



OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY



Machine Id

HIAB 50578 - ABC

Component

Hydraulic System

Fluid

AW HYDRAULIC OIL ISO 32 (--- GAL)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. The filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

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

Fluid Condition

The oil viscosity is higher than normal. The AN level is acceptable for this fluid.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|--------------------|-------------|-------------|------------|--------------------|----------|----------|
| Sample Number | Client Info | | | WC0891999 | --- | --- |
| Sample Date | Client Info | | | 16 Apr 2024 | --- | --- |
| Machine Age | yrs | Client Info | | 0 | --- | --- |
| Oil Age | yrs | Client Info | | 0 | --- | --- |
| Oil Changed | Client Info | | | Not Changed | --- | --- |
| Sample Status | | | | ATTENTION | --- | --- |

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

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

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|------------|-----|-------------|------------|--------------|----------|----------|
| Boron | ppm | ASTM D5185m | 5 | 0 | --- | --- |
| Barium | ppm | ASTM D5185m | 5 | 0 | --- | --- |
| Molybdenum | ppm | ASTM D5185m | 5 | 0 | --- | --- |
| Manganese | ppm | ASTM D5185m | | <1 | --- | --- |
| Magnesium | ppm | ASTM D5185m | 25 | 7 | --- | --- |
| Calcium | ppm | ASTM D5185m | 200 | 1802 | --- | --- |
| Phosphorus | ppm | ASTM D5185m | 300 | 292 | --- | --- |
| Zinc | ppm | ASTM D5185m | 370 | 153 | --- | --- |
| Sulfur | ppm | ASTM D5185m | 2500 | 3334 | --- | --- |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|--------------|-----|-------------|------------|----------|----------|----------|
| Silicon | ppm | ASTM D5185m | >20 | 3 | --- | --- |
| Sodium | ppm | ASTM D5185m | | 3 | --- | --- |
| Potassium | ppm | ASTM D5185m | >20 | 3 | --- | --- |

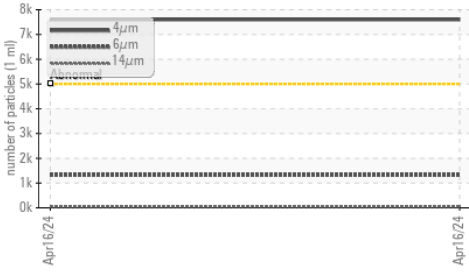
| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|-------------------|--|--------------|------------|-----------------|----------|----------|
| Particles >4µm | | ASTM D7647 | >5000 | 7600 | --- | --- |
| Particles >6µm | | ASTM D7647 | >1300 | 1323 | --- | --- |
| Particles >14µm | | ASTM D7647 | >160 | 47 | --- | --- |
| Particles >21µm | | ASTM D7647 | >40 | 8 | --- | --- |
| Particles >38µm | | ASTM D7647 | >10 | 0 | --- | --- |
| Particles >71µm | | ASTM D7647 | >3 | 0 | --- | --- |
| Oil Cleanliness | | ISO 4406 (c) | >19/17/14 | 20/18/13 | --- | --- |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|-------------------|----------|------------|------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.57 | 0.72 | --- | --- |

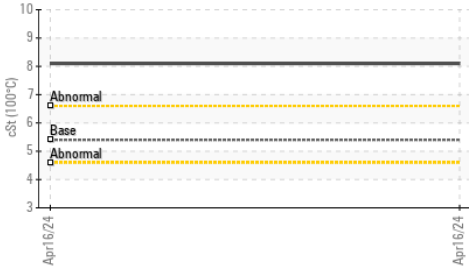


OIL ANALYSIS REPORT

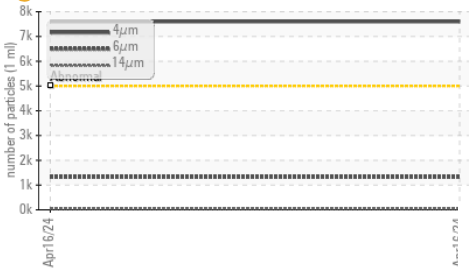
Particle Trend



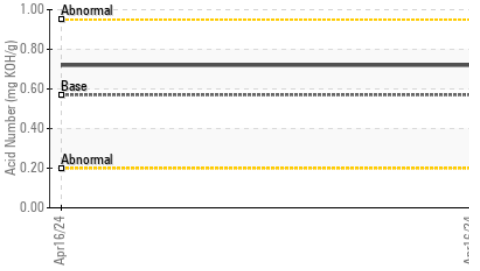
Viscosity @ 100°C



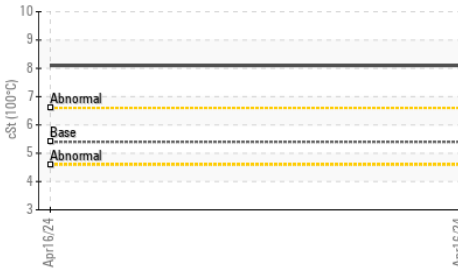
Particle Trend



Acid Number



Viscosity @ 100°C



| 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 | --- | --- |

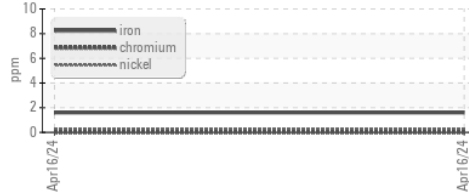
| FLUID PROPERTIES | method | limit/base | current | history1 | history2 | |
|----------------------|--------|------------|---------|----------|----------|-----|
| Visc @ 40°C | cSt | ASTM D445 | 32 | 39.6 | --- | --- |
| Visc @ 100°C | cSt | ASTM D445 | 5.4 | 8.1 | --- | --- |
| Viscosity Index (VI) | Scale | ASTM D2270 | 102 | 184 | --- | --- |

SAMPLE IMAGES

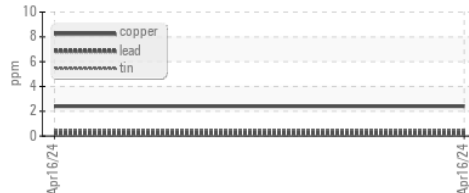
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---------------|--------|------------|---------|----------|----------|
| Color | | | | no image | no image |
| Bottom | | | | no image | no image |

GRAPHS

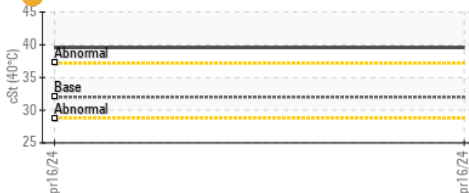
Ferrous Alloys



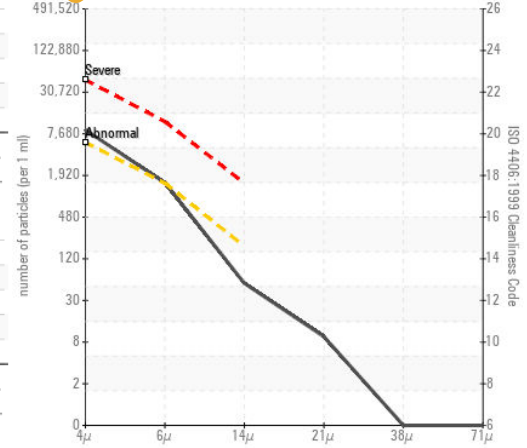
Non-ferrous Metals



Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : WC0891999

Lab Number : 06184959

Unique Number : 11036285

Test Package : MOB 2 (Additional Tests: KV100, VI)

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)

Received : 20 May 2024

Tested : 22 May 2024

Diagnosed : 22 May 2024 - Don Baldrige

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US 55077

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