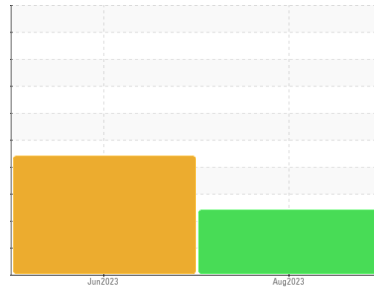




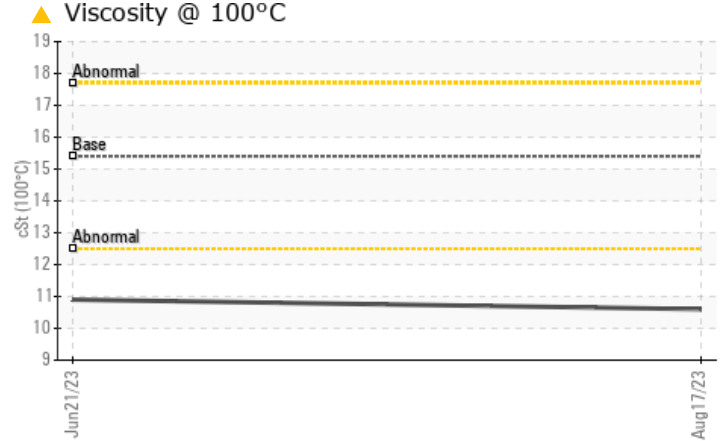
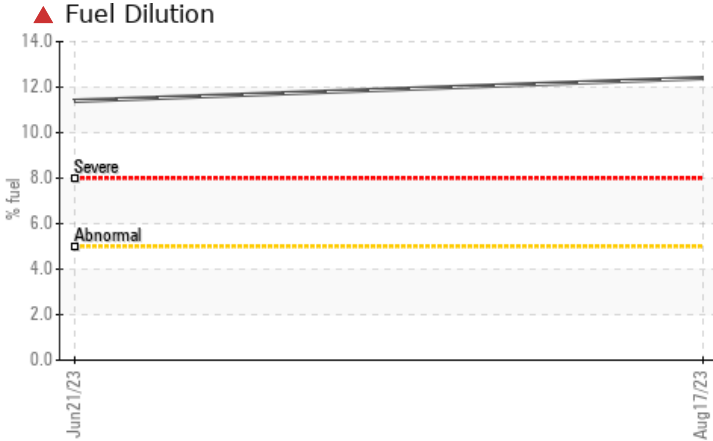
PROBLEM SUMMARY

Machine Id
FREIGHTLINER 32
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (13 LTR)

Sample Rating Trend



COMPONENT CONDITION SUMMARY



RECOMMENDATION

We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	SEVERE	---
Fuel	%	ASTM D3524	>5	▲ 12.4	▲ 11.4	---
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 10.6	▲ 10.9	---

Customer Id: ATRPIN
Sample No.: PCA0102567
Lab Number: 06188650
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
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.
Resample	---	---	?	We recommend an early resample to monitor this condition.
Check Fuel/injector System	---	---	?	We advise that you check the fuel injection system.

HISTORICAL DIAGNOSIS

FUEL



21 Jun 2023 Diag: Don Baldrige

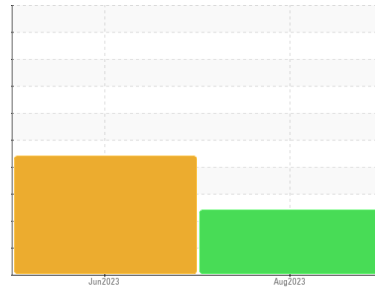
We advise that you check the fuel injection system. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition. All component wear rates are normal. There is an abnormal amount of solids and carbon present in the oil. There is a high amount of fuel present in the oil. Fuel is present in the oil and is lowering the viscosity. The BN level is low. The oil is no longer serviceable due to the presence of contaminants.

view report



OIL ANALYSIS REPORT

Sample Rating Trend



FUEL



Machine Id
FREIGHTLINER 32
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (13 LTR)

DIAGNOSIS

▲ Recommendation

We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

▲ Contamination

There is a high amount of fuel present in the oil.

▲ Fluid Condition

Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		PCA0102567	PCA0100700	---
Sample Date	Client Info		17 Aug 2023	21 Jun 2023	---
Machine Age	mls	Client Info	596540	572752	---
Oil Age	mls	Client Info	25000	26701	---
Oil Changed	Client Info		Changed	N/A	---
Sample Status			SEVERE	SEVERE	---

CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.2	NEG	NEG	---
Glycol	WC Method		NEG	NEG	---

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >80	30	50	---
Chromium	ppm	ASTM D5185m >5	2	3	---
Nickel	ppm	ASTM D5185m >2	<1	<1	---
Titanium	ppm	ASTM D5185m	<1	<1	---
Silver	ppm	ASTM D5185m >3	<1	0	---
Aluminum	ppm	ASTM D5185m >30	1	0	---
Lead	ppm	ASTM D5185m >30	7	12	---
Copper	ppm	ASTM D5185m >150	1	1	---
Tin	ppm	ASTM D5185m >5	<1	1	---
Vanadium	ppm	ASTM D5185m	0	0	---
Cadmium	ppm	ASTM D5185m	0	<1	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<1	<1	---
Barium	ppm	ASTM D5185m 0	0	<1	---
Molybdenum	ppm	ASTM D5185m 60	57	55	---
Manganese	ppm	ASTM D5185m 0	<1	<1	---
Magnesium	ppm	ASTM D5185m 1010	857	843	---
Calcium	ppm	ASTM D5185m 1070	1073	1113	---
Phosphorus	ppm	ASTM D5185m 1150	839	867	---
Zinc	ppm	ASTM D5185m 1270	1127	1110	---
Sulfur	ppm	ASTM D5185m 2060	2926	2951	---

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >20	5	5	---
Sodium	ppm	ASTM D5185m	<1	5	---
Potassium	ppm	ASTM D5185m >20	3	2	---
Fuel	%	ASTM D3524 >5	▲ 12.4	▲ 11.4	---

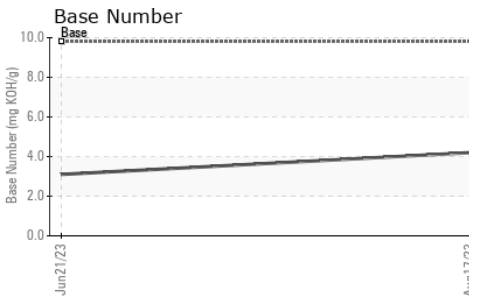
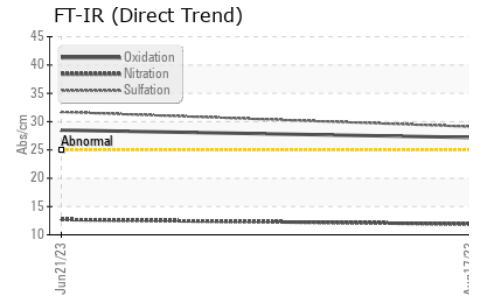
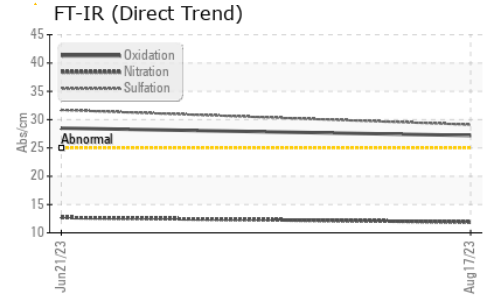
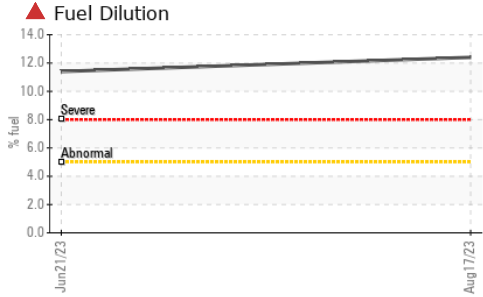
INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	2.8	▲ 3.3	---
Nitration	Abs/cm	*ASTM D7624 >20	11.9	12.7	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	29.1	31.7	---

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	27.2	28.5	---
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	4.2	▲ 3.1	---

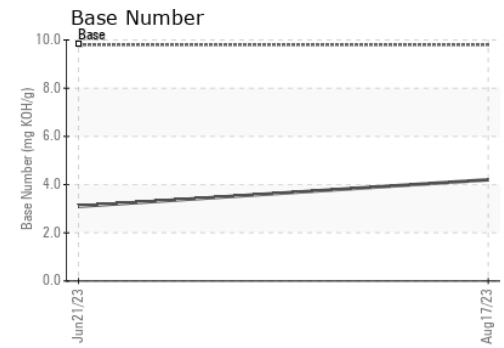
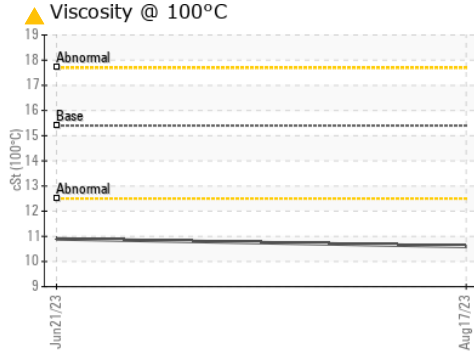
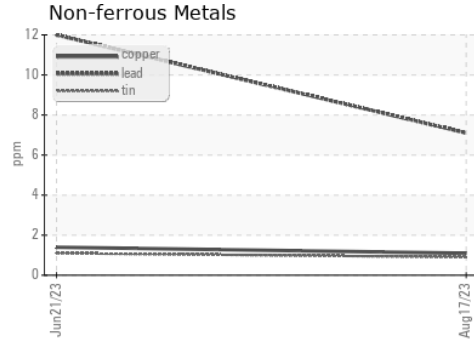
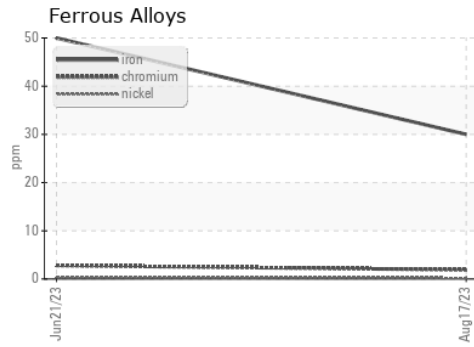
OIL ANALYSIS REPORT



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	▲ 10.6	▲ 10.9

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0102567 **Received** : 23 May 2024
Lab Number : 06188650 **Tested** : 28 May 2024
Unique Number : 11045402 **Diagnosed** : 28 May 2024 - Don Baldrige
Test Package : FLEET (Additional Tests: PercentFuel)

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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