# James River Equipment
## OIL ANALYSIS REPORT

CONST

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

Machine Id
## 5056
Component
## Right Final Drive
Fluid
## {not provided} (--- GAL)

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **JR0221263** | JR0210599 | JR0184552 |
| Sample Date | | Client Info | | **12 Jul 2024** | 09 Apr 2024 | 26 Oct 2023 |
| Machine Age | hrs | Client Info | | **1962** | 1406 | 635 |
| Oil Age | hrs | Client Info | | **556** | 500 | 500 |
| Filter Age | hrs | Client Info | | **556** | 500 | 500 |
| Oil Changed | | Client Info | | **Changed** | Changed | Changed |
| Filter Changed | | Client Info | | **N/A** | N/A | N/A |
| Sample Status | | | | **ABNORMAL** | ABNORMAL | NORMAL |

## 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. Resample at the next service interval to monitor.
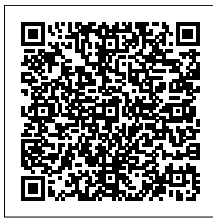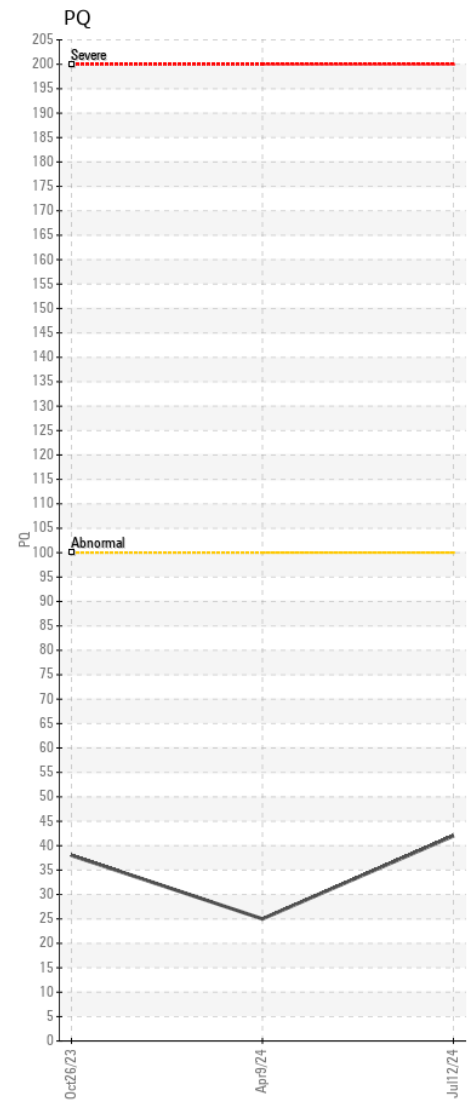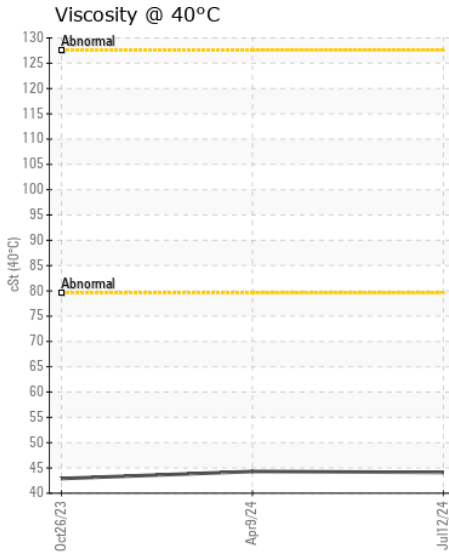
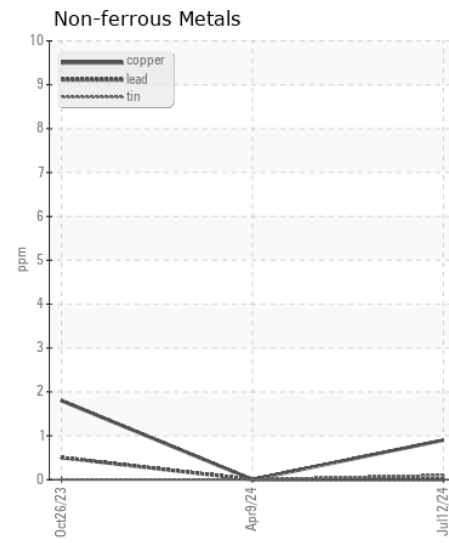## WEAR

All component wear rates are normal.

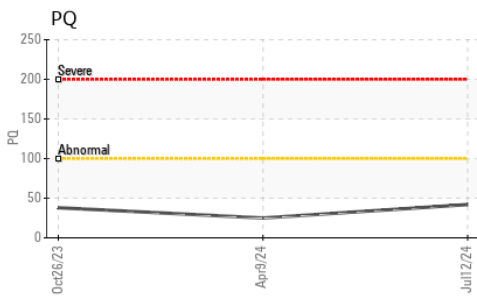| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|---|---|---|---|---|---|---|
| PQ | | ASTM D8184 | | **42** | 25 | 38 |
| Iron | ppm | ASTM D5185m | >500 | **152** | 89 | 53 |
| Chromium | ppm | ASTM D5185m | >10 | **12** | 9 | 3 |
| Nickel | ppm | ASTM D5185m | >10 | **<1** | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | **4** | 2 | <1 |
| Silver | ppm | ASTM D5185m | | **<1** | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >25 | ⬤ **51** | ◯ 25 | <1 |
| Lead | ppm | ASTM D5185m | >25 | **0** | 0 | <1 |
| Copper | ppm | ASTM D5185m | >50 | **<1** | 0 | 2 |
| Tin | ppm | ASTM D5185m | >10 | **<1** | 0 | 0 |
| Vanadium | ppm | ASTM D5185m | | **<1** | 0 | 0 |
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |

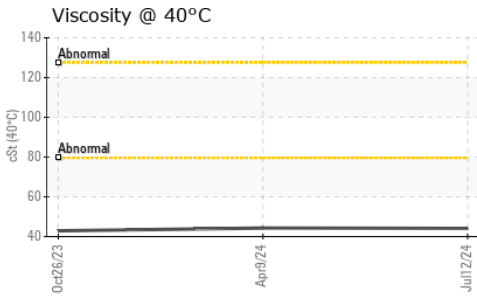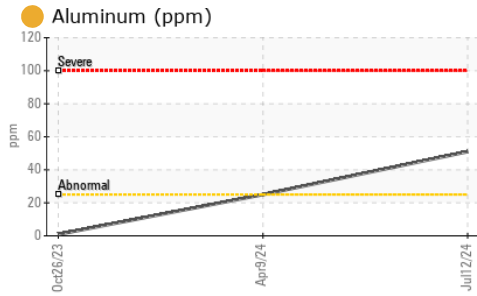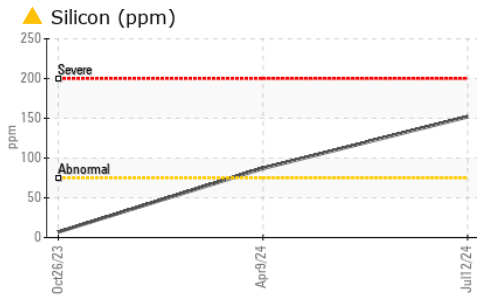## CONTAMINATION

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

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >75 | ⚠ **152** | ⚠ 87 | 7 |
| Potassium | ppm | ASTM D5185m | >20 | **15** | 5 | 2 |
| Water | | WC Method | >0.2 | **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** | HAZY | NORML |
| Odor | scalar | *Visual | NORML | **NORML** | NORML | NORML |
| Emulsified Water | scalar | *Visual | >0.2 | **NEG** | NEG | NEG |

## FLUID CONDITION

The condition of the oil is acceptable for the time in service.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|---|---|---|---|---|---|---|
| Sodium | ppm | ASTM D5185m | | **2** | 5 | 9 |
| Boron | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Barium | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | **2** | <1 | 0 |
| Manganese | ppm | ASTM D5185m | | **3** | 4 | 4 |
| Magnesium | ppm | ASTM D5185m | | **12** | 0 | 11 |
| Calcium | ppm | ASTM D5185m | | **100** | 78 | 70 |
| Phosphorus | ppm | ASTM D5185m | | **124** | 81 | 253 |
| Zinc | ppm | ASTM D5185m | | **68** | 74 | 447 |
| Sulfur | ppm | ASTM D5185m | | **1407** | 1507 | 8611 |
| Visc @ 40°C | cSt | ASTM D445 | | **44.1** | 44.3 | 42.9 |
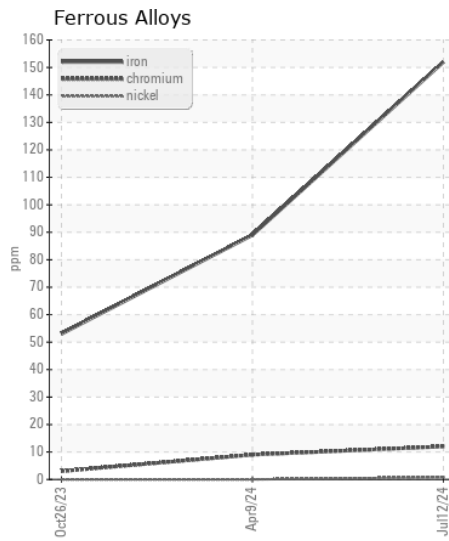
Silicon (ppm)



Aluminum (ppm)



Viscosity @ 40°C



PQ



Ferrous Alloys

iron
chromium
nickel



Non-ferrous Metals

copper
lead
tin



Viscosity @ 40°C



PQ

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