



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

Machine Id
JOHN DEERE 410P 5477 (S/N 1DW410PALPFB06972)
 Component
Diesel Engine
 Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. 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 | | JR0206783 | JR0192937 | --- |
| Sample Date | | Client Info | | 10 Apr 2024 | 01 Dec 2023 | --- |
| Machine Age | hrs | Client Info | | 1051 | 558 | --- |
| Oil Age | hrs | Client Info | | 493 | 558 | --- |
| Filter Age | hrs | Client Info | | 0 | 558 | --- |
| Oil Changed | | Client Info | | Changed | Changed | --- |
| Filter Changed | | Client Info | | Changed | Changed | --- |
| Sample Status | | | | ABNORMAL | ABNORMAL | --- |

WEAR

The copper level has decreased, but is still abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). All other component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|-------------|--------------|-----|
| Iron | ppm | ASTM D5185m | >51 | 15 | 23 | --- |
| Chromium | ppm | ASTM D5185m | >11 | 0 | <1 | --- |
| Nickel | ppm | ASTM D5185m | >5 | 0 | 2 | --- |
| Titanium | ppm | ASTM D5185m | | 0 | <1 | --- |
| Silver | ppm | ASTM D5185m | >3 | 0 | <1 | --- |
| Aluminum | ppm | ASTM D5185m | >31 | 5 | 6 | --- |
| Lead | ppm | ASTM D5185m | >26 | 5 | 11 | --- |
| Copper | ppm | ASTM D5185m | >26 | ▲ 96 | ▲ 443 | --- |
| Tin | ppm | ASTM D5185m | >4 | 4 | 10 | --- |
| Vanadium | ppm | ASTM D5185m | | 0 | <1 | --- |
| White Metal | scalar | *Visual | NONE | NONE | NONE | --- |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | --- |

CONTAMINATION

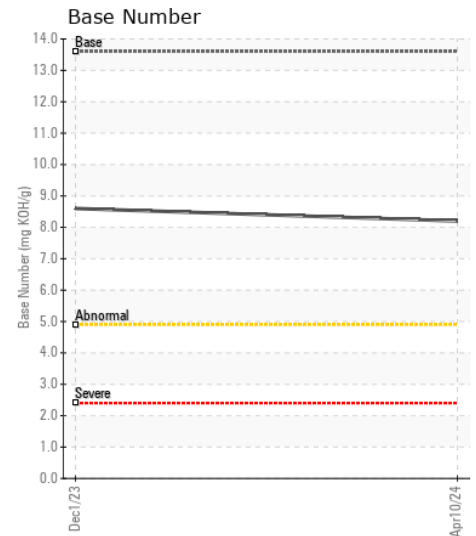
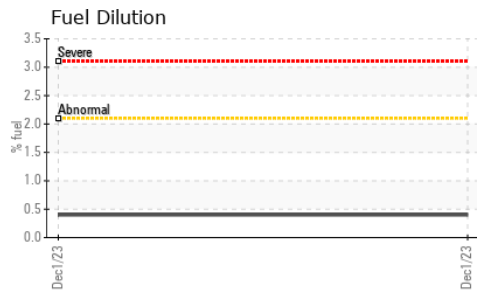
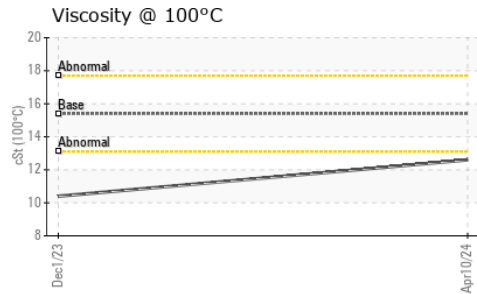
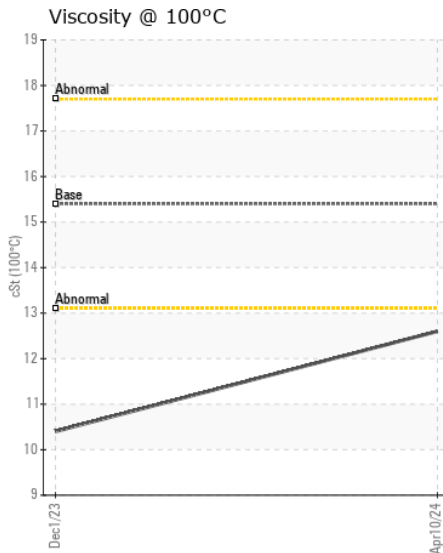
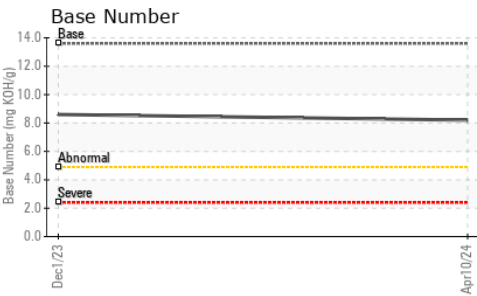
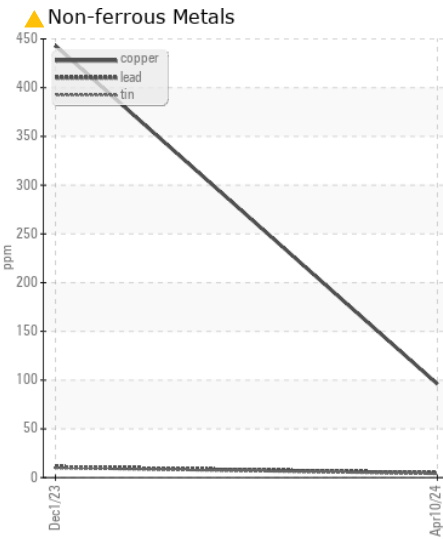
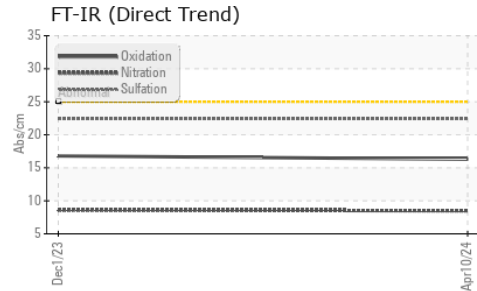
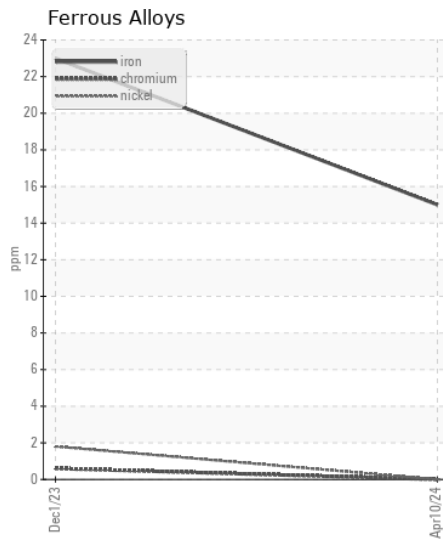
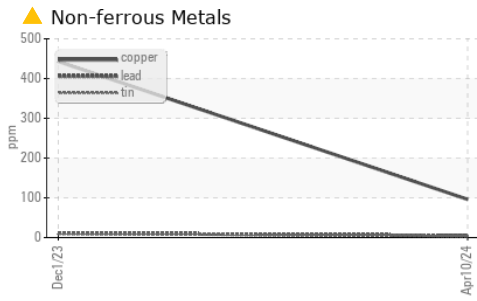
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-----|
| Silicon | ppm | ASTM D5185m | >22 | 7 | 12 | --- |
| Potassium | ppm | ASTM D5185m | >20 | <1 | 3 | --- |
| Fuel | % | ASTM D3524 | >2.1 | <1.0 | 0.4 | --- |
| Water | | WC Method | >0.21 | NEG | NEG | --- |
| Glycol | | WC Method | | NEG | NEG | --- |
| Soot % | % | *ASTM D7844 | >3 | 0.3 | 0.3 | --- |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 8.5 | 8.6 | --- |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 22.4 | 22.4 | --- |
| 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. The condition of the oil is acceptable for the time in service.

| | | | | | | |
|------------------|----------|-------------|------|--------------|--------|-----|
| Sodium | ppm | ASTM D5185m | >31 | 5 | 8 | --- |
| Boron | ppm | ASTM D5185m | | 216 | 184 | --- |
| Barium | ppm | ASTM D5185m | | <1 | <1 | --- |
| Molybdenum | ppm | ASTM D5185m | | 235 | 223 | --- |
| Manganese | ppm | ASTM D5185m | | 2 | 9 | --- |
| Magnesium | ppm | ASTM D5185m | | 788 | 817 | --- |
| Calcium | ppm | ASTM D5185m | | 1441 | 1349 | --- |
| Phosphorus | ppm | ASTM D5185m | | 970 | 905 | --- |
| Zinc | ppm | ASTM D5185m | | 1145 | 1146 | --- |
| Sulfur | ppm | ASTM D5185m | | 3477 | 3017 | --- |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 16.3 | 16.8 | --- |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 13.6 | 8.2 | 8.6 | --- |
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | 12.6 | ● 10.4 | --- |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0206783 **Received** : 12 Apr 2024
Lab Number : 06147177 **Tested** : 15 Apr 2024
Unique Number : 10977255 **Diagnosed** : 16 Apr 2024 - Sean Felton
Test Package : CONST (Additional Tests: FuelDilution, 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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