
AIRWORTHINESS DIRECTIVE

For the reasons set out in the background section, the CASA delegate whose signature appears below issues the following Airworthiness Directive (AD) under subregulation 39.001(1) of CASR 1998. The AD requires that the action set out in the requirement section (being action that the delegate considers necessary to correct the unsafe condition) be taken in relation to the aircraft or aeronautical product mentioned in the applicability section: (a) in the circumstances mentioned in the requirement section; and (b) in accordance with the instructions set out in the requirement section; and (c) at the time mentioned in the compliance section.

Fairchild (Swearingen) SA226 and SA227 Series Aeroplanes**AD/SWSA226/95****Pitch Trim Actuator****11/2007**

Applicability: All Models SA226-AT, SA226-T, SA226-T(B), SA226-TC, SA227-AC (C-26A), SA227-AT, SA227-BC (C-26A), SA227-CC, SA227-DC (C-26B), SA227-PC, and SA227-TT aeroplanes, all serial numbers, that are equipped with pitch trim actuators listed in Table 1 of this AD.

Table 1

Manufacturer	Part Number
Barber-Coleman	27-19008-001 27-19008-002 27-19008-004 27-19008-005 27-19008-006 27-19008-007
Simmonds-Precision	DL5040M5 DL5040M6 DL5040M8

Requirement: 1. For aeroplanes with a pitch trim actuator P/N 27-19008-001, P/N 27-19008-002, P/N 27-19008-004, or P/N 27-19008-005:

Revise the Aircraft Flight Manual (AFM) by incorporating the following restrictions into the Limitations Section.

- a. "Limit the maximum indicated airspeed to manoeuvring airspeed (V_A) as shown in the appropriate aircraft flight manual (AFM)"; and
- b. "The minimum crew required is two pilots."

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This may be accomplished by inserting a copy of this AD into the AFM.

This requirement may be actioned and signed for by a pilot having at least a private pilots licence.

Note 1: Fairchild Service Letter 226-SL-017, Fairchild Service Letter 227-SL-033, and Fairchild Service Letter CC7-SL-023, all FAA Approved and dated 26 August 1998; Revised 2 September 1998, address the subject matter of this AD.

2. For all aeroplanes - Do the following actions at the times specified in the initial inspection or overhaul column and the repetitive inspection or overhaul column in Table 2 of this AD:
 - a. For aeroplanes equipped with a pitch trim actuator P/N DL5040M5, P/N DL5040M6, or P/N DL5040M8 - Measure the freeplay of the pitch trim actuator and inspect the pitch trim actuator for rod slippage using the INSTRUCTIONS section of Fairchild Aircraft SA226 Series Service Letter (SL) 226-SL-005 or Fairchild Aircraft SA227 Series SL 227-SL-011, both Revised: 3 August 1999; or Fairchild Aircraft SA227 Series Service Letter CC7-SL-028, Issued: 12 August 1999, as applicable.
 - b. For aeroplanes equipped with a pitch trim actuator P/N 27-19008-001, P/N 27-19008-002, P/N 27-19008-004, or P/N 27-19008-005 - Do a functional inspection of the pitch trim actuator using the INSTRUCTIONS section of Fairchild Aircraft SA226 Series SL 226-SL-014, Fairchild Aircraft SA227 Series SL 227-SL-031, or Fairchild Aircraft SA227 Series SL CC7-SL-021; all Revised: 1 February 1999; as applicable.
 - c. For aeroplanes equipped with a pitch trim actuator P/N 27-19008-006 or P/N 27-19008-007 - Overhaul the pitch trim actuator following the applicable maintenance manual.

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Table 2. - Inspection/Overhaul and Replacement Requirements for Pitch Trim Actuators

Condition	Initial Inspection or Overhaul	Repetitive Inspection or Overhaul	Repetitive Replacement
(i) For all affected aeroplane models (except for the Models SA227-CC and SA227-DC) that have an original pitch trim actuator, P/N DL5040M5, installed.	Inspect in accordance with Requirement 2a. of this AD before accumulating 3,000 hours time-in-service (TIS) on the pitch trim actuator or within 50 hours TIS after 17 April 1995, whichever occurs later, unless previously accomplished.	Inspect in accordance with Requirement 2a of this AD before accumulating 250 hours TIS after the initial inspection and repetitively thereafter at intervals not to exceed 250 hours TIS until accumulating the hours TIS specified in paragraph (i) of the Repetitive Replacement column of this Table.	Replace the pitch trim actuator with a P/N DL5040M6, P/N DL5040M8, P/N 27-19008-006, P/N 27-19008-007, or an FAA-approved equivalent pitch trim actuator before accumulating 5,000 hours TIS on the pitch trim actuator, 500 hours TIS after the initial inspection, or within 30 days after effective date of this AD, whichever occurs later.
(ii) For all affected aeroplane models (except for the Models SA227-CC and SA227-DC) that have a replacement pitch trim actuator, P/N DL5040M5 installed.	Inspect in accordance with Requirement 2a of this AD before accumulating 5,000 hours TIS on the pitch trim actuator or within 50 hours TIS after 17 April 1995 whichever occurs later.	Inspect in accordance with Requirement 2a of this AD before accumulating 300 hours TIS after the initial inspection and repetitively thereafter at intervals not to exceed 300 hours TIS until accumulating the hours TIS specified in paragraph (ii) of the Repetitive Replacement column of this Table.	Replace the pitch trim actuator with a P/N DL5040M6, P/N DL5040M8, P/N 27-19008-006, P/N 27-19008-007, or an FAA-approved equivalent pitch trim actuator before accumulating 6,500 hours TIS on the pitch trim actuator or within 30 days of the effective date of this AD, whichever occurs later.

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(iii) For all affected aeroplane models (except for the Models SA227-CC and SA227-DC) that have a replacement pitch trim actuator, P/N DL5040M6, installed. This part can be new, modified from a P/N DL5040M5 pitch trim actuator, or overhauled and zero-timed.	Inspect in accordance with Requirement 2a of this AD before accumulating 7,500 hours TIS on the pitch trim actuator or within 50 hours TIS after 17 April 1995, whichever occurs later.	Inspect in accordance with Requirement 2a of this AD before accumulating 300 hours TIS after the initial inspection and repetitively thereafter at intervals not to exceed 300 hours TIS until accumulating the hours TIS specified in paragraph (iii) of the Repetitive Replacement column of this Table.	Replace the pitch trim actuator with a P/N DL5040M6, P/N DL5040M8, P/N 27-19008-006, P/N 27-19008-007, or an FAA-approved equivalent pitch trim actuator before accumulating 9,900 hours TIS on the pitch trim actuator or within 30 days after the effective date of this AD, whichever occurs later.
(iv) For all affected aeroplane models (except for the Models SA227-CC and SA227-DC) that have a replacement pitch trim actuator, P/N DL5040M5, installed that was overhauled and zero-timed where both nut assemblies, P/N AA56142, were replaced with new assemblies during overhaul.	Inspect in accordance with Requirement 2a of this AD before accumulating 5,000 hours TIS on the pitch trim actuator or within 50 hours TIS after 17 April 1995, whichever occurs later.	Inspect in accordance with Requirement 2a of this AD before accumulating 300 hours TIS after the initial inspection and repetitively thereafter at intervals not to exceed 300 hours TIS until accumulating the hours TIS specified in paragraph (iv) of the Repetitive Replacement column of this Table.	Replace the pitch trim actuator with a P/N DL5040M6, P/N DL5040M8, P/N 27-19008-006, P/N 27-19008-007, or an FAA-approved equivalent pitch trim actuator before accumulating 6,500 hours TIS on the pitch trim actuator or within 30 days after the effective date of this AD, whichever occurs later.

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(v) For all affected aeroplane models (except for the Models SA227-CC and SA227-DC) that have a replacement P/N DL5040M5pitch trim actuator installed that was overhauled and zero-timed where both nut assemblies, P/N AA56142, were <u>not</u> replaced with new assemblies during overhaul.	Inspect in accordance with Requirement 2a of this AD before accumulating 3,000 hours TIS on the pitch trim actuator or within 50 hours TIS after 17 April 1995, whichever occurs later.	Inspect in accordance with Requirement 2a of this AD before accumulating 250 hours TIS after the initial inspection and repetitively thereafter at intervals not to exceed 250 hours TIS until accumulating the hours TIS specified in paragraph (iv) of the Repetitive Replacement column of this Table.	Replace the pitch trim actuator with a P/N DL5040M6, P/N DL5040M8, P/N 27-19008-006, P/N 27-19008-007, or an FAA-approved equivalent pitch trim actuator before accumulating 5,000 hours TIS on the pitch trim actuator or within 30 days after the effective date of this AD whichever occurs later.
(vi) For all affected aeroplane models (except for the Models SA227-CC and SA227-DC) that have a newly fabricated or overhauled and zero-timed pitch trim actuator, P/N 27-19008-001, P/N 27-19008-002, P/N 27-19008-004, or P/N 27-19008-005.	Inspect in accordance with Requirement 2b of this AD before accumulating 500 hours total TIS on the pitch trim actuator or within 50 hours TIS after 1 December 1997, whichever occurs later.	Inspect in accordance with Requirement 2b of this AD before accumulating 300 hours TIS after the initial inspection and repetitively thereafter at intervals not to exceed 300 hours TIS until accumulating the hours TIS specified in paragraph (vi) of the Repetitive Replacement column of this Table.	Replace the pitch trim actuator with a P/N DL5040M6, P/N DL5040M8, P/N 27-19008-006, P/N 27-19008-007, or an FAA-approved equivalent pitch trim actuator before accumulating 5,000 hours TIS on the pitch trim actuator or within 30 days after the effective date of this AD, whichever occurs later.

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(vii) For the Models SA227-CC and SA227-DC that have a pitch trim actuator P/N DL5040M5 or P/N DL5040M6 installed.	None.	None.	Replace the pitch trim actuator with a P/N DL5040M8, P/N 27-19008-006 P/N 27-19008-007, or an FAA-approved equivalent pitch trim actuator before accumulating 1,500 hours TIS on the pitch trim actuator or within 30 days after the effective date of this AD, whichever occurs later.
(viii) For the Models SA227-CC and SA227-DC that have a newly fabricated or overhauled and zero-timed pitch trim actuator, P/N 27-19008-001, P/N 27-19008-002, P/N 27-19008-004, or P/N 27-19008-005.	Inspect in accordance with Requirement 2b of this AD before accumulating 500 hours total TIS on the pitch trim actuator or within 50 hours TIS after 1 December 1997, whichever occurs later.	Inspect in accordance with Requirement 2b of this AD before accumulating 300 hours TIS after the initial inspection and repetitively thereafter at intervals not to exceed 300 hours TIS until accumulating the hours TIS specified in paragraph (viii) of the Repetitive Replacement column of this Table.	Replace the pitch trim actuator with a P/N DL5040M8, P/N 27-19008-006, P/N 27-19008-007, or an FAA-approved equivalent pitch trim actuator before accumulating 5,000 hours TIS on the pitch trim actuator or within 30 days after the effective date of this AD, whichever occurs later.

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(ix) For all affected aeroplanes with a pitch trim actuator, P/N DL5040M8, installed.	Inspect in accordance with Requirement 2a of this AD before accumulating 7,500 hours TIS on the pitch trim actuator or within the next 50 hours TIS after April 10, 2000, whichever occurs later.	Inspect in accordance with Requirement 2a of this AD before accumulating 300 hours TIS after the initial inspection and repetitively thereafter at intervals not to exceed 300 hours TIS until accumulating the hours TIS specified in paragraph (ix) of the Repetitive Replacement column of this Table.	Replace the pitch trim actuator with a P/N DL5040M8, P/N 27-19008-006 or P/N 27-19008-007, or an FAA-approved equivalent pitch trim actuator before accumulating 9,900 hours TIS on the pitch trim actuator or within 30 days after the effective date of this AD, whichever occurs later.
(x) For all affected aeroplanes with a P/N 27-19008-006 or 27-19008-007 pitch trim actuator installed.	Overhaul following Requirement 2c of this AD before accumulating 2,000 hours TIS on the pitch trim actuator.	Overhaul following Requirement 2c of this AD before accumulating 2,000 hours TIS on the pitch trim actuator.	No replacement requirements.

3. For all aeroplanes - Replace the pitch trim actuator following the applicable maintenance manual.
4. For all aeroplane models except Models SA227-CC and SA227-DC - Do not install as a replacement any of the following pitch trim actuators or FAA-approved equivalent P/Ns:
 - a. P/N 27-19008-001;
 - b. P/N 27-19008-002;
 - c. P/N 27-19008-004;
 - d. P/N 27-19008-005; or
 - e. P/N DL5040M5.

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5. For all aeroplane Models SA227-CC and SA227-DC - Do not install as a replacement any of the following pitch trim actuators or FAA- approved equivalent P/Ns:
 - a. P/N 27-19008-001;
 - b. P/N 27-19008-002;
 - c. P/N 27-19008-004;
 - d. P/N 27-19008-005;
 - e. P/N DL5040M5; or
 - f. P/N DL5040M6.

Note 2: FAA AD 2007-16-03 Amdt 39-15142 dated 27 July 2007 refers. This AD supersedes FAA AD 98-19-15R and AD 2000-03-17.

- Compliance:
1. Remains unchanged as detailed in AD/SWSA 226/85 Amdt 1 as - Before further flight after 14 September 1998; or in the case of aircraft with actuators P/N 27-19008-004, or P/N 27-19008-005, before further flight after 23 February 2000.

Installation of any FAA-approved pitch trim actuator other than P/N 27-19008-001, P/N 27-19008-002, P/ N 27-19008-004, or P/N 27-19008-005 terminates the actions detailed in Requirement 1 of this AD.

2. As detailed in Table 2 of this AD.
3. Before further flight when any of the following occurs:
 - a. The pitch trim actuator is inspected following Requirement 2 of this AD and the freeplay limitations are exceeded, rod slippage is found, or a ratcheting sound occurs, as specified in the applicable service letters; or
 - b. The installed pitch trim actuator reaches its repetitive replacement time as specified in table 2 of this AD.
4. From the effective date of this AD.
5. From the effective date of this AD.

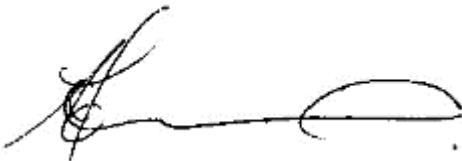
This Airworthiness Directive becomes effective on 25 October 2007.

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AD/SWSA226/95 (continued)

Background: This AD results from reports of mechanical failure of the pitch trim actuator causing the horizontal stabilizer to move to full aircraft nose up. The issuing of this AD is intended to detect excessive freeplay or rod slippage in the pitch trim actuator, which, if not detected and corrected, could result in pitch trim actuator failure. It is also intended to lessen the severity of pitch upset if a pitch trim actuator mechanical failure occurs. These conditions could lead to possible loss of control. The issuing of this AD will also eliminate the use of certain pitch trim actuators that require frequent critical inspections or replacements.

This AD supersedes AD/SWSA226/68 Amdt 5 and AD/SWSA226/85 Amdt 1 which are cancelled.

A handwritten signature in black ink, appearing to read 'Charles Lenarcic', with a stylized flourish at the end.

Charles Lenarcic
Delegate of the Civil Aviation Safety Authority

10 September 2007