

### Performance / Simulation

Method	Test Description	Sample Size
ASTM D130	Copper Strip Corrosion	100 mL
ASTM D217	Cone Penetration, Unworked & 60 Strokes (Grease)	800 g
ASTM D877	Dielectric Breakdown Voltage	800 mL
ASTM D1264	Water Washout (Single Temperature)	50 g
ASTM D1264	Water Washout (Two Bearings Per Method/Single Temperature)	100 g
ASTM D1478	Low Temperature Torque	10 g
ASTM D2070	Thermal Stability (Hydraulic Fluids)	300 mL
ASTM D2266	Four Ball Wear (Grease)	100 g
ASTM D2509	Timken OK Load for Grease (Specify starting load)	3400 g
ASTM D2596	Four Ball Extreme Pressure (Grease) Up to 400 kg	500 g
ASTM D2596	Four Ball Extreme Pressure (Grease) Above 400 kg	500 g
ASTM D2603	Sonic Shear, Oils	100 mL
ASTM D2619	Hydrolytic Stability	250 mL
● ASTM D2622	Sulfur by XRF - Wavelength Dispersive	30 mL
ASTM D2670	Falex Pin & Vee Wear	200 mL
ASTM D2711	Demulsibility - Procedure A (No EP Additives)	2 L
ASTM D2711	Demulsibility - Procedure B (Contains EP Additives)	2 L
ASTM D2714	Block on Ring Friction and Wear	200 mL
ASTM D2782	Timken Extreme Pressure (Specify starting load)	4 L
ASTM D2783	Four Ball Extreme Pressure Up to 400 kg	200 mL
ASTM D2783	Four Ball Extreme Pressure Above 400 kg	200 mL
ASTM D3233	Falex Extreme Pressure	200 mL
ASTM D4049	Resistance of Lubricating Grease to Water Spray	25 g
ASTM D4170	Fretting Wear, Grease	25 mL
ASTM D4172	Four Ball Wear	100 mL
ASTM D4693	Low Temperature Torque, Grease	50 mL
ASTM D5182	FZG Gear Test - Up to 12 Stages	2 L
ASTM D5182	FZG Gear Test - Up to 14 Stages	2 L
ASTM D5183	Coefficient of Friction by Four Ball	100 mL
ASTM D5620	Drain and Dry Mode Using Falex Pin & Vee Block Test Machine	100 mL
ASTM D5621	Sonic Shear, Hydraulic Fluids	100 mL
ASTM D5972	Freeze Point	100 mL
ASTM D6022	Calculated Permanent Shear Stability Index	
ASTM D6079	Lubricity by HFRR	10 mL
ASTM D6200	Cooling Curve Analysis of Quench Oils	4 L
ASTM D6278	Kurt Orbahn Shear Stability, 30 Passes	1 L
ASTM D6278 Mod.	Kurt Orbahn Shear Stability, 90 Passes	1 L
ASTM D6278 Mod.	Kurt Orbahn Shear Stability, 100 Passes	1 L
ASTM D6278 Mod.	Kurt Orbahn Shear Stability, Custom	1 L
ASTM D6794	Engine Oil Water Tolerance (EOWT)	1 L
ASTM D6795	Engine Oil Filterability (EOFT)	1 L
● ASTM D7214	FTIR Analysis, Oxidation by Peak Area Increase	50 mL
● ASTM D7216	GF-5 Elastomer Compatibility, ACM, Polyacrylate	1.2 L
● ASTM D7216	GF-5 Elastomer Compatibility, FKM, Fluoroelastomer	1.2 L
● ASTM D7216	GF-5 Elastomer Compatibility, HNBR, Nitrile	1.2 L
● ASTM D7216	GF-5 Elastomer Compatibility, MAC, Ethylene Acrylate	1.2 L
● ASTM D7216	GF-5 Elastomer Compatibility, VMQ, Silicone	1.2 L
● ASTM D7216	GF-6 Elastomer Compatibility, ACM, Polyacrylate	1 L



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Method	Test Description	Sample Size
• ASTM D7216	GF-6 Elastomer Compatibility, FKM, Fluoroelastomer	1 L
• ASTM D7216	GF-6 Elastomer Compatibility, HNBR, Nitrile	1 L
• ASTM D7216	GF-6 Elastomer Compatibility, MAC, Ethylene Acrylate	1 L
• ASTM D7216	GF-6 Elastomer Compatibility, VMQ, Silicone	1 L
• ASTM D7216	GM dexos1:2015 Elastomer Compatibility, ACM Polyacrylate	1.2 L
• ASTM D7216	GM dexos1:2015 Elastomer Compatibility, FKM, Fluoroelastomer	1.2 L
• ASTM D7216	GM dexos1:2015 Elastomer Compatibility, HNBR, Nitrile	1.2 L
• ASTM D7216	GM dexos1:2015 Elastomer Compatibility, VMQ, Silicone	1.2 L
• ASTM D7216	HDD Elastomer Compatibility, ACM, Polyacrylate	1.2 L
• ASTM D7216	HDD Elastomer Compatibility, FKM, Fluoroelastomer	1.2 L
• ASTM D7216	HDD Elastomer Compatibility, MAC, Vamac	1.2 L
• ASTM D7216	HDD Elastomer Compatibility, NBR, Nitrile	1.2 L
• ASTM D7216	HDD Elastomer Compatibility, VMQ, Silicone	1.2 L
ASTM D7563	Emulsion of Water and Simulated Ed85 Fuel	500 mL
CEC L-085-T99	Oxidation Induction Time by PDSC	5 mL
• CEC L-45-99 Mod. & D445	KRL Shear 04 Hours + 1 Temperature pre & post shear KV	100 mL
• CEC L-45-99 Mod. & D445	KRL Shear 08 Hours + 1 Temperature pre & post shear KV	100 mL
• CEC L-45-99 Mod. & D445	KRL Shear 20 Hours + 1 Temperature pre & post shear KV	100 mL
• CEC L-45-99 Mod. & D445	KRL Shear 30 Hours + 1 Temperature pre & post shear KV	100 mL
• CEC L-45-99 Mod. & D445	KRL Shear 40 Hours + 1 Temperature pre & post shear KV	100 mL
• CEC L-45-99 Mod. & D445	KRL Shear Custom Hours + 1 Temperature pre & post shear KV	100 mL
• CEC L-45-99 Mod. & D2270	KRL Shear 04 Hours + pre & post shear VI	100 mL
• CEC L-45-99 Mod. & D2270	KRL Shear 08 Hours + pre & post shear VI	100 mL
• CEC L-45-99 Mod. & D2270	KRL Shear 20 Hours + pre & post shear VI	100 mL
• CEC L-45-99 Mod. & D2270	KRL Shear 30 Hours + pre & post shear VI	100 mL
• CEC L-45-99 Mod. & D2270	KRL Shear 40 Hours + pre & post shear VI	100 mL
• CEC L-45-99 Mod. & D2270	KRL Shear Custom Hours + pre & post shear VI	100 mL
CEC L-112	Elastomer Compatibility, RE6 FKM	500 mL
CEC L-112	Elastomer Compatibility, RE7 ACM	500 mL
CEC L-112	Elastomer Compatibility, RE8 HNBR	500 mL
CEC L-112	Elastomer Compatibility, RE9 AEM	500 mL
FTM 3456	Channeling Characteristics	1 L
SAVLAB FGE	FoamGen Analysis (Custom Test, Call)	1 L
SAVLAB GES	GE Locomotive Specification (GE Package 1, B82-1 test)	1 L
SAVLAB PEI	Phosphorus Emissions Index (PEI) at 250°C, 1 Hour	250 mL
SAVLAB PEI 165	Phosphorus Emissions Index (PEI) at 165°C, 16 Hours	250 mL
SAVLAB PEI 165	Phosphorus Emissions Index (PEI) at 165°C, 32 Hours	250 mL
SAVLAB PEI 165	Phosphorus Emissions Index (PEI) at 165°C, 48 Hours	250 mL
SAVLAB PEI 165	Phosphorus Emissions Index (PEI) at 165°C, 64 Hours	250 mL
SAVLAB SEI	Sulfur Emissions Index, (SEI)	250 mL
• VDA 675301	GM dexos1:2015 Elastomer Compatibility, AEM, Ethylene Acrylate	1.2 L

