



OIL ANALYSIS REPORT

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

Machine Id
CASE 15499 CR1202 (S/N 98205)
 Component
Hydraulic System
 Fluid
AW HYDRAULIC OIL ISO 220 (--- 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.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | WC0935987 | WC0567945 | WC0401773 |
| Sample Date | | Client Info | | 16 May 2024 | 12 May 2021 | 12 Dec 2019 |
| Machine Age | hrs | Client Info | | 11866 | 9847 | 7896 |
| Oil Age | hrs | Client Info | | 1000 | 1000 | 1000 |
| Filter Age | hrs | Client Info | | 0 | 1000 | 1000 |
| Oil Changed | | Client Info | | Not Changed | Changed | Not Changed |
| Filter Changed | | Client Info | | Changed | Changed | Not Changed |
| Sample Status | | | | ABNORMAL | ATTENTION | ABNORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|------|
| Iron | ppm | ASTM D5185m | >65 | 3 | <1 | 2 |
| Chromium | ppm | ASTM D5185m | >6 | 0 | <1 | 0 |
| Nickel | ppm | ASTM D5185m | >10 | <1 | 0 | <1 |
| Titanium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185m | | <1 | <1 | <1 |
| Aluminum | ppm | ASTM D5185m | >5 | 2 | 0 | 1 |
| Lead | ppm | ASTM D5185m | >45 | 1 | <1 | <1 |
| Copper | ppm | ASTM D5185m | >120 | 3 | 2 | 4 |
| Tin | ppm | ASTM D5185m | >4 | <1 | <1 | <1 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

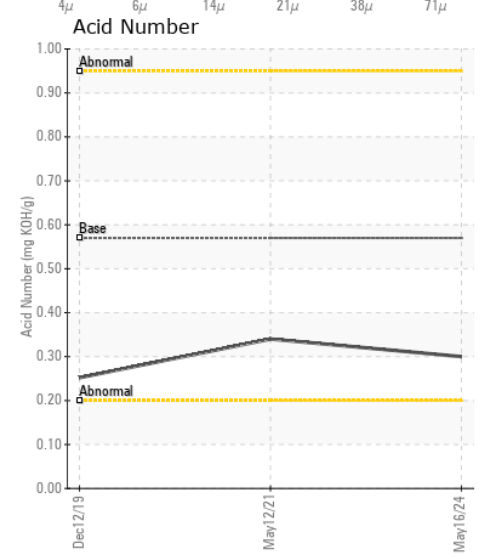
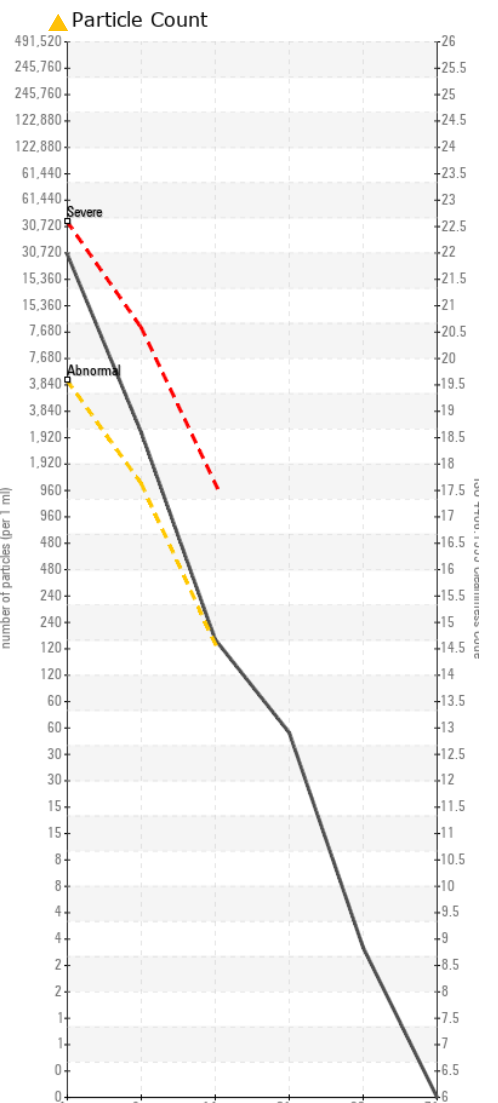
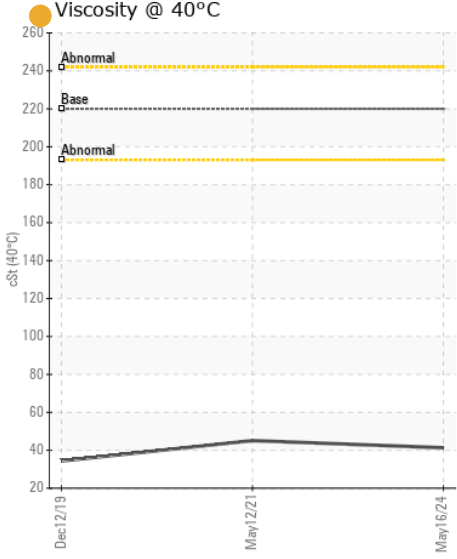
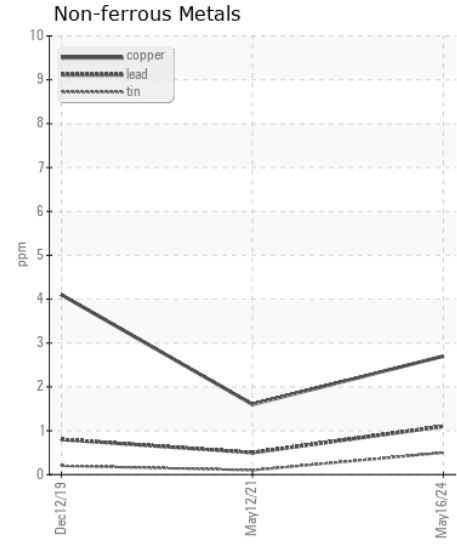
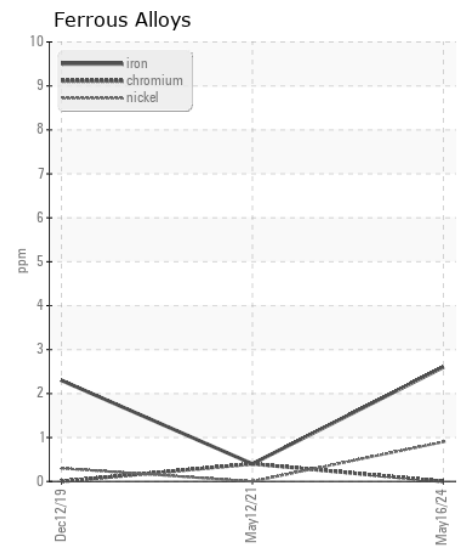
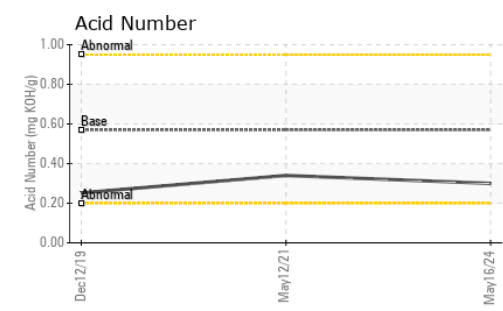
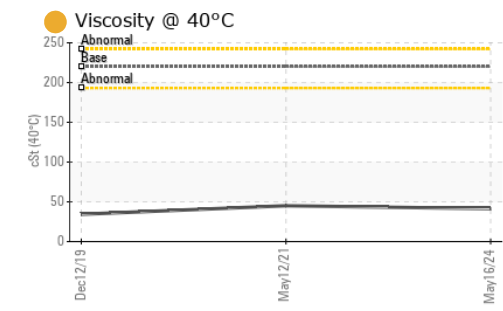
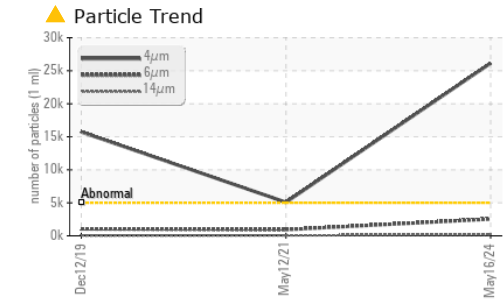
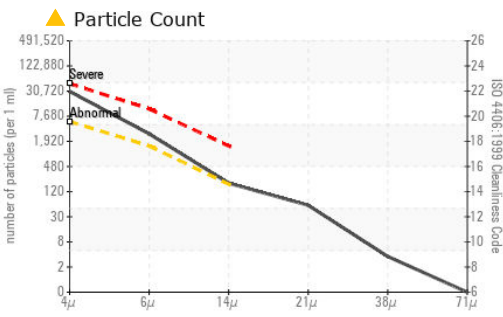
There is a high amount of particulates present in the oil.

| | | | | | | |
|------------------|--------|--------------|-----------|-------------------|------------|------------|
| Silicon | ppm | ASTM D5185m | >25 | 1 | <1 | 2 |
| Potassium | ppm | ASTM D5185m | >20 | 3 | <1 | <1 |
| Water | | WC Method | >0.1 | NEG | NEG | NEG |
| Particles >4µm | | ASTM D7647 | >5000 | ▲ 26143 | ● 5079 | ▲ 15728 |
| Particles >6µm | | ASTM D7647 | >1300 | ▲ 2540 | 928 | 1046 |
| Particles >14µm | | ASTM D7647 | >160 | ▲ 169 | 61 | 39 |
| Particles >21µm | | ASTM D7647 | >40 | ▲ 50 | 16 | 9 |
| Particles >38µm | | ASTM D7647 | >10 | 3 | 0 | 2 |
| Particles >71µm | | ASTM D7647 | >3 | 0 | 0 | 0 |
| Oil Cleanliness | | ISO 4406 (c) | >19/17/14 | ▲ 22/19/15 | ● 20/17/13 | ▲ 21/17/12 |
| 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 oil viscosity is lower than normal. Confirm oil type. The AN level is acceptable for this fluid.

| | | | | | | |
|------------------|----------|-------------|------|---------------|--------|---------|
| Sodium | ppm | ASTM D5185m | | 2 | 0 | 0 |
| Boron | ppm | ASTM D5185m | 5 | 0 | 3 | 2 |
| Barium | ppm | ASTM D5185m | 5 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 5 | <1 | 1 | <1 |
| Manganese | ppm | ASTM D5185m | | <1 | 0 | <1 |
| Magnesium | ppm | ASTM D5185m | 25 | 5 | 10 | 4 |
| Calcium | ppm | ASTM D5185m | 200 | 67 | 74 | 47 |
| Phosphorus | ppm | ASTM D5185m | 300 | 304 | 317 | 173 |
| Zinc | ppm | ASTM D5185m | 370 | 376 | 418 | 193 |
| Sulfur | ppm | ASTM D5185m | 2500 | 1661 | 1347 | 964 |
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.57 | 0.30 | 0.340 | 0.252 |
| Visc @ 40°C | cSt | ASTM D445 | 220 | ● 41.3 | ● 45.1 | ● 34.37 |



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0935987 **Received** : 28 May 2024
Lab Number : 06192757 **Tested** : 30 May 2024
Unique Number : 11049509 **Diagnosed** : 30 May 2024 - Don Baldrige
Test Package : CONST

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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)