

# PROBLEM SUMMARY

Sample Rating Trend



DIRT

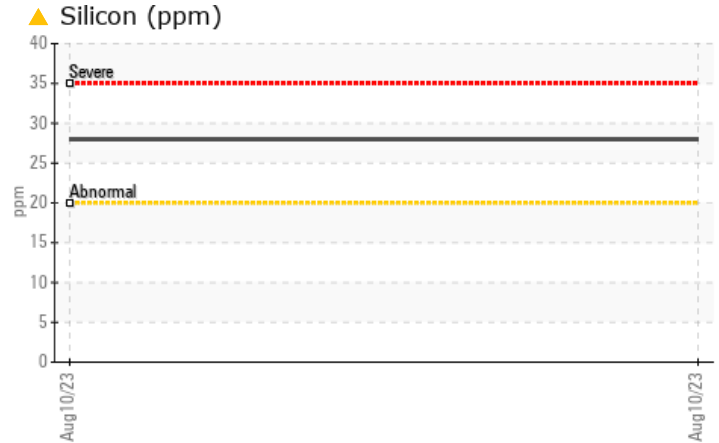
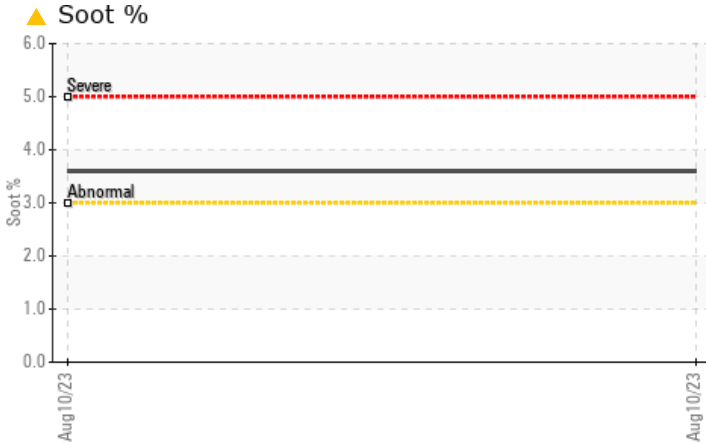


Machine Id  
**FREIGHTLINER 80**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON SHP 15W40 (13 LTR)**

## COMPONENT CONDITION SUMMARY



## 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.

## PROBLEMATIC TEST RESULTS

Sample Status				<b>ABNORMAL</b>	---	---
Silicon	ppm	ASTM D5185m	>20	<b>▲ 28</b>	---	---
Soot %	%	*ASTM D7844	>3	<b>▲ 3.6</b>	---	---

Customer Id: ATRPIN  
Sample No.: PCA0102637  
Lab Number: 05924114  
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.
Check Combustion	---	---	?	We advise that you check for faulty combustion, plugged air filters, or aftercoolers.

## HISTORICAL DIAGNOSIS

# OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id  
**FREIGHTLINER 80**  
 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.

**Wear**  
 All component wear rates are normal.

**Contamination**  
 There is an abnormal amount of solids and carbon present in the oil. Elemental level of silicon (Si) above normal.

**Fluid Condition**  
 The BN result indicates that there is suitable alkalinity remaining in the oil.

## SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	<b>PCA0102637</b>	---	---
Sample Date	Client Info	<b>10 Aug 2023</b>	---	---
Machine Age	mls Client Info	<b>470745</b>	---	---
Oil Age	mls Client Info	<b>24643</b>	---	---
Oil Changed	Client Info	<b>Changed</b>	---	---
Sample Status		<b>ABNORMAL</b>	---	---

## CONTAMINATION

method	limit/base	current	history1	history2
Glycol	WC Method	<b>NEG</b>	---	---

## WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >80	<b>73</b>	---	---
Chromium	ppm ASTM D5185m >5	<b>4</b>	---	---
Nickel	ppm ASTM D5185m >2	<b>0</b>	---	---
Titanium	ppm ASTM D5185m	<b>0</b>	---	---
Silver	ppm ASTM D5185m >3	<b>0</b>	---	---
Aluminum	ppm ASTM D5185m >30	<b>1</b>	---	---
Lead	ppm ASTM D5185m >30	<b>8</b>	---	---
Copper	ppm ASTM D5185m >150	<b>94</b>	---	---
Tin	ppm ASTM D5185m >5	<b>3</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>6</b>	---	---
Barium	ppm ASTM D5185m 0	<b>0</b>	---	---
Molybdenum	ppm ASTM D5185m 60	<b>53</b>	---	---
Manganese	ppm ASTM D5185m 0	<b>1</b>	---	---
Magnesium	ppm ASTM D5185m 1010	<b>768</b>	---	---
Calcium	ppm ASTM D5185m 1070	<b>1220</b>	---	---
Phosphorus	ppm ASTM D5185m 1150	<b>943</b>	---	---
Zinc	ppm ASTM D5185m 1270	<b>1165</b>	---	---
Sulfur	ppm ASTM D5185m 2060	<b>3185</b>	---	---

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >20	<b>▲ 28</b>	---	---
Sodium	ppm ASTM D5185m	<b>4</b>	---	---
Potassium	ppm ASTM D5185m >20	<b>&lt;1</b>	---	---
Fuel	% ASTM D3524 >5	<b>&lt;1.0</b>	---	---

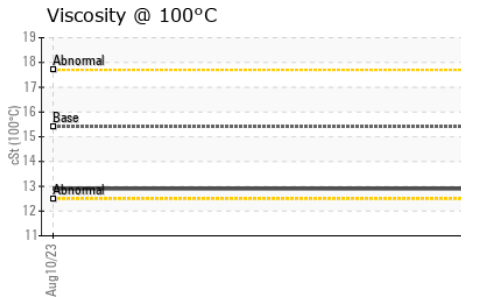
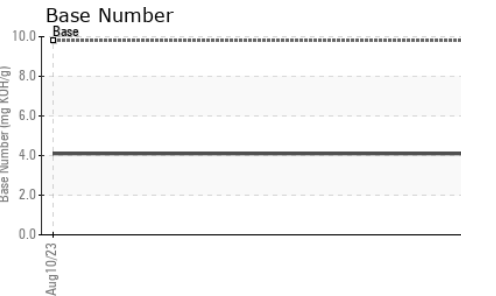
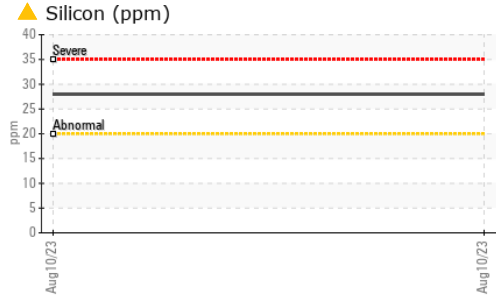
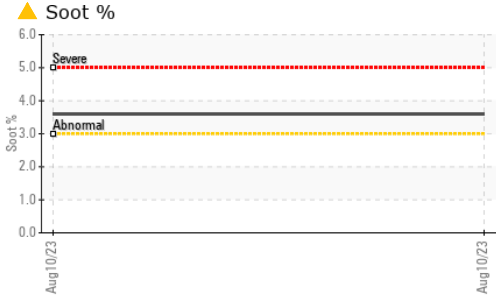
## INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>▲ 3.6</b>	---	---
Nitration	Abs/cm *ASTM D7624 >20	<b>11.4</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>20.7</b>	---	---
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>4.1</b>	---	---

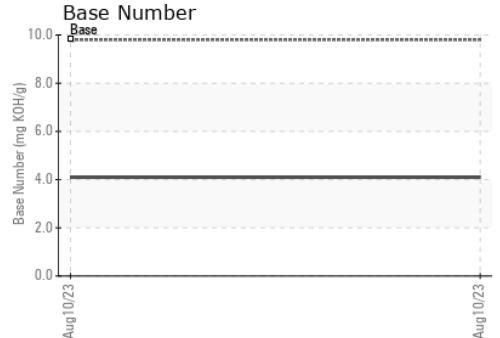
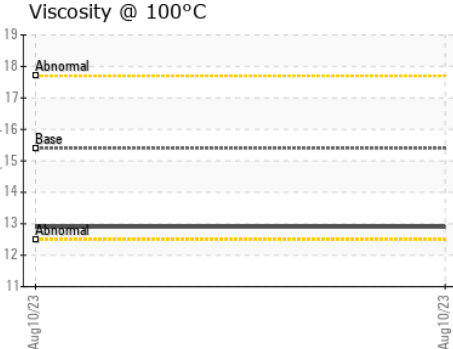
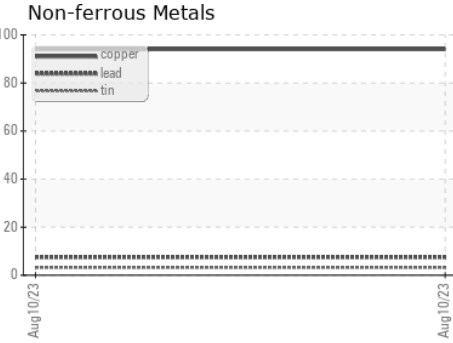
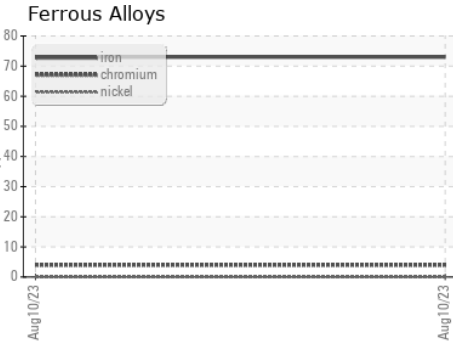
# OIL ANALYSIS REPORT



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	12.9	---

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0102637 **Received** : 14 Aug 2023  
**Lab Number** : 05924114 **Diagnosed** : 15 Aug 2023  
**Unique Number** : 10604061 **Diagnostician** : Don Baldrige  
**Test Package** : FLEET ( Additional Tests: FuelDilution )

**A Truck Repair**  
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 Pineville, NC  
 US 28134  
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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)