TROLLTUNE CORPORATION
2710 Thomes Avenue
Cheyenne, WY 82001

SUPPLEMENT NO. SFM7499-SW-R

FAA APPROVED

SUPPLEMENTAL AIRPLANE FLIGHT MANUAL

FOR

CESSNA 182P s/n 18260826 through 18261425

STC SA03608AT Maximum Gross Takeoff Weight Increase

Registration No. N7484Q

Serial No. 18261124

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 Cessna Owner's Manual for the 1972 model year) whenever this aircraft is operated at weights above 2950 lbs. in accordance with Trolltune Corporation FAA STC SA03608AT or EASA STC 10026913. The information contained in this document supplements or supersedes the Owner's Manual or placards only in those areas listed. For limitations, procedures and performance information not contained in this supplement, consult the basic Owner's Manual, markings and operating placards.

FAA Approved _____
for Manager, Flight Test Branch, ANM-160L
Federal Aviation Administration
Los Angeles Aircraft Certification Office
Transport Airplane Directorate

Date: May 13, 2011

RECORD OF REVISIONS

Rev No.	Page No.	Date	Description	FAA Approved
I/R	All 1-14	22/08/2008	Maximum Takeoff Gross Weight Increase to 3100 lbs. Initial Release	David Crew Manager, Flight Test Branch Federal Aviation Administration Atlanta Aircraft Certification Office Date: 22-August-2008
1	1 2 3 4 1-16	13/05/2011 13/05/2011 13/05/2011 13/05/2011 13/05/2011	Added reference to EASA STC and changed FAA approval block and approval date. Added Record of Revision page. Added performance and limitations note. Added limitation statement. Reformatted and incremented pages numbers.	for Manager, Flight Test Branch, ANM-160L Federal Aviation Administration Los Angeles Aircraft Certification office Transport Airplane Directorate Date: 5/13/2011

SECTION I – OPERATING CHECKLIST

TAKE-OFF:

MAXIMUM PERFORMANCE TAKE-OFF, Flaps 20°, 3100 lbs.:
Climb Speed –- (until all obstacles are cleared): ... 66 MPH IAS

ENROUTE CLIMB:

MAXIMUM PERFORMANCE CLIMB, 3100 lbs.:
Airspeed –- (at sea level): ..... 91 MPH IAS
Airspeed –- (at 10,000 feet): ..... 87 MPH IAS

SECTION II – DESCRIPTION AND OPERATING DETAILS

NOTE: Changes in loadings, limitations, airspeeds, and other performance data due to the gross weight increase described in this SAFM were developed based upon the original airplane configuration as found in the basic Cessna Owner's Manual (OM) and approved placards. If other STCs (e.g., autopilot, aux fuel tanks, engine upgrades, etc.) have been incorporated, it is possible that their associated flight manual supplements describe different limitations or performance data from that shown here.

TAKE-OFF:

Airspeed – As per SECTION I of this Supplement

ENROUTE CLIMB:

Airspeed – Best rate of climb: ..... 91 MPH IAS
(decrease 2 mph for each 5000 feet above sea level)

Airspeed – Best angle of climb, flaps up: ..... 73 MPH IAS

CRUISE:

Performance – See SECTION VI of this Supplement

SECTION II – DESCRIPTION AND OPERATING DETAILS (continued)

NOISE ABATEMENT:

The certificated noise level for the Model 182P 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 III – EMERGENCY PROCEDURES

ENGINE FAILURE:

ENGINE FAILURE AFTER TAKE-OFF, 3100 lbs.:
Wing Flaps 0° - 20°: ..... 85 MPH IAS

ENGINE FAILURE DURING FLIGHT, 3100 lbs.:
Maximum Glide: ..... 86 MPH IAS

FORCED LANDINGS:

EMERGENCY LANDING WITHOUT ENGINE POWER, 3100 lbs.:
Wing Flaps Up: ..... 85 MPH IAS
Wing Flaps Down: ..... 80 MPH IAS

PRECAUTIONARY LANDING WITH ENGINE POWER, 3100 lbs.:
Wing Flaps Down: ..... 80 MPH IAS

SECTION IV – OPERATING LIMITATIONS

The limitations in this section may be further restricted by other installed STC(s), FAA Form 337, associated AFMS(s), or SAFM(s).

MANEUVERS – NORMAL CATEGORY:

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

Note: 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.

AIRSPEED LIMITATIONS:

Maneuvering Speed ..... 127 MPH CAS (128 MPH IAS)

SECTION IV – OPERATING LIMITATIONS (continued)

WEIGHT AND BALANCE:

Center of gravity limitations and envelopes are changed for operation at weights above 2950 lbs. to and including 3100 lbs.

CENTER OF GRAVITY LIMITS:

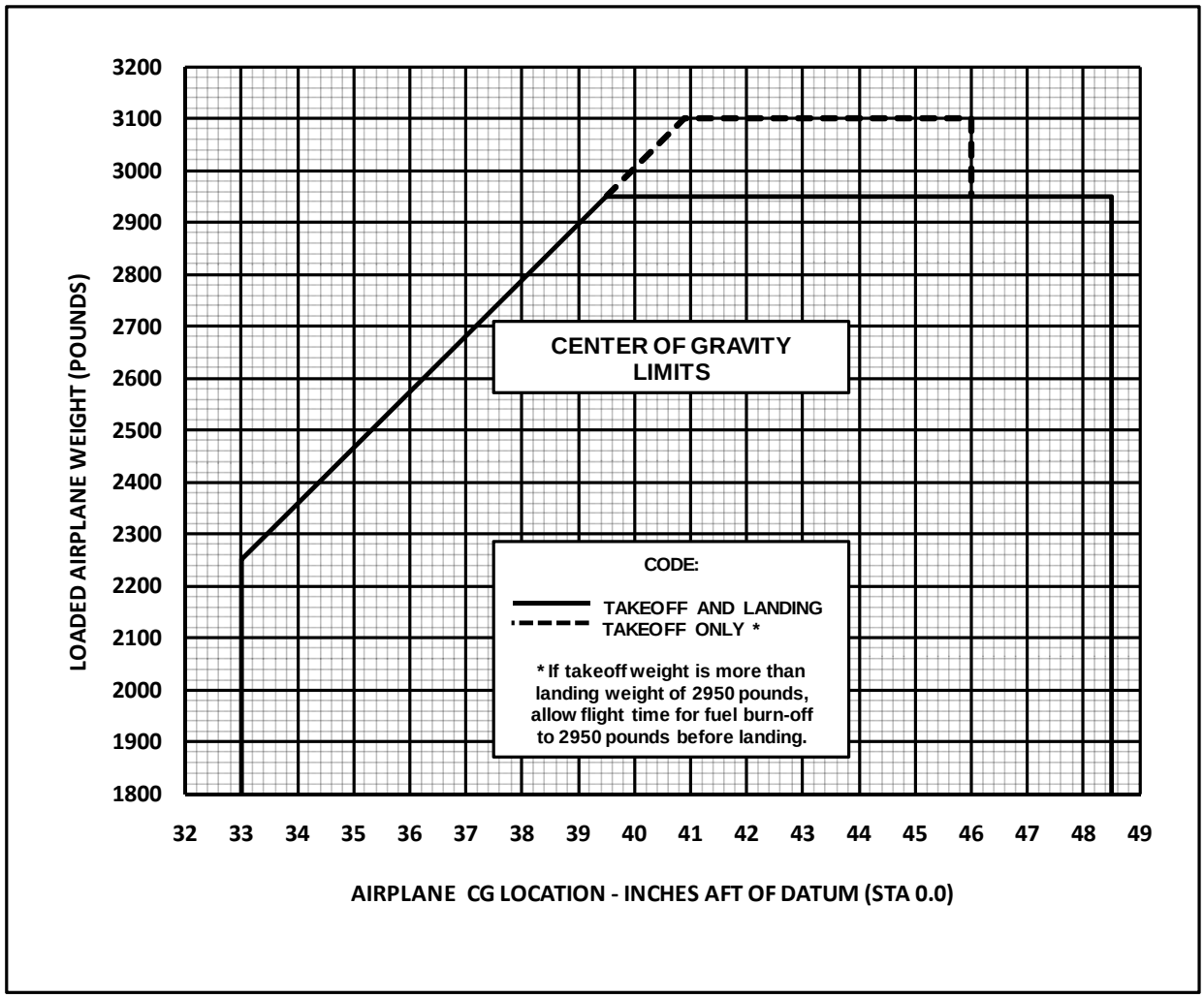
Forward: **33.0 inches aft of datum at 2250 lbs. or less, with straight line variation to 40.9 inches aft of datum at 3100 lbs.**

