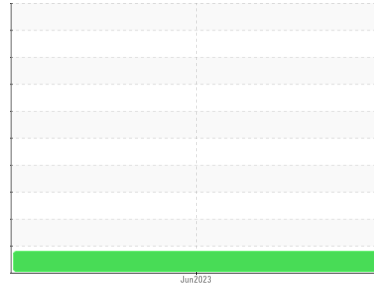


# PROBLEM SUMMARY

Sample Rating Trend

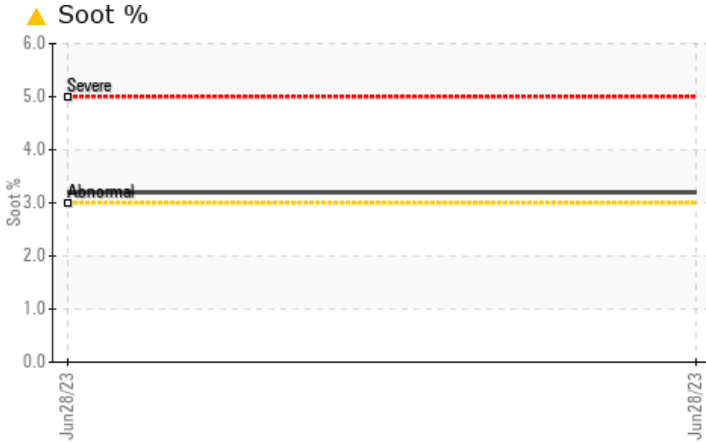


**SOOT**



Machine Id  
**FREIGHTLINER 105**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (13 LTR)**

## COMPONENT CONDITION SUMMARY



## RECOMMENDATION

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	ABNORMAL		
Soot %	%	*ASTM D7844 >3	▲ 3.2

Customer Id: ATRPIN  
 Sample No.: PCA0100691  
 Lab Number: 05889883  
 Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data:  
 Jonathan Hester +1 919-379-4092 x4092  
[jhester@wearcheckusa.com](mailto:jhester@wearcheckusa.com)

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



Machine Id  
**FREIGHTLINER 105**

Component  
**Diesel Engine**

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

## DIAGNOSIS

### ▲ Recommendation

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.

### Fluid Condition

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

SAMPLE INFORMATION		method	limit/base	current	history 1	history 2
Sample Number	Client Info			<b>PCA0100691</b>	---	---
Sample Date	Client Info			<b>28 Jun 2023</b>	---	---
Machine Age	mls	Client Info		<b>382858</b>	---	---
Oil Age	mls	Client Info		<b>31829</b>	---	---
Oil Changed	Client Info			<b>Changed</b>	---	---
Sample Status				<b>ABNORMAL</b>	---	---

CONTAMINATION		method	limit/base	current	history 1	history 2
Glycol	WC Method			<b>NEG</b>	---	---

WEAR METALS		method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185m	>80	<b>35</b>	---	---
Chromium	ppm	ASTM D5185m	>5	<b>1</b>	---	---
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	---	---
Titanium	ppm	ASTM D5185m		<b>0</b>	---	---
Silver	ppm	ASTM D5185m	>3	<b>0</b>	---	---
Aluminum	ppm	ASTM D5185m	>30	<b>&lt;1</b>	---	---
Lead	ppm	ASTM D5185m	>30	<b>15</b>	---	---
Copper	ppm	ASTM D5185m	>150	<b>33</b>	---	---
Tin	ppm	ASTM D5185m	>5	<b>3</b>	---	---
Vanadium	ppm	ASTM D5185m		<b>0</b>	---	---
Cadmium	ppm	ASTM D5185m		<b>0</b>	---	---

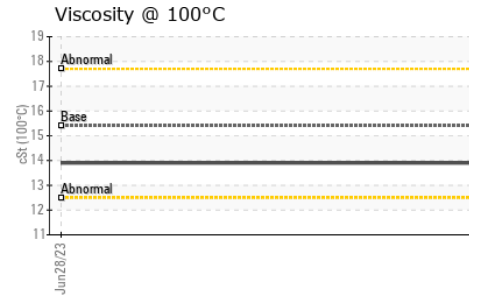
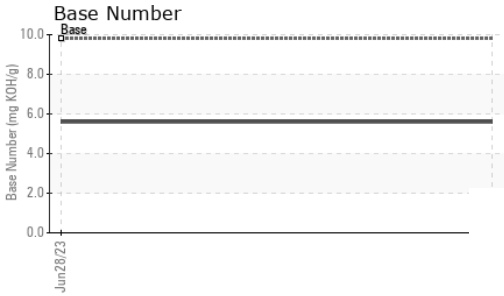
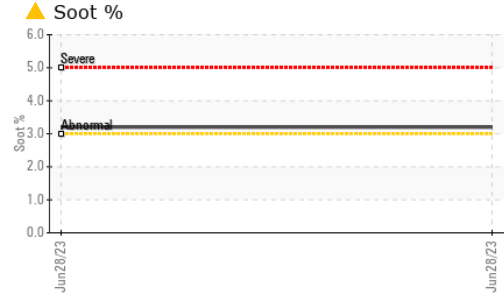
ADDITIVES		method	limit/base	current	history 1	history 2
Boron	ppm	ASTM D5185m	0	<b>7</b>	---	---
Barium	ppm	ASTM D5185m	0	<b>0</b>	---	---
Molybdenum	ppm	ASTM D5185m	60	<b>54</b>	---	---
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	---	---
Magnesium	ppm	ASTM D5185m	1010	<b>613</b>	---	---
Calcium	ppm	ASTM D5185m	1070	<b>1261</b>	---	---
Phosphorus	ppm	ASTM D5185m	1150	<b>895</b>	---	---
Zinc	ppm	ASTM D5185m	1270	<b>1098</b>	---	---
Sulfur	ppm	ASTM D5185m	2060	<b>2469</b>	---	---

CONTAMINANTS		method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185m	>20	<b>4</b>	---	---
Sodium	ppm	ASTM D5185m		<b>&lt;1</b>	---	---
Potassium	ppm	ASTM D5185m	>20	<b>1</b>	---	---
Fuel	%	ASTM D3524	>5	<b>&lt;1.0</b>	---	---

INFRA-RED		method	limit/base	current	history 1	history 2
Soot %	%	*ASTM D7844	>3	<b>▲ 3.2</b>	---	---
Nitration	Abs/cm	*ASTM D7624	>20	<b>10.4</b>	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>26.9</b>	---	---

FLUID DEGRADATION		method	limit/base	current	history 1	history 2
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>19.4</b>	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>5.6</b>	---	---

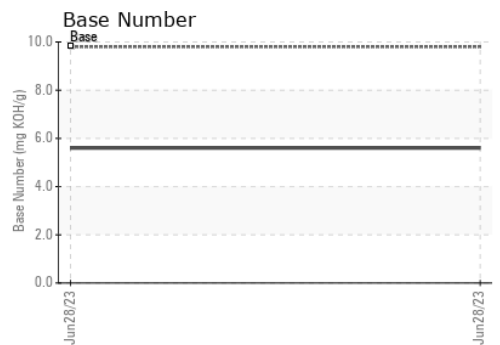
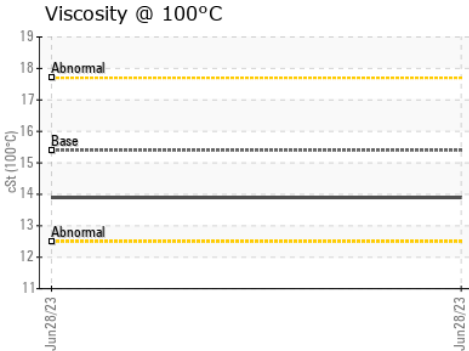
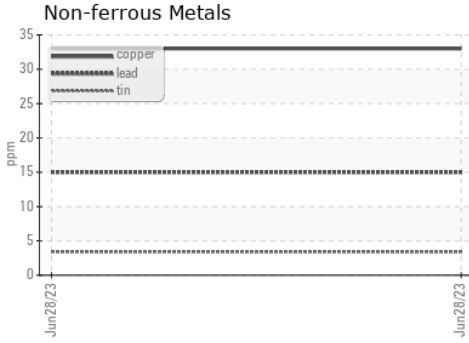
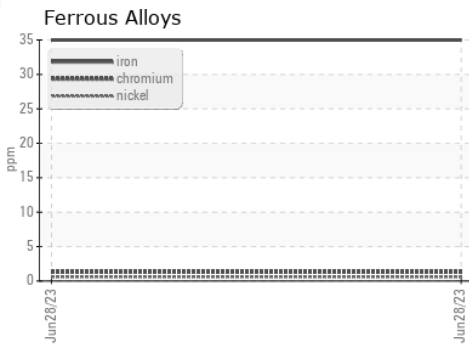
# OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history 1	history 2	
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	history 1	history 2	
Visc @ 100°C	cSt	ASTM D445	15.4	13.9	---	---

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0100691 **Received** : 05 Jul 2023  
**Lab Number** : 05889883 **Diagnosed** : 06 Jul 2023  
**Unique Number** : 10545693 **Diagnostician** : Jonathan Hester  
**Test Package** : FLEET ( Additional Tests: FuelDilution )

**A Truck Repair**  
 9349 China Grove Church Road  
 Pineville, NC  
 US 28134  
 Contact: Vlad Melnichuk  
 shop@migway.com  
 T: (980)255-3200  
 F:

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)