



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



Machine Id
JOHN DEERE 624K 1DW624KZEB0635411
Component
Diesel Engine
Fluid
SHELL ROTELLA T 15W40 (5 GAL)

RECOMMENDATION

We advise that you check for the source of the coolant leak. Check for low coolant level. Oil and filter 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 | | JR0201394 | JR0201396 | JR0201391 |
| Sample Date | | Client Info | | 11 Mar 2024 | 09 Feb 2024 | 09 Jan 2024 |
| Machine Age | hrs | Client Info | | 28972 | 28765 | 28536 |
| Oil Age | hrs | Client Info | | 207 | 228 | 207 |
| Filter Age | hrs | Client Info | | 207 | 228 | 207 |
| Oil Changed | | Client Info | | Changed | Changed | Changed |
| Filter Changed | | Client Info | | Changed | Changed | Changed |
| Sample Status | | | | ABNORMAL | SEVERE | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|------|
| Iron | ppm | ASTM D5185m | >51 | 9 | 5 | 5 |
| Chromium | ppm | ASTM D5185m | >11 | <1 | 0 | 0 |
| Nickel | ppm | ASTM D5185m | >5 | 1 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Silver | ppm | ASTM D5185m | >3 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >31 | 2 | 2 | 2 |
| Lead | ppm | ASTM D5185m | >26 | 2 | 5 | 0 |
| Copper | ppm | ASTM D5185m | >26 | 3 | 3 | <1 |
| Tin | ppm | ASTM D5185m | >4 | <1 | <1 | <1 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

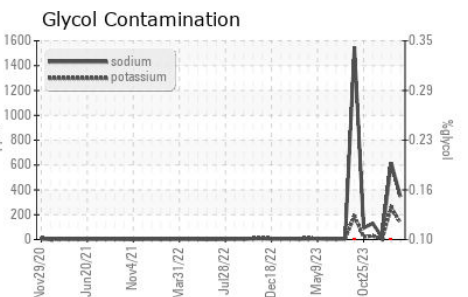
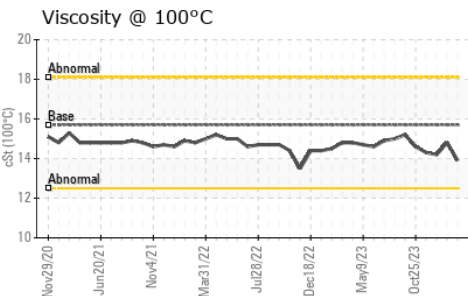
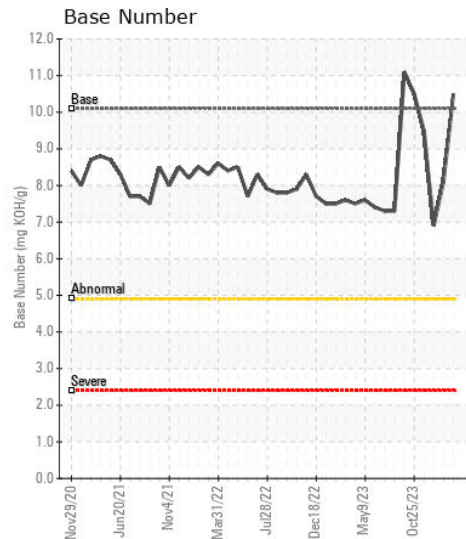
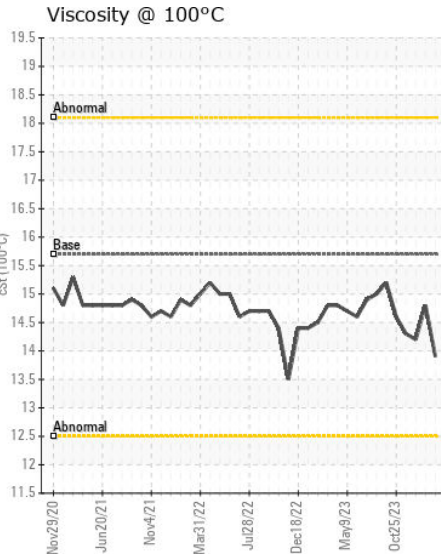
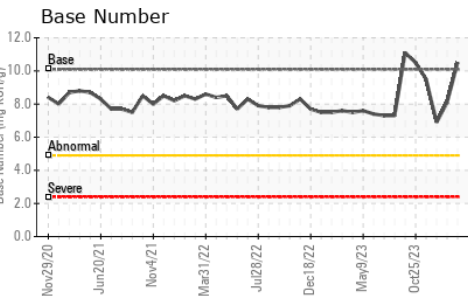
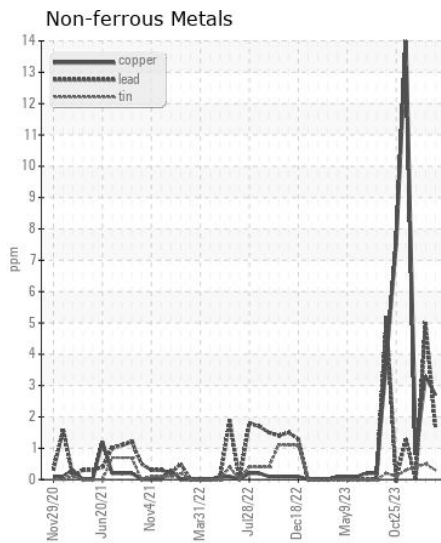
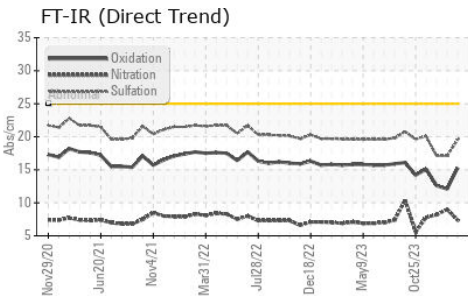
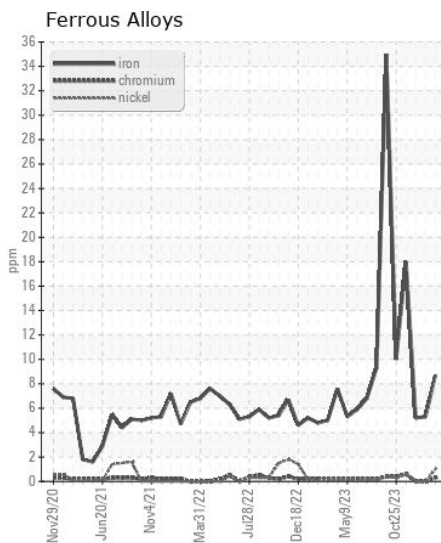
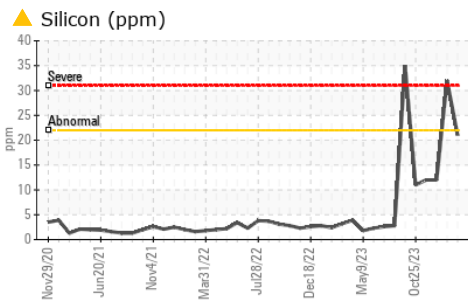
Sodium and/or potassium levels are high. Elemental level of silicon (Si) above normal indicating ingress of seal material.

| | | | | | | |
|------------------|----------|-------------|-------|----------------|--------|-------|
| Silicon | ppm | ASTM D5185m | >22 | ▲ 21 | ▲ 32 | 12 |
| Potassium | ppm | ASTM D5185m | >20 | ▲ 135 | ▲ 260 | 4 |
| Fuel | | WC Method | >2.1 | <1.0 | <1.0 | <1.0 |
| Water | | WC Method | >0.21 | NEG | NEG | NEG |
| Glycol | % | *ASTM D2982 | | NEG | ▲ 0.10 | NEG |
| Soot % | % | *ASTM D7844 | >3 | 0.3 | 0.2 | 0.2 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 7.4 | 9.0 | 8.2 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 19.5 | 17.1 | 17.1 |
| 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.

| | | | | | | |
|------------------|----------|-------------|------|--------------|-------|------|
| Sodium | ppm | ASTM D5185m | >31 | ▲ 346 | ▲ 617 | 19 |
| Boron | ppm | ASTM D5185m | 316 | 43 | 110 | 81 |
| Barium | ppm | ASTM D5185m | 0.0 | <1 | <1 | <1 |
| Molybdenum | ppm | ASTM D5185m | 1.2 | 63 | 84 | 94 |
| Manganese | ppm | ASTM D5185m | | <1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | 24 | 517 | 50 | 87 |
| Calcium | ppm | ASTM D5185m | 2292 | 1626 | 1783 | 2084 |
| Phosphorus | ppm | ASTM D5185m | 1064 | 1201 | 1009 | 1002 |
| Zinc | ppm | ASTM D5185m | 1160 | 1276 | 1077 | 1172 |
| Sulfur | ppm | ASTM D5185m | 4996 | 3546 | 3910 | 4124 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 15.3 | 12.1 | 12.6 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 10.1 | 10.5 | 8.1 | 6.9 |
| Visc @ 100°C | cSt | ASTM D445 | 15.7 | 13.9 | 14.8 | 14.2 |



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0201394 **Received** : 31 May 2024
Lab Number : 06196353 **Tested** : 04 Jun 2024
Unique Number : 11058476 **Diagnosed** : 04 Jun 2024 - Jonathan Hester
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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