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"TAKE YOUR CESSNA HOME
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CESSNA AIRCRAFT COMPANY



WICHITA, KANSAS

II
CESSNA
1966



MODEL
150



OWNER'S MANUAL

WORLD'S LARGEST PRODUCER OF GENERAL AVIATION AIRCRAFT SINCE 1956

STARTING THE ENGINE.

- (1) Carburetor Heat -- Cold.
- (2) Mixture -- Rich.
- (3) Primer -- As required.
- (4) Ignition Switch -- "BOTH."
- (5) Throttle -- Open 1/4".
- (6) Propeller Area -- Clear.
- (7) Starter Handle -- Pull.

8 Oil Pressure - 30 sec.

BEFORE TAKE-OFF.

- (1) Throttle Setting -- 1700 RPM.
- (2) Engine Instruments -- Within green arc and generator light out.
- (3) Magnetos -- Check (75 RPM maximum differential between magnetos).
- (4) Carburetor Heat -- Check operation.
- (5) Suction Gage -- Check (4.6 to 5.4 inches of mercury).
- (6) Flight Controls -- Check.
- (7) Trim Tab -- "TAKE-OFF" setting.
- (8) Cabin Doors -- Latched.
- (9) Flight Instruments and Radios -- Set.

TAKE-OFF.

NORMAL TAKE-OFF.

- (1) Wing Flaps -- Up.
- (2) Carburetor Heat -- Cold.
- (3) Throttle -- Full "OPEN." *2375-2475 RPM*
- (4) Elevator Control -- Lift nose wheel at 50 MPH.
- (5) Climb Speed -- 72 MPH until all obstacles are cleared, then set up climb speed as shown in "NORMAL CLIMB" paragraph.

CLIMB.

NORMAL CLIMB.

- (1) Air Speed -- 75 to 80 MPH.
- (2) Power -- Full throttle.
- (3) Mixture -- Rich (unless engine is rough).

MAXIMUM PERFORMANCE CLIMB.

- (1) Air Speed -- 72 MPH.
- (2) Power -- Full throttle.
- (3) Mixture -- Rich (unless engine is rough).

CRUISING.

70% - 2430 / 111 MPH

- (1) Power -- 2000 to 2750 RPM.
- (2) Elevator Trim -- Adjust.
- (3) Mixture -- Lean to maximum RPM.

BEFORE LANDING.

- (1) Mixture -- Rich.
- (2) Carburetor Heat -- Apply full heat before closing throttle.
- (3) Airspeed -- 65 to 75 MPH.
- (4) Wing Flaps -- As desired below 100 MPH
- (5) Airspeed -- 60 to 70 MPH (flaps extended).

NORMAL LANDING.

- (1) Touch Down -- Main wheels first.
- (2) Landing Roll -- Lower nose wheel gently.
- (3) Braking -- Minimum required.

TAXIING.

When taxiing, it is important that speed and use of brakes be held to a minimum and that all controls be utilized (see taxiing diagram, figure 2-3) to maintain directional control and balance.

Taxiing over loose gravel or cinders should be done at low engine speed to avoid abrasion and stone damage to the propeller tips.

BEFORE TAKE-OFF.

WARM-UP.

Most of the warm-up will have been conducted during taxi, and additional warm-up before take-off should be restricted to the checks outlined in Section I. Since the engine is closely cowled for efficient in-flight cooling, precautions should be taken to avoid overheating on the ground.

MAGNETO CHECK.

The magneto check should be made at 1700 RPM as follows: Move the ignition switch first to "R" position and note RPM. Then move switch back to "BOTH" position to clear the other set of plugs. Then move switch to "L" position and note RPM. The difference between the two magnetos operated individually should not be more than 75 RPM. If there is a doubt concerning the operation of the ignition system, RPM checks at higher engine speeds will usually confirm whether a deficiency exists.

An absence of RPM drop may be an indication of faulty grounding of one side of the ignition system or should be cause for suspicion that the magneto has been "bumped-up" and is set in advance of the setting specified.

TAKE-OFF.

POWER CHECKS.

It is important to check full-throttle engine operation early in the take-off run. Any signs of rough engine operation or sluggish engine acceleration is good cause for discontinuing the take-off. If this occurs, you are

justified in making a thorough full-throttle, static runup before another take-off is attempted. The engine should run smoothly and turn approximately 2375 to 2475 RPM with carburetor heat off.

Full throttle runups over loose gravel are especially harmful to propeller tips. When take-offs must be made over a gravel surface, it is very important that the throttle be advanced slowly. This allows the airplane to start rolling before high RPM is developed, and the gravel will be blown back of the propeller rather than pulled into it. When unavoidable small dents appear in the propeller blades, they should be immediately corrected as described in Section IV.

Prior to take-off from fields above 5000 feet elevation, the mixture should be leaned to give maximum RPM in a full-throttle, static runup.

If 10° of flaps are used in ground runs, it is preferable to leave them extended rather than retract them in the climb to the obstacle. The exception to this rule would be in a high altitude take-off in hot weather where climb would be marginal with flaps 10°.

Flap deflections of 30° and 40° are not recommended at any time for take-off.

PERFORMANCE CHARTS.

Consult the take-off chart in Section V for take-off distances under various gross weight, altitude, and headwind conditions.

CROSSWIND TAKE-OFFS.

Take-offs into strong crosswinds normally are performed with the minimum flap setting necessary for the field length, to minimize the drift angle immediately after take-off. The airplane is accelerated to a speed slightly higher than normal, then pulled off abruptly to prevent possible settling back to the runway while drifting. When clear of the ground, make a coordinated turn into the wind to correct for drift.

CLIMB.

