From: Joshua M [redacted]
Sent: Thursday, May 30, 2019 3:57 PM
To: John A [redacted] <john.[redacted]@cummins.com>; Lessie O [redacted] <lessie.o[redacted]@cummins.com>; Robert T [redacted] <robert.[redacted]@cummins.com>; Everette L [redacted] <everette.[redacted]@cummins.com>; Steve R [redacted] <steve.r.[redacted]@cummins.com>; Kammara A [redacted] <kammara.[redacted]@cummins.com>; Sonya E [redacted] <sonya.e[redacted]@cummins.com>; Luis [redacted] <luis.[redacted]@cummins.com>
Cc: Justin-Ray S [redacted] <justin-ray.[redacted]@cummins.com>; Walt H [redacted] <walt.h.[redacted]@cummins.com>; Tommy [redacted] <tommy.[redacted]@cummins.com>
Subject: Lube Filterhead Pipe Plugs to be Torqued

Team,

Per our discussion earlier, we need to arrange to have technicians overcheck the lube filterhead pipe plugs to 85 Nm for any engines on this list that are still at the OEM locations that are older than the clean point ESNF that we have recorded. Engines that have already been put into application will be covered by the TSB.

We will need to go after the customers highlighted in yellow in the attached file. The ESNs are broken out that are impacted for each customer. Please let us know if you have any questions.

Regards,

Josh [redacted]
Customer Quality Assurance Manager
Cummins Inc.
Rocky Mount Engine Plant
joshua.[redacted]@cummins.com

Cell: (252) [redacted]

Updated: 05/29/2019	STATUS:	ESCALATION:

BACKGROUND

- Plant technicians reported finding oil weeping from the pipe plug in the lubricating oil filter head, EBU P/N 5450366.
- Lubricating oil filter head P/N 3974326 was changed to lubricating oil filter head P/N 5450366.

FAULT CODE/FAIL MODE

- Oil weeping from the lubricating oil filter pipe plug.

CURRENT STATE

- Root cause identified and containment completed at RMEP.
- Containment is being initiated at OEM plants.

ROOT CAUSE AND GOAL STATEMENT

- Manufacturing process changed from a drilling, taper reaming, and ¾ NPTF tapping process to a ¾ NPTF thread milling.
- ¾ NPTF thread milling process has introduced ovality which can create a leak path.

Completed

- Existing Torque process of the pipe plug was validated.
  - A DC Sensor tool is used to torque the plug to 45 Nm
  - A torque overcheck is performed at a subsequent station
- Initial Step 3 implemented to apply Loctite 565 to the plug and increase torque to 55 Nm and all inventory at RMEP reworked.
  - ESN First - 74503910
- 100% black-light assisted leak inspection implemented post hot test.
  - ESN First - 74506743
- Additional torque validated and deviation issued to raise torque to 85Nm
  - ESN First - 74510923
- 85 Nm torque increase validated as Step 3 fix for units at the OEM.
- CAR issued to engineering to update the print to change the hole callout to S2 from S1.
- Supplier reverted to drilling, taper reaming, and ¾ NPTF tapping. (30 pc validation parts in transit to RMEP)

NEXT STEPS

- Work with onsite plant technicians to identify suspect engines still at the OEM plants.
- Rework units at OEM plants with increased torque (85 Nm).
- Release TSB documenting increased torque requirement for units in the field.