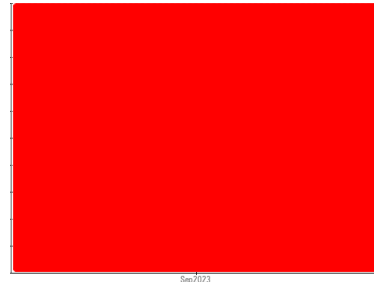


PROBLEM SUMMARY

Sample Rating Trend



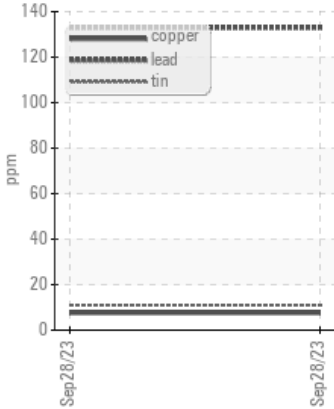
WEAR



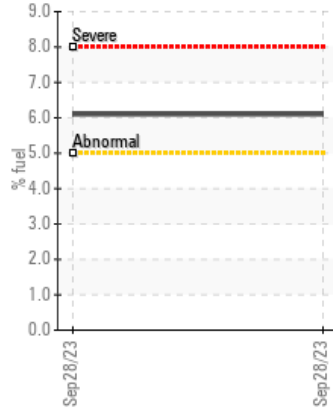
Machine Id
FREIGHTLINER 52
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (13 LTR)

COMPONENT CONDITION SUMMARY

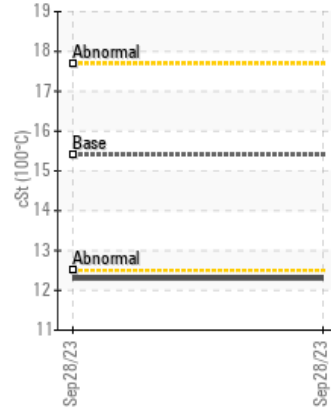
▲ Non-ferrous Metals



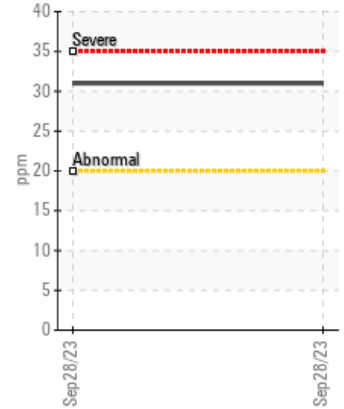
▲ Fuel Dilution



▲ Viscosity @ 100°C



▲ Silicon (ppm)



RECOMMENDATION

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

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	---	---
Lead	ppm	ASTM D5185m	>30	▲ 133	---	---
Tin	ppm	ASTM D5185m	>5	▲ 11	---	---
Silicon	ppm	ASTM D5185m	>20	▲ 31	---	---
Fuel	%	ASTM D3524	>5	▲ 6.1	---	---
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 12.3	---	---

Customer Id: ATRPIN
Sample No.: PCA0105004
Lab Number: 06188629
Test Package: FLEET



To manage this report scan the QR code

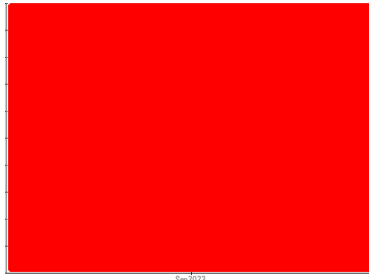
To discuss the diagnosis or test data:
Don Baldrige +1
don.b505@comcast.net

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

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Inspect Wear Source	MISSED	May 28 2024	?	We advise that you inspect for the source(s) of wear.
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	MISSED	May 28 2024	?	We recommend an early resample to monitor this condition.
Check Fuel/injector System	MISSED	May 28 2024	?	We advise that you check the fuel injection system.

HISTORICAL DIAGNOSIS



Machine Id
FREIGHTLINER 52
 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 advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

▲ Wear

The lead and tin levels are severe.

▲ Contamination

There is a moderate amount of fuel present in the oil. Elemental level of silicon (Si) above normal.

▲ 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.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		PCA0105004	---	---
Sample Date	Client Info		28 Sep 2023	---	---
Machine Age	mls	Client Info	617781	---	---
Oil Age	mls	Client Info	27625	---	---
Oil Changed	Client Info		Changed	---	---
Sample Status			SEVERE	---	---

CONTAMINATION

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

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>80	73	---
Chromium	ppm	ASTM D5185m	>5	3	---
Nickel	ppm	ASTM D5185m	>2	<1	---
Titanium	ppm	ASTM D5185m		<1	---
Silver	ppm	ASTM D5185m	>3	<1	---
Aluminum	ppm	ASTM D5185m	>30	2	---
Lead	ppm	ASTM D5185m	>30	▲ 133	---
Copper	ppm	ASTM D5185m	>150	8	---
Tin	ppm	ASTM D5185m	>5	▲ 11	---
Vanadium	ppm	ASTM D5185m		0	---
Cadmium	ppm	ASTM D5185m		0	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	44	---
Barium	ppm	ASTM D5185m	0	0	---
Molybdenum	ppm	ASTM D5185m	60	63	---
Manganese	ppm	ASTM D5185m	0	<1	---
Magnesium	ppm	ASTM D5185m	1010	717	---
Calcium	ppm	ASTM D5185m	1070	1333	---
Phosphorus	ppm	ASTM D5185m	1150	860	---
Zinc	ppm	ASTM D5185m	1270	1162	---
Sulfur	ppm	ASTM D5185m	2060	3004	---

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>20	▲ 31	---
Sodium	ppm	ASTM D5185m		4	---
Potassium	ppm	ASTM D5185m	>20	5	---
Fuel	%	ASTM D3524	>5	▲ 6.1	---

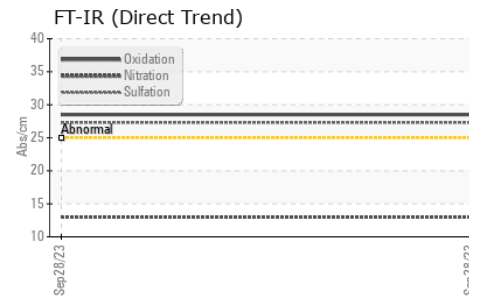
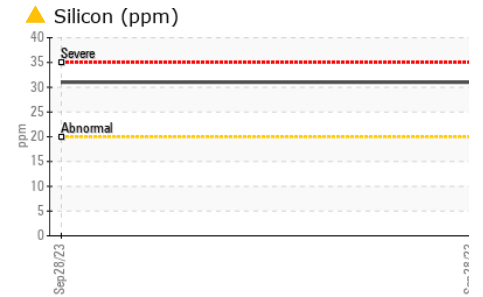
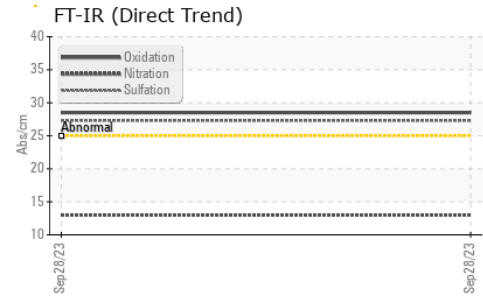
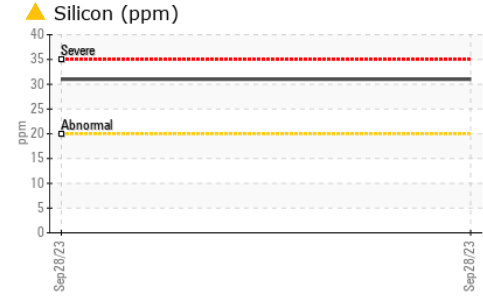
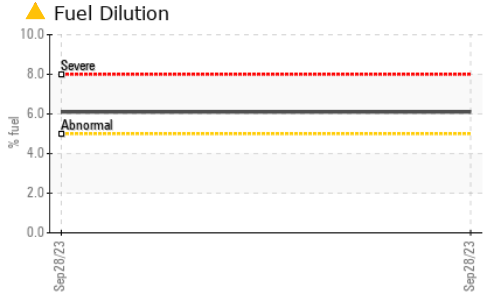
INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.6	---
Nitration	Abs/cm	*ASTM D7624	>20	13.0	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	27.3	---

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	28.5	---
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	5.1	---

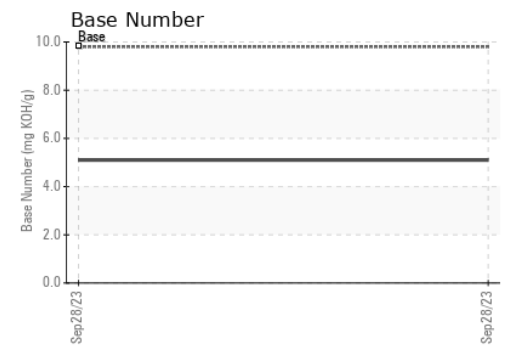
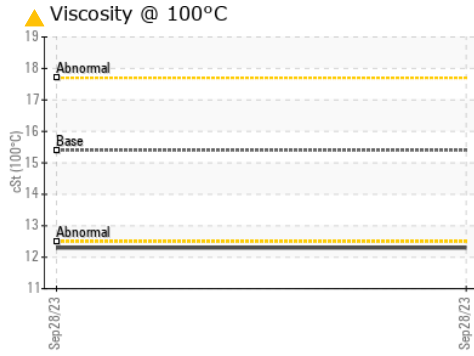
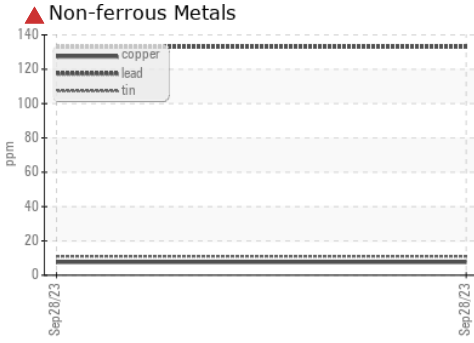
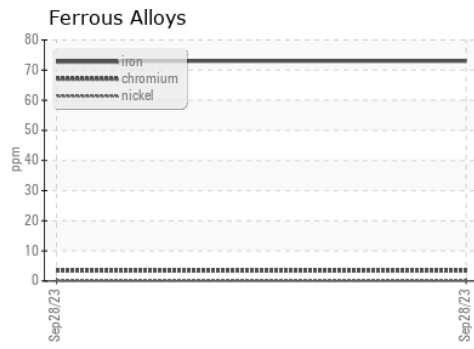
OIL ANALYSIS REPORT



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	▲ 12.3	---	---

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0105004 **Received** : 23 May 2024
Lab Number : 06188629 **Tested** : 28 May 2024
Unique Number : 11045381 **Diagnosed** : 28 May 2024 - Don Baldrige
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

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)