



OIL ANALYSIS REPORT

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

Machine Id
B-003.1C

Component
Hydraulic System

Fluid
HIGH PERFORMANCE LUBRICANTS HYDRAULIC LIFE 46 (--- LTR)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | HPL0003839 | HPL0004439 | HPL0004015 |
| Sample Date | | Client Info | | 18 Apr 2024 | 08 Jan 2024 | 05 Oct 2023 |
| Machine Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Age | hrs | Client Info | | 0 | 0 | 0 |
| Filter Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | Not Changd | Not Changd | Not Changd |
| Filter Changed | | Client Info | | Not Changd | Not Changd | Not Changd |
| Sample Status | | | | ABNORMAL | ABNORMAL | ABNORMAL |

WEAR

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

| | | | | | | |
|--------------|--------|-------------|------|-------------|-------|------|
| Iron | ppm | ASTM D5185m | >20 | 0 | 0 | 0 |
| Chromium | ppm | ASTM D5185m | >10 | 0 | <1 | 0 |
| Nickel | ppm | ASTM D5185m | >10 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >10 | 0 | 3 | 0 |
| Lead | ppm | ASTM D5185m | >10 | 0 | <1 | 1 |
| Copper | ppm | ASTM D5185m | >75 | ▲ 96 | ▲ 106 | ▲ 94 |
| Tin | ppm | ASTM D5185m | >10 | 0 | 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

