



**T R A A P**  
Texas Refinery Advanced Analysis Program

**OIL ANALYSIS REPORT**

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

Machine Id  
**NEW HOLLAND 8870 8870**

Component  
**Diesel Engine**

Fluid  
**TRC MOLY XL PRO-SPEC IV XP 15W40 (5 GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

| Test           | UOM | Method      | Limit/Abn | Current            | History1    | History2    |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number  |     | Client Info |           | <b>TR06031832</b>  | TR05957162  | TR05887539  |
| Sample Date    |     | Client Info |           | <b>04 Dec 2023</b> | 13 Sep 2023 | 23 Jun 2023 |
| Machine Age    | hrs | Client Info |           | <b>11300</b>       | 11000       | 10675       |
| Oil Age        | hrs | Client Info |           | <b>900</b>         | 600         | 300         |
| Filter Age     | hrs | Client Info |           | <b>900</b>         | 600         | 300         |
| 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>NORMAL</b>      | NORMAL      | NORMAL      |

**WEAR**

All component wear rates are normal.

|              |        |             |      |              |      |      |
|--------------|--------|-------------|------|--------------|------|------|
| Iron         | ppm    | ASTM D5185m | >100 | <b>23</b>    | 19   | 10   |
| Chromium     | ppm    | ASTM D5185m | >20  | <b>5</b>     | 3    | 1    |
| Nickel       | ppm    | ASTM D5185m | >4   | <b>0</b>     | 0    | <1   |
| Titanium     | ppm    | ASTM D5185m |      | <b>0</b>     | 0    | <1   |
| Silver       | ppm    | ASTM D5185m | >3   | <b>0</b>     | 0    | 0    |
| Aluminum     | ppm    | ASTM D5185m | >20  | <b>3</b>     | <1   | 3    |
| Lead         | ppm    | ASTM D5185m | >40  | <b>27</b>    | 9    | 1    |
| Copper       | ppm    | ASTM D5185m | >330 | <b>2</b>     | 2    | 2    |
| Tin          | ppm    | ASTM D5185m | >15  | <b>&lt;1</b> | <1   | <1   |
| Vanadium     | ppm    | ASTM D5185m |      | <b>0</b>     | <1   | <1   |
| White Metal  | scalar | *Visual     | NONE | <b>NONE</b>  | NONE | NONE |
| Yellow Metal | scalar | *Visual     | NONE | <b>NONE</b>  | NONE | NONE |

**CONTAMINATION**

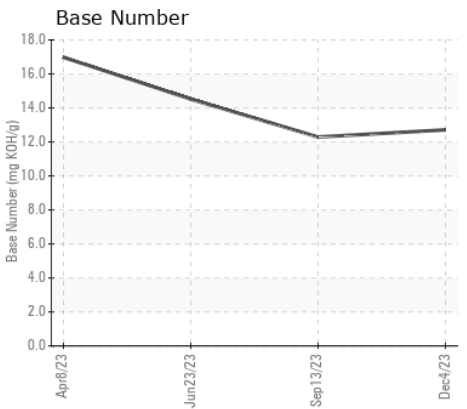
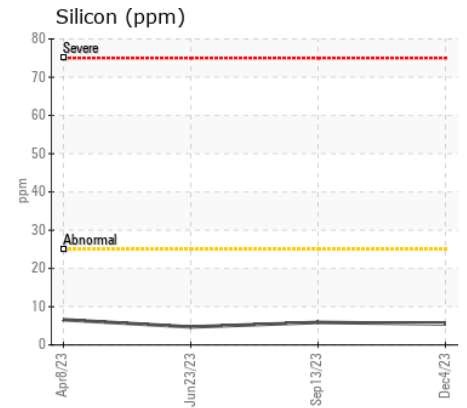
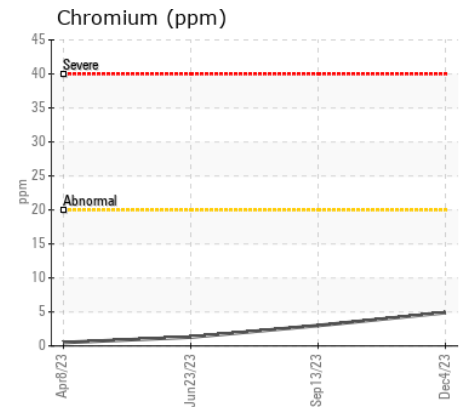
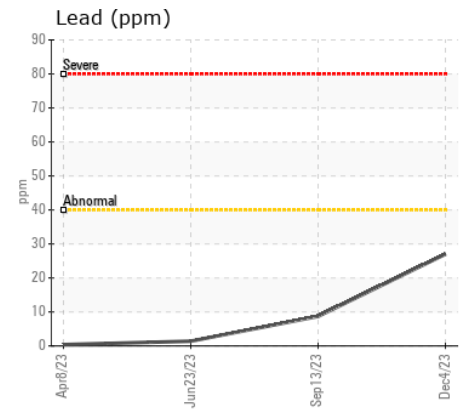
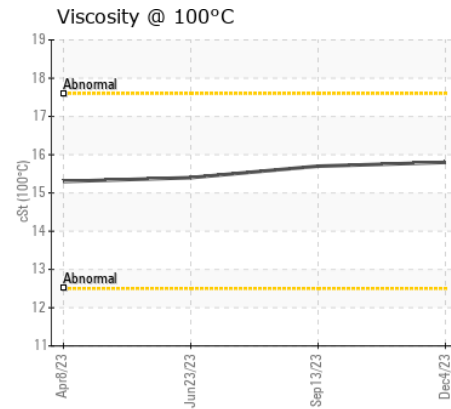
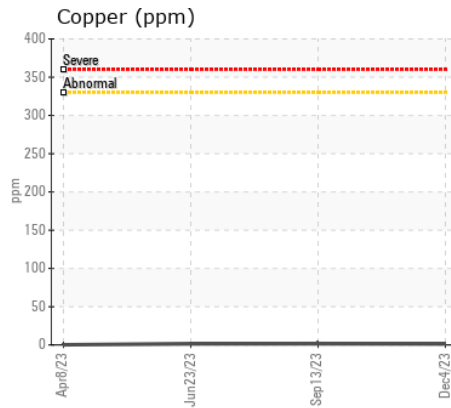
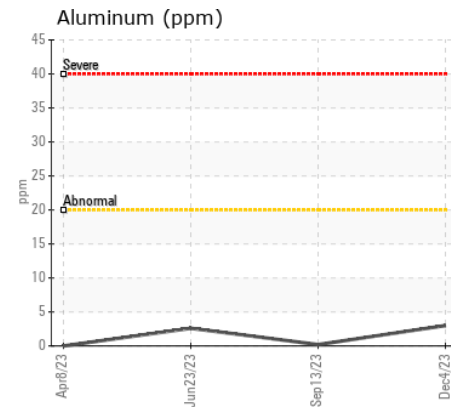
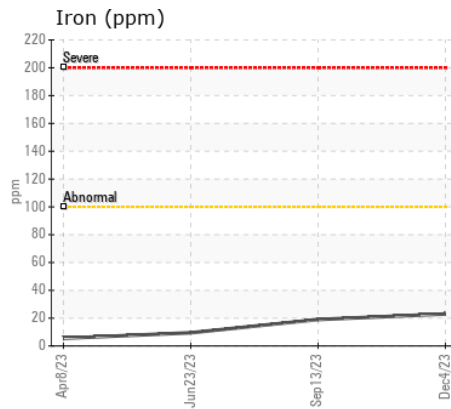
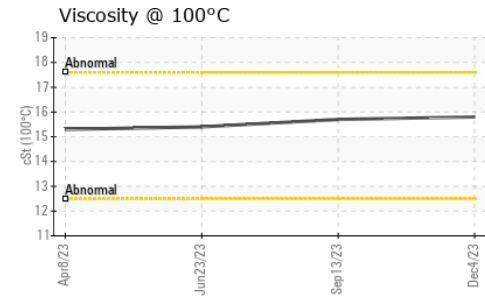
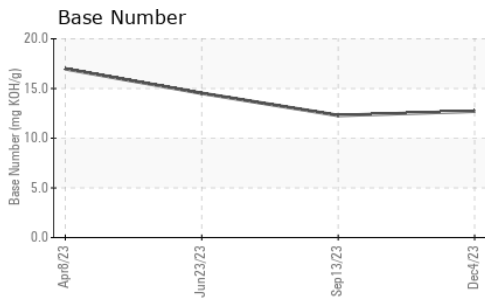
There is no indication of any contamination in the oil.

