



Federal Aviation Administration

September 25, 2014

Daniel Blakely, FAA ASI, Accident IIC, [REDACTED]
Aaron Joyce, FAA ASI, [REDACTED]
Tom Webster, Robinson Helicopter Technical Investigator, [REDACTED] Ext. [REDACTED]
Steven Bortscheller, Owner A&S Helicopters Inc., [REDACTED]
Frank Spavale – N115DD Pilot, [REDACTED]

INSPECTOR'S STATEMENT



09/24/2014 – Inspector Daniel Blakely (DAB) and I, Inspector Aaron Joyce (ATJ) arrived at Frank Spavale's Hangar located at St. Louis Downtown Airport located in Cahokia, Illinois to perform a breakdown inspection of the drive train area that contributed to an accident that occurred at St. Louis Downtown Airport at approximately 1030 local CST, on Friday, 09/19/2014. The aircraft, N115DD, a 2003 Robinson R22 (Beta) Helicopter, certificated Standard Normal, S/N 3494 sustained substantial damage. No personal injuries were sustained in the accident. The aircraft is owned by DED Aviation and was being operated by Frank Spavale. The mechanic for the helicopter was Steven Bortscheller who assisted as the mechanic for the investigation.

Steven Bortscheller removed components from N115DD as directed by inspector DAB. Inspector DAB was in telephone communication with Tom Webster throughout the breakdown inspection of the drive train area. While Steven Bortscheller was removing the bolts on the fanwheel assembly in order to install the fan puller, he made a comment that "they" may have messed up. He stated that the bolts were loose and that they may have forgot to tighten them. Once the fan was off, it allowed clear view of the lower sheave and lower actuator bearing (A181-4). The lower sheave and bearing showed no evidence of grease and the bearing was severely damaged. After the fan was removed it was evident that at least one of the bolts that were used to attach the fan puller was not torqued properly, because the head of the bolt was excessively worn from wear. It appeared as if the loose bolt was rubbing against the lower actuator bearing. Inspector DAB called Tom Webster after the finding and they decided to take the fan assembly and lower actuator bearing so it could be shipped to Robinson Helicopters for further analysis.

The maintenance log certified that the A181-4 bearing was lubricated during the 100 hour/annual inspection dated 08/30/2014 and was signed off by Steven Bortscheller for A&S Helicopters Inc. Repair Station No. S12R162L.

The flight manual maintained for N115DD was also inspected to ensure that it was current. It was verified that the manual was not current and had not been updated with Robinson flight

manual changes. The last time the manual was updated was 12/23/2009. There was a Robinson R44 also parked in the hangar. Inspector DAB told Mr. Spavale to make sure he had the most current flight manual in the helicopter. Mr. Spavale was confused and said he had the manual in the helicopter that it came with. Inspector DAB then told Mr. Spavale that he had been flying N115DD with an outdated flight manual and that he needed to update it. Mr. Spavale said he was unaware that flight manuals had to be updated. Mr. Spavale then stated he would update his flight manuals.



Aaron T. Joyce
Aviation Safety Inspector (ASI)
St. Louis FSDO