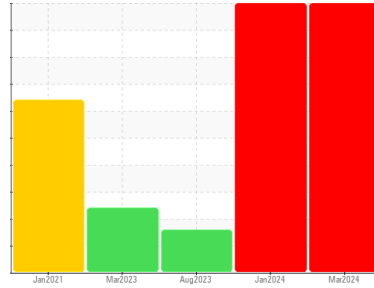




PROBLEM SUMMARY

Sample Rating Trend



WEAR



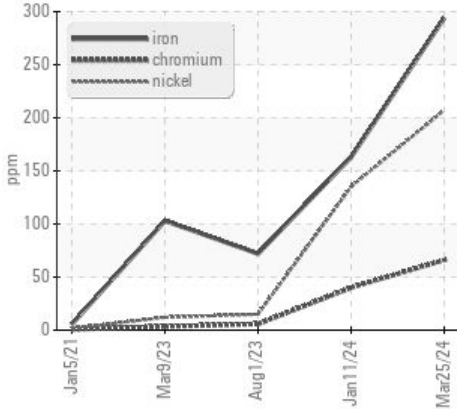
Machine Id
PRESS 1 (S/N 420-235)

Component
Southwest Roller Bearing

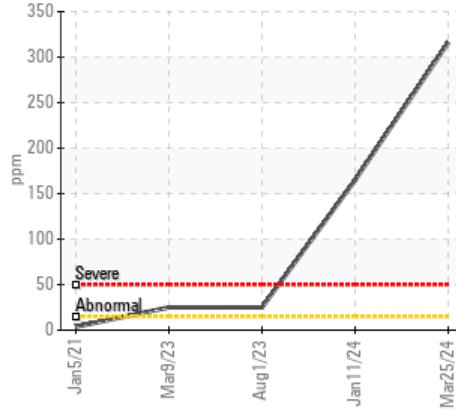
Fluid
ROYAL PURPLE THERMYL-GLYDE 1500 (--- GAL)

COMPONENT CONDITION SUMMARY

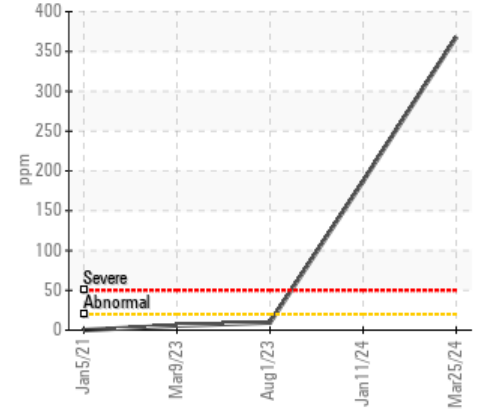
▲ Ferrous Alloys



▲ Silicon (ppm)



▲ Aluminum (ppm)



RECOMMENDATION

We advise that you check all areas where dirt can enter the system. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

| Sample Status | | | | SEVERE | SEVERE | ABNORMAL |
|---------------|-----|-------------|-----|--------|--------|----------|
| Iron | ppm | ASTM D5185m | >20 | ▲ 294 | ▲ 163 | 72 |
| Chromium | ppm | ASTM D5185m | >20 | ▲ 66 | ▲ 40 | 6 |
| Nickel | ppm | ASTM D5185m | >20 | ▲ 207 | ▲ 135 | 15 |
| Aluminum | ppm | ASTM D5185m | >20 | ▲ 368 | ▲ 187 | 10 |
| Silicon | ppm | ASTM D5185m | >15 | ▲ 316 | ▲ 165 | ▲ 25 |

Customer Id: WEYNEW
Sample No.: WC0432395
Lab Number: 06130714
Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
Jonathan Hester +1 919-379-4092 x4092
jhester@wearcheckusa.com

To change component or sample information:
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

| Action | Status | Date | Done By | Description |
|---------------------|--------|------|---------|---|
| Inspect Wear Source | --- | --- | ? | We advise that you inspect for the source(s) of wear. |
| Resample | --- | --- | ? | We recommend an early resample to monitor this condition. |
| Check Dirt Access | --- | --- | ? | We advise that you check all areas where dirt can enter the system. |

HISTORICAL DIAGNOSIS

11 Jan 2024 Diag: Jonathan Hester

WEAR



We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. The iron level is severe. The chromium level is abnormal. The nickel level is severe. The aluminum level is severe. The copper level is abnormal. Elemental level of silicon (Si) above normal indicating ingress of seal material. The water content is negligible. The AN level is acceptable for this fluid.

view report



01 Aug 2023 Diag: Don Baldrige

DIRT



No corrective action is recommended at this time. Resample at the next service interval to monitor. All component wear rates are normal. Elemental level of silicon (Si) above normal. The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

view report



09 Mar 2023 Diag: Don Baldrige

DIRT



Resample at the next service interval to monitor. The iron level is abnormal. All other component wear rates are normal. Elemental level of silicon (Si) above normal indicating ingress of seal material. The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

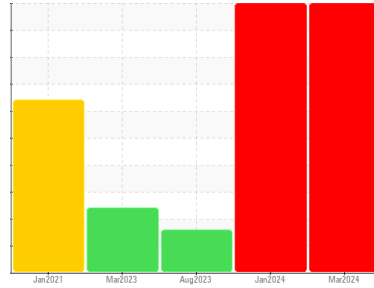
view report





OIL ANALYSIS REPORT

Sample Rating Trend



WEAR



Machine Id
PRESS 1 (S/N 420-235)

Component
Southwest Roller Bearing

Fluid
ROYAL PURPLE THERMYL-GLYDE 1500 (--- GAL)

DIAGNOSIS

▲ Recommendation

We advise that you check all areas where dirt can enter the system. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

▲ Wear

The iron level is severe. The chromium level is abnormal. The nickel level is severe. The aluminum level is severe. The copper level is abnormal.

▲ Contamination

Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. The water content is negligible.

Fluid Condition

The AN level is acceptable for this fluid.

SAMPLE INFORMATION

| | method | limit/base | current | history1 | history2 |
|---------------|-------------|-------------|--------------------|-------------|-------------|
| Sample Number | Client Info | | WC0432395 | WC0432376 | WC0432482 |
| Sample Date | Client Info | | 25 Mar 2024 | 11 Jan 2024 | 01 Aug 2023 |
| Machine Age | hrs | Client Info | 0 | 0 | 0 |
| Oil Age | hrs | Client Info | 0 | 0 | 0 |
| Oil Changed | Client Info | | N/A | N/A | N/A |
| Sample Status | | | SEVERE | SEVERE | ABNORMAL |

WEAR METALS

| | method | limit/base | current | history1 | history2 |
|----------|--------|-----------------|--------------|----------|----------|
| Iron | ppm | ASTM D5185m >20 | ▲ 294 | ▲ 163 | 72 |
| Chromium | ppm | ASTM D5185m >20 | ▲ 66 | ▲ 40 | 6 |
| Nickel | ppm | ASTM D5185m >20 | ▲ 207 | ▲ 135 | 15 |
| Titanium | ppm | ASTM D5185m | <1 | 0 | 0 |
| Silver | ppm | ASTM D5185m | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m >20 | ▲ 368 | ▲ 187 | 10 |
| Lead | ppm | ASTM D5185m >20 | 0 | 0 | 0 |
| Copper | ppm | ASTM D5185m >20 | 19 | ▲ 13 | <1 |
| Tin | ppm | ASTM D5185m >20 | 0 | 0 | 0 |
| Vanadium | ppm | ASTM D5185m | 0 | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | <1 | 0 | 0 |

ADDITIVES

| | method | limit/base | current | history1 | history2 |
|------------|--------|-------------|--------------|----------|----------|
| Boron | ppm | ASTM D5185m | 3 | 2 | 0 |
| Barium | ppm | ASTM D5185m | 70 | 84 | 0 |
| Molybdenum | ppm | ASTM D5185m | 6 | 4 | <1 |
| Manganese | ppm | ASTM D5185m | 4 | 2 | <1 |
| Magnesium | ppm | ASTM D5185m | 8 | 3 | <1 |
| Calcium | ppm | ASTM D5185m | 68 | 59 | 47 |
| Phosphorus | ppm | ASTM D5185m | 216 | 189 | 111 |
| Zinc | ppm | ASTM D5185m | 44 | 33 | <1 |
| Sulfur | ppm | ASTM D5185m | 21177 | 22626 | 27073 |

CONTAMINANTS

| | method | limit/base | current | history1 | history2 |
|-----------|--------|-----------------|--------------|----------|----------|
| Silicon | ppm | ASTM D5185m >15 | ▲ 316 | ▲ 165 | ▲ 25 |
| Sodium | ppm | ASTM D5185m | 86 | 40 | 24 |
| Potassium | ppm | ASTM D5185m >20 | 16 | 5 | 1 |
| Water | % | ASTM D6304 >2 | 0.048 | 0.282 | 0.047 |
| ppm Water | ppm | ASTM D6304 | 480 | 2820 | 477.9 |

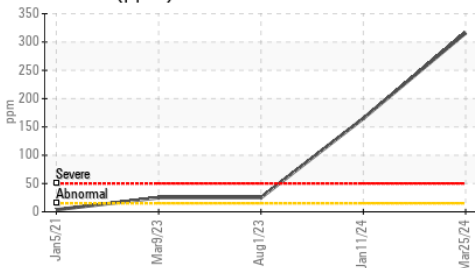
FLUID DEGRADATION

| | method | limit/base | current | history1 | history2 |
|------------------|----------|------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.88 | 0.62 | 0.37 |

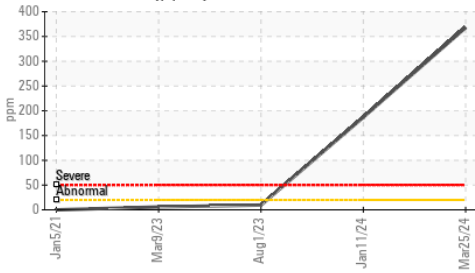


OIL ANALYSIS REPORT

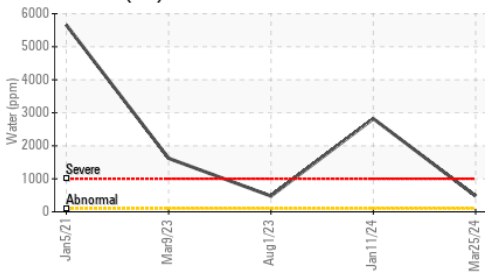
▲ Silicon (ppm)



