

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

A18SO
Revision 4
PIPER
PA-38-112
January 16, 1996

TYPE CERTIFICATION DATA SHEET A18SO

This data sheet which is a part of Type Certificate No. A18SO, 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 The New Piper Aircraft, Inc.
2926 Piper Drive
Vero Beach, Florida 32960

I. - Model PA-38-112 (Tomahawk), 2 PCLM (Normal and Utility Category), Approved December 20, 1977.

Engine Lycoming O-235-L2C (Slick Magnetos) with carburetor setting 10-5199 or
Lycoming O-235-L2A (Bendix Magnetos) with carburetor setting 10-5199

Fuel 100/130 minimum grade aviation gasoline

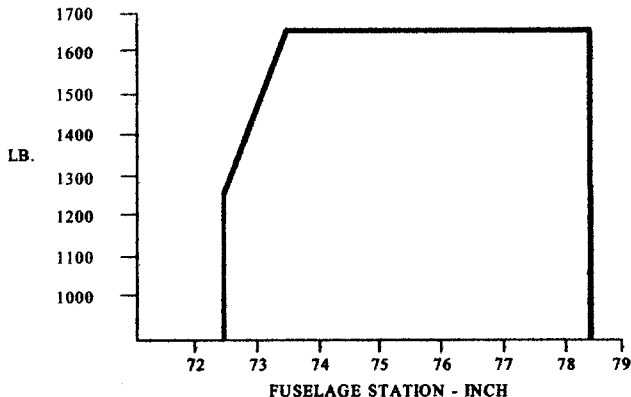
Engine Limits For all operations, 2600 r.p.m. (112 hp)

Propeller and Propeller Limits Sensenich 72CK-0-56
Static r.p.m. at maximum permissible throttle setting not over 2350 r.p.m., not under 2200 r.p.m.
No additional tolerance permitted.
Diameter: Not over 72 inches, not under 70 inches.

Propeller Spinner Piper P/N 77710
See NOTE 4 for spinner removal.

Airspeed Limits (CAS) Never exceed 143 knots
Maximum structural cruising 108 knots
Maneuvering 101 knots
Flaps extended 87 knots

Center of Gravity Range Normal and Utility Category
(+72.4) to (+78.5) at 1277 lb. or less
(+73.5) to (+78.5) at 1670 lb.
Straight line variation between points given.



<u>Empty Weight C. G. Range</u>	None				
<u>Datum</u>	66.25 inches forward of wing leading edge.				
<u>Leveling Means</u>	Top of tailcone behind rear window.				
<u>Maximum Weight</u>	1670 lb. (Normal and Utility Category)				
<u>Number of Seats</u>	2 (2 at +85.5)				
<u>Maximum Baggage</u>	100 lb. (+115.0)				
<u>Fuel Capacity</u>	32 gallons at (+75.4) (2 wing tanks) See NOTE 1 for data on unusable fuel.				
<u>Oil Capacity</u>	6 quarts at (+24.4) (4 quarts usable) See NOTE 1 for data on unusable oil.				
<u>Control Surface Movements</u>	Wing Flaps	(± 2°)	Up	0°	Down 34°
	Ailerons	(± 2°)	Up	26°	Down 14°
	Rudder	(± 1°)	Left	29°	Right 29°
	Elevator	(± 2°)	Up	34°	Down 20°
<u>Nose Wheel Travel</u>		(± 2°)	Left	30°	Right 30°
<u>Serial Numbers Eligible</u>	38-78A0001 through 38-82A0122 (See NOTE 6).				
<u>Certification Basis</u>	Type Certificate Number A18SO, issued December 20, 1977, obtained by the manufacturer under delegation option procedures. Date of application for Type Certificate, June 1, 1976.				
	FAR Part 23, effective February 1, 1965, as amended by Amendment by 23-16, effective February 14, 1975, and FAR 36 including Amendments through 36-7, effective October 1, 1977. Finding of equivalent safety was made for the airspeed indicator (FAR 23.1545(a)).				
<u>Production Basis</u>	Approved for manufacture of spare parts only under Production Certificate No. 206.				
<u>Equipment</u>	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 document is required:				
	1. Pilot's Operating Handbook, Piper Report Number 2126, dated January 20, 1978.				

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 locations must include undrainable system oil (not included in oil capacity) and unusable fuel as noted below:

Unusable Fuel & Oil Quantity

Fuel 12.0 lb. at (+75.4)

Oil 1.90 lb. at (+24.4)

NOTE 2.

The following placard must be displayed in clear view of the pilot:

"EXCEPT AS MAY BE OTHERWISE INDICATED ON A PLACARD, THE MARKINGS AND PLACARDS INSTALLED IN THIS AIRPLANE CONTAIN OPERATING LIMITATIONS WHICH MUST BE COMPLIED WITH WHEN OPERATING THIS AIRPLANE IN THE NORMAL CATEGORY. OTHER OPERATING LIMITATIONS WHICH MUST BE COMPLIED WITH WHEN OPERATING THIS AIRPLANE IN THIS CATEGORY OR IN THE UTILITY CATEGORY ARE CONTAINED IN THE PILOT'S OPERATING HANDBOOK.

FLAPS UP SPINS ARE APPROVED FOR UTILITY CATEGORY OPERATION. FOR SPIN RECOVERY, USE FULL RUDDER AGAINST THE SPIN FOLLOWED IMMEDIATELY BY FORWARD WHEEL.

THIS AIRPLANE IS APPROVED FOR FLIGHT IN DAY/NIGHT VFR/IFR WHEN EQUIPPED IN ACCORDANCE WITH F.A.R. 91. FLIGHT INTO KNOWN ICING CONDITIONS IS PROHIBITED.

FLAPS EXTENDED SPINS PROHIBITED."

NOTE 3.

PA-38-112 - all S/N:

- (a.) The service life of the wing and associated structure has been established as 11,000 hours time-in-service (TIS).
- (b.) The lower longitudinal trim springs, Piper P/N 37523 or 61916-2, have a life limit of 1,500 hours TIS.
- (c.) The service life of the steel upper rudder hinge, Piper P/N 77610-03, has been established as 5,000 hours TIS.

PA-38-112 - S/N 38-78A0001 through 38-80A0198:

The service life of the forward fin spar attachment plate, Piper P/N 77553-05, has been established as 3,000 hours TIS.

PA-38-112 - S/N 38-81A0001 through 38-82A0101:

- (a.) Aircraft not equipped with Piper Kit No. 764-421, the service life of the forward fin spar attachment plate, Piper P/N 77553-05, has been established as 3,000 hours TIS.
- (b.) Aircraft equipped with Piper Kit No. 764-421, the service life of the forward fin spar attachment plate, Piper P/N 77553-05, has been established as 5,000 hours TIS.

PA-38-112 - S/N 38-82A0102 through 38-82A0122:

The service life of the forward fin spar attachment plate, Piper P/N 77553-05, has been established as 5,000 hours TIS.

NOTE 4.

The Model PA-38-112, S/N 38-78A0001 through 38-82A0122 may be operated with the spinner dome removed, or with the spinner dome and rear bulkhead removed.

NOTE 5.

Inboard flow strips installed per Piper Drawing No. 61927-2, are installed on S/N 38-78A0017, 38-78A0786, 38-78A0812, and 38-78A0815. All S/Ns are eligible for installation of inboard flow strips per Piper Drawing No. 61927-2. Pilot's Operating Handbook, Piper Report Number 2126, Revision 3, is required with this installation.

NOTE 6.

The following serial numbers are not eligible for airworthiness certification in the United States:

38-78A0344, 38-78A0358, 38-78A0424, 38-78A0439, 38-78A0624, 38-78A0639, 38-78A0734, 38-78A0749, 38-78A0829, 38-78A0844, 38-79A0058, 38-79A0088, 38-79A0156, 38-79A0221, 38-79A0236, 38-79A0271, 38-79A0301, 38-79A0699, 38-79A0713, 38-79A1042, , 38-79A1051, 38-79A1056, 38-79A1061, 38-79A1115, 38-79A1117, 38-79A1122, 38-79A1126, 38-79A1131, 38-79A1134, 38-79A1158, 38-79A1162, 38-79A1165, 38-79A1168, 38-80A0015, 38-80A0019, 38-80A0022, 38-80A0025, 38-80A0035, 38-80A0038 through 38-80A0051, 38-80A0054, 38-80A0056, 38-80A0057, 38-80A0060, 38-80A0063, 38-80A0077, 38-80A0080, 38-80A0083, 38-80A0086, 38-80A0104, 38-80A0113, 38-80A0120, 38-80A0123 through 38-80A0165, 38-80A0169 through 38-80A0198, 38-81A0136 through 38-81A0138, and 38-81A0191 through 38-81A0210.

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