

RECOMMENDED DIESEL EXHAUST FLUID (DEF) TESTING

CATEGORY / TEST		Standard DEF Tests	DEF Quality Confirmation (ISO 22241-1)	Troubleshooting Crystallization	Troubleshooting Dirt/Metal	Troubleshooting % Urea Concentration	Troubleshooting Mixtures with Other Fluids
FIELD TESTS	Inspect exhaust piping and DEF injector			○			
	Inspect DEF filter debris and DEF containers				○		
	Handheld DEF refractometer					○	○
	Odor Test ("smells like diesel fuel")						○
	Visual assessment of DEF in tank (multiple layers)						○
LABORATORY TESTS	ISO Code by Microscopy	○	○		○		
	Urea Content (Refractive Index Method)	○				○	
	Urea Content (from Nitrogen)		○			○	
	Density (20°C)		○				
	Refractive Index (20°C)		○				
	Alkalinity as NH ₃ *		○				
	Biuret Content*		○				
	Aldehydes*		○				
	Insoluble Matter*		○				
	ICP Trace Elements* P, Ca, Fe, Cu, Zn, Cr, Ni, Mg, Na, K		○				
FTIR Identification*		○					

○ Recommended Testing * Outsourced

NOTE: SCR systems are part of the engine powertrain configuration. Contaminants or impurities in the DEF could cause the SCR system to malfunction or fail. Monitor fault codes for your vehicle and conduct recommended tests as necessary. Sample frequency may also be based on the nature of failure modes, asset criticality, safety, and environmental concerns.

Please contact Fluid Life for laboratory test inquiries or support (www.fluidlife.com).