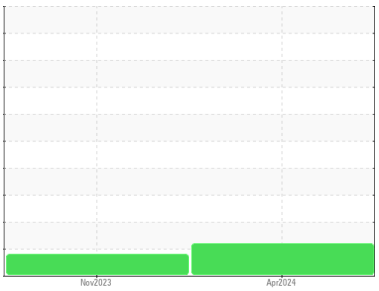
# OIL ANALYSIS REPORT

Sample Rating Trend




ISO

Area
**South Molding**
Machine Id
**Press 4**
Component
**4 Gearbox**
Fluid
**GEAR OIL ISO 320 (--- GAL)**

## DIAGNOSIS

**Recommendation**
We recommend you service the filters on this component. We recommend an early resample to monitor this condition. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

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

**Contamination**
There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. The water content is negligible.

**Fluid Condition**
The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **SBP0007438** | SBP0005193 | --- |
| Sample Date | | Client Info | | **18 Apr 2024** | 09 Nov 2023 | --- |
| Machine Age | days | Client Info | | **365** | 8 | --- |
| Oil Age | days | Client Info | | **365** | 0 | --- |
| Oil Changed | | Client Info | | **N/A** | N/A | --- |
| Sample Status | | | | **ABNORMAL** | ATTENTION | --- |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| PQ | | ASTM D8184 | | **19** | 11 | --- |
| Iron | ppm | ASTM D5185m | >200 | **10** | 4 | --- |
| Chromium | ppm | ASTM D5185m | >15 | **<1** | 0 | --- |
| Nickel | ppm | ASTM D5185m | >15 | **<1** | 0 | --- |
| Titanium | ppm | ASTM D5185m | | **<1** | 0 | --- |
| Silver | ppm | ASTM D5185m | | **<1** | 0 | --- |
| Aluminum | ppm | ASTM D5185m | >25 | **3** | 0 | --- |
| Lead | ppm | ASTM D5185m | >100 | **<1** | 0 | --- |
| Copper | ppm | ASTM D5185m | >200 | **1** | <1 | --- |
| Tin | ppm | ASTM D5185m | >25 | **<1** | 0 | --- |
| Vanadium | ppm | ASTM D5185m | | **<1** | 0 | --- |
| Cadmium | ppm | ASTM D5185m | | **<1** | 0 | --- |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | 50 | **34** | 33 | --- |
| Barium | ppm | ASTM D5185m | 15 | **0** | 0 | --- |
| Molybdenum | ppm | ASTM D5185m | 15 | **<1** | 0 | --- |
| Manganese | ppm | ASTM D5185m | | **<1** | 0 | --- |
| Magnesium | ppm | ASTM D5185m | 50 | **<1** | 0 | --- |
| Calcium | ppm | ASTM D5185m | 50 | **0** | 2 | --- |
| Phosphorus | ppm | ASTM D5185m | 350 | **311** | 349 | --- |
| Zinc | ppm | ASTM D5185m | 100 | **1** | 0 | --- |
| Sulfur | ppm | ASTM D5185m | 12500 | **10665** | 10317 | --- |

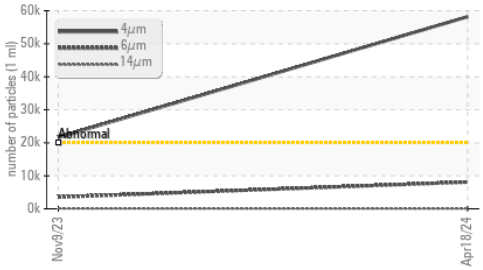
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >50 | **6** | 6 | --- |
| Sodium | ppm | ASTM D5185m | | **0** | 0 | --- |
| Potassium | ppm | ASTM D5185m | >20 | **2** | 0 | --- |
| Water | % | ASTM D6304 | >0.2 | **0.00** | 0.012 | --- |
| ppm Water | ppm | ASTM D6304 | >2000 | **0** | 128.9 | --- |

| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Particles >4µm | | ASTM D7647 | >20000 | ▲ **58193** | 21613 | --- |
| Particles >6µm | | ASTM D7647 | >5000 | ● **8085** | 3554 | --- |
| Particles >14µm | | ASTM D7647 | >640 | **80** | 103 | --- |
| Particles >21µm | | ASTM D7647 | >160 | **11** | 24 | --- |
| Particles >38µm | | ASTM D7647 | >40 | **0** | 1 | --- |
| Particles >71µm | | ASTM D7647 | >10 | **0** | 0 | --- |
| Oil Cleanliness | | ISO 4406 (c) | >21/19/16 | ▲ **23/20/13** | 22/19/14 | --- |

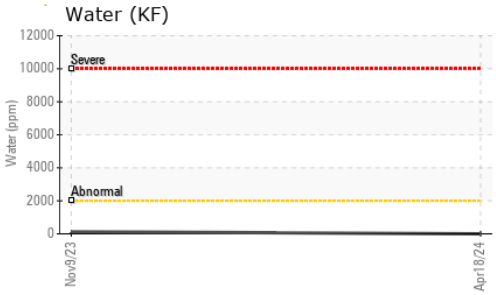
| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.85 | **0.81** | 0.69 | --- |

# OIL ANALYSIS REPORT

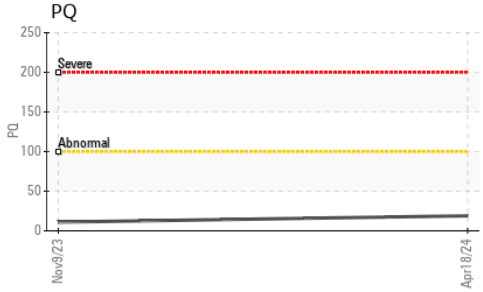
Particle Trend



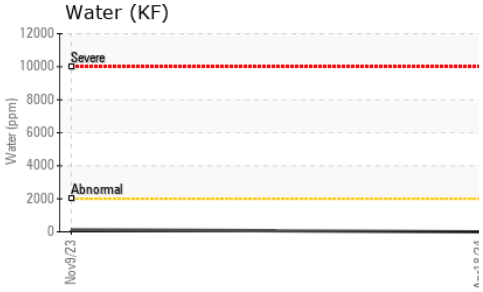

Water (KF)



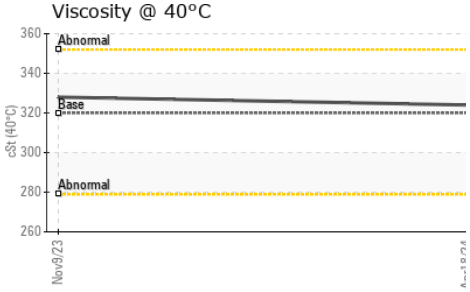

PQ




Water (KF)

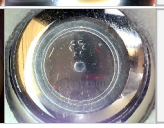



Viscosity @ 40°C



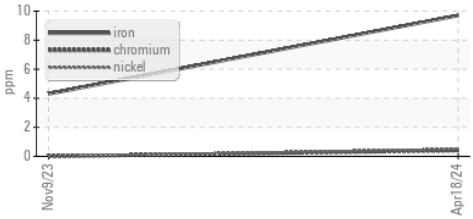

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | --- |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | --- |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | --- |
| Silt | 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 | >0.2 | **NEG** | NEG | --- |
| Free Water | scalar | *Visual | | **NEG** | NEG | --- |

| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D445 | 320 | **324** | 328 | --- |

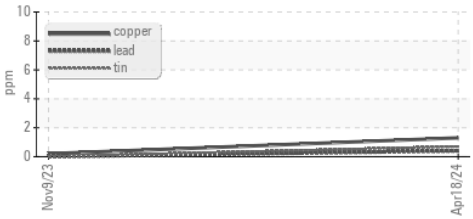
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Color | | |  |  | *no image* |
| Bottom | | |  |  | *no image* |

## GRAPHS

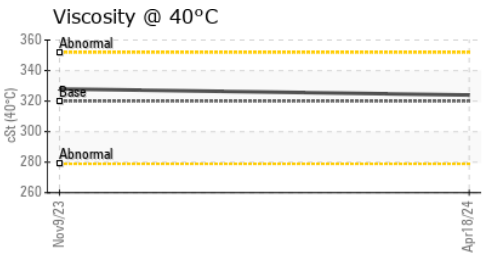
Ferrous Alloys



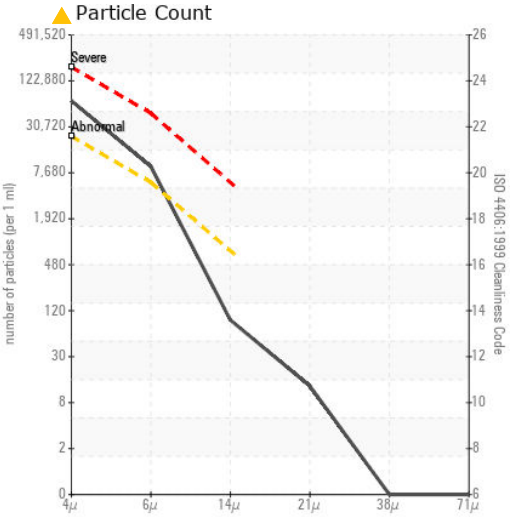

Non-ferrous Metals




Viscosity @ 40°C




Particle Count




Acid Number


**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : SBP0007438
**Lab Number** : 06156976
**Unique Number** : 10992399
**Test Package** : PLANT

**Received** : 22 Apr 2024
**Tested** : 23 Apr 2024
**Diagnosed** : 23 Apr 2024 - Wes Davis

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)*

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Report Id: BECBRONE [WUSCAR] 06156976 (Generated: 04/23/2024 17:39:20) Rev: 1

Submitted By: JUSTIN HURLBURT