Flight and Maintenance Information

Aero Aviation completed its maintenance on the helicopter on April 5, 2012. The maintenance performed was airframe related only. No engine maintenance was done.

Sharpe flew the aircraft 2 times on 4/5/12. The first flight was 0.5 hours. The second was 1.3 hours.

The total aircraft time on 4/5/12 was 4,385.9. The #1and #2 engines had 4,417.2 hours. The #1 and #2 engine cycles were 6,453. Total landings were 7601.

Sharpe flew the helicopter on 4/12 for 3.1 hours.

Sharpe flew the helicopter on Friday, 4/13 for 2.9 hours. On this flight, he experienced some type of engine rollback. We don't know if it went to flight idle. He manipulated the #2 throttle. The engine came back on line but it's not known why. He landed backed at the helicopter's base at Houston Hobby. The pilot did not make a maintenance write-up in the logbook. He called the mechanic on Saturday and left a message on the mechanic's phone. The mechanic did not check his messages until Sunday evening and was unaware of the problem until then. The mechanic said that the pilot did not get any engine out horns

The pilot flew the helicopter on Saturday, 4/14 for 2.4 hours. He took passengers out to an oil platform. No problems were reported concerning this flight.

The helicopter did not fly on Sunday, April 15th.

The mechanic worked on the helicopter on Monday April 16th. He checked the A & B fault codes but there were none. He pulled 2 canon plugs on the #2 engine for the torque indicating system. He cleaned them and put in some solvent. He did not touch the canon plugs for the EEC's. He focused on the torque sensors because 2

years ago that's what had been giving them problems. There was no ground test or flight test to determine if it fixed the problem. No write-ups were made in the airframe or engine logbooks about the discrepancy or the maintenance performed.

On Tuesday, April 17th, the pilot departed in N56RD with 5 passengers in the back of the helicopter. The left seat had a pilot rated passenger. He flew the Gulfstream and Pilatus, but was not helicopter rated. They departed prior to 8:00 AM and the mechanic had not arrived at the hangar before the flight departed. The flight was about 210 miles to New Iberia, LA, where the helicopter was refueled. They then departed for the oil rig.

The pilot reported that he approached the oil platform on a heading of 190 degrees. The wind was from 220 at 5 – 6 knots. Another helicopter was scheduled to land on the rig later, so he was going to land toward the right edge of the landing zone. His airspeed was 60 – 40 knots as he approached the landing pad. We don't know what his vertical speed was. Just prior to the flare he said he noted the airspeed was 20 knots. Just as he was about to flare, the engine noise changed like it was having a roll back. He started to maneuver away from the rig while pulling in power. He said his descent rate was too great to land on the rig and he was concerned about impacting the structure and/or sliding off the platform. As he was pulling in power and maneuvering, he tried to lower the nose and gain flying speed. The helicopter continued its descent and he landed in the water. Prior to water impact, he deployed the floats. He kept the power on the helicopter until the rescue pod was able to get near for the rescue. He shut down the engines, and as the helicopter started to list to the left, the passengers and pilot got into the life rafts and then the rescue pod.

Maintenance Practices

The mechanic related the following information about the maintenance practices:

1. He did not make a write-up in the engine or airframe logbook about the maintenance he had performed. He didn't think it warranted a write-up. It was not unusual for him to not put such maintenance in the engine logbook.
2. He did not know what caused the engine rollback on Friday, 4/13. He cleaned the canon plugs because that seemed to work before. He felt he had to do at least something.
3. They have not been doing power assurance checks since the received the S-76B. They used to do power assurance checks when they had the Bell 222, but not on the S-76B.
4. There has been no trend monitoring of the engines by the mechanic.
5. About 2 months ago, the mechanic stopped rinsing the engines every day. Evidently, he was injured or sick, and since then he didn't rinse the engines.
6. He washed the engines every 300 hours based on the fuel nozzle cleaning schedule.