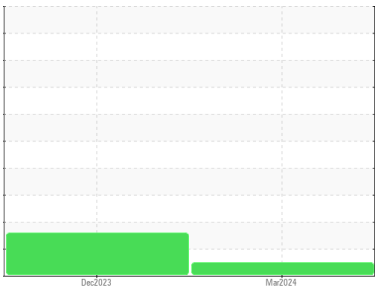
# OIL ANALYSIS REPORT

Sample Rating Trend




NORMAL

Machine Id
**728051-361690**
Component
**Hydraulic System**
Fluid
**AW HYDRAULIC OIL ISO 46 (--- GAL)**

## DIAGNOSIS

**Recommendation**
Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

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

**Contamination**
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

**Fluid Condition**
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **GFL0107997** | GFL0065691 | --- |
| Sample Date | | Client Info | | **13 Mar 2024** | 15 Dec 2023 | --- |
| Machine Age | mls | Client Info | | **0** | 0 | --- |
| Oil Age | mls | Client Info | | **0** | 0 | --- |
| Oil Changed | | Client Info | | **N/A** | Not Changd | --- |
| Sample Status | | | | **NORMAL** | ABNORMAL | --- |

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

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >20 | **6** | 8 | --- |
| Chromium | ppm | ASTM D5185m | >10 | **1** | <1 | --- |
| Nickel | ppm | ASTM D5185m | >10 | **0** | 0 | --- |
| Titanium | ppm | ASTM D5185m | | **<1** | 0 | --- |
| Silver | ppm | ASTM D5185m | | **<1** | 0 | --- |
| Aluminum | ppm | ASTM D5185m | >10 | **1** | 1 | --- |
| Lead | ppm | ASTM D5185m | >10 | **2** | <1 | --- |
| Copper | ppm | ASTM D5185m | >75 | **8** | 9 | --- |
| Tin | ppm | ASTM D5185m | >10 | **1** | <1 | --- |
| Vanadium | ppm | ASTM D5185m | | **<1** | 0 | --- |
| Cadmium | ppm | ASTM D5185m | | **<1** | <1 | --- |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | 5 | **0** | 0 | --- |
| Barium | ppm | ASTM D5185m | 5 | **0** | 0 | --- |
| Molybdenum | ppm | ASTM D5185m | 5 | **<1** | 0 | --- |
| Manganese | ppm | ASTM D5185m | | **<1** | <1 | --- |
| Magnesium | ppm | ASTM D5185m | 25 | **5** | 10 | --- |
| Calcium | ppm | ASTM D5185m | 200 | **117** | 126 | --- |
| Phosphorus | ppm | ASTM D5185m | 300 | **318** | 336 | --- |
| Zinc | ppm | ASTM D5185m | 370 | **357** | 416 | --- |
| Sulfur | ppm | ASTM D5185m | 2500 | **958** | 898 | --- |

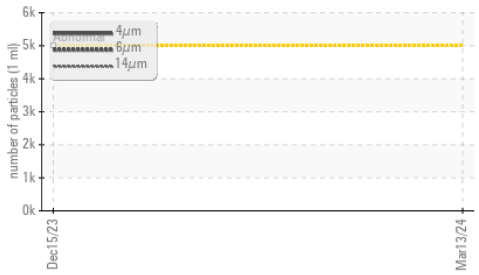
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >20 | **4** | 5 | --- |
| Sodium | ppm | ASTM D5185m | | **4** | 4 | --- |
| Potassium | ppm | ASTM D5185m | >20 | **2** | 0 | --- |

| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Particles >4µm | | ASTM D7647 | >5000 | **4057** | --- | --- |
| Particles >6µm | | ASTM D7647 | >1300 | **1290** | --- | --- |
| Particles >14µm | | ASTM D7647 | >160 | **112** | --- | --- |
| Particles >21µm | | ASTM D7647 | >40 | **26** | --- | --- |
| Particles >38µm | | ASTM D7647 | >10 | **0** | --- | --- |
| Particles >71µm | | ASTM D7647 | >3 | **0** | --- | --- |
| Oil Cleanliness | | ISO 4406 (c) | >19/17/14 | **19/17/14** | --- | --- |

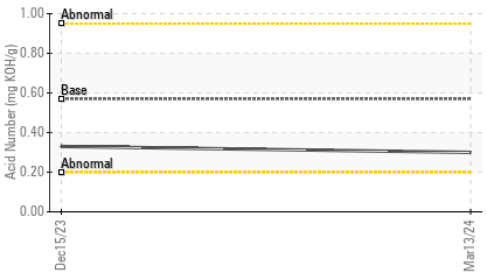
| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.57 | **0.30** | 0.33 | --- |

# OIL ANALYSIS REPORT

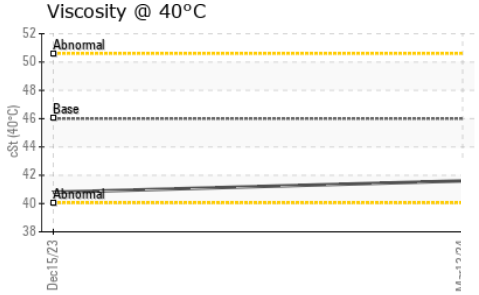
Particle Trend



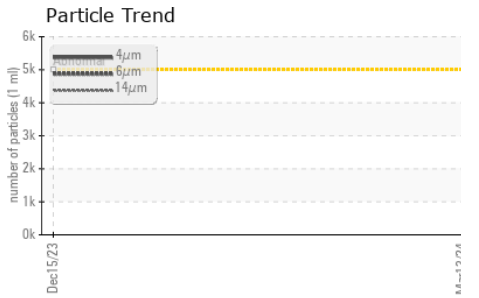

Acid Number




Viscosity @ 40°C

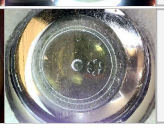



Particle Trend



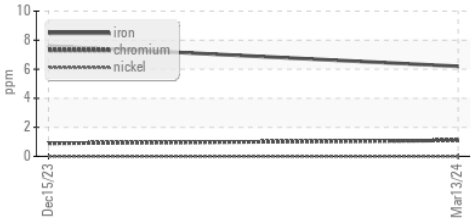

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | ▲ MODER | --- |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | --- |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | --- |
| Silt | scalar | *Visual | NONE | **NONE** | NONE | --- |
| Debris | scalar | *Visual | NONE | **NONE** | ▲ MODER | --- |
| Sand/Dirt | scalar | *Visual | NONE | **NONE** | NONE | --- |
| Appearance | scalar | *Visual | NORML | **NORML** | NORML | --- |
| Odor | scalar | *Visual | NORML | **NORML** | NORML | --- |
| Emulsified Water | scalar | *Visual | >0.1 | **NEG** | NEG | --- |
| Free Water | scalar | *Visual | | **NEG** | NEG | --- |

| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D445 | 46 | **41.6** | 40.8 | --- |

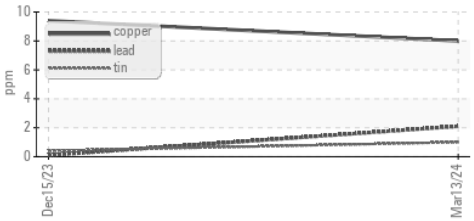
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Color | | |  |  | *no image* |
| Bottom | | |  |  | *no image* |

## GRAPHS

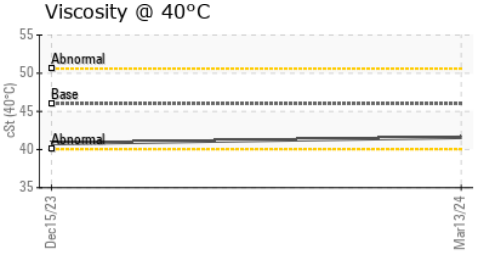
Ferrous Alloys



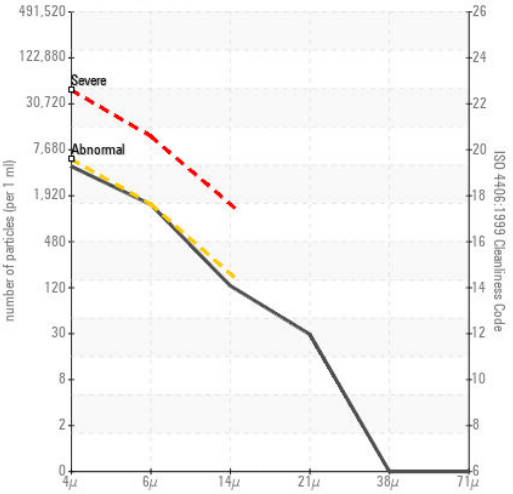

Non-ferrous Metals




Viscosity @ 40°C




Particle Count




Acid Number


**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : GFL0107997
**Lab Number** : 06118230
**Unique Number** : 10927063
**Test Package** : FLEET ( Additional Tests: PrtCount )

**Received** : 14 Mar 2024
**Tested** : 15 Mar 2024
**Diagnosed** : 15 Mar 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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