



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

Machine Id
JOHN DEERE 250G 1FF250GXVFF609867
 Component
Diesel Engine
 Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- LTR)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | JR0194722 | JR0157214 | JR0062561 |
| Sample Date | | Client Info | | 13 Dec 2023 | 20 Dec 2022 | 18 Sep 2020 |
| Machine Age | hrs | Client Info | | 4500 | 4060 | 3429 |
| Oil Age | hrs | Client Info | | 0 | 294 | 0 |
| Filter Age | hrs | Client Info | | 0 | 294 | 0 |
| Oil Changed | | Client Info | | N/A | Changed | Changed |
| Filter Changed | | Client Info | | N/A | Changed | Changed |
| Sample Status | | | | ABNORMAL | ABNORMAL | ABNORMAL |

WEAR

The iron level has decreased, but is still abnormal. Cylinder, crank, or cam shaft wear is indicated.

| | | | | | | |
|--------------|--------|-------------|------|--------------|-------|-------|
| Iron | ppm | ASTM D5185m | >51 | ▲ 91 | ▲ 109 | ▲ 109 |
| Chromium | ppm | ASTM D5185m | >11 | 1 | 1 | 1 |
| Nickel | ppm | ASTM D5185m | >5 | 4 | 2 | ▲ 6 |
| Titanium | ppm | ASTM D5185m | | 0 | <1 | <1 |
| Silver | ppm | ASTM D5185m | >3 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >31 | 6 | 5 | 0 |
| Lead | ppm | ASTM D5185m | >26 | 0 | <1 | <1 |
| Copper | ppm | ASTM D5185m | >26 | 2 | 7 | 5 |
| Tin | ppm | ASTM D5185m | >4 | <1 | 0 | <1 |
| Vanadium | ppm | ASTM D5185m | | <1 | 0 | <1 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