CLIMB DATA.

For detailed data, see Maximum Rate-of-Climb Data chart in Section V.

CLIMB SPEEDS.

Normal climbs are conducted at 75 to 80 MPH with flaps up and full throttle, for best engine cooling. The mixture should be full rich unless the engine is rough due to too rich a mixture. The best rate-of-climb speeds range from 72 MPH at sea level to 66 MPH at 10,000 feet. If an obstruction dictates the use of a steep climb angle,

NOTE

Steep climbs at these low speeds should be of short duration to allow improved engine cooling.

GO-AROUND CLIMB.

In a balked landing (go-around) climb, the wing flap setting should be reduced to 20° immediately after full power is applied. Upon reaching a safe airspeed, the flaps should be slowly retracted to the full up position.

CRUISE.

Normal cruising is done at 65% to 75% of METO power. The settings required to obtain these powers at various altitudes and outside air temperatures can be determined by using your Cessna Power Computer or the OPERATIONAL DATA, Section V.

Cruising can be done most efficiently at high altitude because of the higher true airspeeds obtainable at the same power. This is illustrated in the following table for 70% power.

OPTIMUM CRUISE PERFORMANCE

ALTITUDE	RPM	TRUE AIRSPEED
Sea Level	* 2430	111
5000 feet	* 2550	116
9000 feet	* Full Throttle	120
* 70% POWER		

STALLS.

The stall characteristics are conventional for the flaps up and flaps down condition. Slight elevator buffeting may occur just before the stall with flaps down.

The stalling speeds are shown in Section V for aft c.g., full gross weight conditions. They are presented as calibrated airspeeds because indicated airspeeds are unreliable near the stall. Other loadings result in slower stalling speeds. The stall warning horn produces a steady signal 5 to 10 MPH before the actual stall is reached and remains on until the airplane flight attitude is changed.

LANDING.

Normal landings are made power off with any flap setting. Approach glides are normally made at 65 to 75 MPH with flaps up, or 60 to 70 MPH with flaps down, depending upon the turbulence of the air.

SHORT FIELD LANDINGS.

For a short field landing, make a power off approach at 58 MPH with flaps 40° and land on the main wheels first. Immediately after touchdown, lower the nose gear to the ground and apply heavy braking as required. Raising the flaps after landing will provide more efficient braking.

CROSSWIND LANDINGS.

When landing in a strong crosswind, use the minimum flap setting

= Power Off =		STALLING SPEEDS				MPH = CAS	
Gross Weight 1600 lbs.		ANGLE OF BANK					
CONDITION							
Flaps Up		55	57	63	78		
Flaps 20°		49	51	56	70		
Flaps 40°		48	49	54	67		

Figure 5-2.

AIRSPEED CORRECTION TABLE											
(Flaps Up)											
IAS	40	50	60	70	80	90	100	110	120	130	140
CAS	51	57	65	73	82	91	100	109	118	127	136
(Flaps Down)											
IAS	40	50	60	70	80	90	100				
CAS	49	55	63	72	81	89	98				

Figure 5-1.

—TAKE-OFF DISTANCE—						FLAPS RETRACTED HARD SURFACE RUNWAY				
GROSS WT. LBS.	IAS 50 FT. MPH	HEAD WIND KNOTS	AT SEA LEVEL & 59° F.		AT 2500 FT. & 50° F.		AT 5000 FT. & 41° F.		AT 7500 FT. & 32° F.	
			GROUND RUN	TOTAL TO CLEAR 50 FT.OBS	GROUND RUN	TOTAL TO CLEAR 50 FT.OBS	GROUND RUN	TOTAL TO CLEAR 50 FT.OBS	GROUND RUN	TOTAL TO CLEAR 50 FT.OBS
1600	64	0	735	1385	910	1660	1115	1985	1360	2440
		10	500	1035	630	1250	780	1510	970	1875
		20	305	730	395	890	505	1090	640	1375

NOTE: Increase the distances 10% for each 35° F. increase in temperature above standard for the particular altitude.

MAXIMUM RATE-OF-CLIMB DATA									
GROSS WEIGHT LBS.	AT SEA LEVEL & 59° F.			AT 5000 FT. & 41° F.			AT 10000 FT. & 23° F.		
	IAS, MPH	RATE OF CLIMB FT./MIN.	FUEL USED, GAL.	IAS, MPH	RATE OF CLIMB FT./MIN.	FUEL USED FROM S.L., GAL.	IAS, MPH	RATE OF CLIMB FT./MIN.	FUEL USED FROM S.L., GAL.
1600	72	670	.6	69	440	1.6	66	220	3.0

NOTE: Flaps retracted, full throttle, mixture leaned to smooth operation above 5000 ft. Fuel used includes warm-up and take-off allowances.

LANDING DISTANCE						FLAPS LOWERED TO 40° - POWER OFF HARD SURFACE RUNWAY - ZERO WIND			
GROSS WEIGHT LBS.	APPROACH SPEED, IAS, MPH	AT SEA LEVEL & 59° F.		AT 2500 FT. & 50° F.		AT 5000 FT. & 41° F.		AT 7500 FT. & 32° F.	
		GROUND ROLL	TOTAL TO CLEAR 50 FT. OBS	GROUND ROLL	TOTAL TO CLEAR 50 FT. OBS	GROUND ROLL	TOTAL TO CLEAR 50 FT. OBS	GROUND ROLL	TOTAL TO CLEAR 50 FT. OBS
1600	58	445	1075	470	1135	495	1195	520	1255

NOTE: Decrease the distances shown by 10% for each 4 knots of headwind. Increase the distance by 10% for each 60° F. temperature increase above standard.

Figure 5-3.