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.**

Use the following CG limit and moment envelopes:

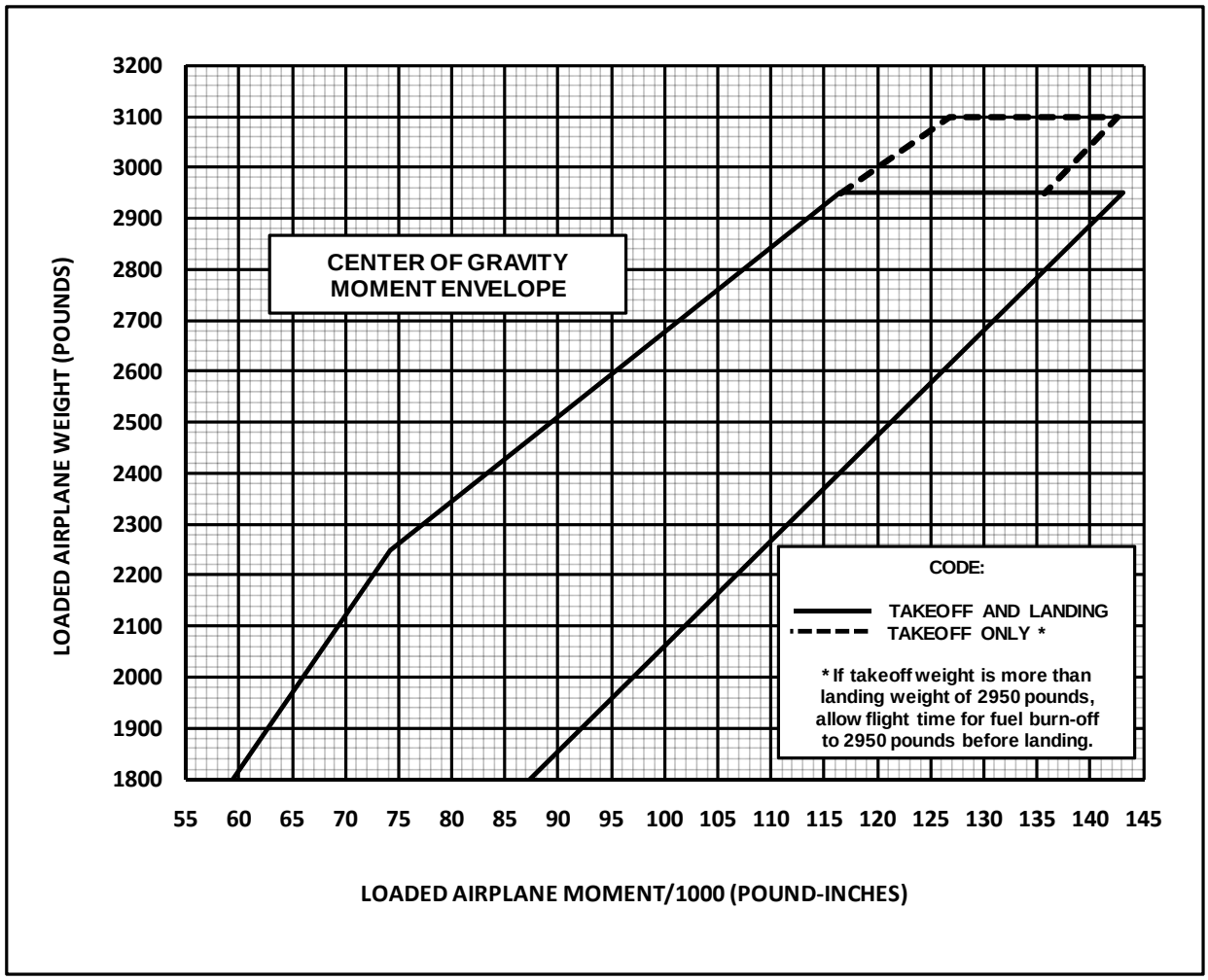
SECTION IV – OPERATING LIMITATIONS (continued)

CENTER OF GRAVITY LIMITS: (continued)



SECTION IV – OPERATING LIMITATIONS (continued)

CENTER OF GRAVITY LIMITS: (continued)



SECTION V – CARE OF THE AIRPLANE

NO CHANGES

SECTION VI – OPERATIONAL DATA

STALL SPEEDS - MPH CAS (IAS)				
		ANGLE OF BANK		
	CONDITION	0°	30°	60°
3100 LBS. GROSS WEIGHT	FLAPS UP	**67 (58)**	**73 (66)**	**94 (92)**
	FLAPS 20°	**61 (48)**	**66 (57)**	**86 (84)**
	FLAPS 40°	**60 (45)**	**64 (52)**	**85 (82)**
POWER OFF - AFT CG				

TAKE-OFF DATA

TAKE-OFF DISTANCE WITH 20° FLAPS FROM HARD SURFACE RUNWAY

GROSS WEIGHT LBS.	IAS @ 50' MPH	HEAD WIND KNOTS	AT SEA LEVEL & 59°F.		AT 2500 FT. & 50°F.		AT 5000 FT. & 41°F.		AT 7500 FT. & 32°F.	
			GROUND RUN	TOTAL TO CLEAR 50' OBS	GROUND RUN	TOTAL TO CLEAR 50' OBS	GROUND RUN	TOTAL TO CLEAR 50' OBS	GROUND RUN	TOTAL TO CLEAR 50' OBS
3100	66	0	805	1540	965	1850	1155	2265	1415	2945
		10	560	1170	680	1420	825	1765	1025	2325
		20	355	845	440	1035	550	1310	700	1760

NOTES: 1. Increase distances 10% for each 25°F above standard temperature for particular altitude.
2. For operation on a dry, grass runway, increase distances (both "ground run" and "total to clear 50 ft. obstacle") by 7% of the "total to clear 50 ft. obstacle" figure.

MAXIMUM RATE-OF-CLIMB DATA

GROSS WEIGHT LBS.	AT SEA LEVEL & 59°F.			AT 5000 FT. & 41°F.			AT 10,000 FT. & 23°F.			AT 15,000 FT. & 5°F.			AT 20,000 FT. & -12°F.		
	IAS MPH	RATE OF CLIMB FT/MIN	GAL. OF FUEL USED	IAS MPH	RATE OF CLIMB FT/MIN	From SL FUEL USED	IAS MPH	RATE OF CLIMB FT/MIN	From SL FUEL USED	IAS MPH	RATE OF CLIMB FT/MIN	From SL FUEL USED	IAS MPH	RATE OF CLIMB FT/MIN	From SL FUEL USED
3100	91	755	1.5	89	540	4.2	87	330	7.8	85	110	13.2	---	---	---

NOTES: 1. Flaps up, full throttle, 2600 RPM, mixture leaned for smooth operation above 5000 ft.
2. Fuel used includes warm-up and take-off allowance.
3. For hot weather, decrease rate of climb 30 ft./min. for each 10°F above standard day temperature for particular altitude.

SECTION VI – OPERATIONAL DATA (continued)

CRUISE PERFORMANCE

LEAN MIXTURE

Standard Conditions - Zero Wind - Gross Weight - 3100 Pounds

2500 FEET

					60 GAL (NO RESERVE)		79 GAL (NO RESERVE)	
RPM	MP	% BHP	TAS MPH	GAL/ HOUR	ENDR. HOURS	RANGE MILES	ENDR. HOURS	RANGE MILES
2450	23	76	154	14.2	4.2	645	5.6	860
	22	72	151	13.4	4.5	675	5.9	890
	21	68	146	12.7	4.7	685	6.2	905
	20	63	141	12.0	5.0	705	6.6	930
2300	23	71	148	13.1	4.6	680	6.0	885
	22	67	145	12.2	4.9	710	6.5	940
	21	62	140	11.5	5.2	725	6.9	965
	20	59	137	11.0	5.5	750	7.2	985
2200	23	67	145	12.1	5.0	725	6.5	940
	22	63	141	11.4	5.3	745	6.9	970
	21	59	137	10.8	5.6	765	7.3	1000
	20	55	132	10.2	5.9	775	7.7	1015
2000*	20	47	119	8.7	6.9	820	9.1	1080
	19	43	113	8.2	7.3	820	9.6	1080
	18	39	106	7.5	8.0	845	10.5	1110
	17	35	96	7.0	8.6	825	11.3	1080

*Power settings in this block represent maximum range settings

SECTION VI – OPERATIONAL DATA (continued)

CRUISE PERFORMANCE

LEAN MIXTURE

Standard Conditions - Zero Wind - Gross Weight - 3100 Pounds

5000 FEET

					60 GAL (NO RESERVE)		79 GAL (NO RESERVE)	
RPM	MP	% BHP	TAS MPH	GAL/ HOUR	ENDR. HOURS	RANGE MILES	ENDR. HOURS	RANGE MILES
2450	23	78	158	14.5	4.1	645	5.4	850
	22	73	154	13.6	4.4	675	5.8	890
	21	70	150	13.0	4.6	690	6.1	915
	20	65	146	12.2	4.9	715	6.5	945
2300	23	73	154	13.4	4.5	690	5.9	905
	22	69	149	12.6	4.8	715	6.3	935
	21	64	145	11.9	5.0	725	6.6	955
	20	60	141	11.2	5.4	760	7.1	1000
2200	23	68	148	12.4	4.8	710	6.4	945
	22	64	145	11.7	5.1	735	6.8	985
	21	60	141	11.0	5.5	775	7.2	1015
	20	57	136	10.5	5.7	775	7.5	1020
2000*	20	48	124	9.0	6.7	830	8.8	1090
	19	45	117	8.5	7.1	830	9.3	1085
	18	41	109	7.9	7.6	825	10.0	1090
	17	37	100	7.3	8.2	820	10.8	1080

*Power settings in this block represent maximum range settings

SECTION VI – OPERATIONAL DATA (continued)

CRUISE PERFORMANCE

LEAN MIXTURE

Standard Conditions - Zero Wind - Gross Weight - 3100 Pounds

7500 FEET

					60 GAL (NO RESERVE)		79 GAL (NO RESERVE)	
RPM	MP	% BHP	TAS MPH	GAL/ HOUR	ENDR. HOURS	RANGE MILES	ENDR. HOURS	RANGE MILES
2450	21	71	154	13.1	4.6	705	6.0	920
	20	67	151	12.4	4.8	720	6.4	965
	19	62	146	11.7	5.1	740	6.8	990
	18	58	140	11.0	5.5	770	7.2	1005
2300	21	66	150	12.2	4.9	735	6.5	975
	20	62	146	11.6	5.2	755	6.8	990
	19	58	140	11.0	5.5	770	7.2	1005
	18	54	135	10.5	5.7	765	7.5	1010
2200	21	62	146	11.4	5.3	770	6.9	1005
	20	58	140	10.7	5.6	780	7.4	1035
	19	54	135	10.2	5.9	795	7.7	1035
	18	51	129	9.7	6.2	795	8.1	1040
2000*	20	50	128	9.2	6.5	830	8.6	1100
	19	47	122	8.7	6.9	840	9.1	1110
	18	43	113	8.1	7.4	835	9.8	1105
	17	39	105	7.6	7.9	825	10.4	1090

*Power settings in this block represent maximum range settings

SECTION VI – OPERATIONAL DATA (continued)

CRUISE PERFORMANCE

LEAN MIXTURE

Standard Conditions - Zero Wind - Gross Weight - 3100 Pounds

10,000 FEET

					60 GAL (NO RESERVE)		79 GAL (NO RESERVE)	
RPM	MP	% BHP	TAS MPH	GAL/ HOUR	ENDR. HOURS	RANGE MILES	ENDR. HOURS	RANGE MILES
2450	19	63	151	11.9	5.0	755	6.6	995
	18	60	145	11.2	5.4	780	7.1	1025
	17	55	139	10.6	5.7	790	7.5	1040
	16	51	133	10.0	6.0	795	7.9	1050
2300	19	60	145	11.1	5.4	780	7.1	1025
	18	56	140	10.5	5.7	795	7.5	1050
	17	51	133	9.8	6.1	810	8.1	1075
	16	47	125	9.2	6.5	810	8.6	1075
2200	19	56	140	10.4	5.8	810	7.6	1060
	18	52	134	9.8	6.1	815	8.1	1085
	17	49	127	9.3	6.5	825	8.5	1075
	16	45	119	8.7	6.9	820	9.1	1080
2000*	19	48	125	8.9	6.7	835	8.9	1110
	18	44	118	8.4	7.1	835	9.4	1105
	17	40	110	7.8	7.7	845	10.1	1110
	16	38	95	7.4	8.1	765	10.7	1015

