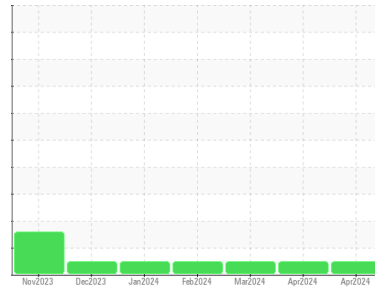




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id

**1802**

Component

**Diesel Engine**

Fluid

**DIESEL ENGINE OIL SAE 15W40 (--- GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the oil.

### Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			<b>WC0897879</b>	WC0897919	WC0878867
Sample Date	Client Info			<b>29 Apr 2024</b>	01 Apr 2024	07 Mar 2024
Machine Age	mls	Client Info		<b>405573</b>	399467	0
Oil Age	mls	Client Info		<b>0</b>	0	0
Oil Changed	Client Info			<b>N/A</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>5		<b>&lt;1.0</b>	<1.0	<1.0
Water	WC Method	>0.2		<b>NEG</b>	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	<b>11</b>	7	8
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m	>20	<b>2</b>	<1	3
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	0	0
Copper	ppm	ASTM D5185m	>330	<b>73</b>	69	81
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Cadmium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	250	<b>&lt;1</b>	<1	<1
Barium	ppm	ASTM D5185m	10	<b>2</b>	0	2
Molybdenum	ppm	ASTM D5185m	100	<b>60</b>	52	58
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	450	<b>871</b>	851	890
Calcium	ppm	ASTM D5185m	3000	<b>1082</b>	1016	1071
Phosphorus	ppm	ASTM D5185m	1150	<b>1036</b>	901	1001
Zinc	ppm	ASTM D5185m	1350	<b>1193</b>	1100	1176
Sulfur	ppm	ASTM D5185m	4250	<b>2961</b>	3060	3035

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	<b>18</b>	9	5
Sodium	ppm	ASTM D5185m	>158	<b>4</b>	2	0
Potassium	ppm	ASTM D5185m	>20	<b>13</b>	0	3
Glycol	%	*ASTM D2982		<b>NEG</b>	NEG	NEG

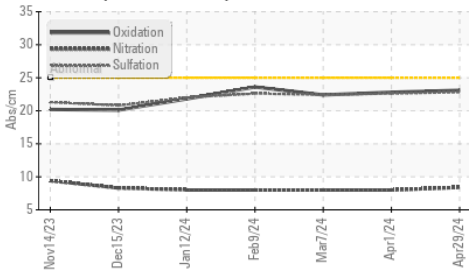
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	<b>0.3</b>	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.4</b>	8.0	8.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>22.8</b>	22.6	22.4

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>23.1</b>	22.8	22.4
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>6.7</b>	6.6	6.9

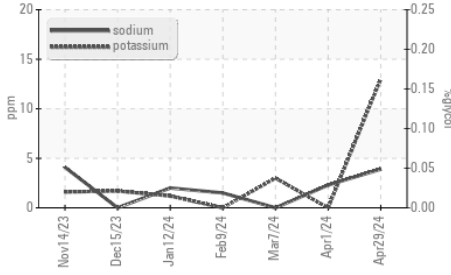


# OIL ANALYSIS REPORT

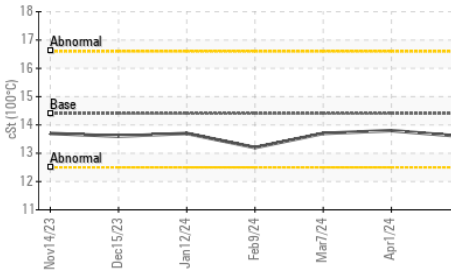
FT-IR (Direct Trend)



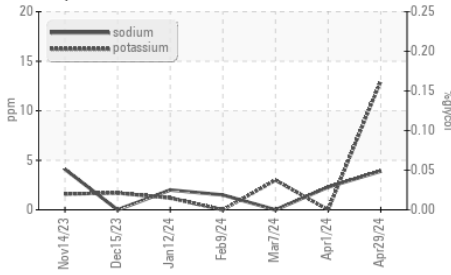
Glycol Contamination



Viscosity @ 100°C



Glycol Contamination



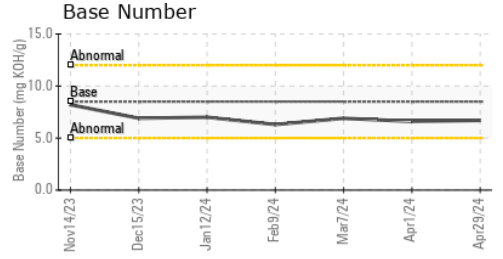
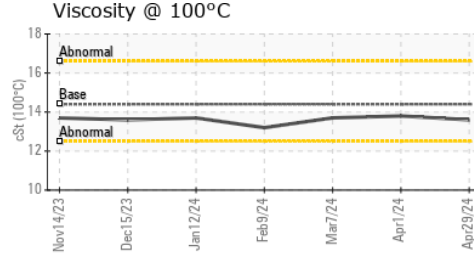
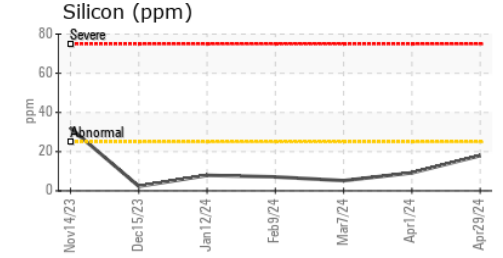
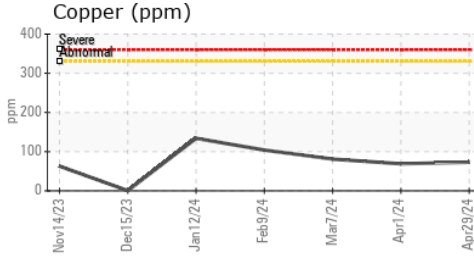
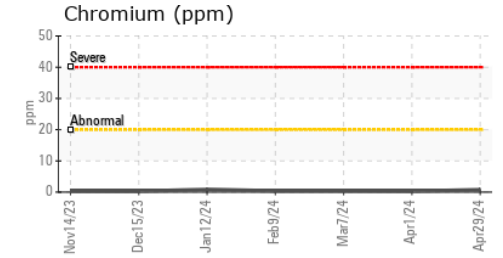
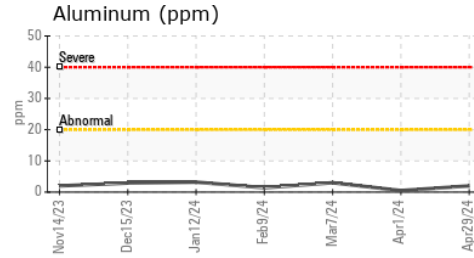
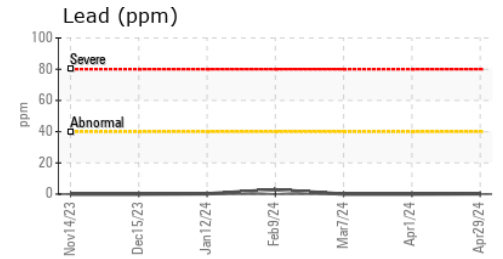
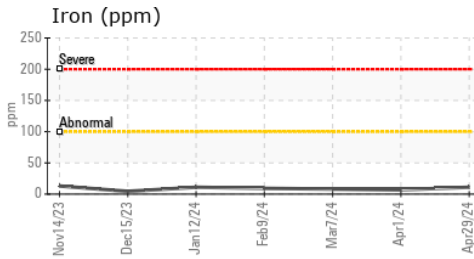
Viscosity @ 100°C



PARAMETER	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
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
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.4	13.6	13.8

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : WC0897879 Received : 13 May 2024  
 Lab Number : 06176797 Tested : 14 May 2024  
 Unique Number : 11022850 Diagnosed : 14 May 2024 - Sean Felton  
 Test Package : MOB 1 ( Additional Tests: Glycol, TBN )

GO DURHAM - RAPT  
 1903 FAYETTEVILLE ST  
 DURHAM, NC  
 US 27701

Contact: Robert Iosiniecki  
 Robert.iosiniecki@ratpdev.com

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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