

FLINT AERO, INC.
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Report No. 050.04

FAA APPROVED AIRPLANE FLIGHT MANUAL SUPPLEMENT

to the

CESSNA 206H AND T206H

PILOT'S OPERATING HANDBOOK AND FAA APPROVED AIRPLANE FLIGHT MANUAL

Extended Wing Tip Fuel Tanks – 3800 LBTOGW

STC No: SA4366WE

Airplane S/N _____ Airplane Reg. No. _____

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

This Supplement is also applicable to Cessna T206H airplanes serial numbers T20608001 through T20608100, serial number T20608159 and subsequent, and serial numbers T20608101 through T20608158 when Cessna Aircraft Company Accomplishment Instruction AI 206-57-01 is incorporated.

This Supplement must be attached to the Basic Pilot's Operating Handbooks and FAA Approved Airplane Flight Manuals (POH/AFM) for Cessna 206H airplanes or POH/AFM for Cessna T206H airplanes, or later FAA Approved revisions of these documents, when these airplanes are modified by the installation of the Flint Aero Extended Wing Tip Fuel Tanks in accordance with STC SA4336WE.

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

FAA Approved _____

Acting

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Los Angeles Aircraft Certification Office
Transport Airplane Directorate

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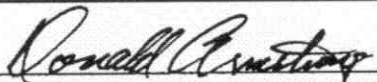

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IR	8-17-00	Title, i ii 1-19	Original issue	 Mgr, Flt. Test Br., ANM-160L FAA Los Angeles ACO Transport Airplane Directorate Date <u>8-17-00</u>
A	7-20-01	Title, i, 1, 3, 5	Corrected applicability to include all S/Ns; added turbo model airspeed limitation	<u>Gordon F. Acker</u> Acting Mgr, Flt. Test Br., ANM-160L FAA Los Angeles ACO Transport Airplane Directorate Date: <u>7-20-2001</u>
B	4-02-07	Title, I, 1-19	Changes this document from an Appendix to a Supplement, generalizes the identifications of the applicable POH/AFMs this document supplements to avoid unnecessary future changes, and reformatted page numbers.	 <i>Acting</i> Mgr, Flt. Test Br., ANM-160L FAA Los Angeles ACO Transport Airplane Directorate Date: <u>4/2/07</u>

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SECTION 1: GENERAL INTRODUCTION

This Flint Aero, Inc. Appendix to the Approved Flight Manual addresses the operation of the Cessna 206H and T206H airplanes when modified by installation of Flint Aero Wing Tip Fuel Tanks in accordance with STC SA4366WE. 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 authorized when these Wing Tip Fuel Tanks are installed. At gross weights above the Cessna original, new performance and CG data are included herein. The new set of Performance Specifications is shown in Table 1-1 below.

Table 1-1

PERFORMANCE - SPECIFICATIONS		206H		T206H	
		6,000 FT	20,000 FT	10,000 FT	
SPEED	Maximum at Sea Level / 17,000 ft.	151 KTS SL	178 KTS		
	Cruise, 75% Power	142 KTS	164 KTS	150 KTS	
CRUISE	Recommended lean mixture with fuel allowance for engine start, taxi, takeoff, climb and 45 minutes reserve.				
	75% Power	Range	857 NM	825 NM	774 NM
	117.8 Gallons usable Fuel	Time	6.1 HRS	5.3 HRS	5.3 HRS
	Max Range	Range	1018 NM	983 NM	1001 NM
	117.8 Gallons Usable Fuel	Time	9.3 HRS	8.6 HRS	9.0 HRS
CLIMB	Sea Level Std Day Rate of Climb	1018 FPM	1080 FPM		
	Service Ceiling	15,700 FT	27,000 FT		
TAKEOFF	Sea Level Std Day Ground Roll	1006 FT	1011 FT		
	Total Distance Over 50 Ft. Obstacle	2016 FT	1903 FT		
LANDING	Sea Level Std Day Ground Roll	735 FT	735 FT		
	Total Distance Over 50 Ft. Obstacle	1395 FT	1395 FT		
STALL	Flaps Up, Power Off	62 KCAS	62 KCAS		
	Flaps Down, Power Off	54 KCAS	54 KCAS		
MAXIMUM WEIGHT	Ramp	3814 LBS	3817 LBS		
	Takeoff	3800 LBS	3800 LBS		
	Landing	3600 LBS	3600 LBS		
STANDARD EMPTY WEIGHT		2248 LBS	2312 LBS		
MAXIMUM USEFUL LOAD		1566 LBS	1505 LBS		
BAGGAGE ALLOWANCE		180 LBS	180 LBS		
WING LOADING: lbs./Sq.Ft.		20.5 PSF	20.5 PSF		
POWER LOADING lbs./HP		12.7 PPHP	12.3 PPHP		
FUEL CAPACITY		122 GAL	122 GAL		
OIL CAPACITY		11 QTS.	12 QTS.		
ENGINE: Textron Lycoming		206H: 300 BHP at 2700 RPM	IO-540-AC1A5	TIO-540-AJ1A	
		T206H: 310 BHP at 2500 RPM			
PROPELLER: 3-Bladed, Constant Speed, Diameter		79 IN	79 IN		

The above performance figures are based on the indicated weights, standard atmospheric conditions, level hard-surface dry runways and no wind. They are calculated values derived from the Cessna 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	206H and T206H
Total Capacity	122.0
Total Usable	117.8
Total Capacity, Each Wing Tank	46.0
Total Usable, Each Wing Tank	44.0
Total Capacity, Each Tip Tank	15.0
Total Usable, Each Tip Tank	14.9

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

Table 1-3

MAXIMUM CERTIFICATED WEIGHTS, LBS.	206H	T206H
Ramp Weight	3814	3817
Takeoff Weight	3800	3800
Landing Weight	3600	3600

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

Table 1-4

STANDARD AIRPLANE WEIGHTS, LBS.	206H	T206H
Standard Empty Weight	2248	2312
Maximum Useful Load, Normal Category	1566	1505

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

Table 1-5

SPECIFIC LOADINGS	206H	T206H
Wing Loading, lbs./sq. ft.	20.5	20.5
Power Loading, lbs./hp.	12.7	12.3

**SECTION 2:
 LIMITATIONS**

1. Airspeed Limitations

Never exceed speed (Vne) and maximum structural cruising speed (Vno) remain unchanged for non-turbo models.

Reduce Vne 5 MPH per 1,000 above 18,000 feet. (Turbocharged models only).

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 Quantity Indicators	E		
	(0.2 U.S. Gal.	-----	-----
	Unusable Each Tank)		

3. Weight Limitations

WEIGHT LIMITS, LBS.	206H	T206H
Maximum Ramp Weight	3814	3817
Maximum Takeoff Weight	3800	3800
Maximum Landing Weight	3600	3600
Maximum Weight in Baggage Compartment (Station 109 to 145)	180	180

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.

6. Fuel Limitations

6.1. Fuel Capacity Limitations

FUEL CAPACITY, U.S. GALLONS	
Total Capacity	122.0
Total Usable	117.8
Total Capacity, Each Wing Tank	46.0
Total Usable, Each Wing Tank	44.0
Total Capacity, Each Tip Tank	15.0
Total Usable, Each Tip Tank	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.

