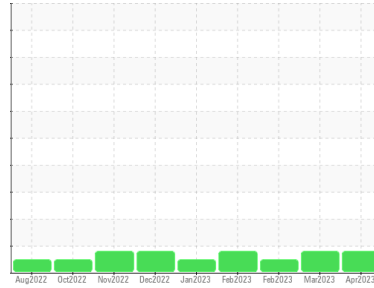




PROBLEM SUMMARY

Sample Rating Trend



ISO



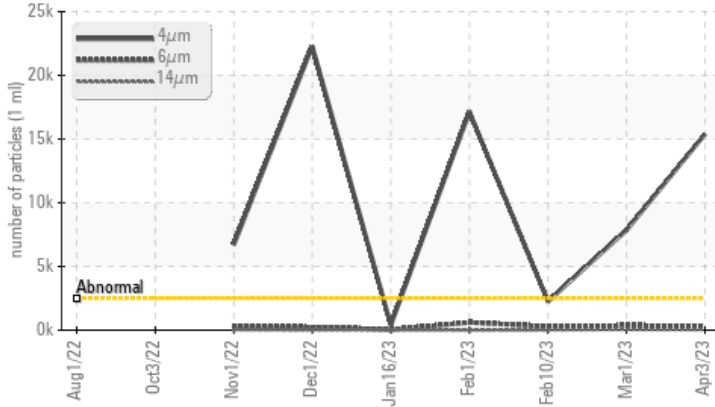
Machine Id
MERCURY MARINE

Component
Transmission (Auto)

Fluid
CASTROL TRANSMAX SYNTHETIC MV ATF (45 GAL)

COMPONENT CONDITION SUMMARY

▲ Particle Trend



RECOMMENDATION

No corrective action is recommended at this time.
Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

| Sample Status | | ABNORMAL | ABNORMAL | NORMAL |
|-----------------|------------------------|------------|------------|----------|
| Particles >4µm | ASTM D7647 >2500 | ▲ 15389 | ▲ 7857 | 2253 |
| Oil Cleanliness | ISO 4406 (c) >18/16/13 | ▲ 21/16/12 | ▲ 20/16/13 | 18/15/10 |

Customer Id: HAWCHANC
Sample No.: WC0700574
Lab Number: 05811582
Test Package: PLANT



To manage this report scan the QR code

To discuss the diagnosis or test data:
Doug Bogart +1 (800)237-1369 x4016
dougb@wearcheckusa.com

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

01 Mar 2023 Diag: Jonathan Hester

ISO



No corrective action is recommended at this time. Resample at the next service interval to monitor. All component wear rates are normal. There is a high amount of silt (particulates < 6 microns in size) present in the fluid. The AN level is acceptable for this fluid. The condition of the fluid is suitable for further service.

view report



10 Feb 2023 Diag: Don Baldrige

NORMAL



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

view report



01 Feb 2023 Diag: Don Baldrige

ISO



No corrective action is recommended at this time. 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 fluid. The AN level is acceptable for this fluid. The condition of the fluid is suitable for further service.

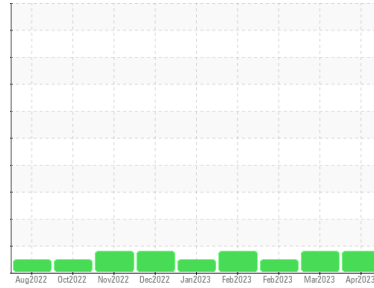
view report





OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id
MERCURY MARINE

Component
Transmission (Auto)

Fluid
CASTROL TRANSMAX SYNTHETIC MV ATF (45 GAL)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is a high amount of silt (particulates < 6 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 | | WC0700574 | WC0700569 | WC0700566 |
| Sample Date | Client Info | | 03 Apr 2023 | 01 Mar 2023 | 10 Feb 2023 |
| Machine Age | mths | Client Info | 0 | 0 | 0 |
| Oil Age | mths | 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 >160 | <1 | 0 | <1 |
| Chromium | ppm | ASTM D5185m >5 | 0 | 0 | 0 |
| Nickel | ppm | ASTM D5185m >5 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185m >5 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m >50 | 3 | 2 | 2 |
| Lead | ppm | ASTM D5185m >50 | <1 | 0 | <1 |
| Copper | ppm | ASTM D5185m >225 | <1 | <1 | <1 |
| Tin | ppm | ASTM D5185m >10 | 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 100 | 97 | 97 | 94 |
| Barium | ppm | ASTM D5185m 0 | 16 | 16 | 5 |
| Molybdenum | ppm | ASTM D5185m 0 | 0 | 0 | 0 |
| Manganese | ppm | ASTM D5185m 10 | <1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m 0 | 0 | 0 | <1 |
| Calcium | ppm | ASTM D5185m 370 | 74 | 69 | 77 |
| Phosphorus | ppm | ASTM D5185m 300 | 221 | 188 | 201 |
| Zinc | ppm | ASTM D5185m 0 | 3 | 0 | 0 |
| Sulfur | ppm | ASTM D5185m 1600 | 935 | 852 | 957 |

CONTAMINANTS

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

FLUID CLEANLINESS

| | method | limit/base | current | history1 | history2 |
|-----------------|--------------|------------|-------------------|------------|----------|
| Particles >4µm | ASTM D7647 | >2500 | ▲ 15389 | ▲ 7857 | 2253 |
| Particles >6µm | ASTM D7647 | >640 | 330 | 367 | 286 |
| Particles >14µm | ASTM D7647 | >80 | 37 | 46 | 10 |
| Particles >21µm | ASTM D7647 | >20 | 14 | 8 | 2 |
| Particles >38µm | ASTM D7647 | >4 | 1 | 1 | 1 |
| Particles >71µm | ASTM D7647 | >3 | 0 | 0 | 0 |
| Oil Cleanliness | ISO 4406 (c) | >18/16/13 | ▲ 21/16/12 | ▲ 20/16/13 | 18/15/10 |

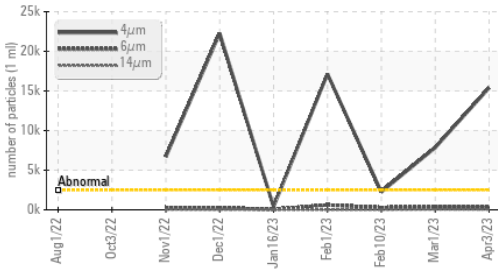
FLUID DEGRADATION

| | method | limit/base | current | history1 | history2 |
|------------------|----------|------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.88 | 0.81 | 0.79 |

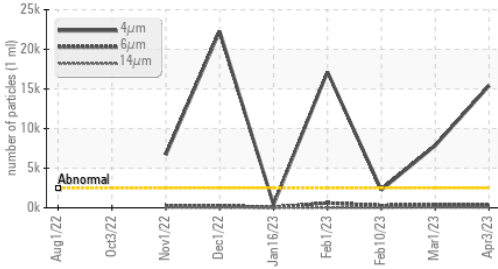


OIL ANALYSIS REPORT

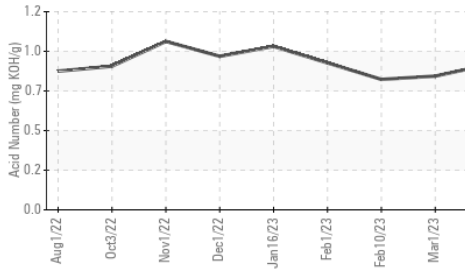
Particle Trend



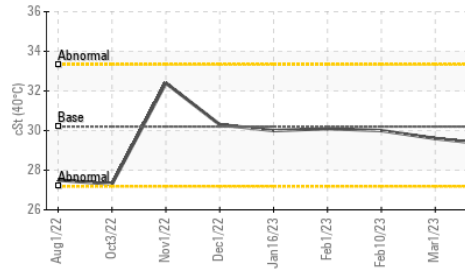
Particle Trend



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 | >0.1 | NEG | NEG |
| Free Water | scalar | *Visual | | NEG | NEG |

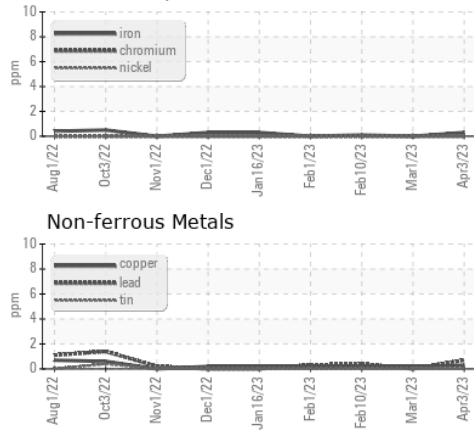
| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 | 30.2 | 29.6 | 30.0 |

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

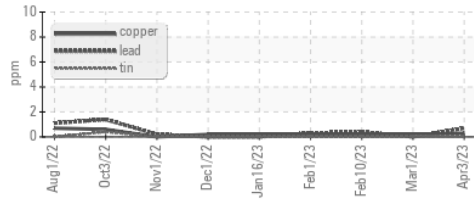


GRAPHS

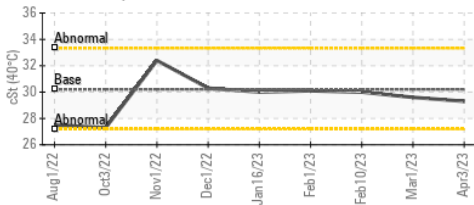
Ferrous Alloys



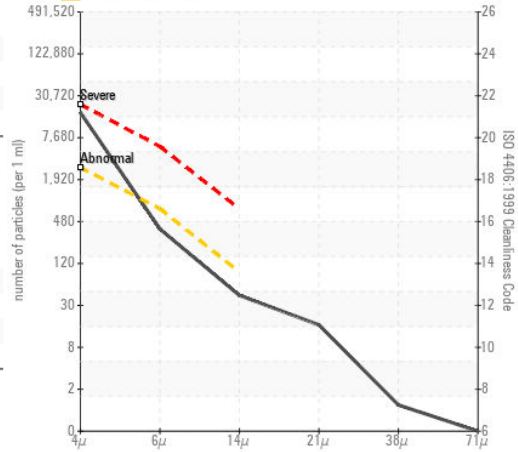
Non-ferrous Metals



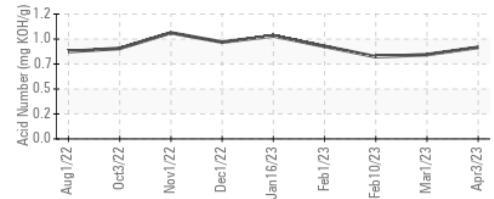
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : WC0700574
 Lab Number : 05811582
 Unique Number : 10414374
 Test Package : PLANT

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 Contact: Kristina Smith
 k.smith@hawe.com
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 F: (704)509-6302

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)