
AIRWORTHINESS DIRECTIVE

On the effective date specified below, and for the reasons set out in the background section, the CASA delegate whose signature appears below revokes Airworthiness Directive (AD) AD/SWSA226/97 and issues the following 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/SWSA226/97
Amdt 1****Chafing or Arcing Electrical Wiring****10/2009**

Applicability: All serial numbers of the following aeroplane models:

SA226-AT	SA227-AT
SA226-T	SA227-BC (C-26A)
SA226-TC	SA227-CC
SA227-AC (C-26A)	SA227-DC (C-26B)

Requirement: 1. For the following model and serial number (S/N) aeroplanes, inspect the main battery leads running forward from the battery compartment for deterioration, cover the four-gauge wires leaving the battery box with firesleeving, and secure them with a clamp:

SA226-AT, S/N AT-001 through AT-419;

SA226-T, S/N T-201 through T-248;

SA226-TC, S/N TC-201 through TC-419;

SA227-AC (C-26A), S/N AC-420 through AC-539, AC-541, AC-543, AC-544, AC-547 through AC-551; and

SA227-AT, S/N AT-423 through AT-551.

The above Requirement is to be accomplished using service information as follows:

For Models SA226-AT, SA226-T, and SA226-TC aeroplanes - M7 Aerospace SA226 Series Service Bulletin (SB) 226-24-019, revised 21 November 2008; or Fairchild Aircraft Corporation SA226 Series SB 24-019, revised 17 May 1983; or

For Models SA227-AC (C-26A) and SA227-AT aeroplanes - M7 Aerospace SA227 Series SB 227-24-001, revised 21 November 2008; or Fairchild Aircraft Corporation SA227 Series SB 24-001, revised 17 May 1983.

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2. For the following model and S/N aeroplanes, reroute the hydraulic tube assemblies in the right wing leading edge, reroute the battery cables and 22-gauge wire bundle, and install a new access panel forward of the battery box:

SA226-AT, S/N AT-001 through AT-074;

SA226-TC, S/N TC-201 through TC-419;

SA227-AC (C-26A), S/N AC-420 through AC-539, AC-541, AC-543, AC-544, AC-547 through AC-550; and

SA227-AT, S/N AT-423 through AT-551.

The above Requirement is to be accomplished using service information as follows:

For Models SA226-AT, and SA226-TC aeroplanes - M7 Aerospace SA226 Series SB 226-24-020, revised 4 August 2008; or Fairchild Aircraft Corporation SA226 Series SB 24-020, revised 15 February 1984; or

For Models SA227-AC (C-26A) and SA227-AT, aeroplanes - M7 Aerospace SA227 Series SB 227-24-002, revised 21 November 2008; or Fairchild Aircraft Corporation SA227 Series SB 24-002, revised 15 February 1984.

3. For model SA226-AT, SA226-T, SA226-TC, SA227-AC (C-26A), SA227-AT, SA227-CC, and SA227-DC (C-26B) aeroplanes, all S/N, inspect electrical wires and components, hydraulic tube assemblies, and bleed air tube assemblies at the left hand and right hand (LH/RH) inboard wing leading edge/battery box areas, LH/RH wing stations 51.167 to 81.174, and at all feed-through locations into the LH/RH inboard keelson for any evidence of chafing or arcing.

The above Requirement is to be accomplished using service information as follows:

For Models SA226-AT, SA226-T, and SA226-TC aeroplanes - M7 Aerospace SA226 Series SB 226-24-036, revised 21 November 2008; or M7 Aerospace SA226 Series SB 226-24-036, issued 19 September 2007;

For Models SA227-AC (C-26A) and SA227-AT, aeroplanes - M7 Aerospace SA227 Series SB 227-24-019, revised 21 November 2008; or M7 Aerospace SA227 Series SB 227-24-019, issued 19 September 2007; or

For Models SA227-CC and SA227-DC (C-26B) aeroplanes - SA227 Series Commuter Category SB CC7-24-010, revised 21 November 2008; or SA227 Series Commuter Category SB CC7-24-010, issued 19 September 2007.

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4. For model SA227-BC (C-26A) aeroplanes, all S/N, inspect the main battery leads running forward from the battery compartment for any evidence of insulation deterioration following M7 Aerospace SA227 Series SB 227-24-001, revised 21 November 2008.
5. For model SA227-BC (C-26A) aeroplanes, all S/N, inspect electrical wires and components, hydraulic tube assemblies, and bleed air tube assemblies at LH/RH inboard wing leading edge/battery box areas, LH/RH wing stations 51.167 to 81.174, and at all feed-through locations into the LH/RH inboard keelson for any evidence of insulation deterioration, chafing, or arcing following M7 Aerospace SA227 Series SB 227-24-019, revised 21 November 2008.
6. For all model and S/N aeroplanes, clear, repair, and/or replace all electrical wires and components, hydraulic tube assemblies, and bleed air tube assemblies, in the inspection area and feed-through locations that show any sign of insulation deterioration, chafing, or arcing, as required following the applicable service information referenced in Requirements 1, 3, 4 and 5.

Note 1: Although not a requirement of this Directive, Swearingen Aviation Corporation SA226 Series SB 57-010, revised 15 December 1975, may be incorporated on those aeroplanes that have not installed the access panel. Installation of the access panel will simplify the incorporation of the service bulletins referenced in this Directive and future inspections of the areas of concern.

Note 2: This Directive supersedes AD/SWSA226/96 Amdt 1 which will be cancelled. Any inspection accomplished in accordance with AD/SWSA226/96 or Amdt 1 that is equivalent to any inspection required by this Directive is acceptable for compliance with this Directive and the 12 month interval for repetitive inspections required by this Directive should start from the date the initial inspection was accomplished in accordance with the superseded Directive.

Later revisions of the above SBs, approved by the United States Federal Aviation Administration (FAA) as an Alternate Method of Compliance (AMOC) to FAA AD 2009-11-06 are considered acceptable for compliance with the equivalent Requirements of this Directive.

Note 3: FAA AD 2009-11-06 Amdt 39-15916 refers.

Compliance: For Requirement 1 - Within 250 hours time in service (TIS) after 28 August 2008 (the effective date of AD/SWSA226/96).

For Requirement 2 - Before further flight after the Requirement 1 modification and a minimum 0.50-inch clearance between the bleed air line and the tubing on the battery cables was not able to be obtained.

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For Requirement 3 - Within 250 hours TIS after 28 August 2008 (the effective date of AD/SWSA226/96) and thereafter at intervals not to exceed 12 months.

For Requirement 4 - Within 250 hours TIS after 30 July 2009 (the effective date of the original issue of this Directive).

For Requirement 5 - Within 250 hours TIS after 30 July 2009 and thereafter at intervals not to exceed 12 months.

For Requirement 6 - Before further flight after any Requirement 1, 3, 4 or 5 inspection where any evidence of insulation deterioration, chafing or arcing was found.

This Amendment becomes effective on 24 September 2009.

Background: The original issue of this Directive superseded AD/SWSA226/96 Amdt 1 which was cancelled. The FAA initially issued AD 2008-12-16 which required inspection of wiring and tube assemblies for chaffing, arcing and insufficient clearance between components and, if necessary, required cleaning, repair and/or replacement of chaffed components, wiring and tubes. CASA subsequently issued AD/SWSA226/96 reflecting those requirements.

Since FAA AD 2008-12-16 was issued M7 Aerospace LP notified the FAA that Model SA227-BC (C-26A) was inadvertently left out of the applicability section of the AD, and they updated some of the service information due to parts availability. Operators have also identified issues with model applicability that needed clarification. The FAA subsequently issued AD 2009-11-06 which corrected these deficiencies but at the same time regrouped the aeroplane models for clarity.

The original issue of this Directive reflected the FAA changes but similar to the FAA AD retained the initial inspection compliance of 'within 250 hours time in service after 28 August 2008' and also allowed credit for inspections accomplished in accordance with the superseded Directives.

The original issue of this Directive was issued to detect and correct chafing of electrical wires, components, and tube assemblies. This condition, if not corrected, could result in arcing of exposed wires with consequent burning of a hole in a hydraulic line or the bleed air line. This failure could lead to a hydraulic fluid leak and a possible fire in the engine nacelle compartment.

This Amendment continues the requirements of the original issue but corrects a typographical error in the Applicability Statement by correctly identifying a SA226-TC model aeroplane.

Fairchild (Swearingen) SA226 and SA227 Series Aeroplanes

AD/SWSA226/97 Amdt 1 (continued)

The original issue of this Directive became effective on 30 July 2009.

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

James Coyne
Delegate of the Civil Aviation Safety Authority

14 August 2009