



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION



Machine Id
LIEBHERR LH80M 1218-157090
Component
Rear Right Wheel Hub
Fluid
GEAR OIL SAE 80W90 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0282879	LH0282890	LH0282901
Sample Date		Client Info		18 May 2024	19 Apr 2024	19 Mar 2024
Machine Age	hrs	Client Info		1559	997	545
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changed	Changed	Not Changed
Filter Changed		Client Info		N/A	N/A	None
Sample Status				ATTENTION	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>650	27	36	34
Chromium	ppm	ASTM D5185m	>4	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	<1	0	<1
Titanium	ppm	ASTM D5185m	>4	<1	0	0
Silver	ppm	ASTM D5185m		<1	0	0
Aluminum	ppm	ASTM D5185m	>25	1	0	<1
Lead	ppm	ASTM D5185m	>4	<1	0	0
Copper	ppm	ASTM D5185m	>60	12	11	10
Tin	ppm	ASTM D5185m	>4	0	<1	1
Vanadium	ppm	ASTM D5185m		<1	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

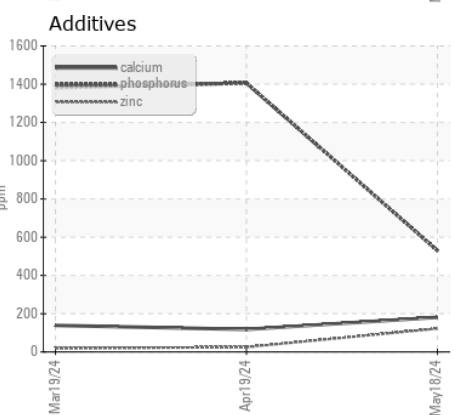
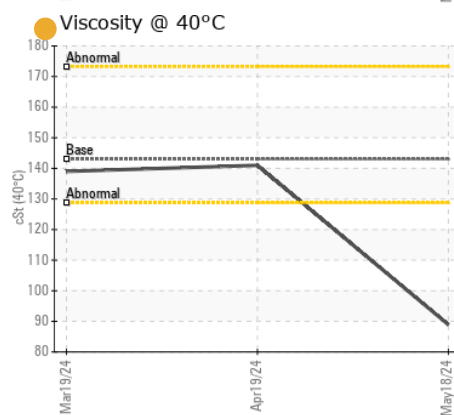
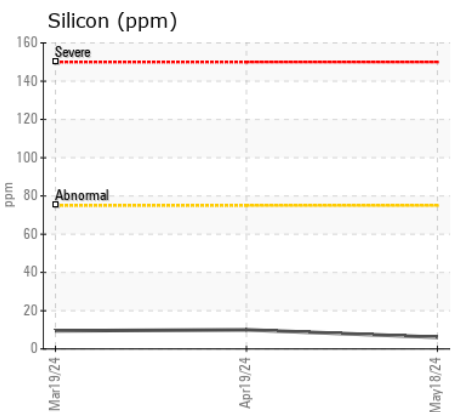
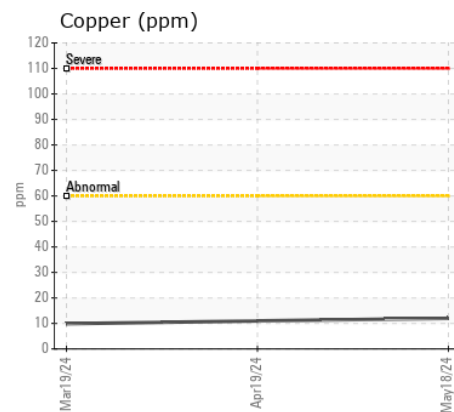
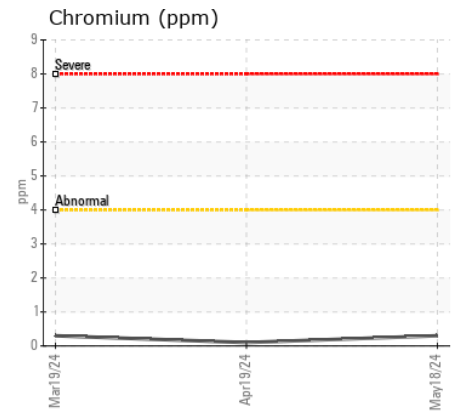
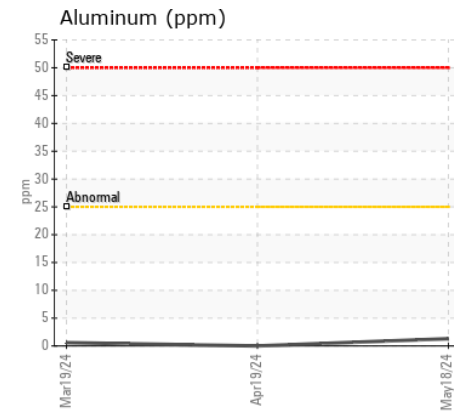
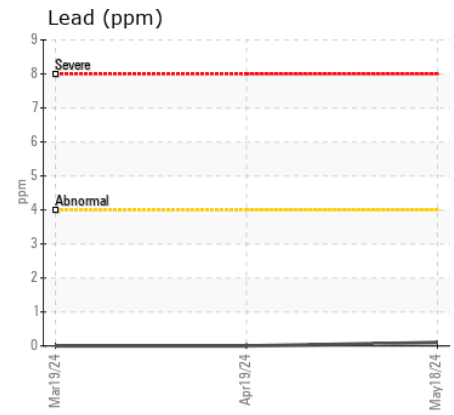
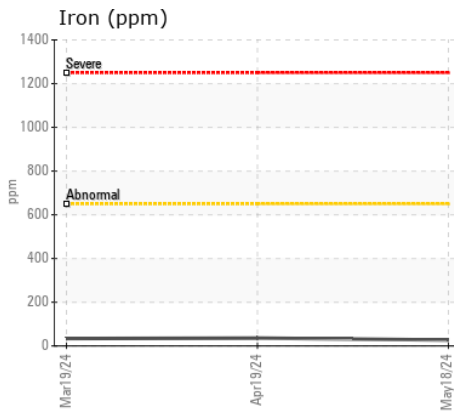
