# FAA APPROVED AIRPLANE FLIGHT MANUAL APPENDIX TO THE

# SOLOY CORPORATION PILOT'S OPERATING HANDBOOK SUPPLEMENT

**AND** 

### FAA APPROVED AIRPLANE FLIGHT MANUAL

FOR

# CESSNA U AND TU 206G AND T206H/206H EXTENDED WING TIP FUEL TANKS

Serial No.:	Registration No.:
-------------	-------------------

The information in this Appendix is FAA approved material and must be attached to the Soloy Corporation Pilot's Operating Handbook Supplement and FAA Approved Airplane Flight Manual when the airplane has been modified by the installation of the Flint Aero Extended Wing Tip Fuel Tanks in accordance with STC SA3232NM.

This Appendix is applicable to the Soloy Corporation Pilot's Operating Handbook Supplement and FAA Approved Airplane Flight Manual for Cessna U and TU 206G and the Soloy Corporation Pilot's Operating Handbook Supplement and FAA Approved Airplane Flight Manual for Cessna T206H/206H, and includes the following airplanes when Flint Aero, Inc. Extended Wing Tip Fuel Tanks have been installed in addition to the Soloy Corporation Turbine Pac (STC SA2353NM):

Cessna TU206G/U206G airplanes U20602589, U20603522 to U20606846, 1985 serial numbers U20606847 to U20606920 and 1986 serial numbers U20606921 to U20607020, and

Cessna 206H airplanes serial numbers 20608001 through 20608059, airplanes serial number 20608092 and subsequent, and serial number 20608060 through 20608091 when Cessna Aircraft Company Accomplishment Instruction AI 206-57-01 is incorporated and

Cessna T206H airplanes serial numbers T20608001 through T20608100, serial number 20608159 and subsequent, and serial number 20608101 through 20608158 when Cessna Aircraft Company Accomplishment Instruction AI 206-57-01 is incorporated.

The information contained herein appends, supplements, or supersedes the Soloy Airplane Flight Manual Supplement only in those areas listed herein. For limitations, procedures, and performance information not contained in this Appendix, consult the Soloy Airplane Flight Manual Supplement and the basic Cessna 206 Airplane Flight Manual.

FAA Approved

Manager, Flight Test Branch, ANM-160L

Federal Aviation Administration

Los Angeles Aircraft Certification Office

**Transport Airplane Directorate** 

FAA Approved Date July 15, 2009

Appendix to AFMS for Soloy Turbine converted Cessna Model U AND TU 206G and 206H/T206H Airplanes for Flint Aero, Inc. Extended Wing Tip Fuel Tanks Flint Aero STC SA3232NM and Soloy STC SA2353NM

#### **RECORD OF REVISIONS**

This "Record of Revisions" identifies all revisions to this document. When changes to this document are needed, revisions will be issued by the Applicant.

This "Record of Revisions" shall remain in this document at all times. Upon the receipt of revisions, insert the revised page(s) into this document and enter the revision number, revision date, insertion date and signature of person incorporating the revision into the document in the appropriate spaces below.

Revision Number	Revision Date	Pages Affected	Description	FAA Approved By
IR	July 20, 2004	1-17	Original Issue	Seyed-Youssef Hashemi  ACTIVIO  Mgr, Flt. Test Br., ANM-160L  FAA Los Angeles ACO  Transport Airplane Directorate  Date: July 20, 2004
Α	July 15, 2009	1-17	Placards revised page 8. Weight and Balance Table revised page 13. Entire Manual replaced.	Mgr, Flt. Test Br., ANM-160L FAA Los Angeles ACO Transport Airplane Directorate Date: July 15, 2004

Appendix to AFMS for Soloy Turbine converted Cessna Model U AND TU 206G and 206H/T206H Airplanes for Flint Aero, Inc. Extended Wing Tip Fuel Tanks Flint Aero STC SA3232NM and Soloy STC SA2353NM

#### **TABLE OF CONTENTS**

SECTION	PAGE
TITLE PAGE	
RECORD OF REVISIONS	2
TABLE OF CONTENTS	3
SECTION I – GENERAL	: 4
SECTION II – LIMITATIONS	6
SECTION III - EMERGENCY PROCEDURES	9
SECTION IV - NORMAL PROCEDURES	<u>;                                    </u>
SECTION V - PERFORMANCE	10
SECTION VI – WEIGHT AND BALANCE/EQUIPMENT	IST13
SECTION VII – AIRPLANE & SYSTEMS DESCRIPTION	NS16
SECTION VIII – AIRPLANE HANDLING, SERVICE AND	MAINTENANCE WITH
WING TIP FUEL (TRANSFER)	17

Appendix to AFMS for Soloy Turbine converted Cessna Model U AND TU 206G and 206H/T206H Airplanes for Flint Aero, Inc. Extended Wing Tip Fuel Tanks Flint Aero STC SA3232NM and Soloy STC SA2353NM

#### **SECTION I – GENERAL**

This Flint Aero, Inc. Appendix to the Approved Flight Manual addresses the operation of the Soloy Corporation Turbine Pac-converted Cessna U AND TU 206G and T206H/206H airplanes (STC SA2353NM) when modified by installation of Flint Aero Wing Tip Fuel Tanks in accordance with STC SA3232NM. With the tips installed, the wing span increases to 39 feet, 0 inches, and the wing area increases to 185 square feet. A maximum takeoff gross weight increase to 3800 pounds is approved when these Wing Tip Fuel Tanks are installed. New performance and CG data for gross weights above 3000 pounds are included nerein. The new Performance Specifications are shown in Table 1-1 below.

Table 1-1

PER	FORMANCE - SPECIFICATION	S	20,000 FT	10,000 FT
SPEED	Maximum (VMO)		148 KCAS /149 KIAS	
SPEED	Max Cruise Power - Standard Day Condition	ns	156 KTAS	165 KTAS
	With fuel allowance for engine start, taxi, ta	keoff, clim	b and 45 minute	es reserve.
	Max Cruise Power	Range	739 NM	571 NM
CRUISE	116.8 Gallons usable Fuel	Time	4.6 HRS	3.2 HRS
	Max Cruise Power	Range	674 NM	503 NM
	105.8 Gallons usable Fuel	Time	4.3 HRS	3.1 HRS
CLIMB	Sea Level Std Day Rate of Climb		1080	FPM
CLIMB	Service Ceiling		20,000 FT	
TAKEOFF	Sea Level Std Day Ground Roll		652 FT	
TARLOTT	Total Distance Over 50 Ft. Obstacle		1164 FT	
LANDING	Sea Level Std Day Ground Roll		735 FT	
	Total Distance Over 50 Ft. Obstacle		1395 FT	
STALL Flaps Up, Power Flight Idle		58 KCAS / 49 KIAS		
Flaps 40°, Power Flight Idle		52 KCAS	/ 40 KIAS	
MAXIMUM Ramp WEIGHT Takeoff		3817 LBS		
		3800 LBS		
Landing		3600 LBS		
	MPTY WEIGHT		2312 LBS	
MAXIMUM USI			1505 LBS	
	_OWANCE (See applicable POH)			180 LBS
WING LOADING: lbs./ Sq.Ft.		20.5 PSF		
POWER LOADING lbs./HP			PPHP	
FUEL CAPACITY (See applicable POH)			122 GAL	
OIL CAPACITY		9	QTS.	
ENGINE: Soloy Turbine Pac 418 SHP (5 minutes) @ 1810 RPM			rbine Pac	
Model 780-1000-1 312 SHP (Continuous) @ 1810 RPM		Model 7	80-1000-1	
PROPELLER: 3-Bladed, Constant Speed, Diameter		93 to	95 IN	

The above performance figures are based on the indicated weights, standard atmospheric conditions, level hard-surface dry runways and no wind. They are FAA Approved Date: July 15, 2009 pg 4 of 17

FLINT AERO, INC.
1942 Joe Crosson Drive
El Cajon, CA 92020
Doc No.: FTC934.001 Rev. A

Appendix to AFMS for Soloy Turbine converted Cessna Model U AND TU 206G and 206H/T206H Airplanes for Flint Aero, Inc. Extended Wing Tip Fuel Tanks Flint Aero STC SA3232NM and Soloy STC SA2353NM

calculated values derived from the Soloy AFM and flight tests conducted by Flint Aero, Inc., and will vary with individual airplanes and numerous factors affecting flight performance.

Fuel capacity is increased to the values in Table 1-2 below:

Table 1-2

FUEL CAPACITY, U.S. GALLONS			
	U AND TU 206G s/n U20603522 through U20604649	U AND TU 206G s/n U20602589, U20604650 through U20606847, and 206H / T206H	
Total Capacity	110.0	122.0	
Total Usable	105.8	116.8	
Total Capacity, Each Wing Tank	40.0	46.0	
Total Usable, Each Wing Tank	38.0	44.0	
Total Capacity, Each Tip Tank	15.0	15.0	
Total Usable, Each Tip Tank	14.9	14.9	

Maximum Certificated Weights are increased to the values in Table 1-3 below:

Table 1-3

MAXIMUM CERTIFICATED WEIGHTS	POUNDS
Ramp Weight	3817
Takeoff Weight	3800
Landing Weight	3600

Standard Airplane Weights are increased to the values in Table 1-4 below:

Table 1-4

STANDARD AIRPLANE WEIGHTS	POUNDS
Standard Empty Weight	2312
Maximum Useful Load, Normal Category	1505

The Specific loadings of the airplane are changed as shown in Table 1-5 below:

Table 1-5

SPECIFIC LOADINGS	POUNDS
Wing Loading, lbs./sq. ft.	20.5
Power Loading, lbs./hp.	9.1

Appendix to AFMS for Soloy Turbine converted Cessna Model U AND TU 206G and 206H/T206H Airplanes for Flint Aero, Inc. Extended Wing Tip Fuel Tanks Flint Aero STC SA3232NM and Soloy STC SA2353NM

#### **SECTION II – LIMITATIONS**

#### 1. Airspeed Limitations

Maximum Operating speed (VMO) remains unchanged from the Soloy Manual.

#### 2. Airspeed Indicator Markings

Airspeed indicator color-code significance remains unchanged.

The white arc limits of the indicator remain unchanged.

#### 3. Power Plant Instrument Markings

The following entry is added to the Powerplant Instrument Markings Table:

Power plant markings and their color-code significance.

INSTRUMENT	RED LINE MINIMUM LIMIT	GREEN ARC NORMAL OPERATING	RED LINE MAXIMUM LIMIT
Wing Tip Fuel Tank	E		
Quantity Indicators	(0.2 U.S. Gal. Unusable Each Tank)		

#### 4. Weight Limitations

WEIGHT LIMITS	POUNDS
Maximum Ramp Weight	3817
Maximum Takeoff Weight	3800
Maximum Landing Weight	3600
Maximum Weight in Baggage Compartment (See applicable POH) (Station 109 to 145)	180 (except 120 for s/n U20602589, & U20603522 through U20606847)

For installation of other modifications by STC, the maximum gross weight is limited to that which is authorized by each particular STC. The pilot is advised to determine this gross weight limit from each appropriate STC.

#### 5. Center of Gravity Limits

Center of gravity range, inches aft of datum:

Forward: 33.0 inches aft of datum at 2500 lbs. or less, with straight line variation to 44.4 inches aft of datum at 3800 lbs.

Aft: 49.7 inches aft of datum at all weights.

Reference datum: Front face of lower firewall.

FAA Approved Date: July 15, 2009

Appendix to AFMS for Soloy Turbine converted Cessna Model U AND TU 206G and 206H/T206H Airplanes for Flint Aero, Inc. Extended Wing Tip Fuel Tanks Flint Aero STC SA3232NM and Soloy STC SA2353NM

#### 6. Fuel Limitations

#### 6.1. Fuel Capacity Limitations

FUEL CAPACITY, U.S. GALLONS			
	U206G or TU206G s/n U20603522 through U20604649	U206G or TU206G s/n U20602589, U20604650 through U20606847, 206H and T206H	
Total Capacity	110.0	122.0	
Total Usable	105.8	116.8	
Total Capacity, Each Wing Tank	40.0	46.0	
Total Usable, Each Wing Tank	38.0	44.0	
Total Capacity, Each Tip Tank	15.0	15.0	
Total Usable, Each Tip Tank	14.9	14.9	

#### 6.2. Wing Tip Fuel Tank Transfer Limits

- When feeding from either or both main tanks, do not transfer wing tip tank fuel into a main fuel tank until it is at least 15.0 gallons below full.
- When feeding from either main tank, begin tip tank transfer into that tank before its level drops below five gallons remaining.
- When feeding from both main tanks, begin tip tank transfer before either main tank drops below five gallons remaining.
- Do not transfer wing tip fuel unless in level flight.
- Do not transfer wing tip fuel during take off, landing, refueling, and when empty.

Note:

Main fuel tank quantity below the full level can be determined by reference to fuel quantity gauges and by calculating fuel used by:

- 1) Estimating engine fuel flow rates versus time.
- 2) If installed, using engine fuel flow rate indicator vs. time.

#### 7. Placards

The following information is displayed in the form of composite or individual placards.

Appendix to AFMS for Soloy Turbine converted Cessna Model U AND TU 206G and 206H/T206H Airplanes for Flint Aero, Inc. Extended Wing Tip Fuel Tanks Flint Aero STC SA3232NM and Soloy STC SA2353NM

#### 7.1. In full view of pilot:

TOTAL WING TIP FUEL 30 U.S. GALLONS (29.8 GALLONS USABLE). TRANSFER FUEL DURING LEVEL FLIGHT.

TRANSFER FUEL WHEN MAIN TANK CONTAINS NOT LESS THAN 5.0 GALLONS AND IS AT LEAST 15.0 GALLONS BELOW FULL.

WING TIP FUEL SWITCH MUST BE OFF DURING TAKEOFF, LANDING, REFUELING, AND WHEN EMPTY.

MONITOR MAIN FUEL TANK GAUGE WHILE TRANSFERRING WING TIP FUEL TO PREVENT OVER FILLING.

7.2. Forward of each wing tip tank filler:

15.0 U.S. GALLONS (14.9 GALLONS USABLE)

JET A

SEE PILOT'S OPERATING HANDBOOK FOR ANTI-ICE ADDITIVE REQUIREMENTS AND ALTERNATE FUELS.

7.3. At wing tip fuel tank pump switches:

LEFT WING TIP FUEL 15.0 U.S. GALLONS 14.9 GALLONS USABLE ON OFF RIGHT WING TIP FUEL 15.0 U.S. GALLONS 14.9 GALLONS USABLE ON OFF

7.4. Installed adjacent to each wing tip fuel tank leak detection drain (3 per side)

FUEL OR VAPOR FROM DRAIN REQUIRES IMMEDIATE REPAIRS

7.5. Installed adjacent to appropriate wing tip tank pump circuit breakers or fuses:

TIP TANK L PUMP

TIP TANK R PUMP

Appendix to AFMS for Soloy Turbine converted Cessna Model U AND TU 206G and 206H/T206H Airplanes for Flint Aero, Inc. Extended Wing Tip Fuel Tanks Flint Aero STC SA3232NM and Soloy STC SA2353NM

#### **SECTION III – EMERGENCY PROCEDURES**

#### NOTE

The Soloy engine installation eliminates the Cessna auxiliary fuel pump. With Flint Aero, Inc. Wing Tip Fuel Tanks installed, fuel transfer to the standard main wing tanks is provided by the wing tip fuel transfer tank pumps controlled by the wing tip fuel tank transfer pump switches.

#### EMERGENCY LANDING WITH OR WITHOUT ENGINE POWER (add)

Wing Tip Fuel Tank transfer pump switches.....OFF.

WING FIRE (add)

Wing Tip Fuel Tank transfer pump switches.....OFF.

