

Airworthiness Directive Schedule

Aeroplanes

Piper PA-38-112 (Tomahawk)

27 October 2011

- Notes**
1. This AD schedule is applicable to Piper PA-38-112 (Tomahawk) aircraft manufactured under Federal Aviation Administration (FAA) Type Certificate No. A18SO.
 2. The date above indicates the amendment date of this schedule.
 3. New or amended ADs are shown with an asterisk*

Contents

DCA/PA38/1	Aft Fuselage - Modification.....	2
DCA/PA38/2A	Rudder and Elevator - Inspection and Modification.....	2
DCA/PA38/3	Control Wheel - Modification	2
DCA/PA38/4A	Fin Forward Spar Attachment - Inspection	2
DCA/PA38/5	Rear Spar Attachment - Inspection	2
DCA/PA38/6A	Stabiliser Pulley Bracket - Inspection	3
DCA/PA38/7A	Engine Mount - Inspection and Modification.....	3
DCA/PA38/8A	Rudder Hinge - Modification.....	3
DCA/PA38/9	Instrument Installation - Modification.....	4
DCA/PA38/10B	Rudder Hinge - Inspection and Modification.....	4
DCA/PA38/11	Cancelled – DCA/PA38/17B refers	4
DCA/PA38/12A	Fin Installation - Inspection and Parts Replacement	4
DCA/PA38/13	Aileron Balance Weight Rib - Inspection	5
DCA/PA38/14A	Elevator Assembly - Inspection	5
DCA/PA38/15	Radio Support Installation - Modification.....	6
DCA/PA38/16	Fatigue Critical Components - Retirement	6
DCA/PA38/17B	MLG Attachment - Modification and Inspection.....	6
DCA/PA38/18	Vertical Fin Spars - Inspection	6
DCA/PA38/19A	Flow Strip Installation – Modification	7
DCA/PA38/20	Throttle Control - inspection and Modification	7
DCA/PA38/21	Elevator Control Installation - Modification	7
DCA/PA38/22	Wing Skin - Inspection	7
DCA/PA38/23	Oil Pressure Line Fitting - Replacement.....	8
DCA/PA38/24	Rear Frame Stiffener - Installation	8
DCA/PA38/25	Rudder Upper Hinge - Replacement.....	8
* DCA/PA38/26A	Gascolator Valve – Inspection and Replacement.....	8

DCA/PA38/1 Aft Fuselage - Modification

Applicability: Model PA-38-112 aircraft, S/N 38-78A0005 through 38-78A0108 as detailed in Piper SB 600A

Requirement: Modify per Piper SB 600A.

Compliance: By 31 July 1978

Effective Date: 21 July 1978

DCA/PA38/2A Rudder and Elevator - Inspection and Modification

Applicability: Model PA-38-112 aircraft, S/N 38-78A0001 through 38-78A0215 and 38-78A0217 through 38-78A0226 for Parts I and II of Piper SB 607A S/N 38-78A0001 through 38A-78A0400 for Part III of Piper SB 607A.

Requirement: Inspect and modify per Piper SB 607A.
(FAA AD 78-22-01 refers)

Compliance: Part I - at intervals not exceeding 25 hours TIS until Part II accomplished.
Parts II and III - within next 50 hours TIS

Effective Date: DCA/PA38/2 - 21 July 1978
DCA/PA38/2A - 9 February 1979

DCA/PA38/3 Control Wheel - Modification

Applicability: Model PA-38-112 aircraft, S/N 38-78A0001 onward

Requirement: Modify per Piper SB 609
(FAA AD 78-23-09 refers)

Compliance: Before further flight unless already accomplished

Effective Date: 21 July 1978

DCA/PA38/4A Fin Forward Spar Attachment - Inspection

Applicability: PA-38-112 aircraft, S/N 38-78A0001 through 38-78A0749 as detailed in Piper SB 628A

Requirement: Inspect fin forward spar attachment plate P/N 77553-5 for cracks per Piper SB 628A using dye penetrant method. Renew cracked parts before further flight.
(FAA AD 78-26-06 refers)

Compliance: Within the next 5 hours TIS unless already accomplished

Effective Date: DCA/PA38/4 - 24 October 1978
DCA/PA38/4A - 9 February 1979

DCA/PA38/5 Rear Spar Attachment - Inspection

Applicability: Model PA-38-112 aircraft with S/N detailed in Piper SB 618

Requirement: Inspect rear spar attachments for missing rivets and rectify as necessary per Piper SB 618.
(FAA AD 78-23-04 refers)

Compliance: Within the next 10 hours TIS unless already accomplished.

