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## Service Information Bulletin

### SB-10055688-8402

SUBJECT	DATE
TCM SPN 521486/FMI 2 (Clutch Position Sensor - Data Erratic)	April 2014

#### Additions, Revisions, or Updates

Publication Number / Title	Platform	Section Title	Change
DDC-SVC-MAN-0084	GHG14 DD Platform	SPN 521486/FMI 2	This is a new section.
DDC-SVC-MAN-0140	DT12 Transmission		



13400 Outer Drive, West, Detroit, Michigan 48239-4001  
 Telephone: 313-592-5000  
[www.demanddetroit.com](http://www.demanddetroit.com)

## 2 SPN 521486/FMI 2

This diagnostic is typically Clutch Position Sensor - Data Erratic.

Check as follows:

**NOTE:** Transmission Control Module (TCM) faults SPN 520971/7 and SPN 521491/2 may also be present when this code sets.

1. Disconnect the Concentric Pneumatic Clutch Actuator (CPCA ) harness connector; inspect connector for bent, spread or corroded pins.
  - a. If pin damage is found, repair as necessary.
  - b. If no pin damage is found, Go to step 2.
2. Turn the ignition ON (key ON, engine OFF).
3. Measure the voltage between pins 1 and 2 of the CPCA harness connector. Is the voltage between 4.5 and 5 volts?
  - a. Yes; Go to step 4.
  - b. No; Go to step 6.
4. Measure the voltage between pins 2 and 3 of the CPCA harness connector. Is the voltage between 4.5 and 5 volts?
  - a. Yes; Go to step 5.
  - b. No; Go to step 6.
5. Measure the voltage between pins 2 and 4 of the CPCA harness connector. Is the voltage between 4.5 and 5 volts?
  - a. Yes; Go to step 11.
  - b. No; Go to step 6.
6. Disconnect the TCM X2 connector.
7. Measure the resistance between pin 5 of the TCM X2 connector and pin 1 of the CPCA harness connector.
  - a. If the resistance is less than 3 ohms, Go to step 8.
  - b. If the resistance is greater than 3 ohms, replace the TCM external sensor harness.
8. Measure the resistance between pin 4 of the TCM X2 connector and pin 2 of the CPCA harness connector.
  - a. If the resistance is less than 3 ohms, Go to step 9.
  - b. If the resistance is greater than 3 ohms, replace the TCM external sensor harness.
9. Measure the resistance between pin 7 of the TCM X2 connector and pin 3 of the CPCA harness connector.
  - a. If the resistance is less than 3 ohms, Go to step 10.
  - b. If the resistance is greater than 3 ohms, replace the TCM external sensor harness.
10. Measure the resistance between pin 8 of the TCM X2 connector and pin 4 of the CPCA harness connector.
  - a. If the resistance is less than 3 ohms, replace the TCM.
  - b. If the resistance is greater than 3 ohms, replace the TCM external sensor harness.
11. Turn the ignition switch OFF.
12. Reconnect the CPCA harness connector.
13. Connect DiagnosticLink™.
14. Turn the ignition ON (key ON, engine OFF).
15. Under Instrumentation heading, "Transmission Learned Values" tab, does the instrument "actual position value clutch" display S.N.A?
  - a. Yes; replace the CPCA clutch actuator.
  - b. No; retain log file and contact the Detroit™ Customer Support Center at 855-253-0428 for further assistance.