James River Equipment

OIL ANALYSIS REPORT

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

Machine Id
## KLEEMANN KT80-2 Y1840001
Component
## Diesel Engine
Fluid
## JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (2 GAL)

### RECOMMENDATION

We advise that you check the fuel injection system. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

### WEAR

All component wear rates are normal.

### CONTAMINATION

There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

### FLUID CONDITION

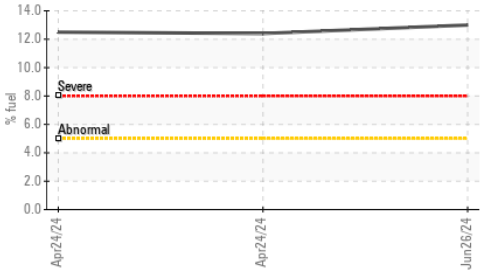
The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | JR0208820 | JR0208999 | JR0214258 |
| Sample Date | | Client Info | | 26 Jun 2024 | 24 Apr 2024 | 24 Apr 2024 |
| Machine Age | hrs | Client Info | | 7465 | 6496 | 5994 |
| Oil Age | hrs | Client Info | | 969 | 500 | 500 |
| Filter Age | hrs | Client Info | | 969 | 500 | 500 |
| Oil Changed | | Client Info | | Changed | Changed | Changed |
| Filter Changed | | Client Info | | Changed | Changed | Changed |
| Sample Status | | | | SEVERE | SEVERE | SEVERE |
| Iron | ppm | ASTM D5185m | >100 | 11 | 17 | 9 |
| Chromium | ppm | ASTM D5185m | >20 | <1 | 1 | 0 |
| Nickel | ppm | ASTM D5185m | >4 | <1 | <1 | 0 |
| Titanium | ppm | ASTM D5185m | | <1 | <1 | 0 |
| Silver | ppm | ASTM D5185m | >3 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | 6 | 5 | 5 |
| Lead | ppm | ASTM D5185m | >40 | 0 | <1 | 0 |
| Copper | ppm | ASTM D5185m | >330 | 3 | 1 | 0 |
| Tin | ppm | ASTM D5185m | >15 | <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 |
| Silicon | ppm | ASTM D5185m | >25 | 12 | 11 | 11 |
| Potassium | ppm | ASTM D5185m | >20 | 3 | 2 | 0 |
| Fuel | % | ASTM D3524 | >5 | ▲ 13.0 | ▲ 12.4 | ▲ 12.5 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | *ASTM D7844 | >3 | 1.2 | 1.9 | 1.5 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 13.1 | 15.5 | 14.3 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 24.8 | 27.6 | 24.7 |
| 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 | >0.2 | NEG | NEG | NEG |
| Sodium | ppm | ASTM D5185m | | 5 | <1 | 0 |
| Boron | ppm | ASTM D5185m | | 176 | 202 | 198 |
| Barium | ppm | ASTM D5185m | | <1 | 2 | <1 |
| Molybdenum | ppm | ASTM D5185m | | 229 | 222 | 211 |
| Manganese | ppm | ASTM D5185m | | <1 | <1 | 0 |
| Magnesium | ppm | ASTM D5185m | | 756 | 701 | 729 |
| Calcium | ppm | ASTM D5185m | | 1266 | 1217 | 1261 |
| Phosphorus | ppm | ASTM D5185m | | 796 | 736 | 803 |
| Zinc | ppm | ASTM D5185m | | 979 | 906 | 950 |
| Sulfur | ppm | ASTM D5185m | | 3090 | 2837 | 2914 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 23.6 | 28.2 | 24.1 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 13.6 | 9.4 | 10.4 | 10.1 |
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | ▲ 12.3 | ▲ 13.0 | ▲ 12.4 |

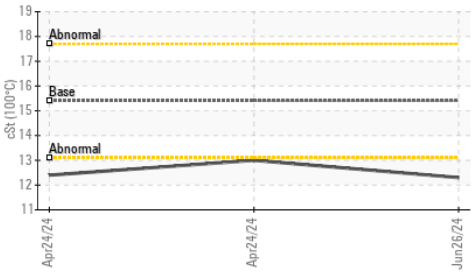
Report Id: RWMNEW [WUSCAR] 06222032 (Generated: 07/01/2024 09:44:58) Rev: 1

Submitted By: Dylan Sanderson

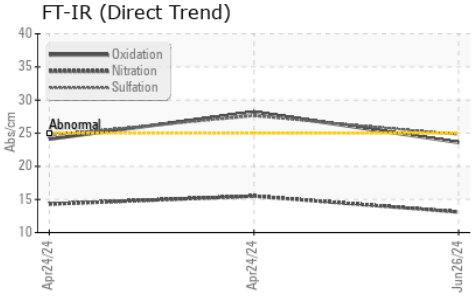
Fuel Dilution



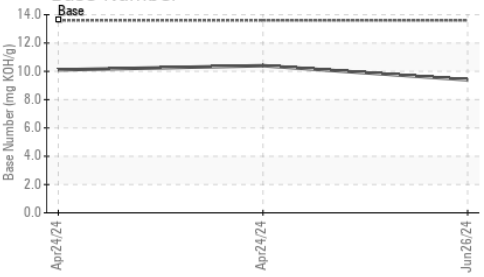

Viscosity @ 100°C



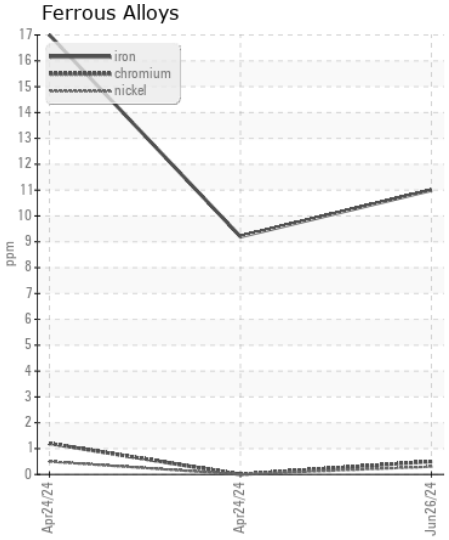

FT-IR (Direct Trend)



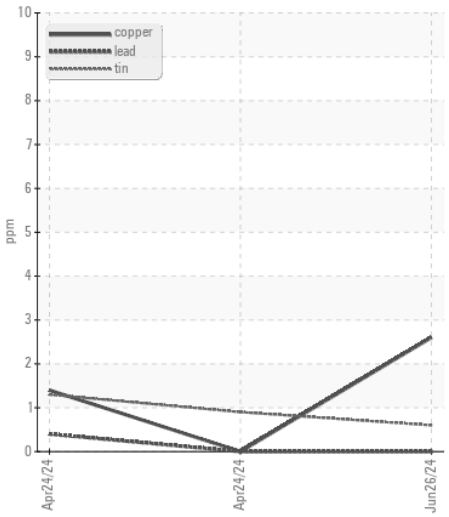

Base Number



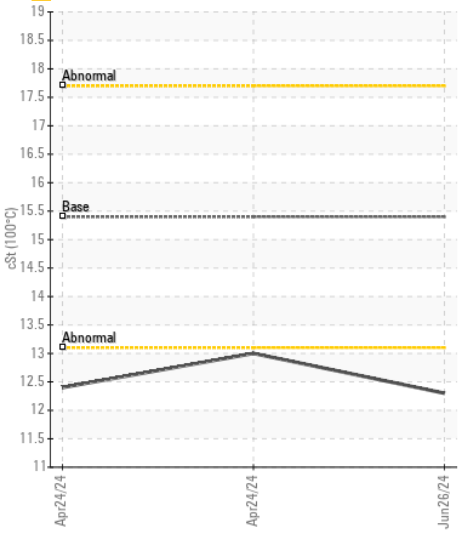

Ferrous Alloys




Non-ferrous Metals




Viscosity @ 100°C

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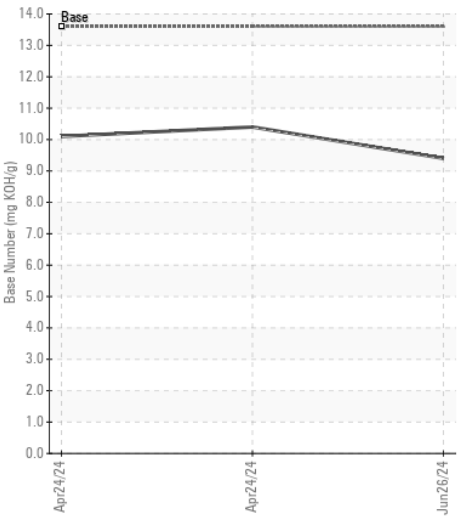


Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : JR0208820 **Received** : 27 Jun 2024
**Lab Number** : 06222032 **Tested** : 01 Jul 2024
**Unique Number** : 11100229 **Diagnosed** : 01 Jul 2024 - Wes Davis
**Test Package** : CONST ( Additional Tests: PercentFuel, 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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