



Machine Id
PETERBILT 2418
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

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 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		HRE0000214	---	---
Sample Date	Client Info		25 May 2024	---	---
Machine Age	mls	Client Info	105492	---	---
Oil Age	mls	Client Info	50000	---	---
Oil Changed	Client Info		Changed	---	---
Sample Status			ABNORMAL	---	---

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<1.0	---	---
Water	WC Method	>0.2	NEG	---	---
Glycol	WC Method		NEG	---	---

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	77	---	---
Chromium	ppm	ASTM D5185m >20	4	---	---
Nickel	ppm	ASTM D5185m >2	1	---	---
Titanium	ppm	ASTM D5185m >2	<1	---	---
Silver	ppm	ASTM D5185m >2	<1	---	---
Aluminum	ppm	ASTM D5185m >25	36	---	---
Lead	ppm	ASTM D5185m >40	12	---	---
Copper	ppm	ASTM D5185m >330	22	---	---
Tin	ppm	ASTM D5185m >15	3	---	---
Vanadium	ppm	ASTM D5185m	0	---	---
Cadmium	ppm	ASTM D5185m	2	---	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 250	22	---	---
Barium	ppm	ASTM D5185m 10	4	---	---
Molybdenum	ppm	ASTM D5185m 100	62	---	---
Manganese	ppm	ASTM D5185m	6	---	---
Magnesium	ppm	ASTM D5185m 450	549	---	---
Calcium	ppm	ASTM D5185m 3000	1655	---	---
Phosphorus	ppm	ASTM D5185m 1150	929	---	---
Zinc	ppm	ASTM D5185m 1350	1188	---	---
Sulfur	ppm	ASTM D5185m 4250	2698	---	---

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	▲ 35	---	---
Sodium	ppm	ASTM D5185m	8	---	---
Potassium	ppm	ASTM D5185m >20	104	---	---

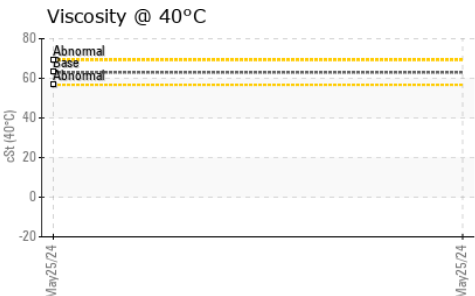
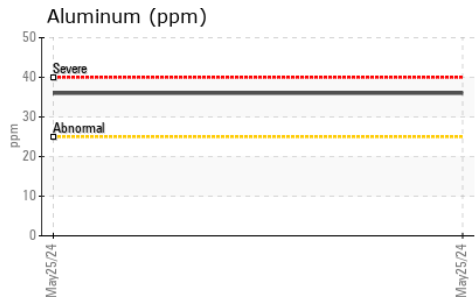
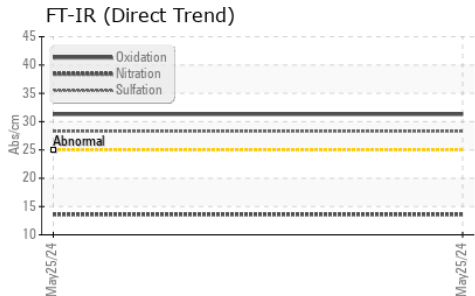
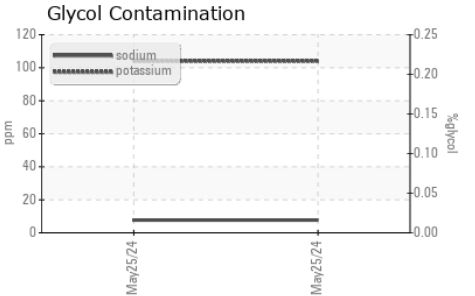
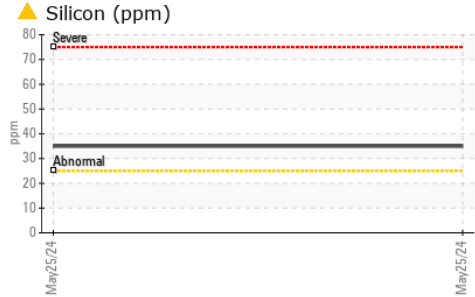
INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.6	---	---
Nitration	Abs/cm	*ASTM D7624 >20	13.6	---	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	28.3	---	---

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	31.3	---	---
Base Number (BN)	mg KOH/g	ASTM D2896 8.5	3.5	---	---

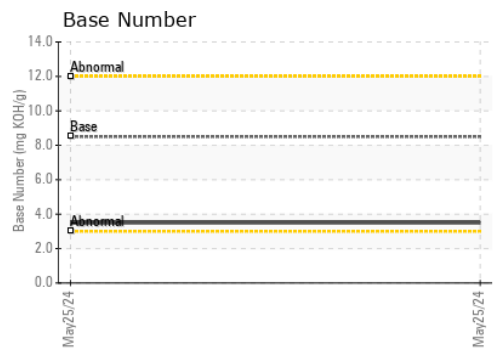
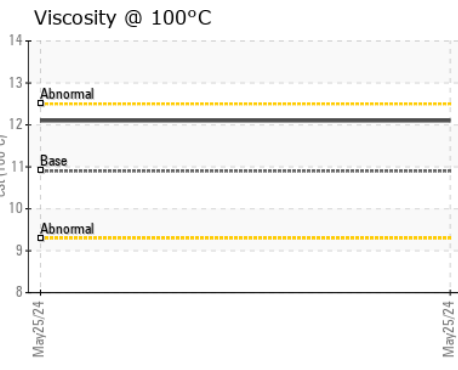
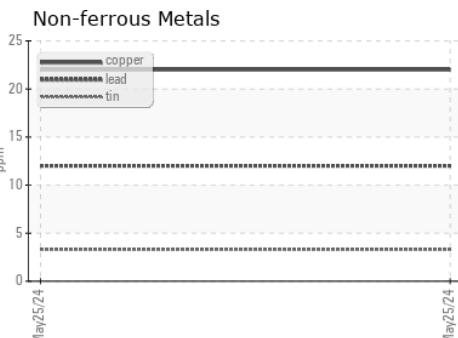
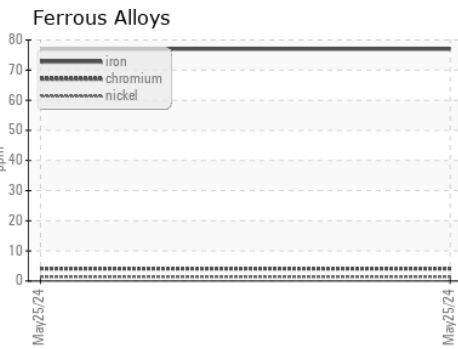
OIL ANALYSIS REPORT



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	12.1	---	---

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : HRE0000214 **Received** : 13 Jun 2024
Lab Number : 06209521 **Tested** : 17 Jun 2024
Unique Number : 11076982 **Diagnosed** : 17 Jun 2024 - Don Baldrige
Test Package : FLEET (Additional Tests: KV40)

MABE TRUCKING
 PO BOX 1081
 EDEN, NC
 US 27289

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) Contact: MAINTENANCE
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