

VAT-92-265

FLIGHT MANUAL

FOR

HUMMINGBIRD

POWERED

WITH

CHEVROLET V-8

FUEL AND OIL. The engine is serviced with Grade 91 CFR aviation fuel. One fuel tank having a capacity of 57 gallons with expansion space for one gallon, is located below the rear portion of the cabin. The oil tank located on the right side of the engine compartment has a capacity of 3.5 U.S. gallons and expansion space for 1-½ gallons.

2. **PRE-FLIGHT CHECK FOR ALL FLIGHTS.**

- a. Ignition switches: "OFF"
- b. Battery switch: "OFF"
- c. Wheel brakes: On
- d. Rotor brakes: On
- e. Check all flight controls for full and free movement.
- f. Check fuel gage for desired fuel loading.
- h. Altimeter: Check for proper setting.

NOTE

All instruments with electrical connections are in functional condition when battery switch is on. Alternator power is furnished only when engine is running.

3. **STARTING ENGINE.**

- a. Main rotor pitch control: Full down
- b. Rotor brakes: "OFF"
- c. Throttle control: Closed
- d. Inch the engine over four or five revolutions with the starter, with the ignition switches "OFF", if the engine has not been operated for two hours or longer, or if it is suspected that excess oil or fuel is present in the cylinder. ("Inching" means that the starter should be so engaged and disengaged that the crankshaft turns only a few degrees at a time.)
- e. Mixture control: Full rich
- f. Fuel pump switches "ON"
- g. Prime engine with primer if necessary. (Do not exceed 3 seconds)
- h. Throttle control: Closed
- i. Ignition switches "ON"
- j. Hold control stick aft the center position. (Starting with the stick in this position prevents excessive blade feathering.)
- k. Engage starter.
- l. As engine starts: Note oil pressure gage. If oil pressure does not register within 30 seconds STOP engine and investigate.
- m. If a start is not effected almost immediately, reprime and repeat starting procedure.

8. CRUISE.

- (1) Fuel pump switches "L or R"

NOTE

In prolonged part-power descent at "zero" airspeed, the rate of descent sometimes increases very rapidly after approximately 500 feet per minute is reached. Applications of additional pitch and power will not always stop the descent. Recovery is definitely accomplished, however, by acquiring approximately 20 knots forward speed. Avoid prolonged part-power vertical descent at low altitudes. When executing this maneuver at proper altitudes, start recovery through forward airspeed above 500 feet.

9. APPROACH AND LANDING

a. APPROACH.

- (1) Mixture control: "RICH"
(2) Keep the approach speed above 40 knots IAS.
(3) Fuel pump switches "ON"

b. LANDING.

- (1) Make the transition from approach to hovering approximately 10 feet from the surface.
(2) Decrease pitch very slightly for vertical descent, maintaining 3275 engine rpm.
(3) As soon as wheels are on the surface, do the following simultaneously:
(a) Decrease main rotor pitch to almost full low.
(b) Reduce throttle.

NOTE

Do not decrease throttle below 3000 engine rpm until it is certain beyond doubt that the alighting gear is secure upon solid ground. Should there be settling of either or both of the wheels, recovery may be quickly made by increasing pitch since high rpm will be present.

NOTE

Hold stick slightly forward of neutral during this operation to keep blades from striking their droop stops.

- (4) Apply wheel brakes.