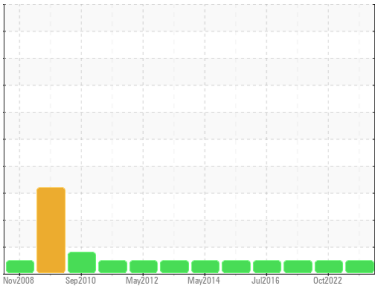
# OIL ANALYSIS REPORT

Sample Rating Trend




NORMAL

Machine Id
## 2007 SPARTAN 24143 P242
Component
**Rear Diesel Engine**
Fluid
**PETRO CANADA DURON HP 15W40 (22 LTR)**

## DIAGNOSIS

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

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **PC0075204** | PC0056517 | AP102830 |
| Sample Date | | Client Info | | **13 Dec 2023** | 11 Oct 2022 | 26 Jun 2017 |
| Machine Age | mths | Client Info | | **0** | 13369 | 138880 |
| Oil Age | mths | Client Info | | **6** | 0 | 0 |
| Oil Changed | | Client Info | | **N/A** | N/A | Changed |
| Sample Status | | | | **NORMAL** | NORMAL | NORMAL |

| CONTAMINATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Fuel | | WC Method | >3.0 | **<1.0** | <1.0 | <1.0 |
| Water | | WC Method | >0.2 | **NEG** | NEG | NEG |
| Glycol | | WC Method | | **NEG** | NEG | NEG |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185(m) | >90 | **25** | 33 | 16 |
| Chromium | ppm | ASTM D5185(m) | >20 | **2** | 3 | <1 |
| Nickel | ppm | ASTM D5185(m) | >2 | **<1** | 0 | <1 |
| Titanium | ppm | ASTM D5185(m) | >2 | **0** | <1 | <1 |
| Silver | ppm | ASTM D5185(m) | >2 | **<1** | 0 | <1 |
| Aluminum | ppm | ASTM D5185(m) | >20 | **3** | 2 | 3 |
| Lead | ppm | ASTM D5185(m) | >40 | **3** | 6 | 3 |
| Copper | ppm | ASTM D5185(m) | >330 | **6** | 15 | 3 |
| Tin | ppm | ASTM D5185(m) | >15 | **<1** | 1 | <1 |
| Antimony | ppm | ASTM D5185(m) | | **0** | 0 | 2 |
| Vanadium | ppm | ASTM D5185(m) | | **0** | 0 | 0 |
| Beryllium | ppm | ASTM D5185(m) | | **0** | 0 | 0 |
| Cadmium | ppm | ASTM D5185(m) | | **0** | 0 | 0 |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185(m) | 0 | **3** | 3 | 41 |
| Barium | ppm | ASTM D5185(m) | 0 | **0** | <1 | <1 |
| Molybdenum | ppm | ASTM D5185(m) | 60 | **61** | 61 | 4 |
| Manganese | ppm | ASTM D5185(m) | 0 | **<1** | 3 | <1 |
| Magnesium | ppm | ASTM D5185(m) | 1010 | **984** | 983 | 12 |
| Calcium | ppm | ASTM D5185(m) | 1070 | **1065** | 1087 | 2642 |
| Phosphorus | ppm | ASTM D5185(m) | 1150 | **1016** | 1074 | 1081 |
| Zinc | ppm | ASTM D5185(m) | 1270 | **1188** | 1205 | 1326 |
| Sulfur | ppm | ASTM D5185(m) | 2060 | **2678** | 2559 | 3757 |
| Lithium | ppm | ASTM D5185(m) | | **<1** | <1 | <1 |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185(m) | >25 | **4** | 6 | 4 |
| Sodium | ppm | ASTM D5185(m) | | **2** | 6 | 3 |
| Potassium | ppm | ASTM D5185(m) | >20 | **2** | 1 | 2 |

| INFRA-RED | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Soot % | % | ASTM D7844* | >6 | **1.9** | 2 | 1.5 |
| Nitration | Abs/cm | ASTM D7624* | >20 | **11.2** | 11.1 | 12.8 |
| Sulfation | Abs/.1mm | ASTM D7415* | >30 | **25.0** | 26.0 | 29.2 |

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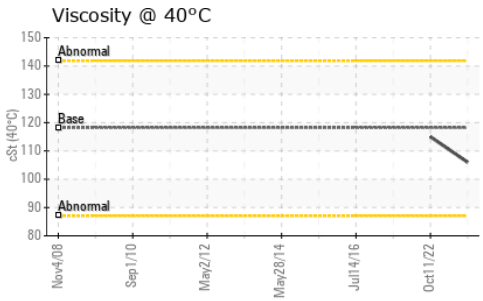
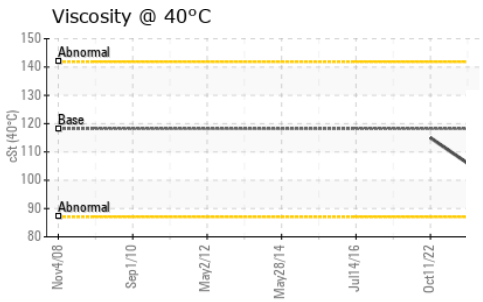


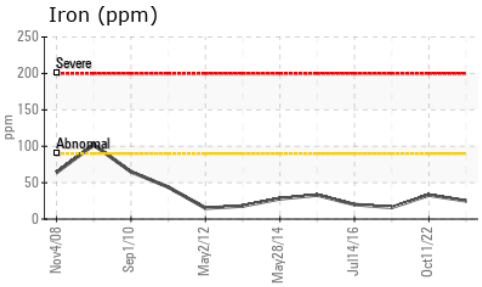



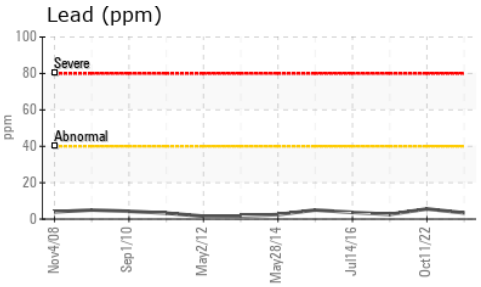

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Oxidation | Abs/.1mm | ASTM D7414* | >25 | **20.1** | 19.3 | 21.1 |

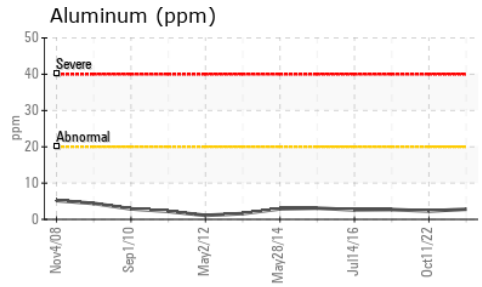
| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Emulsified Water | scalar | Visual* | >0.2 | **NEG** | NEG | NEG |
| Free Water | scalar | Visual* | | **NEG** | NEG | NEG |

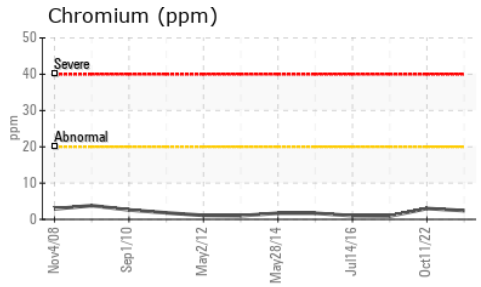
| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D7279(m) | 118.2 | **106** | 115 | --- |
| Visc @ 100°C | cSt | ASTM D7279(m) | 15.6 | **14.6** | 14.9 | 15.8 |
| Viscosity Index (VI) | Scale | ASTM D2270* | 139 | **141** | 133 | --- |

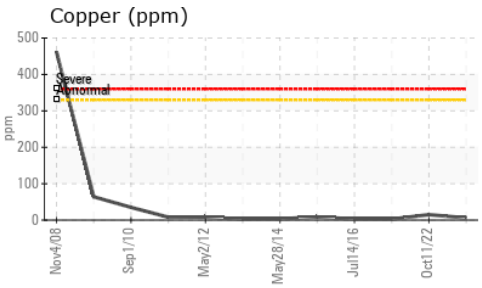
## GRAPHS

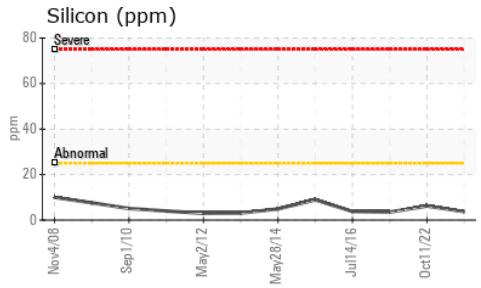


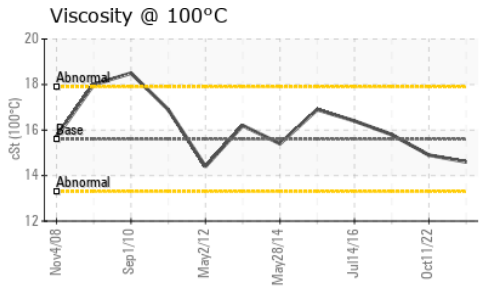



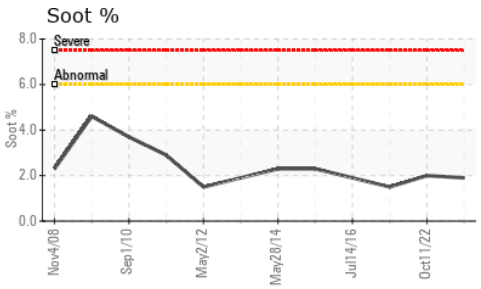




ISO 17025:2017 Accredited Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
**Sample No.** : PC0075204 **Received** : 01 Mar 2024
**Lab Number** : 02619139 **Tested** : 01 Mar 2024
**Unique Number** : 5736249 **Diagnosed** : 01 Mar 2024 - Wes Davis
**Test Package** : MOB 1 ( Additional Tests: KV40, 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.*

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