



# OIL ANALYSIS REPORT

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

Machine Id  
**1707**  
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>WC0897904</b>	WC0894022	WC0855895
Sample Date		Client Info		<b>06 May 2024</b>	15 Mar 2024	03 Oct 2023
Machine Age	mls	Client Info		<b>0</b>	0	0
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>N/A</b>	N/A	N/A
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	ABNORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>17</b>	14	15
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	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>2</b>	2	1
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	0	<1
Copper	ppm	ASTM D5185m	>330	<b>77</b>	37	<1
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

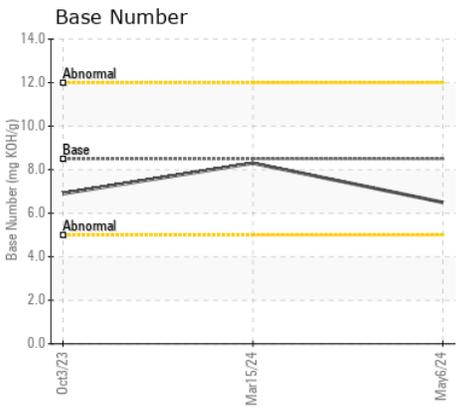
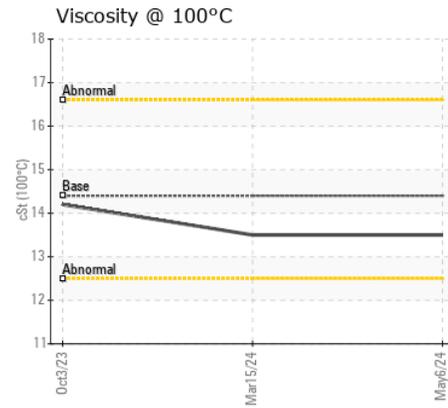
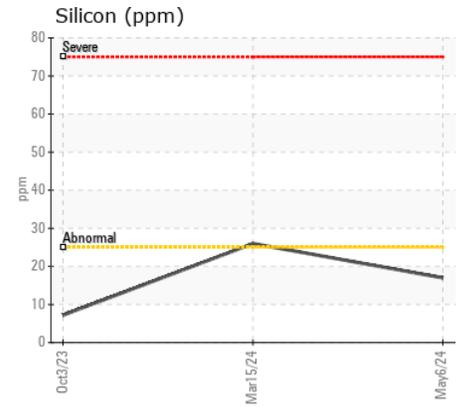
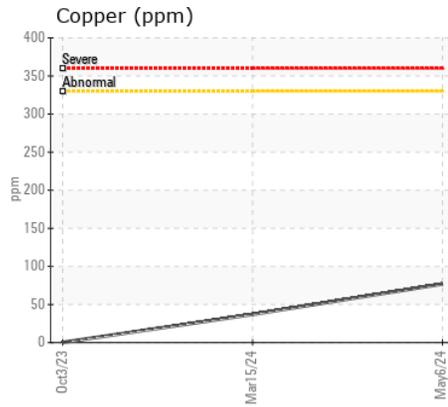
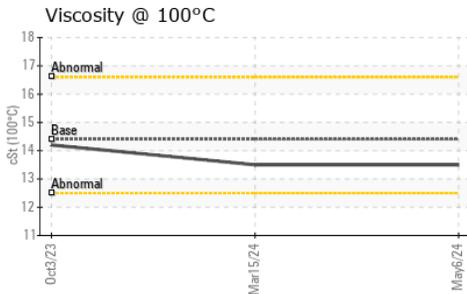
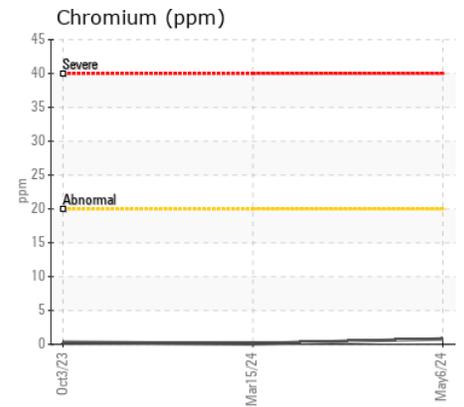
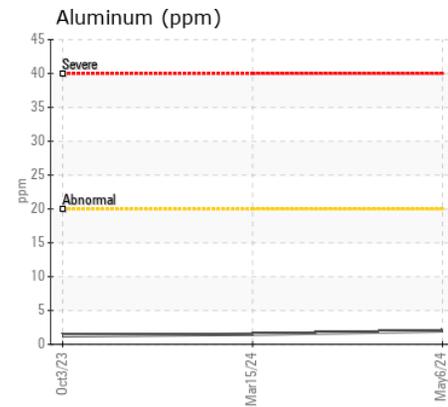
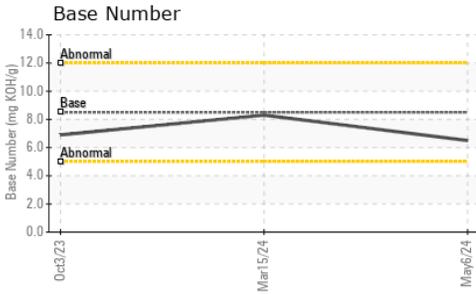
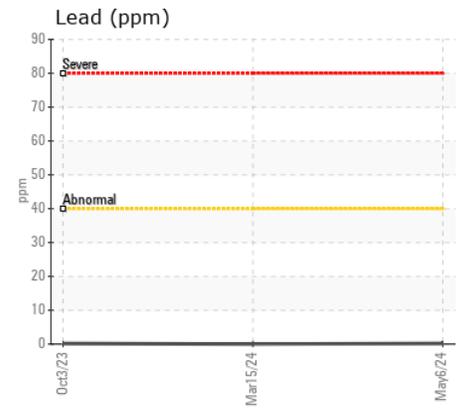
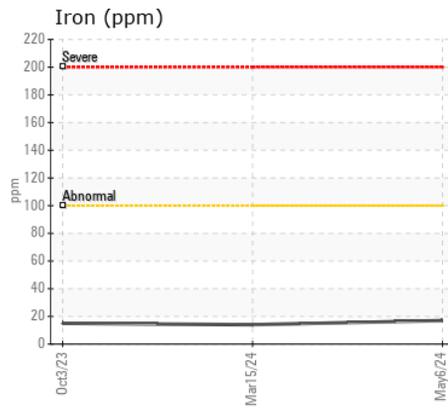
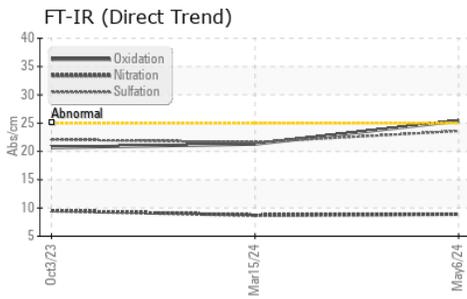
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>17</b>	▲ 26	7
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	<1	4
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>	0.1	0.6
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.9</b>	8.7	9.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>23.6</b>	21.6	22.1
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>1</b>	4	6
Boron	ppm	ASTM D5185m	250	<b>0</b>	43	2
Barium	ppm	ASTM D5185m	10	<b>2</b>	5	0
Molybdenum	ppm	ASTM D5185m	100	<b>59</b>	50	61
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	7	<1
Magnesium	ppm	ASTM D5185m	450	<b>878</b>	813	947
Calcium	ppm	ASTM D5185m	3000	<b>1082</b>	1237	1136
Phosphorus	ppm	ASTM D5185m	1150	<b>997</b>	776	1049
Zinc	ppm	ASTM D5185m	1350	<b>1182</b>	934	1315
Sulfur	ppm	ASTM D5185m	4250	<b>2702</b>	2895	3066
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>25.4</b>	21.3	20.7
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>6.5</b>	8.3	6.9
Visc @ 100°C	cSt	ASTM D445	14.4	<b>13.5</b>	13.5	14.2



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0897904 **Received** : 13 May 2024  
**Lab Number** : 06176779 **Tested** : 14 May 2024  
**Unique Number** : 11022832 **Diagnosed** : 14 May 2024 - Sean Felton  
**Test Package** : MOB 1 ( Additional Tests: 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)

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F: