

# OIL ANALYSIS REPORT

Sample Rating Trend



**DIRT**



Machine Id

**PETERBILT 2420**

Component

**Diesel Engine**

Fluid

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

**DIAGNOSIS**

**Recommendation**

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

**Wear**

All component wear rates are normal.

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

**Fluid Condition**

The BN level is low.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			<b>HRE0000238</b>	---	---
Sample Date	Client Info			<b>06 May 2024</b>	---	---
Machine Age	mls	Client Info		<b>112035</b>	---	---
Oil Age	mls	Client Info		<b>50000</b>	---	---
Oil Changed	Client Info			<b>Changed</b>	---	---
Sample Status				<b>ABNORMAL</b>	---	---

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>5		<b>&lt;1.0</b>	---	---
Water	WC Method	>0.2		<b>NEG</b>	---	---
Glycol	WC Method			<b>NEG</b>	---	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	<b>94</b>	---	---
Chromium	ppm	ASTM D5185m	>20	<b>4</b>	---	---
Nickel	ppm	ASTM D5185m	>2	<b>1</b>	---	---
Titanium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	---	---
Silver	ppm	ASTM D5185m	>2	<b>&lt;1</b>	---	---
Aluminum	ppm	ASTM D5185m	>25	<b>47</b>	---	---
Lead	ppm	ASTM D5185m	>40	<b>11</b>	---	---
Copper	ppm	ASTM D5185m	>330	<b>23</b>	---	---
Tin	ppm	ASTM D5185m	>15	<b>6</b>	---	---
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	---	---
Cadmium	ppm	ASTM D5185m		<b>&lt;1</b>	---	---

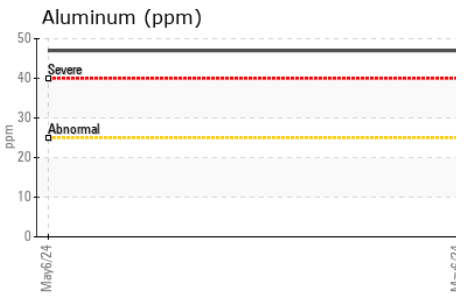
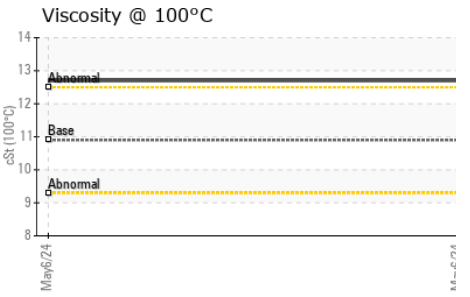
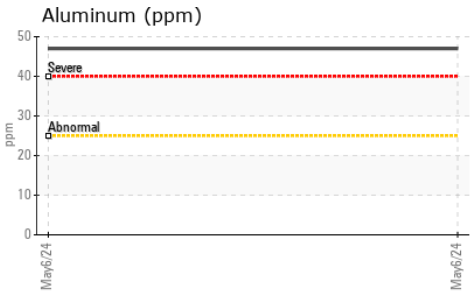
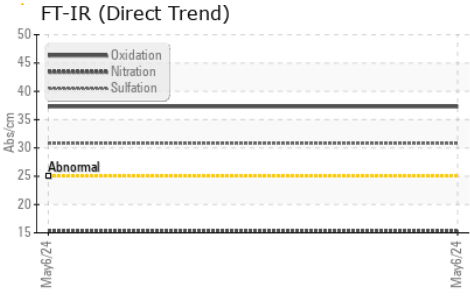
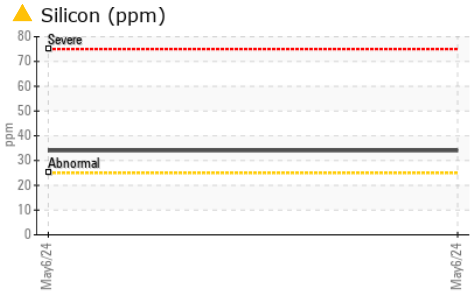
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	250	<b>24</b>	---	---
Barium	ppm	ASTM D5185m	10	<b>5</b>	---	---
Molybdenum	ppm	ASTM D5185m	100	<b>66</b>	---	---
Manganese	ppm	ASTM D5185m		<b>6</b>	---	---
Magnesium	ppm	ASTM D5185m	450	<b>578</b>	---	---
Calcium	ppm	ASTM D5185m	3000	<b>1618</b>	---	---
Phosphorus	ppm	ASTM D5185m	1150	<b>1011</b>	---	---
Zinc	ppm	ASTM D5185m	1350	<b>1319</b>	---	---
Sulfur	ppm	ASTM D5185m	4250	<b>3046</b>	---	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	<b>▲ 34</b>	---	---
Sodium	ppm	ASTM D5185m		<b>4</b>	---	---
Potassium	ppm	ASTM D5185m	>20	<b>121</b>	---	---

