

WEAR NORMAL CONTAMINATION NORMAL FLUID CONDITION NORMAL

Machine Id LIEBHERR LH30M 139969-1253

Front Right Wheel Hub

LIEBHERR GEAR BASIC 90 LS (--- GAL)

RECOMMENDATION

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

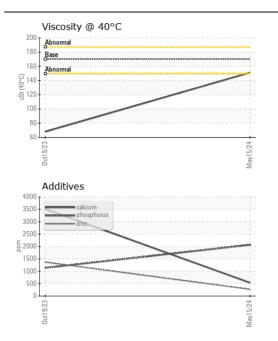
CONTAMINATION

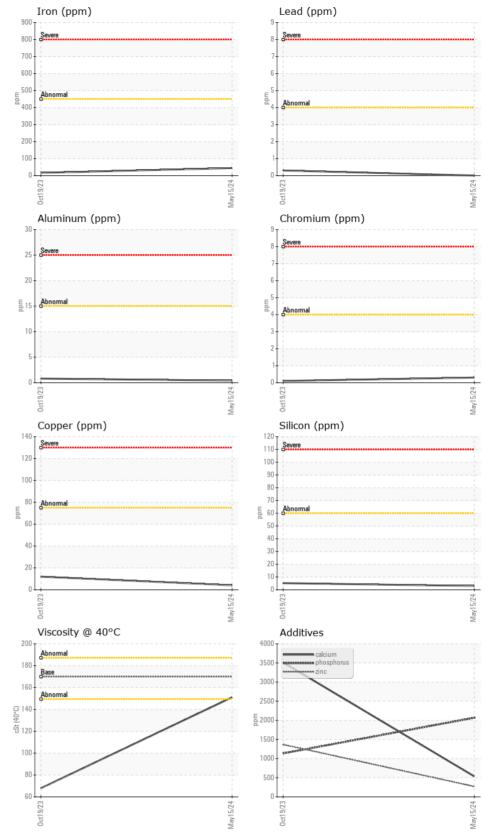
There is no indication of any contamination in the oil.

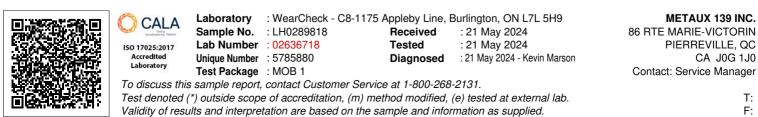
FLUID CONDITION

Additive levels indicate the addition of a different brand, or type of oil. 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		LH0289818	LH	
Sample Date		Client Info		15 May 2024	19 Oct 2023	
Machine Age	hrs	Client Info		930	480	
Oil Age	hrs	Client Info		0	0	
Filter Age	hrs	Client Info		0	0	
Oil Changed		Client Info		Changed	N/A	
Filter Changed		Client Info		N/A	N/A	
Sample Status				NORMAL	NORMAL	
			450		40	
Iron	ppm	ASTM D5185(m)	>450	44	16	
Chromium	ppm	ASTM D5185(m)	>4	<1	<1	
Nickel	ppm	ASTM D5185(m)	>2	0	0	
Titanium	ppm	ASTM D5185(m)		0	0	
Silver	ppm	ASTM D5185(m)	15	0	<1	
Aluminum	ppm	ASTM D5185(m)	>15	<1	<1	
Lead	ppm	ASTM D5185(m)	>4	0	<1	
Copper	ppm	ASTM D5185(m)	>75	4	12	
Tin	ppm	ASTM D5185(m)		0	0	
Vanadium	ppm	ASTM D5185(m)		0	0	
White Metal	scalar	Visual*	NONE	NONE	LIGHT	
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	
Silicon	ppm	ASTM D5185(m)	>60	3	5	
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	
Water		WC Method	>0.2	NEG	NEG	
Silt	scalar	Visual*	NONE	VLITE	NONE	
Debris	scalar	Visual*	NONE	VLITE	NONE	
Sand/Dirt	scalar	Visual*	NONE			
Appearance				NONE	NONE	
	scalar	Visual*	NORML	NONE NORML	NONE NORML	
Odor	scalar scalar	Visual* Visual*		-		
Odor Emulsified Water			NORML	NORML	NORML	
Emulsified Water	scalar scalar	Visual* Visual*	NORML NORML	NORML NORML NEG	NORML NORML NEG	
	scalar scalar ppm	Visual*	NORML NORML >0.2	NORML	NORML NORML	
Emulsified Water Sodium	scalar scalar ppm ppm	Visual* Visual* ASTM D5185(m)	NORML NORML >0.2	NORML NORML NEG 7 16	NORML NORML NEG 21 103	
Emulsified Water Sodium Boron Barium	scalar scalar ppm ppm ppm	Visual* Visual* ASTM D5185(m) ASTM D5185(m)	NORML NORML >0.2	NORML NORML NEG 7	NORML NORML NEG 21	
Emulsified Water Sodium Boron Barium Molybdenum	scalar scalar ppm ppm ppm	Visual* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	NORML NORML >0.2 0 0	NORML NORML NEG 7 16 0	NORML NORML NEG 21 103 <1	
Emulsified Water Sodium Boron Barium Molybdenum Manganese	scalar scalar ppm ppm ppm ppm	Visual* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	NORML NORML >0.2 0 0 0 0	NORML NORML NEG 7 16 0 0 <1	NORML NORML NEG 21 103 <1 0	
Emulsified Water Sodium Boron Barium Molybdenum	scalar scalar ppm ppm ppm ppm ppm	Visual* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	NORML NORML >0.2 0 0 0 0 0 0	NORML NORML NEG 7 16 0 0 <1 3	NORML NORML 21 103 <1 0 <1 9	
Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium	scalar scalar ppm ppm ppm ppm ppm ppm	Visual* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	NORML NORML >0.2 0 0 0 0 0 0 4 1 <1	NORML NORML NEG 7 16 0 0 <1 3 537	NORML NORML 21 103 <1 0 <1 9 3511	
Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	scalar scalar ppm ppm ppm ppm ppm ppm	Visual* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	NORML NORML >0.2 0 0 0 0 0 1 <1 <1 2143	NORML NORML NEG 7 16 0 0 <1 3 537 2066	NORML NORML 21 103 <1 0 <1 9 3511 1134	
Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium	scalar scalar ppm ppm ppm ppm ppm ppm	Visual* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	NORML NORML >0.2 0 0 0 0 0 0 4 1 <1	NORML NORML NEG 7 16 0 0 <1 3 537	NORML NORML 21 103 <1 0 <1 9 3511	







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