

Present for Inspection on 10/26/22 at Pullman facility:

Troy Helgeson, Lycoming Rep

James Geyman, Manufacture/Builder of EAB, N12VV and PIC

Bruce Stephanson ASI Spokane FSDO on Behalf of Helena FSDO.

Started inspection about 8:30 AM, Ended about 12:30 PM

PIC briefed us on the Phase 1 flight activities for the day on June 27, 2022 to the time of accident. This was second flight of day after refueling at Missoula airport.

Entering downwind leg at 1000' AGL engine abruptly quit. PIC selected left tank and engine briefly restarted but abruptly shut down again. PIC advised ATC of engine failure and was given runway below cleared to land. PIC advised ATC he couldn't make as to high and then looked for another landing site maybe the taxiway. While attempting a turn to align with taxi way PIC noted Airspeed was at 65 knots and attempted to push nose down but aircraft stalled in tight left turn.

Began inspection aircraft looking at wing fuel tanks and fuel lines. LH wing line torn off on impact and RH tank appears the line was removed for transporting. Small amount of fuel still in left tank. None noted in RH tank. Tank lines do not appear to have been secured for transport and may have been drained at scene.

Inspected continuity of fuel system components and lines from carb back to each wing tank through the fuel selectors. Drawings of fuel system provided by Manufacture/Builder. Fuel lines in engine compartment appear to be Aeroquip manufactured, steel braided Teflon line and heat covering protection. All lines appear to be tight and connected, torque seal used on many of the connection fittings.

**Fuel Selector and lines,** Fuel selector and aluminum lines all connected in cockpit, placards intact and appropriate marks found. Positive detent positions noted. Verified selector function by blowing air through each wing fuel attach fitting and moving selector to left and right detents. Small amount of fuel came out.

**Electric Fuel pump** on firewall was intact with lines attached but showed signs of impact damage.

- PIC stated: he did not turn on electric pump after engine quit, as switch was on lower left panel and was flying with stick in left hand. He may not have been able to quickly locate switch. Was his concern.

**Fuel strainer/gas collator** intact but damaged in accident. Removed bowl and small amount of fuel in bowl noted. No contaminants found on screen.

**Fuel flow transmitter** and lines intact did appear to be any fuel in line when disconnected.

**Engine driven fuel pump** mounted on engine, lines intact, pump flange damaged in accident. Removed pump, secured in vise and manipulated lever arm, Pump appears to suck on intake side and blow on output side, smelled of fuel but did not observe a significant amount of fuel.

**Carburetor** removed from engine, opened up and no sign of fuel in bowl, floats are intact and undamaged, float valve appears to function.

**Top Spark plugs** removed from cylinders 2 and 4, appeared to have been run lean as tips are white in appearance. 1 and 3 appeared to be wet with oil so could not verify condition.

**Magneto's mounted** to engine removed to inspect drive gears, RH mag leads were broken off in accident as pushed back into mount and firewall. Drive Gears were undamaged and rotated as prop turned and turned freely on mags.

Rotated prop and all 4 cylinders appear to have strong compression and suction.

Removed rocker covers and all pushrods and rockers arms moving same distance.

Borescope each cylinder and each cylinder piston and valves in new condition with no sign of damage.

When engine quit PIC switched tanks but did not turn on electric fuel pump, PIC is not sure if prop was wind milling and did not hit starter.

Bruce Stephanson  
Aviation Safety Inspector  
Spokane FSDO