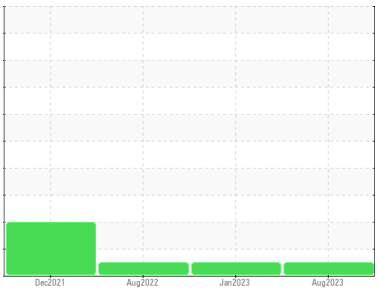
# OIL ANALYSIS REPORT

Sample Rating Trend




NORMAL

Machine Id
**DT800**
Component
**Diesel Engine**
Fluid
**PETRO CANADA DURON SHP 10W30 (--- 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 | | **PCA0102275** | PCA0090276 | PCA0079602 |
| Sample Date | | Client Info | | **15 Aug 2023** | 27 Jan 2023 | 29 Aug 2022 |
| Machine Age | mls | Client Info | | **152234** | 126629 | 101404 |
| Oil Age | mls | Client Info | | **30424** | 101404 | 51050 |
| Oil Changed | | Client Info | | **Changed** | Changed | Changed |
| Sample Status | | | | **NORMAL** | NORMAL | NORMAL |

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

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >110 | **21** | 17 | 17 |
| Chromium | ppm | ASTM D5185m | >4 | **<1** | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >2 | **0** | <1 | <1 |
| Titanium | ppm | ASTM D5185m | | **0** | <1 | 0 |
| Silver | ppm | ASTM D5185m | >2 | **<1** | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >25 | **9** | 6 | 9 |
| Lead | ppm | ASTM D5185m | >45 | **0** | <1 | <1 |
| Copper | ppm | ASTM D5185m | >85 | **1** | 2 | 2 |
| Tin | ppm | ASTM D5185m | >4 | **<1** | <1 | 1 |
| Antimony | ppm | ASTM D5185m | | **---** | --- | --- |
| Vanadium | ppm | ASTM D5185m | | **0** | 0 | <1 |
| Cadmium | ppm | ASTM D5185m | | **0** | 0 | 0 |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | 2 | **6** | 3 | 10 |
| Barium | ppm | ASTM D5185m | 0 | **0** | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 50 | **68** | 68 | 58 |
| Manganese | ppm | ASTM D5185m | 0 | **<1** | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | 950 | **1019** | 981 | 913 |
| Calcium | ppm | ASTM D5185m | 1050 | **1264** | 1263 | 1036 |
| Phosphorus | ppm | ASTM D5185m | 995 | **1136** | 1024 | 926 |
| Zinc | ppm | ASTM D5185m | 1180 | **1396** | 1276 | 1226 |
| Sulfur | ppm | ASTM D5185m | 2600 | **3637** | 3238 | 2547 |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >30 | **7** | 6 | 4 |
| Sodium | ppm | ASTM D5185m | | **2** | 2 | 3 |
| Potassium | ppm | ASTM D5185m | >20 | **4** | 5 | 15 |

| INFRA-RED | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Soot % | % | *ASTM D7844 | >3 | **0.7** | 0.7 | 0.8 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | **9.7** | 10.2 | 11.4 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | **22.1** | 21.9 | 24.4 |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | **17.5** | 17.3 | 19.5 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | | **6.7** | 6.7 | 7.1 |

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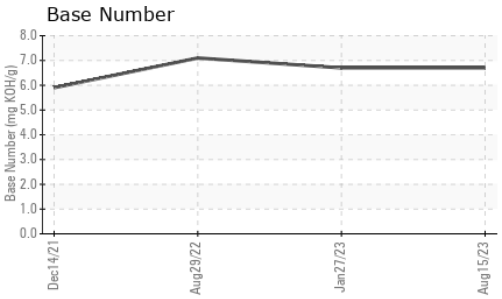
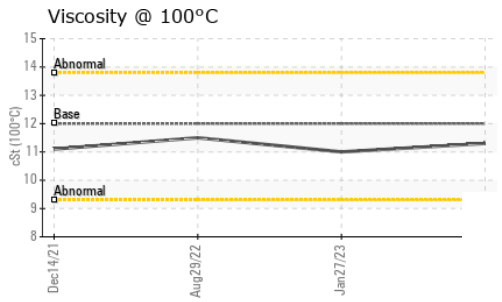
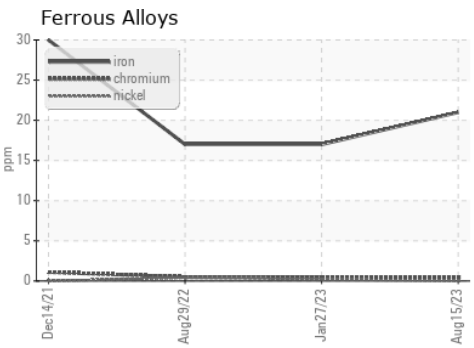


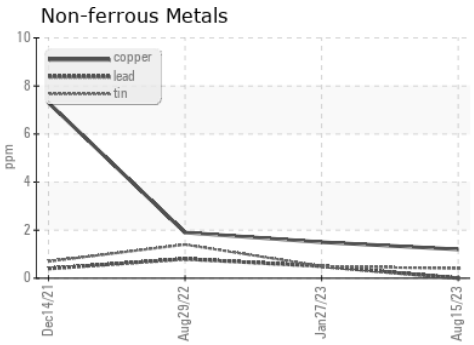



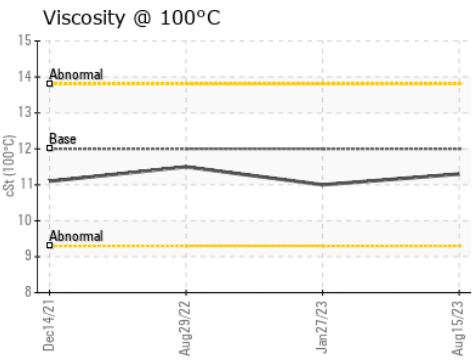

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | NONE |
|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

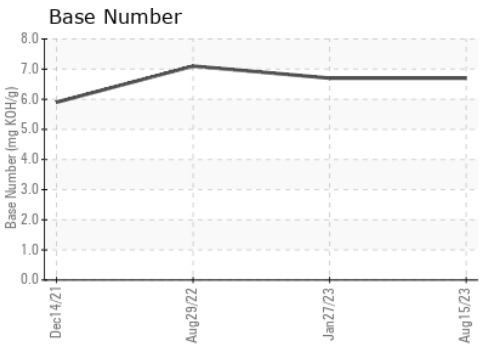
| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 100°C | cSt | ASTM D445 | 12.00 | **11.3** | 11.0 | 11.5 |

## GRAPHS




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : PCA0102275
**Lab Number** : 05934745
**Unique Number** : 10620016
**Test Package** : FLEET

**Received** : 25 Aug 2023
**Diagnosed** : 25 Aug 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)*

**NW WHITE & CO - COLUMBIA DIVISION**
100 INDEPENDENCE BLVD
COLUMBIA, SC
US 29210
Contact: GEORGE EDWARDS
gedwards@nwwhite.com
T:
F: