DETROIT™

Service Information Bulletin

NUMBER: 4–**17**–13 **S.M. REF.:** Listed in Table **ENGINE:** EPA07 Series 60 **DATE:** April 2013

SUBJECT: SPN 3597/FMI 3, 4

ADDITIONS, REVISIONS, OR UPDATES

Publication Number	Platform	Section Title	Change
DDC-SVC-MAN-0009	EPA07 Series 60	SPN 3597/FMI 3	Instructions to use the newest DDDL software are added. Five new steps are added to the procedure.
DDC-SVC-MAN-0009	EPA07 Series 60	SPN 3597/FMI 4	This is a new section.

NOTE: Page numbers are based on the most recent version of the individual publication and may be adjusted throughout the annual print cycle.

SPN 3597/FMI 3

This diagnostic is typically Proportional Valve Bank 1 Circuit Failed High.

CIRCUIT CHECK

Check as follows:

1. Connect DDDL/DDRS (latest version).
2. Turn the ignition ON (key ON, engine OFF).
3. Monitor the active codes.
4. Disconnect the front valve cover injector harness.
5. Does SPN 3597/FMI 3 become inactive?
   [a] Yes; go to step 6.
   [b] No; go to step 10.
6. Reconnect the front valve cover injector harness.
7. Remove the upper valve cover.
8. Disconnect the rear Jake Brake® solenoid.
9. Does SPN 3597/FMI 3 become inactive?
   [a] Yes; replace the rear Jake Brake solenoid. Refer to section .
   [b] No; replace the injector wiring harness. Refer to section .
10. Disconnect the Original Equipment Manufacturer (OEM) 31-pin connector.
11. Does SPN 3597/FMI 3 become inactive?
    [a] Yes; reconnect the OEM 31-pin connector. Refer to section . go to step 12.
    [b] No; go to step 12.
12. Disconnect the fan control solenoid.
13. Does SPN 3597/FMI 3 become inactive?
    [a] Yes; replace the fan control solenoid. Refer to section .
    [b] No; go to step 14.
14. Disconnect the turbo actuator connector.
15. Does SPN 3597/FMI 3 become inactive?
    [a] Yes; replace the turbo actuator.
    [b] No; go to step 16.
16. Turn the ignition OFF.
17. Disconnect the MCM 120-pin connector.

18. Inspect the MCM 120-pin connector and 120-pin harness connector for signs of corrosion, spread, loose or damaged pins or signs of wire damage.
    [a] If signs of damage are found, repair as necessary.
    [b] If no signs of damage, go to step 19.
19. Measure the resistance between pin 91 of the MCM 120-pin connector and ground.
    [a] If the resistance is less than 10K Ω, repair the short to ground between pin 91 of the MCM 120-pin connector and pin 8 of the front injector valve cover connector and pin 22 of the OEM 31-pin connector. Refer to section .
    [b] If the resistance is greater than 10K Ω, go to step 20.
20. Measure the resistance between pin 93 of the MCM 120-pin connector and ground.
    [a] If the resistance is less than 10K Ω, repair the short to ground between pin 93 of the MCM 120-pin connector and pin 1 of the turbo actuator connector. Refer to section .
    [b] If the resistance is greater than 10K Ω, go to step 21.
21. Inspect the harness for signs of chaffing or other damage, focus near mounting points and bends in the harness, looking for signs of wear.
    [a] If damage found, repair as necessary.
    [b] If no damage found, contact the Detroit™ Customer Support Center at 855-253-0423.

VERIFY REPAIRS

1. Turn ignition OFF.
2. Reconnect any electrical connections that were disconnected to perform the diagnosis.
3. Clear codes with DDDL 7.0 or latest version.
4. Start and bring engine up to operating temperature [over 60°C (140°F)].
5. Verify operation is satisfactory and no warning lamps illuminate. If warning lamps illuminate, troubleshoot the codes. If assistance is required, call the Detroit™ Customer Support Center at 855-253-0423.

SPN 3597/FMI 4

This diagnosis is typically Proportional Valve Bank 1 Circuit Failed Low.

CIRCUIT CHECK

Check as follows:

1. Connect DDDL/DDRS (latest version).
2. Turn the ignition ON (key ON, engine OFF).
3. Monitor the active codes.
4. Disconnect the front valve cover injector harness.
5. Does SPN 3597/FMI 4 become inactive?
   [a] Yes; go to step 6.
   [b] No; go to step 10.
6. Reconnect the front valve cover injector harness.
7. Remove the upper valve cover.
8. Disconnect the rear Jake® Brake solenoid.
9. Does SPN 3597/FMI 4 become inactive?
   [a] Yes; replace the rear Jake® Brake solenoid. Refer to section .
   [b] No; replace the injector wiring harness. Refer to section .
10. Disconnect the OEM 31-pin connector.
11. Does SPN 3597/FMI 4 become inactive?
    [a] Yes; troubleshoot a short circuit in the cooling fan wiring. Refer to section .
    [b] No; go to step 12.
12. Disconnect the Turbo Actuator connector.
13. Does SPN 3597/FMI 4 become inactive?
    [a] Yes; replace the Turbo Actuator. Refer to section .
    [b] No; go to step 14.
14. Turn the ignition OFF.
15. Disconnect the MCM 120-pin connector.
16. Inspect the MCM 120-pin connector and 120-pin harness connector for signs of corrosion, spread, loose or damaged pins or signs of wire damage.
    [a] If signs of damage are found, repair as necessary.
    [b] If no signs of damage, go to step 17.

17. Measure the resistance between pin 91 of the MCM 120–pin connector and ground.
    [a] If the resistance is less than 10K Ω, repair the short to ground between pin 91 of the MCM 120–pin connector and the front injector valve cover connector pin 8 and the OEM 31-pin connector pin 22. Refer to section .
    [b] If the resistance is greater than 10 K Ω, go to step 18.
18. Measure the resistance between pin 93 of the MCM 120-pin connector and ground.
    [a] If the resistance is less than 10K Ω, repair the short to ground between pin 93 of the MCM 120-pin connector and the Turbo Actuator connector pin 1. Refer to section .
    [b] If the resistance is greater than 10K Ω, go to step 19.
19. Inspect the harness for signs of chaffing or other damage; focus near mounting points and bends in the harness, looking for signs of wear.
    [a] If damage is found, repair as necessary.
    [b] If no damage is found, contact the Detroit™ Customer Support Center Diagnostic Software Support at 855-253-0423.

VERIFY REPAIRS

Verify repairs as follows:

1. Turn ignition OFF.
2. Reconnect any electrical connections that were disconnected to perform the diagnosis.
3. Clear codes with DDDL/DDRS (latest version).
4. Start and bring engine up to operating temperature; over 60°C (140°F).
5. Verify operation is satisfactory and no warning lamps illuminate. If warning lamps illuminate, troubleshoot the codes. If assistance is required, call the Detroit™ Customer Support Center Diagnostic Software Support at 855-253-0423.

ADDITIONAL SERVICE INFORMATION

Additional service information is available in *Power Service Literature*.

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