



# OIL ANALYSIS REPORT

|                 |                 |
|-----------------|-----------------|
| WEAR            | <b>NORMAL</b>   |
| CONTAMINATION   | <b>MARGINAL</b> |
| FLUID CONDITION | <b>ABNORMAL</b> |

Machine Id  
**THOMAS 624**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON HP 15W40 (--- GAL)**

## RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

| Test           | UOM | Method      | Limit/Abn | Current            | History1    | History2    |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number  |     | Client Info |           | <b>WC0906008</b>   | WC0792698   | WC0792653   |
| Sample Date    |     | Client Info |           | <b>09 Apr 2024</b> | 09 Feb 2024 | 15 Sep 2023 |
| Machine Age    | mls | Client Info |           | <b>69573</b>       | 66358       | 0           |
| Oil Age        | mls | Client Info |           | <b>0</b>           | 0           | 0           |
| Filter Age     | mls | Client Info |           | <b>0</b>           | 0           | 0           |
| Oil Changed    |     | Client Info |           | <b>Not Changd</b>  | Not Changd  | Not Changd  |
| Filter Changed |     | Client Info |           | <b>Not Changd</b>  | Not Changd  | Not Changd  |
| Sample Status  |     |             |           | <b>ABNORMAL</b>    | NORMAL      | NORMAL      |

## WEAR

All component wear rates are normal.

|              |        |             |      |              |      |      |
|--------------|--------|-------------|------|--------------|------|------|
| Iron         | ppm    | ASTM D5185m | >100 | <b>24</b>    | 17   | 35   |
| Chromium     | ppm    | ASTM D5185m | >20  | <b>1</b>     | 2    | 2    |
| Nickel       | ppm    | ASTM D5185m | >4   | <b>&lt;1</b> | <1   | 0    |
| Titanium     | ppm    | ASTM D5185m |      | <b>&lt;1</b> | <1   | 0    |
| Silver       | ppm    | ASTM D5185m | >3   | <b>0</b>     | <1   | 0    |
| Aluminum     | ppm    | ASTM D5185m | >20  | <b>9</b>     | 5    | 13   |
| Lead         | ppm    | ASTM D5185m | >40  | <b>1</b>     | <1   | 0    |
| Copper       | ppm    | ASTM D5185m | >330 | <b>2</b>     | 2    | <1   |
| Tin          | ppm    | ASTM D5185m | >15  | <b>1</b>     | <1   | 0    |
| Vanadium     | ppm    | ASTM D5185m |      | <b>&lt;1</b> | <1   | 0    |
| White Metal  | scalar | *Visual     | NONE | <b>NONE</b>  | NONE | NONE |
| Yellow Metal | scalar | *Visual     | NONE | <b>NONE</b>  | NONE | NONE |

## CONTAMINATION

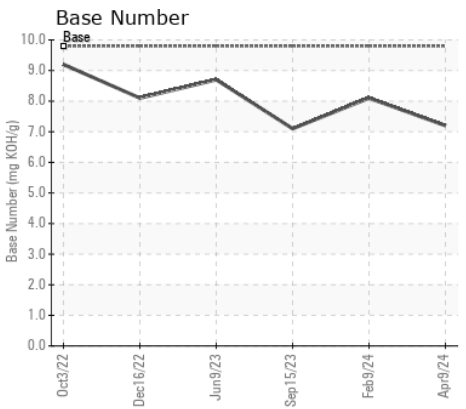
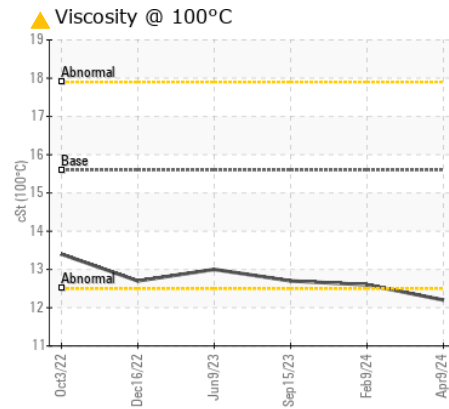
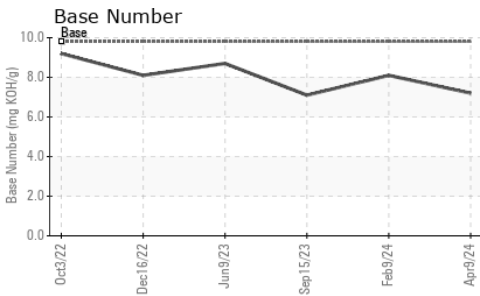
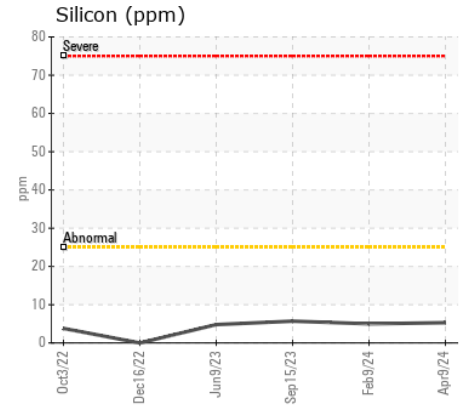
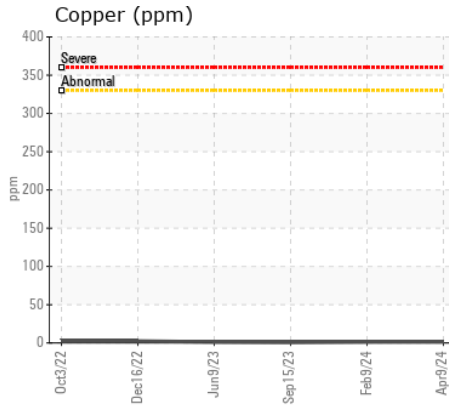
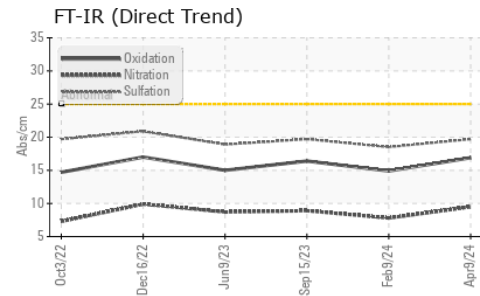
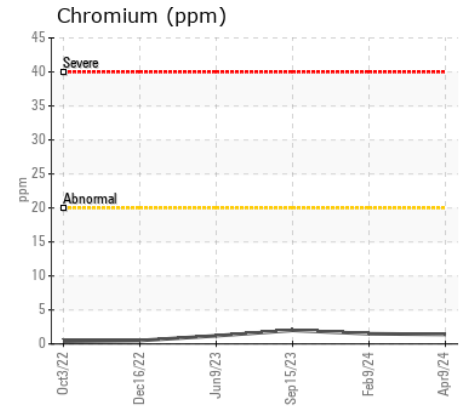
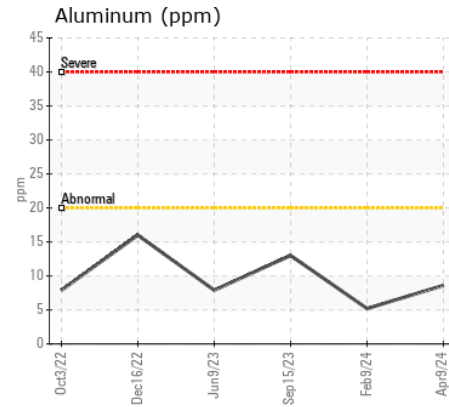
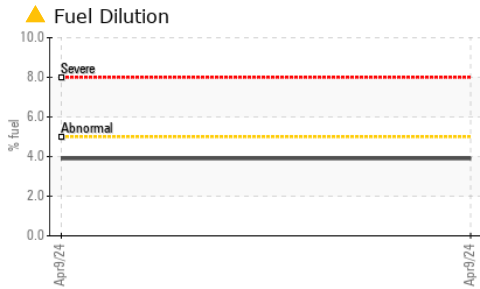
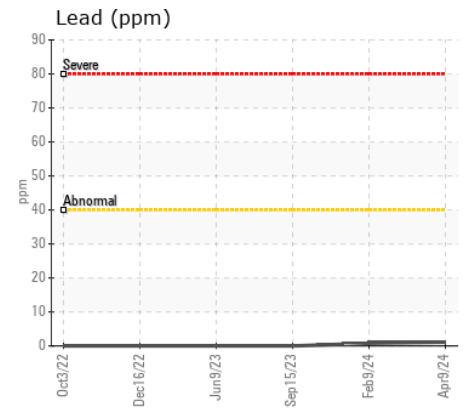
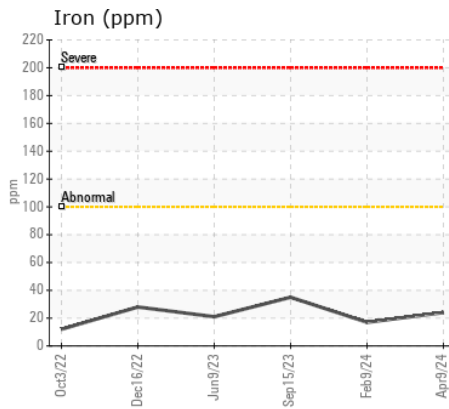
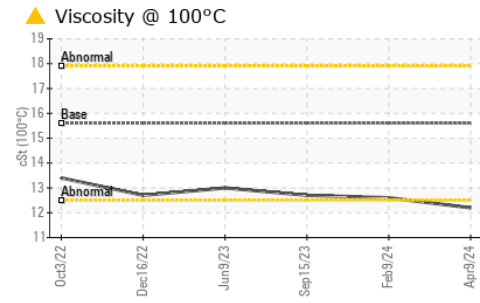
Light fuel dilution occurring.

|                  |          |             |       |              |       |       |
|------------------|----------|-------------|-------|--------------|-------|-------|
| Silicon          | ppm      | ASTM D5185m | >25   | <b>5</b>     | 5     | 6     |
| Potassium        | ppm      | ASTM D5185m | >20   | <b>13</b>    | 9     | 26    |
| Fuel             | %        | ASTM D3524  | >5    | <b>▲ 3.9</b> | <1.0  | <1.0  |
| Water            |          | WC Method   | >0.2  | <b>NEG</b>   | NEG   | NEG   |
| Glycol           |          | WC Method   |       | <b>NEG</b>   | NEG   | NEG   |
| Soot %           | %        | *ASTM D7844 | >3    | <b>0.6</b>   | 0.4   | 0.4   |
| Nitration        | Abs/cm   | *ASTM D7624 | >20   | <b>9.5</b>   | 7.8   | 8.9   |
| Sulfation        | Abs/.1mm | *ASTM D7415 | >30   | <b>19.7</b>  | 18.5  | 19.7  |
| 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     | >0.2  | <b>NEG</b>   | NEG   | NEG   |

## FLUID CONDITION

Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.

|                  |          |             |      |               |      |      |
|------------------|----------|-------------|------|---------------|------|------|
| Sodium           | ppm      | ASTM D5185m |      | <b>3</b>      | 0    | 2    |
| Boron            | ppm      | ASTM D5185m |      | <b>3</b>      | 6    | 7    |
| Barium           | ppm      | ASTM D5185m |      | <b>0</b>      | 0    | 0    |
| Molybdenum       | ppm      | ASTM D5185m |      | <b>58</b>     | 58   | 62   |
| Manganese        | ppm      | ASTM D5185m |      | <b>&lt;1</b>  | <1   | <1   |
| Magnesium        | ppm      | ASTM D5185m |      | <b>860</b>    | 876  | 877  |
| Calcium          | ppm      | ASTM D5185m |      | <b>1070</b>   | 1023 | 1136 |
| Phosphorus       | ppm      | ASTM D5185m |      | <b>938</b>    | 971  | 944  |
| Zinc             | ppm      | ASTM D5185m |      | <b>1097</b>   | 1120 | 1219 |
| Sulfur           | ppm      | ASTM D5185m |      | <b>3072</b>   | 3383 | 3471 |
| Oxidation        | Abs/.1mm | *ASTM D7414 | >25  | <b>16.9</b>   | 14.9 | 16.4 |
| Base Number (BN) | mg KOH/g | ASTM D2896  | 9.8  | <b>7.2</b>    | 8.1  | 7.1  |
| Visc @ 100°C     | cSt      | ASTM D445   | 15.6 | <b>▲ 12.2</b> | 12.6 | 12.7 |



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0906008 **Received** : 12 Apr 2024  
**Lab Number** : 06147977 **Tested** : 17 Apr 2024  
**Unique Number** : 10978055 **Diagnosed** : 17 Apr 2024 - Jonathan Hester  
**Test Package** : MOB 1 ( Additional Tests: FuelDilution, PercentFuel, TBN )

**WAYNE CO SCHOOL BUS GARAGE**  
 1603 SALEM CHURCH RD  
 GOLDSBORO, NC  
 US 27530  
 Contact: BRANDON BRIGGS  
 brandonbriggs@wcps.org

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)

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F: