

Technical Service Bulletin Number	Revision Level	Date	Group Number
TSB140088			



Technical Service Bulletin

Subject

Shorted or Open Selective Catalytic Reduction (SCR) Aftertreatment Wiring Harness Causing Multiple Fault Codes on the J1939 Data Link

Issue

Shorted or open circuits in the Cummins Emission Solutions supplied SCR jumper wiring harness can cause “timeout” errors in the SCR temperature sensor module, the outlet mono-nitrogen oxides (NOx) sensor module, or the NH3 sensor module.

1. Early versions' connectors were missing wedgelocks, which led to bent connector pins.
2. Harness splices came apart.
3. Harness splice corrosion caused short circuits.
4. Improper heat shrinks on harness splices.
5. Supply wire gage **not** sufficient to support (carry) power draw (amperage).

Active or inactive counts of all or any combination the following Fault Codes: 285, 2636, 2771, 3232, 3911, 4151, 4152, 4159, 4572, and 4585 are normally associated with the SCR jumper wiring harness malfunction. However, due to the different original equipment manufacturer (OEM) vehicle configurations, there may be additional fault codes associated with this harness malfunction.

Verification

Condition:

1. Turn Keyswitch OFF.
2. Disconnect the SCR wiring harness at the 12-pin connector (C1).
3. Disconnect the NOx sensor from the harness (C4).

4. Disconnect the NH3 sensor from the harness (C3).
5. Disconnect the SCR temperature sensor module from the harness (C2).

Action:

1. Inspect the connector and pins for damage. Refer to Procedure 019-361 in Section 19.
2. Check for a short circuit to supply or ground in the SCR wiring harness. Refer to Procedure 019-359 in Section 19.
3. Check for an open circuit the SCR wiring harness. Refer to Procedure 019-359 in Section 19.
4. Check for a pin-to-pin short circuit in the SCR wiring harness. Refer to Procedure 019-359 in Section 19.

Connector	Terminal	To	Connector	Terminal
C1 (OEM)	10 (V+)	:	C2 (TEMP)	4 (V+)
C3 (NH3)	1 (V+)	:	C2 (TEMP)	4 (V+)
C4 (NOx)	1 (V+)	:	C2 (TEMP)	4 (V+)

Resolution

If damaged connector pins, an open circuit, a short circuit to power or ground, or a pin-to-pin short is detected in the SCR wiring harness, replace the SCR wiring harness. Otherwise, continue normal troubleshooting of the original fault code.

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.

Document History

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2014-6-23	Module Created

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