



# WEAR CHECK

## OIL ANALYSIS REPORT

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

Area  
**5C07**  
Machine Id  
**FORD F-550 TVK9890 (S/N 11162901160931300)**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA 15W40 (13 QTS)**

### RECOMMENDATION

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time.

| Test           | UOM | Method      | Limit/Abn | Current            | History1    | History2    |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number  |     | Client Info |           | <b>ARI0006707</b>  | ARI0006753  | ARI0006740  |
| Sample Date    |     | Client Info |           | <b>12 Dec 2023</b> | 25 Sep 2023 | 21 Aug 2023 |
| Machine Age    | mls | Client Info |           | <b>84603</b>       | 82402       | 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>Changed</b>     | N/A         | N/A         |
| Filter Changed |     | Client Info |           | <b>Not Changed</b> | N/A         | N/A         |
| Sample Status  |     |             |           | <b>MARGINAL</b>    | SEVERE      | SEVERE      |

### WEAR

All component wear rates are normal.

|              |        |             |      |              |      |      |
|--------------|--------|-------------|------|--------------|------|------|
| Iron         | ppm    | ASTM D5185m | >100 | <b>18</b>    | 49   | 37   |
| Chromium     | ppm    | ASTM D5185m | >20  | <b>1</b>     | 2    | 1    |
| Nickel       | ppm    | ASTM D5185m | >2   | <b>0</b>     | <1   | 0    |
| Titanium     | ppm    | ASTM D5185m | >2   | <b>0</b>     | 0    | <1   |
| Silver       | ppm    | ASTM D5185m | >2   | <b>0</b>     | 0    | 0    |
| Aluminum     | ppm    | ASTM D5185m | >25  | <b>4</b>     | 7    | 5    |
| Lead         | ppm    | ASTM D5185m | >40  | <b>0</b>     | 0    | 0    |
| Copper       | ppm    | ASTM D5185m | >330 | <b>1</b>     | 3    | 2    |
| Tin          | ppm    | ASTM D5185m | >15  | <b>&lt;1</b> | 0    | 0    |
| Vanadium     | ppm    | ASTM D5185m |      | <b>0</b>     | 0    | <1   |
| White Metal  | scalar | *Visual     | NONE | <b>NONE</b>  | NONE | NONE |
| Yellow Metal | scalar | *Visual     | NONE | <b>NONE</b>  | NONE | NONE |

### CONTAMINATION

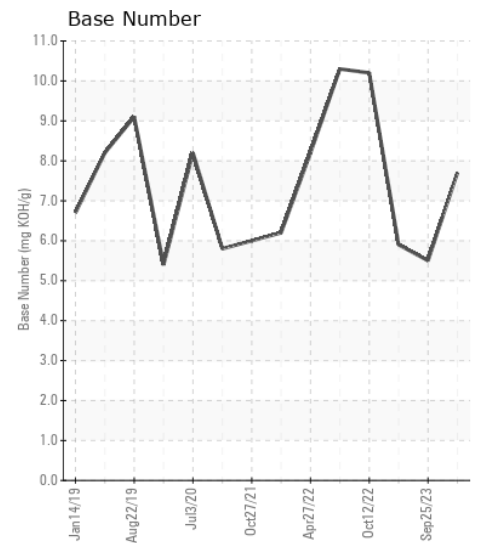
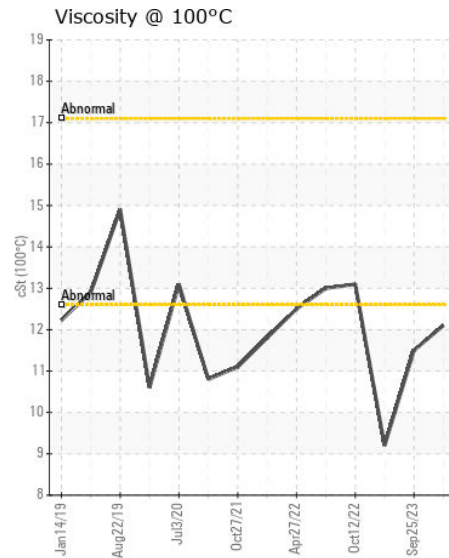
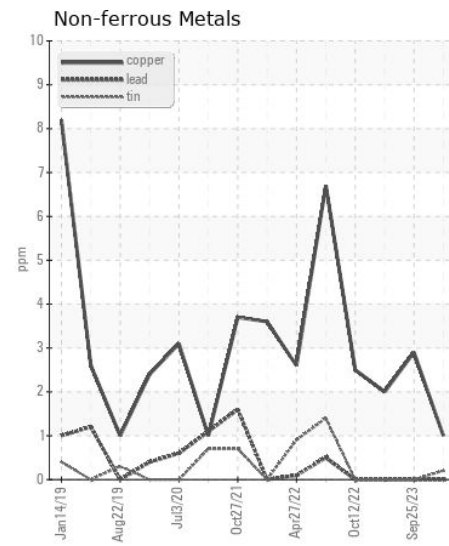
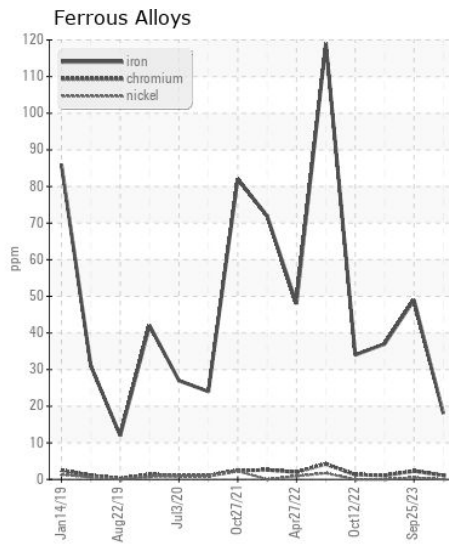
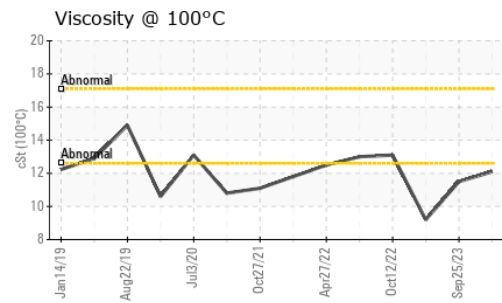
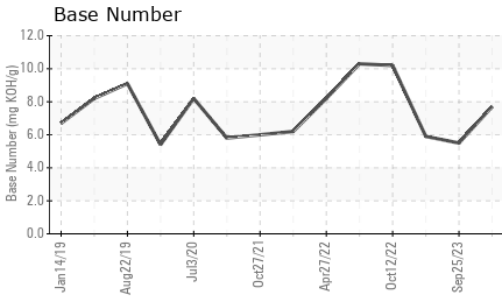
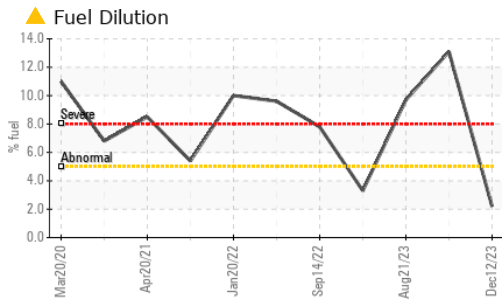
Light fuel dilution occurring. No other contaminants were detected in the oil.

|                  |          |             |       |              |        |       |
|------------------|----------|-------------|-------|--------------|--------|-------|
| Silicon          | ppm      | ASTM D5185m | >25   | <b>10</b>    | 23     | ▲ 60  |
| Potassium        | ppm      | ASTM D5185m | >20   | <b>&lt;1</b> | <1     | 1     |
| Fuel             | %        | ASTM D3524  | >5    | ▲ <b>2.2</b> | ● 13.1 | ● 9.7 |
| Water            |          | WC Method   | >0.2  | <b>NEG</b>   | NEG    | NEG   |
| Glycol           |          | WC Method   |       | <b>NEG</b>   | NEG    | NEG   |
| Soot %           | %        | *ASTM D7844 | >3    | <b>0.3</b>   | 0.5    | 0.5   |
| Nitration        | Abs/cm   | *ASTM D7624 | >20   | <b>11.1</b>  | 14.8   | 13.1  |
| Sulfation        | Abs/.1mm | *ASTM D7415 | >30   | <b>19.7</b>  | 25.1   | 24.3  |
| 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

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 |     | <b>1</b>     | 4      | 13    |
| Boron            | ppm      | ASTM D5185m |     | <b>2</b>     | 1      | 25    |
| Barium           | ppm      | ASTM D5185m |     | <b>0</b>     | 0      | 3     |
| Molybdenum       | ppm      | ASTM D5185m |     | <b>53</b>    | 57     | 65    |
| Manganese        | ppm      | ASTM D5185m |     | <b>&lt;1</b> | <1     | <1    |
| Magnesium        | ppm      | ASTM D5185m |     | <b>881</b>   | 848    | 623   |
| Calcium          | ppm      | ASTM D5185m |     | <b>947</b>   | 999    | 1232  |
| Phosphorus       | ppm      | ASTM D5185m |     | <b>1020</b>  | 938    | 839   |
| Zinc             | ppm      | ASTM D5185m |     | <b>1190</b>  | 1124   | 989   |
| Sulfur           | ppm      | ASTM D5185m |     | <b>2885</b>  | 2723   | 3273  |
| Oxidation        | Abs/.1mm | *ASTM D7414 | >25 | <b>19.9</b>  | 28.0   | 21.7  |
| Base Number (BN) | mg KOH/g | ASTM D2896  |     | <b>7.7</b>   | 5.5    | 5.9   |
| Visc @ 100°C     | cSt      | ASTM D445   |     | <b>12.1</b>  | ▲ 11.5 | ▲ 9.2 |



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : ARI0006707 **Received** : 10 Jan 2024  
**Lab Number** : 06056379 **Diagnosed** : 12 Jan 2024  
**Unique Number** : 10822328 **Diagnostician** : Wes Davis  
**Test Package** : CONST ( Additional Tests: PercentFuel, TBN )

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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