



Interagency Aviation Accident Prevention Bulletin



No. IA APB 18-05

Date: July 18, 2018

Page 1 of 2

Subject: UH-1H Tail Rotor Pitch Change Quill Assembly Inspection Criteria

Area of Concern: Flight Safety

Distribution: All UH-1H Operations utilizing Interagency Committee for Aviation Policy (ICAP) standards, including Federal Excess Personal Property (FEPP) aircraft.

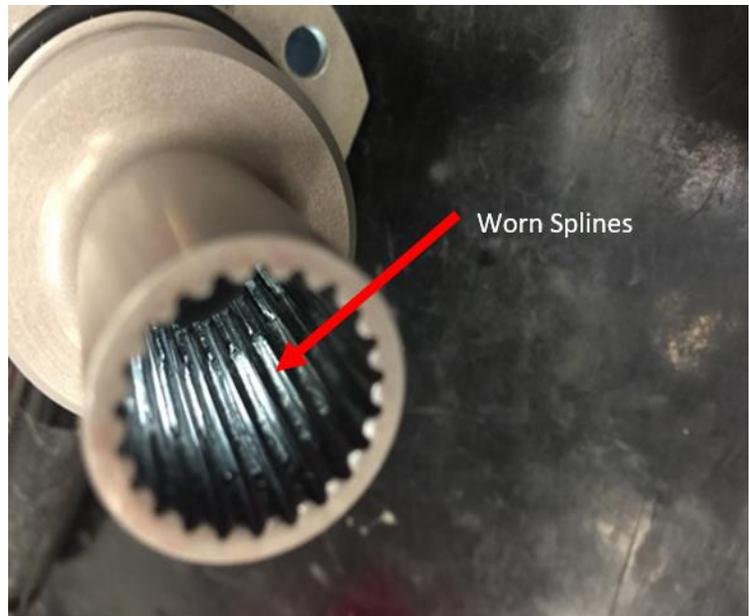
Discussion: Recently a USFS FEPP UH-1H helicopter operating with Tail Rotor Quill Assemblies worn beyond limits experienced a tail rotor failure and subsequent hard landing. There were no injuries associated with the hard landing.

The aircraft was inspected utilizing the [ICAP UH-1H Inspection Planning Guide](#) (Revision 2, March 1, 2002) as the inspection criteria for this part. The criteria for inspection on the quill assembly in the ICAP guide is different than the Army's UH-1H maintenance manual. The Army's UH-1H maintenance manual requires the disassembly and inspection of the tail rotor control system on a 150 hour schedule, whereas the ICAP inspection guide only requires using a dial indicator and checking for wear on the control tube within the assembled system on a 50 hour (Detail 1) schedule.

A review of the aircraft logbook shows that a Detail 1 Inspection was conducted on the mishap aircraft just 0.4 hours prior to the accident with no deficiencies noted.

Three aircraft were inspected in accordance with the ICAP inspection and passed the ICAP maintenance requirement, but two of the quill assemblies were worn beyond limits upon visual disassembly inspection. This procedure alone should be considered inadequate due to the fact that it cannot identify wear of all critical components within the pitch control system.

The operators of the helicopters have chosen to continue with the ICAP inspection of the tail rotor assembly. However, in addition, they have implemented the Army requirement for disassembled



visual inspection of the interior quill assembly housing every 150 flight hours to avoid operations on excessively worn parts.

Under the FEPP program, the Forest Service holds the certificates for a total of 85 aircraft and transfers the aircraft to authorized programs for use (bailed agreements). Of these 85, 49 aircraft logged flight time in 2017.

The Forest Service and DOI recommend all operators of these aircraft implement both ICAP and US Army inspection protocols to ensure airworthiness.

/s/ Keith Raley

Keith Raley
Chief, Aviation Safety, Training, Program
Evaluations and Quality Management
DOI, Office of Aviation Services

/s/ J. Kent Hamilton

John Kent Hamilton
Branch Chief, Aviation
Safety Management Systems
USDA Forest Service