



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



Machine Id  
**JOHN DEERE 644J C002750 (S/N DW6443X598071)**  
Component  
**Rear Differential**  
Fluid  
**JOHN DEERE HY-GARD HYD/TRANS (30 QTS)**

### RECOMMENDATION

We advise that you check for the source of water entry. Resample at the next service interval to monitor.

| Test           | UOM | Method      | Limit/Abn | Current            | History1    | History2    |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number  |     | Client Info |           | <b>JR0225572</b>   | JR0208384   | JR0157752   |
| Sample Date    |     | Client Info |           | <b>17 Jul 2024</b> | 06 Mar 2024 | 15 Feb 2023 |
| Machine Age    | hrs | Client Info |           | <b>21311</b>       | 20786       | 19477       |
| Oil Age        | hrs | Client Info |           | <b>19615</b>       | 19686       | 0           |
| Filter Age     | hrs | Client Info |           | <b>0</b>           | 0           | 0           |
| Oil Changed    |     | Client Info |           | <b>Not Changd</b>  | Not Changd  | Not Changd  |
| Filter Changed |     | Client Info |           | <b>None</b>        | N/A         | N/A         |
| Sample Status  |     |             |           | <b>ABNORMAL</b>    | NORMAL      | NORMAL      |

### WEAR

All component wear rates are normal.

|              |        |             |      |              |      |      |
|--------------|--------|-------------|------|--------------|------|------|
| PQ           |        | ASTM D8184  |      | <b>91</b>    | 98   | 67   |
| Iron         | ppm    | ASTM D5185m | >500 | <b>353</b>   | 232  | 165  |
| Chromium     | ppm    | ASTM D5185m | >10  | <b>&lt;1</b> | <1   | <1   |
| Nickel       | ppm    | ASTM D5185m | >10  | <b>&lt;1</b> | <1   | <1   |
| Titanium     | ppm    | ASTM D5185m |      | <b>1</b>     | <1   | <1   |
| Silver       | ppm    | ASTM D5185m |      | <b>&lt;1</b> | 0    | 0    |
| Aluminum     | ppm    | ASTM D5185m | >25  | <b>4</b>     | 3    | 2    |
| Lead         | ppm    | ASTM D5185m | >25  | <b>1</b>     | <1   | 1    |
| Copper       | ppm    | ASTM D5185m | >100 | <b>9</b>     | 5    | 2    |
| Tin          | ppm    | ASTM D5185m | >10  | <b>&lt;1</b> | <1   | <1   |
| Vanadium     | ppm    | ASTM D5185m |      | <b>&lt;1</b> | 0    | 0    |
| White Metal  | scalar | *Visual     | NONE | <b>NONE</b>  | NONE | NONE |
| Yellow Metal | scalar | *Visual     | NONE | <b>NONE</b>  | NONE | NONE |

### CONTAMINATION

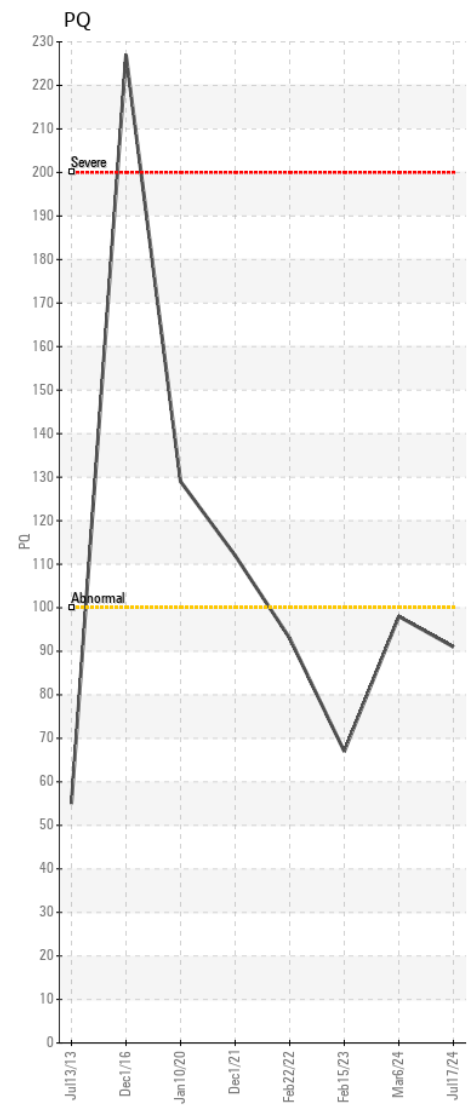
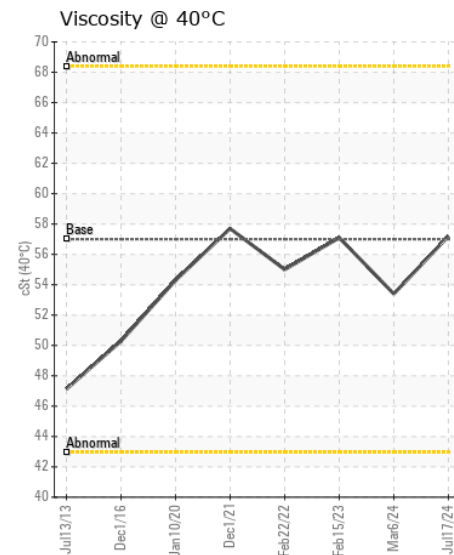
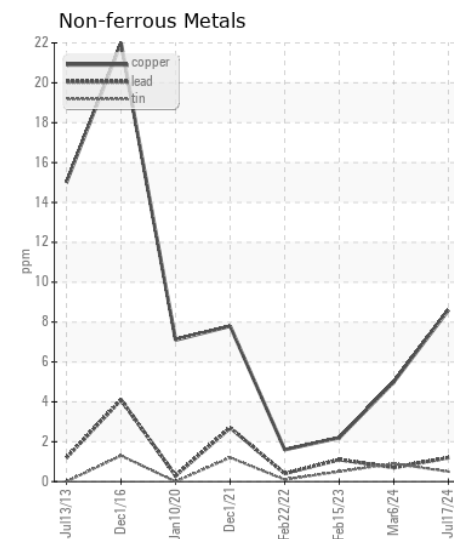
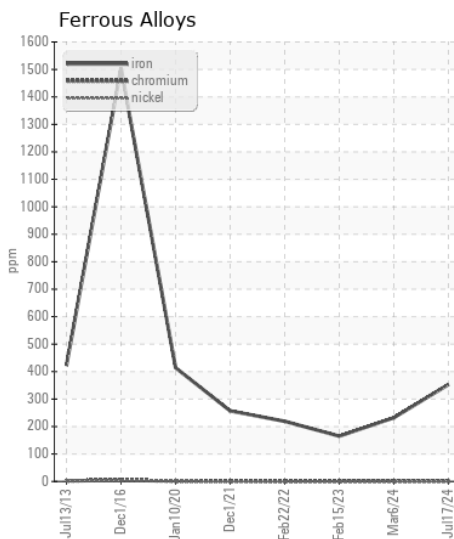
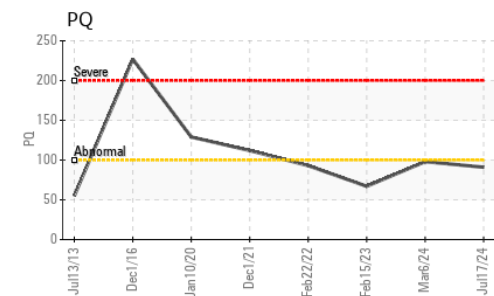
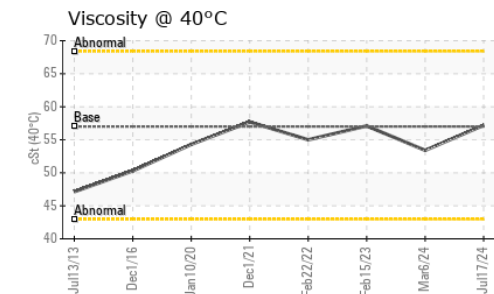
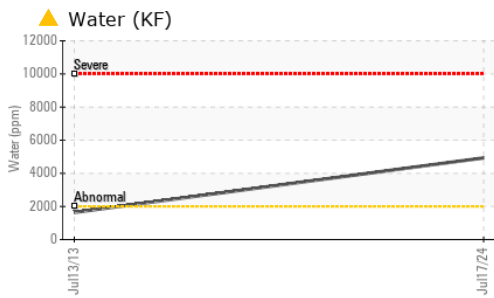
There is a moderate concentration of water present in the oil.

|                  |        |             |       |                |       |       |
|------------------|--------|-------------|-------|----------------|-------|-------|
| Silicon          | ppm    | ASTM D5185m | >75   | <b>16</b>      | 13    | 10    |
| Potassium        | ppm    | ASTM D5185m | >20   | <b>2</b>       | <1    | 0     |
| Water            | %      | ASTM D6304  | >.2   | <b>▲ 0.493</b> | ---   | ---   |
| ppm Water        | ppm    | ASTM D6304  | >2000 | <b>▲ 4930</b>  | ---   | ---   |
| 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     | >.2   | <b>▲ 0.2%</b>  | NEG   | NEG   |

### FLUID CONDITION

The condition of the oil is acceptable for the time in service.

|             |     |             |      |              |      |      |
|-------------|-----|-------------|------|--------------|------|------|
| Sodium      | ppm | ASTM D5185m |      | <b>0</b>     | 4    | 2    |
| Boron       | ppm | ASTM D5185m | 6    | <b>2</b>     | 0    | 0    |
| Barium      | ppm | ASTM D5185m | 0    | <b>0</b>     | 0    | 0    |
| Molybdenum  | ppm | ASTM D5185m | 0    | <b>&lt;1</b> | 0    | <1   |
| Manganese   | ppm | ASTM D5185m |      | <b>3</b>     | 3    | 2    |
| Magnesium   | ppm | ASTM D5185m | 145  | <b>75</b>    | 80   | 86   |
| Calcium     | ppm | ASTM D5185m | 3570 | <b>3322</b>  | 3011 | 3228 |
| Phosphorus  | ppm | ASTM D5185m | 1290 | <b>1071</b>  | 991  | 852  |
| Zinc        | ppm | ASTM D5185m | 1640 | <b>1203</b>  | 1122 | 1021 |
| Sulfur      | ppm | ASTM D5185m |      | <b>4281</b>  | 3459 | 3299 |
| Visc @ 40°C | cSt | ASTM D445   | 57.0 | <b>57.2</b>  | 53.4 | 57.1 |



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : JR0225572 **Received** : 18 Jul 2024  
**Lab Number** : 06240624 **Tested** : 19 Jul 2024  
**Unique Number** : 11129458 **Diagnosed** : 20 Jul 2024 - Don Baldridge  
**Test Package** : CONST ( Additional Tests: KF, PQ )

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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