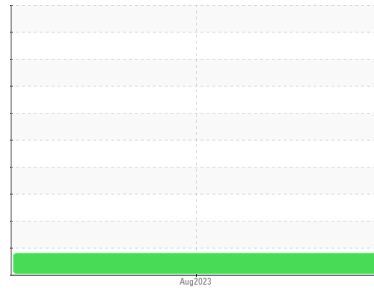


OIL ANALYSIS REPORT

Sample Rating Trend



SOOT



Machine Id
FREIGHTLINER 31

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (13 LTR)

DIAGNOSIS

▲ Recommendation

The oil change at the time of sampling has been noted.

Wear

All component wear rates are normal.

▲ Contamination

Light concentration of carbon/soot present in the oil.

Fluid Condition

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		PCA0102576	---	---
Sample Date	Client Info		17 Aug 2023	---	---
Machine Age	mls	Client Info	557846	---	---
Oil Age	mls	Client Info	24076	---	---
Oil Changed	Client Info		Changed	---	---
Sample Status			ABNORMAL	---	---

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	34	---	---
Chromium	ppm	ASTM D5185m >5	2	---	---
Nickel	ppm	ASTM D5185m >2	<1	---	---
Titanium	ppm	ASTM D5185m	<1	---	---
Silver	ppm	ASTM D5185m >3	<1	---	---
Aluminum	ppm	ASTM D5185m >30	1	---	---
Lead	ppm	ASTM D5185m >30	9	---	---
Copper	ppm	ASTM D5185m >150	1	---	---
Tin	ppm	ASTM D5185m >5	1	---	---
Vanadium	ppm	ASTM D5185m	0	---	---
Cadmium	ppm	ASTM D5185m	0	---	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<1	---	---
Barium	ppm	ASTM D5185m 0	0	---	---
Molybdenum	ppm	ASTM D5185m 60	55	---	---
Manganese	ppm	ASTM D5185m 0	<1	---	---
Magnesium	ppm	ASTM D5185m 1010	872	---	---
Calcium	ppm	ASTM D5185m 1070	1094	---	---
Phosphorus	ppm	ASTM D5185m 1150	914	---	---
Zinc	ppm	ASTM D5185m 1270	1165	---	---
Sulfur	ppm	ASTM D5185m 2060	3118	---	---

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >20	8	---	---
Sodium	ppm	ASTM D5185m	3	---	---
Potassium	ppm	ASTM D5185m >20	6	---	---
Fuel	%	ASTM D3524 >5	<1.0	---	---

INFRA-RED

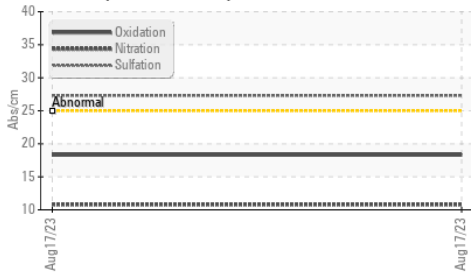
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	▲ 3.8	---	---
Nitration	Abs/cm	*ASTM D7624 >20	10.8	---	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	27.3	---	---

FLUID DEGRADATION

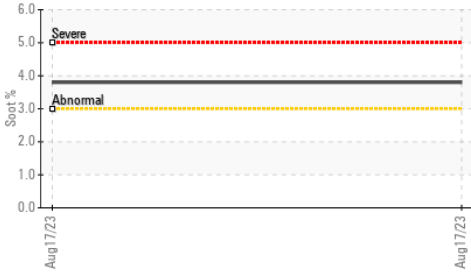
	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	18.3	---	---
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	4.3	---	---

OIL ANALYSIS REPORT

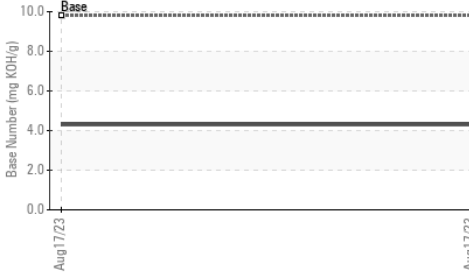
▲ FT-IR (Direct Trend)



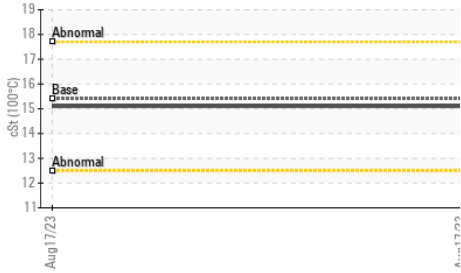
▲ Soot %



Base Number



Viscosity @ 100°C

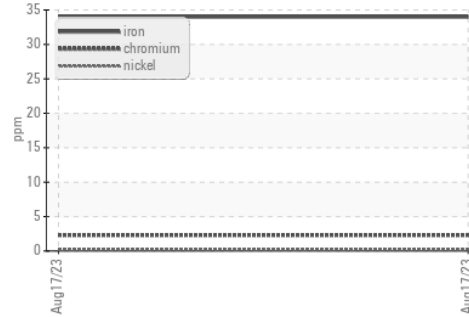


VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---
Precipitate	scalar	*Visual	NONE	NONE	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---	---
Free Water	scalar	*Visual		NEG	---	---

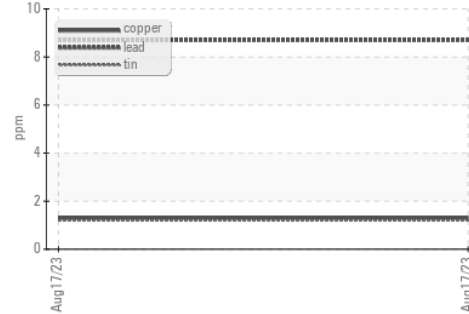
FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	15.4	15.1	---	---

GRAPHS

Ferrous Alloys



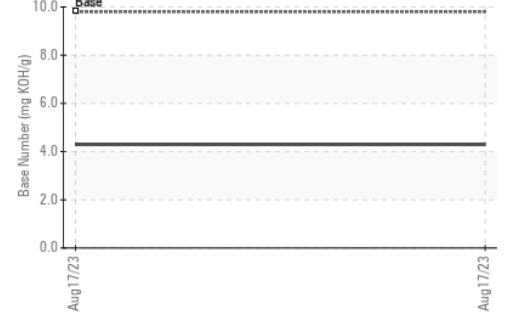
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0102576 **Received** : 23 May 2024
Lab Number : **06188657** **Tested** : 24 May 2024
Unique Number : 11045409 **Diagnosed** : 24 May 2024 - Wes Davis
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)