James River Equipment

OIL ANALYSIS REPORT

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

Machine Id
## JOHN DEERE 350G 1FF350GXEMF815178
Component
## Diesel Engine
Fluid
## JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (28 QTS)

## RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

## WEAR

Cylinder, crank, or cam shaft wear is indicated. Valve wear is indicated.

## CONTAMINATION

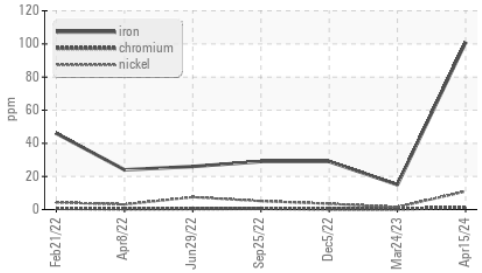
There is no indication of any contamination in the oil.

## FLUID CONDITION

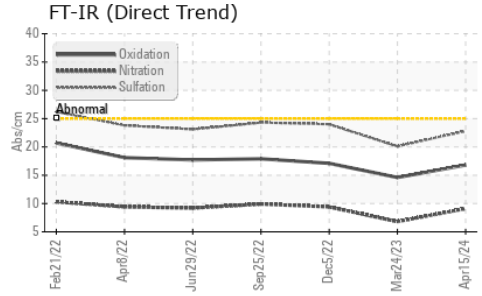
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | JR0211188 | JR0166561 | JR0154350 |
| Sample Date | | Client Info | | 15 Apr 2024 | 24 Mar 2023 | 05 Dec 2022 |
| Machine Age | hrs | Client Info | | 3984 | 3458 | 2936 |
| Oil Age | hrs | Client Info | | 3462 | 522 | 419 |
| Filter Age | hrs | Client Info | | 3462 | 522 | 0 |
| Oil Changed | | Client Info | | Changed | Not Changd | Changed |
| Filter Changed | | Client Info | | Changed | Not Changd | Changed |
| Sample Status | | | | ABNORMAL | NORMAL | NORMAL |
| Iron | ppm | ASTM D5185m | >51 | ▲ 101 | 15 | 29 |
| Chromium | ppm | ASTM D5185m | >11 | 1 | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >5 | ▲ 11 | 2 | 4 |
| Titanium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Silver | ppm | ASTM D5185m | >3 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >31 | 5 | 3 | 2 |
| Lead | ppm | ASTM D5185m | >26 | 1 | 0 | <1 |
| Copper | ppm | ASTM D5185m | >26 | 10 | 1 | 4 |
| Tin | ppm | ASTM D5185m | >4 | <1 | 0 | <1 |
| Vanadium | ppm | ASTM D5185m | | <1 | <1 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Silicon | ppm | ASTM D5185m | >22 | 8 | 8 | 8 |
| Potassium | ppm | ASTM D5185m | >20 | 23 | 2 | 2 |
| Fuel | | WC Method | >2.1 | <1.0 | <1.0 | <1.0 |
| Water | | WC Method | >0.21 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | *ASTM D7844 | >3 | 0.6 | 0.2 | 0.5 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 9.1 | 6.8 | 9.4 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 22.8 | 20.1 | 24.0 |
| 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 |
| Sodium | ppm | ASTM D5185m | >31 | 6 | 3 | 2 |
| Boron | ppm | ASTM D5185m | | 160 | 311 | 196 |
| Barium | ppm | ASTM D5185m | | 0 | 3 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 240 | 250 | 257 |
| Manganese | ppm | ASTM D5185m | | 1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | | 777 | 783 | 868 |
| Calcium | ppm | ASTM D5185m | | 1460 | 1380 | 1569 |
| Phosphorus | ppm | ASTM D5185m | | 867 | 896 | 897 |
| Zinc | ppm | ASTM D5185m | | 1011 | 1044 | 1150 |
| Sulfur | ppm | ASTM D5185m | | 3076 | 3171 | 3415 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 16.8 | 14.6 | 17.1 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 13.6 | 8.7 | 10.4 | 9.8 |
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | 13.4 | 13.8 | 14.2 |

