



OIL ANALYSIS REPORT

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



Area
Store 4 - Fairmont [RO# 151853]
Machine Id
JOHN DEERE 210G 1FF210GXJNF530240
Component
Diesel Engine
Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (6 GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | LEC0048310 | LEC0047352 | LEC0044112 |
| Sample Date | | Client Info | | 10 Jun 2024 | 11 Jan 2024 | 28 Aug 2023 |
| Machine Age | hrs | Client Info | | 2170 | 1638 | 1127 |
| Oil Age | hrs | Client Info | | 532 | 511 | 513 |
| Filter Age | hrs | Client Info | | 532 | 511 | 513 |
| Oil Changed | | Client Info | | Changed | Changed | Changed |
| Filter Changed | | Client Info | | Changed | Changed | Changed |
| Sample Status | | | | MARGINAL | NORMAL | ABNORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|------|
| Iron | ppm | ASTM D5185m | >51 | 22 | 21 | 26 |
| Chromium | ppm | ASTM D5185m | >11 | <1 | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >5 | 1 | 1 | 2 |
| Titanium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185m | >3 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >31 | 5 | 5 | 4 |
| Lead | ppm | ASTM D5185m | >26 | 0 | <1 | 0 |
| Copper | ppm | ASTM D5185m | >26 | 7 | 14 | ▲ 79 |
| Tin | ppm | ASTM D5185m | >4 | <1 | <1 | <1 |
| Vanadium | ppm | ASTM D5185m | | <1 | <1 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

Fuel content negligible. There is no indication of any contamination in the oil.

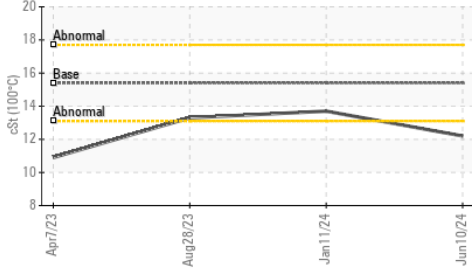
| | | | | | | |
|------------------|----------|-------------|-------|--------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >120 | 6 | 7 | 7 |
| Potassium | ppm | ASTM D5185m | >20 | 3 | 1 | 2 |
| Fuel | % | ASTM D3524 | >2.1 | 0.2 | <1.0 | <1.0 |
| Water | | WC Method | >0.21 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | *ASTM D7844 | >3 | 0.5 | 0.4 | 0.6 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 8.6 | 9.1 | 9.4 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 23.1 | 22.7 | 22.5 |
| 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

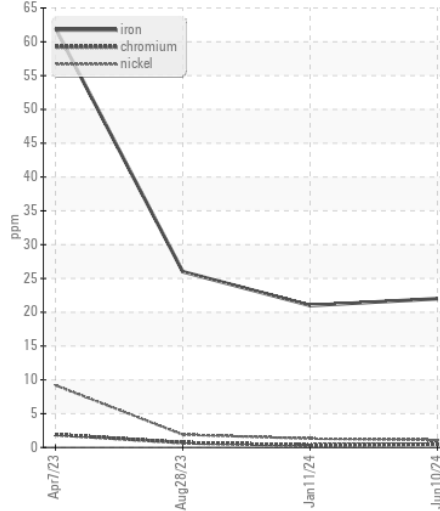
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil.

| | | | | | | |
|------------------|----------|-------------|------|---------------|------|------|
| Sodium | ppm | ASTM D5185m | >31 | 4 | 3 | 4 |
| Boron | ppm | ASTM D5185m | | 105 | 187 | 171 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 155 | 240 | 225 |
| Manganese | ppm | ASTM D5185m | | 1 | <1 | 1 |
| Magnesium | ppm | ASTM D5185m | | 585 | 786 | 851 |
| Calcium | ppm | ASTM D5185m | | 2175 | 1438 | 1573 |
| Phosphorus | ppm | ASTM D5185m | | 993 | 920 | 894 |
| Zinc | ppm | ASTM D5185m | | 1175 | 1096 | 1129 |
| Sulfur | ppm | ASTM D5185m | | 3628 | 2916 | 3482 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 16.5 | 17.8 | 18.2 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 13.6 | 8.6 | 8.4 | 7.9 |
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | ▲ 12.2 | 13.7 | 13.3 |

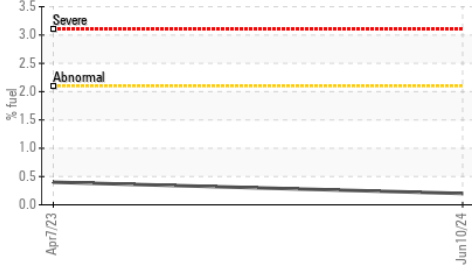
▲ Viscosity @ 100°C



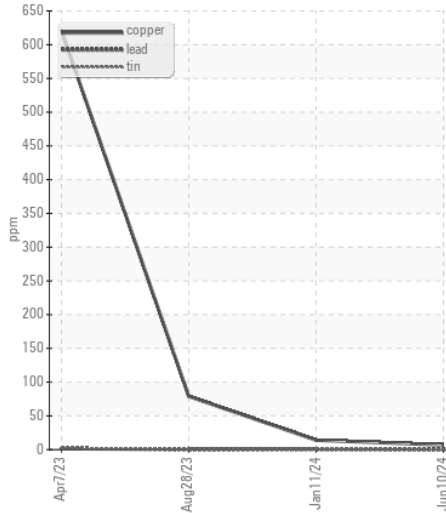
Ferrous Alloys



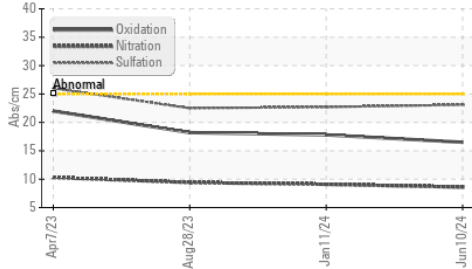
Fuel Dilution



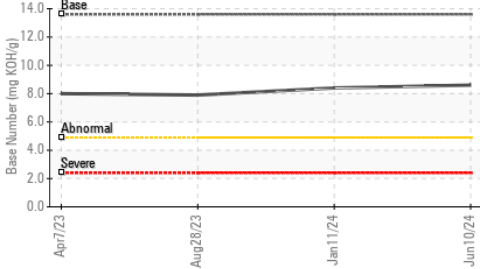
Non-ferrous Metals



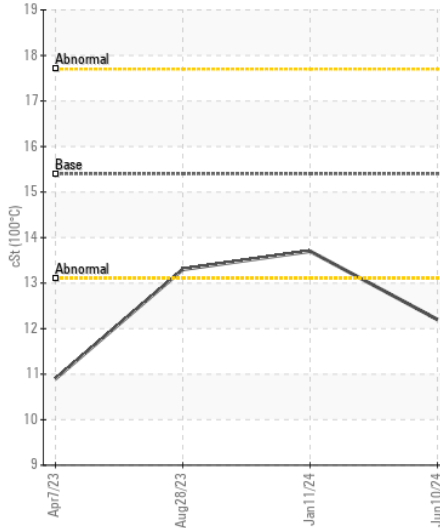
FT-IR (Direct Trend)



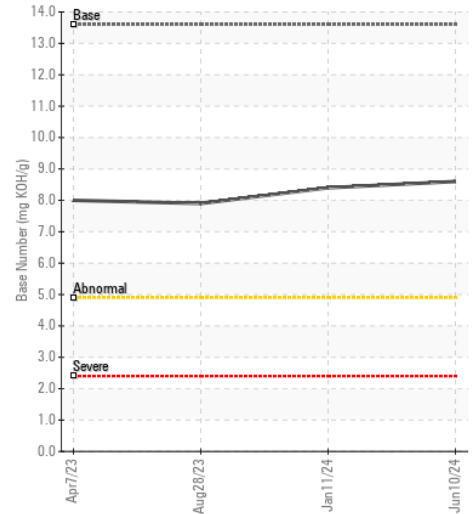
Base Number



▲ Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LEC0048310 **Received** : 17 Jun 2024
Lab Number : 06211417 **Tested** : 20 Jun 2024
Unique Number : 11084281 **Diagnosed** : 20 Jun 2024 - Jonathan Hester
Test Package : CONST (Additional Tests: FuelDilution, PercentFuel, TBN)

LESLIE EQUIPMENT COMPANY
 105 TENNIS CENTER DR.
 MARIETTA, OH
 US 45750-9765
 Contact: LEANNE KENDALL
 KendalLeanne@lec1.com

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)

T:
 F: (740)373-5570