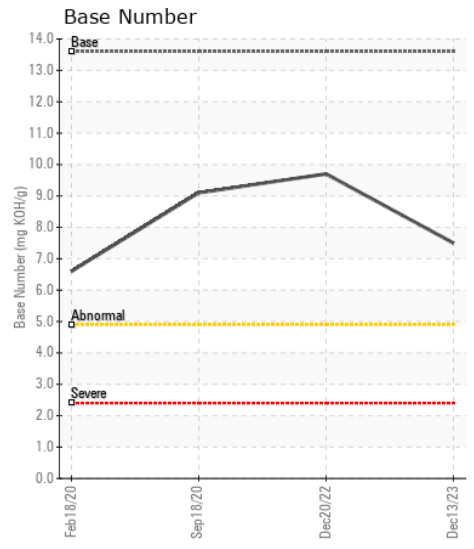
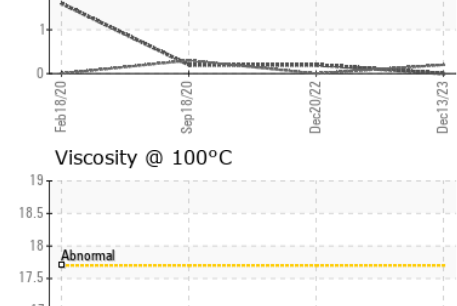
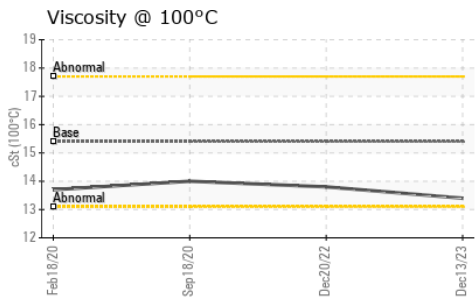
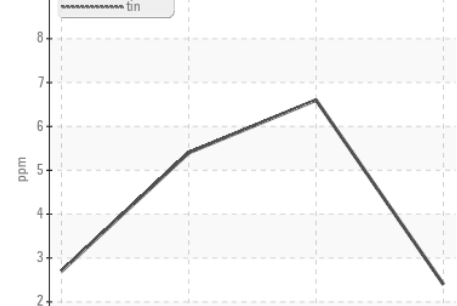
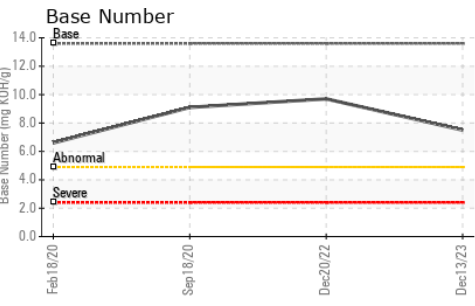
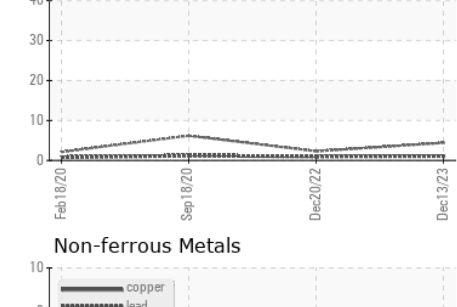
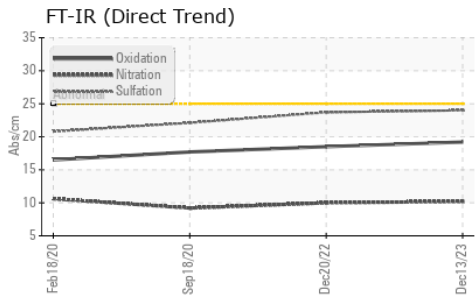
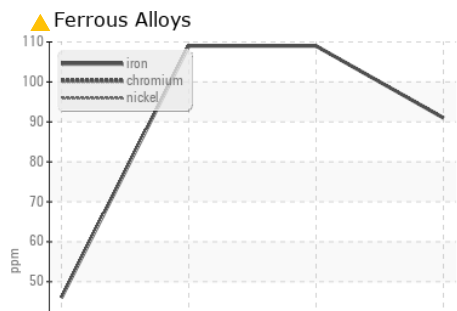
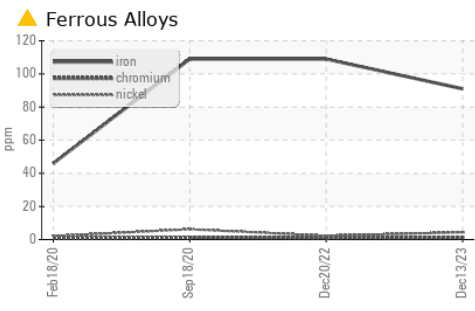
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >22 | 10 | 9 | 9 |
| Potassium | ppm | ASTM D5185m | >20 | 3 | 6 | 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 | 0.4 | 0.3 | 0.2 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 10.2 | 10.0 | 9.2 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 24.0 | 23.7 | 22.1 |
| 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 |

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.

| | | | | | | |
|------------------|----------|-------------|------|-------------|------|------|
| Sodium | ppm | ASTM D5185m | >31 | 2 | 0 | 5 |
| Boron | ppm | ASTM D5185m | | 131 | 157 | 230 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | <1 |
| Molybdenum | ppm | ASTM D5185m | | 214 | 239 | 244 |
| Manganese | ppm | ASTM D5185m | | 1 | 1 | 2 |
| Magnesium | ppm | ASTM D5185m | | 767 | 817 | 784 |
| Calcium | ppm | ASTM D5185m | | 1508 | 1492 | 1336 |
| Phosphorus | ppm | ASTM D5185m | | 887 | 947 | 836 |
| Zinc | ppm | ASTM D5185m | | 1120 | 1141 | 965 |
| Sulfur | ppm | ASTM D5185m | | 2932 | 3756 | 2485 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 19.2 | 18.5 | 17.7 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 13.6 | 7.5 | 9.7 | 9.1 |
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | 13.4 | 13.8 | 14.0 |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0194722 **Received** : 14 Dec 2023
Lab Number : 06034433 **Tested** : 15 Dec 2023
Unique Number : 10789662 **Diagnosed** : 18 Dec 2023 - Don Baldrige
Test Package : CONST (Additional Tests: TBN)

JRE - ASHEVILLE
 101 BRUCE DRIVE
 ASHEVILLE, NC
 US 28806

Contact: Randy Warren
 randy.warren@jamesriverequipment.com

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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