

Technical Service Bulletin Number	Revision Level	Date	Group Number
TSB140013			

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Cummins Inc.

Technical Service Bulletin

Subject

ISL G and ISX12 G: Fault Codes 124, 125, 556, 1861, 1965, 1966, 2722, 2723, 2758, 2759, 2776, and 2991 While Operating in Temperatures Below Freezing 0°C [32°F]

Issue

Condensation forms in the charge-air cooler, exhaust gas recirculation (EGR) cooler and/or blowby gases, freezes and causes poor performance and/or Fault Codes 124, 125, 556, 1861, 1965, 1966, 2722, 2723, 2758, 2759, 2776, and 2991.

Verification

Check the fault code snapshots in the job image to verify fault codes logged when the turbocharger compressor intake air temperature was below or near 0°C [32°F]. If fault codes occurred recently, inspect components for signs of ice or water.

Resolution

When operating engines in low ambient temperatures, care must be taken to make sure that temperatures in the intake system are kept above freezing 0°C [32°F]. Condensation created in the charge-air cooler and the EGR system can freeze in the intake if the intake air temperature is below freezing.

The amount of condensation created in the charge-air cooler can be reduced and the charge-air cooler outlet temperature can be increased by reducing the efficiency of the charge-air cooler. Charge-air cooler efficiency can be reduced by blocking air flow across the cooler and making sure the cooling fan is operating correctly. Care must be taken to make sure there is sufficient flow across the radiator and the charge-air cooler. If blocking air flow through the charge-air cooler is **not** sufficient to increase the intake manifold temperatures above freezing, other measures **must** be taken to increase the air intake temperature, such as pulling in warm engine compartment air into the intake of the engine.

These measures **must** be designed so they can be removed when sustained ambient temperatures are above freezing.

Condensation from blowby can also form in the crankcase breather and the crankcase pressure sensor on the ISX12. Insulating the breather and the breather hoses can increase the temperatures inside the breather and help prevent freezing. Cummins® Part Number 2878268, tube insulation, is available.

Condensation can also collect in the boost reference line and the back side of the low pressure regulator and freeze. This condensation freezes when trucks are parked in subfreezing temperatures. The ice limits the travel of the low pressure regulator and can cause low fuel pressure and fuel flow faults. When the ice thaws the low pressure regulator will resume normal operation. Allowing the engine to reach operating temperatures before operating the engine under load will allow time for the ice to thaw.

For additional details on preparing engines for cold weather operation, reference Operation of Automotive Natural Gas Engines in Cold Climates, Bulletin 4332709.

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.

Attachments

[Click here to see photos.pdf](#)

Document History

Date	Details
2014-1-24	Module Created
2014-1-25	Fix an outfile

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