#### **SECTION IV – NORMAL PROCEDURES**

#### PREFLIGHT INSPECTION - WING TIP FUEL TRANSFER TANKS

- 1. Visually inspect external areas of wing around wing tip fuel tanks for any signs of fuel leakage.
- 2. Check each wing tip tank filler cap for security and vent lines for obstructions. Visually check wing tip fuel tanks for quantity.
- 3. From each wing tip fuel tank, drain a sample quantity of fuel. Check for contamination. If any water is visible, drain additional amounts of fuel until all water is expelled from the tank.
- 4. Master switch on. Check wing tip fuel tank gauges for fuel quantity.
- 5. With master switch on, check each wing tip fuel tank pump for operation by operating each pump separately with wing tip fuel tank transfer switches. Listen for pump operation. If no noise or vibration, assume pump is not operating. Check for serviceability.

#### Before Takeoff (add)

a.	Add the following to the before takeoff procedure:
	Wing tip fuel tank transfer pump switchesOFF

Appendix to AFMS for Soloy Turbine converted Cessna Model U AND TU 206G and 206H/T206H Airplanes for Flint Aero, Inc. Extended Wing Tip Fuel Tanks Flint Aero STC SA3232NM and Soloy STC SA2353NM

#### **SECTION V - PERFORMANCE**

The performance data in this appendix address the operation of an airplane incorporating Flint Aero STC SA3232NM Fueled Wing Tips with airplane gross weight between 3600 and 3800 pounds.

#### **STALL SPEEDS**

The stall speeds published in the Soloy Corporation Pilot's Operating Handbook Supplement and FAA Approved Airplane Flight Manual for Cessna U and TU 206G and Pilot's Operating Handbook Supplement and FAA Approved Airplane Flight Manual for T206H/206H for a gross weight of 3600 pounds are valid for the Flint Aero wingtip-modified airplane at 3800 pounds gross weight, since the added wing area of this modification compensates for the additional weight.

#### SHORT FIELD TAKEOFF DISTANCE

For takeoff weights equal to or less than the previously certificated 3600 pounds gross weight, use the standard performance tables applicable to the basic unmodified airplane. For any weight greater than 3600 pounds gross weight, use the performance tables in this appendix. Interpolation of performance data may be used between 3600 pounds and the 3800 pound maximum gross weight of these performance tables.

Appendix to AFMS for Soloy Turbine converted Cessna Model U AND TU 206G and 206H/T206H Airplanes for Flint Aero, Inc. Extended Wing Tip Fuel Tanks Flint Aero STC SA3232NM and Soloy STC SA2353NM

### Soloy/Flint U AND TU 206G & T206H/206H SHORT FIELD TAKEOFF DISTANCE AT 3800 POUNDS

**CONDITIONS:** 

Flaps 20 degrees
Inlet Normal
Hard Surface, Level, Dry Runway
Zero Wind

Lift Off:

51 KIAS

Speed at 50 Ft:

60 KIAS

# TAKEOFF DISTANCE, SHORT FIELD SOLOY U AND TU 206G & 206H/T206H @ 3800 LBS WITH FLINT WING TIP TANKS

JRE DE,	-20°C		-10°C		0°C		10°C		20°C		30°C		40°C	
PRESSURE ALTITUDE, FEET	GRND ROLL	TOTAL TO CLR 50 FT												
0	535	950	559	1000	588	1051	627	1118	680	1218	748	1347	836	1500
1000	557	995	586	1054	623	1097	678	1222	732	1329	809	1473	905	1623
2000	591	1058	624	1125	669	1171	737	1330	802	1449	880	1603	985	1768
3000	634	1136	672	1212	724	1269	803	1446	884	1577	961	1741	1075	1928
4000	686	1229	729	1314	788	1387	876	1572	975	1716	1052	1892	1176	2101
5000	746	1337	795	1430	861	1522	957	1711	1073	1868	1152	2059	1288	2287
6000	813	1458	868	1562	941	1674	1046	1867	1177	2036	1262	2247	1413	2491
7000	887	1593	949	1709	1030	1840	1143	2042	1288	2225	1385	2463	1551	2721
8000	970	1744	1039	1872	1128	2023	1251	2240	1408	2440	1523	2713	1706	2990
9000	1061	1911	1137	2054	1235	2224	1371	2464	1540	2687	1677	3002	1879	3312
10000	1161	2098	1246	2257	1355	2447	1505	2718	1689	2973	1852	3338	2074	3709
11000	1273	2305	1368	2483	1489	2694	1657	3004	1859	3305	2051	3730	2293	4202
12000	1398	2536	1504	2735	1640	2972	1828	3327	2059	3693	2279	4184		
13000	1538	2796	1657	3019	1810	3287	2023	3690	2296	4145				
14000	1696	3086	1829	3337	2002	3647	2245	4096						

#### NOTES:

- 1. Short field technique as specified in Section 4.
- 2. 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.
- 3. For operation on a dry, grass runway, increase distances by 15% of the "ground roll" figure.

FAA Approved Date: July 15, 2009

Appendix to AFMS for Soloy Turbine converted Cessna Model U AND TU 206G and 206H/T206H Airplanes for Flint Aero, Inc. Extended Wing Tip Fuel Tanks Flint Aero STC SA3232NM and Soloy STC SA2353NM

#### MAXIMUM RATE OF CLIMB

The maximum rate-of-climb data published in the Soloy Corporation Pilot's Operating Handbook Supplement and FAA Approved Airplane Flight Manual for Cessna U and TU 206G and Pilot's Operating Handbook Supplement and FAA Approved Airplane Flight Manual for T206H/206H for a gross weight of 3600 pounds are valid for the Flint Aero wingtip-modified airplane at 3800 pounds gross weight, since the added wing area of this modification compensates for the additional weight. The climb data for 3300 and 3000 pounds are valid for 3500 and 3200 pounds gross weight, respectively.

#### **RANGE PROFILE**

With the Flint Aero wing tip fuel tanks installed, the Soloy cruise performance charts are valid for the usable fuel quantity as stated in the basic manual. The use of full 30.0 U.S. Gallons (29.8 gal. usable) wing tip tank fuel increases the range and endurance shown in Figures 5-12 and 5-13 of the Soloy Corporation Pilot's Operating Handbook Supplement and FAA Approved Airplane Flight Manual for Cessna U and TU 206G and Pilot's Operating Handbook Supplement and FAA Approved Airplane Flight Manual for T206H/206H. The total range and endurance for full main tanks and wing tip tanks is shown in the table below:

RANGE & ENDURANCE PERFORMANCE	Soloy U AND TU 206G & 206H/T206H					
1810 RPM, 100% N2, Inlet Normal, Maximum charted Tq at indicated altitude, Standard Temperature.	Altitude	20,000 FT	10,000 FT			
Max Cruise Power	Range	739 NM	571 NM			
116.8 Gallons usable Fuel	Time	4.6 HRS	3.2 HRS			
Max Cruise Power	Range	674 NM	503 NM			
105.8 Gallons usable Fuel	Time	4.3 HRS	3.1 HRS			
With fuel allowance for engine start, taxi, takeoff, climb and 45 minutes reserve.						

#### <u>LANDING DISTANCE - SHORT FIELD</u>

The landing distances published in the Soloy Corporation Pilot's Operating Handbook Supplement and FAA Approved Airplane Flight Manual for Cessna U and TU 206G and Pilot's Operating Handbook Supplement and FAA Approved Airplane Flight Manual for T206H/206H for a gross weight of 3600 pounds are valid for the Flint Aero, Inc. wingtip-modified airplanes, which also have a maximum landing gross weight of 3600 pounds.

Appendix to AFMS for Soloy Turbine converted Cessna Model U AND TU 206G and 206H/T206H Airplanes for Flint Aero, Inc. Extended Wing Tip Fuel Tanks Flint Aero STC SA3232NM and Soloy STC SA2353NM

