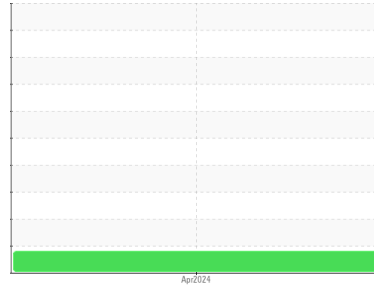


# OIL ANALYSIS REPORT

**Sample Rating Trend**

**WEAR**


Machine Id

**470**

Component

**Diesel Engine**

Fluid

**PETRO CANADA DURON SHP 10W30 (42 QTS)**
**DIAGNOSIS**
**▲ Recommendation**

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

**▲ Wear**

The copper level is abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). All other metal levels are typical for a new component breaking in.

**Contamination**

Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. 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		<b>PCA0109606</b>	---	---
Sample Date	Client Info		<b>16 Apr 2024</b>	---	---
Machine Age	mls	Client Info	<b>16000</b>	---	---
Oil Age	mls	Client Info	<b>16000</b>	---	---
Oil Changed	Client Info		<b>Changed</b>	---	---
Sample Status			<b>ABNORMAL</b>	---	---

**CONTAMINATION**

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<b>&lt;1.0</b>	---	---
Water	WC Method	>0.2	<b>NEG</b>	---	---
Glycol	WC Method		<b>NEG</b>	---	---

**WEAR METALS**

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>200	<b>76</b>	---
Chromium	ppm	ASTM D5185m	>6	<b>2</b>	---
Nickel	ppm	ASTM D5185m	>3	<b>1</b>	---
Titanium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	---
Silver	ppm	ASTM D5185m	>2	<b>&lt;1</b>	---
Aluminum	ppm	ASTM D5185m	>50	<b>27</b>	---
Lead	ppm	ASTM D5185m	>10	<b>&lt;1</b>	---
Copper	ppm	ASTM D5185m	>50	<b>▲ 186</b>	---
Tin	ppm	ASTM D5185m	>6	<b>3</b>	---
Vanadium	ppm	ASTM D5185m		<b>0</b>	---
Cadmium	ppm	ASTM D5185m		<b>&lt;1</b>	---

**ADDITIVES**

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	<b>43</b>	---
Barium	ppm	ASTM D5185m	0	<b>0</b>	---
Molybdenum	ppm	ASTM D5185m	50	<b>44</b>	---
Manganese	ppm	ASTM D5185m	0	<b>4</b>	---
Magnesium	ppm	ASTM D5185m	950	<b>507</b>	---
Calcium	ppm	ASTM D5185m	1050	<b>1703</b>	---
Phosphorus	ppm	ASTM D5185m	995	<b>794</b>	---
Zinc	ppm	ASTM D5185m	1180	<b>922</b>	---
Sulfur	ppm	ASTM D5185m	2600	<b>2508</b>	---

**CONTAMINANTS**

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	<b>12</b>	---
Sodium	ppm	ASTM D5185m		<b>4</b>	---
Potassium	ppm	ASTM D5185m	>20	<b>77</b>	---

**INFRA-RED**

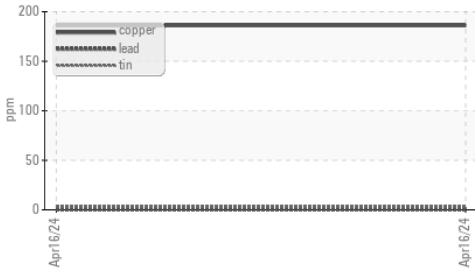
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	<b>0.4</b>	---
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.7</b>	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>23.0</b>	---

**FLUID DEGRADATION**

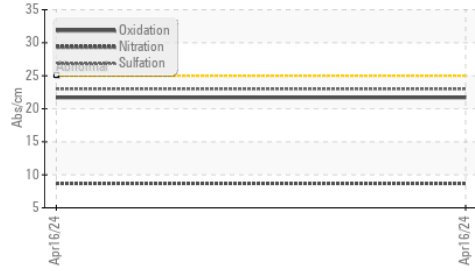
	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>21.7</b>	---
Base Number (BN)	mg KOH/g	ASTM D2896		<b>8.9</b>	---

# OIL ANALYSIS REPORT

### ▲ Non-ferrous Metals



### FT-IR (Direct Trend)



### Base Number



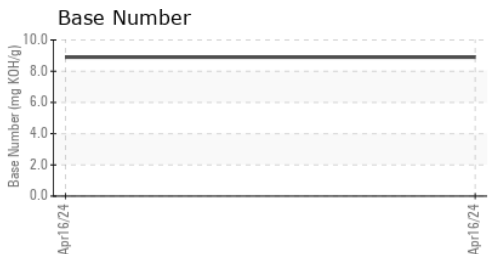
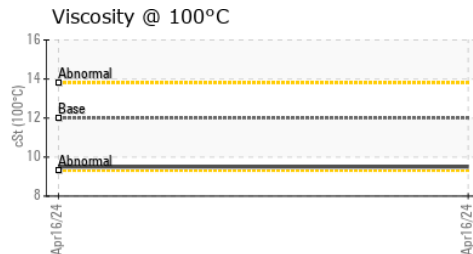
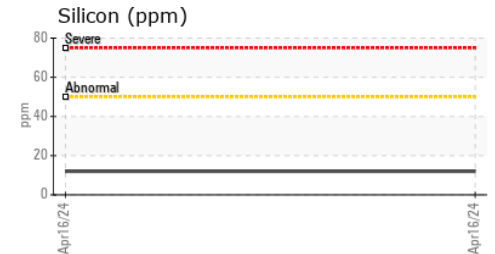
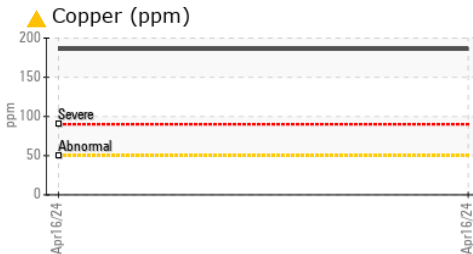
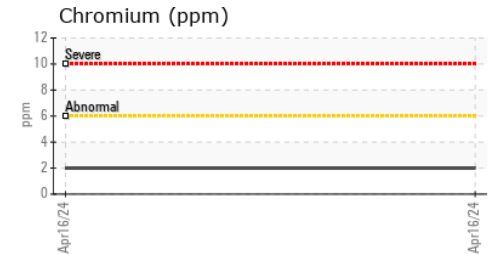
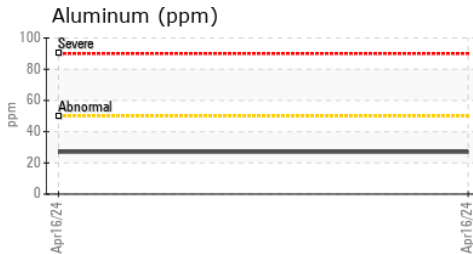
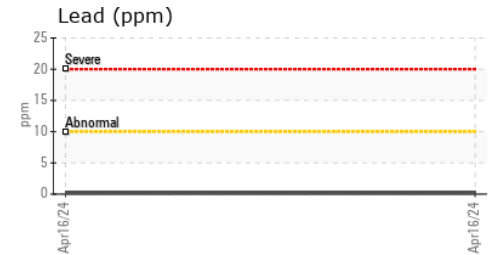
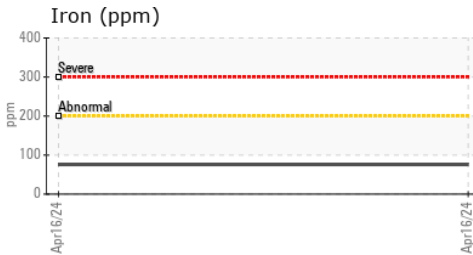
### Viscosity @ 100°C



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	12.00	9.5	---

### GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0109606  
**Lab Number** : 06155071  
**Unique Number** : 10990494  
**Test Package** : MOB 2

**Received** : 19 Apr 2024  
**Tested** : 24 Apr 2024  
**Diagnosed** : 24 Apr 2024 - Jonathan Hester

**DENNIS K BURKE INC - INTERNAL SAMPLES**  
 555 CONSTITUTION DR  
 TAUNTON, MA  
 US 02780  
 Contact: GREG DUNKER

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)

T:  
F: (617)889-6422