

WEAR NORMAL CONTAMINATION ABNORMAL FLUID CONDITION ATTENTION

Machine Id 015-0073 - TROLLEY Component Gearbox Fluid ISO 360 (--- GAL)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

Elemental level of silicon (Si) above normal indicating ingress of dirt/seal material.

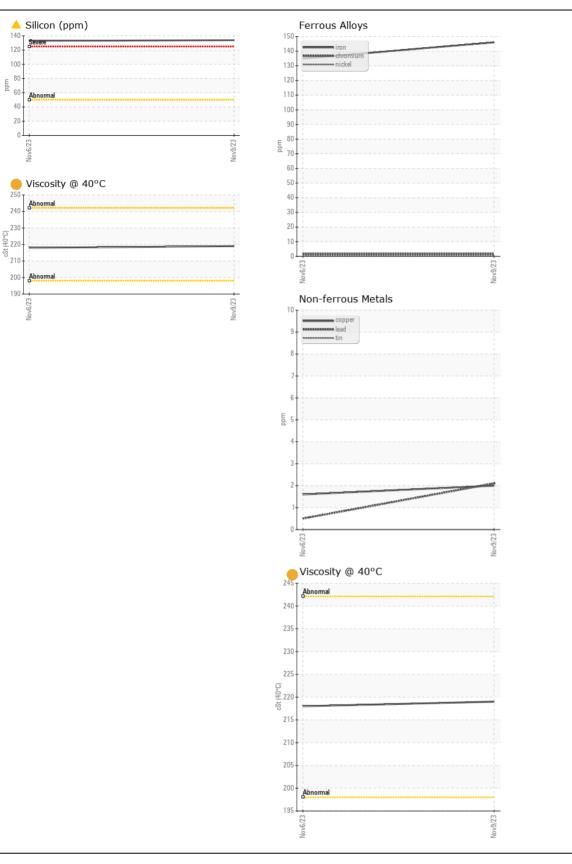
FLUID CONDITION

Viscosity of sample indicates oil is within ISO 220 range, advise investigate. Confirm oil type. The condition of the oil is acceptable for the time in service.

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Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0750611	WC0868361	
Sample Date		Client Info		09 Nov 2023	06 Nov 2023	
Machine Age	hrs	Client Info		0	0	
Oil Age	hrs	Client Info		0	0	
Filter Age	hrs	Client Info		0	0	
Oil Changed		Client Info		Not Changd	Not Changd	
Filter Changed		Client Info		Not Changd	Not Changd	
Sample Status				ABNORMAL	ABNORMAL	
Iron	ppm	ASTM D5185m	>200	146	135	
Chromium	ppm	ASTM D5185m	>10	2	2	
Nickel	ppm	ASTM D5185m	>10	<1	<1	
Titanium	ppm	ASTM D5185m		<1	<1	
Silver	ppm	ASTM D5185m		0	0	
Aluminum	ppm	ASTM D5185m	>25	2	2	
Lead	ppm	ASTM D5185m	>50	2	<1	
Copper	ppm	ASTM D5185m	>200	2	2	
Tin	ppm	ASTM D5185m	>10	0	0	
Vanadium	ppm	ASTM D5185m		0	0	
White Metal	scalar	*Visual	NONE	NONE	NONE	
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
Silicon	ppm	ASTM D5185m	>50	A 104	400	
Potassium			200	🔺 134	🔺 133	
Folassium	ppm	ASTM D5185m	>20	3	3	
Water	ppm	ASTM D5185m WC Method		-		
	ppm scalar		>20	3	3	
Water		WC Method	>20 >0.2	3 NEG	3 NEG	
Water Silt	scalar	WC Method *Visual	>20 >0.2 NONE	3 NEG NONE	3 NEG MODER	
Water Silt Debris	scalar scalar	WC Method *Visual *Visual	>20 >0.2 NONE NONE	3 NEG NONE NONE	3 NEG MODER NONE	
Water Silt Debris Sand/Dirt	scalar scalar scalar	WC Method *Visual *Visual *Visual	>20 >0.2 NONE NONE NONE	3 NEG NONE NONE NONE	3 NEG MODER NONE NONE	
Water Silt Debris Sand/Dirt Appearance	scalar scalar scalar scalar	WC Method *Visual *Visual *Visual *Visual	>20 >0.2 NONE NONE NONE	3 NEG NONE NONE NONE NORML	3 NEG MODER NONE NONE NORML	
Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water	scalar scalar scalar scalar scalar scalar	WC Method *Visual *Visual *Visual *Visual *Visual *Visual	>20 >0.2 NONE NONE NORML NORML	3 NEG NONE NONE NORML NORML NEG	3 NEG MODER NONE NORML NORML NEG	
Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium	scalar scalar scalar scalar scalar scalar scalar	WC Method *Visual *Visual *Visual *Visual *Visual ASTM D5185m	>20 >0.2 NONE NONE NORML NORML	3 NEG NONE NONE NORML NORML NEG 2	3 NEG MODER NONE NORML NORML NEG 2	
Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron	scalar scalar scalar scalar scalar scalar ppm	WC Method *Visual *Visual *Visual *Visual *Visual ASTM D5185m	>20 >0.2 NONE NONE NORML NORML	3 NEG NONE NONE NORML NORML NEG 2 6	3 NEG NONE NONE NORML NORML NEG 2 5	
Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium	scalar scalar scalar scalar scalar scalar ppm ppm	WC Method *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m	>20 >0.2 NONE NONE NORML NORML	3 NEG NONE NONE NORML NORML NEG 2 6 0	3 NEG MODER NONE NORML NORML NEG 2 5 0	
Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum	scalar scalar scalar scalar scalar scalar ppm ppm ppm	WC Method *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m	>20 >0.2 NONE NONE NORML NORML	3 NEG NONE NONE NORML NORML NEG 2 6	3 NEG MODER NONE NORML NORML NEG 2 5 0 2	
Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese	scalar scalar scalar scalar scalar scalar ppm ppm ppm ppm	WC Method *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>20 >0.2 NONE NONE NORML NORML	3 NEG NONE NONE NORML NORML NEG 2 6 0 1 1 4	3 NEG NONE NONE NORML NORML NEG 2 5 0 2 5 0 2 3	
Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium	scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm	WC Method *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>20 >0.2 NONE NONE NORML NORML	3 NEG NONE NONE NORML NORML NEG 2 6 0 1 4 4	3 NEG NONE NONE NORML NORML NEG 2 5 0 2 5 0 2 3 3 1	
Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Malybdenum Manganese Magnesium	scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm ppm	WC Method *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>20 >0.2 NONE NONE NORML NORML	3 NEG NONE NONE NORML NORML 2 6 0 1 4 1 2 2	3 NEG MODER NONE NORML NORML NEG 2 5 0 2 5 0 2 3 1 2 1 2	
Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium	scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm ppm ppm	WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>20 >0.2 NONE NONE NORML NORML	3 NEG NONE NONE NORML NORML NEG 2 6 0 1 4 1 22 2 240	3 NEG NONE NONE NORML NORML NEG 2 5 0 2 5 0 2 3 1 2 1 21 233	
Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm ppm ppm	WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>20 >0.2 NONE NONE NORML NORML	3 NEG NONE NONE NORML NORML 2 2 6 0 1 4 1 22 2 40 240 47	3 NEG NODER NONE NORML NORML NEG 2 5 0 2 5 0 2 3 1 2 1 21 21 233 45	
Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium	scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm ppm ppm	WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>20 >0.2 NONE NONE NORML NORML	3 NEG NONE NONE NORML NORML NEG 2 6 0 1 4 1 22 2 240	3 NEG NONE NONE NORML NORML NEG 2 5 0 2 5 0 2 3 1 2 1 21 233	

Contact/Location: DANIEL LISELLA - AECCHATN



SHIMMICK CONSTRUCTION Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 Sample No. Received : 21 Nov 2023 5535 TRAILHEAD DRIVE : WC0750611 Lab Number : 06014661 Tested : 23 Nov 2023 CHATTANOOGA, TN Unique Number : 10753805 Diagnosed : 24 Nov 2023 - Don Baldridge US 37415 Test Package : CONST Contact: DANIEL LISELLA Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. daniel.lisella@shimmick.com * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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Contact/Location: DANIEL LISELLA - AECCHATN Page 2 of 2

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