

Date Sept. 21, 2016 Time 15:30

Darrington, Washington

I arrived at Hi-Line Helicopters, located in Darrington, Washington at approx. 14:30 local time. The flight from Boise, Id to SEA/TAC had been delayed approximately 1.5 hours due to circumstances beyond my control. I departed Boise, Id. at Approximately 8:35 MST. My contact at Hi Line Helicopters was Jason Moorhead, Hi-Lines Chief of Operations. Jason was aware that I would be at their facility Wednesday and Thursday to conduct the inspections in regards to the incident/accident with N6181A.

Jason Moorhead, was conducting STEP Training in another Helicopter with NPS Personnel upon my arrival. I was greeted by Rebekah Duncan and followed her into the main office. Rebekah Duncan is the pilot involved in the incident/accident with N6181A. I began to review N6181A's flight log and Maintenance Spread Sheet. I was listing all drive components by part and serial number. I intended to verify that each item listed was installed on the Helicopter at the time of the incident/accident. I would also be able to track whether or not each item had been inspected or overhauled when OAS returned to inspect this helicopter for the 2017 season. I spent approximately 30 minutes in the office, when I looked at my watch, I had forgot that my watch was set for MST and not PST. It was approximately 15:20 local time. I asked Jason if I could finish up with the records today and transition to the aircraft inspection in the morning. At that time I was told by Jason Moorhead that I had approximately 40 minutes to finish up. Jason stated, Hi-Line personnel had to join in a pre-work meeting for tomorrow's missions, and I had to be out of the office by 16:00 hours. He also stated, no one would be available at the Hangar to assist me Thursday. I proceeded to the hangar and found out I was only allowed limited access to the helicopter. I was told by Jason, Anthony Reese, the owner did not want me on the helicopter or any panels removed. I could open, both engine cowl doors as well as the left and right lower pylon access panels.

I requested access to the cabin overhead area, Hat rack compartment removal, cargo bay upper panel removal, Tail Boom attach point access and Tail rotor drive cover removal. This would allow access to the Box Beam assembly, below the transmission, internal fuselage area below the engine mount area, and the tail rotor drive shaft. All access was denied. I was not allowed to stand on the upper fuselage to inspect the Mast, Main Rotor Hub, or Main Rotor Blades.

Jason Moorhead left the hangar for a while and upon his return, stated that he had contacted Mr. Anthony Reese and asked if he could remove the forward upper cowling, Jason mentioned, "that would be easy enough" and that request was denied as well. Jason was told, not to remove any cowling or panels for me during my visit. Removal of the above panels and cowling would only require a Standard tip and Philips tip #2 screw driver with minimal effort.

I requested permission from Jason Moorhead to approve the release of any photos or inspection results listed by Bell Helicopter Technical Support Representative, Greg Judd. Greg was scheduled to arrive and inspect N6181A next week. Jason's answer was undecided. I received very little cooperation from Jason Moorhead.

Bell Helicopter Technical Representative, Greg Judd was originally scheduled to meet with Hi-Lines mechanic and Director of Maintenance, Ryan Andrews. They were going to inspect N6181A's damage and submit that information to Bell Helicopter Product Support. Ryan Andrews was not present during my inspection. After I had expired my time limitation and was traveling to the Motel, I contacted Greg Judd and explained to him what I was confronted with. The following afternoon, I received a call from Greg Judd who had been in contact with Ryan Andrews. Ryan had told Greg Judd that Hi-Line Helicopter's owner, Anthony Reese had mentioned to Ryan, Hi-Line will not require any assistance from Bell Helicopter, they will handle this situation on their own. We at OAS are very concerned that proper maintenance procedures and recommended component inspections and possible component replacement, will not be adhered to, or conducted without proper supervision. I would recommend a letter be sent to Hi-Line Helicopters, requesting an inspection to be conducted by the manufacturer and those results forwarded to OAS, Safety Office and Western Regional Office. Without the proper access, this inspection is incomplete and will have to be performed in its entirety before this Helicopter N6181A can be returned to contract availability.

