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GROUP: Emissions Control

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THIS BULLETIN SUPERSEDES SERVICE BULLETIN 25-005-14, DATED SEPTEMBER 19, 2014 WHICH SHOULD BE REMOVED FROM YOUR FILES. ALL REVISIONS ARE HIGHLIGHTED WITH **ASTERISKS**** AND INCLUDE ADDITIONAL MODEL YEARS, VEHICLE AND PARTS REQUIRED.**

SUBJECT:
Diesel Exhaust Fluid

OVERVIEW:
This bulletin provides information regarding the Diesel Exhaust Fluid (DEF) vehicle delivery fill guidelines.

MODELS:

2013 - **2017**	(D2)	RAM 3500 Pickup
2011 - **2017**	(DD)	RAM 3500 Cab Chassis
2013 - **2017**	(DJ)	RAM 2500 Pickup
2011 - **2017**	(DP)	RAM 4500/5500 Cab Chassis
**2016 - 2017	(DF)	RAM 3500 <10K LB Cab Chassis **
2014 - **2017**	(VF)	RAM ProMaster

NOTE: This bulletin applies to vehicles equipped with the 6.7L Cummins Diesel Engine (sales code ETJ or ETK) or the 3.0L In-line 4-Cylinder Diesel Engine (Sales Code EXG) only.

DISCUSSION:
The affected vehicles are equipped with diesel engines that use a Selective Catalytic Reduction (SCR) exhaust emissions aftertreatment system. This technology is used to reduce the Nitrogen Oxides (NOx) emissions of the engine so that it meets current U.S. EPA and California exhaust emission requirements. In order to function properly and ensure the vehicle meets applicable emission standards, the SCR system injects Diesel Exhaust Fluid (DEF) into the exhaust upstream of the SCR catalyst. The DEF reacts with the exhaust gas inside the catalyst to convert NOx to harmless gasses prior to release into the atmosphere.

Since DEF is consumed during operation of the vehicle, the DEF tank must be refilled periodically as outlined in the Owners Manual Diesel Supplement. The DEF filler cap is clearly marked "Diesel Exhaust Fluid". On Cab Chassis vehicles, the cap is located behind the cab on the driver's side of the truck. On Pickup trucks, the cap is located behind the fuel fill door. The tank is pre-filled with approximately 11.35 L (3 Gal) of DEF from the manufacturing assembly plant. This factory fill should be adequate to perform the vehicle's Pre-Delivery Inspection and other in-dealership operations.

These diesel vehicles are equipped with an Electronic Vehicle Information Center (EVIC) that will provide the driver with warning messages displayed by the EVIC and audible chimes informing the driver when it is necessary to refill the DEF tank. Please refer to the applicable Owner's Manual Diesel Supplement for complete aftertreatment warning message details.

The driver will be notified when the level of DEF drops below approximately 9.46 L (2.5 Gal). The first level warning displays the message "8 Kph (5 mph) Max Speed in XXXX mi DEF Low Refill Soon". The mileage counter will then begin to countdown to 0 as the vehicle is driven. The message "8 kph (5 mph) Max Speed on Restart, Long Idle, or Refuel" will then be displayed followed by the message, "8 kph (5 mph) Max Speed Refill DEF." At this point, the vehicle will be reduced to a maximum of 8 kph (5 mph) until the DEF tank is refilled. The Powertrain Control Module (PCM) may also set a Diagnostic Trouble Code (DTC) P203F - (Diesel Exhaust Fluid) Reductant Level Too Low.

NOTE: A minimum of 9.46 L (2.5 Gal) of DEF will need to be added in order for the system to reset and clear out the message.

As indicated on the "New Vehicle Preparation Form," dealers are requested to fill the DEF tank just prior to delivering the vehicle to the owner.

NOTE: Do not prematurely fill the DEF tank. DEF has a limited shelf life based on ambient temperatures and exposure to sunlight. Vehicles that are exposed to high temperatures for lengths of time may have their DEF urea concentration degrade to the point that the DEF will become less effective at reducing NOx levels in the SCR catalyst. If this occurs, the engine control system may illuminate the Malfunction Indicator Lamp (MIL) and set related Diagnostic Trouble Codes (DTC). Refer to the following chart to get a better understanding of DEF shelf life.

The following chart provides the approximate shelf life of DEF versus temperature.

Constant Ambient Storage Temperature °C (°F)	Maximum Shelf Life In Months
10°C (50°F)	36 Months
25°C (77°F)	18 Months
30°C (86°F)	12 Months
35°C (95°F)	6 Months
40°C (104°F)	2 Months

NOTE: It is recommended that dealers store DEF in a location that minimizes this degradation.

If it is suspected that the urea concentration level has decreased too low, DEF can be tested using a Refractometer. OTC DEF/UREA Refractometer (16-5025) is available through Mopar Essential Tools Service Equipment (<https://moparesentialtools.com>). DEF urea concentration should be at 32.5%.

The DEF tank has been designed with an air space that accommodates the expansion of DEF. Never 'top-off' the DEF tank after a normal fill, as that will allow DEF to fill the expansion space, which can cause damage to the tank.

DEF is subject to freezing at the lowest temperatures. For example, DEF may freeze at temperatures at or below -11° C (12° F). The system has been designed to operate in this environment.

Containers, pumps or plumbing containing iron, non-stainless steel, aluminum or brass will rapidly corrode if used to store or transfer DEF. This corrosion can result in plugging of the onboard DEF filter, or other emission system damage.

CAUTION: If DEF is spilled, it should be cleaned up with mild soap and water to avoid corrosion or damage to components and finished surfaces.

DEF can crystallize when exposed to air. However, the crystals should re-dissolve when reintroduced to fresh DEF. Crystallization may be noticed around the DEF filler opening and is normal.

Please refer to the Service Information and/or the Owner's Manual for additional information.

NOTE: Improper, diluted, or contaminated DEF may lead to MIL illumination and reduced speed conditions, so it is important to use MOPAR® Diesel Exhaust Fluid (API Certified) (DEF) or equivalent that has been API Certified to the ISO 22241 standard. Use of fluids not API Certified to ISO 22241 may result in system damage.

PARTS REQUIRED:

Refer to StarParts to obtain current part numbers for the DEF fluid.

POLICY:

Information Only