



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

Area  
**[05W48197]**  
 Machine Id  
**JOHN DEERE 250G B-140 (S/N 1FF250GXLLF611665)**  
 Component  
**Diesel Engine**  
 Fluid  
**JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (5 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>JR0226850</b>   | JR0195692   | JR0122831   |
| Sample Date    |     | Client Info |           | <b>15 Jul 2024</b> | 08 Jan 2024 | 29 Mar 2022 |
| Machine Age    | hrs | Client Info |           | <b>9827</b>        | 8015        | 2330        |
| Oil Age        | hrs | Client Info |           | <b>500</b>         | 800         | 0           |
| Filter Age     | hrs | Client Info |           | <b>500</b>         | 800         | 0           |
| Oil Changed    |     | Client Info |           | <b>Changed</b>     | Changed     | Changed     |
| Filter Changed |     | Client Info |           | <b>Changed</b>     | Changed     | Changed     |
| Sample Status  |     |             |           | <b>ABNORMAL</b>    | NORMAL      | NORMAL      |

### WEAR

Cylinder, crank, or cam shaft wear is indicated.

|              |        |             |      |             |      |      |
|--------------|--------|-------------|------|-------------|------|------|
| Iron         | ppm    | ASTM D5185m | >51  | <b>▲ 53</b> | 38   | 9    |
| Chromium     | ppm    | ASTM D5185m | >11  | <b>1</b>    | 1    | <1   |
| Nickel       | ppm    | ASTM D5185m | >5   | <b>6</b>    | 8    | <1   |
| Titanium     | ppm    | ASTM D5185m |      | <b>0</b>    | 0    | 0    |
| Silver       | ppm    | ASTM D5185m | >3   | <b>0</b>    | 0    | 0    |
| Aluminum     | ppm    | ASTM D5185m | >31  | <b>4</b>    | 8    | 3    |
| Lead         | ppm    | ASTM D5185m | >26  | <b>0</b>    | 0    | <1   |
| Copper       | ppm    | ASTM D5185m | >26  | <b>4</b>    | 3    | 1    |
| Tin          | ppm    | ASTM D5185m | >4   | <b>0</b>    | 0    | 0    |
| Vanadium     | ppm    | ASTM D5185m |      | <b>0</b>    | 0    | 0    |
| 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.

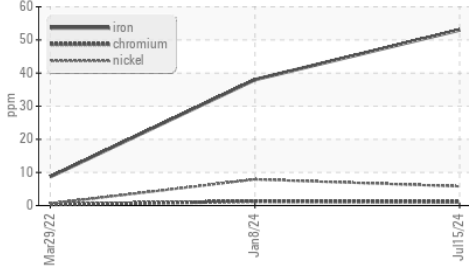
|                  |          |             |       |                |       |       |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon          | ppm      | ASTM D5185m | >22   | <b>11</b>      | 18    | 7     |
| Potassium        | ppm      | ASTM D5185m | >20   | <b>2</b>       | 3     | 0     |
| Fuel             |          | WC Method   | >2.1  | <b>&lt;1.0</b> | <1.0  | <1.0  |
| Water            |          | WC Method   | >0.21 | <b>NEG</b>     | NEG   | NEG   |
| Glycol           |          | WC Method   |       | <b>NEG</b>     | NEG   | NEG   |
| Soot %           | %        | *ASTM D7844 | >3    | <b>0.7</b>     | 0.7   | 0.8   |
| Nitration        | Abs/cm   | *ASTM D7624 | >20   | <b>9.0</b>     | 10.0  | 10.1  |
| Sulfation        | Abs/.1mm | *ASTM D7415 | >30   | <b>23.3</b>    | 25.3  | 20.6  |
| 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

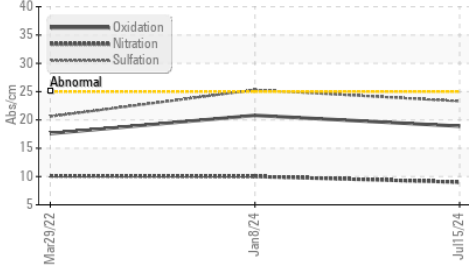
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

|                  |          |             |      |              |      |      |
|------------------|----------|-------------|------|--------------|------|------|
| Sodium           | ppm      | ASTM D5185m | >31  | <b>5</b>     | 6    | 2    |
| Boron            | ppm      | ASTM D5185m |      | <b>61</b>    | 108  | 219  |
| Barium           | ppm      | ASTM D5185m |      | <b>&lt;1</b> | 0    | 0    |
| Molybdenum       | ppm      | ASTM D5185m |      | <b>266</b>   | 320  | 243  |
| Manganese        | ppm      | ASTM D5185m |      | <b>1</b>     | 0    | <1   |
| Magnesium        | ppm      | ASTM D5185m |      | <b>940</b>   | 1062 | 816  |
| Calcium          | ppm      | ASTM D5185m |      | <b>1626</b>  | 1958 | 1533 |
| Phosphorus       | ppm      | ASTM D5185m |      | <b>924</b>   | 1114 | 873  |
| Zinc             | ppm      | ASTM D5185m |      | <b>1149</b>  | 1440 | 986  |
| Sulfur           | ppm      | ASTM D5185m |      | <b>3276</b>  | 3786 | 2523 |
| Oxidation        | Abs/.1mm | *ASTM D7414 | >25  | <b>18.9</b>  | 20.8 | 17.6 |
| Base Number (BN) | mg KOH/g | ASTM D2896  | 13.6 | <b>7.4</b>   | 7.4  | 8.0  |
| Visc @ 100°C     | cSt      | ASTM D445   | 15.4 | <b>14.2</b>  | 14.5 | 14.2 |

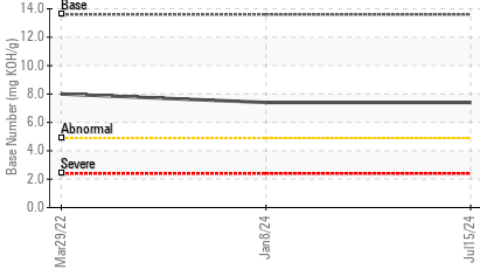
▲ Ferrous Alloys



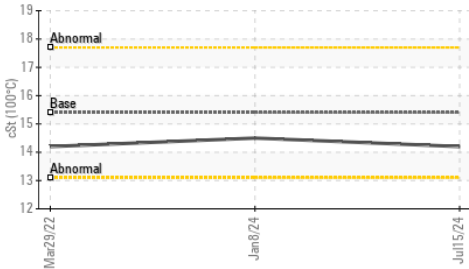
FT-IR (Direct Trend)



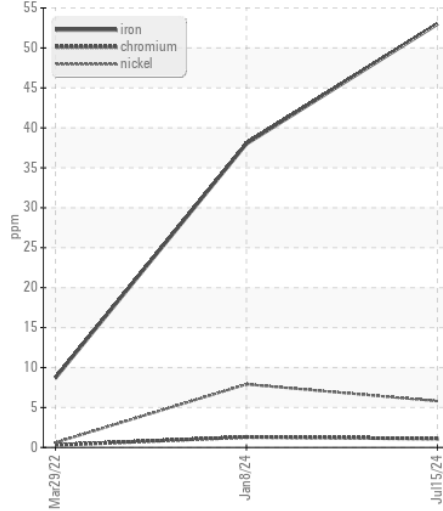
Base Number



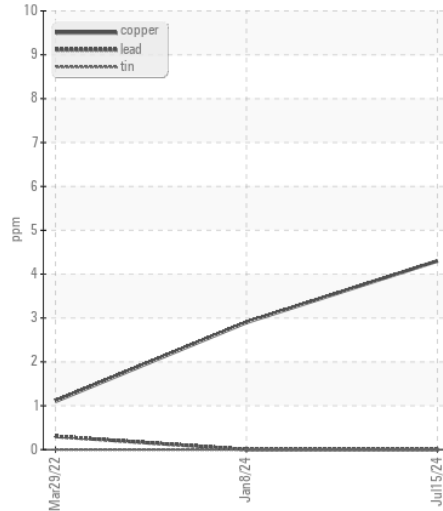
Viscosity @ 100°C



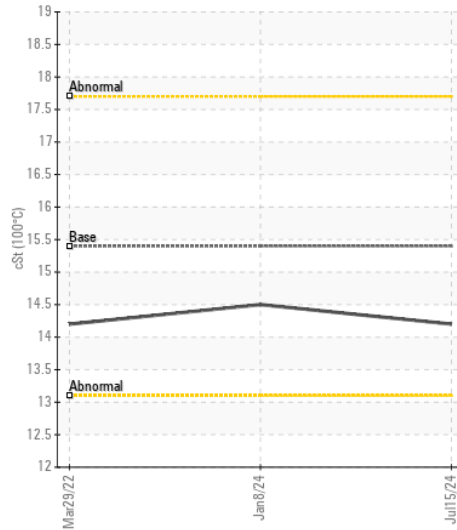
▲ Ferrous Alloys



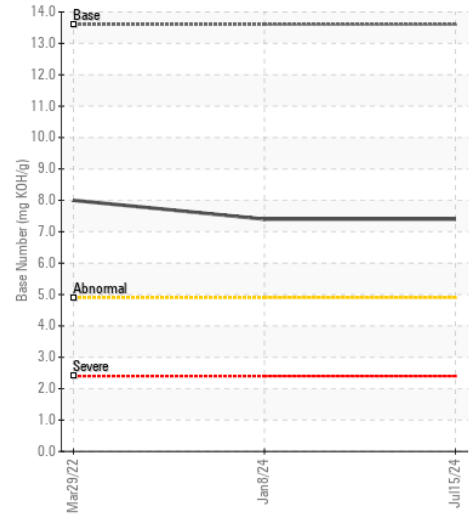
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : JR0226850 **Received** : 16 Jul 2024  
**Lab Number** : 06237554 **Tested** : 17 Jul 2024  
**Unique Number** : 11126388 **Diagnosed** : 18 Jul 2024 - Sean Felton  
**Test Package** : CONST ( Additional Tests: TBN )

**C & D RECOVERY**  
 24024 FREDERICK RD  
 CLARKSBURG, MD  
 US 20871  
 Contact: HERBIE TRENT

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)

T:  
F: