

Sikorsky S-76 Series Helicopters

AD/S-76/61

AC Generator Interlock System

**7/99
TX**

Applicability: Model S-76A with Turbomeca Arriel 1S1 engines installed in accordance with Federal Aviation Administration Supplemental Type Certificate SH568NE, including drawing 76070-30601.

Requirement: 1. Determine if the AC generator interlock relays are installed by conducting the following inspection:

- a. uncover the No 2 relay panel located in the right side of the cockpit overhead (this panel is also referred to as the right-hand panel), and
- b. inspect for the presence of the AC generator interlock relays identified as K43 and K44 (two relays) or K46, K47 and K48 (three relays).

Note 1: For S-76A helicopters, Serial Number (S/N) 760001 through 760237 inclusive, the AC generator interlock relays are wired through splice groups to the K31, K32, K11 and K13 relays. For S-76A helicopters, S/N 760238 and higher, the AC generator interlock relays are wired through splice groups to the K11 and K13 relays. Depending on how and when each helicopter was modified, the labels on these relays could be K43 and K44 (two relays) or K46, K47 and K48 (three relays).

2. If, following the Requirement 1 inspection, the AC generator interlock relays are found to be installed, no further action is necessary. However, if the AC generator interlock relays are not installed, fabricate and install, in clear view of the pilot, a placard stating:

**“WARNING - AC GENERATOR INTERLOCK SYSTEM NOT INSTALLED
SINGLE-ENGINE PERFORMANCE IS REDUCED”**

Note 2: Sikorsky Model S-76A Rotorcraft Flight Manual Supplement (RFMS) No 29B, Temporary Revision 1 dated 9 April 1999 is applicable.

3. Remove the placard installed under Requirement 2.

Note 3: RFMS 29B, Temporary Revision 1, need not be complied with following installation of one of the following kits:

a. for Model S-76A helicopters S/N 760001 through 760237 inclusive, AC Generator Interlock Kit (Kit) Part Number (P/N) 33776-84790-012, or

b. for Model S-76A helicopters S/N 760238 and higher, Kit P/N 33776-84790-011.

Note 4: FAA Priority Letter AD 99-11-04 and Sikorsky Aircraft Corporation Alert Service Bulletin 76-77-4A, Revision A, dated 6 May 1999 pertain to this Directive.

Compliance: 1. Before further flight after the effective date of this Directive.
2. Before further flight after the Requirement 1 inspection is completed.

SCHEDULE OF AIRWORTHINESS DIRECTIVES

3. Concurrent with installation of one of the following kits:
 - a. for Model S-76A helicopters S/N 760001 through 760237 inclusive, AC Generator Interlock Kit (Kit) Part Number (P/N) 33776-84790-012, or
 - b. for Model S-76A helicopters S/N 760238 and higher, Kit P/N 33776-84790-011.

This Airworthiness Directive becomes effective on 25 May 1999.

Background: The FAA has advised that S-76A helicopters with Turbomeca Arriel 1S1 may fail to achieve the specified single engine performance if the AC generator interlock system is not installed. This Directive requires an inspection to determine if the AC generator interlock system is installed and, if necessary, the installation of a warning placard.

The Directive also provides for an optional terminating action allowing removal of the placard and operation limitation imposed by the temporary RFMS revision.