

4-14. ENGINE COOLING SHUTDOWN (cont)

- Set clutch control switch in RELEASE position (guard open) and maintain throttle against stop until tachometer indicates rotor disengagement.

CAUTION

**DAMAGE TO ROTOR BLADES AND TAILBOOM MAY
RESULT IF COLLECTIVE PITCH IS USED TO SLOW ROTOR.**

- Set mixture control in IDLE CUTOFF position.
- Set magneto switch in OFF position.
- Set alternator switch in OFF position.
- Set battery switch in OFF position.
- Set all remaining switches in OFF position.
- Set fuel shutoff valve in CLOSED position.

4-15. PILOT'S CHECK OF IDLE MIXTURE, IDLE SPEED, AND FUEL BOOST PUMP

NOTE: This check of idle mixture and idle speed shall be accomplished at the end of the last flight each day, prior to engine shut down. In the event that the idle mixture check was not accomplished and recorded, the procedure must be accomplished prior to first flight of the day.

- Accomplish this idle mixture check by first hovering the aircraft until normal in-flight operating temperatures of cylinder heads and engine oil are achieved. Once normal operating temperatures are achieved, perform the idle mixture check as follows:
 - Land from a hover with engine cylinder head temperature and oil temperature as near to in-flight conditions as possible, friction on the collective and cyclic controls and engine speed at operational rpm.
 - Ensure MIXTURE is set to FULL RICH.

CAUTION

**AIRCRAFT MAY ROTATE IF LANDING GEAR IS SET ON A
SMOOTH, HARD SURFACE AND OPERATOR DOES NOT
CORRECT FOR LOSS OF TORQUE WITH PEDALS.**

- Rapidly rotate throttle to CLOSED position. (Set at normal idle stop, do not over ride.)
- If engine quits, notify appropriate maintenance personnel to make adjustments.

4-15. PILOT'S CHECK OF IDLE MIXTURE, IDLE SPEED, AND FUEL BOOST PUMP (cont)

NOTE: Engine speed will immediately decrease to idle level. Rotor speed, however, will decline gradually. The next step must be performed before rotor tachometer needle superimposes with engine tachometer needle.

- • Observe engine tachometer needle and smoothly move mixture control toward IDLE CUTOFF position.
- • Return mixture control to FULL RICH before the rpm decreases to a point where the engine will stop.

NOTE: Engine rpm rise is required to be between 25 and 100 rpm for this check.

- • If rpm rise is not within the required limits, notify the appropriate maintenance personnel to perform proper idle speed and mixture adjustments.
- Accomplish an idle speed check as follows:
- • Operate helicopter at operational rpm with rotor system engaged, friction on the collective and cyclic controls.

CAUTION

AIRCRAFT MAY ROTATE IF LANDING GEAR IS SET ON A SMOOTH, HARD SURFACE AND OPERATOR DOES NOT CORRECT FOR LOSS OF TORQUE WITH PEDALS.

- • Rapidly rotate throttle closed and into full override position.
- • Read and record engine idle rpm prior to engine and rotor tachometer needles superimposing.
- • With engine head temperature near 300°F, but not above, repeat the three preceding steps, without going into full override (set throttle at normal idle stop).

4-15. PILOT'S CHECK OF IDLE MIXTURE, IDLE SPEED, AND FUEL BOOST PUMP (cont)

NOTE: The first check (throttle into full override) should produce an idle speed no less than 1400 rpm. The second check (throttle at normal idle stop) should produce an idle speed no greater than 1600 rpm.

- • If engine idle speed is not within the required limits, notify the appropriate maintenance personnel to perform adjustments in accordance with the Basic HMI.
- Perform a fuel boost pump check.
- • Operate helicopter at idle rpm with fuel boost pump ON.
- • Turn fuel boost pump OFF while observing engine tachometer.
- • If a change in engine rpm is observed, ground helicopter and troubleshoot fuel system.

NOTE: Any noticeable change in engine rpm is unacceptable and must be entered in the Helicopter Log Book.

4-16. POST FLIGHT REQUIREMENTS

- Brief PAX on exit safety.
- Shutdown in accordance with Paragraph 4-14 & 4-15.
- Service aircraft as required.
- Notify maintenance of discrepancies.
- Secure aircraft as required.

4-17. OPTIONAL HEATER OPERATION

- Exhaust cabin (muff) heater (optional, see Table 9-3).
- • Heater may be used during all operations.
- • Check that HEATER (blower) circuit breaker is in.

CAUTION

BLOWER MUST BE ON DURING ALL ENGINE OPERATION. OPERATION WITH BLOWER OFF MAY CAUSE DAMAGE TO EXHAUST STACKS OR HEATER ASSEMBLY.

- • Position push-pull control to regulate cabin temperature.