James River Equipment

OIL ANALYSIS REPORT

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

Machine Id
## JOHN DEERE 210G 1FF210GXCKF527819
Component
## Diesel Engine
Fluid
## SHELL 15W40 (--- GAL)

## RECOMMENDATION

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

## WEAR

Cylinder, crank, or cam shaft wear is indicated.

## CONTAMINATION

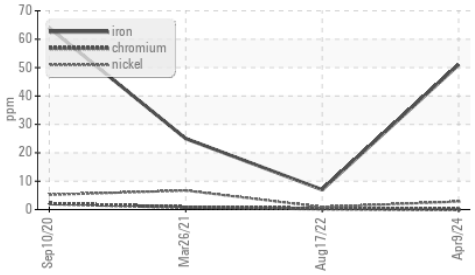
There is no indication of any contamination in the oil.

## FLUID CONDITION

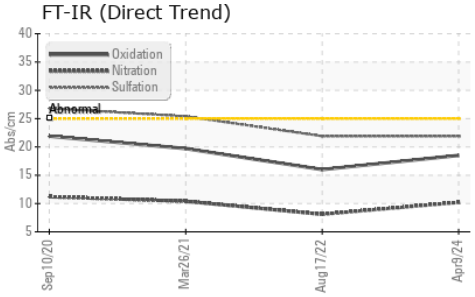
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | JR0207888 | JR0105208 | JR0082882 |
| Sample Date | | Client Info | | 09 Apr 2024 | 17 Aug 2022 | 26 Mar 2021 |
| Machine Age | hrs | Client Info | | 3638 | 2671 | 896 |
| Oil Age | hrs | Client Info | | 0 | 30 | 424 |
| Filter Age | hrs | Client Info | | 0 | 30 | 424 |
| Oil Changed | | Client Info | | Changed | N/A | Changed |
| Filter Changed | | Client Info | | Changed | N/A | Changed |
| Sample Status | | | | ABNORMAL | NORMAL | NORMAL |
| Iron | ppm | ASTM D5185m | >51 | ▲ 51 | 7 | 25 |
| Chromium | ppm | ASTM D5185m | >11 | 0 | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >5 | 3 | <1 | 7 |
| Titanium | ppm | ASTM D5185m | | 0 | 0 | <1 |
| Silver | ppm | ASTM D5185m | >3 | 0 | <1 | <1 |
| Aluminum | ppm | ASTM D5185m | >31 | 2 | 3 | <1 |
| Lead | ppm | ASTM D5185m | >26 | 0 | <1 | <1 |
| Copper | ppm | ASTM D5185m | >26 | 3 | <1 | 44 |
| Tin | ppm | ASTM D5185m | >4 | 0 | <1 | 1 |
| Vanadium | ppm | ASTM D5185m | | 0 | <1 | <1 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Silicon | ppm | ASTM D5185m | >22 | 6 | 6 | 3 |
| Potassium | ppm | ASTM D5185m | >20 | 0 | 2 | 3 |
| 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 | 0.9 | 0.3 | 0.7 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 10.2 | 8.1 | 10.4 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 21.9 | 21.9 | 25.4 |
| 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 | >150 | 5 | 2 | 3 |
| Boron | ppm | ASTM D5185m | | 28 | 213 | 177 |
| Barium | ppm | ASTM D5185m | | 0 | 2 | <1 |
| Molybdenum | ppm | ASTM D5185m | | 53 | 231 | 218 |
| Manganese | ppm | ASTM D5185m | | 0 | <1 | 1 |
| Magnesium | ppm | ASTM D5185m | | 566 | 766 | 669 |
| Calcium | ppm | ASTM D5185m | | 1810 | 1360 | 1712 |
| Phosphorus | ppm | ASTM D5185m | | 1126 | 877 | 931 |
| Zinc | ppm | ASTM D5185m | | 1310 | 1077 | 1042 |
| Sulfur | ppm | ASTM D5185m | | 3669 | 3171 | 2666 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 18.5 | 16.0 | 19.7 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | | 7.7 | 10.5 | 9 |
| Visc @ 100°C | cSt | ASTM D445 | | 14.0 | 14.1 | 14.0 |

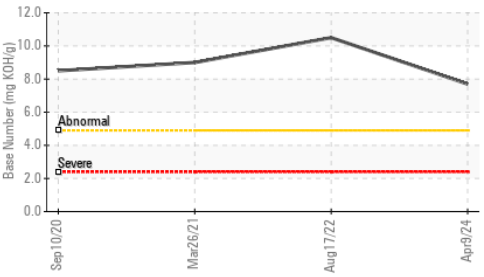
Ferrous Alloys



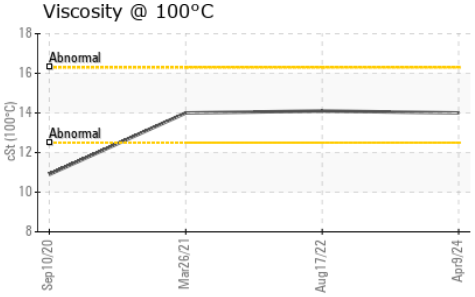

FT-IR (Direct Trend)



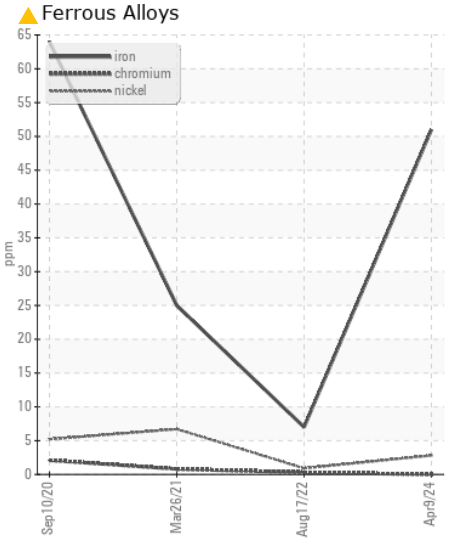

Base Number



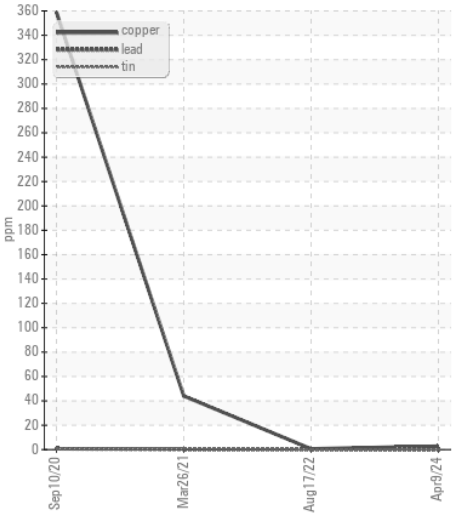

Viscosity @ 100°C



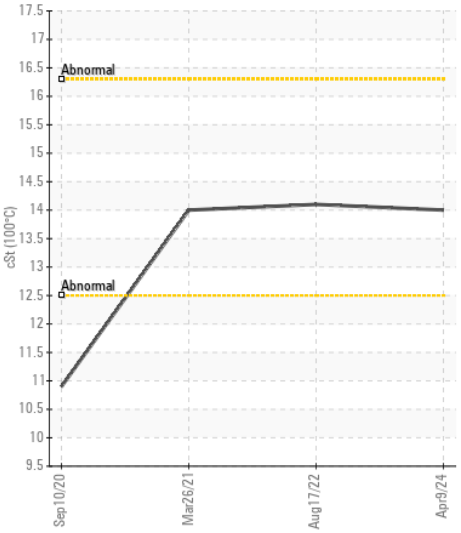

Ferrous Alloys




Non-ferrous Metals




Viscosity @ 100°C

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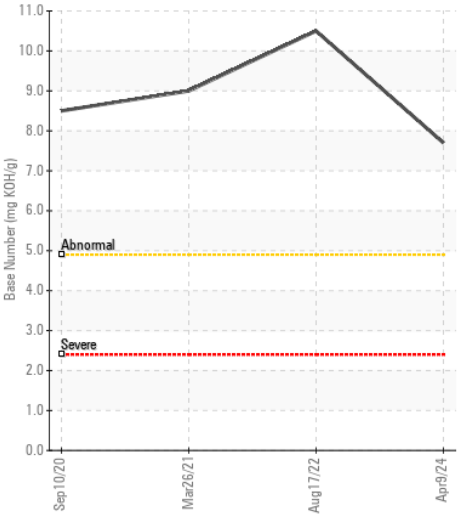


Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : JR0207888 **Received** : 12 Apr 2024
**Lab Number** : 06146991 **Tested** : 15 Apr 2024
**Unique Number** : 10977069 **Diagnosed** : 15 Apr 2024 - Sean Felton
**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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