TYPE-CERTIFICATE

DATA SHEET

No. EASA.IM.A.090

for
Piper PA-34

Type Certificate Holder:
Piper Aircraft, Inc.

2926 Piper Drive
Vero Beach, Florida 32960
U.S.A.

For Models: PA-34-220T (Seneca V)

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CONTENT

SECTION A: Model PA-34-220T (Seneca V)

A.I. General

1. a) Type:	PA-34
b) Model:	PA-34-220T
c) Variant:	N/A
2. Airworthiness Category:	Normal Category
3. Manufacturer:	Piper Aircraft, Inc 2926 Piper Drive Vero Beach, Florida 32960 U.S.A.
4. EASA Certification Application Date:	N/A
5. State of Design Authority:	FAA
6. State of Design TC Date:	11 December 1996
7. EASA Type Certification Date:	28 September 2003 (in accordance with Commission Regulation (EU) No. 748/2012, Article 3, para. 1. (a))

A.II. Certification Basis

1. Reference Date for determining the applicable requirements: Date of application for FAA TC - 10 April 1995

2. (Reserved)

3. (Reserved)

4. Certification Basis:

a) For the basic PA-34-220T (Seneca V) aeroplane the applicable certification basis is FAR 23. For details on the applicable FAR 23 amendments see A.V., note 6.

b) For PA-34-220T (Seneca V) aeroplanes equipped with the factory installed Avidyne Entegra System option the additional certification basis for installation specific items only is CS-23 as defined in CRI-A01, issue 1, or later revision (for details on applicable paragraphs see A.V., note 7).

c) For PA-34-220T (Seneca V) aeroplanes equipped with the factory installed Garmin G600/GNS430W/GWX68 and KTA-870 option the additional certification basis for installation specific items only is CS-23 as defined in CRI-A01-G600, release1, issue 1, or later revision (for details on applicable paragraphs see A.V., note 7).

d) For PA-34-220T (Seneca V) aeroplanes equipped with the factory installed Garmin G1000 Integrated Avionics System option the additional certification basis for installation specific items only is CS-23 as defined in CRI A-01 G1000, issue 2, or later revision (for details on applicable paragraphs see A.V., note 7).

e) For PA-34-220T (Seneca V) aeroplanes equipped with the factory installed Garmin GFC700 AFCS option the additional certification basis for installation specific items only is CS-23 as defined in CRI-A01 (for details on applicable paragraphs see A.V., note 7).
f) For PA-34-220T (Seneca V) aeroplanes equipped with the Piper factory installed optional Garmin International G1000NXi Phase I/II installed in accordance with Piper Top Drawing 107200-004, the additional certification basis for installation specific items only is CS-23 as defined in A.V. note 7).

5. Airworthiness Requirements:

a) FAR 23 for the basic PA-34-220T (Seneca V) aeroplane (for applicable amendments see A.II.4)
b) FAR 23 and CS-23 for PA-34-220T (Seneca V) aeroplanes equipped with the factory installed Avidyne Entegra System option (for applicable amendments see A.II.4)
c) FAR 23 and CS-23 for PA-34-220T (Seneca V) aeroplanes equipped with the factory installed Garmin G600/GNS430W/GWX68 and KTA-870 option (for applicable amendments see A.II.4)
d) FAR 23 and CS-23 for PA-34-220T (Seneca V) aeroplanes equipped with the factory installed Garmin G1000 Integrated Avionics System option (for applicable amendments see A.II.4)
e) FAR 23 and CS-23 for PA-34-220T (Seneca V) aeroplanes equipped with the factory installed Garmin GFC700 AFCS option (for applicable amendments see A.II.4)
f) FAR 23 and CS-23 for PA-34-220T (Seneca V) aeroplanes equipped with the Piper factory installed optional Garmin International G1000NXi Phase I/II installed in accordance with Piper Top Drawing 107200-004 (for applicable amendments see A.II.4)

6. Requirements elected to comply: None

7. Special Conditions:

a) None for the basic PA-34-220T (Seneca V) aeroplane.
b) CRI-F01, Protection from the Effects of HIRF
CRI-F02, Protection from the Effects of Lightning Strike; Indirect Effects,
CRI-F05, Human Factors in Integrated Avionic Systems,
for PA-34-220T (Seneca V) aeroplanes equipped with the factory installed Avidyne Entegra System option.
c) Special Condition SC-B23.div-01 “Human Factors in Integrated Avionic Systems“ (see Annex 1, Ref. CRI B-52),
CRI-F52, Protection from the Effects of HIRF
CRI-F54, Protection from the Effects of Lightning Strike; Indirect Effects,
CRI-F66, Synthetic Vision,
for PA-34-220T (Seneca V) aeroplanes equipped with the factory installed Garmin G600 option.
d) Special Condition SC-B23.div-01 “Human Factors in Integrated Avionic Systems“ (see Annex 1, Ref. CRI B-52),

CRI F-66, Synthetic Vision,
FAR 23.1308(a)(b)(c), Amdt. 23-61, Protection of the effects of HIRF (formerly CRI F-52),
FAR 23.1306, Amdt. 23-61, Protection of the effects of lightning strike, indirect effects (formerly CRI F-54),
for PA-34-220T (Seneca V) aeroplanes equipped with the factory installed Garmin G1000 Integrated Avionics System option.

e) Special Condition SC-B23.div-01 “Human Factors in Integrated Avionic Systems“ (see Annex 1, Ref. CRI B-52), Special condition “Security Protection of Aircraft Systems and Networks” (see Annex 1, Ref. CRI F-90) For PA-34-220T (Seneca V) aeroplanes equipped with the Piper factory installed optional Garmin International G1000NXi Phase I/II installed in accordance with Piper Top Drawing 107200-004
f) CRI F-14 Electronic Stability and Protection (ESP), FAR 23.1306, Amdt. 23-61, Protection of the effects of lightning strike, indirect effects (formerly CRI F-54), FAR 23.1308(a)(b)(c), Amdt. 23-61, Protection of the effects of HIRF (formerly CRI F-52), for PA-34-220T (Seneca V) aeroplanes equipped with the factory installed Garmin GFC700 AFCS option

8. Exemption: None

9. Equivalent Safety Findings:

a) None for the basic PA-34-220T (Seneca V) aeroplane.
b) CRI-F03, Powerplant Instruments for PA-34-220T (Seneca V) aeroplanes equipped with the factory installed Avidyne Entegra System option.
c) None for the factory installed G600 option
d) FAR 23.1303(c), Amdt. 23-62, Use of a stabilized magnetic compass as minimum flight instrumentation, for the factory installed G1000 Integrated Avionics System option
e) None for the factory installed Garmin GFC700 AFCS option
f) ESF for CS 23.1305 (b)(4) “powerplant instruments, fuel flow indication” (see Annex 1, Ref. CRI F-203), ESF for CS 23.1303 (c) “FLIGHT INSTRUMENTS, Stabilized Magnetic Compass” (see Annex 1, Ref. CRI F-201) for PA-34-220T (Seneca V) aeroplanes equipped with the Piper factory installed optional Garmin International G1000NXi Phase I/II installed in accordance with Piper Top Drawing 107200-004

10. Environmental Standards: ICAO Annex 16, Volume 1, Chapter 10

A.III. Technical Characteristics and Operational Limitations

1. Type Design Definition: New Piper Report number VB-1640
For TDD of TCDS relevant changes see note 10.

2. Description: Twin engine reciprocating turbocharged, all-metal, six-place, unpressurized, low wing airplane, retractable tricycle landing gear.

3. Equipment: For approved equipment, see applicable AFM/POH, section 6 (for applicable AFM/POH see A.IV.).

4. Dimensions:

Span	11.86 m (38.9 ft)
Length	8.72 m (28.6 ft)
Height	3.02 m (9.9 ft)
Wing Area	19.39 m² (209 sqf)

5. Engines: 1 Teledyne Continental TSIO-360-RB (LH engine)
1 Teledyne Continental LTSIO-360-RB (RH engine)

The EASA Engine Type Certification standard includes that of FAA TCDS E9CE (in accordance with Commission Regulation (EU) No. 748/2012, Article 3, para. 1.(a))

5.1 Engine Limits: For all operations:
38"Hg MAP @ 2600 RPM (220 HP)

For other powerplant limitations refer to the applicable AFM/POH, section 2.

6. Propellers:

6.1 Propeller 1: 1 Hartzell, Hub BHC-J2YF-2CUF, Blade Model FC8459(B)-8R (LH propeller)
1 Hartzell, Hub BHC-J2YF-2CLUF, Blade Model FJC8459(B)-8R (RH propeller)

Pitch: High 80.0° +1.5°/-0°, Low 14.6°± 0.2°, at 0.762 (30") station

Diameter: Not over 1.930 m (76.0"), not under 1.905 m (75.0").
No further reduction permitted

Spinner: Piper P/N 37138-6 Assembly (left hand)
Piper P/N 37138-7 Assembly (right hand)

Governor: 1 Hartzell hydraulic governor; Model E-3-9 (left),
1 Hartzell hydraulic governor; Model E-3-9L (right); or
1 Hartzell hydraulic governor; Model E-8-9L (right) with Synchrophaser installation.

Avoid continuous ground operation in cross and tail winds between 1600 and 2100 r.p.m..
Avoid continuous operation between 1900 and 2100 r.p.m. with manifold pressure above 32"Hg.

The EASA Propeller Type Certification standard includes that of FAA TCDS P37EA (in accordance with Commission Regulation (EU) No. 748/2012, Article 3, para. 1. (a))

6.2 Propeller 2: 1 McCauley, Hub 3AF32C522, Blade Model 82NJA-6 (LH propeller)
1 McCauley, Hub 3AF32C523, Blade Model L82NJA-6 (RH propeller)

Pitch: Feather 82.1° ±0.5°, Low 12.6°± 0.2°, at 0.762 (30") station.

Diameter: Not over 1.930 m (76.0"), not under 1.905 m (75.0").
No further reduction permitted

Spinner: Piper P/N 100738-2 Assembly

Governor: 1 Hartzell hydraulic governor; Model E-3-9 (left),
1 Hartzell hydraulic governor; Model E-3-9L (right); or
1 Hartzell hydraulic governor; Model E-8-9L (right) with Synchrophaser installation.

With three-bladed McCauley propellers, this model may be operated without spinner dome and rear bulkhead.

The EASA Propeller Type Certification standard includes that of FAA TCDS P57GL (in accordance with Commission Regulation (EU) No. 748/2012, Article 3, para. 1. (a))

7. Fluids:
   - 7.1 Fuel: 100/100LL minimum grade aviation gasoline, for alternate fuels see TCM M77-3
   - 7.2 Engine Oil: in accordance with latest revision of TCM SIL99-2

8. Fluid capacities:
   - 8.1 Fuel: Total: 485 liters (128 US gal) in 2 wing tanks; Usable: 462 liters (122 US gal) in 2 wing tanks
   - 8.2.Oil (per engine): Maximum: 7.6 liters (8 qts); Minimum: 2.9 liters (3 qts)

9. Air Speeds:

Design Manoeuvring Speed, v_A (2155 kg (4750 lb))	139 KIAS
Never Exceed Speed v_{NE}	204 KIAS
Maximum Structural Cruising Speed, v_{NO}	164 KIAS
Maximum Flap Extend Speed, v_{FE}	113 KIAS
Maximum Landing Gear Operating Speed, v_{LO}	
Extension	128 KIAS
Retraction	107 KIAS
Maximum Landing Gear Extended Spped, v_{LE}	128 KIAS
Minimum Control Speed v_{MC}	66 KIAS

10. Maximum Operating Altitude: 7620 m (25,000 ft)

11. Operational Capability: VFR Day and Night
IFR Day and Night
Flight into known icing conditions (see A.V., note 9)

12. Maximum Masses:

Ramp:	2165 kg (4773 lb)
Take-Off:	2155 kg (4750 lb)
Landing:	2047 kg (4513 lb)
Max. Zero Fuel weight:	2031 kg (4479 lb)

For reduced MTOW see A.V., note 8.

13. Centre of Gravity Range (gear extended):

linear variation between given points

Weight	Fwd. Limit	Aft Limit
kg (lb)	m (in) aft of datum	m (in) aft of datum
2155 (4750)	2.301 (90.6)	2.403 (94.6)
1928 (4250)	2.202 (86.7)	2.403 (94.6)
1542 (3400)	2.083 (82.0)	2.403 (94.6)

see also A.V. note 3
Moment change due to retracting landing gear is -32 in-lb

14. Datum: 1.99 m (78.4") forward of the wing leading (at the inboard edge of the inboard fuel tank).

15. (Reserved)

16. Levelling Means: Two screws at the left side fuselage below window.

17. Minimum Flight Crew: 1 (Pilot)

18. Max. Passenger Seating Capacity: 5, for passenger seating locations see applicable AFM/POH

19. Baggage / Cargo Compartments: 84 kg (185 lb) total, thereof 45 kg (100 lb) at +0.572 m (+22.5 in) and 39 kg (85 lb) at +4.539 m (+178.7 in)
S/N 3449001 through 3449310 and 3449312 through 3449322

90 kg (200 lb) total, thereof 45 kg (100 lb) at +0.572 m (+22.5 in) and 45 kg (85 lb) at +4.539 m (+178.7 in)
S/N 3449311 and 3449323 and up

20. Wheels and Tyres:
20.1 Nose Wheel Tyre Size 6.00x6, 6 ply
20.2 Main Wheel Tyre Size 6.00x6, 8 ply

21. (Reserved)

22. Control Surface Movements: For approved control surface deflections see applicable Airplane Maintenance Manual (A.IV.)

A.IV. Operating and Service Instructions

Airplane Flight Manual AFM and
Pilot´s Operating Handbook (POH):

a) DOA No. SO-1 approved Pilot's Operating Handbook and FAA approved Airplane Flight Manual Report No. VB-1638 for Model PA-34-220T (Seneca V),
S/N 3449001 and up
b) DOA No. SO-1 approved Pilot's Operating Handbook and FAA approved Airplane Flight Manual Report No. VB-1649 for Model PA-34-220T (Seneca V) when Piper Kit 766-632 (or equivalent Piper Drawing 88247-{ }, MTOW 1999 kg) is installed
S/N 3449001 and up,
c) DOA No. 510620-CE approved Pilot's Operating Handbook and FAA approved Airplane Flight Manual Report No. VB-1930 for Model PA-34-220T (Seneca V) when equipped with the factory installed Avidyne Entegra option
S/N 3449311 and 3449323 and up
d) DOA No. 510620-CE approved Pilot's Operating Handbook and FAA approved Airplane Flight Manual Report No. VB-1955 for Model PA-34-220T (Seneca V) when equipped with the factory installed Avidyne Entegra option and when Piper Kit 766-632 (or equivalent Piper Drawing 88247-{ }, MTOW 1999 kg) is installed
S/N 3449311 and 3449323 and up
e) ODA-510620-CE approved Pilot's Operating Handbook and FAA approved Airplane Flight Manual Report No. VB-2186, Rev 2 or higher, for Model PA-34-220T (Seneca V) when equipped with the factory installed G600 option
S/N 3449410 and up
f) ODA-510620-CE approved Pilot's Operating Handbook and FAA approved Airplane Flight Manual Report No. VB-2193, Rev 2 or higher, for Model PA-34-220T

(Seneca V) when equipped with the factory installed G600 option and when Piper Kit 766-632 (or equivalent Piper Drawing 88247-{ }, MTOW 1999 kg) is installed
S/N 3449410 and up

g) ODA-510620-CE approved Pilot's Operating Handbook and FAA approved Airplane Flight Manual Report No. VB-2230, Rev 5 or higher, for Model PA-34-220T (Seneca V) when equipped with the factory installed Garmin G1000 Integrated Avionics System option
S/N 3449459, 3449467 and up

h) ODA-510620-CE approved Pilot's Operating Handbook and FAA approved Airplane Flight Manual Report No. VB-2231, Rev 3 or higher, for Model PA-34-220T (Seneca V) when equipped with the factory installed Garmin G1000 Integrated Avionics System option and when Piper Kit 766-632 (or equivalent Piper Drawing 88247-{ }, MTOW 1999 kg) is installed
S/N 3449459, 3449467 and up (see also note A.V. 8 for specific S/N applicability)

i) ODA-510620-CE approved Pilot's Operating Handbook and FAA approved Airplane Flight Manual Report No. VB-2230, Rev 9 or higher, for Model PA-34-220T (Seneca V) when equipped with the factory installed Garmin G1000 Integrated Avionics System and the GFC 700 AFCS option
S/N 3449459, 3449492 and up

j) ODA-510620-CE approved Pilot's Operating Handbook and FAA approved Airplane Flight Manual Report No. VB-2231, Rev 5 or higher, for Model PA-34-220T (Seneca V) when equipped with the factory installed Garmin G1000 Integrated Avionics System and the GFC 700 AFCS option and when Piper Kit 766-632 (or equivalent Piper Drawing 88247-{ }, MTOW 1999 kg) is installed
S/N 3449459, 3449492 and up

k) ODA-510620-CE approved Pilot's Operating Handbook and FAA approved Airplane Flight Manual Report No. VB-2761, Rev 1 or higher if approved by the FAA, for Model PA-34-220T (Seneca V) when equipped with factory installed optional Garmin International G1000NXi Phase I/II installed in accordance with Piper Top Drawing 107200-004,
S/N 3449509 and up

l) ODA-510620-CE approved Pilot's Operating Handbook and FAA approved Airplane Flight Manual Report No. VB-2864, Rev original or higher if approved by the FAA, for Model PA-34-220T (Seneca V) when equipped with factory installed optional Garmin International G1000NXi Phase I/II installed in accordance with Piper Top Drawing 107200-004, and Kit-1999KG Max Gross Weight Modification installed in accordance with Piper Drawing 88247-005.
S/N 3449509 and up

Airplane Maintenance Manual (AMM): P/N 761-888, latest approved revision

Service Bulletins and Service Letters

A.V. Notes

1. Applicable Manufacturer´s S/N and certification import requirements:

   a) Basic aeroplane: S/N 3449001 and up

   b) Avidyne Entegra option: S/N 3449311 and 3449323 and up

   In addition for import into EASA Member State countries following requirements have to be met:
   - PFD set-up has to be configured to display hPa (mbar) altimeter units
   - Pointer type altimeters (including stand-by altimeters) have to be either factory installed or installed in accordance with an approved change, and have to have a hPa (mbar) barometric pressure setting scale.

   - PFD/MFD fuel quantity and fuel flow units can be configured either in metric or US units.

   c) Garmin G600 option: S/N 3449410 and up

   d) Garmin G1000 Integrated Avionics System option: S/N 3449459, 3449467 and up

   Datalink-in functionality of GTS 825, GDL 69A, GSR 56 units was found to meet the EASA certification basis iaw para A.II.4 after issue 4 of this TCDS has been released. Therefore, no further de-activation of the datalink-in functionality is required to be eligible for import into EASA member states.
   PA-34-220T G1000 which were modified by either PPS55032 or SB 1268 to disable this functionality to comply with the import requirements of issue 4 of this TCDS may have this functionality enabled again by complying with Piper SB 1270.

   e) Garmin GFC700 AFCS option: S/N 3449459, 3449492 and up

2. Approved Noise Levels:
   See EASA noise data base

3. Weight and Balance:
   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:

   Fuel: 16.3 kg (36.0 lb). at +2.616 m (+103.0 in)
   Oil: 5.3 kg (12.0 lb). at +1.110 m (+ 43.7in)

4. Placards:
   All placards required in the approved Airplane Flight Manual or Pilot's Operating Handbook and approved Airplane Flight Manual or Pilot's Operating Handbook Supplements must be installed in the appropriate location

5. Life Limitations (see also AMM, chapter 4-00-00 (P/N 761-888)):
   The bolt and stack-up that connect the upper drag link to the nose gear trunnion are required to be replaced every 500 hours time-in-service. The part numbers are as follows:
   1. Piper P/N 400 274 (AN7-35) bolt or Piper P/N 693 215 (NAS6207-50D) bolt;
   2. Piper P/N 407 591 (AN960-716L) washer, as applicable;
   3. Piper P/N 407 568 (AN 960-716) washer, as applicable;
   4. Piper P/N 404 396 (AN 320-7) nut; and
   5. Piper P/N 424 085 cotter pin.

6. Certification Basis for basic PA-34-220T (Seneca V) aeroplanes:
FAR 23 as amended by Amendment 23-6 effective August 1, 1967; FAR 23.901, 23.909, 23.1041, 23.1043, 23.1047, 23.1143, 23.1305(b)(c)(h)(p) and 23.1527 as amended by Amendment 23-7 effective September 14, 1969; FAR 23.959 as amended by Amendment 23-18 effective May 2, 1977; FAR 23.175(a), 23.201, 23.203, 23.1557(c)(1) and 23.1581 as amended by Amendment 23-21 effective March 1, 1978; FAR 23.1545(a) as amended by Amendment 23-23 effective December 1, 1978; FAR 23.1529 as amended by Amendment 23-26 effective October 14, 1980: FAR 23.1322 as amended by Amendment 23-43 effective May 10, 1993; FAR 23.207 as amended by Amendment 23-45 effective September 7, 1993; Removal of FAR 23.205 per Amendment 23-50 effective March 11, 1996; FAR 23.1305(b)(4)(ii) as amended by Amendment 23-52 effective July 25, 1996.

   Compliance with the requirements of FAR 23.1419 as amended by Amendment 23-14 effective December 20, 1973, and FAR 23.1441 as amended by Amendment 23-9 effective June 17, 1970, has been established with optional ice protection provisions and optional supplemental oxygen equipment, respectively.

7. In addition to the certification basis defined in CRI-A01, latest revision, the applicable paragraphs for the factory installation of the Avidyne Entegra option are listed below. These CS requirements substitute the corresponding paragraphs of note 6.
CS-23 (basic release):
CS 23.301, 23.303, 23.305, 23.307(a), 23.337, 23.341(a), 23.395, 23.397, 23.399(a), 23.471, 23.473, 23.561(b)(3), 23.561(e), 23.601, 23.603, 23.605(a), 23.607, 23.609, 23.611, 23.613, 23.627, 23.681(a), 23.683(a), 23.683(b)(1), 23.771(a), 23.773(a)(1)(2), 23.771(b), 23.777(a), 23.777(b), 23.867(b), 23.955(a)(3), 23.1301, 23.1303, 23.1305, 23.1309, 23.1311, 23.1321, 23.1322, 23.1323, 23.1325, 23.1327, 23.1329(d), 23.1329(h), 23.1331, 23.1335, 23.1337, 23.1351(b)(1)(i), 23.1351, 23.1353(d), 23.1353(h), 23.1357, 23.1359(c), 23.1361, 23.1365, 23.1367, 23.1367(d), 23.1381(a), 23.1381(b), 23.1431, 23.1501, 23.1523, 23.1525, 23.1529, 23.1541(a), 23.1541(b), 23.1543(b), 23.1543(c), 23.1545, 23.1547, 23.1549, 23.1555, 23.1563, 23.1581, 23.1583(m), 23.1585(j), 23.1587, 23.1589

   In addition to the certification basis defined in CRI-A01-G600, latest revision, the applicable paragraphs for the factory installation of the Garmin G600 option are listed below.
These CS requirements substitute the corresponding paragraphs of note 6.
CS-23 (basic release):
CS 23.25, 23.29, 23.251, 23.301(a)(b)(c), 23.303, 23.305(a), 23.307(a), 23.337, 23.341, 23.395, 23.397, 23.399, 23.471, 23.473, 23.561(a)(b)(3)(e), 23.601, 23.603, 23.605(a), 23.607(a), 23.609, 23.611, 23.613(a), 23.627, 23.671, 23.771(a), 23.773(a)(1)(2), 23.777(a)(b), 23.867, 23.1301(a)(b)(c)(d), 23.1303 (a)(b)(c)(f), 23.1309(a)(1)(a)(2)(a)(3)(b)(1)(b)(2)(b)(3)(b)(4)(c)(d)(e), 23.1311(a)(1)(a)(2)(a)(3)(a)(4)(a)(5)(a)(6)(a)(7)(b)(c), 23.1321(a) (b)(c)(d)(1)(d)(2)(d)(3)(d)(4)(d)(5)(e), 23.1322(e), 23.1323(a)(c), 23.1325(b)(1)(b)(2), 23.1327, 23.1329, 23.1331(a)(b)(1), 23.1335, 23.1351(a)(1)(a)(2)(i), 23.1353(h), 23.1357(a)(b)(d), 23.1359(c), 23.1365(a)(b)(d)(e), 23.1367(a)(b)(c)(d), 23.1381(a)(b), 23.1385, 23.1387, 23.1389, 23.1391, 23.1393, 23.1395, 23.1397, 23.1401, 23.1431(a)(b)(e), 23.1501, 23.1523, 23.1525, 23.1529, 23.1541(a)(b), 23.1543(b)(c), 23.1545(a)(b), 23.1547, 23.1563(a)(b), 23.1581(a)(b)(c)(f), 23.1583(h)(m), 23.1585(j)

   In addition to the certification basis defined in CRI A-01 G1000, latest revision, the applicable paragraphs for the factory installation of the Garmin G1000 Integrated Avionics System option are listed below.
These CS requirements substitute the corresponding paragraphs of note 6.
CS-23 (Amendment 2):
CS 23.21, 23.23(a), 23.25, 23.29, 23.207(a)(b)(c), 23.251, 23.301(a)(b)(c), 23.303, 23.305, 23.307, 23.337, 23.341(a)(c), 23.473, 23.561(a)(b)(3)(e), 23.601, 23.603, 23.605(a), 23.607, 23.609, 23.611, 23.613, 23.625, 23.627, 23.729(e)(f), 23.771(a), 23.773(a)(1)(2), 23.777(a)(b), 23.867, 23.1301, 23.1303 (a)(b)(f), 23.1305(a)(1)(2)(3)(b)(2)(3)(i)(4)(5)(6)(i), 23.1309(a)(1)(3)(b)(c)(d)(e), 23.1311, 23.1321, 23.1322, 23.1323(a)(c), 23.1325(a)(b)(1)(2)(i), 23.1326, 23.1327(a), 23.1329(d)(g)(h), 23.1335, 23.1337(b)(1)(4), 23.1351(a)(1)(2)(i)(b)(1)(i)(3)(c)(4)(d), 23.1353, 23.1357, 23.1359(c), 23.1361(a)(c), 23.1365,

23.1367, 23.1381, 23.1416(c), 23.1431(a)(b)(e), 23.1441(c), 23.1501, 23.1507, 23.1523, 23.1525, 23.1529, 23.1541(a)(b), 23.1543(b)(c), 23.1545(a)(b), 23.1549(a)(b)(c), 23.1553, 23. 1555(a)(b)(e)(1), 23.1563(a)(b), 23.1567(a)(b), 23.1581(a)(c), 23.1583(g)(h)(m), 23.1585(j), 23.1589(a)

In addition to the certification basis defined in CRI A-01 GFC700, latest revision, the applicable paragraphs for the factory installation of the Garmin GFC700 AFCS option are listed below. These CS requirements substitute the corresponding paragraphs of note 6.
CS-23 (Amendment 3):
23.21(b), 23.23(a)(b)(3), 23.25(a)(1)(iii)(b), 23.29, 23.143(a)(b), 23.207(a)(b)(c)(d)(e), 23.301(a)(b)(c), 23.303, 23.305, 23.307, 23.337, 23.397, 23.399, 23.341(a)(c), 23.473, 23.561(a)(b)(3)(e), 23.601, 23.603, 23.605(a), 23.607, 23.609, 23.611, 23.613, 23.625, 23.627, 23.681, 23.683, 23.693, 23.771(a), 23.777(a)(b), 23.779(a)(2), 23.867, 23.1141(d), 23.1301, 23.1309(a)(1)(3)(b)(c)(d)(e), 23.1311(a)(3)(4)(6), 23.1321(c), 23.1322(a)(b)(c)(d)(e), 23.1329(a)(b)(c)(d)(e)(f)(g)(h), 23.1335, 23.1351(a)(1)(2)(i), 23.1357(a)(b)(c)(d), 23.1359(c), 23.1365, 23.1367(a)(b)(c)(d), 23.1419(a)(c), 23.1431(a){b)(e), 23.1501, 23.1523, 23.1525, 23.1529, 23.1541(a)(b), 23.1555(a), 23.1581(a), 23.1583(g)(h)(m), 23.1585(a)(1)(j)

For aircraft equipped with Piper factory installed optional Garmin International G1000NXi Phase I/II installed in accordance with Piper Top Drawing 107200-004, the applicable requirements are listed below. These requirements substitute the corresponding requirements of note 6. Note that the G1000 NXi is an upgrade of the G1000, so for aeroplanes modified with the G1000 NXi also the applicable certification basis for the G1000 installation shall be considered.

CS-23 (Amendment 3):
21, 23.23, 23.25(a)(b), 23.29, 23.251, 23.301(a)(b)(c), 23.303, 23.305, 23.307, 23.337, 23.341(a)(c), 23.473, 23.561(a)(b)(3)(e), 23.601, 23.603, 23.605(a), 23.607, 23.609, 23.611, 23.613, 23.625, 23.627, 23.729(e)(f), 23.771(a), 23.773(a)(1)(2), 23.777(a)(b), 23.867, 23.1301(a)(b)(c)(d), 23.1303(a)(b)(f), 23.1305(a)(1)(2)(3)(b)(2)(3)(i)(4)(i)(5)(6)(i), 23.1309(a)(1)(3)(b)(c)(d)(e), 23.1311, 23.1321(a)(b)(c)(d)(5)(e), 23.1322, 23.1323(a)(c), 23.1325(a)(b)(1)(2)(i), 23.1326, 23.1327(a), 23.1329(a)(1)(b)(c)(d)(e)(f)(g)(h), 23.1335, 23.1337(b)(1)(4), 23.1351(a)(1)(2)(i)(b)(1)(i)(ii)(iii)(3)(c)(4)(d), 23.1353(h), 23.1357(a)(b)(c)(d), 23.1359(c), 23.1365, 23.1367, 23.1381, 23.1383, 23.1385, 23.1387, 23.1389, 23.1391, 23.1393, 23.1395, 23.1397, 23.1401(a)(1)(2)(b)(c)(d)(e), 23.1431(a)(b)(e), 23.1501, 23.1523, 23.1525, 23.1529, 23.1541(a)(b), 23.1543(b)(c), 23.1545(a)(b), 23.1549(a)(b)(c), 23.1553, 23.1555(a)(b)(e)(1), 23.1563, 23.1581(a)(c), 23.1583(g)(h)(m), 23.1585(j), 23.1589(a);

CS 23 (Amendment 4):
23.1306, 23.1308(a)(b)(c)

8. For operational reasons AFM/POH with a reduced MTOW are available. No physical changes to the aircraft other than installation of additional limitation (weight and manoeuvring speed) placards and installation of applicable AFM/POH are necessary for this MTOW reduction.
With Piper Kit 766-632 (or equivalent Piper Drawing 88247-{ }) installed weights are as follows:
2009 kg (4430 lb). – Max. Ramp Weight
1999 kg (4407 lb). – Max Take-Off, Landing and Zero Fuel Weight

   For aircraft S/Ns 3449479 through 3449482 and 3449484 through 3449486 kits in accordance with Piper Drawing 88247-{ } have been installed during production at the factory without being specifically listed as installed options in the aircraft logbooks.

9. Operation in known icing conditions is approved if the complete optional ice protection system in accordance with the respective Piper POH/AFM-Supplement (AFM/POH Section 9) is installed and operable.

10. Type Design Definition of TCDS relevant changes:
    a) Factory installed Avidyne Entegra option: New Piper report number VB-1939
    b) Factory installed Garmin G600 option: Piper report number VB-2187
    c) Factory installed Garmin G1000 option: Piper Top Drawing 107200
    d) Factory installed Garmin GFC700 AFCS option: Piper Top Drawing 107200-002

ADMINISTRATIVE SECTION

I. ACRONYMS

N/A

II. TYPE CERTIFICATION HOLDER RECORD

(and manufacturer record)

Piper Aircraft, Inc.
2926 Piper Drive
Vero Beach, Florida 32960
U.S.A.

Until August 7, 2006:
The New Piper Aircraft, Inc.
2926 Piper Drive
Vero Beach, Florida 32960
U.S.A.

Until 1995:
Piper Aircraft Corporation
Lock Haven, Pennsylvania/Vero Beach Florida
U.S.A.

III. CHANGE RECORD

Issue No.	Date	Change
01	27 June 2006	Initial issue
02	28 July 2011	Addition of the Garmin G600 option, reformatting TCDS to current EASA standard
03	25 May 2012	Correction p. 6, change “note 11” to “note 9”
04	14 February 2014	Addition of the Garmin G1000 Integrated Avionics System option, addition of alternative drawing no. for the 1999 kg MTOW kit
05	13 May 2014	e-activation of datalink-in functionalities (Piper SB 1270) for GTS 825, GDL 69A, GSR 56 units which were required to be de-activated for import into EASA-MS (either by PPS 55032 or Piper SB 1268)
06	06 February 2017	Addition of the Garmin GFC700 AFCS option Editorial changes Information on specific aircraft S/Ns with Piper Dwg 88247-{ } installed during production
07	28 January 2020	Addition of Garmin G1000 NXI installation

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