TROLLTUNE CORPORATION
2710 Thomes Avenue
Cheyenne, WY 82001

SUPPLEMENT NO. SFM7502-SW-R

FAA APPROVED

SUPPLEMENTAL AIRPLANE FLIGHT MANUAL

FOR

CESSNA 182P s/n 18263476 through 18264295 and s/n 675, except 18263479

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 Cessna Owner's Manual for the 1975 model year) whenever this aircraft is operated at weights above 2950 lbs. in accordance with Trolltune Corporation 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): ... 63 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:

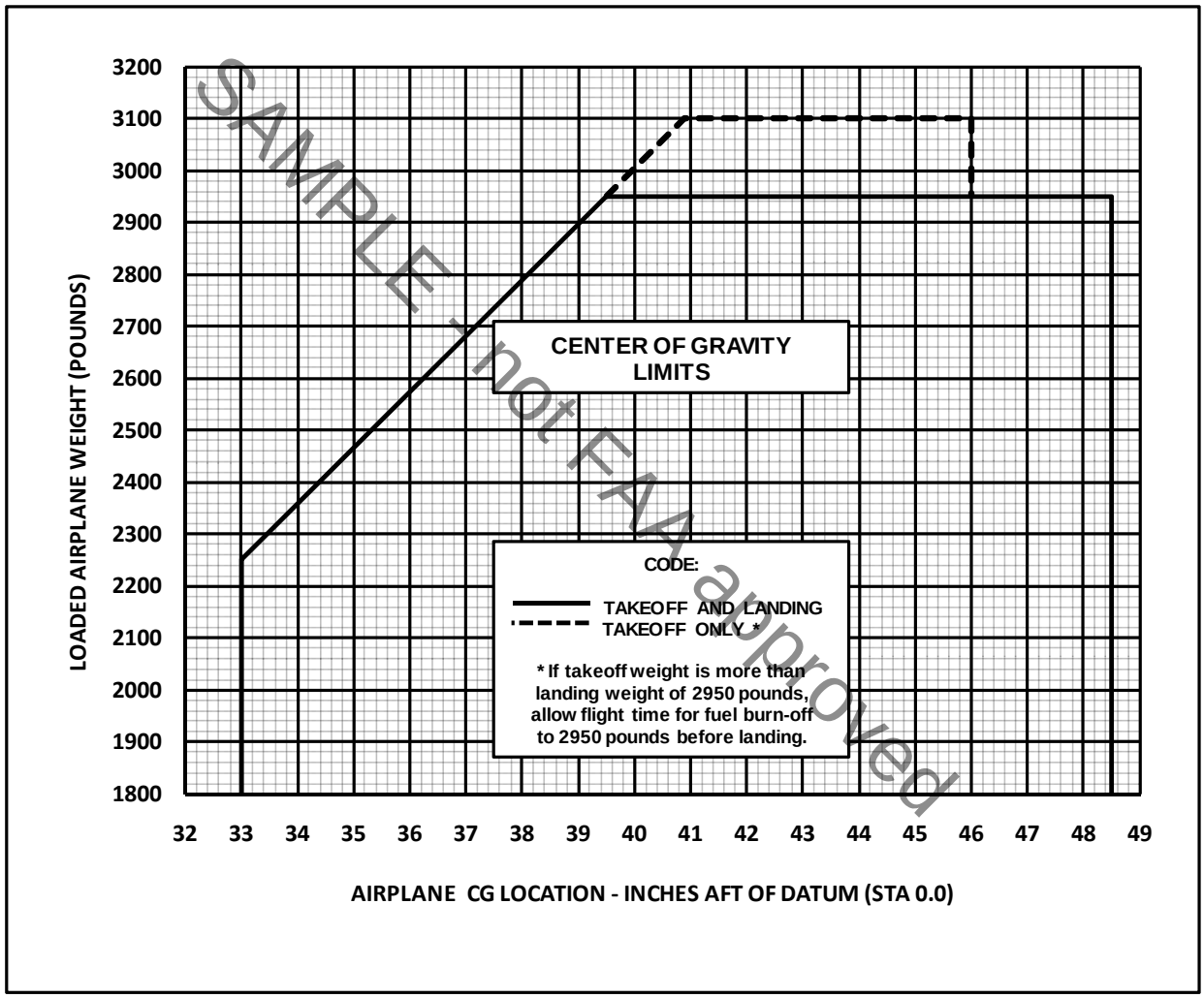
Forward: **33.0 inches aft of datum at 2250 lbs. or less, with straight line variation to 40.9 inches aft of datum at 3100 lbs.**