*Power settings in this block represent maximum range settings

SECTION VI – OPERATIONAL DATA (continued)

CRUISE PERFORMANCE

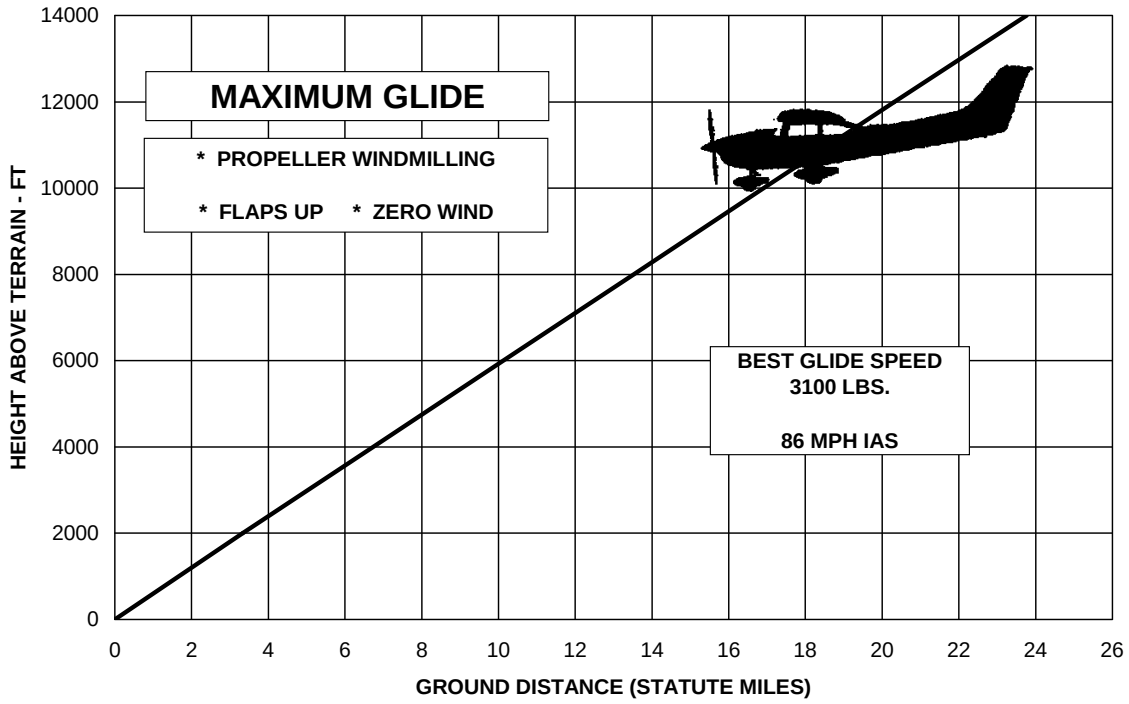
LEAN MIXTURE

Standard Conditions - Zero Wind - Gross Weight - 3100 Pounds

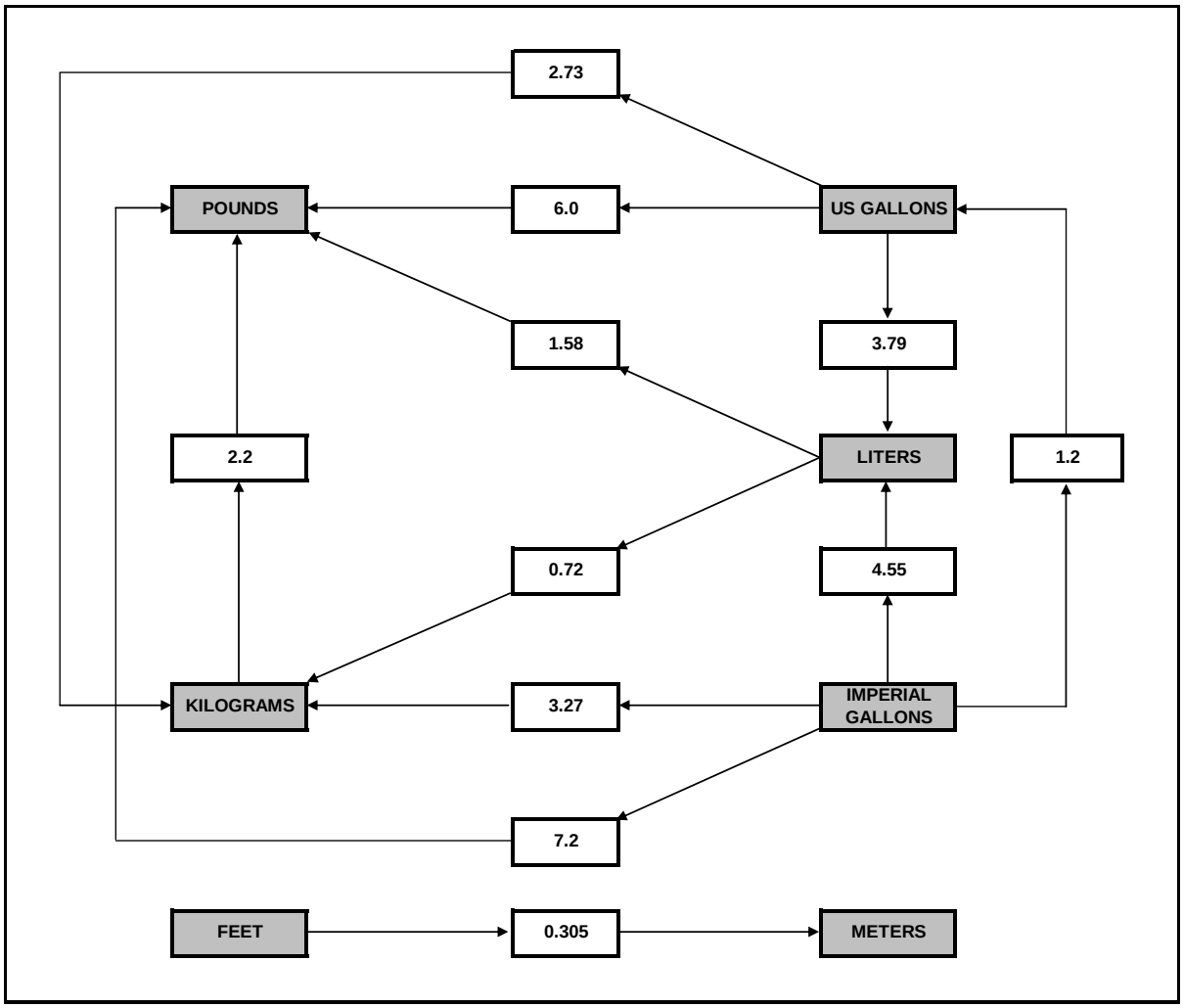
15,000 FEET

					60 GAL (NO RESERVE)		79 GAL (NO RESERVE)	
RPM	MP	% BHP	TAS MPH	GAL/ HOUR	ENDR. HOURS	RANGE MILES	ENDR. HOURS	RANGE MILES
2450	16	54	140	10.4	5.8	810	7.6	1060
	15	50	134	9.8	6.1	815	8.1	1085
	14	46	120	9.2	6.5	780	8.6	1030
2300	16	50	134	9.6	6.2	830	8.2	1095
	15	47	125	9.1	6.6	825	8.7	1085
	14	42	107	8.5	7.1	755	9.3	995
2200	16	47	125	9.1	6.6	825	8.7	1085
	15	44	114	8.6	7.0	795	9.2	1045
	14	40	99	8.0	7.5	740	9.9	980
2000	16	40	99	7.8	7.7	760	10.1	995
	15	37	90	7.3	8.2	735	10.8	970

SECTION VI – OPERATIONAL DATA (continued)



SECTION VI – OPERATIONAL DATA (continued)



Metric / Imperial / US Units Conversion Chart

SECTION VII – OPTIONAL SYSTEMS

NO CHANGES

ALPHABETICAL INDEX

NO CHANGES

SERVICING REQUIREMENTS

NO CHANGES