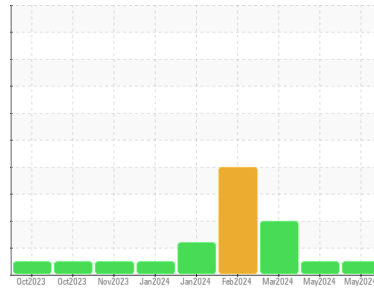




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id

1704

Component

Diesel Engine

Fluid

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

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

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		WC0897818	WC0897839	WC0894020
Sample Date	Client Info		28 May 2024	02 May 2024	27 Mar 2024
Machine Age	mls	Client Info	446461	440533	0
Oil Age	mls	Client Info	6000	0	0
Oil Changed	Client Info		Changed	N/A	Changed
Sample Status			NORMAL	NORMAL	ABNORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<1.0	<1.0	▲ 4.4
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	7	12	14
Chromium	ppm	ASTM D5185m	>20	0	<1	0
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	2	3	3
Lead	ppm	ASTM D5185m	>40	0	<1	0
Copper	ppm	ASTM D5185m	>330	1	3	7
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
Cadmium	ppm	ASTM D5185m		0	<1	0

ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m	250	<1	2	2
Barium	ppm	ASTM D5185m	10	0	2	0
Molybdenum	ppm	ASTM D5185m	100	58	58	52
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	450	971	854	839
Calcium	ppm	ASTM D5185m	3000	1058	1087	1001
Phosphorus	ppm	ASTM D5185m	1150	991	1026	913
Zinc	ppm	ASTM D5185m	1350	1287	1150	1136
Sulfur	ppm	ASTM D5185m	4250	3537	3128	3154

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>25	11	17	10
Sodium	ppm	ASTM D5185m	>158	2	<1	3
Potassium	ppm	ASTM D5185m	>20	2	5	<1

INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844	>3	0.3	0.3	0.5
Nitration	Abs/cm	*ASTM D7624	>20	8.3	8.7	9.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.4	23.3	27.1

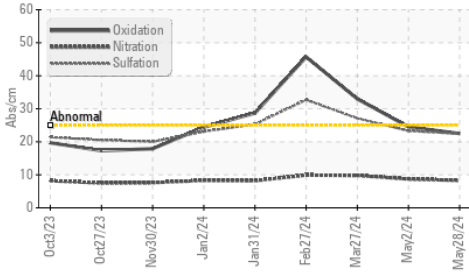
FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414	>25	22.5	24.5	33.0
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	6.4	6.5	▲ 4.4

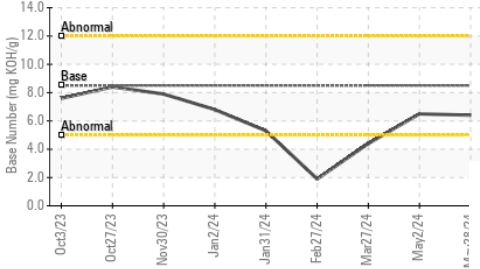


OIL ANALYSIS REPORT

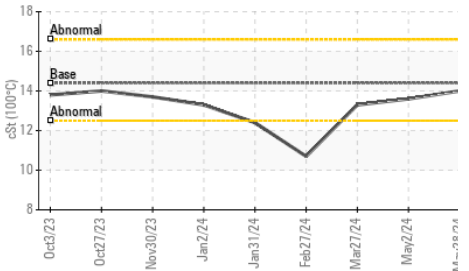
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

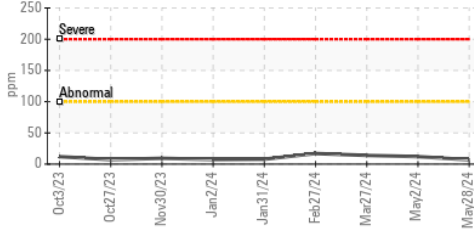


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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

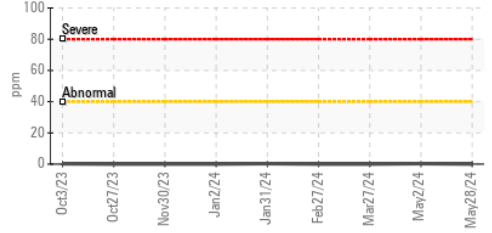
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.4	14.0	13.6

GRAPHS

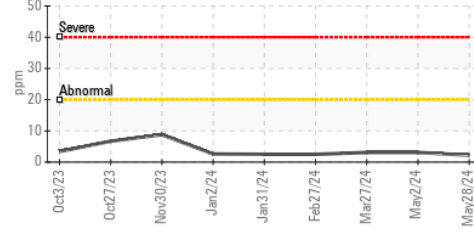
Iron (ppm)



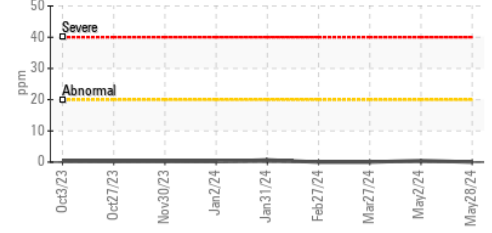
Lead (ppm)



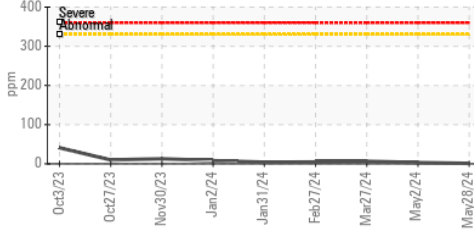
Aluminum (ppm)



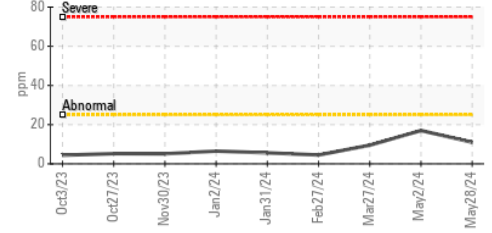
Chromium (ppm)



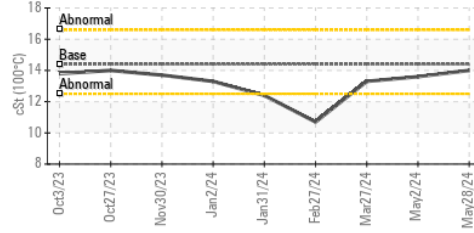
Copper (ppm)



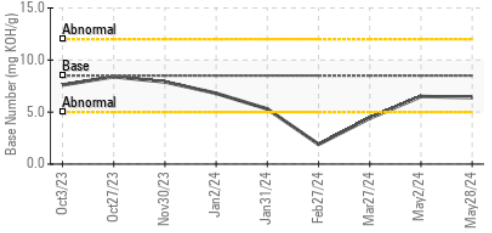
Silicon (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0897818 **Received** : 12 Jun 2024
Lab Number : 06208347 **Tested** : 14 Jun 2024
Unique Number : 11075808 **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)

T:
F: