Honda Performance Development, Inc.

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Issued by: A. Salzano

F4 Oil Pump Recall
Technical Bulletin # F4-2020-EN003-00

Approval

This Technical Bulletin is concerning a certain batch of oil pumps that could contain components made with defective materials. These pumps must be replaced to prevent loss of oil pressure.

Overview

After investigation of two recent oil pump seizures on new engines, HPD and the oil pump manufacturer have determined that a very limited number of pumps from a certain batch from 2018 may have been built with components which do not meet the material specification of the manufacturer. The potential failure mode is seizure of the pump and subsequently a loss of oil pressure. **If the engine runs with no oil pressure, damage could occur to engine internals**. It is the team's responsibility to monitor and manage oil pressure at all times, and be responsive to indicated warnings. To ensure no additional failures of this type, HPD will replace pumps from this batch.

Action to be taken:

1. Teams should inspect the serial number of the oil pump (Fig. 1-3) to see if it matches any number in the list below. If a match is found, inform HPD immediately of the pump number (including a photo) and which type of engine (FRA or F4). Any continued running of the engine is at the team's risk. The number can be very difficult to read properly so please be careful. If the pump does not match the list, no additional action is necessary.

2. Beginning Monday 6/15/20, sealed replacement pumps will be available. HPD can ship replacements OR it can be brought to Mid-Ohio. Teams should inform HPD ASAP of their preference for receiving the pump. The removal and installation procedure can be found at the end of this document. HPD and Mountune will inspect installations performed by the teams upon request.

3. Teams should return the used pump to Mountune USA, 1000 E Carson St, Carson, CA 90745

Serial Number List:		
B91810373	B91810382	B91810390
B91810374	B91810384	B91810392
B91810375	B91810385	B91810394
B91810376	B91810387	B91810395
B91810379	B91810388	B91810396
B91810380	B91810389	B91810399

If you have any questions regarding the content of this bulletin, please contact Andrew Salzano at asalzano@hra.com or GRMS Admin at GRMSAdmin@hra.com.

F4 Oil Pump Recall
Technical Bulletin # F4-2020- EN003-00

Fig.1 Pump Side View

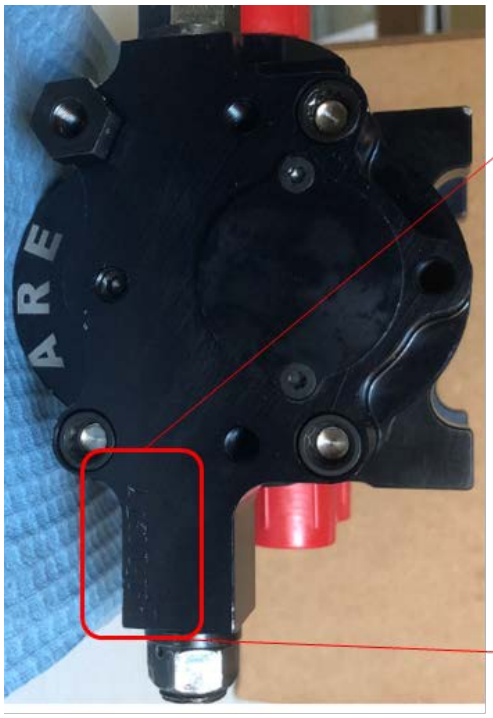

Fig.2: View A

Fig.3: Serial # View

F4 Oil Pump Recall
Technical Bulletin # F4-2020- EN003-00

Oil Pump Removal and Installation Procedure:

1. Drain the engine oil. Loosen and remove hoses A thru E (indicated in Fig. 4) from the pump. It may be difficult to completely remove Hose C while on the engine due to tool clearance in the area. Removal is also possible when the pump is off of the engine. It is recommended to use an open-ended wrench with narrow sides to effectively turn the fitting.

