



# OIL ANALYSIS REPORT

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



Area  
**Store 4 - Fairmont**  
Machine Id  
**JOHN DEERE 210G 1FF210GXTNF530279**  
Component  
**Hydraulic System**  
Fluid  
**HITACHI HYDRAULIC SUPER EX 46HN (63 GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

| Test           | UOM | Method      | Limit/Abn | Current            | History1    | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|----------|
| Sample Number  |     | Client Info |           | <b>LEC0042306</b>  | LEC0020048  | ---      |
| Sample Date    |     | Client Info |           | <b>07 Jun 2023</b> | 23 Dec 2022 | ---      |
| Machine Age    | hrs | Client Info |           | <b>983</b>         | 470         | ---      |
| Oil Age        | hrs | Client Info |           | <b>983</b>         | 470         | ---      |
| Filter Age     | hrs | Client Info |           | <b>983</b>         | 470         | ---      |
| Oil Changed    |     | Client Info |           | <b>Not Changed</b> | Not Changed | ---      |
| Filter Changed |     | Client Info |           | <b>Changed</b>     | N/A         | ---      |
| Sample Status  |     |             |           | <b>NORMAL</b>      | NORMAL      | ---      |

## WEAR

All component wear rates are normal.

|              |        |             |      |             |      |     |
|--------------|--------|-------------|------|-------------|------|-----|
| PQ           |        | ASTM D8184  | >50  | <b>13</b>   | 5    | --- |
| Iron         | ppm    | ASTM D5185m | >32  | <b>2</b>    | 1    | --- |
| Chromium     | ppm    | ASTM D5185m | >9   | <b>0</b>    | 0    | --- |
| Nickel       | ppm    | ASTM D5185m | >5   | <b>0</b>    | 0    | --- |
| Titanium     | ppm    | ASTM D5185m |      | <b>0</b>    | 0    | --- |
| Silver       | ppm    | ASTM D5185m |      | <b>0</b>    | 0    | --- |
| Aluminum     | ppm    | ASTM D5185m | >9   | <b>0</b>    | 0    | --- |
| Lead         | ppm    | ASTM D5185m | >28  | <b>0</b>    | 0    | --- |
| Copper       | ppm    | ASTM D5185m | >50  | <b>1</b>    | 2    | --- |
| Tin          | ppm    | ASTM D5185m | >5   | <b>0</b>    | 0    | --- |
| Vanadium     | ppm    | ASTM D5185m |      | <b>0</b>    | 0    | --- |
| White Metal  | scalar | *Visual     | NONE | <b>NONE</b> | NONE | --- |
| Yellow Metal | scalar | *Visual     | NONE | <b>NONE</b> | NONE | --- |

## CONTAMINATION

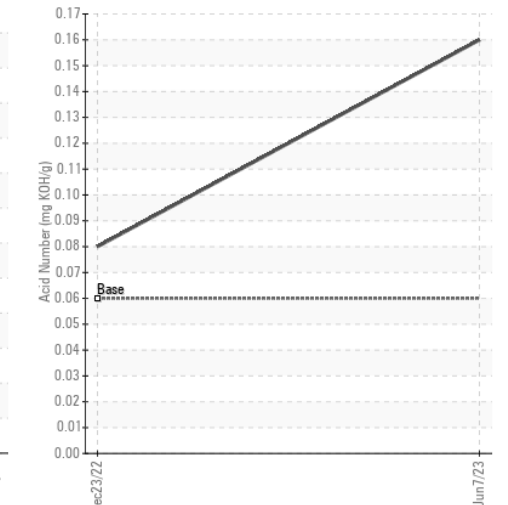
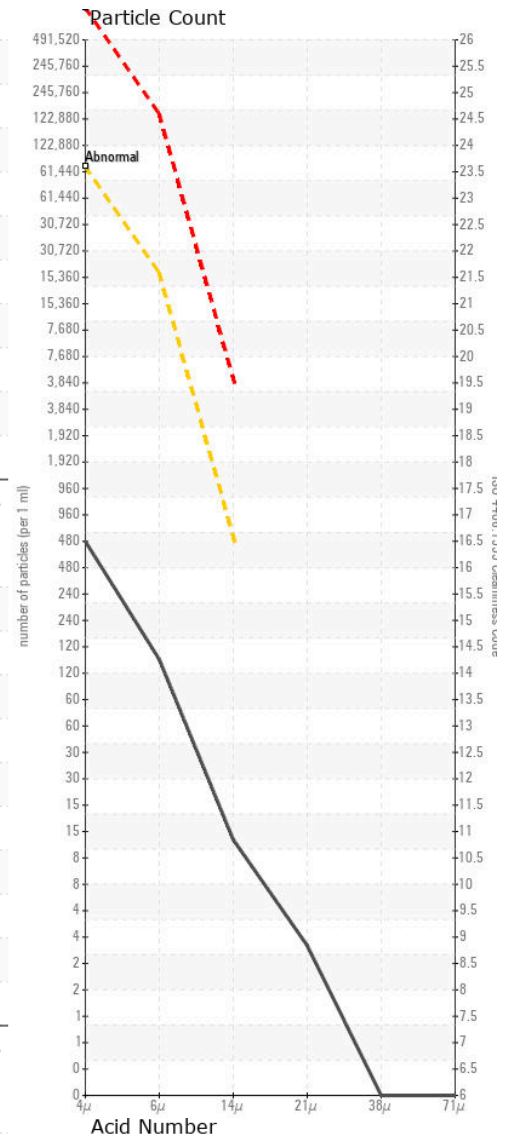
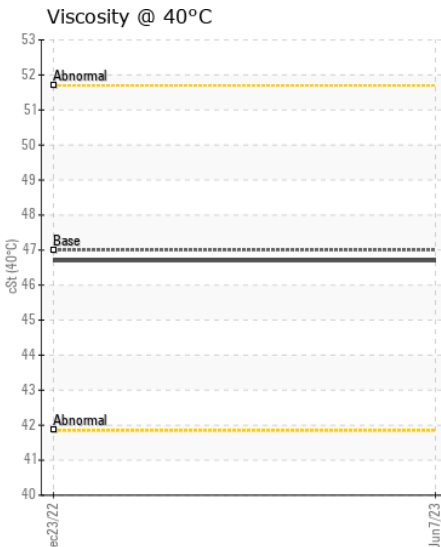
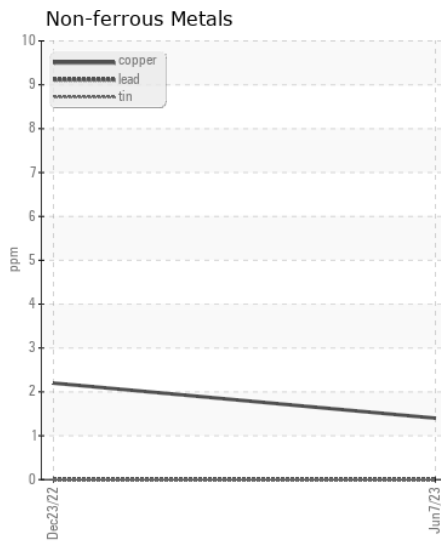
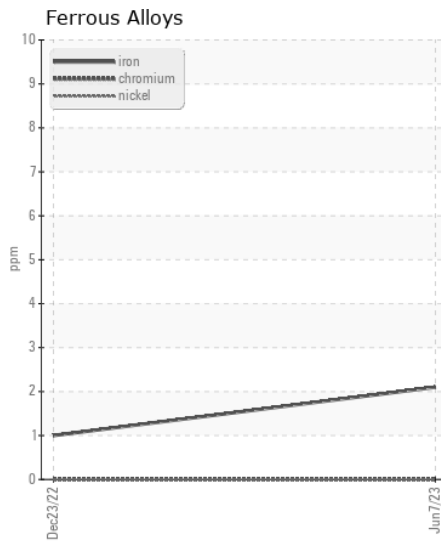
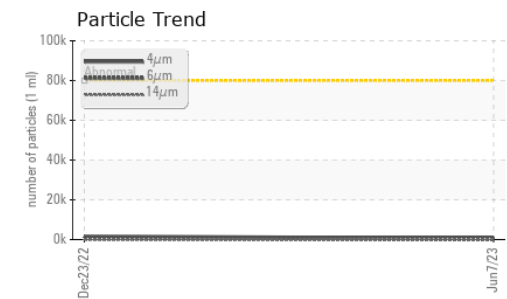
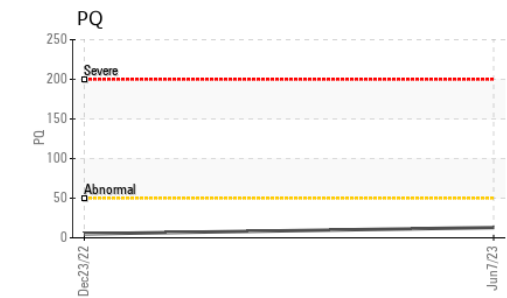
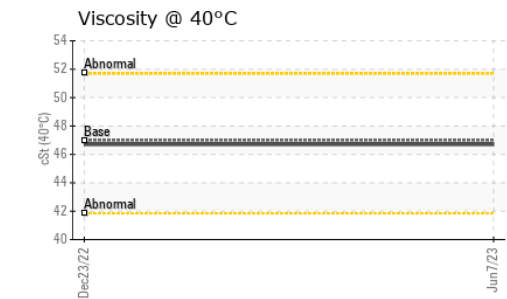
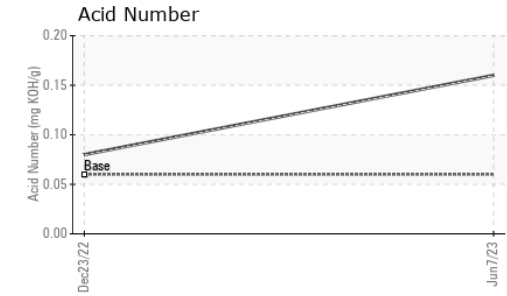
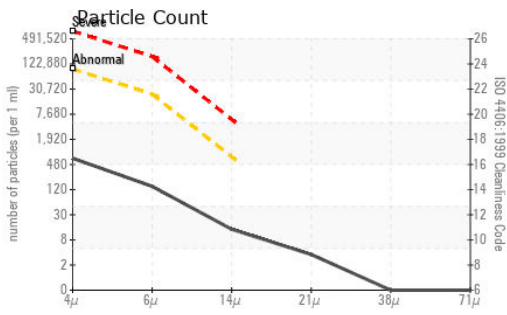
There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

|                  |        |              |           |                 |          |     |
|------------------|--------|--------------|-----------|-----------------|----------|-----|
| Silicon          | ppm    | ASTM D5185m  | >11       | <b>&lt;1</b>    | <1       | --- |
| Potassium        | ppm    | ASTM D5185m  | >20       | <b>&lt;1</b>    | 0        | --- |
| Water            |        | WC Method    | >0.075    | <b>NEG</b>      | NEG      | --- |
| Particles >4µm   |        | ASTM D7647   | >80000    | <b>595</b>      | 1754     | --- |
| Particles >6µm   |        | ASTM D7647   | >20000    | <b>127</b>      | 416      | --- |
| Particles >14µm  |        | ASTM D7647   | >640      | <b>12</b>       | 14       | --- |
| Particles >21µm  |        | ASTM D7647   | >160      | <b>3</b>        | 2        | --- |
| Particles >38µm  |        | ASTM D7647   | >40       | <b>0</b>        | 0        | --- |
| Particles >71µm  |        | ASTM D7647   | >10       | <b>0</b>        | 0        | --- |
| Oil Cleanliness  |        | ISO 4406 (c) | >23/21/16 | <b>16/14/11</b> | 18/16/11 | --- |
| Silt             | scalar | *Visual      | NONE      | <b>NONE</b>     | NONE     | --- |
| Debris           | scalar | *Visual      | NONE      | <b>NONE</b>     | NONE     | --- |
| Sand/Dirt        | scalar | *Visual      | NONE      | <b>NONE</b>     | NONE     | --- |
| Appearance       | scalar | *Visual      | NORML     | <b>NORML</b>    | NORML    | --- |
| Odor             | scalar | *Visual      | NORML     | <b>NORML</b>    | NORML    | --- |
| Emulsified Water | scalar | *Visual      | >0.075    | <b>NEG</b>      | NEG      | --- |

## FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oils additive package is suitable for further service.

|                  |          |             |      |              |      |     |
|------------------|----------|-------------|------|--------------|------|-----|
| Sodium           | ppm      | ASTM D5185m | >21  | <b>&lt;1</b> | <1   | --- |
| Boron            | ppm      | ASTM D5185m |      | <b>0</b>     | 0    | --- |
| Barium           | ppm      | ASTM D5185m |      | <b>0</b>     | 0    | --- |
| Molybdenum       | ppm      | ASTM D5185m |      | <b>0</b>     | 0    | --- |
| Manganese        | ppm      | ASTM D5185m |      | <b>&lt;1</b> | <1   | --- |
| Magnesium        | ppm      | ASTM D5185m |      | <b>0</b>     | 0    | --- |
| Calcium          | ppm      | ASTM D5185m |      | <b>2</b>     | <1   | --- |
| Phosphorus       | ppm      | ASTM D5185m | 827  | <b>549</b>   | 535  | --- |
| Zinc             | ppm      | ASTM D5185m | 0    | <b>25</b>    | 29   | --- |
| Sulfur           | ppm      | ASTM D5185m | 13   | <b>183</b>   | 210  | --- |
| Acid Number (AN) | mg KOH/g | ASTM D8045  | 0.06 | <b>0.16</b>  | 0.08 | --- |
| Visc @ 40°C      | cSt      | ASTM D445   | 47   | <b>46.7</b>  | 46.7 | --- |



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : LEC0042306 **Received** : 09 Jun 2023  
**Lab Number** : 05869361 **Tested** : 12 Jun 2023  
**Unique Number** : 10509145 **Diagnosed** : 12 Jun 2023 - Doug Bogart  
**Test Package** : CONST ( Additional Tests: PQ )

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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)