|                  |          |             |       |                |       |       |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon          | ppm      | ASTM D5185m | >25   | <b>6</b>       | 6     | 5     |
| Potassium        | ppm      | ASTM D5185m | >20   | <b>5</b>       | 5     | 4     |
| Fuel             |          | WC Method   | >5    | <b>&lt;1.0</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>0.2</b>     | 0     | 0.1   |
| Nitration        | Abs/cm   | *ASTM D7624 | >20   | <b>9.8</b>     | 12.4  | 9.9   |
| Sulfation        | Abs/.1mm | *ASTM D7415 | >30   | <b>19.8</b>    | 26.1  | 20.2  |
| 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     | >0.2  | <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>3</b>     | 4     | 3     |
| Boron            | ppm      | ASTM D5185m |     | <b>6</b>     | 2     | 6     |
| Barium           | ppm      | ASTM D5185m |     | <b>0</b>     | 0     | 0     |
| Molybdenum       | ppm      | ASTM D5185m |     | <b>127</b>   | 128   | 117   |
| Manganese        | ppm      | ASTM D5185m |     | <b>&lt;1</b> | <1    | <1    |
| Magnesium        | ppm      | ASTM D5185m |     | <b>24</b>    | 24    | 22    |
| Calcium          | ppm      | ASTM D5185m |     | <b>4520</b>  | 4869  | 4613  |
| Phosphorus       | ppm      | ASTM D5185m |     | <b>986</b>   | 986   | 945   |
| Zinc             | ppm      | ASTM D5185m |     | <b>1168</b>  | 1192  | 1139  |
| Sulfur           | ppm      | ASTM D5185m |     | <b>4509</b>  | 5257  | 5491  |
| Oxidation        | Abs/.1mm | *ASTM D7414 | >25 | <b>12.3</b>  | 17.4  | 13.5  |
| Base Number (BN) | mg KOH/g | ASTM D2896  |     | <b>12.71</b> | 12.29 | 14.52 |
| Visc @ 100°C     | cSt      | ASTM D445   |     | <b>15.8</b>  | 15.7  | 15.4  |



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : TR06031832  
**Lab Number** : 06031832  
**Unique Number** : 10781623  
**Test Package** : MOB 2  
**Received** : 11 Dec 2023  
**Tested** : 15 Dec 2023  
**Diagnosed** : 15 Dec 2023 - Wes Davis

**SPRAGUE RANCH**  
 6907 ROUTE 14  
 BROOKFIELD, VT  
 US 05036  
 Contact: SCOTT BURRELL

To discuss this sample report, contact Customer Service at 1-800-827-0711.

\* - 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: