

FAA Airworthiness Directive

87-18-11 MCDONNELL DOUGLAS HELICOPTER COMPANY (MDHC) (Hughes Helicopters, Inc.): Amendment 39-5678. Applies to all Model 369D, E, F, and FF helicopters, certificated in any category, equipped with MDHC main transmission (P/N 369D25100-BSC or -501) which has tail rotor output drive pinion shaft (P/N 369D25125-BSC or -11) installed.

Compliance is required as indicated, unless previously accomplished.

To prevent possible loss of tail rotor control, accomplish the following:

(a) Within the next 25 hours' time-in-service after the effective date of this AD, perform a one-time magnetic particle and visual inspection on the main transmission tail rotor output drive pinion shaft (P/N 369D25125-BSC or -11) on helicopters with the following serialized main rotor transmission in accordance with procedures detailed in paragraphs (c) through (f) of this AD.

TRANSMISSION SERIAL NUMBER

1989

1992 and 1993

1998 through 2000

2002 through 2082

2084 and 2085

If the tail rotor output drive pinion shaft serial number is contained in the list below, remove the shaft from service prior to further flight.

TAIL ROTOR OUTPUT DRIVE

PINION SHAFT SERIAL NUMBERS

1474 through 1502

1504 through 1547

1549 through 1561

1563 and 1564

1566

(b) Within the next 100 hours' time-in-service after the effective date of this AD, perform a one-time magnetic particle and visual inspection on the main transmission tail rotor output drive pinion shaft (P/N 369D25125-BSC or -11) on all affected helicopters with transmission serial numbers other than those listed above in accordance with procedures detailed in paragraphs (c) through (f) of this AD.

(c) Verify that the tail rotor output drive pinion shaft has an undercut style fillet radius as shown in Figure 1 of MDHC Mandatory SIN DN-147/EN-35/FN-24, dated April 23, 1987, or FAA-approved equivalent. Remove parts which do not have the undercut from service prior to further flight.

NOTE: Tail rotor output drive pinion shafts removed from service in accordance with paragraph (c) may be returned to MDHC for rework if a magnetic particle inspection of the part does not show any crack indications.

(d) Perform a magnetic particle inspection of the tail rotor output drive pinion shaft. Remove parts which show indications of cracking found during magnetic particle inspection from service prior to further flight.

(e) Inspect the tail rotor output drive pinion shafts for scratches, tooling marks, corrosion, or other minor surface defects in the fillet radius or elsewhere on the shaft in accordance with paragraphs c. (4), c. (5), and c. (6) of MDHC Mandatory SIN DN-147/EN-35/FN-24, dated April 23, 1987. Prior to further flight, rework discrepant shafts that show no indication of cracks in accordance with procedures stated in paragraph d. of MDHC Mandatory SIN DN-147/EN-35/FN-24, dated April 23, 1987.

(f) Special flight permits may be issued in accordance with FAR Sections 21.197 and 21.199 to ferry aircraft to a maintenance base in order to comply with the requirements of this AD.

The procedure shall be done in accordance with MDHC SIN DN-147/EN-35/FN-24, dated April 23, 1987. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552 (a) (1).

Copies may be obtained from MDHC, 500 E. McDowell Road, Mesa, Arizona. Copies may be inspected at the Office of the Regional Counsel, FAA, Southwest Region, 4400 Blue Mound Road, Fort Worth, Texas, or at the Office of the Federal Register, 1100 L. Street, NW., Room 8401, Washington, D.C.

This amendment becomes effective September 1, 1987.