



OIL ANALYSIS REPORT

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

Area

[127282]

Machine Id

JOHN DEERE 460P 1DW460PACPF07027

Component

Diesel Engine

Fluid

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

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 | | WE0007779 | WE0007002 | --- |
| Sample Date | | Client Info | | 14 Jun 2024 | 20 Mar 2024 | --- |
| Machine Age | hrs | Client Info | | 968 | 479 | --- |
| Oil Age | hrs | Client Info | | 0 | 0 | --- |
| Filter Age | hrs | Client Info | | 0 | 0 | --- |
| Oil Changed | | Client Info | | Changed | Changed | --- |
| Filter Changed | | Client Info | | Changed | Changed | --- |
| Sample Status | | | | ABNORMAL | ABNORMAL | --- |

WEAR

The copper level is 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 | 21 | 33 | --- |
| Chromium | ppm | ASTM D5185m | >11 | <1 | <1 | --- |
| Nickel | ppm | ASTM D5185m | >5 | <1 | 0 | --- |
| Titanium | ppm | ASTM D5185m | | <1 | 0 | --- |
| Silver | ppm | ASTM D5185m | >3 | <1 | 0 | --- |
| Aluminum | ppm | ASTM D5185m | >31 | 5 | 4 | --- |
| Lead | ppm | ASTM D5185m | >26 | 6 | 19 | --- |
| Copper | ppm | ASTM D5185m | >26 | ▲ 135 | ▲ 522 | --- |
| Tin | ppm | ASTM D5185m | >4 | 6 | 10 | --- |
| Vanadium | ppm | ASTM D5185m | | <1 | 0 | --- |
| White Metal | scalar | *Visual | NONE | NONE | NONE | --- |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | --- |

CONTAMINATION

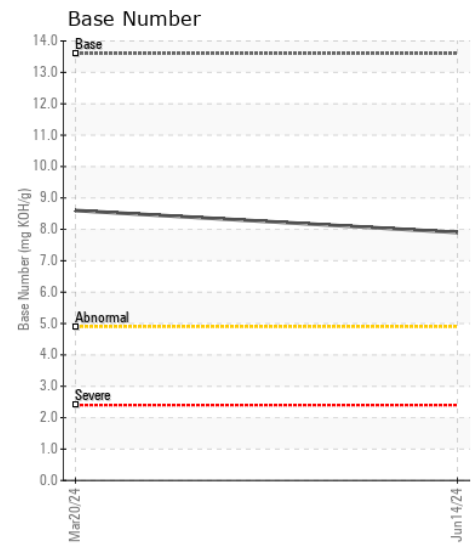
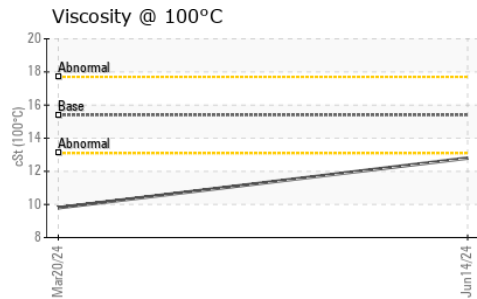
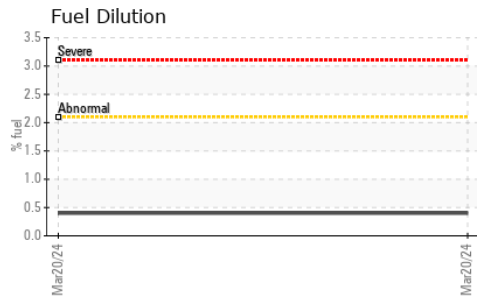
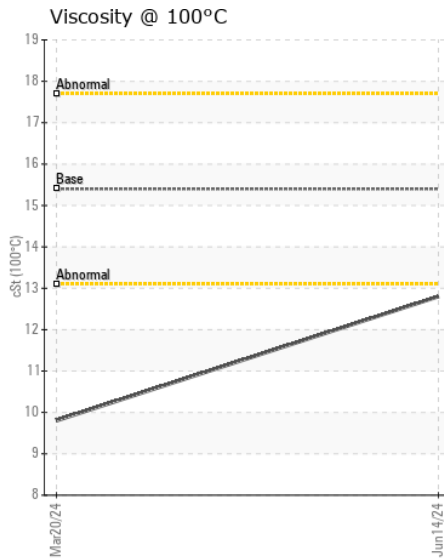
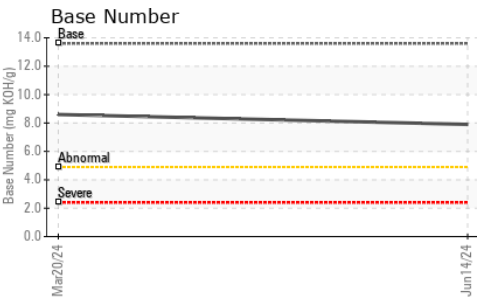
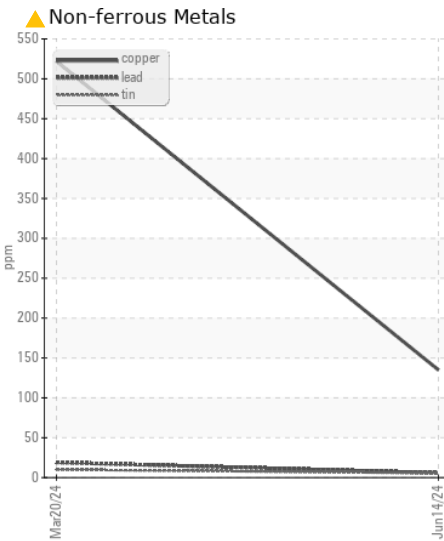
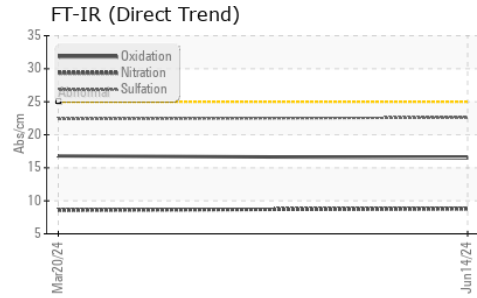
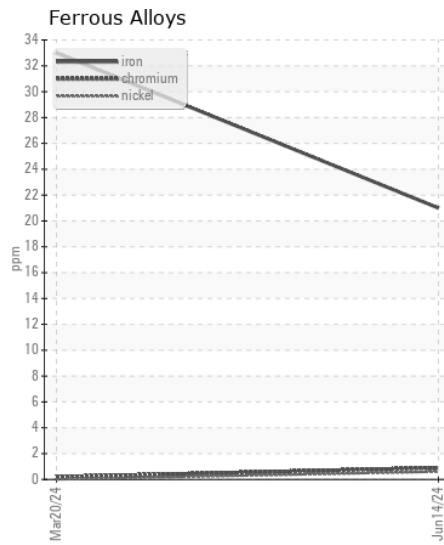
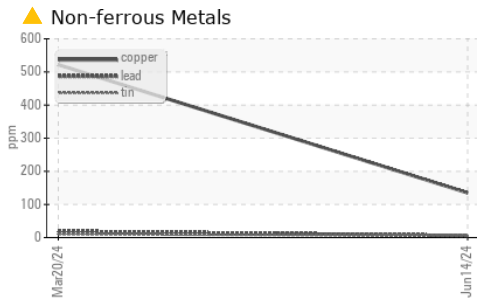
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-----|
| Silicon | ppm | ASTM D5185m | >22 | 10 | 13 | --- |
| Potassium | ppm | ASTM D5185m | >20 | 3 | 4 | --- |
| 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 | 0.2 | --- |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 8.8 | 8.6 | --- |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 22.6 | 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 | 4 | 11 | --- |
| Boron | ppm | ASTM D5185m | | 157 | 179 | --- |
| Barium | ppm | ASTM D5185m | | 2 | 1 | --- |
| Molybdenum | ppm | ASTM D5185m | | 275 | 251 | --- |
| Manganese | ppm | ASTM D5185m | | 2 | 10 | --- |
| Magnesium | ppm | ASTM D5185m | | 805 | 854 | --- |
| Calcium | ppm | ASTM D5185m | | 1372 | 1521 | --- |
| Phosphorus | ppm | ASTM D5185m | | 837 | 959 | --- |
| Zinc | ppm | ASTM D5185m | | 1031 | 1108 | --- |
| Sulfur | ppm | ASTM D5185m | | 2898 | 3626 | --- |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 16.5 | 16.8 | --- |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 13.6 | 7.9 | 8.6 | --- |
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | 12.8 | 9.8 | --- |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WE0007779
Lab Number : 06213091
Unique Number : 11085955
Test Package : CONST (Additional Tests: FuelDilution, TBN)

WARRIOR TRACTOR AND EQUIPMENT - NORTHPORT
 P.O. BOX 412
 NORTHPORT, AL
 US 35476
 Contact: CRAIG ANDOE
 serve01@warriortractor.com
 T: (205)339-0300
 F:

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)