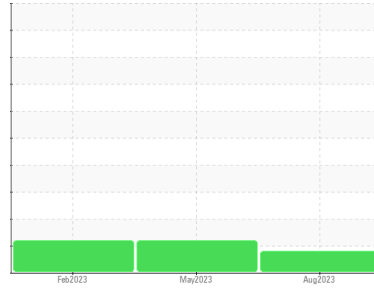




PROBLEM SUMMARY

Sample Rating Trend



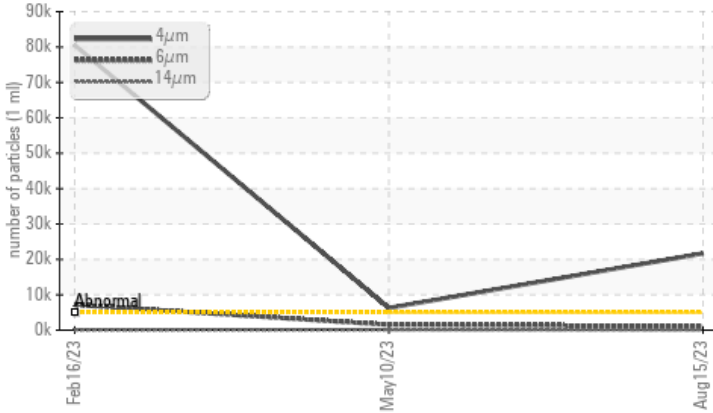
ISO



Machine Id
AVURE M1 HPU2
 Component
Hydraulic System
 Fluid
STARFIRE AW 32 (--- GAL)

COMPONENT CONDITION SUMMARY

▲ Particle Trend



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.

PROBLEMATIC TEST RESULTS

| Sample Status | | ABNORMAL | ATTENTION | ABNORMAL |
|-----------------|------------------------|-------------------|------------|------------|
| Particles >4µm | ASTM D7647 >5000 | ▲ 21691 | ▲ 6264 | ▲ 80515 |
| Oil Cleanliness | ISO 4406 (c) >19/17/14 | ▲ 22/17/13 | ▲ 20/18/14 | ▲ 24/20/13 |

Customer Id: UNIDELOH
 Sample No.: WC0842410
 Lab Number: 05931506
 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

There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

10 May 2023 Diag: Wes Davis

ISO



The filter change at the time of sampling has been noted. Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. All component wear rates are normal. There is a light amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



16 Feb 2023 Diag: Angela Borella

ISO



The filter change at the time of sampling has been noted. Resample at the next service interval to monitor. All component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

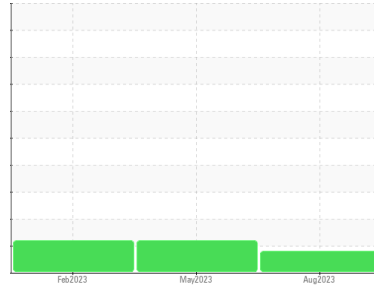
view report





OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id
AVURE M1 HPU2
 Component
Hydraulic System
 Fluid
STARFIRE AW 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 high amount of silt (particulates < 14 microns in size) 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 | | WC0842410 | WC0743763 | WC0743766 |
| Sample Date | Client Info | | 15 Aug 2023 | 10 May 2023 | 16 Feb 2023 |
| Machine Age | yrs | Client Info | 4 | 36 | 0 |
| Oil Age | yrs | Client Info | 1 | 3 | 0 |
| Oil Changed | Client Info | | Not Changed | Not Changed | Not Changed |
| Sample Status | | | ABNORMAL | ATTENTION | ABNORMAL |

WEAR METALS

| | method | limit/base | current | history1 | history2 |
|----------|--------|-----------------|--------------|----------|----------|
| Iron | ppm | ASTM D5185m >20 | 8 | 10 | 8 |
| Chromium | ppm | ASTM D5185m >20 | 0 | 0 | 0 |
| Nickel | ppm | ASTM D5185m >20 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | 0 | 0 | <1 |
| Silver | ppm | ASTM D5185m | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m >20 | <1 | 0 | <1 |
| Lead | ppm | ASTM D5185m >20 | 0 | <1 | 0 |
| Copper | ppm | ASTM D5185m >20 | 14 | 7 | 9 |
| Tin | ppm | ASTM D5185m >20 | 0 | 0 | 0 |
| 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 | 0 | 0 | 0 |
| Barium | ppm | ASTM D5185m | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 0 | <1 | 0 |
| Manganese | ppm | ASTM D5185m | <1 | 0 | <1 |
| Magnesium | ppm | ASTM D5185m | 0 | 4 | 3 |
| Calcium | ppm | ASTM D5185m | 6 | 52 | 11 |
| Phosphorus | ppm | ASTM D5185m | 251 | 332 | 273 |
| Zinc | ppm | ASTM D5185m | 137 | 291 | 284 |
| Sulfur | ppm | ASTM D5185m | 1092 | 1554 | 1038 |

CONTAMINANTS

| | method | limit/base | current | history1 | history2 |
|-----------|--------|-----------------|----------|----------|----------|
| Silicon | ppm | ASTM D5185m >15 | 2 | 2 | 2 |
| Sodium | ppm | ASTM D5185m | 3 | 5 | 2 |
| Potassium | ppm | ASTM D5185m >20 | 0 | <1 | 0 |

FLUID CLEANLINESS

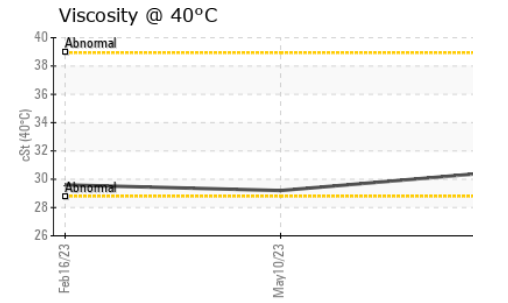
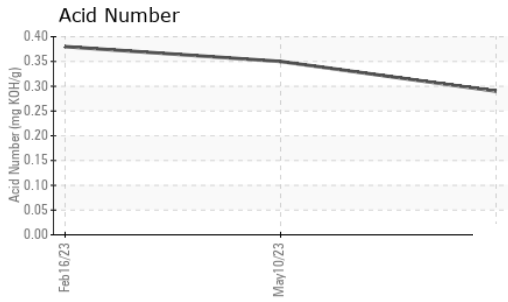
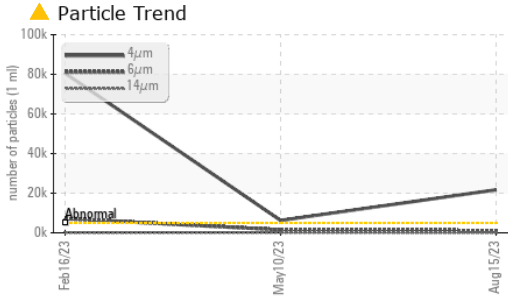
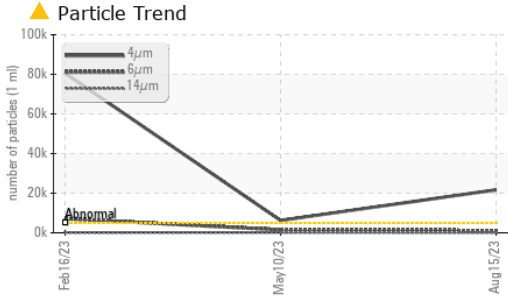
| | method | limit/base | current | history1 | history2 |
|-----------------|--------------|------------|-------------------|------------|------------|
| Particles >4µm | ASTM D7647 | >5000 | ▲ 21691 | ▲ 6264 | ▲ 80515 |
| Particles >6µm | ASTM D7647 | >1300 | 1101 | ▲ 1525 | ▲ 7136 |
| Particles >14µm | ASTM D7647 | >160 | 53 | 95 | 52 |
| Particles >21µm | ASTM D7647 | >40 | 15 | 18 | 12 |
| Particles >38µm | ASTM D7647 | >10 | 1 | 1 | 0 |
| Particles >71µm | ASTM D7647 | >3 | 0 | 0 | 0 |
| Oil Cleanliness | ISO 4406 (c) | >19/17/14 | ▲ 22/17/13 | ▲ 20/18/14 | ▲ 24/20/13 |

