



## Store 9 - Marietta **JOHN DEERE 210G 1FF210GXANF530002**

**Diesel Engine** 

## JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (6 GAL)

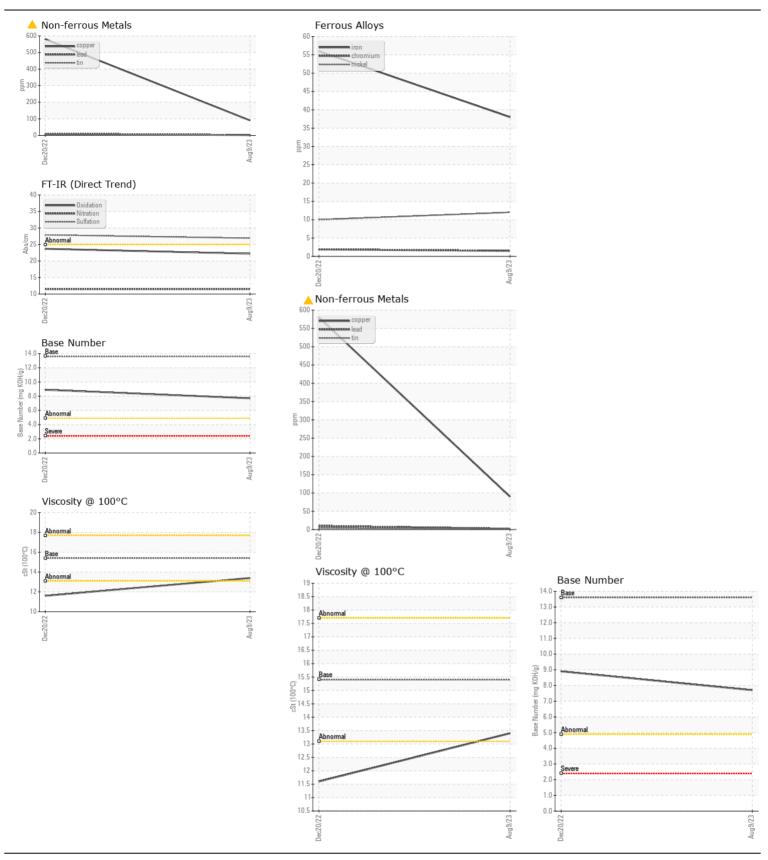
|   |                  |             |              |           | ~~~~~       |             |          |
|---|------------------|-------------|--------------|-----------|-------------|-------------|----------|
| RECOMMENDATION  | Test             | UOM         | Method       | Limit/Abn | Current     | History1    | History2 |
| 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. | Sample Number    |             | Client Info  |           | LEC0043697  | LEC0037992  |          |
|   | Sample Date      |             | Client Info  |           | 09 Aug 2023 | 20 Dec 2022 |          |
|   | Machine Age      | hrs         | Client Info  |           | 1186        | 612         |          |
|   | Oil Age          | hrs         | Client Info  |           | 574         | 612         |          |
|   | Filter Age       | hrs         | Client Info  |           | 574         | 612         |          |
|   | Oil Changed      |             | Client Info  |           | Changed     | Changed     |          |
|   | Filter Changed   |             | Client Info  |           | Changed     | Changed     |          |
|   | Sample Status    |             |              |           | ABNORMAL    | ABNORMAL    |          |
|   |                  |             |              |           |             |             |          |
| WEAR<br>The copper level has decreased, but is still abnormal. All other<br>component wear rates are normal.  | Iron             | ppm         | ASTM D5185m  | >51       | 38          | 56          |          |
|   | Chromium         | ppm         | ASTM D5185m  | >11       | 2           | 2           |          |
|   | Nickel           | ppm         | ASTM D5185m  | >5        | 12          | 10          |          |
|   | Titanium         | ppm         | ASTM D5185m  |           | <1          | <1          |          |
|   | Silver           | ppm         | ASTM D5185m  | >3        | 0           | 0           |          |
|   | Aluminum         | ppm         | ASTM D5185m  | >31       | 6           | 4           |          |
|   | Lead             | ppm         | ASTM D5185m  |           | 2           | 10          |          |
|   | Copper           | ppm         | ASTM D5185m  |           | <b>4</b> 90 | ▲ 580       |          |
|   | Tin              | ppm         | ASTM D5185m  |           | 1           | 4           |          |
|   | Vanadium         | ppm         | ASTM D5185m  |           | 0           | <1          |          |
|   | White Metal      | scalar      | *Visual      | NONE      | NONE        | NONE        |          |
|   | Yellow Metal     | scalar      | *Visual      | NONE      | NONE        | NONE        |          |
|   |                  |             | Viouui       | NONE      |             |             |          |
| CONTAMINATION<br>There is no indication of any contamination in the oil.  | Silicon          | ppm         | ASTM D5185m  | >!20      | 8           | 11          |          |