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:

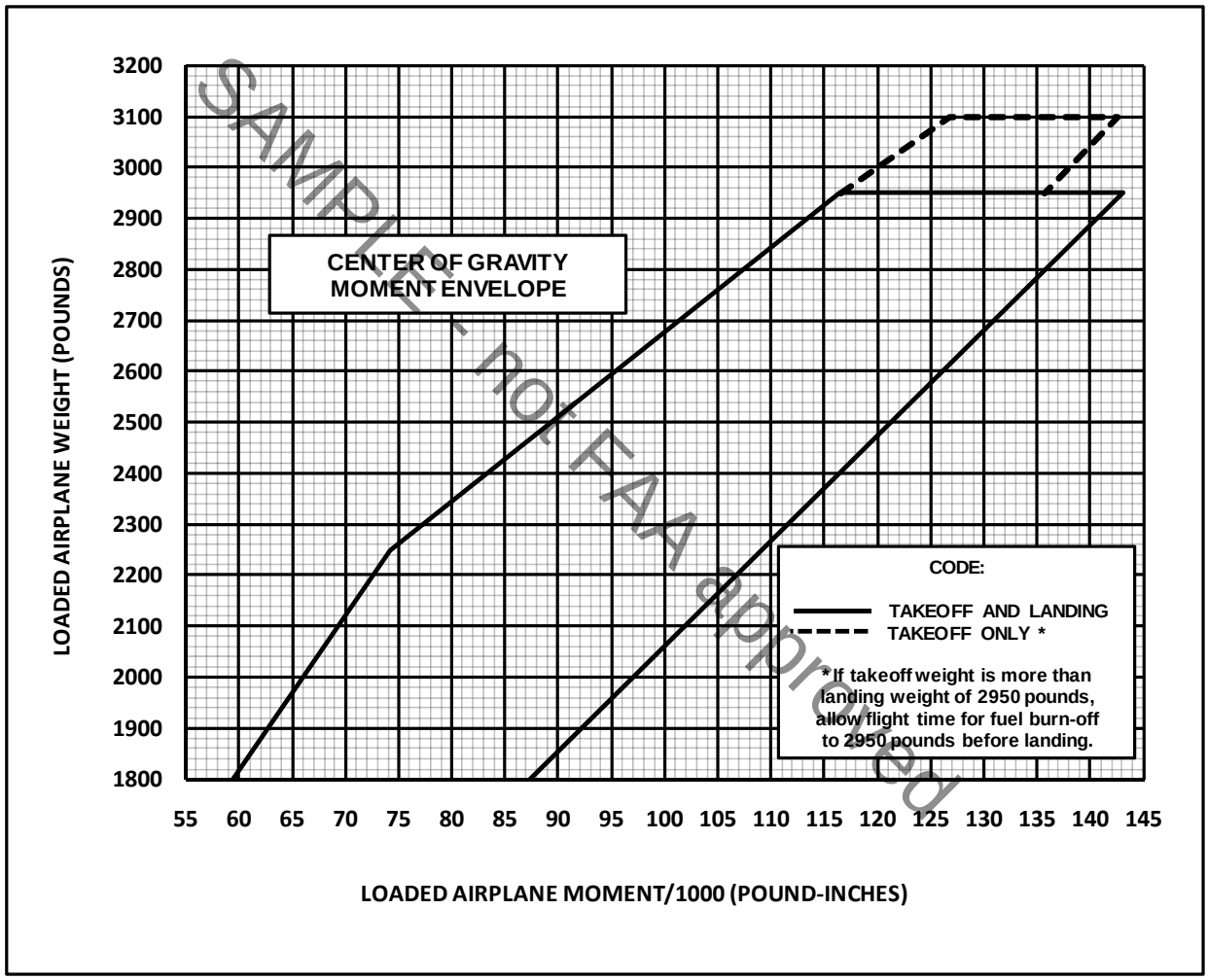
SECTION IV – OPERATING LIMITATIONS (continued)

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)				
	CONDITION	ANGLE OF BANK 0°	30°	60°
3100 LBS. GROSS WEIGHT	FLAPS UP	**67 (58)**	**73 (66)**	**94 (92)**
	FLAPS 20°	**61 (53)**	**66 (60)**	**86 (84)**
	FLAPS 40°	**60 (50)**	**64 (56)**	**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. GROUND RUN	AT SEA LEVEL & 59°F. TOTAL TO CLEAR 50' OBS	AT 2500 FT. & 50°F. GROUND RUN	AT 2500 FT. & 50°F. TOTAL TO CLEAR 50' OBS	AT 5000 FT. & 41°F. GROUND RUN	AT 5000 FT. & 41°F. TOTAL TO CLEAR 50' OBS	AT 7500 FT. & 32°F. GROUND RUN	AT 7500 FT. & 32°F. TOTAL TO CLEAR 50' OBS
3100	63	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. IAS MPH	RATE OF CLIMB FT/MIN	GAL. OF FUEL USED	AT 5000 FT. & 41°F. IAS MPH	RATE OF CLIMB FT/MIN	From SL FUEL USED	AT 10,000 FT. & 23°F. IAS MPH	RATE OF CLIMB FT/MIN	From SL FUEL USED	AT 15,000 FT. & 5°F. IAS MPH	RATE OF CLIMB FT/MIN	From SL FUEL USED	AT 20,000 FT. & -12°F. 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

EXTENDED RANGE MIXTURE

Standard Conditions - Zero Wind - Gross Weight - 3100 Pounds

2500 FEET

					56 GAL (NO RESERVE)		75 GAL (NO RESERVE)	
RPM	MP	% BHP	TAS MPH	GAL/ HOUR	ENDR. HOURS	RANGE MILES	ENDR. HOURS	RANGE MILES
2450	23	76	159	14.2	3.9	620	5.3	835
	22	72	155	13.4	4.2	645	5.5	855
	21	68	152	12.7	4.4	660	5.8	885
	20	63	147	12.0	4.7	680	6.2	910
2300	23	71	155	13.1	4.3	660	5.6	870
	22	67	150	12.2	4.6	680	6.1	915
	21	62	145	11.5	4.8	700	6.5	940
	20	59	141	11.0	5.1	720	6.8	950
2200	23	67	150	12.1	4.7	695	6.1	915
	22	63	146	11.4	4.9	715	6.5	945
	21	59	141	10.8	5.2	730	6.9	965
	20	55	137	10.2	5.5	750	7.2	990
2000*	20	47	123	8.7	6.4	785	8.6	1050
	19	43	117	8.2	6.8	790	9.0	1055
	18	39	107	7.5	7.4	795	9.9	1055
	17	35	96	7.0	8.0	765	10.6	1015

*Power settings in this block represent maximum range settings

SECTION VI – OPERATIONAL DATA (continued)

