

PERFORMANCE AND SPECIFICATIONS

GROSS WEIGHT:		
Takeoff		6300 lbs.
Landing		6200 lbs.
SPEED BEST POWER MIXTURE:		
Maximum - Sea Level		198 kts.
Maximum - 16,000 ft.		227 kts.
Maximum Recommended Cruise		
75% Power at 10,000 ft.		190 kts.
75% Power at 20,000 ft.		208 kts.
RANGE, RECOMMENDED LEAN MIXTURE:		
Maximum Recommended Cruise		
75% Power at 10,000 ft.		550 Naut. Mi.
600 lbs., No Reserve		2.93 hrs.
75% Power at 10,000 ft.		188 kts.
978 lbs., No Reserve		897 Naut. Mi.
75% Power at 10,000 ft.		4.78 hrs.
1218 lbs., No Reserve		188 kts.
75% Power at 10,000 ft.		1117 Naut. Mi.
1218 lbs., No Reserve		5.95 hrs.
75% Power at 20,000 ft.		188 kts.
600 lbs., No Reserve		601 Naut. Mi.
75% Power at 20,000 ft.		2.93 hrs.
978 lbs., No Reserve		205 kts.
75% Power at 20,000 ft.		980 Naut. Mi.
1218 lbs., No Reserve		4.78 hrs.
75% Power at 20,000 ft.		205 kts.
1218 lbs., No Reserve		1220 Naut. Mi.
		5.95 hrs.
		205 kts.
Maximum Range		
10,000 ft., 600 lbs., No Reserve		646 Naut. Mi.
		4.24 hrs.
10,000 ft., 978 lbs., No Reserve		152 kts.
		1053 Naut. Mi.
		6.91 hrs.
10,000 ft., 1218 lbs., No Reserve		152 kts.
		1312 Naut. Mi.
		8.61 hrs.
25,000 ft., 600 lbs., No Reserve		152 kts.
		702 Naut. Mi.
		3.78 hrs.
25,000 ft., 978 lbs., No Reserve		187 kts.
		1143 Naut. Mi.
		6.12 hrs.
25,000 ft., 1218 lbs., No Reserve		187 kts.
		1423 Naut. Mi.
		7.63 hrs.
		187 kts.
RATE OF CLIMB AT SEA LEVEL:		
Twin Engine		1610 fpm.
Single Engine		225 fpm.
SERVICE CEILING:		
Twin Engine		26,180 ft.
Single Engine		11,320 ft.
TAKEOFF PERFORMANCE: Takeoff Speed (91 KIAS)		
Ground Run		1695 ft.
Total Distance Over 50-foot Obstacle		2220 ft.
LANDING PERFORMANCE: Approach Speed (95 KIAS)		
Ground Run		777 ft.
Total Distance Over 50-foot Obstacle		1765 ft.
EMPTY WEIGHT: (Approximate)		
Businessliner		3742 lbs.
Utililiner		3746 lbs.
BAGGAGE ALLOWANCE		
Businessliner		1340 lbs.
Utililiner		1340 lbs.
WING LOADING:		32.2 lbs./sq. ft.
POWER LOADING:		10.5 lbs./hp.
FUEL CAPACITY: TOTAL		
Standard		102 gals.
With Auxiliary Tanks (40 gal. usable)		143 gals.
With Auxiliary Tanks (63 gal. usable)		166 gals.
With Auxiliary Tanks (63 gal. usable) and Wing Locker Tanks		207 gals.
OIL CAPACITY: TOTAL		6.5 gals.
ENGINES:		
Continental 6-Cylinder Turbocharged		
Fuel Injection Engines		TSIO-520-E
300 Rated HP at 2700 Propeller RPM and		
34.5" MP to 16,000 ft.		
PROPELLERS:		
Constant Speed, Full Feathering, Three Bladed		
76.5" Diameter		3AF32C87M/82NC-5.5

THIS OWNER'S MANUAL COVERS THE OPERATION OF THE 402B AIRCRAFT SERIAL NUMBER 0501 AND ON

SERVICING REQUIREMENTS *



FUEL: AVIATION GRADE 100/130 MINIMUM

(Low lead fuels are approved for use) - Service after each flight. Keep full to retard condensation in the tanks. Tank capacities are:

- Each Main Tank - 51.0 Gallons
- Each Auxiliary Tank - 20.5 Gallons (40 Gallon Option)
- Each Auxiliary Tank - 32.0 Gallons (63 Gallon Option)
- Each Wing Locker Tank - 20.5 Gallons

FUEL DRAINS:

Fuel tanks, strainers and crossfeed lines - Drain about (2) ounces of fuel before first flight of day and after each refueling.

OIL: AVIATION GRADE ENGINE OIL; SAE 50 ABOVE 40°F and SAE 10W30 OR SAE 30 BELOW 40°F - FILTER ELEMENT 6435683

(Multi-viscosity oil with a range of SAE 10W30 is recommended for improved starting and turbocharger controller operation in cold weather.) Detergent or dispersant oil, conforming to Continental Motors Specification MHS 24A, must be used. Replace filters every 50 hours. Change oil every 100 hours or 6 months, whichever occurs first, reduce intervals for prolonged operation in dusty areas, cold climates or when short flights and long idle periods result in sludging conditions.

NOTE

For faster ring seating and improved oil control, your Cessna was delivered from the factory with straight mineral (non-detergent) conforming to specification MIL-L-6082. This break-in oil must be used only for the first 25 hours of operation, at that time it must be replaced with detergent oil.

Check oil level before each flight. Do not operate on less than 9 quarts. To minimize loss of oil through breather, fill to 10 quart level for normal flights of less than 3 hours. For extended flight, fill to capacity which is 13 quarts for each engine sump including 1 quart for oil filter.

OXYGEN: AVIATORS BREATHING OXYGEN - SPECIFICATION MIL-O-27210

Check pressure gage for anticipated requirements before each flight. Refill whenever pressure drops below 300 psi. See Figure 2-10 for servicing procedures.

ALCOHOL DEICE RESERVOIR - ISOPROPYL ALCOHOL MIL-F-5566

Check reservoir fluid level, fill as required. Reservoir capacity 3.0 gallons.

TIRES

Main 62 psi; Nose 40 psi.

INDUCTION AIR FILTER - ELEMENT 9910018-2

Service every 50 hours, more often under dusty conditions.

VACUUM SYSTEM FILTER - ELEMENT (STANDARD C294501-0301) (OPTIONAL C294501-0302)

* For complete servicing requirements, refer to the aircraft Service Manual.

During cruise the propellers should be exercised at half-hour intervals to flush the cold oil from the governors and propeller hubs. Electrical equipment should be managed to assure adequate alternator charging throughout the flight, since cold weather adversely affects battery capacity.

During letdown, watch engine temperature closely and carry sufficient power to maintain them above operating minimums.

The pitot, tip tank vents and stall warning heater switch should be turned ON at least 5 minutes before entering potential icing conditions (2 minutes if on ground) so that these units will be warm enough to prevent formation of ice. Preventing ice is preferable to attempting its removal once it has formed.

Refer to Section VII for Optional Cold Weather Equipment.

FUEL SYSTEM

Fuel for each engine is supplied by a main tank (50 gallons usable) on each wing tip. Each engine has its own complete fuel system; the two systems are interconnected only by a cross feed for emergency use. Vapor and excess fuel from the engines are returned to the main fuel tanks. Submerged electric auxiliary pumps in the main fuel tanks supply fuel for priming and starting, and for engine operation as a back up system to the engine-driven pumps. See Figure 2-2 for Fuel System Schematic and optional fuel systems paragraphs in Section VII for additional information.

NOTE

During very hot weather, if there is an indication of vapor in the fuel system (fluctuating fuel flow) or anytime when climbing above 12,000 feet, turn the auxiliary fuel pumps ON until cruising altitude has been attained and the system is purged (usually 5 to 15 minutes after establishing cruising flight). It is recommended that the mixture remain at the climb mixture setting for approximately 5 minutes after establishing cruising flight before leaning is initiated.

A continuous duty tip tank transfer pump is installed in each main tank. The pumps assure availability of all main tank fuel to the engine supply

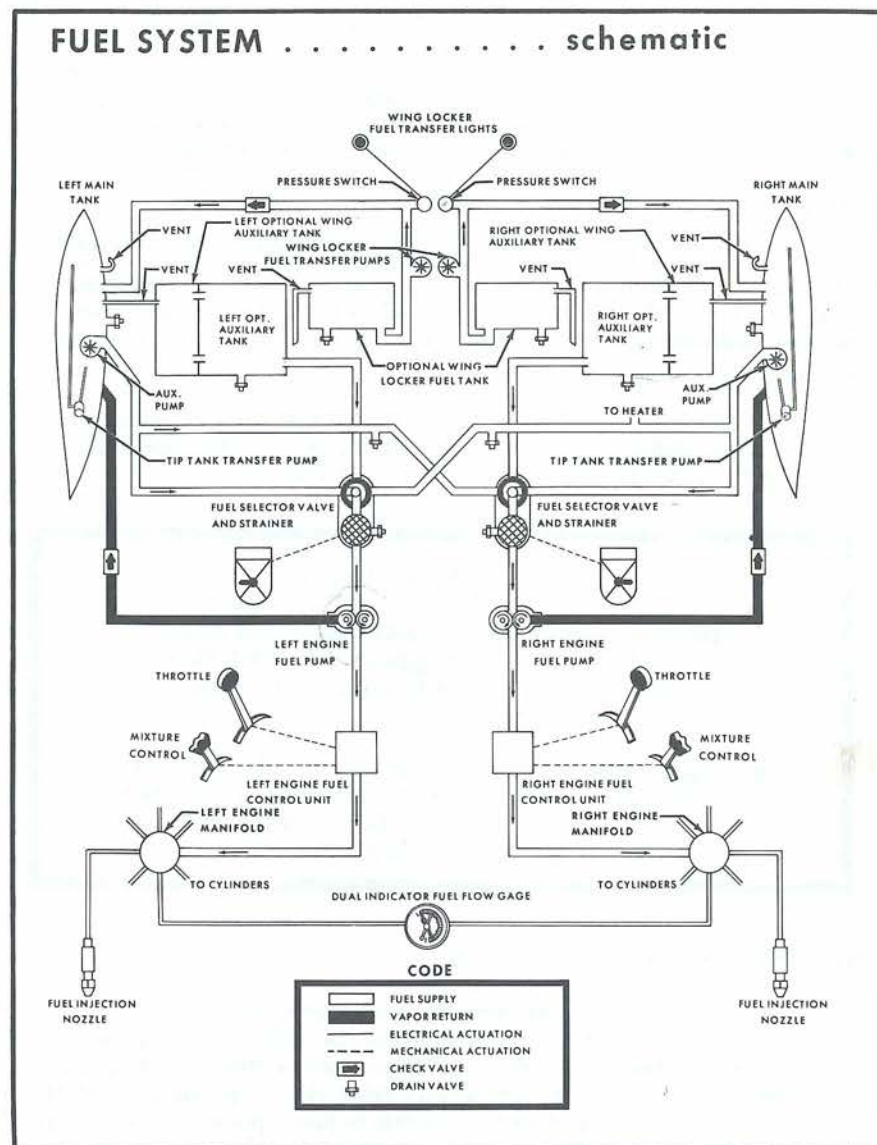


Figure 2-2

line during high angles of descent. Each pump is electrically protected by the respective landing light circuit breaker. When the right-hand landing light is not installed, a circuit breaker is installed to protect the right-hand transfer pump. During preflight inspection these pumps can be checked for operation by listening for a pulsing sound emanating from the aft tip tank fairings with the battery switch in the ON position.

