James River Equipment

OIL ANALYSIS REPORT

| | |
|---|---|
| WEAR | NORMAL |
| CONTAMINATION | NORMAL |
| FLUID CONDITION | MARGINAL |

Machine Id
## JOHN DEERE 844K 1DW844KXKGF674415
Component
## Diesel Engine
Fluid
## JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- QTS)

### RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

### WEAR

All component wear rates are normal.

### CONTAMINATION

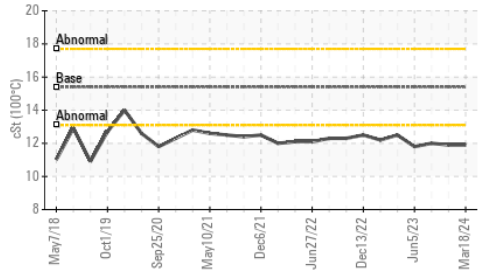
Fuel content negligible. No other contaminants were detected in the oil.

### FLUID CONDITION

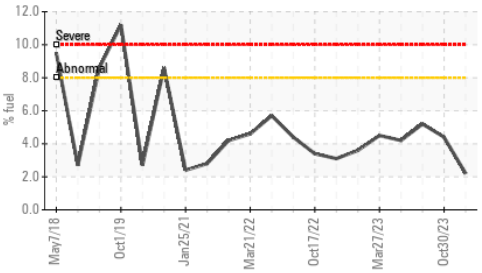
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | JR0199964 | JR0180428 | JR0166067 |
| Sample Date | | Client Info | | 18 Mar 2024 | 30 Oct 2023 | 07 Aug 2023 |
| Machine Age | hrs | Client Info | | 17940 | 17515 | 17001 |
| Oil Age | hrs | Client Info | | 0 | 0 | 0 |
| Filter Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | Changed | Changed | Changed |
| Filter Changed | | Client Info | | Changed | Changed | Changed |
| Sample Status | | | | MARGINAL | MARGINAL | MARGINAL |
| Iron | ppm | ASTM D5185m | >51 | 13 | 10 | 9 |
| Chromium | ppm | ASTM D5185m | >11 | <1 | <1 | 0 |
| Nickel | ppm | ASTM D5185m | >5 | 2 | <1 | <1 |
| Titanium | ppm | ASTM D5185m | | <1 | <1 | 1 |
| Silver | ppm | ASTM D5185m | >3 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >31 | 11 | 9 | 5 |
| Lead | ppm | ASTM D5185m | >26 | <1 | 0 | 1 |
| Copper | ppm | ASTM D5185m | >26 | 3 | 5 | 5 |
| Tin | ppm | ASTM D5185m | >4 | <1 | <1 | <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 | 9 | 8 | 6 |
| Potassium | ppm | ASTM D5185m | >20 | 3 | 3 | <1 |
| Fuel | % | ASTM D3524 | >8.0 | 2.2 | 4.4 | 5.2 |
| Water | | WC Method | >0.21 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | *ASTM D7844 | >3 | 0.2 | 0.2 | 0.3 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 9.3 | 9.6 | 9.4 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 21.9 | 21.4 | 22.2 |
| 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 | 4 | 4 | 3 |
| Boron | ppm | ASTM D5185m | | 240 | 180 | 182 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 251 | 236 | 253 |
| Manganese | ppm | ASTM D5185m | | <1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | | 847 | 814 | 894 |
| Calcium | ppm | ASTM D5185m | | 1427 | 1358 | 1481 |
| Phosphorus | ppm | ASTM D5185m | | 1052 | 925 | 971 |
| Zinc | ppm | ASTM D5185m | | 1177 | 1103 | 1173 |
| Sulfur | ppm | ASTM D5185m | | 3510 | 3227 | 4159 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 16.6 | 16.2 | 16.3 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 13.6 | 8.1 | 8.0 | 8.1 |
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | ▲ 11.9 | ▲ 11.9 | ▲ 12.0 |

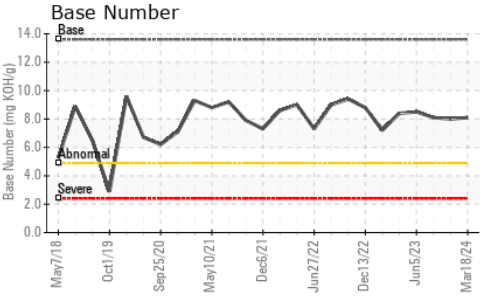
Viscosity @ 100°C



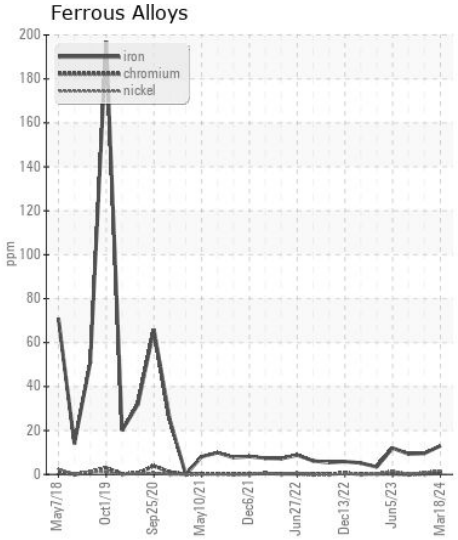

Fuel Dilution



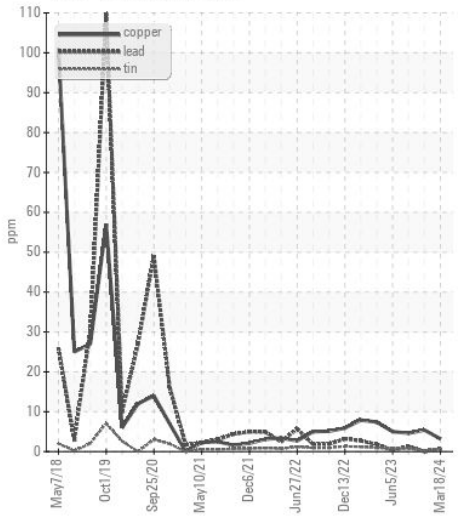

Base Number



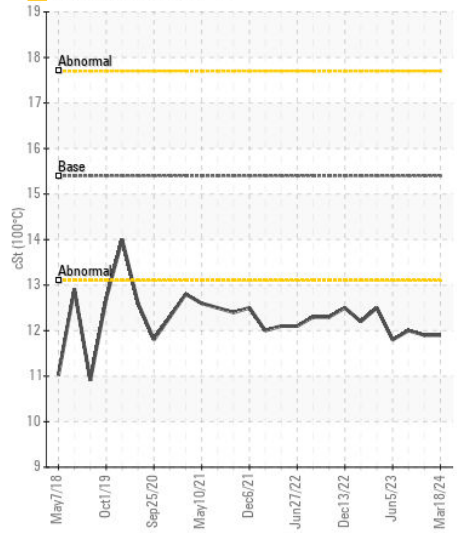

Ferrous Alloys



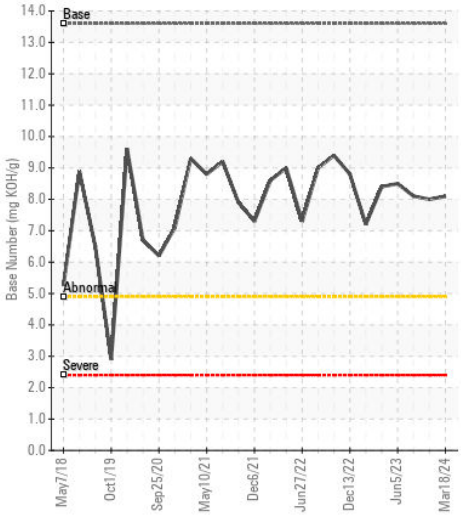

Non-ferrous Metals




Viscosity @ 100°C




Base Number




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : JR0199964 **Received** : 21 Mar 2024
**Lab Number** : 06125512 **Tested** : 27 Mar 2024
**Unique Number** : 10939663 **Diagnosed** : 27 Mar 2024 - Jonathan Hester
**Test Package** : CONST ( Additional Tests: FUELDILUTION, PercentFuel, 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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