

# OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id  
**333896**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 10W30 (--- GAL)**

## DIAGNOSIS

- Recommendation**  
 No corrective action is recommended at this time. We recommend an early resample to monitor this condition.
- Wear**  
 Cylinder, crank, or cam shaft wear is indicated.
- Contamination**  
 Elemental level of silicon (Si) above normal indicating ingress of seal material. 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.

**Fluid Condition**  
 The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

## SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	<b>PCA0105607</b>	---	---
Sample Date	Client Info	<b>30 Dec 2023</b>	---	---
Machine Age	mls Client Info	<b>48408</b>	---	---
Oil Age	mls Client Info	<b>0</b>	---	---
Oil Changed	Client Info	<b>N/A</b>	---	---
Sample Status		<b>ABNORMAL</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>▲ 365</b>	---	---
Chromium	ppm ASTM D5185m >20	<b>11</b>	---	---
Nickel	ppm ASTM D5185m >4	<b>2</b>	---	---
Titanium	ppm ASTM D5185m	<b>&lt;1</b>	---	---
Silver	ppm ASTM D5185m >3	<b>0</b>	---	---
Aluminum	ppm ASTM D5185m >20	<b>64</b>	---	---
Lead	ppm ASTM D5185m >40	<b>&lt;1</b>	---	---
Copper	ppm ASTM D5185m >330	<b>71</b>	---	---
Tin	ppm ASTM D5185m >15	<b>2</b>	---	---
Vanadium	ppm ASTM D5185m	<b>&lt;1</b>	---	---
Cadmium	ppm ASTM D5185m	<b>0</b>	---	---

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 2	<b>24</b>	---	---
Barium	ppm ASTM D5185m 0	<b>8</b>	---	---
Molybdenum	ppm ASTM D5185m 50	<b>125</b>	---	---
Manganese	ppm ASTM D5185m 0	<b>9</b>	---	---
Magnesium	ppm ASTM D5185m 950	<b>735</b>	---	---
Calcium	ppm ASTM D5185m 1050	<b>1388</b>	---	---
Phosphorus	ppm ASTM D5185m 995	<b>777</b>	---	---
Zinc	ppm ASTM D5185m 1180	<b>957</b>	---	---
Sulfur	ppm ASTM D5185m 2600	<b>2628</b>	---	---

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	<b>▲ 48</b>	---	---
Sodium	ppm ASTM D5185m	<b>10</b>	---	---
Potassium	ppm ASTM D5185m >20	<b>165</b>	---	---

## INFRA-RED

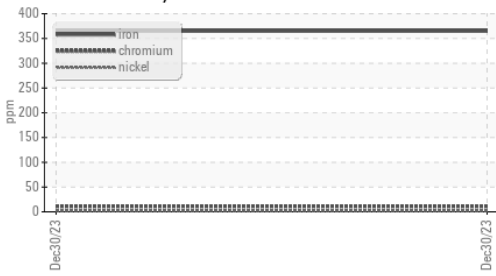
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>2.6</b>	---	---
Nitration	Abs/cm *ASTM D7624 >20	<b>19.1</b>	---	---
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>30.8</b>	---	---

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>31.8</b>	---	---
Base Number (BN)	mg KOH/g ASTM D2896	<b>5.2</b>	---	---

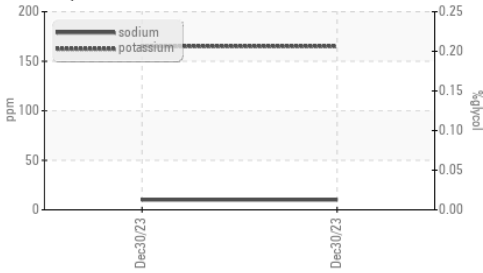
# OIL ANALYSIS REPORT

### ▲ Ferrous Alloys



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	---

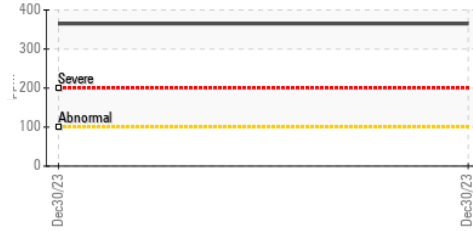
### ● Glycol Contamination



FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	12.00	12.9	---

### GRAPHS

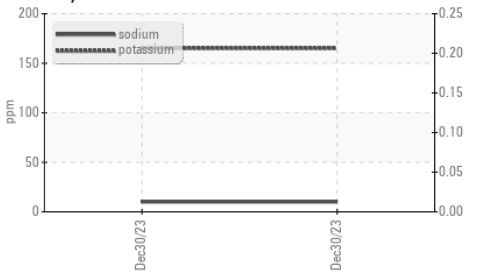
#### ▲ Iron (ppm)



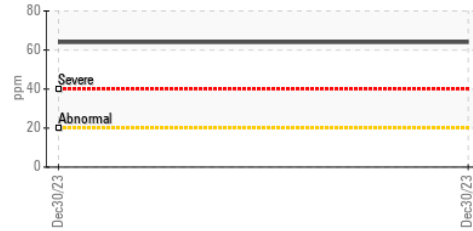
#### Lead (ppm)



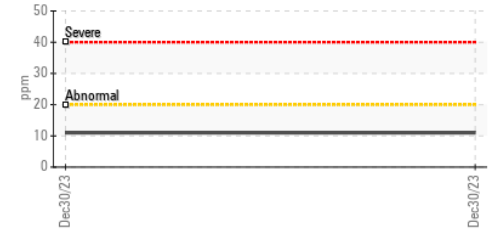
### ● Glycol Contamination



#### Aluminum (ppm)



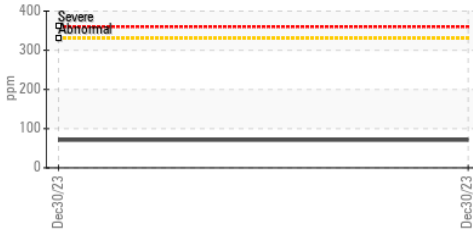
#### Chromium (ppm)



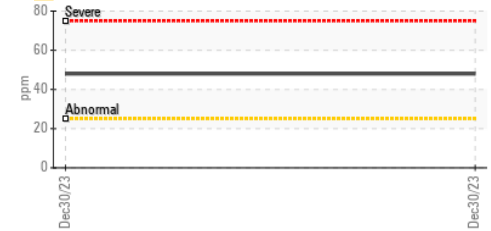
### Base Number



#### Copper (ppm)



#### ▲ Silicon (ppm)



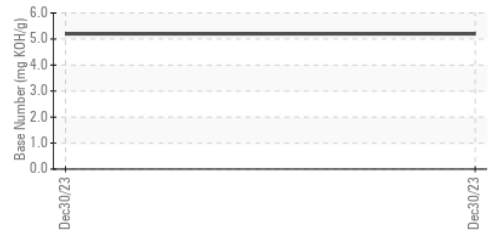
### Viscosity @ 100°C



#### Viscosity @ 100°C



#### Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0105607 **Received** : 10 Jan 2024  
**Lab Number** : 06056424 **Diagnosed** : 11 Jan 2024  
**Unique Number** : 10822373 **Diagnostician** : Don Baldrige  
**Test Package** : MOB 1 ( Additional Tests: TBN )

**MILLER TRUCK LEASING #116**  
 1197 NORTH MAIN ROAD  
 VINELAND, NJ  
 US 08360  
 Contact: JOHN KEEN  
 jkeen@millertransgroup.com

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: (856)696-5629