FUEL SELECTOR VALVE HANDLES

The fuel selector valve placards are marked LEFT ENGINE OFF, LEFT MAIN and RIGHT MAIN for the left engine selector and RIGHT ENGINE OFF, RIGHT MAIN and LEFT MAIN for the right engine selector. The crossfeed position of each selector valve is the one marked for the opposite main tank.

The fuel selector valve handles form the pointers for the selectors. The ends of the handles are arrow-shaped and point to the position on the selector placard which corresponds to the valve position.

NOTE

- The fuel selector valve handles should be turned to LEFT MAIN for the left engine and RIGHT MAIN for the right engine, during takeoff, landing and all emergency operations.
- When fuel selector valve handles are changed from one position to another, (feel for detent) the auxiliary fuel pumps should be turned to LOW and the mixture controls should be in the FULL RICH position.

AUXILIARY FUEL PUMP SWITCHES

The LOW position runs the pumps at low speed, providing 5.5 PSI pressure for the purging. The ON position also runs the pumps at low speed, as long as the engine-driven pumps are functioning. With the switch positioned to ON however, if an engine-driven pump should fail, the auxiliary pump on that side will switch to high speed automatically, providing sufficient fuel for all engine operations including emergency takeoff.

NOTE

If the auxiliary pump switches are positioned to ON for a period in excess of 60 seconds with engines inoperative on the ground or during flight, the engines and/or aircraft may be damaged due to fuel accumulations in the induction system.

FUEL FLOW GAGE

The fuel flow gage, Figure 2-3, is a dual instrument which indicates the approximate fuel consumption of each engine in pounds per hour. The fuel flow gage used with the Continental injection system senses the pressure at which fuel is delivered to the engine spray nozzles. Since fuel pressure at this point is approximately proportional to the fuel consumption of the engine, the gage is marked as a flowmeter.

The gage dial is marked with arc segments corresponding to proper fuel flow for various power settings and is used as a guide to quickly set the mixtures. The gage has takeoff, climb and cruise markings for various percentages of power. The takeoff range presents the desired fuel flow (full rich schedule for proper engine cooling) for full power (2700 RPM and 34.5 inches Hg.) operation under all conditions up to 16,000 feet. The climb range (blue segments) presents the desired fuel flow for best power mixture at 75% power, with an enriched mixture for higher power settings to provide engine cooling during climb conditions. The cruise range presents the recommended fuel flow for standard temperatures at the specified percent power. For more accurate cruise fuel flow settings, refer to your power computer and the following fuel flow information.

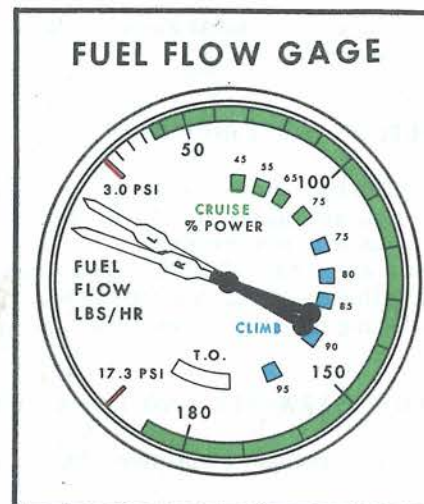


Figure 2-3

FUEL FLOW MANAGEMENT

For normal cruise conditions, your power computer should be utilized to set the fuel flows for the recommended lean mixtures. The power computer is based on true OAT, which is obtained by subtracting the ram rise from the indicated OAT. A ram rise chart is provided in the pilot's checklist and your Aircraft Flight Manual.

When range is not a primary consideration for setting the fuel flows, the Best Power Scale provided on the power computer should be used. This setting will result in a higher airspeed as well as increase the engine and component life because of the lower operating temperatures.

When the optional Economy Mixture Indicator (EGT) is provided, refer to Section VII.

FUEL QUANTITY INDICATORS

The fuel quantity indicators are calibrated in pounds and will accurately indicate the weight of fuel contained in the tanks. Since fuel density varies with temperature, a full tank will weigh more on a cold day than on a warm day. This will be reflected by the weight shown on the gage. A gallons scale is provided in blue on the indicator for convenience in allowing the pilot to determine the approximate volume of fuel on board.

FUEL STRAINER AND TANK SUMP DRAINS

See Preflight Inspection, Figure 1-1.

ELECTRICAL SYSTEM

Electrical energy is supplied by a 28-volt, negative-ground, direct-current system powered by a standard 50 ampere or one of the optional 100 ampere engine-driven alternators on each engine. The electrical system has independent circuits for each side with each alternator having its own regulator and overvoltage protection relay. The voltage regulators are connected to provide proper load sharing. A 24 volt battery is located in the left stub wing. An optional external power receptacle may be installed on the underside of the fuselage just forward of the cabin door. The receptacle accepts a standard external power source plug. See Figure 2-4 for Electrical Power Distribution Schematic.

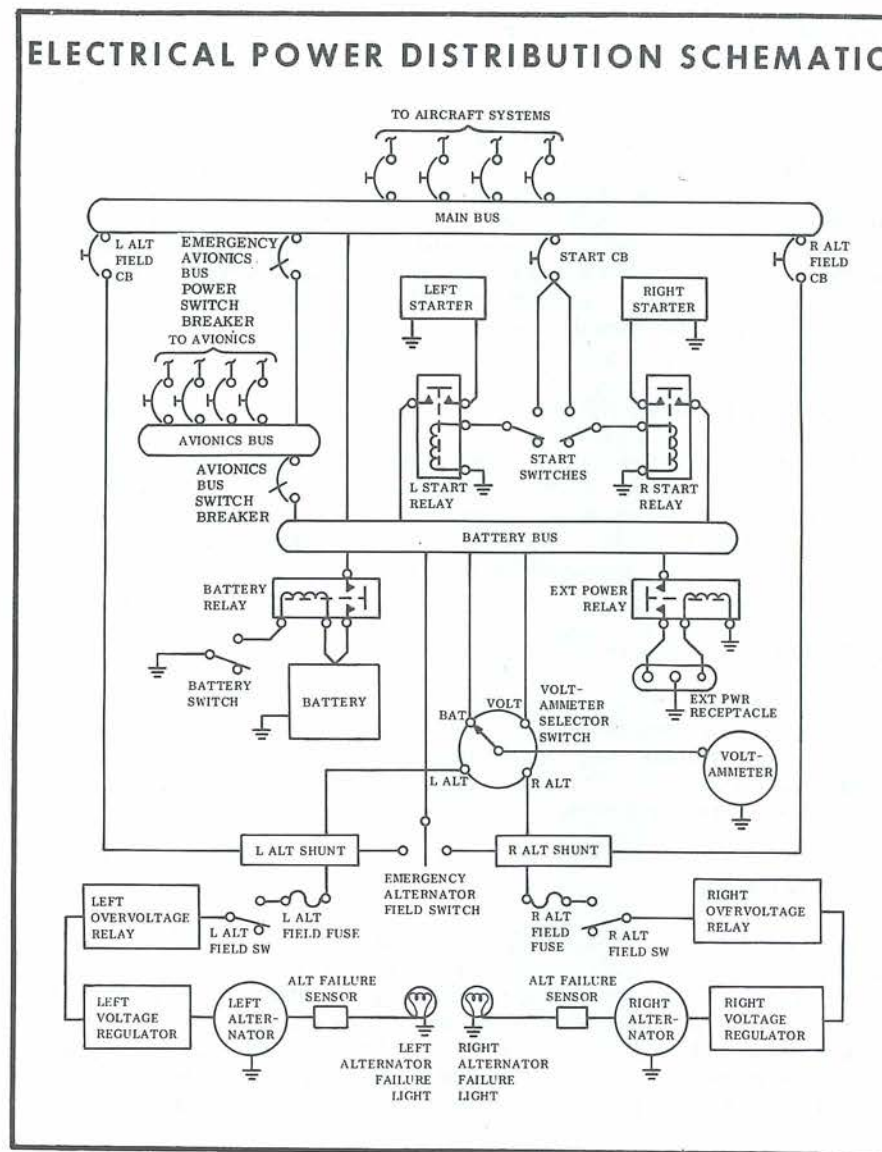
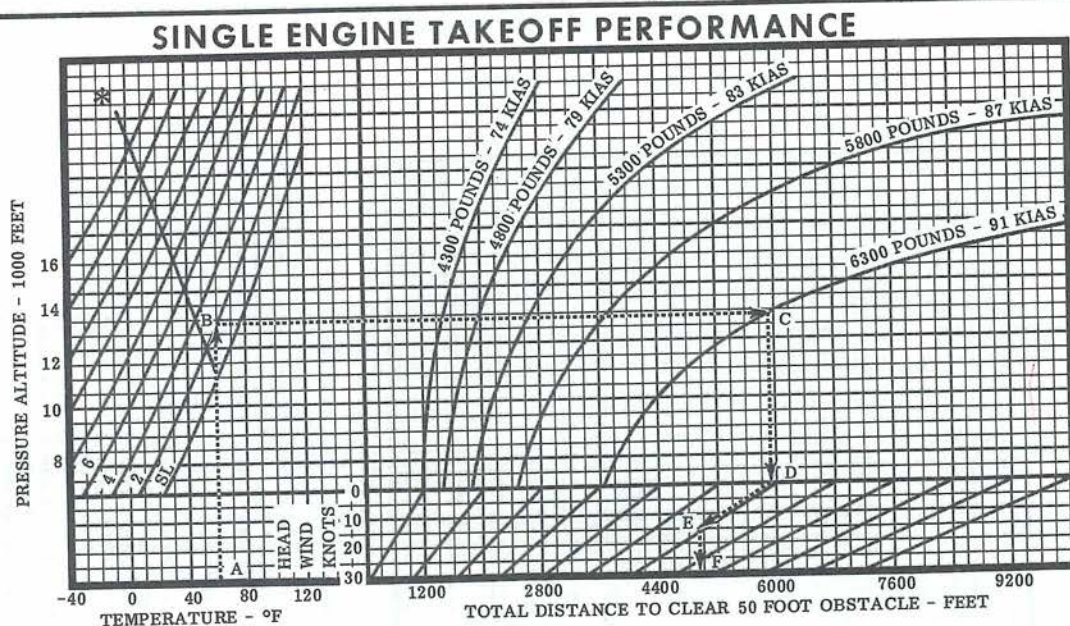


