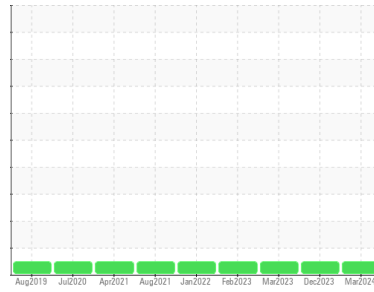


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
Freightliner 2108

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 10W30 (18 QTS)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All 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 suitable for further service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		PCA0091635	PCA0091573	PCA0071397
Sample Date	Client Info		20 Mar 2024	08 Dec 2023	14 Mar 2023
Machine Age	mls	Client Info	193883	189268	183642
Oil Age	mls	Client Info	4615	5626	4244
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<1.0	<1.0	<1.0
Water	WC Method	>0.2	NEG	NEG	NEG
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >130	16	18	14
Chromium	ppm	ASTM D5185m >10	<1	<1	<1
Nickel	ppm	ASTM D5185m >4	0	0	0
Titanium	ppm	ASTM D5185m >2	<1	0	<1
Silver	ppm	ASTM D5185m >2	0	0	0
Aluminum	ppm	ASTM D5185m >20	2	3	2
Lead	ppm	ASTM D5185m >20	1	2	0
Copper	ppm	ASTM D5185m >125	2	<1	<1
Tin	ppm	ASTM D5185m >4	0	0	<1
Vanadium	ppm	ASTM D5185m	<1	<1	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 2	<1	<1	3
Barium	ppm	ASTM D5185m 0	0	0	0
Molybdenum	ppm	ASTM D5185m 50	63	60	62
Manganese	ppm	ASTM D5185m 0	<1	0	<1
Magnesium	ppm	ASTM D5185m 950	1014	975	1018
Calcium	ppm	ASTM D5185m 1050	1170	1011	1104
Phosphorus	ppm	ASTM D5185m 995	1128	1008	1100
Zinc	ppm	ASTM D5185m 1180	1358	1222	1336
Sulfur	ppm	ASTM D5185m 2600	3730	3054	3686

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	3	3	6
Sodium	ppm	ASTM D5185m	7	2	2
Potassium	ppm	ASTM D5185m >20	20	11	6

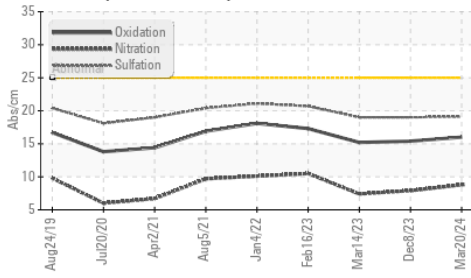
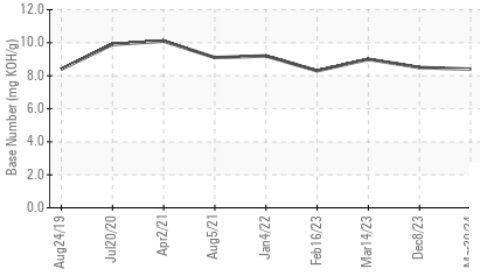
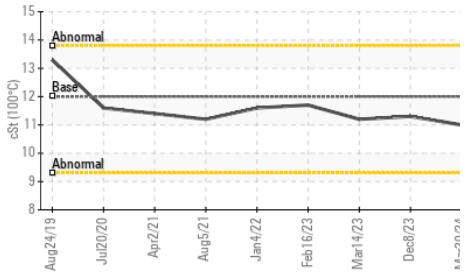
INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >6	0.3	0.3	0.3
Nitration	Abs/cm	*ASTM D7624 >20	8.8	7.9	7.4
Sulfation	Abs/.1mm	*ASTM D7415 >30	19.1	19.0	19.0

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	16.0	15.4	15.2
Base Number (BN)	mg KOH/g	ASTM D2896	8.4	8.5	9.0

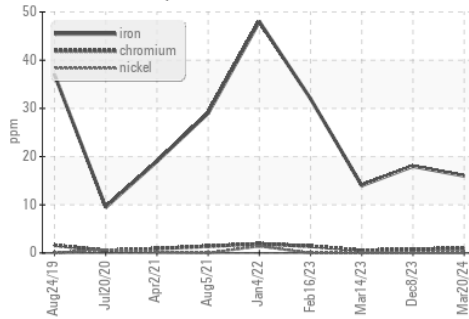
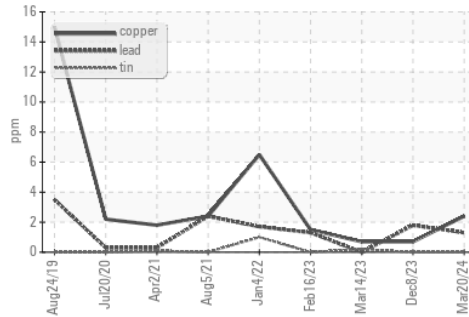
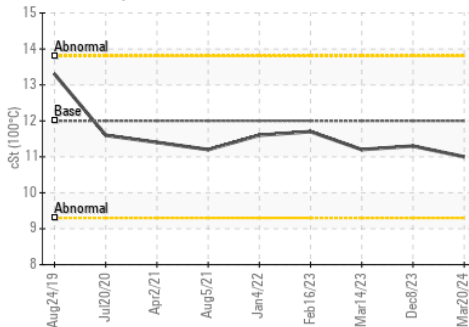
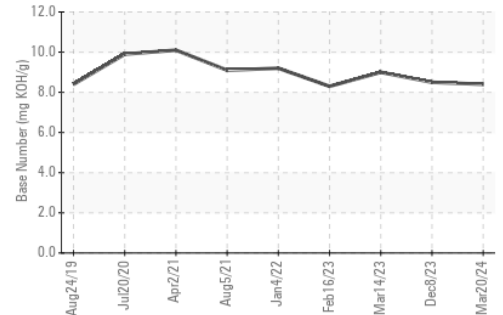
OIL ANALYSIS REPORT

FT-IR (Direct Trend)

Base Number

Viscosity @ 100°C


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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	12.00	11.0	11.3

GRAPHS

Ferrous Alloys

Non-ferrous Metals

Viscosity @ 100°C

Base Number


Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : PCA0091635

Lab Number : 06215297

Unique Number : 11088161

Test Package : FLEET

Received : 20 Jun 2024

Tested : 21 Jun 2024

Diagnosed : 21 Jun 2024 - Wes Davis

ICSB370 - Alton

4525 North Alby Road

Godfrey, IL

US 62035

Contact: Chad Ingold

c.ingold@illinois-central.com

T: (618)466-5400

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)