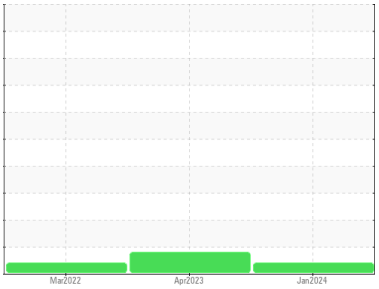
# OIL ANALYSIS REPORT

Sample Rating Trend




**VIS DEBRIS**

Machine Id
## JOHN DEERE 324G 1T0324GKAMJ400490
Component
**Hydraulic System**
Fluid
**JOHN DEERE HYDRAU (--- QTS)**

## DIAGNOSIS

**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. We were unable to perform a particle count due to a high concentration of particles present in this sample.

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

**Contamination**
Moderate concentration of visible dirt/debris present in the oil.

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

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **JR0200220** | JR0164406 | JR0125407 |
| Sample Date | | Client Info | | **15 Jan 2024** | 17 Apr 2023 | 22 Mar 2022 |
| Machine Age | hrs | Client Info | | **1491** | 1013 | 456 |
| Oil Age | hrs | Client Info | | **0** | 1013 | 0 |
| Oil Changed | | Client Info | | **Not Changd** | Changed | Not Changd |
| Sample Status | | | | **ABNORMAL** | ATTENTION | ATTENTION |

| 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** | 11 | 20 |
| Iron | ppm | ASTM D5185m | >20 | **19** | 18 | 12 |
| Chromium | ppm | ASTM D5185m | >10 | **2** | 1 | <1 |
| Nickel | ppm | ASTM D5185m | >10 | **0** | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Silver | ppm | ASTM D5185m | | **0** | 0 | <1 |
| Aluminum | ppm | ASTM D5185m | >10 | **3** | 4 | 2 |
| Lead | ppm | ASTM D5185m | >10 | **1** | 0 | 2 |
| Copper | ppm | ASTM D5185m | >75 | **7** | 9 | 8 |
| Tin | ppm | ASTM D5185m | >10 | **0** | 0 | <1 |
| Vanadium | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | | **0** | 0 | 0 |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | | **0** | 0 | 6 |
| Barium | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | **<1** | <1 | 2 |
| Manganese | ppm | ASTM D5185m | | **0** | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | | **14** | 4 | 9 |
| Calcium | ppm | ASTM D5185m | 87 | **168** | 171 | 176 |
| Phosphorus | ppm | ASTM D5185m | 727 | **638** | 582 | 624 |
| Zinc | ppm | ASTM D5185m | 900 | **848** | 797 | 900 |
| Sulfur | ppm | ASTM D5185m | 1500 | **1835** | 1989 | 1692 |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >20 | **2** | 2 | 2 |
| Sodium | ppm | ASTM D5185m | | **1** | 2 | 0 |
| Potassium | ppm | ASTM D5185m | >20 | **2** | <1 | 2 |

| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Particles >4µm | | ASTM D7647 | >5000 | --- | ▲ 8139 | ▲ 5876 |
| Particles >6µm | | ASTM D7647 | >1300 | --- | 223 | 205 |
| Particles >14µm | | ASTM D7647 | >160 | --- | 21 | 23 |
| Particles >21µm | | ASTM D7647 | >40 | --- | 7 | 6 |
| Particles >38µm | | ASTM D7647 | >10 | --- | 0 | 1 |
| Particles >71µm | | ASTM D7647 | >3 | --- | 0 | 0 |
| Oil Cleanliness | | ISO 4406 (c) | >19/17/14 | --- | ▲ 20/15/12 | ▲ 20/15/12 |

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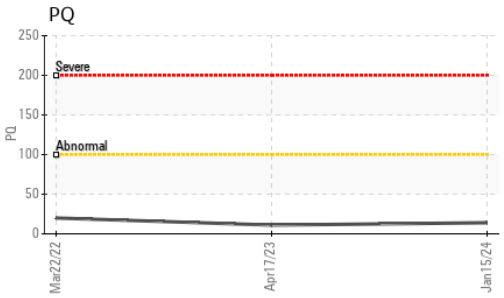
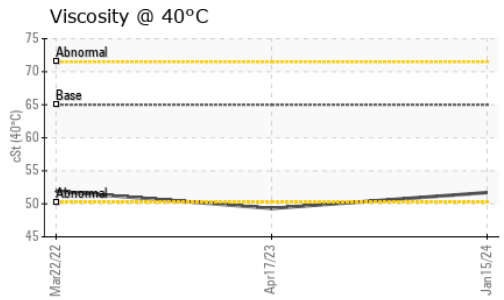
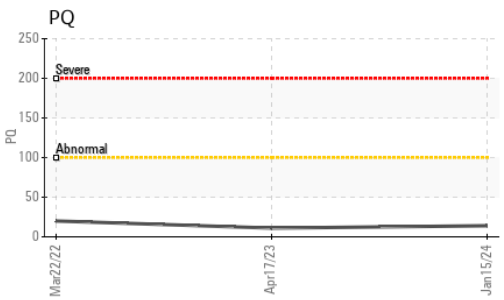


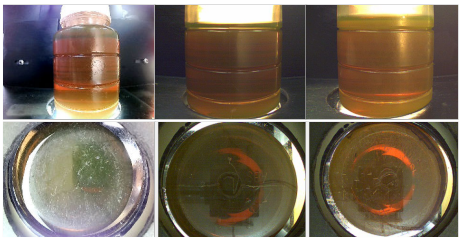




| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 1.0 | **0.68** | 0.75 | 0.66 |

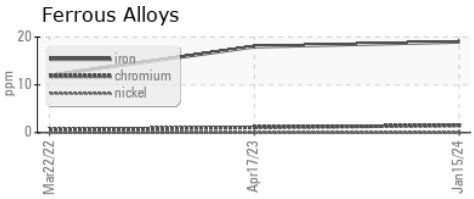
| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **LIGHT** | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Silt | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Debris | scalar | *Visual | NONE | ▲ **MODER** | 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 |

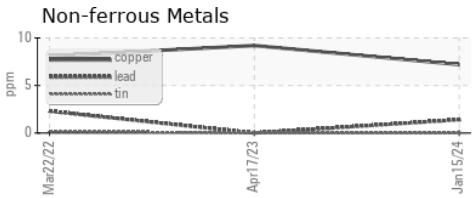
| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D445 | 65 | **51.7** | 49.3 | 51.9 |

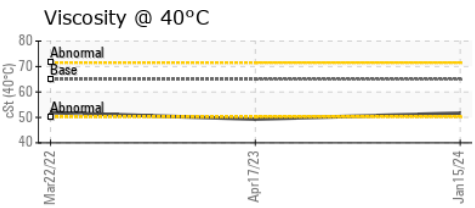
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Color | | | | | |
| Bottom | | | | | |

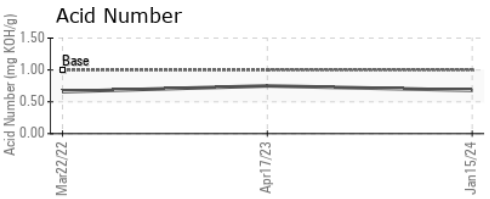


## GRAPHS




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : JR0200220 **Recieved** : 17 Jan 2024
**Lab Number** : 06062533 **Diagnosed** : 18 Jan 2024
**Unique Number** : 10833915 **Diagnostician** : Don Baldridge
**Test Package** : CONST ( Additional Tests: PQ )

*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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