



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

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

Machine Id
JOHN DEERE 4230 JOHN DEERE 4230

Component
Diesel Engine

Fluid
TRC PRO-SPEC III SYNTHETIC BLEND 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|-------------|----------|----------|
| Sample Number | | Client Info | | TR06211973 | --- | --- |
| Sample Date | | Client Info | | 16 Jun 2024 | --- | --- |
| Machine Age | hrs | Client Info | | 9193 | --- | --- |
| Oil Age | hrs | Client Info | | 150 | --- | --- |
| Filter Age | hrs | Client Info | | 150 | --- | --- |
| Oil Changed | | Client Info | | Not Chngd | --- | --- |
| Filter Changed | | Client Info | | Changed | --- | --- |
| Sample Status | | | | NORMAL | --- | --- |

WEAR

All component wear rates are normal.

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

CONTAMINATION

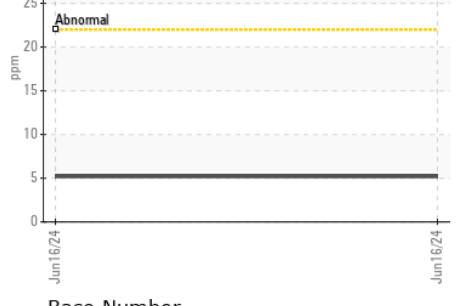
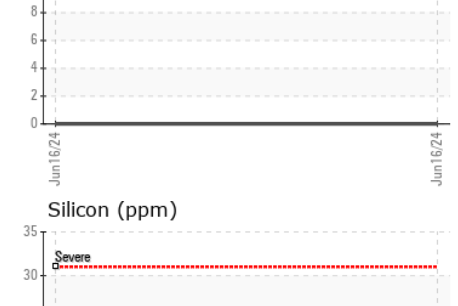
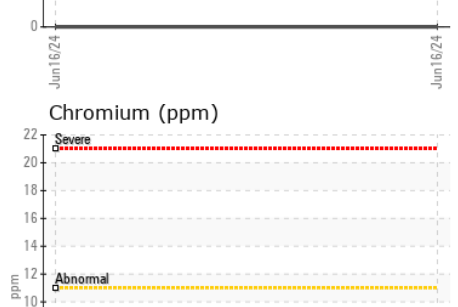
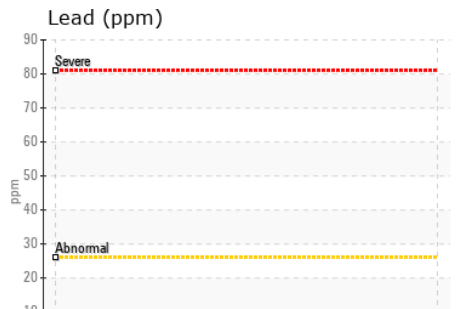
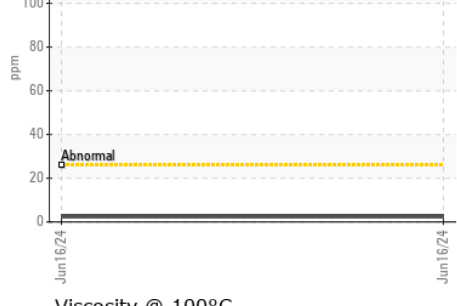
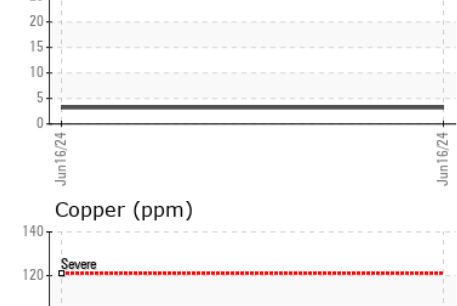
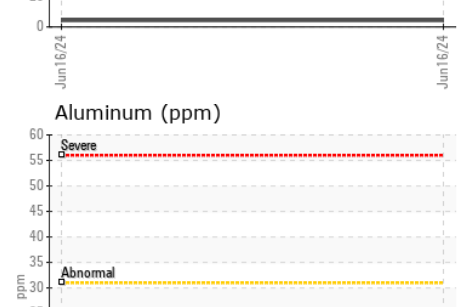
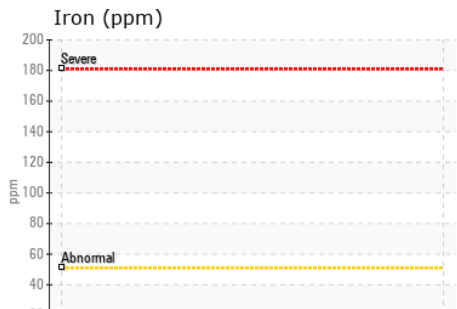
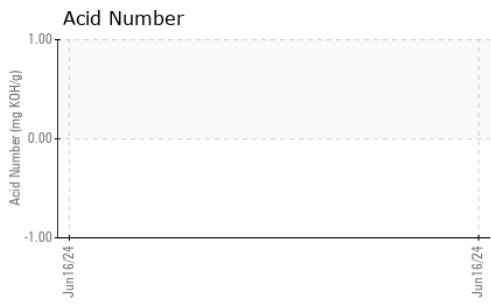
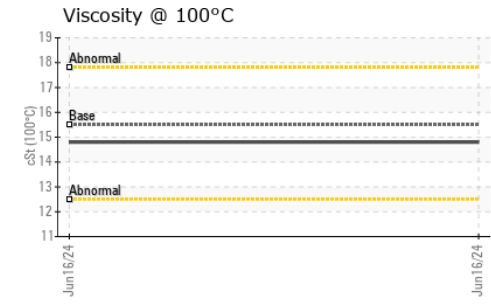
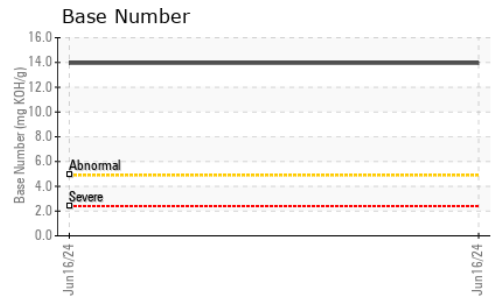
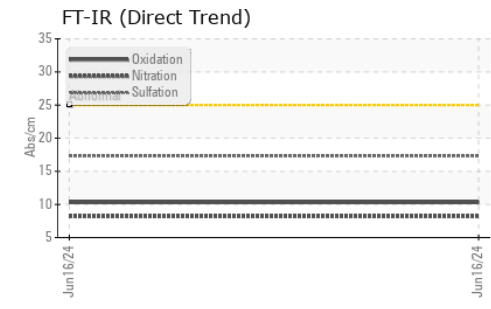
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|-------|-----|-----|
| Silicon | ppm | ASTM D5185m | >22 | 5 | --- | --- |
| Potassium | ppm | ASTM D5185m | >20 | 3 | --- | --- |
| Fuel | | WC Method | >2.1 | <1.0 | --- | --- |
| Water | | WC Method | >0.21 | NEG | --- | --- |
| Glycol | | WC Method | | NEG | --- | --- |
| Soot % | % | *ASTM D7844 | >3 | 0.1 | --- | --- |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 8.2 | --- | --- |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 17.3 | --- | --- |
| Silt | scalar | *Visual | NONE | NONE | --- | --- |
| Debris | scalar | *Visual | NONE | NONE | --- | --- |
| Sand/Dirt | scalar | *Visual | NONE | NONE | --- | --- |
| Appearance | scalar | *Visual | NORML | NORML | --- | --- |
| Odor | scalar | *Visual | NORML | NORML | --- | --- |
| Emulsified Water | scalar | *Visual | >0.21 | 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 | 3 | --- | --- |
| Boron | ppm | ASTM D5185m | | 16 | --- | --- |
| Barium | ppm | ASTM D5185m | | 0 | --- | --- |
| Molybdenum | ppm | ASTM D5185m | | 121 | --- | --- |
| Manganese | ppm | ASTM D5185m | | <1 | --- | --- |
| Magnesium | ppm | ASTM D5185m | | 68 | --- | --- |
| Calcium | ppm | ASTM D5185m | | 3843 | --- | --- |
| Phosphorus | ppm | ASTM D5185m | | 692 | --- | --- |
| Zinc | ppm | ASTM D5185m | | 803 | --- | --- |
| Sulfur | ppm | ASTM D5185m | | 3992 | --- | --- |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 10.3 | --- | --- |
| Base Number (BN) | mg KOH/g | ASTM D2896 | | 13.95 | --- | --- |
| Visc @ 100°C | cSt | ASTM D445 | 15.5 | 14.8 | --- | --- |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR06211973 **Received** : 17 Jun 2024
Lab Number : 06211973 **Tested** : 19 Jun 2024
Unique Number : 11084837 **Diagnosed** : 19 Jun 2024 - Sean Felton
Test Package : MOB 2 (Additional Tests: TAN Man)

CLAY MALLORY
 806 W 5TH ST
 WALLOWA, OR
 US 97885
 Contact: RON GROGAN

To discuss this sample report, contact Customer Service at 1-800-827-0711.

* - 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)

T:
F: