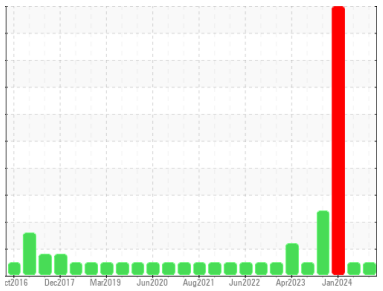
JAMES RIVER EQUIPMENT

# OIL ANALYSIS REPORT

Sample Rating Trend




NORMAL

Machine Id
## JOHN DEERE 844K 1DW844KXLFD672634
Component
**Diesel Engine**
Fluid
**JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- GAL)**

## DIAGNOSIS

**Recommendation**
Resample at the next service interval to monitor.

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

**Contamination**
There is no indication of any contamination in the oil.

**Fluid Condition**
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **JR0212325** | JR0200172 | JR0200296 |
| Sample Date | | Client Info | | **13 May 2024** | 24 Jan 2024 | 22 Jan 2024 |
| Machine Age | hrs | Client Info | | **11959** | 11585 | 11582 |
| Oil Age | hrs | Client Info | | **0** | 1 | 99 |
| Oil Changed | | Client Info | | **Changed** | Changed | Changed |
| Sample Status | | | | **NORMAL** | NORMAL | SEVERE |

| CONTAMINATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Fuel | | WC Method | >2.1 | **<1.0** | <1.0 | <1.0 |
| Water | | WC Method | >0.21 | **NEG** | NEG | NEG |
| Glycol | | WC Method | | **NEG** | NEG | ▲ 0.10 |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >51 | **19** | 3 | ▲ 75 |
| Chromium | ppm | ASTM D5185m | >11 | **<1** | <1 | 5 |
| Nickel | ppm | ASTM D5185m | >5 | **<1** | <1 | 4 |
| Titanium | ppm | ASTM D5185m | | **24** | <1 | 5 |
| Silver | ppm | ASTM D5185m | >3 | **0** | 0 | <1 |
| Aluminum | ppm | ASTM D5185m | >31 | **5** | 5 | ● 10 |
| Lead | ppm | ASTM D5185m | >26 | **2** | <1 | 4 |
| Copper | ppm | ASTM D5185m | >26 | **8** | <1 | 6 |
| Tin | ppm | ASTM D5185m | >4 | **2** | <1 | 3 |
| Vanadium | ppm | ASTM D5185m | | **<1** | <1 | <1 |
| Cadmium | ppm | ASTM D5185m | | **<1** | <1 | 1 |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | | **169** | 275 | 531 |
| Barium | ppm | ASTM D5185m | | **<1** | 0 | 2 |
| Molybdenum | ppm | ASTM D5185m | | **168** | 222 | 207 |
| Manganese | ppm | ASTM D5185m | | **<1** | <1 | 2 |
| Magnesium | ppm | ASTM D5185m | | **624** | 757 | 545 |
| Calcium | ppm | ASTM D5185m | | **1405** | 1221 | 851 |
| Phosphorus | ppm | ASTM D5185m | | **902** | 866 | 659 |
| Zinc | ppm | ASTM D5185m | | **1064** | 989 | 807 |
| Sulfur | ppm | ASTM D5185m | | **3326** | 3140 | 2243 |

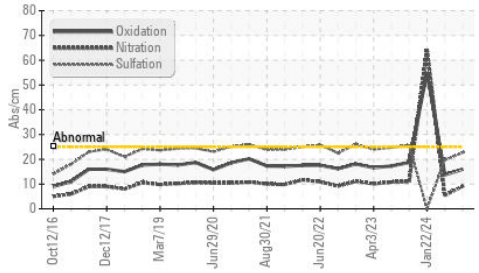
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >22 | **8** | 8 | ▲ 109 |
| Sodium | ppm | ASTM D5185m | >31 | **10** | 6 | ▲ 1597 |
| Potassium | ppm | ASTM D5185m | >20 | **5** | 2 | ▲ 183 |

| INFRA-RED | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Soot % | % | *ASTM D7844 | >3 | **1.3** | 0 | 0.9 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | **9.1** | 5.4 | 64.4 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | **22.7** | 19.7 | 0.0 |

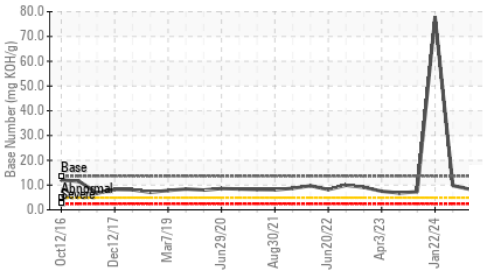
| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | **16.0** | 13.7 | 55.1 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 13.6 | **8.2** | 9.8 | 77.7 |

# OIL ANALYSIS REPORT

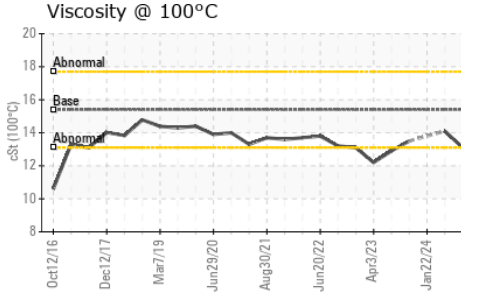
FT-IR (Direct Trend)




Base Number




Viscosity @ 100°C

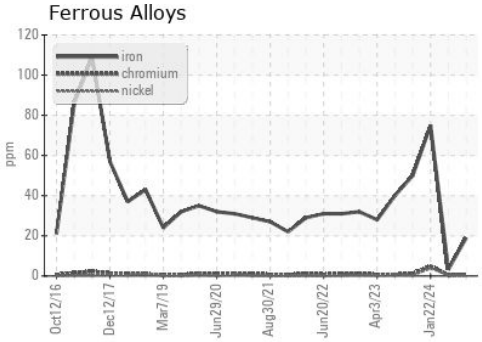



| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Silt | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Debris | scalar | *Visual | NONE | **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 | >0.21 | **NEG** | NEG | NEG |
| Free Water | scalar | *Visual | | **NEG** | NEG | NEG |

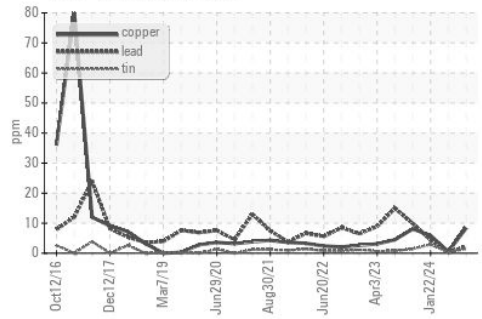
| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | **13.1** | 14.1 | --- |

## GRAPHS

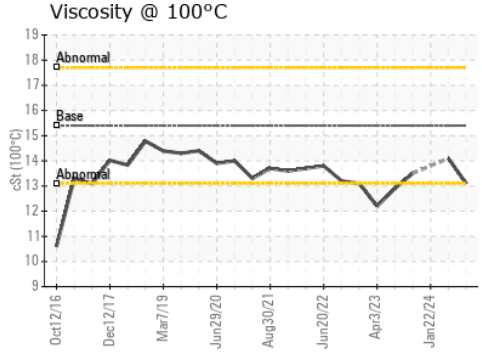
Ferrous Alloys



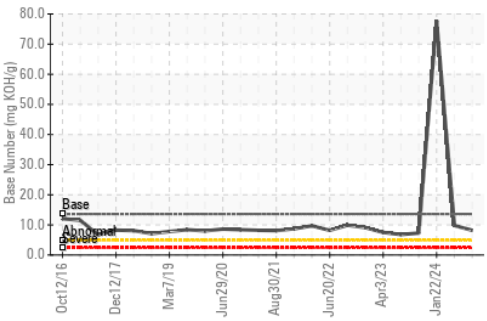

Non-ferrous Metals




Viscosity @ 100°C




Base Number




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : JR0212325
**Lab Number** : 06178524
**Unique Number** : 11029850
**Test Package** : CONST ( Additional Tests: TBN )

**Received** : 14 May 2024
**Tested** : 15 May 2024
**Diagnosed** : 15 May 2024 - Wes Davis

*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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