



Machine Id
JOHN DEERE 317G 1T0317GJPLJ387517
 Component
Diesel Engine
 Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 0W40 (--- GAL)

RECOMMENDATION

We advise that you check for the source of the coolant leak. Check for low coolant level. We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|----------|
| Sample Number | | Client Info | | JR0199117 | JR0110816 | --- |
| Sample Date | | Client Info | | 08 Jan 2024 | 03 Dec 2021 | --- |
| Machine Age | hrs | Client Info | | 1844 | 513 | --- |
| Oil Age | hrs | Client Info | | 1844 | 0 | --- |
| Filter Age | hrs | Client Info | | 0 | 0 | --- |
| Oil Changed | | Client Info | | Changed | Changed | --- |
| Filter Changed | | Client Info | | N/A | Changed | --- |
| Sample Status | | | | SEVERE | NORMAL | --- |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|-----|
| Iron | ppm | ASTM D5185m | >51 | 41 | 15 | --- |
| Chromium | ppm | ASTM D5185m | >11 | 2 | <1 | --- |
| Nickel | ppm | ASTM D5185m | >5 | 2 | <1 | --- |
| Titanium | ppm | ASTM D5185m | | <1 | <1 | --- |
| Silver | ppm | ASTM D5185m | >3 | 0 | 0 | --- |
| Aluminum | ppm | ASTM D5185m | >31 | ▲ 16 | 6 | --- |
| Lead | ppm | ASTM D5185m | >26 | 1 | <1 | --- |
| Copper | ppm | ASTM D5185m | >26 | 7 | 16 | --- |
| Tin | ppm | ASTM D5185m | >4 | <1 | <1 | --- |
| Vanadium | ppm | ASTM D5185m | | 0 | <1 | --- |
| White Metal | scalar | *Visual | NONE | NONE | NONE | --- |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | --- |

CONTAMINATION

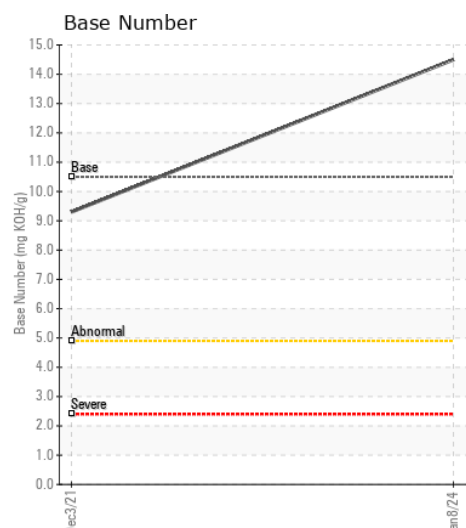
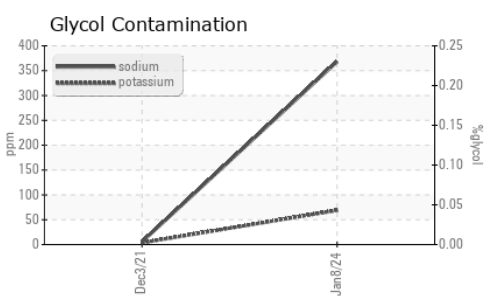
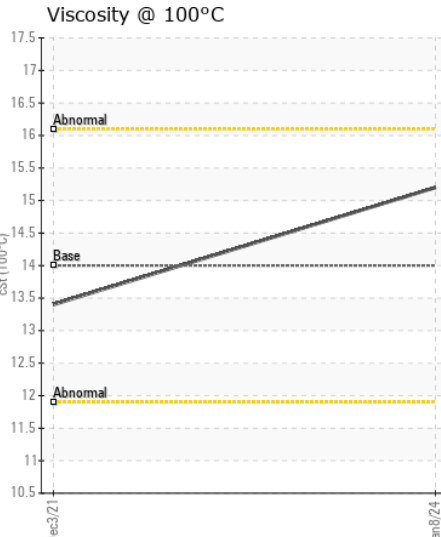
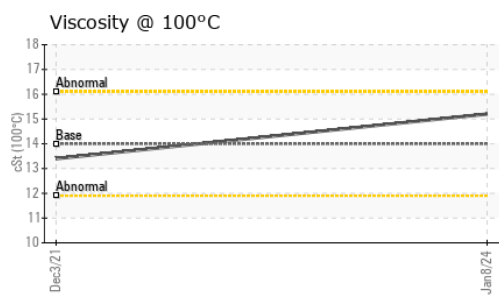
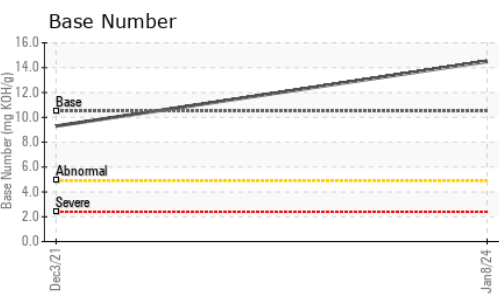
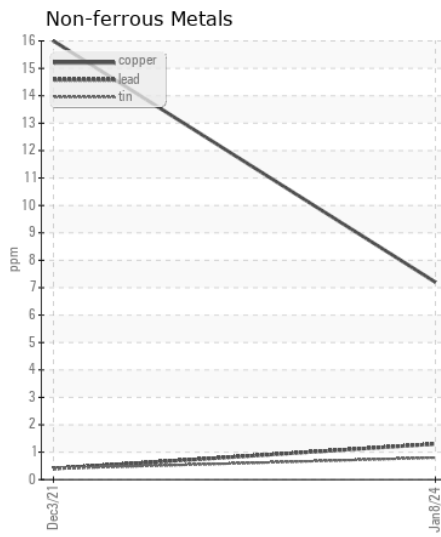
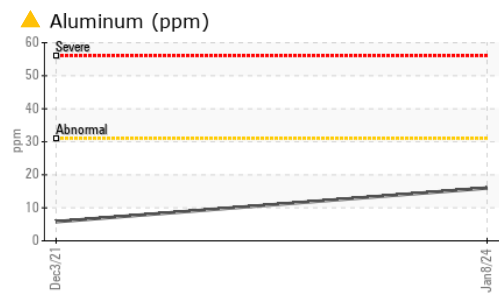
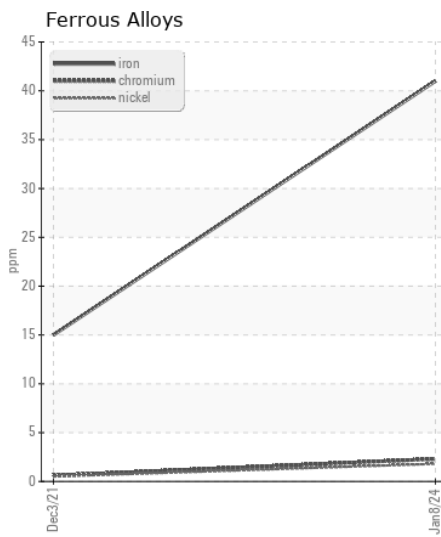
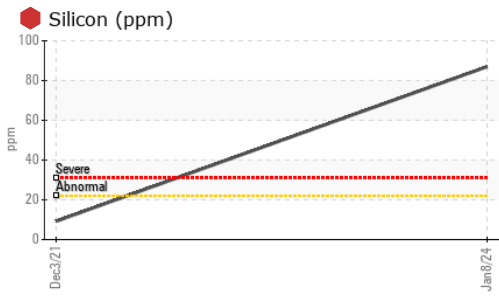
Sodium and/or potassium levels are high. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-----|
| Silicon | ppm | ASTM D5185m | >22 | ◆ 87 | 9 | --- |
| Potassium | ppm | ASTM D5185m | >20 | ▲ 69 | 4 | --- |
| Fuel | | WC Method | >2.1 | <1.0 | <1.0 | --- |
| Water | | WC Method | >0.21 | NEG | NEG | --- |
| Glycol | % | *ASTM D2982 | | NEG | NEG | --- |
| Soot % | % | *ASTM D7844 | >3 | 1 | 0.4 | --- |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 10.8 | 8.1 | --- |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 19.4 | 20.4 | --- |
| Silt | scalar | *Visual | NONE | NONE | NONE | --- |
| Debris | scalar | *Visual | NONE | NONE | NONE | --- |
| Sand/Dirt | scalar | *Visual | NONE | NONE | NONE | --- |
| Appearance | scalar | *Visual | NORML | NORML | NORML | --- |
| Odor | scalar | *Visual | NORML | NORML | NORML | --- |
| Emulsified Water | scalar | *Visual | >0.21 | NEG | NEG | --- |

FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil.

| | | | | | | |
|------------------|----------|-------------|------|--------------|------|-----|
| Sodium | ppm | ASTM D5185m | >31 | ▲ 368 | 5 | --- |
| Boron | ppm | ASTM D5185m | | 24 | 94 | --- |
| Barium | ppm | ASTM D5185m | | <1 | 0 | --- |
| Molybdenum | ppm | ASTM D5185m | | 32 | 32 | --- |
| Manganese | ppm | ASTM D5185m | | <1 | <1 | --- |
| Magnesium | ppm | ASTM D5185m | | 62 | 712 | --- |
| Calcium | ppm | ASTM D5185m | | 1641 | 1340 | --- |
| Phosphorus | ppm | ASTM D5185m | | 743 | 1002 | --- |
| Zinc | ppm | ASTM D5185m | | 981 | 1057 | --- |
| Sulfur | ppm | ASTM D5185m | | 3515 | 3171 | --- |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 12.0 | 14.2 | --- |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 10.5 | 14.5 | 9.3 | --- |
| Visc @ 100°C | cSt | ASTM D445 | 14 | 15.2 | 13.4 | --- |



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0199117 **Received** : 11 Jan 2024
Lab Number : 06058669 **Diagnosed** : 15 Jan 2024
Unique Number : 10830051 **Diagnostician** : Jonathan Hester
Test Package : CONST (Additional Tests: Glycol, TBN)

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Certificate L2367
 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)