FLUID DEGRADATION

| | method | limit/base | current | history1 | history2 |
|------------------|----------|------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.29 | 0.35 | 0.38 |



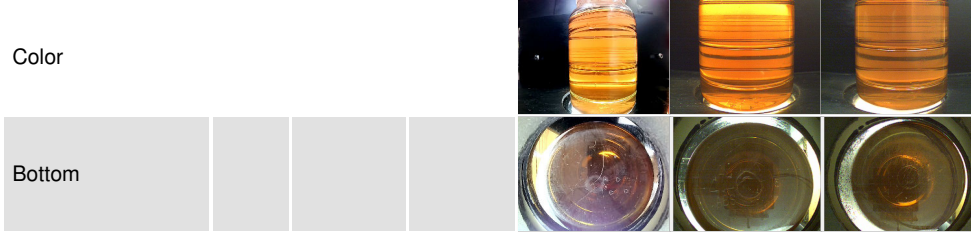
OIL ANALYSIS REPORT



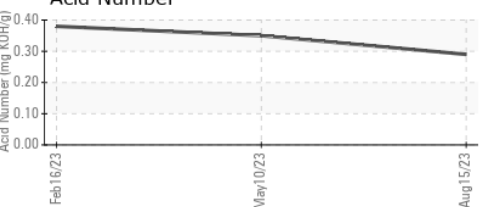
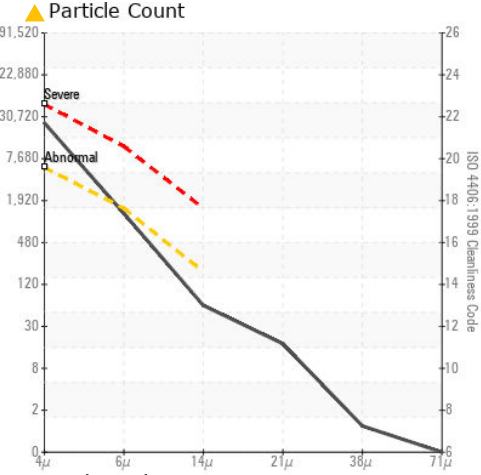
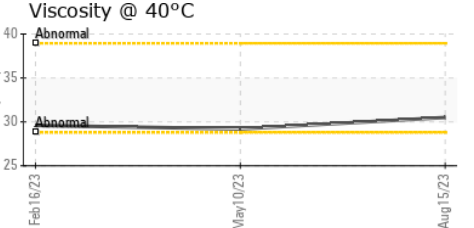
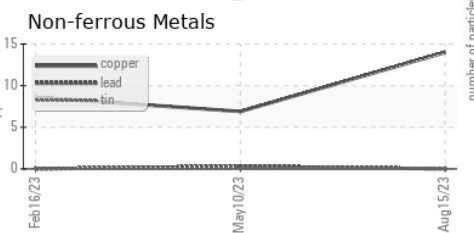
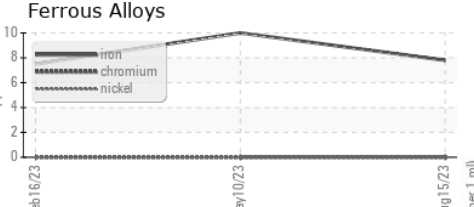
| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | 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 | 30.5 | 29.2 | 29.6 |

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



GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0842410 **Received** : 22 Aug 2023
Lab Number : 05931506 **Diagnosed** : 24 Aug 2023
Unique Number : 10616777 **Diagnostician** : Don Baldrige
Test Package : IND 2

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 US 45833
 Contact: K BRONSON
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 T: (419)551-6185
 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)