

## Store 6 - Ashland [151103] JOHN DEERE 135P 1FF135PACPF000832

## Diesel Engine

## JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (5 GAL)

| RECOMMENDATION |
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We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

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All component wear rates are normal.

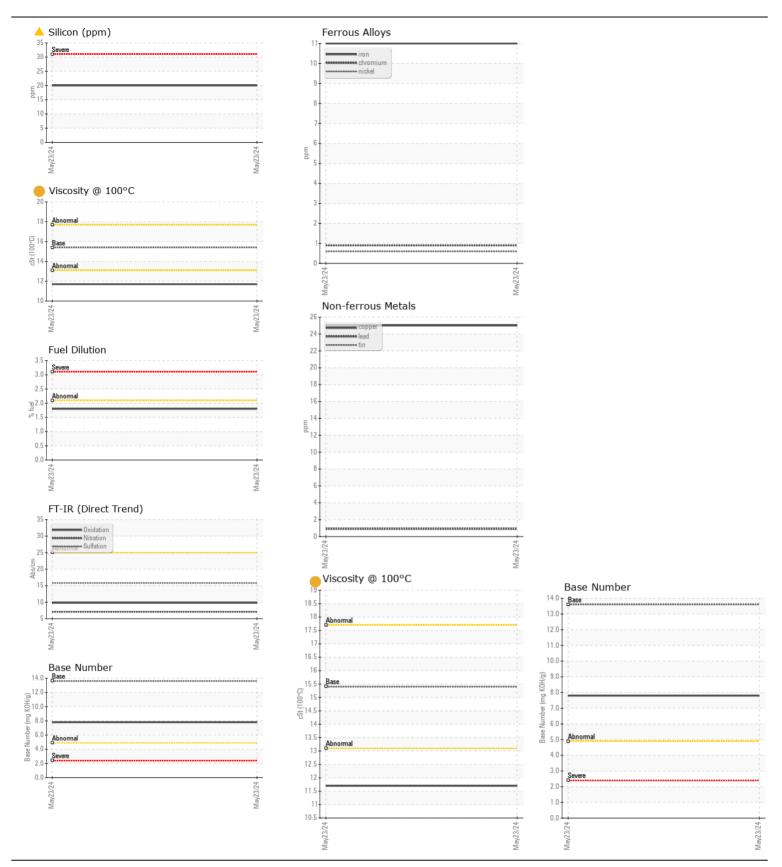
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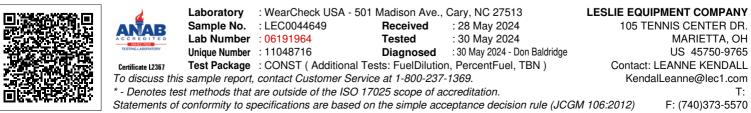
**FLUID CONDITION** 

Fuel content negligible. Elemental level of silicon (Si) above normal indicating ingress of dirt/seal material.

|         | Test                  | UOM             | Method                     | Limit/Abn | Current      | History1 | History2 |
|---------|-----------------------|-----------------|----------------------------|-----------|--------------|----------|----------|
|         | Sample Number         |                 | Client Info                |           | LEC0044649   |          |          |
| e<br>al | Sample Date           |                 | Client Info                |           | 23 May 2024  |          |          |
|         | Machine Age           | hrs             | Client Info                |           | 0            |          |          |
|         | Oil Age               | hrs             | Client Info                |           | 530          |          |          |
|         | Filter Age            | hrs             | Client Info                |           | 530          |          |          |
|         | Oil Changed           |                 | Client Info                |           | Changed      |          |          |
|         | Filter Changed        |                 | Client Info                |           | Changed      |          |          |
|         | Sample Status         |                 |                            |           | ABNORMAL     |          |          |
|         |                       |                 |                            |           |              |          |          |
|         | Iron                  | ppm             | ASTM D5185m                | >51       | 11           |          |          |
|         | Chromium              | ppm             | ASTM D5185m                | >11       | <1           |          |          |
|         | Nickel                | ppm             | ASTM D5185m                | >5        | <1           |          |          |
|         | Titanium              | ppm             | ASTM D5185m                | 0         | <1           |          |          |
|         | Silver                | ppm             | ASTM D5185m                | >3        | 1            |          |          |
|         | Aluminum              | ppm             | ASTM D5185m                | >31       | 5            |          |          |
|         | Lead                  | ppm             | ASTM D5185m                | >26       | <1           |          |          |
|         | Copper                | ppm             | ASTM D5185m                | >26       | 25           |          |          |
|         | Tin                   | ppm             | ASTM D5185m                | >4        | 1            |          |          |
|         | Vanadium              | ppm             | ASTM D5185m                | NONE      | <1           |          |          |
|         | White Metal           | scalar          | *Visual                    | NONE      | NONE         |          |          |
|         | Yellow Metal          | scalar          | *Visual                    | NONE      | NONE         |          |          |
|         | Silicon               | ppm             | ASTM D5185m                | >!20      | <b>2</b> 0   |          |          |
|         | Potassium             | ppm             | ASTM D5185m                | >20       | 7            |          |          |
|         | Fuel                  | %               | ASTM D3524                 | >2.1      | 1.8          |          |          |
|         | Water                 |                 | WC Method                  | >0.21     | NEG          |          |          |
|         | Glycol                |                 | WC Method                  |           | NEG          |          |          |
|         | Soot %                | %               | *ASTM D7844                | >3        | 0.1          |          |          |
|         | Nitration             | Abs/cm          | *ASTM D7624                | >20       | 7.1          |          |          |
|         | Sulfation             | Abs/.1mm        | *ASTM D7415                | >30       | 15.8         |          |          |
|         | Silt                  | scalar          | *Visual                    | NONE      | NONE         |          |          |
|         | Debris                | scalar          | *Visual                    | NONE      | NONE         |          |          |
|         | Sand/Dirt             | scalar          | *Visual                    | NONE      | NONE         |          |          |
|         | Appearance            | scalar          | *Visual                    | NORML     | NORML        |          |          |
|         | Odor                  | scalar          | *Visual                    | NORML     | NORML        |          |          |
|         | Emulsified Water      | scalar          | *Visual                    | >0.21     | NEG          |          |          |
|         |                       |                 |                            |           |              |          |          |
|         | Sodium                | ppm             | ASTM D5185m                | >31       | 2            |          |          |
|         | Boron                 | ppm             | ASTM D5185m                |           | 197          |          |          |
|         | Barium                | ppm             | ASTM D5185m                |           | 3            |          |          |
|         | Molybdenum            | ppm             | ASTM D5185m                |           | 2            |          |          |
|         | Manganese             | ppm             | ASTM D5185m                |           | 1            |          |          |
|         | Magnesium             | ppm             | ASTM D5185m                |           | 11           |          |          |
|         | Calcium<br>Phosphorus | ppm             | ASTM D5185m<br>ASTM D5185m |           | 2243<br>1047 |          |          |
|         | Zinc                  | ppm             | ASTM D5185m                |           | 1047         |          |          |
|         | Sulfur                | ppm             | ASTM D5185m<br>ASTM D5185m |           | 2955         |          |          |
|         | Oxidation             | ppm<br>Abs/.1mm | *ASTM D5165111             | >25       | 2955<br>9.8  |          |          |
|         | Base Number (BN)      | mg KOH/g        | ASTM D7414<br>ASTM D2896   | >25       | 9.8<br>7.8   |          |          |
|         | Visc @ 100°C          | cSt             | ASTM D2090<br>ASTM D445    | 15.4      | 11.7         |          |          |
|         |                       | 501             | 7.0 HW D440                | 10.4      |              |          |          |

The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.





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