LESLIE EQUIPMENT CO.

# OIL ANALYSIS REPORT

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

Area
## Store 9 - Marietta
Machine Id
## JOHN DEERE 650K 1T0650KKLPF435155
Component
## Diesel Engine
Fluid
## JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (4 GAL)

## RECOMMENDATION

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

## 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 metal levels are typical for a new component breaking in.

## CONTAMINATION

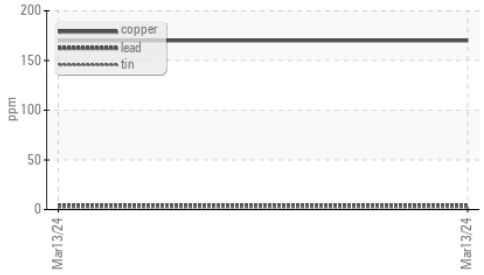
Fuel content negligible. There is no indication of any contamination in the oil.

## FLUID CONDITION

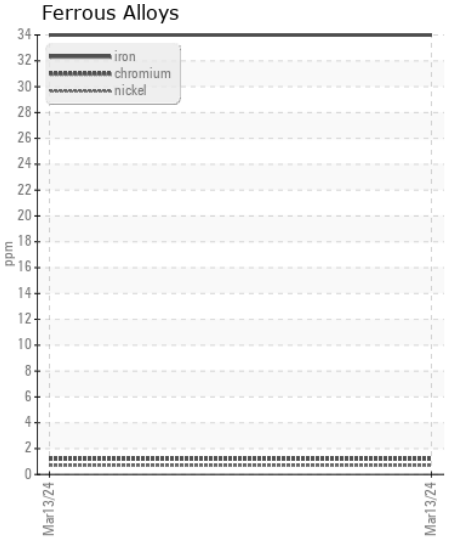
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | LEC0049692 | --- | --- |
| Sample Date | | Client Info | | 13 Mar 2024 | --- | --- |
| Machine Age | hrs | Client Info | | 427 | --- | --- |
| Oil Age | hrs | Client Info | | 427 | --- | --- |
| Filter Age | hrs | Client Info | | 427 | --- | --- |
| Oil Changed | | Client Info | | Changed | --- | --- |
| Filter Changed | | Client Info | | Changed | --- | --- |
| Sample Status | | | | ABNORMAL | --- | --- |
| Iron | ppm | ASTM D5185m | >51 | 34 | --- | --- |
| Chromium | ppm | ASTM D5185m | >11 | 1 | --- | --- |
| Nickel | ppm | ASTM D5185m | >5 | <1 | --- | --- |
| Titanium | ppm | ASTM D5185m | | 2 | --- | --- |
| Silver | ppm | ASTM D5185m | >3 | 0 | --- | --- |
| Aluminum | ppm | ASTM D5185m | >31 | 9 | --- | --- |
| Lead | ppm | ASTM D5185m | >26 | 4 | --- | --- |
| Copper | ppm | ASTM D5185m | >26 | ▲ 170 | --- | --- |
| Tin | ppm | ASTM D5185m | >4 | 2 | --- | --- |
| Vanadium | ppm | ASTM D5185m | | 0 | --- | --- |
| White Metal | scalar | *Visual | NONE | NONE | --- | --- |
| Yellow Metal | scalar | *Visual | NONE | NONE | --- | --- |
| Silicon | ppm | ASTM D5185m | >!20 | 12 | --- | --- |
| Potassium | ppm | ASTM D5185m | >20 | 5 | --- | --- |
| Fuel | % | ASTM D3524 | >2.1 | 0.3 | --- | --- |
| Water | | WC Method | >0.21 | NEG | --- | --- |
| Glycol | | WC Method | | NEG | --- | --- |
| Soot % | % | *ASTM D7844 | >3 | 0.4 | --- | --- |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 10.1 | --- | --- |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 24.7 | --- | --- |
| 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 | --- | --- |
| Sodium | ppm | ASTM D5185m | >31 | 4 | --- | --- |
| Boron | ppm | ASTM D5185m | | 159 | --- | --- |
| Barium | ppm | ASTM D5185m | | 5 | --- | --- |
| Molybdenum | ppm | ASTM D5185m | | 242 | --- | --- |
| Manganese | ppm | ASTM D5185m | | 6 | --- | --- |
| Magnesium | ppm | ASTM D5185m | | 850 | --- | --- |
| Calcium | ppm | ASTM D5185m | | 1485 | --- | --- |
| Phosphorus | ppm | ASTM D5185m | | 866 | --- | --- |
| Zinc | ppm | ASTM D5185m | | 1128 | --- | --- |
| Sulfur | ppm | ASTM D5185m | | 2975 | --- | --- |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 19.9 | --- | --- |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 13.6 | 7.8 | --- | --- |
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | ● 11.1 | --- | --- |

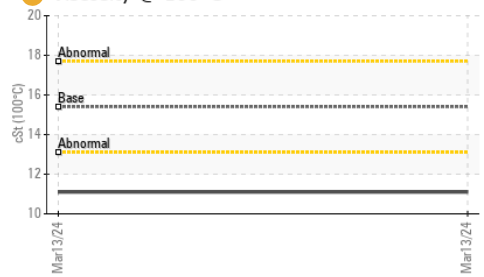
Non-ferrous Metals



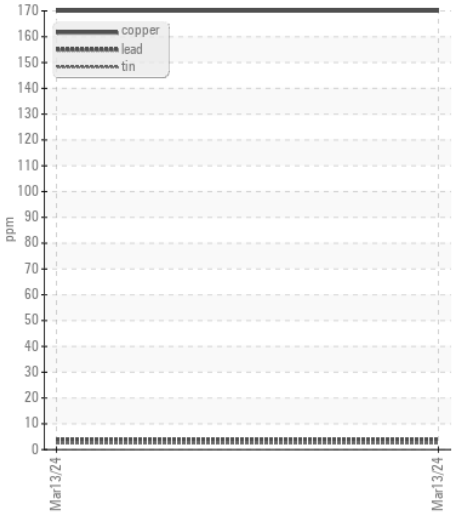

Ferrous Alloys



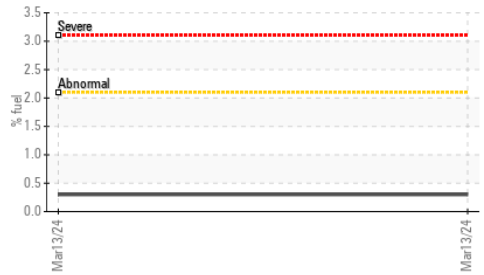

Viscosity @ 100°C



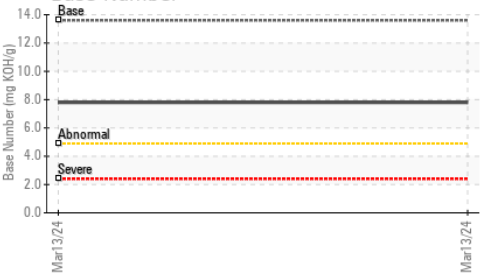

Non-ferrous Metals



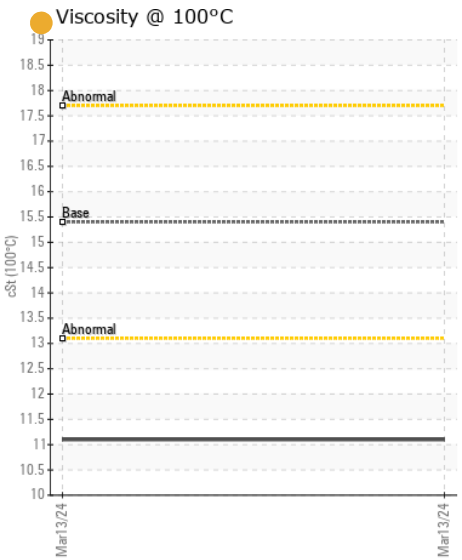

Fuel Dilution




Base Number




Viscosity @ 100°C

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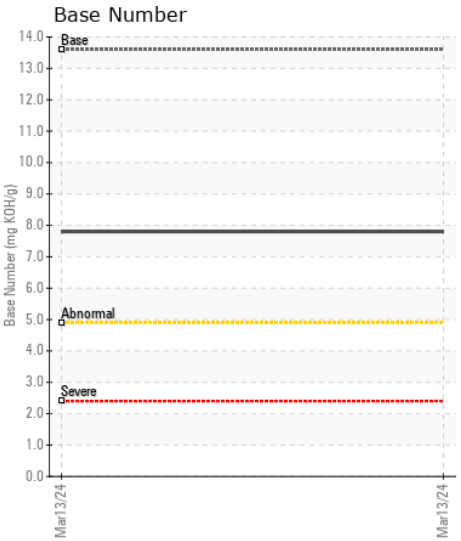


Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : LEC0049692
**Lab Number** : 06122158
**Unique Number** : 10936309
**Test Package** : CONST ( Additional Tests: FuelDilution, PercentFuel, TBN )

**Received** : 19 Mar 2024
**Tested** : 21 Mar 2024
**Diagnosed** : 21 Mar 2024 - Jonathan Hester

*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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Report Id: LESMAROH [WUSCAR] 06122158 (Generated: 03/21/2024 19:59:02) Rev: 1

Submitted By: JOHN MARTIN