



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

Area  
**[16W16013]**

Machine Id  
**HITACHI 350LC-6 1FFDDR70EFF940098**

Component  
**Hydraulic System**

Fluid  
**HITACHI HYDRAULIC SUPER EX 46HN (78 GAL)**

### RECOMMENDATION

No corrective action is recommended at this time. The filter change at the time of sampling has been noted. Resample at the next service interval to monitor. ( Customer Sample Comment: 16W16013 )

| Test           | UOM | Method      | Limit/Abn | Current            | History1    | History2    |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number  |     | Client Info |           | <b>JR0196408</b>   | JR0185619   | JR0173506   |
| Sample Date    |     | Client Info |           | <b>10 Apr 2024</b> | 17 Nov 2023 | 25 Aug 2023 |
| Machine Age    | hrs | Client Info |           | <b>8607</b>        | 8607        | 8071        |
| Oil Age        | hrs | Client Info |           | <b>3989</b>        | 3639        | 3108        |
| Filter Age     | hrs | Client Info |           | <b>886</b>         | 536         | 1039        |
| Oil Changed    |     | Client Info |           | <b>Not Changed</b> | Not Changd  | Not Changed |
| Filter Changed |     | Client Info |           | <b>Changed</b>     | Not Changed | Changed     |
| Sample Status  |     |             |           | <b>ABNORMAL</b>    | ABNORMAL    | ABNORMAL    |

### WEAR

The iron level is abnormal. All other component wear rates are normal.

| PQ           | UOM    | Method      | Limit/Abn | Current      | History1 | History2 |
|--------------|--------|-------------|-----------|--------------|----------|----------|
| Iron         | ppm    | ASTM D5185m | >20       | <b>14</b>    | 9        | 13       |
| Chromium     | ppm    | ASTM D5185m | >10       | <b>&lt;1</b> | <1       | 0        |
| Nickel       | ppm    | ASTM D5185m | >10       | <b>&lt;1</b> | 0        | 0        |
| Titanium     | ppm    | ASTM D5185m |           | <b>&lt;1</b> | <1       | 0        |
| Silver       | ppm    | ASTM D5185m |           | <b>0</b>     | 0        | 0        |
| Aluminum     | ppm    | ASTM D5185m | >10       | <b>1</b>     | 2        | <1       |
| Lead         | ppm    | ASTM D5185m | >10       | <b>1</b>     | 0        | 0        |
| Copper       | ppm    | ASTM D5185m | >75       | <b>2</b>     | <1       | 0        |
| Tin          | ppm    | ASTM D5185m | >10       | <b>1</b>     | 0        | <1       |
| Vanadium     | ppm    | ASTM D5185m |           | <b>&lt;1</b> | 0        | 0        |
| White Metal  | scalar | *Visual     | NONE      | <b>NONE</b>  | NONE     | LIGHT    |
| Yellow Metal | scalar | *Visual     | NONE      | <b>NONE</b>  | NONE     | NONE     |

### CONTAMINATION

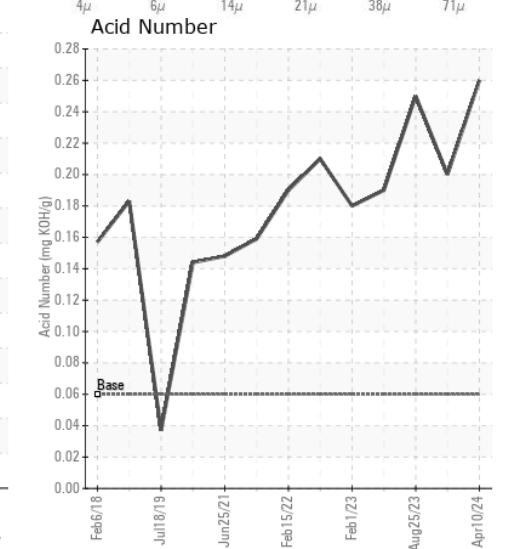
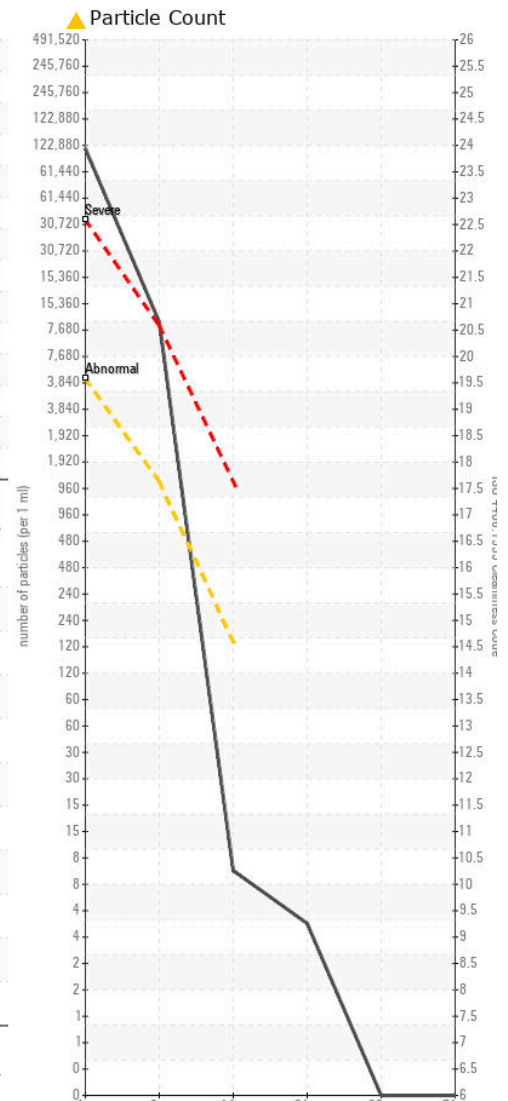
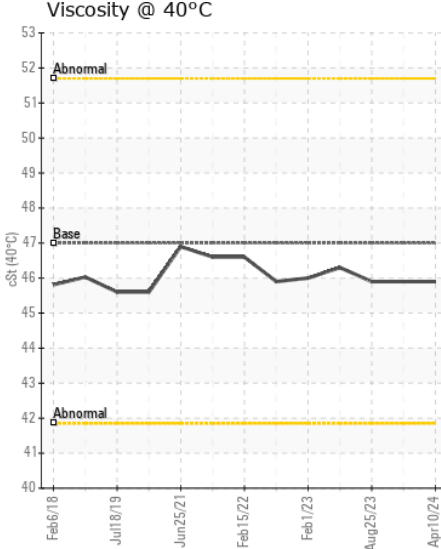
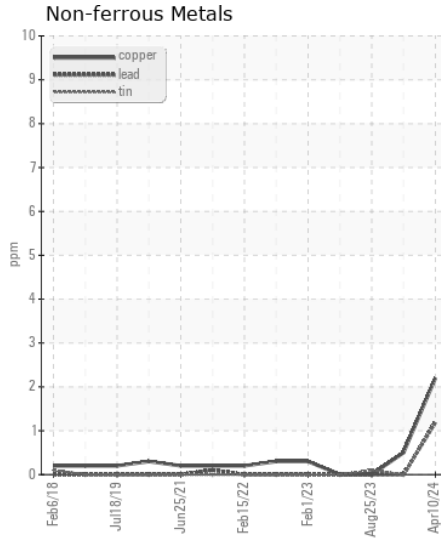
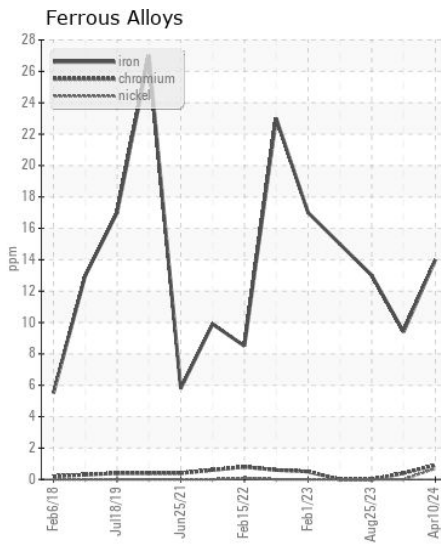
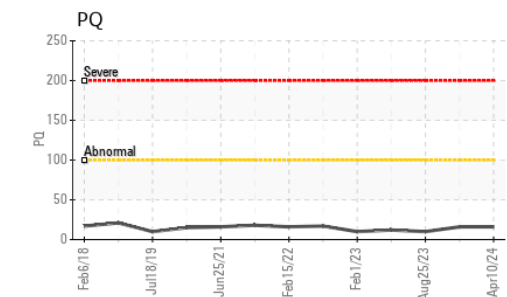
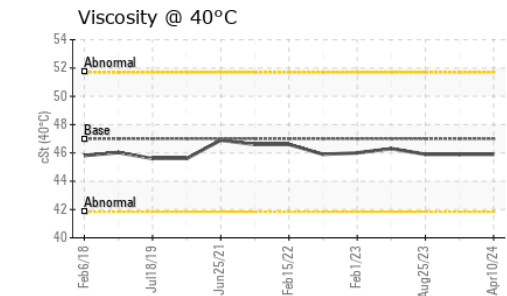
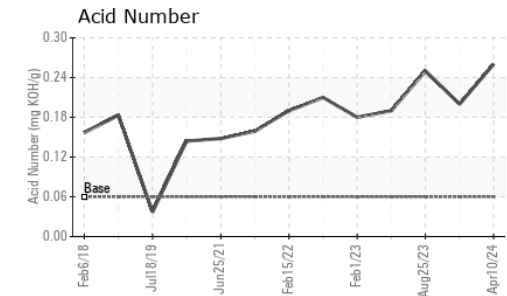
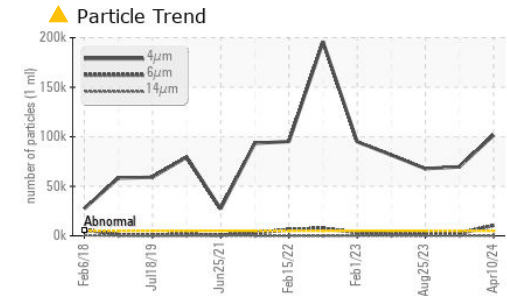
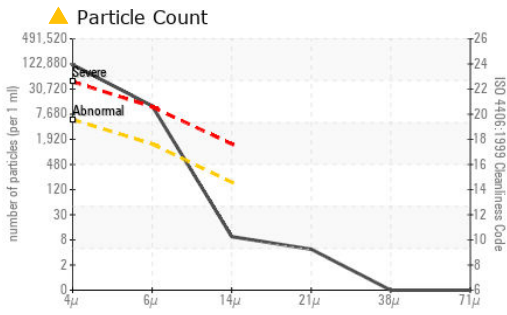
There is a high amount of silt (particulates < 14 microns in size) present in the oil.

|                  |        |              |           |                   |            |            |
|------------------|--------|--------------|-----------|-------------------|------------|------------|
| Silicon          | ppm    | ASTM D5185m  | >20       | <b>3</b>          | 2          | 2          |
| Potassium        | ppm    | ASTM D5185m  | >20       | <b>1</b>          | <1         | 0          |
| Water            |        | WC Method    | >0.1      | <b>NEG</b>        | NEG        | NEG        |
| Particles >4µm   |        | ASTM D7647   | >5000     | <b>▲ 101667</b>   | ▲ 69666    | ▲ 67783    |
| Particles >6µm   |        | ASTM D7647   | >1300     | <b>▲ 10516</b>    | ● 2340     | 1222       |
| Particles >14µm  |        | ASTM D7647   | >160      | <b>8</b>          | 48         | 10         |
| Particles >21µm  |        | ASTM D7647   | >40       | <b>4</b>          | 15         | 3          |
| Particles >38µm  |        | ASTM D7647   | >10       | <b>0</b>          | 1          | 1          |
| Particles >71µm  |        | ASTM D7647   | >3        | <b>0</b>          | 0          | 0          |
| Oil Cleanliness  |        | ISO 4406 (c) | >19/17/14 | <b>▲ 24/21/10</b> | ▲ 23/18/13 | ▲ 23/17/10 |
| 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      | >0.1      | <b>NEG</b>        | NEG        | 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 |      | <b>0</b>     | 0    | <1   |
| Boron            | ppm      | ASTM D5185m |      | <b>0</b>     | 0    | 0    |
| Barium           | ppm      | ASTM D5185m |      | <b>0</b>     | 0    | 0    |
| Molybdenum       | ppm      | ASTM D5185m |      | <b>1</b>     | <1   | 0    |
| Manganese        | ppm      | ASTM D5185m |      | <b>&lt;1</b> | 0    | 0    |
| Magnesium        | ppm      | ASTM D5185m |      | <b>3</b>     | 0    | 0    |
| Calcium          | ppm      | ASTM D5185m |      | <b>57</b>    | 4    | <1   |
| Phosphorus       | ppm      | ASTM D5185m | 827  | <b>579</b>   | 578  | 529  |
| Zinc             | ppm      | ASTM D5185m | 0    | <b>19</b>    | 0    | 1    |
| Sulfur           | ppm      | ASTM D5185m | 13   | <b>47</b>    | 0    | 56   |
| Acid Number (AN) | mg KOH/g | ASTM D8045  | 0.06 | <b>0.26</b>  | 0.20 | 0.25 |
| Visc @ 40°C      | cSt      | ASTM D445   | 47   | <b>45.9</b>  | 45.9 | 45.9 |



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : JR0196408 **Received** : 12 Apr 2024  
**Lab Number** : 06147221 **Tested** : 15 Apr 2024  
**Unique Number** : 10977299 **Diagnosed** : 16 Apr 2024 - Don Baldrige  
**Test Package** : CONST ( Additional Tests: PQ )

**JRE - CASTLE HAYNE**  
 113 CROWATAN ROAD  
 CASTLE HAYNE, NC  
 US 28429-5819

Certificate L2367 **Contact: WILMINGTON SHOP**  
 To discuss this sample report, contact Customer Service at 1-800-237-1369. **todd.simmons@jamesriverequipment.com; canastasio@wearcheck.com; canastasio@we**  
 \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation. **T: (910)675-9211**  
 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) **F:**