



OIL ANALYSIS REPORT

WEAR
CONTAMINATION
FLUID CONDITION

ABNORMAL
SEVERE
ATTENTION



Area
TMR-Riviera Beach
Machine Id
231160 LIEBHERR LH40M 1202-75762
Component
Swing Drive
Fluid
AMALIE 15W40 (--- GAL)

RECOMMENDATION

We advise that you check for the source of water entry. The oil change at the time of sampling has been noted. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		DJJ0023197	DJJ0021108	DJJ0007922
Sample Date		Client Info		09 Jul 2024	13 Oct 2023	15 Sep 2021
Machine Age	hrs	Client Info		15282	14181	10709
Oil Age	hrs	Client Info		500	0	1000
Filter Age	hrs	Client Info		500	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	N/A
Sample Status				SEVERE	SEVERE	SEVERE

WEAR

High concentration of visible metal present. Bearing and/or gear wear is indicated.

Iron	ppm	ASTM D5185m	>350	▲ 548	▲ 5125	▲ 2701
Chromium	ppm	ASTM D5185m	>15	▲ 4	▲ 60	▲ 25
Nickel	ppm	ASTM D5185m	>5	▲ 0	▲ 20	3
Titanium	ppm	ASTM D5185m		▲ 0	<1	<1
Silver	ppm	ASTM D5185m		▲ 0	0	0
Aluminum	ppm	ASTM D5185m	>5	▲ 0	2	▲ 4
Lead	ppm	ASTM D5185m	>10	▲ 2	▲ 29	▲ 18
Copper	ppm	ASTM D5185m	>300	▲ 424	▲ 2633	▲ 1182
Tin	ppm	ASTM D5185m	>15	▲ 13	▲ 81	▲ 33
Vanadium	ppm	ASTM D5185m		▲ 0	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	▲ HEAVY	NONE	NONE

CONTAMINATION

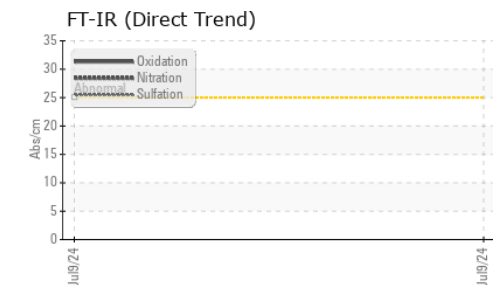
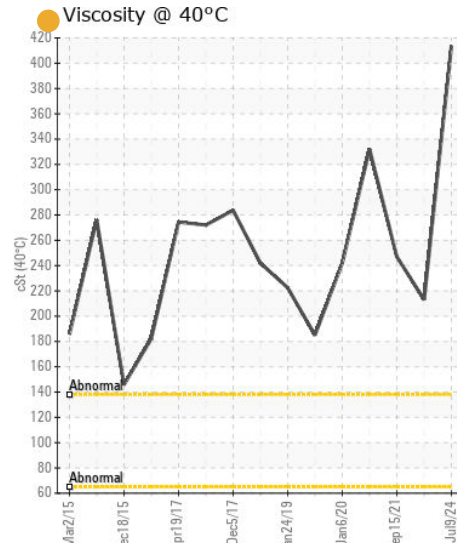
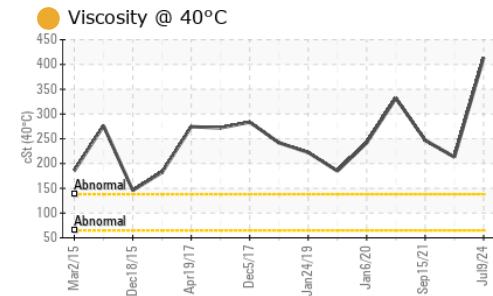
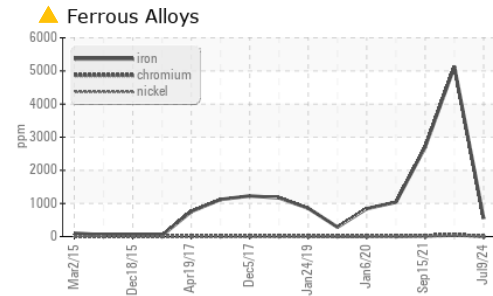
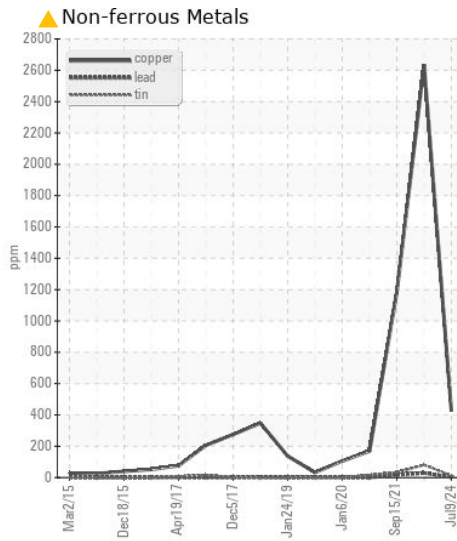
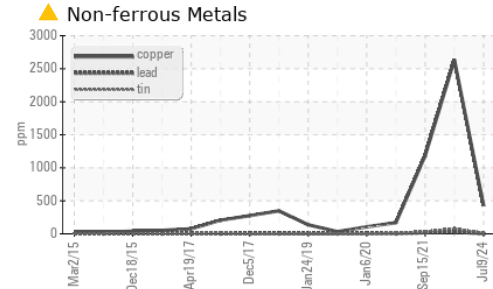
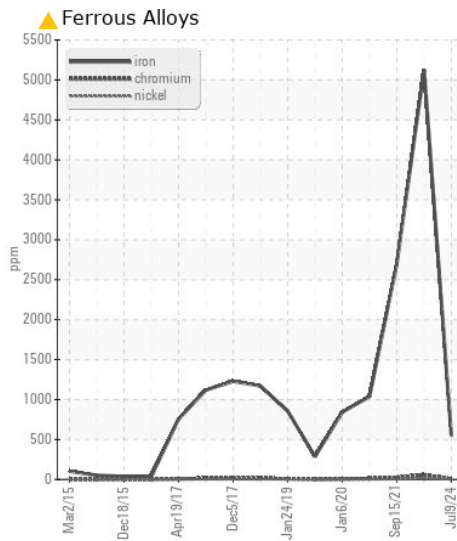
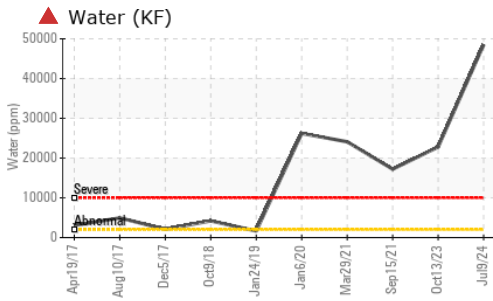
There is a high concentration of water present in the oil.

Silicon	ppm	ASTM D5185m	>15	▲ 2	▲ 19	9
Potassium	ppm	ASTM D5185m	>20	<1	1	0
Water	%	ASTM D6304	>0.2	▲ 4.85	▲ 2.28	▲ 1.72
ppm Water	ppm	ASTM D6304	>2000	▲ 48500	▲ 22800	▲ 17200
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	▲ 0.2%	▲ 0.2%	▲ 0.2%

FLUID CONDITION

Viscosity of sample indicates oil is within ISO 460 range, advise investigate. The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185m		<1	2	2
Boron	ppm	ASTM D5185m		0	8	15
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		2	6	2
Manganese	ppm	ASTM D5185m		4	42	22
Magnesium	ppm	ASTM D5185m		26	10	9
Calcium	ppm	ASTM D5185m		30	19	6
Phosphorus	ppm	ASTM D5185m		429	2321	2434
Zinc	ppm	ASTM D5185m		56	132	65
Sulfur	ppm	ASTM D5185m		21451	24278	22970
Visc @ 40°C	cSt	ASTM D445		● 413.6	213	247



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : DJJ0023197 **Received** : 15 Jul 2024
Lab Number : 06235634 **Tested** : 19 Jul 2024
Unique Number : 11124468 **Diagnosed** : 19 Jul 2024 - Jonathan Hester
Test Package : CONST (Additional Tests: FT-IR, KF, KV100)

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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