



OIL ANALYSIS REPORT

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

Machine Id
JOHN DEERE 30211
 Component
Hydraulic System
 Fluid
JOHN DEERE HYDRAU (20 GAL)

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 | | WC0756139 | WC0671909 | WC0671621 |
| Sample Date | | Client Info | | 20 Feb 2023 | 31 Oct 2022 | 28 Apr 2022 |
| Machine Age | hrs | Client Info | | 3123 | 2849 | 2562 |
| Oil Age | hrs | Client Info | | 1000 | 787 | 2562 |
| Filter Age | hrs | Client Info | | 1000 | 787 | 562 |
| Oil Changed | | Client Info | | Changed | Not Changd | Not Changd |
| Filter Changed | | Client Info | | Changed | Not Changd | Not Changd |
| Sample Status | | | | ABNORMAL | ABNORMAL | ABNORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|------|
| Iron | ppm | ASTM D5185m | >20 | 11 | 10 | 11 |
| Chromium | ppm | ASTM D5185m | >10 | <1 | <1 | <1 |
| 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 | 1 | 1 | <1 |
| Lead | ppm | ASTM D5185m | >10 | <1 | <1 | 1 |
| Copper | ppm | ASTM D5185m | >75 | 7 | 6 | 6 |
| 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

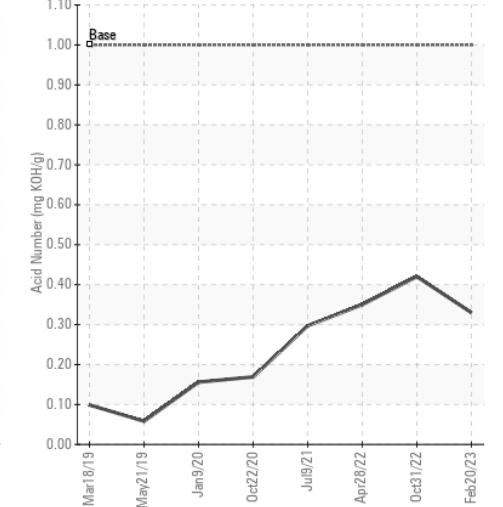
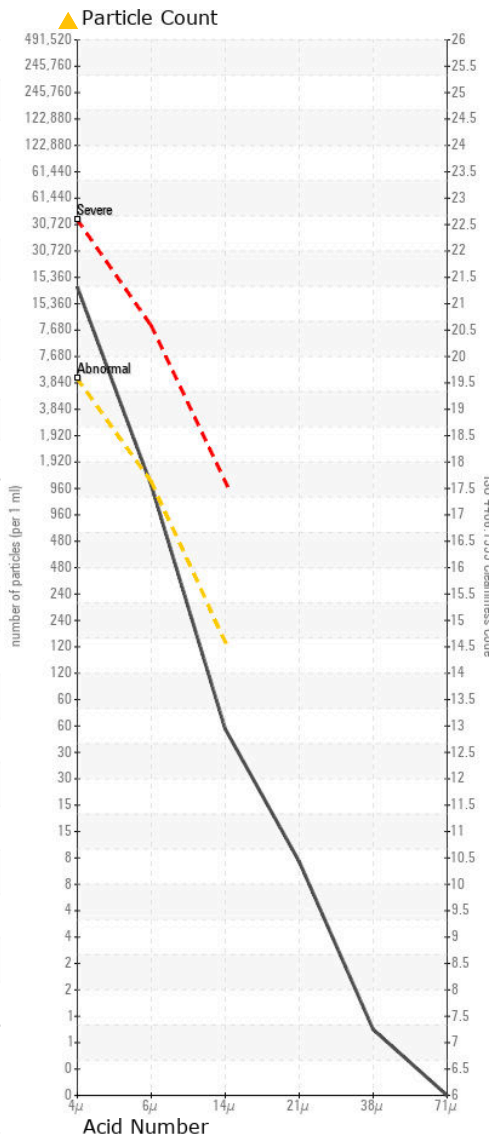
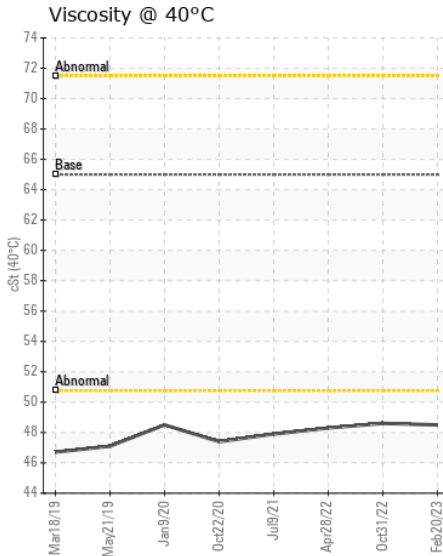
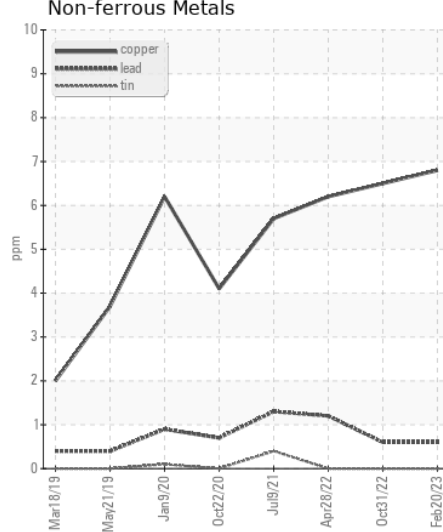
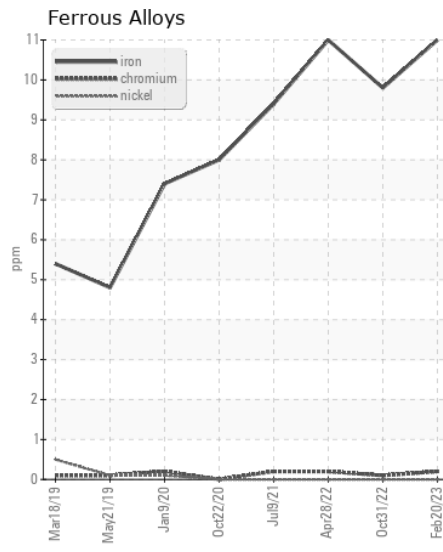
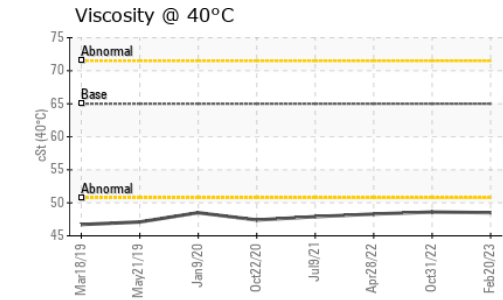
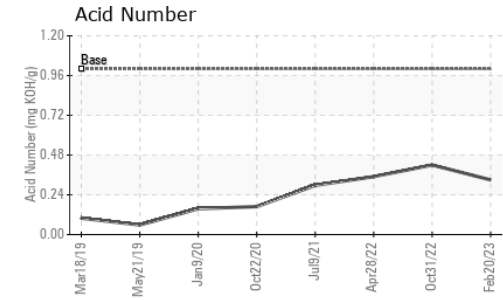
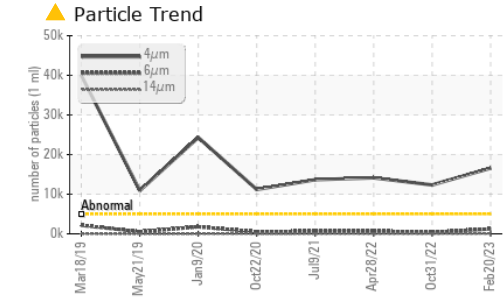
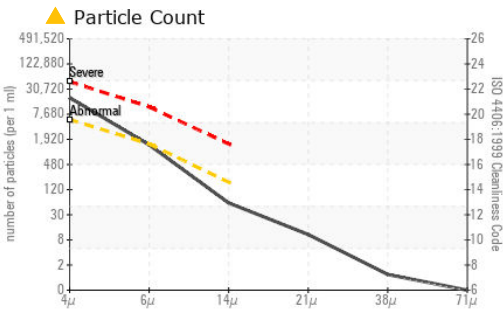
There is a high amount of silt (particulates < 14 microns in size) present in the oil.

| | | | | | | |
|------------------|--------|--------------|-----------|-------------------|------------|------------|
| Silicon | ppm | ASTM D5185m | >20 | 2 | 2 | 2 |
| Potassium | ppm | ASTM D5185m | >20 | 0 | 0 | 1 |
| Water | | WC Method | >0.1 | NEG | NEG | NEG |
| Particles >4µm | | ASTM D7647 | >5000 | ▲ 16585 | ▲ 12343 | ▲ 14131 |
| Particles >6µm | | ASTM D7647 | >1300 | 1239 | 384 | 702 |
| Particles >14µm | | ASTM D7647 | >160 | 51 | 6 | 20 |
| Particles >21µm | | ASTM D7647 | >40 | 9 | 2 | 4 |
| Particles >38µm | | ASTM D7647 | >10 | 1 | 1 | 0 |
| Particles >71µm | | ASTM D7647 | >3 | 0 | 0 | 0 |
| Oil Cleanliness | | ISO 4406 (c) | >19/17/14 | ▲ 21/17/13 | ▲ 21/16/10 | ▲ 21/17/11 |
| 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 | 0 |
| Boron | ppm | ASTM D5185m | | 0 | 0 | 4 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 1 | 2 | 1 |
| Manganese | ppm | ASTM D5185m | | <1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | | 7 | 8 | 7 |
| Calcium | ppm | ASTM D5185m | 87 | 129 | 136 | 134 |
| Phosphorus | ppm | ASTM D5185m | 727 | 419 | 446 | 426 |
| Zinc | ppm | ASTM D5185m | 900 | 176 | 176 | 177 |
| Sulfur | ppm | ASTM D5185m | 1500 | 1073 | 940 | 752 |
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 1.0 | 0.33 | 0.42 | 0.35 |
| Visc @ 40°C | cSt | ASTM D445 | 65 | 48.5 | 48.6 | 48.3 |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0756139
Lab Number : 05774810
Unique Number : 10349427
Test Package : CONST

Received : 23 Feb 2023
Tested : 24 Feb 2023
Diagnosed : 24 Feb 2023 - Angela Borella

SULLIVAN EASTERN INC
 2860 C SLATER RD
 MORRISVILLE, NC
 US 27560

Contact: SCOTT SULLIVAN
 ssullivan@sullivaneastern.com

T: (919)484-8993
 F: (919)484-2136

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)