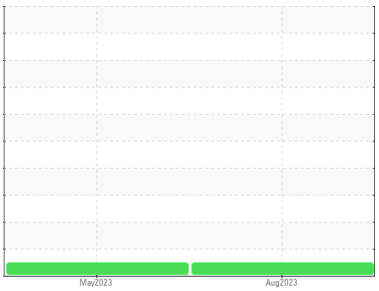
# OIL ANALYSIS REPORT

Sample Rating Trend




NORMAL

Area
## (AU669W) Supermarket
Machine Id
## FREIGHTLINER 107A1808
Component
**Diesel Engine**
Fluid
**PETRO CANADA DURON SHP 10W30 (11 GAL)**

## DIAGNOSIS

**Recommendation**
Resample at the next service interval to monitor.

**Wear**
All component wear rates are normal.

**Contamination**
There is no indication of any contamination 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 | | **PCA0104825** | PCA0096006 | --- |
| Sample Date | | Client Info | | **28 Aug 2023** | 11 May 2023 | --- |
| Machine Age | mls | Client Info | | **281336** | 267128 | --- |
| Oil Age | mls | Client Info | | **14158** | 25723 | --- |
| Oil Changed | | Client Info | | **Changed** | Changed | --- |
| Sample Status | | | | **NORMAL** | NORMAL | --- |

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

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >80 | **11** | 18 | --- |
| Chromium | ppm | ASTM D5185m | >5 | **<1** | 1 | --- |
| Nickel | ppm | ASTM D5185m | >2 | **0** | <1 | --- |
| Titanium | ppm | ASTM D5185m | | **0** | 0 | --- |
| Silver | ppm | ASTM D5185m | >3 | **0** | 0 | --- |
| Aluminum | ppm | ASTM D5185m | >30 | **1** | 7 | --- |
| Lead | ppm | ASTM D5185m | >30 | **0** | 0 | --- |
| Copper | ppm | ASTM D5185m | >150 | **4** | 7 | --- |
| Tin | ppm | ASTM D5185m | >5 | **<1** | <1 | --- |
| Vanadium | ppm | ASTM D5185m | | **0** | 0 | --- |
| Cadmium | ppm | ASTM D5185m | | **0** | 0 | --- |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | 2 | **3** | 8 | --- |
| Barium | ppm | ASTM D5185m | 0 | **0** | 0 | --- |
| Molybdenum | ppm | ASTM D5185m | 50 | **63** | 57 | --- |
| Manganese | ppm | ASTM D5185m | 0 | **<1** | <1 | --- |
| Magnesium | ppm | ASTM D5185m | 950 | **1023** | 818 | --- |
| Calcium | ppm | ASTM D5185m | 1050 | **1206** | 1234 | --- |
| Phosphorus | ppm | ASTM D5185m | 995 | **1043** | 995 | --- |
| Zinc | ppm | ASTM D5185m | 1180 | **1300** | 1217 | --- |
| Sulfur | ppm | ASTM D5185m | 2600 | **3539** | 2829 | --- |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >20 | **4** | 4 | --- |
| Sodium | ppm | ASTM D5185m | | **1** | 0 | --- |
| Potassium | ppm | ASTM D5185m | >20 | **1** | 4 | --- |

| INFRA-RED | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Soot % | % | *ASTM D7844 | >3 | **0.7** | 0.9 | --- |
| Nitration | Abs/cm | *ASTM D7624 | >20 | **8.0** | 9.1 | --- |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | **19.4** | 22.4 | --- |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | **15.0** | 17.7 | --- |
| Base Number (BN) | mg KOH/g | ASTM D2896 | | **8.1** | 7.1 | --- |

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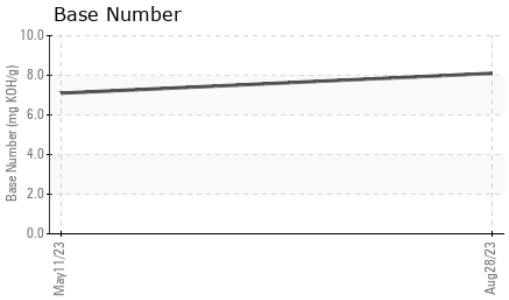
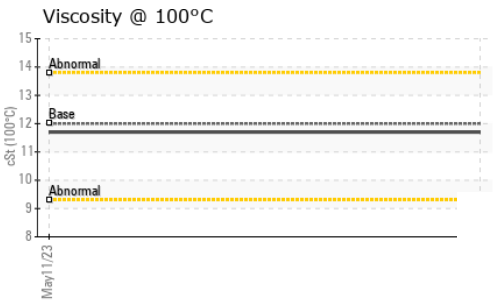
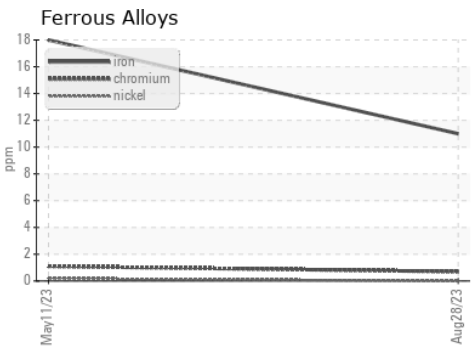


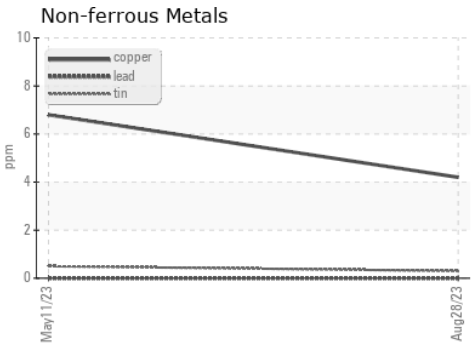



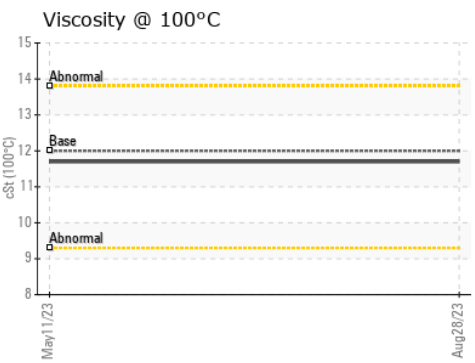

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | --- |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | --- |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | --- |
| Silt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

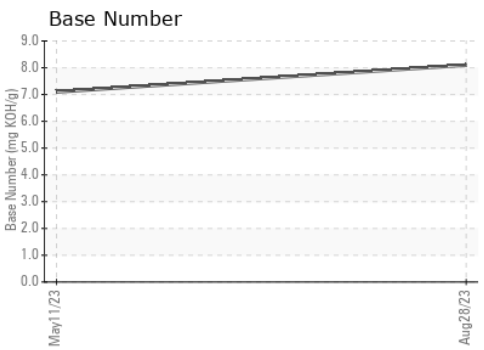
| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 100°C | cSt | ASTM D445 | 12.00 | **11.7** | 11.7 | --- |

## GRAPHS




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : PCA0104825
**Lab Number** : 05949776
**Unique Number** : 10645735
**Test Package** : FLEET

**Received** : 13 Sep 2023
**Diagnosed** : 15 Sep 2023
**Diagnostician** : Wes Davis

*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)*

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Report Id: TSV1072 [WUSCAR] 05949776 (Generated: 09/15/2023 00:10:32) Rev: 1

Submitted By: Normand Brizak