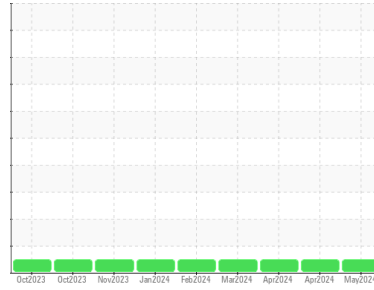




# OIL ANALYSIS REPORT

## Sample Rating Trend



**NORMAL**



Machine Id

**1706**

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>WC0897855</b>	WC0897847	WC0893952
Sample Date	Client Info		<b>28 May 2024</b>	29 Apr 2024	01 Apr 2024
Machine Age	mls	Client Info	<b>419891</b>	413498	0
Oil Age	mls	Client Info	<b>0</b>	6000	0
Oil Changed	Client Info		<b>N/A</b>	Changed	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
Glycol	WC Method		<b>NEG</b>	NEG	NEG

### WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	<b>8</b>	8	8
Chromium	ppm	ASTM D5185m >20	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185m >4	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	<b>0</b>	<1	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>	<1	0
Copper	ppm	ASTM D5185m >330	<b>2</b>	4	8
Tin	ppm	ASTM D5185m >15	<b>&lt;1</b>	<1	0
Vanadium	ppm	ASTM D5185m	<b>0</b>	<1	<1
Cadmium	ppm	ASTM D5185m	<b>0</b>	<1	0

### ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 250	<b>&lt;1</b>	0	<1
Barium	ppm	ASTM D5185m 10	<b>0</b>	2	0
Molybdenum	ppm	ASTM D5185m 100	<b>58</b>	59	53
Manganese	ppm	ASTM D5185m	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 450	<b>973</b>	878	869
Calcium	ppm	ASTM D5185m 3000	<b>1051</b>	1090	1038
Phosphorus	ppm	ASTM D5185m 1150	<b>997</b>	1074	950
Zinc	ppm	ASTM D5185m 1350	<b>1288</b>	1195	1144
Sulfur	ppm	ASTM D5185m 4250	<b>3524</b>	3226	3267

### CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>11</b>	15	10
Sodium	ppm	ASTM D5185m >158	<b>2</b>	<1	2
Potassium	ppm	ASTM D5185m >20	<b>3</b>	3	0

### INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.2</b>	0.2	0.2
Nitration	Abs/cm	*ASTM D7624 >20	<b>8.4</b>	7.8	7.9
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>22.5</b>	22.0	22.7

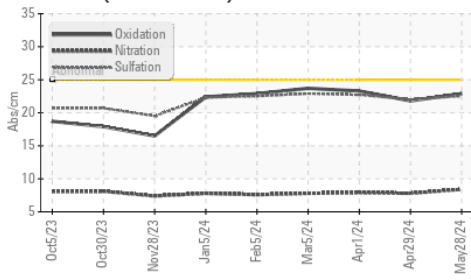
### FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>22.9</b>	21.8	23.3
Base Number (BN)	mg KOH/g	ASTM D2896 8.5	<b>6.1</b>	7.2	6.5

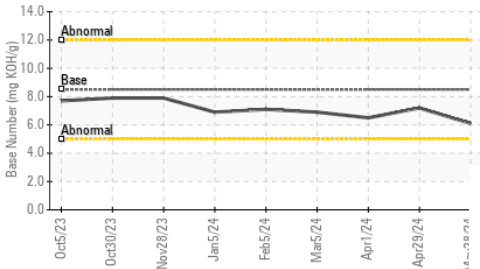


# OIL ANALYSIS REPORT

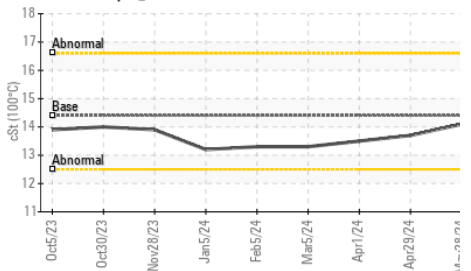
FT-IR (Direct Trend)



Base Number



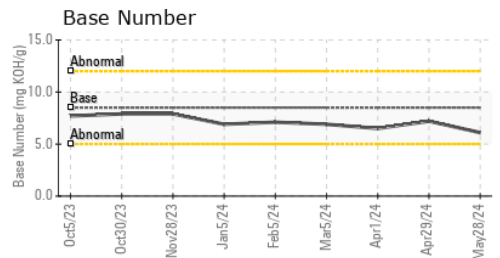
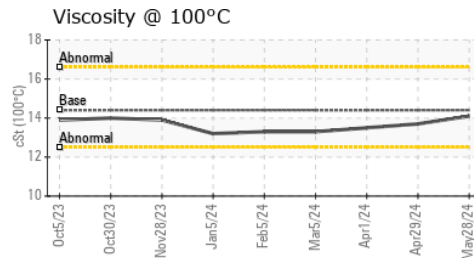
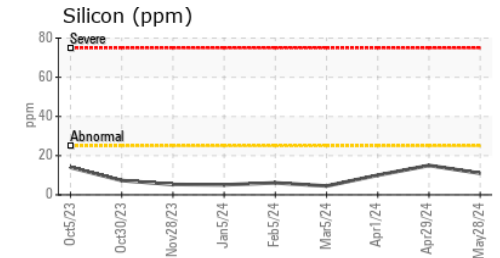
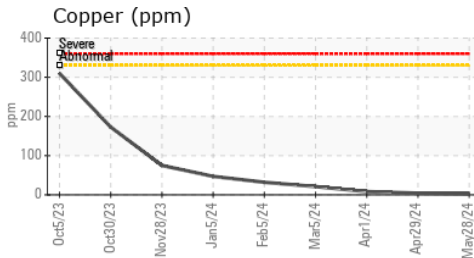
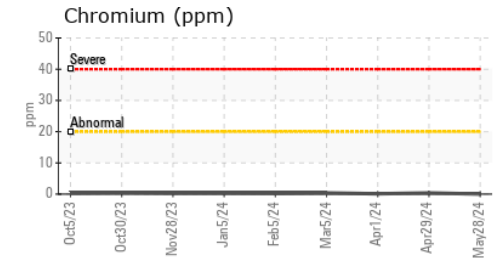
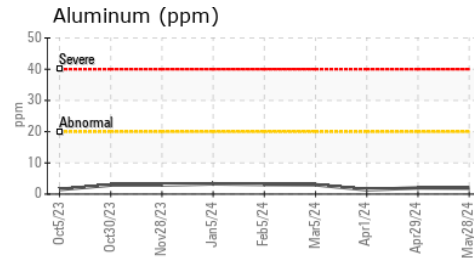
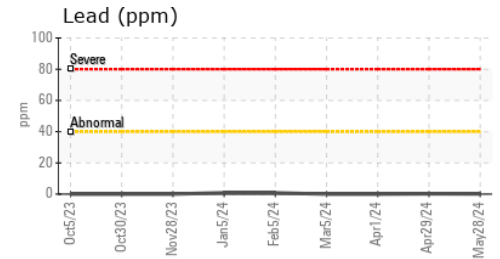
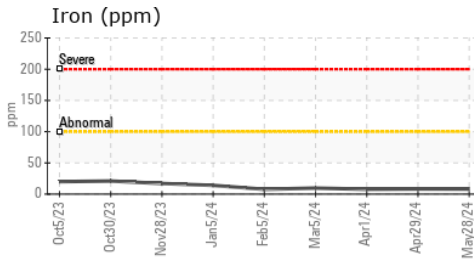
Viscosity @ 100°C



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	14.1	13.7

GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0897855 **Received** : 12 Jun 2024  
**Lab Number** : 06208342 **Tested** : 14 Jun 2024  
**Unique Number** : 11075803 **Diagnosed** : 14 Jun 2024 - Wes Davis  
**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: