

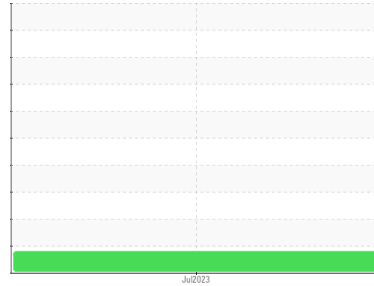
PROBLEM SUMMARY

Sample Rating Trend

WEAR

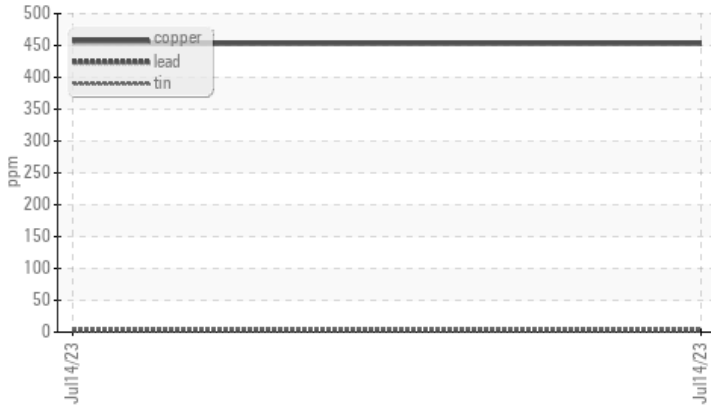


Machine Id
FREIGHTLINER 235
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 10W30 (--- GAL)



COMPONENT CONDITION SUMMARY

▲ Non-ferrous Metals



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	---	---
Copper	ppm	ASTM D5185m	>150
	▲ 453	---	---

Customer Id: ATRPIN
 Sample No.: PCA0100632
 Lab Number: 05902077
 Test Package: FLEET



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To discuss the diagnosis or test data:
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To change component or sample information:
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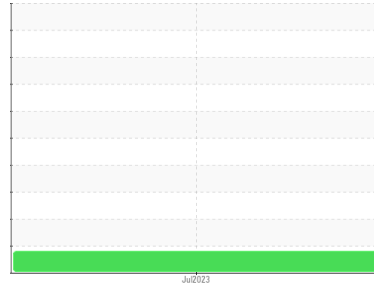
RECOMMENDED ACTIONS

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 235
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 10W30 (--- GAL)



DIAGNOSIS

Recommendation
 Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear
 The copper level is abnormal. All other component wear rates are normal.

Contamination
 There is no indication of any contamination in the oil.

Fluid Condition
 The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION method limit/base current history1 history2

Sample Number	Client Info		PCA0100632	---	---
Sample Date	Client Info		14 Jul 2023	---	---
Machine Age	mls	Client Info	48307	---	---
Oil Age	mls	Client Info	47369	---	---
Oil Changed	Client Info		Changed	---	---
Sample Status			ABNORMAL	---	---

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	105	---	---
Chromium	ppm	ASTM D5185m	>5	5	---	---
Nickel	ppm	ASTM D5185m	>2	1	---	---
Titanium	ppm	ASTM D5185m		<1	---	---
Silver	ppm	ASTM D5185m	>3	0	---	---
Aluminum	ppm	ASTM D5185m	>30	50	---	---
Lead	ppm	ASTM D5185m	>30	3	---	---
Copper	ppm	ASTM D5185m	>150	▲ 453	---	---
Tin	ppm	ASTM D5185m	>5	6	---	---
Vanadium	ppm	ASTM D5185m		<1	---	---
Cadmium	ppm	ASTM D5185m		0	---	---

ADDITIVES method limit/base current history1 history2

Boron	ppm	ASTM D5185m	2	28	---	---
Barium	ppm	ASTM D5185m	0	0	---	---
Molybdenum	ppm	ASTM D5185m	50	49	---	---
Manganese	ppm	ASTM D5185m	0	4	---	---
Magnesium	ppm	ASTM D5185m	950	584	---	---
Calcium	ppm	ASTM D5185m	1050	2026	---	---
Phosphorus	ppm	ASTM D5185m	995	805	---	---
Zinc	ppm	ASTM D5185m	1180	972	---	---
Sulfur	ppm	ASTM D5185m	2600	2163	---	---

CONTAMINANTS method limit/base current history1 history2

Silicon	ppm	ASTM D5185m	>20	10	---	---
Sodium	ppm	ASTM D5185m		8	---	---
Potassium	ppm	ASTM D5185m	>20	150	---	---

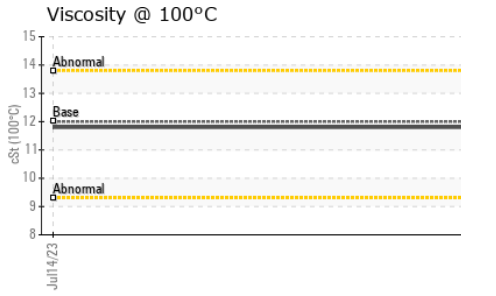
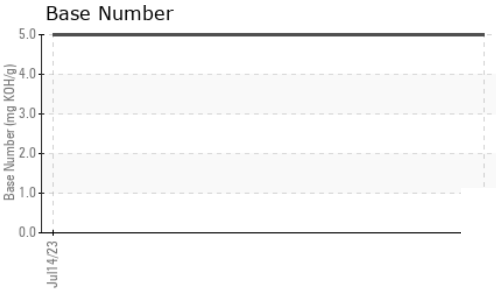
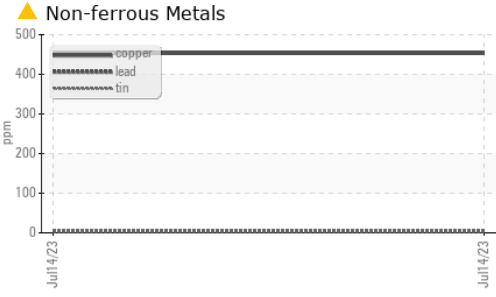
INFRA-RED method limit/base current history1 history2

Soot %	%	*ASTM D7844	>3	1.2	---	---
Nitration	Abs/cm	*ASTM D7624	>20	18.7	---	---
Sulfation	Abs.1mm	*ASTM D7415	>30	28.9	---	---

FLUID DEGRADATION method limit/base current history1 history2

Oxidation	Abs.1mm	*ASTM D7414	>25	38.7	---	---
Base Number (BN)	mg KOH/g	ASTM D2896		5.0	---	---

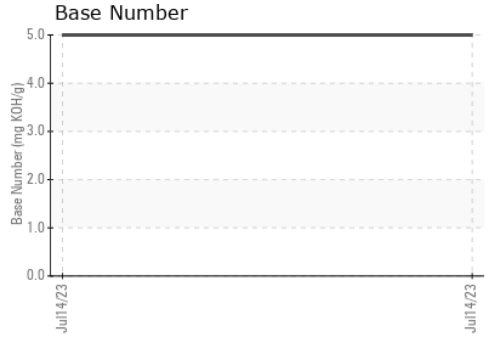
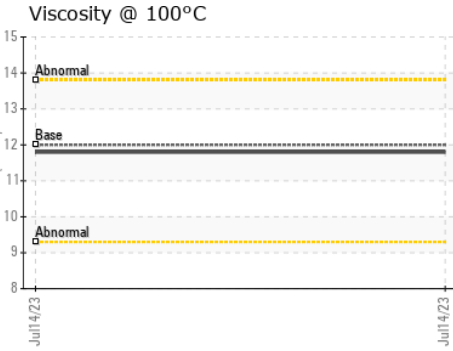
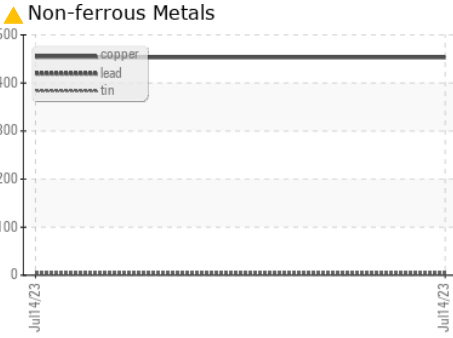
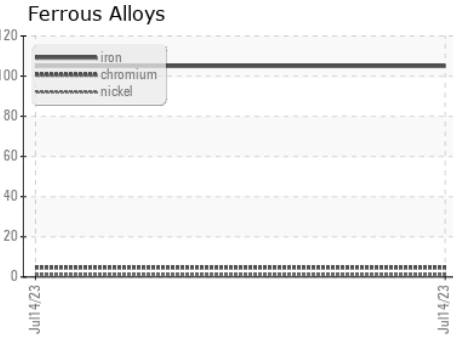
OIL ANALYSIS REPORT



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	12.00	11.8	---

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0100632 **Received** : 19 Jul 2023
Lab Number : **05902077** **Diagnosed** : 21 Jul 2023
Unique Number : 10563433 **Diagnostician** : Angela Borella
Test Package : FLEET

A Truck Repair
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 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)