



OIL ANALYSIS REPORT

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



Area
SOLD LOCATIONS - LESCHI - CHILLICOTHE
 Machine Id
JOHN DEERE 644J DW644JZ616347
 Component
Diesel Engine
 Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (7 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | LEC0050862 | LEC0038956 | LEC0033125 |
| Sample Date | | Client Info | | 24 Jun 2024 | 15 Feb 2023 | 24 May 2022 |
| Machine Age | hrs | Client Info | | 18841 | 17371 | 16524 |
| Oil Age | hrs | Client Info | | 1470 | 847 | 527 |
| Filter Age | hrs | Client Info | | 1470 | 847 | 0 |
| Oil Changed | | Client Info | | Changed | Changed | Changed |
| Filter Changed | | Client Info | | Changed | Changed | Changed |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|------|
| Iron | ppm | ASTM D5185m | | 20 | 28 | 20 |
| Chromium | ppm | ASTM D5185m | | <1 | <1 | <1 |
| Nickel | ppm | ASTM D5185m | | <1 | <1 | 0 |
| Titanium | ppm | ASTM D5185m | | <1 | 0 | <1 |
| Silver | ppm | ASTM D5185m | | 0 | 0 | <1 |
| Aluminum | ppm | ASTM D5185m | | 5 | 4 | 3 |
| Lead | ppm | ASTM D5185m | | 3 | 6 | 3 |
| Copper | ppm | ASTM D5185m | | 1 | <1 | <1 |
| Tin | ppm | ASTM D5185m | | <1 | <1 | <1 |
| Vanadium | ppm | ASTM D5185m | | <1 | <1 | <1 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

There is no indication of any contamination in the oil.

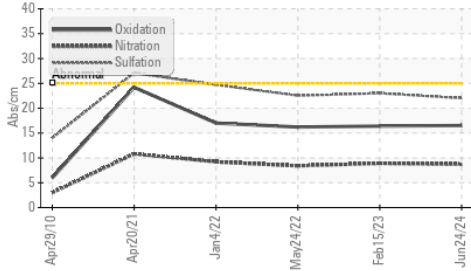
| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon | ppm | ASTM D5185m | | 6 | 7 | 7 |
| Potassium | ppm | ASTM D5185m | >20 | 2 | 1 | 0 |
| Fuel | | WC Method | | <1.0 | <1.0 | <1.0 |
| Water | | WC Method | | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | *ASTM D7844 | | 1 | 1.1 | 0.5 |
| Nitration | Abs/cm | *ASTM D7624 | | 8.7 | 8.9 | 8.4 |
| Sulfation | Abs/.1mm | *ASTM D7415 | | 22.0 | 23.0 | 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 | | NEG | NEG | NEG |

FLUID CONDITION

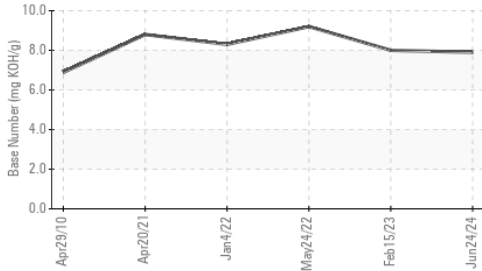
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| | | | | | | |
|------------------|----------|-------------|--|--------------|------|------|
| Sodium | ppm | ASTM D5185m | | 7 | 2 | 1 |
| Boron | ppm | ASTM D5185m | | 42 | 211 | 240 |
| Barium | ppm | ASTM D5185m | | 0 | <1 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 57 | 230 | 240 |
| Manganese | ppm | ASTM D5185m | | <1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | | 556 | 745 | 796 |
| Calcium | ppm | ASTM D5185m | | 1636 | 1493 | 1504 |
| Phosphorus | ppm | ASTM D5185m | | 1144 | 840 | 884 |
| Zinc | ppm | ASTM D5185m | | 1356 | 1070 | 1027 |
| Sulfur | ppm | ASTM D5185m | | 3610 | 3445 | 2678 |
| Oxidation | Abs/.1mm | *ASTM D7414 | | 16.5 | 16.4 | 16.2 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | | 7.9 | 8.0 | 9.2 |
| Visc @ 100°C | cSt | ASTM D445 | | 14.9 | 14.5 | 14.3 |

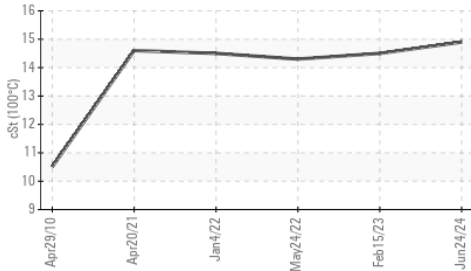
FT-IR (Direct Trend)



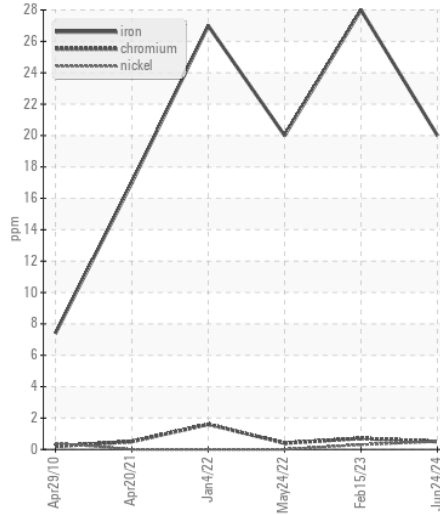
Base Number



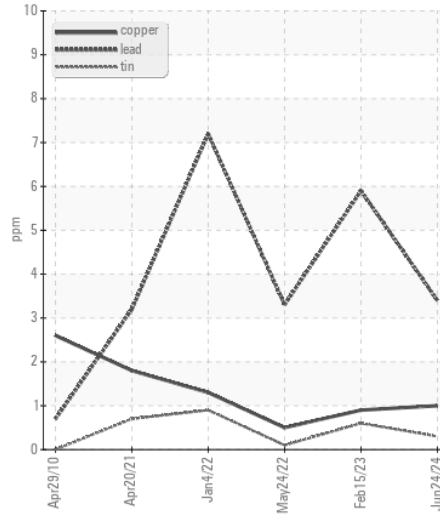
Viscosity @ 100°C



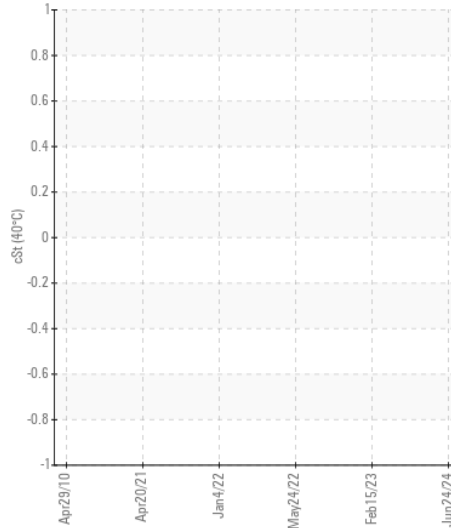
Ferrous Alloys



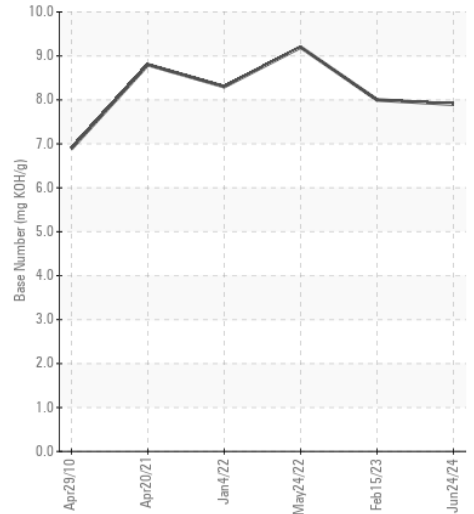
Non-ferrous Metals



Viscosity @ 40°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LEC0050862 **Received** : 27 Jun 2024
Lab Number : 06222196 **Tested** : 28 Jun 2024
Unique Number : 11100393 **Diagnosed** : 28 Jun 2024 - Don Baldrige
Test Package : CONST (Additional Tests: 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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