

16. POWER PLANT MAKE/MODEL/SERIES

LYCOMING 0-290 SERIES

33. NARRATIVE

THE AIRCRAFT DEPARTED HARTNESS STATE AIRPORT (KVSF), NORTH SPRINGFIELD, VT AT APPROXIMATELY 1025 LOCAL. THE PILOT STATED THAT HE HAD BEEN FLYING FOR APPROXIMATELY 25 MINUTES AND WAS LOCATED OVER THE CONNECTICUT RIVER NEAR CHARLESTOWN, NH WHEN HE EXPERIENCED A "VERY LOUD BANG FROM THE ENGINE COMPARTMENT". FOLLOWED IMMEDIATELY BY A LOSS OF ENGINE POWER AND VIBRATIONS. THE PILOT STATED HE REACTED TO THIS EVENT BY SWITCHING FUEL TANKS, VERIFIED A RICH MIXTURE AND THAT BOTH MAGNETOS WERE ON, THEN TURNED ON CARBURETOR HEAT. THERE WAS NO CHANGE IN ENGINE POWER AND THE PILOT WAS NOT ABLE TO MAINTAIN LEVEL FLIGHT. HE THEN PLANNED AN APPROACH OVER THE RIVER TO MAKE AN EMERGENCY LANDING IN A FARM FIELD. WHILE TURNING "FINAL" ON APPROACH TO THE SELECTED FIELD FOR LANDING THE AIRCRAFT STRUCK AND SEVERED 3 PARALLEL UNMARKED POWER LINES, APPROXIMATELY 30 FEET ABOVE THE WATER. THE AIRCRAFT SUSTAINED SIGNIFICANT DAMAGE AND FELL INTO THE CONNECTICUT RIVER BELOW. THE PILOT WAS ABLE TO SELF-EXTRICATE FROM THE AIRCRAFT PRIOR TO THE AIRCRAFT BECOMING FULLY SUBMERGED AND SWAM TO SHORE. HE SUSTAINED SERIOUS INJURY AND WAS TRANSPORTED FOR MEDICAL ATTENTION. THE AIRCRAFT WAS RECOVERED 06/23/2022 FROM THE RIVER AND MOVED TO A HANGAR AT HARTNESS STATE AIRPORT. OBSERVATION OF AIRCRAFT INCLUDED SUBSTANTIAL DAMAGE TO THE RIGHT WING LEADING EDGE ABOVE THE STRUT ATTACHMENT POINT, LEFT WING STRUT STRUCTURE, MAIN LANDING GEAR, PROPELLER AND ENGINE COWLING. THE REAR FUSELAGE WAS BENT AT APPROXIMATELY A 45 DEGREE ANGLE TO THE LEFT JUST AFT OF THE PILOT COMPARTMENT.

43. BRIEF EXPLANATION OF ISSUES INVOLVED

A CURSORY ENGINE INSPECTION WAS CONDUCTED BY AN AIRCRAFT MECHANIC AND OBSERVED BY AN AVIATION SAFETY INSPECTOR ON 06/27/2022. INITIAL INSPECTION OF THE ENGINE DID NOT REVEAL ANY OBVIOUS FAILURE OF CYLINDER ASSEMBLIES, PUSH-ROD TUBE HOUSINGS OR ENGINE CASE. THE SPARK PLUGS WERE REMOVED AND INSPECTED WITH NO SIGNS OF FAILURE. COMPRESSION WAS PRESENT IN ALL FOUR CYLINDERS. THE MAGNETOS WERE REMOVED AND INSPECTION OF DRIVE GEARS IN THE ACCESSORY CASE AND ROTOR GEARS IN THE MAGNETOS SHOWED NO SIGNS OF FAILURE. A MAGNETO TIMER VERIFIED THAT THE POINTS WERE MAKING CONTACT. FUEL SYSTEM WAS CONTAMINATED WITH WATER AS A RESULT OF BEING SUBMERGED. THERE WERE NO OBVIOUS SIGNS OF ENGINE FAILURE. HOWEVER, THE MECHANIC STATED THAT THAT THERE IS APPRECIABLE WEAR TO THE BLOCK FINGER

ELECTRODES AND ROTOR ELECTRODE ON EACH MAGNETO. IT WAS REQUESTED THAT THE MECHANIC MAINTAIN CUSTODY OF THE MAGNETOS IN THE EVENT FURTHER INVESTIGATION IS NECESSARY.