



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
1528-145795 LIEBHERR LH60C 1528-145795
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 5W30 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LHMC149968	DJJ0017860	DJJ0017626
Sample Date		Client Info		14 Jun 2024	13 Mar 2024	20 Oct 2023
Machine Age	hrs	Client Info		2294	1771	948
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	Changed
Filter Changed		Client Info		N/A	N/A	Changed
Sample Status				NORMAL	NORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	4	6	10
Chromium	ppm	ASTM D5185m	>5	<1	0	<1
Nickel	ppm	ASTM D5185m	>5	0	0	0
Titanium	ppm	ASTM D5185m		0	0	1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>15	3	2	3
Lead	ppm	ASTM D5185m	>30	<1	0	5
Copper	ppm	ASTM D5185m	>125	3	5	▲ 217
Tin	ppm	ASTM D5185m	>5	0	0	2
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

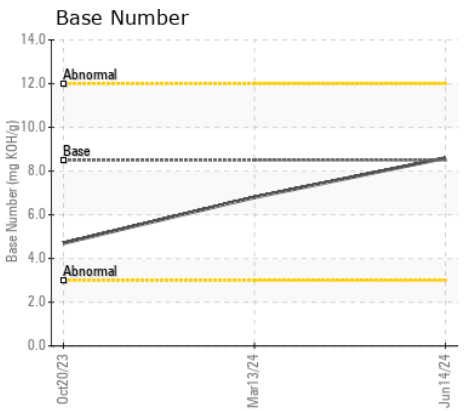
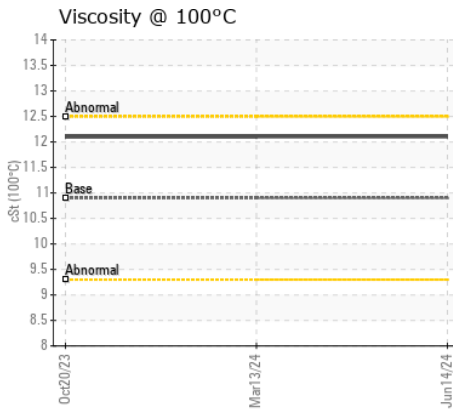
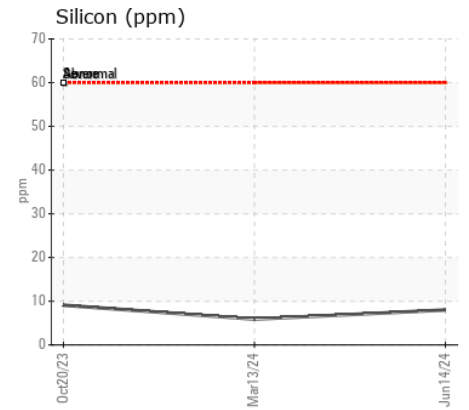
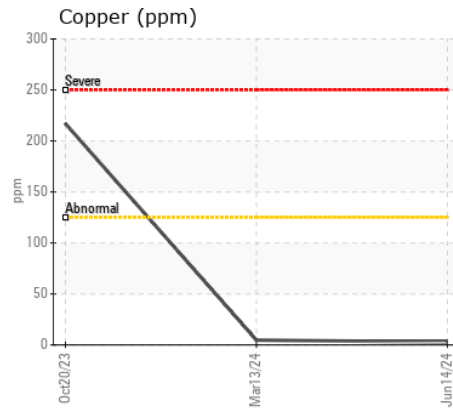
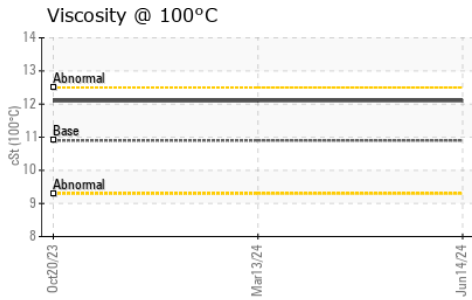
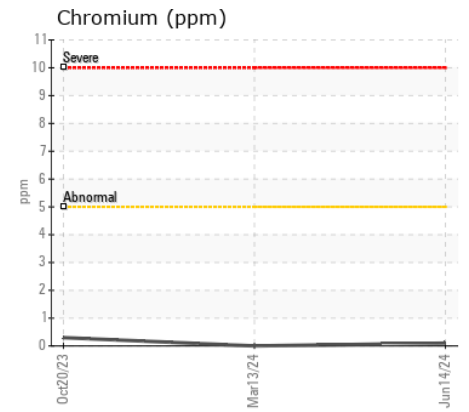
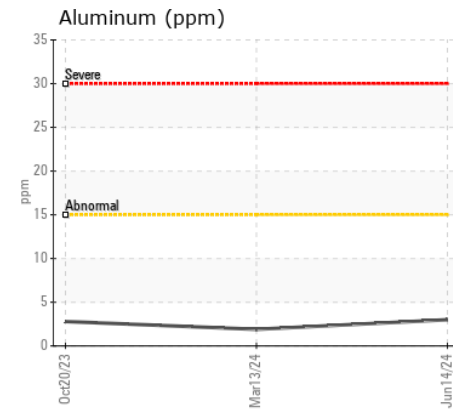
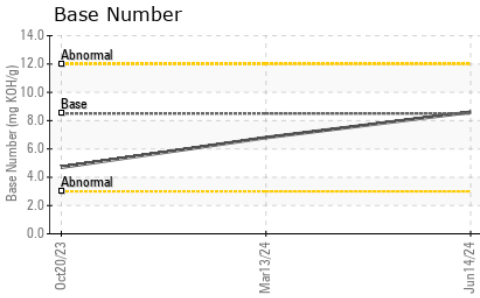
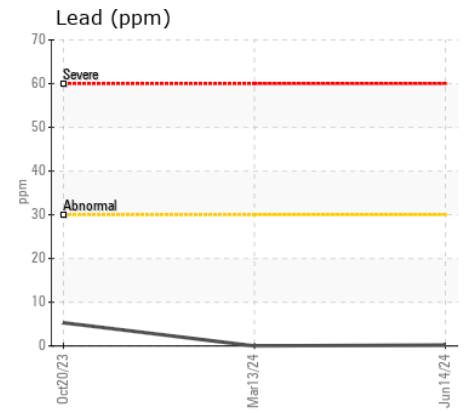
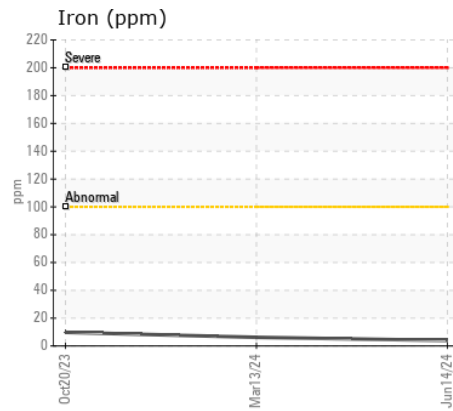
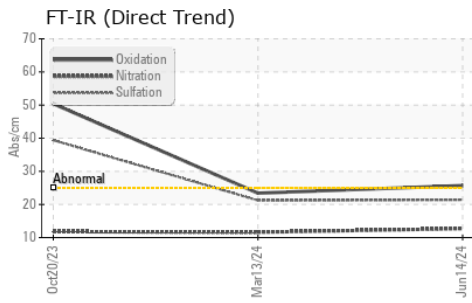
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>60	8	6	9
Potassium	ppm	ASTM D5185m	>20	7	4	24
Fuel		WC Method	>5	<1.0	<1.0	<1.0
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	12.7	11.6	11.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.4	21.2	39.4
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 suitable for further service.

Sodium	ppm	ASTM D5185m		1	2	7
Boron	ppm	ASTM D5185m	250	73	61	99
Barium	ppm	ASTM D5185m	10	0	<1	28
Molybdenum	ppm	ASTM D5185m	100	44	45	44
Manganese	ppm	ASTM D5185m		<1	0	1
Magnesium	ppm	ASTM D5185m	450	918	620	922
Calcium	ppm	ASTM D5185m	3000	1400	1549	1356
Phosphorus	ppm	ASTM D5185m	1150	758	812	662
Zinc	ppm	ASTM D5185m	1350	901	957	919
Sulfur	ppm	ASTM D5185m	4250	2751	3706	2291
Oxidation	Abs/.1mm	*ASTM D7414	>25	25.7	23.4	50.4
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	8.6	6.8	4.7
Visc @ 100°C	cSt	ASTM D445	10.9	12.1	12.1	12.1



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LHMC149968 **Received** : 25 Jun 2024
Lab Number : 06220477 **Tested** : 26 Jun 2024
Unique Number : 11098674 **Diagnosed** : 27 Jun 2024 - Don Baldrige
Test Package : MOB 1 (Additional Tests: TBN)

RIVER METALS RECYCLING - NEWPORT
P.O. BOX 72-220
NEWPORT, KY
US 41072
Contact: RYAN BOWDEN

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)

T:
F: (859)291-0086