James River Equipment

OIL ANALYSIS REPORT

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

Area
**[SOLSTICE HISTORIC]**
Machine Id
**JOHN DEERE 331G 1T0331GKVLF371276**
Component
**Right Final Drive**
Fluid
**JOHN DEERE GL-5 80W90 (--- QTS)**

## RECOMMENDATION

We advise that you check all areas where dirt can enter the system. The oil change at the time of sampling has been noted. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

## WEAR

Gear wear is indicated.

## CONTAMINATION

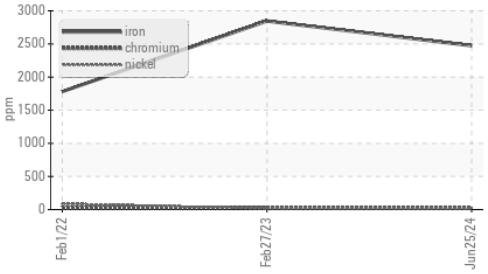
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

## FLUID CONDITION

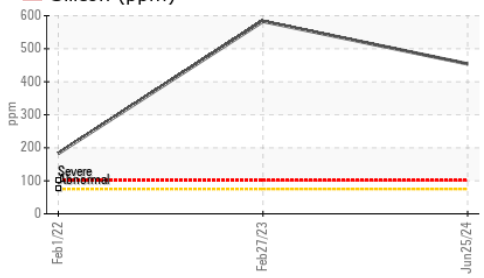
The oil is no longer serviceable due to the presence of contaminants.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | JR0221387 | JR0159523 | JR0112071 |
| Sample Date | | Client Info | | 25 Jun 2024 | 27 Feb 2023 | 01 Feb 2022 |
| Machine Age | hrs | Client Info | | 1900 | 1227 | 531 |
| Oil Age | hrs | Client Info | | 0 | 0 | 0 |
| Filter Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | Changed | Changed | N/A |
| Filter Changed | | Client Info | | N/A | N/A | N/A |
| Sample Status | | | | SEVERE | SEVERE | SEVERE |
| PQ | | ASTM D8184 | >1250 | 101 | 219 | 149 |
| Iron | ppm | ASTM D5185m | >750 | ▲ 2474 | ▲ 2846 | ▲ 1781 |
| Chromium | ppm | ASTM D5185m | >9 | ▲ 24 | ▲ 27 | ▲ 22 |
| Nickel | ppm | ASTM D5185m | >10 | 13 | 14 | 88 |
| Titanium | ppm | ASTM D5185m | | 18 | 20 | 8 |
| Silver | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >40 | ● 125 | ● 120 | ● 63 |
| Lead | ppm | ASTM D5185m | >15 | <1 | 0 | <1 |
| Copper | ppm | ASTM D5185m | >40 | 3 | 2 | 3 |
| Tin | ppm | ASTM D5185m | >10 | 0 | 0 | 0 |
| Vanadium | ppm | ASTM D5185m | | 1 | 1 | 11 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | MODER |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Silicon | ppm | ASTM D5185m | >75 | ▲ 454 | ▲ 583 | ▲ 183 |
| Potassium | ppm | ASTM D5185m | >20 | 54 | 73 | 43 |
| Water | | WC Method | >0.075 | NEG | NEG | NEG |
| 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 | >0.075 | NEG | NEG | NEG |
| Sodium | ppm | ASTM D5185m | >51 | 12 | 19 | 17 |
| Boron | ppm | ASTM D5185m | | 24 | 29 | 116 |
| Barium | ppm | ASTM D5185m | | 9 | 7 | 82 |
| Molybdenum | ppm | ASTM D5185m | | 4 | 4 | 2 |
| Manganese | ppm | ASTM D5185m | | 19 | 23 | 19 |
| Magnesium | ppm | ASTM D5185m | | 17 | 28 | 14 |
| Calcium | ppm | ASTM D5185m | | 32 | 79 | 79 |
| Phosphorus | ppm | ASTM D5185m | | 302 | 237 | 840 |
| Zinc | ppm | ASTM D5185m | | 39 | 54 | 53 |
| Sulfur | ppm | ASTM D5185m | | 16260 | 19980 | 20260 |
| Visc @ 40°C | cSt | ASTM D445 | | 141 | 154 | 136 |

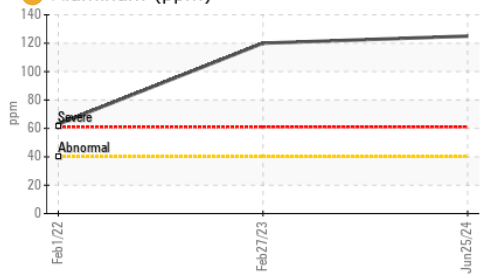
Ferrous Alloys



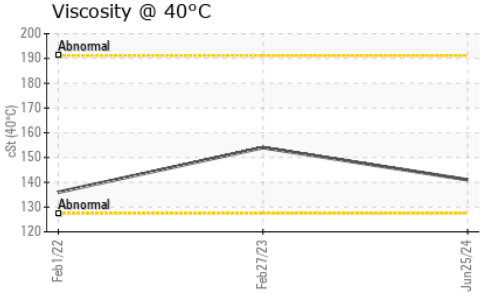

Silicon (ppm)



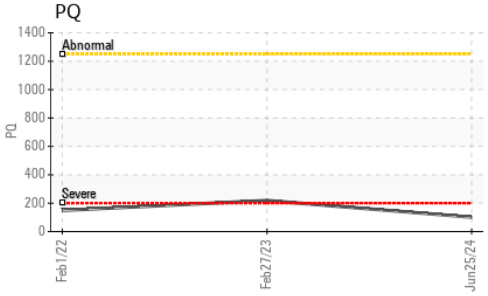

Aluminum (ppm)



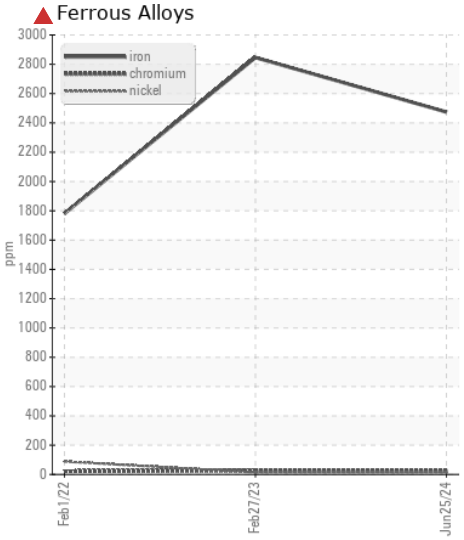

Viscosity @ 40°C



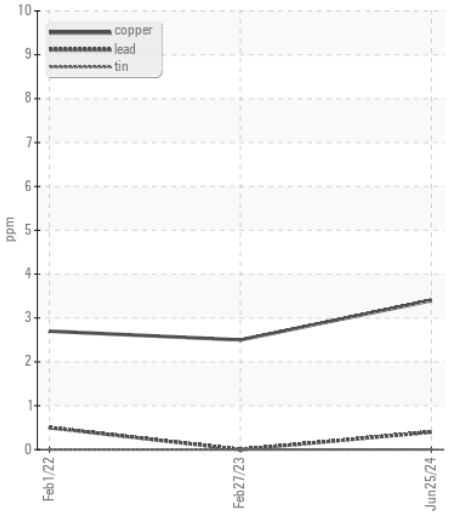

PQ



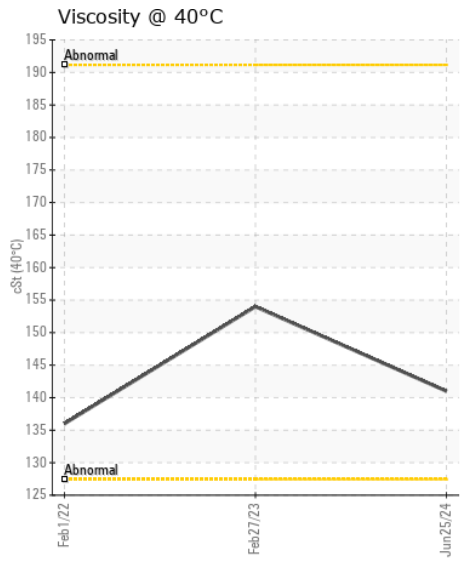

Ferrous Alloys



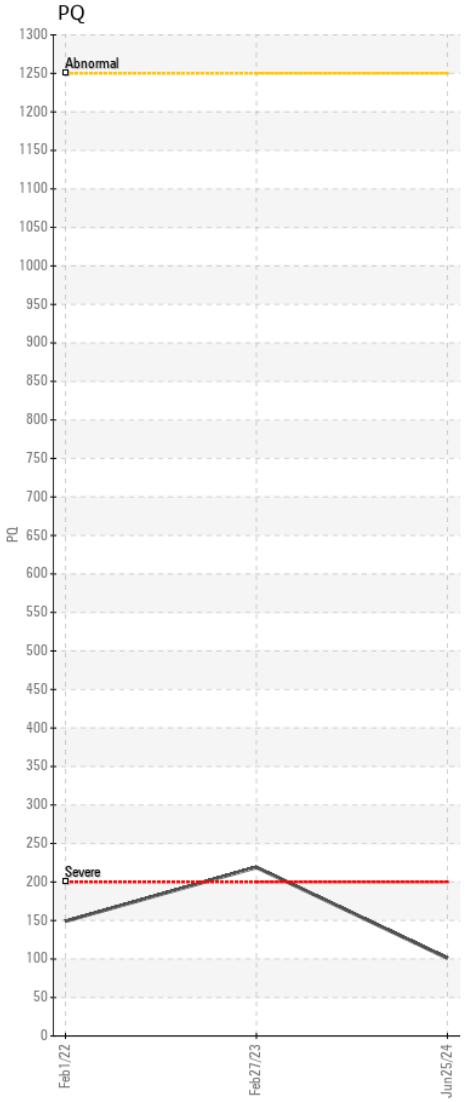

Non-ferrous Metals




Viscosity @ 40°C




PQ





**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : JR0221387
**Lab Number** : 06226498
**Unique Number** : 11109991
**Test Package** : CONST ( Additional Tests: PQ )

**Received** : 02 Jul 2024
**Tested** : 03 Jul 2024
**Diagnosed** : 05 Jul 2024 - Jonathan Hester

**JRE - STEPHENSON**
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Certificate L2367

*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)*