MOBIL LUBE 360 OIL DIAGNOSTICS

# OIL ANALYSIS REPORT

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

Area
**MICHAUDVILLE**
Machine Id
**1592**
Component
**Diesel Engine**
Fluid
**PETRO CANADA DURON SHP 10W30 (--- GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

## WEAR

All component wear rates are normal.

## CONTAMINATION

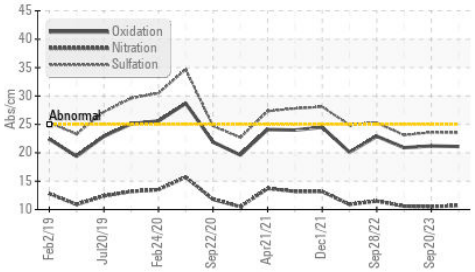
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

## FLUID CONDITION

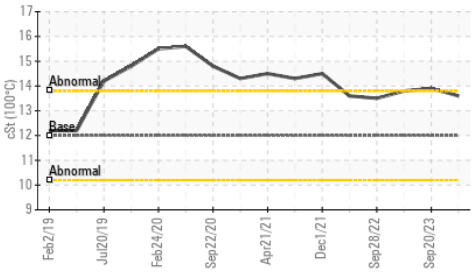
The condition of the oil is acceptable for the time in service.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | PC0084321 | PC0082247 | PC0070973 |
| Sample Date | | Client Info | | 30 May 2024 | 20 Sep 2023 | 16 Apr 2023 |
| Machine Age | hrs | Client Info | | 18118 | 17596 | 16635 |
| Oil Age | hrs | Client Info | | 0 | 0 | 0 |
| Filter Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | N/A | N/A | N/A |
| Filter Changed | | Client Info | | N/A | N/A | N/A |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |
| Iron | ppm | ASTM D5185(m) | >100 | 19 | 20 | 17 |
| Chromium | ppm | ASTM D5185(m) | >20 | <1 | <1 | <1 |
| Nickel | ppm | ASTM D5185(m) | >4 | 0 | 0 | <1 |
| Titanium | ppm | ASTM D5185(m) | | 0 | 0 | <1 |
| Silver | ppm | ASTM D5185(m) | >3 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185(m) | >20 | 6 | 15 | 2 |
| Lead | ppm | ASTM D5185(m) | >40 | 4 | 6 | 4 |
| Copper | ppm | ASTM D5185(m) | >330 | <1 | <1 | <1 |
| Tin | ppm | ASTM D5185(m) | >15 | 0 | 0 | <1 |
| Vanadium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| Silicon | ppm | ASTM D5185(m) | >25 | 12 | 7 | 8 |
| Potassium | ppm | ASTM D5185(m) | >20 | 13 | 43 | 14 |
| Fuel | | WC Method | >5 | <1.0 | <1.0 | <1.0 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | 0.0 |
| Soot % | % | ASTM D7844* | >3 | 0 | 0 | 0 |
| Nitration | Abs/cm | ASTM D7624* | >20 | 10.7 | 10.5 | 10.6 |
| Sulfation | Abs/.1mm | ASTM D7415* | >30 | 23.5 | 23.6 | 23.1 |
| Emulsified Water | scalar | Visual* | >0.2 | NEG | NEG | NEG |
| Sodium | ppm | ASTM D5185(m) | | 3 | 4 | 4 |
| Boron | ppm | ASTM D5185(m) | 2 | 2 | 2 | 3 |
| Barium | ppm | ASTM D5185(m) | 0 | <1 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185(m) | 50 | 64 | 64 | 68 |
| Manganese | ppm | ASTM D5185(m) | 0 | <1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185(m) | 950 | 1061 | 1081 | 1124 |
| Calcium | ppm | ASTM D5185(m) | 1050 | 1230 | 1226 | 1350 |
| Phosphorus | ppm | ASTM D5185(m) | 995 | 1062 | 1191 | 1249 |
| Zinc | ppm | ASTM D5185(m) | 1180 | 1323 | 1341 | 1399 |
| Sulfur | ppm | ASTM D5185(m) | 2600 | 2582 | 2691 | 2858 |
| Oxidation | Abs/.1mm | ASTM D7414* | >25 | 21.1 | 21.2 | 20.9 |
| Visc @ 40°C | cSt | ASTM D7279(m) | 80.1 | 93.7 | 96.1 | 97.7 |
| Visc @ 100°C | cSt | ASTM D7279(m) | 12.00 | 13.6 | 13.9 | 13.8 |
| Viscosity Index (VI) | Scale | ASTM D2270* | 144 | 146 | 147 | 142 |

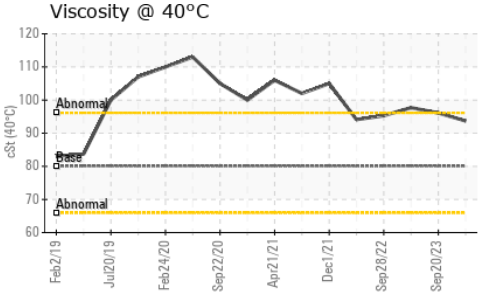
FT-IR (Direct Trend)



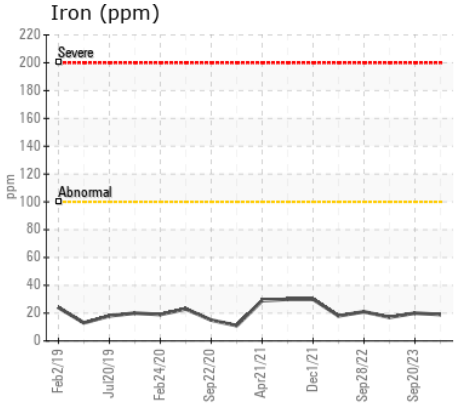

Viscosity @ 100°C



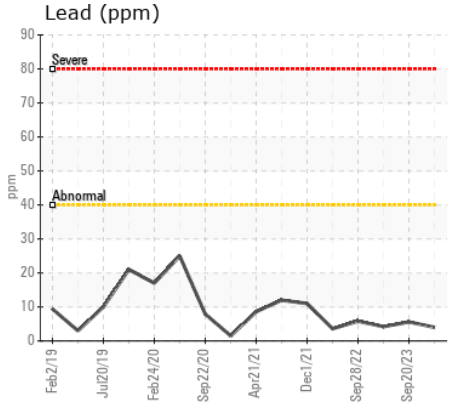

Viscosity @ 40°C



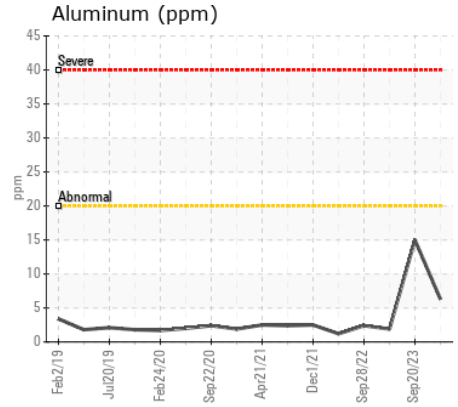

Iron (ppm)



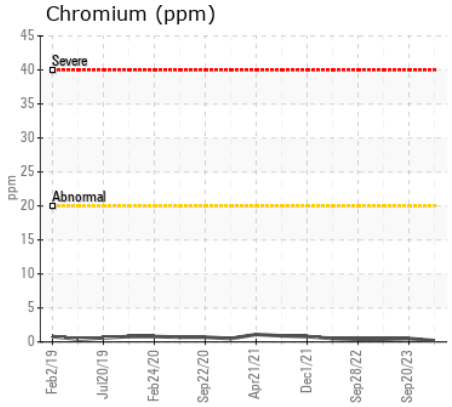

Lead (ppm)



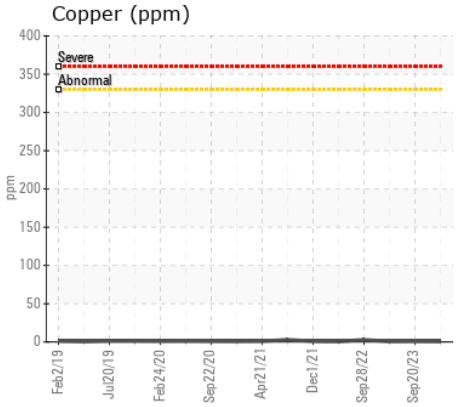

Aluminum (ppm)



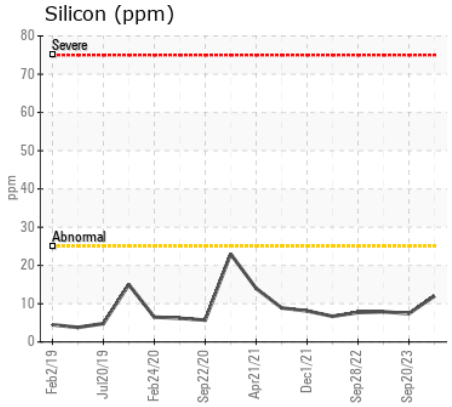

Chromium (ppm)



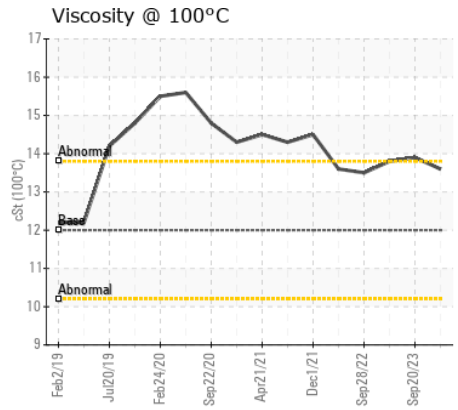

Copper (ppm)



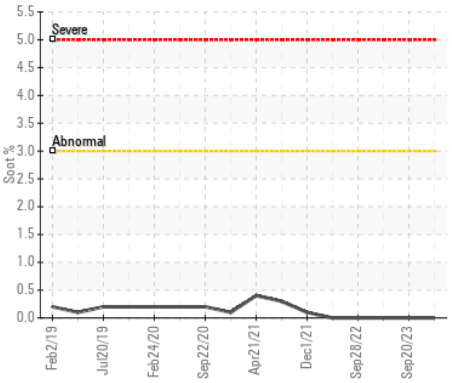

Silicon (ppm)




Viscosity @ 100°C




Soot %




ISO 17025:2017 Accredited Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
**Sample No.** : PC0084321
**Lab Number** : 02639102
**Unique Number** : 5788264
**Test Package** : MOB 1 ( Additional Tests: KV40, VI )

**Received** : 31 May 2024
**Tested** : 31 May 2024
**Diagnosed** : 31 May 2024 - Wes Davis

*To discuss this sample report, contact Customer Service at 1-800-268-2131.*
*Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.*
*Validity of results and interpretation are based on the sample and information as supplied.*

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