

**U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION**

Airworthiness Directive

61-16-04 BRANTLY: Amdt. 319 Part 507 Federal Register August 4, 1961. Applies to Model B-2 Helicopters as indicated.

Compliance required within the next 25 hours' time in service after the effective date of this directive.

Failures of the right forward mount lug of the upper transmission case have occurred on three Brantly B-2 helicopters. These failures are fatigue in nature and apparently are associated with an undesirable pre-stress in the mount lug introduced during assembly procedures. Since this condition is likely to exist in other such aircraft, it is necessary to require the following modifications:

(a) Applies to all Model B-2 helicopters prior to Serial Number 56, except Serial Numbers 16, 31, 44, 51, 52, and 53.

(1) Remove the main rotor and transmission and the three vertical control rods which protrude through the steel plate at the top of the forward firewall.

(2) Rework the upper surface of the left and right forward transmission mount pads as follows: Insert a 5/16-inch diameter bolt downward through an AN 960-516 washer into the transmission mount bolt hole. File approximately 0.015 inch from the top surface of the mount pad except where protected by the washer. Remove bolt and washer.

(3) Rework the lower surface of the left and right forward transmission mount pads as follows: Enlarge the lower 1/4 inch of the 5/16-inch diameter transmission mount bolt hole by drilling upward with a 21/64-inch drill. Use of a drill stop is strongly recommended to avoid exceeding the 1/4-inch depth of this rework.

(4) Apply zinc chromate finish to reworked areas and reinstall transmission, rotor assembly, and control rods in accordance with Brantly Maintenance Manual procedures.

(Brantly Service Bulletin No. 9 covers this same subject.)

(b) Applies to all Model B-2 helicopters prior to Serial Number 103 except those with 0.375-inch thick mount lugs on P/N B2-104-2 upper transmission case.

(1) Remove the NAS 145-22 bolt through the right forward transmission mount lug and the two AN 3-24A bolts through the upper transmission case (P/N B2-104-2) immediately inboard of the mount lug.

(2) Install transmission bracket P/N B2-151-19 on top of the right forward transmission case mount lug and attach with new bolts and nuts through mating holes in transmission case previously exposed by (b) (1). These parts are furnished by Brantly Helicopter Corporation as their Modification Kit No. 20.

(3) Insure a close fit of faying surfaces between the upper transmission case and bracket P/N B2-151-19 by accomplishing the following steps: Break sharp edges of the upper transmission case ledge to avoid interference with the inner radii of the new bracket; remove material from the upper transmission case ledge or from the lower surface of the bracket in contact with the case lug, as necessary. Failure to insure proper fit of this bracket will introduce undesirable pre-stress into the transmission mount lug.

(Brantly Service Bulletin No. 14 covers this same subject.)

This directive effective August 14, 1961.