

FAA APPROVED

SUPPLEMENTAL AIRPLANE FLIGHT MANUAL

FOR

REIMS/CESSNA F182P s/n F18200001 through F18200025

STC SA03608AT Maximum Gross Takeoff Weight Increase

Registration No. _____

Serial No. _____

This supplement must be used in conjunction with existing placards and material required to be furnished to the pilot under CAR Part 3 (as found in Reims/Cessna Pilot's Operating Handbook for the 1976 model year) whenever this aircraft is operated at weights above 2950 lbs. in accordance with Trolltune Corporation STC SA03608AT. The information contained in this document supplements or supersedes the Pilot's Operating Handbook or placards only in those areas listed. For limitations, procedures and performance information not contained in this supplement, consult the basic Pilot's Operating Handbook, markings and operating placards.

SECTION 1 - GENERAL

MAXIMUM CERTIFICATED WEIGHTS

Maximum Ramp Weight: 3110 lbs.
Maximum Gross Takeoff Weight: 3100 lbs.
Maximum Landing Weight: 2950 lbs.

SPECIFIC LOADINGS

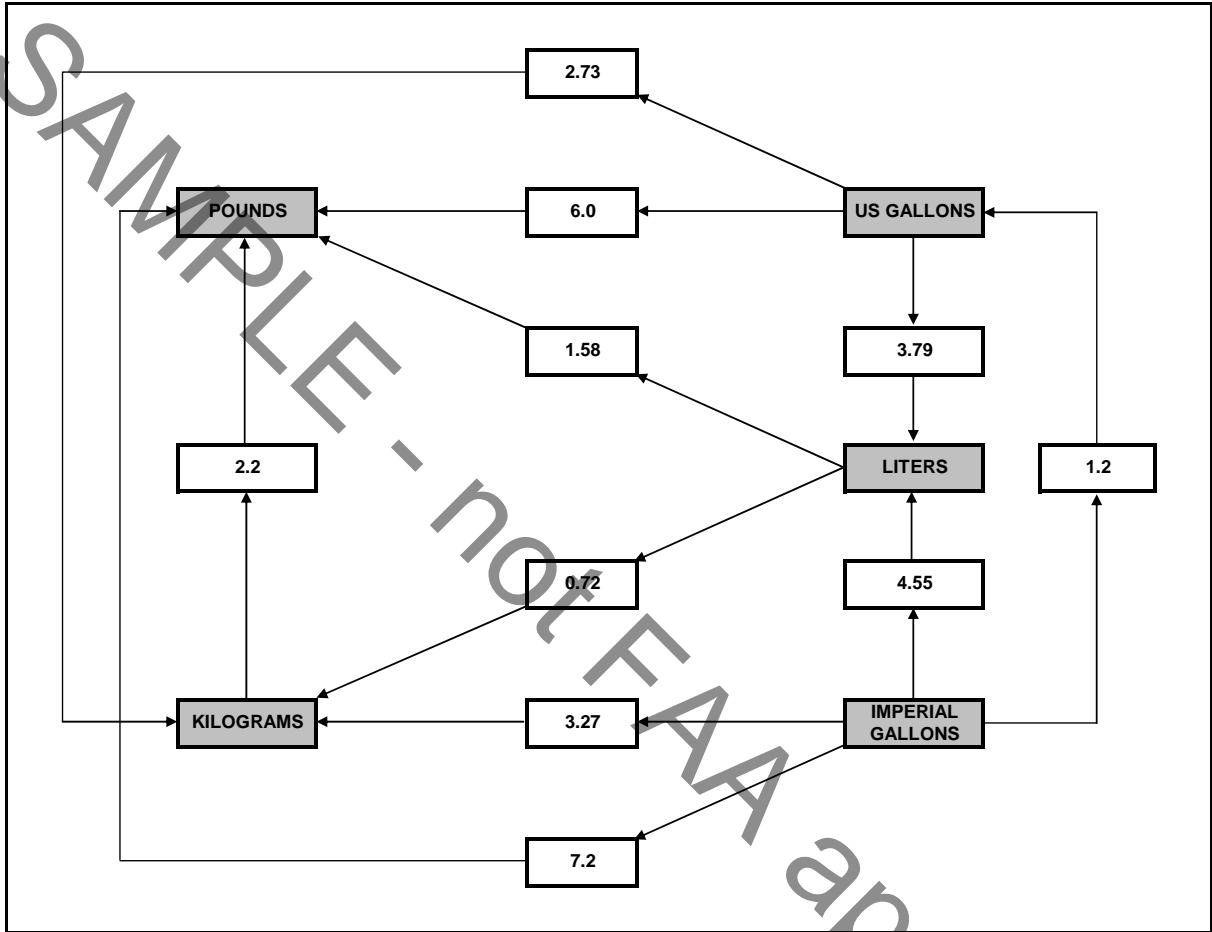
Wing Loading: 17.8 lbs./sq. ft.
Power Loading: 13.5 lbs./hp.

FAA Approved _____

Manager, Flight Test Branch
Federal Aviation Administration
Atlanta Aircraft Certification Office

Date: 15 November 2008

SECTION 1 - GENERAL (continued)



Metric / Imperial / US Units Conversion Chart

SECTION 2 - LIMITATIONS:

WEIGHT LIMITS:

Maximum Ramp Weight: 3110 lbs.
 Maximum Takeoff Weight: 3100 lbs.
 Maximum Landing Weight: 2950 lbs.

A normal start, taxi and run-up time of ten minutes will consume approximately 10 lbs. of fuel. Normal landings must not be made at weights in excess of 2950 lbs. For a typical 3100 lbs. takeoff, climb, and cruise profile, this equates to a minimum flight duration of approximately one hour and forty-five minutes.

CENTER OF GRAVITY LIMITS

Forward: 33.0 inches aft of datum at 2250 lbs. or less, with straight line variation to 40.9 inches aft of datum at 3100 lbs.
 Aft: 48.5 inches aft of datum at all weights except 46.0 inches aft of datum at weights above 2950 lbs. to 3100 lbs.

SECTION 3 - EMERGENCY PROCEDURES:

AIRSPEEDS FOR EMERGENCY OPERATION

ENGINE FAILURE AFTER TAKEOFF, 3100 lbs.:

Wing Flaps Up: 75 KIAS
 Wing Flaps Down: 70 KIAS

MANEUVERING SPEED:

3100 lbs.: 111 KIAS

MAXIMUM GLIDE:

3100 lbs.: 76 KIAS

PRECAUTIONARY LANDING WITH ENGINE POWER:

3100 lbs 70 KIAS

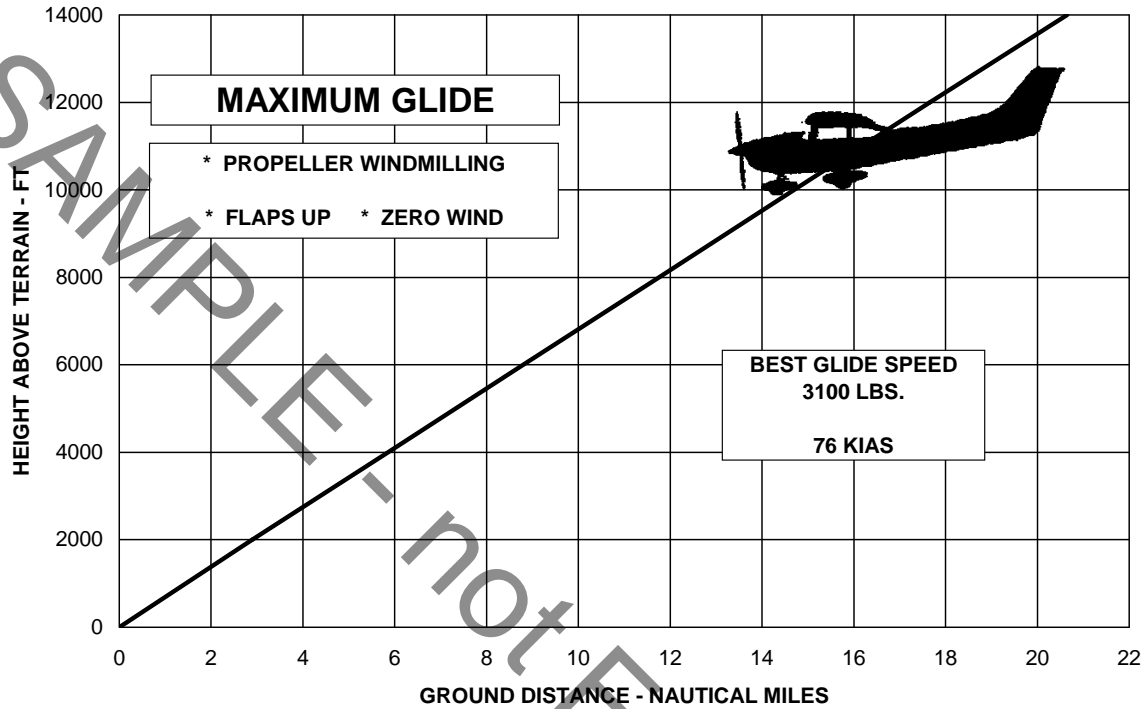
LANDING WITHOUT ENGINE POWER, 3100 lbs:

Wing Flaps Up: 75 KIAS
 Wing Flaps Down: 70 KIAS

DITCHING WITHOUT ENGINE POWER, 3100 lbs:

Wing Flaps Up: 75 KIAS
 Wing Flaps 10 degrees: 70 KIAS

SECTION 3 - EMERGENCY PROCEDURES (continued)



SECTION 4 - NORMAL PROCEDURES

SPEEDS FOR NORMAL OPERATION, 3100 lbs.

TAKEOFF:

Short Field Takeoff, Flaps 20°, Speed at 50 Feet: 59 KIAS

ENROUTE CLIMB. FLAPS UP:

Best Rate of Climb, Sea Level: 82 KIAS

Best Rate of Climb, 10,000 Feet: 75 KIAS

Best Angle of Climb, Sea Level: 59 KIAS

Best Angle of Climb, 10,000 Feet 66 KIAS

MAXIMUM RECOMMENDED TURBULENT AIR PENETRATION SPEED:

3100 lbs.: 111 KIAS

MAXIMUM DEMONSTRATED CROSSWIND VELOCITY:

Takeoff or Landing 15 KNOTS

SECTION 4 - NORMAL PROCEDURES (continued)**NOISE ABATEMENT:**

The certificated noise level for the Model F182P at 3100 pounds maximum weight is 85.5 dB(A), determined according to Appendix G of 14 CFR Part 36 through Amendment 28. No determination has been made by the Federal Aviation Administration that the noise levels of this airplane are or should be acceptable or unacceptable for operation at, into, or out of, any airport.

SECTION 5 - PERFORMANCE

Refer to the following performance charts for operations at weights above 2950 lbs. to 3100 lbs.:

STALL SPEEDS

CONDITIONS:
Power Off

NOTES:

1. Maximum altitude loss during a stall recovery is approximately 250 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	44	58	50	63	58	69	73	82
	20°	41	53	46	57	54	63	67	75
	40°	41	52	46	56	53	62	67	74

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	49	60	55	65	63	71	78	85
	20°	48	56	53	60	60	66	73	79
	40°	46	55	51	59	58	65	71	77

SECTION 5 - PERFORMANCE (continued)

TAKEOFF DISTANCE

MAXIMUM WEIGHT 3100 LBS

SHORT FIELD

CONDITIONS:

Flaps 20°
 2600 RPM and Full Throttle Prior to Brake Release
 Cowl Flaps Open
 Paved, Level, Dry Runway
 Zero Wind

NOTES:

1. Short field technique as specified in Section 4 of the basic Pilot's Operating Handbook.
2. Prior to takeoff from fields above 5000 feet elevation, the mixture should be leaned to give maximum power in a full throttle, static runup.
3. Decrease distances 10% for each 9 knots headwind. For operation with tailwinds up to 10 knots, increase distances by 10% for each 2 knots.
4. Where distance value has been deleted, climb performance after lift-off is less than 150 fpm at takeoff speed.
5. 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	
				GRND	TOTAL	GRND	TOTAL	GRND	TOTAL	GRND	TOTAL	GRND	TOTAL
	LIFTOFF ROLL	AT 50 FT 50 FT OBS		ROLL	50 FT OBS	ROLL	50 FT OBS	ROLL	50 FT OBS	ROLL	50 FT OBS	ROLL	50 FT OBS
3100	50	59	S.L.	720	1365	775	1465	835	1570	895	1680	955	1800
			1000	785	1490	845	1600	910	1720	975	1845	1045	1980
			2000	860	1635	925	1760	995	1890	1065	2035	1140	2185
			3000	940	1800	1010	1940	1085	2090	1165	2255	1250	2430
			4000	1025	1990	1105	2150	1190	2320	1275	2510	1370	2715
			5000	1125	2210	1215	2395	1305	2595	1400	2815	1505	3060
			6000	1235	2470	1330	2685	1435	2925	1540	3190	1655	3490
			7000	1360	2780	1465	3040	1580	3330	1700	3665	---	---
8000	1500	3170	1615	3485	1740	3855	---	---	---	---			

SECTION 5 - PERFORMANCE (continued)

RATE OF CLIMB

CONDITIONS:
 Flaps Up
 2600 RPM
 Full Throttle
 Cowl Flaps Open

NOTE:
 Mixture leaned above 5000 feet for maximum power.

WEIGHT LBS	PRESS ALT FT	CLIMB SPEED KIAS	RATE OF CLIMB - FPM			
			-20° C	0° C	20° C	40° C
3100	S.L.	82	900	820	745	665
	2000	81	800	720	645	570
	4000	80	695	620	545	475
	6000	78	590	525	455	385
	8000	77	485	420	360	295
	10,000	75	390	325	265	---
	12,000	74	285	230	175	---

SECTION 5 - PERFORMANCE (continued)

TIME, FUEL, AND DISTANCE TO CLIMB

MAXIMUM RATE OF CLIMB

CONDITIONS:

Flaps Up
2600 RPM
Full Throttle
Cowl Flaps Open
Standard Temperature

NOTES:

1. Add 1.8 gallons of fuel for engine start, taxi and takeoff allowance.
2. Mixture leaned above 5000 feet for maximum power.
3. Increase time, fuel and distance by 10% for each 10° C above standard temperature.
4. 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	82	755	0	0	0
	1000	13	82	710	1	0.5	2
	2000	11	81	670	3	1.0	4
	3000	9	80	625	4	1.6	6
	4000	7	80	585	6	2.1	8
	5000	5	79	540	8	2.7	11
	6000	3	78	500	10	3.3	14
	7000	1	77	455	12	4.0	17
	8000	-1	77	415	14	4.7	20
	9000	-3	76	370	17	5.5	24
	10,000	-5	75	330	20	6.3	29
	11,000	-7	75	285	23	7.3	34
	12,000	-9	74	240	27	8.4	40

SECTION 5 - PERFORMANCE (continued)

TIME, FUEL, AND DISTANCE TO CLIMB

NORMAL CLIMB - 90 KIAS

CONDITIONS:

Flaps Up
 2450 RPM
 23 Inches MP or Full Throttle
 Cowl Flaps Open
 Standard Temperature

NOTES:

1. Add 1.8 gallons of fuel for engine start, taxi and takeoff allowance.
2. Mixture leaned above 5000 feet for best power.
3. Increase time, fuel and distance by 10% for each 10° C above standard temperature.
4. 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	410	0	0	0
	1000	13	410	2	0.7	4
	2000	11	410	5	1.4	8
	3000	9	410	7	2.1	11
	4000	7	410	10	2.9	16
	5000	5	410	12	3.7	20
	6000	3	385	15	4.4	24
	7000	1	335	18	5.2	29
	8000	-1	285	21	6.1	35
	9000	-3	240	25	7.2	42
	10,000	-5	190	29	8.4	51
	11,000	-7	140	35	10	62
	12,000	-9	90	44	12.3	78

SECTION 5 - PERFORMANCE (continued)

CRUISE PERFORMANCE

PRESSURE ALTITUDE 2000 FEET

CONDITIONS:
 Recommended Lean Mixture
 3100 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	GPH	% BHP	KTAS	GPH	% BHP	KTAS	GPH
2450	23	-	-	-	76	137	14.1	73	138	13.6
	22	75	133	13.8	72	134	13.3	70	135	12.8
	21	70	130	13.0	68	131	12.5	66	132	12.1
	20	66	127	12.2	64	128	11.8	62	128	11.4
2400	23	77	134	14.3	74	136	13.7	72	137	13.3
	22	73	132	13.5	70	133	13.0	68	134	12.6
	21	69	129	12.7	66	130	12.3	64	131	11.9
	20	65	126	12.0	62	127	11.6	60	127	11.2
2300	23	73	132	13.5	70	133	13.0	68	134	12.5
	22	69	129	12.7	67	130	12.3	64	131	11.9
	21	65	126	12.0	63	127	11.6	61	127	11.3
	20	61	123	11.3	59	123	11.0	57	122	10.6
2200	23	68	128	12.5	66	129	12.1	63	130	11.7
	22	64	125	11.9	62	126	11.5	60	127	11.1
	21	60	122	11.2	58	123	10.9	56	122	10.5
	20	56	118	10.6	54	118	10.2	52	117	10.0
	19	52	114	9.9	50	113	9.6	49	112	9.4
	18	48	108	9.3	47	108	9.0	45	106	8.8
	17	44	103	8.6	43	101	8.4	41	99	8.2

SECTION 5 - PERFORMANCE (continued)

CRUISE PERFORMANCE

PRESSURE ALTITUDE 4000 FEET

CONDITIONS:
 Recommended Lean Mixture
 3100 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	GPH	% BHP	KTAS	GPH	% BHP	KTAS	GPH
2450	23	-	-	-	77	140	14.2	74	141	13.7
	22	75	136	14.0	73	137	13.4	70	138	13.0
	21	71	133	13.1	69	134	12.7	66	135	12.3
	20	67	130	12.4	65	131	11.9	62	130	11.6
2400	23	78	137	14.5	75	139	13.9	72	140	13.4
	22	74	135	13.6	71	136	13.1	69	137	12.7
	21	70	132	12.9	67	133	12.4	65	134	12.0
	20	66	129	12.1	63	130	11.7	61	129	11.4
2300	23	74	135	13.6	71	136	13.1	69	137	12.7
	22	70	132	12.9	67	133	12.5	65	134	12.1
	21	66	129	12.2	64	130	11.8	62	130	11.4
	20	62	126	11.5	60	126	11.1	58	125	10.8
2200	23	69	132	12.8	67	133	12.3	65	133	11.9
	22	65	129	12.1	63	129	11.7	61	129	11.3
	21	62	125	11.4	59	126	11.1	57	125	10.7
	20	58	122	10.8	56	121	10.4	54	120	10.1
	19	54	116	10.1	52	116	9.8	50	115	9.6
	18	50	112	9.5	48	111	9.2	46	108	9.0
	17	46	106	8.9	44	104	8.6	43	102	8.4

SECTION 5 - PERFORMANCE (continued)

CRUISE PERFORMANCE

PRESSURE ALTITUDE 6000 FEET

CONDITIONS:
 Recommended Lean Mixture
 3100 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	GPH	% BHP	KTAS	GPH	% BHP	KTAS	GPH
2450	23	-	-	-	77	143	14.3	75	144	13.8
	22	76	139	14.1	73	140	13.6	71	141	13.1
	21	72	136	13.3	69	137	12.8	67	137	12.4
	20	68	133	12.5	65	134	12.1	63	133	11.7
2400	23	-	-	-	76	142	14.0	73	143	13.5
	22	75	138	13.8	72	139	13.3	69	140	12.8
	21	71	135	13.0	68	136	12.6	66	136	12.1
	20	67	132	12.3	64	133	11.9	62	132	11.5
2300	23	75	138	13.8	72	139	13.3	70	140	12.8
	22	71	135	13.1	68	136	12.6	66	136	12.2
	21	67	132	12.4	65	133	12.0	63	133	11.6
	20	63	129	11.7	61	129	11.3	59	129	11.0
2200	23	71	135	13.0	68	136	12.6	66	136	12.1
	22	67	132	12.3	64	133	11.9	62	132	11.5
	21	63	129	11.7	61	128	11.3	59	128	10.9
	20	59	125	11.0	57	124	10.6	55	124	10.3
	19	55	120	10.4	53	119	10.0	51	118	9.7
	18	51	115	9.7	49	114	9.4	48	111	9.2
	17	47	109	9.1	45	106	8.8	44	105	8.5

SECTION 5 - PERFORMANCE (continued)

CRUISE PERFORMANCE

PRESSURE ALTITUDE 8000 FEET

CONDITIONS:
 Recommended Lean Mixture
 3100 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	GPH	% BHP	KTAS	GPH	% BHP	KTAS	GPH
2450	21	73	139	13.5	70	140	13.0	68	140	12.5
	20	69	136	12.7	66	136	12.3	64	136	11.9
	19	65	133	12.0	62	132	11.6	60	132	11.2
	18	60	128	11.2	58	128	10.9	56	127	10.5
2400	21	72	138	13.2	69	139	12.7	67	139	12.3
	20	68	135	12.5	65	135	12.0	63	135	11.6
	19	63	131	11.8	61	131	11.4	59	131	11.0
	18	59	126	11.0	57	126	10.7	55	126	10.4
2300	21	68	136	12.6	66	136	12.2	64	136	11.8
	20	64	132	11.9	62	132	11.5	60	132	11.2
	19	60	128	11.2	58	128	10.9	56	127	10.5
	18	56	123	10.6	54	123	10.2	52	122	9.9
2200	21	64	132	11.9	62	132	11.5	60	132	11.1
	20	60	127	11.2	58	127	10.8	56	127	10.5
	19	56	123	10.6	54	123	10.2	52	122	9.9
	18	52	118	9.9	50	117	9.6	49	115	9.3
	17	48	112	9.3	47	110	9.0	45	108	8.7
	16	44	104	8.6	43	102	8.4	41	98	8.1

SECTION 5 - PERFORMANCE (continued)

CRUISE PERFORMANCE
PRESSURE ALTITUDE 10,000 FEET

CONDITIONS:
 Recommended Lean Mixture
 3100 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	GPH	% BHP	KTAS	GPH	% BHP	KTAS	GPH
2450	20	70	140	12.9	67	139	12.4	65	140	12.0
	19	66	136	12.1	63	135	11.7	61	135	11.4
	18	62	131	11.4	59	131	11.0	57	130	10.7
	17	57	126	10.7	55	125	10.4	53	123	10.0
2400	20	69	138	12.6	68	138	12.2	64	138	11.8
	19	64	134	11.9	62	134	11.5	60	134	11.2
	18	60	129	11.2	58	129	10.9	56	129	10.5
	17	56	124	10.5	54	124	10.2	52	121	9.9
2300	20	66	136	12.1	63	135	11.7	61	135	11.3
	19	62	131	11.5	59	131	11.1	57	130	10.7
	18	58	126	10.8	55	126	10.4	53	124	10.1
	17	53	121	10.1	51	119	9.8	49	117	9.5
2200	20	62	131	11.4	59	131	11.1	57	130	10.7
	19	58	126	10.8	55	126	10.4	54	124	10.1
	18	54	122	10.1	52	119	9.8	50	118	9.5
	17	50	116	9.5	48	113	9.2	46	111	8.9
	16	46	108	8.8	44	105	8.5	42	101	8.3

SECTION 5 - PERFORMANCE (continued)

CRUISE PERFORMANCE
PRESSURE ALTITUDE 12,000 FEET

CONDITIONS:
 Recommended Lean Mixture
 3100 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	GPH	% BHP	KTAS	GPH	% BHP	KTAS	GPH
2450	18	63	134	11.6	60	134	11.2	58	132	10.9
	17	58	129	10.9	56	128	10.5	54	126	10.2
	16	54	123	10.2	52	121	9.8	50	119	9.5
	15	49	115	9.4	47	113	9.1	46	109	8.9
2400	18	61	133	11.4	59	132	11.0	57	131	10.7
	17	57	128	10.7	55	127	10.3	53	124	10.0
	16	53	122	10.0	51	119	9.7	49	117	9.4
	15	48	113	9.3	46	111	9.0	45	107	8.7
2300	18	59	130	11.0	57	129	10.6	55	127	10.3
	17	55	124	10.3	52	122	10.0	51	120	9.7
	16	50	117	9.6	48	115	9.3	47	111	9.0
	15	46	109	8.8	44	104	8.5	42	100	8.3
2200	18	55	125	10.4	53	123	10.0	51	121	9.7
	17	51	118	9.7	49	116	9.4	47	114	9.1
	16	47	111	9.0	45	108	8.7	43	104	8.5
	15	43	102	8.4	41	97	8.1	40	92	7.9

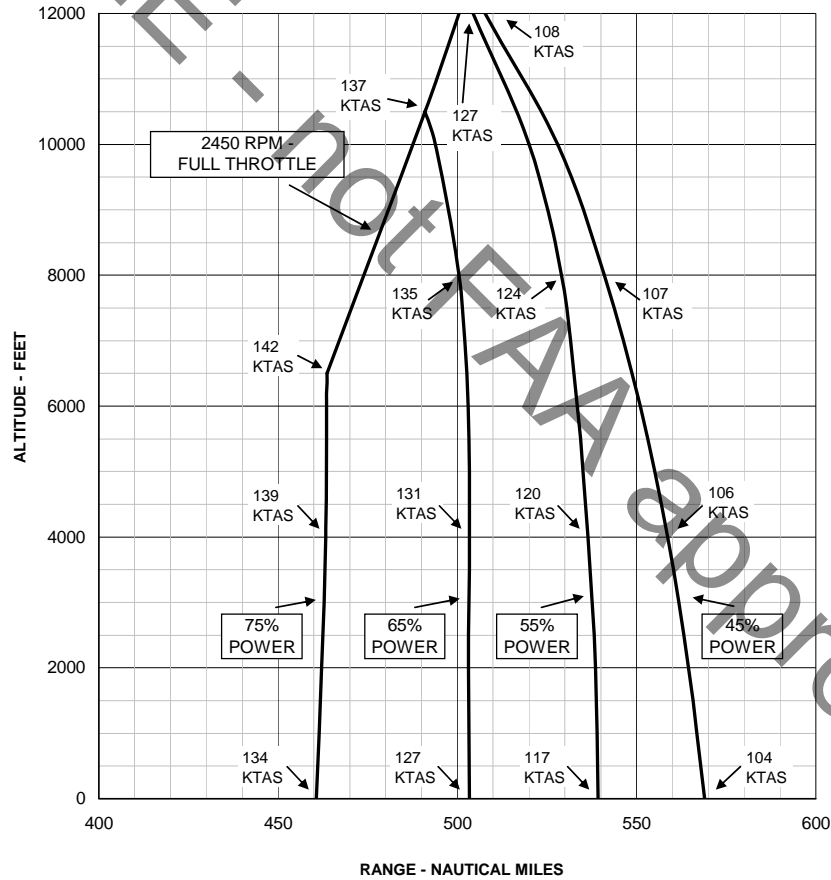
SECTION 5 - PERFORMANCE (continued)

**RANGE PROFILE
45 MINUTES RESERVE
56 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 the table "TIME, FUEL, AND DISTANCE TO CLIMB - NORMAL CLIMB - 90 KIAS" found in this supplement.
- 2. Reserve fuel is based on 45 minutes at 45% BHP and is 6.5 gallons.

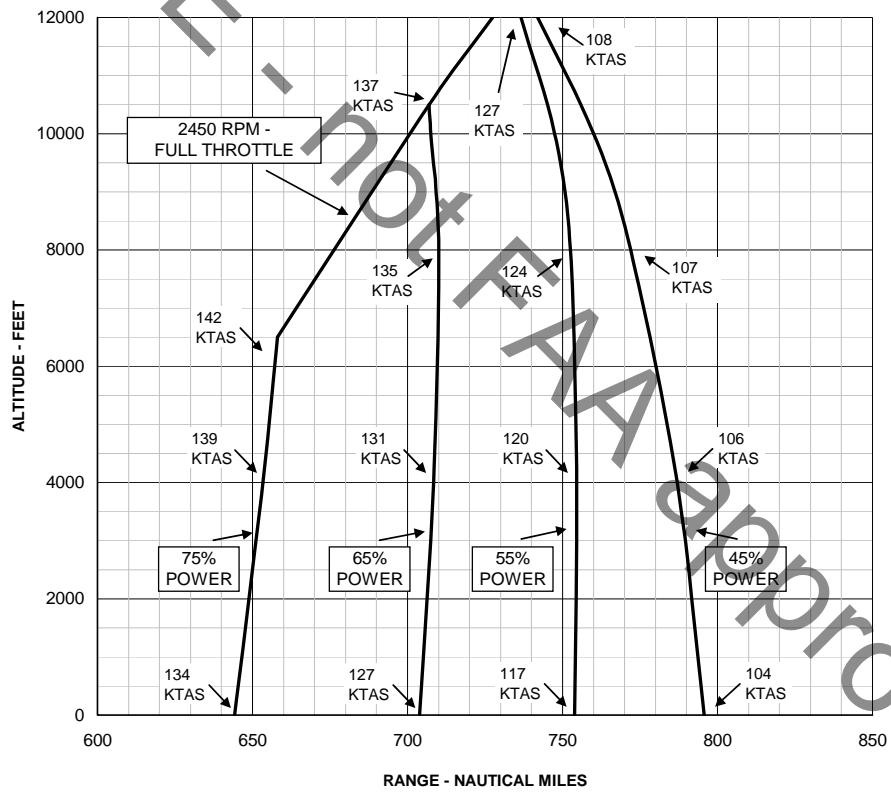


SECTION 5 - PERFORMANCE (continued)

RANGE PROFILE
45 MINUTES RESERVE
75 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 the table "TIME, FUEL, AND DISTANCE TO CLIMB - NORMAL CLIMB - 90 KIAS" found in this supplement.
 2. Reserve fuel is based on 45 minutes at 45% BHP and is 6.5 gallons.



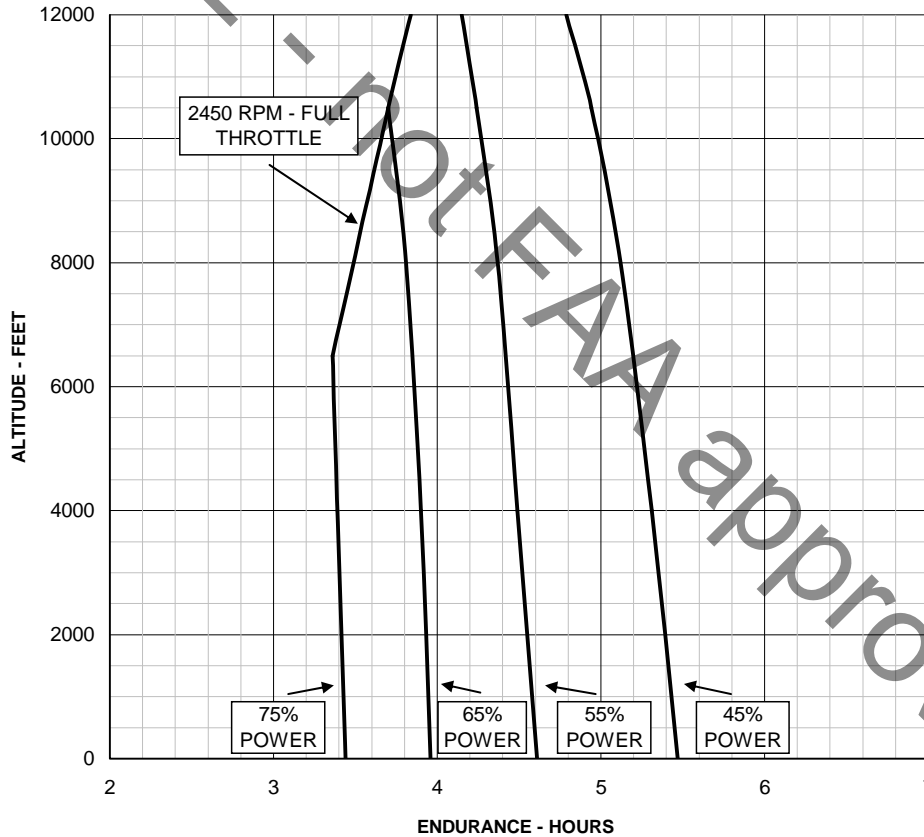
SECTION 5 - PERFORMANCE (continued)

**ENDURANCE PROFILE
45 MINUTES RESERVE
56 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 the table "TIME, FUEL, AND DISTANCE TO CLIMB - NORMAL CLIMB - 90 KIAS" found in this supplement.
2. Reserve fuel is based on 45 minutes at 45% BHP and is 6.5 gallons.



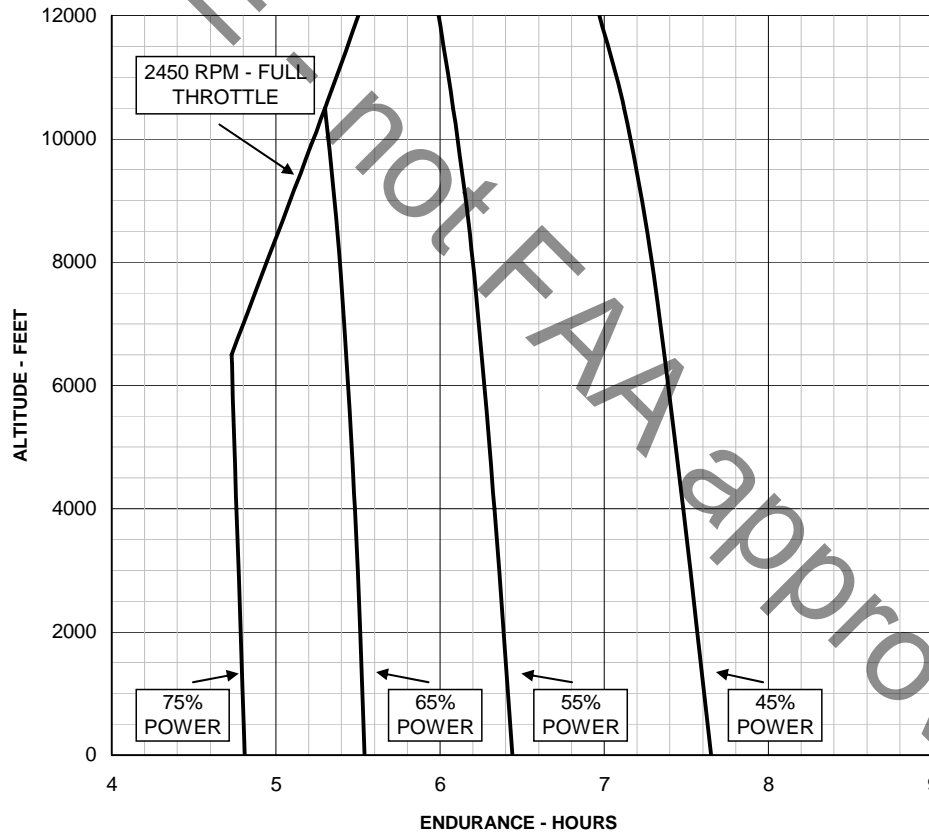
SECTION 5 - PERFORMANCE (continued)

ENDURANCE PROFILE
45 MINUTES RESERVE
75 GALLONS USABLE FUEL

CONDITIONS:
3100 Pounds
Recommended Lean Mixture for Cruise
Standard Temperature

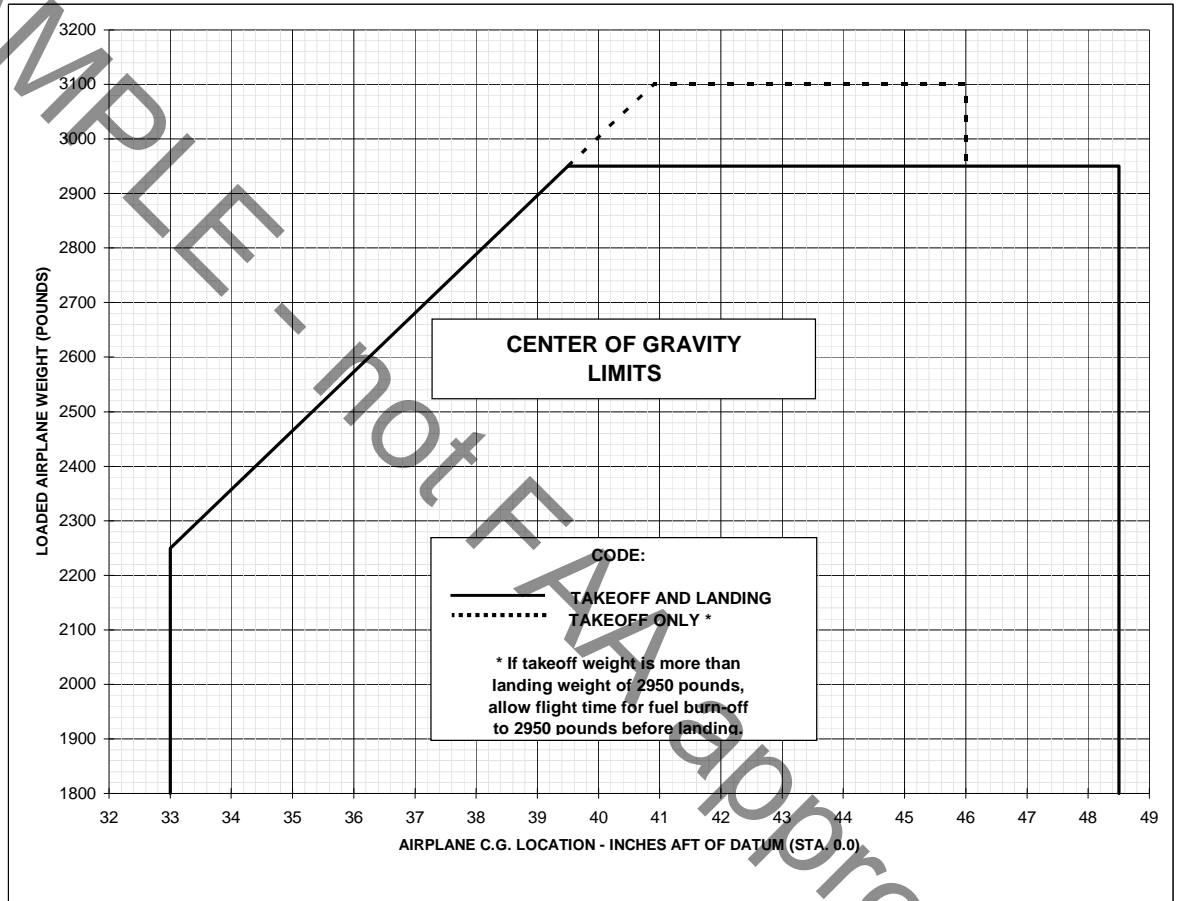
NOTES:

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 the table "TIME, FUEL, AND DISTANCE TO CLIMB - NORMAL CLIMB - 90 KIAS" found in this supplement.
2. Reserve fuel is based on 45 minutes at 45% BHP and is 6.5 gallons.

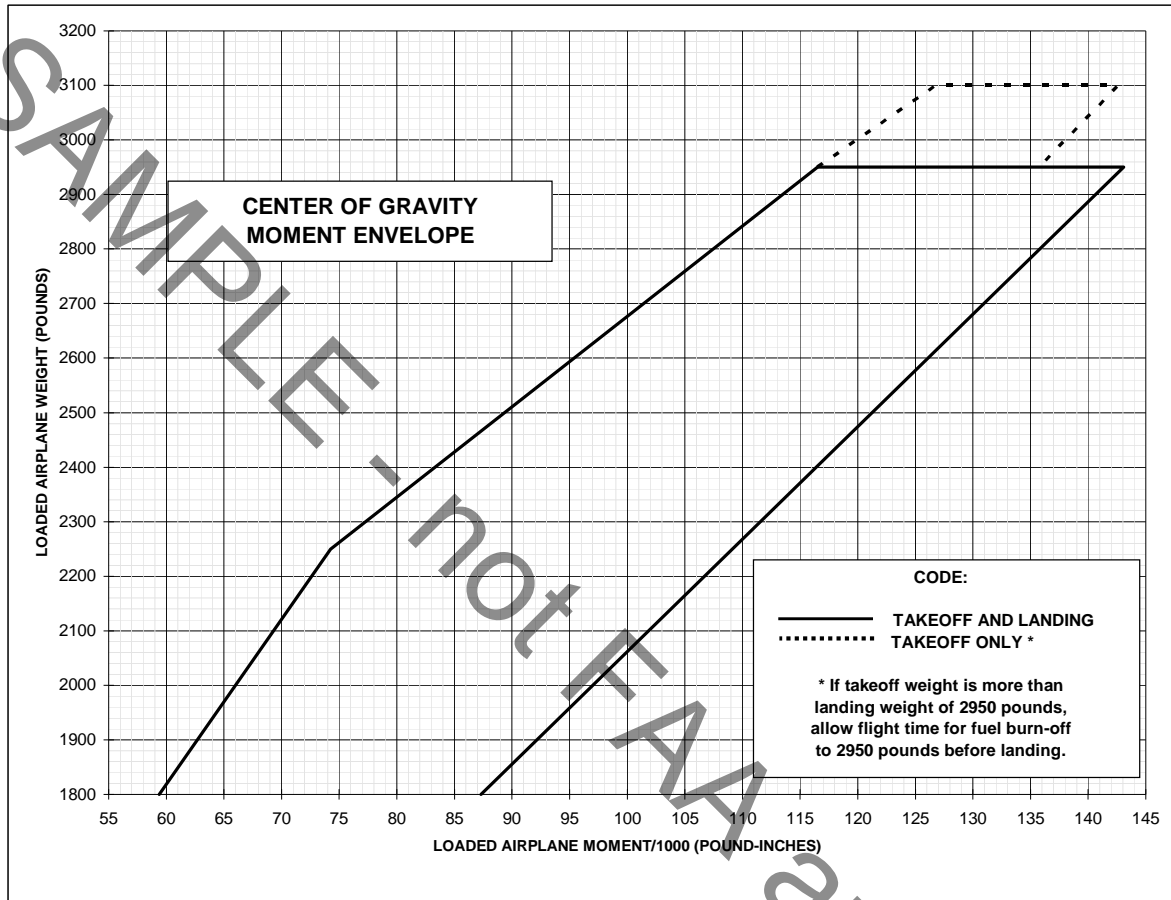


SECTION 6 - WEIGHT & BALANCE / EQUIPMENT LIST

Center of gravity limitations and envelopes are changed for operation at weights above 2950 lbs. to and including 3100 lbs. Use the following limit and moment envelopes:



SECTION 6 - WEIGHT & BALANCE / EQUIPMENT LIST (continued)



SECTION 7 - AIRPLANE SYSTEMS AND DESCRIPTIONS

NO CHANGES

SECTION 8 - HANDLING, SERVICE & MAINTENANCE

NO CHANGES

SECTION 9 - SUPPLEMENTS

ADDED THIS SUPPLEMENTAL AIRPLANE FLIGHT MANUAL, SFM7503-SW-RF

SAMPLE - not FAA approved