

PERFORMANCE - SPECIFICATIONS

	MODEL 172	SKYHAWK
GROSS WEIGHT	2300 lbs	2300 lbs
SPEED:		
Top Speed at Sea Level	138 mph	139 mph
Cruise, 75% Power at 7000 ft	130 mph	131 mph
RANGE:		
Cruise, 75% Power at 7000 ft	550 miles	555 miles
36 Gal. No Reserve	4.2 hours	4.2 hours
130 mph		131 mph
Optimum Range at 10,000 ft	670 miles	670 miles
36 Gal. No Reserve	6.6 hours	6.6 hours
102 mph		102 mph
RATE OF CLIMB AT SEA LEVEL	645 fpm	645 fpm
SERVICE CEILING	13,100 ft	13,100 ft
TAKE-OFF:		
Ground Run	865 ft	865 ft
Total Distance Over 50-Foot Obstacle.	1525 ft	1525 ft
LANDING:		
Landing Roll	520 ft	520 ft
Total Distance Over 50-Foot Obstacle.	1250 ft	1250 ft
EMPTY WEIGHT (Approximate)	1260 lbs	1330 lbs
BAGGAGE	120 lbs	120 lbs
WING LOADING: Pounds/Sq Foot	13.2	13.2
POWER LOADING: Pounds/HP	15.9	15.9
FUEL CAPACITY: Total	39 gal.	39 gal.
OIL CAPACITY: Total	8 qts	8 qts
PROPELLER: Fixed Pitch (Diameter)	76 inches	76 inches
ENGINE:		
Continental Engine No.	O-300-C*	O-300-D
Horse Power	145	145

*The Model F172, which is manufactured by Reims Aviation S.A., Reims (Marne) France, is identical to the 172 except that it is powered by an O-300-D engine, manufactured under license by Rolls Royce, Crewe, England. All 172 information in this manual pertains to the F172 as well.

Section II

DESCRIPTION AND OPERATING DETAILS

The following paragraphs describe the systems and equipment whose function and operation is not obvious when sitting in the airplane. This section also covers in somewhat greater detail some of the items listed in Check List form in Section I that require further explanation.

FUEL SYSTEM.

Fuel is supplied to the engine from two aluminum tanks, one in each wing. From these tanks, fuel flows by gravity through a selector valve and a strainer to the carburetor.

Refer to figure 2-1 for fuel quantity data. For fuel system servicing information, refer to Lubrication and Servicing Procedures in Section IV.

FUEL QUANTITY DATA (U.S. GALLONS)					
TANKS	NO.	USABLE FUEL ALL FLIGHT CONDITIONS	ADDITIONAL USABLE FUEL (LEVEL FLIGHT)	UNUSABLE FUEL (LEVEL FLIGHT)	TOTAL FUEL VOLUME EACH
LEFT WING	1	18.0 gal.	1.0 gal.	0.5 gal.	19.5 gal.
RIGHT WING	1	18.0 gal.	1.0 gal.	0.5 gal.	19.5 gal.

Figure 2-1.

TAKE-OFF DATA

TAKE-OFF DISTANCE FROM HARD SURFACE RUNWAY, FLAPS UP

GROSS WEIGHT LBS.	IAS AT 50 FT. MPH	HEAD WIND KNOTS	@ S.L. & 59° F		@ 2500 ft. & 50° F		@ 5000 ft. & 41° F		@ 7500 ft. & 32° F	
			GROUND RUN	TOTAL TO CLEAR 50' OBS.	GROUND RUN	TOTAL TO CLEAR 50' OBS.	GROUND RUN	TOTAL TO CLEAR 50' OBS.	GROUND RUN	TOTAL TO CLEAR 50' OBS.
1700	60	0	435	780	520	920	625	1095	765	1370
		10	290	570	355	680	430	820	535	1040
		20	175	385	215	470	270	575	345	745
2000	65	0	630	1095	755	1325	905	1625	1120	2155
		10	435	820	530	1005	645	1250	810	1685
		20	275	580	340	720	425	910	595	1255
2300	70	0	865	1525	1040	1910	1255	2480	1565	3855
		10	615	1170	750	1485	920	1955	1160	3110
		20	405	850	505	1100	630	1480	810	2425

Note: Increase distance 10% for each 25°F above standard temperature for particular altitude.

MAXIMUM RATE-OF-CLIMB DATA

GROSS WEIGHT LBS.	@ S.L. & 59° F			@ 5000 ft. & 41° F			@ 10,000 ft. & 23° F			@ 15,000 ft. & 5° F		
	IAS MPH	RATE OF CLIMB FT/MIN.	GALS OF FUEL USED	IAS MPH	RATE OF CLIMB FT/MIN.	FROM S.L. FUEL USED	IAS MPH	RATE OF CLIMB FT/MIN.	FROM S.L. FUEL USED	IAS MPH	RATE OF CLIMB FT/MIN.	FROM S.L. FUEL USED
1700	75	1085	1.0	73	825	1.9	71	570	2.9	70	315	4.4
2000	77	840	1.0	76	610	2.2	74	380	3.6	73	155	6.3
2300	80	645	1.0	78	435	2.6	77	230	4.8	76	22	11.5

Note: Flaps up, full throttle and mixture leaned for smooth operation above 5000 ft.
Fuel used includes warm-up and take-off allowance.

Figure 5-3.

CRUISE & RANGE PERFORMANCE

—172 SKYHAWK—

Gross Weight- 2300 Lbs. *
Standard Conditions *
Zero Wind * Lean Mixture *
36 Gal. of Fuel (No Reserve)

NOTE: Maximum cruise is normally limited to 75% power. For standard 172 performance, subtract 1 MPH from the higher cruise speeds shown.

ALT.	RPM	% BHP	TAS MPH	GAL. / HOUR	ENDR. HOURS	RANGE MILES
2500	2700	93	138	10.5	3.4	470
	2600	84	131	9.5	3.8	495
	2500	75	125	8.5	4.2	530
	2400	67	119	7.6	4.7	560
	2300	59	113	6.8	5.3	595
	2200	52	106	6.2	5.8	615
	2100	46	100	5.7	6.4	635
5000	2700	87	136	9.8	3.7	500
	2600	78	130	8.8	4.1	525
	2550	74	127	8.4	4.3	550
	2500	70	124	7.9	4.5	560
	2400	62	118	7.1	5.1	600
	2300	55	111	6.4	5.6	625
	2200	49	105	5.9	6.1	640
	2100	44	98	5.5	6.4	640
7500	2650	77	132	8.7	4.2	550
	2600	73	129	8.2	4.3	560
	2500	65	123	7.4	4.9	600
	2400	58	116	6.7	5.3	620
	2300	52	110	6.1	5.9	650
	2200	47	103	5.7	6.4	655
	2100	42	97	5.3	6.7	655
10,000	2600	68	128	7.7	4.7	605
	2500	61	121	7.0	5.2	625
	2400	55	115	6.4	5.6	645
	2300	49	108	5.9	6.1	655
	2200	45	102	5.5	6.6	670
	2100	41	96	5.2	6.8	655
12,500	2600	63	126	7.2	5.0	630
	2500	57	120	6.6	5.4	650
	2400	52	113	6.1	5.9	670
	2300	47	107	5.7	6.3	670
	2200	43	101	5.4	6.6	670

The performance figures above apply to aircraft equipped with a standard McCauley 1C172/EM7653 propeller. Refer to figure 5-5 for information concerning aircraft with an optional McCauley 1C172/EM7651 climb propeller.

Figure 5-4.

CRUISE AND RANGE PERFORMANCE

With McCauley 1C172/EM 7651 Propeller

To obtain same % BHP as shown in adjoining figure and on Cessna Power Computer, increase RPM as follows:

For % BHP	Increase RPM
75	+20 RPM
70	+10 RPM
65 (and lower)	0 RPM

The faster turning climb propeller gives a slight loss in cruise speed at a given % BHP as shown below:

At % BHP	Speed Loss Differential
70 - 75	0 MPH
65 - 70	-1.0 MPH
60 - 65	-1.5 MPH
55 - 60	-2.0 MPH
50 - 55	-3.0 MPH

NOTE: When your aircraft is equipped with a McCauley 1C172/EM 7651 climb propeller, the above factors should be used in conjunction with the Cruise and Range Performance on the adjoining page.

Figure 5-5.