CRUISE PERFORMANCE

EXTENDED RANGE MIXTURE

Standard Conditions - Zero Wind - Gross Weight - 3100 Pounds

5000 FEET

RPM	MP	% BHP	TAS MPH	GAL/ HOUR	56 GAL (NO RESERVE)		75 GAL (NO RESERVE)	
					ENDR. HOURS	RANGE MILES	ENDR. HOURS	RANGE MILES
2450	23	78	164	14.5	3.8	625	5.1	830
	22	73	161	13.6	4.1	655	5.5	875
	21	70	156	13.0	4.3	665	5.7	890
	20	65	151	12.2	4.6	685	6.1	920
2300	23	73	159	13.4	4.2	665	5.5	880
	22	69	155	12.6	4.5	690	5.9	915
	21	64	150	11.9	4.7	695	6.2	930
	20	60	146	11.2	5.0	730	6.7	970
2200	23	68	155	12.4	4.5	690	6.0	930
	22	64	150	11.7	4.7	710	6.4	955
	21	60	146	11.0	5.1	745	6.8	985
	20	57	142	10.5	5.3	750	7.1	1000
2000*	20	48	127	9.0	6.2	790	8.3	1050
	19	45	121	8.5	6.6	795	8.7	1055
	18	41	112	7.9	7.1	790	9.4	1050
	17	37	103	7.3	7.6	785	10.2	1045

*Power settings in this block represent maximum range settings

SECTION VI – OPERATIONAL DATA (continued)

CRUISE PERFORMANCE

EXTENDED RANGE MIXTURE

Standard Conditions - Zero Wind - Gross Weight - 3100 Pounds

7500 FEET

RPM	MP	% BHP	TAS MPH	GAL/ HOUR	56 GAL (NO RESERVE)		75 GAL (NO RESERVE)	
					ENDR. HOURS	RANGE MILES	ENDR. HOURS	RANGE MILES
2450	21	71	161	13.1	4.3	685	5.6	905
	20	67	156	12.4	4.5	695	6.0	935
	19	62	152	11.7	4.7	720	6.4	970
	18	58	146	11.0	5.1	745	6.8	985
2300	21	66	155	12.2	4.6	705	6.1	945
	20	62	151	11.6	4.8	730	6.4	965
	19	58	146	11.0	5.1	745	6.8	985
	18	54	140	10.5	5.3	740	7.1	985
2200	21	62	152	11.4	4.9	745	6.5	985
	20	58	147	10.7	5.2	765	7.0	1020
	19	54	142	10.2	5.5	775	7.2	1025
	18	51	135	9.7	5.8	775	7.6	1025
2000*	20	50	133	9.2	6.0	800	8.1	1075
	19	47	126	8.7	6.4	805	8.6	1075
	18	43	117	8.1	6.9	805	9.2	1075
	17	39	108	7.6	7.3	790	9.8	1055

*Power settings in this block represent maximum range settings

SECTION VI – OPERATIONAL DATA (continued)

CRUISE PERFORMANCE

EXTENDED RANGE MIXTURE

Standard Conditions - Zero Wind - Gross Weight - 3100 Pounds

10,000 FEET

					56 GAL (NO RESERVE)		75 GAL (NO RESERVE)	
RPM	MP	% BHP	TAS MPH	GAL/ HOUR	ENDR. HOURS	RANGE MILES	ENDR. HOURS	RANGE MILES
2450	19	63	156	11.9	4.7	725	6.2	965
	18	60	151	11.2	5.0	755	6.7	1005
	17	55	144	10.6	5.3	760	7.1	1015
	16	51	137	10.0	5.6	760	7.4	1015
2300	19	60	151	11.1	5.0	755	6.7	1005
	18	56	144	10.5	5.3	760	7.1	1015
	17	51	137	9.8	5.7	775	7.6	1040
	16	47	128	9.2	6.0	770	8.1	1030
2200	19	56	145	10.4	5.4	780	7.1	1035
	18	52	139	9.8	5.7	785	7.6	1055
	17	49	132	9.3	6.0	795	8.0	1050
	16	45	123	8.7	6.4	785	8.6	1050
2000*	19	48	131	8.9	6.2	815	8.4	1095
	18	44	122	8.4	6.6	805	8.8	1075

*Power settings in this block represent maximum range settings

SECTION VI – OPERATIONAL DATA (continued)

CRUISE PERFORMANCE

EXTENDED RANGE MIXTURE

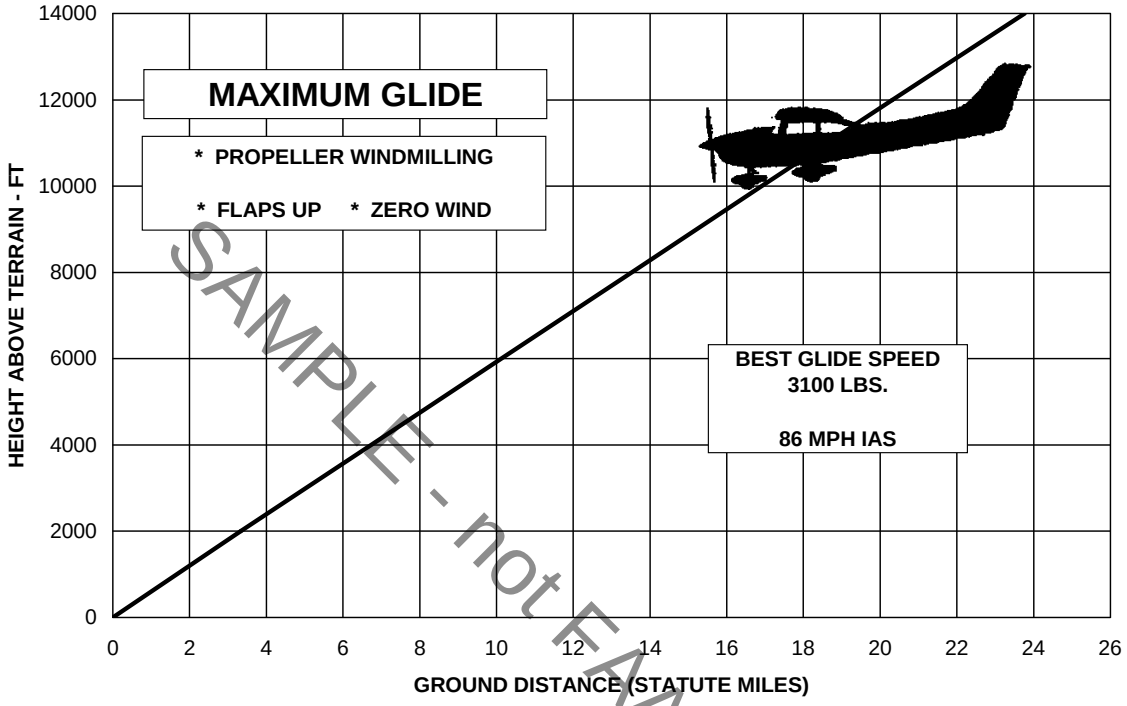
Standard Conditions - Zero Wind - Gross Weight - 3100 Pounds

