

C.G. range	<u>Normal or Utility Category</u> (+32.6) to (+40.7) at 1344 lb., or less (+33.9) to (+40.7) at 1700 lb. Straight line variation between points given.		
Empty weight C.G. range	None		
Maximum weight	1700 lb., <u>Normal or Utility Category</u>		
Number of seats	3 (2 at +37.3, 1 at +70.0). See NOTE 3 for rear seat occupancy.		
Maximum baggage	See NOTE 3.		
Fuel capacity	Standard interconnected wing tanks with float level fuel gauge: 27.6 gal., total (27 gal., usable, two 13.8 gal., tanks at +42.0) Long range interconnected wing tanks with float level fuel gauge: 47.6 gal., total (47 gal., usable, two 23.8 gal., tanks at +42.0) Standard separated wing tanks with electrical fuel gauge: 27.8 gal., total (25.4 gal., usable, two 13.9 gal., tanks at +42.0) Long range separated wing tanks with electrical fuel gauge: 48.6 gal., total (45 gal., usable, two 24.3 gal., tanks at +42.0)		
Oil capacity	5 qt., (-22.0) 6 qt., (-22.0) when Spec. CES 1108 engines are installed See NOTE 1 for unusable fuel and undrainable oil data.		
Control surface movements	Aileron	Up 17°30'	Down 13°30'
	Elevator	Up 25°	Down 30°
	Elevator trim tab	Up 28°*	Down 28°
	Rudder	Right 30°	Left 30°
	Wing flaps	Takeoff 0°	Landing 30°

*Up 20° as of the 281th aircraft

II - Model MS 885 (Super Rallye), 3 PCLM (Normal Category), approved 23 August 1962

Engine	Continental O-300-A or B		
Fuel	80/87 minimum grade aviation gasoline		
Engine limits	For all operations, 2700 rpm (145 hp)		
Propeller and propeller limits	McCauley 1C172/MDM 7652 TO 7658 Static r.p.m. at maximum permissible throttle setting: Not over 2400, not under 2150 No additional tolerances permitted. Diameter: Maximum 76 in., minimum allowable for repairs 74 in. No further reduction permitted. Spinner: SOCATA P/N 835-33		
Airspeed limits (IAS)	Never exceed	156 m.p.h. (135 knots)	
	Maximum structural cruising	125 m.p.h. (108 knots)	
	Maneuvering	120 m.p.h. (104 knots)	
	Flaps extended	87 m.p.h. (76 knots)	
C.G. range	(+32.6) to (+40.21) at 1499 lb., or less (+33.5) to (+40.21) at 1880 lb. Straight line variation between points given.		
Empty weight C.G. range	None		
Maximum weight	1880 lb.		
Number of seats	3 (2 at +37.3, 1 at +70.0). See NOTE 3 for rear seat occupancy.		
Maximum baggage	See NOTE 3.		
Fuel capacity	47.6 gal., total (47 gal., usable, two 23.8 gal., tanks at +42.0)		
Oil capacity	8 qt., (-19.4) See NOTE 1 for unusable fuel and undrainable oil data.		
Control surface movements	Aileron	Up 17°30'	Down 13°30'
	Elevator	Up 25°	Down 30°
	Elevator trim tab	Up 28°*	Down 28°
	Rudder	Right 30°	Left 30°
	Wing flaps	Takeoff 0°	Landing 30°

*Up 20° as of the 281th aircraft

III - Model MS 894A, 4 PCLM (Normal and Utility Category), approved 29 August 1968

(Similar to MS 885 except for modified rudder, increased skin thickness on airframe and powerplant installation).

IV - Model MS 894E (Rallye Minerva 220), 4 PCLM (Normal and Utility Category), approved 29 November 1972

(Similar to MS 894A except control wheel installed in lieu of stick, instrument panel and center pedestal changes, and introduction of electric flap system).

Engine	Franklin 6A 350 C1		
Fuel	100/130 minimum grade aviation gasoline		
Engine limits	For all operations, 2800 rpm (220 hp)		
Propeller and propeller limits	<ol style="list-style-type: none"> McCaughey 2 A 31C21/84 S-8 Diameter: maximum 76 in., minimum allowable for repairs 74 in. No further reduction permitted Pitch setting at 30 in., radius: Low 13°30' High 22° Spinner: SOCATA P/N 894.58.0.147.0 Woodward hydraulic governor 210453 or 210660 Hartzell HC - C2YF-1B/8459-4 Diameter: maximum 80 in., minimum allowable for repairs 76 in. No further reduction permitted Pitch setting at 30 in., radius: Low 11°30' High 31° Spinner: SOCATA P/N 894.58.0.147.0 Woodward hydraulic governor 210453 or 210660 		
Airspeed limits (IAS)	<u>Categories</u>	<u>Normal</u>	<u>Utility</u>
	Never exceed	190 m.p.h. (164 knots)	202 m.p.h. (175 knots)
	Maximum structural cruising	155 m.p.h. (135 knots)	155 m.p.h. (135 knots)
	Maneuvering	124 m.p.h. (108 knots)	130 m.p.h. (113 knots)
	Flaps extended	100 m.p.h. (86 knots)	100 m.p.h. (86 knots)
C.G. range	<u>MS 894A:</u>		
	Normal Category :	(+31.5) to (41.15) at weight lower than	1600 lb. 2205 lb. 2425 lb.
		(+34.4) to (41.15) at	
		(+38.2) to (41.15) at	
		Straight line variation between points given.	
	Utility Category:	(+31.5) to (41.15) at weight lower than	1600 lb. 2205 lb.
		(+34.4) to (41.15) at	
		Straight line variation between points given	
	<u>MS 894E:</u>		
	Normal Category :	(+31.0) to (41.15) at weight lower than	1660 lb. 2205 lb. 2425 lb.
		(+33.6) to (41.15) at	
		(+38.2) to (41.15) at	
		Straight line variation between points given.	
	Utility Category:	(+31.0) to (41.15) at weight lower than	1660 lb. 2205 lb.
		(+33.6) to (41.15) at	
		Straight line variation between points given	
Empty weight C.G. range	None		
Maximum weight	<u>Normal Category:</u>		
	Maximum T.O.	- 2425 lb.	
	Maximum Landing	- 2314 lb.	
	<u>Utility Category:</u>		
	Max. T.O. & Landing	2205 lb.	
Number of seats	<u>MS 894A:</u>		
	4 (2 at +37.3, 2 at +70.0)		
	<u>MS 894E:</u>		
	4 (2 at +38.1, 2 at +70.0)		
Maximum baggage	100 lb. (+96.3)		

Fuel capacity	Standard: 48.6 gal., total (45 gal., usable, two 24.3 gal., wing tanks at +42.0)		
	ong range: 62.0 gal., total (58 gal., usable, two 31.0 gal., wing tanks at +42.0)		
Oil capacity	9.5 qt., (-21.5)		
	See NOTE 1 for unusable fuel and undrainable oil data.		
Control surface movements	Aileron	Up 17°	Down 13°
	Elevator	Up 25°	Down 30° (Down 20° for MS 894E)
	Elevator trim tab	Up 20°	Down 28°
	Rudder	Right 30°	Left 30°
	Wing flaps	Takeoff 0°	Landing 30°
	Rudder trim tab	Right 10°	Left 25°

V - Model MS 892A-150 (Commodore), 4 PCLM (Utility Category), approved 22 June 1971

(Similar to MS 894A, except for powerplant installation).

VI - Model MS 892E-150 (Rallye 150GT), 4 PCLM (Utility Category), approved 29 November 1972

(Similar to MS 894E, except for powerplant installation).

Engine	Lycoming O-320-E2A
Fuel	80/87 minimum grade aviation gasoline
Engine limits	For all operations, 2700 rpm (150 hp)
Propeller and propeller limits	<ol style="list-style-type: none"> 1. Sensenich 74DM6-0-54 or M74DM-0-54 Static r.p.m. at maximum permissible throttle setting: Not over 2500, not under 2400 No additional tolerances permitted. Diameter: Maximum 74 in., minimum allowable for repairs 72 in. No further reduction permitted. Spinner: SOCATA P/N 892.58.0.161.0 2. Sensenich 74DM6-0-56 or M74DM-0-56 Static r.p.m. at maximum permitted throttle setting: Not over 2425, not under 2325 No additional tolerances permitted. Diameter: Maximum 74 in., minimum allowed for repairs 72 in. No further reduction permitted. Spinner: SOCATA P/N 892.58.0.161.0 3. Sensenich 74DM6-0-58 or M74DM-0-58 Static r.p.m. at maximum permitted throttle setting: Not over 2350, not under 2250 No additional tolerances permitted. Diameter: Maximum 74 in., minimum for repairs 72 in. No further reduction permitted. Spinner: SOCATA P/N 892.58.0.161.0 4. McCauley 1C172/MGM-7650 Static r.p.m. at maximum permitted throttle setting: Not over 2510, not under 2410 No additional tolerances permitted. Diameter: Maximum 76 in., minimum for repairs 74 in. No further reduction permitted. Spinner: SOCATA P/N 892.58.0.161.0 5. McCauley 1C172/MGM-7652 Static r.p.m. at maximum permitted throttle setting: Not over 2460, not under 2360 No additional tolerances permitted. Diameter: Maximum 76 in., minimum for repairs 74 in. No further reduction permitted. Spinner: SOCATA P/N 892.58.0.161.0

Airspeed limits (IAS)	Never exceed	180 m.p.h. (156 knots)
	Maximum structural cruising	155 m.p.h. (135 knots)
	Maneuvering	130 m.p.h. (113 knots)
	Flaps extended	100 m.p.h. (86 knots)
C.G. range	(+30.7) to (+41.15) at 1510 lb., or less (+37.1) to (+41.15) at 2160 lb. Straight line variation between points given.	
Empty weight C.G. range	None	
Maximum weight	2160 lb.	
Number of seats	<u>Model MS 892A-150:</u> 4 (2 at +37.3; 2 at +70.0)	
	<u>Model MS 892E-150:</u> 4 (2 at +38.1; 2 at +70.0)	
Maximum baggage	100 lb. (+96.3)	
Fuel capacity	Standard: 48.6 gal., total (45 gal., usable, two 24.3 gal., wing tanks at +42.0) Long range: 62.0 gal., total (58 gal., usable, two 31.0 gal., wing tanks at +42.0)	
Oil capacity	8.5 qt., (-19.4) See NOTE 1 for unusable fuel and undrainable oil data.	
Control surface movements	Aileron	Up 17° Down 13°
	Elevator	Up 25° Down 28° (Down 20° for MS 892E-150)
	Elevator trim tab	Up 20° Down 28°
	Rudder	Right 30° Left 30°
	Wing flaps	Takeoff 0° Landing 30°

VII - Model MS 893A (Rallye Commodore), 4 PCLM (Normal and Utility Category), approved 22 June 1971
(Similar to MS 894A except for powerplant installation).

VIII - Model MS 893E (Rallye 180 GT), 4 PCLM (Normal and Utility Category), approved 29 November 1972
(Similar to MS 894E except for powerplant installation).

Engine	Lycoming O-360-A1A, O-360-A2A, or O-360-A3A
Fuel	91/96 minimum grade aviation gasoline
Engine limits	For all operations, 2700 rpm (180 hp)
Propeller and propeller limits	1. Sensenich 76EM8-0-54 or M76EMM-0-54 * (with O-360-A2A engine) Static r.p.m. at maximum permitted throttle setting: Not over 2500, not under 2400 No additional tolerances permitted. Diameter: Maximum 76 in., no further reduction permitted. Spinner: SOCATA P/N 892.58.0.161.0
	2. Sensenich 76EM8-0-56 or M76EMM-0-56 * (with O-360-A2A engine) Static r.p.m. at maximum permitted throttle setting: Not over 2450, not under 2350 No additional tolerances permitted. Diameter: Maximum 76 in., no further reduction permitted. Spinner: SOCATA P/N 892.58.0.161.0
	3. Sensenich 76EM8-0-58 or M76EMM-0-58 * (with O-360-A2A engine) Static r.p.m. at maximum permitted throttle setting: Not over 2425, not under 2325 No additional tolerances permitted. Diameter: Maximum 76 in., no further reduction permitted. Spinner: SOCATA P/N 892.58.0.161.0

4. Sensenich 76EM8-0-60 or M76EMM-0-60 * (with O-360-A2A engine)
 Static r.p.m. at maximum permitted throttle setting:
 Not over 2400, not under 2300
 No additional tolerances permitted.
 Diameter: Maximum 76 in., no further reduction permitted.
 Spinner: SOCATA P/N 892.58.0.161.0
5. Hartzell HC-C2YK-1B/7666A-2 * (with O-360-A1A engine)
 Diameter: Maximum 74 in., minimum for repairs 72 in.
 No further reduction permitted.
 Pitch setting at 30 in., radius: Low 11°30'
 High 31°
 Spinner: HARTZELL P/N 835.33
 Hartzell hydraulic governor F4-4A

*Placards required: Sensenich propellers - "Avoid continuous operation between 2150 and 2350 r.p.m."

Hartzell propellers - "Avoid continuous operation between 2000 and 2250 r.p.m."

Airspeed limits (IAS)

Normal and Utility Category

Never exceed	180 m.p.h. (156 knots)
Maximum structural cruising	155 m.p.h. (135 knots)
Maneuvering	130 m.p.h. (113 knots)
Flaps extended	100 m.p.h. (86 knots)

C.G. range

Normal Category:

(+30.7) to (+41.15) at 1510 lb., or less
 (+38.2) to (+41.15) at 2314 lb.
 Straight line variation between points given.

Utility Category:

(+30.7) to (+41.15) at 1510 lb., or less
 (+37.2) to (+41.15) at 2205 lb.
 Straight line variation between points given.

Empty weight C.G. range

None

Maximum weight

Normal Category:

Maximum T.O.	- 2314 lb.
Maximum Landing	- 2205 lb.

Utility Category:

Maximum T.O. and Landing - 2205 lb.

Number of seats

MS 893A:

4 (2 at +37.3; 2 at +70.0)

MS 893E:

4 (2 at +38.1; 2 at +70.0) Maximum baggage 100 lb. (+96.3)

Fuel capacity

Standard: 48.6 gal., total (45 gal., usable, two 24.3 gal., wing tanks at +42.0)
 Long range: 62.0 gal., total (58 gal., usable, two 31.0 gal., wing tanks at +42.0)
 (See NOTE 2).

Oil capacity

8.5 qt., (-19.4)

See NOTE 1 for unusable fuel and undrainable oil data.

Control surface movements

Aileron	Up 17°	Down 13°
Elevator	Up 25°	Down 28° (Down 20° for MS 893E)
Elevator trim tab	Up 20°	Down 28°
Rudder	Right 30°	Left 30°
Wing flaps	Takeoff 0°	Landing 30°

IX - Model Rallye 100S, 2 PCLM (Utility Category), approved 4 April 1975

Engine	Continental O-200-A; or Rolls-Royce RR O-200-A		
Fuel	80/87 minimum grade aviation gasoline or AVGAS 100 L according to Service Bulletin Rolls-Royce T-220/1-T-229		
Engine limits	For all operations, 2750 rpm (100 hp)		
Propeller and propeller limits	<u>Utility Category:</u> McCauley 1A101/DCM-6948 Static r.p.m. at maximum permissible throttle setting: Not over 2500, not under 2400 No additional tolerances permitted. Diameter: Maximum 69 in., minimum allowable for repairs 67 in. No further reduction permitted.		
Airspeed limits (IAS)	<u>Utility Category:</u> Never exceed 168 m.p.h. (145 knots) Maximum structural cruising 125 m.p.h. (108 knots) Maneuvering 120 m.p.h. (104 knots) Flaps extended 87 m.p.h. (76 knots)		
C.G. range	<u>Utility Category:</u> (+32.6) to (+37.1) at 1344 lb., or less (+33.7) to (+37.1) at 1655 lb. Straight line variation between points given.		
Empty weight C.G. range	None		
Maximum weight	1655 lb.		
Number of seats	2 at (+37.3)		
Maximum baggage	44 lb.		
Fuel capacity	Standard separated wing tanks with electrical fuel gauge: 27.8 gal., total (25.4 gal., usable, two 13.9 gal., tanks at +42.0)		
Oil capacity	Never use detergent oil 5 qt., (-22.0) 6 qt., (-22.0) when Spec. CES 1108 engines are installed. See NOTE 1 for unusable fuel and undrainable oil data.		
Control surface movements	Aileron	Up 17°30'	Down 13°30'
	Elevator	Up 30°	Down 25°
	Elevator trim tab	Up 28° *	Down 28°
	Rudder	Right 30°	Left 30°
	Wing flaps	Takeoff 0°	Landing 30°
	* Up 20° as of the 281th aircraft.		

X - Model Rallye 150 ST, 4 PCLM (Normal or Utility Category), approved November 18, 1976

Engine	Lycoming O-320-E2A		
Fuel	80/87 or AVGAS 100 L grade aviation gasoline.		
Engine limits	For all operations, 2700 rpm (150 hp)		
Propeller and propeller limits	Sensenich 74 DM 6 056 Static r.p.m. at maximum permissible throttle setting: Not over 2450, not under 2200 No additional tolerances permitted. Diameter: Maximum 74 in., minimum allowable for repairs 72 in. No further reduction permitted. Spinner: SOCATA P/N 892.58.0.161.0		

Airpeed limits (IAS)		<u>Normal Category</u>	<u>Utility Category</u>
	Never exceed	156 m.p.h. (135 knots)	168 m.p.h. (145 knots)
	Maximum structural cruising	125 m.p.h. (108 knots)	125 m.p.h. (108 knots)
	Maneuvering	120 m.p.h. (104 knots)	120 m.p.h. (104 knots)
	Flaps extended	99 m.p.h. (86 knots)	99 m.p.h. (76 knots)
C.G. range	<u>Normal Category:</u> (+32.0 in.) to (+41.22 in.) at 1642 lb. or less (+34.68 in.) to (+41.22 in.) at 1918 lb.		
	<u>Utility Category</u> (+32.55 in.) to (+35.10 in.) at 1698 lb. (Spins) Straight line variation between points given.		
Empty weight C.G. range	None		
Maximum weight	1918 lb.		
Number of seats	4 (2 at +37.3 in.; 2 at +70.0 in.) See NOTE 6 for rear seat occupancy.)		
Maximum baggage	See NOTE 6.		
Fuel capacity	Standard: 27.8 gal., total (25.46 gal., usable, two 13.9 gal., tanks at +42.0) Optional 48.6 gal. total (45 gal. usable, two 24.3 gal. tanks at +42.0)		
Oil capacity	8.5 qt., (-19.4) See NOTE 1 for unusable fuel and undrainable oil data.		
Control surface movements	Aileron	Up 17°30'	Down 13°30'
	Elevator	Up 30°	Down 25°
	Elevator trim tab	Up 30°	Down 28°
	Rudder	Right 30°	Left 30°
	Wing flaps	Takeoff 0°	Landing 30°

XI - Model Rallye 150 T, 4 PCLM (Utility Category), approved November 18, 1976

Engine	Lycoming O-320-E2A		
Fuel	80/87 or AVGAS 100 L grade aviation gasoline		
Engine limits	For all operations, 2700 r.p.m. (150 hp)		
Propeller and propeller limits	Sensenich 74 DM 6 - 054 at 74 DM 6 - 060 Static r.p.m. at maximum permissible throttle setting: Not over 2450, not under 2200 No additional tolerances permitted. Diameter: Maximum 74 in., minimum allowable for repairs 72 in. No further reduction permitted. Spinner: SOCATA P/N 892.58.0.161.0		
Airpeed limits (IAS)	<u>Utility Category:</u>		
	Never exceed	168 m.p.h. (145 knots)	
	Maximum structural cruising	125 m.p.h. (108 knots)	
	Maneuvering	130 m.p.h. (113 knots)	
	Flaps extended	100 m.p.h. (86 knots)	
C.G. range	<u>Utility Category:</u> (+32.0) to (+41.22 in.) at 1642 lb. or less (+36.33 in.) to (+41.22 in.) at 2095 lb. Straight line variation between points given.		
Empty weight C.G. range	None		
Maximum weight	2095 lb.		
Number of seats	4 (2 at +37.3 in.; 2 at +70.0 in.) See NOTE 6 for rear seat occupancy.		
Maximum baggage	See NOTE 6.		
Fuel capacity	Standard: 48.6 gal., total (45 gal., usable, two 24.3 gal., wing tanks at +42.0 in.)		
Oil capacity	8 qt., (-19.4 in.) See NOTE 1 for unusable fuel and undrainable oil data.		

Control surface movements	Aileron	Up	17°	Down	13°
	Elevator	Up	25°	Down	30°
	Elevator trim tab	Up	30°	Down	28°
	Rudder	Right	30°	Left	30°
	Wing flaps	Takeoff	0°	Landing	30°

XII - Model Rallye 235 E, 4 PCLM (Normal or Utility Category), approved November 18, 1976

Engine	Lycoming O-540-B4-B5				
Fuel	80/87 minimum grade aviation gasoline or 100 L AVGAS				
Engine limits	For all operations, 2575 rpm (235 hp)				
Propeller and propeller limits	Hartzell HC-C2YK-1BF/F8468.A-4. Diameter: Maximum 80 in., minimum allowable for repairs 77 in. No further reduction permitted. Pitch setting at 30 in., Radius: low 12°50', high 28°18' Spinner: HARTZELL 835-33 Woodward 210-681 hydraulic governor.				
Airspeed limits (IAS)		<u>Normal Category</u>	<u>Utility Category</u>		
	Never exceed	196 m.p.h. (170 knots)	209 m.p.h. (182 knots)		
	Maximum structural cruising	156 m.p.h. (135 knots)	156 m.p.h. (135 knots)		
	Maneuvering	130 m.p.h. (113 knots)	130 m.p.h. (113 knots)		
	Flaps extended	109 m.p.h. (95 knots)	109 m.p.h. (95 knots)		
C.G. range	<u>Normal Category:</u> (+31.0 in.) to (41.22 in.) at weight lower than 1764 lb. (+33.54 in.) to (41.22 in.) at weight lower than 2315 lb. (+38.2 in.) to (41.22 in.) at weight lower than 2645 lb. Straight line variation between points given.				
	<u>Utility Category</u> (+31.0 in.) to (41.22 in.) at weight lower than 1764 lb. (+33.54 in.) to (41.22 in.) at weight lower than 2205 lb. Straight line variation between points given.				
Empty weight C.G. range	None				
Maximum weight	<u>Normal Category:</u> Maximum T.O. 2645 lb. - Maximum landing 2513 lb.				
	<u>Utility Category:</u> Maximum T.O. and landing - 2205 lb.				
Number of seats	4 (2 at +38.1 in.; 2 at +70.0 in.)				
Maximum baggage	100 lb. (+96.3 in.)				
Fuel capacity	Standard separated wing tanks with electrical fuel gauge: 74 gal., total (71.32 gal., usable, two 37 gal. wing tanks at +42.0)				
Oil capacity	14.3 qt., (-19.7) See NOTE 1 for unusable fuel and undrainable oil data.				
Control surface movements	Aileron	Up	17°	Down	13°
	Elevator	Up	25°	Down	20°
	Elevator trim tab	Up	20°	Down	28°
	Rudder	Right	30°	Left	30°
	Wing flaps	Takeoff	0°	Landing	30°
	Rudder trim tab	Right	10°	Left	25°

XIV - Model Rallye 235C, 4 PCLM (Normal or Utility Category), approved June 14, 1979

Engine	Lycoming O-540-B4-B5		
Fuel	80/87 or AVGAS 100LL grade aviation gasoline.		
Engine limits	For all operations: 2575 rpm (235 hp)		
Propeller and propeller limits	HARTZELL HC-C2YK-1BF/F-8468 A-4 Diameter: Maximum 80 in., minimum allowable for repairs 77 in. No further reduction permitted. Pitch setting at 30 in., Radius: Low 12°50', high 28°18'. Spinner: HARTZELL 835-33 Woodward 210-681 hydraulic governor.		
Airspeed limits (IAS)		<u>Normal Category</u>	<u>Utility Category</u>
	Never exceed	196 m.p.h. (170 knots)	209 m.p.h. (182 knots)
	Maximum structural cruising	155 m.p.h. (135 knots)	155 m.p.h. (135 knots)
	Maneuvering	130 m.p.h. (113 knots)	130 m.p.h. (113 knots)
	Flaps extended	109 m.p.h. (95 knots)	109 m.p.h. (95 knots)
C.G. range	<u>Normal Category:</u> (+31.0 in.) to (41.22 in.) at weight lower than 1764 lb. (+33.54 in.) to (41.22 in.) at weight lower than 2315 lb. (+38.2 in.) to (41.22 in.) at weight lower than 2645 lb. Straight line variation between points given.		
	<u>Utility Category</u> (+31.0 in.) to (41.22 in.) at weight lower than 1764 lb. (+33.0 in.) to (41.22 in.) at weight lower than 2205 lb. Straight line variation between points given.		
Empty weight C.G. range	None		
Maximum weight	<u>Normal Category:</u> Maximum T.O. 2645 lb. - Maximum landing 2513 lb.		
	<u>Utility Category</u> Maximum T.O. and landing 2205 lb.		
Number of seats	4 (2 at +38.1 in.; 2 at +70.0 in.)		
Maximum baggage	100 lb. (96.3 in.)		
Fuel capacity	Standard separated wing tanks with electrical fuel gauge: 74 gal., Total (71.32 gal., usable, two 37 gal. wing tanks at +42.0)		
Oil capacity	14.3 qt., (-19.7) See NOTE 1 for unusable fuel and undrainable oil data.		
Control surface movements	Aileron	Up 17°	Down 13°
	Elevator	Up 25°	Down 20°
	Elevator trim tab	Up 20°	Down 28°
	Rudder	Right 30°	Left 30°
	Wing flaps	Takeoff 0°	Landing 30°
	Rudder trim tab	Right 10°	Left 25°

DATA PERTINENT TO ALL MODELS

Datum	Front face of firewall.
Leveling means	Longitudinal fuselage longerons used as canopy rails.

Serial Numbers eligible	A Certificate of Airworthiness for Export endorsed as noted under "Import Requirements" must be submitted for each individual aircraft for which application for U.S. certification is made.
Certification basis	<p>CAR.10 - CAR.3 effective 15 May 1956, including amendments 3-1 through 3-5. Type Certificate No. 7A14 issued 21 November 1961. Application for Type Certificate dated 19 December 1960.</p> <p>The Direction Générale de l'Aviation Civile (DGAC) originally type certificated this aircraft under its type certificate Numbers TC 13 and TC 22. The FAA validated this product under U.S. Type Certificate Number 7A14. Effective September 28, 2003, the European Aviation Safety Agency (EASA) began oversight of this product on behalf of France.</p>
Import requirements	The FAA can issue a U.S. airworthiness certificate based on an NAA Export Certificate of Airworthiness (Export C of A) signed by a representative of the Direction Générale de l'Aviation Civile (DGAC) on behalf of the European Community. The Export C of A should contain the following statement: 'The aircraft covered by this certificate has been examined, tested, and found to comply with U.S. airworthiness regulations Civil Air Regulation Part 3 dated 15 May 1956, including Amendments 3-1 through 3-5 approved under U.S. Type Certificate No. 7A14 and to be in a condition for safe operation.'
Equipment	<p>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 is required:</p> <p>(a) DGAC approved Airplane Flight Manual for the Models MS 894A, MS 894E, Rallye 100 S, Rallye 150 ST, Rallye 150 T, and Rallye 235 E and Rallye 235C only.</p>
Service Information	<p>Each of the documents listed below must state that it is approved by the European Aviation Safety Agency (EASA) or – for approvals made before September 28, 2003 – by the Direction Générale de l'Aviation Civile (DGAC).</p> <ul style="list-style-type: none"> • Service bulletins, • Structural repair manuals, • Vendor manuals, • Aircraft flight manuals, and • Overhaul and maintenance manuals. <p>The FAA accepts such documents and considers them FAA-approved unless one of the following conditions exists:</p> <ul style="list-style-type: none"> • The documents change the limitations, performance, or procedures of the FAA approved manuals; or • The documents make an acoustical or emissions changes to this product's U.S. type certificate as defined in 14 CFR § 21.93. <p>The FAA uses the post type validation procedures to approve these documents. The FAA may delegate on case-by-case to EASA to approve on behalf of the FAA for the U.S. type certificate. If this is the case it will be noted on the document.</p>

NOTES

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 corresponding center of gravity location must include unusable fuel and undrainable oil as follows:

<u>Model</u>	<u>Tank Configuration</u>	<u>Unusable Fuel</u>	<u>Undrainable Oil</u>
MS 880B	Standard, interconnected tanks	4 lb., (+42.0)	0 lb.
MS 880B	Long range, interconnected tanks	4 lb., (+42.0)	0 lb.
MS 880B	Standard, separated tanks	7 lb., (+42.0)	0 lb.
MS 880B	Long range, separated tanks	7 lb., (+42.0)	0 lb.
MS 885	Standard	4 lb., (+42.0)	0 lb.
MS 894A & MS 894E	Standard	7 lb., (+42.0)	0 lb.
MS 894A & MS 894E	Long range	7 lb., (+42.0)	0 lb.
MS 892A & MS 892E	Standard	7 lb., (+42.0)	0 lb.
MS 892A & MS 892E	Long range	7 lb., (+42.0)	0 lb.
MS 893A & MS 893E	Standard	7 lb., (+42.0)	0 lb.
MS 893A & MS 893E	Long range	7 lb., (+42.0)	0 lb.
Rallye 100 S	Standard, separated tanks	7 lb., (+42.0)	0 lb.
Rallye 150 ST	Standard, separated tanks	7 lb., (+42.0)	0 lb.
Rallye 150 T	Standard, separated tanks	7 lb., (+42.0)	0 lb.
Rallye 235 E	Standard, separated tanks	7 lb., (+42.0)	0 lb.
Rallye 235 C	Standard, separated tanks	7 lb., (+42.0)	0 lb.

NOTE 2. Model MS 880B - Normal Category:

- (a) The following placard must be displayed in front and in clear of the pilots:
- 1) "This airplane must be operated in normal category in compliance with the operating limitations stated in the form of placards, markings and manuals. No acrobatic maneuvers, including spins, approved".
 - 2) "Avoid continuous operation over 2650 r.p.m."
 - 3) "Maximum weight 1700 lb.
Flight maneuvering load factor (flaps up) + 3.8, - 1.5
Never exceed speed (IAS) 156 m.p.h. (135 knots)
Maneuvering speed (IAS) 120 m.p.h. (104 knots)
Maximum speed rough air (IAS) 125 m.p.h. (108 knots)
Maximum speed flaps extended (IAS) 87 m.p.h. (76 knots)"
- (b) The following placard must be displayed in the rear seat area:
"Maximum weight on rear seats 240 lb."

For additional loading instructions, see weight and balance data. Model MS 880B - Utility Category:

- (a) The following placards must be displayed in front and in clear view of the pilots:
- 1) "This airplane must be operated in Utility Category in compliance with the operating limitations stated in the form of placards, markings and manuals. Acrobatic maneuvers are limited to the following:

<u>Maneuver</u>	<u>Recommended Entry Speed</u>
Lazy eight	137 m.p.h. (119 knots)
Chandelle	149 m.p.h. (130 knots)
Steep turns	106 m.p.h. (92 knots)
Stalls (except whip)	Slow deceleration
Spins are prohibited."	
 - 2) "Maximum weight 1700 lb.
Flight maneuvering load factor (flaps up) + 4.4, - 1.8
Never exceed speed (IAS) 168 m.p.h. (145 knots)
Maneuvering speed (IAS) 120 m.p.h. (104 knots)
Maximum speed rough air (IAS) 125 m.p.h. (108 knots)
Maximum speed flaps extended (IAS) 87 m.p.h. (76 knots)"
- (b) The following placard must be displayed in the rear seat area:
"Maximum weight on rear seats 240 lb."
For additional loading instructions, see weight and balance data.

Model MS 885:

- (a) The following placards must be displayed in front and in clear view of the pilots:
- 1) "This airplane must be operated in normal category in compliance with the operating limitations stated in the form of placards, markings and manuals. No acrobatic maneuvers, including spins, approved".
 - 2) "Maximum weight 1880 lb.
Flight maneuvering load factor (flaps up) + 3.8, - 1.5
Never exceed speed (IAS) 156 m.p.h. (135 knots)
Maneuvering speed (IAS) 120 m.p.h. (104 knots)

Maximum speed rough air (IAS)	125 m.p.h. (108 knots)
Maximum speed flaps extended (IAS)	87 m.p.h. (76 knots)"

- (b) The following placard must be displayed in the rear seat:
 "Maximum weight on rear seats 240 lb."
 For additional loading instructions, see weight and balance data.

Models MS 894A and MS 894E:

- (a) The following placards must be displayed in front and in clear view of the pilots:

- On instrument panel:

- 1) "This airplane must be operated as a normal or utility category airplane in compliance with the approved airplane flight manual. All markings and placards on this airplane apply to its operations as a normal category airplane. For utility category operations refer to the airplane flight manual".

- 2) "Only the following acrobatic maneuvers are approved when flying at "Utility category (maximum weight 2205 lb., or less):

Steep turn	103 knots	118 m.p.h.
Chandelle	130 knots	149 m.p.h.
Lazy eight	119 knots	137 m.p.h.
Stalls (except whip)	Slow deceleration"	

- 3) "No acrobatic maneuvers including spins are approved for normal category operations".

- 4) "Max. speed with fully extended flaps at 30°
- | | | |
|---|-------------------|--------------------|
| Maneuvering maximum speed | 86 knots | 100 m.p.h. |
| | 113 knots | 130 m.p.h. |
| | <u>Category U</u> | <u>Category N</u> |
| Maximum weight | 2205 lb. | 2425 lb. |
| Flight maneuvering load factor (flaps up) | + 4.4, - 1.8 | + 3.8, - 1.5 |
| Never exceed speed (IAS) | 202 mph (175 kts) | 190 mph (164 kts) |
| Maneuvering speed (IAS) | 130 mph (113 kts) | 124 mph (108 kts) |
| Maximum speed rough air (IAS) | 155 mph (135 kts) | 155 mph (135 kts) |
| Maximum speed flaps extended (IAS) | 100 mph (86 kts) | 100 mph (86 kts)" |

Models MS 892A-150 and MS 892E-150:

- (a) The following placards must be displayed in front and in clear view of the pilots:

- 1) "This airplane must be operated as a Utility Category airplane in compliance with the operating limitations stated in the form of placards, markings and manuals. Acrobatic maneuvers are limited to the following:

<u>Maneuver</u>	<u>Recommended Entry Speed</u>
Lazy eight	137 m.p.h. (119 knots)
Chandelle	149 m.p.h. (130 knots)
Steep turns	109 m.p.h. (94 knots)
Stalls (except whip)	Slow deceleration
Spins are prohibited".	

- 2) "Maximum weight 2160 lb.
 Flight maneuvering load factor (flaps up) + 4.4, - 1.8
 Never exceed speed (IAS) 180 m.p.h. (156 knots)
 Maneuvering speed (IAS) 130 m.p.h. (113 knots)
 Maximum speed rough air (IAS) 155 m.p.h. (135 knots)
 Maximum speed flaps extended (IAS) 100 m.p.h. (86 knots)"

- (b) The following placards must be displayed on the fuel gauge:

- 1) Under the left tank gauge -
 "22.5 gal usable" or "29 gal. usable" (as applicable)

- 2) Under the right tank gauge -
"22.5 gal usable" or "29 gal. usable" (as applicable)
- (c) The following fuel and oil placards must be displayed on -
 - 1) Each fuel tank cover (2):

"80/87 min. grade aviation gasoline".
"22.5 gal. usable" or "29 gal. usable" (as applicable)
 - 2) Oil cap: "8.5 qt".

Models MS 893A and MS 893E:

- (a) The following placards must be displayed in front and in clear view of the pilots:

- 1) "This airplane must be operated as a normal or utility category airplane in compliance with the operating limitations stated in the form of placards, markings and manuals.
- 2) "No acrobatic maneuver, including spins approved when operating in the normal category".
- 3) "Only the following acrobatic maneuvers are approved when operating in the utility category (maximum weight 2205 lb., or less).

<u>Maneuver</u>	<u>Recommended Entry Speed</u>
Lazy eight	137 m.p.h. (119 knots)
Chandelle	149 m.p.h. (130 knots)
Steep turns	109 m.p.h. (94 knots)
Stalls (except whip)	Slow deceleration
Spins are prohibited."	

- 4) Never exceed speed (IAS) 180 m.p.h. (156 knots)
Maneuvering speed (IAS) 130 m.p.h. (113 knots)
Maximum speed rough air (IAS) 155 m.p.h. (135 knots)
Maximum speed flaps extended (IAS) 100 m.p.h. (86 knots)"

5)	<u>"Category N</u>	<u>Category U</u>
Maximum weights:		
Takeoff	2314 lb.	2205 lb.
Landing	2205 lb.	2205 lb.
Flight maneuvering load factors (flaps up)	+ 3.8, - 1.5	+ 4.4, - 1.8"

- 6) "Avoid continuous operation between 2150 and 2350 r.p.m." (Sensenich propellers)
"Avoid continuous operation between 2000 and 2250 r.p.m." (Hartzell propeller)

- (b) The following placards must be displayed on the fuel gauge:

- 1) Under the left tank gauge -
"22.5 gal usable" or "29 gal. usable" (as applicable) except from serial number 2642 on MS-893E only "29 gal. usable" applies)
- 2) Under the right tank gauge -
"22.5 gal usable" or "29 gal. usable" (as applicable) except from serial number 2642 on MS-893E only "29 gal. usable" applies)

- (c) The following fuel and oil placards must be displayed on -

- 1) Each fuel tank cover (2):
"91/96 min. grade aviation gasoline".
"22.5 gal. usable" or "29 gal. usable" (as applicable) except from serial number 2642 on MS-893E only "29 gal. usable" applies).
- 2) Oil cap: "8.5 qt".

Model Rallye 100 S - Utility Category:

- (a) The following placards must be displayed in front and in clear view of the pilots:
- 1) "This airplane must be operated as a utility category airplane in compliance with the operating limitations stated in the form of placards, markings and manuals.

Acrobatic maneuvers are limited to the following:

<u>Maneuver</u>	<u>Recommended Entry Speed</u>
Lazy eight	137 m.p.h. (119 knots)
Chandelle	149 m.p.h. (130 knots)
Steep turns	106 m.p.h. (92 knots)
Stalls (except whip)	Slow deceleration
Spins	62 m.p.h. (54 knots)"

- 2) "Maximum weight 1656 lb.
Flight maneuvering load factor (flaps up) + 4.4, - 1.8
Never exceed speed (IAS) 168 m.p.h. (145 knots)
Maneuvering speed (IAS) 120 m.p.h. (104 knots)
Maximum speed rough air (IAS) 125 m.p.h. (108 knots)
Maximum speed flaps extended (IAS) 87 m.p.h. (76 knots)"

- (b) The following placard must be displayed in the baggage compartment:
"Maximum weight baggage: 44 lb."
For additional loading instructions, see weight and balance data.

Model Rallye 150 ST:

- (a) The following placards must be displayed in front and in clear view of the pilots:
- 1) "This airplane must be operated as a normal or utility category airplane in compliance with the operating limitations stated in the form of placards, markings and manuals."
 - 2) "No acrobatic maneuver, including spins approved when operating in the Normal Category".
 - 3) "Only the following acrobatic maneuvers are approved when operating in the Utility Category (maximum weight 1700 lb., or less):

<u>Maneuver</u>	<u>Recommended Entry Speed</u>
Lazy eight	137 m.p.h. (119 knots)
Chandelle	149 m.p.h. (130 knots)
Steep turns	106 m.p.h. (92 knots)
Stalls (except whip)	Slow deceleration
Spins	62 m.p.h. (54 knots)

- 4)

	<u>Category U</u>	<u>Category N</u>
"Maximum weight	1698 lb.	1918 lb.
Flight maneuvering load factor (flaps up)	+ 4.4, - 1.8	+ 3.8, -1.5
Never exceed speed (IAS)	168 mph (145 knots)	156 mph (135 knots)
Maneuvering speed (IAS)	120 mph (104 knots)	120 mph (104 knots)
Maximum speed rough air (IAS)	125 mph (108 knots)	125 mph (108 knots)
Maximum speed flaps extended (IAS)	99 mph (86 knots)	99 mph (86 knots)

- (b) The following placard must be displayed in the rear seat area.
"Maximum weight on rear seats: 287 lb".
For additional loading instructions see weight and balance data.

- (c) The following placard must be displayed on the fuel gauge -
- 1) "Under the left tank gauge : "12.7 gal usable" or "22.5 gal. usable" (as applicable)
 - 2) "Under the right tank gauge : "12.7 gal. usable" or "22.5 gal usable" (as applicable)
- (d) The following fuel and oil placards must be displayed on:
- 1) Each fuel tank cover (2):

"80/87 or 100 L grade aviation gasoline".
"12.7 gal. usable" or "22.5 gal. usable" (as applicable)

- 2) Oil cap: "8.5 qt".

Model Rallye 150 T:

- (a) The following placards must be displayed in front and in clear view of the pilots:

- 1) "This airplane must be operated as a Utility Category airplane in compliance with the operating limitations stated in the form of placards, markings and manuals.

Acrobatic maneuvers are limited to the following:

<u>Maneuver</u>	<u>Recommended Entry Speed</u>
Lazy eight	137 m.p.h. (119 knots)
Chandelle	149 m.p.h. (130 knots)
Steep turns	109 m.p.h. (94 knots)
Stalls (except whip)	Slow deceleration
Spins	62 m.p.h. (54 knots)"

- 2) "Maximum weight 2095 lb.
 Flight maneuvering load factor (flaps up) + 4.4, - 1.8
 Never exceed speed (IAS) 168 m.p.h. (145 knots)
 Maneuvering speed (IAS) 130 m.p.h. (113 knots)
 Maximum speed rough air (IAS) 125 m.p.h. (108 knots)
 Maximum speed flaps extended (IAS) 100 m.p.h. (86 knots)"

- (b) The following placard must be displayed in the rear seat area:
 "Maximum weight on rear seats: 309 lb."

For additional loading instructions, see weight and balance data.

- (c) The following placards must be displayed on the fuel gauge -

- 1) "Under the left tank gauge : 22.5 gal. usable"
 2) "Under the right tank gauge : 22.5 gal usable"

- (d) The following fuel and oil placards must be displayed on:

- 1) Each fuel tank cover (2):
 "80/87 or 100 L grade aviation gasoline
 22.5 gal. usable".

- 2) Oil cap: "8.5 qt".

Model Rallye 235 E:

- (a) The following placards must be displayed in front and in clear view of the pilots:

- 1) "This airplane must be operated as a normal or utility category airplane in compliance with the operating limitations stated in the form of placards, markings and manuals.
 2) "No acrobatic maneuver, including spins, approved when operating in the Normal Category."
 3) "Only the following acrobatic maneuvers are approved when operating in the Utility Category (maximum weight 2205 lb., or less):

<u>Maneuver</u>	<u>Recommended Entry Speed</u>
Lazy eight	143 m.p.h. (124 knots)
Chandelle	162 m.p.h. (140 knots)
Steep turns	124 m.p.h. (108 knots)
Stalls (except whip)	Slow deceleration

Spins are prohibited."

4) <u>Categories</u>	<u>Normal</u>	<u>Utility</u>
"Maximum weight Takeoff	2645 lb.	2205 lb.
Landing	2513 lb.	2205 lb.
Flight maneuvering load factor (flaps up)	+ 3.8, -1.5	+ 4.4, - 1.8
Never exceed speed (IAS)	196 mph (170 knots)	209 mph (182 knots)
Maneuvering speed (IAS)	130 mph (113 knots)	130 mph (113 knots)
Maximum speed rough air (IAS)	155 mph (135 knots)	155 mph (135 knots)
Maximum speed flaps extended (IAS)	109 mph (95 knots)	109 mph (95 knots)

5) Flight conditions: DAY VFR (see NOTE 5).

Icing conditions : NOT ALLOWED

(b) The following placard must be displayed in the baggage compartment:

"Maximum Load: 100 lb."

"4 persons, maximum load: 55 lb."

For additional loading instructions, see weight and balance data.

(c) The following placards must be displayed on the fuel gauge -

- 1) Under the left tank gauge : 35.66 gal. usable.
- 2) Under the right tank gauge : 35.66 gal. usable.

(d) The following fuel and oil placards must be displayed on:

1) "Each fuel tank cover (2):

80/87 or 100 L AVGAS grade aviation gasoline.
35.66 gal. usable".

2) Oil capacity engine: "14.3 qt".

Model Rallye 235C:

(a) The following placards must be displayed in front and in clear view of the pilots:

- 1) "This airplane must be operated as a Normal or Utility Category airplane in compliance with the operating limitations stated in the form of placards, markings and manuals.
- 2) No aerobatic maneuvers, including spins, approved when operating in the normal category.
- 3) Only the following aerobatic maneuvers are approved when operating in the Utility category (maximum weight 2205 lb., or less).

<u>Maneuver</u>	<u>Recommended Entry Speed</u>
Lazy eight	143 m.p.h. (124 knots)
Chandelle	162 m.p.h. (140 knots)
Steep turns	124 m.p.h. (108 knots)
Stalls (except whip)	Slow deceleration

Spins are prohibited.

4) <u>Categories</u>	<u>Normal</u>	<u>Utility</u>
"Maximum weight Takeoff	2645 lb.	2205 lb.
Landing	2513 lb.	2205 lb.
Flight maneuvering load factor (flaps up)	+ 3.8, -1.5	+ 4.4, - 1.8
Never exceed speed (IAS)	196 mph (170 knots)	209 mph (182 knots)
Maneuvering speed (IAS)	130 mph (113 knots)	130 mph (113 knots)
Maximum speed rough air (IAS)	155 mph (135 knots)	155 mph (135 knots)

Maximum speed flaps extended (IAS) 109 mph (95 knots) 109 mph (95 knots)

- 5) Flight conditions: DAY VFR (see NOTE 5).

Icing conditions : NOT ALLOWED

- (b) The following placards must be displayed in the baggage compartment:

"Maximum Load: 100 lb."

"4 persons, maximum load: 55 lb."

For additional loading instructions, see weight and balance data.

- (c) The following placards must be displayed on the fuel gauge -

- 1) under the left tank gauge : 35.66 gal. usable.
- 2) under the right tank gauge : 35.66 gal. usable.

- (d) The following fuel and oil placards must be displayed on:

- 1) Each fuel tank cover (2):

80/87 or AVGAS 100 LL grade aviation gasoline.
35.66 gal. usable"

- 2) Oil cap.: "14.3 qt".

NOTE 3. For Models MS 880B and MS 885 - rear seat may be occupied by two persons and/or baggage provided:

- (a) The total weight on the rear seats (including baggage) is under 240 lb.
- (b) The rear seat is equipped with two separate safety belts.
- (c) Weight and C.G. position are within limits.

NOTE 4. A Model MS 880B airplanes airworthiness certificated in the normal category may be approved in the utility category after accomplishing the following modifications:

- (a) Replace the McCauley 1A105/SCM-7146 propeller with a McCauley 1A101/DCM-6948 propeller.
- (b) Replace the Normal Category placards with Utility Category placards in accordance with NOTE 2.

NOTE 5. Kinds of Operations:

For Models MS 893A-E, MS 894A-E, 235E and 235C, when equipment required by operating rules is installed and approved the following flight operations should be stated on a placard in full view of the pilot: "DAY-NIGHT VFR IFR" (See Airplane Flight Manual Sections 8 and 9).

NOTE 6. For Model Rallye 150ST rear seat may be occupied by two persons and/or baggage provided:

- (a) The total weight on the rear seats (including baggage) is under 287 lb.
- (b) The rear seat is equipped with two separate safety belts.
- (c) Weight and C.G. position are within limits.

For Model Rallye 150T rear seat may be occupied by two persons and/or baggage provided:

- (a) The total weight on the rear seats (including baggage) is under 309 lb.
- (b) The rear seat is equipped with two separate safety belts.
- (c) Weight and C.G. position are within limits.

.....END.....