



OIL ANALYSIS REPORT

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



Area
Store 8 - Pikeville [121334]
Machine Id
JOHN DEERE 950K 1T0950KPVHF317789
Component
Diesel Engine
Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (7 GAL)

RECOMMENDATION

No corrective action is recommended at this time. 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 | | LEC0022002 | LEC0019520 | LEC0001079 |
| Sample Date | | Client Info | | 19 Oct 2021 | 27 Jan 2021 | 12 Jun 2019 |
| Machine Age | hrs | Client Info | | 1871 | 1490 | 1003 |
| Oil Age | hrs | Client Info | | 381 | 487 | 490 |
| Filter Age | hrs | Client Info | | 0 | 0 | 490 |
| Oil Changed | | Client Info | | Changed | Changed | Changed |
| Filter Changed | | Client Info | | Changed | Changed | Changed |
| Sample Status | | | | ABNORMAL | ABNORMAL | ABNORMAL |

WEAR

Cylinder, crank, or cam shaft wear is indicated.

| | | | | | | |
|--------------|--------|-------------|------|--------------|-------|------|
| Iron | ppm | ASTM D5185m | >51 | ▲ 78 | ▲ 137 | ▲ 61 |
| Chromium | ppm | ASTM D5185m | >11 | 1 | 1 | 1 |
| Nickel | ppm | ASTM D5185m | >5 | <1 | 1 | 3 |
| Titanium | ppm | ASTM D5185m | | <1 | <1 | <1 |
| Silver | ppm | ASTM D5185m | | 0 | <1 | 0 |
| Aluminum | ppm | ASTM D5185m | >31 | 7 | 6 | 7 |
| Lead | ppm | ASTM D5185m | >26 | <1 | 2 | 5 |
| Copper | ppm | ASTM D5185m | >26 | 11 | ▲ 26 | 12 |
| Tin | ppm | ASTM D5185m | >4 | <1 | 1 | 0 |
| Vanadium | ppm | ASTM D5185m | | <1 | <1 | 0 |
| 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.

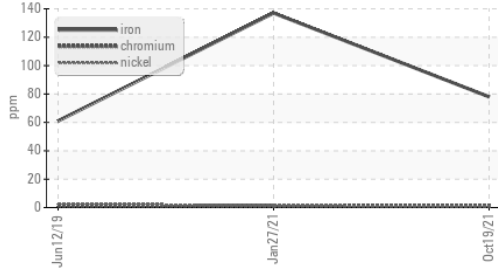
| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >22 | 8 | 9 | 8 |
| Potassium | ppm | ASTM D5185m | >20 | 5 | 4 | 5 |
| Fuel | | WC Method | >2.1 | <1.0 | <1.0 | <1.0 |
| Water | | WC Method | >0.21 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | *ASTM D7844 | >3 | 0.1 | 0.4 | 0.4 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 6.4 | 9.3 | 9.3 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 18.7 | 23.7 | 21.8 |
| 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

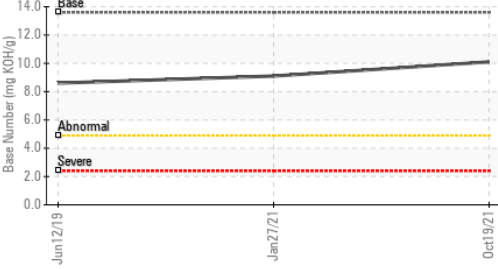
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| | | | | | | |
|------------------|----------|-------------|------|-------------|------|------|
| Sodium | ppm | ASTM D5185m | >31 | 4 | 5 | 7 |
| Boron | ppm | ASTM D5185m | | 246 | 186 | 143 |
| Barium | ppm | ASTM D5185m | | 0 | <1 | <1 |
| Molybdenum | ppm | ASTM D5185m | | 267 | 225 | 251 |
| Manganese | ppm | ASTM D5185m | | 1 | 2 | 1 |
| Magnesium | ppm | ASTM D5185m | | 815 | 847 | 914 |
| Calcium | ppm | ASTM D5185m | | 1489 | 1514 | 1463 |
| Phosphorus | ppm | ASTM D5185m | | 936 | 940 | 849 |
| Zinc | ppm | ASTM D5185m | | 1020 | 1072 | 1072 |
| Sulfur | ppm | ASTM D5185m | | 2541 | 2682 | 2550 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 14 | 18.2 | 16.2 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 13.6 | 10.1 | 9.1 | 8.6 |
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | 13.7 | 13.3 | 12.6 |

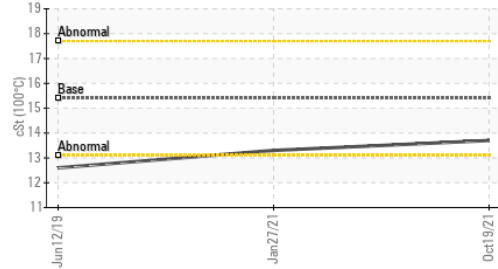
▲ Ferrous Alloys



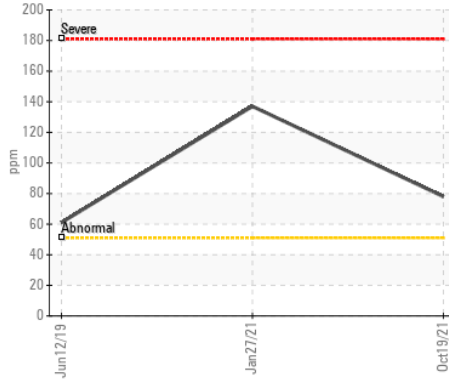
Base Number



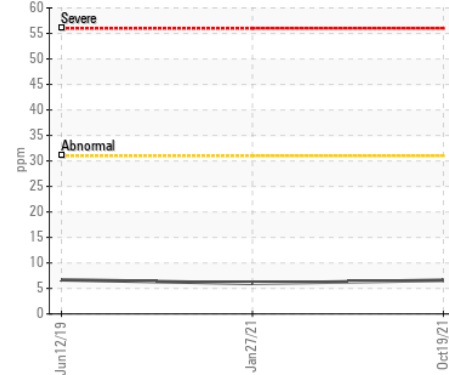
Viscosity @ 100°C



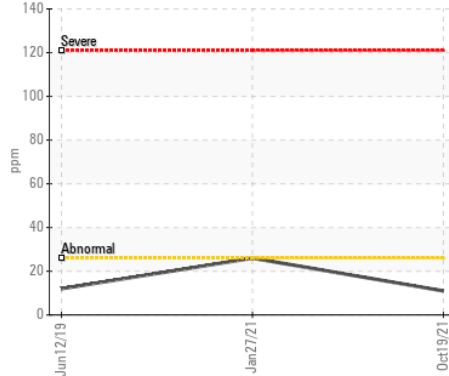
▲ Iron (ppm)



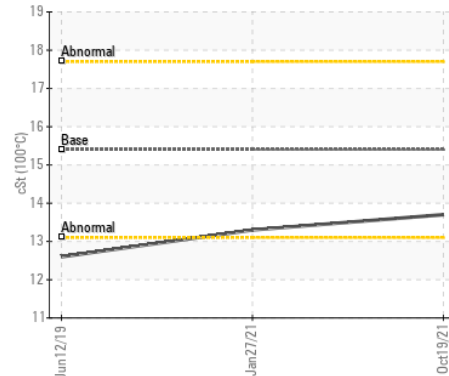
Aluminum (ppm)



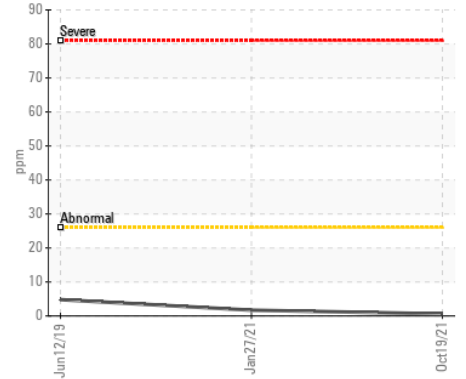
Copper (ppm)



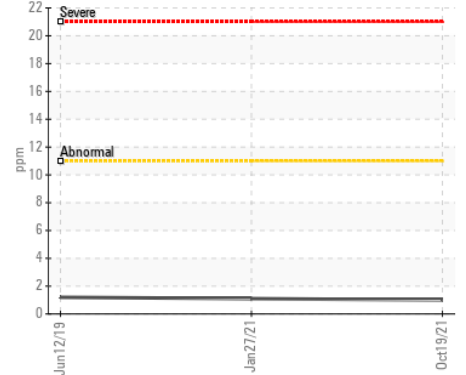
Viscosity @ 100°C



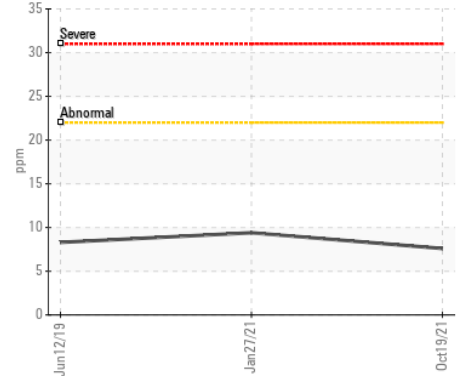
Lead (ppm)



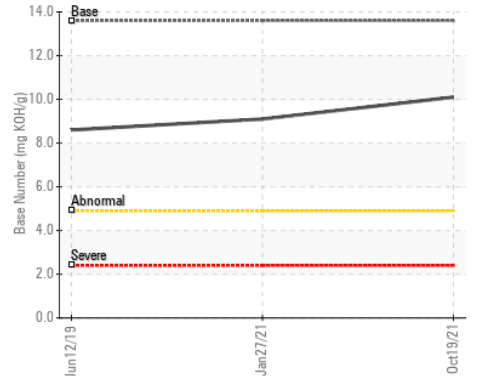
Chromium (ppm)



Silicon (ppm)



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LEC0022002 **Received** : 21 Oct 2021
Lab Number : 05379526 **Diagnosed** : 22 Oct 2021
Unique Number : 9708654 **Diagnostician** : Jonathan Hester
Test Package : MOBCE (Additional Tests: TBN)

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 MARIETTA, OH
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 F: (740)373-5570

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)