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WORLD'S LARGEST PRODUCER OF GENERAL AVIATION AIRCRAFT SINCE 1956

MODEL 150

OWNER'S MANUAL

PERFORMANCE - SPECIFICATIONS

	Commuter*
GROSS WEIGHT	1600 lbs
SPEED:	
Top Speed at Sea Level	125 mph
Cruise, 75% Power at 7000 ft	122 mph
RANGE:	
Cruise, 75% Power at 7000 ft	500 mi
22.5 Gallons, No Reserve	4.1 hrs
	122 mph
Cruise, 75% Power at 7000 ft	755 mi
35 Gallons, No Reserve	6.2 hrs
	122 mph
Maximum Range at 10,000 ft	660 mi
22.5 Gallons, No Reserve	6.9 hrs
	95 mph
Maximum Range at 10,000 ft	1025 mi
35 Gallons, No Reserve	10.8 hrs
	95 mph
RATE OF CLIMB AT SEA LEVEL	670 fpm
SERVICE CEILING	14,000 ft
TAKE-OFF:	
Ground Run	735 ft
Total Distance Over 50-Ft Obstacle	1385 ft
LANDING:	
Ground Roll	445 ft
Total Distance Over 50-Ft Obstacle	1075 ft
STALL SPEEDS:	
Flaps Up, Power Off	55 mph
Flaps Down, Power Off	48 mph
BAGGAGE	120 lbs
POWER LOADING: Pounds/HP	16.0
FUEL CAPACITY: Total	
Standard Tanks	26 gal.
Optional Long Range Tanks	38 gal.
OIL CAPACITY	6 qts
PROPELLER: Fixed Pitch, Diameter	69 inches
ENGINE: Continental Engine	O-200-A
100 rated HP at 2750 RPM	

	150	Commuter	Commuter II	F150	F150 Commuter
EMPTY WEIGHT: (Approximate)	1000 lbs	1065 lbs	1085 lbs	1030 lbs	1080 lbs
USEFUL LOAD: (Approximate)	600 lbs	535 lbs	515 lbs	570 lbs	520 lbs
WING LOADING: Pounds/Sq Foot	10.2	10.0	10.0	10.0	10.0

NOTE: All performance figures include the effect of speed fairings which improve the speeds by approximately two mph. Speed fairings are standard equipment on the Commuter and Commuter II and are optional equipment on the 150, F150, and F150 Commuter.

*This manual covers operation of the Model 150 which is certificated as Model 150M under FAA Type Certificate No. 3A19. The manual also covers operation of the Model Reims/Cessna F150 which is certificated as Model F150M under French Type Certificate No. 38/3 and FAA Type Certificate No. A13EU. The Model F150, manufactured by Reims Aviation S.A., Reims (Marne), France, is identical to the 150 except that it is powered by an O-200-A engine manufactured under license by Rolls Royce, Crewe, England.

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Cessna Aircraft Company
Wichita, Kansas USA

CONGRATULATIONS . . . . .

Welcome to the ranks of Cessna owners! Your Cessna has been designed and constructed to give you the most in performance, economy, and comfort. It is our desire that you will find flying it, either for business or pleasure, a pleasant and profitable experience.

This Owner's Manual has been prepared as a guide to help you get the most pleasure and utility from your Model 150. It contains information about your Cessna's equipment, operating procedures, and performance; and suggestions for its servicing and care. We urge you to read it from cover to cover, and to refer to it frequently.

Our interest in your flying pleasure has not ceased with your purchase of a Cessna. World-wide, the Cessna Dealer Organization backed by the Cessna Service Department stands ready to serve you. The following services are offered by most Cessna Dealers:

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c. Available at Cessna Dealers world wide
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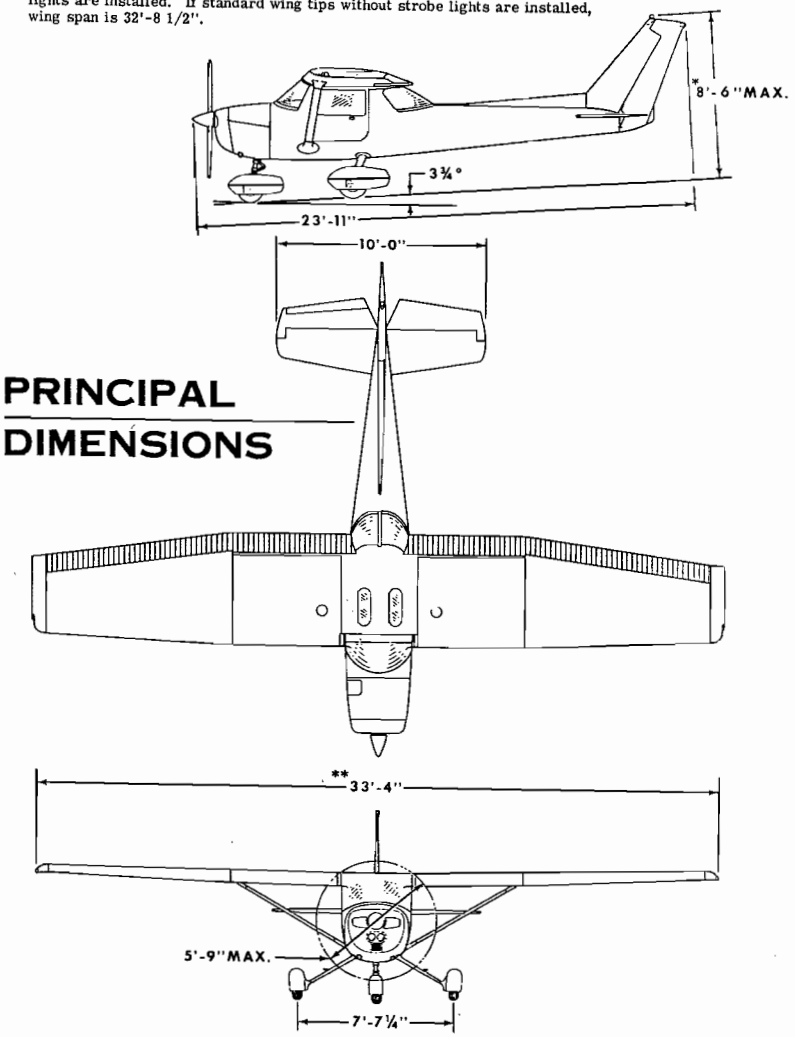
We urge all Cessna owners to use the Cessna Dealer Organization to the fullest.

A current Cessna Dealer Directory accompanies your new airplane. The Directory is revised frequently, and a current copy can be obtained from your Cessna Dealer. Make your Directory one of your cross-country flight planning aids; a warm welcome awaits you at every Cessna Dealer.

* Maximum height of airplane with nose gear depressed, all tires and nose strut properly inflated, and optional flashing beacon installed.

** Maximum wing span if optional conical camber wing tips and optional strobe lights are installed. If standard wing tips without strobe lights are installed, wing span is 32'-8 1/2".

PRINCIPAL DIMENSIONS



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This manual describes the operation and performance of the Model 150, the Commuter, and the Commuter II. Equipment described as "Optional" denotes that the subject equipment is optional on the Model 150. Much of this equipment is standard on the Commuter and Commuter II.

ground, make a coordinated turn into the wind to correct for drift.

ENROUTE CLIMB.

CLIMB DATA.

For detailed data see Maximum Rate-Of-Climb Data chart in Section VI.

CLIMB SPEEDS.

Normal climbs are conducted at 75 to 85 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 78 MPH at sea level to 71 MPH at 10,000 feet. If an obstruction dictates the use of a steep climb angle, climb at an obstacle clearance speed of 70 MPH with flaps retracted.

NOTE

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

CRUISE.

Normal cruising is done at power settings up to 75% power. The engine RPM and corresponding fuel consumption for various altitudes can be determined by using your Cessna Power Computer or the Operational Data in Section VI.

The Operational Data in Section VI shows the increased range and improved fuel economy that is obtainable when operating at lower power settings and higher altitudes. The use of lower power settings and the selection of cruise altitude on the basis of the most favorable wind conditions are significant factors that should be considered on every trip to reduce fuel consumption.

The Cruise Performance table on page 2-15 shows the true airspeed and miles per gallon during cruise for various altitudes and percent powers. This table should be used as a guide, along with the available winds aloft information, to determine the most favorable altitude and power setting for a given trip.

CRUISE PERFORMANCE
COMMUTER

	75% POWER		65% POWER		55% POWER	
ALTITUDE	TAS	MPG	TAS	MPG	TAS	MPG
Sea Level	115	20.5	108	22.0	102	24.3
3500 Feet	118	21.1	112	22.9	105	25.0
7000 Feet	122	21.8	115	23.5	108	25.7

Standard Conditions — Zero Wind

To achieve the lean mixture fuel consumption figures shown in Section VI, the mixture should be leaned as follows:

(1) Pull the mixture control out until engine RPM peaks and begins to fall off.
(2) Enrichen slightly back to peak RPM.

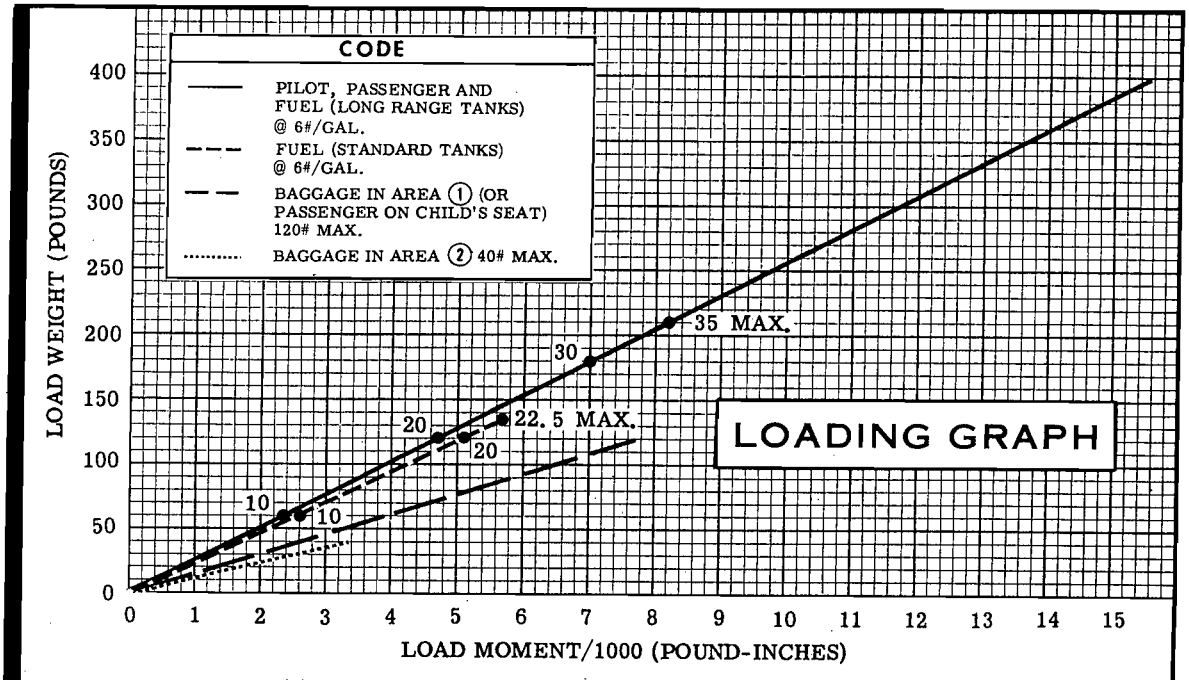
For best fuel economy at 55% power or less, operate at the leanest mixture that results in smooth engine operation or at 50 RPM on the lean side of the peak RPM, whichever occurs first. This will result in approximately 5% greater range than shown in this manual.

Carburetor ice, as evidenced by an unexplained drop in RPM, can be removed by application of full carburetor heat. Upon regaining the original RPM (with heat off), use the minimum amount of heat (by trial and error) to prevent ice from forming. Since the heated air causes a richer mixture, readjust the mixture setting when carburetor heat is to be used continuously in cruise flight.

The use of full carburetor heat is recommended during flight in very heavy rain to avoid the possibility of engine stoppage due to excessive water ingestion. The mixture setting should be readjusted for smoothest operation.

SAMPLE LOADING PROBLEM	SAMPLE AIRPLANE Weight (lbs.)	SAMPLE AIRPLANE Moment (lb.-ins. /1000)	YOUR AIRPLANE Weight (lbs.)	YOUR AIRPLANE Moment (lb.-ins. /1000)
1. Licensed Empty Weight (Use the data pertaining to your airplane as it is presently equipped. Includes unusable fuel)	1089	36.0		
2. Oil (6 Qts. - The weight of full oil may be used for all calculations. 6 Qts = 11 Lbs. at -0.1 Moment/1000)	11	-0.1	11	-0.1
3. Usable Fuel (At 6 Lbs./Gal.)				
Standard Tanks (22.5 Gal. Maximum)	135	5.7		
Long Range Tanks (35 Gal. Maximum)				
4. Pilot and Passenger (Sta. 33 to 41)	340	13.3		
5. Baggage - Area 1 (or Passenger on Child's Seat) (Sta. 50 to 76, 120 Lbs. Max.)	25	1.6		
6. Baggage - Area 2 (Sta. 76 to 94, 40 Lbs. Max.) .				
7. TOTAL WEIGHT AND MOMENT	1600	56.5		

8. Locate this point (1600 at 56.5) on the Center of Gravity Moment Envelope, and since this point falls within the envelope, the loading is acceptable.



NOTES: (1) Line representing adjustable seats shows the pilot or passenger center of gravity on adjustable seats positioned for an average occupant. Refer to the Loading Arrangements Diagram for forward and aft limits of occupant c.g. range.

(2) Engine Oil: 6 Qts. = 11 lbs. at -0.1 Moment/1000.

AIRSPEED CORRECTION TABLE

FLAPS UP										
IAS-MPH	50	60	70	80	90	100	110	120	130	140
CAS-MPH	53	60	69	78	87	97	107	117	128	138
FLAPS DOWN										
IAS-MPH	40	50	60	70	80	90	100			
CAS-MPH	40	50	61	72	83	94	105			

Figure 6-1.

STALL SPEEDS – MPH CAS

Gross Weight 1600 lbs. / CONDITION	ANGLE OF BANK 0°	20°	40°	60°
Flaps UP	55	57	63	78
Flaps 20°	49	51	56	70
Flaps 40°	48	49	54	67

POWER OFF — AFT CG

Figure 6-2.

—TAKE-OFF DISTANCE— FLAPS RETRACTED HARD SURFACE RUNWAY

GROSS WT. LBS.	IAS 50 FT. MPH	HEAD WIND KNOTS	AT SEA LEVEL & 59° F. GROUND RUN	AT SEA LEVEL & 59° F. TOTAL TO CLEAR 50 FT. OBS	AT 2500 FT. & 50° F. GROUND RUN	AT 2500 FT. & 50° F. TOTAL TO CLEAR 50 FT. OBS	AT 5000 FT. & 41° F. GROUND RUN	AT 5000 FT. & 41° F. TOTAL TO CLEAR 50 FT. OBS	AT 7500 FT. & 32° F. GROUND RUN	AT 7500 FT. & 32° F. TOTAL TO CLEAR 50 FT. OBS
1600	70	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

NOTES: 1. Increase the distances 10% for each 35°F. increase in temperature above standard for the particular altitude.
2. For operation on a dry, grass runway, increase distances (both "ground run" and "total to clear 50 ft. obstacle") by 7% of the "total to clear 50 ft. obstacle" figure.

—MAXIMUM RATE-OF-CLIMB DATA—

GROSS WEIGHT LBS.	AT SEA LEVEL & 59° F. IAS, MPH	AT SEA LEVEL & 59° F. RATE OF CLIMB FT./MIN.	AT SEA LEVEL & 59° F. FUEL USED, GAL.	AT 5000 FT. & 41° F. IAS, MPH	AT 5000 FT. & 41° F. RATE OF CLIMB FT./MIN.	AT 5000 FT. & 41° F. FUEL USED FROM S.L., GAL.	AT 10000 FT. & 23° F. IAS, MPH	AT 10000 FT. & 23° F. RATE OF CLIMB FT./MIN.	AT 10000 FT. & 23° F. FUEL USED FROM S.L., GAL.
1600	78	670	0.6	74	470	1.6	71	260	2.8

NOTES: 1. Flaps retracted, full throttle, mixture leaned to smooth operation above 5000 ft.
2. Fuel used includes warm-up and take-off allowances.
3. For hot weather, decrease rate of climb 15 ft./min. for each 10°F above standard day temperature for particular altitude.

—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. GROUND ROLL	AT SEA LEVEL & 59° F. TOTAL TO CLEAR 50 FT. OBS	AT 2500 FT. & 50° F. GROUND ROLL	AT 2500 FT. & 50° F. TOTAL TO CLEAR 50 FT. OBS	AT 5000 FT. & 41° F. GROUND ROLL	AT 5000 FT. & 41° F. TOTAL TO CLEAR 50 FT. OBS	AT 7500 FT. & 32° F. GROUND ROLL	AT 7500 FT. & 32° F. TOTAL TO CLEAR 50 FT. OBS
1600	60	445	1075	470	1135	495	1195	520	1255

NOTES: 1. Decrease the distances shown by 10% for each 4 knots of headwind.
2. Increase the distance by 10% for each 60°F. temperature increase above standard.
3. For operation on a dry, grass runway, increase distances (both "ground roll" and "total to clear 50 ft. obstacle") by 20% of the "total to clear 50 ft. obstacle" figure.

Figure 6-3.