



|                 |        |
|-----------------|--------|
| WEAR            | NORMAL |
| CONTAMINATION   | NORMAL |
| FLUID CONDITION | NORMAL |

Machine Id  
**JOHN DEERE 160G 1FF160GXCLF057824**  
 Component  
**Hydraulic System**  
 Fluid  
**HITACHI HYDRAULIC SUPER EX 46HN (--- GAL)**

### RECOMMENDATION

Resample at the next service interval to monitor.

| Test           | UOM | Method      | Limit/Abn | Current            | History1    | History2    |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number  |     | Client Info |           | <b>JR0218879</b>   | JR0141589   | JR0099432   |
| Sample Date    |     | Client Info |           | <b>08 Jul 2024</b> | 08 Dec 2022 | 25 Aug 2021 |
| Machine Age    | hrs | Client Info |           | <b>1495</b>        | 1045        | 510         |
| Oil Age        | hrs | Client Info |           | <b>1495</b>        | 1045        | 510         |
| Filter Age     | hrs | Client Info |           | <b>450</b>         | 1045        | 510         |
| Oil Changed    |     | Client Info |           | <b>Not Chngd</b>   | Not Chngd   | Not Chngd   |
| Filter Changed |     | Client Info |           | <b>Not Chngd</b>   | Changed     | Not Chngd   |
| Sample Status  |     |             |           | <b>NORMAL</b>      | ABNORMAL    | ATTENTION   |

### WEAR

All component wear rates are normal.

| PQ           | UOM    | Method      | Limit/Abn | Current      | History1 | History2 |
|--------------|--------|-------------|-----------|--------------|----------|----------|
| Iron         | ppm    | ASTM D5185m | >32       | <b>5</b>     | 5        | 18       |
| Chromium     | ppm    | ASTM D5185m | >9        | <b>&lt;1</b> | <1       | 1        |
| Nickel       | ppm    | ASTM D5185m | >5        | <b>0</b>     | 0        | 0        |
| Titanium     | ppm    | ASTM D5185m |           | <b>0</b>     | 0        | <1       |
| Silver       | ppm    | ASTM D5185m |           | <b>0</b>     | 0        | <1       |
| Aluminum     | ppm    | ASTM D5185m | >9        | <b>&lt;1</b> | 1        | 3        |
| Lead         | ppm    | ASTM D5185m | >28       | <b>0</b>     | <1       | 2        |
| Copper       | ppm    | ASTM D5185m | >50       | <b>6</b>     | 6        | 23       |
| 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

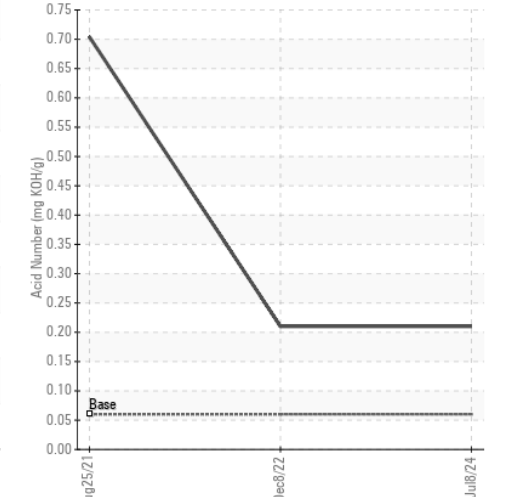
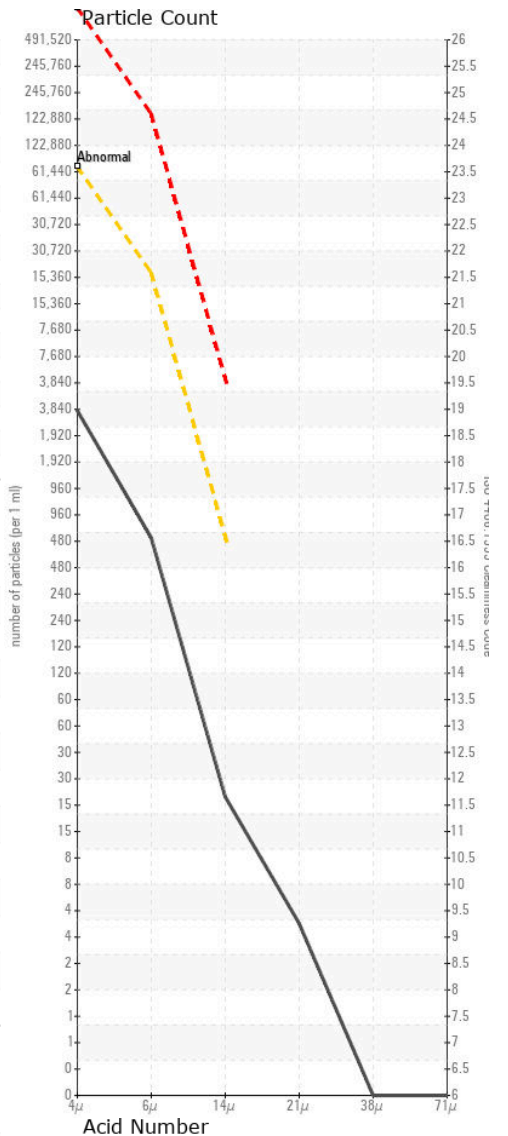
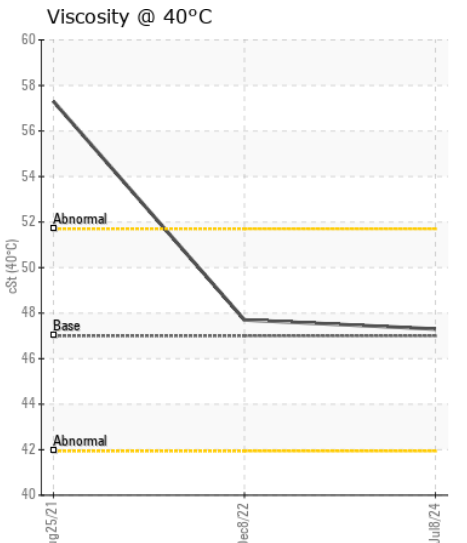
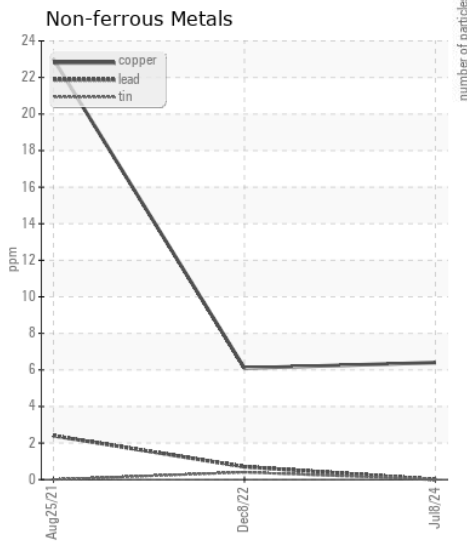
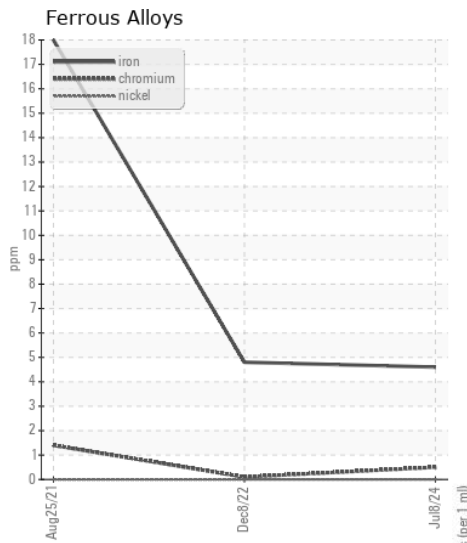
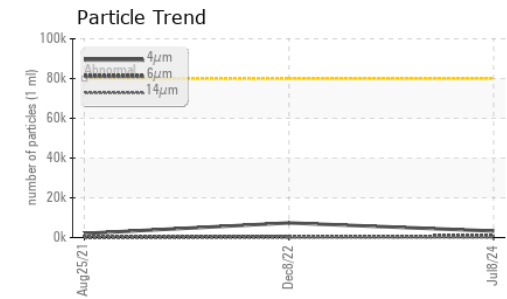
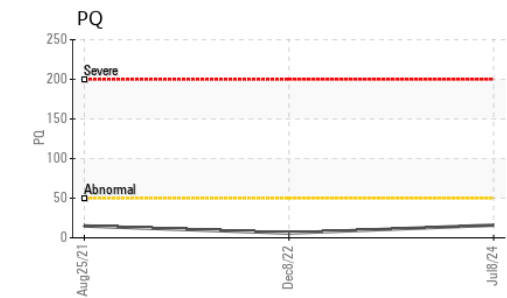
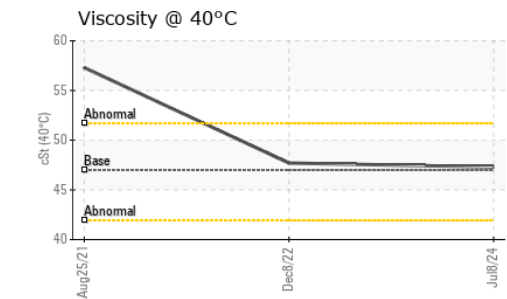
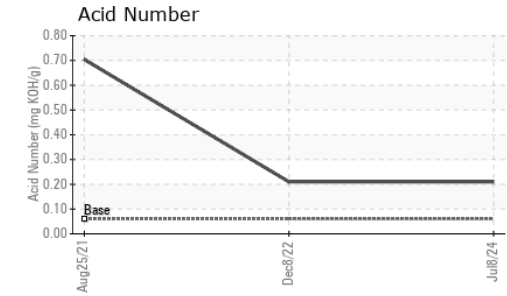
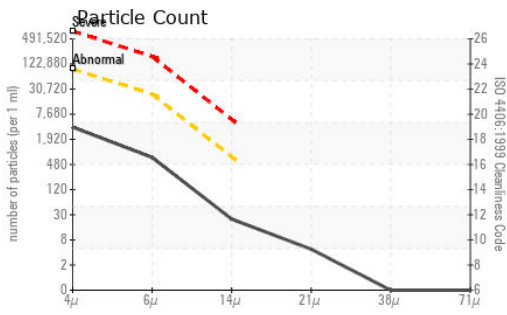
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

