

Airworthiness Directive Schedule

Helicopters

Sikorsky S-76 Series

24 October 2019

- Notes:**
1. This AD schedule is applicable to Sikorsky Aircraft Corporation S-76A, S-76B and S-76C series helicopters manufactured under Federal Aviation Administration (FAA) Type Certificate No. H1NE.
 2. The Federal Aviation Administration (FAA) is the National Airworthiness Authority (NAA) responsible for the issue of State of Design Airworthiness Directives (ADs) for these helicopters. State of Design ADs can be obtained directly from the FAA website at http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgAD.nsf/MainFrame?OpenFrameSet
 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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	From 1 October 2012 the Civil Aviation Authority of New Zealand (CAA) will no longer rewrite the text of State of Design ADs. Applicable State of Design ADs will be listed below and can be obtained directly from the National Airworthiness Authority (NAA) website. The link to the NAA website is 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.	17
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DCA/S-76/1A Airworthiness Directive Compliance at Initial Airworthiness Certificate Issue

Applicability All S-76A, S-76B and S-76C series helicopters.

Note: DCA/S-76/1A revised to expand the AD applicability to include S-76B and S-76C helicopters and introduce additional ADs to the AD requirement. New or amended ADs are shown with an asterisk *

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

79-25-08	Hydraulic pumps
80-14-16 R1	Main rotor blade spindle
80-22-55 R4	Main rotor damper rods
81-07-51 R1	Main rotor spindles
81-09-07	Main rotor blades
81-21-04	Main rotor scissors assembly
81-23-04	Main gearbox overhaul
82-06-08	DC generators
82-06-51	Main gearbox shaft and spur pinions
82-17-03	Rotor brake assembly
82-25-01 R1	Landing gear positioning rod ends
84-08-01	Shaft bearing assembly
84-10-02	Main rotor blade spar
84-15-04	Tail rotor controls
84-17-01	Main rotor pitch horn
84-19-51 R1	Centre firewall supports
85-15-06	Tail rotor drive shaft bearings
86-09-11	Main and nose landing gear
86-14-07	Push rod assembly
86-19-14	Tail rotor assembly
87-12-06	Generator control unit
87-23-07 R1	Electrical door locking actuators
87-25-02	Ground connections
89-07-12	Tail rotor horn
91-08-03	Forward spar cap
91-24-13	Vertical pylon forward spar cap and web
94-14-20	Tail rotor plug
* 85-07-03R1	Instrument Landing System
* 88-05-01R1	Engine Support Cross Beam
* 95-22-01	Fluorescent Lighting System
* 96-15-03	Drive Shaft Assembly
* 2001-22-14	Fire Extinguishing System

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

Compliance: Before issue of a New Zealand Certificate of Airworthiness, or at the next RA inspection after the effective date of this AD, whichever is the sooner, unless previously accomplished and thereafter (if applicable) at intervals not exceeding the times specified in the FAA Airworthiness Directives.

Effective Date: DCA/S-76/1 - 21 November 1997
DCA/S-76/1A - 30 May 2019

DCA/S-76/2 Swashplate Assembly Bolts - Inspection

Applicability: Model S-76A, B, and C helicopters, S/Ns prior to 760488, with swashplate assembly, P/N 76104-08000-044, -045, -046, or 76104-08500-041 or -043 installed.

Requirement: To prevent failure of the swashplate assembly, loss of control of the main rotor, and subsequent loss of the helicopter, accomplish the following:-

Conduct a one-time visual inspection of the swashplate assembly uniball bearing retainer (retainer) to determine whether any retainer bolts are missing. Replace any missing retainer bolt with an airworthy AN3-5A bolt.

Conduct a one-time inspection of each swashplate assembly retainer bolt (12 installed) with a magnet to verify that steel bolts are installed.

Replace any aluminum bolt, one at a time, with an airworthy AN3-5A bolt.

NOTE: Sikorsky Aircraft Corporation SB 76-65-47, dated July 31, 1998, pertains to the subject of this AD.

(FAA AD 98-17-15 refers)

Compliance: Required before further flight, unless accomplished previously.

Effective Date: 20 August 1998

DCA/S-76/3 Tail Gearbox Forward Fairing - Inspection

Applicability: Model S-76A, B, and C helicopters.

Requirement: To prevent separation of the tail gearbox forward fairing, damage to the tail rotor blades, and subsequent loss of control of the helicopter, accomplish the following:-

Inspect the attachment angle on each fairing, per the Accomplishment Instructions, paragraph A, of Sikorsky ASB 76-55-16.

If any inspection reveals a disbond area that equals or exceeds 1.0 square inch, prior to further flight, repair or replace the attachment angle with an airworthy attachment angle per the Accomplishment Instructions, paragraph B, of ASB 76-55-16.

(FAA AD 99-19-30 refers)

Compliance: Within next 50 hours TIS, and thereafter at intervals not to exceed 1500 hours TIS.

Effective Date: 19 November 1999

DCA/S-76/4 Main Rotor Blade – Inspection and Removal from Service

Applicability: All model S-76 series.

Requirement: To prevent main rotor blade root end pocket separation, impact with main rotor or tail rotor blades, and subsequent loss of control of the helicopter, accomplish the following:-

(a) Before further flight, determine the S/N of each main rotor blade.

(b) Any main rotor blade identified in paragraphs (c) or (d) of this AD that has been repaired per Sikorsky Aircraft Corporation Overhaul and Repair Instructions (ORI) No. 76150-023, Revision A, dated 26 May 2000, and marked as RS-023-1 is not affected by the requirements of this AD.

(c) Before further flight, remove any main rotor blade identified by S/N in the Group 1, paragraph 1A Planning Information of Sikorsky ASB 76-65-50, dated 25 May 2000.

(d) Before each flight and at intervals not to exceed 3 hours TIS, visually inspect any main rotor blade, identified by S/N in Group 2, paragraph 1A of the ASB, for a span-wise crack in the upper and lower root end area, per paragraph 3B of the ASB. Remove any main rotor blade with a span-wise crack and replace with an airworthy blade before further flight.

(e) Accomplishing ORI 76150-023, Revision A, dated 26 May 2000, on each affected blade is terminating action for the requirements of this AD.

Note: A crack, other than a span-wise crack in the root end cap of the main rotor blade should be actioned per the applicable Maintenance Manual.

(FAA AD 2000-11-52 refers)

Compliance: Compliance is required at the times specified within the requirement of this airworthiness directive.

Effective Date: 1 June 2000

DCA/S-76/5 Aero Aire Air Conditioning System – Inspection and Modification

Applicability: Model S-76A helicopters with Aero Aire Air Conditioning System, P/N S-76A-2, modified per STC SH4680SW.

Requirement: To prevent overheating of the air conditioning soft-start control assembly, damage in the lower tailcone, a fire, and subsequent loss of control of the helicopter, accomplish the following:-

1. Inspect the soft-start control assembly per the Accomplishment Instruction, Section III, of Aero Aire Corporation SB 970001, Revision A.

2. Install a soft start assembly retrofit kit (kit), P/N 76SB001, per the Accomplishment Instructions, Section III, of Aero Aire Corporation SB 970002. Installing the kit is terminating action for the requirements of this AD.

(FAA AD 2000-12-09 refers)

Compliance: 1. Within next 25 hours TIS and thereafter at intervals not to exceed 25 hours TIS.

2. By 20 November 2000

Effective Date: 27 July 2000

DCA/S-76/6B Main Rotor Shaft – Removal from Service

Applicability: Model S-76A, S-76B, and S-76C helicopters with main rotor shaft assembly P/N 76351-09030-all dash numbers, installed.

Requirement: To prevent failure of the main rotor shaft assembly and subsequent loss of control of the helicopter, accomplish the following:-

Replace each affected shaft, S/N B015-00700 through B015-00706, with an airworthy shaft. Sikorsky ASB. 76-66-32A (319A), Revision A refers.

(FAA AD 2001-10-06 also refers)

Compliance: Before further flight.

Effective Date: DCA/S-76/6A - 16 November 2000
DCA/S-76/6B - 31 May 2001

DCA/S-76/7 Landing Gear Assembly - Inspection

Applicability: Model S-76A, S-76B, and S-76C up to and including S/N 760513 fitted with positioning rod assembly P/N 1945E-31A or 2071-31, or side brace rod end P/N 1945E-235 or 2071-235.

Requirement: To detect corrosion of the threaded joint in the rod assembly and prevent a collapse of the landing gear, accomplish the following:-

1. Inspect the rod assembly and rod end for corrosion per Section 2, BF Goodrich SB 76A-32-03, Revision 1, except that scrapping of corroded parts is not required. Replace any part that is corroded with an airworthy part before further flight.

2. If the rod assembly and rod end were inspected and reassembled per BF Goodrich Component Maintenance Manual with Illustrated Parts List, 1945/2071 Series Main Landing Gear, No. 32-10-01, (formerly titled Cleveland Pneumatic Maintenance Manual 32-10-01), Revision 4, dated December 15, 1994, within the past 24 months, inspect the rod assembly and rod end per Section 2 of SB 76A-32-03, Revision 1. Scrapping of corroded parts is not required. Replace any part that is corroded with an airworthy part before further flight.

3. For rod ends that are not reassembled with Mastinox sealant or reassembled with Mastinox sealant but without cadmium plate restoration, inspect the rod assembly and rod end for corrosion per Section 2 of SB 76A-32-03, Revision 1. Scrapping of corroded parts is not required. Replace any part that is corroded with an airworthy part before further flight.

4. For rod ends assembled with Mastinox sealant and cadmium plate restoration, or for rod ends reassembled with Mastinox but that did not previously require rework due to corrosion, inspect the rod assembly and rod end for corrosion per Section 2 of SB 76A-32-03, Revision 1. Scrapping of corroded parts is not required. Replace any part that is corroded with an airworthy part before further flight.

(FAA AD 2001-01-04 refers)

Compliance:

1. Within next 14 days.
2. Within next 90 days.
3. At intervals not to exceed 90 days.
4. At intervals not to exceed 12 months or 1,500 hours TIS, whichever occurs first.

Effective Date: 8 February 2001

DCA/S-76/8 AHRS WARN Circuit - Modification

Applicability: Model S-76B helicopters, S/N 760430, 760441 through 760445, 760448 through 760452, 760454, 760455, 760458, 760462, and 760465,
Model S-76C helicopters, S/N 760420, 760436, 760438, 760440, 760453, 760456, 760457, 760459, 760460, 760461 760463, 760464, 760466 through 760487.

Requirement: To prevent an attitude and heading reference (AHRS) fail signal to both autopilots due to a failure of the essential bus, loss of both autopilot functions, and subsequent loss of control of the helicopter, modify Nos. 1 and 2 AHRS WARN circuits per the Accomplishment Instructions, paragraphs 3.A. through 3.D, of Sikorsky ASB 76-34-7A (320A), Rev A.

(FAA AD 2001-25-06 refers)

Compliance: By 28 February 2002

Effective Date: 31 January 2002

DCA/S-76/9 Landing Gear - Cycle Calculation and Life Limitation

Applicability: Model S-76A

Requirement: To prevent fatigue failures of the main and nose landing gear, adopt component life limitations in accordance with FAA AD 2002-05-06. Remove from service each part listed in Table 1 or Table 2 of FAA AD 2002-05-06, as applicable, on or before reaching the life limits listed in the applicable table.

(FAA AD 2002-05-06 refers)

Compliance: Within next 50 hours TIS.

Effective Date: 26 April 2002

DCA/S-76/10 Main Rotor Blade – Removal from Service due to Lightning Strike

Applicability: Model S-76A, B and C

Requirement: To prevent failure of a main rotor blade and subsequent loss of the helicopter, accomplish the following:-

1. Review the blade service records and other records per Sikorsky ASB 76-65-55A for evidence of damage to a blade due to a lightning strike. Before further flight, remove any blade identified as having been damaged by lightning. If the blade service history cannot be determined, remove the blade from service before further flight.
2. Before further flight, remove blades S/N A086-00167, 00429, 00798, 00999, 01165, 01168, 01291, and 02504, which are known to have sustained lightning damage.
3. From the effective date of this AD, if any blade is subjected to lightning strike damage, it must be removed from service before the next flight.

(FAA AD 2002-15-51 refers)

Compliance: Compliance is required at the times specified within the requirement of this airworthiness directive.

Effective Date: 29 August 2002

DCA/S-76/11 Main Rotor Spindle Attachment bolts - Inspection

Applicability: Model S-76A, S-76B and S-76C helicopters, except S/N 760501, and 760506 through 760515.

Requirement: To detect installation of an incorrect main rotor spindle attachment bolt, which could result in reduced hub or bolt fatigue life, separation of the main rotor blade at the spindle attachment, and subsequent loss of control of the helicopter, accomplish the following:

1. Remove and measure each bolt to ensure that the length is 1.181 +/- .015 inches. There are 10 bolts per rotor spindle and 40 bolts per helicopter that require inspection.
 - a. If 1 or 2 bolts are found on any spindle that are longer than 1.196 inches (1.181 inches + .015-inch permissible tolerance), visually inspect the main rotor hub internal threads for distortion and the hole-bottoms for scoring. If thread distortion or hole-bottom scoring is found, remove the rotor hub from service. If no thread distortion or hole-bottom scoring is found, replace all 10 bolts with new airworthy bolts.
 - b. If 3 or more bolts that exceed 1.196 inches are found on any spindle, remove and replace the main rotor hub with an airworthy main rotor hub.
 - c. If any bolt is found that is shorter than 1.166 inches (1.181 inches - .015 permissible tolerance), replace it with a new airworthy bolt.

(FAA AD 2002-21-07 refers)

Compliance: Within 1,250-hours TIS or 2 years, whichever comes first.

Effective Date: 31 October 2002

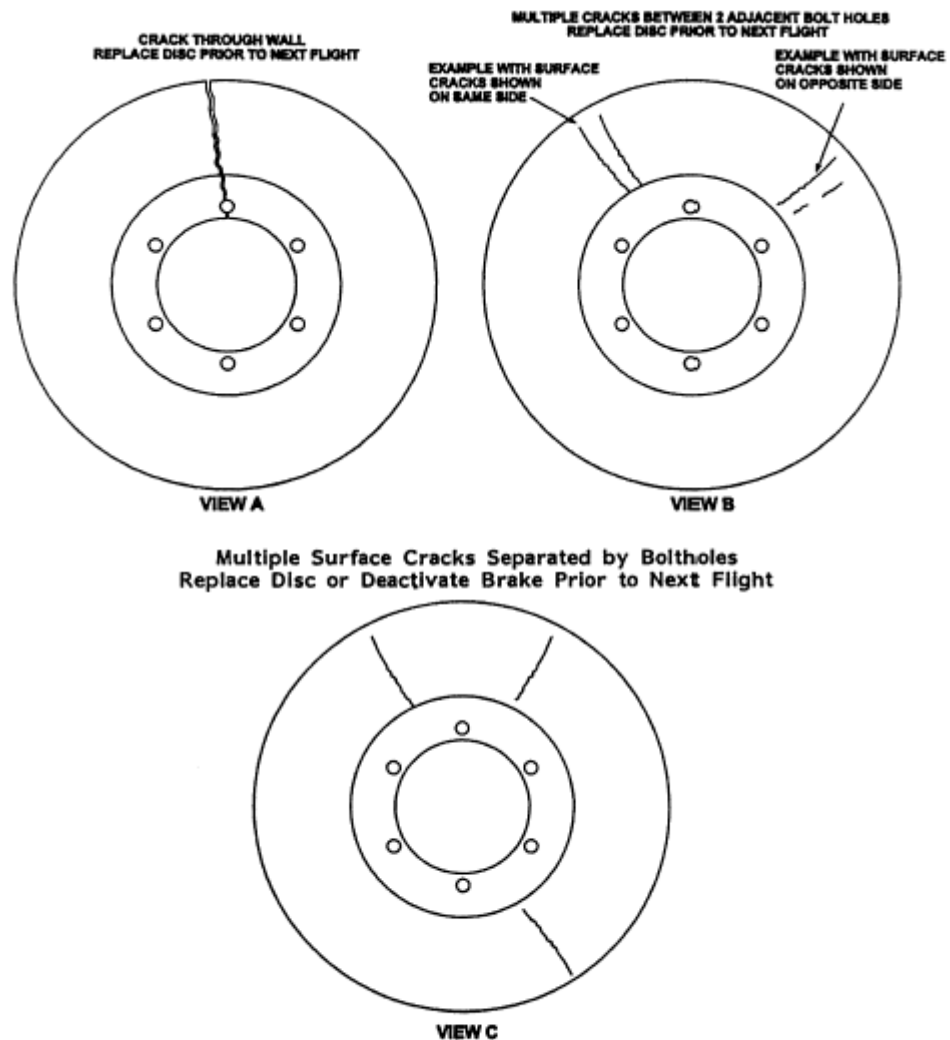
DCA/S-76/12 Rotor Brake Disc - Inspection

Applicability: Model S-76A, B, and C.

Requirement: To prevent failure of the rotor brake disc (RBD), damage to the rotor blades and nearby hydraulic and fuel lines, and subsequent loss of control of the helicopter, accomplish the following:

1. Determine the manufacturer of each RBD by examining the P/N markings, and perform the required actions as follows:
 - a. If the P/N is 76363-09101-102, the manufacturer is Goodyear. No further action is required by this AD.
 - b. If the P/N 76363-09103-102 is pressure stamped on the RBD, the manufacturer is BF Goodrich. No further action is required by this AD.
 - c. If the P/N 76363-09103-102 is electrolytically etched on the RBD, the manufacturer is Parker Hannifin Corporation (PHC). For each PHC RBD with a P/N 76363-09103-102 and serial number (S/N) other than 38 through 379, remark the P/N as P/N 76363-09103-105 using the vibropeen method. No further action is required by this AD.
 - d. If the RBD serial number or the manufacturer cannot be determined and for PHC RBDs with P/N 76363-09103-102 and S/N's 38 through 379, reidentify or mark the P/N as 76363-09103-104 or replace the RBD in accordance with paragraph (c) of this AD.

2. Visually inspect each RBD, P/N 76363-09103-104, for a crack, and perform the following actions. See Figure 1.
- If you find a crack through the entire RBD thickness as shown in Figure 1, View A, replace the RBD with an airworthy RBD, other than P/N 76363-09103-104, before further flight.
 - If you find two or more surface cracks between adjacent boltholes as shown in Figure 1, View B, replace the RBD with an airworthy RBD, other than P/N 76363-09103-104, before further flight.
 - If you find a surface crack or surface cracks separated by the boltholes as shown in Figure 1, View C, replace the RBD with an airworthy RBD, other than P/N 76363-09103-104, or deactivate the RBD before further flight.



**RBD INSPECTION LIMITS
FIGURE 1.**

3. Replace PHC RBD, P/N 76363-09103-104, with an airworthy RBD by 31 May 2003. Any replacement RBD, P/N 76363-09103-104, is not airworthy. (FAA AD 2003-04-15 refers)

- Compliance:**
1. Before further flight.
 2. Before the first flight of the day following any day in which the RBD was used.
 3. By 31 May 2003.

Effective Date: 27 March 2003

DCA/S-76/13 Main Landing Gear Brake Disc – Replacement and AFM Revision

Applicability: Model S76A, B, and C helicopters, with main landing gear brake P/N 5007555, 5007555-1, or 5007555-2 installed.

Requirement: To prevent reduced braking performance and subsequent loss of control of the helicopter, accomplish the following:

1. Determine if a main landing gear brake disc P/N 5014067, is installed in the braking assembly in accordance with:
 - a. Section III Accomplishment Instructions, paragraph 1.A. through 1.D., of Aircraft Braking Systems Corporation Alert SB S76-32-A24, dated April 10, 2002 (ASB A24) for braking assembly, P/N 5007555 and P/N 5007555-1, and
 - b. Section III Accomplishment Instructions, paragraph 1.A. and 1.B., of Aircraft Braking Systems Corporation Alert SB S76-32-A25, dated May 15, 2002 (ASB A25), for braking assembly, P/N 5007555-2.
2. If disc, P/N 5014067, is installed, remove that disc and replace it with disc, P/N 5007672, and re-identify:
 - a. Brake assembly, P/N 5007555 and P/N 5007555-1, as brake assembly, P/N 5007555-3, per the conversion of brake assembly instructions on page 6 of ASB A24, and
 - b. Brake assembly, P/N 5007555-2, as brake assembly, P/N 5007555-4, per the conversion of brake assembly instructions on page 6 of ASB A25.

Note 1: Sikorsky Aircraft Corporation ASB No. 76-32-27, dated April 30, 2002, contains Aircraft Braking Systems Corporation ASB S76-32-A24, dated April 10, 2002, and Sikorsky Aircraft Corporation ASB No. 76-32-28, dated May 17, 2002, contains Aircraft Braking Systems Corporation ASB S76-32-A25, dated May 15, 2002.

3. Until all installed discs, P/N 5014067, on the helicopter are replaced with disc, P/N 5007672, and all brake assemblies are re-identified in accordance with paragraph (b) of this AD, before further flight, increase the Category A Rejected Takeoff Distance, the Category A--Landing Distance, and the Category B Landing Distance as stated in the current Rotorcraft Flight Manual (RFM) by multiplying these rejected takeoff and landing distances by a factor of 1.67.

Note 2: There are temporary revisions to the RFM available from the helicopter manufacturer that documents increased rejected takeoff and landing distances. (FAA AD 2003-14-18 refers)

- Compliance:**
1. By 31 October 2003.
 2. By 30 November 2003
 3. By 30 September 2003

Effective Date: 28 August 2003

DCA/S-76/14 Autopilot and Inverter - Modification

Applicability: Model S-76 A, B, and C helicopters, with a dual channel autopilot and with dual inverters installed,

Note: The following serial-numbered helicopters were manufactured with the dual channel autopilots and dual inverters installed:

S-76 A S/Ns: 760267, 760268, 760270 through 760298, 760300 through 760302, 760304 through 760309, 760364, 760366, 760369 through 760371, 760373 through 760378;

S-76 B S/Ns: 760262, 760269, 760299, 760303, 760310 through 760363, 760365, 760367, 760368, 760372, 760379 through 760382, 760387, 760391, 760393, 760395, 760399, 760403, 760404, 760409, 760410, 760413, 760414, 760416, 760425, 760427 through 760430, 762976 (760433), 760437, 760439, 760441 through 760445, 760447 through 760452, 760454, 760455, 760458, 760462, 760465, and 760507; and

S-76 C S/Ns: 760383 through 760386, 760388 through 760390, 760392, 760394, 760396 through 760398, 760400 through 760402, 760405 through 760408, 760411, 760412, 760415, 760417 through 760424, 760426, 760431, 760432, 760434 through 760436, 760438, 760440, 760446, 760453, 760456, 760457, 760459 through 760461, 760463, 760464, 760466 through 760506, and 760508 through 760526.

Requirement: To prevent both autopilots from disengaging following a No. 2 DC generator failure, and subsequent loss of control of the helicopter during IMC flight, do the following:

1. Determine if the No. 1 inverter is wired to the DC essential bus by following the Accomplishment Instructions, paragraph 3.B. of Sikorsky Aircraft Corporation Alert Service Bulletin No. 76-24-14A, Revision A, dated October 9, 2003 . If the No. 1 inverter is wired to the DC essential bus, and the wiring modification is not accomplished as described in paragraph 2. of this AD, then before further flight, install a placard near the airspeed indicator that contains the limitation "Maximum IMC Airspeed 120 KIAS" and annotate this airspeed limitation in the Operating Limitation section of the Rotorcraft Flight Manual.
2. For those helicopters with the No.1 inverter wired to the DC essential bus, modify the electrical wiring so that the No.1 inverter, which powers the co-pilot's Automatic Flight Control System (AFCS) computer, is wired to the No. 2 DC primary bus and the No. 2 inverter, which powers the pilot's AFCS computer, is wired to the DC essential bus by following the Accomplishment Instructions, paragraph 3.C. of the ASB. After modifying the electrical wiring, remove the placard and RFM annotation.

(FAA AD 2004-06-04 refers)

Compliance:

1. Before further flight
2. Within 30 days after inspection per part 1 of this AD.

Effective Date: 27 May 2004

DCA/S-76/15 Cancelled – FAA AD 2014-08-06 refers

Effective Date: 2 June 2014

DCA/S-76/16 Main Rotor Shaft Assembly – NDT Inspection

- Applicability:** All model S-76A, B and C aircraft fitted with any of the following main rotor shaft assemblies:
- P/N 76351-09030-all dash numbers, S/N B015-00782 through to B015-00791, B015-00811 through to B015-00816, E015-00844 through to E015-00865 and E015-00908 through to E015-00918,
- P/N 76351-09630-041, S/N C213-00436 through to C213-00454, D213-00537 through to D213-00545 and D213-00575 through to D213-00585.
- Requirement:** To prevent cracks developing in the main rotor (M/R) shaft which could result in M/R shaft failure and loss of aircraft control, accomplish the following:
- For model S-76A aircraft fitted with M/R shaft P/N 76351-09030-all dash numbers, remove the M/R shaft assembly per the instructions in paragraphs 3.B.(1)(a) through to 3.B.(1)(d)5 of Sikorsky ASB No. 76-66-46.
- For model S-76A, B and C aircraft fitted with M/R shaft P/N 76351-09630-041, remove the M/R shaft assembly per the instructions in paragraphs 3.B.(1)(a) through to 3.B.(1)(d)5 of Sikorsky Alert Service Bulletin (ASB) No. 76-66-45A.
- Accomplish an NDT ultrasonic inspection of the M/R shaft in accordance with the instructions in ASB No. 76-66-45A or ASB No. 76-66-46 as applicable.
- If cracked, replace the M/R shaft with a shaft that has been ultrasonically inspected per the requirements of this AD, before further flight.
- Reassemble the lower bearing housing assembly, install the main gearbox, and accomplish the ground run leak test per the instructions in paragraphs 3.B.(1)(f) through to 3.B.(1)(l) of either ASB No. 76-66-45A or ASB No. 76-66-46 as applicable.
- Note 1:** The ultrasonic inspection of the M/R shaft shall be accomplished by an inspector qualified under the guidelines established in MIL-STD-410E, ATA Specification 105, AIA-NAS-410 or an accepted equivalent.
- Note 2:** Before fitting affected M/R shafts to any aircraft, comply with the NDT inspection and installation requirements of this AD.
(FAA AD 2007-11-05 refers)
- Compliance:** Within the next 75 hours TIS, unless previously accomplished.
- Effective Date:** 28 June 2007

DCA/S-76/17 Option Code 88051 Flotation System – Inspection

- Applicability:** Model S-76C aircraft, S/N 760501 and 760506 through to 760761 fitted with Option Code 88051 Flotation System installed by Keystone Helicopter Corporation.
- Requirement:** To prevent non-deployment of the flotation system in a emergency water landing due to the possible installation of a metallic foil shunt in the flotation system which could prevent the flotation system from deploying, accomplish the following:
- Inspect the flotation system connector and if a metallic foil shunt is found installed in the flotation system, remove it per the instructions in paragraphs 3.A.(1) through to 3.A.(9) in Sikorsky ASB No. 76-32-30, dated 8 April 2009.
- Note:** The requirements of this AD shall be accomplished per the specified paragraphs in Sikorsky ASB No. 76-32-30, dated 8 April 2009.
(FAA AD 2010-06-08 refers)
- Compliance:** Before the next flight over water, or by 29 May 2010 whichever occurs sooner, unless previously accomplished.
- Effective Date:** 29 April 2010

DCA/S-76/18 LITEF LCR-100 AHRS Units – Inspection, Placards and AFM Amendment

Applicability: Model S-76A, B and C aircraft fitted with a LITEF LCR-100 P/N 145130-7100 Attitude Heading and Reference System (AHRS) Units.

Requirement: To prevent failure of the autopilot and the inability to reset the autopilot due to possible intermittent malfunctions of the AHRS which could result in reduced aircraft functional capabilities and loss of aircraft control, accomplish the following:

1. Review the aircraft records or inspect the No. 1 and No. 2 AHRS unit data plates and determine if any P/N 145130-7100 with mod status 18 is fitted to the aircraft.

If P/N 145130-7100 with mod status 18 is not fitted to the aircraft, no further AD action is required.

If any AHRS unit fitted to the aircraft is P/N 145130-7100 with mod status 18, accomplish requirement 2 of this AD.

2. Install instrument panel placards per figure 2 of Sikorsky ASB No. 76-34-11 dated 17 May 2010 in the areas indicated in figure 3 of ASB No. 76-34-11 and accomplish these requirements per the instructions in paragraph 3.A.(6)(c) through to (d) of ASB No. 76-34-11.

Insert Active Temporary Revision No. T-Revision 3 into the limitations section of the AFM (document no. SA-4047-76-1). Note: This AFM amendment limits the minimum flight crew to two pilots for IFR and night operations.

3. A LITEF LCR-100 P/N 145130-7100 AHRS unit shall not be fitted to any aircraft unless the requirements of this AD have been accomplished.

(FAA AD 2010-11-52 refers)

Compliance:

1. By 26 May 2010 unless previously accomplished.
2. By 26 May 2010 unless previously accomplished.
3. From 21 May 2010.

Effective Date: 21 May 2010

DCA/S-76/19 Main Rotor Servo Actuator – Inspection, Rework and Replacement

Applicability: Model S-76A, B and C helicopters fitted with a Sikorsky Aircraft Corporation main rotor servo actuator P/N 76650-09805-109 or -110 (Affected servo actuators also marked as HR Textron or Woodward HRT P/N 3006760-109 or -110).

Note 1: The 1500 hour inspection mandated by this AD is a revised airworthiness limitation requirement introduced in the aircraft maintenance manual.

Requirement: To detect possible servo actuator leaks which could result in degraded servo actuator performance and loss of aircraft control, accomplish the following:

1. Inspect affected servo actuators and determine the leak rate of the actuators. If the leak rate exceeds 700 cc per minute accomplish one of the following two actions before further flight:

- Replace the HR Textron or Woodward HRT servo actuator piston P/N 41004321 or P/N RW41004321 with a servo actuator piston P/N 41012001 or P/N 41012001-001 and re-identify the servo actuator on the servo actuator data plate as Sikorsky P/N "76650-09805-111" and Woodward HRT P/N "3006760-111" with a metal stamp method, or alternatively
- Replace the servo actuator with an airworthy Sikorsky servo actuator P/N 76650-09805-111 (Woodward HRT P/N 3006760-111).

2. Replace affected servo actuator pistons and re-identify the servo actuator or alternatively replace affected servo actuators per the requirement 1 of this AD.

Note 2:

The modification and re-identification of an affected servo actuator or the replacement of an affected servo actuator per requirement 1 is a terminating action for the requirements of this AD.

(FAA AD 2010-10-02 refers)

Compliance:

1. For affected servo actuators with 1500 or less hours TSN or TSO:
Before exceeding 1500 hours TSN or TSO.

For affected servo actuators with between 1500 hours and 2250 hours TSN or TSO:
Before exceeding 2250 hours TSN or TSO.
2. Before exceeding 3000 hours TSN or TSO whichever occurs sooner, unless previously accomplished.

Effective Date: 27 May 2010

DCA/S-76/20 Vertical Stabiliser – Inspection**Applicability:**

Model S-76A, S-76B, and S-76C helicopters, S/N 76005 through to 760578 and 762976 fitted with any of the following P/N vertical stabiliser aft spar assemblies with 1000 or more hours TIS:

Model S-76A aircraft fitted with aft spar assembly P/N 76201-05002-114 or 76201-05002-115, and

Model S-76B and S-76C fitted with aft spar assembly P/N 76201-05002-047, 76201-05002-048, 76201-25002-041, 76201-25002-044, 76201-25002-045 or 76201-25002-046.

Requirement:

To detect and correct an unbalanced or out-of-track tail rotor, which could lead to increased vibrations, a fatigue crack, loss of a portion of the vertical stabilizer, and subsequent loss of control of the helicopter, accomplish the following

1. Inspect the vertical stabilizer aft spar assembly (aft spar assembly) for cracks, loose or working fasteners, and corrosion per the instructions in paragraph 3.A. of Sikorsky ASB No. 76-55-20A revision A, dated 11 November 2003 (No. 76-55-20A). For purposes of this AD, ASB No. 76-55-20A is applicable to Model S-76B helicopters as well as model S-76A and S-76C helicopters.

If a crack, a loose or working fastener, or corrosion is found in the aft spar assembly, repair, or replace any unairworthy parts before further flight.

2. Inspect the vertical stabilizer forward spar assembly (forward spar assembly) for cracks, a loose or working fastener and corrosion per the instructions in paragraph 3.B. of ASB No. 76-55-20A.

If a crack, a loose or working fastener, or corrosion is found in the forward spar assembly, repair per the applicable maintenance manual, or replace with airworthy parts before further flight.

3. Accomplish a track-and-balance procedure for the the tail rotor per the instructions in paragraph 3.A. of ASB No. 76- 65-58A revision A, dated 11 November 2003.

4. Install a vertical stabilizer modification kit P/N 76070-20562-011, 76070- 20563-011 or 76070-20564-011. The installation of a vertical stabilizer modification kit is a terminating action for the requirements of this AD.

Note 1: Although the ASB specifies only an initial inspection of the aft spar assembly and a track and balance of the tail rotor, this AD requires inspecting the aft spar assembly and track-and-balancing the tail rotor repetitively.

Note 2: The track-and-balancing of the tail rotor that is required per requirement 3 of this AD involves both a pilot and an engineer. The pilot's function is to operate the helicopter to a "light on wheels" state, almost to the point of takeoff. The engineer is required to accomplish the vibration measurements.

(FAA AD 2010-17-16 refers)

Compliance:

1. By 28 November 2010 unless previously accomplished and thereafter at intervals not to exceed 50 hours TIS
2. By 28 November 2010 unless previously accomplished and thereafter at intervals not to exceed 50 hours TIS.
3. By 28 November 2010 unless previously accomplished and thereafter at intervals not to exceed 200 hours TIS.
4. By 31 December 2010.

Effective Date: 28 October 2010

DCA/S-76/21 LITEF LCR-100 AHRS Units – Inspection, Placards and AFM Amendment

Applicability: Model S-76A, B and C aircraft fitted with a LITEF LCR-100 Attitude Heading and Reference System (AHRS) Units P/N 145130-7100.

Note: This AD supersedes DCA/S-76/18 to remove the active temporary revisions in the AFM relating to pilots keeping their hands and feet near the flight controls and introduce an airspeed limitation of 120 KIAS if both autopilots uncouple during IMC or night flight.

Requirement: To prevent a possible anomaly in the AHRS related to the 26-volt AC inverter which could result in the decoupling of both autopilots during Instrument Meteorological Conditions (IMC) while operating under Instrument Flight Rules (IFR) and result in loss of helicopter control, accomplish the following:

1. Review the aircraft records or inspect the No. 1 and No. 2 AHRS unit data plates and determine if any P/N 145130-7100 with mod status 18 is fitted to the aircraft.

If P/N 145130-7100 with mod status 18 is not fitted to the aircraft, no further AD action is required.

If any AHRS unit fitted to the aircraft is P/N 145130-7100 with mod status 18, accomplish requirement 2 of this AD.

2. Install instrument panel placards per figure 2 of Sikorsky ASB No. 76-34-11 dated 17 May 2010 in the areas indicated in figure 3 of ASB No. 76-34-11 dated 17 May 2010 and accomplish these requirements per the instructions in paragraph 3.A.(6)(c) through to (d) of ASB No. 76-34-11.

Revise the minimum flight crew section of the operating limitations section in the AFM by adding the following text: "For helicopters with an LCR-100 Mod Status '18' AHRS installed, two pilots are required for IFR and night flights."

Revise the airspeed limits section of the operating limitations section in the AFM by adding the following text: "For helicopters with an LCR-100 Mod Status '18' AHRS installed, airspeed is limited to 120 knots indicated airspeed (KIAS) when both autopilots are uncoupled and operating at night or in IMC."

If any of the following Active Temporary Revisions (ATR) are found in the operating limitations section of the AFM, remove and discard the ATR.

Model:	AFM Document No:	Active Temporary Rev. No:
S-76A	SA-4047-76-1	T-Revision 3
S-76B	SA 4047-76B-1	T-Revision 3
S-76C (Turbomeca Arriel 1S1 engines installed)	SA 4047-76C-1	T-Revision 3
S-76C (Turbomeca Arriel 2S1 engines installed)	SA 4047-76C-10	T-Revision 4
S-76C (Turbomeca Arriel 2S1 engines installed and S/N 760511 onwards)	SA 4047-76C-14	T-Revision 4
S-76C (Turbomeca Arriel 2S2 engines installed)	SA 4047-76C-15	T-Revision 1

Revise the operating limitations section of the AFM by inserting a copy of this AD into the appropriate section of the AFM.

3. A LITEF LCR-100 P/N 145130-7100 AHRS unit shall not be fitted to any aircraft unless the requirements of this AD have been accomplished.

(FAA AD 2010-26-09 refers)

- Compliance:**
1. By 24 February 2011.
 2. By 24 February 2011.
 3. From 19 February 2011.

Effective Date: 19 February 2011

DCA/S-76/22 Electric Rotor Brake – Modification and AFM Amendment

Applicability: Model S-76A helicopters fitted with an electric rotor brake (ERB) P/N 76363-09100-012.

Requirement: To prevent overheating of the ERB, possible ignition of the ERB hydraulic fluid and a fire in the main gearbox area which could result in loss of aircraft control, accomplish the requirements in FAA AD 2012-15-08.

Note 1: A copy of FAA AD 2012-15-08 can be obtained from the FAA AD web site at http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgAD.nsf/MainFrame?OpenFrameSet

Note 2: Sikorsky Customer Service Bulletin No. 76-66-10B, Revision 2, dated November 25, 1981 (pages 1 and 9 through 13 of the service bulletin are dated November 25, 1981 and pages 2 through 8 are dated July 30, 1981); Sikorsky Customer Service Notice No. 76-113, dated June 1, 1983; Sikorsky Alert Service Bulletin No. 76-66-48B, Revision B, dated July 8, 2009; and Sikorsky Rotorcraft Flight Manual Supplement No. 41, Part 1, approved September 6, 2005 pertains to the subject of this AD.

(FAA AD 2012-15-08 refers)

Compliance: At the compliance times specified in FAA AD 2012-15-08.

Effective Date: 27 September 2012

From 1 October 2012 the Civil Aviation Authority of New Zealand (CAA) will no longer rewrite the text of State of Design ADs. Applicable State of Design ADs will be listed below and can be obtained directly from the National Airworthiness Authority (NAA) website. The link to the NAA website is 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.

2013-22-15 MRB Spindle Cuffs – Inspection

Applicability: Model S-76A, S-76B and S-76C helicopters, S/N up to and including 760822 and fitted with a spindle cuff assembly P/N 76102-08001-043, -045 or -046, or a blade fold cuff assembly P/N 76150-09601-041.

Effective Date: 13 December 2013

2014-08-06 Main Rotor Bifilar Arm Assembly – Inspection

Applicability: Model S-76A, S-76B and S-76C helicopters fitted with a main rotor hub (MRH) pilot P/N 76103-08003-101.

Effective Date: 2 June 2014

2014-0189 Cancelled – EASA AD 2014-0244 refers

Effective Date: 10 November 2014

EASA AD 2014-0244 Emergency Flotation System (EFS) – AFM Supplement

Applicability: Model S-76A, S-76B and S-76C helicopters, all S/N fitted with an Emergency Flotation System (EFS), all P/N approved as an optional kit for ditching provision from the helicopter manufacturer, or through the embodiment of a STC.

Effective Date: 10 November 2014

2015-04-05 Tail Rotor Drive Shaft – Inspection

Applicability: Model S-76A, S-76B, S-76C and S-76D helicopters, S/N up to and including 761050 fitted with a Tail Drive Shaft (TDS) P/N and S/N as follows:

(a) P/N 76361-04004 (all dash numbers) with a S/N up to and including A127-01092; or

(b) P/N 76361-04604 (all dash numbers) with an S/N with a prefix A240 or B240, or with a S/N C240-00001 through to C240-00880.

Effective Date: 12 March 2015

2015-19-51 Servo Pushrod Assemblies – Inspection

Applicability: Model S-76A, S-76B, S-76C and S-76D helicopters fitted with main rotor (M/R) servo input control pushrod assembly P/N 76400-00034-059, or tail rotor (T/R) pushrod assembly P/N 76400-00014-071.

Effective Date: 14 September 2015

2015-26-10 MGB Lower Housing – Inspection

Applicability: Model S-76A, S-76B, and S-76C helicopters fitted with a main gearbox (MGB) P/N 76351-09000 series, 76351-09500 series, and 76351-09600 series that has been repaired in accordance with Sikorsky Overhaul and Repair Instruction (ORI) No. 76350-065, dated 12 November 1982 (ORI 76350-065), or ORI No. 76350-065 revision A, dated 21 September 1984 (ORI 76350-065A).

Effective Date: 9 February 2016

99-01-09 Fuel Supply Line - Inspection

Applicability: Model S-76C helicopters, S/N 760477, 760479, 760481 through to 760487, 760490, 760491 and 760493.

Note: This AD is also applicable to all helicopter listed in the applicability section of this AD that have been modified, altered or repaired in the area subject to the requirements of this AD.

Compliance: Initial compliance required before the issue of a New Zealand Certificate of Airworthiness, or at the next Review of Airworthiness (RA), whichever is the sooner, unless previously accomplished. Repetitive inspections, if required, are to be accomplished at intervals not to exceed the times specified in the FAA AD.

Effective Date: 30 November 2017

2001-03-51 Main Rotor Shaft Assembly – Inspection

Applicability: Model S-76B and S-76C helicopters fitted with a main rotor shaft assembly (shaft), P/N 76351-09630 all dash numbers, S/N C213-00274, C213-00275, C213-00276, C213-00277, C213-00278, C213-00279, C213-00280, C213-00282, C213-00292, C213-00294, C213-00295, C213-00296, C213-00297, C213-00299 and C213-00300.

Note: This AD is also applicable to all helicopter listed in the applicability section of this AD that have been modified, altered or repaired in the area subject to the requirements of this AD.

Compliance: Initial compliance required before the issue of a New Zealand Certificate of Airworthiness, or at the next Review of Airworthiness (RA), whichever is the sooner, unless previously accomplished. Repetitive inspections, if required, are to be accomplished at intervals not to exceed the times specified in the FAA AD.

Effective Date: 30 November 2017

2012-22-13 Engine Controls – Inspection

Applicability: Model S-76C helicopters, S/N 760506 and 760607 through to 760812.

Compliance: Initial compliance required before the issue of a New Zealand Certificate of Airworthiness, or at the next Review of Airworthiness (RA), whichever is the sooner, unless previously accomplished. Repetitive inspections, if required, are to be accomplished at intervals not to exceed the times specified in the FAA AD.

Effective Date: 30 November 2017

2017-19-01 Main Rotor Servo Pushrod Assembly – Inspection

Applicability: Model S-76A, S-76B, S-76C and S-76D helicopters, S/N up to and including 761075, fitted with a main rotor (M/R) servo pushrod (pushrod) assembly P/N 76400-00034-059, 76400-00014-074, 76400-00014-076, or 76400-00014-077.

Effective Date: 2 January 2018

*** 2018-10-07 Cancelled – FAA AD 2019-19-12 refers**

Effective Date: 8 November 2019

*** 2019-19-12 Engine Collective Position Transducer (CPT) – Inspection**

Applicability: Model S-76C helicopters, fitted with a Turbomeca Arriel 2S1 or an Arriel 2S2 engine with an engine collective position transducer (CPT) P/N 76900-01821-104, or 76900-01821-105.

Effective Date: 8 November 2019