Figure 2-4

Figure 6-6



CONDITIONS

1. Level Hard Surface Runway
2. Wing Flaps - UP
3. Cowl Flaps - OPEN
4. 2700 RPM, 34.5 In. Hg M.P. Before Releasing Brakes
5. Engine Failure at Takeoff Speed
6. Propeller Feathered and Gear Retracted During Climb.
7. Maintain Speed to 50 Feet

EXAMPLE

- A. Temperature - 60°F
- B. Pressure Altitude - 2000 Feet
- C. Gross Weight - 6300 Pounds
- D. Total Distance to Clear 50 Foot Obstacle (No Wind) - 5930 Feet
- E. Headwind - 15 Knots
- F. Total Distance to Clear 50 Foot Obstacle (15 Knot Headwind - 4950 Feet)

Figure 6-7

MULTI-ENGINE CLIMB DATA AT 6300 POUNDS

MAXIMUM CLIMB																	
SEA LEVEL 59°F			5000 FT. 41°F			10,000 FT. 23°F			15,000 FT. 5°F			20,000 FT. -12°F			25,000 FT. -30°F		
Best Climb KIAS	Rate of Climb Ft/Min	Lb of Fuel Used	Best Climb KIAS	Rate of Climb Ft/Min	From S. L. Fuel Used	Best Climb KIAS	Rate of Climb Ft/Min	From S. L. Fuel Used	Best Climb KIAS	Rate of Climb Ft/Min	From S. L. Fuel Used	Best Climb KIAS	Rate of Climb Ft/Min	From S. L. Fuel Used	Best Climb KIAS	Rate of Climb Ft/Min	From S. L. Fuel Used
109	1610	30	109	1470	49	108	1340	69	108	1200	90	106	750	120	103	220	168

NOTE: 34.5 IN. HG. M. P. TO 16,000 FT. PLACARDED M. P. ABOVE 16,000 FT., 2700 RPM. MIXTURE AT RECOMMENDED FUEL FLOW. FLAPS AND GEAR RETRACTED. COWL FLAPS OPEN. FUEL USED INCLUDES 30 POUNDS PRETAKEOFF ALLOWANCE.

CRUISE CLIMB															
Power Setting		Climb KIAS	Fuel Flow Lb/Hr Per Eng	5000 FT. 41°F			10,000 FT. 23°F			15,000 FT. 5.5°F			20,000 FT. -12°F		
				FROM SEA LEVEL			FROM SEA LEVEL			FROM SEA LEVEL			FROM SEA LEVEL		
				Dist. Naut. Mi.	Time Min.	Fuel Used Lb	Dist. Naut. Mi.	Time Min.	Fuel Used Lb	Dist. Naut. Mi.	Time Min.	Fuel Used Lb	Dist. Naut. Mi.	Time Min.	Fuel Used Lb
RPM	M. P.														
2450	29.5	120	102	13	6	50	29	13	73	50	22	101	76	32	133
NOTE: FUEL USED INCLUDES A PRETAKEOFF ALLOWANCE OF 30 POUNDS, MIXTURE AT RECOMMENDED FUEL FLOW, FLAPS AND GEAR RETRACTED, COWL FLAPS AS REQUIRED.															

SINGLE ENGINE CLIMB DATA										
Gross Weight Pounds	SEA LEVEL 59°F		5000 FT 41°F		10,000 FT 23°F		15,000 FT 5.5°F		20,000 FT -12°F	
	Best Climb KIAS	Rate of Climb Ft/Min	Best Climb KIAS	Rate of Climb Ft/Min	Best Climb KIAS	Rate of Climb Ft/Min	Best Climb KIAS	Rate of Climb Ft/Min	Best Climb KIAS	Rate of Climb Ft/Min
6300	103	225	102	147	101	70	100	-9	99	-278
5800	98	350	98	277	97	202	96	128	95	-142
5300	94	499	93	430	93	360	92	289	91	8
4800	89	680	88	615	88	550	87	484	86	192
4300	84	908	84	850	83	790	82	731	81	424

NOTE: FLAPS AND GEAR RETRACTED, INOPERATIVE PROPELLER - FEATHERED, WING BANKED 5° TOWARD OPERATIVE ENGINE, COWL FLAP CLOSED ON INOPERATIVE ENGINE, 34.5 IN. HG. M. P., TO 16,000 FT., PLACARD M. P. ABOVE 16,000 FT., 2700 RPM, MIXTURE AT RECOMMENDED FUEL FLOW. DECREASE RATE OF CLIMB 15 FT/MIN FOR EACH 10°F ABOVE STANDARD TEMPERATURE FOR A PARTICULAR ALTITUDE.

Figure 6-8

SINGLE ENGINE SERVICE CEILING							
BEST CLIMB SPEED APPROXIMATELY 95 KIAS (R/C = 50 FPM)							
GROSS WEIGHT POUNDS	OUTSIDE AIR TEMPERATURE °F						
	-10	0	10	20	30	40	50
6300	14,200	13,250	12,200	11,150	10,100	9,050	7,950
5800	17,300	16,950	16,700	16,350	15,800	14,750	13,700
5300	19,450	19,100	18,700	18,400	18,000	17,600	17,300
4800	21,700	21,300	20,900	20,600	20,200	19,800	19,450
4300	24,400	24,000	23,650	23,250	22,850	22,450	22,050

NOTE: TABLE PROVIDES PERFORMANCE INFORMATION TO AID IN ROUTE SELECTION WHEN OPERATING UNDER FAR 135.145 AND FAR 91.119 REQUIREMENTS

INCREASE INDICATED SERVICE CEILINGS 100 FEET FOR EACH 0.10 INCH HG. ALTIMETER SETTING GREATER THAN 29.92.

