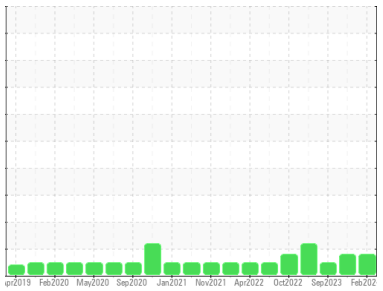
# OIL ANALYSIS REPORT

Sample Rating Trend



ISO

Area
**[W49955]**
Machine Id
## JOHN DEERE 844K 1DW844KAJJF693325
Component
**Hydraulic System**
Fluid
**JOHN DEERE HYDRAU (--- GAL)**

## DIAGNOSIS

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

**Wear**
All component wear rates are normal.

**Contamination**
There is a high amount of silt (particulates < 6 microns in size) present in the oil.

**Fluid Condition**
The AN level is acceptable for this fluid. The condition of the oils additive package is suitable for further service.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **JR0200460** | JR0179515 | JR0180831 |
| Sample Date | | Client Info | | **20 Feb 2024** | 30 Nov 2023 | 06 Sep 2023 |
| Machine Age | hrs | Client Info | | **13465** | 12982 | 12496 |
| Oil Age | hrs | Client Info | | **0** | 0 | 0 |
| Oil Changed | | Client Info | | **Not Changd** | Not Changd | Not Changd |
| Sample Status | | | | **ABNORMAL** | ABNORMAL | NORMAL |

| CONTAMINATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Water | | WC Method | >0.1 | **NEG** | NEG | NEG |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| PQ | | ASTM D8184 | | **14** | 12 | 13 |
| Iron | ppm | ASTM D5185m | >20 | **5** | 6 | 5 |
| Chromium | ppm | ASTM D5185m | >10 | **<1** | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >10 | **0** | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | **<1** | <1 | 0 |
| Silver | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >10 | **7** | 6 | 2 |
| Lead | ppm | ASTM D5185m | >10 | **0** | 0 | 0 |
| Copper | ppm | ASTM D5185m | >75 | **<1** | <1 | <1 |
| Tin | ppm | ASTM D5185m | >10 | **0** | 0 | 0 |
| Vanadium | ppm | ASTM D5185m | | **0** | <1 | 0 |
| Cadmium | ppm | ASTM D5185m | | **0** | 0 | 0 |

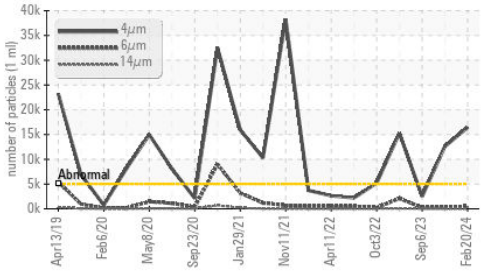
| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | | **2** | 7 | 7 |
| Barium | ppm | ASTM D5185m | | **<1** | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | **<1** | 1 | 2 |
| Manganese | ppm | ASTM D5185m | | **<1** | 0 | 0 |
| Magnesium | ppm | ASTM D5185m | | **36** | 27 | 33 |
| Calcium | ppm | ASTM D5185m | 87 | **883** | 834 | 952 |
| Phosphorus | ppm | ASTM D5185m | 727 | **666** | 639 | 757 |
| Zinc | ppm | ASTM D5185m | 900 | **909** | 756 | 966 |
| Sulfur | ppm | ASTM D5185m | 1500 | **2808** | 2576 | 3638 |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >20 | **12** | 11 | 9 |
| Sodium | ppm | ASTM D5185m | | **0** | 2 | 2 |
| Potassium | ppm | ASTM D5185m | >20 | **0** | 0 | 2 |

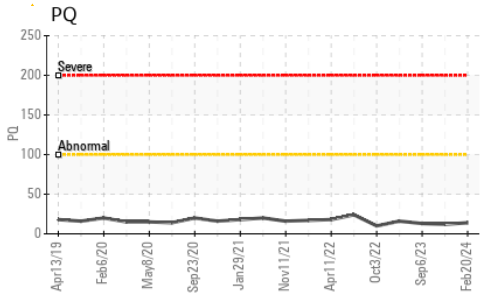
| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Particles >4µm | | ASTM D7647 | >5000 | ▲ **16426** | ▲ 12593 | 2499 |
| Particles >6µm | | ASTM D7647 | >1300 | **490** | 400 | 237 |
| Particles >14µm | | ASTM D7647 | >160 | **25** | 22 | 11 |
| Particles >21µm | | ASTM D7647 | >40 | **5** | 3 | 3 |
| Particles >38µm | | ASTM D7647 | >10 | **0** | 0 | 0 |
| Particles >71µm | | ASTM D7647 | >3 | **0** | 0 | 0 |
| Oil Cleanliness | | ISO 4406 (c) | >19/17/14 | ▲ **21/16/12** | ▲ 21/16/12 | 18/15/11 |

# OIL ANALYSIS REPORT

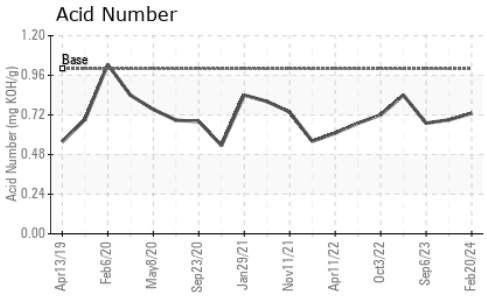
Particle Trend



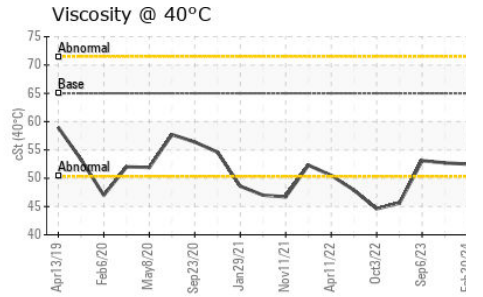

PQ



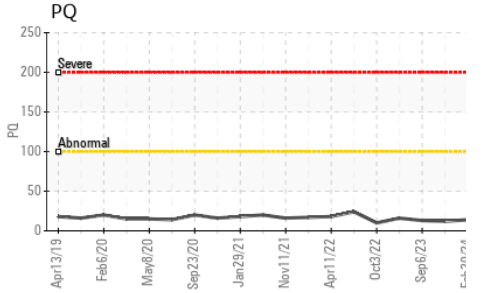

Acid Number




Viscosity @ 40°C




PQ




| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 1.0 | **0.73** | 0.69 | 0.67 |

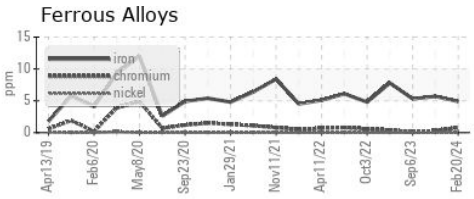
| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | LIGHT |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| 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 |
| Free Water | scalar | *Visual | | **NEG** | NEG | NEG |

| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D445 | 65 | **52.5** | 52.7 | 53.1 |

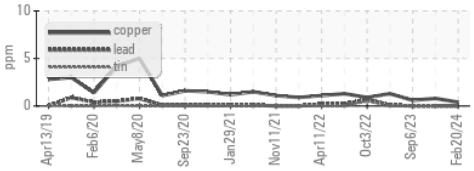
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Color | | |  | | |
| Bottom | | |  | | |

## GRAPHS

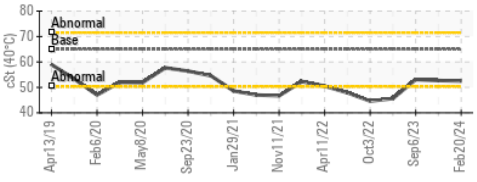
Ferrous Alloys



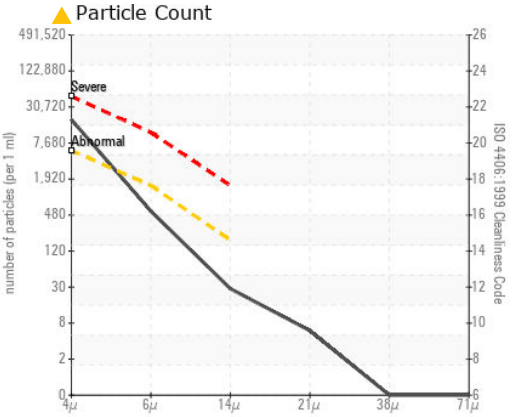

Non-ferrous Metals



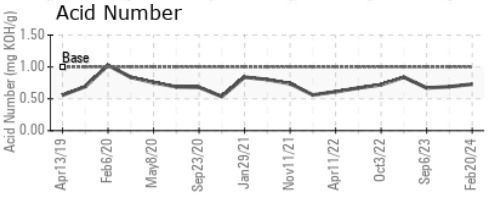

Viscosity @ 40°C




Particle Count




Acid Number




**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : JR0200460
**Lab Number** : 06101526
**Unique Number** : 10899756
**Test Package** : CONST ( Additional Tests: PQ )

**Received** : 27 Feb 2024
**Tested** : 28 Feb 2024
**Diagnosed** : 29 Feb 2024 - Jonathan Hester

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)*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