



OIL ANALYSIS REPORT

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

Machine Id
52976
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 10W30 (--- LTR)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|----------|
| Sample Number | | Client Info | | WC0915468 | WC0904892 | --- |
| Sample Date | | Client Info | | 05 Jun 2024 | 09 Feb 2024 | --- |
| Machine Age | mls | Client Info | | 61397 | 0 | --- |
| Oil Age | mls | Client Info | | 26925 | 34077 | --- |
| Filter Age | mls | Client Info | | 26925 | 34077 | --- |
| Oil Changed | | Client Info | | Changed | Changed | --- |
| Filter Changed | | Client Info | | Changed | Changed | --- |
| Sample Status | | | | NORMAL | ABNORMAL | --- |

WEAR

Metal levels are typical for a new component breaking in.

| | | | | | | |
|----------|-----|---------------|------|-----------|------|-----|
| Iron | ppm | ASTM D5185(m) | >90 | 32 | 56 | --- |
| Chromium | ppm | ASTM D5185(m) | >20 | 1 | 2 | --- |
| Nickel | ppm | ASTM D5185(m) | >2 | 0 | <1 | --- |
| Titanium | ppm | ASTM D5185(m) | >2 | 0 | 0 | --- |
| Silver | ppm | ASTM D5185(m) | >2 | 0 | <1 | --- |
| Aluminum | ppm | ASTM D5185(m) | >20 | 19 | ▲ 35 | --- |
| Lead | ppm | ASTM D5185(m) | >40 | 2 | 5 | --- |
| Copper | ppm | ASTM D5185(m) | >330 | 8 | 22 | --- |
| Tin | ppm | ASTM D5185(m) | >15 | 2 | 4 | --- |
| Vanadium | ppm | ASTM D5185(m) | | 0 | 0 | --- |

