

i. GPU (GPU START) — Disconnect. The external power caution light should go out when GPU access door is secured.

8-23.

- * 1. Avionics/Radar Altimeter — On as desired.

CAUTION

FULL MOVEMENT OF CYCLIC AT LOW ROTOR RPM MAY DAMAGE THE MAIN DRIVE SHAFT.

2. FORCE TRIM — Check as follows:

a. Press force trim button on the cyclic to ensure proper function.

b. Release button and place the FORCE TRIM switch to the OFF position.

c. Check cyclic and pedals for freedom of movement and tip-path for correlation with cyclic movement.

3. Hydraulic system — check as follows:

a. Place the HYD CONT switch to the OFF position. Wait momentarily prior to removing hand from hydraulic control switch in case of hydraulic hardover. The HYD PRESSURE caution light should illuminate.

b. Check controls for freedom of movement; ensure that the collective is full-down.

c. Place the HYD CONT switch to the ON position. The HYD PRESSURE caution light should be out.

d. Place the FORCE TRIM switch to the ON position.

4. Fuel Boost Pumps — Pull the RIGHT FUEL BOOST circuit breaker. The RIGHT FUEL BOOST caution light should illuminate and fuel pressure should remain in the normal range. RESET MASTER CAUTION. Pull the LEFT FUEL BOOST circuit breaker; the LEFT FUEL BOOST caution light should illuminate and pressure should be 0. Reset MASTER CAUTION. Press RIGHT FUEL

BOOST circuit breaker in. The RIGHT FUEL BOOST caution light should be out and the fuel pressure should increase to the normal range. Left circuit breaker — IN. All caution lights should be out.

5. BLEED AIR switch — ON; check EGT/MGT increase, OFF; EGT/MGT decrease.

6. DE-ICE switch — ON; check EGT/MGT increase, then OFF; EGT/MGT decrease.

- * 7. LOW RPM AUDIO switch — AUDIO.

8. Throttle — Slowly increase to full open. The low RPM audio and warning light should go off when speed increases above 6200 ± 100 engine RPM and 300 ± 5 rotor RPM. Engine RPM (N_2) should stabilize at 6600 ± 50 RPM. Throttle friction as desired.

* 9. Engine and transmission instruments — Check readings are within operational limits.

10. Fuel quantity — Check by pressing the FUEL GAGE TEST switch until fuel quantity gage drops approximately 200 pounds, then release and check that gage returns to the original indication.

11. PITOT HTR — Check. Place the PITOT HTR switch in the ON position. Note loadmeter increase — then OFF.

12. AC voltmeter — Check each phase for 115 ± 3 volts, leave in AC.

13. INVTR switch — OFF. Check for INST INVERTER caution light illumination and AC voltmeter indicates "zero". Switch to MAIN ON check caution light OFF.

14. VM selector switch — Check all positions for DC voltage indication; leave in NON-ESS BUS position. Main generator voltage will be dependent upon the average ambient temperatures:

27 volts	26°C (80°F) and above
28 volts	0°C to 26°C (32°F to 80°F)
28.5 volts	0°C (32°F)

All standby generator positions should indicate 1.0 volt lower than the main generator voltage.

* 15. STARTER GEN switch — STBY-GEN.

16. MAIN GEN switch — OFF. The main generator loadmeter should indicate "zero" and standby generator loadmeter should indicate a load. Check for DC GENERATOR caution light illumination. DC voltage should indicate zero.

17. NON-ESS BUS switch — MANUAL ON, note standby generator voltage on voltmeter. NON-ESS BUS switch — NORMAL.

18. VM selector switch — ESS BUS position.

19. MAIN GEN switch — ON and guard closed. Check DC voltmeter. The DC GENERATOR caution light should be out. The main generator Loadmeter should indicate a load and the standby generator loadmeter should indicate "zero".

20. Avionics — Perform operational check as necessary and set as desired.

* 21. Attitude indicators — Set.

* 22. Heading indicators — Check that the heading indicators are aligned and correspond with magnetic compass. The annunciator may indicate alignment even though the heading indicator is 180° out of phase. Set heading indicator as required.

* 23. FORCE TRIM switch — As desired.

8-24. BEFORE TAKEOFF.

Immediately prior to takeoff, the following checks shall be accomplished:

* 1. Throttle full open — RPM 6600.

* 2. Systems — Check engine, transmission, electrical, fuel, systems indications are within operational limits.

* 3. Avionics — As required.

* 4. Crew, passengers, and mission equipment — Check.

(O)* 5. Cargo hook — Check operation, if use is anticipated, perform the following steps:

a. Cargo — Secured; sling attached to cargo.

b. Ground personnel — Positioned as required.

c. CARGO REL switch — Arm; check CARGO RELEASE ARMED light illuminates.

8-25. TAKEOFF TO HOVER.

With the cyclic in a neutral position, increase collective with a smooth, positive pressure until the desired hovering altitude is reached. Apply pedal pressures to maintain heading as collective is increased. As the helicopter leaves the ground, make minor corrections with cyclic to ensure a vertical ascent and apply pedal pressures as necessary to maintain directional control. As the desired hover height is reached, adjust the flight controls as necessary to stabilize the helicopter at that height.

8-26. HOVERING TURNS.

Apply pressure on the desired pedal to begin the turn, using pressure and counterpressure on pedals as necessary to maintain constant rate of turn. Coordinate cyclic to maintain the desired position over the selected point on the ground while maintaining altitude with collective.

8-27. SIDEWARD AND REARWARD HOVERING FLIGHT.

From a stabilized hover, apply cyclic in the desired direction of flight to begin sideward or rearward movement. Maintain the desired heading with pedals and altitude with collective. Sideward and rearward airspeeds should be limited to 30 knots, which shall be estimated. To return to a stationary hover, apply cyclic opposite the direction of movement while coordinating collective and pedals to maintain the desired altitude and heading.

8-28. HOVER/TAXI.

From a stabilized hover, apply forward cyclic to begin forward movement of the helicopter. Maintain the desired heading with pedals and altitude with collective. Changes in direction should be made primarily with pedals to avoid excessive bank angles. To stop the forward movement, apply aft cyclic while coordinating collective and pedals to maintain the desired altitude and heading.

8-29. HOVER/TAXI CHECK.

Perform the following checks at a hover/taxi.

Section V. AIRSPEED LIMITS

5-12. AIRSPEED LIMITATIONS.

WARNING

IF A MAIN CARGO DOOR COMES OPEN FROM CLOSED POSITION WHILE IN FLIGHT; REDUCE AIRSPEED BELOW 50 KNOTS AND SECURE DOOR.

WHEN SECURING THE CARGO DOOR IN FLIGHT, THE CREW MEMBERS SHALL BE FASTENED TO THE HELICOPTER BY SEAT BELTS OR OTHER SAFETY DEVICES.

CAUTION

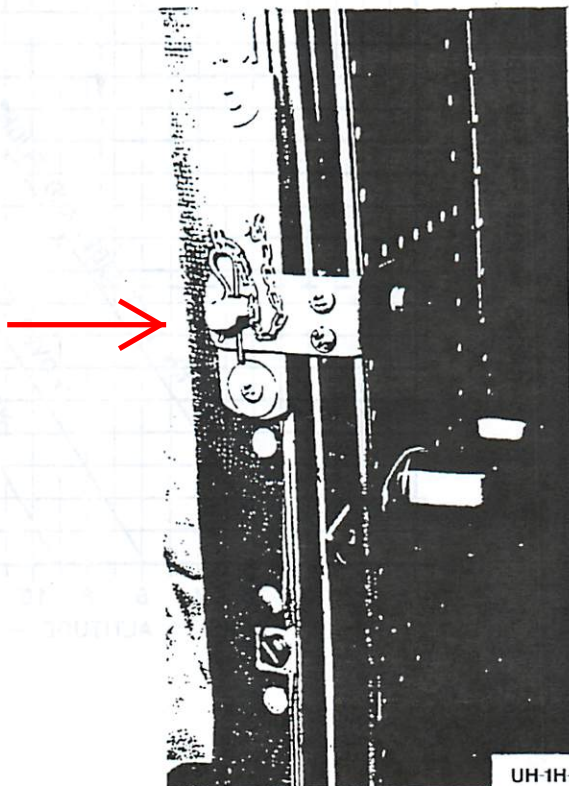
1. Refer to Figure 5-4 or Figure 7-15 for forward airspeed limits.

2. *Operation In Takeoff Power Range.* Vne is 80 KIAS for all gross weights when above maximum continuous torque (88%).

3. Sideward flight limits are 35 knots.

4. Rearward flight limit is 30 knots.

5. *Climb.* During climbs at low altitude, safe autorotative speed shall be maintained in the event an engine failure occurs, sufficient airspeed is available to accomplish a safe autorotative landing. Refer to Paragraph 5-14 and applicable chart for details concerning climb limitations.



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