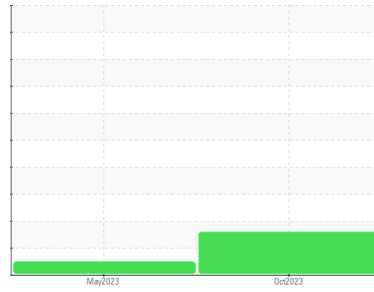




# PROBLEM SUMMARY

Sample Rating Trend



DIRT



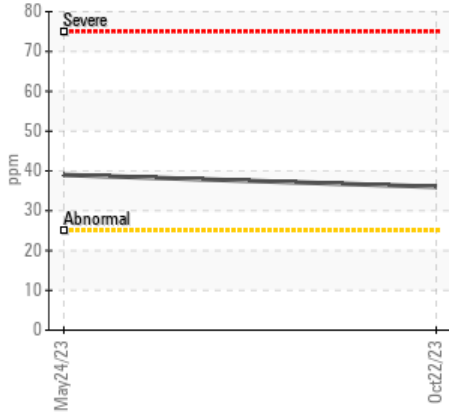
Machine Id  
**PETERBILT 2413**

Component  
**Diesel Engine**

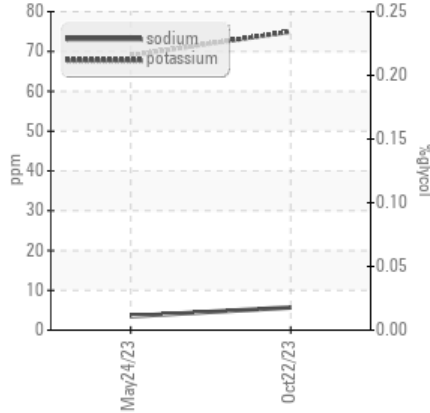
Fluid  
**DIESEL ENGINE OIL SAE 5W30 (44 QTS)**

## COMPONENT CONDITION SUMMARY

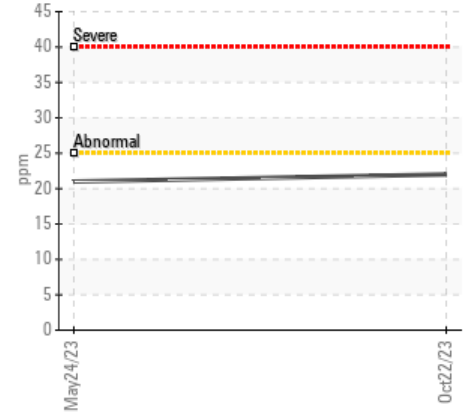
▲ Silicon (ppm)



Glycol Contamination



Aluminum (ppm)



## RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

## PROBLEMATIC TEST RESULTS

Sample Status	ABNORMAL	NORMAL	---
Silicon	▲ 36	39	---

Customer Id: MABEDE  
Sample No.: WC0836299  
Lab Number: 05996190  
Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data:  
Don Baldrige +1  
[don.b505@comcast.net](mailto:don.b505@comcast.net)

To change component or sample information:  
Customer Service +1 1-800-237-1369  
[customerservice@wearcheck.com](mailto:customerservice@wearcheck.com)

## RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Fluid	---	---	?	Oil and filter change at the time of sampling has been noted.
Change Filter	---	---	?	Oil and filter change at the time of sampling has been noted.

## HISTORICAL DIAGNOSIS

**24 May 2023 Diag: Angela Borella**

NORMAL



No corrective action is recommended at this time. Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

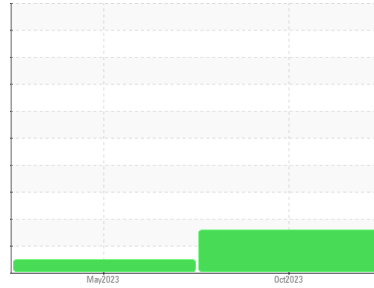
view report





# OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id  
**PETERBILT 2413**  
 Component  
**Diesel Engine**  
 Fluid  
 **DIESEL ENGINE OIL SAE 5W30 (44 QTS)**

## DIAGNOSIS

### Recommendation

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

Elemental level of silicon (Si) above normal indicating ingress of seal material. 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.

### Fluid Condition

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

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0836299</b>	WC0814822	---
Sample Date	Client Info		<b>22 Oct 2023</b>	24 May 2023	---
Machine Age	mls	Client Info	<b>110350</b>	59304	---
Oil Age	mls	Client Info	<b>50000</b>	50000	---
Oil Changed	Client Info		<b>Changed</b>	Not Changd	---
Sample Status			<b>ABNORMAL</b>	NORMAL	---

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<b>&lt;1.0</b>	<1.0	---
Glycol	WC Method		<b>NEG</b>	NEG	---

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	<b>79</b>	52	---
Chromium	ppm	ASTM D5185m >20	<b>2</b>	1	---
Nickel	ppm	ASTM D5185m >2	<b>1</b>	<1	---
Titanium	ppm	ASTM D5185m >2	<b>&lt;1</b>	0	---
Silver	ppm	ASTM D5185m >2	<b>&lt;1</b>	<1	---
Aluminum	ppm	ASTM D5185m >25	<b>22</b>	21	---
Lead	ppm	ASTM D5185m >40	<b>13</b>	7	---
Copper	ppm	ASTM D5185m >330	<b>19</b>	21	---
Tin	ppm	ASTM D5185m >15	<b>4</b>	4	---
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	---
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	---

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 250	<b>16</b>	22	---
Barium	ppm	ASTM D5185m 10	<b>3</b>	0	---
Molybdenum	ppm	ASTM D5185m 100	<b>62</b>	65	---
Manganese	ppm	ASTM D5185m	<b>6</b>	6	---
Magnesium	ppm	ASTM D5185m 450	<b>533</b>	422	---
Calcium	ppm	ASTM D5185m 3000	<b>1519</b>	1689	---
Phosphorus	ppm	ASTM D5185m 1150	<b>950</b>	920	---
Zinc	ppm	ASTM D5185m 1350	<b>1195</b>	1192	---
Sulfur	ppm	ASTM D5185m 4250	<b>2424</b>	2877	---

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>▲ 36</b>	39	---
Sodium	ppm	ASTM D5185m	<b>6</b>	4	---
Potassium	ppm	ASTM D5185m >20	<b>75</b>	69	---

## INFRA-RED

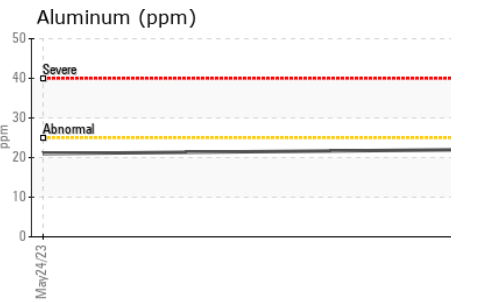
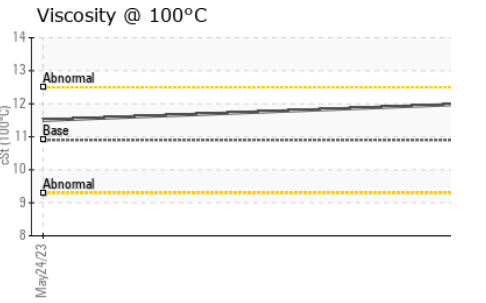
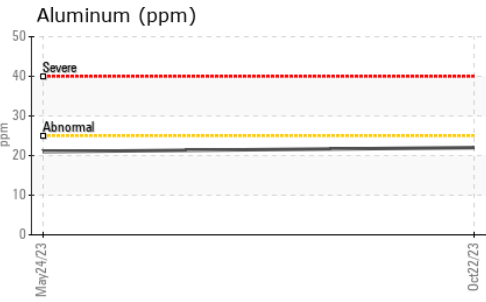
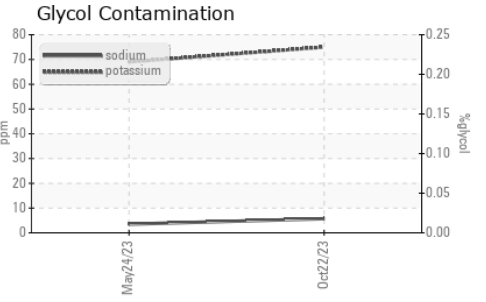
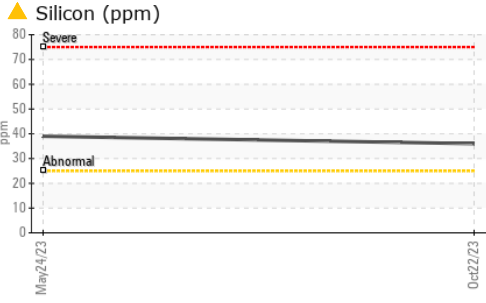
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.8</b>	0.5	---
Nitration	Abs/cm	*ASTM D7624 >20	<b>12.8</b>	10.0	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>28.0</b>	23.9	---

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>29.0</b>	21.5	---
Base Number (BN)	mg KOH/g	ASTM D2896 8.5	<b>3.5</b>	6.1	---



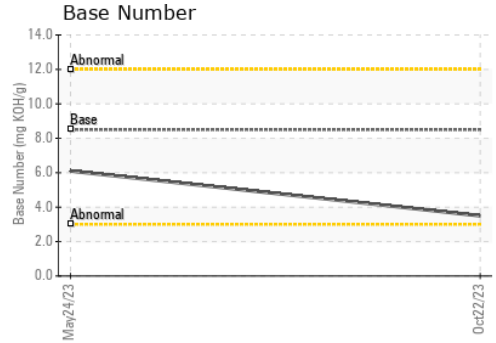
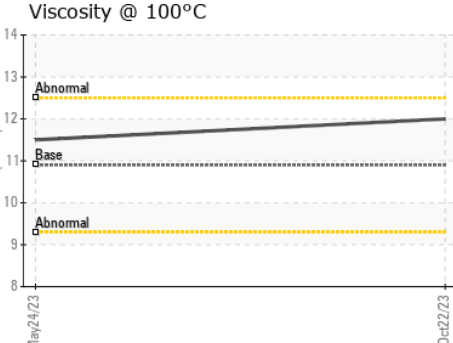
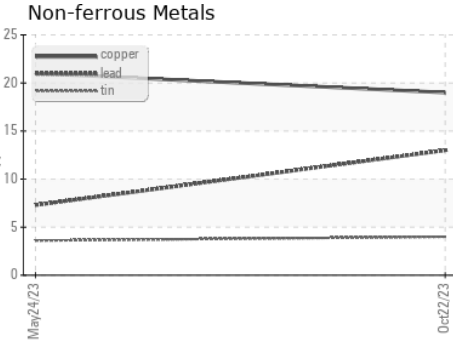
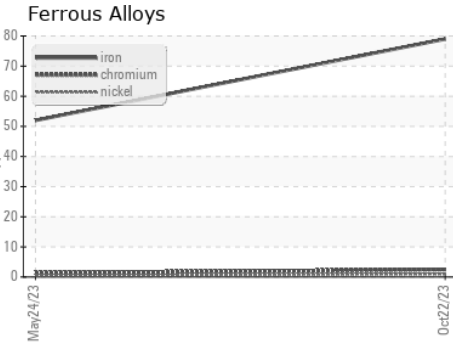
# OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---
Free Water	scalar	*Visual		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	10.9	12.0	11.5

### GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0836299 **Received** : 01 Nov 2023  
**Lab Number** : 05996190 **Diagnosed** : 04 Nov 2023  
**Unique Number** : 10724550 **Diagnostician** : Don Baldrige  
**Test Package** : FLEET

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Certificate L2367  
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 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)