DECREASE INDICATED SERVICE CEILINGS 100 FEET FOR EACH 0.10 INCH HG. ALTIMETER SETTING LESS THAN 29.92.

Figure 6-9

CRUISE PERFORMANCE WITH RECOMMENDED LEAN MIXTURE AT SEA LEVEL										
RPM	MP	%BHP	KTAS	Lb/Hr	Endurance 600 Lbs.	Range 600 Lbs. Naut. Mi.	Endurance 978 Lbs.	Range 978 Lbs. Naut. Mi.	Endurance 1218 Lbs.	Range 1218 Lbs. Naut. Mi.
2450	29.5	73.6	171	202.0	2.97	508	4.84	828	6.03	1032
27	65.7	162	181.2	3.31	538	5.40	876	6.72	1092	
25	59.2	155	165.6	3.62	564	5.91	918	7.36	1144	
23	53.0	148	151.8	3.95	584	6.44	951	8.02	1184	
2300	29	65.7	162	181.2	3.31	538	5.40	876	6.72	1092
27	60.2	156	168.0	3.57	558	5.82	910	7.25	1133	
25	54.3	149	154.8	3.88	579	6.32	944	7.87	1175	
23	48.4	142	142.8	4.20	595	6.85	969	8.53	1207	
2200	29	62.1	159	172.8	3.47	551	5.66	900	7.05	1120
27	56.6	152	159.6	3.76	571	6.13	931	7.63	1160	
25	51.0	145	147.6	4.07	590	6.63	960	8.25	1197	
23	45.8	138	137.4	4.37	603	7.12	983	8.86	1224	
2100	29	57.6	153	162.0	3.70	566	6.04	922	7.52	1149
27	52.3	147	151.8	3.95	580	6.44	946	8.02	1178	
25	47.4	141	140.4	4.27	601	6.97	980	8.68	1220	
23	42.2	133	130.2	4.61	612	7.51	998	9.35	1243	
21	37.2	123	121.2	4.95	610	8.07	995	10.05	1239	
19	32.0	109	111.0	5.41	591	8.81	964	10.97	1201	

CRUISE PERFORMANCE IS BASED ON STANDARD CONDITIONS (59°F), ZERO WIND, 600, 978 AND 1218 POUNDS OF FUEL (NO RESERVE).

NOTE: See Range Profile, Figure 6-11, for range including climb.

CRUISE PERFORMANCE WITH RECOMMENDED LEAN MIXTURE AT 5000 FT										
RPM	MP	%BHP	KTAS	Lb/Hr	Endurance 600 Lbs.	Range 600 Lbs. Naut. Mi.	Endurance 978 Lbs.	Range 978 Lbs. Naut. Mi.	Endurance 1218 Lbs.	Range 1218 Lbs. Naut. Mi.
2450	29.5	73.6	178	202.0	2.97	530	4.84	862	6.03	1073
27	65.7	170	181.2	3.31	564	5.40	919	6.72	1144	
25	59.5	162	166.8	3.60	581	5.86	947	7.30	1179	
23	53.3	155	152.4	3.94	609	6.42	992	8.00	1236	
2300	29	65.7	170	181.2	3.31	564	5.40	919	6.72	1144
27	60.5	164	169.2	3.55	582	5.78	948	7.20	1182	
25	54.9	156	156.0	3.85	601	6.27	980	7.81	1220	
23	49.1	148	144.0	4.17	618	6.79	1008	8.46	1256	
2200	29	62.5	166	173.4	3.46	574	5.64	935	7.02	1165
27	56.9	159	160.8	3.73	593	6.08	967	7.57	1204	
25	51.7	152	148.8	4.03	613	6.57	999	8.18	1244	
23	46.4	145	138.6	4.33	628	7.06	1023	8.79	1275	
2100	29	58.5	161	164.4	3.65	586	5.95	956	7.41	1191
27	53.3	155	152.4	3.94	609	6.42	992	7.99	1236	
25	48.1	147	141.6	4.24	622	6.91	1013	8.60	1263	
23	42.8	138	131.4	4.57	630	7.44	1028	9.27	1280	
21	37.9	128	122.4	4.90	625	8.00	1020	9.95	1270	
19	32.7	108	112.4	5.34	575	8.70	937	10.84	1167	

CRUISE PERFORMANCE IS BASED ON STANDARD CONDITIONS (41°F), ZERO WIND, 600, 978 AND 1218 POUNDS OF FUEL (NO RESERVE).

NOTE: See Range Profile, Figure 6-11, for range including climb.

Figure 6-10 (Sheet 1 of 3)

CRUISE PERFORMANCE WITH RECOMMENDED LEAN MIXTURE AT 10,000 FT										
RPM	MP	%BHP	KTAS	Lb/Hr	Endurance 600 Lbs.	Range 600 Lbs. Naut. Mi.	Endurance 978 Lbs.	Range 978 Lbs. Naut. Mi.	Endurance 1218 Lbs.	Range 1218 Lbs. Naut. Mi.
2450	29.5	73.6	187	202.0	2.97	555	4.84	904	6.03	1125
	27	66.1	177	182.4	3.29	583	5.36	950	6.68	1183
	25	60.2	169	168.0	3.57	604	5.82	986	7.25	1228
	23	54.3	161	154.8	3.88	626	6.32	1020	7.87	1270
2300	29	66.1	177	182.4	3.29	583	5.36	949	6.68	1183
	27	60.5	171	169.2	3.55	607	5.78	989	7.20	1232
	25	55.3	164	157.2	3.82	626	6.22	1021	7.75	1271
	23	49.4	155	144.6	4.15	642	6.76	1046	8.42	1302
2200	29	63.1	174	175.2	3.42	595	5.58	969	6.95	1207
	27	57.6	167	162.0	3.70	617	6.04	1006	7.52	1254
	25	52.0	159	150.6	3.98	633	6.49	1032	8.09	1285
	23	46.8	150	139.8	4.29	644	7.00	1051	8.71	1309
2100	29	59.2	168	165.6	3.62	610	5.91	995	7.35	1239
	27	54.3	161	154.8	3.88	626	6.32	1020	7.87	1270
	25	49.1	155	144.0	4.17	644	6.79	1050	8.46	1308
	23	43.5	144	133.2	4.50	650	7.34	1059	9.14	1318
	21	38.5	131	123.0	4.88	640	7.95	1043	9.90	1298
CRUISE PERFORMANCE IS BASED ON STANDARD CONDITIONS (23°F), ZERO WIND, 600, 978 AND 1218 POUNDS OF FUEL (NO RESERVE).										
NOTE: See Range Profile, Figure 6-11, for range including climb.										

CRUISE PERFORMANCE WITH RECOMMENDED LEAN MIXTURE AT 15,000 FT										
RPM	MP	%BHP	KTAS	Lb/Hr	Endurance 600 Lbs.	Range 600 Lbs. Naut. Mi.	Endurance 978 Lbs.	Range 978 Lbs. Naut. Mi.	Endurance 1218 Lbs.	Range 1218 Lbs. Naut. Mi.
2450	29.5	73.6	195	202.0	2.97	577	4.84	941	6.03	1173
	27	66.4	186	182.6	3.29	610	5.36	995	6.67	1239
	25	60.5	178	168.6	3.56	633	5.80	1040	7.22	1286
	23	54.6	169	155.4	3.86	654	6.29	1065	7.84	1327
2300	29	66.4	186	182.6	3.29	610	5.36	995	6.67	1239
	27	60.8	178	169.2	3.55	631	5.78	1038	7.20	1282
	25	55.6	171	157.8	3.80	650	6.20	1060	7.72	1321
	23	50.0	162	145.8	4.12	669	6.71	1089	8.35	1356
2200	29	63.4	181	175.8	3.41	619	5.56	1010	6.93	1257
	27	57.9	174	162.6	3.69	641	6.01	1045	7.49	1301
	25	52.6	167	151.2	3.97	662	6.47	1079	8.06	1343
	23	47.1	156	140.4	4.27	668	6.97	1087	8.68	1356
2100	29	59.8	177	167.4	3.58	634	5.84	1035	7.28	1288
	27	54.9	169	156.0	3.85	651	6.27	1061	7.81	1322
	25	49.7	161	145.2	4.13	663	6.74	1082	8.39	1348
	23	44.1	150	134.4	4.46	670	7.28	1093	9.06	1362
	21	39.2	131	124.8	4.81	630	7.84	1027	9.76	1280
CRUISE PERFORMANCE IS BASED ON STANDARD CONDITIONS (5.5°F), ZERO WIND, 600, 978 AND 1218 POUNDS OF FUEL (NO RESERVE).										
NOTE: See Range Profile, Figure 6-11, for range including climb.										

Figure 6-10 (Sheet 2 of 3)

CRUISE PERFORMANCE WITH RECOMMENDED LEAN MIXTURE AT 20,000 FT										
RPM	MP	%BHP	KTAS	Lb/Hr	Endurance 600 Lbs.	Range 600 Lbs. Naut. Mi.	Endurance 978 Lbs.	Range 978 Lbs. Naut. Mi.	Endurance 1218 Lbs.	Range 1218 Lbs. Naut. Mi.
2450	29.5	73.6	203	202.0	2.97	604	4.84	983	6.03	1225
	27	66.4	194	182.6	3.29	637	5.36	1037	6.67	1291
	25	60.8	187	169.8	3.53	660	5.76	1075	7.17	1339
	23	54.9	177	156.6	3.83	679	6.25	1106	7.78	1352
2300	29	66.4	194	182.6	3.29	637	5.36	1037	6.67	1291
	27	61.1	187	170.4	3.52	657	5.74	1072	7.15	1335
	25	55.9	178	158.4	3.79	675	6.17	1099	7.69	1369
	23	50.4	168	146.4	4.10	687	6.68	1119	8.32	1395
2200	27	58.2	182	163.8	3.66	668	5.97	1089	7.44	1356
	25	53.0	174	151.8	3.95	687	6.44	1119	8.02	1394
	23	47.7	162	141.0	4.26	687	6.94	1120	8.64	1396
2100	25	50.0	168	145.8	4.12	690	6.71	1125	8.35	1400
	24	47.7	162	141.0	4.26	687	6.94	1120	8.64	1396
	23	44.8	154	135.6	4.42	680	7.21	1109	8.98	1381
CRUISE PERFORMANCE IS BASED ON STANDARD CONDITIONS (-12°F), ZERO WIND, 600, 978 AND 1218 POUNDS OF FUEL (NO RESERVE).										
NOTE: See Range Profile, Figure 6-11, for range including climb.										

CRUISE PERFORMANCE WITH RECOMMENDED LEAN MIXTURE AT 25,000 FT										
RPM	MP	%BHP	KTAS	Lb/Hr	Endurance 600 Lbs.	Range 600 Lbs. Naut. Mi.	Endurance 978 Lbs.	Range 978 Lbs. Naut. Mi.	Endurance 1218 Lbs.	Range 1218 Lbs. Naut. Mi.
2450	23	55.6	184	158.4	3.79	697	6.17	1137	7.69	1415
	22	52.6	178	151.2	3.97	707	6.47	1151	8.06	1434
	21	49.4	168	144.6	4.15	699	6.76	1139	8.42	1419
	20	47.1	160	139.8	4.29	686	7.00	1118	8.71	1392
2300	23	51.0	174	148.2	4.05	703	6.60	1146	8.22	1428
	22	48.4	166	142.8	4.20	697	6.85	1136	8.53	1415
	21	45.5	150	136.8	4.39	659	7.15	1074	8.90	1337
2200	23	48.1	165	142.2	4.22	696	6.88	1135	8.57	1413
	22	45.5	149	136.8	4.39	655	7.15	1068	8.90	1330
CRUISE PERFORMANCE IS BASED ON STANDARD CONDITIONS (-30°F), ZERO WIND, 600, 978 AND 1218 POUNDS OF FUEL (NO RESERVE).										

Figure 6-10 (Sheet 3 of 3)

Figure 6-11

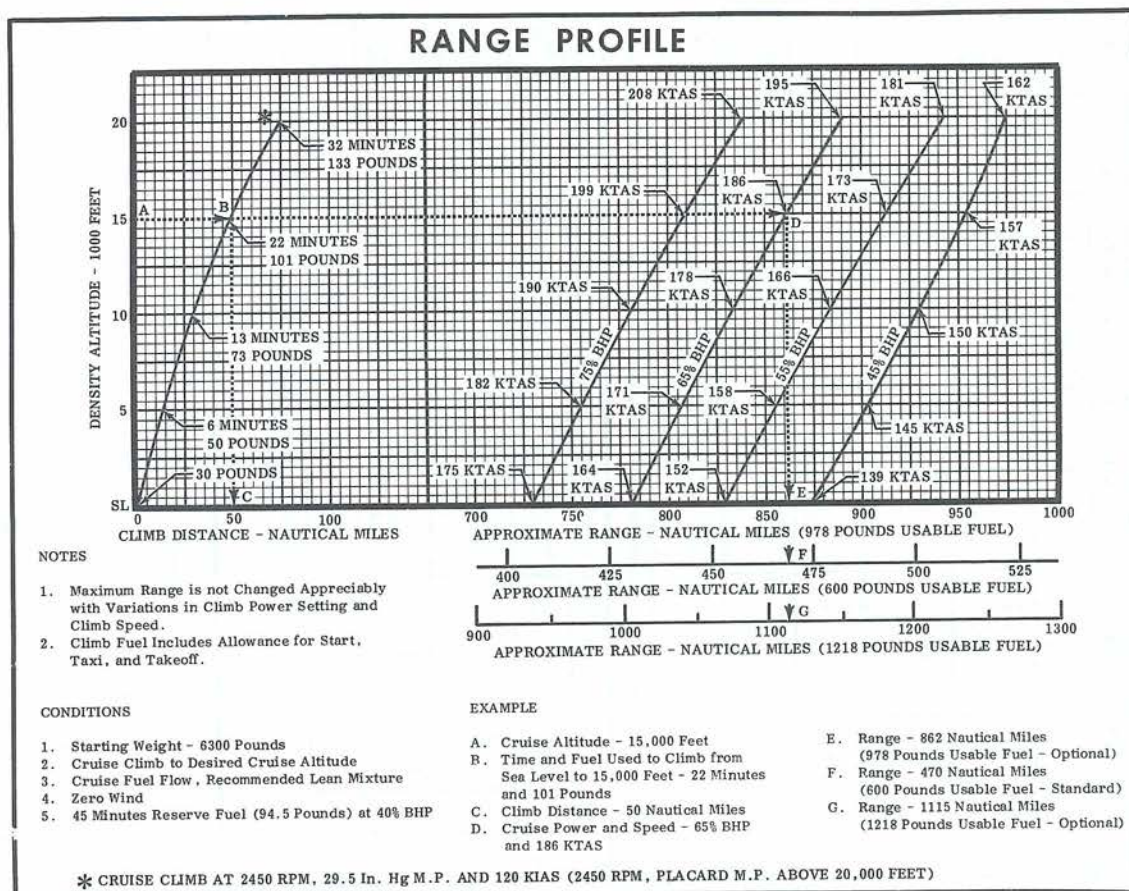


Figure 6-12

LANDING PERFORMANCE									
Gross Weight Pounds	KIAS at Obstacle	SEA LEVEL 59° F		2500 FT. 50° F		5000 FT. 41° F		7500 FT. 32° F	
		Ground Run	Total Distance Over 50 Foot Obstacle	Ground Run	Total Distance Over 50 Foot Obstacle	Ground Run	Total Distance Over 50 Foot Obstacle	Ground Run	Total Distance Over 50 Foot Obstacle
6200	95	777	1765	837	1825	902	1890	969	1957
5800	92	670	1658	722	1710	779	1767	840	1828
5300	88	550	1538	592	1580	639	1627	690	1678
4800	83	442	1430	476	1464	514	1502	554	1542
4300	79	347	1335	374	1362	403	1391	435	1423

NOTE: WING FLAPS 45°. POWER OFF, COWL FLAPS CLOSED, HARD SURFACE RUNWAY, ZERO WIND, MAXIMUM BRAKING EFFORT. REDUCE LANDING DISTANCE 10% FOR EACH 10 KNOTS HEADWIND.