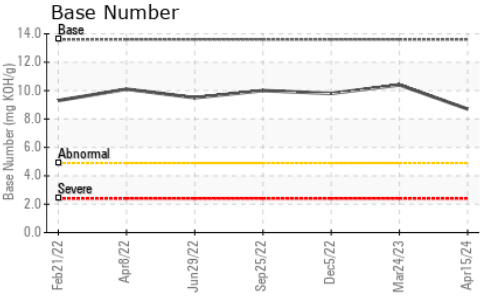
Ferrous Alloys



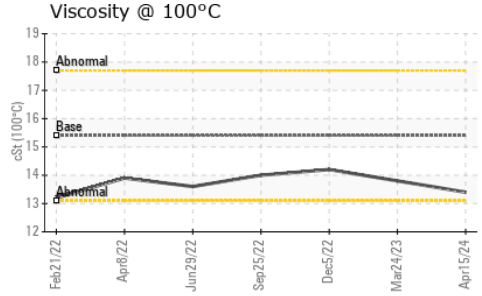

FT-IR (Direct Trend)



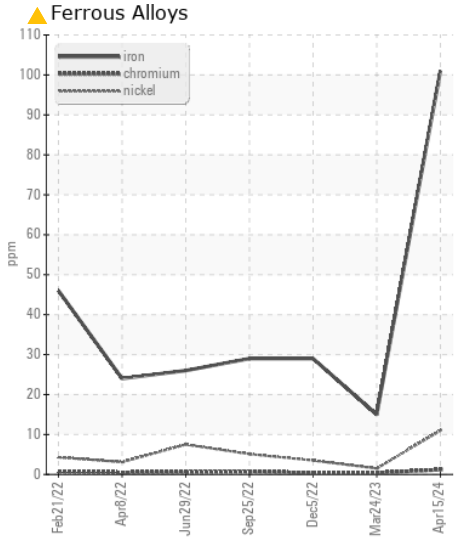

Base Number



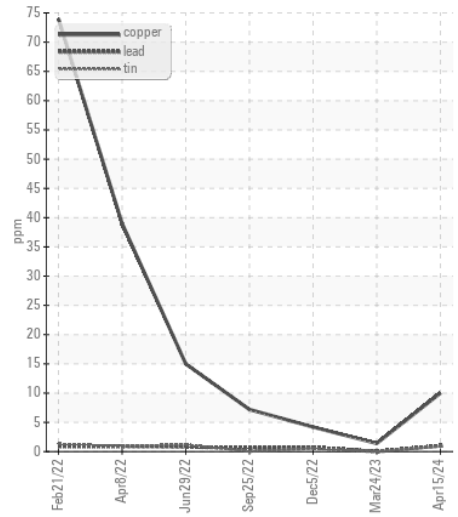

Viscosity @ 100°C



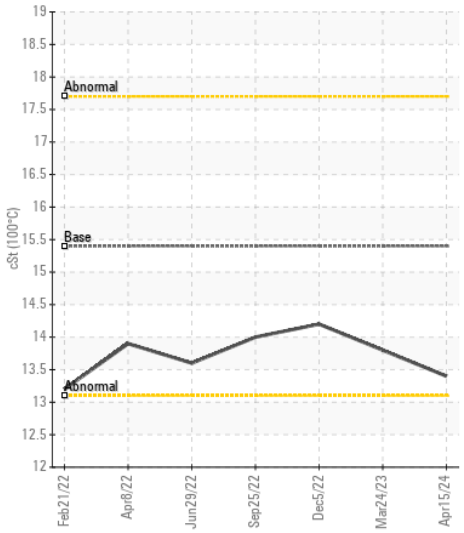

Ferrous Alloys



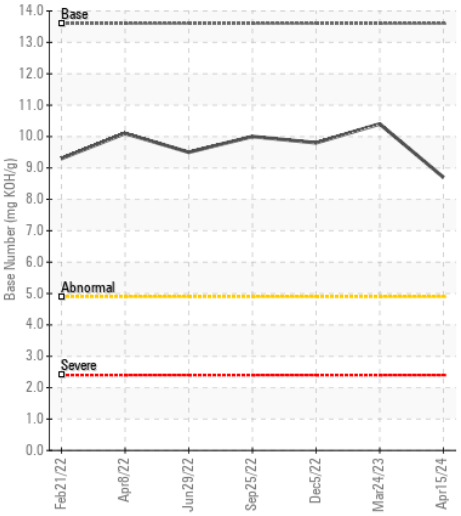

Non-ferrous Metals




Viscosity @ 100°C




Base Number




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : JR0211188 **Received** : 16 Apr 2024
**Lab Number** : 06150883 **Tested** : 17 Apr 2024
**Unique Number** : 10980961 **Diagnosed** : 19 Apr 2024 - Don Baldridge
**Test Package** : CONST ( Additional Tests: TBN )

*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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