

5.1 GENERAL

5.1.1 Performance Group

This aircraft is classified in Performance Group E of BCAR. This means that there is no specific provision for performance after engine failure. The performance data has been measured in accordance with both Section K BCAR and FAR Part 23.

5.1.2 Flight Over Water Speed

The declared "flight over water" speed of the aircraft is a true airspeed of 100 kts.

5.1.3 Air Speed Indicator Position Errors

Flaps Retracted

IAS (Kts)	50	60	70	80	90	100	110	120	130	140	150	160	170	180
CAS (Kts)	51	61	71	81		100.5	111.5	121.5	131.5	141.5	151	162	172	182

Takeoff Flap

IAS (Kts)	50	60	70	80	88
CAS (Kts)	50	60.5	71	81	88.5

Landing Flap

IAS (Kts)	50	60	70	80	88
CAS (Kts)	51.3	61	70.7	81	88.3

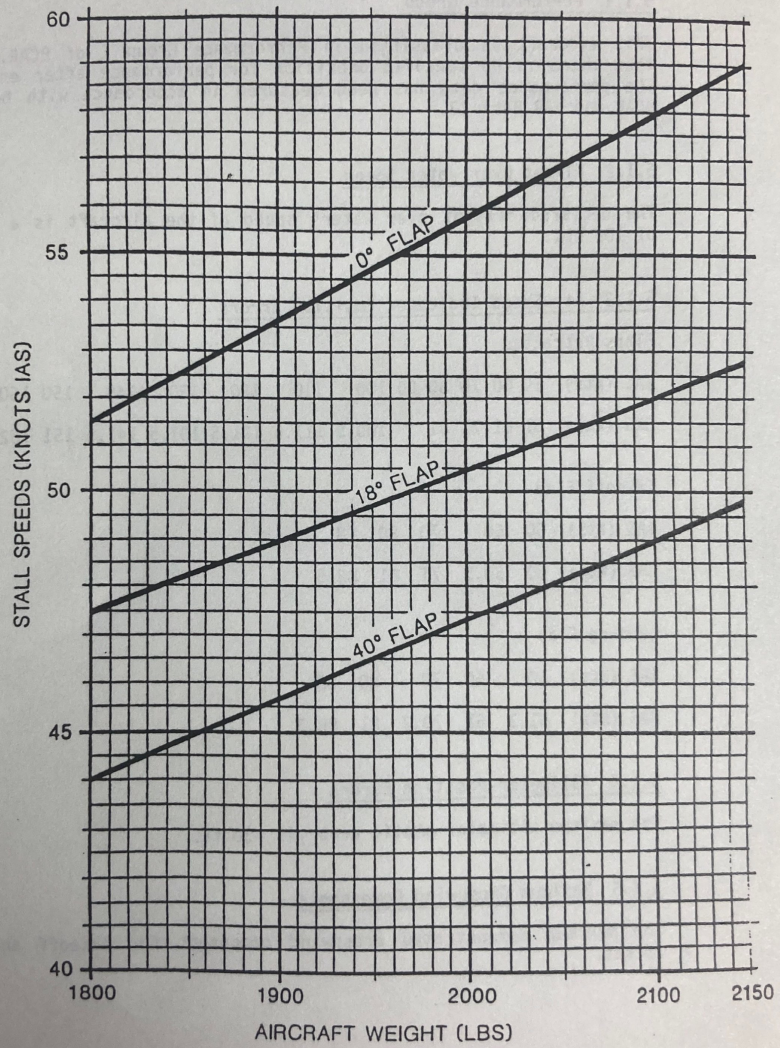
5.1.4 Altimeter Position Errors

The maximum altimeter static error is -30 ft.

5.1.5 Maximum Crosswind Components

The maximum demonstrated crosswind component for takeoff and landing is > 25 kts. <

5.1.6 Stall Speeds - At Forward C of G



P.5-2
CAA Approved
July 1998 A6
TP.T67C/3/FM



PILOTS NOTES
FIREFLY T67C3

5.2 TAKEOFF PERFORMANCE

The information is derived from the table and represents the take off distances required from rest to the 50ft (15m) height point.

