



# OIL ANALYSIS REPORT

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



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

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>DJJ0017642</b>	DJJ0016255	DJJ0004061
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	Not Changd
Filter Changed		Client Info		<b>N/A</b>	Not Changd	Not Changd
Sample Status				<b>NORMAL</b>	NORMAL	MARGINAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>190	<b>53</b>	4	73
Chromium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	<1
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>5	<b>&lt;1</b>	<1	<1
Lead	ppm	ASTM D5185m	>15	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>70	<b>30</b>	5	8
Tin	ppm	ASTM D5185m	>2	<b>0</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>MODER</b>	LIGHT	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

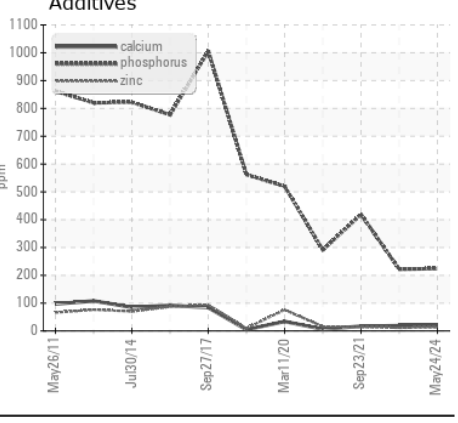
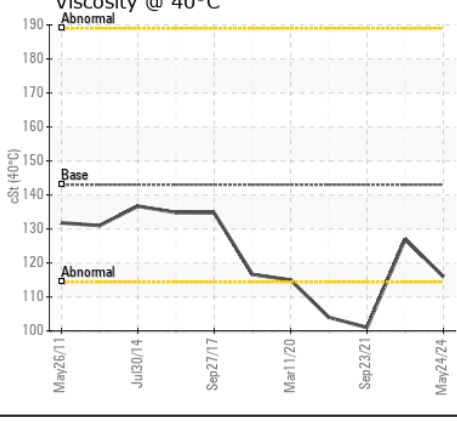
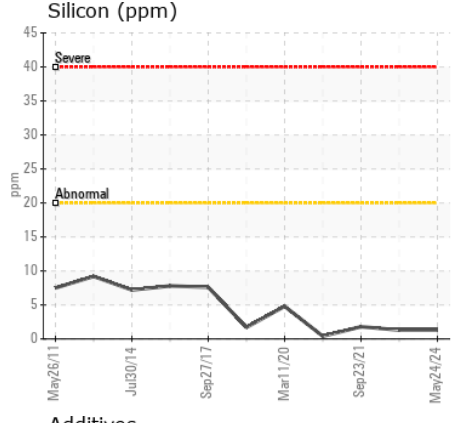
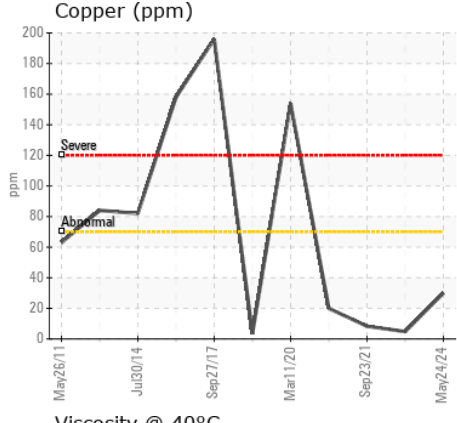
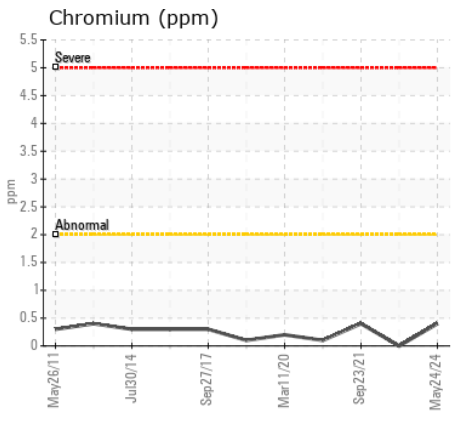
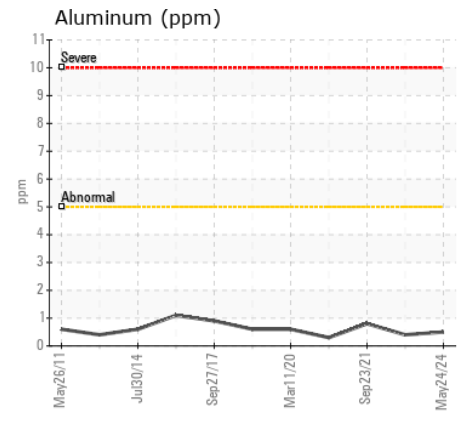
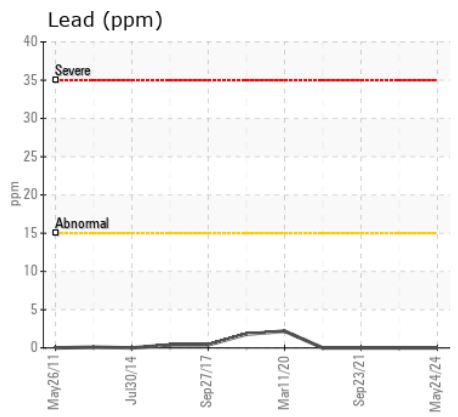
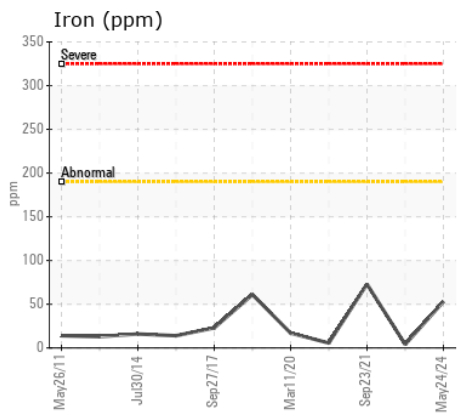
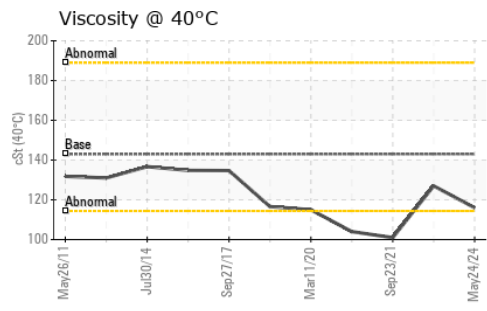
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>1</b>	1	2
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	1	<1
Water		WC Method	>.2	<b>NEG</b>	NEG	NEG
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	▲ 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	>.2	<b>NEG</b>	NEG	NEG

## FLUID CONDITION

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

Sodium	ppm	ASTM D5185m	>170	<b>0</b>	0	2
Boron	ppm	ASTM D5185m	400	<b>0</b>	<1	10
Barium	ppm	ASTM D5185m	200	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	12	<b>2</b>	3	<1
Manganese	ppm	ASTM D5185m		<b>1</b>	<1	1
Magnesium	ppm	ASTM D5185m	12	<b>2</b>	3	6
Calcium	ppm	ASTM D5185m	150	<b>19</b>	19	17
Phosphorus	ppm	ASTM D5185m	1650	<b>224</b>	222	419
Zinc	ppm	ASTM D5185m	125	<b>13</b>	11	15
Sulfur	ppm	ASTM D5185m	22500	<b>16533</b>	17213	12773
Visc @ 40°C	cSt	ASTM D445	143	<b>116</b>	127	101



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : DJJ0017642  
**Lab Number** : 06197129  
**Unique Number** : 11059252  
**Test Package** : MOBCE  
**Received** : 31 May 2024  
**Tested** : 03 Jun 2024  
**Diagnosed** : 04 Jun 2024 - Don Baldrige

**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)