



Technical Service Bulletin

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Cummins Recommendation for C300 D6R Generator Set with the QSM11 Engine Maintenance and Exercise	

Cummins Recommendation for C300 D6R Generator Set with the QSM11 Engine Maintenance and Exercise

Warranty Statement

The information in this document has no effect on present warranty coverage or repair practices, nor does it authorize TRP or Campaign actions.

Contents

Product Affected

- C300 D6R

Issue

QSM11 Engine failure due to light load and carbon build up causing damage to the engine block.

Probable Root Cause:

Heavy carbon deposit/sludge build up in the engine. Engine failure most likely due to light load operation for an extended period of time.

Customer Communication

Five failed QSM11 engines were sent back to Cummins for root cause analysis. The tear down reports for these engines showed heavy carbon deposits/sludge build up in the engine. These types of deposits can cause the valves and/or other internal engine components to fail. The Cummins engineering team reviewed these reports and came to the conclusion that the engine failures were most likely due to light load operation for an extended period of time.

Our recommendations and requirements are as follow:

1. Follow all Cummins recommended engine and generator set maintenance guidelines and checks found on Quickserve.cummins.com

- C300 D6R Generator Set Service Manual - P/N A031B240, Section 4.1 Periodic Maintenance schedule

2. Follow Cummins exercising recommendations and requirements that follow:

- Cummins recommends the engine be exercised monthly with a minimum load of 30% of the Standby Power Rating while loaded to the recommended exhaust stack temperature: 650°F for a Calibrated Thermocouple or 500°F for an Infrared Instrument. The engine should be operated with stabilized coolant temperatures for thirty minutes.
- Cummins requires that the generator set be exercised once per year with a minimum load of 30% of the Standby Power Rating while loaded to the recommended exhaust stack temperature: 650°F for a Calibrated Thermocouple or 500°F for an Infrared Instrument. The engine should be operated with stabilized coolant temperatures for thirty minutes.
- Cummins recommends that the generator set be operated with no load for 5 to 10 minutes before shutdown after the exercise period.

3. Verify installation of proper calibration. BA20013.01 or BA20002.18 or higher.

- If incorrect calibration is found: Document and retain the improper calibration on computer, conduct a calibration compare and change to the recommended calibration.

4. In addition, for engines with greater than 6000 run hours.

- Remove EGR to check for heavy carbon build up on the EGR valve, EGR Cooler, and inside the EGR Piping. Document and Clean as necessary.
- Exercise the generator set.
- If the engine doesn't obtain the recommended minimum exhaust stack temperature, this may indicate heavy carbon buildup on the top ring and piston crown. Remove the head, document carbon buildup and clean as necessary by qualify and authorized technician.
- If cleaning doesn't correct exhaust stack temperature, escalate via calling 1-800-CUMMINS.

Document History

Date	Details

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