



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

Machine Id
HITACHI 210-6 1ffdc571jmf341002
 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 | | JR0205126 | JR0182606 | JR0174228 |
| Sample Date | | Client Info | | 11 Apr 2024 | 23 Aug 2023 | 23 May 2023 |
| Machine Age | hrs | Client Info | | 2925 | 2007 | 1686 |
| Oil Age | hrs | Client Info | | 2925 | 0 | 0 |
| Filter Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | Not Chngd | N/A | N/A |
| Filter Changed | | Client Info | | Not Chngd | N/A | N/A |
| Sample Status | | | | NORMAL | ABNORMAL | ABNORMAL |

WEAR

All component wear rates are normal.

| PQ | UOM | Method | Limit/Abn | Current | History1 | History2 |
|--------------|--------|-------------|-----------|--------------|----------|----------|
| Iron | ppm | ASTM D5185m | >20 | 4 | 2 | 2 |
| Chromium | ppm | ASTM D5185m | >10 | <1 | 0 | <1 |
| Nickel | ppm | ASTM D5185m | >10 | <1 | 0 | <1 |
| Titanium | ppm | ASTM D5185m | | <1 | 0 | <1 |
| Silver | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >10 | 1 | 0 | <1 |
| Lead | ppm | ASTM D5185m | >10 | 2 | 0 | 0 |
| Copper | ppm | ASTM D5185m | >75 | 2 | <1 | 1 |
| Tin | ppm | ASTM D5185m | >10 | 1 | 0 | <1 |
| Vanadium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | ▲ MODER |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

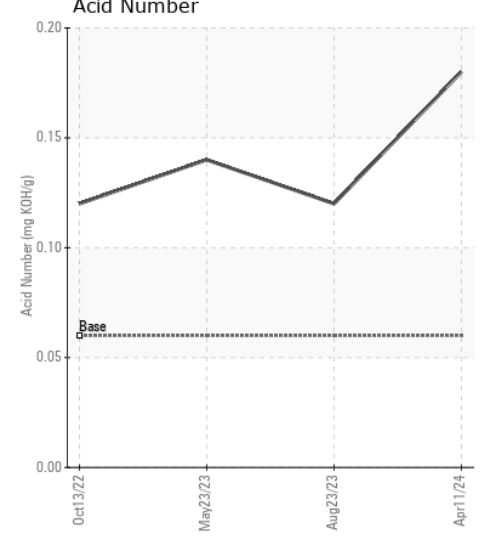
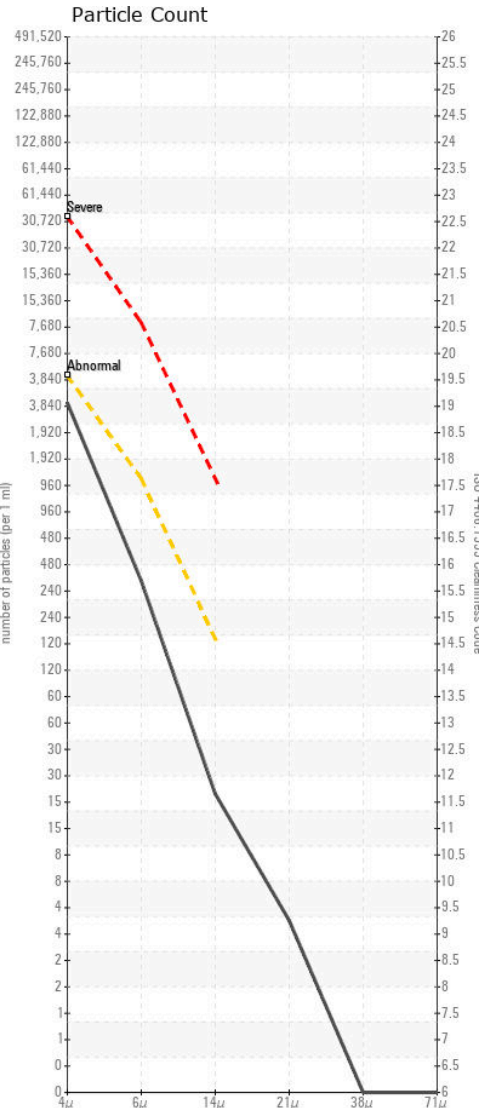
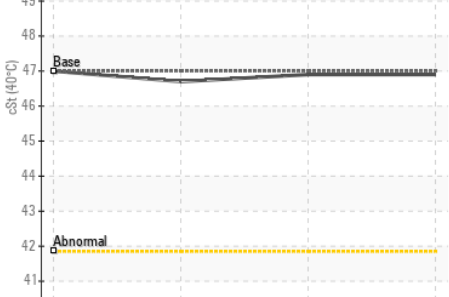
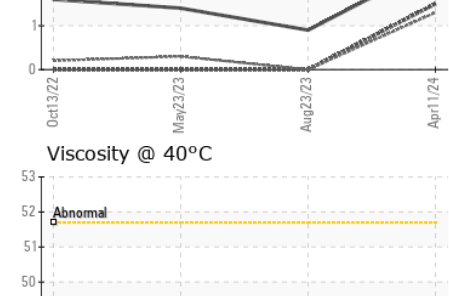
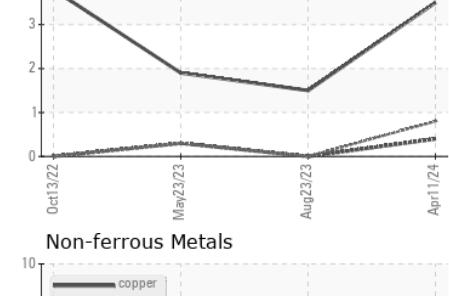
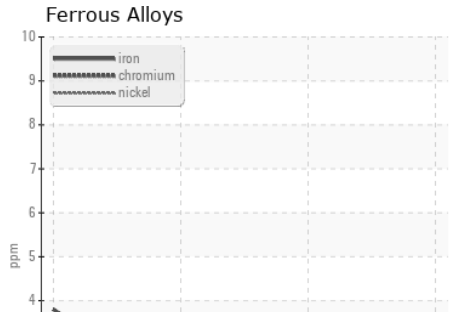
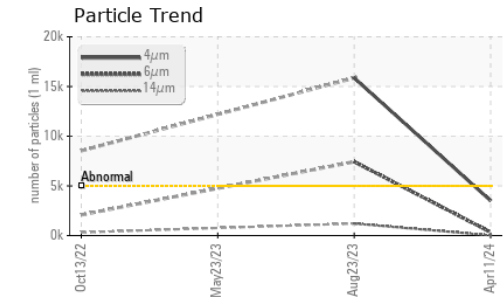
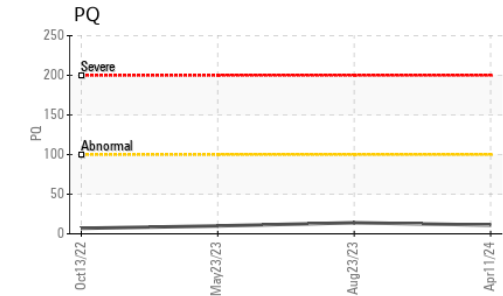
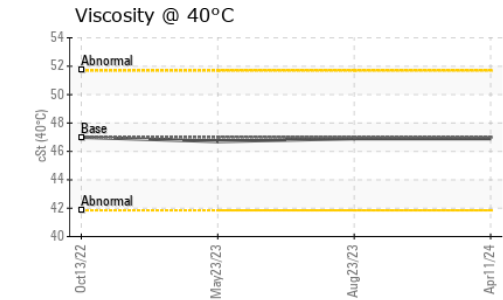
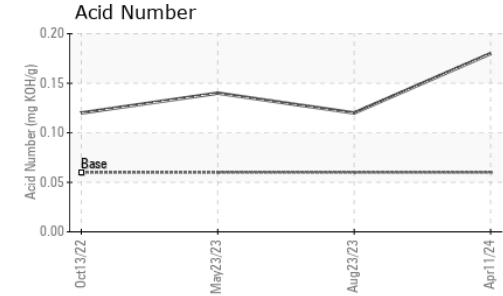
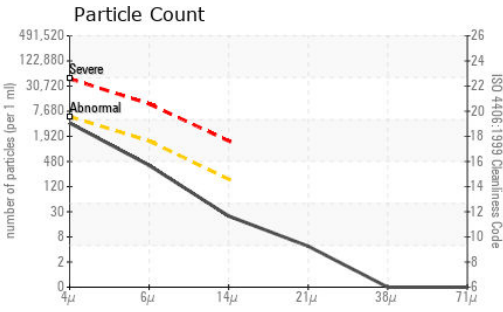
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

| | | | | | | |
|------------------|--------|--------------|-----------|-----------------|------------|-------|
| Silicon | ppm | ASTM D5185m | >20 | <1 | <1 | <1 |
| Potassium | ppm | ASTM D5185m | >20 | 1 | <1 | 1 |
| Water | | WC Method | >0.1 | NEG | NEG | NEG |
| Particles >4µm | | ASTM D7647 | >5000 | 3507 | 15864 | --- |
| Particles >6µm | | ASTM D7647 | >1300 | 341 | 7430 | --- |
| Particles >14µm | | ASTM D7647 | >160 | 21 | ● 1207 | --- |
| Particles >21µm | | ASTM D7647 | >40 | 4 | ▲ 369 | --- |
| Particles >38µm | | ASTM D7647 | >10 | 0 | 11 | --- |
| Particles >71µm | | ASTM D7647 | >3 | 0 | 1 | --- |
| Oil Cleanliness | | ISO 4406 (c) | >19/17/14 | 19/16/12 | ● 21/20/17 | --- |
| Silt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Debris | scalar | *Visual | NONE | NONE | NONE | NONE |
| Sand/Dirt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Appearance | scalar | *Visual | NORML | NORML | NORML | NORML |
| Odor | scalar | *Visual | NORML | NORML | NORML | NORML |
| Emulsified Water | scalar | *Visual | >0.1 | NEG | 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 | | 0 | 0 | <1 |
| Boron | ppm | ASTM D5185m | | 0 | 0 | 1 |
| Barium | ppm | ASTM D5185m | | 0 | 2 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 1 | 0 | 2 |
| Manganese | ppm | ASTM D5185m | | <1 | 0 | <1 |
| Magnesium | ppm | ASTM D5185m | | <1 | 0 | 19 |
| Calcium | ppm | ASTM D5185m | | 5 | 0 | 117 |
| Phosphorus | ppm | ASTM D5185m | 827 | 541 | 520 | 513 |
| Zinc | ppm | ASTM D5185m | 0 | 11 | 11 | 56 |
| Sulfur | ppm | ASTM D5185m | 13 | 3 | 0 | 97 |
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.06 | 0.18 | 0.12 | 0.14 |
| Visc @ 40°C | cSt | ASTM D445 | 47 | 46.9 | 46.9 | 46.7 |



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0205126 **Received** : 12 Apr 2024
Lab Number : 06147214 **Tested** : 15 Apr 2024
Unique Number : 10977292 **Diagnosed** : 15 Apr 2024 - Wes Davis
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)