
AFC Aircraft Works

3/17/2021

Ms. Tealeye Cornejo, ASI
NTSB
32125 32nd Avenue South
Suite 140
Federal Way, WA 98001

SUBJECT: ACCIDENT INVESTIGATION OF N3254F

Ms. Cornejo,

As you requested, I performed a 100-hour inspection on the engine of N3254F.

Here are my findings:

- Good compression on all cylinders.
- Sparkplugs in good condition with no oil found.
- Magneto timing good, and spark found on all cylinders.
- Throttle and Mixture controls were operated and moved to stops in the flightdeck.
 - Mixture operation checked okay
 - The throttle would not reach idle-stop, but the full throttle stop was reached.
- An oil leak was noted on the number 1 cylinder base.
- The oil quantity was at 7 quarts.
- The fuel flow divider clear of debris, and no tears were noted on the fuel divider diaphragm.
- The fuel injectors were found to be clear of debris.
- Inspected air filter and intake manifold were all clear.
- Exhaust pipe clear with no signs of excessive oil or fuel.
- The fuel selector was found in good shape with a clean filter and no leaks.
- Found the fuel and oil flexible lines to be 20 years old.
 - These lines maybe a contributing factor to the material found in the fuel injection servo filter.

- Inspected the left main fuel tank and found have metal flakes in the bottom of the tank. After rocking the tank back and forth we did not notice any rubber piece floating in the tank.
- The throttle/fuel injection servo filter was found with rust and black material on the plug.
 - Further investigation found the fuel flow servo diaphragms full of hard grey sludge restricting their movement. The restricted movement would cause the lack of fuel to reach the engine and causing the shutdown inflight.
 - I have the servo and the grey sludge material in my control.

Pictures:



Idle stop not reached



Fuel injection servo filter plug with rust and black material



Material found in fuel injection servo filter



Fuel injection servo data plate



Grey water coming from servo fuel flow diaphragms

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Grey sludge
material found
in the fuel flow
diaphragms

Respectfully,

William Fernandez
Owner