



# OIL ANALYSIS REPORT

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

Machine Id  
**1461121**  
 Component  
**Diesel Engine**  
 Fluid  
**DIESEL ENGINE OIL SAE 15W40 (--- QTS)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>RPL0017059</b>	RPL0006910	RPL0001834
Sample Date		Client Info		<b>11 May 2024</b>	31 Dec 2022	07 Dec 2021
Machine Age	mls	Client Info		<b>206109</b>	173782	166445
Oil Age	mls	Client Info		<b>0</b>	0	2690
Filter Age	mls	Client Info		<b>0</b>	0	2690
Oil Changed		Client Info		<b>Changed</b>	N/A	Changed
Filter Changed		Client Info		<b>Changed</b>	N/A	Changed
Sample Status				<b>NORMAL</b>	NORMAL	ABNORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>46</b>	13	5
Chromium	ppm	ASTM D5185m	>20	<b>1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m	>20	<b>7</b>	3	<1
Lead	ppm	ASTM D5185m	>40	<b>2</b>	<1	0
Copper	ppm	ASTM D5185m	>330	<b>4</b>	2	<1
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	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.

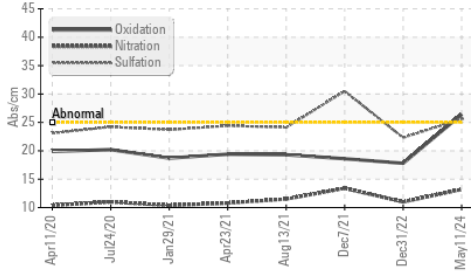
Silicon	ppm	ASTM D5185m	>25	<b>11</b>	8	4
Potassium	ppm	ASTM D5185m	>20	<b>4</b>	3	3
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	0.7
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>1</b>	0.5	▲ 4.3
Nitration	Abs/cm	*ASTM D7624	>20	<b>13.2</b>	11.0	13.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>25.6</b>	22.3	30.5
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

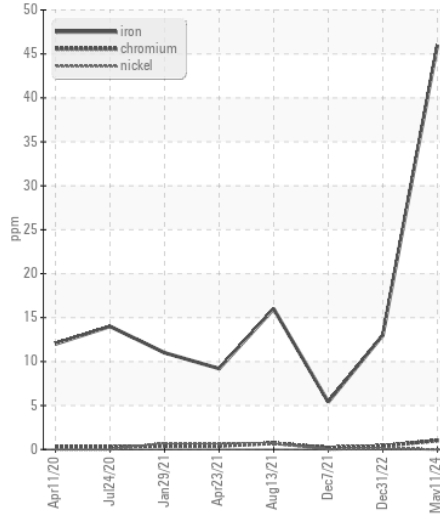
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>158	<b>3</b>	2	2
Boron	ppm	ASTM D5185m	250	<b>39</b>	40	64
Barium	ppm	ASTM D5185m	10	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	100	<b>98</b>	6	<1
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	450	<b>662</b>	653	707
Calcium	ppm	ASTM D5185m	3000	<b>1361</b>	1388	1363
Phosphorus	ppm	ASTM D5185m	1150	<b>748</b>	704	723
Zinc	ppm	ASTM D5185m	1350	<b>910</b>	808	766
Sulfur	ppm	ASTM D5185m	4250	<b>2992</b>	3077	2488
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>26.4</b>	17.8	18.6
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>5.2</b>	7.2	▲ 2.8
Visc @ 100°C	cSt	ASTM D445	14.4	<b>14.0</b>	13.7	14.1

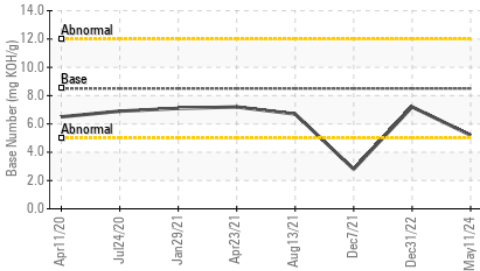
**FT-IR (Direct Trend)**



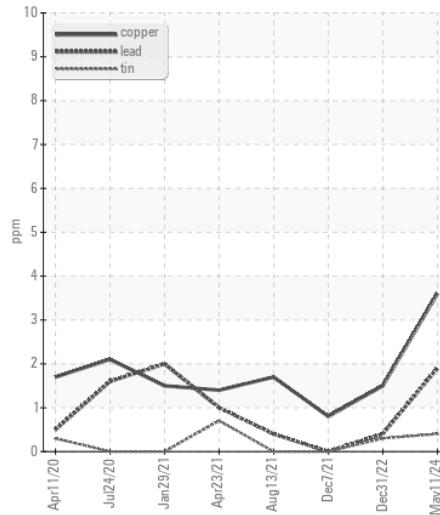
**Ferrous Alloys**



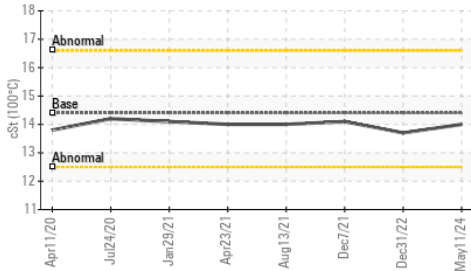
**Base Number**



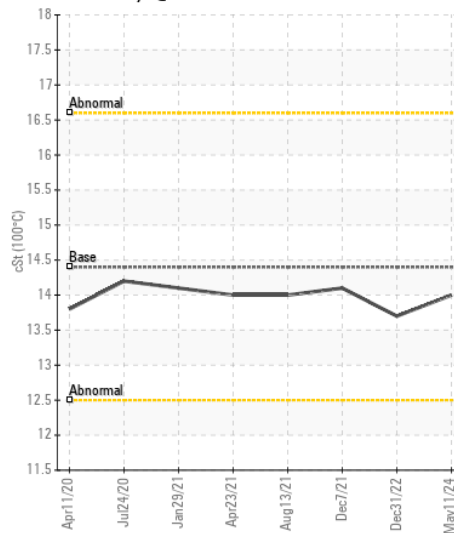
**Non-ferrous Metals**



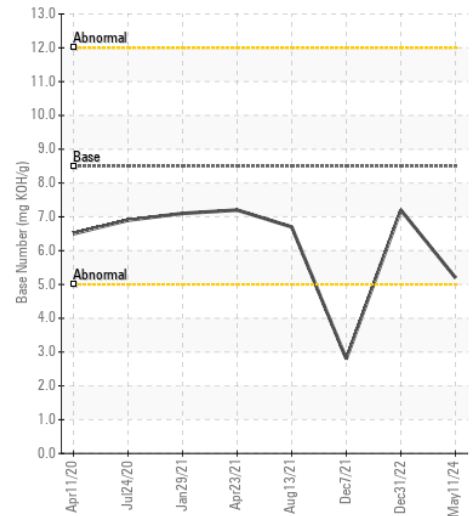
**Viscosity @ 100°C**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : RPL0017059  
**Lab Number** : 06187271  
**Unique Number** : 11044023  
**Test Package** : FLEET

**RTL PACLEASE - 7008 - Phoenix**  
 625 South 27th Ave  
 Phoenix, AZ  
 US 85009

Contact: Maurice Pilotte  
 PilotteM@rushenterprises.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: