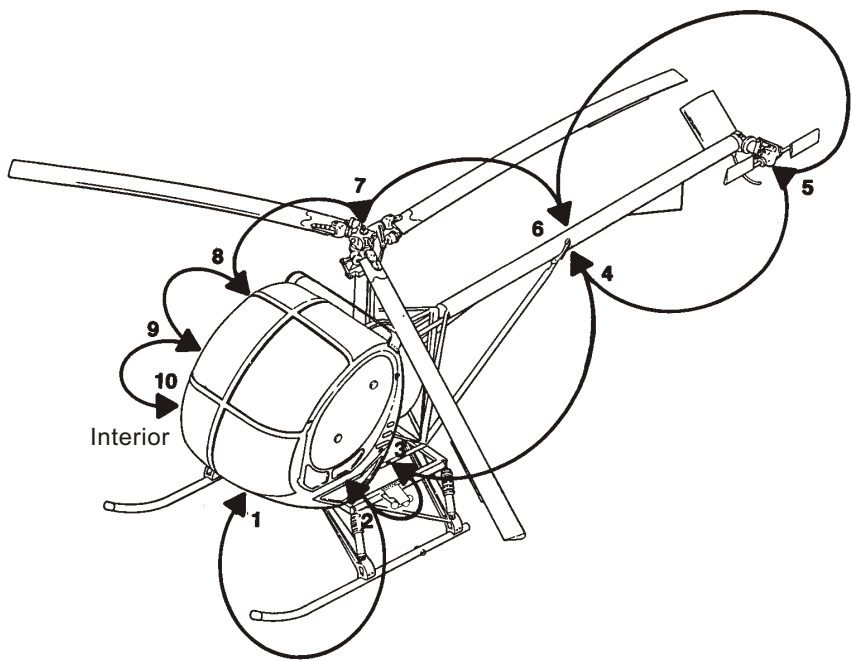


Figure 4-1. Pilot's Preflight Guide

EXTERIOR

NOSE AREA (cont) ①

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|---|------------------------|
| 7. Pitot tube | NO OBSTRUCTIONS |
| 8. Frame, front crossbeam, drag strut, and skid for damage | CHECK |
| 9. Tail rotor pedals for condition and security of retaining pins/shims (both sides if dual controls) | CHECK |
| 10. VHF antenna for damage or security | CHECK |

CABIN - LEFT SIDE ②

- | | |
|--|--------------|
| 1. Cabin for damage or dents | CHECK |
| 2. Door and latch | CHECK |
| 3. Canopy slat for damage or looseness | CHECK |
| 4. Left navigation light and beacon for damage or looseness | CHECK |
| 5. Front oleo damper extension | CHECK |
| 6. Skid tube | CHECK |
| 7. Ground handling wheel (if installed) in up position with quick-release pin installed. | CHECK |

ENGINE - LEFT SIDE ③

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|--|--------------|
| 1. Engine oil level | CHECK |
| 2. Engine oil drain plug (If installed) | CHECK |
| 3. Engine and components, exhaust and intake tubes, fuel and oil lines | CHECK |
| 4. Fuel quantity level; verify gage reading | CHECK |
| 5. Fuel tank cap seal for proper condition | CHECK |

- | | |
|---|------------------------|
| 6. Fuel strainer, for debris or water | DRAIN |
| 7. Fuel tank vent | NO OBSTRUCTIONS |
| 8. Alternator drive belt and belt tension | CHECK |
| 9. Belt drive lower H-frame tie bar bracket and strut for cracks and security | CHECK |
| 10. Aft crossbeam | CHECK |
| 11. Landing light | CHECK |
| 12. Rear oleo damper extension | CHECK |

CAUTION

If cracking of cluster fittings is suspected dye penetrant inspect in accordance with HMI prior to further flight.

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|--|--------------|
| 13. Center frame aft cluster fittings for cracks, deformation, or damage | CHECK |
|--|--------------|

TAILBOOM LEFT SIDE ④

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|---|--------------|
| 1. Tail rotor shaft, set alignment marks | CHECK |
| 2. Tailboom for damage or dents | CHECK |
| 3. Tailboom supports and fittings - for cracks, deformation, damage, looseness and security | CHECK |
| 4. Static port clear of obstructions | CHECK |
| 5. Tailboom support strut end fitting for cracks, deformation, or damage | CHECK |
| 6. Exhaust tailpipe support at tailboom | CHECK |
| 7. Exhaust diffuser installation (if installed) for cracks, deformation, damage, looseness and security | CHECK |

TAIL ROTOR ⑤

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|-------------------------------|--------------|
| 1. Tail rotor shaft alignment | CHECK |
|-------------------------------|--------------|

TAIL ROTOR (cont) ⑤

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|---|--------------|
| 2. Tail rotor blade pitch links, teetering bearings, and swashplate | CHECK |
|---|--------------|

CAUTION

If poor abrasion strip bond is suspected, but not confirmed, inspect blade in accordance with HMI prior to further flight.

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|--------------------------------------|--------------|
| 3. Tail rotor abrasion strip bonding | CHECK |
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CAUTION

If tail rotor blade attachment bushing hole cracking is suspected, perform dye penetrant inspection in accordance with HMI prior to further flight.

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|--|--------------|
| 4. Tail rotor blade attachment bushing hole for evidence of cracks | CHECK |
| 5. Tail rotor push-pull rod | CHECK |
| 6. Tail skid | CHECK |
| 7. Tail rotor transmission/oil level | CHECK |
| 8. Horizontal stabilizer, vertical fin, and tail light | CHECK |

TAILBOOM, RIGHT SIDE ⑥

- | | |
|---|--------------|
| 1. Tailboom for damage or dents | CHECK |
| 2. Tailboom supports and fittings for cracks, looseness, security, deformation, or damage | CHECK |
| 3. Tailboom support strut end fitting for cracks, deformation, or damage | CHECK |

MAIN ROTOR SYSTEM ⑦

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|---|--------------|
| 1. Main rotor transmission and mast | CHECK |
| 2. Main transmission oil level | CHECK |
| 3. Blades and rotor head | CHECK |
| 4. Main rotor dampers | CHECK |
| 5. Main rotor swashplate, pitch links, upper and lower bearings | CHECK |
| 6. Main rotor mixer bellcrank | CHECK |
| 7. Main rotor control rods | CHECK |

ENGINE - RIGHT SIDE ⑧

- | | |
|---|--------------|
| 1. Belt drive lower pulley bearings | CHECK |
| a. Place hand between engine and V-belt drive cover (if installed); grasp forward edge of pulley (lower coupling drive) and try to move at right angles to shaft. Observe bearing to determine if bearing inner race is a tight fit on lower pulley shaft. | |
| 2. Engine lower coupling shaft | CHECK |
| a. Fore and aft movement | |
| b. Using a flashlight (or equivalent), inspect exterior of boot for cracking, fraying, chips, and deterioration. If any damage is observed, replace boot prior to flight. | |
| 3. Audibly inspect lower coupling drive shaft for adequate lubrication as follows: | CHECK |
| a. Grasp lower pulley AFT spacer and rotate coupling shaft back and forth to take up backlash in both directions (CW and CCW). Listen for hard metal-to-metal contact noise between gear teeth. If any metal-to-metal contact noise is heard, lower coupling drive shaft and engine adapter must be removed and inspected in accordance with Basic HMI, Section 10 prior to further flight. | |

ENGINE - RIGHT SIDE (cont) ⑧

4. Engine impeller (any indication of looseness) **CHECK**
5. Idler pulley for smooth rotational freedom and fore and aft freedom of movement **CHECK**
6. Clutch control cable, spring assembly, and lower end of spring retainer
 - a. Clutch engaged: With a flashlight carefully check clutch cable where it enters spring assembly for any broken strands at the end of the internal swaged fitting. No broken strands permitted; Check spring tension mark.
 - b. Clutch engaged and disengaged: Check lower end of spring retainer tube for wear and wear deposits.
 - c. Clutch disengaged: Check spring assembly for freedom.
7. General engine area for loose wires, fittings or damage **CHECK**

CAUTION

If Cracking of cluster fittings is suspected dye penetrant inspect in accordance with HMI prior to further flight.

8. Center frame aft cluster fittings for cracks, deformation, or damage **CHECK**
9. Tail rotor control cable **CHECK**
10. Engine oil drain plug **CHECK**
11. Engine sump fuel drain (if installed) **CHECK**
12. Aux. fuel quantity level (if installed) **CHECK**

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|---|--------------|
| 13. Aux fuel tank (if installed) cap seal for proper condition | CHECK |
| 14. Aux. fuel tank sump for water (if installed) | DRAIN |
| 15. Cabin heater (if installed); security of muff and hoses, heater control operation | CHECK |

CABIN - RIGHT SIDE ⑨

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|---|--------------|
| 1. Canopy, canopy slat | CHECK |
| 2. Door and latch | CHECK |
| 3. Rear oleo damper extension, drag strut and skid | CHECK |
| 4. Right navigation light and beacon for damage or looseness | CHECK |
| 5. Front oleo damper extension | CHECK |
| 6. Skid tube | CHECK |
| 7. Ground handling wheel (if installed) in up position with quick-release pin installed | CHECK |
| 8. Ground handling wheel handle (if installed); quick-release pin installed | CHECK |