



Inspector Statement

This Inspector examined the wreckage of N653CH, a Hughes 269A, Serial Number 96-0653, registered to Kelley Aviation Consultants, LLC, 2270 W. Mountain Ave, Williamsport, PA. The wreckage was examined on August 27, 2019 at Northumberland County Airport (N79) T-Hangar 6, Shamokin, PA.

All Fuselage Stations (FS) and Waterlines (WL) are approximate measurements.

The aircraft was in an upright position resting on its lower nose fairing, fixed skid landing gear, and its frame assembly. All major components are accounted for. The main rotor blades were removed at the accident site for transport. The skid type landing gear appeared spread outboard approximately 20 inches consistent with a slight nose down attitude hard landing. The left and right hand landing gear forward dampers, FS 73.0 WL 20.0, were broken at the upper mounts. The left hand and right hand step, FS 73.0 to FS 116.0 WL 20.0, were broken at the forward crosstube mounts. The fore, FS 73.0, and the aft, FS 116.0, crosstubes appeared spread and bent upwards consistent with a hard landing.

The structure of the nose, FS 39.5 to FS 53.0, while mostly intact, the lower fairing sustained considerable damage. Damage to the fairing appeared to be consistent with a slight nose down attitude, right side impact. The engine air intake, FS 60.0 WL 25.0, was crushed. The left windscreen and overhead window were broken.

The crew/passenger compartment exterior, FS 53.0 to 90.0, sustained substantial damage as evidence of skin wrinkling on both the left and right hand door frames, FS 75.6 WL 30. The right and left hand doors were not installed but were accounted for. The interior of the crew/passenger compartment remained intact. The crew/passenger restraints remained attached. Positions of gauges, switches, circuit breakers, etc. appeared unremarkable.

The transition section, FS 90.0 to FS137.0 sustained substantial damage. Several frame tubes, to include engine/transmission mounts, were bent and/or broken. The engine remained attached to the airframe.

The tailboom section, FS 137.0 to 283.5, appeared intact. The tail rotor driveshaft was "cut" at FS 137.0 consistent with the rotors being driven by the engine indicating the rotors were turning at the point of impact. The vertical stabilizer, horizontal stabilizer remained attached to the tailboom with no apparent damage. The tail rotor gearbox was firmly attached to its tailboom mounting frame. Tail rotor blades were intact with no apparent damage. The tail rotor gearbox and tail rotor swashplate operated smoothly when rotated by hand. There was no damage noted to the tail rotor pitch change mechanism. The tail rotor blades were manipulated by hand and control linkages and mechanisms responded appropriately with no binding noted.

The main rotor pylon area appeared unremarkable. The main rotor transmission remained attached to the airframe. The forward, lateral, and aft flight control rods remained connected to the stationary swashplate. The collective levers remained attached.

The main rotor hub showed no evidence of damage. The pitch housings, dampers, and striker plates showed no evidence of visible damage. The main rotor blades remained intact.

The main transmission and drivetrain showed no visible damage to the main transmission. Drive continuity of the main transmission was verified by rotating the tail rotor driveshaft by hand. The transmission rotated smoothly with corresponding rotation of the main rotor head. The overrunning clutch was functioned by hand and operated normally. All drive belts appeared intact.

The aircraft was configured with dual flight controls. Control continuity of the collective and cyclic was verified from the controls at both seats in the cockpit to their respective attach point at the swashplate. Anti-torque control continuity was confirmed, with positive results, from the controls at both seats in the cockpit to their respective attach point at the tail rotor blades. "Hand" resistance was applied to each tail rotor blade by holding the tail rotor blades as the left and right anti torque pedals were manipulated by hand, at both seats in the cockpit, through their full range of motion against their respective stops. The resulting corresponding pitch in the tail rotor blades appeared to be consistent with the pedal movements mentioned above with no binding noted.

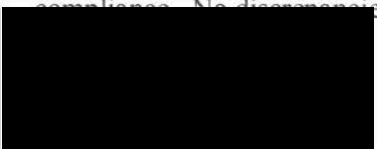
The aircraft was equipped with a Lycoming HIO-360 series reciprocating engine, SN: L-52283-36. The engine was displaced due to bent and broken mounting structure and frame tubes consistent with a hard landing. The throttle linkage to the engine fuel control linkage functioned normally. All spark plugs were removed and inspected with indications of normal combustion. A fuel sample was obtained through the sump valve and appeared clean and bright with no indications of water or particulate contamination.

All damage appears to be impact related as a result of the mishap sequence. The wreckage examination failed to identify any discrepancy or malfunction of the airframe, or its related components, that would have contributed to the mishap.

A review of the airframe/engine/accessory component times for compliance with the applicable manufacturer's recommended overhauls or replacement times was found to be satisfactory. No discrepancies were noted.

A review of the Airworthiness Directives (AD) for the airframe, engine, and associated accessories against the current ADs were found to be satisfactory. No discrepancies were noted in required compliance.

A review of the Instructions for Continued Airworthiness pertinent to applicable major alterations as depicted in the FAA Aircraft Registry Electronic Data Reporting System was found to be in compliance. No discrepancies were noted.



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