



LIEBHERR

OIL ANALYSIS REPORT



Area
RMR-Newport
Machine Id
1217-97851 LIEBHERR LH60M 1217-97851
Component
Rear Right Wheel Hub
Fluid
GEAR OIL SAE 80W90 (--- GAL)

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0258356	DJJ0004302	WCMC64381
Sample Date		Client Info		13 Mar 2024	21 Dec 2020	15 Apr 2019
Machine Age	hrs	Client Info		13914	6959	3089
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	Changed	Changed
Filter Changed		Client Info		N/A	Not Changed	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>650	12	9	12
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		0	0	0
Aluminum	ppm	ASTM D5185m	>25	2	<1	0
Lead	ppm	ASTM D5185m	>4	<1	0	0
Copper	ppm	ASTM D5185m	>60	6	26	17
Tin	ppm	ASTM D5185m	>4	<1	0	0
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	LIGHT
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

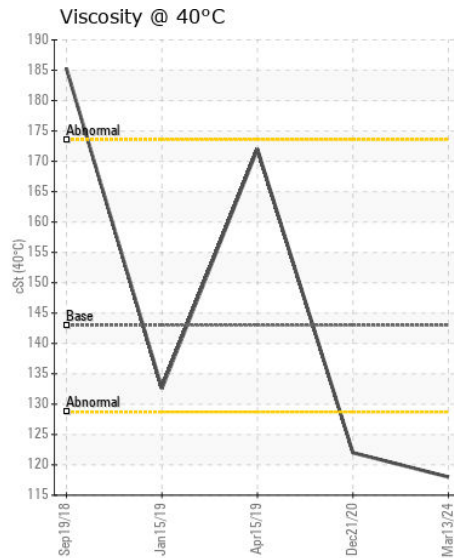
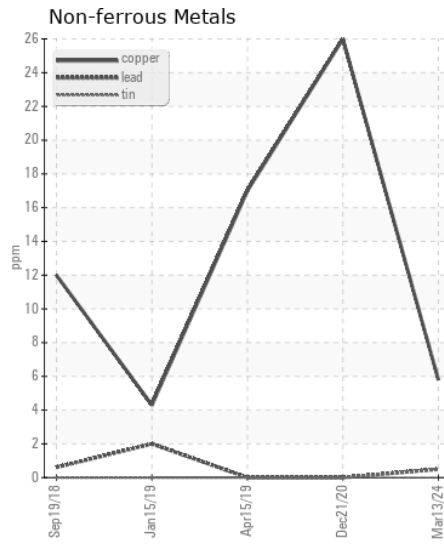
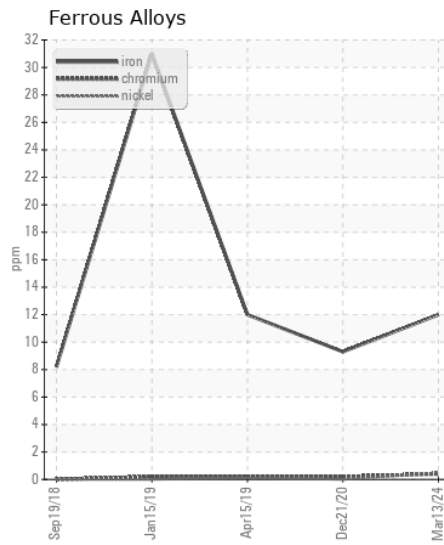
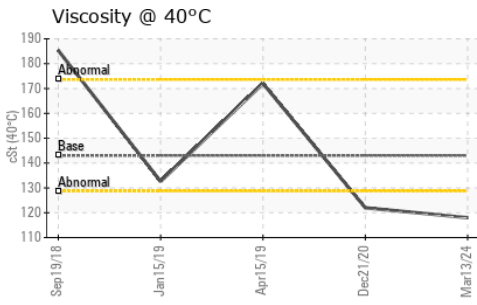
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>75	2	2	2
Potassium	ppm	ASTM D5185m	>20	<1	3	2
Water		WC Method	>0.2	NEG	NEG	NEG
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	LIGHT
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 condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m	>170	1	1	7
Boron	ppm	ASTM D5185m	400	1	75	6
Barium	ppm	ASTM D5185m	200	0	42	263
Molybdenum	ppm	ASTM D5185m	12	<1	<1	<1
Manganese	ppm	ASTM D5185m		<1	<1	1
Magnesium	ppm	ASTM D5185m	12	2	5	0
Calcium	ppm	ASTM D5185m	150	21	33	14
Phosphorus	ppm	ASTM D5185m	1650	215	742	884
Zinc	ppm	ASTM D5185m	125	8	26	14
Sulfur	ppm	ASTM D5185m	22500	16063	13823	23497
Visc @ 40°C	cSt	ASTM D445	143	118	122	172



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LH0258356
Lab Number : 06124010
Unique Number : 10938161
Test Package : CONST

Received : 20 Mar 2024
Tested : 21 Mar 2024
Diagnosed : 22 Mar 2024 - Don Baldrige

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:
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