

**CROSS-COUNTRY FLY AWAY KIT**

IPAD MINI + CHARGER	FUEL TESTER	JOURNEY LOG BINDER
SENTRY ADS-B + CHARGER	ENGINE OIL – 2 QUARTS	FRONT ENGINE COVERS
GARMIN GPSMAP 196	OIL FUNNEL	ENG EXHAUST PLUGS
FLIGHT PUBS/MAPS	PORTABLE LADDER	METAL CHOCKS
	TOW BAR	

**PRE-WALK AROUND**

MASTER SWITCH ..... ON  
FUEL INDICATORS ..... CHECK QUANTITIES  
FUEL TANK SELECTOR ..... FULLEST TANK  
STALL WARNING ..... CHECK LEFT WING TAB & HORN  
MASTER SWITCH ..... OFF  
HYDRAULIC FLUID ..... CHECK WINDOW  
EMERG HYDRAULIC PUMP..... STOWED  
OXYGEN ..... 300 – 1800 PSI & MASKS CONNECTED AS REQUIRED  
FUEL CONTAMINATION ..... 4 x CHECK VALVES  
STRAINER DRAIN KNOB ..... PULL 4 SECONDS  
OIL LEVEL ..... APPROX 8.5 QTS ENGINE OIL MIN  
CONTROL LOCK ..... REMOVE  
WALK AROUND CHECK ..... COMPLETE

**PASSENGER BRIEFING**

FRONT SEAT OPERATION  
SEATBELT USE  
OPERATION OF DOORS  
EMERGENCY EXIT PROCEDURE – ALWAYS TOWARD BACK OF AIRCRAFT  
SICK BAGS LOCATION – BEHIND FRONT RIGHT SEAT  
NO SMOKING/OTHER  
FRONT RIGHT SEAT PAX – CLEAR OF CONTROLS AND RUDDER PEDALS  
AIR VENTS & CABIN HEAT – LOCATION & OPERATION  
FIRST AID KIT LOCATION – RIGHT FRONT GLOVE BOX  
FIRE EXTINGUISHER LOCATION & USE – UNDER PILOT SEAT  
ELT “ON” SWITCH – FOLLOWING CRASH LANDING OR DITCHING  
HEADSET & INTERCOM USE/VOLUME CONTROL (MANUAL IN JOURNEY LOG BINDER)  
LOOSE ITEMS SECURED FOR T/O AND LANDING  
QUESTIONS?

**PRE-START**

SEATS AND SEAT BELTS ..... ADJUSTED AND SECURED  
FLIGHT CONTROLS ..... CHECK  
BRAKES ..... TEST AND SET (AS REQ)  
INST LT/RADIO LT KNOBS ..... OFF (FULL COUNTERCLOCKWISE)  
AVIONIC MASTER..... OFF  
CIRCUIT BREAKERS ..... IN  
PITOT/NAV LTS/LANDING LT ..... OFF  
DEFROST KNOB ..... OFF (FULL COUNTERCLOCKWISE)  
TACH TIME ..... RECORD  
MASTER SWITCH ..... ON  
STROBE LIGHT ..... ON  
LANDING GEAR ..... HANDLE NEUTRAL AND DOWN LIGHT GREEN  
LANDING GEAR LIGHTS/HORN .... PUSH TO TEST  
COWL FLAPS ..... OPEN  
ELEVATOR & RUDDER TRIM ..... TAKE-OFF SETTINGS  
FUEL SELECTOR ..... FULLEST TANK

**STARTING ENGINE**

MIXTURE ..... RICH  
PROPELLER ..... HIGH RPM (FULL IN)  
THROTTLE CRACKED ..... ONE INCH  
CLEAR AREA ..... "CLEAR" & CHECK FOR PERSONNEL  
AUX FUEL PUMP SWITCH ..... ON LOW (RIGHT ROCKER SW), START IMMED.  
FUEL FLOW ..... INDICATING 2-4 GAL/HR  
IGNITION SWITCH ..... START (MAX 30 SEC)  
IGNITION SWITCH ..... RELEASE TO "BOTH" (WHEN ENGINE FIRES)  
AUX FUEL PUMP SWITCH ..... OFF (AFTER ENGINE STARTS)  
ENGINE INSTRUMENTS ..... CHECK

**PRE-TAXI**

NAVIGATION LIGHTS ..... ON  
DEFROST & VENTILATION ..... AS REQUIRED  
AVIONIC SWITCH..... ON  
RADIOS & NAV AIDS ..... ON & SET  
TRANSPONDER ..... STBY  
ATIS ..... IF AVAILABLE  
ALTIMETER & DG COMPASS ..... SET  
VOT CHECK ..... IF AVAILABLE

**RUN-UP**

INDUCTION AIR ..... COLD  
THROTTLE SETTING ..... 1700 RPM  
ENGINE INSTRUMENTS ..... WITHIN ARC  
AMMETER ..... CHECK - NO DISCHARGE ABOVE 1000 RPM  
SUCTION METER ..... 3.75 TO 5.0  
MAGNETOS ..... CHECK (150 RPM MAX DROP, 50 RPM DIFFERENTIAL)  
MIXTURE ..... LEAN TO RPM/EGT CHANGE, THEN RICH  
PROPELLER ..... CYCLE (RETURN TO HIGH RPM)  
THROTTLE IDLE ..... CHECK 600 RPM, THEN SET THROTTLE AS REQUIRED  
FLIGHT CONTROLS ..... RECHECK  
WING FLAPS ..... 0° TO 20°  
COWL FLAPS ..... FULL OPEN  
ELEVATOR & RUDDER TRIM ..... RECHECK TAKE-OFF SETTING  
DOORS & WINDOW ..... CLOSED AND LOCKED  
FLIGHT INSTRUMENTS ..... CONFIRM SET  
NAV AIDS ..... SET AS REQUIRED  
PITOT HEAT ..... ON  
TRANSPONDER ..... ALT  
LANDING LIGHT ..... ON

**TAKE OFF**

GNS 430 CDI VLOC SELECTED  
COMPASSES ..... CHECK ALIGNED TO RUNWAY HEADING  
ILS LOCALIZER ..... CHECK CENTRED  
POWER ..... FULL THROTTLE  
ELEVATOR CONTROL ..... LIFT NOSEWHEEL AT 60 MPH  
BRAKES ..... APPLY (WHEN SAFELY AIRBORNE)  
LANDING GEAR ..... RETRACT  
POWER ..... REDUCE TO 24" MP & 2450 RPM  
FLAPS ..... RETRACT  
LANDING GEAR ..... "UP" LIGHT RED / DOORS CLOSED / HANDLE NEUTRAL  
TIME OFF ..... NOTE

**CLIMB & LEVEL OFF**

CLIMB IAS ..... 120 MPH TO 140 MPH  
FUEL & OXYGEN ..... CHECK QUANTITIES & O<sub>2</sub> FLOW (RED INDICATOR)  
MIXTURE ..... AS REQUIRED FOR EGT 1400F – 1450F  
COWL FLAPS ..... AS REQUIRED FOR CHT 300F – 380F (MAX 460F)  
ENGINE INSTRUMENTS ..... CHECK  
LANDING LIGHT ..... OFF

**PRE-DESCENT**

FUEL ..... CHECK QUANTITIES & TANK SELECTOR  
HYDRAULIC FLUID ..... CHECK WINDOW  
HARNESSES ..... TIGHT, LOSE ITEMS STOWED  
DEFROST ..... AS REQUIRED  
ALTIMETER ..... SET  
DIRECTIONAL GYRO COMPASS .. ALIGNED  
LANDING LIGHT ..... ON

**BEFORE LANDING**

FUEL SELECTOR ..... FULLEST TANK  
LANDING GEAR LEVER ..... DOWN (BELOW 160 MPH)  
LANDING GEAR INDICATORS ..... DOWN LIGHT GREEN / DOORS CLOSED  
HANDLE NEUTRAL  
FLAPS ..... DOWN 10° (BELOW 160 MPH)  
MIXTURE ..... RICH  
AIRSPEED ..... MIN 85-95 MPH (WITH FLAPS RETRACTED)  
PROPELLER ..... HIGH RPM  
FLAPS ..... DOWN 10° – 40° (BELOW 110 MPH)  
AIRSPEED ..... MIN 75-85 MPH (WITH FLAPS EXTENDED)

**AFTER LANDING**

COWL FLAPS ..... OPEN  
WING FLAPS ..... RETRACT  
PITOT HEAT ..... OFF  
LANDING LIGHT ... OFF  
TRANSPONDER ..... OFF  
TIME DOWN ..... NOTE

**SHUT DOWN**

DEFROST ..... OFF  
AVIONIC SWITCH..... OFF  
NAV LIGHTS ..... OFF (NOT STROBE)  
IGNITION SWITCH ..... DEAD MAG CHECK  
MIXTURE ..... IDLE CUT-OFF  
IGNITION SWITCH ..... OFF  
INST LT/RADIO LT KNOBS ..... OFF (COUNTERCLOCKWISE)  
STROBE ..... OFF  
MASTER SWITCH ..... OFF  
TACH TIME ..... RECORD  
BRAKES OR CHOCKS ..... AS REQUIRED

**HOT ENGINE STARTING PROCEDURE.**

WITH VAPOR IN THE FUEL SYSTEM, THE AUXILIARY FUEL PUMPS ON "LO" OR "HI" WILL RUN WITH A DEEP GROWLING OR RATTLING SOUND UNTIL THE VAPOR IS PURGED. UNDER THESE CONDITIONS, START THE ENGINE AS FOLLOWS:

1. MIXTURE -- IDLE CUT-OFF
2. THROTTLE -- CLOSED
3. MASTER SWITCH -- ON
4. AUXILIARY FUEL PUMP SWITCH -- HI (UNTIL VAPOR IS PURGED)
5. THROTTLE -- CRACKED (ONE INCH)
6. IGNITION SWITCH -- START TO ENGAGE STARTER
7. MIXTURE -- PUSH TO FULL RICH
8. IGNITION SWITCH -- RELEASE TO "BOTH" (WHEN ENGINE FIRES)

**NOTE**

THE ENGINE SHOULD START IN 3 TO 4 REVOLUTIONS. IF IT DOES NOT, THE MIXTURE SHOULD BE MOVED TOWARD IDLE CUT-OFF TO LEAN OUT THE FUEL MIXTURE IN THE CYLINDERS. AGAIN THE ENGINE SHOULD START IN 5 TO 7 ADDITIONAL REVOLUTIONS; IF IT DOES NOT, STOP CRANKING AND START AGAIN FROM STEP (1) AFTER A BRIEF REST (APPROXIMATELY 30 SECONDS).

9. MIXTURE -- ADJUST (SMOOTHLY) BETWEEN FULL RICH AND IDLE CUT-OFF TO OBTAIN A FUEL-AIR MIXTURE THAT WILL ACCELERATE ENGINE TO 1000-1200 RPM.
10. AUXILIARY FUEL PUMP SWITCH -- LO AFTER ENGINE STARTS
11. THROTTLE -- IDLE THE ENGINE 800-1000 RPM ON "LO" AND FULL RICH MIXTURE UNTIL THERE IS NO SIGN OF VAPOR.

**NOTE**

UNDER SEVERE VAPOR CONDITIONS IT MAY TAKE 2 TO 5 MINUTES TO PURGE THE VAPOR FROM THE SYSTEM. IF THE AUXILIARY PUMP IS NOT ON, THE ENGINE RPM MAY SLOWLY START TO DROP OFF AS THE FUEL FLOW FLUCTUATES WITH VAPOR; OPENING THE THROTTLE SLIGHTLY AND TURNING THE AUXILIARY FUEL PUMP ON WILL STABILIZE ENGINE OPERATION.

## ENGINE FAILURES

## TAKEOFF ROLL

Throttle.....IDLE  
 Brakes.....APPLY  
 Flaps.....UP  
 Mixture .....CUT-OFF  
 Mags.....OFF  
 Master switch.....OFF

## IMMEDIATELY AFTER TAKEOFF

Airspeed.....85 MPH  
 Mixture .....CUT-OFF  
 Fuel Selector Valve.....OFF  
 Mags.....OFF  
 Gear .....Down (as req'd)  
 Flaps .....Max (as req'd)  
 Master switch.....OFF

## DURING FLIGHT

Airspeed .....95 MPH ( $V_{glide}$ )  
 Field.....SELECT  
 Approach.....PLAN  
 Fuel Quantity .....CHECK  
 Fuel Selector Valve.....CHANGE TANK  
     (if fuel remains in other tank)  
 Mixture.....RICH  
 Throttle .....CRACKED 1 INCH  
 Fuel Pump.....ON 3-5 SECONDS  
 Ignition.....BOTH  
     (or START if not windmilling)  
 Throttle.....ADVANCE

## FORCED LANDING

Mayday.....TRANSMIT 121.5  
 Transponder.....7700  
 Passengers.....BRIEF SECURE  
 Mixture .....CUTOFF  
 Fuel Selector Valve .....OFF  
 Ignition .....OFF  
 Landing Gear .....As Required  
 Flaps.....As Required  
 Master switch.....OFF  
 Doors .....UNLATCH  
 Touchdown.....TAIL LOW

## FUEL FLOW RECOVERY TO ENGINE

Attitude .....LEVEL AIRCRAFT  
 Mixture Control .....FULL RICH  
 Throttle .....MAX  
 Fuel Pump .....HI  
 Engine should resume within 6 seconds.

## ENGINE FIRE

## DURING START

Starter.....CRANK (to draw away flames)  
 Fuel Pump .....OFF  
 If Engine Starts:  
 Power.....1700 RPM  
     (until flames appear to be extinguished)  
 Engine .....SHUT DOWN & INSPECT  
 If engine does not start:  
 Mixture .....CUTOFF  
 Ignition.....OFF  
 Master Switch .....OFF  
 Fuel Selector Valve .....OFF  
**EVACUATE AIRCRAFT**  
 Fight Fire with Extinguisher and/or Inspect Damage

## IN FLIGHT

Fuel Selector Valve .....OFF  
 Mixture .....CUTOFF  
 Master Switch .....OFF  
 Cabin Heat and Air.....OFF  
 Airspeed.....140 MPH

If fire is not extinguished,  
 Increase Speed and/or Sideslip as required  
 to obtain an incombustible mixture.

**Forced Landing .....EXECUTE**

## WING FIRE

Pitot Heat .....OFF  
 Nav Lights .....OFF  
 Landing Lights .....OFF  
 Sideslip .....AS NECESSARY  
     (To keep flames away from Fuel Tank & Cabin)  
**Land ASAP**

**ELECTRICAL FIRE**

## UNKNOWN SOURCE

**Master Switch** .....OFF  
**All Avionics and Electrics** .....OFF  
 (except MAGS)  
**Vents/Cabin Air/Heat** .....CLOSED  
**Fire Extinguisher (if necessary)** .....ACTIVATE  
 If Smoke Ceases:  
 Cabin .....VENTILATE  
 Master Switch .....ON  
 Circuit Breakers .....CHECK  
 DO NOT RESET  
 Essential Electrical/Avionics .....ON  
 (ONE at a time to isolate cause)  
 Land ASAP

## KNOWN SOURCE

**Faulty Equipment** .....OFF  
 Cabin .....VENTILATE  
 Reassess continued flight functionality without faulty equipment.

**CABIN FIRE**

## ON GROUND

**Brakes** .....STOP AIRCRAFT  
**Master Switch** .....OFF  
**Mixture/Mags** .....CUTOFF/OFF  
**Evacuate Aircraft ASAP**  
 If necessary:  
 Cabin Vents/Air/Heat .....CLOSED  
 Fire Extinguisher (if necessary) .....ACTIVATE  
 Cabin Vents/Windows .....OPEN

## IN FLIGHT

**Master Switch** .....OFF  
**Cabin Vents/Air/Heat** .....CLOSED  
**Fire Extinguisher (if necessary)** .....ACTIVATE  
 Electrics/Avionics .....ALL OFF  
 Master Switch .....ON  
 Avionics/Electrics .....ON INDIVIDUALLY

**SPIN RECOVERY**

**Ailerons** .....NEUTRAL  
**Throttle** .....IDLE  
**Confirm direction**  
**Rudder** .....FULL OPPOSITE  
**Elevator** .....FORWARD TO BREAK STALL  
**Rudder**.....NEUTRALIZE (when spinning stops)  
**Pitch**.....EASE OUT OF DIVE

**DITCHING**

Follow forced landing procedure with the following differences:

Heavy Objects from baggage.....JETTISON  
 Approach .....80 MPH  
 Gear.....UP  
 Flaps .....30 DEG  
 Doors .....UNLATCH  
 FACE .....CUSHION FOR IMPACT

With Power:

Approach.....300ft/min DESCENT  
 Airspeed .....80 MPH  
 Land-High Winds.....INTO WIND  
 Light winds.....PARALLEL TO SWELL

Max Gross Weight	3000 lbs
G Load Flaps Up	+3.8 to -1.52
Flaps Down	+3.5
$V_S$ Flaps 40 – Gear Down	60 MPH
$V_S$ Flaps Up – Gear Up	65 MPH
$V_{glide}$ Best Glide Speed	95 MPH
$V_{FE}$ Flaps 40	110 MPH
Flaps 10	160 MPH
$V_{LO}$ Gear Down	160 MPH
$V_A$ Manoeuvring Speed	132 MPH
$V_{NO}$ Max Structural Cruise	190 MPH
$V_{NE}$ Never Exceed	225 MPH

\***BOLD FACE** items are Commit-to-Memory sequences

**LANDING GEAR - EMERG EXTENSION**

Landing Gear Handle .....DOWN  
 Emergency Hand Pump .....EXTEND FULLY  
 Pump hand pump until GREEN Indicator Light  
 comes on, & continue pumping until the Landing  
 Gear Handle returns to NEUTRAL.

**LANDING GEAR – UNSAFE DOWN**

**Flickering, unsteady, or inoperative gear-down  
 green light**

Approach .....NORMAL FULL-FLAP  
 ENGINE RPM .....MIN 1000 RPM  
 Landing Gear Handle .....HOLD DOWN  
 Before reducing RPM and releasing Gear Handle,  
 have ground personnel depress the tail  
 until Nose Gear is off ground.  
 Engine .....STOP  
 Nose Gear .....MECHANICALLY LOCKED DOWN  
 Lower Nose to Ground

**MAIN GEAR – DEFECTIVE**

**One Main Gear does not extend or only partially  
 extends**

Fuel Selector Valve .....DEFECTIVE SIDE  
 Runway .....USE WIDE, HARD SURFACE RWY  
 (if possible, otherwise smooth Sod)  
 Gear Handle .....DOWN  
 Flaps .....40 DEG  
 Approach .....ALIGN WITH EDGE OF RWY  
 OPPOSITE DEFECTIVE GEAR  
 Master Switch .....OFF  
 Landing .....SLIGHTLY WING-LOW  
 TOWARD THE OPERATIVE GEAR  
 Nose Wheel .....IMMEDIATELY LOWER  
 FOR DIRECTIONAL CONTROL  
 Mixture .....CUT OFF  
 Ignition .....OFF  
 Landing Roll .....USE FULL AILERON TO  
 GENTLY LOWER WING TO GROUND  
 Brake .....USE ONLY GOOD SIDE  
 Fuel Selector Valve .....OFF  
 EVACUATE AIRCRAFT ONCE STOPPED

**NOSE GEAR – DEFECTIVE**

**Partial or no extension**

Movable Load .....MOVE TO BAGGAGE AREA  
 Front Passenger ...MOVE TO BACK SEAT (if possible)  
 Runway .....USE HARD-SURFACE OR SMOOTH SOD

**NOTE**

If terrain is rough or soft, plan a wheels-up landing  
 as presented under

**PRECAUTIONARY LANDING WITH POWER**

Gear Handle .....DOWN  
 Flaps .....40 DEG  
 Master Switch .....OFF  
 Landing Attitude .....SLIGHTLY TAIL-LOW  
 Mixture .....CUT OFF  
 Ignition .....OFF  
 Nose .....HOLD OFF GROUND AS LONG AS POSSIBLE  
 Fuel Selector Valve .....OFF  
 EVACUATE AIRCRAFT ONCE STOPPED

**PRECAUTIONARY LANDING  
 WITH POWER**

Airspeed .....90 MPH  
 Flaps .....20 DEG

Fly over selected field noting type of terrain and  
 obstructions.

**IF SMOOTH SURFACE**

Landing Gear .....DOWN  
 Flaps .....FULL  
 Nose Wheel .....KEEP OFF GROUND  
 AS LONG AS PRACTICAL

**IF ROUGH OR SOFT SURFACE**

Landing Gear .....UP  
 Flaps .....FULL DOWN  
 Airspeed .....75 - 85 MPH  
 Switches .....ALL OFF  
 Cabin Door .....UNLATCH  
 Power .....MIN DURING FLARE  
 Ignition .....OFF (prior to touch down)  
 Attitude .....SLIGHTLY TAIL LOW  
 HOLD TAIL LOW THROUGHOUT SLIDE

**\*BOLD FACE** items are Commit-to-Memory sequences



# TAKE-OFF DATA

TAKE-OFF DISTANCE WITH 20° FLAPS FROM HARD-SURFACED RUNWAY

GROSS WEIGHT LBS.	IAS AT 50 FT. MPH	HEAD WIND MPH	AT SEA LEVEL & 59°F		AT 2500 FEET & 50°F		AT 5000 FT. & 41°F		AT 7500 FT. & 32°F	
			GROUND RUN	TO CLEAR 50' OBSTACLE	GROUND RUN	TO CLEAR 50' OBSTACLE	GROUND RUN	TO CLEAR 50' OBSTACLE	GROUND RUN	TO CLEAR 50' OBSTACLE
2200	55	0	345	680	405	770	480	885	580	1040
		15	205	460	245	525	295	615	365	725
		30	100	275	120	320	155	380	195	460
2600	60	0	500	915	585	1045	705	1230	855	1470
		15	310	635	370	735	455	870	560	1055
		30	165	395	200	465	255	565	325	695
3000	64	0	695	1210	820	1405	990	1675	1205	2045
		15	450	855	535	1005	660	1215	815	1505
		30	250	555	310	665	390	820	500	1030

**NOTE:** INCREASE DISTANCES 10% FOR EACH 25°F ABOVE STANDARD TEMPERATURE FOR PARTICULAR ALTITUDE.

# CLIMB DATA

GROSS WEIGHT LBS.	AT SEA LEVEL & 59°F			AT 5000 FT. & 41°F			AT 10000 FT. & 23°F			AT 15000 FT. & 5°F			AT 20000 FT. & -12°F		
	BEST CLIMB IAS MPH	RATE OF CLIMB FT./MIN	GAL. OF FUEL USED	BEST CLIMB IAS MPH	RATE OF CLIMB FT./MIN	FROM S.L. FUEL USED	BEST CLIMB IAS MPH	RATE OF CLIMB FT./MIN	FROM S.L. FUEL USED	BEST CLIMB IAS MPH	RATE OF CLIMB FT./MIN	FROM S.L. FUEL USED	BEST CLIMB IAS MPH	RATE OF CLIMB FT./MIN	FROM S.L. FUEL USED
2200	96	1900	2.0	92	1530	2.9	88	1150	3.9	83	780	5.1	78	410	6.8
2600	100	1540	2.0	97	1210	3.1	93	890	4.4	88	580	6.1	84	250	8.6
3000	105	1270	2.0	101	980	3.4	97	690	5.0	94	400	7.3	90	120	11.5

**NOTE:** FULL THROTTLE, 2625 RPM, MIXTURE AT RECOMMENDED LEANING SCHEDULE, FLAPS AND GEAR UP. FUEL USED INCLUDES WARM-UP AND TAKE-OFF ALLOWANCE.

**2500****CRUISE PERFORMANCE**

## NORMAL LEAN MIXTURE

Standard Atmosphere • Zero Wind • Gross Weight-3000 Pounds

## 2500 FEET

RPM	MP	% BHP	TAS MPH	Gal/ Hour	63.5 Gal. (No Reserve)		80 Gal. (No Reserve)	
					Endr. Hours	Range Miles	Endr. Hours	Range Miles
2450	24	76	180	14.3	4.4	800	5.6	1010
	23	71	177	13.4	4.7	835	6.0	1050
	22	67	173	12.7	5.0	865	6.3	1090
	21	63	169	11.9	5.3	900	6.7	1135
2300	24	68	174	12.8	4.9	860	6.2	1085
	23	64	170	12.1	5.2	890	6.6	1120
	22	61	166	11.4	5.6	925	7.0	1165
	21	57	163	10.8	5.9	960	7.4	1210
2200	23	60	166	11.3	5.6	930	7.1	1175
	22	56	162	10.7	6.0	965	7.5	1215
	21	53	158	10.0	6.3	1005	8.0	1265
	20	49	154	9.4	6.7	1035	8.5	1305
2100	22	52	157	9.9	6.4	1010	8.1	1275
	21	48	153	9.3	6.8	1045	8.6	1320
	20	45	148	8.7	7.3	1080	9.2	1360
	19	42	144	8.3	7.7	1105	9.7	1390
	18	39	139	7.8	8.1	1130	10.2	1420
	17	35	133	7.3	8.7	1150	10.9	1445
	16	32	126	6.9	9.2	1160	11.6	1460



# CRUISE PERFORMANCE 5000

## NORMAL LEAN MIXTURE

Standard Atmosphere • Zero Wind • Gross Weight - 3000 Pounds

## 5000 FEET

RPM	MP	% BHP	TAS MPH	Gal/ Hour	63.5 Gal. (No Reserve)		80 Gal. (No Reserve)	
					Endr. Hours	Range Miles	Endr. Hours	Range Miles
2450	24	79	187	14.8	4.3	800	5.4	1010
	23	74	183	14.0	4.5	830	5.7	1050
	22	70	179	13.1	4.8	870	6.1	1095
	21	65	175	12.3	5.2	905	6.5	1140
2300	24	71	180	13.3	4.8	860	6.0	1080
	23	67	177	12.6	5.0	890	6.4	1125
	22	63	173	11.8	5.4	925	6.8	1170
	21	59	169	11.1	5.7	965	7.2	1215
2200	23	62	172	11.7	5.4	935	6.8	1175
	22	58	168	11.0	5.8	970	7.2	1220
	21	55	165	10.4	6.1	1005	7.7	1265
	20	51	160	9.8	6.5	1040	8.2	1310
2100	22	53	163	10.1	6.3	1020	7.9	1290
	21	50	159	9.6	6.6	1055	8.4	1330
	20	46	154	9.0	7.1	1090	8.9	1370
	19	43	150	8.5	7.5	1115	9.4	1405
	18	40	145	8.1	7.9	1140	9.9	1435
	17	37	139	7.6	8.4	1160	10.6	1465
	16	34	132	7.1	8.9	1175	11.2	1480
	15	31	125	6.7	9.4	1180	11.9	1485

**7500****CRUISE PERFORMANCE**

NORMAL LEAN MIXTURE

Standard Atmosphere • Zero Wind • Gross Weight-3000 Pounds

7500 FEET

RPM	MP	% BHP	TAS MPH	Gal/ Hour	63.5 Gal. (No Reserve)		80 Gal. (No Reserve)	
					Endr. Hours	Range Miles	Endr. Hours	Range Miles
2450	22	72	186	13.6	4.7	870	5.9	1095
	21	67	182	12.7	5.0	910	6.3	1145
	20	64	178	12.0	5.3	945	6.7	1190
	19	59	173	11.1	5.7	990	7.2	1245
2300	22	65	179	12.2	5.2	930	6.6	1175
	21	61	175	11.5	5.5	970	7.0	1220
	20	57	171	10.8	5.9	1005	7.4	1270
	19	53	167	10.1	6.3	1040	7.9	1320
2200	22	61	175	11.4	5.6	970	7.0	1225
	21	57	171	10.7	5.9	1010	7.5	1275
	20	53	166	10.1	6.3	1045	7.9	1315
	19	50	162	9.5	6.7	1080	8.4	1360
2100	21	52	165	9.8	6.4	1060	8.1	1335
	20	48	160	9.3	6.8	1095	8.6	1380
	19	45	155	8.7	7.3	1125	9.2	1420
	18	42	150	8.3	7.7	1150	9.7	1450
	17	39	145	7.8	8.1	1175	10.2	1485
	16	35	138	7.4	8.6	1190	10.9	1500
	15	32	131	6.9	9.1	1200	11.5	1510

# CRUISE PERFORMANCE 10,000

## NORMAL LEAN MIXTURE

Standard Atmosphere • Zero Wind • Gross Weight-3000 Pounds

10,000 FEET

RPM	MP	% BHP	TAS MPH	Gal/ Hour	63.5 Gal. (No Reserve)		80 Gal. (No Reserve)	
					Endr. Hours	Range Miles	Endr. Hours	Range Miles
2450	20	65	184	12.3	5.2	950	6.5	1200
	19	61	179	11.5	5.5	995	7.0	1250
	18	57	174	10.7	5.9	1035	7.5	1305
	17	52	169	10.0	6.4	1075	8.0	1355
2300	20	59	177	11.1	5.7	1010	7.2	1275
	19	55	173	10.4	6.1	1050	7.7	1325
	18	51	168	9.8	6.5	1090	8.2	1370
	17	48	162	9.1	6.9	1125	8.7	1420
2200	20	55	173	10.4	6.1	1050	7.7	1325
	19	52	168	9.9	6.4	1085	8.1	1365
	18	48	163	9.2	6.9	1120	8.7	1410
	17	44	158	8.7	7.3	1155	9.2	1450
2100	20	50	166	9.5	6.7	1105	8.4	1390
	19	47	161	9.0	7.0	1135	8.9	1430
	18	44	156	8.5	7.4	1160	9.4	1465
	17	40	150	8.0	7.9	1185	9.9	1495
	16	37	144	7.6	8.4	1205	10.5	1520
	15	34	137	7.1	8.9	1215	11.2	1530
	14	30	126	6.6	9.6	1200	12.0	1510



# 15-20,000 CRUISE PERFORMANCE

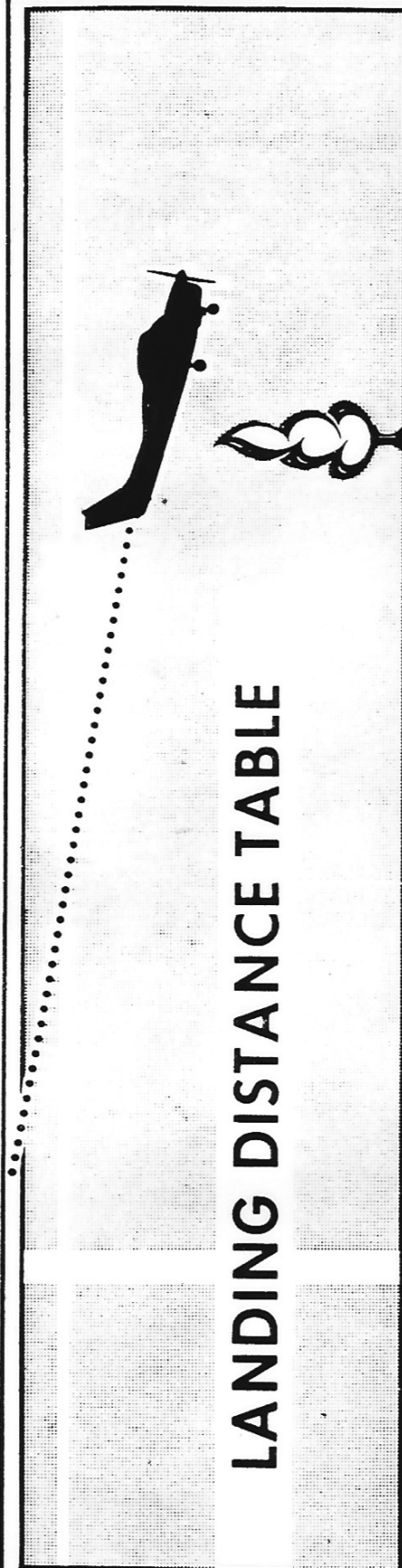
## NORMAL LEAN MIXTURE

Standard Atmosphere • Zero Wind • Gross Weight-3000 Pounds  
• 15,000 FEET

RPM	MP	% BHP	TAS MPH	Gal/ Hour	63.5 Gal. (No Reserve)		80 Gal. (No Reserve)	
					Endr. Hours	Range Miles	Endr. Hours	Range Miles
2450	16	51	176	9.8	6.5	1140	8.2	1435
	15	47	170	9.1	6.9	1180	8.8	1485
	14	42	160	8.3	7.6	1220	9.6	1540
	13	39	152	7.8	8.1	1240	10.3	1565
2300	16	46	168	9.0	7.1	1190	8.9	1495
	15	43	162	8.4	7.5	1215	9.5	1530
	14	39	153	7.8	8.1	1245	10.3	1565
	13	35	144	7.3	8.7	1250	10.9	1575
2200	16	44	163	8.5	7.4	1210	9.4	1525
	15	40	156	8.0	7.9	1235	10.0	1555
	14	36	147	7.5	8.5	1250	10.7	1575
2100	16	40	155	7.9	8.0	1235	10.1	1560
	15	36	148	7.5	8.5	1250	10.7	1575
	14	33	136	7.0	9.1	1235	11.4	1555

## 20,000 FEET

RPM	MP	% BHP	TAS MPH	Gal/ Hour	63.5 Gal. (No Reserve)		80 Gal. (No Reserve)	
					Endr. Hours	Range Miles	Endr. Hours	Range Miles
2450	13.5	43	168	8.4	7.5	1265	9.5	1595
	13	41	165	8.2	7.7	1275	9.7	1605
	12	37	152	7.6	8.4	1275	10.6	1605
2300	13.5	39	159	7.9	8.1	1285	10.2	1620
	13	37	155	7.6	8.3	1285	10.5	1620



## LANDING DISTANCE TABLE

GROSS WEIGHT LBS.	APPROACH IAS MPH	AT SEA LEVEL & 59° F		AT 2500 FT & 50° F		AT 5000 FT & 41° F		AT 7500 FT & 32° F	
		GROUND ROLL	TO CLEAR 50' OBSTACLE	GROUND ROLL	TO CLEAR 50' OBSTACLE	GROUND ROLL	TO CLEAR 50' OBSTACLE	GROUND ROLL	TO CLEAR 50' OBSTACLE
2200	61	355	945	385	980	415	1020	445	1060
2600	66	420	1030	455	1070	490	1110	530	1155
3000	71	485	1110	525	1150	565	1200	610	1255

**NOTE: REDUCE LANDING DISTANCES 10% FOR EACH 6 MPH HEADWIND. FLAPS 40° AND POWER OFF.**