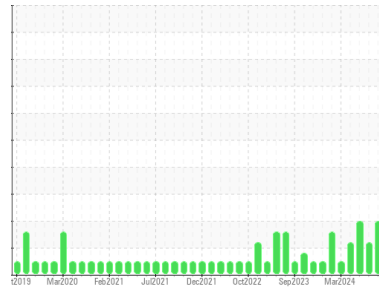




OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area
PRESS
 Machine Id
TOP TOOL LOCK
 Component
Tank Hydraulic System
 Fluid
ECOSAFE FR-46 (200 GAL)

DIAGNOSIS

Recommendation

We recommend you service the filters on this component if applicable. 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 | | WC0937031 | WC0937016 | WC0905616 |
| Sample Date | Client Info | | 31 May 2024 | 09 May 2024 | 21 Apr 2024 |
| Machine Age | hrs | Client Info | 0 | 0 | 0 |
| Oil Age | hrs | Client Info | 0 | 0 | 0 |
| Oil Changed | Client Info | | N/A | N/A | N/A |
| Sample Status | | | ABNORMAL | ABNORMAL | ABNORMAL |

CONTAMINATION

| | method | limit/base | current | history1 | history2 |
|-------|-----------|------------|------------|----------|----------|
| Water | WC Method | >0.05 | NEG | NEG | NEG |

WEAR METALS

| | method | limit/base | current | history1 | history2 | |
|----------|--------|-------------|---------|--------------|----------|----|
| Iron | ppm | ASTM D5185m | >20 | 2 | 2 | 1 |
| Chromium | ppm | ASTM D5185m | >20 | <1 | <1 | 0 |
| Nickel | ppm | ASTM D5185m | >20 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | 0 | <1 | <1 |
| Silver | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | 2 | 2 | <1 |
| Lead | ppm | ASTM D5185m | >20 | 0 | 0 | 0 |
| Copper | ppm | ASTM D5185m | >20 | <1 | 1 | <1 |
| Tin | ppm | ASTM D5185m | >20 | <1 | <1 | 1 |
| Vanadium | ppm | ASTM D5185m | | <1 | <1 | <1 |
| Cadmium | ppm | ASTM D5185m | | 0 | <1 | 0 |

ADDITIVES

| | method | limit/base | current | history1 | history2 | |
|------------|--------|-------------|---------|--------------|----------|------|
| Boron | ppm | ASTM D5185m | | <1 | 0 | <1 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Manganese | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Magnesium | ppm | ASTM D5185m | | <1 | <1 | 1 |
| Calcium | ppm | ASTM D5185m | | 4 | 8 | 2 |
| Phosphorus | ppm | ASTM D5185m | | 448 | 624 | 606 |
| Zinc | ppm | ASTM D5185m | | 25 | 18 | 12 |
| Sulfur | ppm | ASTM D5185m | | 2576 | 3130 | 3805 |

CONTAMINANTS

| | method | limit/base | current | history1 | history2 | |
|-----------|--------|-------------|---------|----------|----------|----|
| Silicon | ppm | ASTM D5185m | >15 | 2 | 2 | 2 |
| Sodium | ppm | ASTM D5185m | | 6 | 1 | 0 |
| Potassium | ppm | ASTM D5185m | >20 | 1 | 2 | <1 |

FLUID CLEANLINESS

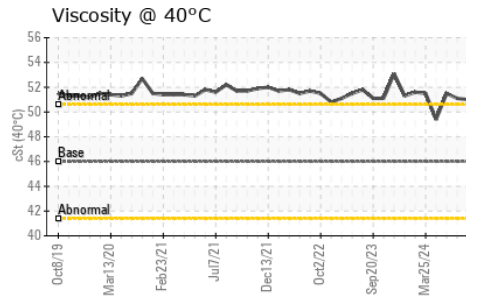
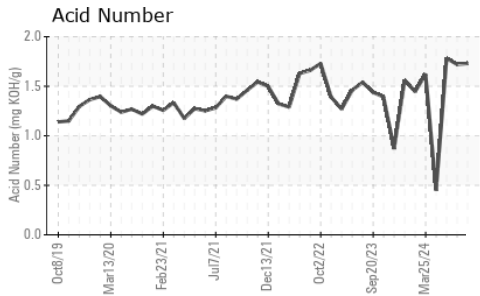
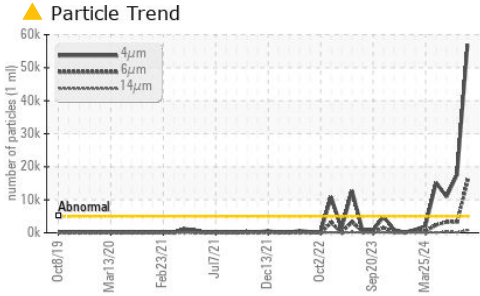
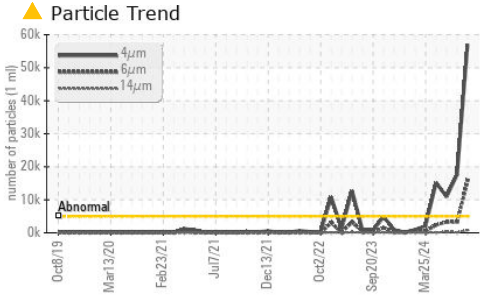
| | method | limit/base | current | history1 | history2 |
|-----------------|--------------|------------|-------------------|------------|------------|
| Particles >4µm | ASTM D7647 | >5000 | ▲ 57013 | ▲ 17649 | ▲ 10883 |
| Particles >6µm | ASTM D7647 | >1300 | ▲ 15632 | ▲ 3247 | ▲ 3286 |
| Particles >14µm | ASTM D7647 | >160 | ▲ 786 | 155 | ▲ 241 |
| Particles >21µm | ASTM D7647 | >40 | ▲ 192 | 33 | ▲ 47 |
| Particles >38µm | ASTM D7647 | >10 | 8 | 1 | 1 |
| Particles >71µm | ASTM D7647 | >3 | 0 | 0 | 0 |
| Oil Cleanliness | ISO 4406 (c) | >19/17/14 | ▲ 23/21/17 | ▲ 21/19/14 | ▲ 21/19/15 |

FLUID DEGRADATION

| | method | limit/base | current | history1 | history2 |
|------------------|----------|------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 1.73 | 1.72 | 1.78 |



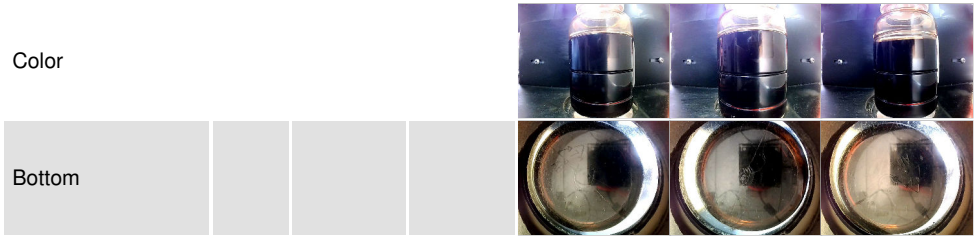
OIL ANALYSIS REPORT



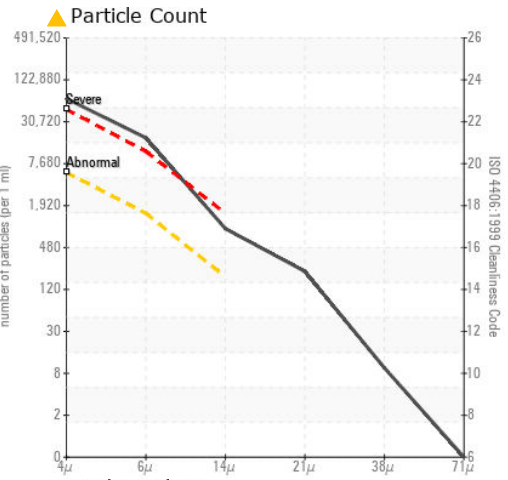
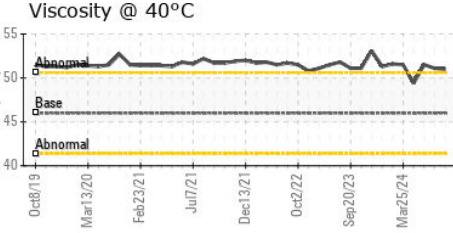
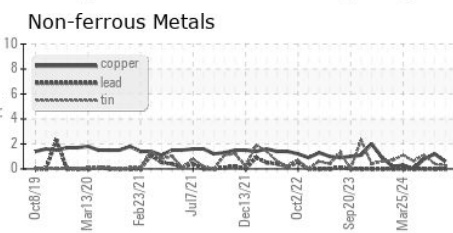
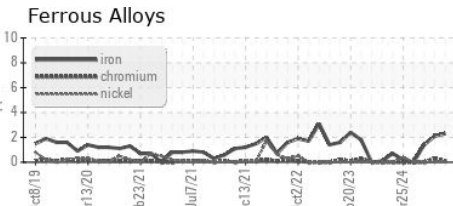
| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | 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 46 | 51.0 | 51.1 | 51.5 |

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



GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0937031 **Received** : 04 Jun 2024
Lab Number : 06199090 **Tested** : 06 Jun 2024
Unique Number : 11061213 **Diagnosed** : 06 Jun 2024 - Jonathan Hester
Test Package : IND 2

ALLVAC SAF CONDITIONING
 3750 ALLOY WAY
 MONROE, NC
 US 28110
 Contact: MIKE TODD
 mike.todd@atimetals.com

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)