



OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
TMR-Riviera Beach
Machine Id
493144 LIEBHERR LH50 119559
Component
Rear Right Wheel Hub
Fluid
AMALIE 85W140 (--- GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		DJJ0023217	DJJ0006592	---
Sample Date		Client Info		08 Jul 2024	04 Oct 2022	---
Machine Age	hrs	Client Info		9235	5718	---
Oil Age	hrs	Client Info		500	0	---
Filter Age	hrs	Client Info		500	0	---
Oil Changed		Client Info		Changed	N/A	---
Filter Changed		Client Info		Changed	N/A	---
Sample Status				ABNORMAL	NORMAL	---

WEAR

The copper level is abnormal. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>325	57	<1	---
Chromium	ppm	ASTM D5185m	>3	<1	<1	---
Nickel	ppm	ASTM D5185m	>2	<1	<1	---
Titanium	ppm	ASTM D5185m		<1	0	---
Silver	ppm	ASTM D5185m		0	0	---
Aluminum	ppm	ASTM D5185m	>10	2	0	---
Lead	ppm	ASTM D5185m	>4	<1	2	---
Copper	ppm	ASTM D5185m	>75	▲ 226	<1	---
Tin	ppm	ASTM D5185m	>3	<1	2	---
Vanadium	ppm	ASTM D5185m		0	<1	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

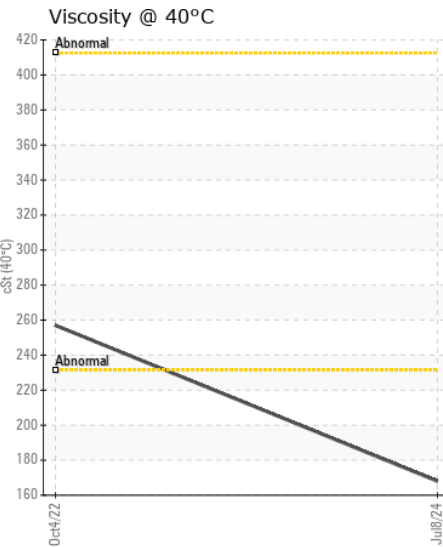
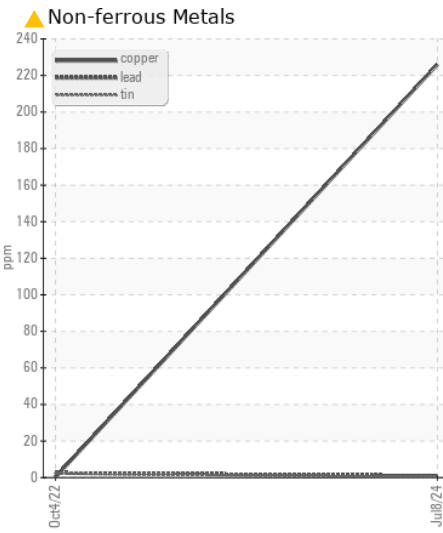
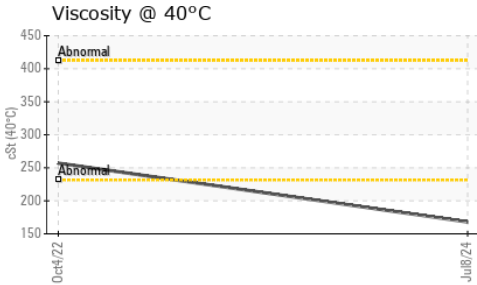
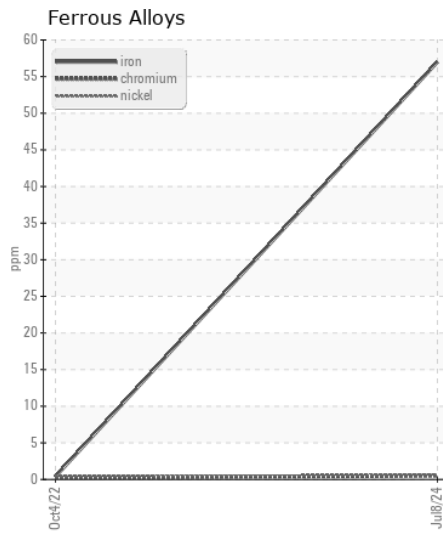
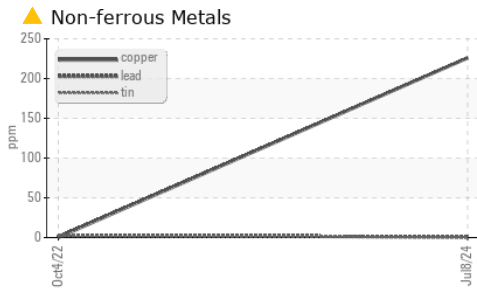
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>75	16	1	---
Potassium	ppm	ASTM D5185m	>20	103	4	---
Water		WC Method	>0.2	NEG	NEG	---
Silt	scalar	*Visual	NONE	NONE	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	---

FLUID CONDITION

The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		6	0	---
Boron	ppm	ASTM D5185m		139	6	---
Barium	ppm	ASTM D5185m		0	0	---
Molybdenum	ppm	ASTM D5185m		<1	2	---
Manganese	ppm	ASTM D5185m		4	0	---
Magnesium	ppm	ASTM D5185m		3	5	---
Calcium	ppm	ASTM D5185m		43	171	---
Phosphorus	ppm	ASTM D5185m		1249	465	---
Zinc	ppm	ASTM D5185m		62	92	---
Sulfur	ppm	ASTM D5185m		21280	18727	---
Visc @ 40°C	cSt	ASTM D445		168	257	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : DJJ0023217
Lab Number : 06236521
Unique Number : 11125355
Test Package : CONST

Received : 15 Jul 2024
Tested : 16 Jul 2024
Diagnosed : 17 Jul 2024 - Sean Felton

TRADEMARK METALS RECYCLING - RIVIERA BEACH
 4661 DYER BLVD
 WEST PALM BEACH, FL
 US 33407
 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)

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