



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



Area  
**[16W16417]**  
 Machine Id  
**JOHN DEERE 210G 1FF210GXLMF529559**  
 Component  
**Hydraulic System**  
 Fluid  
**HITACHI HYDRAULIC SUPER EX 46HN (36 GAL)**

### RECOMMENDATION

Resample at the next service interval to monitor. ( Customer Sample Comment: 16W16417 )

| Test           | UOM | Method      | Limit/Abn | Current            | History1    | History2    |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number  |     | Client Info |           | <b>JR0217313</b>   | JR0196259   | JR0173858   |
| Sample Date    |     | Client Info |           | <b>25 Jun 2024</b> | 26 Jan 2024 | 09 May 2023 |
| Machine Age    | hrs | Client Info |           | <b>2502</b>        | 2036        | 1498        |
| Oil Age        | hrs | Client Info |           | <b>2502</b>        | 2036        | 1498        |
| Filter Age     | hrs | Client Info |           | <b>466</b>         | 953         | 498         |
| Oil Changed    |     | Client Info |           | <b>Not Changd</b>  | Not Changd  | Not Changd  |
| Filter Changed |     | Client Info |           | <b>Not Changd</b>  | Changed     | Not Changd  |
| Sample Status  |     |             |           | <b>NORMAL</b>      | NORMAL      | NORMAL      |

### WEAR

All component wear rates are normal.

|              |        |             |      |             |      |      |
|--------------|--------|-------------|------|-------------|------|------|
| PQ           |        | ASTM D8184  | >50  | <b>18</b>   | 10   | 14   |
| Iron         | ppm    | ASTM D5185m | >32  | <b>0</b>    | 2    | 1    |
| Chromium     | ppm    | ASTM D5185m | >9   | <b>0</b>    | <1   | 0    |
| Nickel       | ppm    | ASTM D5185m | >5   | <b>0</b>    | 0    | 0    |
| Titanium     | ppm    | ASTM D5185m |      | <b>0</b>    | <1   | 0    |
| Silver       | ppm    | ASTM D5185m |      | <b>0</b>    | 0    | 0    |
| Aluminum     | ppm    | ASTM D5185m | >9   | <b>0</b>    | 2    | 0    |
| Lead         | ppm    | ASTM D5185m | >28  | <b>0</b>    | <1   | 0    |
| Copper       | ppm    | ASTM D5185m | >50  | <b>2</b>    | 1    | <1   |
| Tin          | ppm    | ASTM D5185m | >5   | <b>0</b>    | <1   | 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

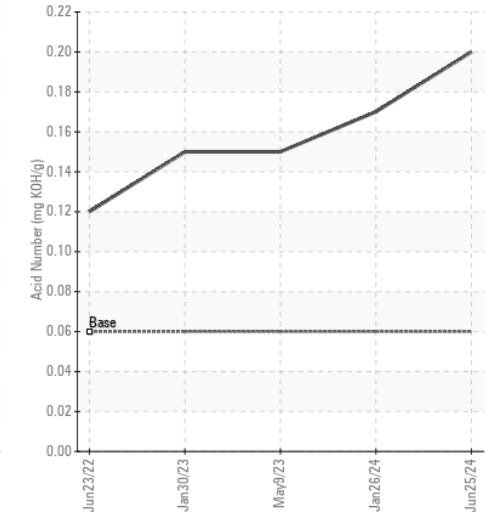
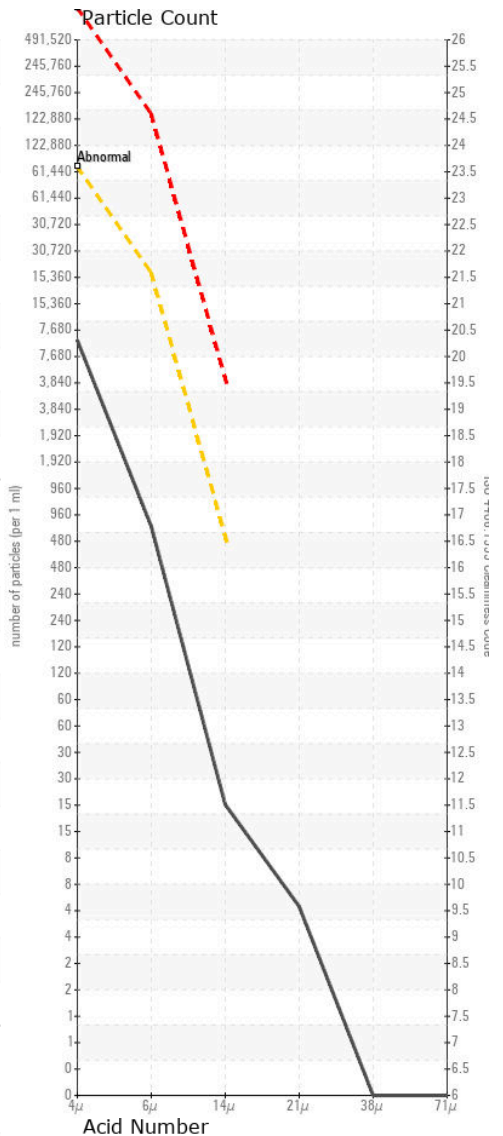
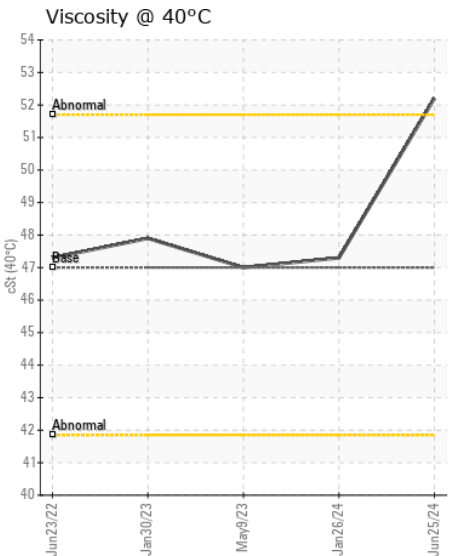
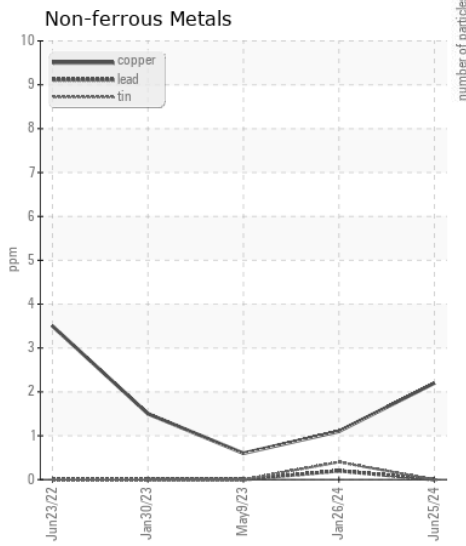
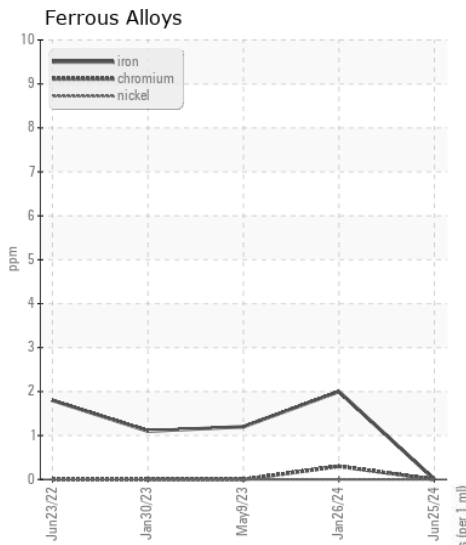
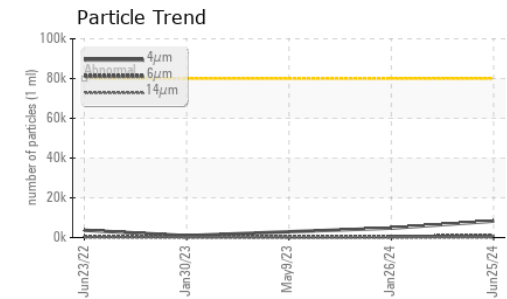
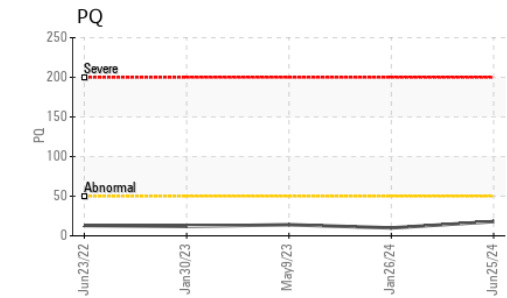
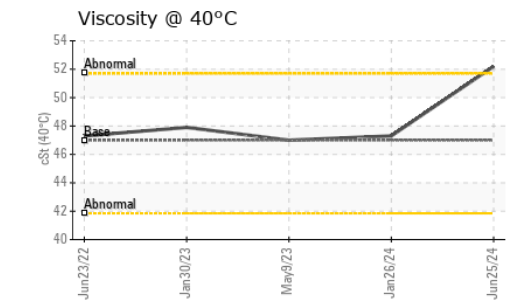
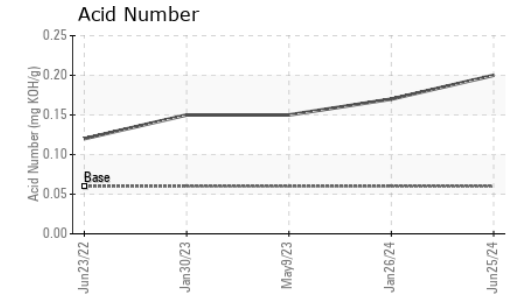
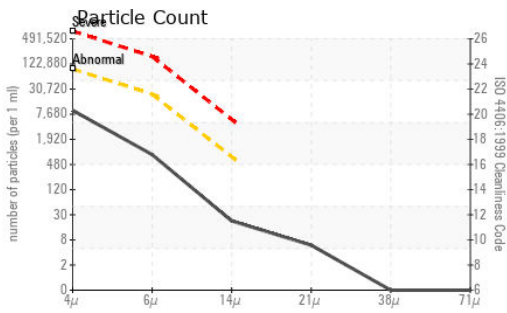
There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

|                  |        |              |           |                 |          |          |
|------------------|--------|--------------|-----------|-----------------|----------|----------|
| Silicon          | ppm    | ASTM D5185m  | >11       | <b>&lt;1</b>    | 0        | <1       |
| Potassium        | ppm    | ASTM D5185m  | >20       | <b>0</b>        | 2        | 1        |
| Water            |        | WC Method    | >0.075    | <b>NEG</b>      | NEG      | NEG      |
| Particles >4µm   |        | ASTM D7647   | >80000    | <b>8274</b>     | 4756     | 2924     |
| Particles >6µm   |        | ASTM D7647   | >20000    | <b>724</b>      | 490      | 335      |
| Particles >14µm  |        | ASTM D7647   | >640      | <b>19</b>       | 14       | 11       |
| Particles >21µm  |        | ASTM D7647   | >160      | <b>5</b>        | 2        | 4        |
| Particles >38µm  |        | ASTM D7647   | >40       | <b>0</b>        | 0        | 0        |
| Particles >71µm  |        | ASTM D7647   | >10       | <b>0</b>        | 0        | 0        |
| Oil Cleanliness  |        | ISO 4406 (c) | >23/21/16 | <b>20/17/11</b> | 19/16/11 | 19/16/11 |
| 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      | >0.075    | <b>NEG</b>      | NEG      | NEG      |

### FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

|                  |          |             |      |              |      |      |
|------------------|----------|-------------|------|--------------|------|------|
| Sodium           | ppm      | ASTM D5185m | >21  | <b>&lt;1</b> | 0    | 2    |
| Boron            | ppm      | ASTM D5185m |      | <b>0</b>     | 0    | 0    |
| Barium           | ppm      | ASTM D5185m |      | <b>0</b>     | 0    | 0    |
| Molybdenum       | ppm      | ASTM D5185m |      | <b>0</b>     | <1   | 0    |
| Manganese        | ppm      | ASTM D5185m |      | <b>0</b>     | 0    | <1   |
| Magnesium        | ppm      | ASTM D5185m |      | <b>0</b>     | <1   | 1    |
| Calcium          | ppm      | ASTM D5185m |      | <b>&lt;1</b> | 2    | 6    |
| Phosphorus       | ppm      | ASTM D5185m | 827  | <b>546</b>   | 548  | 561  |
| Zinc             | ppm      | ASTM D5185m | 0    | <b>59</b>    | 17   | 26   |
| Sulfur           | ppm      | ASTM D5185m | 13   | <b>177</b>   | 31   | 132  |
| Acid Number (AN) | mg KOH/g | ASTM D8045  | 0.06 | <b>0.20</b>  | 0.17 | 0.15 |
| Visc @ 40°C      | cSt      | ASTM D445   | 47   | <b>52.2</b>  | 47.3 | 47.0 |



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : JR0217313 **Received** : 27 Jun 2024  
**Lab Number** : 06222272 **Tested** : 28 Jun 2024  
**Unique Number** : 11100469 **Diagnosed** : 28 Jun 2024 - Don Baldrige  
**Test Package** : CONST ( Additional Tests: 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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