



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id  
**1711**  
Component  
**Diesel Engine**  
Fluid  
**DIESEL ENGINE OIL SAE 15W40 (--- GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0878869</b>	WC0894016	WC0868120
Sample Date		Client Info		<b>09 Mar 2024</b>	07 Feb 2024	02 Jan 2024
Machine Age	mls	Client Info		<b>0</b>	0	455302
Oil Age	mls	Client Info		<b>0</b>	0	0
Filter Age	mls	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	N/A	N/A
Filter Changed		Client Info		<b>Changed</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>9</b>	10	15
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m	>3	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>3</b>	3	3
Lead	ppm	ASTM D5185m	>40	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>330	<b>1</b>	1	2
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

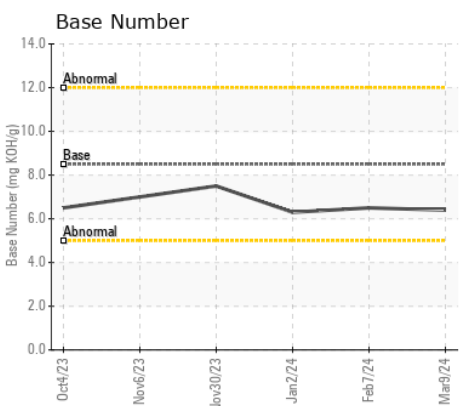
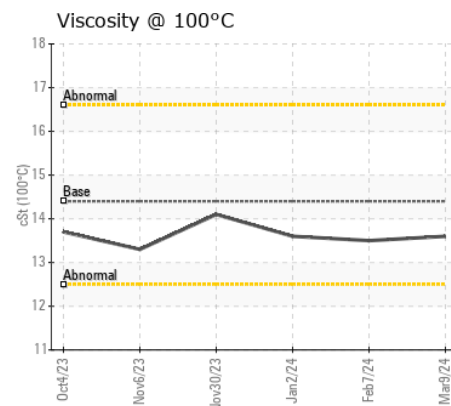
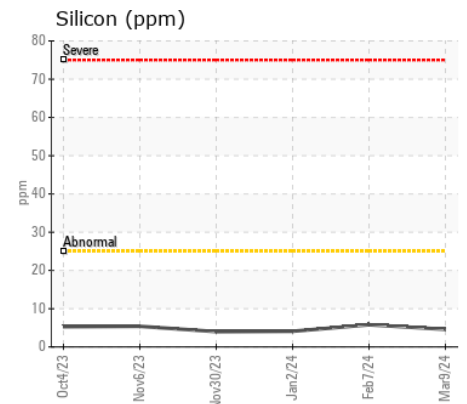
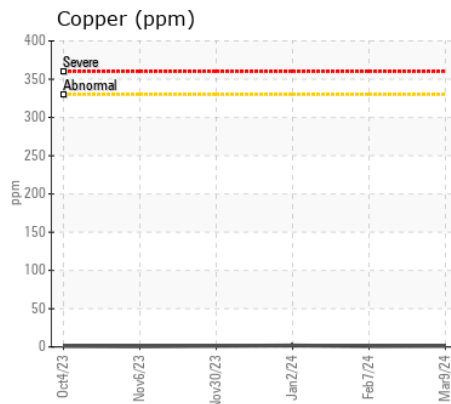
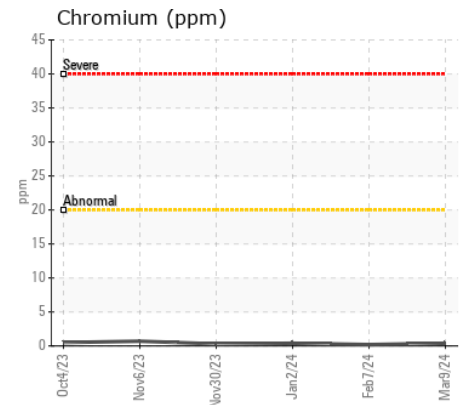
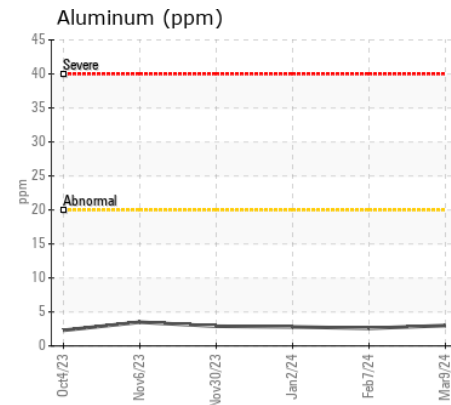
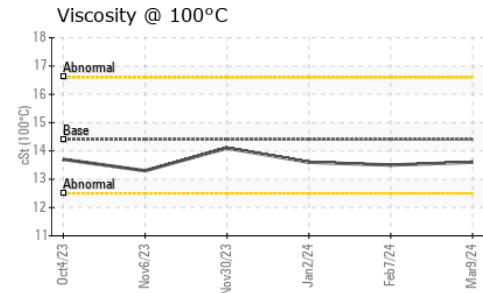
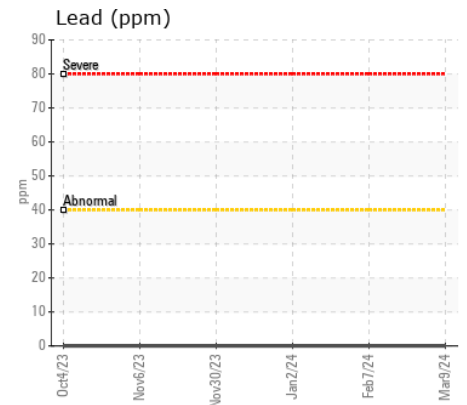
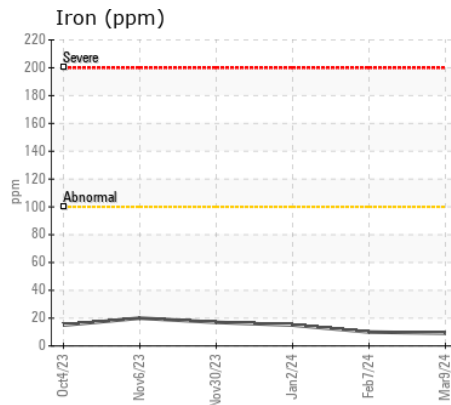
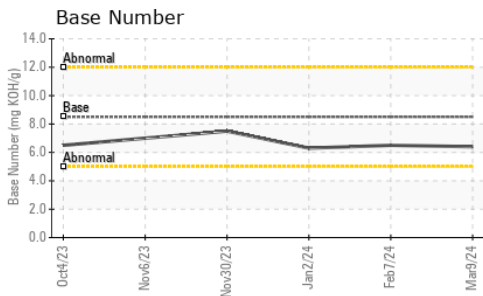
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>5</b>	6	4
Potassium	ppm	ASTM D5185m	>20	<b>4</b>	4	10
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.3</b>	0.3	0.4
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.9</b>	8.8	9.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>23.8</b>	22.9	24.1
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
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>NEG</b>	NEG	NEG

## 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.

Sodium	ppm	ASTM D5185m	>158	<b>&lt;1</b>	3	6
Boron	ppm	ASTM D5185m	250	<b>0</b>	0	2
Barium	ppm	ASTM D5185m	10	<b>2</b>	0	0
Molybdenum	ppm	ASTM D5185m	100	<b>58</b>	55	57
Manganese	ppm	ASTM D5185m		<b>0</b>	0	<1
Magnesium	ppm	ASTM D5185m	450	<b>873</b>	995	944
Calcium	ppm	ASTM D5185m	3000	<b>1043</b>	1056	1064
Phosphorus	ppm	ASTM D5185m	1150	<b>986</b>	985	973
Zinc	ppm	ASTM D5185m	1350	<b>1164</b>	1244	1238
Sulfur	ppm	ASTM D5185m	4250	<b>3101</b>	2880	2952
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>26.1</b>	24.4	26.4
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>6.4</b>	6.5	6.3
Visc @ 100°C	cSt	ASTM D445	14.4	<b>13.6</b>	13.5	13.6



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0878869  
**Lab Number** : 06124580  
**Unique Number** : 10938731  
**Test Package** : MOB 1 ( Additional Tests: TBN )

**Received** : 21 Mar 2024  
**Tested** : 21 Mar 2024  
**Diagnosed** : 23 Mar 2024 - Don Baldrige

**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)

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F: