

DETROIT DIESEL



DDEC® VI Troubleshooting

NUMBER: 08 DDEC VI-46 S.M. REF.: 124.1 ENGINE: DD15 DATE: September 2008

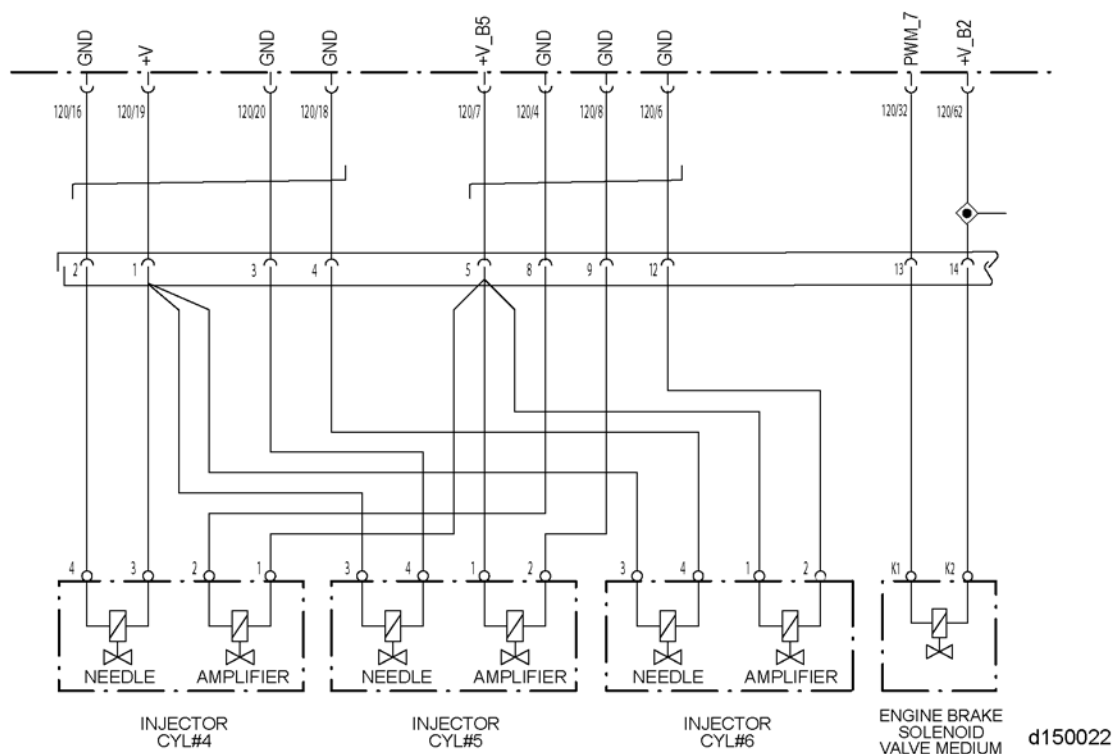
SUBJECT: SPN 3663/FMI 14

PUBLICATION: DDC-SVC-MAN-0029

Pin 7 on the valve cover side of the injector harness has been changed to pin 9 throughout the troubleshooting procedure.

SPN 3663/FMI 14

This diagnosis is typically an open circuit, short to ground or short to power.

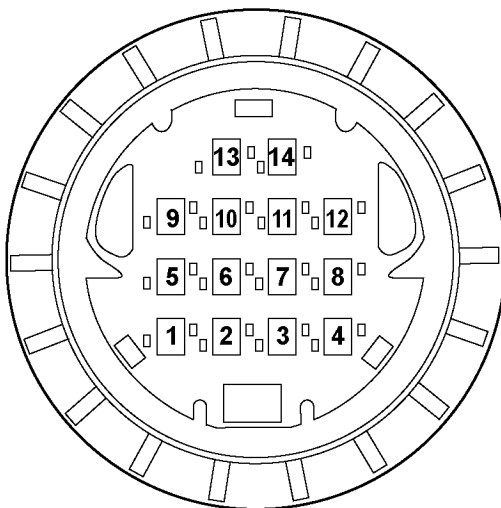


Check as follows:

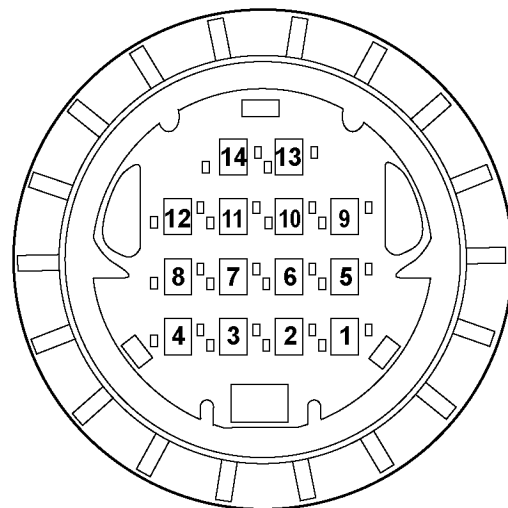
1. Check for multiple codes.
 - [a] If fault code 168/1 is active, service 168/1 first.
 - [b] If fault 3662/14 and 3664/14 are active in addition to 3663/14, go to the next step.

- [c] If only fault code 3663/14 is active, go to step 10.
2. Turn the ignition OFF.
 3. Disconnect the Rear Injector Harness 14-pin connector.
 4. Inspect the Rear Injector Harness 14-pin connector for bent or spread pins. Inspect the connector seal for damage (signs of water or oil intrusion).
 - [a] If water or oil intrusion, bent or spread pins are found, repair as necessary. Verify repairs.
 - [b] If connector shows no signs of damage, go to the next step.
 5. Measure the resistance between pin 5 and pin 9 on the valve cover side of the injector harness. If using J-48671-10, measure between injector #5 pins 1 and 2.
 - [a] If the resistance is greater than 3 Ω , replace the under valve cover injector harness. Verify repairs.
 - [b] If the resistance is less than 3 Ω , go to the next step.
 6. Disconnect the MCM 120-pin connector.
 7. Measure the resistance between pin 7 of the MCM 120-pin connector and pin 5 of the Rear Injector Harness 14-pin connector.

ENGINE HARNESS SIDE



VALVE COVER SIDE



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- [a] If the resistance is greater than 3 Ω , repair the open between pin 7 of the MCM 120-pin connector and pin 5 of the Rear Injector Harness 14-pin connector. Verify repairs.

- [b] If the resistance is less than 3 Ω , go to the next step.
8. Disconnect the negative battery cable.
 9. Measure the resistance between the positive battery post and pin 7 of the MCM 120-pin connector.
 - [a] If the resistance is less than 3 Ω , repair the short to power between battery positive and pin 7 of the 120-pin MCM connector. Verify repairs.
 - [b] If the resistance is greater than 3 Ω , contact the Detroit Diesel Customer Support Center at 313-592-5800 for MCM replacement authorization.
 10. Turn the ignition OFF.
 11. Disconnect the Rear Injector Harness 14-pin connector.
 12. Measure the resistance between pin 5 and pin 9 on the valve cover side of the injector harness. If using J-48671-10, measure between injector #5 pins 1 and 2.
 - [a] If the resistance is greater than 3 Ω , go to step 18.
 - [b] If the resistance is less than 3 Ω , go to the next step.
 13. Remove the upper valve cover.
 14. Disconnect injector #5.
 15. Measure the resistance between pin 5 on the valve cover side of the Rear Injector Harness and pin 1 on the injector #5 harness connector. If using J-48671-10, measure between injector #5 pin 1 and pin 1 on the injector #5 harness connector.
 - [a] If the resistance is greater than 3 Ω , replace the under valve cover injector harness. Verify repairs.
 - [b] If the resistance is less than 3 Ω , go to the next step.
 16. Measure the resistance between pin 9 on the valve cover side of the Rear Injector Harness and pin 2 of the injector #5 harness connector. If using J-48671-10, measure between injector #5 pin 2 and the injector #5 harness connector pin 2.
 - [a] If the resistance is greater than 3 Ω , replace the under valve cover injector harness. Verify repairs.
 - [b] If the resistance is less than 3 Ω , go to the next step.

17. Measure the resistance between pin 9 on the valve cover side of the Rear Injector Harness and ground. If using J-48671-10, measure between injector #5 pin 2 and ground.
 - [a] If the resistance is less than 3 Ω , replace the under valve cover injector harness. Verify repairs.
 - [b] If the resistance is greater than 3 Ω , replace injector #5. Verify repairs.
18. Measure the resistance between pin 9 on the valve cover side of the Rear Injector Harness and ground. If using J-48671-10, measure between injector #5 pin 2 and ground.
 - [a] If the resistance is less than 3 Ω , go to the next step.
 - [b] If the resistance is greater than 3 Ω , repair the short to ground between pin 4 of the MCM 120-pin connector and pin 9 of the Rear Injector Harness connector. Verify repairs.
19. Remove the upper valve cover.
20. Disconnect injector #5 connector.
21. Measure the resistance between pin 9 on the valve cover side of the Rear Injector Harness and ground. If using J-48671-10, measure between injector #5 pin 2 and ground.
 - [a] If the resistance is less than 3 Ω , replace the under valve cover injector harness. Verify repairs.
 - [b] If the resistance is greater than 3 Ω , replace injector #5. Verify repairs.

ADDITIONAL SERVICE INFORMATION

Additional service information is available in one of the *DD15 Troubleshooting Guide* (DDC-SVC-MAN-0029). The next printed revision to this manual will include this information.

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