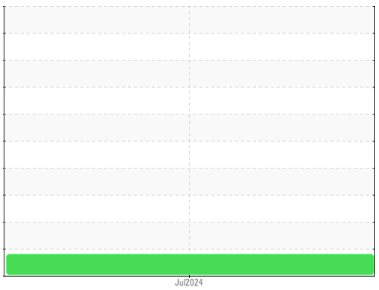
# OIL ANALYSIS REPORT

Sample Rating Trend




**WEAR**

Area
## (66443Z) Walgreens - Tractor
Machine Id
## [Walgreens - Tractor] 136A624145
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**

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 | | **PCA0117310** | --- | --- |
| Sample Date | | Client Info | | **10 Jul 2024** | --- | --- |
| Machine Age | mls | Client Info | | **40162** | --- | --- |
| Oil Age | mls | Client Info | | **40162** | --- | --- |
| Oil Changed | | Client Info | | **Changed** | --- | --- |
| Sample Status | | | | **ABNORMAL** | --- | --- |

| CONTAMINATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Fuel | | WC Method | >5 | **<1.0** | --- | --- |
| Water | | WC Method | >0.2 | **NEG** | --- | --- |
| Glycol | | WC Method | | **NEG** | --- | --- |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >80 | **68** | --- | --- |
| Chromium | ppm | ASTM D5185m | >5 | **5** | --- | --- |
| Nickel | ppm | ASTM D5185m | >2 | **<1** | --- | --- |
| Titanium | ppm | ASTM D5185m | | **0** | --- | --- |
| Silver | ppm | ASTM D5185m | >3 | **<1** | --- | --- |
| Aluminum | ppm | ASTM D5185m | >30 | **106** | --- | --- |
| Lead | ppm | ASTM D5185m | >30 | **0** | --- | --- |
| Copper | ppm | ASTM D5185m | >150 | ▲ **204** | --- | --- |
| Tin | ppm | ASTM D5185m | >5 | **4** | --- | --- |
| Vanadium | ppm | ASTM D5185m | | **0** | --- | --- |
| Cadmium | ppm | ASTM D5185m | | **0** | --- | --- |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | 2 | **5** | --- | --- |
| Barium | ppm | ASTM D5185m | 0 | **0** | --- | --- |
| Molybdenum | ppm | ASTM D5185m | 50 | **45** | --- | --- |
| Manganese | ppm | ASTM D5185m | 0 | **4** | --- | --- |
| Magnesium | ppm | ASTM D5185m | 950 | **580** | --- | --- |
| Calcium | ppm | ASTM D5185m | 1050 | **1657** | --- | --- |
| Phosphorus | ppm | ASTM D5185m | 995 | **798** | --- | --- |
| Zinc | ppm | ASTM D5185m | 1180 | **948** | --- | --- |
| Sulfur | ppm | ASTM D5185m | 2600 | **2186** | --- | --- |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >20 | **8** | --- | --- |
| Sodium | ppm | ASTM D5185m | | **7** | --- | --- |
| Potassium | ppm | ASTM D5185m | >20 | **267** | --- | --- |

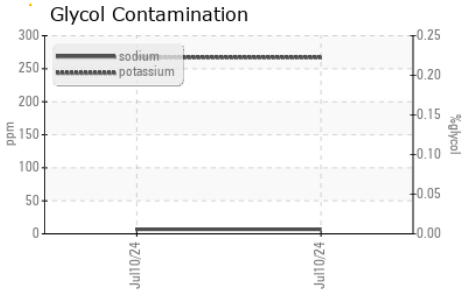
| INFRA-RED | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Soot % | % | *ASTM D7844 | >3 | **0.7** | --- | --- |
| Nitration | Abs/cm | *ASTM D7624 | >20 | **10.6** | --- | --- |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | **23.5** | --- | --- |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | **24.2** | --- | --- |
| Base Number (BN) | mg KOH/g | ASTM D2896 | | **6.9** | --- | --- |

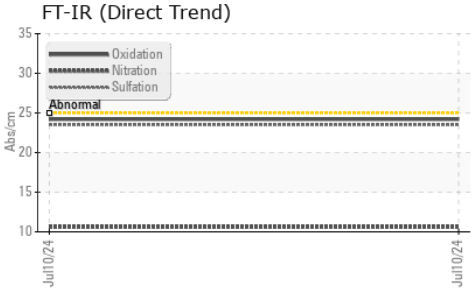
OIL DIAGNOSTICS

# OIL ANALYSIS REPORT

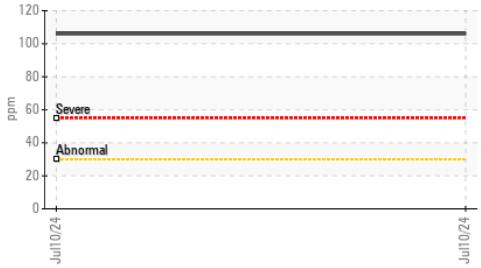
Glycol Contamination



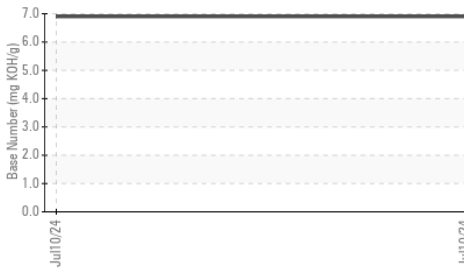

FT-IR (Direct Trend)



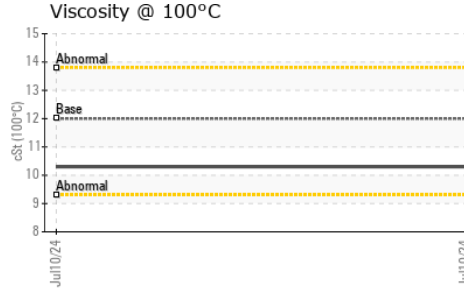

Aluminum (ppm)




Base Number




Viscosity @ 100°C

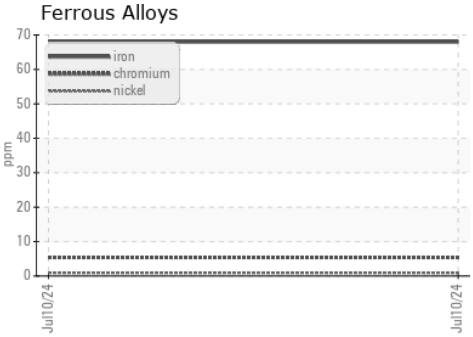



| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | --- | --- |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | --- | --- |
| Precipitate | scalar | *Visual | NONE | **NONE** | --- | --- |
| Silt | 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** | --- | --- |

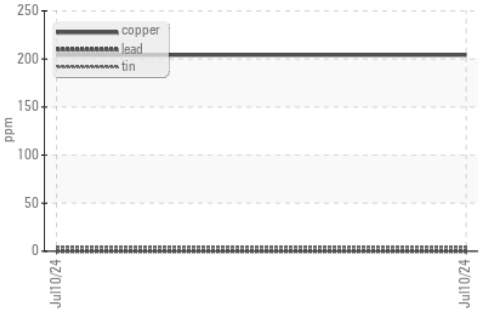
| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 100°C | cSt | ASTM D445 | 12.00 | **10.3** | --- | --- |

## GRAPHS

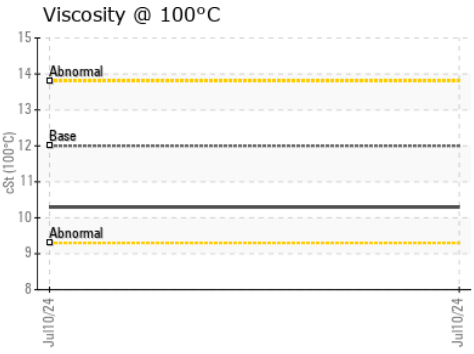
Ferrous Alloys



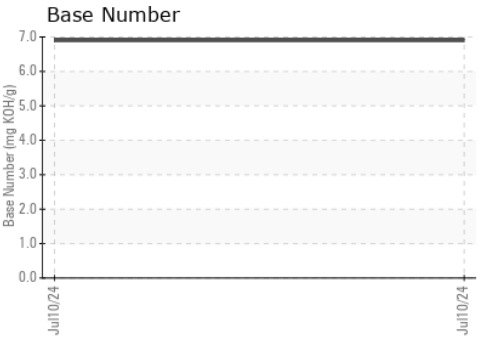

Non-ferrous Metals




Viscosity @ 100°C




Base Number




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : PCA0117310
**Lab Number** : 06237396
**Unique Number** : 11126230
**Test Package** : FLEET

**Received** : 15 Jul 2024
**Tested** : 17 Jul 2024
**Diagnosed** : 17 Jul 2024 - Don Baldridge

*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)*


**Transervice - Shop 1367 - Berkeley-Jupiter**
15998 Walgreens Drive
Jupiter, FL
US 33478
Contact: Manny Gonzalez
egonzalez@transervice.com
T: (561)776-0755
F: (561)776-0799