# OIL ANALYSIS REPORT

Sample Rating Trend


**FUEL**

Area
## SHARP BUS LINES
Machine Id
## INTERNATIONAL 1354
Component
**Diesel Engine**
Fluid
**PETRO CANADA DURON HP 15W40 (--- GAL)**

## DIAGNOSIS

**Recommendation**
The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

**Wear**
All component wear rates are normal.

**Contamination**
There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

**Fluid Condition**
Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **PC0081565** | --- | --- |
| Sample Date | | Client Info | | **06 Oct 2023** | --- | --- |
| Machine Age | kms | Client Info | | **218828** | --- | --- |
| Oil Age | kms | Client Info | | **3000** | --- | --- |
| Oil Changed | | Client Info | | **Changed** | --- | --- |
| Sample Status | | | | **ABNORMAL** | --- | --- |

| CONTAMINATION | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Glycol | WC Method | | **NEG** | --- | --- |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185(m) | >127 | **20** | --- | --- |
| Chromium | ppm | ASTM D5185(m) | >3 | **1** | --- | --- |
| Nickel | ppm | ASTM D5185(m) | >30 | **<1** | --- | --- |
| Titanium | ppm | ASTM D5185(m) | >2 | **0** | --- | --- |
| Silver | ppm | ASTM D5185(m) | >2 | **<1** | --- | --- |
| Aluminum | ppm | ASTM D5185(m) | >59 | **6** | --- | --- |
| Lead | ppm | ASTM D5185(m) | >29 | **<1** | --- | --- |
| Copper | ppm | ASTM D5185(m) | >135 | **<1** | --- | --- |
| Tin | ppm | ASTM D5185(m) | >2 | **0** | --- | --- |
| Antimony | ppm | ASTM D5185(m) | | **0** | --- | --- |
| Vanadium | ppm | ASTM D5185(m) | | **0** | --- | --- |
| Beryllium | ppm | ASTM D5185(m) | | **0** | --- | --- |
| Cadmium | ppm | ASTM D5185(m) | | **0** | --- | --- |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185(m) | 0 | **2** | --- | --- |
| Barium | ppm | ASTM D5185(m) | 0 | **<1** | --- | --- |
| Molybdenum | ppm | ASTM D5185(m) | 60 | **52** | --- | --- |
| Manganese | ppm | ASTM D5185(m) | 0 | **0** | --- | --- |
| Magnesium | ppm | ASTM D5185(m) | 1010 | **809** | --- | --- |
| Calcium | ppm | ASTM D5185(m) | 1070 | **868** | --- | --- |
| Phosphorus | ppm | ASTM D5185(m) | 1150 | **840** | --- | --- |
| Zinc | ppm | ASTM D5185(m) | 1270 | **993** | --- | --- |
| Sulfur | ppm | ASTM D5185(m) | 2060 | **2194** | --- | --- |
| Lithium | ppm | ASTM D5185(m) | | **<1** | --- | --- |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185(m) | >18 | **2** | --- | --- |
| Sodium | ppm | ASTM D5185(m) | | **2** | --- | --- |
| Potassium | ppm | ASTM D5185(m) | >20 | **<1** | --- | --- |
| Fuel | % | ASTM D7593* | >2.0 | ▲ **4.1** | --- | --- |

| INFRA-RED | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Soot % | % | ASTM D7844* | >3 | **1.5** | --- | --- |
| Nitration | Abs/cm | ASTM D7624* | >20 | **10.4** | --- | --- |
| Sulfation | Abs/.1mm | ASTM D7415* | >30 | **23.9** | --- | --- |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Oxidation | Abs/.1mm | ASTM D7414* | >25 | **21.2** | --- | --- |

# OIL ANALYSIS REPORT

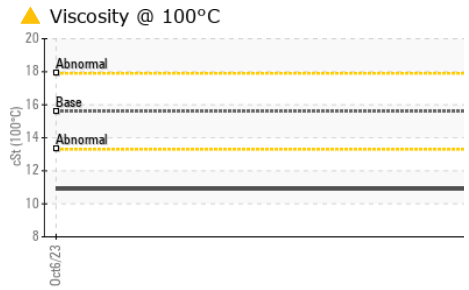
Viscosity @ 40°C


| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Emulsified Water | scalar | Visual* | >0.2 | **NEG** | --- | --- |
| Free Water | scalar | Visual* | | **NEG** | --- | --- |

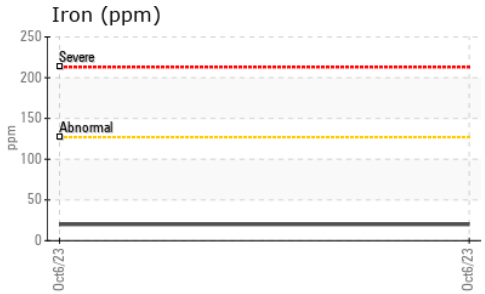
| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D7279(m) | 118.2 | ▲ **66.6** | --- | --- |
| Visc @ 100°C | cSt | ASTM D7279(m) | 15.6 | ▲ **10.9** | --- | --- |
| Viscosity Index (VI) | Scale | ASTM D2270* | 139 | **154** | --- | --- |

## GRAPHS

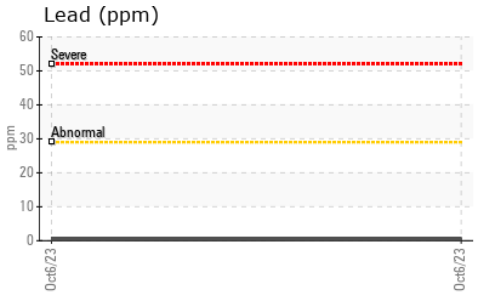
Viscosity @ 100°C



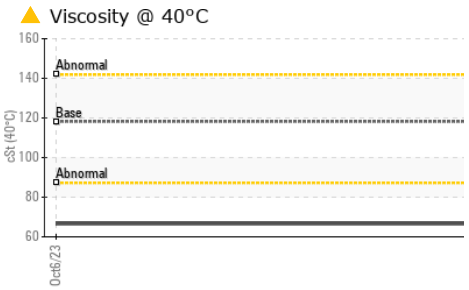

Iron (ppm)



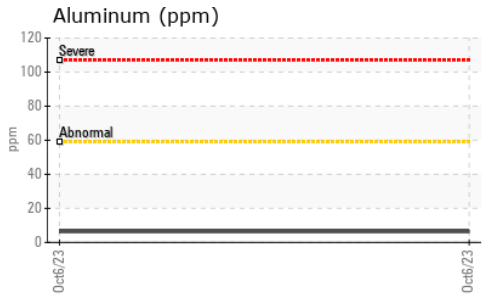

Lead (ppm)



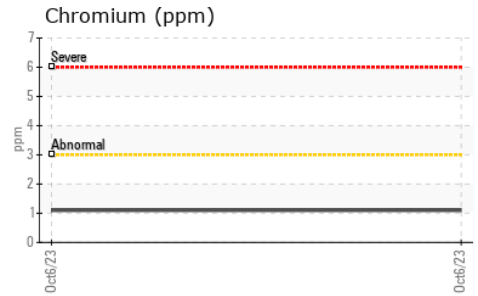

Viscosity @ 40°C



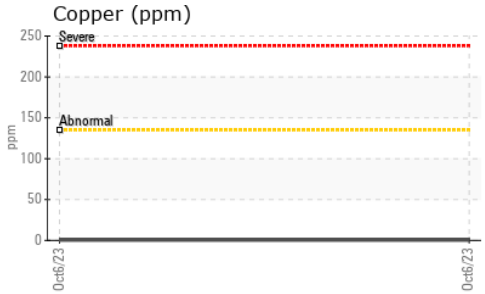

Aluminum (ppm)



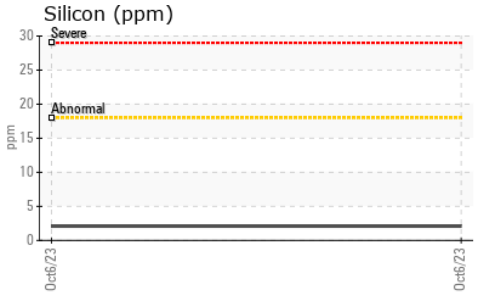

Chromium (ppm)



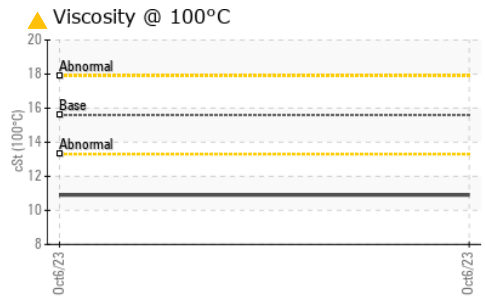

Copper (ppm)



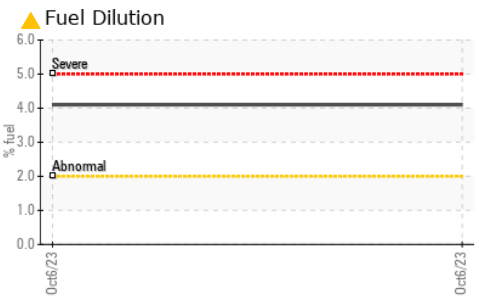

Silicon (ppm)




Viscosity @ 100°C




Fuel Dilution




ISO 17025:2017 Accredited Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
**Sample No.** : PC0081565 **Received** : 13 Oct 2023
**Lab Number** : 02588828 **Diagnosed** : 16 Oct 2023
**Unique Number** : 5657894 **Diagnostician** : Wes Davis
**Test Package** : MOB 1 ( Additional Tests: FuelDilution, KV40, PercentFuel, VI )

*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.*


**ICSB - Brantford**
567 Oak Park Rd.
Brantford, ON
CA N3T 5L8
Contact: Doug Hall
Djhall@sharpbus.com
T: (519)751-3434
F: