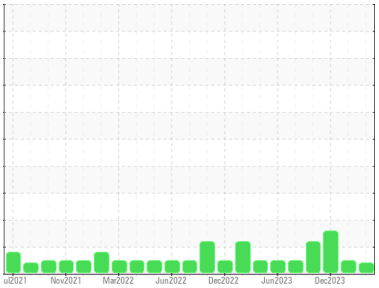
# OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY

Area
## Extrusion
Machine Id
## Press 6 Press Hydraulic Unit (S/N 3080-2010)
Component
### Hydraulic System
Fluid
### AW HYDRAULIC OIL ISO 68 (3778 GAL)

## DIAGNOSIS

**▲ Recommendation**

Resample at the next service interval to monitor.

**Wear**

All component wear rates are normal.

**Contamination**

There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

**▲ Fluid Condition**

Viscosity of sample indicates oil is within ISO 46 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 | | **RP0038251** | RP0029948 | RP0038265 |
| Sample Date | Client Info | | **04 Jan 2024** | 04 Dec 2023 | 01 Dec 2023 |
| Machine Age | Client Info | | **0** | 0 | 0 |
| Oil Age | Client Info | | **0** | 0 | 0 |
| Oil Changed | Client Info | | **N/A** | N/A | N/A |
| Sample Status | | | **ATTENTION** | NORMAL | ABNORMAL |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >20 | **0** | 0 | 0 |
| Chromium | ppm | ASTM D5185m | >20 | **0** | 0 | 0 |
| Nickel | ppm | ASTM D5185m | >20 | **0** | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | **0** | <1 | 0 |
| Silver | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | **0** | <1 | 0 |
| Lead | ppm | ASTM D5185m | >20 | **0** | 0 | 0 |
| Copper | ppm | ASTM D5185m | >20 | **1** | <1 | 1 |
| Tin | ppm | ASTM D5185m | >20 | **0** | 0 | 0 |
| Vanadium | ppm | ASTM D5185m | | **0** | <1 | 0 |
| Cadmium | ppm | ASTM D5185m | | **0** | 0 | 0 |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | 5 | **5** | 0 | 9 |
| Barium | ppm | ASTM D5185m | 5 | **0** | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 5 | **8** | 0 | 10 |
| Manganese | ppm | ASTM D5185m | | **0** | 0 | <1 |
| Magnesium | ppm | ASTM D5185m | 25 | **14** | 2 | 23 |
| Calcium | ppm | ASTM D5185m | 200 | **66** | 3 | 87 |
| Phosphorus | ppm | ASTM D5185m | 300 | **374** | 459 | 308 |
| Zinc | ppm | ASTM D5185m | 370 | **378** | 560 | 365 |

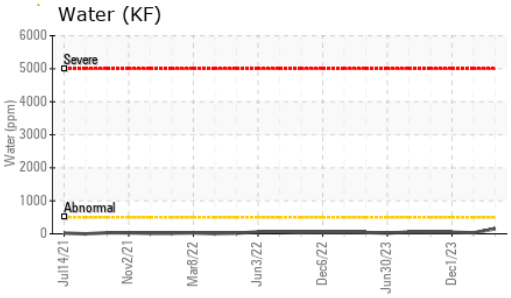
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >15 | **<1** | 1 | <1 |
| Sodium | ppm | ASTM D5185m | | **<1** | 0 | 1 |
| Potassium | ppm | ASTM D5185m | >20 | **<1** | 3 | <1 |
| Water | % | ASTM D6304 | >0.05 | **0.015** | 0.003 | 0.004 |
| ppm Water | ppm | ASTM D6304 | >500 | **152** | 31 | 49 |

| FLUID CLEANLINESS | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Particles >4µm | ASTM D7647 | >5000 | **4735** | 1449 | ▲ 16025 |
| Particles >6µm | ASTM D7647 | >1300 | **1064** | 500 | ▲ 3279 |
| Particles >14µm | ASTM D7647 | >160 | **98** | 41 | ▲ 169 |
| Particles >21µm | ASTM D7647 | >40 | **30** | 10 | 42 |
| Particles >38µm | ASTM D7647 | >10 | **2** | 0 | 2 |
| Particles >71µm | ASTM D7647 | >3 | **0** | 0 | 0 |
| Oil Cleanliness | ISO 4406 (c) | >19/17/14 | **19/17/14** | 18/16/13 | ▲ 21/19/15 |

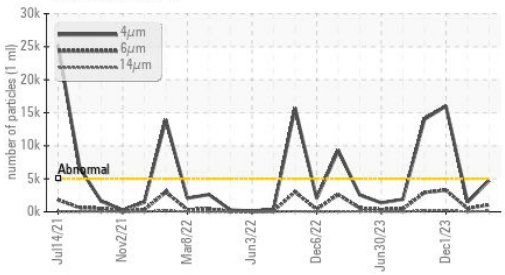
| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.57 | **0.42** | 0.60 | 0.42 |

# OIL ANALYSIS REPORT

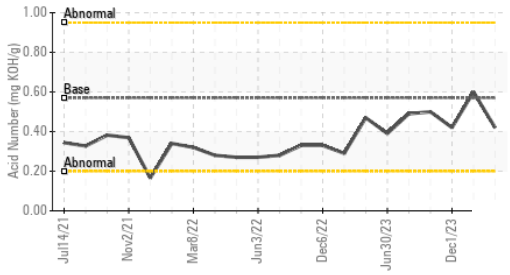
Water (KF)




Particle Trend

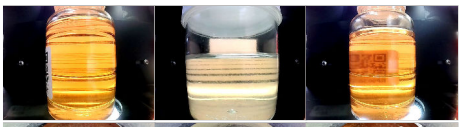



Acid Number



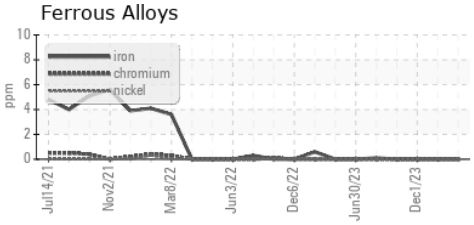

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Silt | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Debris | scalar | *Visual | NONE | **LIGHT** | 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 | >0.05 | **NEG** | NEG | NEG |
| Free Water | scalar | *Visual | | **NEG** | NEG | NEG |

| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D445 | 68 | ▲ **44.7** | 67.53 | 44.5 |

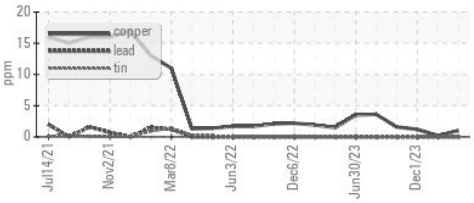
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Color | | |  | | |
| Bottom | | |  | | |

## GRAPHS

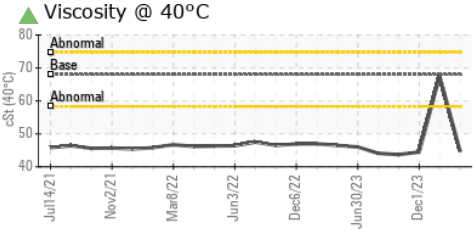
Ferrous Alloys



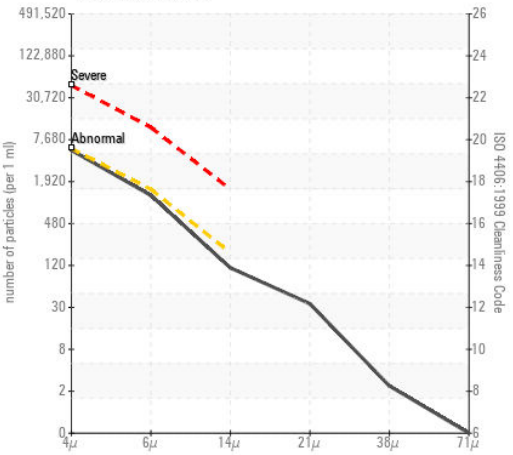

Non-ferrous Metals



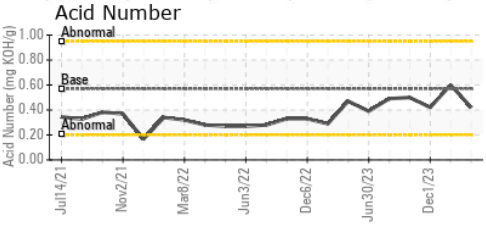

▲ Viscosity @ 40°C



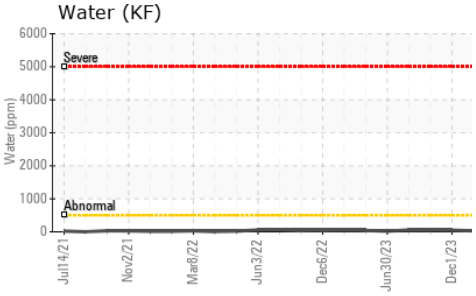

Particle Count



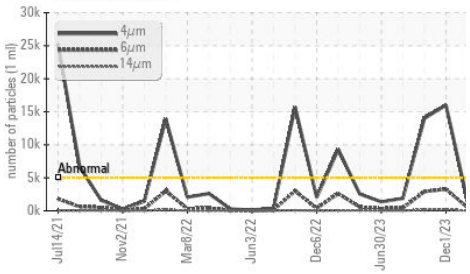

Acid Number




Water (KF)




Particle Trend




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : RP0038251 **Recieved** : 09 Jan 2024
**Lab Number** : 06055903 **Diagnosed** : 10 Jan 2024
**Unique Number** : 10821852 **Diagnostician** : Don Baldridge
**Test Package** : IND 2

*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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