CONTAMINATION

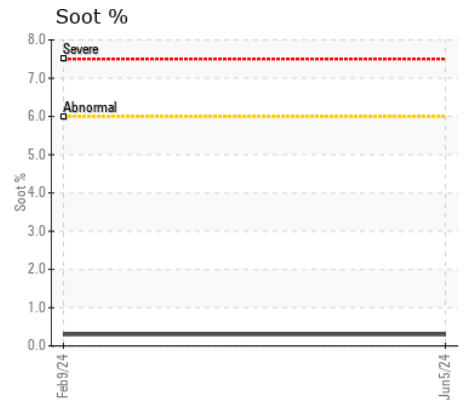
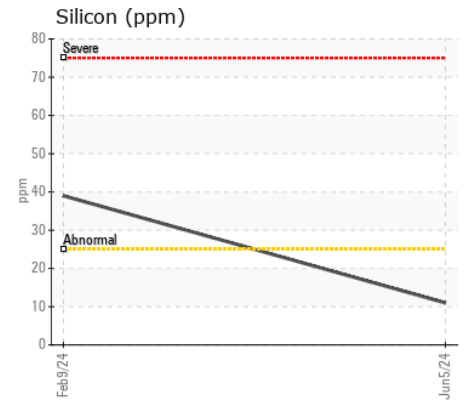
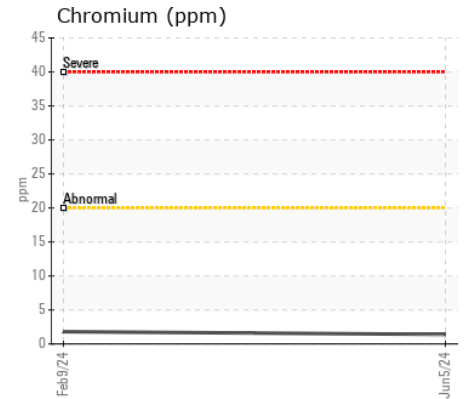
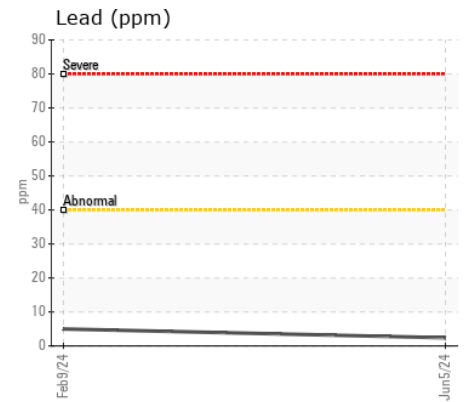
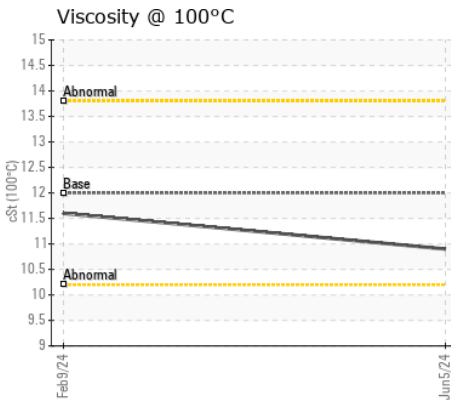
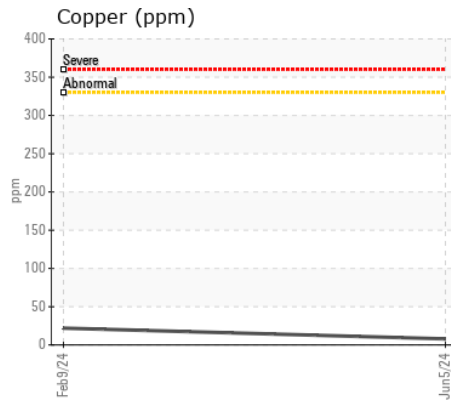
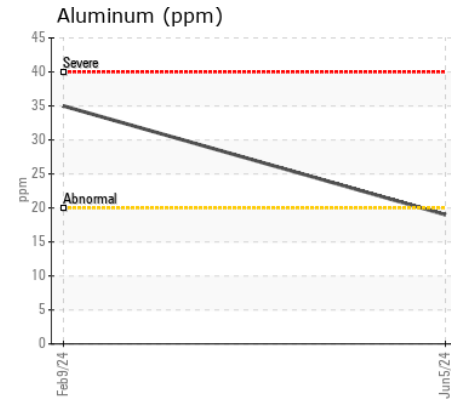
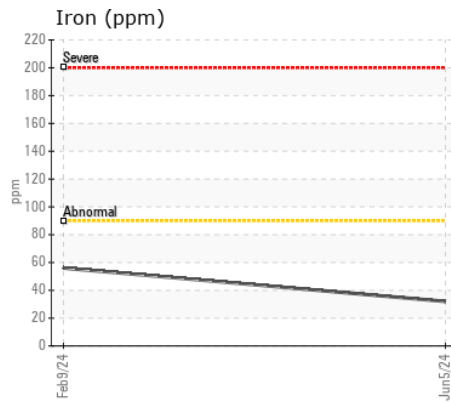
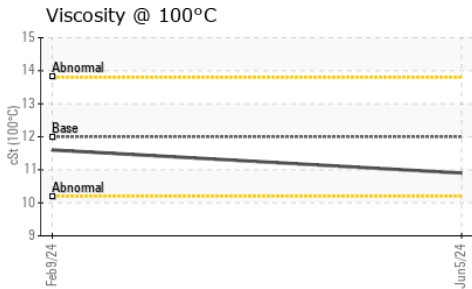
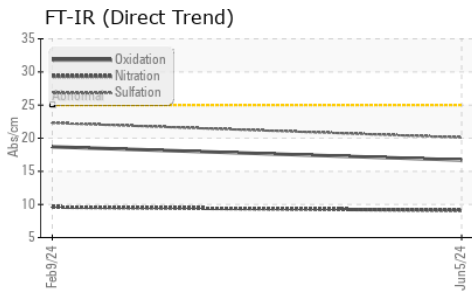
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|---------------|------|----------------|------|-----|
| Silicon | ppm | ASTM D5185(m) | >25 | 11 | ▲ 39 | --- |
| Potassium | ppm | ASTM D5185(m) | >20 | 44 | 101 | --- |
| Fuel | | WC Method | >3.0 | <1.0 | <1.0 | --- |
| Water | | WC Method | >0.2 | NEG | NEG | --- |
| Glycol | | WC Method | | NEG | NEG | --- |
| Soot % | % | ASTM D7844* | >6 | 0.3 | 0.3 | --- |
| Nitration | Abs/cm | ASTM D7624* | >20 | 9.1 | 9.6 | --- |
| Sulfation | Abs/.1mm | ASTM D7415* | >30 | 20.1 | 22.3 | --- |
| Emulsified Water | scalar | Visual* | >0.2 | NEG | NEG | --- |

FLUID CONDITION

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

| | | | | | | |
|--------------|----------|---------------|-------|--------------|------|-----|
| Sodium | ppm | ASTM D5185(m) | | 2 | 5 | --- |
| Boron | ppm | ASTM D5185(m) | 2 | 9 | 48 | --- |
| Barium | ppm | ASTM D5185(m) | 0 | <1 | 5 | --- |
| Molybdenum | ppm | ASTM D5185(m) | 50 | 62 | 64 | --- |
| Manganese | ppm | ASTM D5185(m) | 0 | 1 | 4 | --- |
| Magnesium | ppm | ASTM D5185(m) | 950 | 910 | 446 | --- |
| Calcium | ppm | ASTM D5185(m) | 1050 | 1191 | 1759 | --- |
| Phosphorus | ppm | ASTM D5185(m) | 995 | 998 | 976 | --- |
| Zinc | ppm | ASTM D5185(m) | 1180 | 1219 | 1171 | --- |
| Sulfur | ppm | ASTM D5185(m) | 2600 | 2442 | 2566 | --- |
| Oxidation | Abs/.1mm | ASTM D7414* | >25 | 16.7 | 18.7 | --- |
| Visc @ 100°C | cSt | ASTM D7279(m) | 12.00 | 10.9 | 11.6 | --- |



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0915468 **Received** : 06 Jun 2024
Lab Number : 02640158 **Tested** : 06 Jun 2024
Unique Number : 5789320 **Diagnosed** : 06 Jun 2024 - Wes Davis
Test Package : MOB 1

MANITOU LIN TRANSPORT
 75 MUMFORD ROAD
 LIVELY, ON
 CA P3Y 1L1
 Contact: Todd Smith
 tosmith@manitoulintransport.com
 T: (705)562-3302
 F: x:

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.