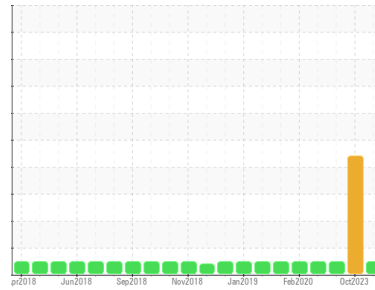


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
Plymouth & Brockton
Machine Id
11407

Component
Diesel Engine
Fluid

PETRO CANADA DURON SHP 15W40 (39 QTS)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

Fuel content negligible. 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		PCA0104491	PCA0104676	PCA0013373
Sample Date	Client Info		13 Dec 2023	08 Oct 2023	29 Jul 2023
Machine Age	mls	Client Info	665782	660630	650226
Oil Age	mls	Client Info	24000	6000	12000
Oil Changed	Client Info		Changed	Changed	Not Changed
Sample Status			NORMAL	SEVERE	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
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 >200	14	181	89
Chromium	ppm	ASTM D5185m >10	<1	6	3
Nickel	ppm	ASTM D5185m >4	0	<1	0
Titanium	ppm	ASTM D5185m >2	<1	0	<1
Silver	ppm	ASTM D5185m >2	0	0	0
Aluminum	ppm	ASTM D5185m >30	2	8	4
Lead	ppm	ASTM D5185m >30	2	▲ 37	7
Copper	ppm	ASTM D5185m >30	1	6	4
Tin	ppm	ASTM D5185m >4	<1	▲ 10	4
Vanadium	ppm	ASTM D5185m	0	0	<1
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	13	4	5
Barium	ppm	ASTM D5185m 0	0	0	0
Molybdenum	ppm	ASTM D5185m 60	55	55	59
Manganese	ppm	ASTM D5185m 0	<1	2	1
Magnesium	ppm	ASTM D5185m 1010	912	832	891
Calcium	ppm	ASTM D5185m 1070	1009	1016	1141
Phosphorus	ppm	ASTM D5185m 1150	1006	897	952
Zinc	ppm	ASTM D5185m 1270	1218	1125	1217
Sulfur	ppm	ASTM D5185m 2060	3093	2466	3346

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >30	6	16	10
Sodium	ppm	ASTM D5185m	1	10	5
Potassium	ppm	ASTM D5185m >20	<1	1	2
Fuel	%	ASTM D3524 >3.0	0.9	◆ 7.9	<1.0

INFRA-RED

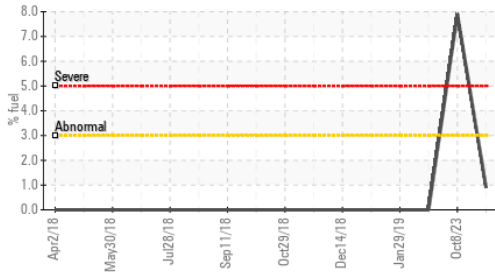
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.4	▲ 4.4	2.1
Nitration	Abs/cm	*ASTM D7624 >20	5.2	17.8	10.8
Sulfation	Abs/.1mm	*ASTM D7415 >30	17.5	36.6	24.2

FLUID DEGRADATION

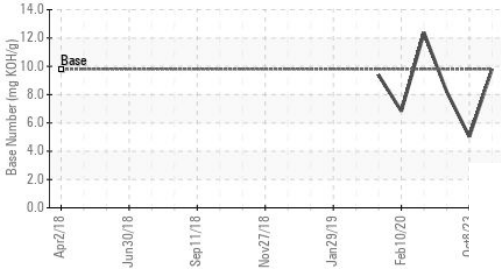
	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	12.8	32.2	19.0
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	9.80	5.03	8.21

OIL ANALYSIS REPORT

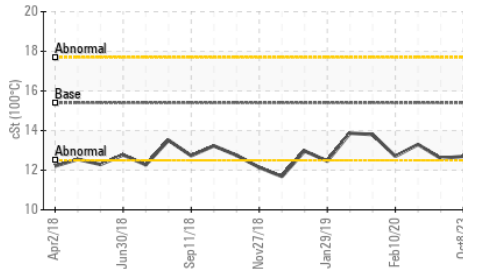
Fuel Dilution



Base Number



Viscosity @ 100°C

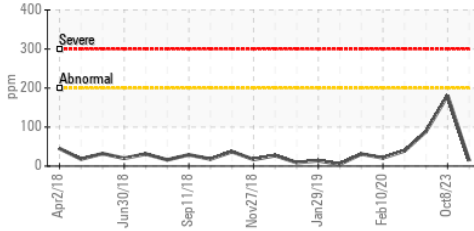


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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

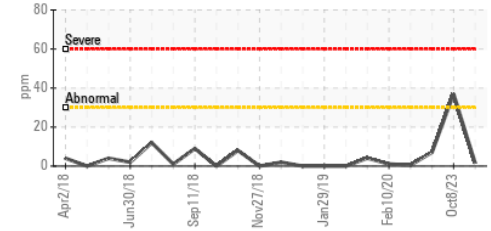
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.9	12.7

GRAPHS

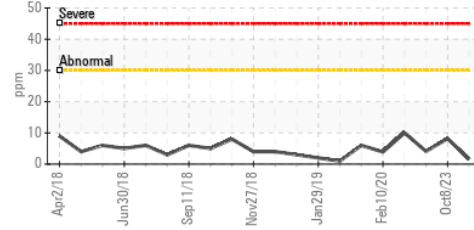
Iron (ppm)



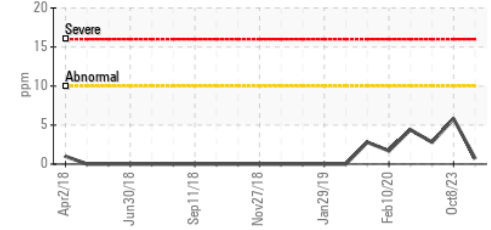
Lead (ppm)



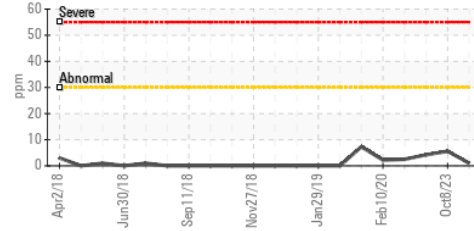
Aluminum (ppm)



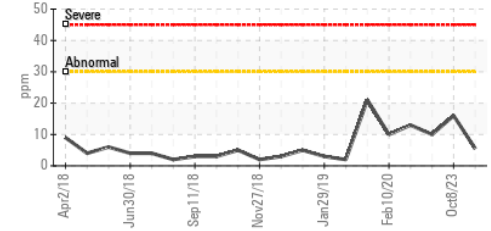
Chromium (ppm)



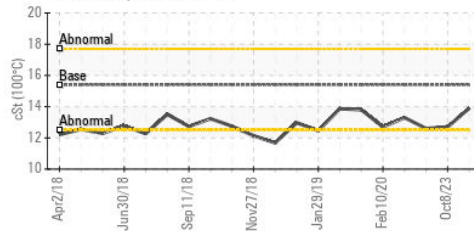
Copper (ppm)



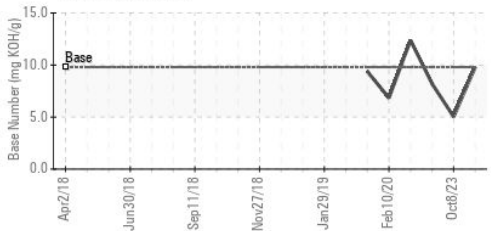
Silicon (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0104491 **Received** : 02 Jan 2024
Lab Number : 06049119 **Diagnosed** : 03 Jan 2024
Unique Number : 10809727 **Diagnostician** : Wes Davis
Test Package : MOB 2 (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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