

# OIL ANALYSIS REPORT

Sample Rating Trend

**WEAR**

 Machine Id  
**433197**

 Component  
**Diesel Engine**

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

**DIAGNOSIS**
**Recommendation**

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

**Wear**

The iron level is abnormal. All other 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 acceptable for the time in service.

**SAMPLE INFORMATION**

method	limit/base	current	history1	history2
Sample Number	Client Info	<b>PCA0113657</b>	---	---
Sample Date	Client Info	<b>13 Dec 2023</b>	---	---
Machine Age	mls	Client Info	<b>0</b>	---
Oil Age	mls	Client Info	<b>0</b>	---
Oil Changed	Client Info	<b>Changed</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>▲ 149</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>0</b>	---
Aluminum	ppm	ASTM D5185m	>20	<b>54</b>	---
Lead	ppm	ASTM D5185m	>40	<b>0</b>	---
Copper	ppm	ASTM D5185m	>330	<b>29</b>	---
Tin	ppm	ASTM D5185m	>15	<b>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	2	<b>13</b>	---
Barium	ppm	ASTM D5185m	0	<b>0</b>	---
Molybdenum	ppm	ASTM D5185m	50	<b>51</b>	---
Manganese	ppm	ASTM D5185m	0	<b>10</b>	---
Magnesium	ppm	ASTM D5185m	950	<b>655</b>	---
Calcium	ppm	ASTM D5185m	1050	<b>1839</b>	---
Phosphorus	ppm	ASTM D5185m	995	<b>889</b>	---
Zinc	ppm	ASTM D5185m	1180	<b>1116</b>	---
Sulfur	ppm	ASTM D5185m	2600	<b>2906</b>	---

**CONTAMINANTS**

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>25	<b>11</b>	---
Sodium	ppm	ASTM D5185m		<b>8</b>	---
Potassium	ppm	ASTM D5185m	>20	<b>86</b>	---

**INFRA-RED**

method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844	>3	<b>0.9</b>	---
Nitration	Abs/cm	*ASTM D7624	>20	<b>13.7</b>	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>24.5</b>	---

**FLUID DEGRADATION**

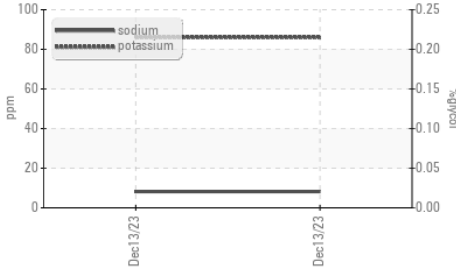
method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>24.7</b>	---
Base Number (BN)	mg KOH/g	ASTM D2896		<b>7.9</b>	---

# OIL ANALYSIS REPORT

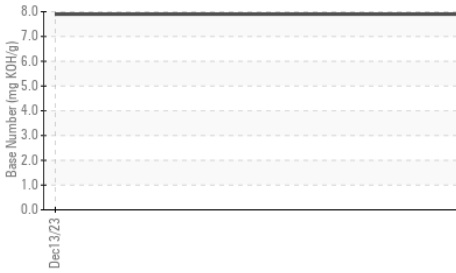
**▲ Ferrous Alloys**



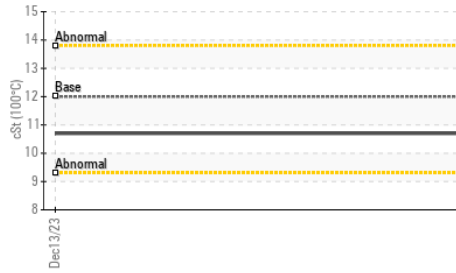
**Glycol Contamination**



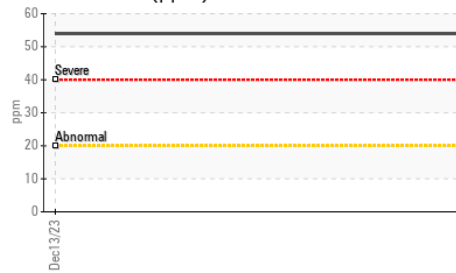
**Base Number**



**Viscosity @ 100°C**



**Aluminum (ppm)**

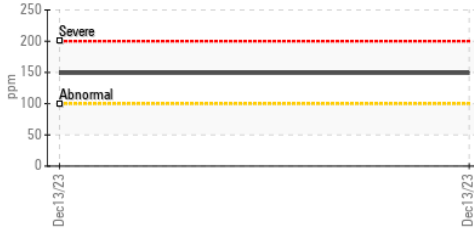


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---
Free Water	scalar	*Visual		NEG	---

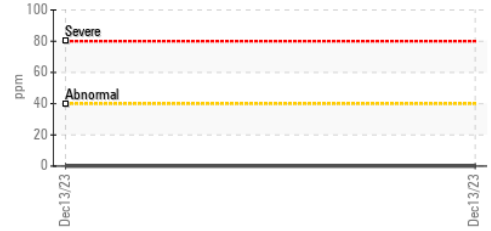
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	12.00	10.7	---

**GRAPHS**

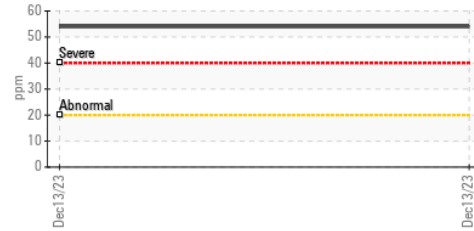
**▲ Iron (ppm)**



**Lead (ppm)**



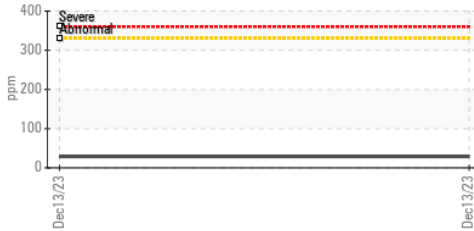
**Aluminum (ppm)**



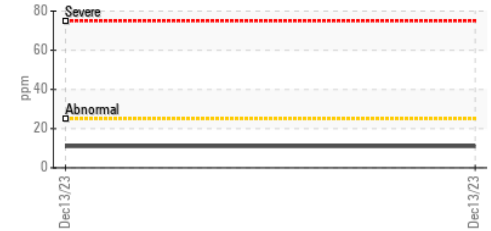
**Chromium (ppm)**



**Copper (ppm)**



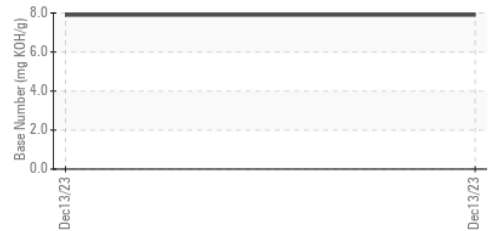
**Silicon (ppm)**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0113657 **Received** : 21 Mar 2024  
**Lab Number** : 06124639 **Tested** : 22 Mar 2024  
**Unique Number** : 10938790 **Diagnosed** : 23 Mar 2024 - Don Baldrige  
**Test Package** : MOB 1 ( Additional Tests: TBN )

**MILLER TRUCK LEASING #114**  
 63 REPAUPO STATION ROAD  
 LOGAN TOWNSHIP, NJ  
 US 08085  
 Contact: ED DAVIS  
 edavis@millertransgroup.com  
 T: (856)214-3521  
 F: (856)214-3663

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)