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Service Information Bulletin

SUBJECT	DATE
SPN 4335/FMI 1 EPA10	January 2013

Additions, Revisions, or Updates

Publication Number / Title	Platform	Section Title	Change
DDC-SVC-MAN-0084	EPA10 DD Platform	SPN 4335/FMI 1 EPA10	Updated diagnostics.

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2   SPN 4335/FMI 1 - EPA10

This diagnostic is typically Diesel Exhaust Fluid (DEF) Air Pressure Not Detected (From Vehicle Supply).

Table 1.

SPN 4335/FMI 1	
Description	Diesel Exhaust Fluid (DEF) Air Pressure Not Detected (From Vehicle Supply)
Monitored Parameter	Vehicle Air Pressure
Typical Enabling Conditions	Engine rpm > 500, Dosing Enabled
Monitor Sequence	None
Execution Frequency	Continuous when enabling conditions met
Typical Duration	
Dash Lamps	MIL, CEL
Engine Reaction	Derate 25%
Verification	Selective Catalytic Reduction (SCR) Air Pressure Test

> ⚠ **WARNING: ENGINE EXHAUST**
>
> To avoid injury from inhaling engine exhaust, always operate the engine in a well-ventilated area. Engine exhaust is toxic.

> ⚠ **WARNING: PERSONAL INJURY**
>
> To avoid injury before starting and running the engine, ensure the vehicle is parked on a level surface, parking brake is set, and the wheels are blocked.

1. Start the engine and ensure vehicle air pressure is above 689 kPa (100 psi).
2. Does the vehicle air pressure reach and maintain 689 kPa (100 psi)?
   a. Yes; Go to step 3.
   b. No; refer to OEM literature for air compressor diagnostic and leak checks.

NOTE: Wait five minutes for DEF Purge Routine to complete before proceeding.

3. Connect DDDL/DDRS 7.06SP3 or newer.
4. Turn ignition ON (key ON, engine OFF).
5. Compare DEF air pressure to barometric air pressure (Baro) and DEF pressure.
6. Is the DEF air pressure within 28 kPa (4 psi) of barometric air pressure (Baro) and DEF pressure?
   a. Yes; Go to step 10.
   b. No; Go to step 7.
7. Remove the DEF metering unit air pressure sensor. Refer to section "Removal of the Diesel Exhaust Fluid Metering Unit Air Pressure Sensor" and re-connect the electrical harness to the sensor.
8. Compare the DEF air pressure to barometric air pressure (Baro) and DEF pressure.
9. Is the DEF air pressure within 28 kPa (4 psi) of barometric air pressure (Baro) and DEF pressure?
   a. Yes; Go to step 10.
   b. No; replace the DEF metering unit air pressure sensor. Refer to section "Installation of the Diesel Exhaust Fluid Metering Unit Air Pressure Sensor". Go to step 26.
10. Turn ignition OFF (key OFF, engine OFF).
11. Visually inspect air supply lines from air tank to pressure limiting unit, DEF pump module and DEF metering unit for leaks, kinks or damage.

    a. If damage is found, repair as necessary. Go to step 27.

    b. If no damage is found, Go to step 12.

12. Remove fittings (1) and (2) from the pressure limiting unit.

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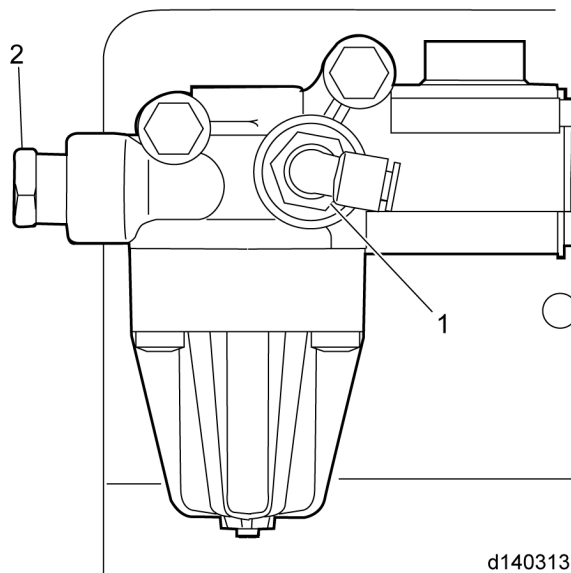
13. Inspect the pressure limiting unit orifices (1) and (2) for signs of oil/sludge or rust contamination.