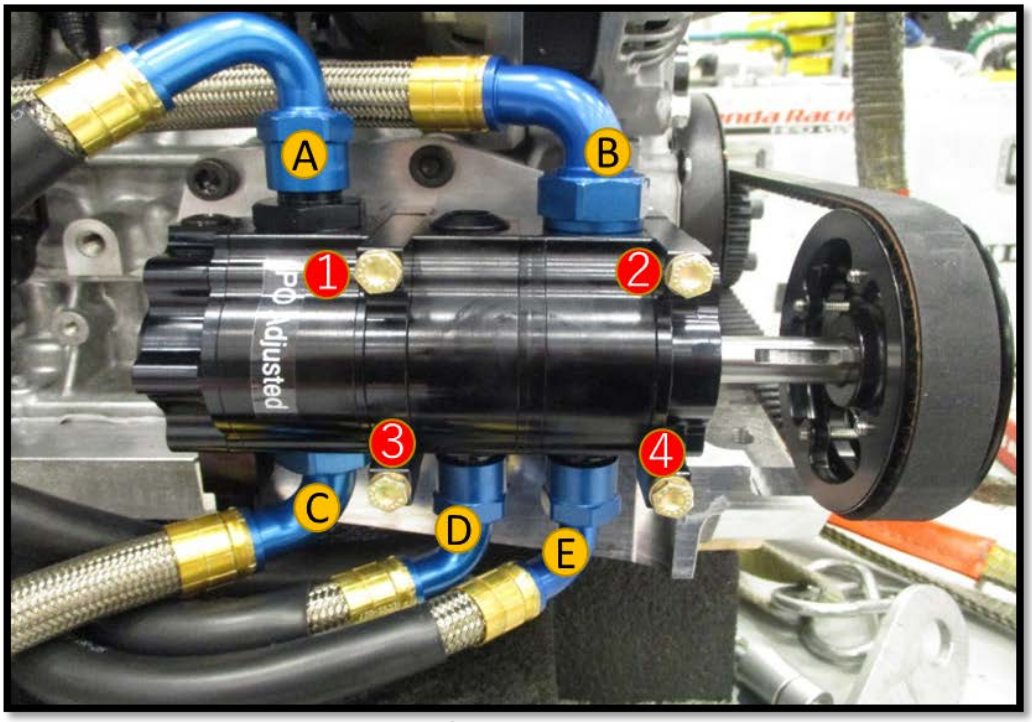

Fig.4 Oil pump on engine

Fig. 5: Suggested wrenches for tight clearance (McMaster-Carr)

F4 Oil Pump Recall
Technical Bulletin # F4-2020- EN003-00

2. Loosen and remove the oil pump mounting bolts (#1-4) taking care not to lose the washers. Note there are two (2) washers behind the head of #4.

3. Remove the pump from the engine by rotating the rear side of the pump outward, allowing the belt to slacken and carefully slide it over the guide on the pulley.

4. Once the pump is removed from the engine, some items will need to be swapped over to the new pump. Start by removing the pulley from the pump shaft and moving it over to the new pump. Take care to check the length of the key, as it may need to be shortened. It also possible to re-use the key from the old pump. Torque pulley bolt to 150 in-lb (16.9Nm, 12.5lb-ft) using blue Loctite. Once the pulley is moved, and remove the appropriate plugs as defined in Fig. 7. It is also recommended at this time to install Hose C to the pump.

Fig. 6: Pulley

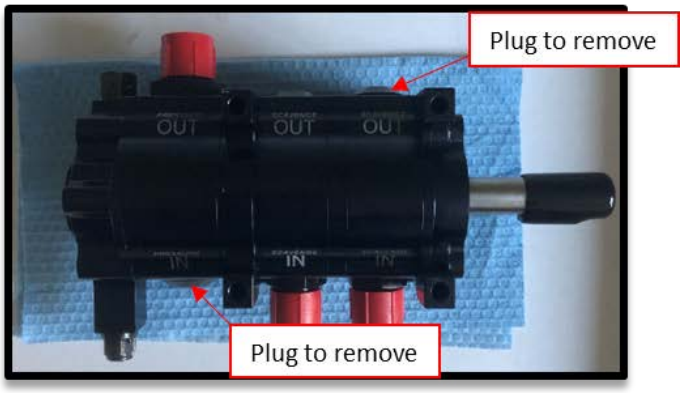

Fig. 7: Plugs for removal

5. The new pump should now be ready for installation. Start by feeding the belt over the pulley and rotating the pump into place, taking care not to damage the belt and ensuring it is located within the guides. Install bolts 1 thru 4, taking care with the washer arrangement, and tighten down in a star pattern. Torque to 120 in-lb (13.4Nm, 10lb-ft) using blue Loctite.

6. Reinstall hoses A thru E to the pump in the locations specified in Fig.4.

7. Fill, prime and leak check the system per the HPD operating manual for a “Dry Engine Start-up). Procedure included on next page.

F4 Oil Pump Recall
Technical Bulletin # F4-2020- EN003-00

Dry Engine Start-Up Procedure

NOTE: Before performing dry engine start-up procedure, ensure that the proper type and amount of coolant has been added, and monitor coolant level as the engine temperature increases.

To start an engine that has no lubricants:
1. Add about 3/4 capacity of oil to the dry sump tank and add a quart to the engine itself to prime the scavenge pump.
2. Open the oil supply line to the bottom rear fitting on the dry sump pump and allow oil flow out, then close and retighten.
3. Crank the engine **without ignition** for 5 seconds. Inspect the oil pressure reading on display. If the oil pressure reading did not change, the pump is still priming, repeat this procedure until you see oil pressure.
4. Turn the ignition back on and start the engine. Let engine idle to normal operating temperature.
5. While the engine is running, inspect for leaks.
6. Shut down the engine and immediately check the oil tank level. The sump and oil tank level will gradually equalize as the engine sits. If the oil level is inspected after the engine has not been running for some time, the reading will be inaccurate, and too much oil might be added to the system.
7. Top up the tank with oil to the proper operating level, if necessary.