



Machine Id LIEBHERR L586 70612 Component Front Left Wheel Hub Fluid LIEBHERR GEAR BASIC 90 LS (60 LTR)

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

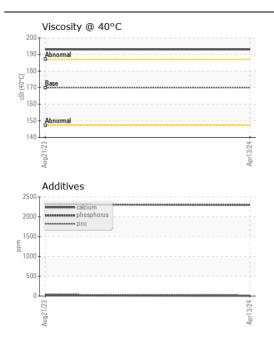
There is no indication of any contamination in the oil.

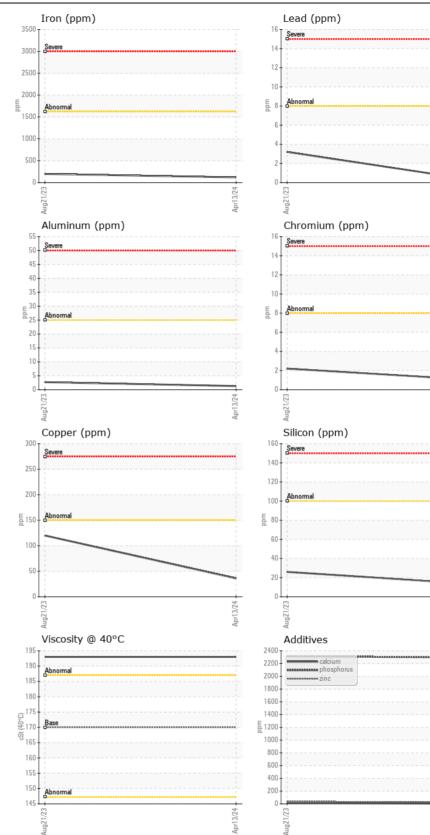
FLUID CONDITION

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.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0287851	LH0269595	
Sample Date		Client Info		13 Apr 2024	21 Aug 2023	
Machine Age	hrs	Client Info		1998	970	
Oil Age	hrs	Client Info		0	0	
Filter Age	hrs	Client Info		0	0	
Oil Changed		Client Info		Changed	Changed	
Filter Changed		Client Info		N/A	N/A	
Sample Status				NORMAL	NORMAL	
Iron	ppm	ASTM D5185(m)	>1625	119	197	
Chromium	ppm	ASTM D5185(m)	>8	1	2	
Nickel	ppm	ASTM D5185(m)	>4	<1	1	
Titanium	ppm	ASTM D5185(m)		0	0	
Silver	ppm	ASTM D5185(m)		0	0	
Aluminum	ppm	ASTM D5185(m)	>25	1	3	
Lead	ppm	ASTM D5185(m)	>8	<1	3	
Copper	ppm	ASTM D5185(m)	>150	36	120	
Tin	ppm	ASTM D5185(m)	>10	3	7	
Vanadium	ppm	ASTM D5185(m)		0	<1	
White Metal	scalar	Visual*	NONE	VLITE	NONE	
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	
Silicon		ASTM D5185(m)	>100	13	26	
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	
Water	ppm	WC Method	>0.2	NEG	NEG	
Silt	scalar	Visual*	NONE	VLITE	NONE	
Debris	scalar	Visual*	NONE	NONE	NONE	
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	
Appearance	scalar	Visual*	NORML	NORML	NORML	
Odor	scalar	Visual*	NORML	NORML	NORML	
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	
				NEG		
Sodium	ppm	ASTM D5185(m)	0	6	9	
Boron	ppm	ASTM D5185(m)	0	6 2	9 3	
Boron Barium	ppm ppm	ASTM D5185(m) ASTM D5185(m)	0	6 2 0	9 3 0	
Boron Barium Molybdenum	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0	6 2 0 0	9 3 0 0	
Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 0	6 2 0 0 20	9 3 0 0 43	
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 0 <1	6 2 0 0 20 1	9 3 0 0 43 4	
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 <1 <1	6 2 0 0 20 1 5	9 3 0 0 43 4 13	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 <1 <1 2143	6 2 0 20 1 5 2295	9 3 0 0 43 4 13 2313	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 <1 <1 2143 <1	6 2 0 20 1 5 2295 21	9 3 0 43 4 13 2313 40	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 <1 <1 2143	6 2 0 20 1 5 2295	9 3 0 0 43 4 13 2313	

Contact/Location: Dennis Wall - GRAHAV







CALA Sample No. : LH0287851 Received : 19 Apr 2024 Lab Number : 02630327 Tested : 19 Apr 2024 ISO 17025:2017 Accredited Laboratory Unique Number : 5763459 Diagnosed : 22 Apr 2024 - Wes Davis Test Package : MOB 1 To discuss this sample report, contact Customer Service at 1-800-268-2131. Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab. Validity of results and interpretation are based on the sample and information as supplied.

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9

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Apr13/24

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