Effective Date: 8 December 1978

DCA/PA38/6A Stabiliser Pulley Bracket - Inspection

Applicability: Part I - Model PA-38-112 aircraft, S/N 38-78A0001 through 38-79A0312 as detailed in Piper SB 637

Part II - Model PA-38-112 aircraft, S/N 38-78A0001 through 38-79A0254

Requirement: Part I - Inspect bracket P/N 77615-07 for forming cracks per Piper SB 637 Part I. Replace cracked fittings with undamaged part of same P/N before further flight.

Part II - Check torque of stabiliser to fin and fin to fuselage attach bolts per Piper SB 637 Part II.

(FAA AD 79-08-02 refers)

Compliance: Part I - within next 10 hours TIS unless already accomplished

Part II - within next 100 hours TIS

Effective Date: DCA/PA38/6 - 9 January 1978
DCA/PA38/6A - 18 May 1979

Note: Requirement notified to registered owners on effective date

DCA/PA38/7A Engine Mount - Inspection and Modification

Applicability: Model PA-38-112 aircraft, S/N 38-78A0001 through 38-78A0678 not incorporating engine mount P/N 77651-02

Requirement: 1. Inspect per Piper SB 617B
2. Install engine mount P/N 77651-02

(FAA AD 81-23-07 refers)

Compliance: 1. At intervals not exceeding 50 hours TIS until engine mount P/N 77651-02 installed.

2. At 1000 hours TIS since modification per Piper SB 617B, or within next 50 hours TIS, whichever is the later.

Effective Date: DCA/PA38/7 - 23 February 1979
DCA/PA38/7A - 29 January 1982

DCA/PA38/8A Rudder Hinge - Modification

Applicability: Model PA-38-112 aircraft, S/N 38-78A0001 through 38-80A0063

Requirement: Embody rudder lower hinge modification kit 763881 per Piper SB 613A
(FAA AD 79-03-02 refers)

Compliance: Within the next 50 hours TIS, unless already accomplished.

Effective Date: DCA/PA38/8 - 23 February 1979
DCA/PA38/8A - 18 July 1980

DCA/PA38/9 Instrument Installation - Modification

- Applicability:** Model PA-38-112 aircraft, S/N 38-78A0002 through 38-78A0104 as detailed in Piper SB 603
- Requirement:** Embody groundwire assembly per Piper SB 603.
(FAA AD 79-17-05 refers)
- Compliance:** Within the next 25 hours TIS unless already accomplished.
- Effective Date:** 28 September 1979

DCA/PA38/10B Rudder Hinge - Inspection and Modification

- Applicability:** Model PA-38-112 aircraft, S/N 38-78A0001 through 38-80A0099, 38-80A0113, 38-80A0120 and 38-80A0123 through 38-80A0165
- Requirement:**
1. Inspection - remove rudder upper hinge pin and carefully displace rudder rearwards from fin to expose both parts of hinge P/N 77610-02. Inspect all hinge surfaces in area of hinge pin hole to forward edge of hinge for cracks using dye penetrant method. Install upper hinge bolt with torque of 50 to 70 inch lb. Do not exceed maximum value. Renew cracked fittings before further flight.
 2. Modification - embody P/N 77610-03 brackets per Piper SB 686.
 3. Replacement - Remove and replace the upper rudder hinge bracket, P/N 77610-03, with a new upper rudder hinge bracket, P/N 77610-03 per Piper SB 686.
(FAA AD 80-22-13 refers)
- Compliance:**
1. Inspection at intervals not exceeding 50 hours TIS until modified.
 2. Modification within the next 100 hours TIS.
 3. At 5,000 hours TTIS or within the next 100 hours TIS, whichever is the later, and thereafter at intervals not to exceed 5,000 hours TIS.
- Effective Date:** DCA/PA38/10A - 19 December 1980
DCA/PA38/10B - 13 March 1998

DCA/PA38/11 Cancelled – DCA/PA38/17B refers

- Effective Date:** 29 November 2007

DCA/PA38/12A Fin Installation - Inspection and Parts Replacement

- Applicability:** Model PA-38-112 aircraft as detailed in requirement
- Requirement:** To preclude possible inflight failure due to fatigue, accomplish the following:
1. Aircraft S/N 38-78A0001 through 80A0198 not incorporating Piper kit P/N 764427. Inspect forward fin spar P/N 77601-03 per Piper SB 745 Part I at intervals not exceeding 100 hours TIS.
 2. Aircraft not incorporating fuselage bulkhead assembly P/N 77553-06. Inspect fuselage bulkhead assembly P/N 77553-02 per Piper SB 745 Part II at intervals not exceeding 300 hours TIS.

3. Aircraft not incorporating aft vertical spar assembly P/N 77601-16, upper rudder hinge shim P/N 85606-02 and fuselage bulkhead assembly P/N 85615-02. Inspect aft vertical fin spar P/N 77601-02 per Piper SB 745 Part IV at 2500 hours TTIS, or within next 25 hours TIS whichever is the later, and thereafter at intervals not exceeding 200 hours TIS.

Renew defective parts as prescribed before further flight.

4. Aircraft not incorporating Piper kit P/N 764421.

Replace forward fin attachment plate P/N 77553-05 per Piper SB 745 Part III at 3000 hours TTIS, or within next 25 hours TIS, whichever is the later, and thereafter at intervals not exceeding 3000 hours TIS.

5. Aircraft incorporating Piper kit P/N 764421 and aircraft S/N 38-82A0102 through 82A0122.

Replace forward fin spar attachment plate P/N 77553-05 per Piper SB 710 at 5000 hours TTIS, or within next 25 hours TIS whichever is the later and thereafter at intervals not exceeding 5000 hours TIS.

(FAA AD 82-27-08 refers)

Effective Date: DCA/PA38/12 - 16 March 1981
DCA/PA38/12A - 11 February 1983

DCA/PA38/13 Aileron Balance Weight Rib - Inspection

Applicability: PA-38-112 aircraft, S/N 38-78A0001 through 38-81A0051 and 38-81A0105

Requirement: Inspect flange area of aileron balance weight rib P/N 77342-16 and -17 per Piper SB 723 for cracks. If cracked, embody Piper reinforcement kit P/N 764140 before further flight.

(FAA AD 82-02-01 refers)

Compliance: Within the next 50 hours TIS and thereafter at intervals not exceeding 100 hours TIS until Piper reinforcement kit P/N 764140 is embodied

Effective Date: 13 November 1981

DCA/PA38/14A Elevator Assembly - Inspection

Applicability: All model PA-38-112 aircraft

Requirement: To preclude possibility of aircraft loss of controllability in flight due to elevator control surface assembly failure, accomplish the following, (unless already accomplished)

1. Visually inspect torque tube assembly P/N 77620-02 for cracks, paying particular attention to welded areas of each elevator attachment bracket to torque tube. Confirm any crack indication using magnetic particle method before further flight.

2. Remove torque tube assembly from elevator installation and inspect using magnetic particle method. Remove cracked assemblies from service before further flight. Reprotect uncracked assemblies before reinstallation.

3. Torque tube assemblies fitted as replacements are to be inspected using magnetic particle method before installation. Assemblies exhibiting cracking must not be fitted.