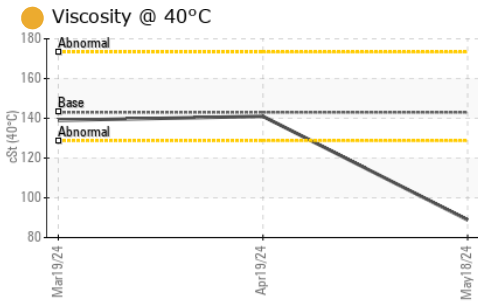
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>75	6	10	10
Potassium	ppm	ASTM D5185m	>20	2	<1	<1
Water		WC Method	>0.2	NEG	NEG	NEG
Silt	scalar	*Visual	NONE	LIGHT	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG

FLUID CONDITION

The oil viscosity is lower than normal. Confirm oil type.

Sodium	ppm	ASTM D5185m	>170	3	2	2
Boron	ppm	ASTM D5185m	400	6	6	3
Barium	ppm	ASTM D5185m	200	0	2	0
Molybdenum	ppm	ASTM D5185m	12	4	0	<1
Manganese	ppm	ASTM D5185m		<1	1	<1
Magnesium	ppm	ASTM D5185m	12	30	5	<1
Calcium	ppm	ASTM D5185m	150	181	118	139
Phosphorus	ppm	ASTM D5185m	1650	530	1406	1382
Zinc	ppm	ASTM D5185m	125	122	25	19
Sulfur	ppm	ASTM D5185m	22500	13762	22507	22351
Visc @ 40°C	cSt	ASTM D445	143	88.9	141	139



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LH0282879
Lab Number : 06192620
Unique Number : 11049372
Test Package : MOBCE

Received : 28 May 2024
Tested : 29 May 2024
Diagnosed : 30 May 2024 - Don Baldrige

KINDER MORGAN
 4301 IVERSON
 TRINITY, AL
 US 35601

Contact: RICKY JOHNSON
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To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - 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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