



# OIL ANALYSIS REPORT

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



Area  
**Store 9 - Marietta**  
Machine Id  
**JOHN DEERE 250G 1FF250GXJNF611968**  
Component  
**Diesel Engine**  
Fluid  
**JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (5 GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor. Tests do not reveal cause for reported problem. ( Customer Sample Comment: RENTAL RETURN SAMPLE. HAD CODES FOR LOW OIL PRESSURE. RO# 145819 )

| Test           | UOM | Method      | Limit/Abn | Current            | History1    | History2    |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number  |     | Client Info |           | <b>LEC0046141</b>  | LEC0043789  | LEC0032829  |
| Sample Date    |     | Client Info |           | <b>04 Dec 2023</b> | 16 Sep 2023 | 03 May 2023 |
| Machine Age    | hrs | Client Info |           | <b>1554</b>        | 1186        | 648         |
| Oil Age        | hrs | Client Info |           | <b>368</b>         | 538         | 648         |
| Filter Age     | hrs | Client Info |           | <b>368</b>         | 538         | 648         |
| Oil Changed    |     | Client Info |           | <b>Not Chngd</b>   | Changed     | Changed     |
| Filter Changed |     | Client Info |           | <b>Not Chngd</b>   | Changed     | Changed     |
| Sample Status  |     |             |           | <b>NORMAL</b>      | NORMAL      | ABNORMAL    |

## WEAR

Metal levels are typical for a new component breaking in.

|              |        |             |      |              |      |       |
|--------------|--------|-------------|------|--------------|------|-------|
| Iron         | ppm    | ASTM D5185m | >51  | <b>17</b>    | 37   | 63    |
| Chromium     | ppm    | ASTM D5185m | >11  | <b>&lt;1</b> | 1    | 2     |
| Nickel       | ppm    | ASTM D5185m | >5   | <b>9</b>     | 17   | 10    |
| Titanium     | ppm    | ASTM D5185m |      | <b>&lt;1</b> | <1   | <1    |
| Silver       | ppm    | ASTM D5185m | >3   | <b>0</b>     | 0    | 0     |
| Aluminum     | ppm    | ASTM D5185m | >31  | <b>3</b>     | 2    | 5     |
| Lead         | ppm    | ASTM D5185m | >26  | <b>&lt;1</b> | <1   | 0     |
| Copper       | ppm    | ASTM D5185m | >26  | <b>11</b>    | 50   | ▲ 390 |
| Tin          | ppm    | ASTM D5185m | >4   | <b>&lt;1</b> | <1   | 2     |
| Vanadium     | ppm    | ASTM D5185m |      | <b>&lt;1</b> | <1   | <1    |
| White Metal  | scalar | *Visual     | NONE | <b>NONE</b>  | NONE | NONE  |
| Yellow Metal | scalar | *Visual     | NONE | <b>NONE</b>  | NONE | NONE  |

## CONTAMINATION

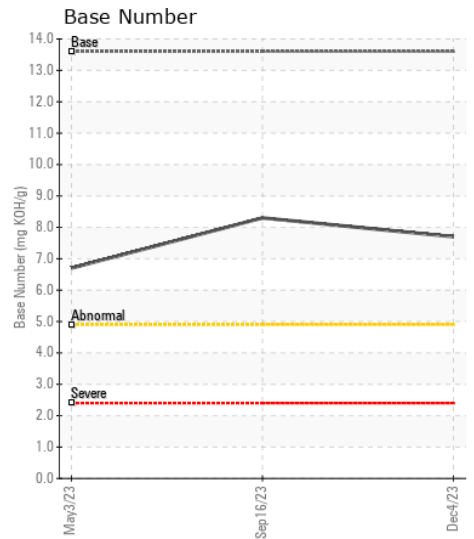
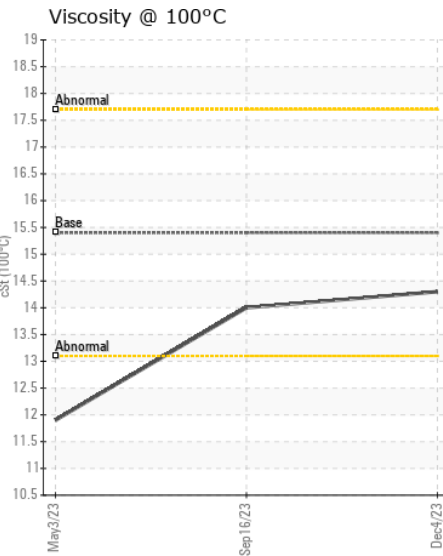
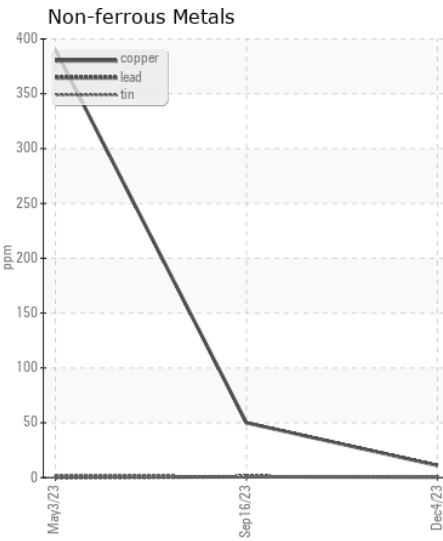
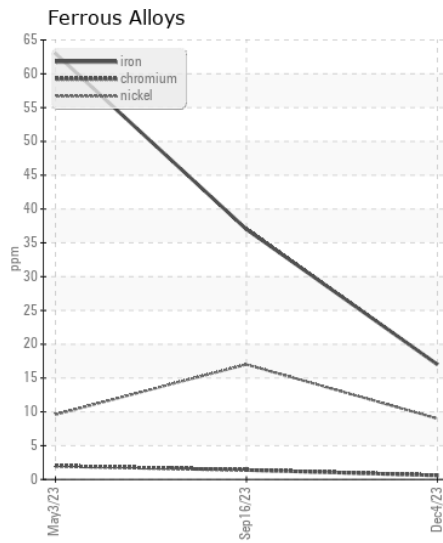
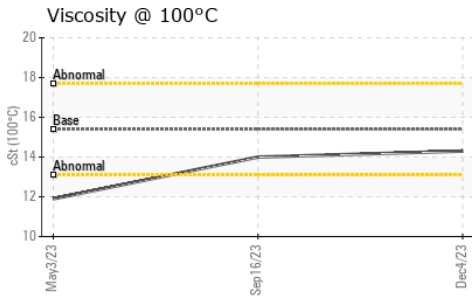
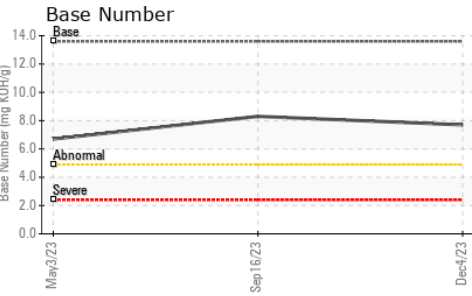
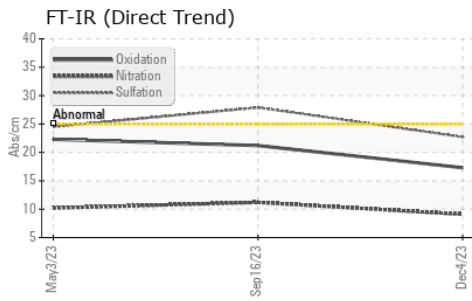
There is no indication of any contamination in the oil.

|                  |          |             |       |                |       |       |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon          | ppm      | ASTM D5185m | >120  | <b>8</b>       | 8     | 13    |
| Potassium        | ppm      | ASTM D5185m | >20   | <b>2</b>       | 5     | 4     |
| Fuel             |          | WC Method   | >2.1  | <b>&lt;1.0</b> | <1.0  | 0.3   |
| Water            |          | WC Method   | >0.21 | <b>NEG</b>     | NEG   | NEG   |
| Glycol           |          | WC Method   |       | <b>NEG</b>     | NEG   | NEG   |
| Soot %           | %        | *ASTM D7844 | >3    | <b>0.4</b>     | 0.2   | 0.8   |
| Nitration        | Abs/cm   | *ASTM D7624 | >20   | <b>9.1</b>     | 11.2  | 10.2  |
| Sulfation        | Abs/.1mm | *ASTM D7415 | >30   | <b>22.7</b>    | 27.9  | 24.5  |
| 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    | 8      |
| Boron            | ppm      | ASTM D5185m |      | <b>199</b>   | 95   | 141    |
| Barium           | ppm      | ASTM D5185m |      | <b>0</b>     | 0    | 0      |
| Molybdenum       | ppm      | ASTM D5185m |      | <b>242</b>   | 207  | 214    |
| Manganese        | ppm      | ASTM D5185m |      | <b>&lt;1</b> | 2    | 5      |
| Magnesium        | ppm      | ASTM D5185m |      | <b>848</b>   | 704  | 728    |
| Calcium          | ppm      | ASTM D5185m |      | <b>1727</b>  | 1868 | 1800   |
| Phosphorus       | ppm      | ASTM D5185m |      | <b>1002</b>  | 912  | 931    |
| Zinc             | ppm      | ASTM D5185m |      | <b>1213</b>  | 1188 | 1185   |
| Sulfur           | ppm      | ASTM D5185m |      | <b>3203</b>  | 3262 | 3156   |
| Oxidation        | Abs/.1mm | *ASTM D7414 | >25  | <b>17.3</b>  | 21.2 | 22.3   |
| Base Number (BN) | mg KOH/g | ASTM D2896  | 13.6 | <b>7.7</b>   | 8.3  | 6.7    |
| Visc @ 100°C     | cSt      | ASTM D445   | 15.4 | <b>14.3</b>  | 14.0 | ● 11.9 |



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : LEC0046141 **Received** : 07 Dec 2023  
**Lab Number** : 06027602 **Tested** : 08 Dec 2023  
**Unique Number** : 10777393 **Diagnosed** : 08 Dec 2023 - Don Baldrige  
**Test Package** : CONST ( Additional Tests: TBN )

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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)