1 8 03-13

Service Information Bulletin

SUBJECT	DATE
SPN 51/FMI 2, 10, 18	August 2013

Additions, Revisions, or Updates

Publication Number / Title	Platform	Section Title	Change
DDC-SVC-MAN-0084	DD Platform	SPN 51/FMI 2 – All Years	Most steps have been updated.
	GHG14 DD Platform	SPN 51/FMI 10 – GHG14	Updated DDDL version.
		SPN 51/FMI 18 – GHG14	

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2 SPN 51/FMI 2 - ALL YEARS

This diagnostic is typically Intake Throttle Position Deviation Error.

Table 1.

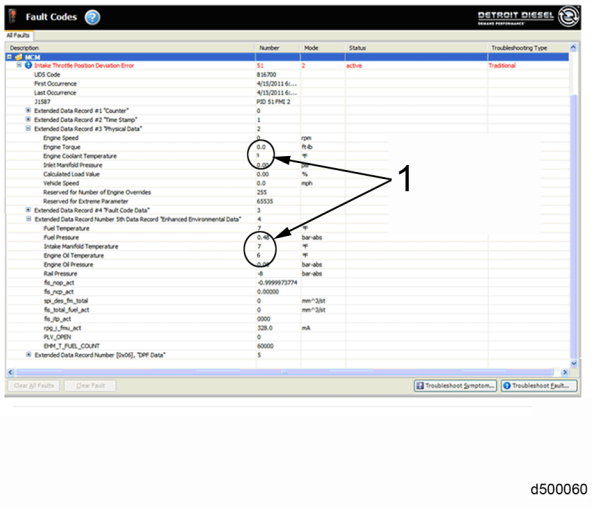
SPN 51/FMI 2	
Description	Intake Throttle Position Deviation Error
Monitored Parameter	Intake Throttle Valve (ITV)
Typical Enabling Conditions	Engine RPM = idle or higher
Monitor Sequence	None
Execution Frequency	Continuous when enabling conditions met
Typical Duration	Five Seconds
Dash Lamps	MIL, CEL
Engine Reaction	Derate 10%
Verification	Engine RPM = idle or higher

Check as follows:

NOTE: SPN 51/FMI 2 may erroneously set if vehicle is operated in extreme cold ambient conditions (valve icing). Step 11 gives detailed information on this concern.

1. Connect DDDL/DDRS 7.09 SP2 or higher
2. Turn ignition ON (key ON, engine OFF).
3. Is SPN 51/FMI 3 or 4 also present?
   a. Yes; repair those faults first.
   b. No; Go to step 4.
4. Using Intake Air Throttle service routine, command the ITV to 20%. Is the ITV actual position between 15 and 25%?
   a. Yes; Go to step 5.
   b. No; Go to step 7.
5. Command the ITV to 50%. Is the ITV actual position between 45 and 55%?
   a. Yes; Go to step 6.
   b. No; Go to step 7.
6. Command the ITV to 90%. Is the ITV actual position between 85 and 95%?
   a. Yes; repeat steps 3 through 5. If results are the same, refer to step 11 for further instruction. If the retest results are NOT the same, Go to step 7.
   b. No; Go to step 7.
7. Turn the ignition OFF.
8. Disconnect the ITV harness connector.
9. Inspect the ITV harness connector for bent, spread or corroded pins. Also ensure that the ITV harness connector retaining clip is present.
   a. If pin damage is found, repair as necessary.
   b. If no pin damage is found, Go to step 10.
10. Measure ITV Motor Resistance. Measure the resistance between pins 4 and 5 on the ITV. Is the resistance 10 ohms or less?
    a. Yes; Go to step 11.
    b. No; replace the ITV. On EPA07 DD Platform engines only, ensure that the MCM software is v13.3.2.0 or higher, and that the MCM fuel map part number version is ZGS 002 or higher.
11. Review extended fault code data; see chart below. Cold temperatures (0°C [32°F]) (valve icing) (1) may have an effect on this fault. If cold intake manifold and coolant temperatures were present when fault occurred and the above steps

passed, clear faults and release the vehicle. If cold temperatures were not indicated at the time of the fault, retain log file of the above steps and contact the CSC for further direction.



3 SPN 51/FMI 10 - GHG14

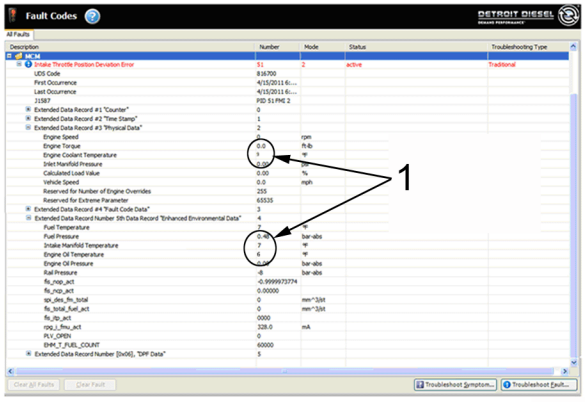
This diagnostic is typically Intake Throttle Position Abnormal Rate of Change.

Table 2.

SPN 51/FMI 10	
Description	Intake Throttle Position Abnormal Rate Of Change
Monitored Parameter	Intake Throttle Valve (ITV)
Typical Enabling Conditions	Engine RPM = idle or higher
Monitor Sequence	None
Execution Frequency	Continuous when enabling conditions met
Typical Duration	Five seconds
Dash Lamps	None
Engine Reaction	No Derate
Verification	Engine RPM = idle or higher

NOTE: SPN 51/FMI 10 may erroneously set if vehicle is operated in extreme cold ambient conditions (valve icing). Step 11 gives detailed information on this concern.

1. Connect DDDL/DDRS 7.09 SP2 or higher.
2. Turn ignition ON (key ON, engine OFF).
3. Is SPN 51/FMI 3 or 4 also present?
   a. Yes; repair those faults first.
   b. No; Go to step 4.
4. Using ITV service routine, command the ITV to 20%. Is the ITV actual position between 15 and 25%?
   a. Yes; Go to step 5.
   b. No; Go to step 7.
5. Command the ITV to 50%. Is the ITV actual position between 45 and 55%?
   a. Yes; Go to step 6.
   b. No; Go to step 7.
6. Command the ITV to 90%. Is the ITV actual position between 85 and 95%?
   a. Yes; repeat steps 3 through 5. If results are the same, refer to step 11 for further instruction. If the retest results are NOT the same, Go to step 7.
   b. No; Go to step 7.
7. Turn the ignition OFF.
8. Disconnect the ITV harness connector.
9. Inspect the ITV harness connector for bent, spread or corroded pins. Also ensure that the ITV harness connector retaining clip is present.
   a. If pin damage is found, repair as necessary.
   b. If no pin damage is found, Go to step 10.
10. Measure ITV Motor Resistance. Measure the resistance between pins 4 and 5 on the ITV. Is the resistance 10 ohms or less?
    a. Yes; Go to step 11.
    b. No; replace the Intake Throttle Valve.
11. Review extended fault code data; see chart below. Cold temperatures (0°C [32°F]) (valve icing) (1) may have an effect on this fault. If cold intake manifold and coolant temperatures were present when fault occurred and the above steps passed, clear faults and release the vehicle. If cold temperatures were not indicated at the time of the fault, retain log file of the above steps and contact the CSC for further direction.



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4 SPN 51/FMI 18 - GHG14

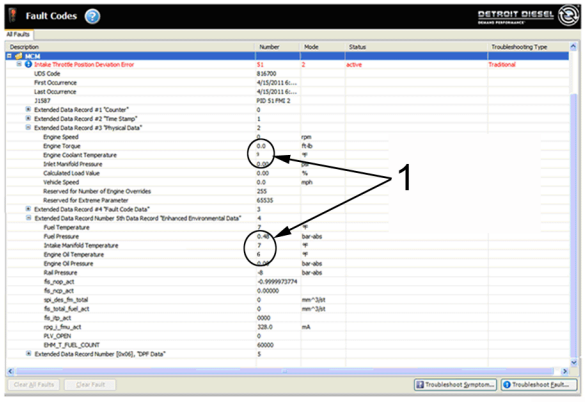
This diagnostic is typically Intake Throttle Position Data Valid but Below Normal Operating Range - Moderately Severe Level.

Table 3.

SPN 51/FMI 18	
Description	Intake Throttle Position Data Valid but Below Normal Operating Range – Moderately Severe Level
Monitored Parameter	Intake Throttle Valve (ITV)
Typical Enabling Conditions	Engine RPM = idle or higher
Monitor Sequence	None
Execution Frequency	Continuous when enabling conditions met
Typical Duration	Five seconds
Dash Lamps	MIL
Engine Reaction	No Derate
Verification	Engine rpm = idle or higher

NOTE: SPN 51/FMI 18 may erroneously set if vehicle is operated in extreme cold ambient conditions (valve icing). Step 11 gives detailed information on this concern.

1. Connect DDDL/DDRS 7.09 SP2 or higher.
2. Turn the ignition ON (key ON, engine OFF).
3. Is SPN 51/FMI 3 or 4 also present?
   a. Yes; repair those faults first.
   b. No; Go to step 4.
4. Using Intake Air Throttle service routine, command the ITV to 20%. Is the ITV actual position between 15 and 25%?
   a. Yes; Go to step 5.
   b. No; Go to step 7.
5. Command the ITV to 50%. Is the ITV actual position between 45 and 55%?
   a. Yes; Go to step 6.
   b. No; Go to step 7.
6. Command the ITV to 90%. Is the ITV actual position between 85 and 95%?
   a. Yes; repeat steps 3 through 5. If results are the same, refer to step 11 for further instruction. If the retest results are NOT the same, Go to step 7.
   b. No; Go to step 7.
7. Turn the ignition OFF.
8. Disconnect the ITV harness connector.
9. Inspect the ITV harness connector for bent, spread or corroded pins. Also ensure that the ITV harness connector retaining clip is present.
   a. If pin damage is found, repair as necessary.
   b. If no pin damage is found, Go to step 10.
10. Measure ITV Motor Resistance. Measure the resistance between pins 4 and 5 on the ITV. Is the resistance 10 ohms or less?
    a. Yes; Go to step 11.
    b. No; replace the Intake Throttle Valve.
11. Review extended fault code data; see chart below. Cold temperatures (0°C [32°F]) (valve icing) (1) may have an effect on this fault. If cold intake manifold and coolant temperatures were present when fault occurred and the above steps passed, clear faults and release the vehicle. If cold temperatures were not indicated at the time of the fault, retain log file of the above steps and contact the CSC for further direction.



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