

TO: Service Locations

FROM: Technical Service

SUBJECT: **EPA10 Diesel Exhaust Fluid (DEF) Metering Unit Air Supply Contamination**

ISSUE

DEF Metering Units are experiencing rust, oil, and/or debris contamination of the air supply to the Metering Unit. The contamination can be found at the DEF Metering Unit air inlet fitting and screen. See item #1 and #2 in the cutaway view of the DEF Metering Unit in Figure 1 for the location of the air inlet fitting and screen. The contamination often results in these codes being logged:

- SPN 3361, FMI 7 – DEF Unit Unable To Clear Restriction
- SPN 4335, FMI 7 – DEF Air Pressure Low

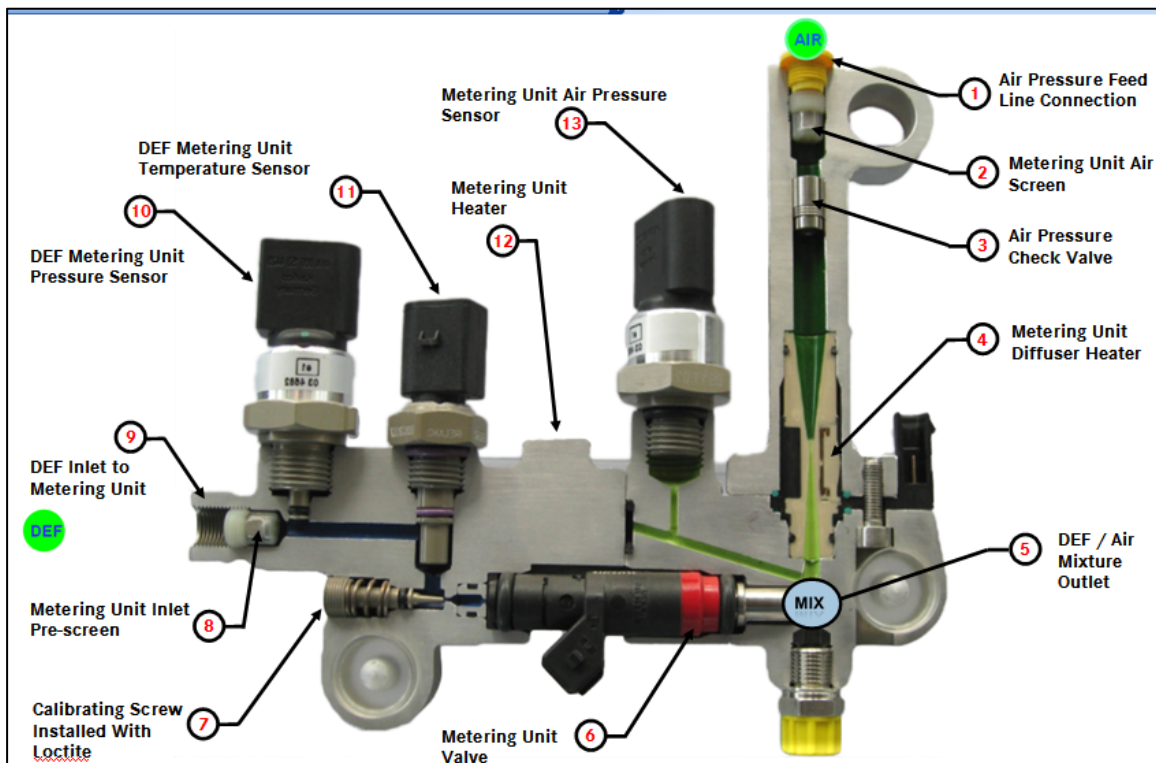


Figure 1 – DEF Metering Unit Cutaway View

CAUSE

The DEF Metering Unit is **NOT** the cause of the failure. It is the result of an upstream failure of the vehicle air supply that causes rust, oil, or debris to be formed in the vehicle air supply system. See Figure 2 for an example of water in the vehicle air tanks that caused rust to form and subsequently be passed into the DEF Metering Unit air supply.



Figure 2 – Vehicle Air Tanks With Rust

There should be **NO** rust, oil, or debris in the DEF air system. Possible causes of the contamination are as follows:

- Faulty air dryer in the vehicle air system.
- Faulty air compressor governor causing the compressor to run longer. A hotter running compressor will produce hotter air and more water vapor in the air.
- Vehicle air system leaks causing the air compressor to run longer than normal. A hotter running compressor will produce hotter air and more water vapor in the air. An example of where leaks can be found is the signal line between the primary tank and governor, especially at the quick-connect fittings.
- Plugged air filter.
- Plugged air inlet hose from the air filter to the air compressor.

- Incorrect vehicle air system specification. Some vehicles with high air system volume requirements have single-cylinder air compressors instead of the more appropriate twin-cylinder air compressor. This may also impact vehicle air dryer specifications.
- Operator error with failure to drain the water from the vehicle air system on a daily basis as noted in the Operators Manual.

REQUIRED ACTION

There should be **NO** rust, oil, or debris in the DEF Metering Unit air system. If contamination is found, the source of it must be located and corrected. All DEF air system components must be inspected and cleaned or replaced. Start the inspection at the air tanks, then the Pressure Limiting Unit (PLU), then the DEF Pump, and then to the DEF Metering Unit. Contaminated DEF air supply lines generally can be cleaned. Contaminated DEF air system components such as the PLU and DEF Pump must be replaced. The DEF Metering Unit can be taken apart and the contaminated parts replaced and the air channel flushed. On DD13 engines, you must also check the air supply to the engine-mounted wastegate solenoid for the turbocharger wastegate.

REQUIRED MATERIAL

See table 1 for a list of commonly needed parts. These part numbers are current as of June, 2012, and are subject to change without notice.

Part Number	Quantity	Description
A0001400594	1	DEF Metering Unit Air Inlet Screen – Use only when there is no contamination in the Diffuser Heater
A0001404539	1	DEF Metering Unit Service Kit – Includes Air Inlet Screen, Diffuser Heater, and Diffuser Heater O-rings
EA0001402478	1	DEF Pump
WAB975 009 002 0	1	PLU (Chassis OEM part, Positive Battery Disconnect)
WAB975 009 101 0	1	PLU (Chassis OEM part, Negative Battery Disconnect)

Table 1 – DEF Metering Unit Air Supply Parts

REPAIR PROCEDURE

Follow all applicable service procedures in the appropriate service manual. Troubleshooting information can be found in the *EPA07/10 DDEC VI/10 Electronics and Troubleshooting Manual* (DDC-SVC-MAN-0084). Repair information on the DEF system components can be found in the *EPA07/10 Exhaust – EGR – ATS Manual* (DDC-SVC-MAN-0083).

WARRANTY CLAIM PROCESS

The DEF Metering Unit is **NOT** the cause of this failure and should never be used as the Primary Failed Part (PFP) on a warranty claim.

If the cause of the air system contamination is chassis related and the component is within the guidelines of that product, a warranty claim may be filed to the appropriate chassis OEM. Note that the air tanks, air lines, air compressor governor, and air system dryer are chassis OEM parts.

If the cause of the air system contamination is due to operator error (failure to drain the air tanks), the failure is not warrantable.

CONTACT INFORMATION

Please contact the Detroit Diesel Customer Support Center at 800-445-1980 or email csc@daimler.com if you have any questions.