



# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**Carpenter 0420**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON SHP 15W40 (18 GAL)**



## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor. ( Customer Sample Comment: Petro Canada Duron 15W-409 )

### 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		<b>SBP0004842</b>	---	---
Sample Date	Client Info		<b>10 Nov 2023</b>	---	---
Machine Age	mls	Client Info	<b>330939</b>	---	---
Oil Age	mls	Client Info	<b>27565</b>	---	---
Oil Changed	Client Info		<b>Changed</b>	---	---
Sample Status			<b>NORMAL</b>	---	---

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<b>&lt;1.0</b>	---	---
Glycol	WC Method		<b>NEG</b>	---	---

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	<b>36</b>	---	---
Chromium	ppm	ASTM D5185m >20	<b>2</b>	---	---
Nickel	ppm	ASTM D5185m >4	<b>0</b>	---	---
Titanium	ppm	ASTM D5185m	<b>0</b>	---	---
Silver	ppm	ASTM D5185m >3	<b>&lt;1</b>	---	---
Aluminum	ppm	ASTM D5185m >20	<b>16</b>	---	---
Lead	ppm	ASTM D5185m >40	<b>1</b>	---	---
Copper	ppm	ASTM D5185m >330	<b>1</b>	---	---
Tin	ppm	ASTM D5185m >15	<b>&lt;1</b>	---	---
Vanadium	ppm	ASTM D5185m	<b>0</b>	---	---
Cadmium	ppm	ASTM D5185m	<b>0</b>	---	---

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>8</b>	---	---
Barium	ppm	ASTM D5185m 0	<b>0</b>	---	---
Molybdenum	ppm	ASTM D5185m 60	<b>55</b>	---	---
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	---	---
Magnesium	ppm	ASTM D5185m 1010	<b>909</b>	---	---
Calcium	ppm	ASTM D5185m 1070	<b>1048</b>	---	---
Phosphorus	ppm	ASTM D5185m 1150	<b>891</b>	---	---
Zinc	ppm	ASTM D5185m 1270	<b>1155</b>	---	---
Sulfur	ppm	ASTM D5185m 2060	<b>2416</b>	---	---

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>6</b>	---	---
Sodium	ppm	ASTM D5185m	<b>2</b>	---	---
Potassium	ppm	ASTM D5185m >20	<b>4</b>	---	---

## INFRA-RED

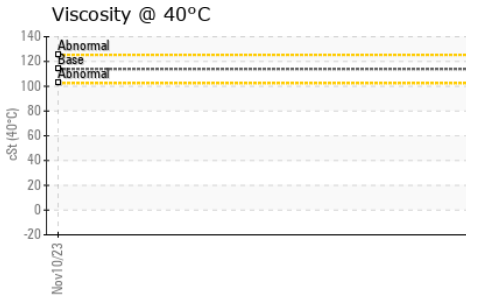
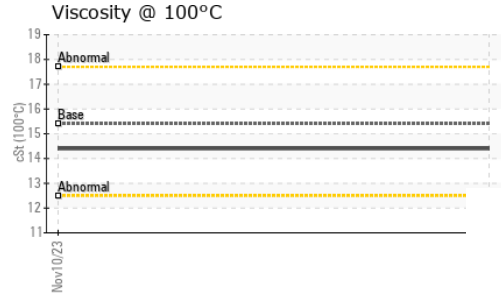
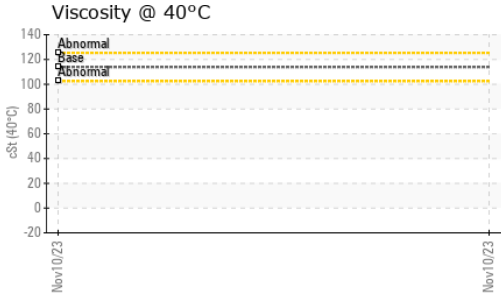
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>1.3</b>	---	---
Nitration	Abs/cm	*ASTM D7624 >20	<b>11.5</b>	---	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>24.8</b>	---	---

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>21.2</b>	---	---
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>6.2</b>	---	---



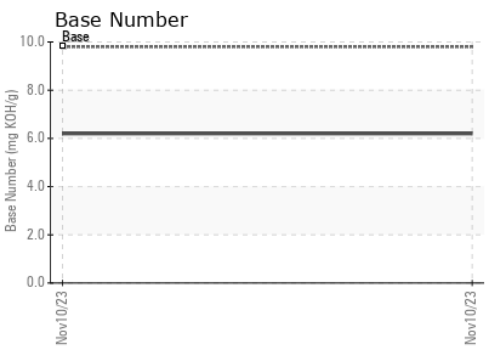
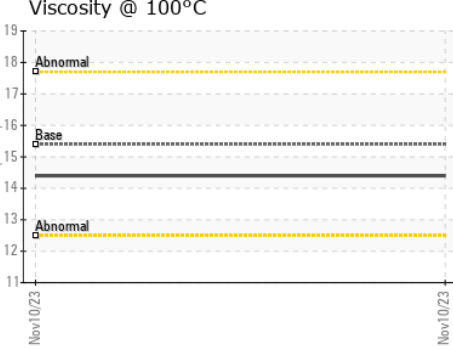
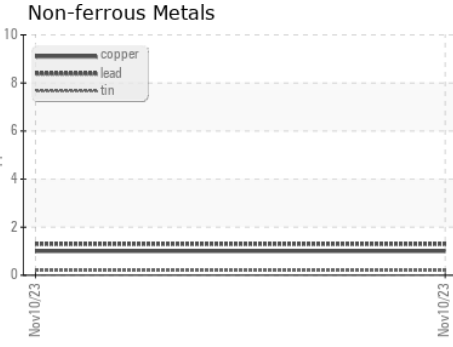
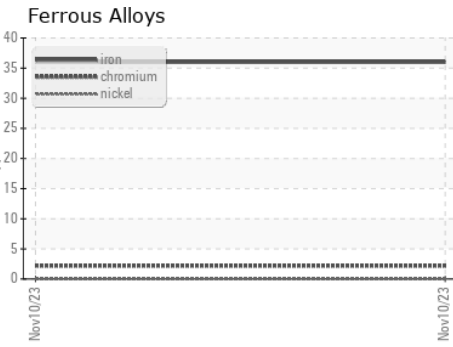
# OIL ANALYSIS REPORT



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	<b>14.4</b>	---	---

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : SBP0004842 **Received** : 15 Nov 2023  
**Lab Number** : 06008821 **Diagnosed** : 16 Nov 2023  
**Unique Number** : 10742583 **Diagnostician** : Sean Felton  
**Test Package** : FLEET ( Additional Tests: KV40 )

**Sapp Bros. Petroleum - Corporate - OMA**  
 9915 South 148th  
 OMAHA, NE  
 US 68138  
 Contact: Josh Broz  
 JBroz@sappbros.net  
 T: (402)895-2202  
 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)