

Sikorsky S-76 Series Helicopters

---

---

**AIRWORTHINESS DIRECTIVE**

---

For the reasons set out in the background section, the CASA delegate whose signature appears below revokes Airworthiness Directive (AD) AD/S-76/65 Amdt 3 and issues the following AD under subregulation 39.1 (1) of CAR 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.

---

**AD/S-76/65  
Amdt 4**

**Main Rotor Shaft**

**3/2001**

**Applicability:** Model S-76A, S-76B, and S-76C helicopters, with main rotor shaft assembly part number 76351-09030 series or 76351-09630 series installed.

**Requirement:** Action in accordance with the Accomplishment Instructions of Sikorsky Aircraft Corporation Alert Service Bulletin (ASB) 76-66-32.

*Note 1: The fluorescent penetrant inspection specified in the Requirement document is not the fluorescent penetrant inspection contained in paragraph 4 of Chapter 20-05-00 of the applicable maintenance manual.*

*Note 2: FAA Emergency AD 2001-03-51 refers.*

**Compliance:**

1. Main Gear Box Assemblies containing a listed serial number 76351-09030-044 main rotor shaft specified in the Requirement document, are to be replaced before further flight after 18 January 2001, unless already accomplished.
2. Main Gear Box Assemblies containing a listed serial number 76351-09630-041 main rotor shaft specified in the Requirement document, with less than 1,000 hours time in service, are to continue the recurring Fluorescent Penetrant Inspection (FPI) previously required by ASB 76-66-31 Revision B. The FPI is to be accomplished every 20 flight hours or every 80 flights, whichever occurs first. A take-off and landing constitutes one flight. This interval begins after the last previously conducted FPI in accordance with ASB 76-66-31 Revision B.

*Note 3: The daily 10x visual inspection is no longer required for these main gear box assemblies.*

3. Main Gear Box Assemblies containing a listed serial number 76351-09630-041 main rotor shaft specified in the Requirement document, with more than 1,000 hours time in service, are to be replaced before further flight after 18 January 2001.

This amendment becomes effective on 22 March 2001.

Background: The FAA received a report of a cracked main rotor shaft assembly, found during an inspection of the main transmission oil seal. The shaft had accrued 477 hours time in service when the crack was found. A cracked main rotor shaft assembly could result in failure of the shaft assembly and subsequent loss of control of the helicopter.

Amendment 1 required repeat visual and NDI inspections. Additionally, the FAA has determined that certain shafts must be removed from service because the three cracked shafts discovered so far came from the same manufacturing lot.

Amendment 2 was a re-issue of amendment 1 due to a gazette administration issue.

Amendment 3 introduced the latest revision of the Requirement document which isolated certain main rotor shafts for further inspection and replacement.

Amendment 4 is issued to reference the related FAA AD.

Amendment 3 of this Airworthiness Directive became effective on 18 January 2001.

Amendment 1 of this Airworthiness Directive became effective on 13 November 2000.

The original issue of this Airworthiness Directive became effective on 7 November 2000.



David Alan Villiers  
Delegate of the Civil Aviation Safety Authority

9 February 2001