



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

Area
[W03896 ROBESON CO LA]
 Machine Id
BOMAG 1172RB 2203590 (S/N 101570221033)
 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 | | JR0054455 | JR0054324 | JR0013678 |
| Sample Date | | Client Info | | 17 Mar 2021 | 22 Dec 2020 | 23 Jun 2020 |
| Machine Age | hrs | Client Info | | 5524 | 4999 | 3878 |
| Oil Age | hrs | Client Info | | 0 | 1499 | 0 |
| Filter Age | hrs | Client Info | | 0 | 1499 | 0 |
| Oil Changed | | Client Info | | N/A | Not Changd | N/A |
| Filter Changed | | Client Info | | N/A | Not Changd | N/A |
| Sample Status | | | | NORMAL | ABNORMAL | ATTENTION |

WEAR

All component wear rates are normal.

| PQ | UOM | Method | Limit/Abn | Current | History1 | History2 |
|--------------|--------|-------------|-----------|--------------|----------|----------|
| Iron | ppm | ASTM D5185m | >20 | 4 | 3 | 4 |
| Chromium | ppm | ASTM D5185m | >10 | <1 | <1 | <1 |
| Nickel | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185m | | 0 | 0 | 3 |
| Aluminum | ppm | ASTM D5185m | >10 | 0 | <1 | 0 |
| Lead | ppm | ASTM D5185m | >10 | <1 | <1 | <1 |
| Copper | ppm | ASTM D5185m | >75 | 1 | <1 | 1 |
| Tin | ppm | ASTM D5185m | >10 | <1 | 0 | 0 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

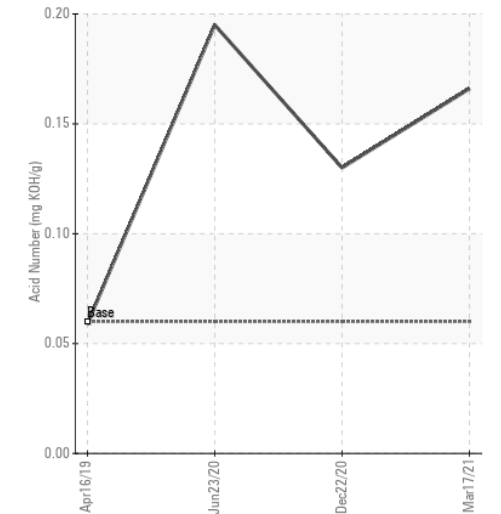
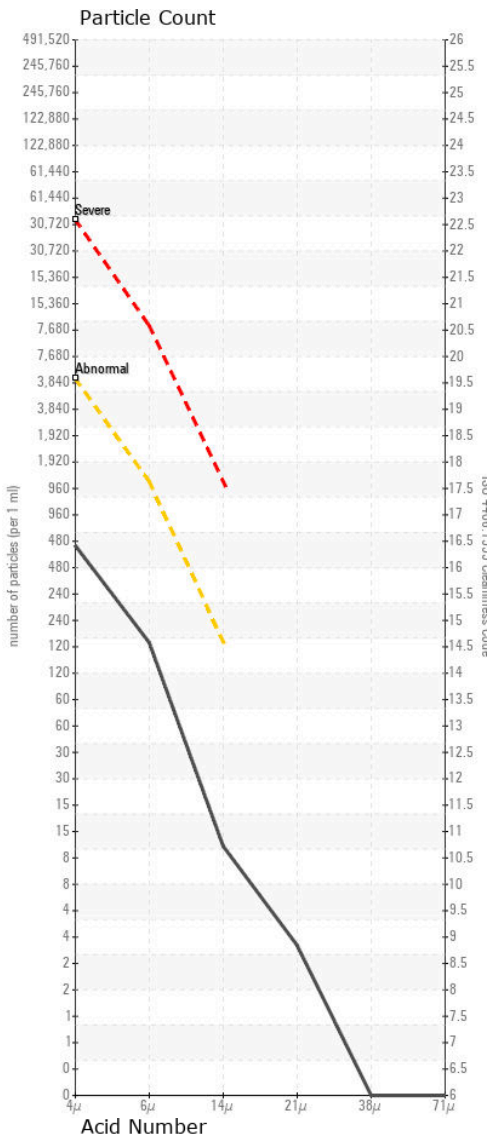
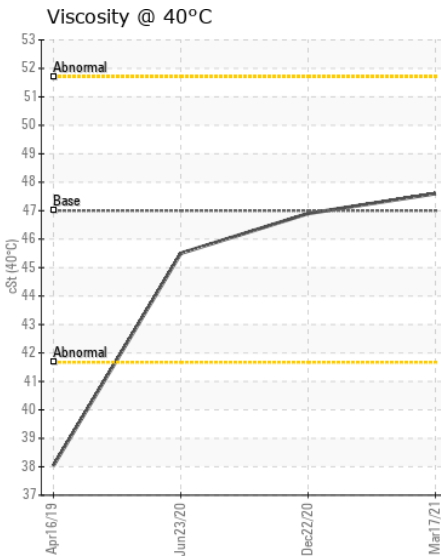
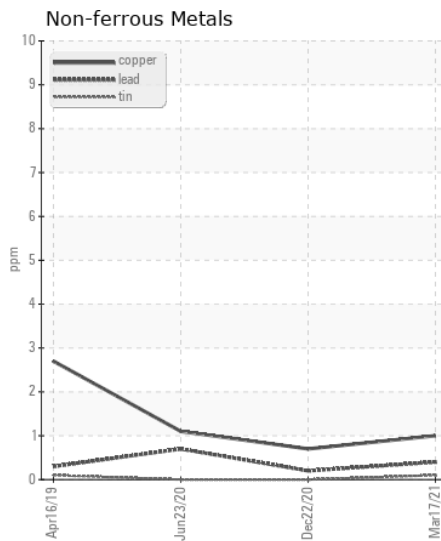
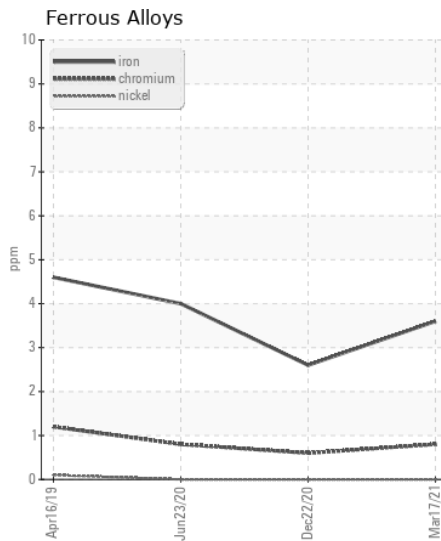
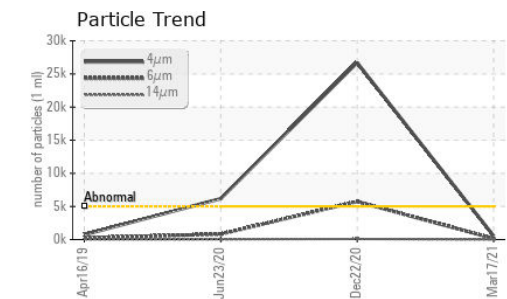
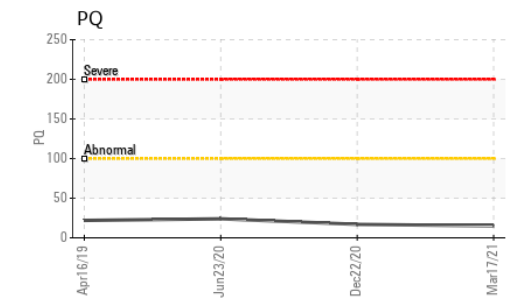
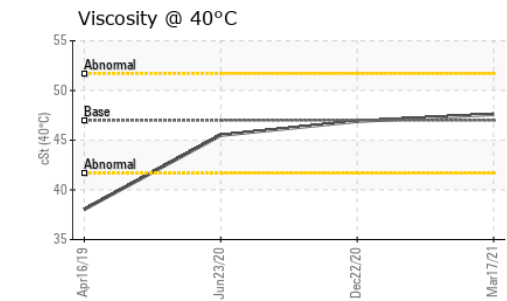
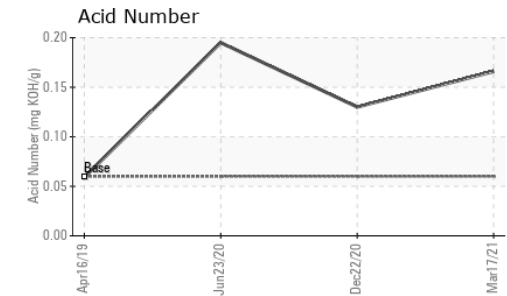
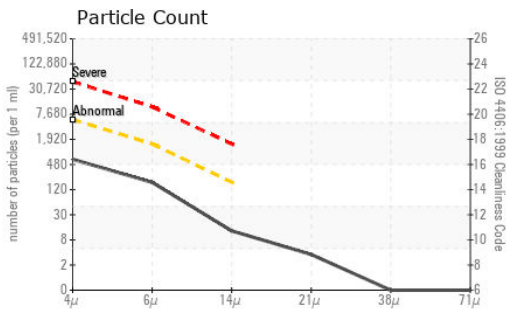
There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

| | | | | | | |
|------------------|--------|--------------|-----------|-----------------|------------|------------|
| Silicon | ppm | ASTM D5185m | >20 | <1 | <1 | 1 |
| Potassium | ppm | ASTM D5185m | >20 | 0 | 0 | <1 |
| Water | | WC Method | >0.1 | NEG | NEG | NEG |
| Particles >4µm | | ASTM D7647 | >5000 | 563 | ▲ 26700 | ● 6182 |
| Particles >6µm | | ASTM D7647 | >1300 | 158 | ▲ 5734 | 820 |
| Particles >14µm | | ASTM D7647 | >160 | 11 | 90 | 39 |
| Particles >21µm | | ASTM D7647 | >40 | 3 | 18 | 12 |
| Particles >38µm | | ASTM D7647 | >10 | 0 | 1 | 1 |
| Particles >71µm | | ASTM D7647 | >3 | 0 | 0 | 0 |
| Oil Cleanliness | | ISO 4406 (c) | >19/17/14 | 16/14/11 | ▲ 22/20/14 | ● 20/17/12 |
| Silt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Debris | scalar | *Visual | NONE | NONE | NONE | VLITE |
| 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 | <1 | 0 |
| Boron | ppm | ASTM D5185m | | 1 | 1 | <1 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | <1 |
| Molybdenum | ppm | ASTM D5185m | | <1 | <1 | <1 |
| Manganese | ppm | ASTM D5185m | | 0 | 0 | <1 |
| Magnesium | ppm | ASTM D5185m | | 2 | 2 | 3 |
| Calcium | ppm | ASTM D5185m | | 21 | 15 | 31 |
| Phosphorus | ppm | ASTM D5185m | 827 | 550 | 493 | 414 |
| Zinc | ppm | ASTM D5185m | 0 | 73 | 60 | 118 |
| Sulfur | ppm | ASTM D5185m | 13 | 885 | 727 | 1987 |
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.06 | 0.166 | 0.130 | 0.195 |
| Visc @ 40°C | cSt | ASTM D445 | 47 | 47.6 | 46.9 | 45.5 |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : JR0054455

Lab Number : 05207622

Unique Number : 9409031

Test Package : MOBCE (Additional Tests: PQ)

Received : 18 Mar 2021

Tested : 22 Mar 2021

Diagnosed : 22 Mar 2021 - Don Baldrige

JRE - HOPE MILLS/FAYETTEVILLE

5039 HWY 301 SOUTH

HOPE MILLS, NC

US 28348

Contact: FAYETTEVILLE SHOP

stephen.mullis@jamesriverequipment.com; panastasio@wearcheck.com

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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F: