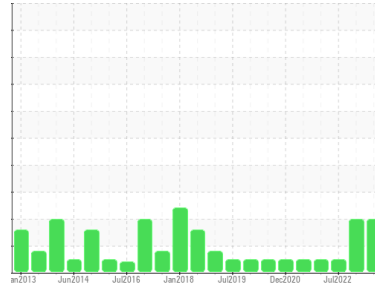




PROBLEM SUMMARY

Sample Rating Trend

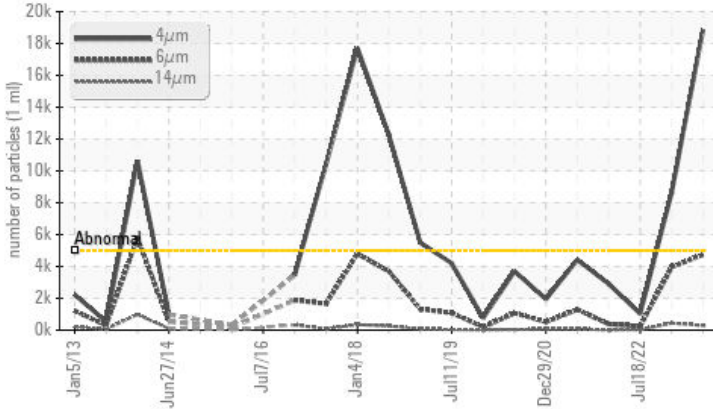
ISO



Area
[603778809 SR]
 Machine Id
K REFINER 7 (S/N 20075569)
 Component
Hydraulic System
 Fluid
AW HYDRAULIC OIL ISO 68 (--- GAL)

COMPONENT CONDITION SUMMARY

▲ Particle Trend



RECOMMENDATION

We recommend you service the filters on this component. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

| Sample Status | | | ABNORMAL | ABNORMAL | NORMAL |
|-----------------|--------------|-----------|------------|------------|----------|
| Particles >4µm | ASTM D7647 | >5000 | ▲ 18849 | ▲ 8622 | 1032 |
| Particles >6µm | ASTM D7647 | >1300 | ▲ 4737 | ▲ 3956 | 254 |
| Particles >14µm | ASTM D7647 | >160 | ▲ 286 | ▲ 441 | 27 |
| Particles >21µm | ASTM D7647 | >40 | ▲ 59 | ▲ 105 | 8 |
| Oil Cleanliness | ISO 4406 (c) | >19/17/14 | ▲ 21/19/15 | ▲ 20/19/16 | 17/15/12 |

Customer Id: MARSCHI
 Sample No.: WC0605545
 Lab Number: 05901242
 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
 Don Baldrige +1
don.b505@comcast.net

To change component or sample information:
 Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

| Action | Status | Date | Done By | Description |
|---------------|--------|-------------|---------|---|
| Change Filter | MISSED | Jul 20 2023 | ? | We recommend you service the filters on this component. |

HISTORICAL DIAGNOSIS

27 Dec 2022 Diag: Don Baldrige

ISO



We recommend you service the filters on this component. Resample at the next service interval to monitor. All component wear rates are normal. There is a high amount of particulates present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



18 Jul 2022 Diag: Don Baldrige

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



17 Dec 2021 Diag: Angela Borella

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

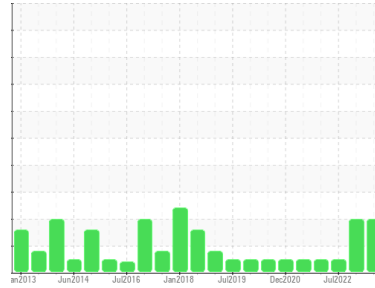
view report





OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area
[603778809 SR]
 Machine Id
K REFINER 7 (S/N 20075569)
 Component
Hydraulic System
 Fluid
AW HYDRAULIC OIL ISO 68 (--- GAL)

DIAGNOSIS

Recommendation

We recommend you service the filters on this component. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is a high amount of particulates present in the oil.

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 | | WC0605545 | WC0562460 | WC0605691 |
| Sample Date | Client Info | | 23 Jun 2023 | 27 Dec 2022 | 18 Jul 2022 |
| Machine Age | hrs | Client Info | 0 | 0 | 0 |
| Oil Age | hrs | Client Info | 0 | 0 | 0 |
| Oil Changed | Client Info | | Not Chngd | Not Chngd | Not Chngd |
| Sample Status | | | ABNORMAL | ABNORMAL | NORMAL |

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 | <1 | 0 | 0 |
| Silver | ppm | ASTM D5185m | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m >20 | 1 | 0 | 0 |
| Lead | ppm | ASTM D5185m >20 | 0 | 0 | <1 |
| Copper | ppm | ASTM D5185m >20 | <1 | 2 | 0 |
| Tin | ppm | ASTM D5185m >20 | 0 | 0 | 0 |
| Antimony | ppm | ASTM D5185m | --- | --- | --- |
| Vanadium | ppm | ASTM D5185m | <1 | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | 0 | 0 | 0 |

ADDITIVES

| | method | limit/base | current | history1 | history2 |
|------------|--------|------------------|--------------|----------|----------|
| Boron | ppm | ASTM D5185m 5 | 0 | 0 | 0 |
| Barium | ppm | ASTM D5185m 5 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m 5 | 0 | 0 | 0 |
| Manganese | ppm | ASTM D5185m | <1 | 0 | 0 |
| Magnesium | ppm | ASTM D5185m 25 | 1 | <1 | <1 |
| Calcium | ppm | ASTM D5185m 200 | 3 | 10 | 0 |
| Phosphorus | ppm | ASTM D5185m 300 | 282 | 661 | 195 |
| Zinc | ppm | ASTM D5185m 370 | 68 | 492 | 0 |
| Sulfur | ppm | ASTM D5185m 2500 | 2262 | 2037 | 2144 |

CONTAMINANTS

| | method | limit/base | current | history1 | history2 |
|-----------|--------|-----------------|--------------|----------|----------|
| Silicon | ppm | ASTM D5185m >15 | 1 | <1 | 2 |
| Sodium | ppm | ASTM D5185m | <1 | <1 | 0 |
| Potassium | ppm | ASTM D5185m >20 | <1 | 0 | 2 |

FLUID CLEANLINESS

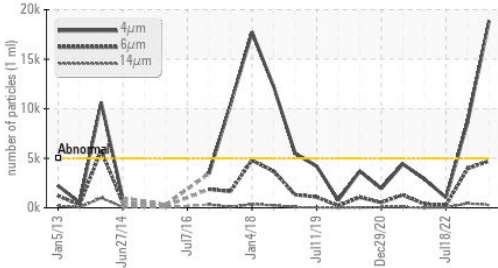
| | method | limit/base | current | history1 | history2 |
|-----------------|--------------|------------|-------------------|------------|----------|
| Particles >4µm | ASTM D7647 | >5000 | ▲ 18849 | ▲ 8622 | 1032 |
| Particles >6µm | ASTM D7647 | >1300 | ▲ 4737 | ▲ 3956 | 254 |
| Particles >14µm | ASTM D7647 | >160 | ▲ 286 | ▲ 441 | 27 |
| Particles >21µm | ASTM D7647 | >40 | ▲ 59 | ▲ 105 | 8 |
| Particles >38µm | ASTM D7647 | >10 | 2 | 1 | 1 |
| Particles >71µm | ASTM D7647 | >3 | 1 | 0 | 0 |
| Oil Cleanliness | ISO 4406 (c) | >19/17/14 | ▲ 21/19/15 | ▲ 20/19/16 | 17/15/12 |

FLUID DEGRADATION

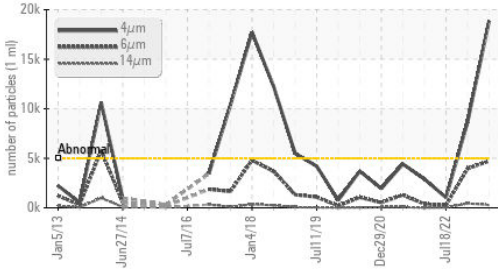
| | method | limit/base | current | history1 | history2 |
|------------------|----------|-----------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 0.57 | 0.66 | 0.83 | 0.70 |

OIL ANALYSIS REPORT

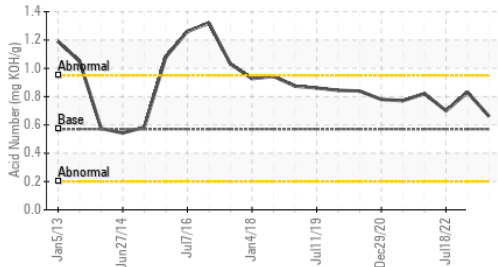
▲ Particle Trend



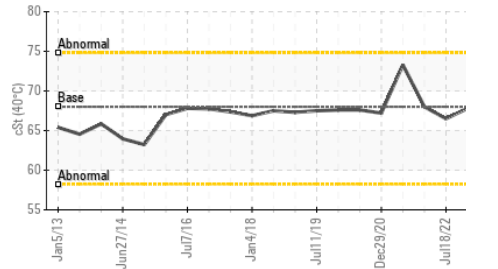
▲ Particle Trend



Acid Number



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 | >0.05 | NEG | NEG |
| Free Water | scalar | *Visual | | NEG | NEG |

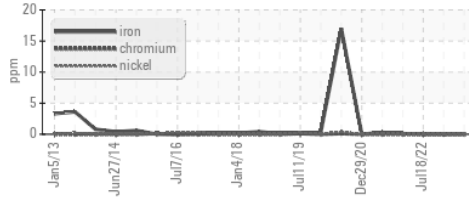
| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|--------------|---------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 68 | 65.9 | 67.8 | 66.5 |

SAMPLE IMAGES

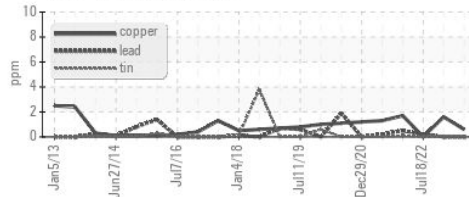


GRAPHS

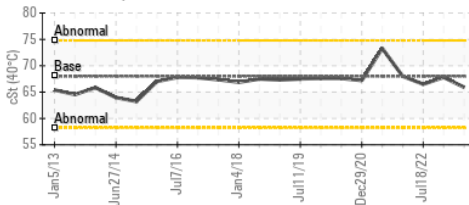
Ferrous Alloys



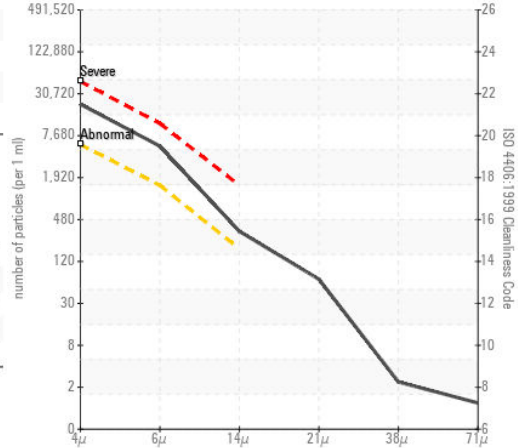
Non-ferrous Metals



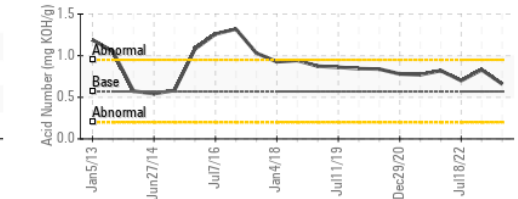
Viscosity @ 40°C



▲ Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : WC0605545 Received : 18 Jul 2023
 Lab Number : 05901242 Diagnosed : 20 Jul 2023
 Unique Number : 10562598 Diagnostician : Don Baldrige
 Test Package : IND 2

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 T: (773)745-2279
 F:

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)