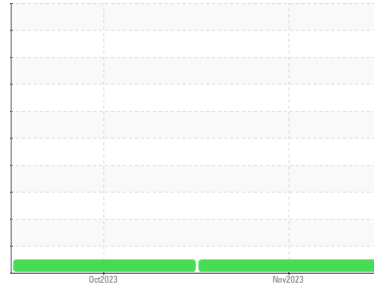




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id

1004

Component

Diesel Engine

Fluid

DISEL 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	WC0855837	WC0855894	---
Sample Date	Client Info	03 Nov 2023	04 Oct 2023	---
Machine Age	mls Client Info	0	872563	---
Oil Age	mls Client Info	0	0	---
Oil Changed	Client Info	N/A	N/A	---
Sample Status		NORMAL	NORMAL	---

CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >3.0	<1.0	<1.0	---
Glycol	WC Method	NEG	NEG	---

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >90	12	17	---
Chromium	ppm ASTM D5185m >20	1	1	---
Nickel	ppm ASTM D5185m >2	0	0	---
Titanium	ppm ASTM D5185m >2	0	0	---
Silver	ppm ASTM D5185m >2	0	0	---
Aluminum	ppm ASTM D5185m >20	1	1	---
Lead	ppm ASTM D5185m >40	0	0	---
Copper	ppm ASTM D5185m >330	0	1	---
Tin	ppm ASTM D5185m >15	<1	<1	---
Vanadium	ppm ASTM D5185m	0	0	---
Cadmium	ppm ASTM D5185m	0	0	---

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 250	3	2	---
Barium	ppm ASTM D5185m 10	0	0	---
Molybdenum	ppm ASTM D5185m 100	63	66	---
Manganese	ppm ASTM D5185m	<1	<1	---
Magnesium	ppm ASTM D5185m 450	1031	1077	---
Calcium	ppm ASTM D5185m 3000	1151	1202	---
Phosphorus	ppm ASTM D5185m 1150	1091	1111	---
Zinc	ppm ASTM D5185m 1350	1376	1433	---
Sulfur	ppm ASTM D5185m 4250	2969	3085	---

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	4	6	---
Sodium	ppm ASTM D5185m >158	1	3	---
Potassium	ppm ASTM D5185m >20	2	2	---

INFRA-RED

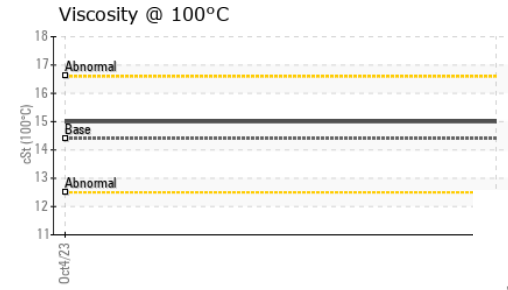
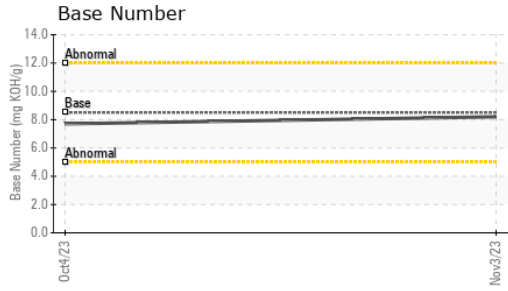
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >6	0.8	0.8	---
Nitration	Abs/cm *ASTM D7624 >20	9.8	10.0	---
Sulfation	Abs/.1mm *ASTM D7415 >30	21.5	21.6	---

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	18.9	19.2	---
Base Number (BN)	mg KOH/g ASTM D2896 8.5	8.2	7.7	---



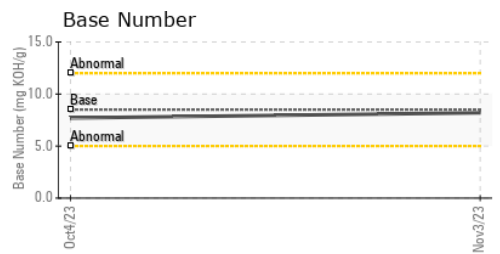
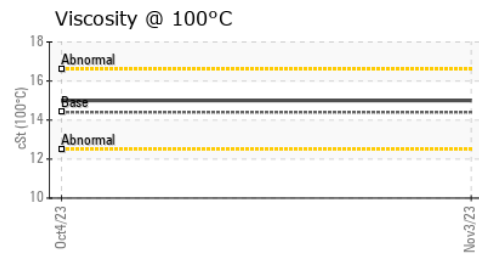
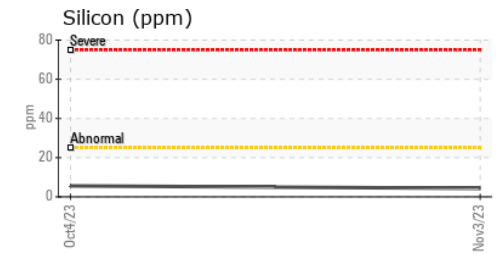
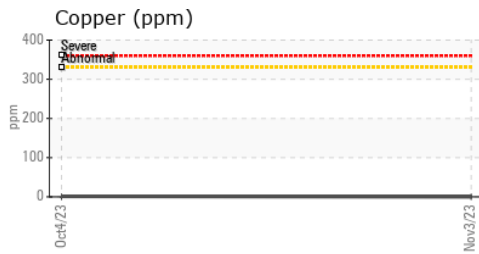
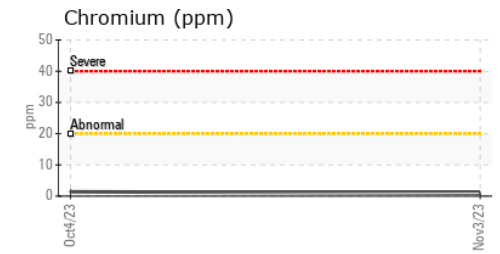
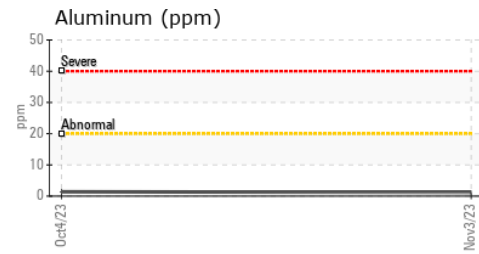
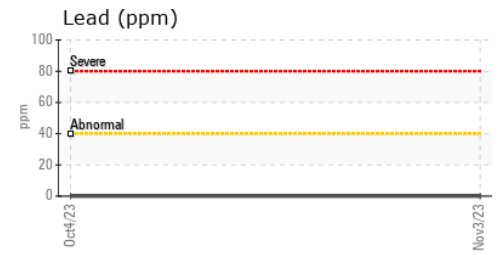
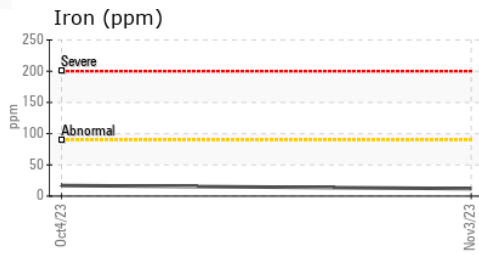
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---
Free Water	scalar	*Visual		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	14.4	15.0	15.0	---

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0855837 **Received** : 17 Nov 2023
Lab Number : **06010655** **Diagnosed** : 19 Nov 2023
Unique Number : 10749799 **Diagnostician** : 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)

T:
F: