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Many portions were omitted for brevity.

## STALL SPEEDS

CONDITIONS:  
Power Off

NOTES:

1. Maximum altitude loss during a stall recovery may be as much as 300 feet.
2. KIAS values are approximate.

### MOST REARWARD CENTER OF GRAVITY

WEIGHT LBS	FLAP DEFLECTION	ANGLE OF BANK							
		0°		30°		45°		60°	
		KIAS	KCAS	KIAS	KCAS	KIAS	KCAS	KIAS	KCAS
3100	UP	41	54	44	58	49	64	58	76
	20°	39	51	42	55	46	61	55	72
	40°	40	50	43	54	48	59	57	71

### MOST FORWARD CENTER OF GRAVITY

WEIGHT LBS	FLAP DEFLECTION	ANGLE OF BANK							
		0°		30°		45°		60°	
		KIAS	KCAS	KIAS	KCAS	KIAS	KCAS	KIAS	KCAS
3100	UP	43	55	46	59	51	65	61	78
	20°	41	52	44	56	49	62	58	74
	40°	43	52	46	56	51	62	61	74

Figure 5-3. Stall Speeds

## TAKEOFF DISTANCE

### MAXIMUM WEIGHT 3100 LBS

#### SHORT FIELD

**CONDITIONS:**

Flaps 20°  
 2400 RPM and 31 Inches Hg Prior to Brake Release  
 Mixture Full Rich  
 Cowl Flaps Open  
 Paved, Level, Dry Runway  
 Zero Wind

**NOTES:**

1. Short field technique as specified in Section 4.
2. Decrease distances 10% for each 9 knots headwind. For operation with tailwinds up to 10 knots, increase distances by 10% for each 2 knots.
3. For operation on a dry, grass runway, increase distances by 15% of the "ground roll" figure.

WEIGHT LBS	TAKEOFF SPEED KIAS		PRESS ALT FT	0°C		10°C		20°C		30°C		40°C	
	LIFT OFF	AT 50 FT		GRND ROLL	TOTAL TO CLEAR 50 FT OBS	GRND ROLL	TOTAL TO CLEAR 50 FT OBS	GRND ROLL	TOTAL TO CLEAR 50 FT OBS	GRND ROLL	TOTAL TO CLEAR 50 FT OBS	GRND ROLL	TOTAL TO CLEAR 50 FT OBS
3100	52	59	S.L.	725	1390	790	1505	855	1635	925	1780	1000	1935
			1000	775	1475	840	1600	915	1740	990	1895	1070	2065
			2000	830	1570	900	1705	975	1855	1060	2020	1145	2205
			3000	890	1670	965	1815	1045	1980	1135	2160	1230	2360
			4000	955	1780	1035	1940	1125	2115	1215	2310	1320	2530
			5000	1025	1900	1110	2075	1205	2265	1310	2480	1415	2715
			6000	1100	2035	1195	2225	1300	2435	1405	2665	1525	2930
			7000	1185	2185	1285	2390	1395	2615	1515	2870	1640	3165
			8000	1275	2345	1385	2570	1505	2820	1630	3100	1770	3425

Figure 5-4. Takeoff Distance (Sheet 1 of 2)

# TAKEOFF DISTANCE

2800 LBS AND 2500 LBS

## SHORT FIELD

REFER TO SHEET 1 FOR APPROPRIATE CONDITIONS AND NOTES.

WEIGHT LBS	TAKEOFF SPEED KIAS		PRESS ALT FT	0°C		10°C		20°C		30°C		40°C	
	LIFT OFF	AT 50 FT		GRND ROLL	TOTAL TO CLEAR 50 FT OBS	GRND ROLL	TOTAL TO CLEAR 50 FT OBS	GRND ROLL	TOTAL TO CLEAR 50 FT OBS	GRND ROLL	TOTAL TO CLEAR 50 FT OBS	GRND ROLL	TOTAL TO CLEAR 50 FT OBS
2800	49	56	S.L.	575	1105	620	1195	675	1290	725	1395	785	1510
			1000	615	1170	665	1265	720	1370	780	1480	840	1605
			2000	655	1240	710	1345	770	1455	835	1575	900	1710
			3000	705	1320	760	1430	825	1550	890	1680	965	1825
			4000	755	1405	815	1520	885	1650	955	1790	1035	1950
			5000	810	1495	875	1625	950	1765	1025	1915	1110	2085
			6000	870	1600	940	1735	1020	1885	1105	2055	1195	2235
			7000	935	1710	1015	1860	1100	2020	1190	2205	1285	2405
			8000	1005	1830	1090	1990	1180	2170	1280	2365	1385	2585
			2500	47	53	S.L.	445	860	480	925	520	995	560
1000	475	910				515	980	555	1055	600	1140	645	1230
2000	510	965				550	1040	595	1120	640	1210	695	1305
3000	545	1020				590	1105	635	1190	690	1285	740	1390
4000	580	1085				630	1175	680	1265	735	1370	795	1480
5000	625	1155				675	1250	730	1350	790	1460	855	1580
6000	670	1230				725	1330	785	1440	850	1560	920	1690
7000	720	1315				780	1420	845	1540	915	1665	990	1805
8000	775	1405				840	1520	910	1645	985	1785	1065	1935

