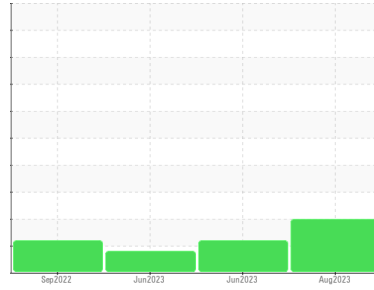




OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area
WALPOLE
Machine Id
943 - WALPOLE
Component
Front Differential
Fluid
NOT GIVEN (--- GAL)

DIAGNOSIS

Recommendation

We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor. Please note that this is a corrected copy for laboratory data updates of elemental data.

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 | | WC0843159 | WC0828725 | WC0828702 |
| Sample Date | Client Info | | 01 Aug 2023 | 29 Jun 2023 | 02 Jun 2023 |
| Machine Age | mls | Client Info | 125562 | 116673 | 106319 |
| Oil Age | mls | Client Info | 0 | 0 | 0 |
| Oil Changed | Client Info | | N/A | N/A | N/A |
| Sample Status | | | ABNORMAL | ABNORMAL | ABNORMAL |

WEAR METALS

| | method | limit/base | current | history1 | history2 |
|----------|--------|------------------|--------------|----------|----------|
| Iron | ppm | ASTM D5185m >500 | 358 | 309 | 303 |
| Chromium | ppm | ASTM D5185m >10 | 4 | 4 | 4 |
| Nickel | ppm | ASTM D5185m >10 | 1 | <1 | 2 |
| Titanium | ppm | ASTM D5185m | <1 | <1 | 0 |
| Silver | ppm | ASTM D5185m | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m >25 | 3 | 3 | 4 |
| Lead | ppm | ASTM D5185m >25 | 6 | 4 | 6 |
| Copper | ppm | ASTM D5185m >100 | 56 | 53 | 50 |
| Tin | ppm | ASTM D5185m >10 | 7 | 6 | 7 |
| Vanadium | ppm | ASTM D5185m | <1 | <1 | 0 |
| Cadmium | ppm | ASTM D5185m | <1 | 0 | 0 |

ADDITIVES

| | method | limit/base | current | history1 | history2 |
|------------|--------|-------------|--------------|----------|----------|
| Boron | ppm | ASTM D5185m | 83 | 77 | 67 |
| Barium | ppm | ASTM D5185m | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 0 | <1 | <1 |
| Manganese | ppm | ASTM D5185m | 8 | 7 | 7 |
| Magnesium | ppm | ASTM D5185m | 207 | 197 | 204 |
| Calcium | ppm | ASTM D5185m | 0 | 7 | 5 |
| Phosphorus | ppm | ASTM D5185m | 1782 | 1694 | 1823 |
| Zinc | ppm | ASTM D5185m | 0 | 7 | 0 |
| Sulfur | ppm | ASTM D5185m | 25056 | 25056 | 31695 |

CONTAMINANTS

| | method | limit/base | current | history1 | history2 |
|-----------|--------|------------------|--------------|----------|----------|
| Silicon | ppm | ASTM D5185m >75 | 39 | 36 | 34 |
| Sodium | ppm | ASTM D5185m | 3 | 4 | 3 |
| Potassium | ppm | ASTM D5185m >20 | <1 | 0 | 3 |
| Water | % | ASTM D6304 >.2 | 0.060 | 0.028 | 0.030 |
| ppm Water | ppm | ASTM D6304 >2000 | 605.3 | 287.4 | 302.2 |

FLUID CLEANLINESS

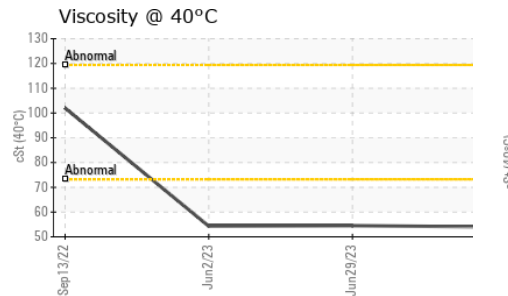
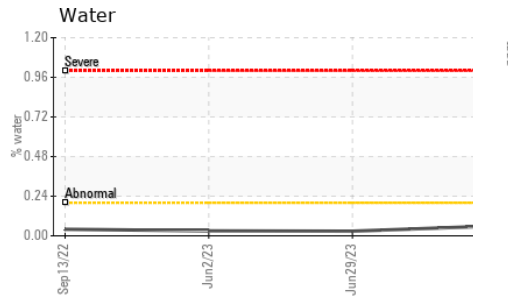
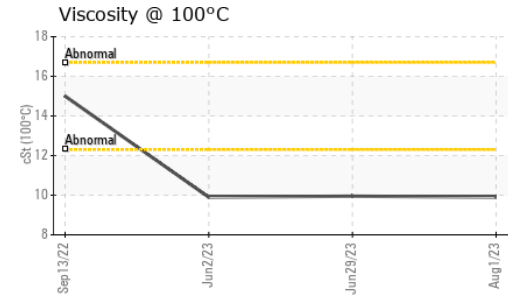
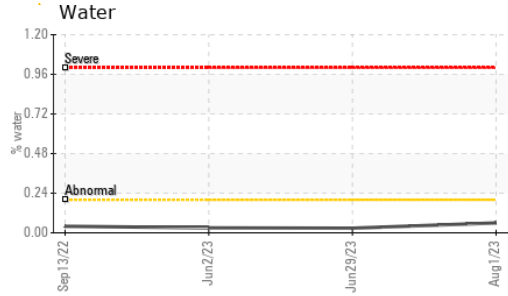
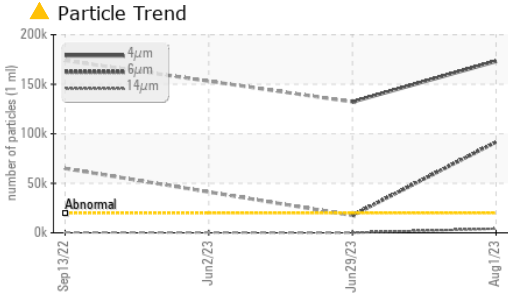
| | method | limit/base | current | history1 | history2 |
|-----------------|--------------|------------|-------------------|------------|----------|
| Particles >4µm | ASTM D7647 | >20000 | ▲ 173142 | ▲ 132158 | --- |
| Particles >6µm | ASTM D7647 | >5000 | ▲ 91614 | ▲ 17512 | --- |
| Particles >14µm | ASTM D7647 | >640 | ▲ 4168 | 113 | --- |
| Particles >21µm | ASTM D7647 | >160 | ▲ 763 | 21 | --- |
| Particles >38µm | ASTM D7647 | >40 | 37 | 0 | --- |
| Particles >71µm | ASTM D7647 | >10 | 1 | 0 | --- |
| Oil Cleanliness | ISO 4406 (c) | >21/19/16 | ▲ 25/24/19 | ▲ 24/21/14 | --- |

FLUID DEGRADATION

| | method | limit/base | current | history1 | history2 |
|------------------|----------|------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.49 | 0.41 | 0.46 |



OIL ANALYSIS REPORT

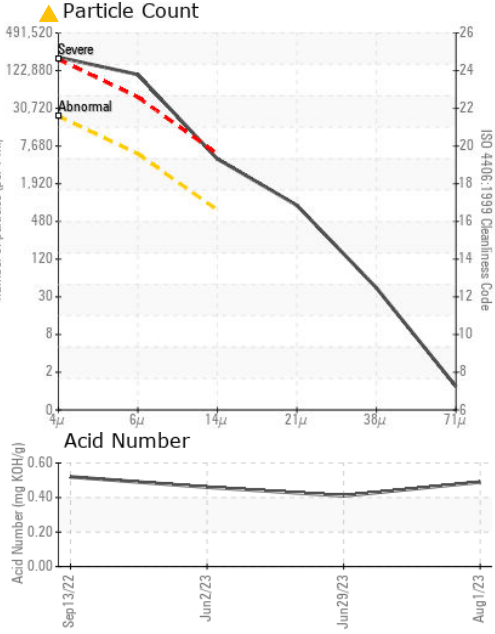
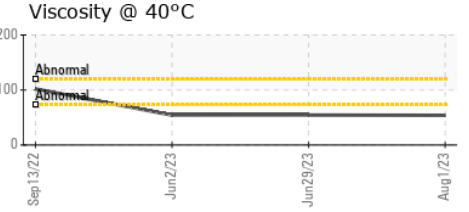
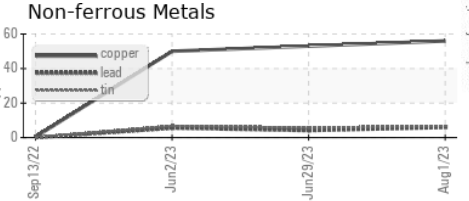
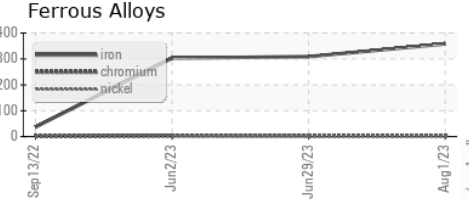


| VISUAL | method | limit/base | current | history1 | history2 | |
|------------------|--------|------------|---------|----------|----------|---------|
| White Metal | scalar | *Visual | NONE | LIGHT | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | NONE | NONE |
| Silt | scalar | *Visual | NONE | NONE | NONE | ▲ MODER |
| Debris | scalar | *Visual | NONE | NONE | LIGHT | NONE |
| Sand/Dirt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Appearance | scalar | *Visual | NORML | NORML | NORML | NORML |
| Odor | scalar | *Visual | NORML | NORML | NORML | NORML |
| Emulsified Water | scalar | *Visual | >.2 | NEG | NEG | NEG |
| Free Water | scalar | *Visual | | NEG | NEG | NEG |

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|----------------------|--------|------------|---------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 | 54.0 | 54.5 | 54.3 |
| Visc @ 100°C | cSt | ASTM D445 | 9.9 | 9.95 | 9.9 |
| Viscosity Index (VI) | Scale | ASTM D2270 | 172 | 171 | 170 |

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

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0843159 **Received** : 21 Aug 2023
Lab Number : 05930336 **Diagnosed** : 24 Aug 2023
Unique Number : 10615607 **Diagnostician** : Doug Bogart
Test Package : MOB 2 (Additional Tests: KF, KV100, PrtCount, VI)

BASF - GIANNA CREDAROLI
 500 WHITE PLAINS RD
 TARRYTOWN, NY
 US 10591
 Contact: GIANNA CREDAROLI
 gianna.credaroli@basf.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)