Airworthiness Directive Schedule

Aeroplanes

Piper PA-46 Series (Malibu and Meridian)

29 April 2021

Notes:

1. This AD schedule is applicable to Piper PA-46-310P (Malibu) and PA-46-500TP (Malibu Meridian) aircraft manufactured under Federal Aviation Administration (FAA) Type Certificate No. A25SO.
2. The FAA is the National Airworthiness Authority (NAA) responsible for the issue of State of Design Airworthiness Directives (ADs) for these aircraft. State of Design ADs applicable to these aircraft can be obtained directly from the FAA website at http://www.caa.govt.nz/airworthiness-directives/states-of-design/
3. The date above indicates the amendment date of this schedule.
4. New or amended ADs are shown with an asterisk *

Contents

DCA/PA46/1A Airworthiness Directive Compliance at Initial Airworthiness Certificate Issue

Applicability: Models PA-46-310P and PA-46-350P

Requirement: Compliance with the following FAA Airworthiness Directives (as applicable) is required:-

87-04-01	Air valve linkage
88-25-08	Engine cooling system
92-13-06	Jammed trim tab
92-13-07	Loose empennage rivets
92-15-14	Undetected low vacuum
95-23-12	Manifold pressure limits

Note: Each part of this AD (each individual FAA AD) shall be certified in the aircraft log book separately.

Compliance: Before issue of New Zealand Certificate of Airworthiness. Repetitive inspections to be accomplished at intervals not exceeding the times specified in the FAA Airworthiness Directives

Effective Date: DCA/PA46/1 - 10 April 1998
DCA/PA46/1A - 5 June 1998

DCA/PA46/2 Severe Icing Conditions - Flight Manual Revision

Applicability: Models PA-46-310P and PA-46-350P.

Requirement: To minimise the potential hazards associated with operating the aircraft in severe icing conditions (by providing more clearly defined procedures and limitations associated with such conditions), incorporate the following into the Aircraft Flight Manual (AFM):-

1. Limitations Section of the Aircraft Flight Manual

"WARNING

Severe icing may result from environmental conditions outside of those for which the aircraft is certificated. Flight in freezing rain, freezing drizzle, or mixed icing conditions (supercooled liquid water and ice crystals) may result in ice build-up on protected surfaces exceeding the capability of the ice protection system, or may result in ice forming aft of the protected surfaces. This ice may not be shed using the ice protection systems, and may seriously degrade the performance and controllability of the aircraft.

• During flight, severe icing conditions that exceed those for which the aircraft is certificated shall be determined by the following visual cues. If one or more of these visual cues exists, immediately request priority handling from Air Traffic Control to facilitate a route or an altitude change to exit the icing conditions.

• Unusually extensive ice accumulation on the airframe and windshield in areas not normally observed to collect ice.

• Accumulation of ice on the upper surface of the wing aft of the protected area.

• Accumulation of ice on the engine nacelles and propeller spinners farther aft than normally observed.

• Since the autopilot, when installed and operating, may mask tactile cues that indicate adverse changes in handling characteristics, use of the autopilot is prohibited when any of the visual cues specified above exist, or when unusual lateral trim requirements or autopilot trim warnings are encountered while the aircraft is in icing conditions.

• All wing icing inspection lights must be operative prior to flight into known or forecast icing conditions at night. This supersedes any relief provided by the Master Minimum Equipment List (MMEL)."

2. Normal Procedures Section of the Aircraft Flight Manual

"THE FOLLOWING WEATHER CONDITIONS MAY BE CONDUCIVE TO SEVERE IN-FLIGHT ICING:

• Visible rain at temperatures below 0 degrees Celsius ambient air temperature.

• Droplets that splash or splatter on impact at temperatures below 0 degrees Celsius ambient air temperature.

PROCEDURES FOR EXITINGTHE SEVERE ICING ENVIRONMENT:

These procedures are applicable to all flight phases from takeoff to landing. Monitor the ambient air temperature. While severe icing may form at temperatures as cold as -18 degrees Celsius, increased vigilance is warranted at temperatures around freezing with visible moisture present. If the visual cues specified in the Limitations Section of the AFM for identifying severe icing conditions are observed, accomplish the following:

• Immediately request priority handling from Air Traffic Control to facilitate a route or an altitude change to exit the severe icing conditions in order to avoid extended exposure to flight conditions more severe than those for which the aircraft has been certificated.

• Avoid abrupt and excessive manoeuvring that may exacerbate control difficulties.

• Do not engage the autopilot.

• If the autopilot is engaged, hold the control wheel firmly and disengage the autopilot.

• If an unusual roll response or uncommanded roll control movement is observed, reduce the angle-of-attack.

• Do not extend flaps when holding in icing conditions. Operation with flaps extended can result in a reduced wing angle-of-attack, with the possibility of ice forming on the upper surface further aft on the wing than normal, possibly aft of the protected area.

• If the flaps are extended, do not retract them until the airframe is clear of ice.

• Report these weather conditions to Air Traffic Control."

Note: This may be accomplished by inserting a copy of this AD in the AFM or by incorporating a manufacturer's flight manual revision that contains the wording per this AD.

3. Flight Crew Notification
Operators must ensure that flight crew are aware of the flight manual revision.

(FAA AD 98-04-26 refers)

Compliance: By 10 May 1998

Effective Date: 10 April 1998

DCA/PA46/3 Cancelled – DCA/PA46/7 refers

Effective Date: 21 April 2011

DCA/PA46/4 Flap Drive Bellcrank Assemblies - Inspection

Applicability: Model PA-46-310P S/N 46-8408001 through 46-8408087, 46-8508001 through 46-8508109, 46-8608001 through 46-8608067, and 4608001 through 4608140.

Model PA-46-350P S/N 4622001 through 4622200 and 4636001 through 4636313.

Model PA-46-500TP S/N 4697001 through 4697020, 4697023, 4697024, 4697025, 4697027 through 4697037, 4697040 through 4697052, 4697054, 4697055, 4697058, and 4697059.

Requirement: To prevent failure of the flap drive bellcrank assemblies and subsequent inability to control the flaps and possible loss of control of the aircraft, accomplish the following:-

1. Inspect LH and RH inboard flap drive bellcrank assemblies, Piper P/N 82905-2 and P/N 82905-3, per Piper SB 1062, to ensure that the welding is complete and adequate. Replace any assembly that has incomplete or inadequate welding prior to further flight.

2. Do not install any inboard flap drive bellcrank assembly, Piper P/N 82905-2 or P/N 82905-3, unless you have ensured that the welding is complete and adequate.

(FAA AD 2001-12-01 refers)

Compliance: 1. Within next 10 hours TIS.

2. From 28 June 2001.

Effective Date: 28 June 2001

DCA/PA46/5A Control Wheel Attachment – Inspection and Modification

Applicability: Group A aircraft: Model PA-46-350P aircraft, S/N 4636132 through to 4636344, and Model PA–46–500TP aircraft, S/N 4697001 through to 4697162.

Group B aircraft: Model PA-46-350P aircraft, S/N 4636345 through to 4636348, and model PA–46–500TP aircraft, S/N 4697163 through to 4697174.

Note: No action required if already in compliance with DCA/PA46/5. The AD applicability revised to include PA-46-500TP aircraft.

Requirement: To detect and correct inadequate control wheel attachment design, which could result in loss of control, accomplish the following;

1. For Group A aircraft:
   Inspect the control wheel attachment screw and nut-plate for proper thread engagement (minimum one thread showing past the end of the nut plate), and replace the screw and/or nut plate if insufficient thread engagement is found. Reassemble the control wheel onto the control wheel shaft and apply Loctite thread-locking compound.
2. For Group A and B aircraft:
   Install the retainer clip P/N 104687-002 per part II of New Piper Aircraft SB 1139A.

(FAA AD 2004-14-12 refers)

Compliance:
1. Inspect within the next 25 hours TIS unless previously accomplished.
2. Install the retainer clip within the next 100 hours TIS unless previously accomplished.

Effective Date: DCA/PA46/5 - 26 August 2004
DCA/PA46/5A - 28 October 2010

DCA/PA46/6 Airworthiness Directive Compliance at Initial Airworthiness Certificate Issue

Applicability: Model PA-46-500TP aircraft, all S/N

Requirement: Compliance with the following Federal Aviation Administration (FAA) Airworthiness Directives (as applicable) is required:

FAA AD No:	Piper Service Information:	Subject and Applicability:	AD Requirement:
2004-03-32	Piper SB No. 1132 dated 4 June 2003.	Electronic Control Modules. Model PA-46-500TP aircraft, S/N 4697001 through to 4697140 and 4697142 through to 4697153.	Accomplish the AD requirements per the instructions in Piper SB No. 1132.
2004-15-19	Piper SB No. 1140 dated 16 September 2003.	Protective percussion caps or silicone tube installed over the end of the trigger mechanism. Model PA-46-500TP aircraft, S/N 4697001 through to 4697163.	Accomplish the AD requirements per the instructions in Piper SB No. 1140.
2008-26-11	Piper SB No. 1192 dated 15 September 2008, drawing no. 88452 dated 19 June 2008.	Stall Vane Heater. Model PA-46-500TP aircraft, S/N 4697001 through to 4697365.	Accomplish the instructions in Piper SB No. 1192 and drawing no. 88452.

Note 1: Each part of this AD (each individual FAA AD) shall be certified in the aircraft log book separately. Copies of the FAA ADs can be obtained from http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgAD.nsf/MainFrame?OpenFrameSet

Note 2: Manufacturer service information at later FAA approved revisions is acceptable to comply with the requirements of this AD.

Compliance: Before issue of a New Zealand Certificate of Airworthiness, or at the next ARA inspection after the effective date of this AD whichever is the sooner, unless previously accomplished.

Effective Date: 28 October 2010

DCA/PA46/7 Turbine Inlet Temp Gauge System – Inspection, Calibration and Replacement

Applicability: Group 1 aircraft previously affected by DCA/PA46/3:

Model PA–46–310P (Malibu) aircraft, S/N 46–8408001 through to 46–8608067 and 4608001 through to 4608140,
Model PA–46–350P (Malibu Mirage) aircraft, S/N 4622001 through to 4622200 and 4636001 through to 4636020, and

Group 2 aircraft previously not affected by DCA/PA46/3:

Model PA–46–350P (Malibu Mirage) aircraft, S/N 4636021 onwards,
Model PA–46R–350T (Matrix) aircraft, S/N 4692001 onwards, and

Fitted with a Turbine Inlet Temperature (T.I.T.) system identified in Table 1:

Table 1

Model	S/N	Indication System P/N	Probe P/N
PA-46-310P	46-8408001 through 46-8608067 and 4608001 through to 4608140	Lewis T.I.T. analog indicators P/N 471-008	471-009 or 481-387
PA-46-350P	4622001 through 4622200 and 4636001 through to 4636020	Lewis T.I.T. analog indicators P/N 471-008	481-389 or 481-392 or 686-216 (preferred)
PA-46-350P	4636021 through 4636374	Lewis T.I.T. digital indicators P/N 548-811	481-389 or 481-392 or 686-216 (preferred)
PA-46-350P	4636375 onwards	Avidyne Entegra or other Electronic Flight Information System (EFIS) display	686-216
PA-46R-350T	4692001 onwards	Avidyne Entegra or other EFIS display	686-216

Note 1: This AD retains the requirements in superseded AD DCA/PA46/3, expands the applicability to include certain model PA-46R-350T aircraft and other T.I.T. systems, and introduce new service information.

Note 2: Relief from this AD is available only if the gauge and probe are replaced through an STC and not if a second T.I.T. gauge was installed while retaining the Lewis or Transicoil T.I.T. gauge and probe.

Requirement: To prevent engine damage/failure due to possible incorrectly calibrated T.I.T. indicators or defective T.I.T. probes which could result in loss of engine power and aircraft control, accomplish the following:

1. Group 1 aircraft previously affected by DCA/PA46/3:

Clean and inspect the T.I.T. gauge and probe per the instructions in Piper MM PA-46-310P/PA-46-350P P/N 761-783, chapter 77-20-00, section A.(1)(d), pages 1 and 2, dated 1 July 1998, and Piper MM PA-46-350P/PA-46R-350T P/N 761-876, chapter 77-20-00, section 1.C, pages 1 and 2, dated 31 July 2008, as applicable. Calibrate the T.I.T. system per the instructions in Piper MM PA-46-310P/PA-46-350P P/N 761-783, chapter 77-20-00, section A.(1)(g), pages 3 and 4, dated 1 July 1998, and Piper MM PA-46-350P/PA-46R-350T P/N 761-876, chapter 77-20-00, section 1.F, page 2, dated 31 July 2008, and pages 3 and 4, dated 28 August 2007, as applicable, or Piper SB No. 995C, dated 17 November 2009.

If the T.I.T. probe fails the inspection requirements and/or the T.I.T. system indicator cannot be calibrated, replace defective parts with a serviceable part listed in table 1 of this AD provided the replacement parts have been inspected, passed the inspection, and been properly calibrated per the requirements of this AD. Accomplish these requirements per the instructions in Piper MM PA-46-310P/PA-46-350P P/N 761-783, chapter 77-20-00, section A.(1)(f), page 2, dated 1 July 1998; and Piper MM PA-46-

350P/PA-46R-350T P/N 761-876, chapter 77-20-00, section 1.E., page 2, dated 31 July 2008, as applicable, or Piper SBn No. 995C, dated 17 November 2009.

Incorporate the information in appendix 1 and appendix 2 of FAA AD 2011-06-10, as applicable into the emergency procedures section of the AFM. This may be done by inserting a copy of FAA AD 2011-06-10 into the AFM.

Note 3: For all group 1 aircraft the parts listed in Table 1 of this AD may only be fitted once they have been inspected and correctly calibrated per the requirements of this AD.

2. Group 1 model PA-46-350P aircraft only (this action is not required for model PA-46-310P:

Replace the T.I.T. probe with a new P/N 481-389, 481-392 or 686-216 probe (preferred).
For S/N 4622001 through to 4622200 accomplish this requirement per the instructions in Piper MM PA-46-310P/PA-46-350P P/N 761-783, chapter 77-20-00, section A.(1)(f), page 2, dated 1 July 1998, or Piper SB No. 995C, dated 17 November 2009.
For S/N 4636001 through to 4636020 accomplish this requirement per the instructions in Piper MM PA-46-350P/PA-46R-350T P/N 761-876, chapter 77-20-00, section 1.E., page 2, dated 31 July 2008, or Piper SB No. 995C, dated 17 November 2009.

3. Group 2 aircraft previously not affected by DCA/PA46/3:

For model PA-46-350P aircraft, S/N 4636021 through to 4636374 clean and inspect the T.I.T. gauge and probe per the instructions in Piper MM PA-46-350P/PA-46R-350T P/N 761-876, chapter 77-20-00, section 1.C, page 1, dated 28 August 2007, and page 2, dated 31 July 2008. If the T.I.T. probe fails the inspection, replace defective parts with a serviceable part listed in table 1 of this AD provided the replacement parts have been inspected, passed the inspection per the requirements of this AD. Accomplish these requirements per the instructions in Piper SB No. 995C, dated 17 November 2009.

For all Group 2 aircraft incorporate the information in appendix 2 of FAA AD 2011-06-10 into the emergency procedures section of the AFM. This may be accomplished by inserting a copy of FAA AD 2011-06-10 into the AFM.

4. Group 2 aircraft previously not affected by DCA/PA46/3:

Replace the T.I.T. probe with a new P/N 686-216 probe per the instruction in Piper SB No. 995C, dated 17 November 2009.

Note 4: For all group 2 aircraft the parts listed in Table 1 of this AD may only be fitted once they have been inspected and correctly calibrated per the requirements of this AD.

(FAA AD 2011-06-10 refers)

Compliance: 1. Within the next 100 hours from 27 August 1999 (the effective date of DCA/PA46/3) unless previously accomplished.

2. Before accumulating 250 hours TIS on the currently installed T.I.T. probe or within the next 100 hours TIS after 27 August 1999 (the effective date of DCA/PA46/3) whichever occurs later, unless previously accomplished and thereafter at intervals not to exceed 250 hours TIS.

3. Within the next 100 hours TIS.

4. Before accumulating 250 hours TIS on the currently installed T.I.T. probe or within the next 100 hours TIS whichever occurs later, and thereafter at intervals not to exceed 250 hours TIS.

Effective Date: 21 April 2011

The State of Design ADs listed below are available directly from the National Airworthiness Authority (NAA) websites. Links to NAA websites are available on the CAA website at http://www.caa.govt.nz/airworthiness-directives/states-of-design/
If additional NZ ADs need to be issued when an unsafe condition is found to exist in an aircraft or aeronautical product in NZ, they will be added to the list below.

2013-13-01 Fuel Vent Valves – Inspection

Note: FAA AD 2013-13-01 dated 12 September 2013 is re-issued with corrections. The AD effective date remains 10 July 2013.

Effective Date: 10 July 2013

2015-13-09 Cabin Altitude Encoder – Inspection

Effective Date: 13 July 2015

2016-01-01 Upper Wing Skin – Inspection

Effective Date: 17 February 2016

*** 2021-09-02 Stall Warning Heat Control System – Inspection**

Applicability: Piper PA-46-350P (Malibu Mirage) aircraft, S/N 4622041, 4636041, 4636142, 4636143, 4636313, 4636341 and 4636379, Piper PA-46-500TP (Malibu Meridian) aircraft, S/N 4697141, 4697161, 4697086, and 4697020, Piper PA-46-350P (Malibu Mirage), PA-46R-350T (Malibu Matrix), and PA-46-500TP (Malibu Meridian) aircraft, all S/N, if the left wing has been replaced with a serviceable (more than zero hours time-in-service) wing.

Note: This AD supersedes FAA AD 2021-04-07 which was effective 30 March 2021.

Effective Date: 29 April 2021