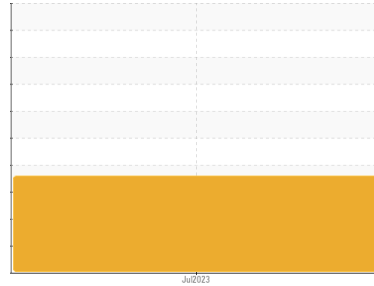


PROBLEM SUMMARY

Sample Rating Trend

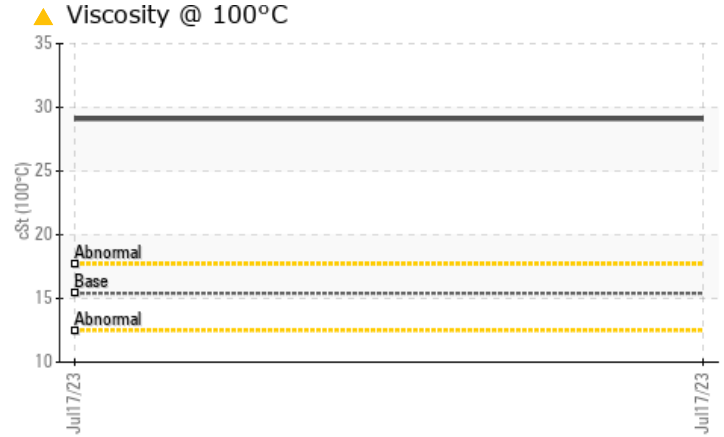
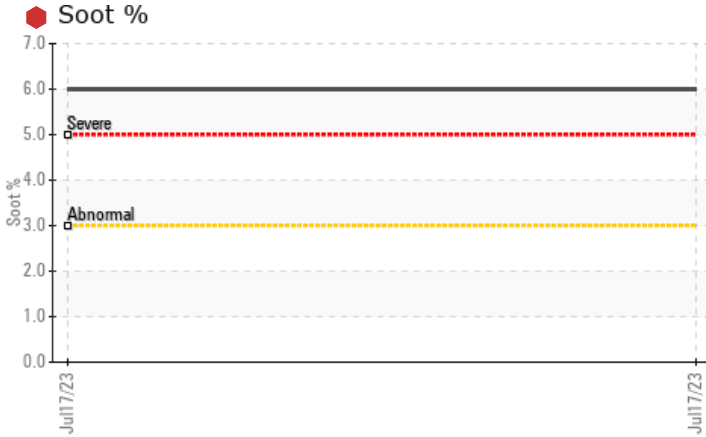


SOOT



Machine Id
FREIGHTLINER 104
 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. We recommend an early resample to monitor this condition. NOTE: High solids (carbon/soot) in the sample have limited the accuracy of Infra-Red data including Total Base Number (TBN) value.

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	---	---
Soot %	%	*ASTM D7844	>3	6	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	0.0	---	---
Visc @ 100°C	cSt	ASTM D445	15.4	29.1	---	---

Customer Id: ATRPIN
 Sample No.: PCA0100673
 Lab Number: 05902069
 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

To change component or sample information:
 Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

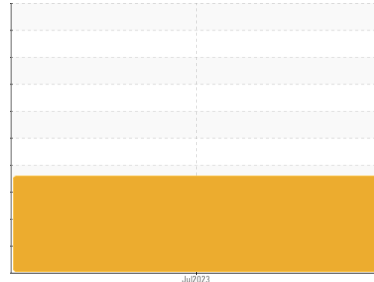
RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Resample	---	---	?	We recommend an early resample to monitor this condition.
Alert	---	---	?	NOTE: High solids (carbon/soot) in the sample have limited the accuracy of Infra-Red data including Total Base Number (TBN) value.
Check Combustion	---	---	?	We advise that you check for faulty combustion, plugged air filters, or aftercoolers.

HISTORICAL DIAGNOSIS



Machine Id
FREIGHTLINER 104
 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. We recommend an early resample to monitor this condition. 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. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		PCA0100673	---	---
Sample Date	Client Info		17 Jul 2023	---	---
Machine Age	mls	Client Info	343453	---	---
Oil Age	mls	Client Info	29753	---	---
Oil Changed	Client Info		Changed	---	---
Sample Status			SEVERE	---	---

CONTAMINATION

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

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >80	45	---	---
Chromium	ppm	ASTM D5185m >5	3	---	---
Nickel	ppm	ASTM D5185m >2	0	---	---
Titanium	ppm	ASTM D5185m	<1	---	---
Silver	ppm	ASTM D5185m >3	0	---	---
Aluminum	ppm	ASTM D5185m >30	<1	---	---
Lead	ppm	ASTM D5185m >30	13	---	---
Copper	ppm	ASTM D5185m >150	2	---	---
Tin	ppm	ASTM D5185m >5	<1	---	---
Vanadium	ppm	ASTM D5185m	<1	---	---
Cadmium	ppm	ASTM D5185m	0	---	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	0	---	---
Barium	ppm	ASTM D5185m 0	0	---	---
Molybdenum	ppm	ASTM D5185m 60	56	---	---
Manganese	ppm	ASTM D5185m 0	<1	---	---
Magnesium	ppm	ASTM D5185m 1010	838	---	---
Calcium	ppm	ASTM D5185m 1070	1129	---	---
Phosphorus	ppm	ASTM D5185m 1150	906	---	---
Zinc	ppm	ASTM D5185m 1270	1081	---	---
Sulfur	ppm	ASTM D5185m 2060	3069	---	---

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >20	6	---	---
Sodium	ppm	ASTM D5185m	4	---	---
Potassium	ppm	ASTM D5185m >20	0	---	---

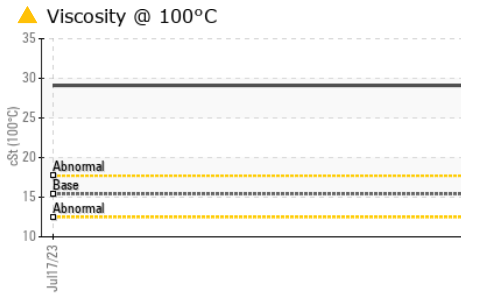
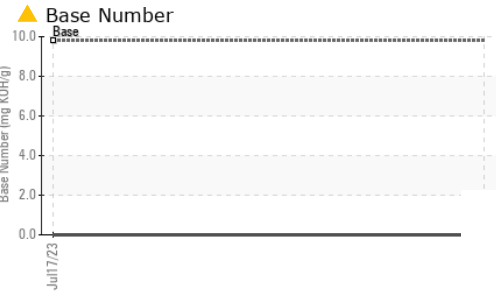
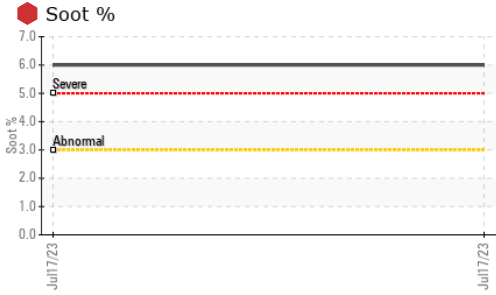
INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	6	---	---
Nitration	Abs/cm	*ASTM D7624 >20	16.4	---	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	37.2	---	---

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	26.5	---	---
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	0.0	---	---

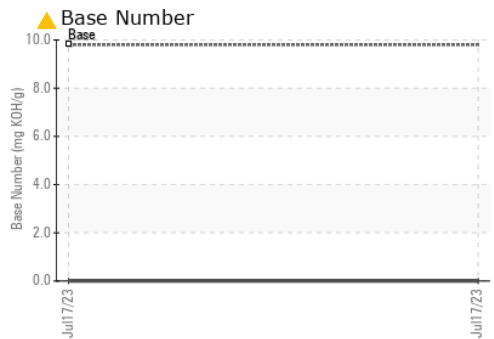
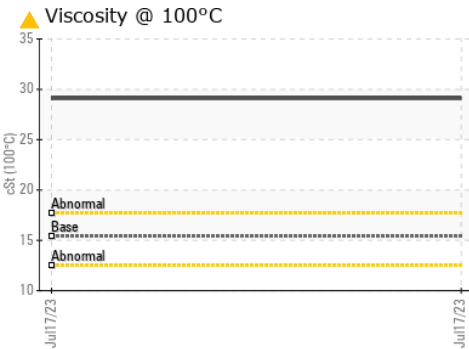
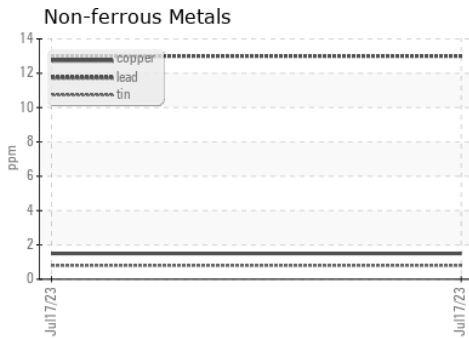
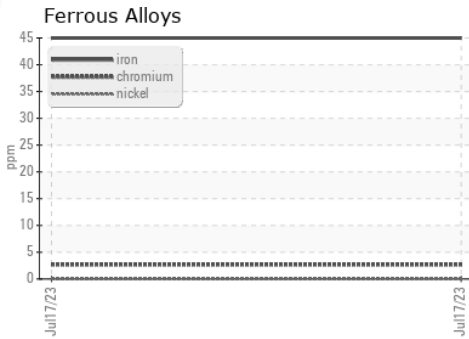
OIL ANALYSIS REPORT



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	▲ 29.1	---	---

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0100673 **Received** : 19 Jul 2023
Lab Number : 05902069 **Diagnosed** : 20 Jul 2023
Unique Number : 10563425 **Diagnostician** : Don Baldrige
Test Package : FLEET

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)