

550 T.I. Centurion

TAKEOFF DISTANCE SHORT FIELD TECHNIQUE

CONDITIONS:

Flaps 10°
2700 RPM, Full Throttle and Mixture Set at Placard Fuel Flow Prior to Brake Release
Cowl Flaps Open
Paved, Level, Dry Runway
Zero Wind

MIXTURE SETTING	
PRESS ALT	PPH
S.L.	150
4000	127
8000	112

NOTES:

1. Short field technique as specified in Section 4 of the basic POH.
2. Where distance has been omitted, climb performance after liftoff is less than 150 fpm. Rate of climb is based on landing gear extended and flaps 10° at takeoff speed.
3. Decrease distances 10% for each 10 knots headwind. For operation with tailwinds up to 10 knots, increase distances by 10% for each 2.5 knots.
4. 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	
4000 See Note	65	71	S.L.	1215	1920	1310	2065	1410	2215	1515	2380	1630	2560	
			1000	1335	2110	1440	2265	1550	2435	1660	2625	1785	2825	
			2000	1465	2320	1570	2490	1695	2690	1830	2905	1965	3135	
			3000	1610	2565	1730	2760	1865	2980	2010	3225	2165	3500	
			4000	1765	2835	1905	3070	2055	3320	2215	3600	2385	3920	
			5000	1950	3160	2105	3425	2270	3720	2445	4055	2640	4440	
			6000	2150	3545	2325	3855	2510	4200	2705	4605	2920	5080	
			7000	2385	4000	2575	4370							
			8000	2650	4565									
3800	63	69	S.L.	1065	1685	1145	1810	1230	1940	1320	2080	1420	2235	
			1000	1165	1850	1255	1985	1350	2130	1450	2290	1560	2465	
			2000	1280	2030	1375	2180	1475	2345	1590	2530	1710	2730	
			3000	1400	2235	1505	2405	1625	2595	1750	2800	1880	3030	
			4000	1540	2470	1660	2665	1785	2880	1925	3120	2070	3385	
			5000	1695	2745	1830	2970	1970	3215	2125	3500	2290	3820	
			6000	1870	3070	2020	3330	2175	3620	2345	3960	2530	4355	
			7000	2070	3450	2235	3765	2415	4120	2605	4540			
			8000	2295	3920	2480	4310							
3500	60	66	S.L.	880	1395	940	1495	1010	1600	1090	1710	1165	1830	
			1000	960	1525	1030	1635	1105	1745	1190	1875	1275	2005	
			2000	1050	1665	1125	1785	1210	1915	1300	2055	1395	2205	
			3000	1150	1825	1235	1960	1330	2105	1430	2265	1535	2440	
			4000	1280	2010	1355	2160	1460	2325	1570	2500	1685	2700	
			5000	1385	2220	1490	2385	1605	2575	1730	2780	1860	3005	
			6000	1525	2460	1645	2650	1770	2865	1905	3100	2050	3370	
			7000	1680	2735	1815	2960	1955	3210	2110	3490	2275	3810	
			8000	1860	3065	2010	3330	2165	3625	2335	3965	2520	4360	
3200	58	63	S.L.	715	1145	770	1225	820	1305	885	1390	945	1487	
			1000	780	1245	835	1330	900	1420	965	1520	1035	1625	
			2000	850	1360	915	1455	985	1555	1055	1660	1130	1780	
			3000	930	1485	1000	1590	1080	1700	1155	1820	1240	1955	
			4000	1020	1625	1095	1740	1180	1870	1270	2005	1365	2155	
			5000	1120	1785	1205	1915	1295	2055	1395	2210	1500	2380	
			6000	1235	1965	1325	2110	1425	2270	1535	2450	1655	2640	
			7000	1360	2175	1465	2345	1570	2525	1695	2725	1825	2950	
			8000	1495	2415	1615	2605	1740	2815	1870	3050	2020	3315	

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RATE OF CLIMB

MAXIMUM

CONDITIONS:

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

MIN. MIXTURE SETTING	
PRESS ALT	PPH
S.L.	150
4000	127
8000	112

WEIGHT LBS	PRESS ALT FT	CLIMB SPEED KIAS	RATE OF CLIMB - FPM			
			-20°C	0°C	20°C	40°C
4000 See Note	S.L.	98	1174	1082	989	898
	2000	96	1060	966	880	792
	4000	94	941	857	774	693
	6000	93	823	747	665	588
	8000	92	715	637	561	484
	10000	90	606	528	457	382
	12000	89	497	425	354	
3800	S.L.	96	1259	1164	1069	974
	2000	94	1139	1044	954	864
	4000	93	1014	929	844	759
	6000	92	894	814	729	649
	8000	90	779	699	619	539
	10000	89	664	584	509	432
	12000	88	549	474	399	
3500	S.L.	94	1399	1304	1204	1104
	2000	93	1269	1179	1084	989
	4000	91	1144	1054	964	874
	6000	90	1014	929	849	764
	8000	89	889	809	729	649
	10000	87	769	694	614	537
	12000	86	649	574	499	
3200	S.L.	92	1559	1459	1359	1254
	2000	91	1419	1329	1229	1134
	4000	90	1284	1194	1104	1009
	6000	88	1154	1064	979	894
	8000	87	1019	939	854	774
	10000	86	889	814	734	654
	12000	85	764	689	614	

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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

MIN. MIXTURE SETTING	
PRESS ALT	PPH
S.L.	150
4000	127
8000	112

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 temp.
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
4000 See Note	S.L.	98	1039	0	0	0
	2000	96	942	2	5	3
	4000	94	853	4	10	7
	6000	93	757	7	15	11
	8000	92	666	10	20	16
	10000	90	569	13	26	22
	12000	89	474	17	33	28
3800	S.L.	96	1149	0	0	0
	2000	94	1049	2	4	3
	4000	93	954	4	9	6
	6000	92	854	6	13	10
	8000	90	759	9	18	14
	10000	89	659	11	23	19
	12000	88	559	15	29	25
3500	S.L.	94	1301	0	0	0
	2000	93	1196	2	4	3
	4000	91	1096	3	8	5
	6000	90	991	5	12	8
	8000	89	886	7	16	12
	10000	87	781	10	20	16
	12000	86	681	13	25	21
3200	S.L.	92	1476	0	0	0
	2000	91	1366	1	3	2
	4000	90	1256	3	7	5
	6000	88	1146	5	10	7
	8000	87	1036	6	14	10
	10000	86	926	8	17	14
	12000	85	816	11	21	17

LANDING DISTANCE

SHORT FIELD

CONDITIONS:

Flaps 30°
 Power Off
 Maximum Braking
 Paved, Level, Dry Runway
 Zero Wind

NOTES:

- Short field technique as specified in Section 4.
- Decrease distances 10% for each 10 knots headwind. For operation with tailwinds up to 10 knots, increase distances by 10% for each 2.5 knots.
- For operation on a dry, grass runway, increase distances by 40% of the "ground roll" figure.

WEIGHT LBS	SPEED AT 60 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
3800	74	S.L.	725	1440	750	1480	780	1520	805	1560	830	1600
		1000	750	1480	780	1520	805	1560	835	1605	860	1645
		2000	780	1525	810	1565	835	1605	865	1650	895	1695
		3000	810	1565	840	1610	870	1660	900	1705	930	1750
		4000	840	1615	870	1660	900	1705	930	1750	965	1800
		5000	870	1660	905	1710	935	1755	965	1805	1000	1855
		6000	905	1710	940	1765	970	1810	1005	1860	1035	1910
		7000	940	1765	975	1815	1010	1870	1045	1920	1075	1970
	8000	975	1815	1010	1870	1050	1930	1085	1980	1120	2035	

Figure 5-10. Landing Distance

550 T.I. Centurion

CRUISE PERFORMANCE

Pressure Altitude 8000 Feet

Best Economy

CONDITIONS: Mid-Cruise Weight
Mixture 50°F Lean of Peak EGT
Cowl Flaps Closed

		20°C Below Standard -21°C			Standard -1°C			20°C Above Standard 19°C		
RPM	MP	% BHP	KTAS	PPH	% BHP	KTAS	PPH	% BHP	KTAS	PPH
2550	21.7				71	175	85	68	173	82
	21	71	173	85	68	172	82	65	170	79
	20	67	170	81	64	168	78	62	168	75
	19	63	166	76	60	164	73	59	164	71
2500	21.7	73	175	88	70	174	84	67	172	81
	21	69	171	83	67	171	81	64	169	78
	20	65	168	79	63	167	76	60	166	73
	19	62	165	75	60	163	72	58	163	70
2400	21.7	70	172	84	67	171	81	65	170	79
	21	67	170	81	64	168	78	62	168	75
	20	63	166	76	60	164	73	59	164	71
	19	60	162	72	58	161	70	55	160	66
2300	21	63	166	76	61	165	74	59	164	71
	20	60	162	72	58	161	70	56	161	67
	19	56	158	67	54	157	65	52	157	63
	18	53	154	63	51	153	61	49	153	60
2200	21	59	161	71	57	160	69	55	160	66
	20	55	157	66	53	156	64	51	156	62
	19	52	154	63	50	154	61	48	153	58
	18	49	151	60	47	151	57	46	150	55

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CRUISE PERFORMANCE

Pressure Altitude 4000 Feet

Best Economy

CONDITIONS: Mid-Cruise Weight
Mixture 50°F Lean of Peak EGT
Cowl Flaps Closed

		20°C Below Standard -13°C			Standard 7°C			20°C Above Standard 27°C		
RPM	MP	% BHP	KTAS	PPH	% BHP	KTAS	PPH	% BHP	KTAS	PPH
2550	23				73	169	88	70	168	84
	22	72	167	87	70	167	84	67	166	81
	21	69	165	83	66	164	80	64	164	78
2500	24							73	170	88
	23.2				73	169	88	70	168	84
	23				72	169	87	70	168	84
	22	71	166	85	69	166	83	66	165	80
2400	24				73	169	88	70	168	84
	23	72	167	87	69	166	83	67	166	81
	22	68	164	82	66	164	80	63	163	76
	25				72	169	87	70	168	84
2300	24	72	167	87	69	166	83	66	165	80
	23	68	164	82	65	163	79	63	163	76
	22	64	161	78	62	161	75	60	159	72
	25	69	165	83	66	164	80	64	164	78
2200	24	66	162	80	63	161	76	61	161	74
	23	63	160	76	60	159	73	59	159	71
	22	60	157	72	58	157	70	55	155	66
	21	56	154	67	54	153	65	52	153	63
	20	53	151	64	51	151	62	49	151	60
	19	50	149	61	48	148	58	47	148	56

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CRUISE PERFORMANCE

Pressure Altitude 2000 Feet

Best Economy

CONDITIONS: Mid-Cruise Weight
Mixture 50°F Lean of Peak EGT
Cowl Flaps Closed

		20°C Below Standard -9°C			Standard 11°C			20°C Above Standard 31°C		
RPM	MP	% BHP	KTAS	PPH	% BHP	KTAS	PPH	% BHP	KTAS	PPH
2550	24							73	167	88
	23.2				73	166	88	70	165	84
	23				72	165	87	69	164	83
	22	71	163	85	69	163	83	66	162	80
2500	24							72	166	87
	23.6				73	166	88	70	165	84
	23				71	164	85	68	164	82
	22	70	162	84	67	161	81	65	161	79
2400	25							72	166	87
	24.5				73	166	88	70	165	84
	24				71	164	85	69	164	83
	23	70	162	84	68	162	82	65	161	79
	22	67	160	81	64	159	78	62	159	75
2300	25				71	164	85	68	164	82
	24	70	162	84	67	161	81	64	161	78
	23	66	159	80	64	159	78	61	158	74
	22	63	157	76	60	156	73	59	156	71
2200	25	68	161	82	65	160	79	63	160	76
	24	64	158	78	62	158	75	60	157	72
	23	61	156	74	60	156	72	57	155	69
	22	59	154	71	56	153	67	54	153	65
	21	55	151	66	53	151	64	51	150	62
	20	52	148	63	50	148	61	48	148	58

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CRUISE PERFORMANCE

Pressure Altitude 8000 Feet

Best Power

CONDITIONS: Mid-Cruise Weight
Mixture 50°F Rich of Peak EGT
Cowl Flaps Closed

		20°C Below Standard -21°C			Standard -1°C			20°C Above Standard 19°C		
RPM	MP	% BHP	KTAS	PPH	% BHP	KTAS	PPH	% BHP	KTAS	PPH
2550	21.7				76	180	101	73	178	97
	21	76	179	101	73	177	97	70	175	93
	20	72	175	96	69	173	92	67	172	89
	19	68	171	91	65	169	87	63	168	84
2500	21.7	78	181	104	75	179	100	72	177	96
	21	74	177	99	72	176	96	69	174	92
	20	70	173	93	68	172	91	65	170	87
	19	67	170	89	64	168	85	62	167	83
2400	21.7	75	178	100	72	176	96	70	176	93
	21	72	175	96	69	173	92	67	172	89
	20	68	171	91	65	169	87	63	168	84
	19	64	166	85	62	166	83	59	164	79
2300	21	68	171	91	66	170	88	63	168	84
	20	64	166	85	62	166	83	60	165	80
	19	60	162	80	58	162	77	56	161	75
2200	21	63	165	84	61	165	81	59	164	79
	20	59	161	79	57	161	78	55	160	75
	19	56	158	76	54	158	74	52	157	73
	18	53	155	74	51	154	71	49	154	68

RANGE PROFILE

45 MINUTES RESERVE

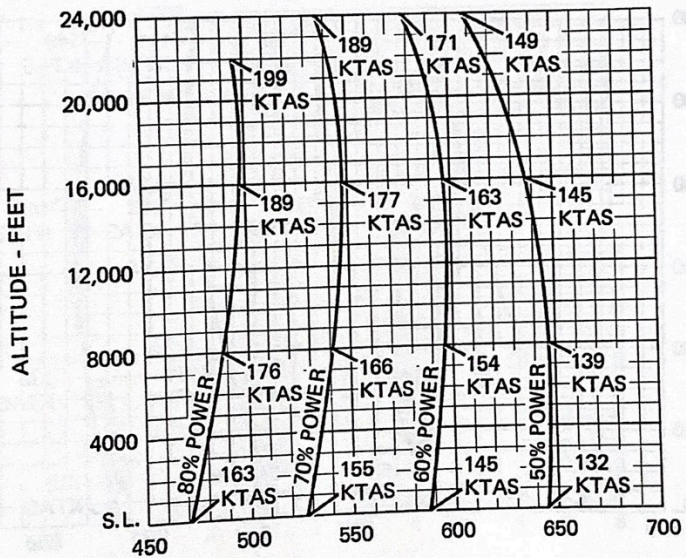
396 LBS. USABLE FUEL

CONDITIONS:

4000 Pounds
 Recommended Lean Mixture for Cruise
 Standard Temperature
 Zero Wind

NOTE:

This chart allows for the fuel used for engine start, taxi, takeoff and climb and the distance during a normal climb up to 20,000 feet and maximum climb above 20,000 feet.



