



Area  
**G.LOPES CONSTRUCTION INC./Off-Road**  
Machine Id  
**BH890**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

| Test           | UOM | Method      | Limit/Abn | Current            | History1    | History2    |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number  |     | Client Info |           | <b>PCA0122982</b>  | PCA0090691  | PCA0059386  |
| Sample Date    |     | Client Info |           | <b>18 Jun 2024</b> | 02 May 2023 | 13 Oct 2021 |
| Machine Age    | hrs | Client Info |           | <b>6160</b>        | 6160        | 4945        |
| Oil Age        | hrs | Client Info |           | <b>6160</b>        | 6160        | 6160        |
| Filter Age     | hrs | Client Info |           | <b>0</b>           | 0           | 0           |
| Oil Changed    |     | Client Info |           | <b>N/A</b>         | N/A         | N/A         |
| Filter Changed |     | Client Info |           | <b>N/A</b>         | N/A         | N/A         |
| Sample Status  |     |             |           | <b>NORMAL</b>      | NORMAL      | NORMAL      |

**WEAR**

All component wear rates are normal.

|              |        |             |      |              |      |      |
|--------------|--------|-------------|------|--------------|------|------|
| Iron         | ppm    | ASTM D5185m | >51  | <b>20</b>    | 37   | 46   |
| Chromium     | ppm    | ASTM D5185m | >11  | <b>&lt;1</b> | 1    | 1    |
| Nickel       | ppm    | ASTM D5185m | >5   | <b>0</b>     | <1   | <1   |
| Titanium     | ppm    | ASTM D5185m |      | <b>1</b>     | <1   | <1   |
| Silver       | ppm    | ASTM D5185m | >3   | <b>0</b>     | 0    | 0    |
| Aluminum     | ppm    | ASTM D5185m | >31  | <b>1</b>     | 0    | 5    |
| Lead         | ppm    | ASTM D5185m | >26  | <b>&lt;1</b> | 3    | 2    |
| Copper       | ppm    | ASTM D5185m | >26  | <b>&lt;1</b> | 4    | 2    |
| Tin          | ppm    | ASTM D5185m | >4   | <b>0</b>     | <1   | <1   |
| Vanadium     | ppm    | ASTM D5185m |      | <b>0</b>     | 0    | 0    |
| White Metal  | scalar | *Visual     | NONE | <b>NONE</b>  | NONE | NONE |
| Yellow Metal | scalar | *Visual     | NONE | <b>NONE</b>  | NONE | NONE |

**CONTAMINATION**

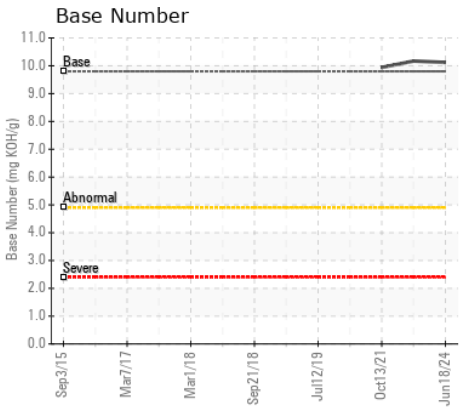
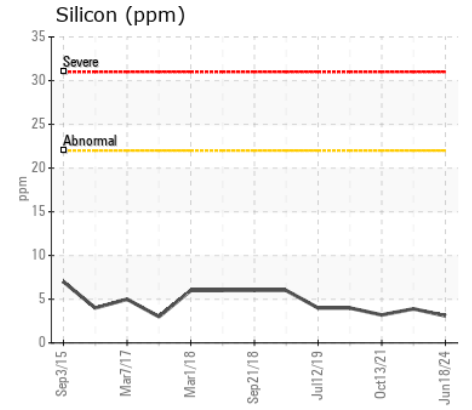
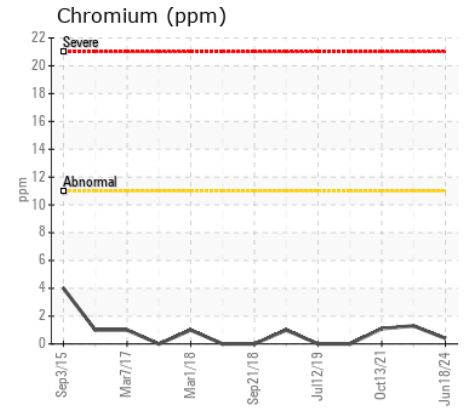
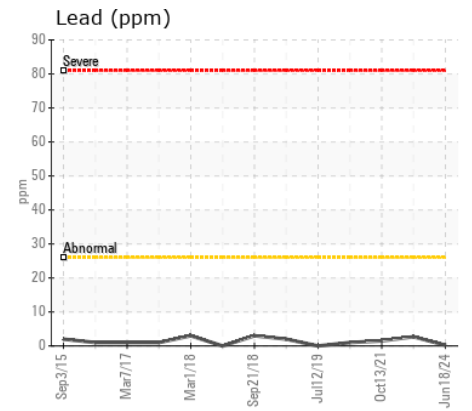
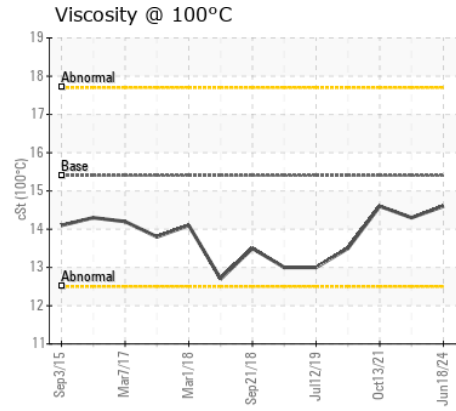
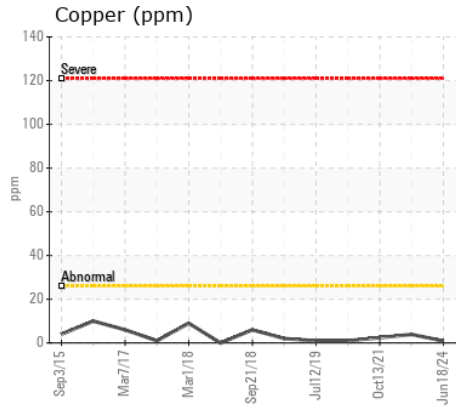
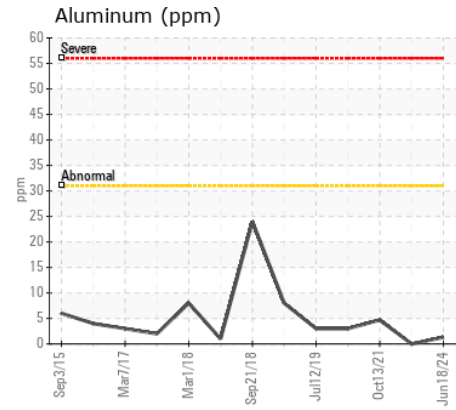
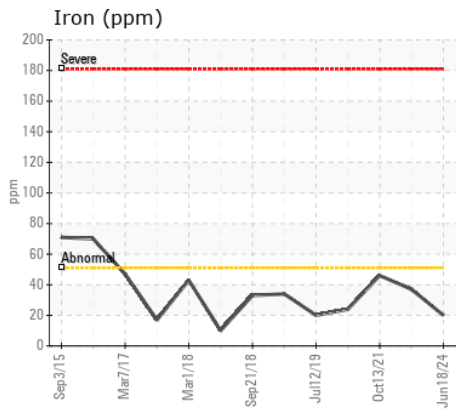
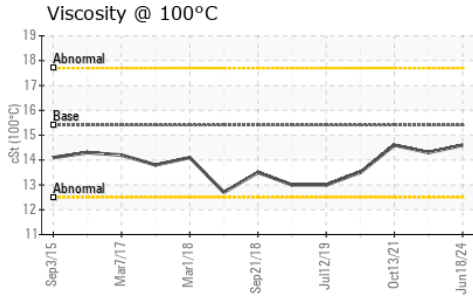
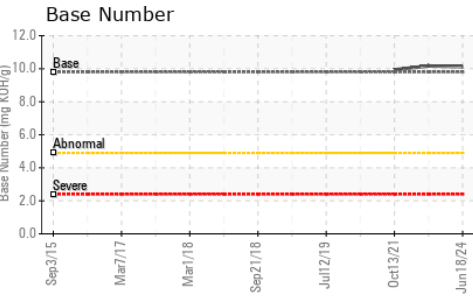
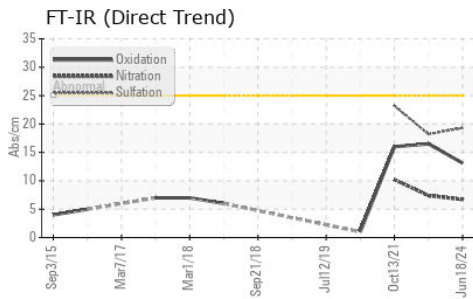
There is no indication of any contamination in the oil.

|                  |          |             |       |                |       |       |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon          | ppm      | ASTM D5185m | >22   | <b>3</b>       | 4     | 3     |
| Potassium        | ppm      | ASTM D5185m | >20   | <b>0</b>       | <1    | <1    |
| Fuel             |          | WC Method   | >2.1  | <b>&lt;1.0</b> | <1.0  | <1.0  |
| Water            |          | WC Method   | >0.21 | <b>NEG</b>     | NEG   | NEG   |
| Glycol           |          | WC Method   |       | <b>NEG</b>     | NEG   | NEG   |
| Soot %           | %        | *ASTM D7844 | >3    | <b>1.6</b>     | 0.2   | 2.3   |
| Nitration        | Abs/cm   | *ASTM D7624 | >20   | <b>6.7</b>     | 7.4   | 10.2  |
| Sulfation        | Abs/.1mm | *ASTM D7415 | >30   | <b>19.3</b>    | 18.2  | 23.2  |
| Silt             | scalar   | *Visual     | NONE  | <b>NONE</b>    | NONE  | NONE  |
| Debris           | scalar   | *Visual     | NONE  | <b>NONE</b>    | NONE  | NONE  |
| Sand/Dirt        | scalar   | *Visual     | NONE  | <b>NONE</b>    | NONE  | NONE  |
| Appearance       | scalar   | *Visual     | NORML | <b>NORML</b>   | NORML | NORML |
| Odor             | scalar   | *Visual     | NORML | <b>NORML</b>   | NORML | NORML |
| Emulsified Water | scalar   | *Visual     | >0.21 | <b>NEG</b>     | NEG   | NEG   |

**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.

|                  |          |             |      |              |       |      |
|------------------|----------|-------------|------|--------------|-------|------|
| Sodium           | ppm      | ASTM D5185m | >31  | <b>2</b>     | 4     | 0    |
| Boron            | ppm      | ASTM D5185m | 0    | <b>7</b>     | 9     | 14   |
| Barium           | ppm      | ASTM D5185m | 0    | <b>0</b>     | 0     | 0    |
| Molybdenum       | ppm      | ASTM D5185m | 60   | <b>61</b>    | 61    | 63   |
| Manganese        | ppm      | ASTM D5185m | 0    | <b>&lt;1</b> | <1    | <1   |
| Magnesium        | ppm      | ASTM D5185m | 1010 | <b>984</b>   | 929   | 927  |
| Calcium          | ppm      | ASTM D5185m | 1070 | <b>1126</b>  | 1036  | 1104 |
| Phosphorus       | ppm      | ASTM D5185m | 1150 | <b>1079</b>  | 982   | 1045 |
| Zinc             | ppm      | ASTM D5185m | 1270 | <b>1300</b>  | 1253  | 1164 |
| Sulfur           | ppm      | ASTM D5185m | 2060 | <b>3773</b>  | 3115  | 2646 |
| Oxidation        | Abs/.1mm | *ASTM D7414 | >25  | <b>13.1</b>  | 16.5  | 16   |
| Base Number (BN) | mg KOH/g | ASTM D2896  | 9.8  | <b>10.12</b> | 10.17 | 9.94 |
| Visc @ 100°C     | cSt      | ASTM D445   | 15.4 | <b>14.6</b>  | 14.3  | 14.6 |



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0122982 **Received** : 20 Jun 2024  
**Lab Number** : 06215932 **Tested** : 22 Jun 2024  
**Unique Number** : 11088796 **Diagnosed** : 22 Jun 2024 - Wes Davis  
**Test Package** : MOB 2

**G LOPES CONSTRUCTION**  
 565 WINTHROP ST  
 TAUNTON, MA  
 US 02780  
 Contact: BUTCH MCGRATH  
 bmcgrath@glopes.com

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)