FLEET LUBE 360 OIL DIAGNOSTICS

# OIL ANALYSIS REPORT

| | |
|---|---|
| WEAR | NORMAL |
| CONTAMINATION | NORMAL |
| FLUID CONDITION | NORMAL |

Machine Id
**04537**
Component
**Diesel Engine**
Fluid
**PETRO CANADA DURON SHP 10W30 (9 QTS)**

## RECOMMENDATION

Resample at the next service interval to monitor.

## WEAR

All component wear rates are normal.

## CONTAMINATION

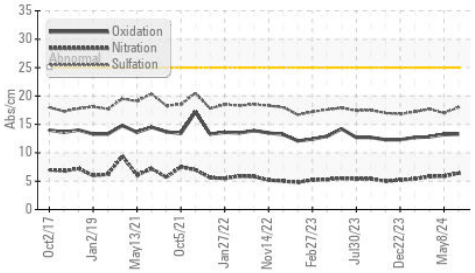
There is no indication of any contamination in the oil.

## FLUID CONDITION

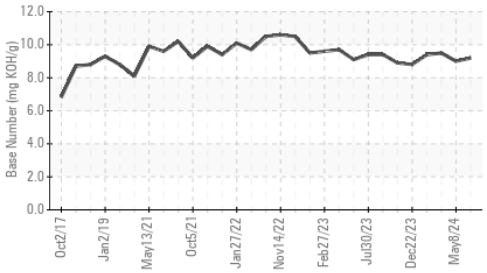
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **PCA0123586** | PCA06173403 | PCA0116244 |
| Sample Date | | Client Info | | **03 Jun 2024** | 08 May 2024 | 26 Feb 2024 |
| Machine Age | hrs | Client Info | | **12253** | 0 | 12046 |
| Oil Age | hrs | Client Info | | **465** | 0 | 11950 |
| Filter Age | hrs | Client Info | | **465** | 0 | 0 |
| Oil Changed | | Client Info | | **Changed** | N/A | N/A |
| Filter Changed | | Client Info | | **Changed** | N/A | N/A |
| Sample Status | | | | **NORMAL** | NORMAL | ABNORMAL |
| Iron | ppm | ASTM D5185m | >100 | **14** | 8 | 12 |
| Chromium | ppm | ASTM D5185m | >20 | **<1** | <1 | 2 |
| Nickel | ppm | ASTM D5185m | >4 | **0** | 0 | <1 |
| Titanium | ppm | ASTM D5185m | | **0** | 0 | <1 |
| Silver | ppm | ASTM D5185m | >3 | **0** | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | **3** | 2 | 3 |
| Lead | ppm | ASTM D5185m | >40 | **0** | <1 | <1 |
| Copper | ppm | ASTM D5185m | >330 | **1** | 2 | 1 |
| Tin | ppm | ASTM D5185m | >15 | **0** | <1 | <1 |
| Vanadium | ppm | ASTM D5185m | | **0** | 0 | <1 |
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Silicon | ppm | ASTM D5185m | >25 | **4** | 12 | 5 |
| Potassium | ppm | ASTM D5185m | >20 | **5** | <1 | ▲ 56 |
| Fuel | | WC Method | >5 | **<1.0** | <1.0 | <1.0 |
| Water | | WC Method | >0.2 | **NEG** | NEG | NEG |
| Glycol | | WC Method | | **NEG** | NEG | NEG |
| Soot % | % | *ASTM D7844 | >3 | **0.5** | 0.2 | 0.5 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | **6.4** | 5.9 | 5.8 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | **18.0** | 17.0 | 17.7 |
| 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 |
| Sodium | ppm | ASTM D5185m | | **4** | 0 | 51 |
| Boron | ppm | ASTM D5185m | 2 | **14** | 8 | 6 |
| Barium | ppm | ASTM D5185m | 0 | **0** | <1 | 2 |
| Molybdenum | ppm | ASTM D5185m | 50 | **59** | 61 | 59 |
| Manganese | ppm | ASTM D5185m | 0 | **0** | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | 950 | **948** | 938 | 828 |
| Calcium | ppm | ASTM D5185m | 1050 | **1102** | 1058 | 976 |
| Phosphorus | ppm | ASTM D5185m | 995 | **1059** | 1083 | 964 |
| Zinc | ppm | ASTM D5185m | 1180 | **1316** | 1245 | 1133 |
| Sulfur | ppm | ASTM D5185m | 2600 | **3778** | 3734 | 3365 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | **13.3** | 13.2 | 12.8 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | | **9.2** | 9.0 | 9.5 |
| Visc @ 100°C | cSt | ASTM D445 | 12.00 | **11.5** | 11.3 | 11.5 |

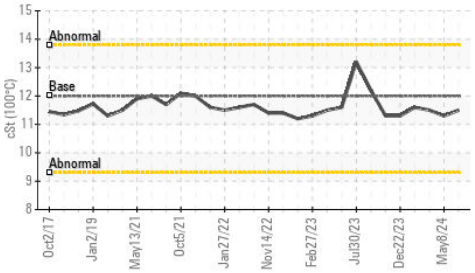
FT-IR (Direct Trend)



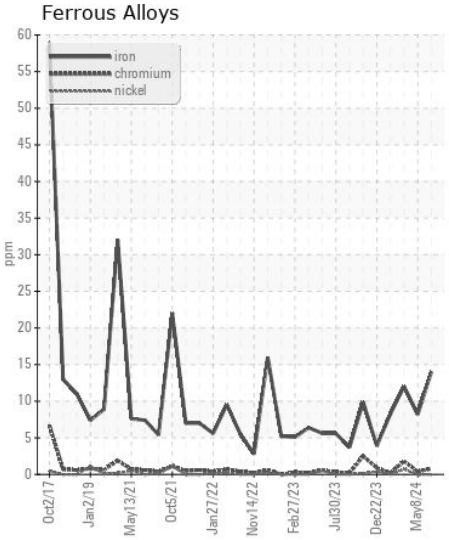

Base Number



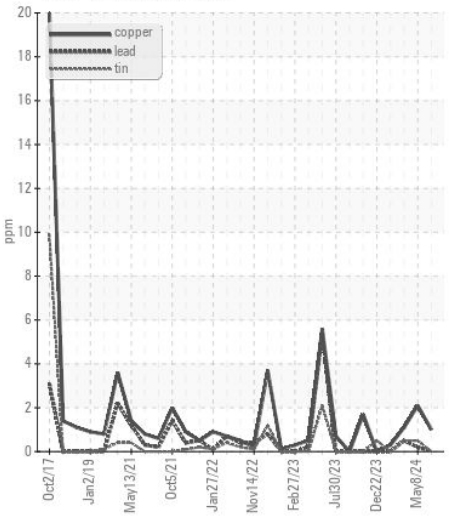

Viscosity @ 100°C



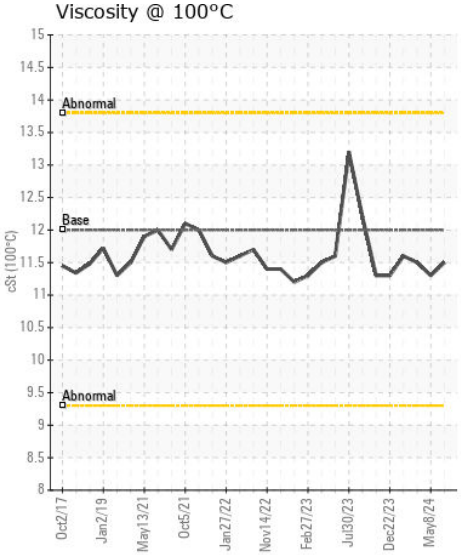

Ferrous Alloys




Non-ferrous Metals




Viscosity @ 100°C

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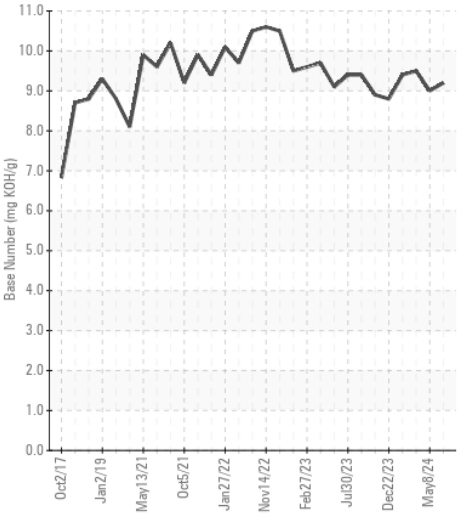


Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : PCA0123586
**Lab Number** : 06240053
**Unique Number** : 11128887
**Test Package** : FLEET

**Received** : 18 Jul 2024
**Tested** : 19 Jul 2024
**Diagnosed** : 19 Jul 2024 - 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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