

OIL ANALYSIS REPORT

Sample Rating Trend



DEGRADATION



Machine Id

471078

Component

Diesel Engine

Fluid

PETRO CANADA DURON SHP 10W30 (--- QTS)

DIAGNOSIS

Recommendation

We advise that you check for faulty combustion, plugged air filters, or aftercoolers. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. NOTE: High solids (carbon/soot) in the sample have limited the accuracy of Infra-Red data including Total Base Number (TBN) value.

Wear

All component wear rates are normal.

Contamination

There is an abnormal amount of solids and carbon present in the oil.

Fluid Condition

The oil viscosity is higher than normal. The BN level is low.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		PCA0121067	---	---
Sample Date	Client Info		24 May 2024	---	---
Machine Age	mls	Client Info	224126	---	---
Oil Age	mls	Client Info	0	---	---
Oil Changed	Client Info		Changed	---	---
Sample Status			ABNORMAL	---	---

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<1.0	---	---
Water	WC Method	>0.2	NEG	---	---
Glycol	WC Method		NEG	---	---

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	43	---	---
Chromium	ppm	ASTM D5185m >20	1	---	---
Nickel	ppm	ASTM D5185m >4	0	---	---
Titanium	ppm	ASTM D5185m	0	---	---
Silver	ppm	ASTM D5185m >3	0	---	---
Aluminum	ppm	ASTM D5185m >20	16	---	---
Lead	ppm	ASTM D5185m >40	16	---	---
Copper	ppm	ASTM D5185m >330	2	---	---
Tin	ppm	ASTM D5185m >15	<1	---	---
Vanadium	ppm	ASTM D5185m	<1	---	---
Cadmium	ppm	ASTM D5185m	0	---	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 2	3	---	---
Barium	ppm	ASTM D5185m 0	0	---	---
Molybdenum	ppm	ASTM D5185m 50	68	---	---
Manganese	ppm	ASTM D5185m 0	1	---	---
Magnesium	ppm	ASTM D5185m 950	935	---	---
Calcium	ppm	ASTM D5185m 1050	1303	---	---
Phosphorus	ppm	ASTM D5185m 995	1051	---	---
Zinc	ppm	ASTM D5185m 1180	1302	---	---
Sulfur	ppm	ASTM D5185m 2600	3400	---	---

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	5	---	---
Sodium	ppm	ASTM D5185m	16	---	---
Potassium	ppm	ASTM D5185m >20	10	---	---

INFRA-RED

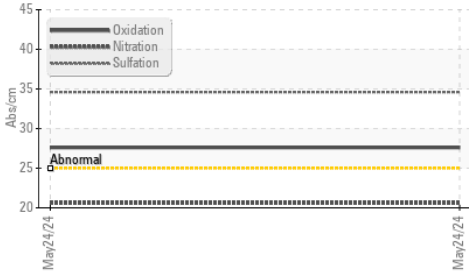
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	▲ 4.9	---	---
Nitration	Abs/cm	*ASTM D7624 >20	20.6	---	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	34.6	---	---

FLUID DEGRADATION

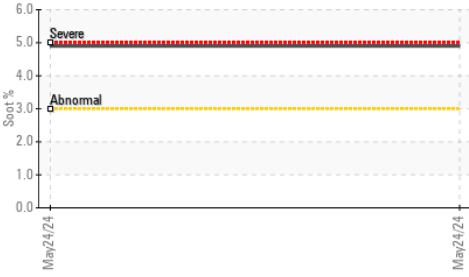
	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	27.6	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	▲ 0.0	---	---

OIL ANALYSIS REPORT

▲ FT-IR (Direct Trend)



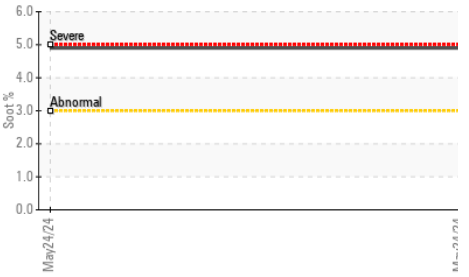
▲ Soot %



▲ Viscosity @ 100°C



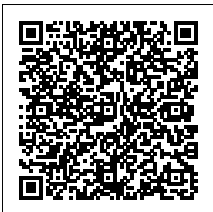
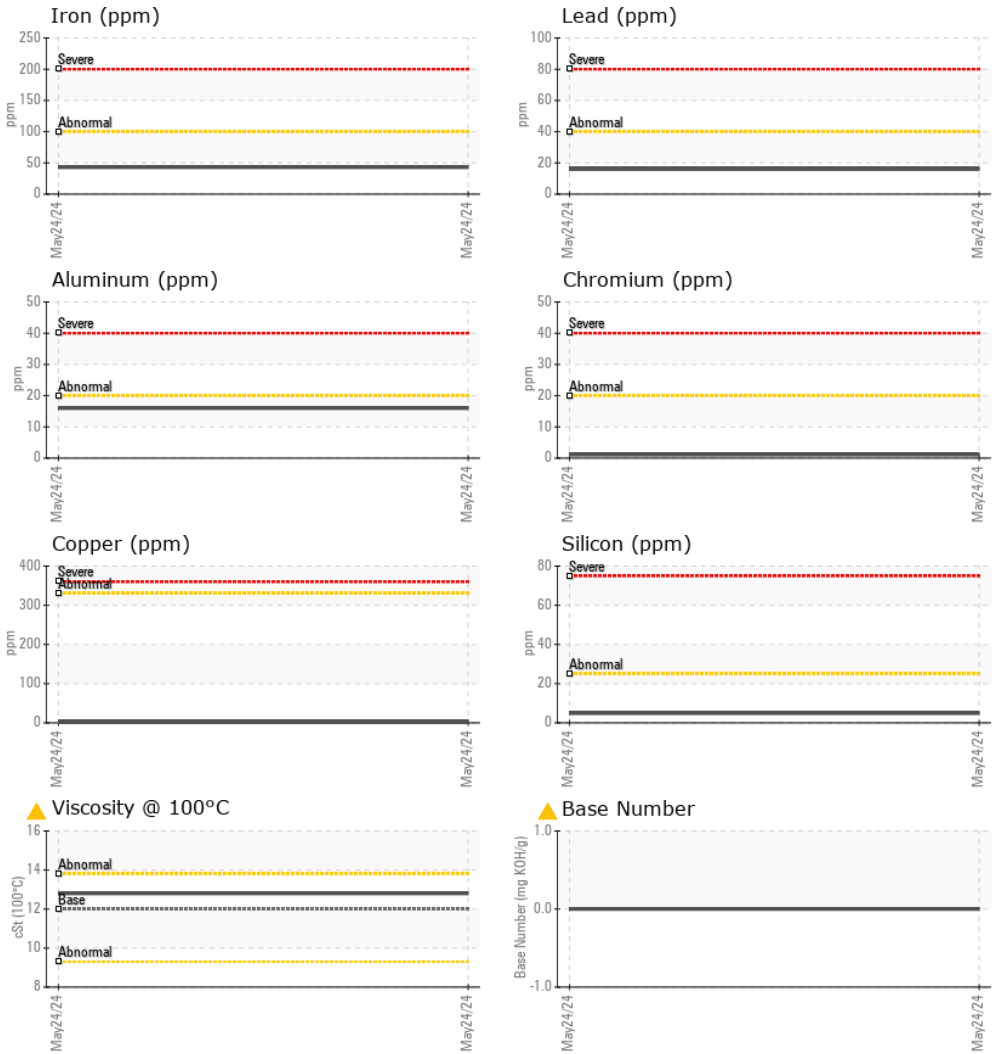
▲ Soot %



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 ▲ 12.8	---	---

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0121067 **Received** : 07 Jun 2024
Lab Number : 06202466 **Tested** : 11 Jun 2024
Unique Number : 11069927 **Diagnosed** : 11 Jun 2024 - Jonathan Hester
Test Package : MOB 1 (Additional Tests: TBN)

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 US 08085
 Contact: ED DAVIS
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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)