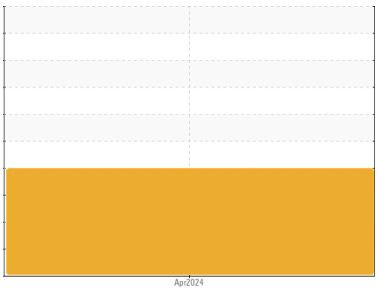
# OIL ANALYSIS REPORT

Sample Rating Trend




**DIRT**

Machine Id
## OPARDIV CARTER SAMPLE 1
Component
**Hydraulic System**
Fluid
**AW HYDRAULIC OIL ISO 68 (--- GAL)**

## DIAGNOSIS

**Recommendation**
We advise that you check all areas where dirt can enter the system. Resample at the next service interval to monitor.

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

**Contamination**
There is a moderate amount of particulates present in the oil. Elemental level of silicon (Si) above normal indicating ingress of dirt/seal material.

**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 | | **WC06161429** | --- | --- |
| Sample Date | | Client Info | | **12 Apr 2024** | --- | --- |
| Machine Age | hrs | Client Info | | **0** | --- | --- |
| Oil Age | hrs | Client Info | | **0** | --- | --- |
| Oil Changed | | Client Info | | **N/A** | --- | --- |
| Sample Status | | | | **ABNORMAL** | --- | --- |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| PQ | | ASTM D8184 | | **17** | --- | --- |
| Iron | ppm | ASTM D5185m | >20 | **0** | --- | --- |
| Chromium | ppm | ASTM D5185m | >10 | **<1** | --- | --- |
| Nickel | ppm | ASTM D5185m | >10 | **0** | --- | --- |
| Titanium | ppm | ASTM D5185m | | **0** | --- | --- |
| Silver | ppm | ASTM D5185m | | **0** | --- | --- |
| Aluminum | ppm | ASTM D5185m | >10 | **0** | --- | --- |
| Lead | ppm | ASTM D5185m | >10 | **0** | --- | --- |
| Copper | ppm | ASTM D5185m | >75 | **<1** | --- | --- |
| Tin | ppm | ASTM D5185m | >10 | **0** | --- | --- |
| Vanadium | ppm | ASTM D5185m | | **0** | --- | --- |
| Cadmium | ppm | ASTM D5185m | | **0** | --- | --- |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | 5 | **<1** | --- | --- |
| Barium | ppm | ASTM D5185m | 5 | **0** | --- | --- |
| Molybdenum | ppm | ASTM D5185m | 5 | **0** | --- | --- |
| Manganese | ppm | ASTM D5185m | | **<1** | --- | --- |
| Magnesium | ppm | ASTM D5185m | 25 | **0** | --- | --- |
| Calcium | ppm | ASTM D5185m | 200 | **76** | --- | --- |
| Phosphorus | ppm | ASTM D5185m | 300 | **279** | --- | --- |
| Zinc | ppm | ASTM D5185m | 370 | **343** | --- | --- |
| Sulfur | ppm | ASTM D5185m | 2500 | **5169** | --- | --- |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >20 | **61** | --- | --- |
| Sodium | ppm | ASTM D5185m | | **<1** | --- | --- |
| Potassium | ppm | ASTM D5185m | >20 | **0** | --- | --- |
| Water | % | ASTM D6304 | >0.1 | **0.006** | --- | --- |
| ppm Water | ppm | ASTM D6304 | >1000 | **61** | --- | --- |

| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Particles >4µm | | ASTM D7647 | >5000 | **8955** | --- | --- |
| Particles >6µm | | ASTM D7647 | >1300 | **2334** | --- | --- |
| Particles >14µm | | ASTM D7647 | >160 | **189** | --- | --- |
| Particles >21µm | | ASTM D7647 | >40 | **50** | --- | --- |
| Particles >38µm | | ASTM D7647 | >10 | **1** | --- | --- |
| Particles >71µm | | ASTM D7647 | >3 | **0** | --- | --- |
| Oil Cleanliness | | ISO 4406 (c) | >19/17/14 | **20/18/15** | --- | --- |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.57 | **0.44** | --- | --- |

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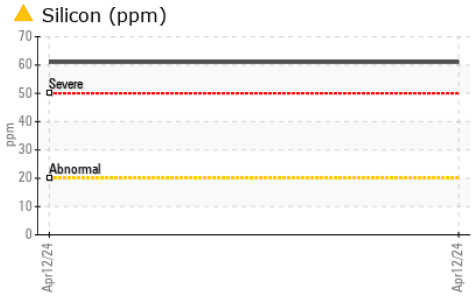
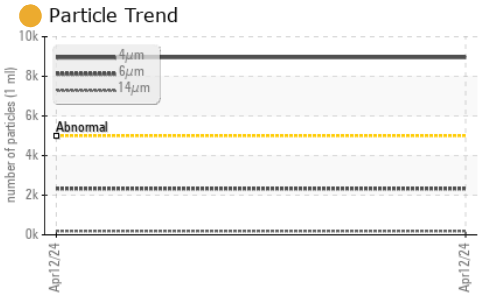
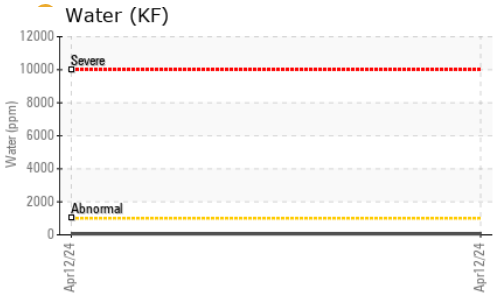
Silicon (ppm)



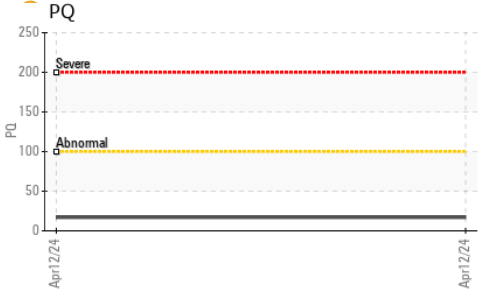

Particle Trend



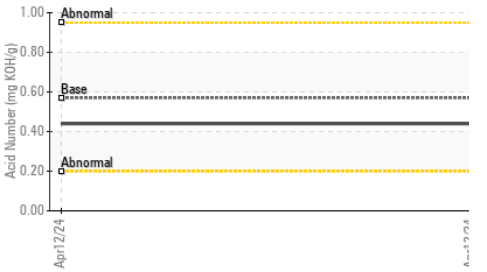

Water (KF)




PQ




Acid Number



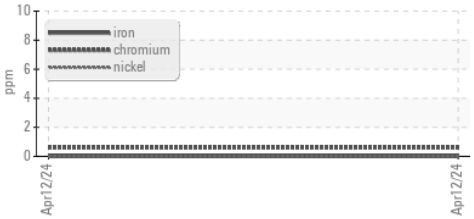

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | --- | --- |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | --- | --- |
| Precipitate | scalar | *Visual | NONE | **NONE** | --- | --- |
| Silt |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

| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D445 | 68 | **43.9** | --- | --- |

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

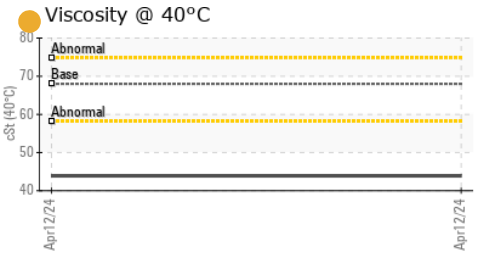
## GRAPHS

Ferrous Alloys

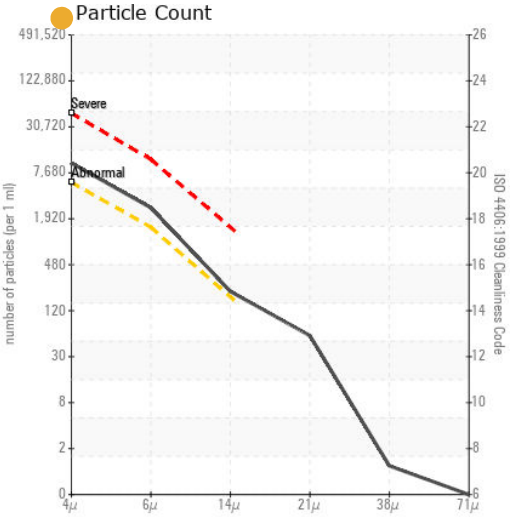



Non-ferrous Metals


Viscosity @ 40°C




Particle Count




Acid Number


Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : WC06161429 **Received** : 26 Apr 2024
**Lab Number** : 06161429 **Tested** : 29 Apr 2024
**Unique Number** : 10996852 **Diagnosed** : 30 Apr 2024 - Don Baldridge
**Test Package** : IND 2 ( Additional Tests: KF, PQ )

*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)*

**MOLUB LUBRICANTES ESPECIALIZADOS**
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Report Id: MOLUB [WUSCAR] 06161429 (Generated: 04/30/2024 15:00:35) Rev: 1
Contact/Location: SOPORTE TECNICO - MOLUB