

December 7, 2018

Caterpillar Surveillance Panel O&H Engineering Teleconference Minutes

Conference Attendees:

Hind Abi-Akar, Mark Jarret – Caterpillar

Andrew Stevens, Bill Larch - Lubrizol

Jim McCord, Jim Carroll (Secretary), Gary Hammer - SwRI

Christian Porter - Afton

Addison Schweitzer - Intertek

Mark Cooper - Chevron

Sean Moyer – TMC

AGENDA

- Finalizing Auxiliary Coolant Cart Details
- 1P Part ID Codes Work

Finalizing Auxiliary Coolant Cart Details

Warmup coolant flow comparisons for the 1N engines were shown by Lubrizol over multiple tests (attached).

Also there were proposed changes put into section 6.3.3 of the procedure. Essentially, any replacement cooling system must match the engine driven pump's performance during all conditions including startup, warmup, on test cooldown, hot shutdown and programmed shutdowns.

McCord requested guidance for what must be matched for warmups and cooldowns since there are no specs in the procedure for warmups and cooldowns.

Sean stated we should match engine driven pump performance. There are some procedures that have graphs of flow over time that need to be matched.

McCord asked if each test would need proof sent to TMC that the flows matched.

Sean said the initial prove out of the system should suffice.

McCord noted that the 65L/min requirement is not set until that mode time is reached.

Andrew stated 'with our VFD system we could set it to any setting we want. So we could set it to plus/minus 2L/min.'

Andrew: I have been more than patient waiting for data. I got some from SwRI, and don't know about Afton. Got data from Intertek. I would like to get the proposal to the surveillance panel so I could start work with my stand.

McCord said that the revised pump system and specifications are ready to go to the panel, and the other attendees agreed.

Andrew said he would submit the revised tables A14.1 and A16.2, and draft revisions for the procedure to Jim Gutzwiller along with the data presentation.

Andrew's current draft revised wording for the procedure is attached along with his PowerPoint presentation on the work done at Lubrizol with their auxiliary coolant cart.

1P Part ID Codes Work

The attendees discussed what codes were available on the parts and what should be added to the reports.

Piston Skirt Codes: Mark ID'd all the codes cast into the pistons. He did not get the top codes for the injectors.

Liners: Include PN, SN, Date Code, and add Box Date Code

Rings: Add supplier code? Yes since we did it for the 1K and 1N.

Piston Crown: Mark stated not to worry about forging codes. Material changes would require a PN change. We should add Box Date Code.

Piston Skirt: Add Casting Date Code.

Fuel Injector: Add Box Date Code

McCord asked how to know if the injector is remanufactured or not? Mark and Hind were not sure. Mark will follow up.

ECM EPROM: It appears the only thing on the EPROM is the part number. Mark stated the PN defines the flash file. The Cat electronic technician shows the personality module and date code. Laboratories are to look into the PN and date codes for their ECM EPROM.

Piston Cooling Jet: Only has PN and SN.

Andrew has been compiling a list of all parts and codes to be reported. And, built the description of locations for code identifications.

Other

Hind stated that for these older tests laboratories should contact her if there are any part shortages or issues. CAT found a supplier to make a bracket casting for PN 1Y5788 and it is being developed for production. Many older CAT parts that are seldom ordered will become parts that will only be made when ordered.

Andrew provided me with his notes from the CAT OH meeting held on September 10, 2018 which I did not attend. I have attached his minutes.