



# OIL ANALYSIS REPORT

WEAR	<b>SEVERE</b>
CONTAMINATION	<b>SEVERE</b>
FLUID CONDITION	<b>NORMAL</b>



Area  
**RMR-Newport**  
Machine Id  
**23617 LIEBHERR A934C 040933-1007**  
Component  
**Swing Drive**  
Fluid  
**GEAR OIL SAE 80W90 (--- GAL)**

## RECOMMENDATION

We advise that you check for the source of water entry. We recommend that you drain the oil from the component if this has not already been done. 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		<b>DJJ0017643</b>	DJJ0016257	DJJ0004069
Sample Date		Client Info		<b>24 May 2024</b>	15 Feb 2023	23 Sep 2021
Machine Age	hrs	Client Info		<b>13856</b>	12299	10715
Oil Age	hrs	Client Info		<b>0</b>	0	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>N/A</b>	Not Changd	Changed
Filter Changed		Client Info		<b>N/A</b>	Changed	Changed
Sample Status				<b>SEVERE</b>	MARGINAL	ABNORMAL

## WEAR

Gear wear is indicated. Bearing and/or bushing wear is indicated.

Iron	ppm	ASTM D5185m	>1700	<b>▲ 4301</b>	662	1260
Chromium	ppm	ASTM D5185m	>15	<b>▲ 21</b>	5	14
Nickel	ppm	ASTM D5185m	>4	<b>▲ 5</b>	<1	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>4	<b>1</b>	1	2
Lead	ppm	ASTM D5185m	>10	<b>0</b>	0	4
Copper	ppm	ASTM D5185m	>550	<b>▲ 1196</b>	193	▲ 317
Tin	ppm	ASTM D5185m	>30	<b>▲ 83</b>	16	▲ 50
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	MODER	LIGHT
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

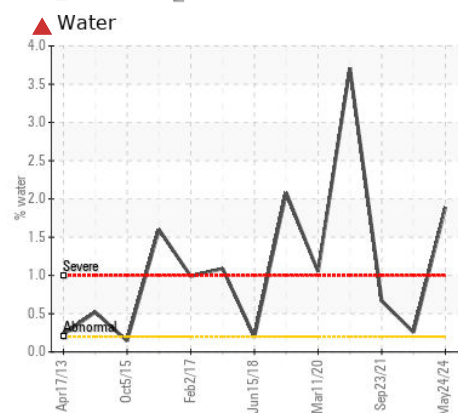
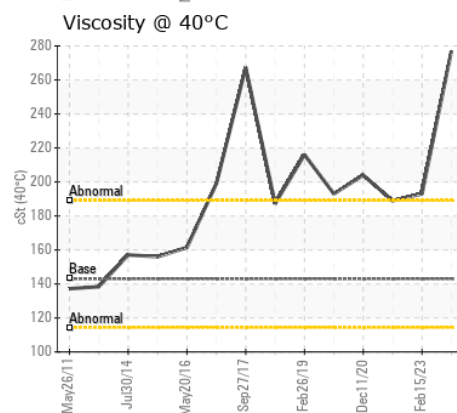
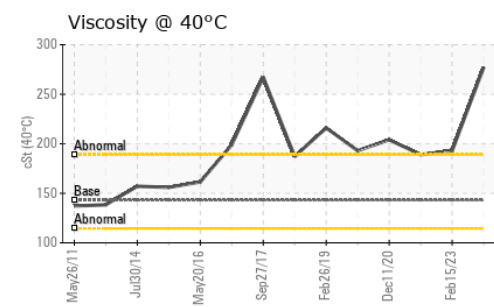
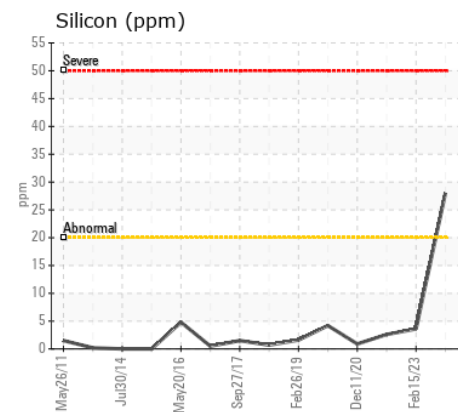
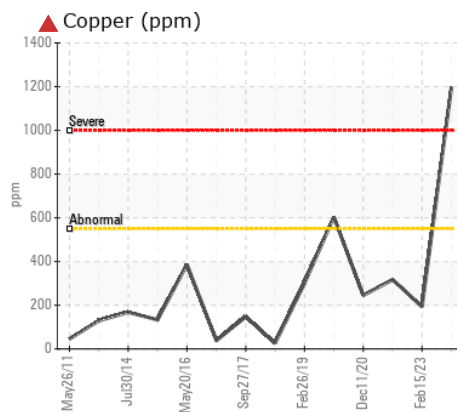
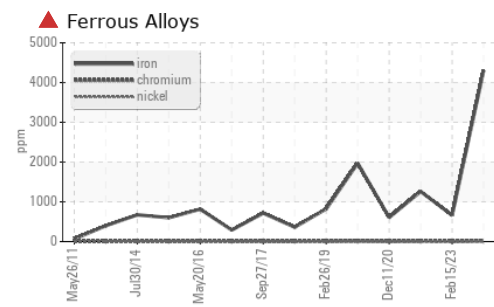
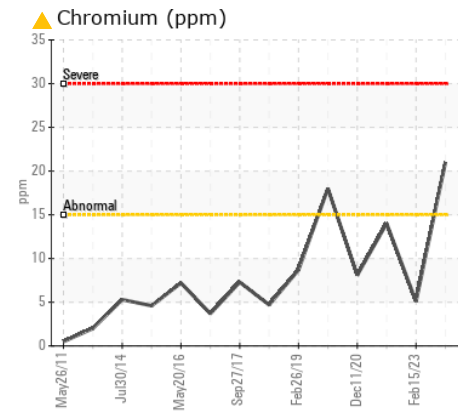
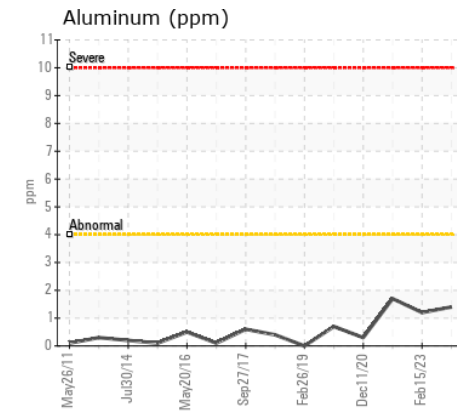
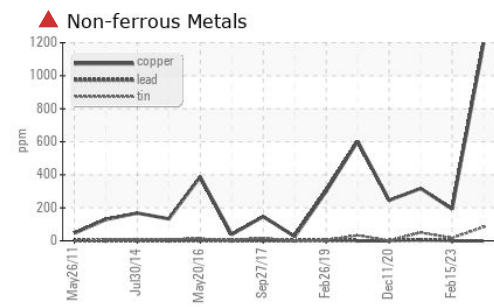
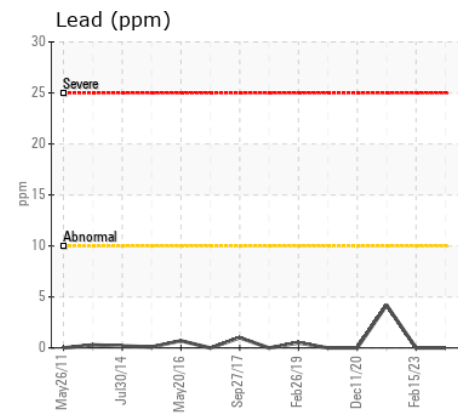
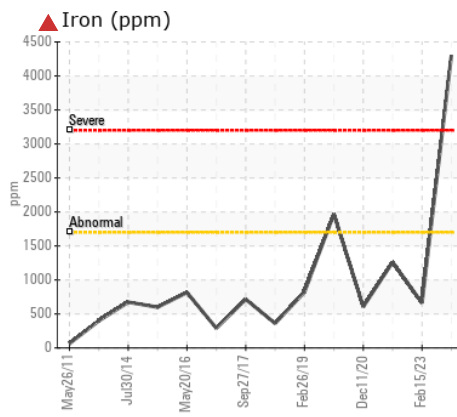
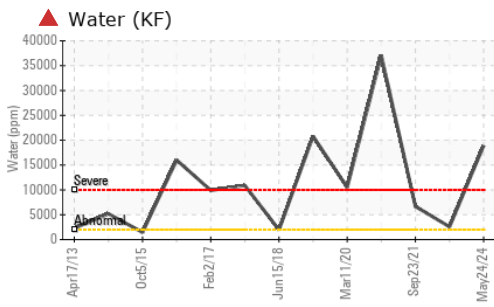
There is a high concentration of water present in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>28</b>	4	3
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	<1	0
Water	%	ASTM D6304	>0.2	<b>▲ 1.89</b>	▲ 0.256	▲ 0.667
ppm Water	ppm	ASTM D6304	>2000	<b>▲ 18900</b>	▲ 2560	▲ 6670
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	LIGHT	▲ MODER
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>▲ 0.2%</b>	0.2%	▲ 0.2%

## FLUID CONDITION

The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185m	>170	<b>&lt;1</b>	2	<1
Boron	ppm	ASTM D5185m	400	<b>2</b>	<1	5
Barium	ppm	ASTM D5185m	200	<b>8</b>	4	0
Molybdenum	ppm	ASTM D5185m	12	<b>&lt;1</b>	<1	0
Manganese	ppm	ASTM D5185m		<b>33</b>	5	11
Magnesium	ppm	ASTM D5185m	12	<b>4</b>	<1	0
Calcium	ppm	ASTM D5185m	150	<b>23</b>	18	5
Phosphorus	ppm	ASTM D5185m	1650	<b>2238</b>	2196	1927
Zinc	ppm	ASTM D5185m	125	<b>32</b>	17	28
Sulfur	ppm	ASTM D5185m	22500	<b>33349</b>	35871	22641
Visc @ 40°C	cSt	ASTM D445	143	<b>277</b>	193	189



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : DJJ0017643 **Received** : 31 May 2024  
**Lab Number** : 06197133 **Tested** : 03 Jun 2024  
**Unique Number** : 11059256 **Diagnosed** : 04 Jun 2024 - Don Baldrige  
**Test Package** : MOBCE ( Additional Tests: KF )

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

Certificate L2367  
 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)