

The Enstrom Helicopter Corporation
280C, S/N 1108, N280WR Accident Investigation Notes

March 26, 2024

Enstrom ASI – Douglas Smith

Lycoming ASI – David Harsanyi

NTSB ASI – Zane Brown

Owner – Ray Butler

- Main rotor and tail rotor ground strikes. Main rotor blades damaged beyond repair. Tail rotor blades damaged beyond repair. Damage to tail rotor blades consistent with engine power driving the rotor systems during initial rotor strikes. Main rotor blades did not contact tail cone during sequence. Main rotor blades cut up by owner.
- Helicopter equipped with graphic engine monitor. Insight model does not have memory feature.
- Annual inspection completed 15 DEC 2023. Aircraft TT 1713.3, Hobbs 444.9. Aircraft TT at accident is 1720.6/Hobbs 452.1. 7.2 hours since annual inspection.
- Tail rotor drive shaft sheared at forward coupling. Both flex packs have “wave” but are intact.
- Support braces on #1 tail cone (TC) bulkhead buckled; L/S TC skin dented/dished at #1 TC bulkhead. L/S TC skin dented at #2 TC bulkhead. #5 & #6 TC bulkhead and bottom and top skin between #5 & #6 TC bulkhead is dented and buckled. Rivets sheared on extension tube lower clamp. Lower stabilizer and tail skid damaged. Left and right horizontal stabilizers damage.
- Left side landing gear collapsed. Owner report additional damage to landing gear during recovery operation and removed L/S landing gear.
- Collective control system bellcrank failed and attachment to pivot mount located in bottom of seat structure. No other failures in system noted.
- Longitudinal (R/S) and lateral (L/S) bellcrank mounts located at top of seat structure failed at bellcrank attachment ears. No other failures in systems noted.
- No failures noted in tail rotor/anti-torque system.
- #2 and #3 main rotor (MR) pitch change links failed at pitch horns. #2 & #3 MR blade grips rotated 180°.

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- Seat structure/pan braces not bowed and flanges of vertical members at intersection of seat structure not kinked. No indication of a hard landing.
- Throttle and mixture controls operate normally.
- Fuel was drained by owner. Approximately 1 ml of water was found in residual fuel drained when the fuel tanks were removed.
- Magneto timing to engine was checked at approximately 20° BTC. Engine is HIO-360-E1AD; magneto is an impulse coupling magneto. Internal time appears to be correct; approximately 8° K with red teeth on gears in inspection window. P/N 10-682555-13, Model D4LN-3000, S/N H-X080138.
- Fuel servo removed to inspection at Precision Airmotive. P/N 2524712-10, Model RSA-5AB1, S/N 720PRR01.

End of Notes