Figure 5-4. Takeoff Distance (Sheet 2 of 2)

**RATE OF CLIMB**

**MAXIMUM**

CONDITIONS:  
Flaps Up  
Gear Up  
2400 RPM  
31 Inches Hg  
Mixture Full Rich  
Cowl Flaps Open

WEIGHT LBS	PRESS ALT FT	CLIMB SPEED KIAS	RATE OF CLIMB - FPM			
			-20°C	0°C	20°C	40°C
3100	S.L.	88	1245	1130	1010	890
	4000	87	1160	1040	915	790
	8000	87	1050	925	800	675
	12,000	86	915	790	675	---
	16,000	86	775	660	545	---
	20,000	85	635	530	---	---

Figure 5-5. Rate of Climb

## TIME, FUEL, AND DISTANCE TO CLIMB

### MAXIMUM RATE OF CLIMB

**CONDITIONS:**

Flaps Up  
Gear Up  
2400 RPM  
31 Inches Hg  
Mixture Full Rich  
Cowl Flaps Open  
Standard Temperature

**NOTES:**

1. Add 2.0 gallons of fuel for engine start, taxi and takeoff allowance.
2. Increase time, fuel and distance by 10% for each 10°C above standard temperature.
3. Distances shown are based on zero wind.

WEIGHT LBS	PRESSURE ALTITUDE FT	TEMP °C	CLIMB SPEED KIAS	RATE OF CLIMB FPM	FROM SEA LEVEL		
					TIME MIN	FUEL USED GALLONS	DISTANCE NM
3100	S.L.	15	88	1040	0	0	0
	2000	11	88	1020	2	0.8	3
	4000	7	87	995	4	1.6	6
	6000	3	87	965	6	2.4	9
	8000	-1	87	930	8	3.3	13
	10,000	-5	87	890	10	4.2	16
	12,000	-9	86	845	13	5.1	20
	14,000	-13	86	800	15	6.1	25
	16,000	-17	86	755	18	7.1	29
	18,000	-21	85	710	20	8.2	34
	20,000	-25	85	660	23	9.4	40

Figure 5-6. Time, Fuel, and Distance to Climb (Sheet 1 of 2)

**TIME, FUEL AND DISTANCE TO CLIMB**

**NORMAL CLIMB - 95 KIAS**

CONDITIONS:

Flaps Up  
Gear Up  
2400 RPM  
25 Inches Hg  
Mixture Full Rich  
Cowl Flaps Open  
Standard Temperature

NOTES:

1. Add 2.0 gallons of fuel for engine start, taxi and takeoff allowance.
2. Increase time, fuel and distance by 10% for each 8°C above standard temperature.
3. Distances shown are based on zero wind.

WEIGHT LBS	PRESSURE ALTITUDE FT	TEMP °C	RATE OF CLIMB FPM	FROM SEA LEVEL		
				TIME MIN	FUEL USED GALLONS	DISTANCE NM
3100	S.L.	15	610	0	0	0
	2000	11	610	3	1.1	5
	4000	7	610	7	2.3	11
	6000	3	600	10	3.5	16
	8000	-1	590	13	4.6	22
	10,000	-5	575	17	5.8	28
	12,000	-9	555	20	7.1	35
	14,000	-13	525	24	8.4	42
	16,000	-17	495	28	9.8	50
	18,000	-21	450	32	11.3	59
20,000	-25	400	37	12.9	69	

Figure 5-6. Time, Fuel, and Distance to Climb (Sheet 2 of 2)

## CRUISE PERFORMANCE

### PRESSURE ALTITUDE 2000 FEET

CONDITIONS:  
3100 Pounds  
Recommended Lean Mixture  
Cowl Flaps Closed

**NOTE**  
For best fuel economy, operate at the leanest mixture that results in smooth engine operation or at peak EGT.

		20°C BELOW STANDARD TEMP -9°C			STANDARD TEMPERATURE 11°C			20°C ABOVE STANDARD TEMP 31°C		
RPM	MP	% BHP	KTAS	GPH	% BHP	KTAS	GPH	% BHP	KTAS	GPH
2400	25	---	---	---	78	150	14.8	74	149	14.0
	23	74	143	14.0	70	143	13.3	66	143	12.6
	21	65	136	12.4	62	136	11.8	59	135	11.3
	19	57	128	10.9	54	128	10.5	51	127	10.0
2300	25	78	147	14.9	74	147	14.1	71	147	13.4
	23	70	141	13.3	67	140	12.7	63	140	12.1
	21	62	133	11.8	59	133	11.3	56	132	10.8
	19	54	125	10.4	51	125	10.0	49	123	9.6
2200	25	75	144	14.2	71	144	13.5	67	144	12.8
	23	67	138	12.7	64	137	12.1	60	137	11.5
	21	59	130	11.3	56	130	10.8	53	129	10.3
	19	51	122	9.9	49	121	9.5	46	120	9.1
2100	25	71	141	13.5	68	141	12.9	64	141	12.2
	23	64	134	12.1	60	134	11.5	57	133	11.0
	21	56	127	10.7	53	127	10.3	50	125	9.8
	19	48	118	9.5	46	117	9.1	43	115	8.7
	17	41	108	8.2	39	105	7.8	37	102	7.5

Figure 5-7. Cruise Performance (Sheet 1 of 10)

## CRUISE PERFORMANCE

PRESSURE ALTITUDE 4000 FEET

CONDITIONS:  
3100 Pounds  
Recommended Lean Mixture  
Cowl Flaps Closed

**NOTE**  
For best fuel economy, operate at the leanest mixture that results in smooth engine operation or at peak EGT.

		20°C BELOW STANDARD TEMP -13°C			STANDARD TEMPERATURE 7°C			20°C ABOVE STANDARD TEMP 27°C		
RPM	MP	% BHP	KTAS	GPH	% BHP	KTAS	GPH	% BHP	KTAS	GPH
2400	25	---	---	---	79	153	15.0	75	153	14.2
	23	75	147	14.2	71	147	13.5	67	146	12.8
	21	67	140	12.7	63	139	12.1	60	139	11.5
	19	59	132	11.2	56	131	10.7	53	130	10.2
2300	25	79	151	15.0	75	150	14.3	71	150	13.6
	23	71	144	13.6	68	144	12.9	64	143	12.3
	21	64	137	12.1	60	136	11.5	57	136	11.0
	19	56	129	10.7	53	128	10.3	50	127	9.8
2200	25	76	148	14.4	72	147	13.7	68	147	13.0
	23	68	141	12.9	65	141	12.3	61	140	11.7
	21	60	134	11.5	57	133	11.0	54	132	10.5
	19	53	126	10.2	50	125	9.8	48	123	9.4
2100	25	72	145	13.7	69	144	13.0	65	144	12.4
	23	65	138	12.3	62	138	11.7	58	137	11.2
	21	57	130	11.0	54	130	10.5	52	129	10.0
	19	50	122	9.7	47	121	9.3	45	119	8.9
	17	42	112	8.5	40	110	8.1	38	107	7.8

Figure 5-7. Cruise Performance (Sheet 2 of 10)

## CRUISE PERFORMANCE

PRESSURE ALTITUDE 6000 FEET

CONDITIONS:  
3100 Pounds  
Recommended Lean Mixture  
Cowl Flaps Closed

**NOTE**  
For best fuel economy, operate at the leanest mixture that results in smooth engine operation or at peak EGT.

RPM	MP	20°C BELOW STANDARD TEMP -17°C			STANDARD TEMPERATURE 3°C			20°C ABOVE STANDARD TEMP 23°C		
		% BHP	KTAS	GPH	% BHP	KTAS	GPH	% BHP	KTAS	GPH
2400	25	---	---	---	79	156	15.0	75	156	14.2
	23	75	150	14.3	72	150	13.6	68	149	12.9
	21	67	143	12.8	64	142	12.2	61	142	11.6
	19	60	135	11.4	57	135	10.9	54	134	10.4
2300	25	80	153	15.1	76	153	14.4	72	153	13.6
	23	72	147	13.7	68	147	13.0	65	146	12.4
	21	64	140	12.2	61	140	11.7	58	139	11.1
	19	57	132	10.9	54	131	10.4	51	130	10.0
2200	25	76	151	14.5	72	150	13.7	69	150	13.0
	23	69	144	13.1	65	144	12.4	62	143	11.8
	21	61	137	11.7	58	136	11.2	55	135	10.7
	19	54	129	10.4	51	128	10.0	49	127	9.5
2100	25	73	147	13.8	69	147	13.1	66	147	12.5
	23	65	141	12.5	62	141	11.9	59	140	11.3
	21	58	134	11.2	55	133	10.7	53	132	10.2
	19	51	126	9.9	49	124	9.5	46	122	9.1
	17	44	116	8.7	42	114	8.4	40	110	8.0

Figure 5-7. Cruise Performance (Sheet 3 of 10)

**CRUISE PERFORMANCE**  
**PRESSURE ALTITUDE 8000 FEET**

CONDITIONS:  
3100 Pounds  
Recommended Lean Mixture  
Cowl Flaps Closed

NOTE  
For best fuel economy, operate at the leanest mixture that results in smooth engine operation or at peak EGT.

		20°C BELOW STANDARD TEMP -21°C			STANDARD TEMPERATURE -1°C			20°C ABOVE STANDARD TEMP 19°C		
RPM	MP	% BHP	KTAS	GPH	% BHP	KTAS	GPH	% BHP	KTAS	GPH
2400	25	---	---	---	79	159	15.1	75	159	14.3
	23	76	153	14.4	72	153	13.7	69	152	13.0
	21	68	146	13.0	65	146	12.4	62	145	11.8
	19	61	138	11.6	58	138	11.1	55	137	10.6
2300	25	80	157	15.2	76	156	14.5	72	156	13.7
	23	73	150	13.8	69	150	13.1	66	149	12.5
	21	65	143	12.4	62	143	11.9	59	142	11.3
	19	58	136	11.1	55	135	10.6	52	134	10.1
2200	25	77	154	14.6	73	153	13.9	69	153	13.1
	23	70	147	13.2	66	147	12.6	63	146	12.0
	21	62	140	11.9	59	140	11.3	56	139	10.8
	19	55	133	10.6	53	132	10.2	50	130	9.7
2100	25	73	151	13.9	70	150	13.2	66	150	12.6
	23	66	144	12.6	63	144	12.0	60	143	11.4
	21	59	137	11.3	56	137	10.9	54	135	10.4
	19	52	129	10.2	50	128	9.7	47	126	9.3
	17	46	120	9.0	43	118	8.6	41	114	8.3

Figure 5-7. Cruise Performance (Sheet 4 of 10)

**CRUISE PERFORMANCE**  
**PRESSURE ALTITUDE 10,000 FEET**

CONDITIONS:  
3100 Pounds  
Recommended Lean Mixture  
Cowl Flaps Closed

**NOTE**  
For best fuel economy, operate at the leanest mixture that results in smooth engine operation or at peak EGT.

RPM	MP	20°C BELOW STANDARD TEMP -25°C			STANDARD TEMPERATURE -5°C			20°C ABOVE STANDARD TEMP 15°C		
		% BHP	KTAS	GPH	% BHP	KTAS	GPH	% BHP	KTAS	GPH
2400	25	---	---	---	79	162	15.1	75	162	14.3
	23	76	156	14.5	72	156	13.8	69	155	13.1
	21	69	149	13.1	66	149	12.5	62	148	11.9
	19	62	142	11.7	59	141	11.2	56	140	10.7
2300	25	80	159	15.2	76	159	14.5	72	159	13.7
	23	73	153	13.9	70	153	13.2	66	152	12.5
	21	66	146	12.5	63	146	12.0	60	145	11.4
	19	59	139	11.3	56	138	10.8	53	137	10.2
2200	25	77	156	14.6	73	156	13.9	69	156	13.2
	23	70	150	13.3	67	150	12.7	63	149	12.0
	21	63	143	12.0	60	143	11.5	57	142	10.9
	19	56	136	10.8	53	135	10.3	51	133	9.9
2100	25	74	153	14.0	70	153	13.3	66	153	12.6
	23	67	147	12.7	64	147	12.1	60	146	11.5
	21	60	140	11.5	57	140	11.0	54	138	10.5
	19	53	133	10.4	51	131	9.9	48	129	9.5
	17	47	123	9.2	45	121	8.9	42	118	8.5

Figure 5-7. Cruise Performance (Sheet 5 of 10)

**CRUISE PERFORMANCE**  
**PRESSURE ALTITUDE 12,000 FEET**

CONDITIONS:  
3100 Pounds  
Recommended Lean Mixture  
Cowl Flaps Closed

**NOTE**  
For best fuel economy, operate at the leanest mixture that results in smooth engine operation or at peak EGT.

		20°C BELOW STANDARD TEMP -29°C			STANDARD TEMPERATURE -9°C			20°C ABOVE STANDARD TEMP 11°C		
RPM	MP	% BHP	KTAS	GPH	% BHP	KTAS	GPH	% BHP	KTAS	GPH
2400	25	---	---	---	79	165	15.0	75	164	14.3
	23	76	159	14.5	73	159	13.8	69	158	13.1
	21	69	152	13.2	66	152	12.5	62	151	11.9
	19	62	145	11.9	59	144	11.3	56	143	10.8
2300	25	80	162	15.2	76	162	14.5	72	161	13.7
	23	73	156	13.9	70	156	13.2	66	155	12.6
	21	66	149	12.6	63	149	12.0	60	148	11.5
	19	60	142	11.4	57	141	10.9	54	140	10.4
2200	25	77	159	14.6	73	159	13.9	69	159	13.2
	23	70	153	13.3	67	153	12.7	63	152	12.1
	21	64	146	12.1	61	146	11.6	57	145	11.0
	19	57	139	11.0	54	138	10.5	51	136	10.0
2100	25	74	156	14.0	70	156	13.3	66	155	12.6
	23	67	150	12.8	64	150	12.2	61	149	11.6
	21	61	143	11.6	58	143	11.1	55	141	10.6
	19	54	136	10.5	52	134	10.1	49	132	9.6
	17	48	127	9.4	46	124	9.0	43	121	8.6

Figure 5-7. Cruise Performance (Sheet 6 of 10)

**CRUISE PERFORMANCE**  
**PRESSURE ALTITUDE 14,000 FEET**

CONDITIONS:  
3100 Pounds  
Recommended Lean Mixture  
Cowl Flaps Closed

**NOTE**  
For best fuel economy, operate at the leanest mixture that results in smooth engine operation or at peak EGT.

		20°C BELOW STANDARD TEMP -33°C			STANDARD TEMPERATURE -13°C			20°C ABOVE STANDARD TEMP 7°C		
RPM	MP	% BHP	KTAS	GPH	% BHP	KTAS	GPH	% BHP	KTAS	GPH
2400	25	---	---	---	79	167	14.9	75	167	14.2
	23	76	161	14.5	72	161	13.7	69	161	13.0
	21	69	155	13.2	66	155	12.5	63	154	11.9
	19	63	148	11.9	60	147	11.4	57	146	10.9
2300	25	80	165	15.1	76	165	14.4	72	164	13.6
	23	73	158	13.9	70	158	13.2	66	158	12.6
	21	67	152	12.7	63	152	12.1	60	151	11.5
	19	60	145	11.5	57	144	11.0	54	142	10.5
2200	25	77	162	14.6	73	162	13.8	69	161	13.1
	23	70	156	13.4	67	156	12.7	63	155	12.1
	21	64	149	12.2	61	149	11.6	58	147	11.1
	19	58	142	11.1	55	141	10.6	52	139	10.1
2100	25	74	159	14.0	70	159	13.3	66	158	12.6
	23	67	153	12.8	64	153	12.2	61	152	11.6
	21	61	146	11.7	58	146	11.2	55	144	10.7
	19	55	139	10.6	53	137	10.2	50	135	9.7
	17	49	130	9.6	47	128	9.2	44	124	8.8

Figure 5-7. Cruise Performance (Sheet 7 of 10)

**CRUISE PERFORMANCE**  
**PRESSURE ALTITUDE 16,000 FEET**

CONDITIONS:  
3100 Pounds  
Recommended Lean Mixture  
Cowl Flaps Closed

**NOTE**  
For best fuel economy, operate at the leanest mixture that results in smooth engine operation or at peak EGT.

RPM	MP	20°C BELOW STANDARD TEMP -37°C			STANDARD TEMPERATURE -17°C			20°C ABOVE STANDARD TEMP 3°C		
		% BHP	KTAS	GPH	% BHP	KTAS	GPH	% BHP	KTAS	GPH
2400	25	---	---	---	78	170	14.8	74	169	14.1
	23	76	164	14.4	72	164	13.7	68	163	13.0
	21	70	158	13.2	66	157	12.6	63	156	12.0
	19	63	151	12.0	60	150	11.5	57	148	10.9
2300	25	79	167	15.1	75	167	14.3	72	167	13.6
	23	73	161	13.9	70	161	13.2	66	160	12.6
	21	67	155	12.7	64	155	12.1	60	153	11.5
	19	61	148	11.6	58	147	11.1	55	145	10.6
2200	25	76	164	14.5	73	164	13.8	69	164	13.1
	23	70	159	13.4	67	158	12.7	64	157	12.1
	21	64	152	12.3	61	152	11.7	58	150	11.1
	19	58	145	11.2	56	144	10.7	53	141	10.2
2100	25	73	162	14.0	70	162	13.3	66	161	12.6
	23	68	156	12.9	64	155	12.2	61	154	11.6
	21	62	149	11.8	59	149	11.3	56	147	10.7
	19	56	142	10.8	53	140	10.3	51	138	9.9
	17	50	133	9.8	48	131	9.4	45	127	9.0

Figure 5-7. Cruise Performance (Sheet 8 of 10)

**CRUISE PERFORMANCE**  
**PRESSURE ALTITUDE 18,000 FEET**

CONDITIONS:  
3100 Pounds  
Recommended Lean Mixture  
Cowl Flaps Closed

**NOTE**  
For best fuel economy, operate at the leanest mixture that results in smooth engine operation or at peak EGT.

RPM	MP	20°C BELOW STANDARD TEMP -41°C			STANDARD TEMPERATURE -21°C			20°C ABOVE STANDARD TEMP -1°C		
		% BHP	KTAS	GPH	% BHP	KTAS	GPH	% BHP	KTAS	GPH
2400	25	---	---	---	77	172	14.6	73	171	13.9
	23	75	166	14.3	71	166	13.6	68	165	12.9
	21	69	160	13.1	66	160	12.5	62	158	11.9
	19	63	153	12.0	60	152	11.5	57	150	10.9
2300	25	78	169	14.9	74	169	14.1	71	169	13.4
	23	73	164	13.8	69	163	13.1	65	162	12.4
	21	67	157	12.7	63	157	12.1	60	155	11.5
	19	61	151	11.6	58	149	11.1	55	147	10.6
2200	25	76	167	14.4	72	167	13.7	68	166	12.9
	23	70	161	13.3	67	161	12.6	63	159	12.0
	21	64	155	12.2	61	154	11.7	58	152	11.1
	19	59	148	11.2	56	146	10.7	53	143	10.2
2100	25	73	164	13.8	69	164	13.2	66	163	12.5
	23	67	158	12.8	64	158	12.2	61	156	11.6
	21	62	152	11.8	59	151	11.3	56	148	10.7
	19	56	145	10.8	54	143	10.4	51	139	9.9
	17	51	136	9.9	49	133	9.5	46	129	9.1

Figure 5-7. Cruise Performance (Sheet 9 of 10)

**CRUISE PERFORMANCE**  
**PRESSURE ALTITUDE 20,000 FEET**

CONDITIONS:  
3100 Pounds  
Recommended Lean Mixture  
Cowl Flaps Closed

NOTE	
For best fuel economy, operate at the leanest mixture that results in smooth engine operation or at peak EGT.	

