DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

7A12
Revision 4
AERONAUTICA MACCHI
AL 60
(Formerly LASA 60
See NOTE 4)
AL 60-B
AL 60-F5
AL 60-C5
April 29, 1968

TYPE CERTIFICATE DATA SHEET NO. 7A12

This data sheet which is a part of type certificate No. 7A12 prescribes conditions and limitations under which the product for which the type certificate was issued meets the airworthiness requirements of the Civil Air Regulations.

Type Certificate Holder — Aeronautica Macchi S.p.A.
Via Sanvito Silvestro, 8Q
VARESE, Italy

I. Model AL 60 (Normal Category), Approved June 26, 1961 (See NOTE 5)

Engines	Continental IO-470-R or Continental TSIO-470-B	
Fuel	Continental IO-470-R engine:	
	91/96 minimum grade aviation gasoline	
	Continental TSIO-470-B engine:	
	100/130 minimum grade aviation gasoline	
Engine limits	Continental IO-470-R engine:	
	For all operations, 2600 r.p.m. (250 hp.)	
	Continental TSIO-470-B engine:	
	For all operations,	
	(Sea level) 35 in.Hg., 2600 r.p.m. (260 hp.)	
	(16,000 ft.) 35 in.Hg., 2600 r.p.m. (260 hp.)	
Propeller and propeller limits	McCauley D2A36C33/90M-4	
	Diameter: Maximum 86 in., minimum allowable for repairs 84 in.	
	(No further reduction permitted)	
	Pitch setting at 36 in. radius:	
	With Continental IO-470-R engine:	
	Low 9.0 degrees, High 22.3 degrees	
	With Continental TSIO-470-B engine:	
	Low 10.0 degrees, High 27.5 degrees	
Airspeed limits	Never exceed	176 m.p.h. (153 knots)
	Maximum structural cruising	140 m.p.h. (122 knots)
	Maneuvering	133 m.p.h. (116 knots)
	Flaps extended	100 m.p.h. (87 knots)
C.G. range	(+211.1) to (+216.5) at 3532 lb.	
	(+204.5) to (+216.5) at 2700 lb. or less	
	Straight line variation between points given.	

Empty weight C.G. range	None		
Maximum weight	3532 lb.		
No. seats	2 (+202), 2 (+230) or (+236), 2 (+261)		
Maximum baggage	200 lb. (+285)		
Fuel capacity	57 gal. total; 49 or 52.5 gal. usable (2 wing tanks) (+219) See NOTE 1 for unusable fuel.		
Oil capacity	3 gal. (+135) (Unusable oil - 4 qt.) Applicable to either engine. See NOTE 1 for system oil.		
Control surface movements	Wing flaps		Down 27 degrees ±1 degree
	Aileron	Up 10 degrees ±1 degrees	Down 11 degrees ±1 degree
	Elevator	Up 25 degrees ±1/2 degree	Down 16 degrees ±1 degree
	Rudder	Right 20 degrees ±1 degree	Left 19 degrees ±1 degree
	Horizontal Stabilizer	(Minus) 1/2 degree ± 1/2 degree to (Minus) 5 1/2 degrees ±1/2 degree	

II. Model AL 60-B (Normal Category), Approved October 27, 1962

(Model AL 60-B same as Model AL 60 except structural changes to make it eligible for 3850 lb. maximum weight).

Engines	Continental IO-470-R or Continental TSIO-470-B	
Fuel	Continental IO-470-R engine :	91-96 minimum grade aviation gasoline
	Continental TSIO-470-B engine :	100/130 minimum grade aviation gasoline
Engine limits	Continental IO-470-R engine :	For all operations, 2600 r.p.m. (250 hp.)
	Continental TSIO-470-B engine :	For all operations, (Sea level) 35 in. HG., 2600 r.p.m. (260 hp.) (16,000 ft.) 35 in. Hg., 2600 r.p.m. (260 hp.)
Propeller and Propeller limits	McCauley D2A36C33/90m-4 Diameter: Maximum 86 in., minimum allowable for repairs 84 in. (No further reduction permitted) Pitch setting at 36 in. radius: Low 10.0 degrees, High 27.5 degrees	
Airspeed limits	Never exceed	176 m.p.h. (153 knots)
	Maximum structural cruising	140 m.p.h. (122 knots)
	Maneuvering	140 m.p.h. (122 knots)
	Flaps extended	105 m.p.h. (92 knots)
C.G. Range	(+211.1) to (+216.5) at 3850 lb. (+204.5) to (+216.5) at 2945 lb. or less Straight line variation between points given.	
Empty weight C.G. range	None	
Maximum weight	3850 lb.	
No. of seats	2 (+202), 2 (+230) or (+236), 2 (+261)	
Maximum baggage	200 lb. (+285)	

Fuel capacity	57 gal. total; 52.5 gal. usable (2 wing tanks) (+219) with two-cell type tanks Macchi dwg. 2735 or 74.5 gal. total; 70 gal. usable (2 wing tanks) (+215) with four-cell type tanks Macchi dwg. 10085 or 91 gal. total; 84 gal. usable (2 wing tanks) (+219) with three-cell type tanks Macchi dwg. 27042 See NOTE 1 for unusable fuel. If four-cell type tanks, Macchi dwg. 10085, are installed, "Appendix C" is required in "Flight Manual".
Oil capacity	3 gal. (+135) (Unusable oil - 4 qt.) See NOTE 1 for system oil.

Control surface movements		
Wing flaps		Down 27 degrees ± 1 degree
Aileron	Up 10 degrees ± 1 degree	Down 11 degrees ± 1 degree
Elevator	Up 25 degrees ± 1/2 degree	Down 16 degrees ± 1 degree
Rudder	Right 20 degrees ± 1 degree	Left 19 degrees ± 1 degree

Horizontal Stabilizer (Plus) 0 degrees 50 min. ± 10 min. to (Minus)
4 degree 20 min. ± 10 min.

III. Model AL 60-F5 (Normal Category), Approved October 16, 1967, and Model AL 60-C5 (Normal Category) Approved February 29, 1968

(Model AL 60-F5 is similar to previous models except for major modifications to the airframe structure, such as strengthening of nose landing gear and engine mount. Model AL 60-C5 is the same as Model AL 60-F5 except for tail wheel type landing gear and location of fuselage door on left side.)

Engine	Lycoming IO-720-A1A
Fuel	100/130 minimum grade aviation gasoline
Engine limits	For all operations, 2650 r.p.m. (400 hp.)
Propeller and propeller limits	Hartzell HC-A3VK-4V8433 three-bladed constant speed. Diameter : Maximum 84 5/8 in., minimum allowable for repairs 82 5/8 in. (No further reduction permitted) Pitch setting at 30 in. radius : Low 12.0 degrees, High 33.9 degrees

Airspeed Limits		
	Never exceed	185 m.p.h. (160 knots)
	Maximum structural cruising	149 m.p.h. (129 knots)
	Maneuvering	149 m.p.h. (129 knots)
	Flaps extended	112 m.p.h. (97 knots)

C.G. Range	(+211.1) to (+217.9) at 4490 lb. (+203.5) to (+217.9) at 3300 lb. or less Straight line variation between points given.
Empty Weight C.G. Range	None
Maximum weight	4490 lb.
No. of Seats	2 (+202), 2 (+230) or (+236), 2 (+261)
Maximum baggage	200 lb (+285)
Fuel capacity	91 gal. total; 84 gal. usable (2 wing tanks) (+219) See NOTE 1 for unusable fuel

Oil capacity	17 qt. (+138) (Unusable oil - 5 qt.) See NOTE 1 for system oil.	
Control surface movements	Wing flaps	Down 32 degrees ± 1 degree
	Aileron Up 10 degrees ± 1 degree	Down 11 degrees ± 1 degree
	Elevator Up 25 degrees ± 1/2 degree	Down 16 degree ± 1 degree
	Rudder Right 20 degree ± 1 degree	Left 19 degrees ± 1 degree
	Horizontal Stabilizer (Plus) 3 degrees ± 1/2 degree to (Minus) 7 degrees ± 1/2 degree	

DATA PERTINENT TO ALL MODELS

Datum	191.67 in. forward of leading edge of wing at wing root.
Leveling means	Cabin floor - left center seat rail inside cabin door.
Serial Nos. eligible	A Registro Aeronautico Italiano (R.A.I.) Certificate of Airworthiness for Export endorsed as noted below under "Import requirement" must be submitted for each individual aircraft for which certification is made.
Certification basis	CAR 10. Type Certificate No. 7A12 issued June 26, 1961. Car 3 dated May 15, 1956, including Amendments 3 - 1 through 3 - 5.
Import Requirements	A U.S. Airworthiness Certificate may be issued on the basis of a Certificate of Airworthiness for Export signed by a representative of the Registro Aeronautico Italiano (R.A.I.), containing the following statement: "The airplane covered by this certificate has been examined and found to comply with U.S. Civil Air Regulation Part 3, dated May 15, 1956, including Amendment 3-1 through 3-5 and conforms to T.C. 7A12".
Equipment	The basic required equipment as prescribed in the applicable airworthiness regulations (See Certification basis) must be installed in the aircraft for certification. In addition, the following items of equipment are required: a. Pre-stall warning indicator, Safe Flight Instrument Corp. 164 R. b. 1. R.A.I. approved Airplane Flight Manual for AL 60-1 dated June 8, 1962 or 2. R.A.I. approved Airplane Flight Manual for AL 60-2 dated April 20, 1962 or 3. R.A.I. approved Airplane Flight Manual for AL 60-B-1 dated July 2, 1962 or 4. R.A.I. approved Airplane Flight Manual for AL 60-B-2 dated July 12, 1962 or 5. R.A.I. approved Airplane Flight Manual for AL 60-F5 dated July 26, 1967 or 6. R.A.I. approved Airplane Flight Manual for AL 60-C5 dated January 19, 1968 (See NOTE 3 for model designation).

NOTE 1. Current weight and balance report including list of equipment included in certificated empty weight, and loading instructions when necessary, must be provided for each aircraft at time of original certification and at all times thereafter. The certificated empty weight and corresponding center of gravity locations must include:

System oil of 1 lb. at (+135) and unusable fuel of 48 lb. at (+219) for the serial number 2/6144, 4/6146, 5/6147, 6/6148, 7/6149, 8/6150, 9/6154, 11/6156, 12/6157 (only Model AL60).

System oil of 1 lb. at (+135) and unusable fuel of 27 lb. at (+219) for the serial number 1/6143, 3/6145, 10/6155, 13/6158 and successive up to serial number 61/6241 fitted with two-cell type tanks Macchi dwg. 2735 and four-cell type tanks Macchi dwg. 10085 (Model AL-60 and AL 60-B).

System oil of 1 lb. at (+135) and unusable fuel of 42 lb. at (+219) for airplane fitted with three-cell type tanks Macchi dwg. 27042. (Model AL 60-B serial number 62/6242 and all successive).

System oil of 1 lb. at (+138) and unusable fuel of 42 lb. at (+219) for Model AL 60-F5 and AL 60-C5.

NOTE 2. The following placards must be displayed in front and in clear view of pilots:

"THIS AIRPLANE MUST BE OPERATED AS A NORMAL CATEGORY AIRPLANE IN COMPLIANCE WITH THE APPROVED AIRPLANE FLIGHT MANUAL".

"NO ACROBATIC MANEUVERS, INCLUDING SPINS, APPROVED".

NOTE 3. For convenience in identifying the appropriate model, the number following the dash identifies only the engine installation:

- 1 is applicable to Continental IO-470-R

- 2 is applicable to Continental TSIO-470-B

- 5 is applicable to Lycoming IO-720-A1A

NOTE 4. All Model LASA 60 aircraft were redesignated as Model AL 60 on April 27, 1962.

NOTE 5. When Aeronautica Macchi Modification Bulletin No. 7 dated September 20, 1962, is complied with, Model AL 60 is changed to AL 60-B.

Modification Kit supplied by Aeronautica Macchi will be accompanied by a "Certificato di Collaudo" issued by R.A.I. Two Flight Manuals, one for the owner, and one for the FAA Regional Office, will be supplied with each Kit.

NOTE 6. Each individual airplane will be supplied with a placard that specifies the kinds of operation such as VFR or IFR, Day or Night to which the operation of the airplane is limited by the equipment installed.

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