

CEN16LA326
N40499, Thrush S2R-T660, S/N T660-113
08/29/2016

On scene accident investigation synopsis

On August 19, 2016, at approximately 14:30, FAA safety inspectors David Nelson and Kurt Holmberg arrived on the scene of an aircraft accident involving N40499, Thrush S2R-T660, s/n T660-113 that had been reported to the MSP FSDO. The accident reportedly occurred on August 19, 2016 at approximately 08:10.

Initial walk around was conducted of the accident scene. Photographed the accident area. Main wreckage is located at GPS coordinates of N44-10-58.6, W096-12-02.8. Aircraft was found to be in a nose down attitude with extensive damage to the entire aircraft. The tail section of the aircraft was completely separated from the aircraft and was located just aft of the aircraft and within a few feet of the aircraft. The flight control cables in the tail showed evidence of "broomstrawing" where they had separated. There was what appeared to be a ground scar of approximately 75-100 feet behind the aircraft in the direction of travel consistent with the aircraft traveling in a horizontal attitude prior to the final position of nose down. The right main gear leg was located approximately 20-30 feet from the aircraft in the scarring area and only the top 3-4 feet was above ground. Inspectors were unable to move the gear leg to check to see if the complete assembly was attached (retrieval personnel found that the wheel assembly had broken from the leg at what appeared to be an initial impact point, from scarring in the crop, a ways behind the aircraft. The right main wheel assembly was found in an area to the right and behind the aircraft). The right aileron assembly was completely detached and laying on the ground directly behind the right wing. Most of the significant components and flight controls of the aircraft appeared to be located in close proximity to the aircraft with the exception of the propeller assembly and front nose section. The right wing was found to have some of the guide wires from a nearby tower. The distance between the tower and the aircraft final location was approximately 615 feet. There was approximately 8 feet of the tower still attached to the cables and was it located approximately 30 to 40 feet ahead of the aircraft in the direction of travel. The aircraft propeller assembly was located approximately 445 feet forward of the aircraft in the direction of travel. There was what appeared to be an initial ground impact area near the propeller assembly that was approximately 75 feet before the final stopping point of the propeller assembly. The propeller was missing 1 blade that appeared to have sheared inside the clamping area with what appeared to be the root section of the blade still in the propeller. The other 4 blades were bent and had some scarring on them, but did not appear to have a lot of dirt on them from ground contact. The propeller spinner appeared clean with no evidence of mud or dirt and had one dent on top of the nose section approximately 6 to 8 inches long and 2 to 3 inches wide with some scarring that appeared to be from contact with a hard object such as metal components or a rock. The front section of the engine case was still attached to the aircraft and appears to have the mounting flange that attaches to the rest of the engine sheared from it. The missing blade was not on the initial on scene investigation, nor was it located by the recovery personnel. The cockpit area of the aircraft was not looked at on scene due to the unsafe position of the aircraft.

On August 24, 2016, additional on scene investigation was conducted at the Wentworth aircraft salvage facility at the Lakeville, MN airport. The aircraft had been retrieved by Wentworth Aircraft and was located in a secure hangar. The cockpit of the aircraft was accessible and according to retrieval personnel nothing had been moved or removed from the cockpit. They also had been cautious in retrieval and moving of the propeller assembly as per FAA inspector instructions on the day of retrieval. Cockpit controls were photographed. Elevator trim lever was found to be in the full nose down position. After documenting the initial position, the lever was able to be moved, but with some difficulty. The throttle control was in the idle position, fuel lever was in low idle position and propeller control was in full decrease position. Due to the damage to the aircraft and engine area, it was unable to be determined if the positions were pre-impact or moved on impact. Sheriff department photos that were obtained late showed the positions of the controls were as they were on scene. Additional photographs were obtained of the engine forward flange area. The flange from the forward section of the engine appears to have sheared and was still mostly intact on the aft section. All of the bolts appeared to be in place. The Sat-Loc system components were removed from the aircraft in coordination with NTSB for sending to their lab for attempting a download of any available information. It was noted that the Sat-Loc system switch in the cockpit was in the off position, so it the system may not have been turned on. Photographs were taken of all information collected.