		20°C BELOW STANDARD TEMP -45°C			STANDARD TEMPERATURE -25°C			20°C ABOVE STANDARD TEMP -5°C		
RPM	MP	% BHP	KTAS	GPH	% BHP	KTAS	GPH	% BHP	KTAS	GPH
2400	25	---	---	---	76	174	14.5	72	174	13.7
	23	74	169	14.1	71	168	13.5	67	167	12.8
	21	69	163	13.1	65	162	12.4	62	160	11.8
	19	63	156	12.0	60	155	11.5	57	152	10.9
2300	25	77	172	14.7	74	172	14.0	70	171	13.3
	23	72	166	13.7	69	166	13.0	65	165	12.4
	21	67	160	12.7	63	159	12.1	60	157	11.5
	19	61	153	11.7	58	152	11.1	55	149	10.6
2200	25	75	169	14.2	71	169	13.5	68	168	12.8
	23	70	163	13.2	66	163	12.6	63	161	12.0
	21	64	157	12.2	61	156	11.7	58	154	11.1
	19	59	150	11.3	56	149	10.8	53	145	10.3
2100	25	72	166	13.8	69	166	13.1	65	165	12.4
	23	67	161	12.8	64	160	12.2	61	158	11.6
	21	62	155	11.8	59	153	11.3	56	151	10.8
	19	57	148	10.9	54	145	10.5	51	142	10.0
	17	52	139	10.1	49	136	9.6	47	132	9.2

Figure 5-7. Cruise Performance (Sheet 10 of 10)

## RANGE PROFILE

### 45 MINUTES RESERVE 88 GALLONS USABLE FUEL

CONDITIONS:  
3100 Pounds  
Recommended Lean Mixture for Cruise  
Standard Temperature  
Zero Wind

- NOTES:
1. This chart allows for the fuel used for engine start, taxi, takeoff and climb, and the distance during a normal climb as shown in figure 5-6.
  2. Reserve fuel is based on 45 minutes at 45% BHP and is 6.7 gallons.

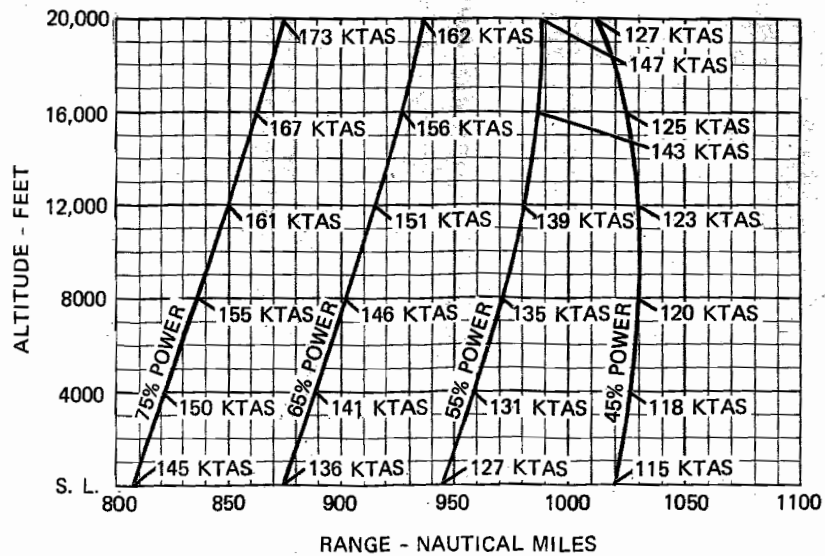


Figure 5-8. Range Profile

## ENDURANCE PROFILE

45 MINUTES RESERVE  
88 GALLONS USABLE FUEL

CONDITIONS:  
3100 Pounds  
Recommended Lean Mixture for Cruise  
Standard Temperature

- NOTES:
1. This chart allows for the fuel used for engine start, taxi, takeoff and climb, and the time during a normal climb as shown in figure 5-6.
  2. Reserve fuel is based on 45 minutes at 45% BHP and is 6.7 gallons.

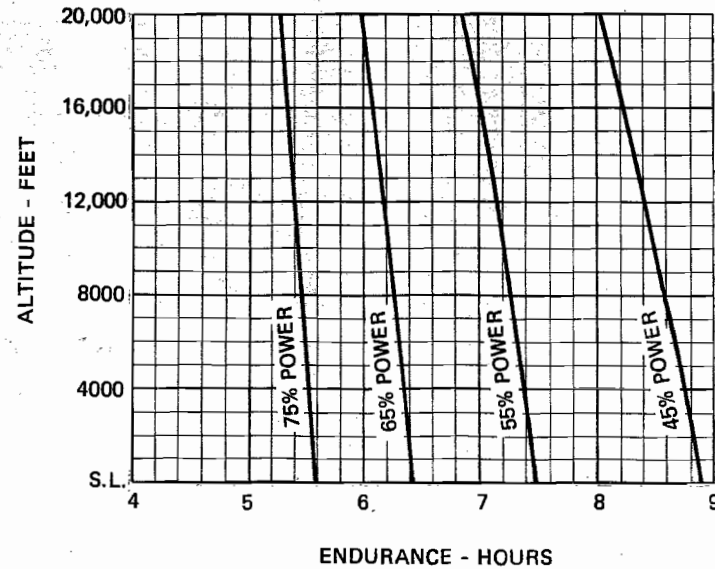


Figure 5-9. Endurance Profile

**RANGE PROFILE**  
**45 MINUTES RESERVE**  
**88 GALLONS USABLE FUEL**

CONDITIONS:  
3100 Pounds  
Recommended Lean Mixture for Cruise  
Standard Temperature  
Zero Wind

- NOTES:
1. This chart allows for the fuel used for engine start, taxi, takeoff and climb, and the distance during a normal climb as shown in figure 5-6.
  2. Reserve fuel is based on 45 minutes at 45% BHP and is 6.7 gallons.

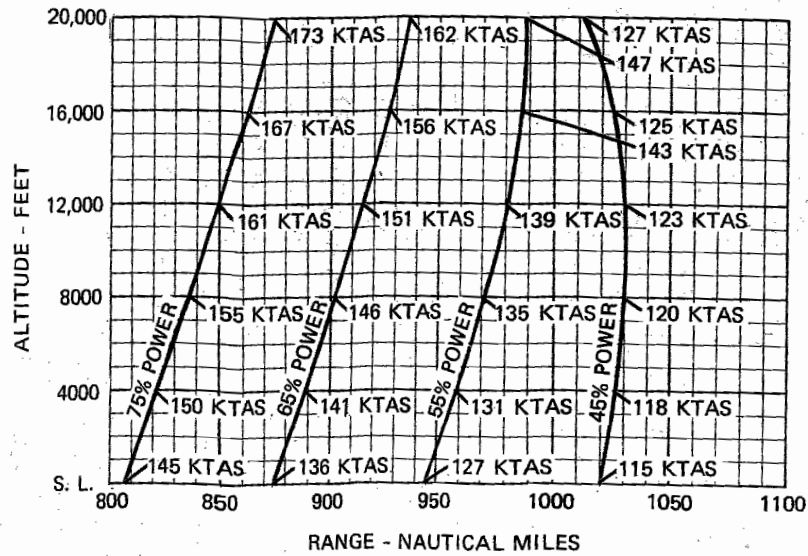


Figure 5-8. Range Profile

# LANDING DISTANCE

## SHORT FIELD

**CONDITIONS:**

Flaps 40°  
 Power Off  
 Maximum Braking  
 Paved, Level, Dry Runway  
 Zero Wind

**NOTES:**

1. Short field technique as specified in Section 4.
2. Decrease distances 10% for each 9 knots headwind. For operation with tailwinds up to 10 knots, increase distances by 10% for each 2 knots.
3. For operation on a dry, grass runway, increase distances by 40% of the "ground roll" figure.

WEIGHT LBS	SPEED AT 50 FT KIAS	PRESS ALT FT	0°C		10°C		20°C		30°C		40°C	
			GRND ROLL	TOTAL TO CLEAR 50 FT OBS	GRND ROLL	TOTAL TO CLEAR 50 FT OBS	GRND ROLL	TOTAL TO CLEAR 50 FT OBS	GRND ROLL	TOTAL TO CLEAR 50 FT OBS	GRND ROLL	TOTAL TO CLEAR 50 FT OBS
3100	64	S.L.	570	1270	590	1305	610	1335	630	1370	650	1400
		1000	590	1305	610	1335	635	1375	655	1410	675	1440
		2000	610	1335	635	1375	655	1410	680	1450	700	1480
		3000	635	1375	660	1415	680	1450	705	1490	730	1530
		4000	660	1415	685	1455	705	1490	730	1530	755	1570
		5000	685	1455	710	1495	735	1535	760	1580	785	1620
		6000	710	1500	735	1540	760	1580	790	1625	815	1665
		7000	735	1540	765	1585	790	1630	820	1675	845	1715
8000	765	1585	795	1635	820	1675	850	1725	880	1770		

Figure 5-10. Landing Distance