

**3-3. ENGINE FAILURE - ALTITUDE ABOVE 7 FEET AND BELOW
450 FEET**

- Takeoff operation should be conducted in accordance with the Height Velocity Diagram (Fig. 5-4).
- In the event of power failure during takeoff, the collective pitch should be initially lowered in order to maintain rotor speed. The amount and duration of collective reduction depends upon the height above the ground at which the engine failure occurs.
- As the ground is approached, aft cyclic and collective controls should be used as needed to decrease forward and vertical velocity.
- Ground contact should be established in a level attitude.

3-4. ENGINE FAILURE - ALTITUDE BELOW 7 FEET

- • A power failure is indicated by a yawing of the ship to the left and a loss of rotor RPM.
- • Do not reduce collective pitch.
- • Apply right pedal to prevent yawing.
- • Apply collective pitch as necessary, in order to cushion landing.

3-5. ENGINE/FUSELAGE/ELECTRICAL FIRE ON THE GROUND.

- Set fuel shutoff valve in CLOSED position.
- Set battery switch in OFF position.
- Set generator switch in OFF position.

- • Shut down the engine (normal engine shutdown).
- • Make an autorotational landing.
- Failure producing an underspeed:
 - • Check twist grip full open; beep to max.
 - • Level flight is possible if sufficient power is available.
 - • When power is insufficient for level flight, make an autorotational landing.
- Power turbine governor surge:

NOTE: The following action takes the governor out of the system and should eliminate the surge.

- • Beep N₂ to full high and reduce twistgrip to 90% N₂.

3-11. TAIL ROTOR FAILURE

- Different types of failure may require slightly different techniques for optimum success in recovery.
- General Corrective Action:
 - • Complete loss of tail rotor thrust:
 - • • Failure is normally indicated by an uncontrollable (by pedal) yawing to the right
 - • • Reduce power by lowering collective.
 - • • Adjust airspeed to 50 to 60 knots.
 - • • Use left lateral cyclic in combination with collective pitch to limit left sideslip to a reasonable angle.
 - • • If conditions permit, place the twistgrip in the GROUND IDLE position once a landing area is selected, and perform a normal autorotation. Plan to touch down with little or no forward speed.

3-11. TAIL ROTOR FAILURE (cont)

WARNING

WHEN HOVERING AT ALTITUDES WITHIN OR ABOVE THE CROSS-HATCHED AREAS DEPICTED ON THE HEIGHT VELOCITY DIAGRAM (FIG. 5-4), IT IS NECESSARY TO REDUCE ALTITUDE TO 7 FEET OR LESS PRIOR TO PLACING THE TWISTGRIP IN THE GROUND IDLE POSITION AND PERFORMING A HOVERING AUTOROTATION.

- • **While at a hover:** Place the twistgrip in the GROUND IDLE position and perform a hovering autorotation.
- • Tail rotor control failure - Fixed pitch setting:
 - • • Adjust power to maintain 50 to 60 knots airspeed.
 - • • Perform a shallow approach and running landing to a suitable area, touching down into wind at a speed between effective translational lift and 30 knots. Directional control may be accomplished by small adjustments in throttle and/or collective control.

3-12. CYCLIC TRIM FAILURE

- Failure is indicated by an inability to reduce cyclic forces with cyclic trim switch. Failure may be either a frozen or uncontrollable runaway of the trim actuator in either the longitudinal or lateral direction. Runaway to full travel can produce stick forces of approximately 10 pounds in the direction of the runaway.
- • Avoid rapid and/or abrupt maneuvers.
- • Establish flight conditions that produce the least cyclic control force.
- • Land as soon as practicable.

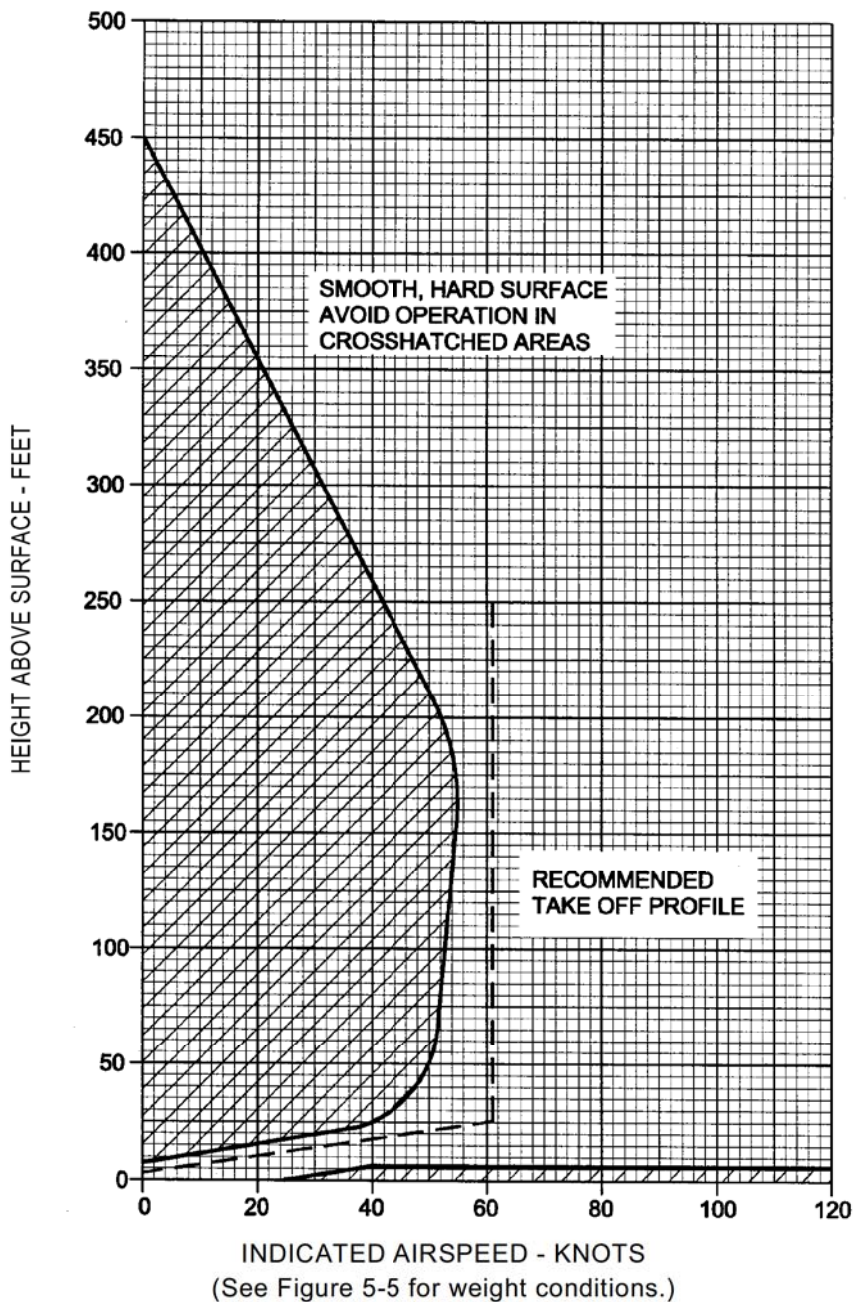


Figure 5-4. Height Velocity Diagram at Sea Level