

DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION

A6SO  
Revision 2  
Mael  
(Burns)  
BA-42

October 1, 1977

TYPE CERTIFICATE DATA SHEET NO. A6SO

The data sheet which is a part of type certificate No. A6SO prescribes conditions and limitations under which the product for which the type certificate was issued, meets the airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder      Mael Aircraft Corporation  
Portage, Wisconsin

I - Model BA-42, 4 PCLM (Normal Category), approved May 12, 1970  
Model BA-42, 6 PCLM (Normal Category), approved October 3, 1977

Engines	2 Continental IO-360-D														
Fuel	100/130 Minimum grade aviation gasoline														
Engine limits	For all operations, 2800 rpm (210 hp)														
Propeller and propeller limits	2 McCauley, Hub Model D2AF34C59, Blade: Model 76C-2 Pitch: High 79°, Low 11.2°, measured at the 30 inch blade station. Diameter: 74 inches (no further reduction permitted). RPM Restrictions 1800-2050 with 18 inches MP, and above.														
Propeller spinners	2 Spinners, BAC P/N 42-6006 required														
Governors	2 Woodward, Model 210436														
Airspeed limits	<table border="0"> <tbody> <tr> <td>V<sub>NE</sub> (Never exceed)</td> <td>252 MPH (219 Kts.)</td> </tr> <tr> <td>V<sub>NO</sub> (Maximum Structural Cruise)</td> <td>200 MPH (173 Kts.)</td> </tr> <tr> <td>V<sub>A</sub> (Maximum Design Maneuvering)</td> <td>177 MPH (153 Kts.)</td> </tr> <tr> <td>V<sub>FE</sub> (Flaps Extended)</td> <td>145 MPH (126 Kts.)</td> </tr> <tr> <td>V<sub>LO</sub> (Landing Gear Operating)</td> <td>140 MPH (122 Kts.)</td> </tr> <tr> <td>V<sub>LE</sub> (Landing Gear Extended)</td> <td>155 MPH (134 Kts.)</td> </tr> <tr> <td>V<sub>MC</sub> (Minimum Control Speed)</td> <td>65 MPH (57 Kts.)</td> </tr> </tbody> </table>	V <sub>NE</sub> (Never exceed)	252 MPH (219 Kts.)	V <sub>NO</sub> (Maximum Structural Cruise)	200 MPH (173 Kts.)	V <sub>A</sub> (Maximum Design Maneuvering)	177 MPH (153 Kts.)	V <sub>FE</sub> (Flaps Extended)	145 MPH (126 Kts.)	V <sub>LO</sub> (Landing Gear Operating)	140 MPH (122 Kts.)	V <sub>LE</sub> (Landing Gear Extended)	155 MPH (134 Kts.)	V <sub>MC</sub> (Minimum Control Speed)	65 MPH (57 Kts.)
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C.G. range (Gear extended)	(+130.51) to (+138.85) at 3500 lbs. and less (+135.01) to (+138.85) at 4250 lbs. Straight line variation between points given  Moment change due to retracting landing gear: -1296 inch-pounds.														
Empty weight C.G. range	Maximum Aft permissible empty weight c.g. is 134.57 inches. Ballast may be required (see Dwg. No. 42-2031)														
Datum	Datum line is 137.0 inches forward of centerline of main frame (wing spar carry through).														
Leveling means	Level line on left side of vertical tail for longitudinal leveling. Deck of main frame at F. S. 137.0 for lateral leveling.														

Maximum weight	4250 pounds			
Number of seats	4 (2 at +118.6, 2 at +155.0) (4 PCLM Only) 6 (2 at +119.0, 2 at +156.0, 2 at +191.0) (6 PCLM)			
Maximum baggage	Baggage not authorized.			
Fuel capacity	100 gal. total (2 wing tanks, 50 gals. each) at +143.9. 37 gal. usable each tank. See Note 1 for system fuel. (4 PCLM only) 49 gal. usable each tank. See Note 1 for system fuel. (6 PCLM only)			
Oil capacity	20 qts. (10 qts. each engine) (7 qts. usable) at +92.0. See Note 1 for system oil.			
Control surface movements	Aileron	$16^{\circ} \pm 1.5^{\circ}$	Up	$16^{\circ} \pm 1.5^{\circ}$ Down
	Aileron tab (left wing only)	$14^{\circ} \pm 1.5^{\circ}$	Up	$14^{\circ} \pm 1.5^{\circ}$ Down
	Elevator	$11.75^{\circ} \pm 0.0^{\circ}$		$15^{\circ} \pm 1.5^{\circ}$ Down
		$0.75^{\circ}$	Up	
	Rudder	$23^{\circ} \pm 1.5^{\circ}$	Right	$23^{\circ} \pm 1.5^{\circ}$ Left
	Rudder Tab	$20^{\circ} \pm 1.5^{\circ}$	Right	$27^{\circ} \pm 1.5^{\circ}$ Left
	Flaps			$24^{\circ} \pm 1.5^{\circ}$ Down
Manufacturers Serial Nos. eligible	002 and up (See NOTE for 4 PCLM and Serial No. 001)			
Certification basis	FAR 21 effective 1 February 1965, including Amendments 1 through 15. FAR 23 effective 1 February 1965, including Amendments 1 through 4.			
Production basis	None. Prior to original certification of each aircraft, an FAA representative must perform a detailed inspection for workmanship, materials, and conformity with the approved technical data, and a check of the flight characteristics.			
Equipment	The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification. Additional required items of equipment are listed in the FAA approved BAC Report 42-7 or the Airplane Flight Manual. Burns Aircraft Corporation Airplane Flight Manual approved 12 May 1970, is required. (4 PCLM only). MacI Aircraft Corporation Airplane Flight Manual approved October 3, 1977, is required (6 PCLM).			

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 the time of original certification.

The certificated empty weight and the corresponding center of gravity; 1) must include 26 gals. of unusable fuel at (+130.9) and 4.0 lbs. of system oil at (+92.0) (4 PCLM only), 2) must include 2 gals. of unusable fuel at (+115.0) and 4.0 lbs. of system oil at (+92.0) (6 PCLM).

Note 2: All placards required in the approved airplane flight manual must be installed in the appropriate location.

Note 3: Intentionally left blank.

Note 4: The electrical system is limited to a continuous load not to exceed 24 amperes.

Note 5: The 4 PCLM approval was intended for Serial No. 001, only, which does not conform to type design data.

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