

PROBLEM SUMMARY

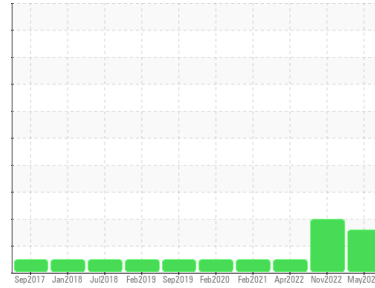
Sample Rating Trend

ISO



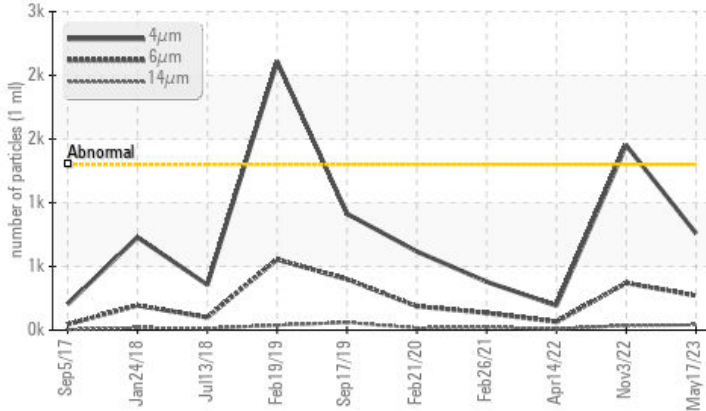
Area
West Molding
Machine Id
139 (S/N 65000105)

Component
Hydraulic System
Fluid
AW HYDRAULIC OIL ISO 46 (645 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. Please specify the brand, type, and viscosity of the oil on your next sample.

PROBLEMATIC TEST RESULTS

| Sample Status | | | ABNORMAL | ABNORMAL | NORMAL |
|-----------------|--------------|-----------|------------|------------|----------|
| Particles >6µm | ASTM D7647 | >160 | ▲ 271 | ▲ 370 | 66 |
| Particles >14µm | ASTM D7647 | >10 | ▲ 42 | ▲ 36 | 10 |
| Particles >21µm | ASTM D7647 | >3 | ▲ 13 | ▲ 10 | 3 |
| Oil Cleanliness | ISO 4406 (c) | >17/14/10 | ▲ 17/15/13 | ▲ 18/16/12 | 15/13/10 |

Customer Id: JOHHOL
Sample No.: RP0034636
Lab Number: 05899893
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. |
| 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

03 Nov 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



14 Apr 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



26 Feb 2021 Diag: Jonathan Hester

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.

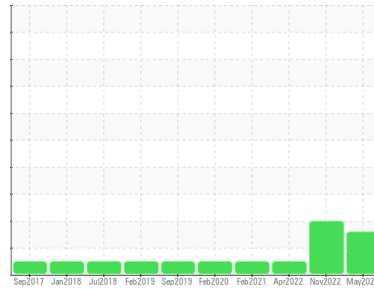
view report





OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area
West Molding
Machine Id
139 (S/N 65000105)

Component
Hydraulic System
Fluid
AW HYDRAULIC OIL ISO 46 (645 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. 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 water content is negligible. 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 | RP0034636 | RP0030212 | RP0021586 |
| Sample Date | Client Info | 17 May 2023 | 03 Nov 2022 | 14 Apr 2022 |
| Machine Age | hrs | Client Info | 0 | 0 |
| Oil Age | hrs | Client Info | 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 | 2 | 2 | 2 |
| Chromium | ppm | ASTM D5185m >20 | <1 | <1 | <1 |
| Nickel | ppm | ASTM D5185m >20 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | <1 | <1 | <1 |
| Silver | ppm | ASTM D5185m | 0 | 0 | <1 |
| Aluminum | ppm | ASTM D5185m >20 | 0 | 0 | <1 |
| Lead | ppm | ASTM D5185m >20 | 0 | <1 | <1 |
| Copper | ppm | ASTM D5185m >20 | 4 | 4 | 4 |
| Tin | ppm | ASTM D5185m >20 | 0 | <1 | <1 |
| Antimony | ppm | ASTM D5185m | --- | --- | --- |
| Vanadium | ppm | ASTM D5185m | 0 | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | 0 | 0 | 0 |

ADDITIVES

| method | limit/base | current | history1 | history2 | |
|------------|------------|-----------------|--------------|----------|-----|
| Boron | ppm | ASTM D5185m 5 | 0 | <1 | 2 |
| Barium | ppm | ASTM D5185m 5 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m 5 | <1 | <1 | <1 |
| Manganese | ppm | ASTM D5185m | <1 | 0 | <1 |
| Magnesium | ppm | ASTM D5185m 25 | 4 | 5 | 5 |
| Calcium | ppm | ASTM D5185m 200 | 64 | 57 | 64 |
| Phosphorus | ppm | ASTM D5185m 300 | 382 | 350 | 378 |
| Zinc | ppm | ASTM D5185m 370 | 464 | 399 | 425 |

CONTAMINANTS

| method | limit/base | current | history1 | history2 | |
|-----------|------------|------------------|--------------|----------|-------|
| Silicon | ppm | ASTM D5185m >15 | <1 | <1 | <1 |
| Sodium | ppm | ASTM D5185m | 1 | <1 | 1 |
| Potassium | ppm | ASTM D5185m >20 | <1 | 0 | 0 |
| Water | % | ASTM D6304 >0.05 | 0.008 | 0.010 | 0.003 |
| ppm Water | ppm | ASTM D6304 >500 | 80.3 | 109.8 | 26.9 |

FLUID CLEANLINESS

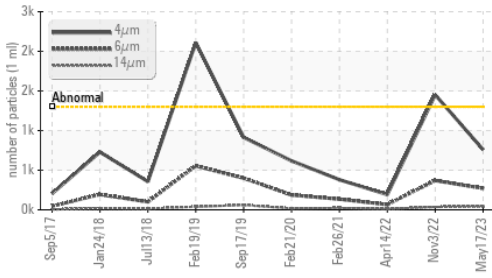
| method | limit/base | current | history1 | history2 |
|-----------------|------------------------|-------------------|------------|----------|
| Particles >4µm | ASTM D7647 >1300 | 759 | ▲ 1451 | 192 |
| Particles >6µm | ASTM D7647 >160 | ▲ 271 | ▲ 370 | 66 |
| Particles >14µm | ASTM D7647 >10 | ▲ 42 | ▲ 36 | 10 |
| Particles >21µm | ASTM D7647 >3 | ▲ 13 | ▲ 10 | 3 |
| Particles >38µm | ASTM D7647 >3 | 1 | 1 | 0 |
| Particles >71µm | ASTM D7647 >3 | 0 | 0 | 0 |
| Oil Cleanliness | ISO 4406 (c) >17/14/10 | ▲ 17/15/13 | ▲ 18/16/12 | 15/13/10 |

FLUID DEGRADATION

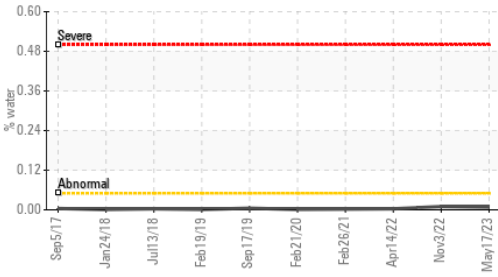
| method | limit/base | current | history1 | history2 | |
|------------------|------------|-----------------|-------------|----------|------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 0.57 | 0.40 | 0.44 | 0.35 |

OIL ANALYSIS REPORT

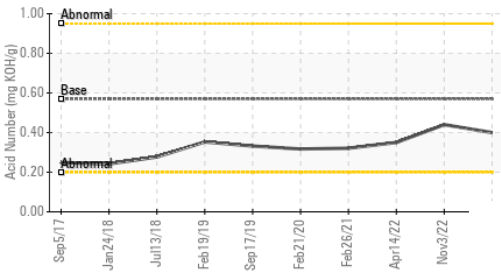
▲ Particle Trend



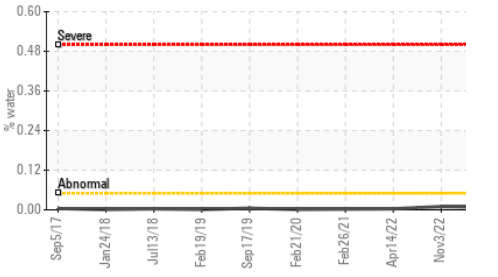
Water



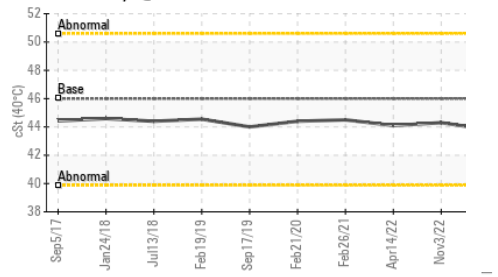
Acid Number



Water



Viscosity @ 40°C



| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | LIGHT |
| 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 |

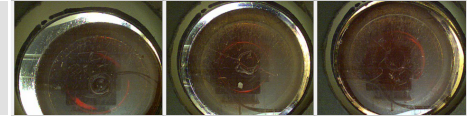
| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|--------------|---------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 46 | 43.8 | 44.3 | 44.1 |

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

Color

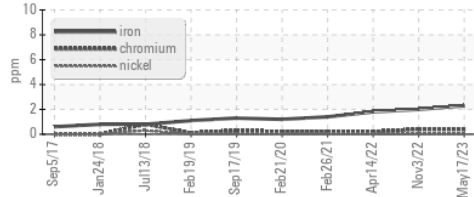


Bottom

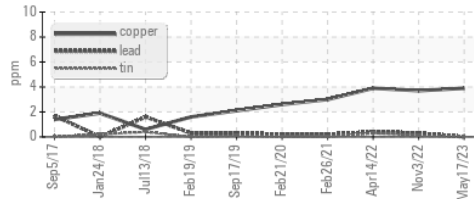


GRAPHS

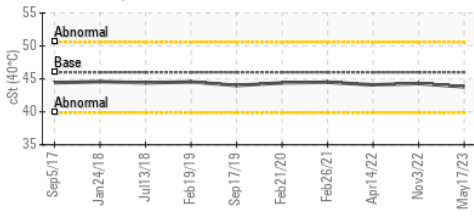
Ferrous Alloys



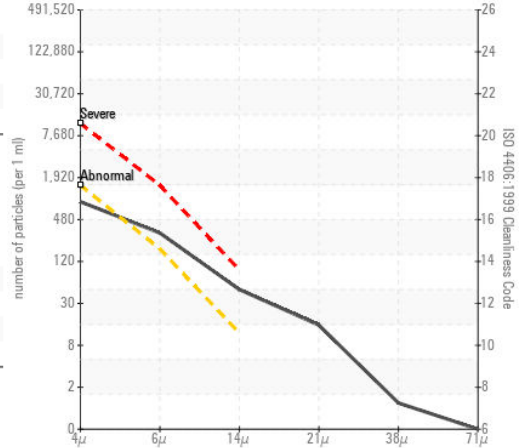
Non-ferrous Metals



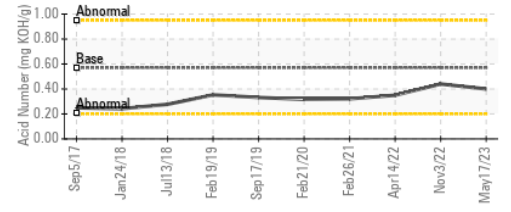
Viscosity @ 40°C



▲ Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : RP0034636
Lab Number : 05899893
Unique Number : 10561249
Test Package : IND 2

YANFENG AUTOMOTIVE INTERIORS
 1600 S. WASHINGTON AVE.
 HOLLAND, MI
 US 49423
 Contact: JEFF HARRIS
 jeffrey.harris@yanfeng.com
 T: (616)915-4443
 F: (616)394-1725

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)