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	<b>0.6</b>	---	---
Nitration	Abs/cm	*ASTM D7624	>20	<b>15.4</b>	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>30.8</b>	---	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>37.3</b>	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>▲ 2.4</b>	---	---

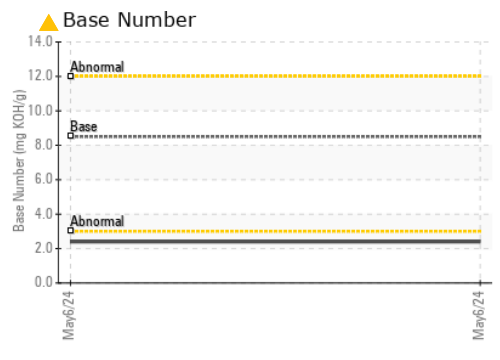
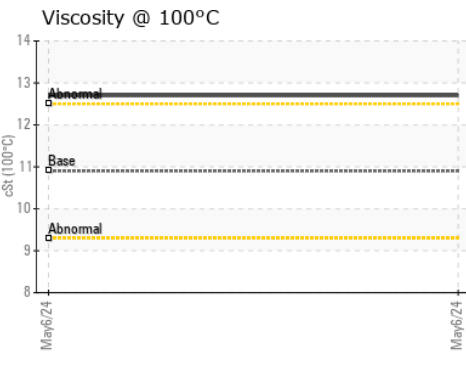
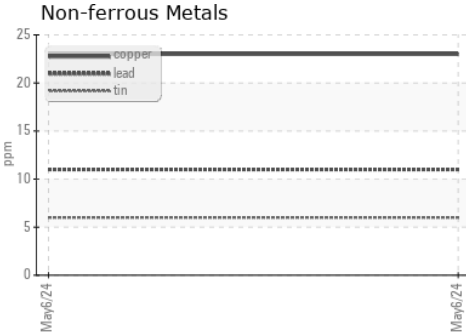
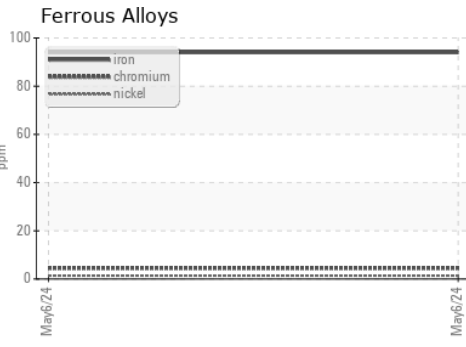
# OIL ANALYSIS REPORT



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	12.7	---	---

### GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : HRE0000238      **Received** : 13 May 2024  
**Lab Number** : 06178146      **Tested** : 14 May 2024  
**Unique Number** : 11029472      **Diagnosed** : 15 May 2024 - Sean Felton  
**Test Package** : FLEET

**MABE TRUCKING**  
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 EDEN, NC  
 US 27289  
 Contact: MAINTENANCE  
 maintenancemanager@mabetrucking.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)      F: (336)635-1791