



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR LH30M 1253-117759
Component
Diesel Engine
Fluid
LIEBHERR MOTOROIL 5W30 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0210944	LH0210925	LH0210902
Sample Date		Client Info		02 Feb 2024	29 Jul 2023	29 Jul 2023
Machine Age	hrs	Client Info		7907	6250	5000
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	N/A	N/A
Filter Changed		Client Info		Changed	N/A	N/A
Sample Status				NORMAL	ABNORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>66	18	13	7
Chromium	ppm	ASTM D5185m	>4	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m	>8	5	3	2
Lead	ppm	ASTM D5185m	>10	0	4	<1
Copper	ppm	ASTM D5185m	>74	6	▲ 392	1
Tin	ppm	ASTM D5185m	>4	<1	1	<1
Vanadium	ppm	ASTM D5185m		0	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

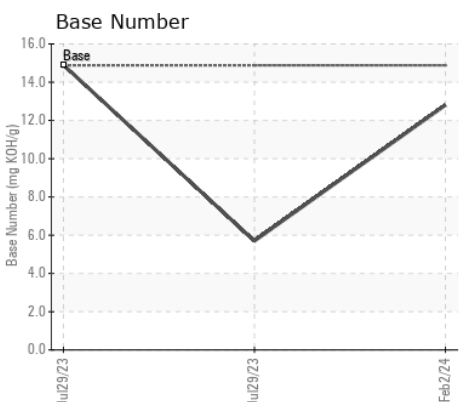
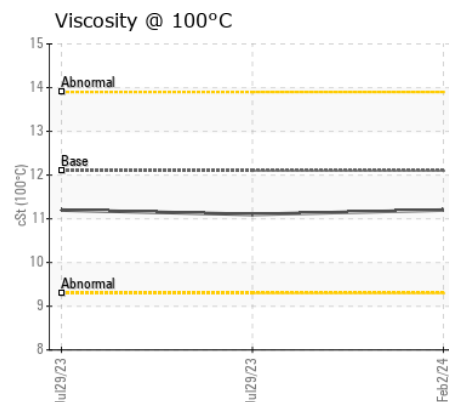
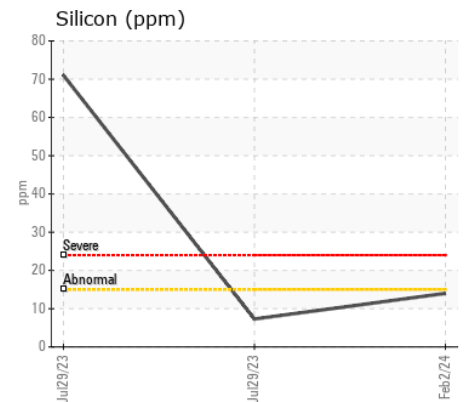
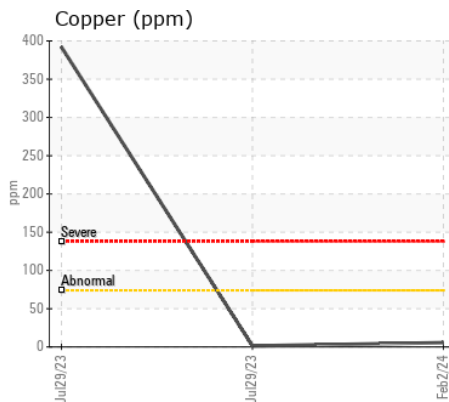
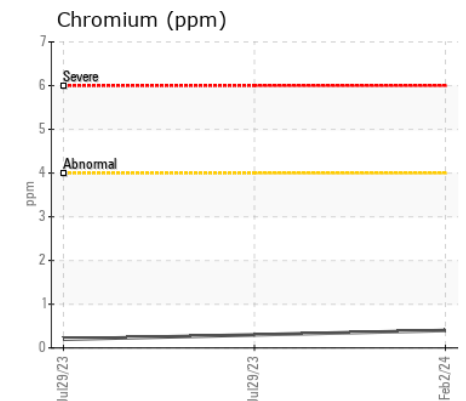
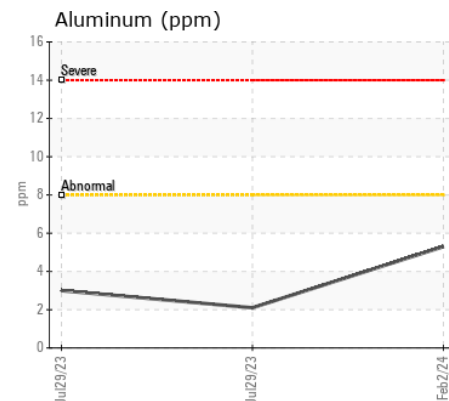
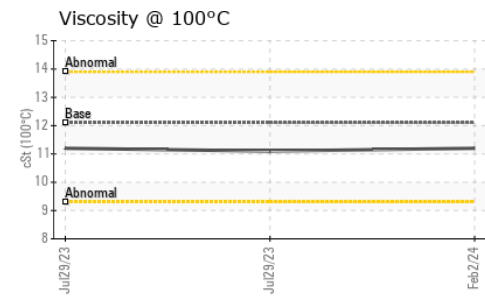
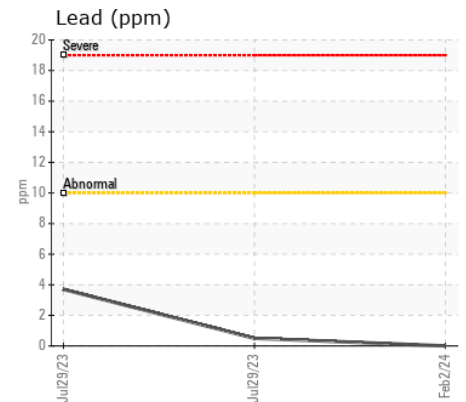
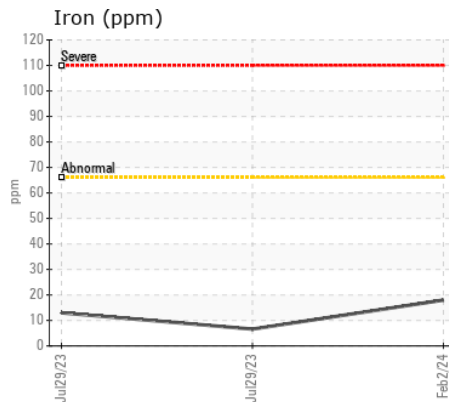
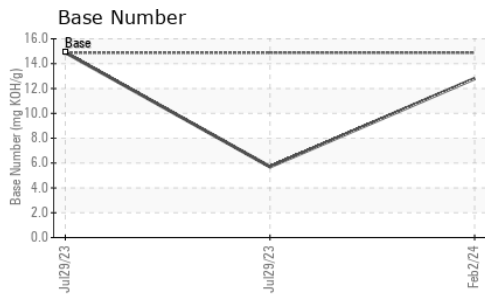
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>15	14	▲ 71	7
Potassium	ppm	ASTM D5185m	>20	9	2	1
Fuel		WC Method	>5	<1.0	0.8	1.8
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	13.3	9.7	13.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	17.1	35.9	14.7
Silt	scalar	*Visual	NONE	NONE	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 BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		0	2	1
Boron	ppm	ASTM D5185m	236	360	118	269
Barium	ppm	ASTM D5185m	0	26	18	0
Molybdenum	ppm	ASTM D5185m	0	<1	33	<1
Manganese	ppm	ASTM D5185m	<1	0	2	<1
Magnesium	ppm	ASTM D5185m	25	35	751	21
Calcium	ppm	ASTM D5185m	4298	5980	1354	4317
Phosphorus	ppm	ASTM D5185m	1020	1492	720	1015
Zinc	ppm	ASTM D5185m	1164	1659	858	1243
Sulfur	ppm	ASTM D5185m	2460	4354	2691	3328
Oxidation	Abs/.1mm	*ASTM D7414	>25	12.9	44.8	10.7
Base Number (BN)	mg KOH/g	ASTM D2896	14.88	12.8	5.7	14.9
Visc @ 100°C	cSt	ASTM D445	12.1	11.2	11.1	11.2



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LH0210944 **Received** : 09 Feb 2024
Lab Number : 06084588 **Tested** : 12 Feb 2024
Unique Number : 10872033 **Diagnosed** : 12 Feb 2024 - Don Baldrige
Test Package : MOBCE (Additional Tests: TBN)

RECO EQUIPMENT INC.
 1615 JP HENESSY DRIVE
 LAVERGNE, TN
 US 37086
 Contact: KEN FISCHER

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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F: