CONST

James River Equipment

OIL ANALYSIS REPORT

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

Area

**[16W16330]**

Machine Id

**JOHN DEERE 324G 1T0324GKJPJ452962**

Component

**Diesel Engine**

Fluid

**JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (3 GAL)**

## RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor. ( Customer Sample Comment: 16W16330 )

## WEAR

The copper level is abnormal. Cylinder, crank, or cam shaft wear is indicated. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core).

## CONTAMINATION

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

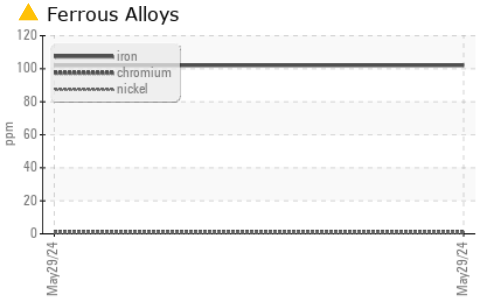
## FLUID CONDITION

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

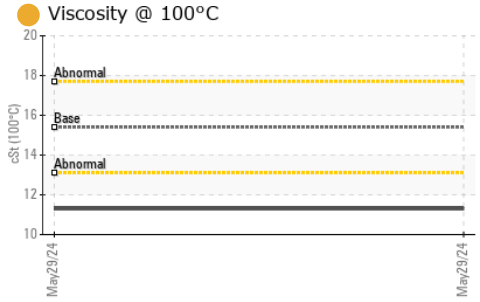
| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | JR0207197 | --- | --- |
| Sample Date | | Client Info | | 29 May 2024 | --- | --- |
| Machine Age | hrs | Client Info | | 1162 | --- | --- |
| Oil Age | hrs | Client Info | | 1162 | --- | --- |
| Filter Age | hrs | Client Info | | 1162 | --- | --- |
| Oil Changed | | Client Info | | Changed | --- | --- |
| Filter Changed | | Client Info | | Changed | --- | --- |
| Sample Status | | | | ABNORMAL | --- | --- |
| Iron | ppm | ASTM D5185m | >51 | ▲ 102 | --- | --- |
| Chromium | ppm | ASTM D5185m | >11 | 1 | --- | --- |
| Nickel | ppm | ASTM D5185m | >5 | <1 | --- | --- |
| Titanium | ppm | ASTM D5185m | | <1 | --- | --- |
| Silver | ppm | ASTM D5185m | >3 | 2 | --- | --- |
| Aluminum | ppm | ASTM D5185m | >31 | 3 | --- | --- |
| Lead | ppm | ASTM D5185m | >26 | <1 | --- | --- |
| Copper | ppm | ASTM D5185m | >26 | ▲ 111 | --- | --- |
| Tin | ppm | ASTM D5185m | >4 | <1 | --- | --- |
| Vanadium | ppm | ASTM D5185m | | <1 | --- | --- |
| White Metal | scalar | *Visual | NONE | NONE | --- | --- |
| Yellow Metal | scalar | *Visual | NONE | NONE | --- | --- |
| Silicon | ppm | ASTM D5185m | >22 | 13 | --- | --- |
| Potassium | ppm | ASTM D5185m | >20 | 3 | --- | --- |
| Fuel | % | ASTM D3524 | >2.1 | 0.4 | --- | --- |
| Water | | WC Method | >0.21 | NEG | --- | --- |
| Glycol | | WC Method | | NEG | --- | --- |
| Soot % | % | *ASTM D7844 | >3 | 0.2 | --- | --- |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 7.5 | --- | --- |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 18.0 | --- | --- |
| 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 | 1 | --- | --- |
| Boron | ppm | ASTM D5185m | | 44 | --- | --- |
| Barium | ppm | ASTM D5185m | | 0 | --- | --- |
| Molybdenum | ppm | ASTM D5185m | | 43 | --- | --- |
| Manganese | ppm | ASTM D5185m | | <1 | --- | --- |
| Magnesium | ppm | ASTM D5185m | | 176 | --- | --- |
| Calcium | ppm | ASTM D5185m | | 2090 | --- | --- |
| Phosphorus | ppm | ASTM D5185m | | 963 | --- | --- |
| Zinc | ppm | ASTM D5185m | | 1113 | --- | --- |
| Sulfur | ppm | ASTM D5185m | | 3919 | --- | --- |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 12.5 | --- | --- |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 13.6 | 5.8 | --- | --- |
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | ● 11.3 | --- | --- |

Non-ferrous Metals

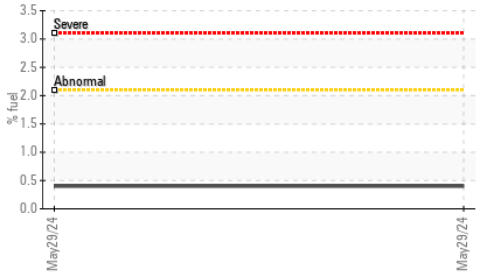

Ferrous Alloys



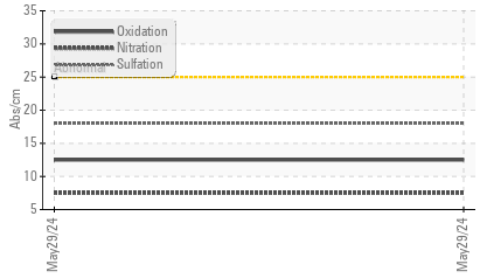

Viscosity @ 100°C



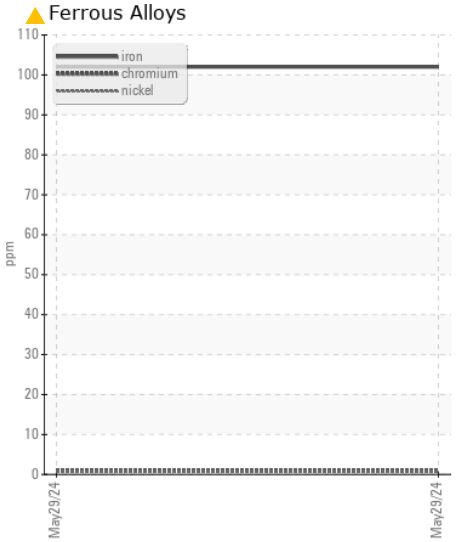

Fuel Dilution



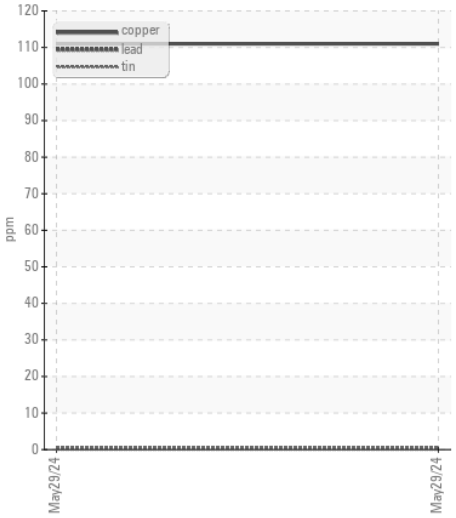

FT-IR (Direct Trend)



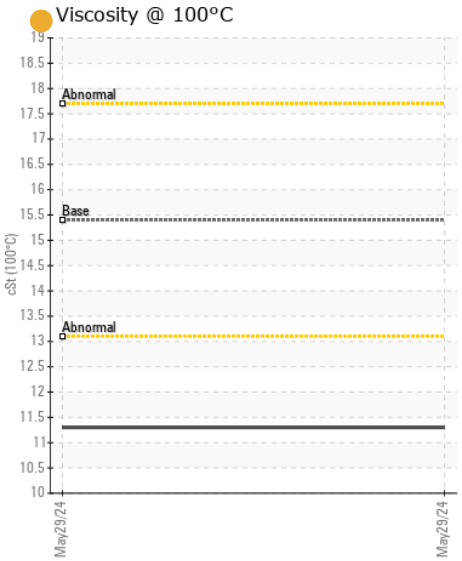

Ferrous Alloys



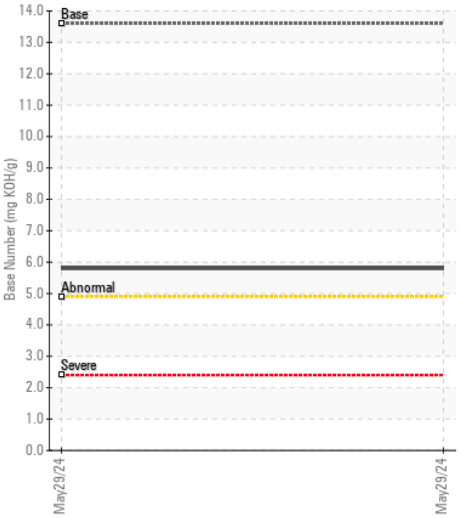

Non-ferrous Metals




Viscosity @ 100°C




Base Number




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : JR0207197 **Received** : 03 Jun 2024
**Lab Number** : 06197479 **Tested** : 05 Jun 2024
**Unique Number** : 11059602 **Diagnosed** : 05 Jun 2024 - Sean Felton
**Test Package** : CONST ( Additional Tests: FuelDilution, 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)*

**JRE - CASTLE HAYNE**
113 CROWATAN ROAD
CASTLE HAYNE, NC
US 28429-5819
Contact: WILMINGTON SHOP
todd.simmons@jamesriverequipment.com;canastasio@wearcheck.com;canastasio@we
T: (910)675-9211
F: