

The pilot departed from runway 11 at approximately 1445 and stated that around 200 feet the engine began to run rough and experienced low RPM. After performing checks was able to regain power and initiated a right turn to return to airport, while initiating a right turn to engine lost power. Pilot decided to land on runway 29 due to loss of power and landed at approximately 95 knots. On touch down the aircraft began to porpoise, the pilot applied brake and the passenger seeing they were approaching the end of the runway applied the brakes causing the aircraft to skid down runway sideways and departed the runway between B1 and B2 into the ditch and came to rest which was supported by the video of the landing.

The aircraft N207AB was reported having recent engine roughness on September 30, 2024, approximately one week prior to the accident whereas, maintenance was performed, several checks resulted in replacing the left and right magnetos, cylinder #2 and 4 bottom spark plugs, replaced fuel pump and carburetor. All checks thereafter were within normal operating parameters and the aircraft was returned to service. An instructor flew the aircraft prior to the accident and did not disclose any deficiencies during those flights.

No signs of internal engine failure- filters had no indication of metal particles. Oil filter was opened, and no metal particles noted.

Checked fuel sample for color and or water, none found, or defects noted.

Removed fuel line and found flow found irregularities between right and left tank selection whereas, right tank selected showed flow and the left tank selected no flow noted.

Checked the fuel flow with static pressure and with the pump and throttle on.

- Right tank selected with positive results.
- Left Tank selected-negative results- flow was nonexistent.

The fuel filter was pulled and the screen clean. The carburetor screen was also pulled and clean with no debris and installed approximately 6 hours on previous squawk.

Drained left wing fuel tank:

- Used borescope and no contamination was noted in tank.
- Pulled fuel screens from wing tanks after defueling. Screens clean with no debris.
- Next attached air to check for blockage and none found on the left side due to concerns previously noted whereas, a possible obstruction was evident.
- Next, inspected the selector valve and with doing so identified some irregularities with fuel flow and not allowing fuel to pass.
- Referenced other aircraft selector valves and upon further inspection found that the position indicator when choosing the left tank detent could be exceeded therefore, restricting fuel and inhibiting flow to the engine.

Disassembled the selector: Fuel Selector valve P/N 6S122:

All three-ball bearing were in place and three springs intact. When testing the flow, positive airway was evident. But when checked while installed, it appeared the left position did not allow for flow and the right appeared fine.

Upon further inspection and referenced other aircraft fuel selectors it was found that the position indicator when choosing the left tank could exceed the detent therefore restricting fuel and inhibiting flow and shutting off when the pump is placed on.

Based on the findings and comparison to in- use selector valves, the selector valve selections could exceed proper operation due to wear and restrict fuel causing fuel starvation to the engine.



Digitally Signed by Laura Burns

Date:

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