

RATE OF CLIMB

CONDITIONS:

Flaps Up
Gear Up
2700 RPM
Full Throttle
Mixture Set at Placard Fuel Flow
Cowl Flaps Open

MIXTURE SETTING	
PRESS ALT	PPH
S.L.	138
4000	126
8000	114
12,000	102

WEIGHT LBS	PRESS ALT FT	CLIMB SPEED KIAS	RATE OF CLIMB - FPM			
			-20°C	0°C	20°C	40°C
3800	S.L.	97	1020	930	835	745
	2000	95	895	810	720	635
	4000	94	775	690	610	525
	6000	93	655	575	495	415
	8000	91	535	460	380	300
	10,000	90	420	345	270	---
	12,000	89	310	235	160	---
3500	S.L.	95	1155	1060	965	865
	2000	94	1025	935	840	750
	4000	93	895	810	720	635
	6000	91	770	685	605	520
	8000	90	645	565	485	405
	10,000	89	520	445	370	---
	12,000	87	405	325	250	---
3200	S.L.	94	1310	1210	1110	1010
	2000	92	1165	1070	975	880
	4000	91	1030	940	850	760
	6000	90	895	810	725	640
	8000	88	765	685	605	520
	10,000	87	635	555	480	---
	12,000	86	510	435	355	---

Figure 5-5. Rate of Climb

TIME, FUEL, AND DISTANCE TO CLIMB

MAXIMUM RATE OF CLIMB

CONDITIONS:

Flaps Up
Gear Up
2700 RPM
Full Throttle
Mixture Set at Placard Fuel Flow
Cowl Flaps Open
Standard Temperature

MIXTURE SETTING	
PRESS ALT	PPH
S.L.	138
4000	126
8000	114
12,000	102

NOTES:

1. Add 12 pounds 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	PRESS ALT FT	CLIMB SPEED KIAS	RATE OF CLIMB FPM	FROM SEA LEVEL		
				TIME MIN	FUEL USED POUNDS	DISTANCE NM
3800	S.L.	97	860	0	0	0
	2000	95	760	2	6	4
	4000	94	660	5	12	9
	6000	93	565	9	18	14
	8000	91	465	13	26	21
	10,000	90	365	18	35	29
	12,000	89	265	24	47	41
3500	S.L.	95	990	0	0	0
	2000	94	885	2	5	3
	4000	93	780	5	10	7
	6000	91	675	7	16	12
	8000	90	570	11	22	17
	10,000	89	465	15	29	24
	12,000	87	360	20	38	32
3200	S.L.	94	1135	0	0	0
	2000	92	1020	2	4	3
	4000	91	910	4	9	6
	6000	90	800	6	14	10
	8000	88	685	9	19	14
	10,000	87	575	12	25	20
	12,000	86	465	16	32	26

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

TIME, FUEL, AND DISTANCE TO CLIMB

NORMAL CLIMB - 100 KIAS

CONDITIONS:

Flaps Up
Gear Up
2550 RPM
25 Inches MP or Full Throttle
Cowl Flaps Open
Standard Temperature

MIXTURE SETTING	
PRESS ALT	PPH
S.L. to 4000	108
8000	96
12,000	84

NOTES:

1. Add 12 pounds 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	PRESS ALT FT	RATE OF CLIMB FPM	FROM SEA LEVEL		
			TIME MIN	FUEL USED POUNDS	DISTANCE NM
3800	S.L.	580	0	0	0
	2000	580	3	6	6
	4000	570	7	12	12
	6000	470	11	19	19
	8000	365	16	27	28
	10,000	265	22	37	40
	12,000	165	32	51	59
3500	S.L.	685	0	0	0
	2000	685	3	5	5
	4000	675	6	11	10
	6000	565	9	16	16
	8000	455	13	23	23
	10,000	350	18	31	33
	12,000	240	25	41	46
3200	S.L.	800	0	0	0
	2000	800	2	4	4
	4000	795	5	9	8
	6000	675	8	14	13
	8000	560	11	19	19
	10,000	445	15	25	27
	12,000	325	20	33	37

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

CRUISE PERFORMANCE **PRESSURE ALTITUDE 2000 FEET**

CONDITIONS:
Recommended Lean Mixture
3800 Pounds
Cowl Flaps Closed

		20°C BELOW STANDARD TEMP -9°C			STANDARD TEMPERATURE 11°C			20°C ABOVE STANDARD TEMP 31°C		
RPM	MP	% BHP	KTAS	PPH	% BHP	KTAS	PPH	% BHP	KTAS	PPH
2550	25	---	---	---	78	166	98	76	168	95
	24	77	162	96	74	163	93	71	165	90
	23	72	158	91	70	160	88	67	161	85
	22	68	155	85	65	156	82	63	157	80
2500	25	78	163	98	76	164	95	73	166	92
	24	74	160	93	72	161	90	69	163	87
	23	70	156	88	68	158	85	65	159	82
	22	66	153	83	64	154	80	62	155	78
2400	25	73	159	92	71	161	89	68	162	86
	24	69	156	87	67	157	84	65	159	82
	23	66	153	83	63	154	80	61	155	77
	22	62	149	78	59	150	75	57	151	73
2300	25	69	155	86	66	157	84	64	158	81
	24	65	152	82	63	153	79	61	154	77
	23	61	149	77	59	150	75	57	150	73
	22	58	145	73	56	146	71	54	146	69
2200	25	64	151	80	61	152	77	59	153	75
	24	60	147	76	58	148	74	56	149	71
	23	57	144	72	55	145	70	53	145	68
	22	53	140	68	51	140	66	50	140	64
	21	50	136	64	48	135	62	46	134	60
	20	46	130	60	45	130	58	43	129	57

Figure 5-7. Cruise Performance (Sheet 1 of 6)

CRUISE PERFORMANCE
PRESSURE ALTITUDE 4000 FEET

CONDITIONS:
Recommended Lean Mixture
3800 Pounds
Cowl Flaps Closed

		20°C BELOW STANDARD TEMP -13°C			STANDARD TEMPERATURE 7°C			20°C ABOVE STANDARD TEMP 27°C		
RPM	MP	% BHP	KTAS	PPH	% BHP	KTAS	PPH	% BHP	KTAS	PPH
2550	24	79	166	99	76	168	95	73	169	92
	23	74	163	93	72	164	90	69	166	87
	22	70	159	88	67	161	85	65	162	82
	21	66	155	83	63	157	80	61	158	77
2500	25	---	---	---	78	169	97	75	171	94
	24	76	164	96	74	166	92	71	168	89
	23	72	161	90	70	163	87	67	164	85
	22	68	157	85	65	159	82	63	160	80
2400	25	75	163	94	72	165	91	70	166	88
	24	71	160	89	69	162	86	66	163	83
	23	67	157	85	65	158	82	63	159	79
	22	63	153	80	61	154	77	59	155	75
2300	25	70	160	88	68	161	85	66	162	83
	24	67	156	84	64	158	81	62	159	79
	23	63	153	80	61	154	77	59	155	74
	22	59	149	75	57	150	73	55	150	71
2200	25	65	155	82	63	156	79	61	157	77
	24	62	152	78	59	153	75	57	153	73
	23	58	148	74	56	149	71	54	149	69
	22	55	144	70	53	145	68	51	144	66
	21	51	140	66	50	140	64	48	139	62
	20	48	135	62	46	134	60	45	133	59
	19	44	129	58	43	128	56	41	126	55

Figure 5-7. Cruise Performance (Sheet 2 of 6)

CRUISE PERFORMANCE

PRESSURE ALTITUDE 6000 FEET

CONDITIONS:
Recommended Lean Mixture
3800 Pounds
Cowl Flaps Closed

		20°C BELOW STANDARD TEMP -17°C			STANDARD TEMPERATURE 3°C			20°C ABOVE STANDARD TEMP 23°C		
RPM	MP	% BHP	KTAS	PPH	% BHP	KTAS	PPH	% BHP	KTAS	PPH
2550	24	---	---	---	78	173	97	75	174	94
	23	76	167	96	74	169	92	71	171	89
	22	72	164	90	69	166	87	67	167	84
	21	68	160	85	65	162	82	63	163	80
2500	24	78	169	98	75	171	95	73	172	91
	23	74	166	93	71	167	90	69	169	87
	22	70	162	88	67	164	85	65	165	82
	21	66	158	83	63	160	80	61	160	77
2400	24	73	165	91	70	166	88	68	167	85
	23	69	161	87	67	163	84	64	164	81
	22	65	158	82	63	159	79	61	160	77
	21	61	154	77	59	155	75	57	155	73
2300	24	68	161	86	66	162	83	64	163	80
	23	65	158	82	62	159	79	60	159	76
	22	61	154	77	59	155	75	57	155	72
	21	57	150	73	55	150	71	53	150	68
2200	24	63	156	80	61	157	77	59	158	75
	23	60	152	76	58	153	73	56	154	71
	22	57	149	72	54	149	70	53	149	67
	21	53	144	68	51	144	66	49	143	64
	20	50	139	64	48	138	62	46	137	60
	19	46	133	60	44	132	58	43	131	57