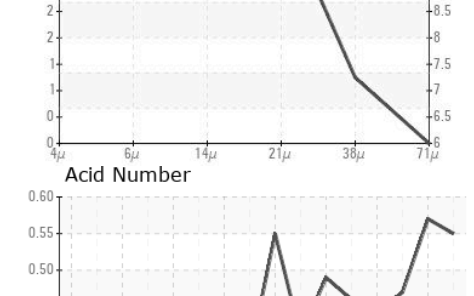
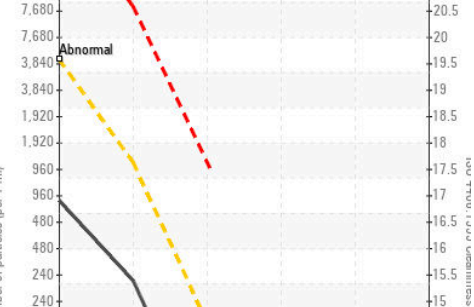
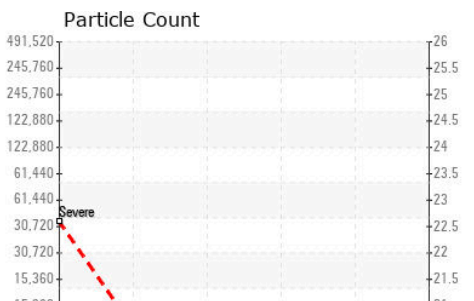
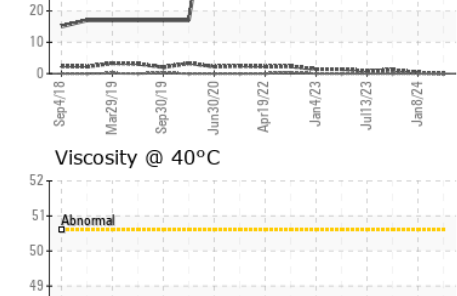
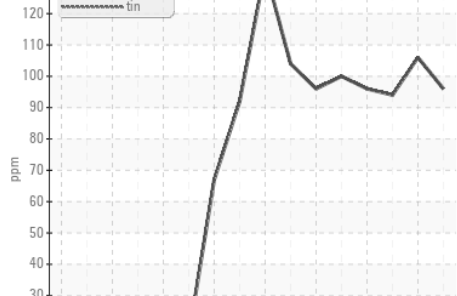
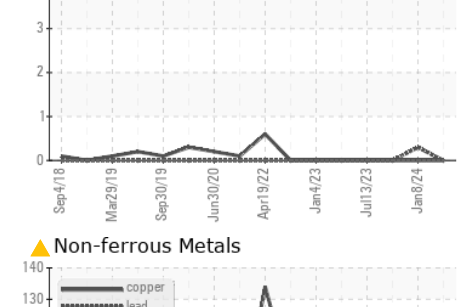
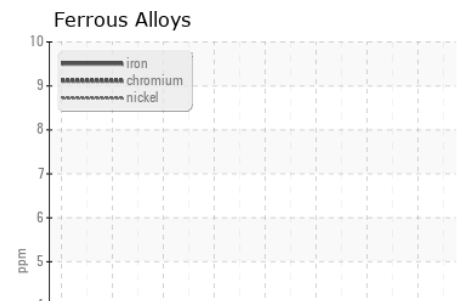
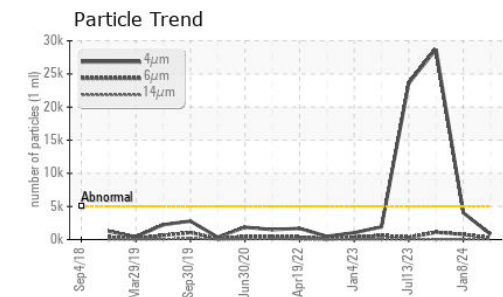
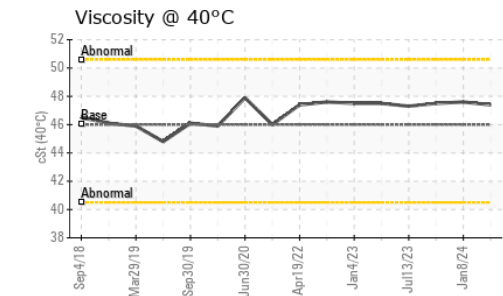
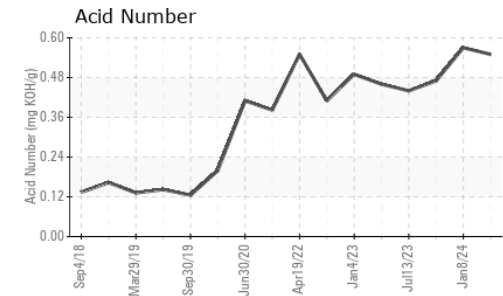
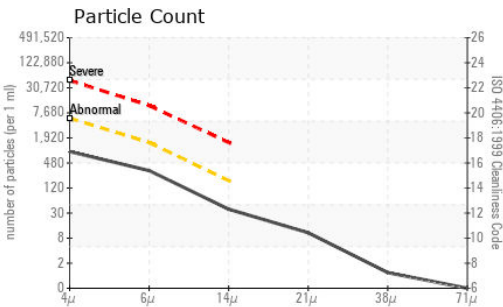
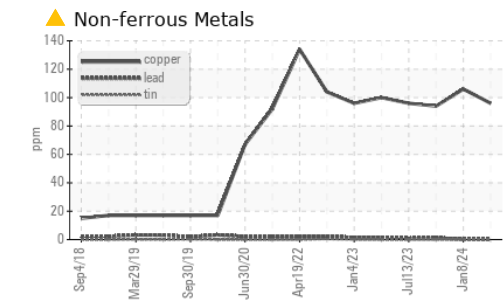
The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|--------|--------------|-----------|-----------------|----------|------------|
| Silicon | ppm | ASTM D5185m | >20 | 4 | 4 | 4 |
| Potassium | ppm | ASTM D5185m | >20 | 0 | 1 | 0 |
| Water | | WC Method | >0.1 | NEG | NEG | NEG |
| Particles >4µm | | ASTM D7647 | >5000 | 791 | 4034 | ▲ 28719 |
| Particles >6µm | | ASTM D7647 | >1300 | 277 | 769 | 1102 |
| Particles >14µm | | ASTM D7647 | >160 | 33 | 28 | 34 |
| Particles >21µm | | ASTM D7647 | >40 | 9 | 6 | 9 |
| Particles >38µm | | ASTM D7647 | >10 | 1 | 0 | 0 |
| Particles >71µm | | ASTM D7647 | >3 | 0 | 0 | 0 |
| Oil Cleanliness | | ISO 4406 (c) | >19/17/14 | 17/15/12 | 19/17/12 | ▲ 22/17/12 |
| 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 | | 1 | 0 | 1 |
| Boron | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Manganese | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Magnesium | ppm | ASTM D5185m | | 0 | <1 | <1 |
| Calcium | ppm | ASTM D5185m | | 8 | 71 | 24 |
| Phosphorus | ppm | ASTM D5185m | | 400 | 421 | 448 |
| Zinc | ppm | ASTM D5185m | | 290 | 335 | 328 |
| Sulfur | ppm | ASTM D5185m | | 20512 | 19696 | 18025 |
| Acid Number (AN) | mg KOH/g | ASTM D8045 | | 0.55 | 0.57 | 0.47 |
| Visc @ 40°C | cSt | ASTM D445 | 46 | 47.4 | 47.6 | 47.5 |



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : HPL0003839
Lab Number : 06161394
Unique Number : 10996817
Test Package : MOB 2
Received : 26 Apr 2024
Tested : 29 Apr 2024
Diagnosed : 30 Apr 2024 - Don Baldrige

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Certificate L2367
 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)