



# OIL ANALYSIS REPORT

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

Area  
**Store 9 - Marietta**  
Machine Id  
**JOHN DEERE 333G E131 (S/N JF333009)**  
Component  
**Diesel Engine**  
Fluid  
**CHEVRON DELO 400 MULTIGRADE 15W40 (--- GAL)**

## RECOMMENDATION

Oil and filter change at the time of sampling has been noted. 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>LEC0049259</b>  | LEC0014439  | ---      |
| Sample Date    |     | Client Info |           | <b>24 Jun 2024</b> | 23 Sep 2020 | ---      |
| Machine Age    | hrs | Client Info |           | <b>1751</b>        | 575         | ---      |
| Oil Age        | hrs | Client Info |           | <b>500</b>         | 574         | ---      |
| Filter Age     | hrs | Client Info |           | <b>500</b>         | 574         | ---      |
| Oil Changed    |     | Client Info |           | <b>Changed</b>     | Changed     | ---      |
| Filter Changed |     | Client Info |           | <b>Changed</b>     | Changed     | ---      |
| Sample Status  |     |             |           | <b>ABNORMAL</b>    | ABNORMAL    | ---      |

## WEAR

The copper level has decreased, but is still abnormal. Cylinder, crank, or cam shaft wear is indicated.

|              |        |             |      |              |              |     |
|--------------|--------|-------------|------|--------------|--------------|-----|
| Iron         | ppm    | ASTM D5185m | >51  | <b>▲ 59</b>  | 74           | --- |
| Chromium     | ppm    | ASTM D5185m | >11  | <b>&lt;1</b> | 2            | --- |
| Nickel       | ppm    | ASTM D5185m | >5   | <b>&lt;1</b> | <1           | --- |
| Titanium     | ppm    | ASTM D5185m |      | <b>&lt;1</b> | <1           | --- |
| Silver       | ppm    | ASTM D5185m | >3   | <b>&lt;1</b> | <1           | --- |
| Aluminum     | ppm    | ASTM D5185m | >31  | <b>4</b>     | 10           | --- |
| Lead         | ppm    | ASTM D5185m | >26  | <b>0</b>     | 0            | --- |
| Copper       | ppm    | ASTM D5185m | >26  | <b>▲ 27</b>  | <b>▲ 218</b> | --- |
| Tin          | ppm    | ASTM D5185m | >4   | <b>&lt;1</b> | 0            | --- |
| Vanadium     | ppm    | ASTM D5185m |      | <b>0</b>     | 0            | --- |
| White Metal  | scalar | *Visual     | NONE | <b>NONE</b>  | NONE         | --- |
| Yellow Metal | scalar | *Visual     | NONE | <b>NONE</b>  | NONE         | --- |

## CONTAMINATION

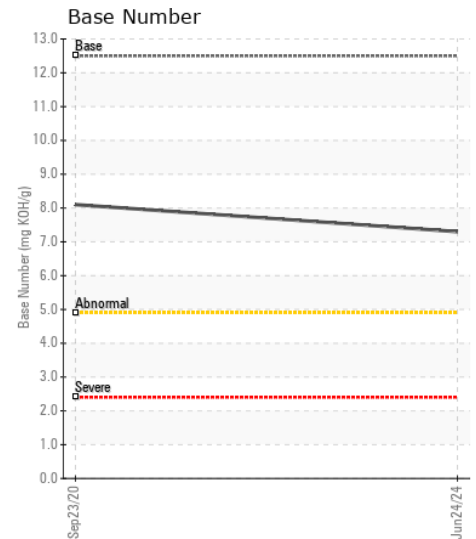
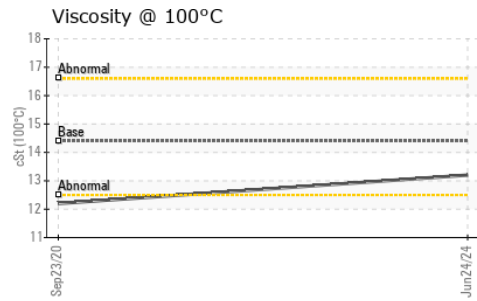
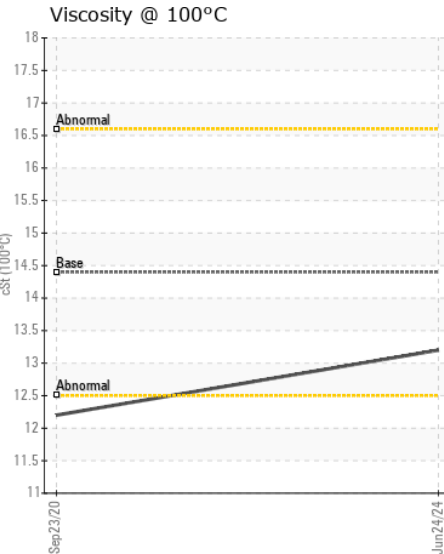
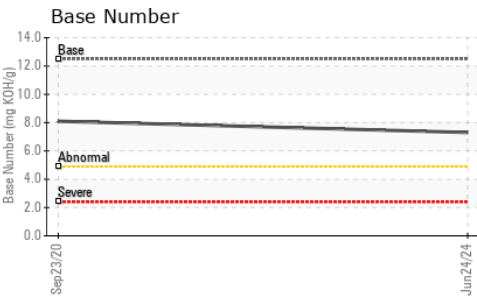
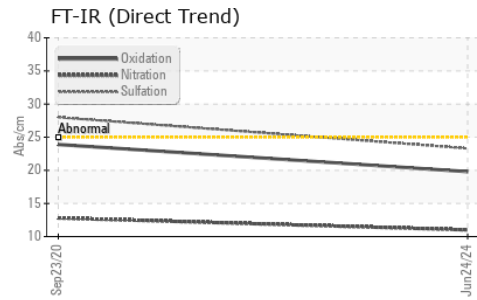
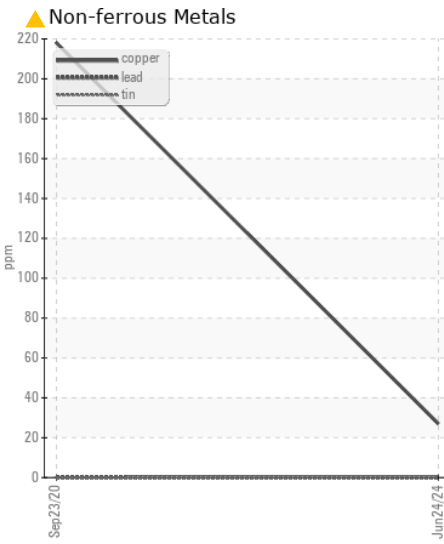
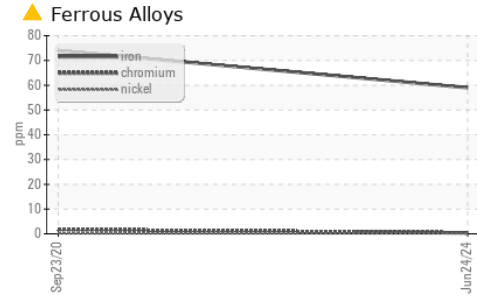
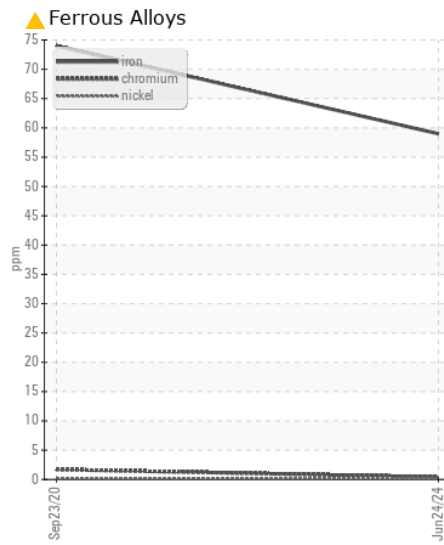
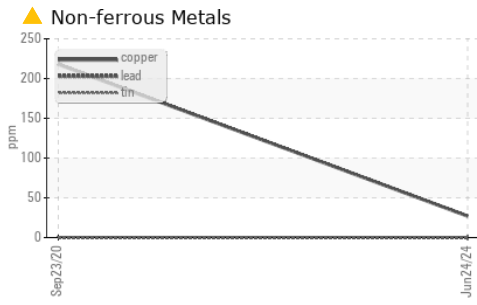
There is no indication of any contamination in the oil.