Compliance: Visual Inspection - within the next 5 hours TIS

Magnetic Particle Inspection - within the next 25 hours TIS

Effective Date: DCA/PA38/14 - 12 June 1982
DCA/PA38/14A - 12 July 1985

DCA/PA38/15 Radio Support Installation - Modification

Applicability: PA-38-112 aircraft, S/N 38-78A0001 through 38-82A0091

Requirement: To preclude possibility of flight control restriction due to radio support strap interference, replace all attachment strap non-self locking nuts with self locking nuts per Piper SB 748

Compliance: Within the next 25 hours TIS

Effective Date: 1 September 1982

DCA/PA38/16 Fatigue Critical Components - Retirement

Applicability: All model PA-38-112 aircraft

Requirement: Retire the following components at the specified TTIS:
Lower Longitudinal Trim Springs P/N 37523 or 61916-2 - 1,500 hours.
Wing P/N 77352 and associated structure - 11,000 hours.
Steel Upper Rudder Hinge P/N 77610-03 - 5,000 hours

Effective Date: 11 February 1983

DCA/PA38/17B MLG Attachment - Modification and Inspection

Applicability: Model PA-38-112 aircraft, S/N 38-78A0001 through 38-82A0122

Requirement: To prevent failure of the MLG attachment bolts, accomplish the following:

1. Install MLG bolt replacement kit, Piper P/N 765-171 or P/N 765-172 as applicable per Piper SB 673B.
2. Inspect MLG attachment bolts for correct torque. If found loose, renew before further flight. Remove bolts and inspect. If bolts are found bent, cracked or corroded, renew before further flight. Inspect bolt holes in fittings for cracks and corrosion. Rectify any defects found before further flight. Reinstall MLG attachment bolts with a corrosion preventative grease.

(FAA AD 90-19-03 refers)

Compliance:

1. Within next 100 hours TIS.
2. At intervals not to exceed 100 hours TIS.

Effective Date: DCA/PA38/17A - 24 November 1989
DCA/PA38/17B - 20 January 1995

DCA/PA38/18 Vertical Fin Spars - Inspection

Applicability: Model PA-38-112 aircraft, S/N 38-78A0001 through 38-82A0122

Requirement: To preclude possible structural failure, inspect upper forward and aft vertical fin spars per Piper SB 763 and repair/reinforce as prescribed therein.
(FAA AD 83-19-01 refers)

Compliance: At 500 hours TTIS or within next 50 hours TIS whichever is the later and thereafter at intervals not exceeding 100 hours TIS until Piper kit 764 965 installed

Effective Date: 19 August 1983

DCA/PA38/19A Flow Strip Installation – Modification

Applicability: Model PA-38-112 aircraft, S/N 38-78A0001 through to 38-79A0582.

Note 1: This AD revised to introduce an affected S/N range in the applicability and to clarify the AD requirement.

Requirement: To standardise and improve stall characteristics, accomplish the following:

1. Install Piper Flow Strip Installation Kit P/N 763-930 and insert Piper P/N 761-658 revision 3, dated 18 December 1978 into the aircraft POH. The POH insert contains performance information applicable to aircraft fitted with Kit P/N 763-930.
2. Replace the Airspeed Indicator (ASI) with Piper ASI P/N 61906-02 or 61905-02, or alternatively change the original ASI markings as follows:
 - Red radial – 138 knots.
 - Yellow arc – from 110 to 138 knots.
 - Green arc – from 52 to 110 knots.
 - White arc – from 49 to 89 knots.

Note 2: Piper SL No. 876 dated 12 April 1979 pertains to the subject of this AD. (FAA AD 83-14-08 refers)

Compliance:

1. Within the next 100 hours TIS unless already accomplished.
2. Within the next 100 hours TIS unless already accomplished.

Effective Date: DCA/PA38/19 - 19 August 1983
DCA/PA38/19A - 29 April 2010

DCA/PA38/20 Throttle Control - inspection and Modification

Applicability: Model PA-38-112 aircraft, S/N 38-78A0001 through 38-82A0122

Requirement: To preclude possible loss of engine control, inspect and modify per Piper SB 760

Compliance: Inspection - within next 50 hours TIS
Modification - by 30 September 1984

Effective Date: 8 June 1984

DCA/PA38/21 Elevator Control Installation - Modification

Applicability: Model PA-38-112 aircraft, S/N 38-78A0001 through 38-82A0122

Requirement: To preclude possible control movement restriction modify per Piper SB 800

Compliance: Within the next 100 hours TIS or by 30 April 1985, whichever is the later

Effective Date: 8 February 1985

DCA/PA38/22 Wing Skin - Inspection

Applicability: Model PA-38-112 aircraft, S/N 38-78A0001 through 38-82A0122

Requirement: Inspect top inboard wing skin to spar rivets per Piper SB 879. Renew failed/loose rivets before further flight

Compliance: At 3000 hours TTIS or within next 100 hours TIS whichever is the later, unless already accomplished, and thereafter at intervals not exceeding 1000 hours TIS

Effective Date: 5 July 1988

DCA/PA38/23 Oil Pressure Line Fitting - Replacement

- Applicability:** Model PA-38-112 aircraft, S/N 38-78A0001 through 38-82A0122
- Requirement:** To reduce engine oil loss in case of oil pressure line failure, replace the 90 degree fitting per Piper SB 936. If an optional hour meter oil pressure switch is installed, inspect the Tee fitting and nipple attaching the transducer and switch per the SB. If aluminium fittings are found, replace per the SB before further flight
- Compliance:** Within the next 100 hours TIS
- Effective Date:** 24 August 1990

DCA/PA38/24 Rear Frame Stiffener - Installation

- Applicability:** Model PA-38-112 aircraft, S/N 38-78A0001 through 38-80A0198.
- Requirement:** To prevent cracking and distortion of the rear spar frame assembly caused by hard landings and poor ground handling techniques, install rear spar frame reinforcement kit, per Piper SB 834.
- Compliance:** Within next 200 hours TIS, unless already accomplished.
- Effective Date:** 11 April 1997

DCA/PA38/25 Rudder Upper Hinge - Replacement

- Applicability:** Model PA-38-112 aircraft, S/N 38-80A0166 through 38-82A0122.
The aircraft S/Ns listed do not match those in Piper SB 686. This AD takes precedence over the applicability section of SB 686.
- Requirement:** To prevent cracks in the upper rudder hinge bracket, which could result in separation of the rudder from the aircraft and loss of control, accomplish the following:-

Remove and replace the upper rudder hinge bracket, P/N 77610-02, P/N 77610-03 or an FAA-approved equivalent P/N, with a new upper rudder hinge bracket, P/N 77610-03 per Piper SB 686.

(FAA AD 98-03-16 refers)
- Compliance:** At 5,000 hours TTIS or within the next 100 hours TIS, whichever is the later, and thereafter at intervals not to exceed 5,000 hours TIS.
- Effective Date:** 13 March 1998

*** DCA/PA38/26A Gascolator Valve – Inspection and Replacement**

- Applicability:** Model PA-38-112 aircraft, all S/N.
- Note 1:** This AD supersedes DCA/PA38/26 to extend the compliance with no change to the AD requirement. This AD is prompted by reports of finding locking type fuel drain valves fitted to the gascolators on certain PA-28 and PA-38 aircraft. This AD requires the replacement of locking gascolator fuel drain valves with a manufacturer approved non-locking drain valve.
- Requirement:** To prevent the gascolator fuel drain inadvertently being left open which could result in fuel starvation and a loss of engine power, accomplish the following:
1. Inspect the aircraft and determine the type of fuel drain valve installed on the gascolator.

If a locking fuel drain valve is found fitted, replace with Piper valve P/N 492-312 (CCA 36150) or an equivalent manufacturer approved non-locking valve.

If a non-locking fuel drain valve is found fitted, no further AD action is required.

2. A locking fuel drain valve shall not be fitted to the gascolator on any affected aircraft.

Note 2: For gascolator maintenance requirements refer to Piper SL No. 1141 date 27 April 2011 and the Piper PA-38-112 Maintenance/Service Manual.

(NZ Occurrences 10/743 and 11/254 refer)

Compliance:

1. By 5 January 2012.
2. From 5 October 2011.

Effective Date: DCA/PA38/26 - 29 September 2011
DCA/PA38/26A - 5 October 2011