RANGE PROFILE

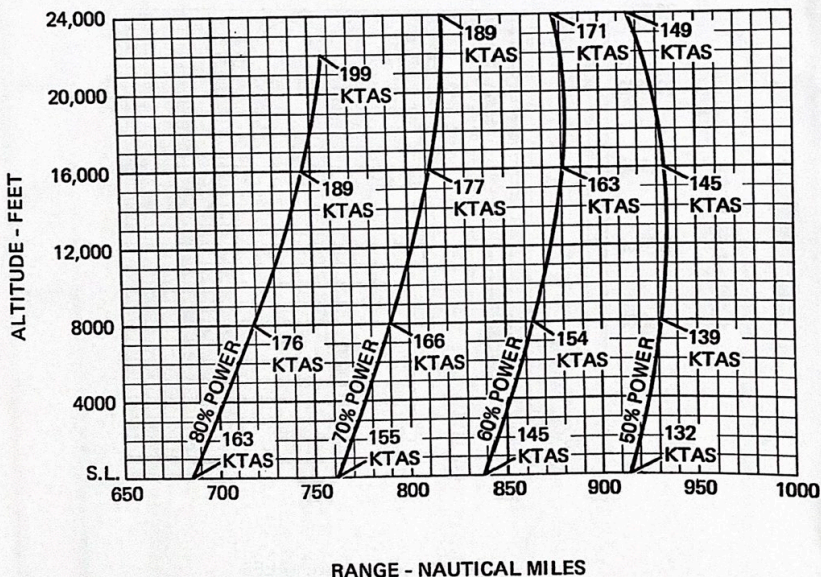
45 MINUTES RESERVE 534 LBS. USABLE FUEL

CONDITIONS:

4000 Pounds
 Recommended Lean Mixture for Cruise
 Standard Temperature
 Zero Wind

NOTE:

This chart allows for the fuel used for engine start, taxi, takeoff and climb and the distance during a normal climb up to 20,000 feet and maximum climb above 20,000 feet.



ENDURANCE PROFILE

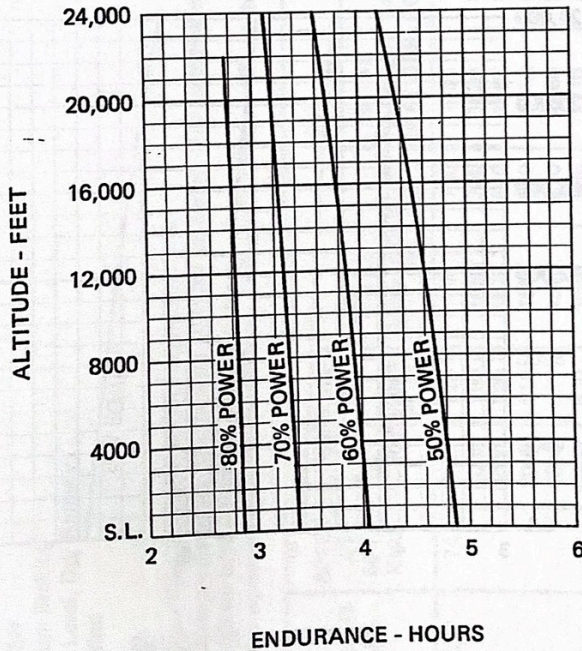
45 MINUTES RESERVE
396 LBS. USABLE FUEL

CONDITIONS:

4000 Pounds
Recommended Lean Mixture for Cruise
Standard Temperature

NOTE:

This chart allows for the fuel used for engine start, taxi, takeoff and climb and the time during a normal climb up to 20,000 feet and maximum climb above 20,000 feet.



ENDURANCE PROFILE

45 MINUTES RESERVE

534 LBS. USABLE FUEL

CONDITIONS:

4000 Pounds

Recommended Lean Mixture for Cruise

Standard Temperature

NOTE:

This chart allows for the fuel used for engine start, taxi, takeoff and climb and the time during a normal climb up to 20,000 feet and maximum climb above 20,000 feet.