|                  |        |              |           |                 |          |         |
|------------------|--------|--------------|-----------|-----------------|----------|---------|
| Silicon          | ppm    | ASTM D5185m  | >11       | <b>&lt;1</b>    | 1        | 4       |
| Potassium        | ppm    | ASTM D5185m  | >20       | <b>0</b>        | 0        | 1       |
| Water            |        | WC Method    | >0.075    | <b>NEG</b>      | NEG      | NEG     |
| Particles >4µm   |        | ASTM D7647   | >80000    | <b>3294</b>     | 7368     | 2073    |
| Particles >6µm   |        | ASTM D7647   | >20000    | <b>622</b>      | 510      | 85      |
| Particles >14µm  |        | ASTM D7647   | >640      | <b>21</b>       | 23       | 4       |
| Particles >21µm  |        | ASTM D7647   | >160      | <b>4</b>        | 6        | 2       |
| Particles >38µm  |        | ASTM D7647   | >40       | <b>0</b>        | 1        | 0       |
| Particles >71µm  |        | ASTM D7647   | >10       | <b>0</b>        | 0        | 0       |
| Oil Cleanliness  |        | ISO 4406 (c) | >23/21/16 | <b>19/16/12</b> | 20/16/12 | 18/14/9 |
| 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>2</b>     | 0    | 2      |
| Boron            | ppm      | ASTM D5185m |      | <b>0</b>     | 0    | 2      |
| Barium           | ppm      | ASTM D5185m |      | <b>&lt;1</b> | 0    | 0      |
| Molybdenum       | ppm      | ASTM D5185m |      | <b>2</b>     | 0    | <1     |
| Manganese        | ppm      | ASTM D5185m |      | <b>0</b>     | <1   | <1     |
| Magnesium        | ppm      | ASTM D5185m |      | <b>&lt;1</b> | 0    | 0      |
| Calcium          | ppm      | ASTM D5185m |      | <b>13</b>    | 1    | 79     |
| Phosphorus       | ppm      | ASTM D5185m | 827  | <b>464</b>   | 524  | 523    |
| Zinc             | ppm      | ASTM D5185m | 0    | <b>73</b>    | ▲ 91 | 734    |
| Sulfur           | ppm      | ASTM D5185m | 13   | <b>274</b>   | 273  | 1159   |
| Acid Number (AN) | mg KOH/g | ASTM D8045  | 0.06 | <b>0.21</b>  | 0.21 | 0.704  |
| Visc @ 40°C      | cSt      | ASTM D445   | 47   | <b>47.3</b>  | 47.7 | ● 57.3 |



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : JR0218879 **Received** : 12 Jul 2024  
**Lab Number** : 06234780 **Tested** : 15 Jul 2024  
**Unique Number** : 11123614 **Diagnosed** : 15 Jul 2024 - Wes Davis  
**Test Package** : CONST ( Additional Tests: PQ )

**JRE - ASHEVILLE**  
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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)