

# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**BM-188**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 10W30 (10 GAL)**

## DIAGNOSIS

### Recommendation

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### 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. No other contaminants were detected 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>PCA0114022</b>	---	---
Sample Date	Client Info	<b>14 Feb 2024</b>	---	---
Machine Age	mls Client Info	<b>16635</b>	---	---
Oil Age	mls Client Info	<b>16635</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>	---	---
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 >100	<b>50</b>	---	---
Chromium	ppm ASTM D5185m >20	<b>0</b>	---	---
Nickel	ppm ASTM D5185m >4	<b>0</b>	---	---
Titanium	ppm ASTM D5185m	<b>0</b>	---	---
Silver	ppm ASTM D5185m >3	<b>0</b>	---	---
Aluminum	ppm ASTM D5185m >20	<b>25</b>	---	---
Lead	ppm ASTM D5185m >40	<b>0</b>	---	---
Copper	ppm ASTM D5185m >330	<b>15</b>	---	---
Tin	ppm ASTM D5185m >15	<b>2</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 2	<b>28</b>	---	---
Barium	ppm ASTM D5185m 0	<b>0</b>	---	---
Molybdenum	ppm ASTM D5185m 50	<b>6</b>	---	---
Manganese	ppm ASTM D5185m 0	<b>2</b>	---	---
Magnesium	ppm ASTM D5185m 950	<b>760</b>	---	---
Calcium	ppm ASTM D5185m 1050	<b>1317</b>	---	---
Phosphorus	ppm ASTM D5185m 995	<b>744</b>	---	---
Zinc	ppm ASTM D5185m 1180	<b>859</b>	---	---
Sulfur	ppm ASTM D5185m 2600	<b>2852</b>	---	---

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	<b>13</b>	---	---
Sodium	ppm ASTM D5185m	<b>4</b>	---	---
Potassium	ppm ASTM D5185m >20	<b>70</b>	---	---

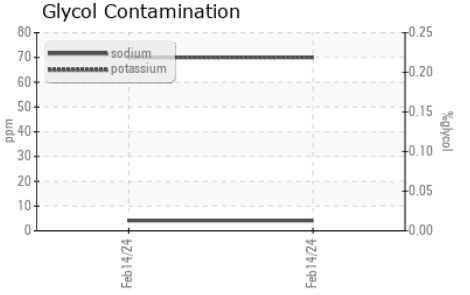
## INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>0.4</b>	---	---
Nitration	Abs/cm *ASTM D7624 >20	<b>10.5</b>	---	---
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>23.4</b>	---	---

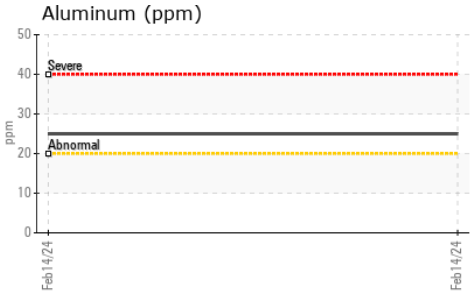
## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>19.2</b>	---	---
Base Number (BN)	mg KOH/g ASTM D2896	<b>5.3</b>	---	---

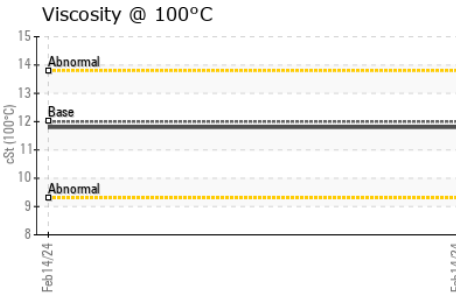
# OIL ANALYSIS REPORT



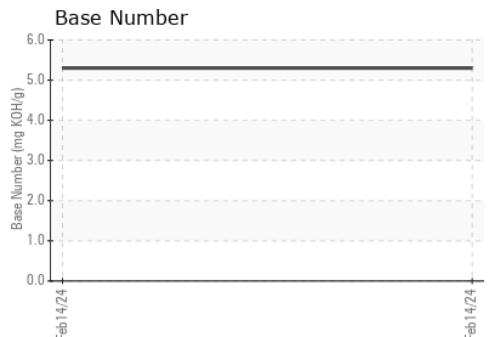
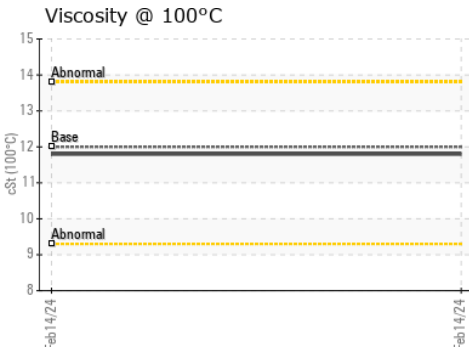
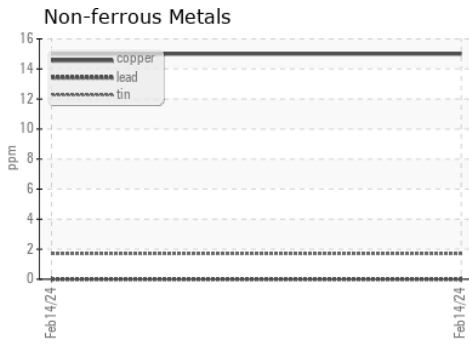
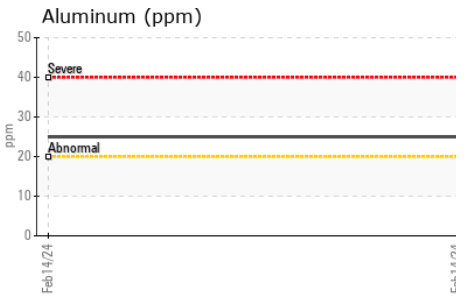
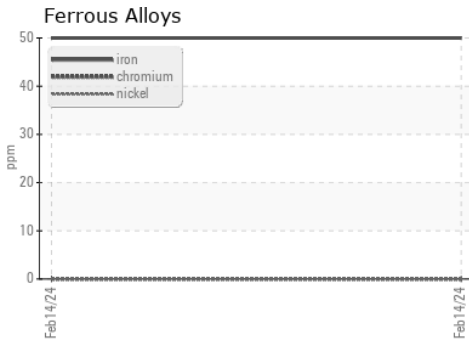
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*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	12.00	11.8	---



### GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0114022      **Received** : 22 Feb 2024  
**Lab Number** : 06097552      **Tested** : 23 Feb 2024  
**Unique Number** : 10890405      **Diagnosed** : 24 Feb 2024 - Don Baldrige  
**Test Package** : FLEET

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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)