



# OIL ANALYSIS REPORT

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

Machine Id  
**PETERBILT 453655**  
Component  
**Diesel Engine**  
Fluid  
**CITGO CITGUARD 600 15W40 (46 QTS)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>RPL0012782</b>	RPL0004595	---
Sample Date		Client Info		<b>13 Nov 2023</b>	28 Aug 2023	---
Machine Age	hrs	Client Info		<b>8842</b>	8184	---
Oil Age	hrs	Client Info		<b>648</b>	890	---
Filter Age	hrs	Client Info		<b>1094</b>	890	---
Oil Changed		Client Info		<b>Changed</b>	Not Changed	---
Filter Changed		Client Info		<b>Changed</b>	Changed	---
Sample Status				<b>NORMAL</b>	NORMAL	---

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>63</b>	39	---
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	---
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	---
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	---
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	---
Aluminum	ppm	ASTM D5185m	>20	<b>8</b>	6	---
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	<1	---
Copper	ppm	ASTM D5185m	>330	<b>7</b>	3	---
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	0	---
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	---
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---

## CONTAMINATION

There is no indication of any contamination in the oil.

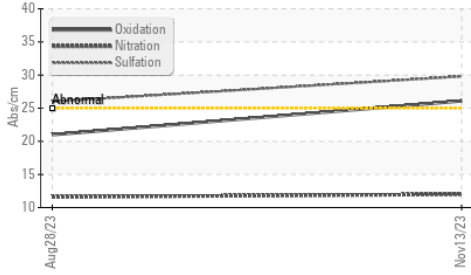
Silicon	ppm	ASTM D5185m	>25	<b>11</b>	9	---
Potassium	ppm	ASTM D5185m	>20	<b>20</b>	19	---
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	---
Water		WC Method	>0.2	<b>NEG</b>	NEG	---
Glycol		WC Method		<b>NEG</b>	NEG	---
Soot %	%	*ASTM D7844	>3	<b>1</b>	0.7	---
Nitration	Abs/cm	*ASTM D7624	>20	<b>12.0</b>	11.6	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>29.8</b>	26.0	---
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG	---

## FLUID CONDITION

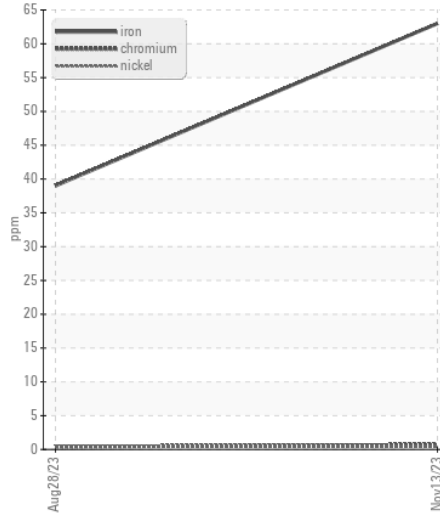
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>15</b>	14	---
Boron	ppm	ASTM D5185m	13	<b>31</b>	83	---
Barium	ppm	ASTM D5185m	0	<b>9</b>	9	---
Molybdenum	ppm	ASTM D5185m	57	<b>79</b>	76	---
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	---
Magnesium	ppm	ASTM D5185m	825	<b>483</b>	465	---
Calcium	ppm	ASTM D5185m	1100	<b>1641</b>	1630	---
Phosphorus	ppm	ASTM D5185m	933	<b>1008</b>	1028	---
Zinc	ppm	ASTM D5185m	1089	<b>1285</b>	1261	---
Sulfur	ppm	ASTM D5185m	2769	<b>3009</b>	3129	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>26.1</b>	21.0	---
Base Number (BN)	mg KOH/g	ASTM D2896	11.0	<b>5.2</b>	6.1	---
Visc @ 100°C	cSt	ASTM D445	15.4	<b>14.1</b>	14.2	---

