James River Equipment

OIL ANALYSIS REPORT

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

Machine Id
## JOHN DEERE 700K 1T0700KXTHF315362
Component
## Diesel Engine
Fluid
## JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- GAL)

## RECOMMENDATION

Resample at the next service interval to monitor.

## WEAR

All component wear rates are normal.

## CONTAMINATION

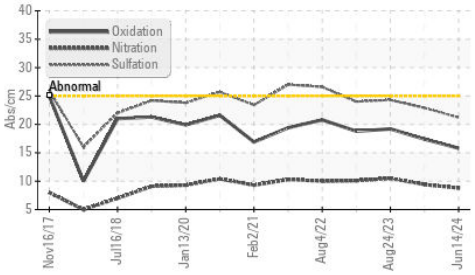
There is no indication of any contamination in the oil.

## FLUID CONDITION

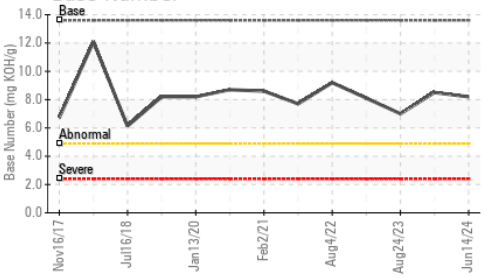
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | JR0222504 | JR0197450 | JR0186321 |
| Sample Date | | Client Info | | 14 Jun 2024 | 07 Dec 2023 | 24 Aug 2023 |
| Machine Age | hrs | Client Info | | 8655 | 7805 | 7373 |
| Oil Age | hrs | Client Info | | 850 | 432 | 759 |
| Filter Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | Changed | Changed | Changed |
| Filter Changed | | Client Info | | Changed | Changed | Changed |
| Sample Status | | | | NORMAL | ABNORMAL | ABNORMAL |
| Iron | ppm | ASTM D5185m | >51 | 26 | ▲ 58 | ▲ 64 |
| Chromium | ppm | ASTM D5185m | >11 | <1 | 1 | 2 |
| Nickel | ppm | ASTM D5185m | >5 | 4 | 4 | 3 |
| Titanium | ppm | ASTM D5185m | | <1 | <1 | 3 |
| Silver | ppm | ASTM D5185m | >3 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >31 | 5 | 5 | 10 |
| Lead | ppm | ASTM D5185m | >26 | 0 | 0 | <1 |
| Copper | ppm | ASTM D5185m | >26 | 7 | 11 | 2 |
| Tin | ppm | ASTM D5185m | >4 | 0 | 0 | <1 |
| Vanadium | ppm | ASTM D5185m | | <1 | <1 | <1 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Silicon | ppm | ASTM D5185m | >22 | 7 | 9 | 14 |
| Potassium | ppm | ASTM D5185m | >20 | 4 | <1 | 2 |
| 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 | 0.3 | 0.4 | 0.7 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 8.8 | 9.4 | 10.5 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 21.2 | 22.9 | 24.3 |
| 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 |
| Sodium | ppm | ASTM D5185m | >31 | 3 | 1 | 4 |
| Boron | ppm | ASTM D5185m | | 147 | 178 | 96 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 187 | 237 | 254 |
| Manganese | ppm | ASTM D5185m | | 1 | <1 | 1 |
| Magnesium | ppm | ASTM D5185m | | 572 | 800 | 870 |
| Calcium | ppm | ASTM D5185m | | 1690 | 1451 | 1749 |
| Phosphorus | ppm | ASTM D5185m | | 934 | 900 | 1008 |
| Zinc | ppm | ASTM D5185m | | 1134 | 1157 | 1256 |
| Sulfur | ppm | ASTM D5185m | | 3624 | 2976 | 3719 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 15.8 | 17.4 | 19.2 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 13.6 | 8.2 | 8.5 | 7.0 |
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | 14.2 | 14.2 | 14.4 |

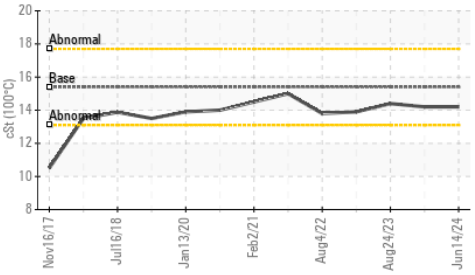
FT-IR (Direct Trend)



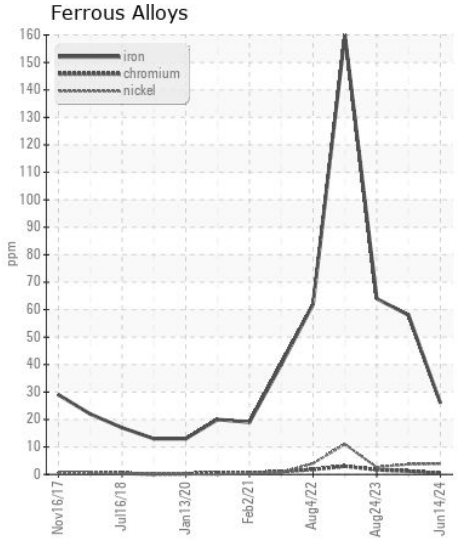

Base Number



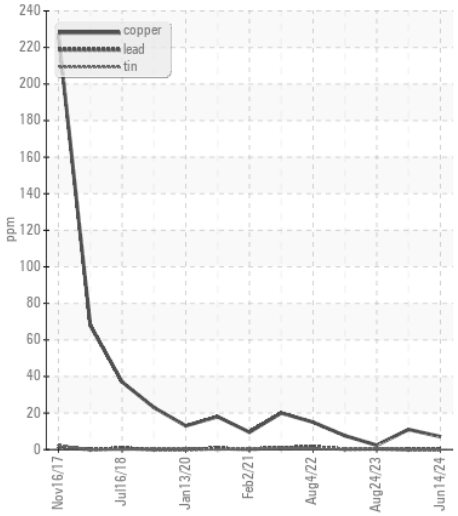

Viscosity @ 100°C



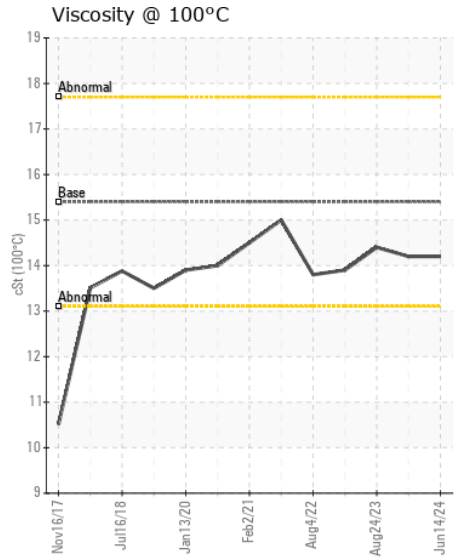

Ferrous Alloys




Non-ferrous Metals




Viscosity @ 100°C

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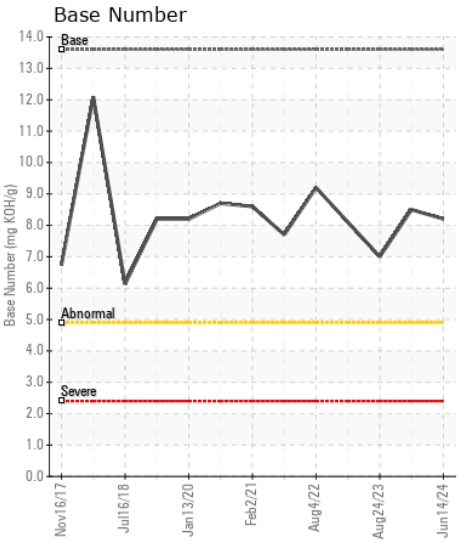


Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : JR0222504
**Lab Number** : 06211433
**Unique Number** : 11084297
**Test Package** : CONST ( Additional Tests: TBN )

**Received** : 17 Jun 2024
**Tested** : 18 Jun 2024
**Diagnosed** : 18 Jun 2024 - Wes Davis

**MONTAGUE DEVELOPMENT**
10305 PENNY RD
RALEIGH, NC
US 27606
Contact: Mark Fielding

*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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