



TYPE CERTIFICATE DATA SHEET Nº EA-2016T05

Type Certificate Holder:

THE WACO AIRCRAFT COMPANY

See Note 7.

EA-2016T05-00
Sheet 01

WACO

YMF

29 July 2016

This data sheet, which is part of Type Certificate No. 2016T05, prescribes conditions and limitations under which the product, for which the Type Certificate was issued, meets the airworthiness requirements of the Brazilian Aeronautical Regulations.

Model YMF (normal category) modified by Classic Aircraft Corporation (WACO F5C modification), Supplemental Type Certificate SA1000GL, approved 24 June 1991.

This model is a modernized version of the original YMF. The five principal areas in which design changes were incorporated are: (1) throttle control, (2) wheels and brakes, (3) electrical and starting system, (4) steerable tail wheel, (5) engine and propeller, (6) fuselage lengthened 6 inches. Additionally, construction materials and methods have been updated to current standards.

The items listed below have changed from the original YMF. Items marked “*” are changes made for airplanes designated as “F5C”, serial numbers F5C-8-040 and up (See Note 11).

ENGINE	Air Repair, Inc. R-755A2M or R-755A2.
FUEL	80 octane minimum aviation grade gasoline.
*ENGINE LIMITS	300 hp at 2200 rpm for Air Repair, Inc. R-755A2M or R-755A2.
*PROPELLER AND PROPELLER LIMITS	MT-Propeller model: MT233R150-6AJ. Hamilton Standard model: 2B20/6135-15”. (See Note 10).
AIRSPEED LIMITS	Never exceed - 214 mph (186 knots).
*CG RANGE	1,98m (78.0”) to 2,10m (82.5”) All weights
EMPTY WT. C.G.	None
DATUM	2,24m (88.2”) forward of lower wing leading edge
LEVELING MEANS	Top of upper longeron in rear cockpit or top longeron under stabilizer. Leveling screws under left stabilizer effective S/N F5C121 and up (See Note 11).

*MAXIMUM WEIGHT	1338 kg (2950 lb.)
MINIMUM CREW	1
*NUMBER OF SEATS	3 (1 at 3,33m (131.0")), (2 at 2,24m (88.0"))
*MAXIMUM BAGGAGE	45 kg (100 lb.) maximum (11kg (25 lb.) front at 1,65m (65.0")), 34kg (75 lb.) rear at 4,01m (158.0"))
FUEL CAPACITY	Standard – 185 litres (49 gallons) (two 92.7 litre (24.5 gallon) tanks in upper wing center section) (at 1,90m (75.0")) Optional – 46.5 litres (12.3 gallon) tanks in either or both upper wings (at 1,90m (75.0"))
OIL CAPACITY	18.9 litres (5 gallons) (at 1,14m (45.0")) standard
*CONTROL SURFACE MOVEMENTS (DEGREES)	(1) Ailerons 25 ± 3 up, no down stop (2) Elevator 33 ± 2 up, 27 ± 5 down (See Note 5.) (3) Rudder 35 ± 2 left, 35 ± 2 right (4) Rudder trim tab is ground adjustable.
*MANUFACTURER'S SERIAL NUMBERS	F5C-8-040 and up (See Note 11).

DATA PERTINENT TO ALL MODELS

CERTIFICATION BASIS Aeronautics Bulletin No. 7-A, effective as amended January 1, 1933. FAA design approval of "Classic WACO F5C" by Supplemental Type Certificate SA1000GL includes compliance with FAA Part 36, through amendment 36-18 for the "F5C" models.

EQUIPMENT The basic required equipment as prescribed in Department of Commerce, Aeronautics Bulletin 7A, 1 January 1933, must be installed in each aircraft for certification. In addition, the following items of equipment are required for all airplanes modified by Supplemental Type Certificate SA1000GL:

- (a) FAA Approved Flight Manual
- (b) Current weight and balance report with loading instructions
- (c) Equipment list
- (d) Placards required as listed in FAA Approved Flight Manual
- (e) Those items listed in NOTE 4.

See Aircraft listings Volumes VI for airplanes approved prior to 30 September 1939.

NOTE 1 **Weight and Balance**
The current weight and balance report, including a list of equipment included in the certificated empty weight, and loading instructions, when necessary, must be provided for each aircraft at the time of original certification.

NOTE 2 **Marking and Placards**
All placards specified in the appropriate FAA approved flight manual must be displayed.

NOTE 3 There are no life limited structural components for all airplanes with serial numbers F5C-8-040 and up.

- NOTE 4** Each airplane manufactured and delivered with serial number F5C-8-040 and up will contain:
- (a) Airplane log book
 - (b) Engine log book
 - (c) FAA Form 337, a record of alterations and return to service
 - (d) FAA approved airplane flight manual
 - (e) Operators manual, Jacobs aircraft engine model R-755A2 series
- NOTE 5** Any aircraft using a fin modified to Drawing 50916, which incorporates an elevator down stop, should be rigged to have 33 ± 2 up and 23 ± 1 down elevator travel.
- NOTE 6** Optional equipment is listed on Classic Aircraft Corporation Drawing Number 50295, Revision R, dated 17 March 1993, or later FAA approved revision.
- NOTE 7** U.S. Department of Commerce approved Type Certificate No. 542 was cancelled 30 September 1939. Prior to that date, all YMF Model airplanes were manufactured by The WACO Aircraft Company.
- The WACO Aircraft Company ceased to exist surrendering all data to the public domain at that time.
- The FAA Type Certificate was reinstated in 1986 with the issuance of FAA TCDS ATC 542 defining the WACO F5 as modified by WACO Classic Aircraft Corporation (WACO Classics) under Supplemental Type Certificate SA1000GL and later revised to include the WACO F5C under the same STC.
- The basic (original) YMF aircraft is no longer being manufactured. This type is excluded from this TCDS and is not ANAC approved.
- WACO Classic holds FAA Production Certificate No. 328CE approving production of the YMF F5 and F5C (as recorded in FAA TCDS No. ATC 542, Sections II, III and IV).
- NOTE 8** Reserved.
- NOTE 9** Reserved.
- NOTE 10** Optional propeller and propeller accessories:
1. Hamilton Standard constant speed installation to Classic Aircraft Corporation drawing number 50670.
 - (a) Hub 2B20, blades 6135-15"
Pitch settings at 42 inch station: Low $9^\circ - 12^\circ$, high $24^\circ - 27^\circ$
(Propeller to be indexed with blades in line with crankthrow – 0° or 180° position)
Diameter: (Not over 93 inches, not under $91\text{-}1/8$ inches)
 - (b) Governor, Hamilton Standard – 1A4G5
 - (c) Spinner installation per Classic Aircraft Corporation Drawing number 50765 is optional for use with Hamilton Standard Propeller installation per drawing 50670.
- NOTE 11** All F5C airplanes equipped with the Air Repair, Inc. R-755A2M or R-755A2 engine have serial numbers F5C-8-040 and up.



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