



MEMORANDUM FOR RECORD

Eric Alleyne
Air Safety Investigator
National Transportation Safety Board
Office of Aviation Safety - Eastern
Region

NTSB Case Number: ERA22LA340
Model/N#: Robinson R-22/ N42WC
Date: 7/27/2022
FAA inspectors: Ricardo Queiroz and William Chadwick
Subject: Inspector examination notes

The following are examination observations and notes.

"Inspector Queiroz and I traveled to Ft. Pierce to take additional photos of the aircraft. I have attached some additional photos and can send more if requested. Here are some notes from the interviews conducted with the pilot and the student:

The aircraft had been previously grounded (by the same pilot) two days prior due to a "rough" running engine. The pilot discussed with the mechanic, the day before the flight, the mechanic was unable to duplicate, however he noted that the Primer was in the full up position. The mechanic returned the aircraft to service.

The pilot stated he completed a pre-flight of the aircraft, but also stated that he did not review any maintenance records of the aircraft to verify airworthiness. He used the Robinson produced pre-flight checklist. He did not use, nor open, the Pilot Operating Handbook. His statement about airworthiness was "I trusted the mechanic". He focused on three areas, T/R (see remarks below), the engine (noted wet brown/black oil substance around #1-cylinder head), and the drive train.

He provided some photos of tail rotor cracks/damage from two (2) weeks prior (photo 1431). The pilot stated that the mechanic replaced the blades, we do not have any maintenance records showing removal, nor installation. The life limited components listing provided by the mechanic show different S/N for the tail rotor and hub, however no maintenance records show the change. The aircraft was using mineral oil, due to the engine break-in, but he did not need to service the aircraft.

He stated the aircraft contained 15 gallons of total fuel (10.4 Main, 4.6 Aux). The pilot weighed

150 lbs., and the student weighed 220 lbs. Weight and Balance worksheets contained in the POH showed an aircraft empty weight with floats removed of 852 lbs.

He planned to conduct a 1-hour flight. He completed his normal starting engine and run-up procedures, but stated because of the previous issues he took a longer run-up, approximately 6-8 minutes. He noted no abnormal conditions. He stated the sprag clutch check showed normal lights/indications.

After completing the run-up, the pilot picked up to a 3 ft hover and moved the taxiway to Air Taxi to the "Practice area" which was an asphalt section located in the center of the airport WEATHER DATA: KHWO Spec 271805Z 13011KT 10SM CLR 33/23 A3013 at the time of the crash. His air taxi was between 30-40 ft AGL, 20-30 kts airspeed, above ETL. He didn't check any of his instrumentation and was primarily focused outside the aircraft. He stated he felt like the aircraft was more powerful than previous flights, and the governor was engaged and operational. Before he reached the asphalt area, he started his approach, approximately 15-20 feet, a "Popping" and "Bang" noise were heard, with an uncommanded spin. The pilot was unable to remember which way the aircraft spun (believed right), but the student was emphatic that it was a right-hand spin. The pilot didn't remember any control inputs and indicated that he may not have reacted. The aircraft impacted the ground after spinning for 2-3 seconds and landed on it's right side. The aircraft was up righted by the fire department to prevent fuel leaking. Upon post-crash inspection, the Collective was full up, throttle full-open, and left pedal full deflection forward. Cyclic was lying to the right side due to gravity. All flight controls moved freely up to the break points.

We received copies of the aircraft maintenance records. Owner and mechanic claimed the original logbooks were water damaged, and they were in the process of recreating them. There is not a large number of records available, however there were several key documents found. The Hobbs meter the aircraft has flown 92.95 hrs. since installation. Total AFTT 6975.1. Per the Life Limited Parts listing (attached) provided by the owner/mechanic, most of the life limited parts were installed at 4401.0 hrs. Serial numbers of TBO items (except for T/R Blades and hub) match the numbers of the components contained in the list."