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Service Information Bulletin

SUBJECT	DATE
Diagnostics	July 2017

Additions, Revisions, or Updates

Publication Number / Title	Platform	Section Title	Change
DDC-SVC-MAN-0140	DT12 Transmission	SPN 521731/FMI 3	Updates to existing procedures.
		SPN 521731/FMI 4	
		SPN 521731/FMI 5	

DiagnosticLink users: Please update the troubleshooting guides in DiagnosticLink with this newest version. To update the tool troubleshooting guide, open DiagnosticLink and from the Help – Troubleshooting Guides menu, select the appropriate troubleshooting manual, then click Update.



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2 SPN 521731/FMI 3

TCM Driver GrS_G3 – Failed High

Check as follows:

NOTE: Transmission Control Module (TCM) driver faults may be inactive when the truck arrives. This is due to fault detection is only active when a shift is in progress. The fault code time-stamp will generally be within the last 10 days of the vehicle arriving at the shop.

1. Was the Transmission Control Module (TCM) just replaced?
 - a. Yes; remove the TCM and inspect all X3 connector mating pins for damage. If damage is found, replace component as necessary. **DO NOT ATTEMPT TO STRAIGHTEN PINS.**
 - b. No; Go to step 2.
2. Are any AMT Solenoid faults (SPNs 521736 through 521752 FMI any) also present (active or inactive)?
 - a. Yes; replace the TCM and the Automated Manual Transmission (AMT) shift control unit. Clear faults after repair.
 - b. No; replace the TCM. Clear faults after repair.

3 SPN 521731/FMI 4

TCM Driver GrS_G3 - Failed Low

Check as follows:

NOTE: Transmission Control Module (TCM) driver faults may be inactive when the truck arrives. This is due to fault detection is only active when a shift is in progress. The fault code time-stamp will generally be within the last 10 days of the vehicle arriving at the shop.

1. Was the Transmission Control Module (TCM) just replaced?
 - a. Yes; remove TCM and inspect all X3 connector mating pins for damage. If damage is found, replace component as necessary. **DO NOT ATTEMPT TO STRAIGHTEN PINS.**
 - b. No; Go to step 2.
2. Are any AMT Solenoid faults (SPNs 521736 through 521752 FMI any) also present (active or inactive)?
 - a. Yes; replace the TCM and the Automated Manual Transmission (AMT) shift control unit. Clear faults after repair.
 - b. No; replace the TCM. Clear faults after repair.

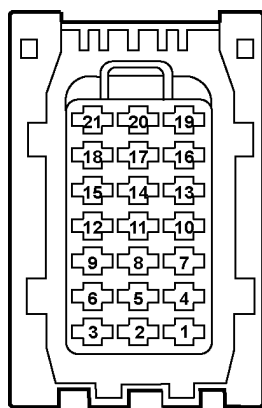
4 SPN 521731/FMI 5

TCM Driver GrS_G3 - Failed Open

Check as follows:

NOTE: Transmission Control Module (TCM) driver faults may be inactive when the truck arrives. This is due to fault detection is only active when a shift is in progress. The fault code time-stamp will generally be within the last 10 days of the vehicle arriving at the shop.

1. Was the Transmission Control Module (TCM) just replaced?
 - a. Yes; remove TCM and inspect all X3 connector mating pins for damage. If damage is found, replace component as necessary. **DO NOT ATTEMPT TO STRAIGHTEN PINS.**
 - b. No; Go to step 2.
2. Disconnect the TCM X1 21-pin connector.
3. Turn the ignition ON (key ON, engine OFF).



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4. Measure the voltage between pins 1, 2, 3, 4, and 6 of the TCM X1 21-pin connector (ignition/battery voltage) and ground. Is voltage less than 11.5 volts?
 - a. Yes; restore voltage to pins 1, 2, 3, 4, and 6 of the TCM X1 21-pin connector.
 - b. No; Go to step 5.
5. Turn the ignition OFF.
6. Measure the resistance between pins 16, 19, 20, 21 of the TCM X1 21-pin connector and the negative battery post. Is resistance greater than three ohms?
 - a. Yes; restore battery ground to pins 16, 19, 20 and 21 of the TCM X1 21-pin connector.
 - b. No; Go to step 7.
7. Are any AMT Solenoid faults (SPNs 521736 through 521752 FMI any) also present (active or inactive)?
 - a. Yes; replace the TCM and the Automated Manual Transmission (AMT) shift control unit. Clear faults after repair.
 - b. No; replace the TCM. Clear faults after repair.