|                  |          |             |       |                |       |     |
|------------------|----------|-------------|-------|----------------|-------|-----|
| Silicon          | ppm      | ASTM D5185m | >120  | <b>13</b>      | 54    | --- |
| Potassium        | ppm      | ASTM D5185m | >20   | <b>1</b>       | 0     | --- |
| Fuel             |          | WC Method   | >2.1  | <b>&lt;1.0</b> | 0.4   | --- |
| Water            |          | WC Method   | >0.21 | <b>NEG</b>     | NEG   | --- |
| Glycol           |          | WC Method   |       | <b>NEG</b>     | NEG   | --- |
| Soot %           | %        | *ASTM D7844 | >3    | <b>0.5</b>     | 0.4   | --- |
| Nitration        | Abs/cm   | *ASTM D7624 | >20   | <b>11.0</b>    | 12.8  | --- |
| Sulfation        | Abs/.1mm | *ASTM D7415 | >30   | <b>23.3</b>    | 28    | --- |
| Silt             | scalar   | *Visual     | NONE  | <b>NONE</b>    | NONE  | --- |
| Debris           | scalar   | *Visual     | NONE  | <b>NONE</b>    | NONE  | --- |
| Sand/Dirt        | scalar   | *Visual     | NONE  | <b>NONE</b>    | NONE  | --- |
| Appearance       | scalar   | *Visual     | NORML | <b>NORML</b>   | NORML | --- |
| Odor             | scalar   | *Visual     | NORML | <b>NORML</b>   | NORML | --- |
| Emulsified Water | scalar   | *Visual     | >0.21 | <b>NEG</b>     | NEG   | --- |

## FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

|                  |          |             |      |             |      |     |
|------------------|----------|-------------|------|-------------|------|-----|
| Sodium           | ppm      | ASTM D5185m | >31  | <b>2</b>    | 14   | --- |
| Boron            | ppm      | ASTM D5185m | 151  | <b>21</b>   | 81   | --- |
| Barium           | ppm      | ASTM D5185m | 0.4  | <b>0</b>    | 2    | --- |
| Molybdenum       | ppm      | ASTM D5185m | 250  | <b>81</b>   | 236  | --- |
| Manganese        | ppm      | ASTM D5185m |      | <b>1</b>    | 2    | --- |
| Magnesium        | ppm      | ASTM D5185m | 0    | <b>473</b>  | 702  | --- |
| Calcium          | ppm      | ASTM D5185m | 2046 | <b>1909</b> | 1813 | --- |
| Phosphorus       | ppm      | ASTM D5185m | 1043 | <b>1069</b> | 947  | --- |
| Zinc             | ppm      | ASTM D5185m | 943  | <b>1351</b> | 1158 | --- |
| Sulfur           | ppm      | ASTM D5185m | 5012 | <b>3396</b> | 2398 | --- |
| Oxidation        | Abs/.1mm | *ASTM D7414 | >25  | <b>19.8</b> | 23.9 | --- |
| Base Number (BN) | mg KOH/g | ASTM D2896  | 12.5 | <b>7.3</b>  | 8.1  | --- |
| Visc @ 100°C     | cSt      | ASTM D445   | 14.4 | <b>13.2</b> | 12.2 | --- |



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : LEC0049259 **Received** : 03 Jul 2024  
**Lab Number** : 06227145 **Tested** : 05 Jul 2024  
**Unique Number** : 11110638 **Diagnosed** : 05 Jul 2024 - Don Baldrige  
**Test Package** : CONST ( Additional Tests: TBN, KV40 )

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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