

Interstate Aviation Committee
Aviation Register

Data Sheet

Type Certificate №CT290-PA-46

Revision 01

21 November, 2008

Airplanes:

PA-46-350P (Malibu Mirage)
PA-46-500TP (Malibu Meridian)

Type Certificate Holder:

Piper Aircraft, Inc.
2926 Piper Drive
Vero Beach, Florida 32960, USA

Courtesy translation of TCDS
In case of misinterpretation the Russian text shall prevail.

This data sheet is the integral part of Type Certificate №CT290-PA-46 , defines Type Design and prescribes the conditions and limitations under which the product for which the Type Certificate was issued meets the airworthiness requirements of Certification Basis, which is prescribed in this Data Sheet.

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Designer and Manufacturer Piper Aircraft, Inc.
2926 Piper Drive, Vero Beach, Florida 32960

I Model PA-46-350P (Malibu Mirage)

(S/n: 4636375 and subsequent)

- 1. Brief Aircraft Description** Normal category airplane with one reciprocating engine.
- 2. Type Design Definition** Type Design is defined by:
a) original Type Design according to Type Certificate № A25SO issued by FAA, described by Aircraft General Assembly Drawing № VB-1954 (with Supplement incorporated upon IAC AR requirement, see section 17).
b) Operational documentation:
 - FAA approved Airplane Flight Manual VB-1950 with Supplement VB-2019 for CIS operators.
 - Maintenance Manual №761-876.
- 3. Engines** Textron Lycoming, model TIO-540-AE2A.
Supplement to IAC AR Type Certificate № CT250-AMД/Д-01 dated 08.11.2007.
- 3.1 Engine limitations** Engine performance and operating limitations see in IAC AR Type Certificate Data Sheet № CT250-AMД, Rev. 02 dated 08.11.2007.
- 4. Propeller** Hartzell, Hub model HC-I2YR-1BF, Blade Model F8074 (standard 2 blade-serial numbers 4622001 through 4622200 and 4636001 through 4636195)
Spinner: Hartzell A-2298-3P
Governor: Harzell model V-5-2 or V-11-1
or
Hartzell, Hub model HC-I3YR-1E, Blade Model 7890K, 3-blade, Serial Numbers 4636132 and up
Spinner: Hartzell D-6750P
Governor: Hartzell model V-5-2 or V-11-1

IAC AR Type Certificate № CT272-BB dated 31.03.2008.
- 4.1 Propeller limitations** Propellers performance and operating limitations see in IAC AR Type Certificate Data Sheet № CT272-BB dated 31.03.2008r
- 5. Approved fuel** Foreign fuel types:
100/100 LL aviation grade fuel
- 6. Fuel Capacity** 464 liters (122 gallons) (2 wing tanks)
- 7. Minimum flight crew** One pilot
- 8. Maximum number of seats** 6
- 9. Maximum weight**
- | | S/n 4636196 and subsequent | |
|-------------------------|----------------------------|----------|
| Maximum ramp weight: | 1977 kg. | 4358 lb. |
| Maximum takeoff weight: | 1969 kg. | 4340 lb. |
| Maximum landing weight: | 1870 kg. | 4123 lb. |
- 10. Maximum baggage weight** forward: 45 kg (100lb)
aft: 45 kg (100lb)

11.C.G. range (landing gear extended)	See in FAA approved AFM VB-1950																				
12. Maximum operating altitude	7620 meters (25000 feet)																				
13. Aerodrome class and category	Airplane is capable to operate on paved runways. The aerodrome elevation must not exceed 2440 meters (8000 feet).																				
14. Airspeed limits (IAS)	<table border="1"> <thead> <tr> <th></th> <th>KIAS</th> </tr> </thead> <tbody> <tr> <td>Never exceed (V_{NE})</td> <td>198</td> </tr> <tr> <td>Maximum structural cruise (V_{NO})</td> <td>168</td> </tr> <tr> <td>Maneuvering (V_A) (1969 kg) (4340 lb) (s/n 4636196 and subsequent)</td> <td>133</td> </tr> <tr> <td>Maneuvering (V_A) (1114 kg) (2450 lb) (s/n 4636196 and subsequent)</td> <td>100</td> </tr> <tr> <td>Maximum flaps extended (V_{FE}):</td> <td>116</td> </tr> <tr> <td>Maximum landing gear operation (V_{LO}):</td> <td></td> </tr> <tr> <td> Extension</td> <td>165</td> </tr> <tr> <td> Retraction</td> <td>126</td> </tr> <tr> <td>Maximum landing gear extended (V_{LE}):</td> <td>195</td> </tr> </tbody> </table>		KIAS	Never exceed (V_{NE})	198	Maximum structural cruise (V_{NO})	168	Maneuvering (V_A) (1969 kg) (4340 lb) (s/n 4636196 and subsequent)	133	Maneuvering (V_A) (1114 kg) (2450 lb) (s/n 4636196 and subsequent)	100	Maximum flaps extended (V_{FE}):	116	Maximum landing gear operation (V_{LO}):		Extension	165	Retraction	126	Maximum landing gear extended (V_{LE}):	195
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15. Outside ambient temperature	Outside ambient temperature on the ground is minus 15 °C to +35 °C.																				
16. Airworthiness limitations	Life limits and airworthiness limits see in FAA approved Chapter 4: "Airworthiness Limitations" of the Maintenance Manual №761-876.																				
17. Mandatory equipment	<ol style="list-style-type: none"> All placards and inscriptions inside and outside the airplane related to emergency and safety equipment and to the firefighting means except for "EXIT" signs in English must be bilingual: in English and in a language agreed on with CIS operator In addition to the standard equipment, approved by FAA, for flights in CIS airspace airplane should be equipped with the following equipment: <ul style="list-style-type: none"> • P855A1 Russian-made emergency VHF radio (installed by operator); • two PFD (displays pressure in hPa); • Stand-by altimeter for indicating flight altitude in meters; • FDR (for commercial flights); • ADF; • EGPWS (for operation in regions where this equipment is required) • TCAS II with S-transponder (for operation in regions where this equipment is required). 																				
18. Other limitations	<ul style="list-style-type: none"> ▪ Flights are prohibited in predicted icing conditions. ▪ Airplane operations are allowed only on paved runways. ▪ Flights in CIS aerospace are performed only in the routes, where ATC is functioning in RBS mode. ▪ Overwater flights are allowed on the conditions prescribed in operational regulations 																				
19. Noise requirements	Noise Type Certificate issued № CIII183-PA-46 dated 21.11.08r.																				
20. Certification basis	<ol style="list-style-type: none"> Airworthiness requirements: Aviation Regulations, Part 23 (AP-23) "Airworthiness Standards: Normal, Utility, Acrobatic and Commuter category airplanes" with Amendment 4 (See CRI – A1) and Special Technical Conditions issued by FAA and prescribed in FAA Type Certificate Data Sheet № A25SO. Environmental requirements: Aviation Regulations, Part 36 (AP-36) Section F "Noise requirements". 																				

II Модель PA-46-500TP (Malibu Meridian)*(S/n: 4697002, 4697198, 4697216 and subsequent)*

- 1. Brief Aircraft Description** Normal category airplane with one turboprop engine.
- 2. Type Design Definition** Type Design is defined by:
a) original Type Design according to Type Certificate № A25SO issued by FAA, described by Aircraft General Assembly Drawing № VB-1919 (with Supplement incorporated upon IAC AR requirement, see section 17).
b) Operational documentation:
 - FAA approved Airplane Flight Manual VB-1912 with Supplement VB-2017 for CIS operators.
 - Maintenance Manual №767-005.
- 3. Engines** Pratt & Whitney Canada, model PT6A-42A.
Supplement to IAC AR Type Certificate № CT76-Д/03 dated 18.07.2007.
- 3.1 Engine limitations** Engine performance and operating limitations see in IAC AR Type Certificate Data Sheet № CT76-Д, Rev. 04 dated 18.07.2007.
- 4. Propeller** Hartzell, Hub model HC-E4N-3Q, Blade Model E8501B-3.5
Spinner: Hartzell D-630-5P
Governor: Woodward model 210638

IAC AR Type Certificate № CT64B dated 31.03.2008.
- 4.1 Propeller limitations** Propeller performance and operating limitations see in IAC AR Type Certificate Data Sheet № CT64B dated 31.03.2008r
- 5. Approved fuel** CIS Fuels: TS-1, RT (GOST 10227-86)
Anti-icing additives:
fluid "I" (GOST 8313),
Operational recommendations see in engine Operational Manual № 50771 and engine Maintenance Manual № 50773.
Foreign fuel types:
Jet A, Jet A-1, conforming to Pratt & Whitney Specification 522 or Service Bulletin 3044, CPW204. Anti-icing liquids according to MIL-I-27686 or equivalent must be used in the fuel in concentration of 0.15% by volume.
- 6. Fuel Capacity** 657.4 liters (173 gallons) (2 wing tanks)
usable fuel: 646 liters (140 gallons)
- 7. Minimum flight crew** One pilot
- 8. Maximum number of seats** 6
- 9. Maximum weight**

	S/n 4697001 through 4697156		S/n 4697157 and subsequent, and also airplanes having Kit 767-360 installed	
Maximum ramp weight:	2219 kg	4892 lb	2329 kg	5134 lb
Maximum takeoff weight:	2200 kg	4850 lb	2310 kg	5092 lb
Maximum landing weight:	2200 kg	4850 lb	2200 kg	4850 lb
Maximum zero	-		2200 kg	4850 lb

fuel weight:				
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10. Maximum baggage weight

45 kg. (100 lb)

11. C.G. range (landing gear extended)

See in FAA approved AFM VB-1912 with Supplement VB-2017 for CIS operators.

12. Maximum operating altitude

9150 meters (30000 feet)

13. Aerodrome class and category

Airplane is capable to operate on paved runways. The aerodrome elevation must not exceed 3050 meters (10000 feet).

14. Airspeed limits (IAS)

	KIAS
Maximum operating speed (V_{MO})	188
Operating maneuvering speed (V_O)	127
Flaps extended speed (V_{FE}):	
flaps 10°	168
flaps 20°	135
flaps 36°	118
Maximum landing gear operation (V_{LO}):	
Extension	168
Retraction	129
Maximum landing gear extended (V_{LE}):	168

15. Outside ambient temperature

Outside ambient temperature on the ground is minus 34 °C to +56 °C.

16. Airworthiness limitations

Life limits and airworthiness limits see in FAA approved Chapter 4: "Airworthiness Limitations" of the Maintenance Manual №767-005.

17. Mandatory equipment

1. All placards and inscriptions inside and outside the airplane related to emergency and safety equipment and to the firefighting means except for "EXIT" signs in English must be bilingual: in English and in a language agreed on with CIS operator

2. In addition to the standard equipment, approved by FAA, for flights in CIS airspace airplane should be equipped with the following equipment:

- P855A1 Russian-made emergency VHF radio (installed by operator);
- two PFD (displays pressure in hPa);
- Stand-by altimeter for indicating flight altitude in meters;
- FDR (for commercial flights);
- ADF;
- EGPWS (for operation in regions where this equipment is required)
- TCAS II with S-transponder (for operation in regions where this equipment is required).

18. Other limitations

- Airplane operations are allowed only on paved runways.
- Flights in CIS aerospace are performed only in the routes, where ATC is functioning in RBS mode.
- Overwater flights are allowed on the conditions prescribed in operational regulations

19. Noise requirements

Noise Type Certificate issued № CIII183-PA-46 dated 21.11.08r.

20. Certification basis

1. Airworthiness requirements:
Aviation Regulations, Part 23 (AP-23) “Airworthiness Standards: Normal, Utility, Acrobatic and Commuter category airplanes” with Amendment 4 (See CRI – A1) and Special Technical Conditions issued by FAA and prescribed in FAA Type Certificate Data Sheet № A25SO.
2. Environmental requirements:
Aviation Regulations, Part 36 (AP-36) Section F “Noise requirements”.
ICAO Annex16, Volume 1, Chapter 10.

*Original in Russian language
signed by*

Vladimir Putilin
Chief of Branch
Small Aircraft