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## Service Information Bulletin

| SUBJECT                         | DATE           |
|---------------------------------|----------------|
| SPN 4335/FMI 3, 4 (ACM) (EPA10) | September 2014 |

### Additions, Revisions, or Updates

| Publication Number / Title | Platform    | Section Title             | Change                                                      |
|----------------------------|-------------|---------------------------|-------------------------------------------------------------|
| DDC-SVC-MAN-0084           | DD Platform | SPN 4335/FMI 3, 4 - EPA10 | This is an updated section to include all fault conditions. |



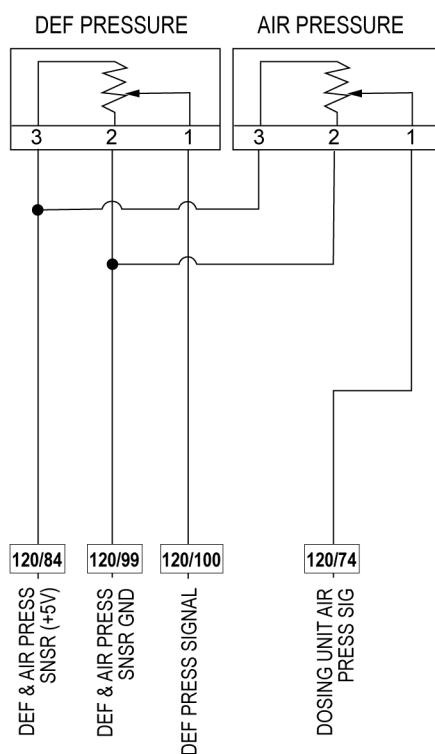
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## 2 SPN 4335/FMI 3 - EPA10

Diesel Exhaust Fluid Metering Unit Air Pressure Sensor Circuit Failed High

**Table 1.**

| SPN 4335/FMI 3              |                                                                                                                                                                    |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Description                 | This code sets when the Aftertreatment Control Module (ACM) detects a short to voltage on the Diesel Exhaust Fluid (DEF) Metering Unit Air Pressure Sensor Circuit |
| Monitored Parameter         | Diesel Exhaust Fluid (DEF) Metering Unit Air Pressure Sensor                                                                                                       |
| Typical Enabling Conditions | Always Enabled                                                                                                                                                     |
| Monitor Sequence            | None                                                                                                                                                               |
| Execution Frequency         | Always Enabled                                                                                                                                                     |
| Typical Duration            | 2 Seconds                                                                                                                                                          |
| Dash Lamps                  | MIL, CEL                                                                                                                                                           |
| Engine Reaction             | Derate 25%                                                                                                                                                         |
| Verification                | Engine Idle (1 minute)                                                                                                                                             |



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Check as follows:

1. Check for multiple codes. Are multiple fault codes present?
  - a. Yes; Go to step 2.
  - b. No; Go to step 3.
2. Is fault code SPN 3510/FMI 3 also present along with SPN 4335/FMI 3 and SPN 4334/FMI 3?
  - a. Yes; repair short to voltage (greater than 5.0v) between pin 3 of the DEF metering unit air pressure sensor and pin 84 of the ACM. Verify repairs.

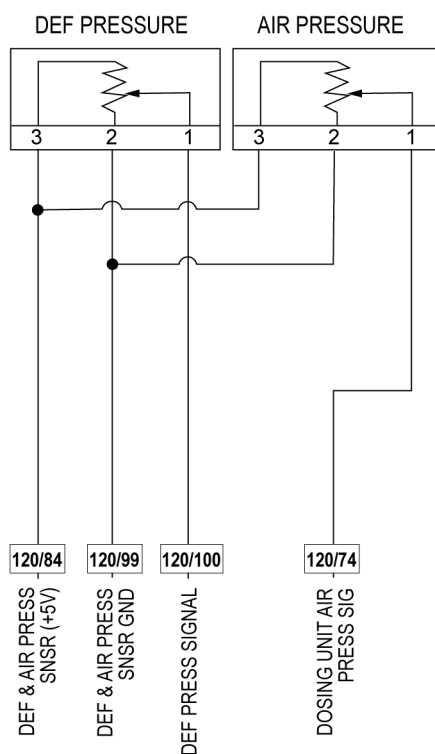
- b. No; repair open circuit between pin 2 of the DEF metering unit air pressure sensor and pin 99 of the ACM. Verify repairs.
3. Turn the ignition OFF. Go to step 4.
4. Disconnect the DEF air pressure sensor electrical connector.
5. Inspect the DEF air pressure sensor and harness connector for bent, spread or corroded pins. Is any damage found?
  - a. Yes; repair as necessary. Verify repairs.
  - b. No; Go to step 6.
6. Turn the ignition ON (key ON, engine OFF). Go to step 7.
7. Measure the voltage between pins 2 and 3 of the DEF air pressure sensor connector, harness side. Is the voltage between 4.5 and 5.0 volts?
  - a. Yes; Go to step 9.
  - b. No; Go to step 8.
8. Measure the voltage between pin 3 of the DEF air pressure sensor connector, harness side and ground. Is the voltage between 4.5 and 5.5 volts?
  - a. Yes; repair the open wire between pin 2 of the DEF pressure sensor connector, the circuit splice, and pin 99 of the ACM. Verify repair.
  - b. No; Go to step 9.
9. Measure the voltage between pin 1 of the DEF air pressure sensor connector, harness side and ground. Is any voltage (0.5V or greater) present?
  - a. Yes; repair the short to power between pin 1 of the DEF pressure sensor and pin 74 of the 120-pin ACM connector. Verify repair.
  - b. No; replace the DEF air pressure sensor. Refer to section "Removal of the Diesel Exhaust Fluid Metering Unit Air Pressure Sensor". Verify repair.

