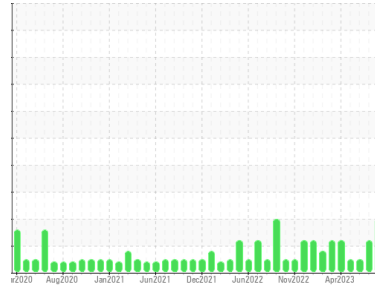




PROBLEM SUMMARY

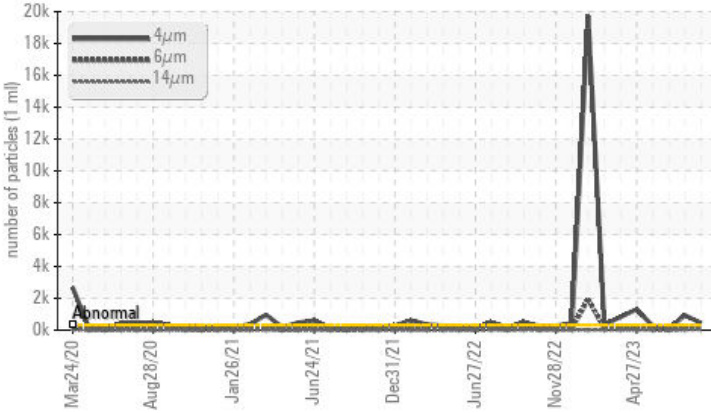
Sample Rating Trend



Area
PRESS
Machine Id
PRESS COOLING AND FILTERING (S/N PR205F20)
Component
Hydraulic System
Fluid
AW HYDRAULIC OIL ISO 68 (--- GAL)

COMPONENT CONDITION SUMMARY

▲ Particle Trend



RECOMMENDATION

We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. We recommend an early resample to monitor this condition. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

PROBLEMATIC TEST RESULTS

| Sample Status | | | ABNORMAL | ABNORMAL | NORMAL |
|-----------------|--------------|-----------|------------|------------|---------|
| Particles >4µm | ASTM D7647 | >320 | ▲ 436 | ▲ 940 | 77 |
| Particles >6µm | ASTM D7647 | >80 | ▲ 115 | ▲ 118 | 26 |
| Particles >14µm | ASTM D7647 | >10 | ▲ 27 | 10 | 3 |
| Particles >21µm | ASTM D7647 | >3 | ▲ 11 | 4 | 1 |
| Oil Cleanliness | ISO 4406 (c) | >15/13/10 | ▲ 16/14/12 | ▲ 17/14/10 | 13/12/9 |

Customer Id: JMHCRY
Sample No.: WC0734576
Lab Number: 05935334
Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
Wes Davis +1 905-569-8600 x223
wesd@wearcheck.ca

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 | --- | --- | ? | We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. |
| Resample | --- | --- | ? | We recommend an early resample to monitor this condition. |
| Information Required | --- | --- | ? | Please specify the brand, type, and viscosity of the oil on your next sample. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. |
| Filter Fluid | --- | --- | ? | We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. |

HISTORICAL DIAGNOSIS

24 Jul 2023 Diag: Wes Davis

ISO



We recommend you service the filters on this component. We recommend an early resample to monitor this condition. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the brand, type, and viscosity of the oil on your next sample. All component wear rates are normal. There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. The system cleanliness is above the acceptable limit for the target ISO 4406 cleanliness code. The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

view report



26 Jun 2023 Diag: Wes Davis

NORMAL



Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the brand, type, and viscosity of the oil on your next sample. All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



01 Jun 2023 Diag: Wes Davis

NORMAL



Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the brand, type, and viscosity of the oil on your next sample. All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



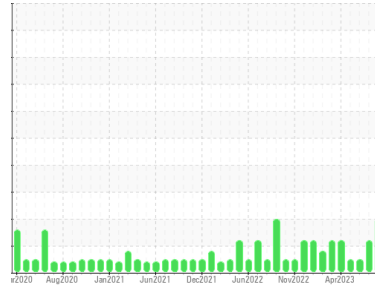


OIL ANALYSIS REPORT

Sample Rating Trend

ISO

Area
PRESS
 Machine Id
PRESS COOLING AND FILTERING (S/N PR205F20)
 Component
Hydraulic System
 Fluid
AW HYDRAULIC OIL ISO 68 (--- GAL)



DIAGNOSIS

Recommendation

We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. We recommend an early resample to monitor this condition. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

Wear

All component wear rates are normal.

