FLEET LUBE 360 OIL DIAGNOSTICS

# OIL ANALYSIS REPORT

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

Area
**(H904541)**
Machine Id
**2588**
Component
**Diesel Engine**
Fluid
**PETRO CANADA DURON SHP 15W40 (10 GAL)**

## RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

## WEAR

Metal levels are typical for a new component breaking in.

## CONTAMINATION

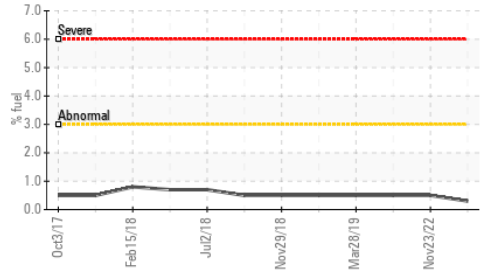
Fuel content negligible. There is no indication of any contamination in the oil.

## FLUID CONDITION

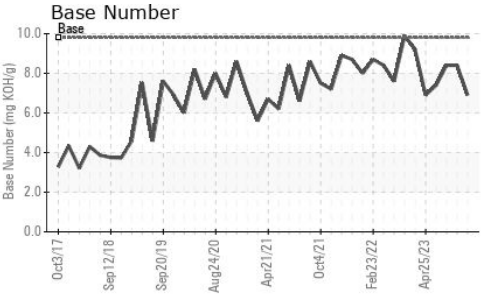
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **GFL0099747** | GFL0073288 | GFL0073278 |
| Sample Date | | Client Info | | **27 Feb 2024** | 08 Nov 2023 | 04 Oct 2023 |
| Machine Age | hrs | Client Info | | **600** | 600 | 600 |
| Oil Age | hrs | Client Info | | **600** | 600 | 600 |
| Filter Age | hrs | Client Info | | **600** | 600 | 600 |
| Oil Changed | | Client Info | | **Changed** | Changed | Changed |
| Filter Changed | | Client Info | | **Changed** | Changed | Changed |
| Sample Status | | | | **NORMAL** | NORMAL | NORMAL |
| Iron | ppm | ASTM D5185m | >165 | **17** | 3 | 2 |
| Chromium | ppm | ASTM D5185m | >5 | **1** | 0 | 0 |
| Nickel | ppm | ASTM D5185m | >4 | **<1** | 0 | 0 |
| Titanium | ppm | ASTM D5185m | >2 | **<1** | 0 | 0 |
| Silver | ppm | ASTM D5185m | >2 | **0** | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | **3** | 1 | 1 |
| Lead | ppm | ASTM D5185m | >150 | **<1** | 0 | 0 |
| Copper | ppm | ASTM D5185m | >90 | **<1** | 0 | 1 |
| Tin | ppm | ASTM D5185m | >5 | **<1** | <1 | 0 |
| Vanadium | ppm | ASTM D5185m | | **0** | 0 | 0 |
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Silicon | ppm | ASTM D5185m | >35 | **18** | 8 | 5 |
| Potassium | ppm | ASTM D5185m | >20 | **1** | <1 | 2 |
| Fuel | % | ASTM D3524 | >3.0 | **0.3** | <1.0 | <1.0 |
| Water | | WC Method | >0.2 | **NEG** | NEG | NEG |
| Glycol | | WC Method | | **NEG** | NEG | NEG |
| Soot % | % | *ASTM D7844 | >7.5 | **0.4** | 0.1 | 0.2 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | **7.4** | 5.2 | 5.3 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | **17.9** | 16.8 | 16.9 |
| 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 | | **12** | 0 | 7 |
| Boron | ppm | ASTM D5185m | 0 | **22** | 30 | 24 |
| Barium | ppm | ASTM D5185m | 0 | **0** | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 60 | **109** | 89 | 95 |
| Manganese | ppm | ASTM D5185m | 0 | **<1** | 0 | 0 |
| Magnesium | ppm | ASTM D5185m | 1010 | **1151** | 906 | 916 |
| Calcium | ppm | ASTM D5185m | 1070 | **1348** | 1080 | 1113 |
| Phosphorus | ppm | ASTM D5185m | 1150 | **1313** | 1001 | 1022 |
| Zinc | ppm | ASTM D5185m | 1270 | **1627** | 1217 | 1244 |
| Sulfur | ppm | ASTM D5185m | 2060 | **4436** | 3087 | 3162 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | **13.2** | 12.1 | 12.2 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 9.8 | **6.9** | 8.4 | 8.4 |
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | **12.0** | 12.7 | 12.6 |

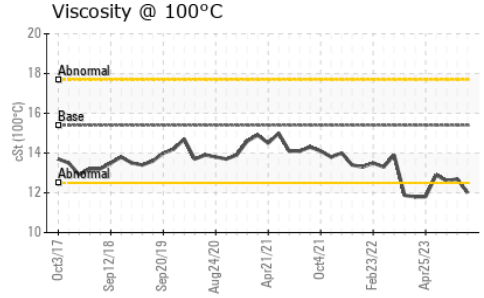
Fuel Dilution



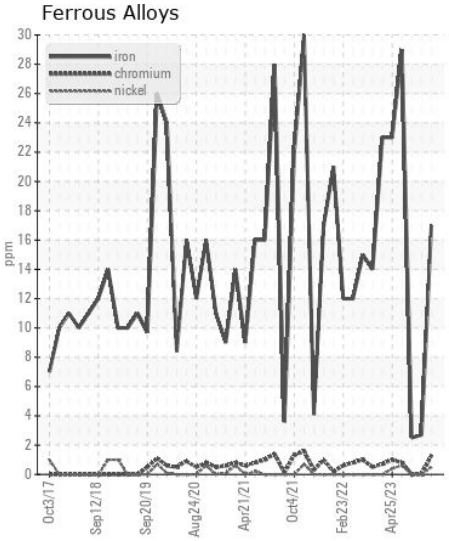

Base Number



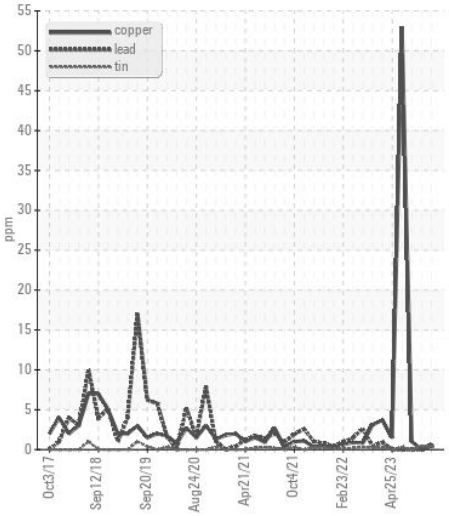

Viscosity @ 100°C



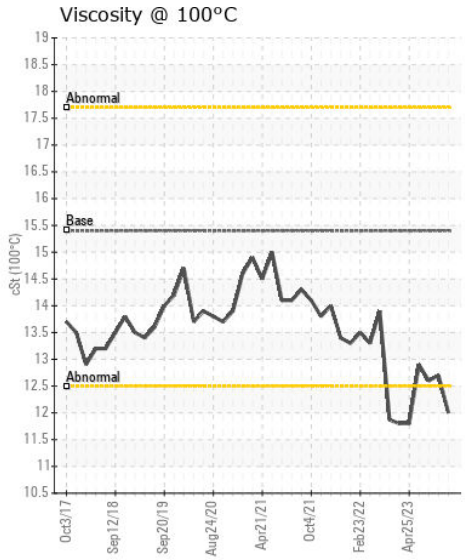

Ferrous Alloys



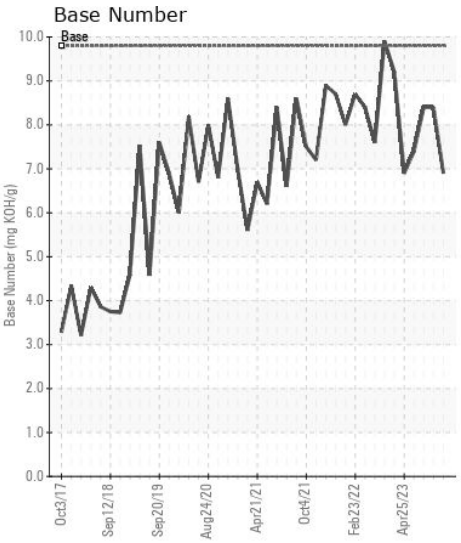

Non-ferrous Metals




Viscosity @ 100°C




Base Number




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : GFL0099747
**Lab Number** : 06104032
**Unique Number** : 10902262
**Test Package** : FLEET ( Additional Tests: FuelDilution, PercentFuel )

**Received** : 29 Feb 2024
**Tested** : 04 Mar 2024
**Diagnosed** : 04 Mar 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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