### 3 SPN 4335/FMI 4 - EPA10

Diesel Exhaust Fluid Metering Unit Air Pressure Sensor Circuit Failed Low

**Table 2.**

| SPN 4335/FMI 4              |                                                                                                                                                                                   |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Description                 | This code sets when the Aftertreatment Control Module (ACM) detects a short to ground or an open wire on the Diesel Exhaust Fluid (DEF) Metering Unit Air Pressure Sensor Circuit |
| Monitored Parameter         | Diesel Exhaust Fluid (DEF) Metering Unit Air Pressure Sensor                                                                                                                      |
| Typical Enabling Conditions | Always Enabled                                                                                                                                                                    |
| Monitor Sequence            | None                                                                                                                                                                              |
| Execution Frequency         | Always Enabled                                                                                                                                                                    |
| Typical Duration            | 2 Seconds                                                                                                                                                                         |
| Dash Lamps                  | MIL, CEL                                                                                                                                                                          |
| Engine Reaction             | Derate 25%                                                                                                                                                                        |
| Verification                | Engine Idle (1 minute)                                                                                                                                                            |



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Check as follows:

1. Check for multiple codes. Are SPN 4335/FMI 4, SPN 4334/FMI 4 and SPN 3510/FMI 4 fault codes present?
  - a. Yes; repair short to ground (less than 5.0v) between pin 3 of the DEF metering unit air pressure sensor and pin 84 of the ACM. Verify repairs.
  - b. No; Go to step 2.
2. Turn the ignition OFF. Go to step 3.
3. Disconnect the DEF air pressure sensor electrical connector.
4. Inspect the DEF air pressure sensor and harness connector for bent, spread or corroded pins. Is any damage found?

- a. Yes; repair as necessary. Verify repairs.
  - b. No; Go to step 5.
5. Turn the ignition ON (key ON, engine OFF). Go to step 6.
6. Measure the voltage between pin 3 of the DEF pressure sensor connector, harness side and ground. Is the voltage between 4.5 and 5 volts?
  - a. Yes; Go to step 7.
  - b. No; repair the open circuit between pin 3 of the DEF pressure sensor connector, the circuit splice, and pin 84 of the ACM. Verify repair.
7. Turn the ignition OFF. Go to step 8.
8. Disconnect the ACM 120-pin connector.
9. Inspect the ACM 120-pin and harness connector for signs of damage, bent, spread, corroded or unseated (pushed out) pins and signs of moisture in the connector or wire damage near the connector. Is any damage found?
  - a. Yes; repair as necessary. Verify repair.
  - b. No; Go to step 10.
10. Measure the resistance between pin 74 of the 120-pin ACM connector, harness side, and ground. Is the resistance greater than 10K ohms?
  - a. Yes; Go to step 11.
  - b. No; repair the short circuit between pin 1 of the DEF air pressure sensor and pin 74 of the 120-pin ACM connector. Verify repairs.
11. Measure the resistance between pins 74 and 99 of the 120-pin ACM connector, harness side. Is the resistance greater than 10K ohms?
  - a. Yes; Go to step 12.
  - b. No; repair the short circuit between pins 1 and 2 of the DEF air pressure sensor and pins 74 and 99 of the 120-pin ACM connector. Verify repairs.
12. Measure the resistance between pin 74 of the 120-pin ACM connector, harness side, and pin 1 of the DEF air pressure sensor connector, harness side. Is the resistance less than 5 ohms?
  - a. Yes; replace the DEF air pressure sensor. Refer to section "Removal of the Diesel Exhaust Fluid Metering Unit Air Pressure Sensor". Verify repair.
  - b. No; repair the open circuit between pin 1 of the DEF air pressure sensor and pin 74 of the 120-pin ACM connector. Verify repairs.