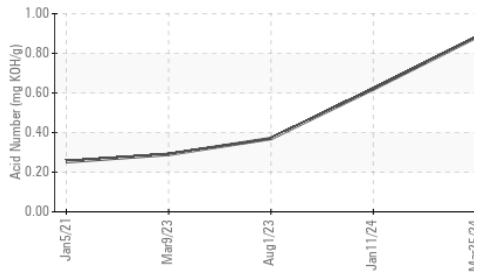
▲ Aluminum (ppm)



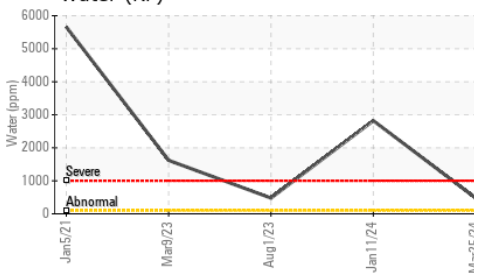
Water (KF)



Acid Number



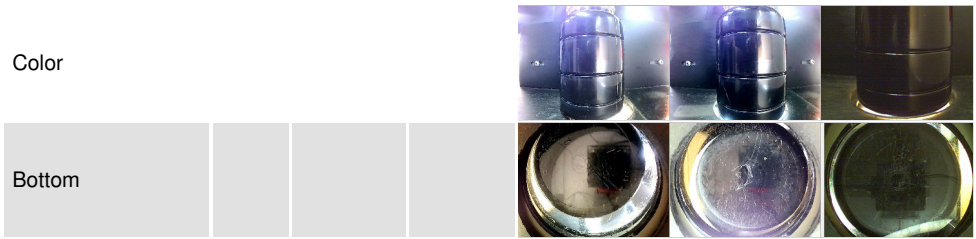
Water (KF)



| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | NONE |
| Silt | scalar | *Visual | NONE | NONE | NONE |
| Debris | scalar | *Visual | NONE | NONE | NONE |
| Sand/Dirt | scalar | *Visual | NONE | NONE | NONE |
| Appearance | scalar | *Visual | NORML | NORML | NORML |
| Odor | scalar | *Visual | NORML | NORML | NORML |
| Emulsified Water | scalar | *Visual | >2 | 0.2% | NEG |
| Free Water | scalar | *Visual | | NEG | NEG |

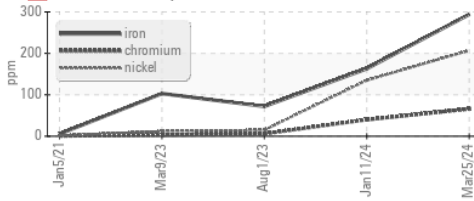
| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 | 1500 | 1579 | 1466 |

| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---------------|--------|------------|---------|----------|----------|
|---------------|--------|------------|---------|----------|----------|

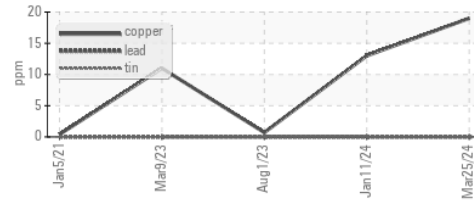


GRAPHS

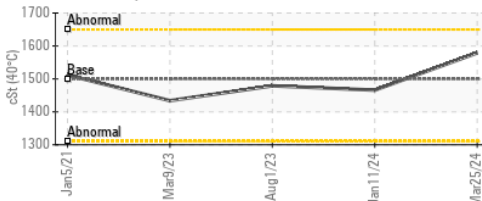
▲ Ferrous Alloys



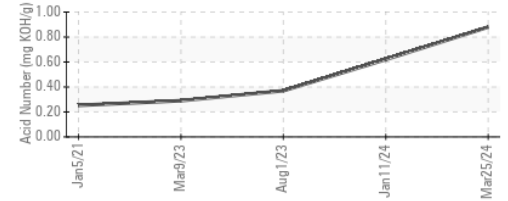
Non-ferrous Metals



Viscosity @ 40°C



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0432395 **Received** : 27 Mar 2024
Lab Number : 06130714 **Tested** : 28 Mar 2024
Unique Number : 10950179 **Diagnosed** : 01 Apr 2024 - Jonathan Hester
Test Package : IND 2 (Additional Tests: KF)

INTERNATIONAL PAPER
 1785 Weyerhaeuser Road
 VANCEBORO, NC
 US 28586
 Contact: DOUG WEIR
 Doug.Weir@paper.com;jon.fazenbaker@wearcheck.com
 T: (252)633-7350
 F: (252)633-7761

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)