|   | Potassium        | ppm         | ASTM D5185m  | >20       | 3           | 2           |          |
|   | Fuel             |             | WC Method    | >2.1      | <1.0        | 0.4         |          |
|   | Water            |             | WC Method    | >0.21     | NEG         | NEG         |          |
|   | Glycol           |             | WC Method    |           | NEG         | NEG         |          |
|   | Soot %           | %           | *ASTM D7844  | >3        | 1           | 1           |          |
|   | Nitration        | Abs/cm      | *ASTM D7624  | >20       | 11.5        | 11.5        |          |
|   | Sulfation        | Abs/.1mm    | *ASTM D7415  |           | 26.9        | 27.9        |          |
|   | Silt             | scalar      | *Visual      | NONE      | NONE        | NONE        |          |
|   | Debris           | scalar      | *Visual      | NONE      | NONE        | NONE        |          |
|   | Sand/Dirt        | scalar      | *Visual      | NONE      | NONE        | NONE        |          |
|   | Appearance       | scalar      | *Visual      | NORML     | NORML       | NORML       |          |
|   | Odor             | scalar      | *Visual      | NORML     | NORML       | NORML       |          |
|   | Emulsified Water | scalar      | *Visual      | >0.21     | NEG         | NEG         |          |
|   |                  |             |              |           |             |             |          |
| FLUID CONDITION   | Sodium           | ppm         | ASTM D5185m  | >31       | 3           | 7           |          |
|   | Boron            | ppm         | ASTM D5185m  |           | 63          | 113         |          |
| The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.                         | Barium           | ppm         | ASTM D5185m  |           | <1          | 0           |          |
|   | Molybdenum       | ppm         | ASTM D5185m  |           | 250         | 224         |          |
|   | Manganese        | ppm         | ASTM D5185m  |           | 2           | 4           |          |
|   | Magnesium        | ppm         | ASTM D5185m  |           | 755         | 658         |          |
|   | Calcium          | ppm         | ASTM D5185m  |           | 1706        | 1768        |          |
|   | Phosphorus       | ppm         | ASTM D5185m  |           | 910         | 1179        |          |
|   | Zinc             | ppm         | ASTM D5185m  |           | 1181        | 1200        |          |
|   | Sulfur           | ppm         | ASTM D5185m  |           | 3056        | 3219        |          |
|   | Oxidation        | Abs/.1mm    | *ASTM D7414  |           | 22.2        | 23.7        |          |
|   | Base Number (BN) |             | ASTM D2896   |           | 7.7         | 8.9         |          |
|   |                  | ing itoning | .10111102000 | 10.0      |             | 0.0         |          |

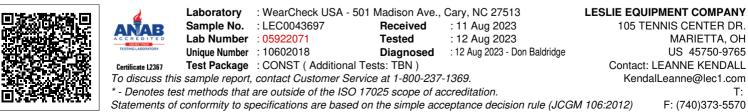
Visc @ 100°C cSt

ASTM D445 15.4

11.6

13.4





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