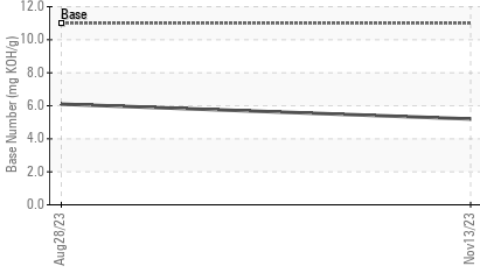
**FT-IR (Direct Trend)**



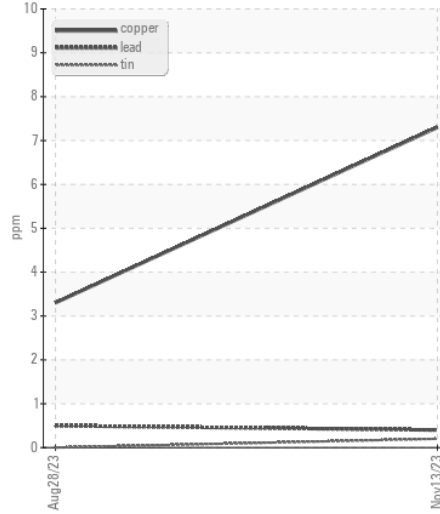
**Ferrous Alloys**



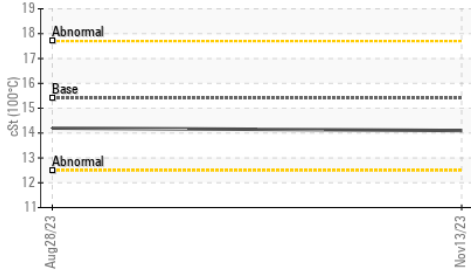
**Base Number**



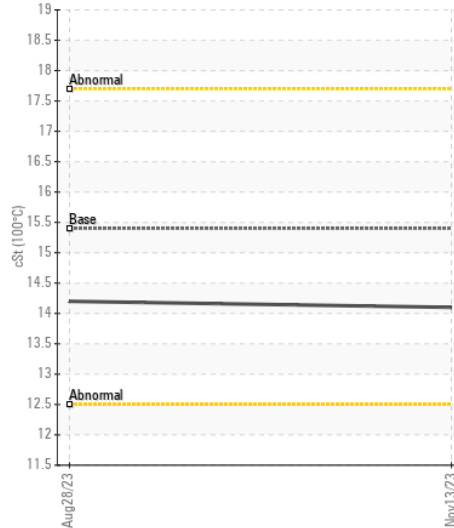
**Non-ferrous Metals**



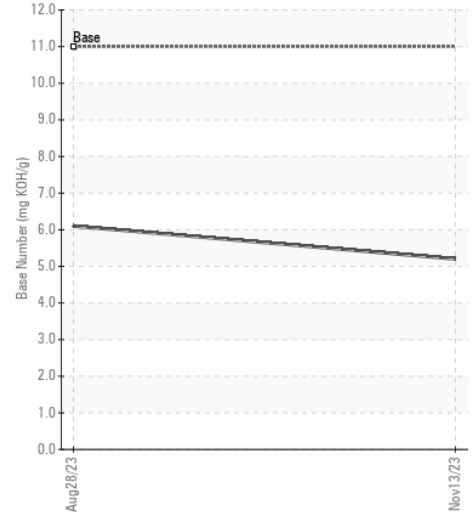
**Viscosity @ 100°C**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : RPL0012782  
**Lab Number** : 06013656  
**Unique Number** : 10752800  
**Test Package** : FLEET  
**Received** : 21 Nov 2023  
**Tested** : 21 Nov 2023  
**Diagnosed** : 23 Nov 2023 - Don Baldrige

**RTL PACLEASE - 7010 - Florida**  
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 Orlando, FL  
 US 32824  
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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)