

Robinson Helicopter Company

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MANDATORY SERVICE BULLETIN #15

DATE: November 14, 1981

TO: All Owners and Operators of R22 Helicopters

SUBJECT: Service Life Reduction and Additional Inspection of A016 Rotor Blade

ROTORCRAFT AFFECTED: All Model R22 Helicopters

TIME FOR COMPLIANCE: Prior to next flight.

BACKGROUND: During a pre-flight check, cracks were found in both the upper and lower skins of an old design blade at the location described in Service Letter No. 15. The blade had only 207 hours time in service. Disassembly of the blade revealed a crack in the root fitting at the same location. Fortunately, there was no accident.

CORRECTIVE ACTION:

Immediately reduce the service life of A016-1, Rev A thru V, Main Rotor Blades, Blade S/N 0100 through 0593, from 300 hours to 100 hours. Any blades of this series with more than 100 flight hours must be removed from service.

ADDITIONAL INSPECTION REQUIREMENTS:

Old design blades, S/N 0100 through 0593, with less than 100 hours time in service may remain in use provided the following inspections are performed.

1. Paint Removal

Carefully remove the paint in a one inch spanwise by two inch chordwise area on both skin surfaces as shown in Figure 1 on page 3. Use 600 grit or finer sandpaper and sand in the spanwise direction until the metal is exposed.

DO NOT USE CHEMICAL PAINT STRIPPERS.

2. Pre-flight Visual Check

Visually check the exposed area before each flight for any indication of cracking or yielding of the blade skin. The inspection must be performed with a 3 to 10 power magnifying glass and a good light.

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ADDITIONAL INSPECTION REQUIREMENTS (continued):3. Dye Penetrant Check

Prior to next flight and every five hours thereafter, dye penetrant check the exposed area using the following procedure:

- a) Clean the exposed area with a solvent cleaner such as MEK or the cleaner furnished in a dye check kit. Be sure to remove all traces of grease, oil, dirt, etc. from the surface. Make sure all solvent is evaporated or wiped away before applying dye.
- b) Apply the penetrant dye to the exposed area and allow the penetrant to remain for a minimum of 15 minutes.
- c) Using a soft towel or cloth and a small amount of solvent cleaner, remove the excess dye from the surface.
- d) Spray a light coat of developer on the exposed area and allow it to dry for a minimum of 15 minutes.
- e) Examine the area shown in Figure 1 for crack indications.
- f) If any indication of a crack is found, immediately remove the blade from service.
- g) To prevent corrosion, apply a light coat of oil to the exposed area after each inspection and before parking the helicopter outside overnight.

DO NOT APPLY ANY WAX THAT CONTAINS SILICONE.

This check may be performed by anyone holding a valid pilot's license provided they receive proper orientation from a certified Airframe and Powerplant Mechanic. Each dye penetrant check must be recorded in the airframe logbook.

DAILY CHECK OF NEW DESIGN BLADES:

New design blades, S/N 600 and on, may remain in service with a temporary interim service life of 300 hours, while fatigue tests are being completed. However, these blades must be visually checked in the area shown in Figure 1 during each daily pre-flight check. The suspect area must be examined by the pilot or mechanic using a 3X or higher magnifying glass. It is not necessary to remove the paint.

ADDITIONAL PRECAUTION:

Should any unusual out-of-balance condition occur, immediately ground the aircraft, and contact the factory.

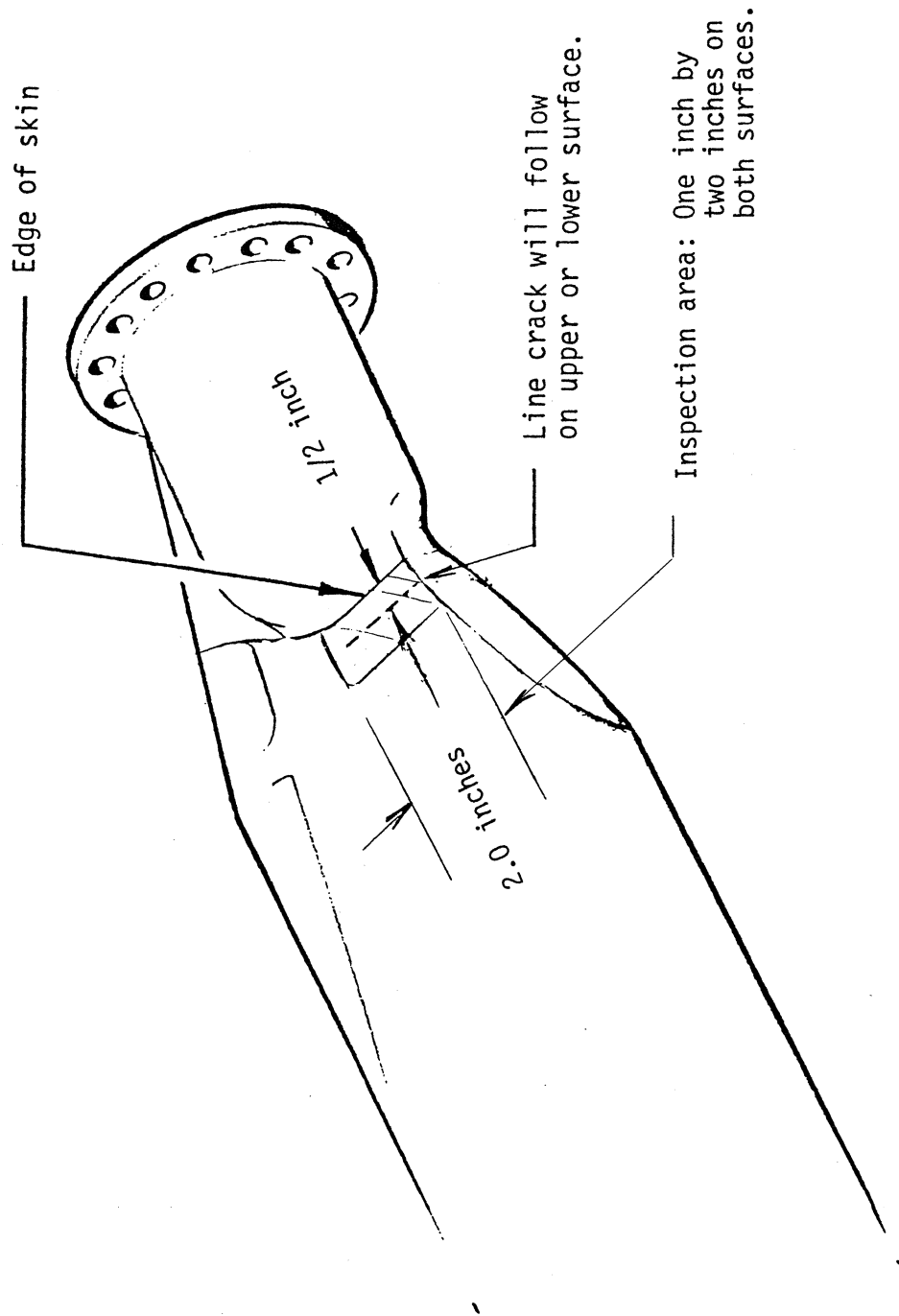


FIGURE #1