Figure 5-7. Cruise Performance (Sheet 3 of 6)

CRUISE PERFORMANCE

PRESSURE ALTITUDE 8000 FEET

CONDITIONS:
Recommended Lean Mixture
3800 Pounds
Cowl Flaps Closed

		20°C BELOW STANDARD TEMP -21°C			STANDARD TEMPERATURE -1°C			20°C ABOVE STANDARD TEMP 19°C		
RPM	MP	% BHP	KTAS	PPH	% BHP	KTAS	PPH	% BHP	KTAS	PPH
2550	22	74	169	93	71	171	90	69	172	87
	21	70	165	88	67	167	85	65	168	82
	20	66	161	82	63	162	80	61	163	77
	19	61	157	77	59	157	75	57	157	72
2500	22	72	167	90	69	169	87	67	170	84
	21	68	163	85	65	164	82	63	165	79
	20	63	159	80	61	160	77	59	160	75
	19	59	154	75	57	155	72	55	154	70
2400	22	67	163	84	65	164	81	62	165	79
	21	63	159	80	61	160	77	59	160	74
	20	59	154	75	57	155	73	55	155	70
	19	55	150	70	53	149	68	51	148	66
2300	22	63	158	79	61	159	77	59	160	74
	21	59	154	75	57	155	72	55	155	70
	20	55	150	71	53	150	68	52	149	66
	19	52	144	66	50	143	64	48	142	62
2200	22	58	153	74	56	154	71	54	153	69
	21	55	149	70	53	149	68	51	148	66
	20	51	144	66	49	143	64	48	142	62
	19	48	138	62	46	137	60	44	135	58
	18	44	131	58	43	130	56	41	128	55

Figure 5-7. Cruise Performance (Sheet 4 of 6)

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

CONDITIONS:
Recommended Lean Mixture
3800 Pounds
Cowl Flaps Closed

		20°C BELOW STANDARD TEMP -25°C			STANDARD TEMPERATURE -5°C			20°C ABOVE STANDARD TEMP 15°C		
RPM	MP	% BHP	KTAS	PPH	% BHP	KTAS	PPH	% BHP	KTAS	PPH
2550	20	68	166	85	65	167	82	63	168	79
	19	63	162	80	61	162	77	59	162	74
	18	59	156	74	56	157	72	55	156	70
	17	54	150	69	52	149	67	50	148	65
2500	20	65	164	82	63	165	80	61	165	77
	19	61	159	77	59	160	75	57	160	72
	18	57	154	72	55	154	70	53	153	68
	17	52	147	67	50	146	65	49	145	63
2400	20	61	159	77	59	160	75	57	160	72
	19	57	154	73	55	154	70	53	153	68
	18	53	149	68	51	148	66	49	147	64
	17	49	142	63	47	140	61	45	139	59
2300	20	57	154	73	55	154	70	53	153	68
	19	53	149	68	51	148	66	50	147	64
	18	50	143	64	48	141	62	46	140	60
	17	46	136	60	44	134	58	42	132	56
2200	20	53	148	68	51	148	66	49	146	64
	19	49	143	64	48	141	62	46	140	60
	18	46	136	60	44	135	58	43	133	56

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

CRUISE PERFORMANCE

PRESSURE ALTITUDE 12,000 FEET

CONDITIONS:
Recommended Lean Mixture
3800 Pounds
Cowl Flaps Closed

		20°C BELOW STANDARD TEMP -29°C			STANDARD TEMPERATURE -9°C			20°C ABOVE STANDARD TEMP 11°C		
RPM	MP	% BHP	KTAS	PPH	% BHP	KTAS	PPH	% BHP	KTAS	PPH
2550	18	61	162	77	58	162	74	56	161	72
	17	56	155	71	54	155	69	52	153	67
	16	51	148	66	50	147	64	48	145	62
	15	47	139	61	45	137	59	43	135	57
2500	18	59	159	74	57	159	72	55	158	70
	17	54	153	69	52	151	67	50	150	65
	16	50	145	64	48	143	62	46	142	60
	15	45	136	59	43	134	57	42	131	55
2400	18	55	154	70	53	153	68	51	151	66
	17	51	147	65	49	145	63	47	144	61
	16	47	139	61	45	137	59	43	135	57
2300	18	51	148	66	49	146	64	48	145	62
	17	47	140	62	46	139	60	44	137	58
	16	43	132	57	42	130	55	40	126	54
2200	18	48	141	62	46	139	60	44	137	58
	17	44	134	58	42	131	56	41	128	54

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