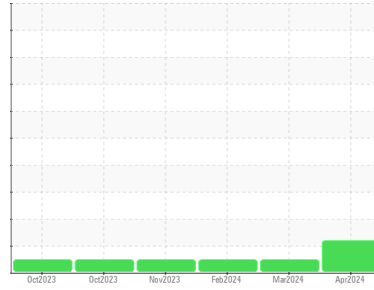




OIL ANALYSIS REPORT

Sample Rating Trend



DEGRADATION



Machine Id

1903

Component

Diesel Engine

Fluid

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

DIAGNOSIS

▲ Recommendation

The oil is near the end of its useful service life, recommend schedule an oil change. 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 level is low.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0897912	WC0878870	WC0893993
Sample Date	Client Info		11 Apr 2024	06 Mar 2024	11 Feb 2024
Machine Age	mls	Client Info	339850	0	0
Oil Age	mls	Client Info	0	0	0
Oil Changed	Client Info		N/A	N/A	Changed
Sample Status			ABNORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<1.0	<1.0	<1.0
Water	WC Method	>0.2	NEG	NEG	NEG
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	6	13	7
Chromium	ppm	ASTM D5185m >20	<1	<1	<1
Nickel	ppm	ASTM D5185m >4	0	0	0
Titanium	ppm	ASTM D5185m	0	<1	0
Silver	ppm	ASTM D5185m >3	0	<1	0
Aluminum	ppm	ASTM D5185m >20	<1	3	1
Lead	ppm	ASTM D5185m >40	0	1	0
Copper	ppm	ASTM D5185m >330	0	2	1
Tin	ppm	ASTM D5185m >15	<1	<1	0
Vanadium	ppm	ASTM D5185m	0	<1	<1
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 250	2	<1	2
Barium	ppm	ASTM D5185m 10	0	2	0
Molybdenum	ppm	ASTM D5185m 100	54	58	56
Manganese	ppm	ASTM D5185m	0	0	0
Magnesium	ppm	ASTM D5185m 450	876	871	973
Calcium	ppm	ASTM D5185m 3000	1064	1061	1075
Phosphorus	ppm	ASTM D5185m 1150	954	936	980
Zinc	ppm	ASTM D5185m 1350	1141	1140	1212
Sulfur	ppm	ASTM D5185m 4250	3173	3045	2844

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	7	5	5
Sodium	ppm	ASTM D5185m >158	<1	0	2
Potassium	ppm	ASTM D5185m >20	0	3	1

INFRA-RED

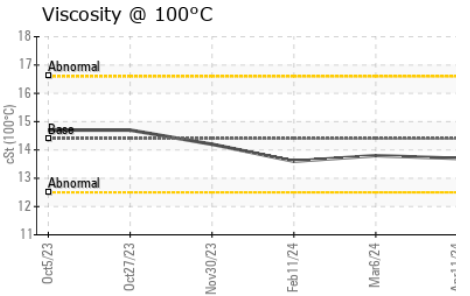
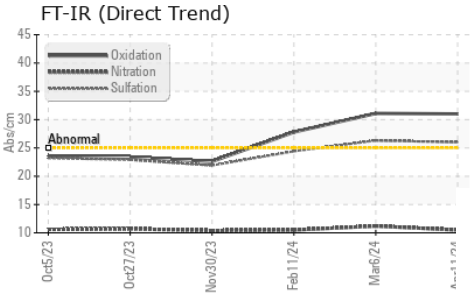
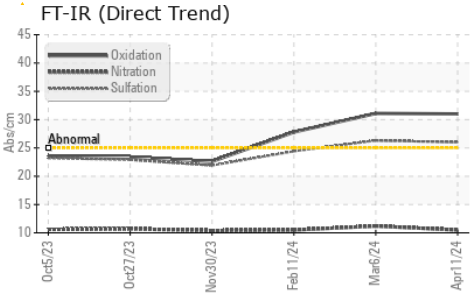
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.2	0.4	0.3
Nitration	Abs/cm	*ASTM D7624 >20	10.5	11.2	10.5
Sulfation	Abs/.1mm	*ASTM D7415 >30	26.0	26.3	24.4

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	31.0	31.1	27.8
Base Number (BN)	mg KOH/g	ASTM D2896 8.5	▲ 3.6	5.1	5.5



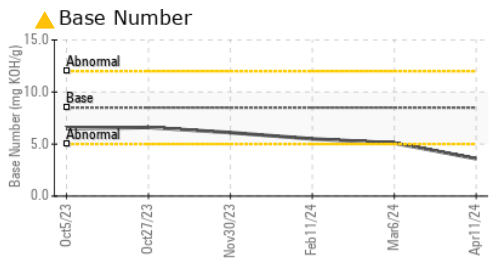
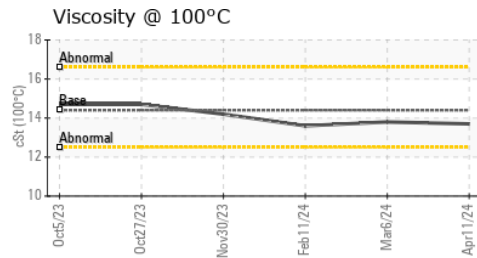
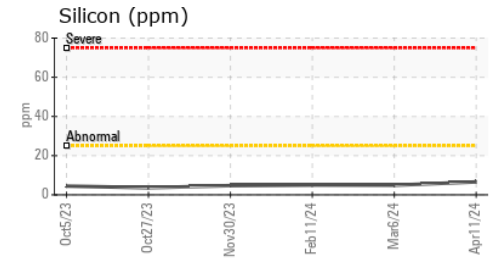
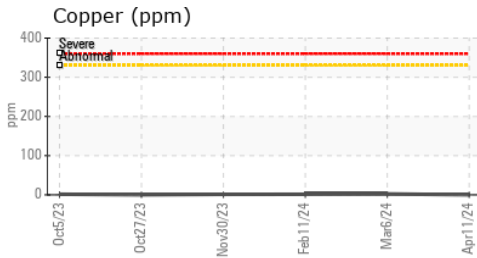
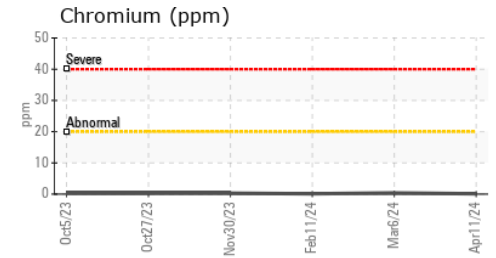
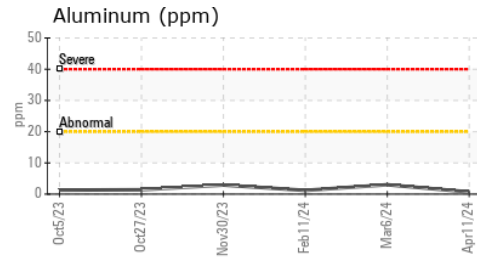
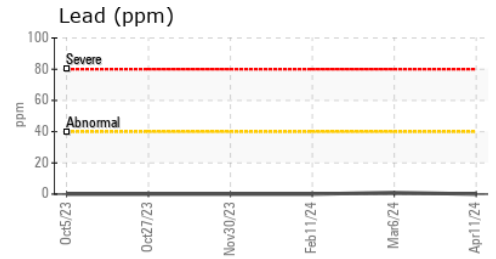
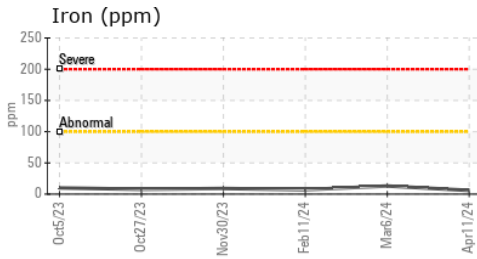
OIL ANALYSIS REPORT



VISUAL	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	13.7	13.8	13.6

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0897912 **Received** : 17 Apr 2024
Lab Number : **06151525** **Tested** : 18 Apr 2024
Unique Number : 10981603 **Diagnosed** : 19 Apr 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)