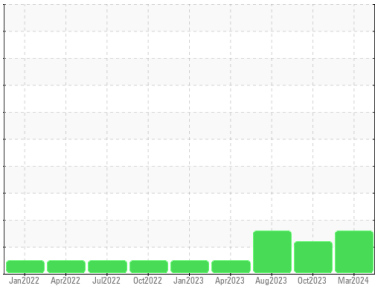
# OIL ANALYSIS REPORT

Sample Rating Trend




**VISCOSITY**

Area
## TUMBLE ROOM [98725359]
Machine Id
## KR-GR-003171 - RIBBON LOADER (S/N TUMBLE ROOM - 11513092)
Component
**Travel**
Fluid
**SCHAEFFER 293A SUPREME GEAR LUBE NO TACK 220 (--- GAL)**

## DIAGNOSIS

**Recommendation**
We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor. ( Customer Sample Comment: 98725359 )

**Wear**
All component wear rates are normal.

**Contamination**
There is a high amount of silt (particulates < 14 microns in size) present in the oil.

**Fluid Condition**
Viscosity of sample indicates oil is within ISO 680 range, advise investigate. Confirm oil type. The AN level is acceptable for this fluid.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **PCA0115874** | PCA0106514 | PCA0103754 |
| Sample Date | | Client Info | | **11 Mar 2024** | 31 Oct 2023 | 09 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 | | | | **ABNORMAL** | ABNORMAL | ABNORMAL |

| CONTAMINATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Water | | WC Method | >0.1 | **NEG** | NEG | NEG |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >150 | **6** | 6 | 41 |
| Chromium | ppm | ASTM D5185m | >10 | **<1** | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >10 | **0** | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | **<1** | <1 | 0 |
| Silver | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >25 | **3** | <1 | <1 |
| Lead | ppm | ASTM D5185m | >100 | **<1** | 0 | 0 |
| Copper | ppm | ASTM D5185m | >50 | **<1** | <1 | 0 |
| Tin | ppm | ASTM D5185m | >10 | **<1** | <1 | 0 |
| Vanadium | ppm | ASTM D5185m | | **<1** | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | | **<1** | 0 | 0 |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Barium | ppm | ASTM D5185m | | **2** | 21 | 0 |
| Molybdenum | ppm | ASTM D5185m | | **<1** | 0 | <1 |
| Manganese | ppm | ASTM D5185m | | **<1** | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | | **<1** | 0 | <1 |
| Calcium | ppm | ASTM D5185m | | **7** | 3 | 12 |
| Phosphorus | ppm | ASTM D5185m | | **325** | 310 | 281 |
| Zinc | ppm | ASTM D5185m | | **62** | 69 | 16 |
| Sulfur | ppm | ASTM D5185m | | **13256** | 16181 | 10947 |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >50 | **2** | 2 | 2 |
| Sodium | ppm | ASTM D5185m | | **<1** | 4 | 0 |
| Potassium | ppm | ASTM D5185m | >20 | **1** | 0 | <1 |

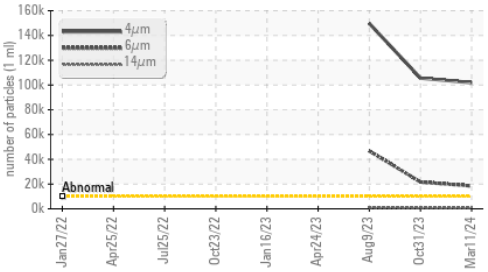
| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Particles >4µm | | ASTM D7647 | >10000 | ▲ **101911** | ▲ 105562 | ▲ 149688 |
| Particles >6µm | | ASTM D7647 | >2500 | ▲ **18455** | ▲ 21643 | ▲ 46773 |
| Particles >14µm | | ASTM D7647 | >640 | **513** | 599 | ▲ 743 |
| Particles >21µm | | ASTM D7647 | >160 | **84** | 95 | 94 |
| Particles >38µm | | ASTM D7647 | >40 | **1** | 1 | 4 |
| Particles >71µm | | ASTM D7647 | >10 | **0** | 0 | 2 |
| Oil Cleanliness | | ISO 4406 (c) | >20/18/16 | ▲ **24/21/16** | ▲ 24/22/16 | ▲ 24/23/17 |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | | **0.38** | 0.39 | 0.41 |

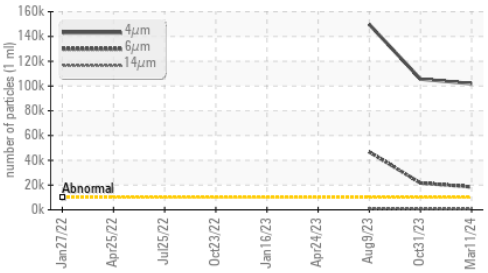
OIL DIAGNOSTICS

# OIL ANALYSIS REPORT

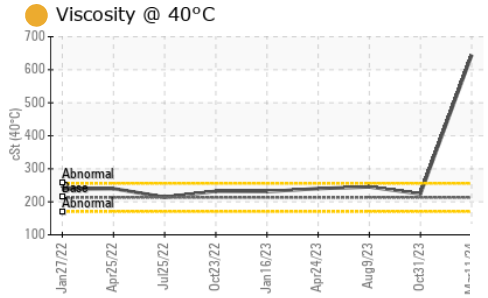
Particle Trend



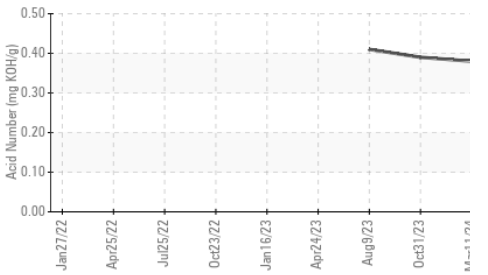

Particle Trend




Viscosity @ 40°C




Acid Number



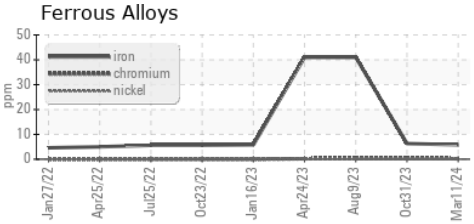

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| 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 | >0.1 | **NEG** | NEG | NEG |
| Free Water | scalar | *Visual | | **NEG** | NEG | NEG |

| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D445 | 213 | **644** | 224 | 245 |

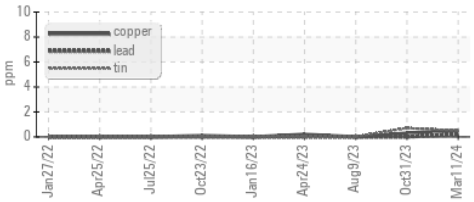
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Color | | |  | | |
| Bottom | | |  | | |

## GRAPHS

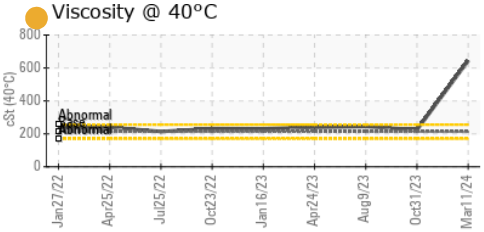
Ferrous Alloys



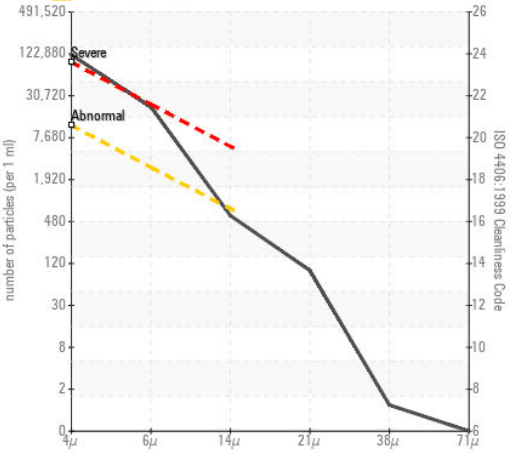

Non-ferrous Metals



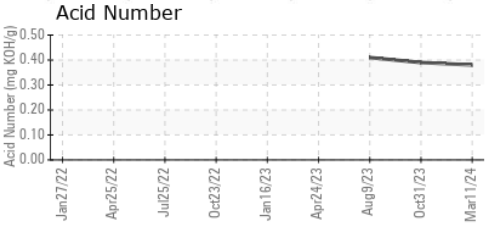

Viscosity @ 40°C




Particle Count




Acid Number




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : PCA0115874
**Lab Number** : 06133269
**Unique Number** : 10952734
**Test Package** : IND 2 ( Additional Tests: PrtCount )

**Received** : 29 Mar 2024
**Tested** : 01 Apr 2024
**Diagnosed** : 03 Apr 2024 - Don Baldridge

*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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