N6181A Bell 206 BIII Serial Number 4277 Total Aircraft Time 7539.2 Hour Meter 990.0

Rolls Royce 250-C20R/4 Serial Number CAE-296033 Total Engine Time 7376.6

Last 100 Hour Inspection conducted Aug. 8, 2016 at Aircraft Total Time 7513.0

Last 4 Power Check results were +18 Degrees

N6181A Inspection, Incomplete

Exterior fuselage, no major indications of damage observed by a walk around, Tail Rotor Gear Box Cover was not installed, Tail boom and elevators were observed but not inspected, due to lack of time allowed. Tail Boom attach point access was not allowed, this area was not inspected. Vertical Fin was observed, no major damage, but not inspected.

Fore and Aft Cross Tubes and Passenger Steps appeared to be normal, cross tube attach point areas were not inspected, Fuselage Belly was observed, no major damage but not inspected,

Left and right Skid tubes appeared to be normal, lower sides, inboard and out board areas were observed, but not inspected

Interior Cabin, cock pit appeared to be normal, Box Beam and bottom of Transmission deck were not inspected, access denied.

Engine compartment, forward fire wall, Main Drive Shaft Panel, and all Engine Mounts appeared to be normal. Engine pan appeared to be normal. Engine N2 Governor and linkage, Fuel Control and linkage, Engine Driven Fuel Pump, fuel lines and Bleed Valve appeared to be normal.

Main drive Shaft aft coupling, Rotor Brake Disc and Calipers appeared to be normal, unable to observe center of main drive shaft area through the forward fire wall. Main Drive Shaft forward coupling, Damaged, Forward boot separated from coupling, 204-040-755-5 (Black/ Brown in color). Coupling grease was scattered throughout aft transmission area, the main shaft appeared to have contacted the forward firewall. Forward coupling had contacted Isolation mount, metal shavings were apparent. Lower Particle Separator sheet metal and Particle Purge Bleed lines appeared to be normal. Transmission lubrication Line to Free Wheel Unit appeared to be normal. These areas were covered with drive shaft grease and need to be re-inspected once the area has been cleaned.

Upper Right hand top Transmission Cowl, inner diameter damaged, cracked with a piece of composite material missing. Possibly during from extraction from LZ.

Main Rotor Blades, lower skin and spar were observed from a ladder, no major damage observed, upper blade doublers, spar and skin were not inspected. Tail Rotor Blades appeared to be normal. Tail Rotor Gear box was felt for security, no looseness observed. Tail Rotor Cross Head and Controls was observed but not inspected.

Main Rotor Droop Stop Elastomeric Rubber displayed some cracks within the rubber, but no bonding separation. Contact area on the top inboard Main Rotor Yoke appeared normal as viewed with a mirror. Both centrifugal droop stops were free in movement and presumed to have been operating normal.

Main Rotor Mast had contact with the Main Rotor Static Stops, definite signs of impact on one side of the mast tube. With a Dial Caliper I performed measurements in 4 locations on the Mast tube, 180 degrees out from each other to determine if elongation of the mast had occurred. Measurements were consistent throughout area below main rotor hub to the top of the drive link. A "TIR" Measurement should be conducted. (Total Indicated Run Out) as described in the BHT-206A/B Series MM-6, Conditional inspections, Pylon Whirl Inspection.

Rotating SwashPlate, Pitch change Rods, Swashplate Support, Collective levers appeared to be normal, Swashplate boot was not removed to determine mast contact to swash plate sleeve. Limited access to forward flight controls as viewed through Hydraulic Filter Assembly access panel were observed but not inspected. Forward flight controls, servo actuators, observed but not inspected, they appeared to be normal with Limited access to forward flight controls as viewed through Hydraulic Filter Assembly access panel.

Transmission Drag Pin Spike mount, sheared from Lower Transmission Housing. 4 Drag Pin retaining studs sheared off.

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Left and right, transmission mounts appeared to be normal. The transmission mounts where they attach to the upper transmission case was observed but not inspected due to limited access. Forward Transmission Deck appeared to be normal. The forward transmission deck where possible Nr Tach. Generator contact could have been made was not accessible for inspection.

Aft Transmission Deck damaged. Drag Pin spike witness ring retaining rivets sheared from transmission deck. Aft Drag Pin spike witness hole, aft sheet metal torn from Transmission Deck, definite spike knock.

With limited access to the airframe and rotating components and an incomplete inspection to determine other existing damage, I believe N6181A experienced a ground idle spike knock followed up by a pylon whirl.

Hal DeGrange

Safety Compliance Specialist

Office of Aviation Services

Western Region