



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

Area

Rockydale Quarries

Machine Id

JOHN DEERE 944K 1DW944KXVGE677118

Component

Diesel Engine

Fluid

JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- QTS)

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 | | JR0126033 | JR0126029 | JR0074526 |
| Sample Date | | Client Info | | 30 May 2024 | 09 May 2024 | 01 Mar 2024 |
| Machine Age | hrs | Client Info | | 11750 | 11649 | 11107 |
| Oil Age | hrs | Client Info | | 11649 | 11106 | 1 |
| Filter Age | hrs | Client Info | | 0 | 11106 | 0 |
| Oil Changed | | Client Info | | N/A | Changed | N/A |
| Filter Changed | | Client Info | | N/A | Changed | N/A |
| Sample Status | | | | ABNORMAL | ABNORMAL | ABNORMAL |

WEAR

The copper level has decreased, but is still abnormal. All other component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|-------|-------|
| Iron | ppm | ASTM D5185m | >51 | 12 | 48 | 29 |
| Chromium | ppm | ASTM D5185m | >11 | <1 | 1 | <1 |
| Nickel | ppm | ASTM D5185m | >5 | 2 | ▲ 10 | 7 |
| Titanium | ppm | ASTM D5185m | | <1 | <1 | <1 |
| Silver | ppm | ASTM D5185m | >3 | 0 | 0 | <1 |
| Aluminum | ppm | ASTM D5185m | >31 | 2 | 8 | 7 |
| Lead | ppm | ASTM D5185m | >26 | 2 | 13 | 6 |
| Copper | ppm | ASTM D5185m | >26 | ▲ 56 | ▲ 224 | ▲ 233 |
| Tin | ppm | ASTM D5185m | >4 | 1 | 5 | 3 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | <1 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

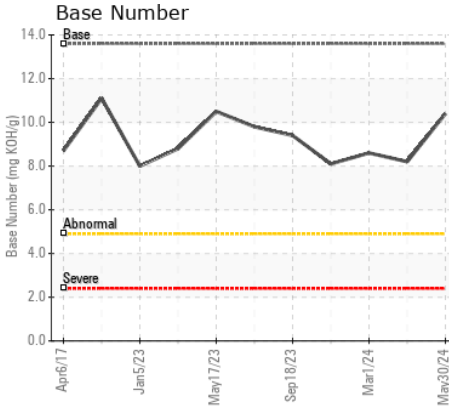
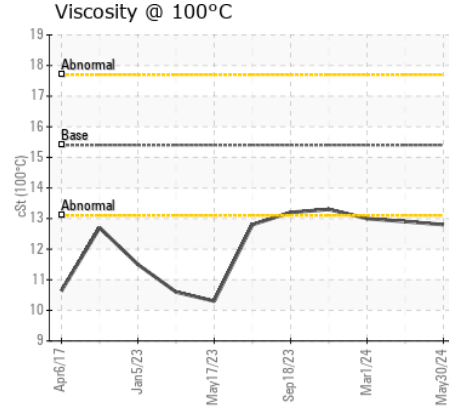
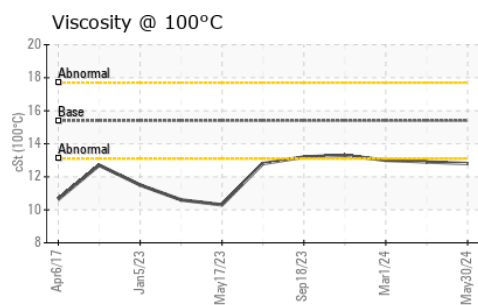
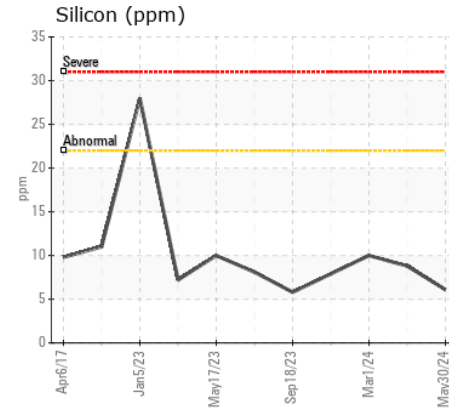
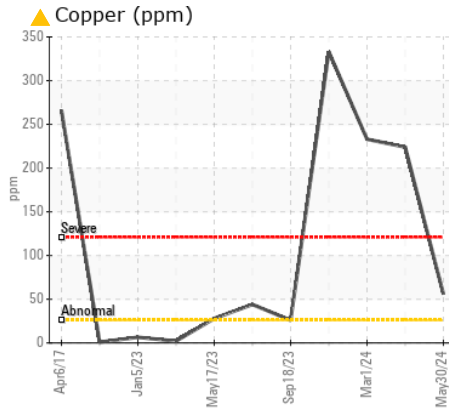
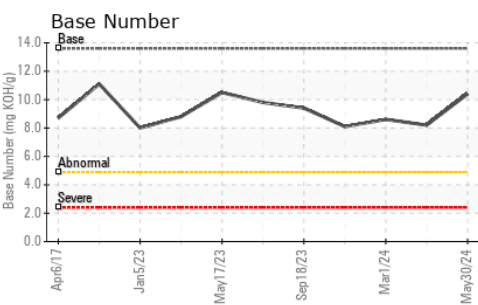
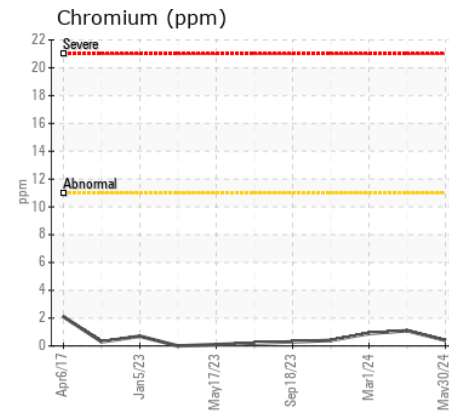
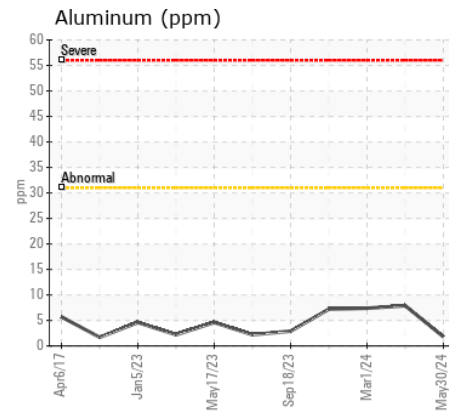
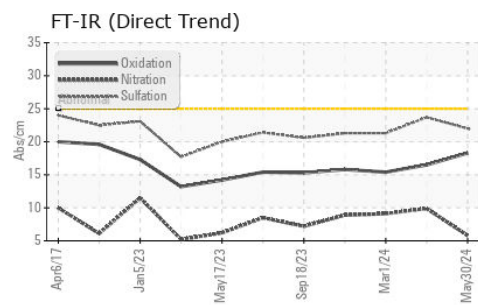
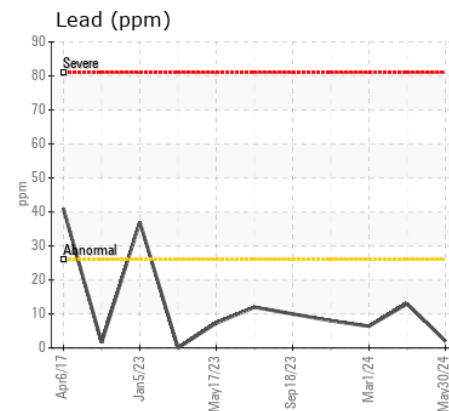
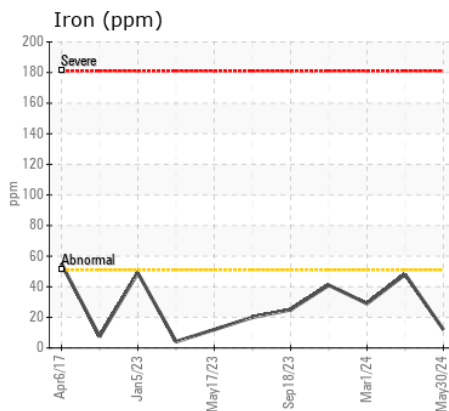
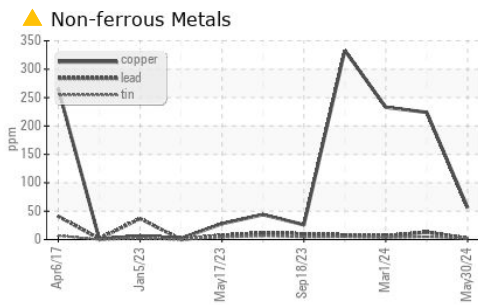
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >22 | 6 | 9 | 10 |
| Potassium | ppm | ASTM D5185m | >20 | 2 | 2 | 4 |
| 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 | 1.4 | 0.9 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 5.8 | 9.9 | 9.1 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 22.0 | 23.7 | 21.3 |
| 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 suitable for further service.

| | | | | | | |
|------------------|----------|-------------|------|--------------|------|------|
| Sodium | ppm | ASTM D5185m | >31 | 2 | 4 | 2 |
| Boron | ppm | ASTM D5185m | | 75 | 107 | 182 |
| Barium | ppm | ASTM D5185m | | 0 | <1 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 75 | 243 | 240 |
| Manganese | ppm | ASTM D5185m | | <1 | 2 | 1 |
| Magnesium | ppm | ASTM D5185m | | 539 | 834 | 756 |
| Calcium | ppm | ASTM D5185m | | 1609 | 1681 | 1509 |
| Phosphorus | ppm | ASTM D5185m | | 999 | 985 | 1023 |
| Zinc | ppm | ASTM D5185m | | 1134 | 1228 | 1127 |
| Sulfur | ppm | ASTM D5185m | | 3277 | 3739 | 3508 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 18.3 | 16.5 | 15.4 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 13.6 | 10.4 | 8.2 | 8.6 |
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | 12.8 | 12.9 | 13.0 |



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0126033 **Received** : 03 Jun 2024
Lab Number : 06197469 **Tested** : 04 Jun 2024
Unique Number : 11059592 **Diagnosed** : 04 Jun 2024 - Don Baldrige
Test Package : MOBCE (Additional Tests: TBN)

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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)