

#### Machine Id LIEBHERR 1400 CR4405 (S/N 0015-108) Component Rear Right Track Drive Fluid GEAR OIL ISO 220 (--- GAL)

## RECOMMENDATION

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

## **WEAR**

All component wear rates are normal.

#### CONTAMINATION

There is no indication of any contamination in the oil.

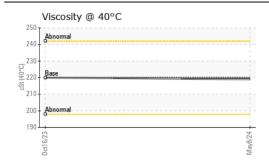
# FLUID CONDITION

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

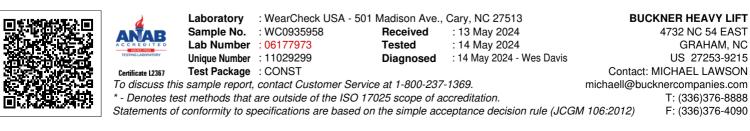
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Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0935958	WC0823353	
Sample Date		Client Info		08 May 2024	16 Oct 2023	
Machine Age	hrs	Client Info		9661	9409	
Oil Age	hrs	Client Info		252	1000	
Filter Age	hrs	Client Info		0	1000	
Oil Changed		Client Info		Changed	Changed	
Filter Changed		Client Info		Not Changd	Changed	
Sample Status				NORMAL	NORMAL	
			4000	•		
Iron	ppm	ASTM D5185m	>1000	0	3	
Chromium	ppm	ASTM D5185m	>30	<1	<1	
Nickel	ppm	ASTM D5185m	>7	0	0	
Titanium	ppm	ASTM D5185m		0	<1	
Silver	ppm	ASTM D5185m		0	0	
Aluminum	ppm	ASTM D5185m	>25	0	2	
Lead	ppm	ASTM D5185m	>50	0	0	
Copper	ppm	ASTM D5185m	>100	0	<1	
Tin	ppm	ASTM D5185m	>5	<1	0	
Vanadium	ppm	ASTM D5185m		0	<1	
White Metal	scalar	*Visual	NONE	NONE	MODER	
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
Silicon	ppm	ASTM D5185m	>150	1	1	
Silicon Potassium	ppm ppm	ASTM D5185m ASTM D5185m	>150 >20	1 <1	1	
				-		
Potassium		ASTM D5185m	>20	<1	1	  
Potassium Water	ppm	ASTM D5185m WC Method	>20 >0.2	<1 NEG	1 NEG	
Potassium Water Silt	ppm scalar	ASTM D5185m WC Method *Visual	>20 >0.2 NONE	<1 NEG NONE	1 NEG NONE	
Potassium Water Silt Debris	ppm scalar scalar	ASTM D5185m WC Method *Visual *Visual	>20 >0.2 NONE NONE	<1 NEG NONE NONE	1 NEG NONE NONE	
Potassium Water Silt Debris Sand/Dirt	ppm scalar scalar scalar	ASTM D5185m WC Method *Visual *Visual *Visual	>20 >0.2 NONE NONE NONE	<1 NEG NONE NONE NONE	1 NEG NONE NONE	
Potassium Water Silt Debris Sand/Dirt Appearance	ppm scalar scalar scalar scalar	ASTM D5185m WC Method *Visual *Visual *Visual *Visual	>20 >0.2 NONE NONE NONE NORML	<1 NEG NONE NONE NONE NORML	1 NEG NONE NONE NONE NORML	  
Potassium Water Silt Debris Sand/Dirt Appearance Odor	ppm scalar scalar scalar scalar scalar	ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual	>20 >0.2 NONE NONE NORML NORML	<1 NEG NONE NONE NORE NORML NORML	1 NEG NONE NONE NONE NORML NORML	  
Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water	ppm scalar scalar scalar scalar scalar scalar	ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual	>20 >0.2 NONE NONE NORML NORML	<1 NEG NONE NONE NORE NORML NORML NEG	1 NEG NONE NONE NORML NORML NEG	
Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium	ppm scalar scalar scalar scalar scalar scalar ppm	ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m	>20 >0.2 NONE NONE NORML NORML >0.2	<1 NEG NONE NONE NORML NORML NEG	1 NEG NONE NONE NORML NORML NEG	  
Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron	ppm scalar scalar scalar scalar scalar scalar ppm	ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m	>20 >0.2 NONE NONE NORML >0.2	<1 NEG NONE NONE NORML NORML NEG <1 39	1 NEG NONE NONE NORML NORML NEG 0 45	
Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium	ppm scalar scalar scalar scalar scalar scalar ppm ppm	ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m	>20 >0.2 NONE NONE NORML NORML >0.2 50 15	<1 NEG NONE NONE NORML NORML NEG <1 39 1	1 NEG NONE NONE NORML NORML NEG 0 45 <1	
Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum	ppm scalar scalar scalar scalar scalar scalar ppm ppm ppm	ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m	>20 >0.2 NONE NONE NORML NORML >0.2 50 15	<1 NEG NONE NONE NORML NORML NEG <1 39 1 0	1 NEG NONE NONE NORML NORML NEG 0 45 <1 0	
Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese	ppm scalar scalar scalar scalar scalar ppm ppm ppm	ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>20 >0.2 NONE NONE NORML >0.2 50 15 15	<1 NEG NONE NONE NORML NORML NEG <1 39 1 0 0	1 NEG NONE NONE NORML NORML NEG 0 45 <1 0 0	
Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Malybdenum Manganese Magnesium	ppm scalar scalar scalar scalar scalar ppm ppm ppm ppm	ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>20 >0.2 NONE NONE NORML NORML >0.2 50 15 15	<1 NEG NONE NONE NORML NORML NEG <1 39 1 0 0 3	1 NEG NONE NONE NORML NORML NEG 0 45 <1 0 45 <1 0 0 <1	
Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Malybdenum Manganese Magnesium Calcium	ppm scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm ppm	ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>20 >0.2 NONE NONE NORML NORML >0.2 50 15 15 50 50	<1 NEG NONE NONE NORML NORML NEG <1 39 1 0 0 3 46	1 NEG NONE NONE NORML NORML NEG 0 45 <1 0 0 <1 30	
Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Barium Malybdenum Manganese Magnesium Calcium	ppm scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm ppm	ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>20 >0.2 NONE NONE NORML >0.2 50 15 15 50 50 50 350	<1 NEG NONE NONE NORML NORML NEG <1 39 1 0 0 3 46 364	1 NEG NONE NONE NORML NORML NEG 0 45 <1 0 45 <1 0 0 <1 30 329	

Contact/Location: MICHAEL LAWSON - BUCGRA



Ferrous Alloys 10 mdd 0 Non-ferrous Metals 10 lead mdo Viscosity @ 40°C 24 240 235 230 22! C20 (40°C) 21 210 205 200 Abnorma 195 May8/24 0ct16/23



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