

1 12 01-18**Service Information Bulletin**

SUBJECT	DATE
SPN 45	December 2018

Additions, Revisions, or Updates

Publication Number / Title	Platform	Section Title	Change
DDC-SVC-MAN-0027	EPA98/04 MBE 900/4000	SPN 45/FMI12	Added new diagnostic procedure.

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.



13400 Outer Drive, West, Detroit, Michigan 48239-4001
Telephone: 313-592-5000
www.demanddetroit.com

22.1 DESCRIPTION OF SID 45/FMI 12 — GRID HEATER DEFECT

Check as follows:

1. Are any circuit related faults present?
 - [a] Yes; troubleshoot those codes first.
 - [b] No; go to step 2.
2. Verify the correct parameter settings in the PLD and VCU.

MBE 900	PLD Group 3	Parameter 6	Proportional Valve (PV6)	Future Grid Heater
MBE 4000	VCU Group 2	Parameter 6	Grid Heater	Grid Heater in MR-PLD

3. Ensure engine coolant temp is at 70°C (160°F) or lower. go to step 4.
4. Disconnect the Coolant Temperature Sensor & Intake Manifold Pressure/Temperature Sensor from the Engine Sensor Harness. go to step 5.
5. Using Connector Test Kit J-48476, install male blade terminals J-48476-25 in to pins 3 and 4 of the Engine Sensor Harness side of the Intake Manifold Pressure/Temperature Sensor Connector. go to step 6.
6. Install a 20K Ohm resistor between the two blade terminals. An Instrument Gauge Tester (commercially available), set to the appropriate resistance may be utilized in place of a 20K ohms resistor. go to step 7.
7. Connect Diagnostic Link/DDDL to the vehicle. go to step 8.
8. Turn the ignition ON (key ON, engine OFF). go to step 9.
9. Monitor the voltage on the positive stud of the Grid Heater. go to step 10.
10. Monitor voltmeter when the grid heater is activated. Is the batter voltage steady?
 - [a] Yes; go to step 14.
 - [b] No; go to step 11.
11. During Step 10, did you observe the voltage cycling on and off?
 - [a] Yes; confirm parameters are set correctly per Parameter list in Step 2 (if parameter(s) need to be changed, use MBE reprogramming).
 - [b] No; go to step 13.
12. During Step 10, did you observe an absence of voltage?
 - [a] Yes; replace Grid Heater relay. go to step 13.
 - [b] No; Go to Step 10 and repeat the steps.
13. Does voltmeter read battery voltage on the positive stud of the Grid Heater when the Grid heater is activated?

- [a] Yes; go to step 14.
 - [b] No; replace Jumper Harness and verify repairs (refer to 18SP675 for the proper jumper harness and installation location).
14. Turn ignition off, remove test kit terminals, reconnect Coolant Temperature Sensor & Intake Manifold Pressure/Temperature sensor. go to step 15.
15. Does code 45/12 return?
- [a] Yes; replace grid heater.
 - [b] No; release the unit.