Diesel Exhaust Fluid (DEF) is a non-hazardous solution of 32.5% urea and 67.5% de-ionized water used in post-2009 diesel vehicles. DEF is sprayed into the exhaust stream of diesel vehicles to break down NOx emissions into nitrogen and water. DEF is not a fuel additive and never comes into contact with diesel. It is stored in a separate tank, typically with a blue filler cap.

Is there any danger of filling the DEF tank with diesel and what problems will it cause?

The standard nozzle diameter for DEF is 0.75”, compared to 0.87” for diesel, preventing the diesel nozzle from ever being inserted into the DEF tank. In addition, the filling cap for the DEF tank is blue and will be clearly marked.

Diesel is less dense than DEF and will float on top of the DEF in the tank, but even small amounts of diesel can damage the exhaust system. If any fluid except DEF is poured into the DEF tank, contact CMF immediately and do not drive the vehicle.

If DEF is filled into the diesel tank, the engine will stop running almost immediately, and the vehicle will require repair.

Supply and Refilling

CMF stocks DEF in 2.5 gallon containers with filler tubes. DEF may be requested as needed through normal supply procedures.

DEF crystallizes when stored for prolonged periods as the water evaporates. Do not use DEF that shows signs of crystallization and always completely use a container to avoid storing opened containers.

Refill DEF only when the level indicator reaches 1/2 or less. At that point, the tank should accept one full 2.5 gallon container of DEF. There is no need to continuously top off the DEF tank.

Use the filler tube supplied with the case to avoid spills or splashes. Spills can be safely washed down with water. DEF is not corrosive to human skin, however is corrosive to aluminum. Do not allow it to remain on the diamond tread.

The freezing point of DEF is 12°F, however vehicles are equipped to thaw the DEF and this should not restrict use of the vehicle.

Personal protective equipment is not necessary when handling DEF, however it will stain clothes.