

Airworthiness Directive Schedule

Aeroplanes

Piper PA-42 Series (Cheyenne 400LS)

27 October 2011

- Notes**
1. This AD schedule is applicable to Piper PA-42-1000 (Cheyenne 400LS) aircraft manufactured under Federal Aviation Administration (FAA) Type Certificate No. A23SO.
 2. As there are no aircraft of this type currently registered in New Zealand this AD schedule is not being maintained. The schedule will be reactivated once the New Zealand Civil Aviation Authority receives an application to register an aircraft of this type. At that time the applicable ADs will include all those published by the state of design (FAA).
 3. The date above indicates the amendment date of this schedule.
 4. New or amended ADs are shown with an asterisk *

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DCA/PA42/1 Inboard Aileron Hinge Brackets - Inspection and Replacement

Applicability: The following models and S/Ns that are not equipped with P/N 74461-02 (left) and P/N 74461-03 (right) inboard aileron hinge brackets.

Model PA42 S/N 42-7800001 through 42-7800004, and 42-8001001 through 42-8001106; PA42-720 S/N 42-8301001, 42-8301002, 42-5501003 through 42-5501023, 42-5501025 through 42-5501027, 42-5501029 through 42-5501031, 42-5501033, and 42-5501039 through 42-5501059; PA42-720R S/N 42-5501024, 42-5501028, 42-5501032, and 42-5501034 through 42-5501038; PA42-1000 S/N 42-5527002 through 42-5527044.

Requirement: To prevent structural failure of the aileron caused by cracks in the area of the inboard aileron hinge bracket, accomplish the following:-

1. Inspect (using dye penetrant methods) the area beneath and in the area of the inboard aileron hinge bracket on the aileron spar for cracks per Piper SB 967.

If cracks are found on the aileron spar, accomplish the following before further flight:

(i) Inspect the corresponding aileron rib at the inboard aileron hinge bracket location;

(ii) Replace any cracked spar assembly and any cracked aileron rib per the applicable Maintenance Manual;

(iii) Replace the inboard aileron hinge brackets with an inboard aileron hinge bracket of improved design, part number (P/N) 74461-02 (left) and P/N 74461-03 (right), per SB 967.

If no cracks are found, prior to further flight, replace the inboard aileron hinge brackets with a part of improved design P/N 74461-02 (left) and P/N 74461-03 (right), per SB No. 967.

2. If the inboard aileron hinge brackets, P/N 74461-02 (left) or P/N 74461-03 (right) have been ordered from the manufacturer but are not available, dye penetrant inspect beneath and in the vicinity of the inboard aileron hinge bracket for cracks per SB No. 967.

If an inboard aileron bracket hinge, aileron spar or aileron rib is found cracked, before further flight, replace any cracked aileron rib and any cracked spar assembly (if applicable), and replace the inboard aileron hinge bracket as specified in this AD.

(FAA AD 96-21-03 refers)

Compliance: 1. At 3000 hours TIS or within the next 100 hours TIS, whichever is the later.

2. At intervals not to exceed 100 hours TIS until either parts become available or 1000 hours TIS have accumulated since the initial inspection required by this AD.

Effective Date: 22 November 1996

DCA/PA42/2 Hydraulic Hoses - Removal

Applicability: Model PA42 S/N 42-7800001, 42-7800002, 42-7801003, 42-7801004, 42-8001001 through 42-8001106, 42-8301001, 42-8301002, 42-5501003 through 42-5501023, and 42-5501025.

Requirement: To prevent hydraulic hose failure which could cause loss of hydraulic capabilities resulting in a gear-up landing, accomplish the following:-

Inspect and replace all hydraulic hoses identified as P/N 17766-02 or 465-138 and having a smooth rubber surface and a blue coloured end nut, with hoses of the same part number having a woven outer covering and black coloured end nut, per Piper SB 822.

Note: These hoses were available for installation starting February 1, 1985, and may have been installed in newly manufactured aircraft or as spares at any subsequent time.

(FAA AD 96-21-04 refers)

Compliance: Within next 25 hours TIS.

Effective Date: 22 November 1996

DCA/PA42/3 Positioning of Power Levers - Flight Manual Revision

Applicability: Models PA-42, PA-42-720, and PA-42-1000.

Requirement: To prevent loss of control of the aircraft or engine overspeed caused by the power levers being positioned below the flight idle stop while the airplane is in flight, accomplish the following:-

Amend the Limitations Section of the aircraft flight manual (AFM) by inserting the following wording:

“Positioning of power levers below the flight idle stop while the aircraft is in flight is prohibited. Such positioning could lead to loss of aircraft control or may result in an engine overspeed condition and consequent loss of engine power.”

This action may be accomplished by incorporating a copy of this AD into the Limitations Section of the AFM.

(FAA AD 97-26-12 refers)

Compliance: By 31 March 1998

Effective Date: 13 February 1998

DCA/PA42/4 Severe Icing Conditions - Flight Manual Revision**Applicability:** Models PA-42, PA-42-720 and PA-42-1000**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 EXITING THE 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 98-04-27 refers)

Compliance: By 10 May 1998

Effective Date: 10 April 1998

DCA/PA42/5 Ice Protection Systems – Flight Manual Revision

Applicability: Models PA-42, PA-42-720, PA-42-720R, and PA-42-1000 that are equipped with pneumatic deicing boots.

Requirement: To prevent reduced controllability of the aircraft due to adverse aerodynamic effects of ice adhering to the aircraft prior to the first deicing cycle, revise the Limitations Section of the Aircraft Flight Manual (AFM) to include the following:-

"Except for certain phases of flight where the AFM specifies that deicing boots should not be used (e.g., takeoff, final approach, and landing), compliance with the following is required.

Wing and Tail Leading Edge Pneumatic Deicing Boot System, if installed, must be activated:

- At the first sign of ice formation anywhere on the aircraft, or upon annunciation from an ice detector system, whichever occurs first; and

- The system must either be continued to be operated in the automatic cycling mode, if available; or the system must be manually cycled as needed to minimize the ice accretions on the airframe.

The wing and tail leading edge pneumatic deicing boot system may be deactivated only after:

- leaving known or observed/detected icing that the flight crew has visually observed on the aircraft or was identified by the on-board sensors; and
- after the airplane is determined to be clear of ice."

(FAA AD 2000-14-08 refers)

Notes: 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.

Operators must ensure that flight crew are aware of the flight manual revision.

Periodic treatment of deicing boots with approved ice release agents, such as ICEXä , in accordance with the manufacturer's application instructions is recommended.

Compliance: By 27 August 2000

Effective Date: 27 July 2000

*** DCA/PA42/6A Nose Baggage Door – Inspection and Maintenance**

Applicability: Model PA-42, PA-42-720 and PA-42-1000 aircraft, all S/N fitted with a baggage door in the fuselage nose section (a nose baggage door).

Note 1: This AD revised to clarify the AD requirement. The nose baggage compartment interior light inspection per SB No. 1194A to determine correct operation is not mandated by this AD.

Requirement: To prevent the nose baggage door opening in flight due to possible damaged, worn, corroded or non-conforming door assembly parts which could result in baggage striking the propeller or affect aircraft handling, accomplish the following:

1. Inspect the nose baggage door assembly for damaged, worn, corroded or non-conforming parts per part 1 of Piper Aircraft, Inc. SB No. 1194A, dated 10 November 2008.

Replace life limited parts per SB No. 1194A and ensure a nose baggage placard is fitted per the instructions in SB No. 1194A.

If any damaged, worn, corroded or non-conforming nose baggage door parts are found, repair or replace as required per the instructions in SB No. 1194A before further flight.

2. Inspect the nose baggage door latch and lock assemblies for damage, wear, corrosion, or non-conforming components, and lubricate as required per SB No. 1194A. Determine that the key can only be removed from the lock assembly in the locked position per the instructions in part II of the SB No. 1194A.

If any damaged, worn, corroded or non-conforming nose baggage door parts are found, repair or replace as required per the instructions in SB No. 1194A before further flight.

Note 2: As an alternative to fitting placard P/N 100700-079 per SB No. 1194A, manufacturer a placard (using at least 1/8-inch letters) with the following text and install the placard directly above the nose baggage door handle.

CLOSE AND LOCK NOSE BAGGAGE DOOR BEFORE FLIGHT

1. CLOSE DOOR FULLY AGAINST DOOR FRAME
2. PRESS DOOR HANDLE FLUSH WITH SKIN, AND ROTATE KEY INTO LOCKED POSITION
3. REMOVE KEY
4. PUSH ON FORWARD END OF DOOR HANDLE, TO CONFIRM THAT HANDLE IS LOCKED AND SECURE

Note 3: This AD does not require an inspection of the nose baggage compartment interior light to determine correct operation as specified in part 1, paragraph 1 of Piper MSB No. 1194A dated 10 November 2008.

(FAA AD 2009-13-06R1 refers)

Compliance:

1. Within the next 1000 hours TIS since replacement of all life limited parts listed in SB No. 1194A, or within the next 100 hours TIS whichever occurs later, and thereafter at intervals not to exceed 1000 hours TIS.
2. Within the next 100 hours TIS unless previously accomplished and thereafter at intervals not to exceed 100 hours TIS.

Effective Date: DCA/PA42/6 - 30 July 2009
DCA/PA42/6A - 27 October 2011