> PRE MOD 495 MTHA 953 kg (2100 lbs)

T67C3 TAKEOFF DISTANCE (ft)													
CONDITIONS : FLAP 16° / FULL THROTTLE PRIOR TO BRAKES RELEASE / PAVED, LEVEL RUNWAY - ZERO WIND													
Gross Weight (lbs/kg)	Takeoff Speed		Pressure Altitude (ft)	0°C		10°C		20°C		40°C			
	Lift Off	Ai 50 ft		Ground Roll	Total to clear 50 ft	Ground Roll	Total to clear 50 ft	Ground Roll	Total to clear 50 ft	Ground Roll	Total to clear 50 ft		
2100 (953)	53 kts	87 kts	Sea Level	1034	1712	1077	1774	1123	1636	1233	1990	1401	2218
			1000 (305)	1220	1986	1272	2059	1333	2145	1460	2315	1665	2562
			3000 (814)	1703	2677	1785	2788	1874	2908	2099	3195	2404	3547
			4000 (1219)	2028	3128	2125	3255	2239	3400	2530	3786	2968	4284
			5000 (1524)	2461	3707	2598	3881	2758	4078	3136	4528	3748	5217

For operation on grass runways the total takeoff distances scheduled for paved runways must be increased as follows:

(i) Dry grass (8 ins long): 20% of the total takeoff distance

(ii) Wet grass (8 ins long): 30% of the total takeoff distance

For operation in headwind conditions the following corrections may be applied:
Decrease distances by 10% for each 8 knots

For operation in tailwind conditions the following correction must be applied:
Increase distance by 10% for each 2 knots

In the event of a flapless takeoff (lift off speed of 58 kts IAS, speed at 50 ft screen height of 75 kts IAS) the ground run and total takeoff distances should be increased by 16% and 32% respectively.

POST MOD 495 MTHA 975 kg (2150 lbs)

T67C3 TAKEOFF DISTANCE (ft)													
CONDITIONS : FLAP 16° / FULL THROTTLE PRIOR TO BRAKES RELEASE / PAVED, LEVEL RUNWAY - ZERO WIND													
Gross Weight (lbs/kg)	Takeoff Speed		Pressure Altitude (ft)	0°C		10°C		20°C		40°C			
	Lift Off	Ai 50 ft		Ground Roll	Total to clear 50 ft	Ground Roll	Total to clear 50 ft	Ground Roll	Total to clear 50 ft	Ground Roll	Total to clear 50 ft		
2150 (975)	53 kts	89 kts	Sea Level	1085	1807	1151	1872	1179	1838	1295	2100	1471	2341
			1000 (305)	1281	2098	1335	2173	1400	2284	1533	2443	1748	2725
			3000 (819)	1502	2417	1571	2512	1640	2609	1819	2847	2191	3214
			4000 (1219)	1789	2929	1874	2943	1908	3087	2204	3372	2577	3848
			5000 (1524)	2130	3302	2231	3438	2352	3588	2658	3975	3117	4531
			2584	3912	2728	4098	2894	4302	3292	4777	3933	5508	

For operation on grass runways the total takeoff distances scheduled for paved runways must be increased as follows:

(i) Dry grass (8 ins long): 20% of the total takeoff distance

(ii) Wet grass (8 ins long): 30% of the total takeoff distance

For operation in headwind conditions the following corrections may be applied:
Decrease distances by 10% for each 8 knots

For operation in tailwind conditions the following correction must be applied:
Increase distance by 10% for each 2 knots

In the event of a flapless takeoff (lift off speed of 58 kts IAS, speed at 50 ft screen height of 75 kts IAS) the ground run and total takeoff distances should be increased by 16% and 32% respectively.



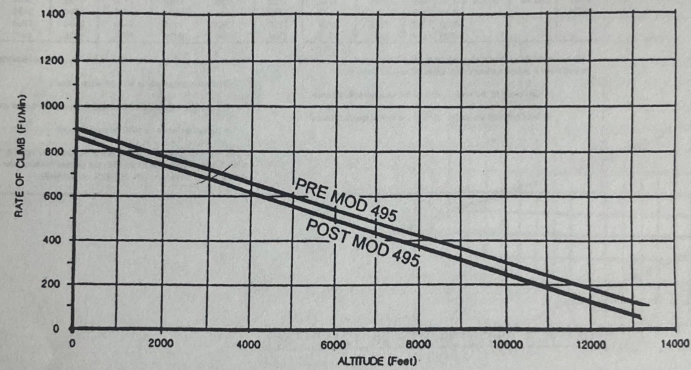
PILOTS NOTES
FIREFLY T67C3

5.3 CLIMB

5.3.1 Climb Speeds

- > At maximum all up weight, 953 kg (2100 lbs) PRE MOD 495 and 975 kg (2150 lbs) POST MOD 495, the best rate of climb speed is 77 kts IAS without flap in ISA temperatures.

5.3.2 Rate of Climb in ISA Temperatures



NOTE

In hot weather, reduce the rate of climb by 20 feet per minute for every 5°C above the standard temperature at the altitude in question.

P.5-4
CAA Approved
July 1998 A6
TP.T67C/3/FM



PILOTS NOTES
FIREFLY T67C3

5.4 LANDING PERFORMANCE

The information is derived from the table and represents the landing distance required from a height of 50ft (15m) to bring the aircraft to rest.

> PRE MOD 495 MTWA 963 kg (2100 lbs)

T67C3 LANDING DISTANCE (ft)												
CONDITIONS : FLAP 40° POWER OFF - MODERATE BRAKING - HARD DRY RUNWAY - ZERO WIND												
Gross Weight (lbs/kg)	Indicated Air Speed At 50 ft	Pressure Altitude ft. (m)	0°C		10°C		20°C		30°C		40°C	
			Ground Roll	Total to clear 50 ft.	Ground Roll	Total to clear 50 ft.	Ground Roll	Total to clear 50 ft.	Ground Roll	Total to clear 50 ft.	Ground Roll	Total to clear 50 ft.
2100 (953)	66 kts	Sea Level	1082	1757	1122	1822	1162	1886	1201	1951	1241	2015
		1000 (305)	1122	1822	1164	1899	1205	1956	1246	2022	1267	2069
		2000 (810)	1164	1890	1209	1959	1249	2026	1292	2096	1335	2167
		3000 (914)	1208	1961	1252	2033	1296	2104	1341	2176	1385	2248
		4000 (1219)	1253	2035	1299	2109	1345	2184	1391	2258	1437	2333
5000 (1524)	1301	2112	1349	2189	1396	2267	1444	2344	1492	2422		

For operation on grass runways the total landing distances scheduled for paved runways must be increased as follows:

(i) Dry grass (8 ins long): 15% of the total landing distance

(ii) Wet grass (8 ins long): 30% of the total landing distance

For operation in headwind conditions the following corrections may be applied:

Decrease distances by 10% for each 8 knots

For operation in tailwind conditions the following correction must be applied:

Increase distance by 10% for each 2 knots

In the event of a flapless landing (approach speed of 76 kts IAS) the ground roll figures should be increased by 45% and the total landing distance 30%.

POST MOD 495 MTWA 975 kg (2150 lbs)

T67C3 LANDING DISTANCE (ft)												
CONDITIONS : FLAP 40° POWER OFF - MODERATE BRAKING - HARD DRY RUNWAY - ZERO WIND												
Gross Weight (lbs/kg)	Indicated Air Speed At 50 ft	Pressure Altitude ft. (m)	0°C		10°C		20°C		30°C		40°C	
			Ground Roll	Total to clear 50 ft.	Ground Roll	Total to clear 50 ft.	Ground Roll	Total to clear 50 ft.	Ground Roll	Total to clear 50 ft.	Ground Roll	Total to clear 50 ft.
2150 (975)	66 kts	Sea Level	1140	1831	1182	1898	1224	1964	1266	2032	1308	2099
		1000 (305)	1183	1899	1228	1968	1269	2038	1313	2107	1356	2177
		2000 (810)	1227	1969	1271	2041	1316	2114	1361	2185	1406	2257
		3000 (914)	1272	2042	1319	2117	1366	2192	1412	2268	1459	2342
		4000 (1219)	1320	2119	1368	2197	1417	2270	1465	2353	1513	2431
5000 (1524)	1371	2200	1421	2361	1470	2362	1521	2442	1571	2523		

For operation on grass runways the total landing distances scheduled for paved runways must be increased as follows:

(i) Dry grass (8 ins long): 15% of the total landing distance

(ii) Wet grass (8 ins long): 30% of the total landing distance

For operation in headwind conditions the following corrections may be applied:

Decrease distances by 10% for each 8 knots

For operation in tailwind conditions the following correction must be applied:

Increase distance by 10% for each 2 knots

In the event of a flapless landing (approach speed of 76 kts IAS) the ground roll figures should be increased by 45% and the total landing distance 30%.

5.5 GLIDE PERFORMANCE

>
PRE MOD 495

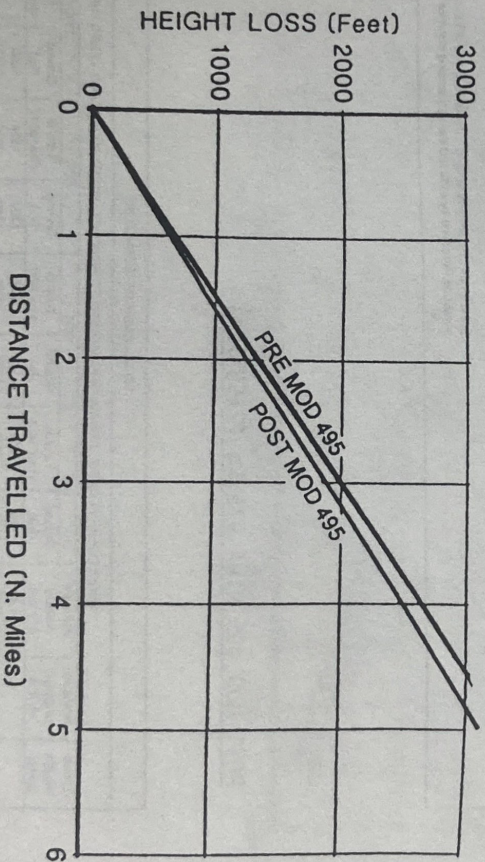
At maximum total weight of 953 kg (2100 lbs)

POST MOD 495

At maximum total weight of 975 kg (2150 lbs)

Set speed to 70 kts (IAS) (this gives the maximum glide angle which is 1 in 9.7 PRE MOD 495 or 1 in 9.1 POST MOD 495).

Engine Off - Propeller Windmilling - Flaps Retracted - No Wind.



5.6 ENDURANCE PERFORMANCE

IN HOURS - MAX FUEL CONTENTS 34.62 Imp Gal (41.54 US Gal)
(157.4 litres)

PRE MOD 495 MTWA 953 kg (2100 lbs) and
POST MOD 495 MTWA 975 kg (2150 lbs)

CONDITIONS:		STANDARD TEMPERATURE - NIL WIND											
		PRESSURE ALTITUDE											
MIXTURE SETTING	RPM	0 FT		2000 FT		4000 FT		6000 FT		8000 FT			
		% BHP	HRS	% BHP	HRS	% BHP	HRS	% BHP	HRS	% BHP	HRS		
BEST ECONOMY (PEAK EGT)	2500	-	-	-	-	-	-	-	-	-	-	69	4.5
	2400	-	-	75	4.2	70	4.4	66	4.7	64	4.8	64	4.8
	2200	63	4.9	59	5.2	55	5.5	52	5.7	51	5.8	51	5.8
	2000	44	6.7	42	7.0	40	7.1	39	7.2	38	7.3	38	7.3

Notes:

- This table includes: 45 mins reserve at 45% power = 3.5 Imp Gals (4.2 US Gals) (15.9 litres)
- This table includes: Allowance for engine start, taxi and take-off = 0.9 Imp Gals (1.1 US Gals) (4.1 litres)
- This table includes: Allowance for time to climb, ref. table 5.9.



PILOTS NOTES
FIREFLY T67C3

5.7 CRUISE PERFORMANCE

For POST MOD 495 conditions MTWA 2150 lbs (975 kg) reduce all airspeeds by 1 kt (2 km/h).

CONDITIONS : MTWA 2100 LBS (953 KG)

PRESSURE ALTITUDE (FT)	MIXTURE SETTING	20°C BELOW STANDARD TEMP.						STANDARD TEMPERATURE						20°C ABOVE STANDARD TEMP.					
		TRUE AIRSPEED			FUEL USED			TRUE AIRSPEED			FUEL USED			TRUE AIRSPEED			FUEL USED		
		BHP	kts	km/h	Imp Gal/hr	Litres/hr	US Gal/hr	BHP	kts	km/h	Imp Gal/hr	Litres/hr	US Gal/hr	BHP	kts	km/h	Imp Gal/hr	Litres/hr	US Gal/hr
0	2700	104	129	239	11.4	52.0	13.7	100	127	235	11.3	51.2	13.5	96	125	232	10.8	49.1	13.0
	2600	96	124	230	10.9	49.1	13.0	92	121	224	10.6	48.0	12.7	88	118	219	10.3	46.8	12.4
SEA LEVEL	2300	76	108	200	6.5	29.5	7.6	63	87	179	6.2	28.0	7.4	59	84	174	5.8	26.3	6.9
	2000	68	104	188	4.8	22.0	5.6	44	80	149	4.3	20.5	5.4	40	77	143	4.2	19.0	5.0
2000	2660	96	127	235	11.0	49.9	13.2	93	125	232	10.8	48.9	12.9	90	123	228	10.4	47.2	12.5
	2600	79	114	211	7.5	34.0	8.0	75	111	205	7.2	32.7	8.6	71	107	198	6.8	31.0	8.2
	2200	63	100	185	6.2	28.2	7.0	59	83	172	5.8	26.2	6.9	54	74	174	5.5	24.8	6.6
	2000	46	85	157	4.7	21.2	5.6	42	82	152	4.2	19.3	5.1	38	70	144	4.0	18.1	4.8
4000	2630	91	126	233	10.5	47.7	12.6	87	123	228	10.2	46.5	12.3	83	121	224	9.9	45.2	11.9
	2600	74	113	209	7.1	32.2	8.5	70	110	203	6.8	30.9	8.1	66	108	200	6.4	29.0	7.7
	2200	59	101	187	5.8	25.4	7.0	55	97	179	5.0	22.9	6.1	51	86	174	4.6	21.2	6.1
	2000	44	86	159	4.5	20.5	5.4	40	81	153	4.2	19.0	5.0	36	73	146	3.8	17.5	4.8

5.7 CRUISE PERFORMANCE (Cont'd)

CONDITIONS : MFW-2100 US (953 KG)

PRESSURE ALTITUDE (FT)	RPM	MIXTURE SETTING	20°C BELOW STANDARD TEMP.						STANDARD TEMPERATURE						20°C ABOVE STANDARD TEMP.					
			% BHP		TIME AIRSPEED		FUEL USED		% BHP		TIME AIRSPEED		FUEL USED		% BHP		TIME AIRSPEED		FUEL USED	
			Imp/Gal/hr	US Gal/hr	kts	km/h	Imp/Gal/hr	US Gal/hr	kts	km/h	Imp/Gal/hr	US Gal/hr	kts	km/h	Imp/Gal/hr	US Gal/hr	kts	km/h	Imp/Gal/hr	US Gal/hr
6000	2550	Full Rich Mixture	83	122	226	10.1	45.7	12.1	80	120	222	9.8	44.4	11.7	77	117	217	9.5	43.3	11.4
	2400	Best.	70	112	207	6.8	30.7	8.1	66	109	202	6.4	29.1	7.7	62	106	195	6.0	27.5	7.8
	2200	Economy	56	100	185	5.5	25.1	6.6	52	97	182	4.7	21.2	6.2	48	88	172	4.8	22.0	5.8
	2000	Lean (95%)	43	88	163	4.4	20.1	5.3	38	84	156	4.1	18.7	4.9	35	80	148	3.8	17.1	4.5
8000	2550	Full Rich Mixture	77	119	223	9.6	43.7	11.5	73	116	215	9.3	42.3	11.2	69	113	209	9.1	41.3	10.9
	2400	Best.	72	116	215	7.0	31.8	8.4	69	113	209	6.6	30.2	8.0	65	111	206	6.3	28.7	7.6
	2200	Economy	64	112	208	6.6	29.9	7.9	61	109	202	6.1	28.2	7.4	57	106	195	5.9	26.8	7.1
	2000	Lean (95%)	52	101	183	4.4	19.8	5.2	48	84	156	4.0	18.2	4.8	44	80	148	3.7	16.7	4.4

5.8 RANGE PERFORMANCE (PRE MOD 495)

IN NM AND KM - MAX USEABLE FUEL CONTENTS 34.62 Imp Gal (41.54 US Gals)
(157.4 litres)

CONDITIONS: 2100 LBS (953 kg) - STANDARD TEMPERATURE - NIL WIND																		
MIXTURE SETTING	RPM	PRESSURE ALTITUDE (FT)																
		0		2000		4000		6000		8000								
		% BHP	NM	km	% BHP	NM	km	% BHP	NM	km	% BHP	NM	km					
FULL RICH	2700	100	340	630	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2600	92	346	641	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2660	-	-	-	93	350	649	-	-	-	-	-	-	-	-	-	-	-
	2630	-	-	-	-	-	-	87	361	669	-	-	-	-	-	-	-	-
	2590	-	-	-	-	-	-	-	-	-	-	80	366	678	-	-	-	-
	2550	-	-	-	-	-	-	-	-	-	-	-	-	-	73	371	688	-
BEST ECONOMY (PEAK EGT)	2500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	69	504	934
	2400	81	440	815	75	463	858	70	483	895	66	504	934	64	517	958	-	-
	2300	72	460	852	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2200	63	473	877	59	507	940	55	535	991	52	549	1017	51	558	1034	-	-
	2000	44	537	995	42	578	1071	40	588	1090	39	602	1116	38	614	1138	-	-

Notes:

- 1 This table includes : 45 minutes reserve at 45% power = 3.5 Imp Gals (4.2 US Gals) : Best Economy.
- 2 This table includes : Allowance for engine start, taxi and take-off = 0.9 Imp Gals (1.1 US Gals)
- 3 This table includes : Allowance for distance to climb, ref Table 5.9.
- 4 This table includes : Allowance for distance to descent, ref Table 5.10.

RANGE PERFORMANCE (POST MOD 495)

IN NM AND KM- MAX USEABLE FUEL CONTENTS 34.62 Imp Gal (41.54 US Gals)
(157.4 litres)

CONDITIONS: 2150 LBS (975 kg) - STANDARD TEMPERATURE - NIL WIND

MIXTURE SETTING	PRESSURE ALTITUDE (FT)														
	0			2000			4000			6000			8000		
	% BHP	nm	km	% BHP	nm	km	% BHP	nm	km	% BHP	nm	km	% BHP	nm	km
FULL RICH	2700	340	629	-	-	-	-	-	-	-	-	-	-	-	-
	2600	92	345	-	-	-	-	-	-	-	-	-	-	-	-
	2660	-	-	93	350	648	-	-	-	-	-	-	-	-	-
	2630	-	-	-	-	-	87	364	675	-	-	-	-	-	-
	2590	-	-	-	-	-	-	-	-	80	370	685	-	-	-
2550	-	-	-	-	-	-	-	-	-	-	-	73	377	698	
BEST ECONOMY (PEAK EGT)	2500	-	-	-	-	-	-	-	-	-	-	-	-	69	517
	2400	-	-	75	466	863	70	489	905	66	515	953	64	531	984
	2200	63	473	876	59	514	55	543	1005	52	564	1044	51	575	1064
2000	44	537	995	42	590	40	597	1106	39	619	1147	38	635	1175	

NOTES:

- This table includes : 45 minutes reserve at 45% power = 3.5 Imp gals (4.2 US gals) : Best Economy
- This table includes: Allowance for engine start, taxi and take off = 0.9 Imp gals (1.1 US gals)
- This table includes : Allowance for distance to climb, ref Table 5.9
- This table includes : Allowance for distance to descent, ref Table 5.10

5.9 TIME, FUEL AND DISTANCE TO CLIMB (PRE MOD 495)

SCHEDULED RATE OF CLIMB

CONDITIONS: CLEAN FLAP - FULL THROTTLE - FULL RICH - STANDARD TEMPERATURE - ZERO WIND													
WEIGHT lbs (kg)	PRESSURE ALTITUDE ft	STANDARD TEMP. °C	INDICATED CLIMB SPEED kts	km/h	RATE OF CLIMB		TIME min	FUEL USED			DISTANCE		
					ft/min	m/s		Imp gals	Litres	US gals	NM	km	
2100 (953)	0	15	77	143	902	4.6	0	0	0	0	0	0	0
	1000	13	77	143	841	4.3	1.2	0.2	0.9	0.2	0.2	1.5	2.8
	2000	11	77	143	780	4.0	2.4	0.4	1.8	0.5	3.2	5.8	
	3000	9	77	143	720	3.7	3.7	0.6	2.7	0.7	5.0	9.2	
	4000	7	77	143	659	3.4	5.1	0.8	3.7	1.0	7.0	12.9	
	5000	5	77	143	598	3.0	6.7	1.1	4.8	1.3	9.3	17.1	
	6000	3	77	143	537	2.7	8.3	1.3	6.0	1.6	11.7	21.8	
	7000	1	77	143	476	2.4	10.2	1.6	7.2	1.9	16.0	29.6	
	8000	-1	77	143	416	2.1	12.1	1.9	8.4	2.2	17.6	32.6	
	9000	-3	77	143	355	1.8	14.3	2.2	9.8	2.6	21.1	39.1	
	10000	-5	77	143	294	1.5	16.7	2.5	11.4	3.0	25.1	46.5	

Notes:

- 1 Add 0.9 Imp gals (1.1 US gals) of fuel for engine start, taxi and take-off allowance.
- 2 Increase time, fuel and distance by 10% for each 10°C above standard temperature.
Decrease time, fuel and distance by 4% for each 10°C below standard temperature.
- 3 Above 5000 ft, lean off to maintain smooth engine running.

TIME, FUEL AND DISTANCE TO CLIMB (POST MOD 495)

SCHEDULED RATE OF CLIMB

CONDITIONS: CLEAN FLAP - FULL THROTTLE - FULL RICH - STANDARD TEMPERATURE - ZERO WIND												
WEIGHT lbs (kg)	PRESSURE ALTITUDE ft	STANDARD TEMP °C	INDICATED CLIMB SPEED kts	RATE OF CLIMB		TIME min	FUEL USED			DISTANCE		
				ft/min	m/s		Imp gals	Litres	US gals	NM	km	
2150 (975)	0	15	77	143	875	4.4	0	0	0	0	0	0
	1000	13	77	143	814	4.1	1.2	0.2	1.0	0.3	1.5	2.8
	2000	11	77	143	753	3.8	2.5	0.5	2.0	0.5	3.1	5.8
	3000	9	77	143	692	3.5	3.8	0.7	3.2	0.8	0.9	9.0
	4000	7	77	143	631	3.2	5.4	1.0	4.4	1.2	6.8	12.6
	5000	5	77	143	570	2.9	7.0	1.2	5.6	1.5	8.9	16.5
	6000	3	77	143	509	2.6	8.9	1.5	7.0	1.9	11.3	20.9
	7000	1	77	143	448	2.2	11.0	1.9	8.6	2.3	14.0	25.8
	8000	-1	77	143	387	2.0	13.4	2.3	10.3	2.7	17.0	31.5
	9000	-3	77	143	326	1.7	16.2	2.7	12.2	3.2	20.6	38.1
	10000	-5	77	143	265	1.4	19.6	3.2	14.5	3.8	24.9	46.3

NOTES:

1. Add 0.9 Imp gals (1.1 US gals) of fuel for engine start, taxi and takeoff allowance.
2. Increase time, fuel and distance by 10% for each 10°C above standard temperature.
Decrease time, fuel and distance by 4% for each 10°C below standard temperature.
3. Above 5000 ft, lean off to maintain smooth engine running.

5.10 TIME, FUEL AND DISTANCE TO DESCEND

CONDITIONS: FLAPS UP - ENGINE IDLING - FULL RICH MIXTURE - NIL WIND												
WEIGHT	HEIGHT ABOVE GROUND	Indicated Airspeed		Rate of Descent		Time mins	Fuel Used			Distance		
		kts	km/h	ft/min	m/s		Imp gals	Litres	US gals			
lbs (kg)	ft									NM	km	
	10,000					12.8					18.4	34.0
	9,000					11.5					16.2	30.1
2100 (953) (Pre Mod 495)	8,000					10.2					14.2	26.2
	7,000					8.9					12.2	22.6
	6,000					7.7					10.4	19.2
	5,000	75	139	785	4.0	6.4	0.023	0.100	0.026	8.5	15.7	
2150 (975) (Post Mod 495)	4,000					5.1	per 1000 ft	per 1000 ft	per 1000 ft	6.7	12.4	
	3,000					3.8				4.9	9.1	
	2,000					2.6				3.3	6.1	
	1,000					1.3				1.6	3.0	
	0					0				0	0	

P.5-12
 July 1998 A6
 TP.T67C/3/FM