

# OIL ANALYSIS REPORT

Sample Rating Trend



**WEAR**



Area  
**(60900Z) Walgreens - Tractor**  
 Machine Id  
**[Walgreens - Tractor] 136A624241**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 10W30 (11 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

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. 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>PCA0120854</b>	---	---
Sample Date	Client Info	<b>09 Apr 2024</b>	---	---
Machine Age	mls Client Info	<b>64011</b>	---	---
Oil Age	mls Client Info	<b>64011</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 >80	<b>82</b>	---	---
Chromium	ppm ASTM D5185m >5	<b>7</b>	---	---
Nickel	ppm ASTM D5185m >2	<b>2</b>	---	---
Titanium	ppm ASTM D5185m	<b>&lt;1</b>	---	---
Silver	ppm ASTM D5185m >3	<b>&lt;1</b>	---	---
Aluminum	ppm ASTM D5185m >30	<b>221</b>	---	---
Lead	ppm ASTM D5185m >30	<b>&lt;1</b>	---	---
Copper	ppm ASTM D5185m >150	<b>▲ 284</b>	---	---
Tin	ppm ASTM D5185m >5	<b>6</b>	---	---
Vanadium	ppm ASTM D5185m	<b>&lt;1</b>	---	---
Cadmium	ppm ASTM D5185m	<b>&lt;1</b>	---	---

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 2	<b>22</b>	---	---
Barium	ppm ASTM D5185m 0	<b>0</b>	---	---
Molybdenum	ppm ASTM D5185m 50	<b>46</b>	---	---
Manganese	ppm ASTM D5185m 0	<b>5</b>	---	---
Magnesium	ppm ASTM D5185m 950	<b>567</b>	---	---
Calcium	ppm ASTM D5185m 1050	<b>1717</b>	---	---
Phosphorus	ppm ASTM D5185m 995	<b>782</b>	---	---
Zinc	ppm ASTM D5185m 1180	<b>933</b>	---	---
Sulfur	ppm ASTM D5185m 2600	<b>2021</b>	---	---

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >20	<b>10</b>	---	---
Sodium	ppm ASTM D5185m	<b>8</b>	---	---
Potassium	ppm ASTM D5185m >20	<b>484</b>	---	---

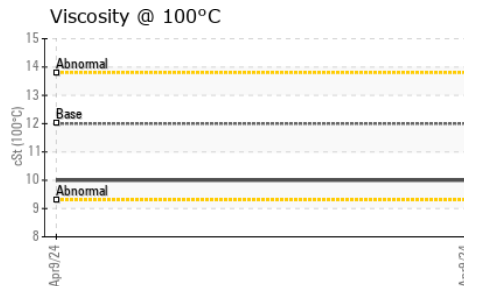
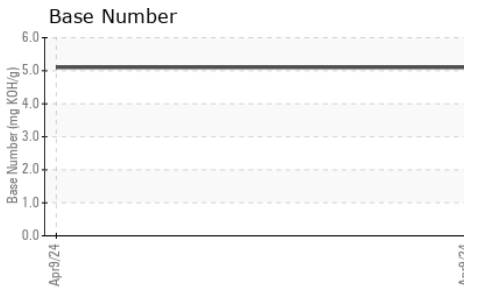
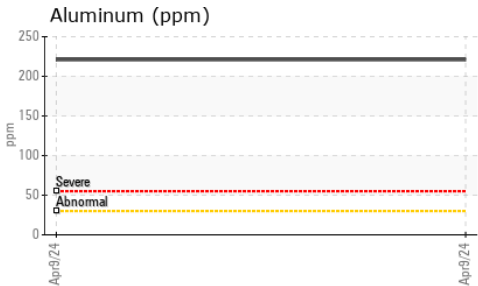
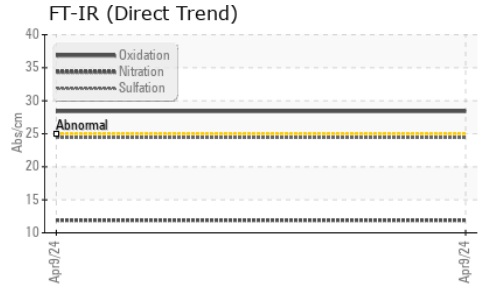
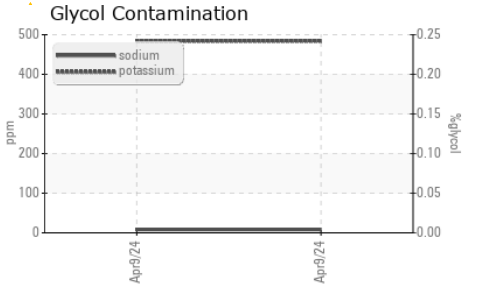
## INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>0.7</b>	---	---
Nitration	Abs/cm *ASTM D7624 >20	<b>11.9</b>	---	---
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>24.4</b>	---	---

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>28.4</b>	---	---
Base Number (BN)	mg KOH/g ASTM D2896	<b>5.1</b>	---	---

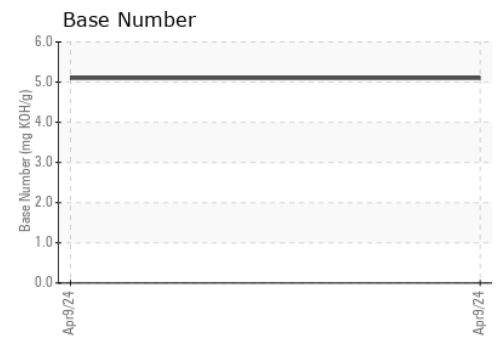
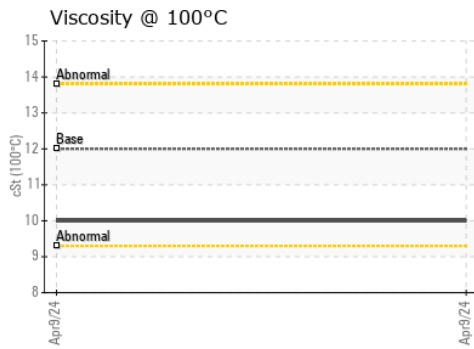
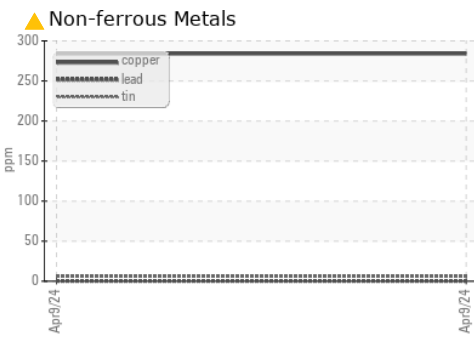
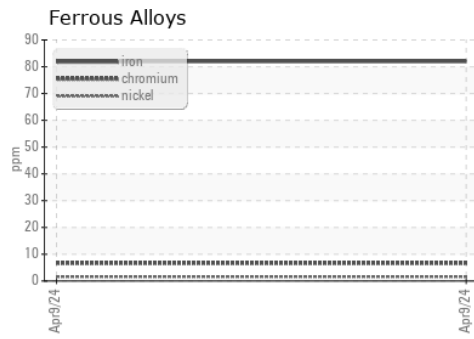
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VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual NONE	<b>NONE</b>	---	---
Yellow Metal	scalar	*Visual NONE	<b>NONE</b>	---	---
Precipitate	scalar	*Visual NONE	<b>NONE</b>	---	---
Silt	scalar	*Visual NONE	<b>NONE</b>	---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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445 12.00	<b>10.0</b>	---	---

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0120854  
**Lab Number** : 06154012  
**Unique Number** : 10989435  
**Test Package** : FLEET

**Received** : 19 Apr 2024  
**Tested** : 22 Apr 2024  
**Diagnosed** : 23 Apr 2024 - Don Baldrige

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