FLEET LUBE 360 OIL DIAGNOSTICS

# OIL ANALYSIS REPORT

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

Machine Id
**429075**
Component
**Diesel Engine**
Fluid
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

## WEAR

All component wear rates are normal.

## CONTAMINATION

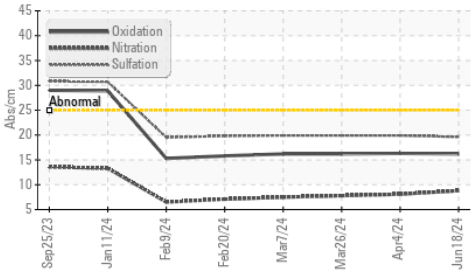
There is no indication of any contamination in the oil.

## FLUID CONDITION

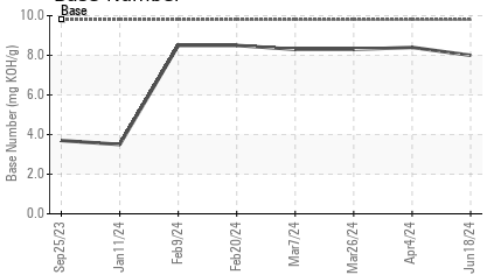
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | GFL0093456 | GFL0109348 | GFL0109247 |
| Sample Date | | Client Info | | 18 Jun 2024 | 04 Apr 2024 | 26 Mar 2024 |
| Machine Age | hrs | Client Info | | 5049 | 4978 | 4939 |
| Oil Age | hrs | Client Info | | 261 | 190 | 151 |
| Filter Age | hrs | Client Info | | 261 | 190 | 151 |
| Oil Changed | | Client Info | | Not Changd | Not Changd | Not Changd |
| Filter Changed | | Client Info | | Not Changd | Not Changd | Not Changd |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |
| Iron | ppm | ASTM D5185m | >100 | 20 | 20 | 24 |
| Chromium | ppm | ASTM D5185m | >20 | <1 | 0 | <1 |
| Nickel | ppm | ASTM D5185m | >4 | <1 | 0 | <1 |
| Titanium | ppm | ASTM D5185m | | 16 | 17 | 16 |
| Silver | ppm | ASTM D5185m | >3 | <1 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | 4 | 4 | 5 |
| Lead | ppm | ASTM D5185m | >40 | 0 | 0 | <1 |
| Copper | ppm | ASTM D5185m | >330 | 3 | 3 | 4 |
| Tin | ppm | ASTM D5185m | >15 | <1 | 0 | 2 |
| Vanadium | ppm | ASTM D5185m | | <1 | 0 | <1 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Silicon | ppm | ASTM D5185m | >25 | 5 | 4 | 7 |
| Potassium | ppm | ASTM D5185m | >20 | 6 | 4 | 6 |
| 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 | 0.3 | 0.3 | 0.2 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 8.8 | 8.1 | 7.8 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 19.6 | 19.9 | 19.9 |
| 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 | | 3 | 1 | 2 |
| Boron | ppm | ASTM D5185m | 0 | 19 | 21 | 22 |
| Barium | ppm | ASTM D5185m | 0 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 60 | 47 | 49 | 50 |
| Manganese | ppm | ASTM D5185m | 0 | 1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | 1010 | 749 | 825 | 767 |
| Calcium | ppm | ASTM D5185m | 1070 | 1280 | 1443 | 1358 |
| Phosphorus | ppm | ASTM D5185m | 1150 | 1014 | 1116 | 1022 |
| Zinc | ppm | ASTM D5185m | 1270 | 1229 | 1363 | 1254 |
| Sulfur | ppm | ASTM D5185m | 2060 | 3769 | 4415 | 3979 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 16.2 | 16.3 | 16.2 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 9.8 | 8.0 | 8.4 | 8.3 |
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | 13.7 | 13.7 | 13.8 |

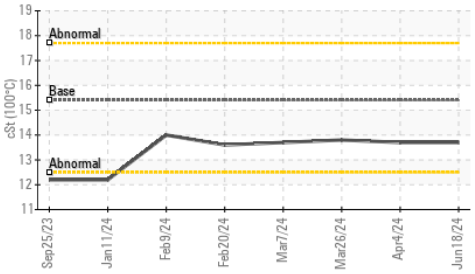
FT-IR (Direct Trend)



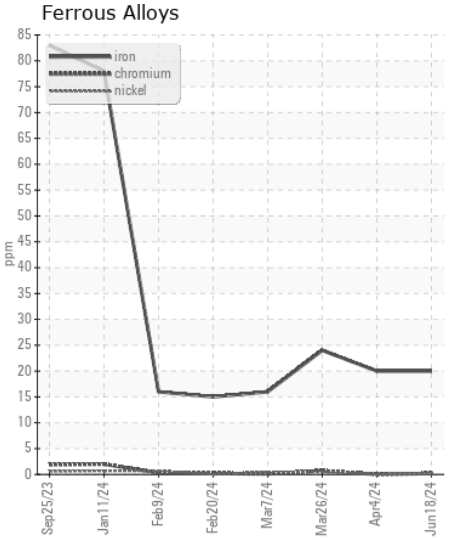

Base Number



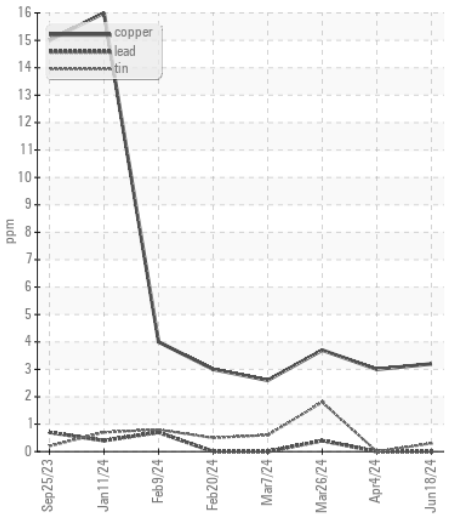

Viscosity @ 100°C



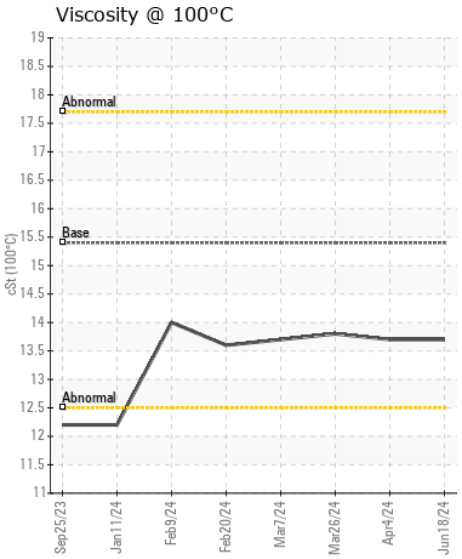

Ferrous Alloys




Non-ferrous Metals




Viscosity @ 100°C

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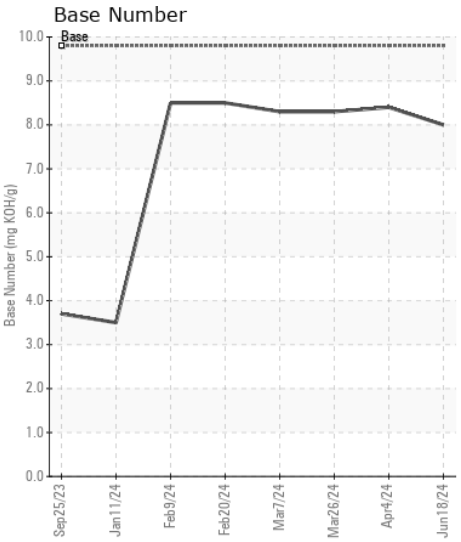


Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : GFL0093456
**Lab Number** : 06214459
**Unique Number** : 11087323
**Test Package** : FLEET

**Received** : 19 Jun 2024
**Tested** : 20 Jun 2024
**Diagnosed** : 20 Jun 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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