15,000 FEET

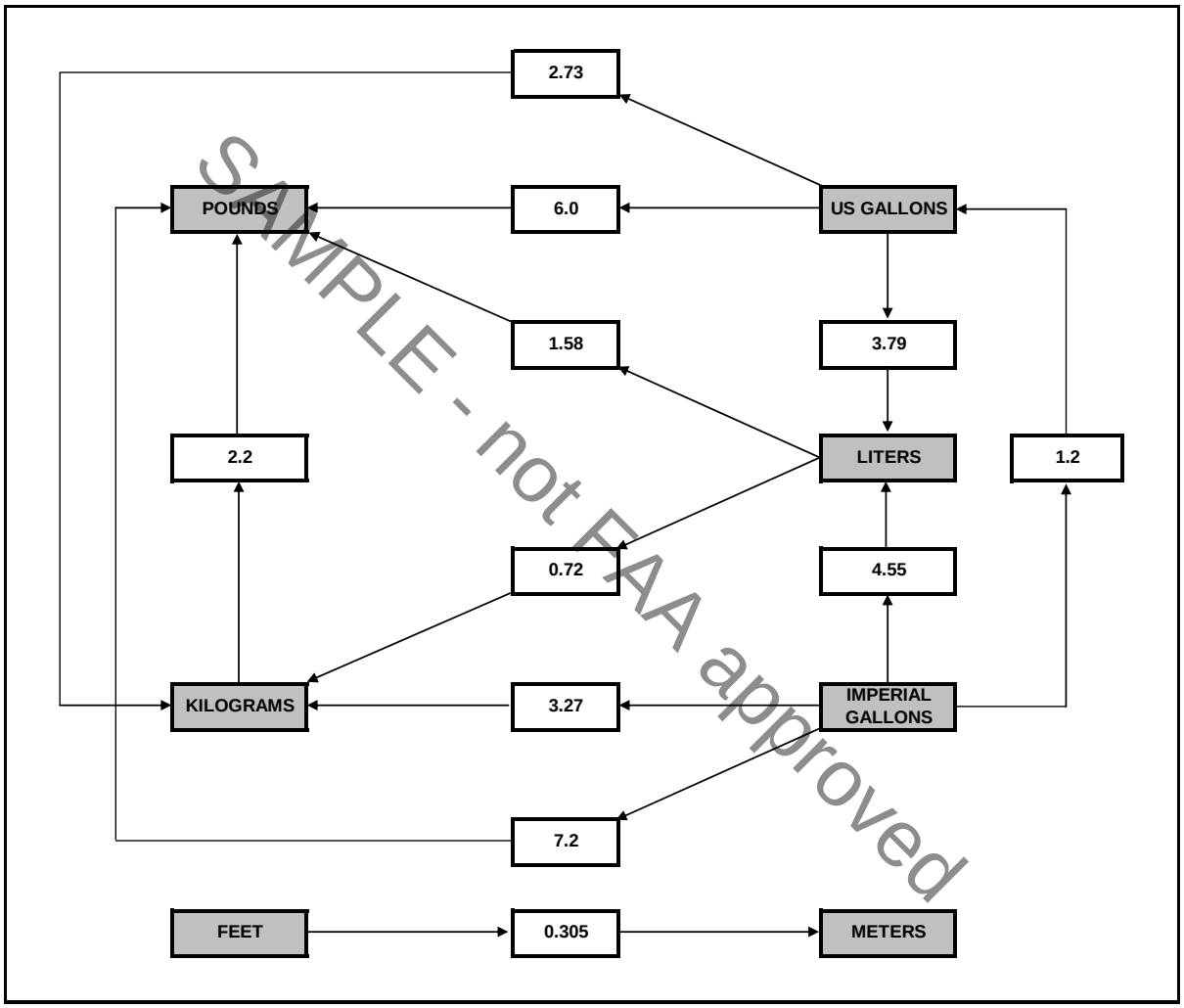
RPM	MP	% BHP	TAS MPH	GAL/ HOUR	56 GAL (NO RESERVE)		75 GAL (NO RESERVE)	
					ENDR. HOURS	RANGE MILES	ENDR. HOURS	RANGE MILES
2450	16	54	145	10.4	5.4	780	7.1	1035
	15	50	136	9.8	5.7	770	7.6	1035
	14	46	126	9.2	6.0	760	8.1	1015
2300	16	50	136	9.6	5.8	780	7.7	1045
	15	47	129	9.1	6.1	790	8.2	1050
	14	42	116	8.5	6.6	765	8.7	1010
2200	16	47	131	9.1	6.1	800	8.2	1070
	15	44	120	8.6	6.5	780	8.6	1035

Note: Range and endurance values in the cruise performance tables above take into account corrections to the basic Cessna Owner's Manual per AD 75-16-01 and Cessna Service Letter SE 75-7 regarding amendment of usable fuel quantities.

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