

WEAR ABNORMAL CONTAMINATION NORMAL FLUID CONDITION NORMAL

Machine Id HC2235 - 1 Component Front Winch Fluid GEAR OIL ISO 220 (--- GAL)

RECOMMENDATION

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor.

WEAR

The iron level is abnormal.

CONTAMINATION

There is no indication of any contamination in the oil.

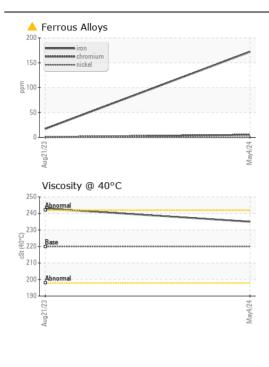
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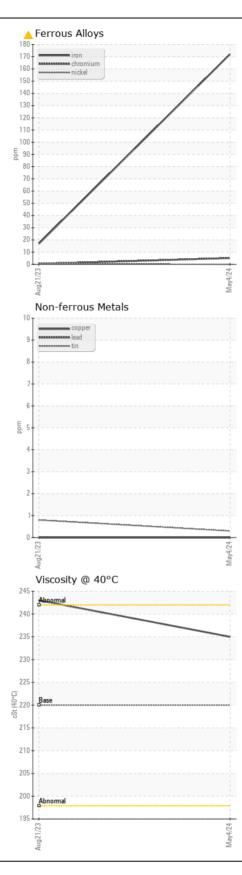
FLUID CONDITION

The condition of the oil is acceptable for the time in service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0936093	WC0720604	
Sample Date		Client Info		04 May 2024	21 Aug 2023	
Machine Age	hrs	Client Info		1540	800	
Oil Age	hrs	Client Info		1000	800	
Filter Age	hrs	Client Info		0	0	
Oil Changed		Client Info		Changed	Changed	
Filter Changed		Client Info		Changed	Changed	
Sample Status				ABNORMAL	NORMAL	
Iron		ASTM D5185m	. 150	172	17	
Iron	ppm		>150		17	
Chromium Nickel	ppm	ASTM D5185m	>10	5	<1	
Titanium	ppm	ASTM D5185m	>10	-	<1	
	ppm			<1	0	
Silver	ppm	ASTM D5185m	. 5	0	0	
	ppm	ASTM D5185m	>5	-	0	
Lead	ppm	ASTM D5185m ASTM D5185m	>15	0	0	
Copper	ppm		>80	-	0	
Tin	ppm	ASTM D5185m		<1	<1	
Vanadium	ppm	ASTM D5185m		0	0	
White Metal	scalar	*Visual	NONE	NONE	NONE	
				NONE	NONE	
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
Yellow Metal Silicon	scalar ppm	*Visual ASTM D5185m	NONE	NONE 8	NONE <1	
Silicon	ppm	ASTM D5185m	>25	8	<1	
Silicon Potassium	ppm	ASTM D5185m ASTM D5185m	>25 >20	8 2	<1 2	
Silicon Potassium Water	ppm ppm	ASTM D5185m ASTM D5185m WC Method	>25 >20 >0.2	8 2 NEG	<1 2 NEG	
Silicon Potassium Water Silt	ppm ppm scalar	ASTM D5185m ASTM D5185m WC Method *Visual	>25 >20 >0.2 NONE	8 2 NEG NONE	<1 2 NEG NONE	
Silicon Potassium Water Silt Debris	ppm ppm scalar scalar	ASTM D5185m ASTM D5185m WC Method *Visual *Visual	>25 >20 >0.2 NONE NONE	8 2 NEG NONE LIGHT	<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	>25 >20 >0.2 NONE NONE NONE	8 2 NEG NONE LIGHT 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	>25 >20 >0.2 NONE NONE NONE NORML	8 2 NEG NONE LIGHT NONE NORML	<1 2 NEG NONE NONE NONE NORML	
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water	ppm ppm scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual	>25 >20 >0.2 NONE NONE NONE NORML NORML	8 2 NEG NONE LIGHT NONE NORML NORML NEG	<1 2 NEG NONE NONE NORML NORML NEG	
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium	ppm ppm scalar scalar scalar scalar scalar scalar ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m	>25 >20 >0.2 NONE NONE NORML NORML >0.2	8 2 NEG NONE LIGHT NONE NORML NORML NEG 2	<1 2 NEG NONE NONE NORML NORML NEG <1	
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron	ppm ppm scalar scalar scalar scalar scalar scalar gppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m	>25 >20 >0.2 NONE NONE NORML >0.2	8 2 NEG NONE LIGHT NORML NORML NEG 2 0	<1 2 NEG NONE NONE NORML NORML NEG <1 5	
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 *Visual ASTM D5185m ASTM D5185m	>25 >20 >0.2 NONE NONE NORML NORML >0.2	8 2 NEG NONE LIGHT NORML NORML NEG 2 0 3	<1 2 NEG NONE NONE NORML NORML NEG <1 5 0	
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum	ppm ppm scalar scalar scalar scalar scalar scalar ppm ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m	>25 >20 >0.2 NONE NONE NORML >0.2	8 2 NEG NONE LIGHT NORML NORML NEG 2 0 3 0	<1 2 NEG NONE NONE NONE NORML NORML NEG <1 5 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 scalar ppm ppm ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m	>25 >20 >0.2 NONE NORME NORML >0.2 50 15 15	8 2 NEG NONE LIGHT NORML NORML NEG 2 0 3 0 3 0 3	<1 2 NEG NONE NONE NONE NORML NORML NEG <1 5 0 0 <1	
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium	ppm ppm scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>25 >20 >0.2 NONE NONE NORML NORML >0.2 50 15 15	8 2 NEG NONE LIGHT NORML NORML NEG 2 0 3 0 3 0 3 0 3 0	<1 2 NEG NONE NONE NONE NORML NORML NORML S 0 0 0 <1 5 0 1 5 0 0 0 5 0 0 0 5 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 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	>25 >20 >0.2 NONE NORML NORML >0.2 50 15 15 50 50	8 2 NEG NONE LIGHT NORML NORML NEG 2 0 3 0 3 0 3 0 3 0 12	<1 2 NEG NONE NONE NONE NORML NORML NEG 1 5 5	
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Barium Molybdenum Manganese Magnesium Calcium	ppm ppm scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	 >25 >20 >0.2 NONE NORML NORML >0.2 50 50	8 2 NEG NONE LIGHT NORML NORML NEG 2 0 3 0 3 0 3 0 12 295	<1 2 NEG NONE NONE NONE NORML NORML NEG 1 5 5 20	
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Malybdenum Manganese Magnesium Calcium	ppm ppm scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	 >25 >20 >0.2 NONE NORML >0.2 50 15 15 50 50 50 350 100 	8 2 NEG NONE LIGHT NORML NORML NEG 2 0 3 0 3 0 3 0 12 295 56	<1 2 NEG NONE NONE NONE NORML NORML NORML S C 1 S 0 0 C 1 S 5 5 20 17	
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	 >25 >20 >0.2 NONE NORML NORML >0.2 50 50	8 2 NEG NONE LIGHT NORML NORML NEG 2 0 3 0 3 0 3 0 12 295	<1 2 NEG NONE NONE NONE NORML NORML NEG 1 5 5 20	

Contact/Location: MICHAEL LAWSON - BUCGRA





BUCKNER HEAVY LIFT : WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received 4732 NC 54 EAST :09 May 2024 Tested GRAHAM, NC : 10 May 2024 : 13 May 2024 - Angela Borella Diagnosed US 27253-9215 Contact: MICHAEL LAWSON To discuss this sample report, contact Customer Service at 1-800-237-1369. michaell@bucknercompanies.com * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: (336)376-8888 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F: (336)376-4090

Certificate L2367

Laboratory

Sample No.

Lab Number : 06174799

Unique Number : 11020852

Test Package : CONST

: WC0936093

Contact/Location: MICHAEL LAWSON - BUCGRA Page 2 of 2