

# OIL ANALYSIS REPORT

**Sample Rating Trend**

**DEGRADATION**


Machine Id

**FREIGHTLINER 24**

Component

**Diesel Engine**

Fluid

**PETRO CANADA DURON SHP 15W40 (13 LTR)**
**DIAGNOSIS**
**Recommendation**

We advise that you check for faulty combustion, plugged air filters, or aftercoolers. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. NOTE: High solids (carbon/soot) in the sample have limited the accuracy of Infra-Red data including Total Base Number (TBN) value.

**Wear**

All component wear rates are normal.

**Contamination**

There is an abnormal amount of solids and carbon present in the oil.

**Fluid Condition**

The oil viscosity is higher than normal. The BN level is low.

**SAMPLE INFORMATION**

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>PCA0102578</b>	---	---
Sample Date	Client Info		<b>17 Aug 2023</b>	---	---
Machine Age	mls	Client Info	<b>585522</b>	---	---
Oil Age	mls	Client Info	<b>25167</b>	---	---
Oil Changed	Client Info		<b>Changed</b>	---	---
Sample Status			<b>ABNORMAL</b>	---	---

**CONTAMINATION**

	method	limit/base	current	history1	history2
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 >80	<b>27</b>	---	---
Chromium	ppm	ASTM D5185m >5	<b>2</b>	---	---
Nickel	ppm	ASTM D5185m >2	<b>&lt;1</b>	---	---
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	---	---
Silver	ppm	ASTM D5185m >3	<b>&lt;1</b>	---	---
Aluminum	ppm	ASTM D5185m >30	<b>1</b>	---	---
Lead	ppm	ASTM D5185m >30	<b>10</b>	---	---
Copper	ppm	ASTM D5185m >150	<b>2</b>	---	---
Tin	ppm	ASTM D5185m >5	<b>&lt;1</b>	---	---
Vanadium	ppm	ASTM D5185m	<b>0</b>	---	---
Cadmium	ppm	ASTM D5185m	<b>0</b>	---	---

**ADDITIVES**

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>&lt;1</b>	---	---
Barium	ppm	ASTM D5185m 0	<b>0</b>	---	---
Molybdenum	ppm	ASTM D5185m 60	<b>56</b>	---	---
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	---	---
Magnesium	ppm	ASTM D5185m 1010	<b>869</b>	---	---
Calcium	ppm	ASTM D5185m 1070	<b>1063</b>	---	---
Phosphorus	ppm	ASTM D5185m 1150	<b>860</b>	---	---
Zinc	ppm	ASTM D5185m 1270	<b>1145</b>	---	---
Sulfur	ppm	ASTM D5185m 2060	<b>2896</b>	---	---

**CONTAMINANTS**

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >20	<b>5</b>	---	---
Sodium	ppm	ASTM D5185m	<b>0</b>	---	---
Potassium	ppm	ASTM D5185m >20	<b>4</b>	---	---
Fuel	%	ASTM D3524 >5	<b>&lt;1.0</b>	---	---

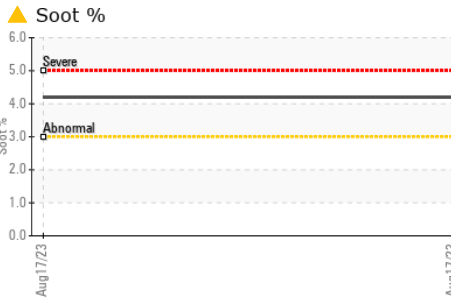
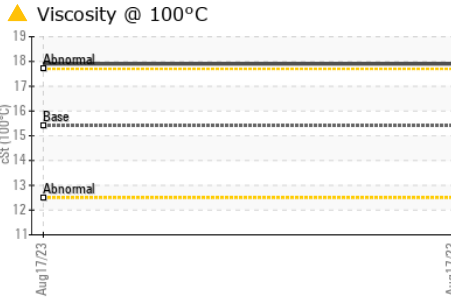
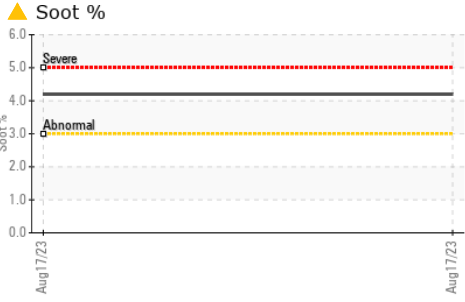
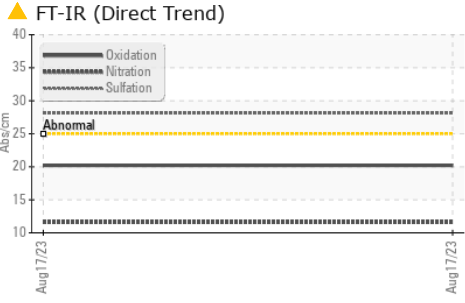
**INFRA-RED**

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>▲ 4.2</b>	---	---
Nitration	Abs/cm	*ASTM D7624 >20	<b>11.6</b>	---	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>28.1</b>	---	---

**FLUID DEGRADATION**

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>20.2</b>	---	---
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>▲ 3.7</b>	---	---

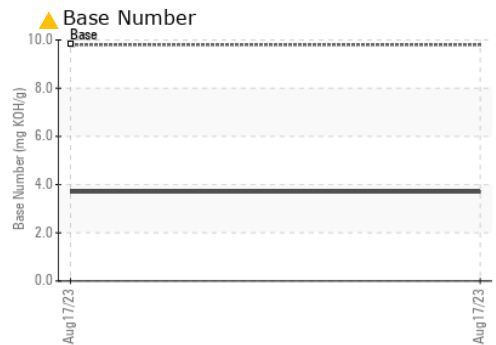
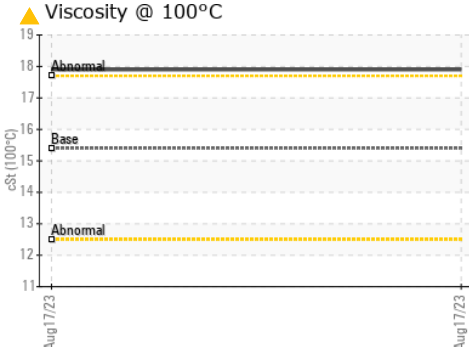
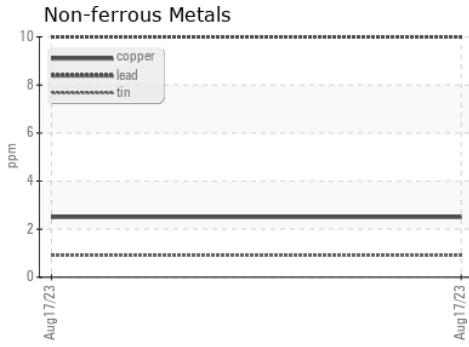
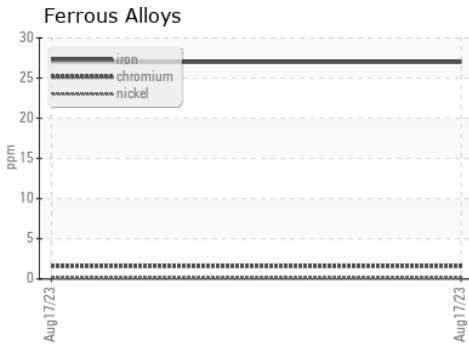
# OIL ANALYSIS REPORT



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	15.4 ▲ 17.9	---	---

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0102578      **Received** : 23 May 2024  
**Lab Number** : 06188653      **Tested** : 24 May 2024  
**Unique Number** : 11045405      **Diagnosed** : 28 May 2024 - Don Baldrige  
**Test Package** : FLEET ( Additional Tests : FuelDilution )

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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