



# OIL ANALYSIS REPORT

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

Machine Id  
**PETERBILT 459455**  
Component  
**Diesel Engine**  
Fluid  
**MOBIL 15W40 (44 QTS)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>RPL0011812</b>	RPL0003917	RPL0003832
Sample Date		Client Info		<b>25 Jun 2024</b>	16 Mar 2023	05 Dec 2022
Machine Age	mls	Client Info		<b>0</b>	211445	199856
Oil Age	mls	Client Info		<b>0</b>	11589	10934
Filter Age	mls	Client Info		<b>0</b>	11589	10934
Oil Changed		Client Info		<b>N/A</b>	Changed	Changed
Filter Changed		Client Info		<b>N/A</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>165	<b>34</b>	6	8
Chromium	ppm	ASTM D5185m	>5	<b>1</b>	0	<1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	0	1
Titanium	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>10</b>	2	4
Lead	ppm	ASTM D5185m	>150	<b>7</b>	0	1
Copper	ppm	ASTM D5185m	>90	<b>1</b>	0	<1
Tin	ppm	ASTM D5185m	>5	<b>&lt;1</b>	0	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

Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

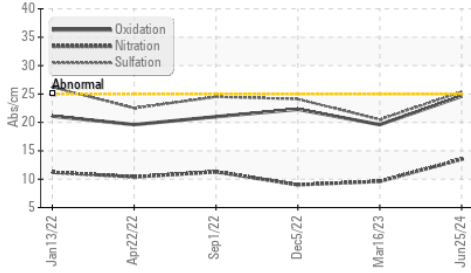
Silicon	ppm	ASTM D5185m	>35	<b>7</b>	7	6
Potassium	ppm	ASTM D5185m	>20	<b>19</b>	3	8
Fuel		WC Method	>3.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>7.5	<b>0.9</b>	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>13.5</b>	9.6	9.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>25.4</b>	20.5	24.1
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

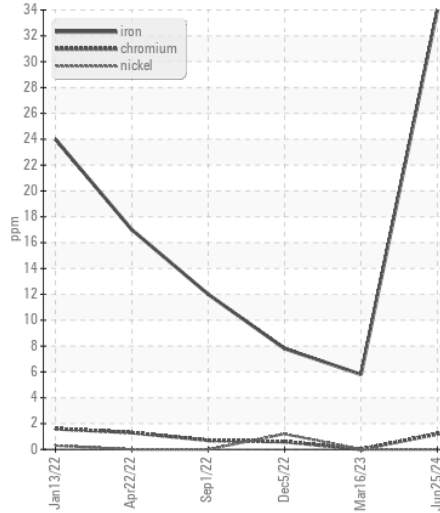
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>118	<b>3</b>	<1	3
Boron	ppm	ASTM D5185m		<b>29</b>	65	46
Barium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>97</b>	76	56
Manganese	ppm	ASTM D5185m		<b>1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>550</b>	563	522
Calcium	ppm	ASTM D5185m		<b>1349</b>	1423	1633
Phosphorus	ppm	ASTM D5185m		<b>718</b>	679	736
Zinc	ppm	ASTM D5185m		<b>873</b>	875	936
Sulfur	ppm	ASTM D5185m		<b>3279</b>	2875	2943
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>24.6</b>	19.6	22.3
Base Number (BN)	mg KOH/g	ASTM D2896		<b>5.0</b>	8.2	10.8
Visc @ 100°C	cSt	ASTM D445		<b>13.3</b>	12.8	13.1

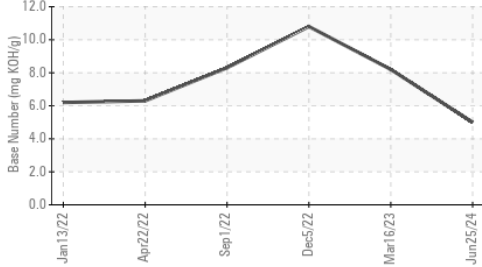
**FT-IR (Direct Trend)**



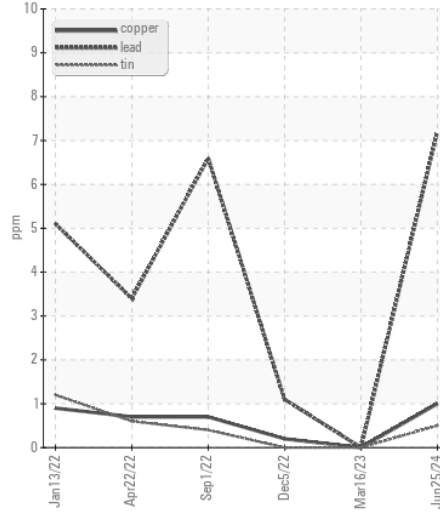
**Ferrous Alloys**



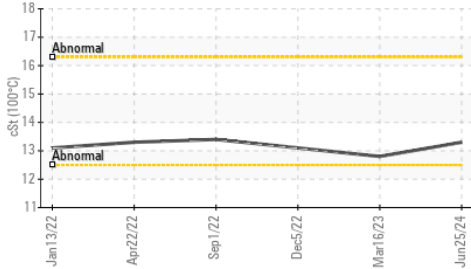
**Base Number**



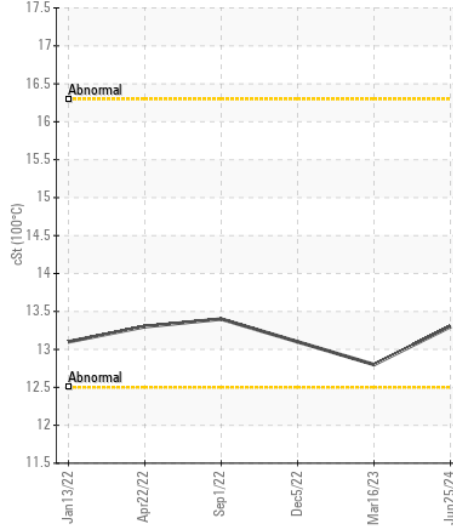
**Non-ferrous Metals**



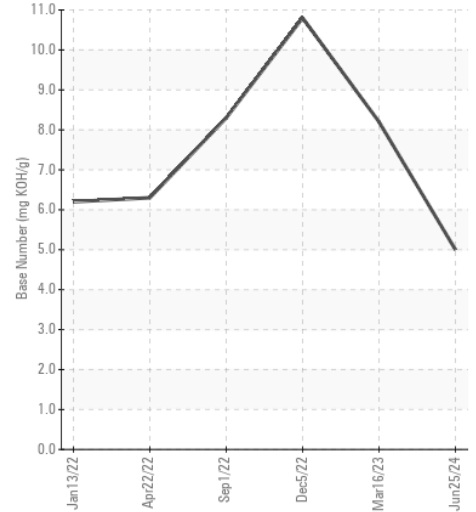
**Viscosity @ 100°C**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : RPL0011812  
**Lab Number** : 06220645  
**Unique Number** : 11098842  
**Test Package** : FLEET

**Received** : 26 Jun 2024  
**Tested** : 27 Jun 2024  
**Diagnosed** : 27 Jun 2024 - Wes Davis

**RTL PACLEASE - 7018 - West Texas**  
 1230 South Grandview  
 Odessa, TX  
 US 79761

Contact: David Johnson  
 JohnsonD@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: