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Subject: WPR21LA219 N8176J
Date: Monday, August 2, 2021 12:05:03 PM
Attachments: [N8176J Engine tear down notes.docx](#)
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Hi Maja,

Attached are my notes from N8176J's engine teardown. As I noted unfortunately we were not able to completely disassemble the engine. With it being an automotive engine it required some special tools that were not available to us.

Please let me know if you have any questions

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Accident WPR21LA219

N8176J Engine tear down notes,

Due to this being an automotive engine that requires tools specifically designed by the manufacture for complete disassembly. We were not able to perform a complete teardown. The engine was disassembled as far as we could with the available tools.

If further disassembly is needed, it will have to be done by an automotive shop that has the specialized tooling.

Engine Make: Experimental - Eggenfellner / Subaru

Model: 3.6 Liter

Serial Number: Unknown

Engine will not rotate when attempting to rotate it by hand.

Removed propeller gear box, gear box rotated smoothly, no grinding or binding. Gear box oils system is self-contained wet sump, oil filler plug and vent on top of gear box. Drain plug on bottom, sight gage on front face, no oil visible in sight gage, however engine was stored upside down and oil drained out atmospheric vent.

Engine will still not rotate by hand

Removed aluminum forward mount plate

Aluminum forward mount plate shows signs of rubbing on flywheel. No significant signs of wear on fly wheel. **See picture**

Removed left valve cover, no abnormalities noted, camshafts appear normal.

Removed right valve cover, no abnormalities noted, camshafts appear normal.

Removed, all six sparkplugs (P/N NKG / IR - SILFR6A) no abnormalities noted, no signs of oil fouling.

Engine will still not rotate.

Removed dampener off of fly wheel and was able to rotate engine by hand. Dampening plate prevented rotating engine by hand. Rotated engine through several complete cycles, engine rotated smoothly, no binding, no abnormal noise, good compression on all cylinders.

Turned engine upside down to obtain access to oil sump

About 2 quarts of engine oil drained out of the engine when rotated

Removed oil sump no abnormalities note

Remove lower engine case to obtain access to crankshaft, engine design prevented a complete inspection of crankshaft, connecting rods, etc. No abnormalities were noted in what was visible.

Removed oil filter and oil filter adapter, noted RTV sealant around base of oil filter adapter, O-ring nicked and deteriorated and in overall poor condition. Oil adapter mating flange on engine block has minor nicks and scratches. (See pictures) Engine block around oil filter / oil filter adapter has light film of oil.

Cut open oil filter, discovered sliver of RTV sealant about an inch long similar in appearance to the RTV sealant around base of oil filter adapter.

Summary: We didn't see anything that would lead us to believe that the engine oil pressure was actually dropping, however we lacked the special tooling needed to remove the oil pump for testing. As of this moment, since we found RTV in the oil filter, my best guess would be that RTV possibly partially plugged the Oil Pressure transducer, or the oil pump failed.

PHOTO's

#1 Oil filter adapter mount pad on engine (NOTE: Black RTV on face and around edge)

#2 RTV found in Oil Filter.

#3 Fly Wheel

#4 Forward Mount Plate

#5 Forward Mount Plate









