James River Equipment

OIL ANALYSIS REPORT

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

Area
**[W21131-ADAMS]**
Machine Id
**JOHN DEERE 2032R 1LV2032RCJJ104316**
Component
**Diesel Engine**
Fluid
**JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

## WEAR

Metal levels are typical for a new component breaking in.

## CONTAMINATION

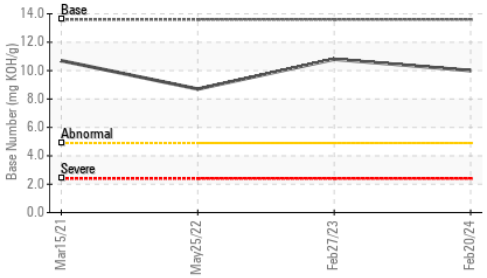
There is no indication of any contamination in the oil.

## FLUID CONDITION

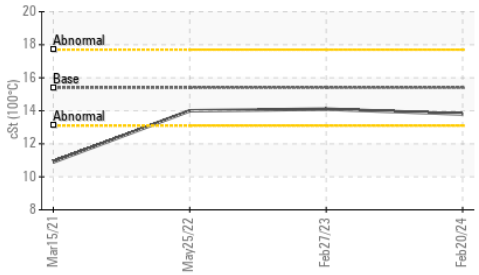
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | JR0204402 | JR0163995 | JR0131744 |
| Sample Date | | Client Info | | 20 Feb 2024 | 27 Feb 2023 | 25 May 2022 |
| Machine Age | hrs | Client Info | | 443 | 389 | 332 |
| Oil Age | hrs | Client Info | | 443 | 0 | 0 |
| Filter Age | hrs | Client Info | | 443 | 0 | 0 |
| Oil Changed | | Client Info | | Changed | Changed | Changed |
| Filter Changed | | Client Info | | Changed | Changed | Changed |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |
| Iron | ppm | ASTM D5185m | >51 | 6 | 8 | 16 |
| Chromium | ppm | ASTM D5185m | >11 | 0 | 0 | <1 |
| Nickel | ppm | ASTM D5185m | >5 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Silver | ppm | ASTM D5185m | >3 | 0 | 0 | <1 |
| Aluminum | ppm | ASTM D5185m | >31 | 4 | 3 | 4 |
| Lead | ppm | ASTM D5185m | >26 | <1 | 0 | <1 |
| Copper | ppm | ASTM D5185m | >26 | 1 | 2 | 6 |
| Tin | ppm | ASTM D5185m | >4 | 0 | 0 | <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 | 17 | 8 | 13 |
| Potassium | ppm | ASTM D5185m | >20 | 0 | <1 | 0 |
| 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 | 0.1 | 0.1 | 0.2 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 6.8 | 7.4 | 8.0 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 19.3 | 19.6 | 20.5 |
| 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 | 2 | 2 | 3 |
| Boron | ppm | ASTM D5185m | | 296 | 285 | 275 |
| Barium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 240 | 251 | 245 |
| Manganese | ppm | ASTM D5185m | | <1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | | 780 | 843 | 819 |
| Calcium | ppm | ASTM D5185m | | 1362 | 1460 | 1436 |
| Phosphorus | ppm | ASTM D5185m | | 851 | 883 | 852 |
| Zinc | ppm | ASTM D5185m | | 962 | 1090 | 1033 |
| Sulfur | ppm | ASTM D5185m | | 2801 | 3665 | 3125 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 14.4 | 14.3 | 15.5 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 13.6 | 10.0 | 10.8 | 8.7 |
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | 13.8 | 14.1 | 14.0 |

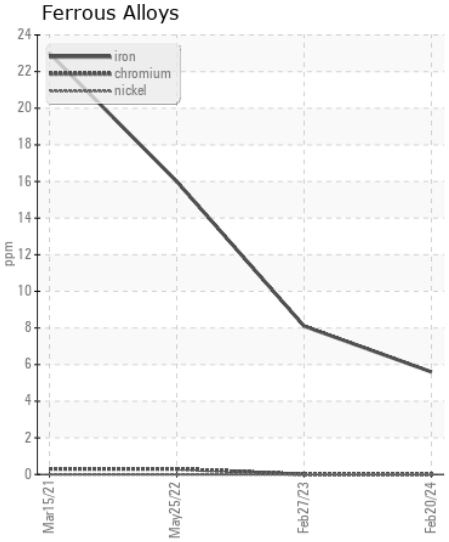
Base Number



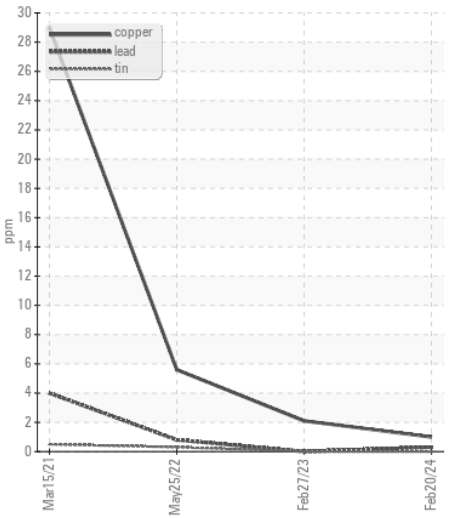

Viscosity @ 100°C



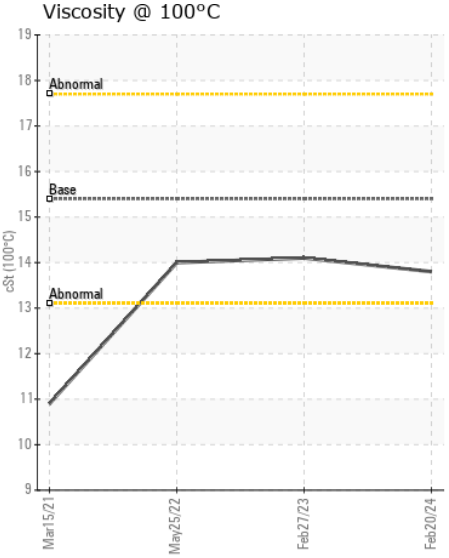

Ferrous Alloys



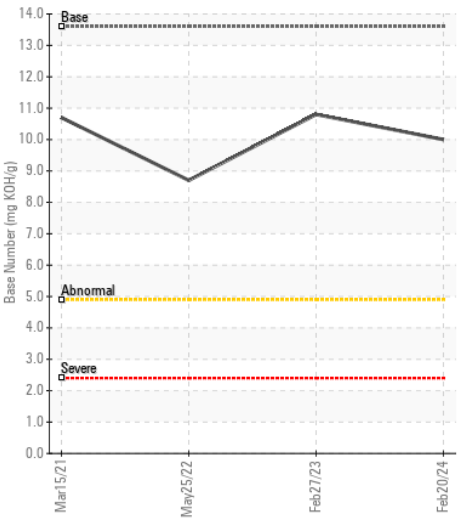

Non-ferrous Metals




Viscosity @ 100°C




Base Number




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : JR0204402
**Lab Number** : 06099565
**Unique Number** : 10897795
**Test Package** : CONST ( Additional Tests: TBN )

**Received** : 26 Feb 2024
**Tested** : 27 Feb 2024
**Diagnosed** : 27 Feb 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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