#### SECTION VI - WEIGHT AND BALANCE/EQUIPMENT LIST

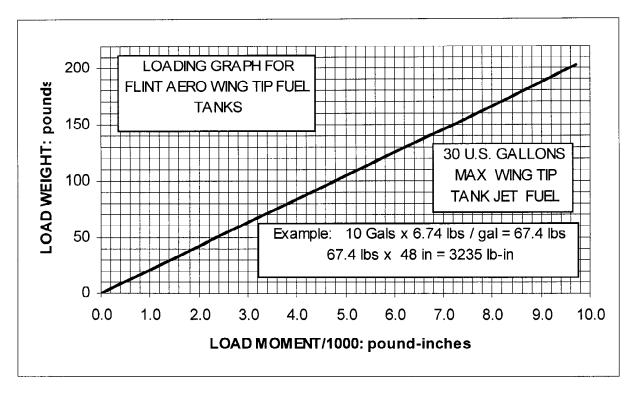
ITEM NO	EQUIPMENT LIST DESCRIPTION	REF DRAWING	WEIGHT lbs.	ARM inches	MOMENT lbin.
	C. ELECTRICAL SYSTEMS				
31	Fuel Pump - L.H. Wing Tip Tank	FALS206	1.5	34.3	51.5
31	Fuel Pump - R.H. Wing Tip Tank	FALS206	1.5	34.3	51.5
	D. INSTRUMENTS				
64	Gauges - L.H. & R.H. Wing Tip Fuel Tank Quantity Indicator	FALS206	2.5	37.8	95
Various	Placards: Various - see this				
	Appendix Section 2 Limitations	FALS206	neg'l	neg'l	neg'l
	J. SPECIAL PACKAGES				
2, 3	Wing tips & fuel tanks including position lights (net change)				,
	1 - Remove Cessna wing tips and install Flint Aero Wing Tip Fuel Tanks (net)	FALS206	49.0	52.6	2577.4
	2 - Unusable fuel in Flint Aero Wing Tip Tanks (0.2 U.S. Gal. Jet Fuel at 6.74 lbs./U.S. gal.)	FALS206	1.35	48.0	64.8
	TOTAL INSTALLATION NET CHANGE		55.85	50.85	2840.2

In calculating weight and balance for full wing tip fuel tank:

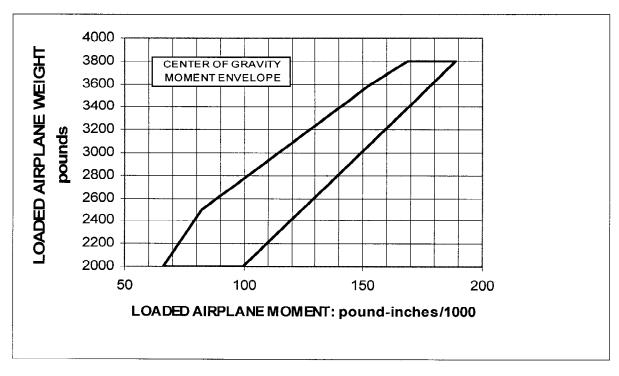
29.8 U.S. gal. Jet Fuel usable x 6.74 lbs./U.S. gal. x 48 in. arm = 9641 lb.-in. or 9.641 lb.-in./1000.

C.G. = total moment divided by total weight.

Appendix to AFMS for Soloy Turbine converted Cessna Model U AND TU 206G and 206H/T206H Airplanes for Flint Aero, Inc. Extended Wing Tip Fuel Tanks Flint Aero STC SA3232NM and Soloy STC SA2353NM

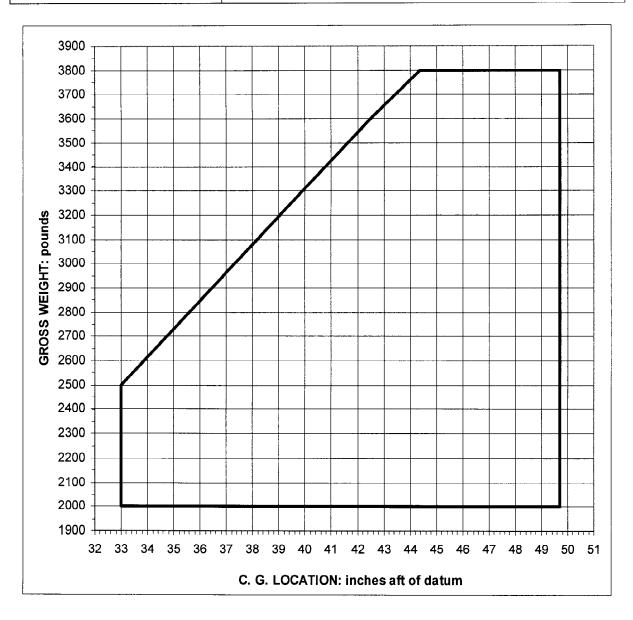


#### **FUEL LOAD MOMENTS**



#### **CENTER-OF-GRAVITY MOMENT ENVELOPE**

Appendix to AFMS for Soloy Turbine converted Cessna Model U AND TU 206G and 206H/T206H Airplanes for Flint Aero, Inc. Extended Wing Tip Fuel Tanks Flint Aero STC SA3232NM and Soloy STC SA2353NM



#### **CENTER-OF-GRAVITY RANGE**

Appendix to AFMS for Soloy Turbine converted Cessna Model U AND TU 206G and 206H/T206H Airplanes for Flint Aero, Inc. Extended Wing Tip Fuel Tanks Flint Aero STC SA3232NM and Soloy STC SA2353NM

#### **SECTION VII – AIRPLANE & SYSTEMS DESCRIPTIONS**

#### 1. Fuel Tank Capacities (U.S.Gallons)

FUEL CAPACITY, U.S. GALLONS						
	U206G or TU206G S/N U20603522 through U20604649	U206G or TU206G S/N U20602589, U20604650 through U20606847, 206H / T206H				
Total Capacity	110.0	122.0				
Total Usable	105.8	116.8				
Total Capacity, Each Wing Tank	40.0	46.0				
Total Usable, Each Wing Tank	38.0	44.0				
Total Capacity, Each Tip Tank	15.0	15.0				
Total Usable, Each Tip Tank	14.9	14.9				

#### 2. Operation of Wing Tip Fuel Tanks (transfer)

- To transfer, turn applicable "wing tip fuel tank transfer switch" on. When wing tip tanks indicate empty, turn applicable transfer switch off.
- As a general procedure, do not transfer wing tip tank fuel until after burning approximately 15 U.S. gallons of fuel from each main tank.

NOTE: Should the transfer pump fail, it is not possible to transfer fuel from the affected tank in flight.

#### 3. Airframe

Left and right wing tip fuel transfer tank quantity gauges and pump switches are located on subpanels in left and right wing roots. Fuses or circuit breakers are connected to the airplane's electrical system main bus bar, are accessible, and have visible placarding.

#### 4. Fuel Quantity Data (U.S. Gallons)

Add 29.8 U.S. gallons additional usable fuel to the total fuel available in the Cessna tanks.

In addition to the Cessna main fuel tanks, two wing tip fuel transfer tanks are installed as wing tip extensions. The capacity is 15.0 U.S. gallons each tank (14.9 usable U.S. gallons).

These tanks transfer to their respective main wing tank by transfer pumps controlled by switches in the cockpit.

Appendix to AFMS for Soloy Turbine converted Cessna Model U AND TU 206G and 206H/T206H Airplanes for Flint Aero, Inc. Extended Wing Tip Fuel Tanks Flint Aero STC SA3232NM and Soloy STC SA2353NM

Each wing tip tank has a water drain and is vented through an overboard vent line. Each tank has an individual quantity gauge.

#### **NOTES**

The wing tip fuel (transfer) tank quantity gauges are similar in operation to the main fuel tank gauges and visual inspection of the tanks during preflight is the best assurance of fuel quantities. There are no provisions for visually determining reduced tank quantity.

The fuel in the wing tip fuel transfer tanks is available to the engine only through the airplane's main fuel tanks. The main fuel tank gauges are the sole reference gauges for immediately available engine fuel.

Should a wing tip fuel (transfer) tank pump fail, it is not possible to transfer fuel from the affected tank during the flight in progress and the pilot must immediately adjust his range and endurance calculations on the basis of the fuel available through the standard fuel system.

## SECTION VIII – AIRPLANE HANDLING, SERVICE AND MAINTENANCE WITH WING TIP FUEL (TRANSFER)

#### **NOTE**

Before flight, check through the filler neck for wing tip tank fuel quantity. No provision is made for calculating reduced capacity fuel in the wing tip fuel tanks.