    a. If any oil/sludge or rust contamination is found, replace the pressure limiting unit and repair cause of contamination. Refer to OEM for air system diagnostics. Go to step 14.

    b. If no contamination is found, install removed fittings. Go to step 14.

14. Disconnect both the air outlet supply lines from tee fitting (3) on the Pressure Limiting Unit (1).

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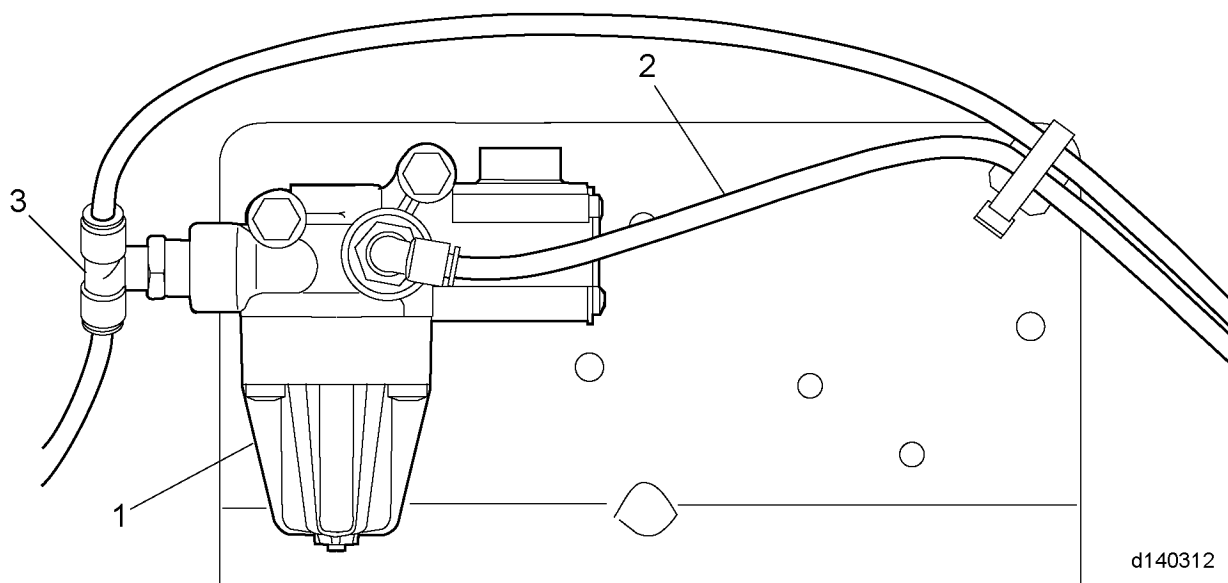
15. Plug off one side of the tee connector (3) and connect an appropriate air pressure gauge 0-1,379 kPa (0-200 psi) on the other side.

> ⚠️ **WARNING: EYE INJURY**
>
> To avoid injury from flying debris when using compressed air, wear adequate eye protection (face shield or safety goggles) and do not exceed 276 kPa (40 psi) air pressure.

16. Turn the ignition ON (key ON, engine OFF).

17. While monitoring the air pressure gauge, perform a Selective Catalytic Reduction (SCR) Air Pressure Test for (60 seconds).
18. Is the air pressure between 537-586 kPa (78-85 psi)?
    a. Yes; Go to step 19.
    b. No; replace the pressure limiting valve. Go to step 29.
19. Remove the DEF metering unit air supply line and the DEF metering unit compressed air supply screen. Refer to section "Removal of the Diesel Exhaust Fluid Metering Unit Compressed Air Supply Screen".
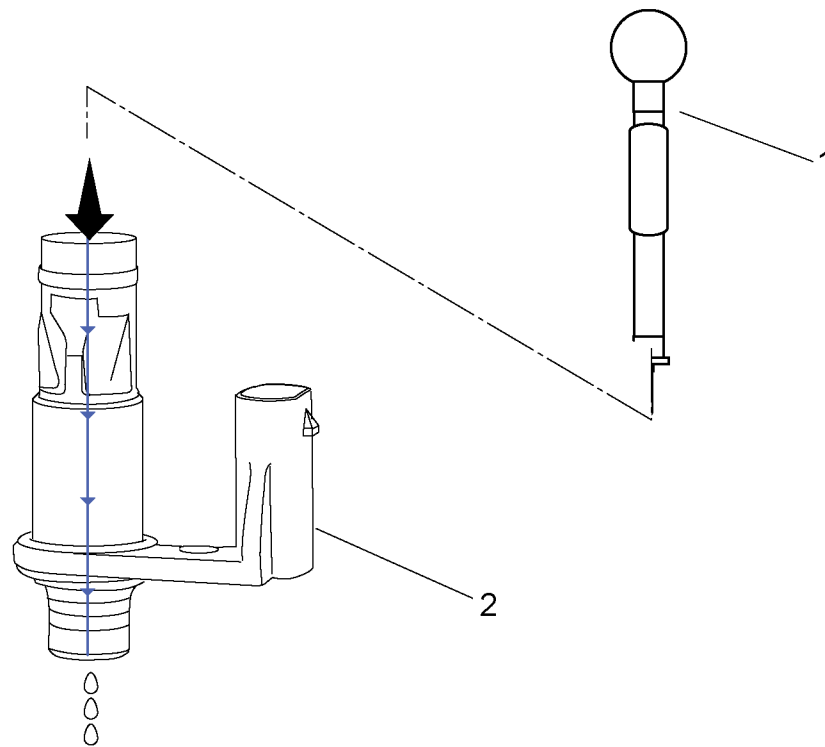
NOTE: If inlet screen is discarded, continue diagnostics before installation of new inlet screen.

20. Inspect the DEF metering unit compressed air supply screen for debris. Is there oil or rust on the air inlet screen?
    a. Yes; discard the air inlet screen and repair cause of contamination. Refer to OEM for air system diagnostics. Go to step 21.
    b. No; Go to step 21.
21. Remove the DEF nozzle supply hose and flush the DEF metering unit air channel (2) with warm water. Use pipette (1) supplied in DEF test kit W060589001900.
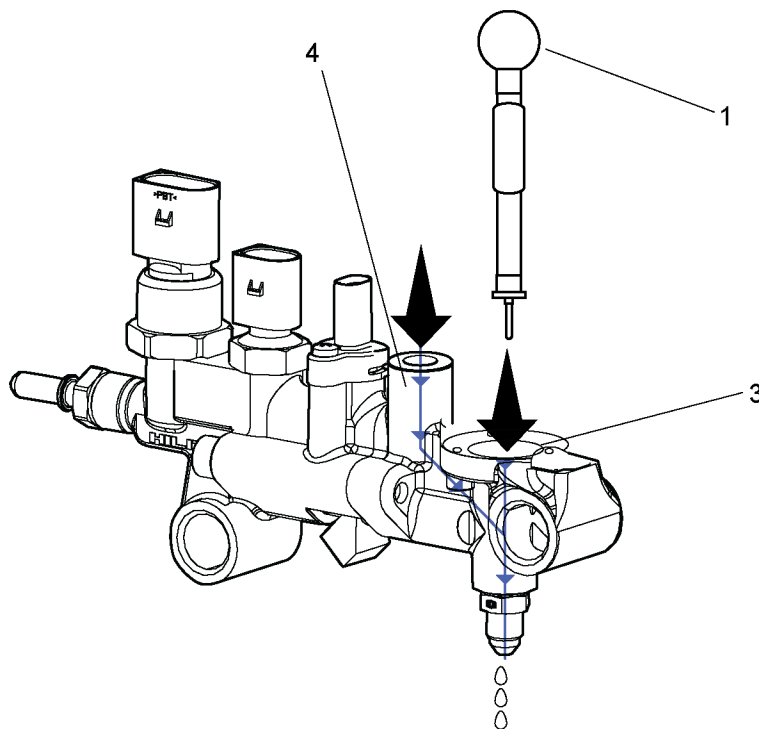22. Does water flow from the DEF nozzle supply fitting?
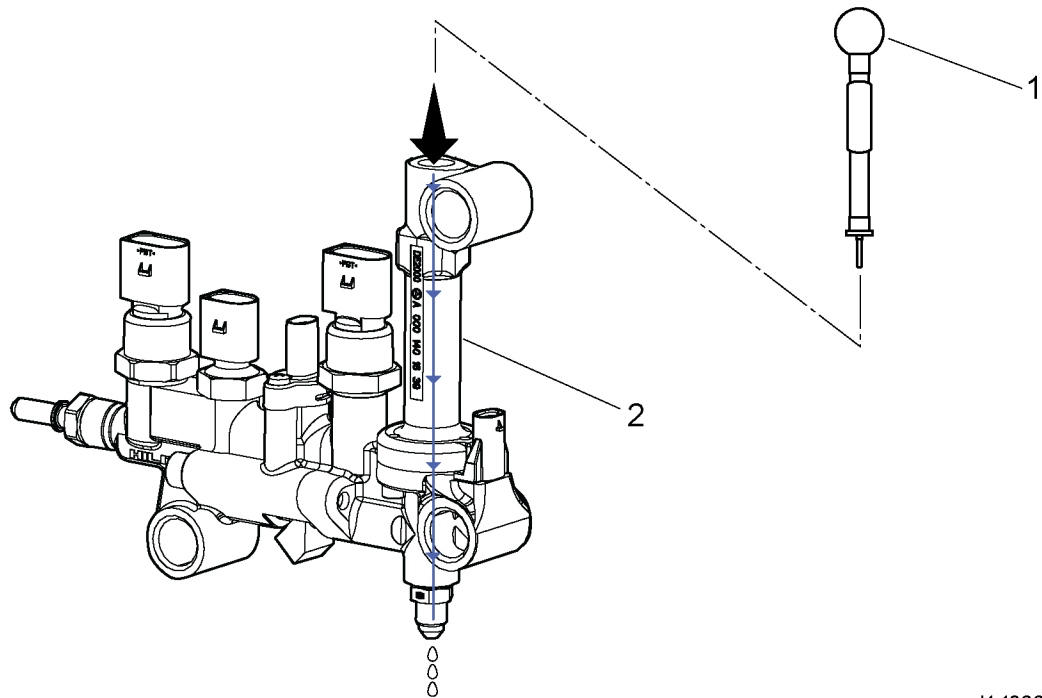
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    a. Yes; Go to step 27.
    b. No; Go to step 23.
23. Remove the metering unit. Refer to section "Removal of the Diesel Exhaust Fluid Metering Unit".
24. Remove the DEF air pressure sensor.
25. Remove the three screws from the bottom of the metering unit; remove the diffuser heater. Refer to section "Removal of the Diesel Exhaust Fluid Metering Unit Diffuser Heater".
26. Flush the diffuser heater (2), the metering unit mixing chamber (3) and the DEF pressure sensor port (4) with warm water to dissolve DEF crystals using pipette supplied in DEF test kit, as shown in the following two figures.

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27. Does water flow through the diffuser heater?
    a. Yes; Go to step 28.
    b. No; contact the Detroit™ Customer Support Center (800) 445-1980 for further instruction.
28. Install removed components.

> ⚠️ **WARNING: EYE INJURY**
>
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29. Perform the SCR air pressure test (60-second duration).
30. Does the DEF metering unit air pressure sensor read between 131–200 kPa (19–29 psi) (1.3–2.0 bar)?
    a. Yes; testing is completed. Clear faults and release vehicle.
    b. No; obtain log file of SCR air pressure system check and contact Detroit™ Customer Support Center at (800) 445-1980 for further instruction.