Contamination

There is a moderate amount of particulates (2 to 100 microns in size) present in the oil. The system cleanliness is above the acceptable limit for the target ISO 4406 cleanliness code.

Fluid Condition

The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

SAMPLE INFORMATION

| | method | limit/base | current | history1 | history2 |
|---------------|-------------|-------------|--------------------|-------------|-------------|
| Sample Number | Client Info | | WC0734576 | WC0782967 | WC0782858 |
| Sample Date | Client Info | | 22 Aug 2023 | 24 Jul 2023 | 26 Jun 2023 |
| Machine Age | days | Client Info | 0 | 0 | 0 |
| Oil Age | days | Client Info | 0 | 0 | 0 |
| Oil Changed | Client Info | | N/A | N/A | N/A |
| Sample Status | | | ABNORMAL | ABNORMAL | NORMAL |

WEAR METALS

| | method | limit/base | current | history1 | history2 | |
|----------|--------|-------------|---------|--------------|----------|----|
| Iron | ppm | ASTM D5185m | >20 | 0 | 0 | <1 |
| Chromium | ppm | ASTM D5185m | >20 | 0 | 0 | 0 |
| Nickel | ppm | ASTM D5185m | >20 | 0 | 0 | <1 |
| Titanium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | 0 | 0 | <1 |
| Lead | ppm | ASTM D5185m | >20 | 0 | 0 | 0 |
| Copper | ppm | ASTM D5185m | >20 | 3 | 2 | 3 |
| Tin | ppm | ASTM D5185m | >20 | 0 | 0 | 0 |
| 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 | <1 | <1 | <1 |
| Manganese | ppm | ASTM D5185m | | 0 | 0 | <1 |
| Magnesium | ppm | ASTM D5185m | 25 | 2 | 4 | 7 |
| Calcium | ppm | ASTM D5185m | 200 | 68 | 65 | 70 |
| Phosphorus | ppm | ASTM D5185m | 300 | 356 | 352 | 337 |
| Zinc | ppm | ASTM D5185m | 370 | 435 | 441 | 452 |
| Sulfur | ppm | ASTM D5185m | 2500 | 1002 | 1001 | 1060 |

CONTAMINANTS

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

FLUID CLEANLINESS

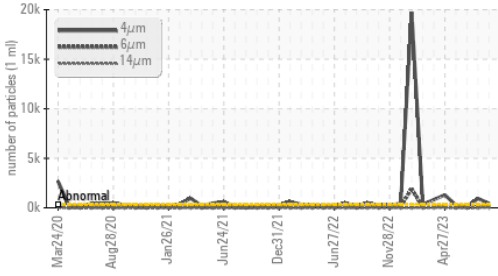
| | method | limit/base | current | history1 | history2 |
|-----------------|--------------|------------|-------------------|------------|----------|
| Particles >4µm | ASTM D7647 | >320 | ▲ 436 | ▲ 940 | 77 |
| Particles >6µm | ASTM D7647 | >80 | ▲ 115 | ▲ 118 | 26 |
| Particles >14µm | ASTM D7647 | >10 | ▲ 27 | 10 | 3 |
| Particles >21µm | ASTM D7647 | >3 | ▲ 11 | 4 | 1 |
| Particles >38µm | ASTM D7647 | >3 | 1 | 0 | 0 |
| Particles >71µm | ASTM D7647 | >3 | 0 | 0 | 0 |
| Oil Cleanliness | ISO 4406 (c) | >15/13/10 | ▲ 16/14/12 | ▲ 17/14/10 | 13/12/9 |

FLUID DEGRADATION

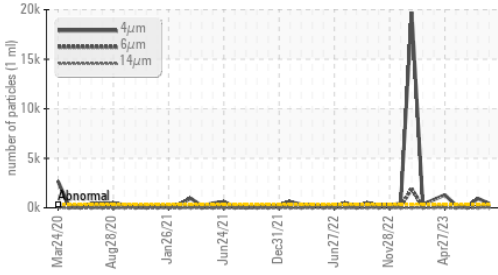
| | method | limit/base | current | history1 | history2 | |
|------------------|----------|------------|---------|-------------|----------|------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.57 | 0.28 | 0.539 | 0.27 |

OIL ANALYSIS REPORT

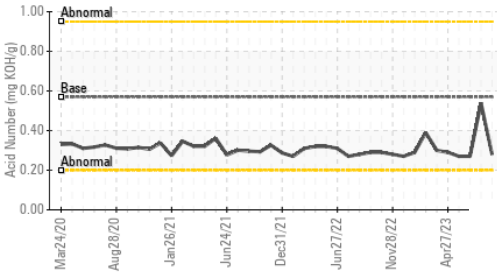
▲ Particle Trend



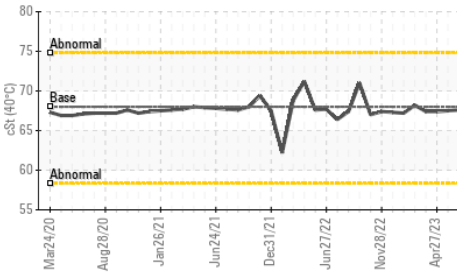
▲ Particle Trend



Acid Number



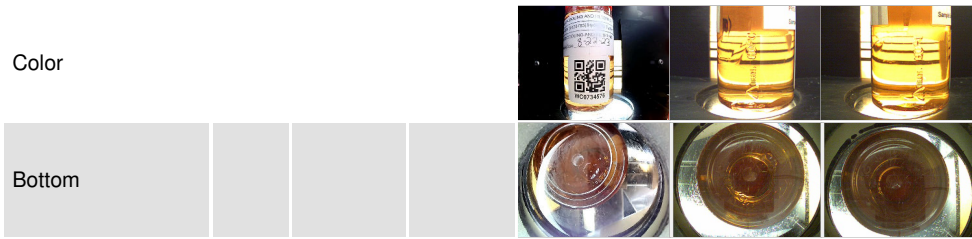
Viscosity @ 40°C



| 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 |

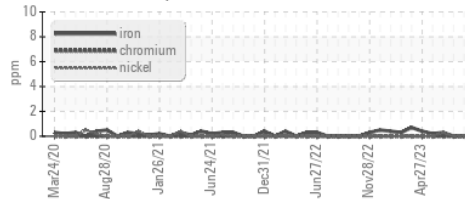
| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|--------------|---------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 68 | 67.3 | 67.8 | 67.6 |

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

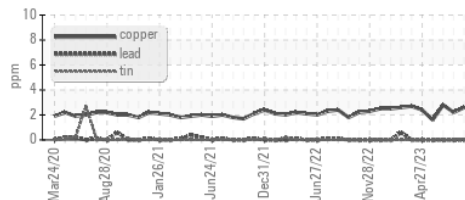


GRAPHS

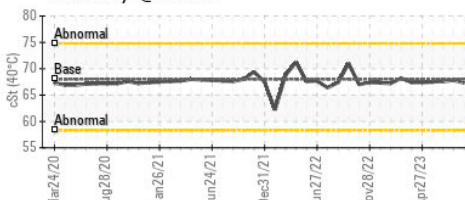
Ferrous Alloys



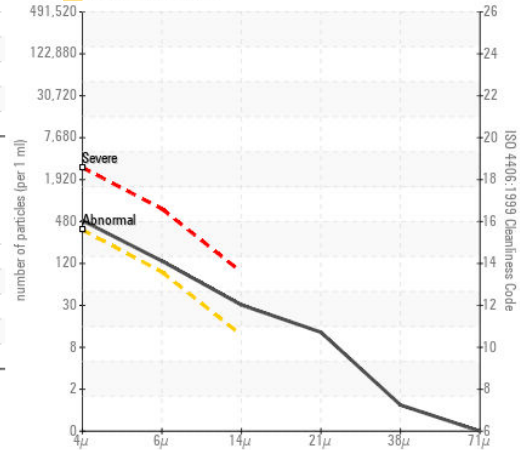
Non-ferrous Metals



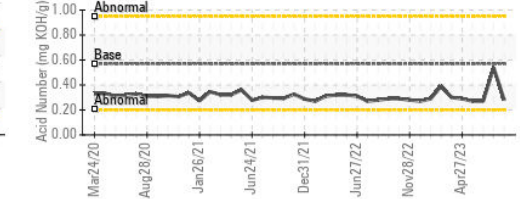
Viscosity @ 40°C



▲ Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0734576 **Received** : 25 Aug 2023
Lab Number : 05935334 **Diagnosed** : 28 Aug 2023
Unique Number : 10620605 **Diagnostician** : Wes Davis
Test Package : IND 2

J.M. Huber Corporation
 PO BOX 38
 CRYSTAL HILL, VA
 US 24539
 Contact: Ted Hudson
 ted.hudson@huber.com
 T: (434)476-6628
 F: (434)476-8133

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)