

WEAR NORMAL CONTAMINATION NORMAL FLUID CONDITION NORMAL

Machine Id USED-051524-01 Component Oil Fluid {not provided} (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample. (Customer Sample Comment: RUN TAN)

WEAR

All component wear rates are normal.

CONTAMINATION

There is no indication of any contamination in the oil.

FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		HPL0004368		
Sample Date		Client Info		15 May 2024		
Machine Age	hrs	Client Info		0		
Oil Age	hrs	Client Info		0		
Filter Age	hrs	Client Info		0		
Oil Changed		Client Info		Not Changd		
Filter Changed		Client Info		N/A		
Sample Status				NORMAL		
Iron	ppm	ASTM D5185m		1		
Chromium	ppm	ASTM D5185m		<1		
Nickel	ppm	ASTM D5185m		0		
Titanium	ppm	ASTM D5185m		<1		
Silver	ppm	ASTM D5185m		<1		
Aluminum	ppm	ASTM D5185m		1		
Lead	ppm	ASTM D5185m		<1		
Copper	ppm	ASTM D5185m		2		
Tin	ppm	ASTM D5185m		1		
Vanadium	ppm	ASTM D5185m		<1		
White Metal	scalar	*Visual	NONE	NONE		
Yellow Metal	scalar	*Visual	NONE	NONE		
Silicon	ppm	ASTM D5185m		1		
Silicon Potassium	ppm ppm	ASTM D5185m ASTM D5185m	>20	1 2		
Silicon Potassium Water	ppm ppm	ASTM D5185m ASTM D5185m WC Method	>20	1 2 NEG		
Silicon Potassium Water Silt	ppm ppm scalar	ASTM D5185m ASTM D5185m WC Method *Visual	>20 NONE	1 2 NEG NONE	 	
Silicon Potassium Water Silt Debris	ppm ppm scalar scalar	ASTM D5185m ASTM D5185m WC Method *Visual *Visual	>20 NONE NONE	1 2 NEG NONE NONE	 	
Silicon Potassium Water Silt Debris Sand/Dirt	ppm ppm scalar scalar scalar	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual	>20 NONE NONE NONE	1 2 NEG NONE NONE NONE	 	
Silicon Potassium Water Silt Debris Sand/Dirt Appearance	ppm ppm scalar scalar scalar scalar	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual	>20 NONE NONE NORE	1 2 NEG NONE NONE NONE NORML	 	
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor	ppm ppm scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual	>20 NONE NONE NORML NORML	1 2 NEG NONE NONE NORE NORML		
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water	ppm ppm scalar scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual	>20 NONE NONE NORML NORML	1 2 NEG NONE NONE NORE NORML NEG		
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water	ppm ppm scalar scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual	>20 NONE NONE NORML NORML	1 2 NEG NONE NONE NORML NORML NEG		
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water	ppm ppm scalar scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual	>20 NONE NONE NORML NORML	1 2 NEG NONE NONE NORML NORML NEG 0		
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron	ppm ppm scalar scalar scalar scalar scalar scalar ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m	>20 NONE NONE NORML NORML	1 2 NEG NONE NONE NORML NORML NEG 0 0		
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium	ppm ppm scalar scalar scalar scalar scalar scalar ppm ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m	>20 NONE NONE NORML NORML	1 2 NEG NONE NONE NORML NORML NEG 0 0		
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium	ppm ppm scalar scalar scalar scalar scalar ppm ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m	>20 NONE NONE NORML NORML	1 2 NEG NONE NONE NORML NORML NEG 0 0 0 0		
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese	ppm ppm scalar scalar scalar scalar scalar ppm ppm ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m	>20 NONE NONE NORML NORML	1 2 NEG NONE NONE NORML NORML NEG 0 0 0 0 0		
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Malybdenum Manganese	ppm ppm scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>20 NONE NONE NORML NORML	1 2 NEG NONE NONE NORML NORML NEG 0 0 0 0 0 0 0 0 0 0 0		
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Malybdenum Manganese Magnesium	ppm ppm scalar scalar scalar scalar ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>20 NONE NONE NORML NORML	1 2 NEG NONE NONE NORML NORML NEG 0 0 0 0 0 0 0 0 0 2 5		
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Barium Molybdenum Manganese Magnesium Calcium	ppm scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>20 NONE NONE NORML	1 2 NEG NONE NONE NORML NORML NEG 0 0 0 0 0 0 0 0 2 5 14		
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm scalar scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>20 NONE NONE NORML	1 2 NEG NONE NONE NORML NORML NEG 0 0 0 0 0 0 0 0 0 0 0 0 1 25 14 0		
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Boron Barium Malybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>20 NONE NONE NORML NORML	1 2 NEG NONE NONE NORML NORML NEG 0 0 0 0 0 0 0 0 0 2 1 25 14 0 21376		
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Boron Barium Malybdenum Malybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Sulfur	ppm scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm ppm ppm ppm ppm pp	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>20 NONE NONE NORML NORML	1 2 NEG NONE NONE NORML NORML NEG 0 0 0 0 0 0 0 0 0 0 1 25 14 0 21376 0.26		

Submitted By: DAVID WARD





HIGH PERFORMANCE LUBRICANTS LLC Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 Sample No. Received 500 S SPRUCE ST : HPL0004368 : 21 May 2024 Lab Number : 06186632 MANTENO, IL Tested : 21 May 2024 Unique Number : 11043384 : 21 May 2024 - Jonathan Hester US 60950 Diagnosed Test Package : MOB 2 Contact: DAVID WARD Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. sampledata@hplubricants.com * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: (815)468-3535 F: x: Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)