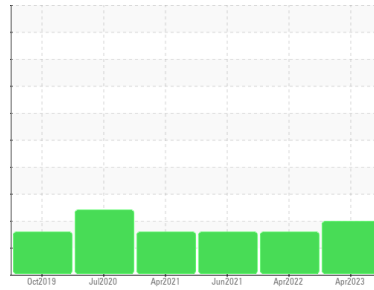




OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id
LINE 6 (S/N 3223)

Component
Hydraulic System

Fluid
SAFETY-KLEEN PERFORMANCE PLUS HYDRAULIC AW 46 (--- GAL)

DIAGNOSIS

Recommendation

We recommend you service the filters on this component. Resample at the next service interval to monitor. Please note that this is a corrected copy for laboratory data update for fuel dilution.

Wear

All component wear rates are normal.

Contamination

There is a high amount of particulates present in the oil. Fuel content negligible.

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 | | WC0801310 | WC0574561 | WC0449556 |
| Sample Date | Client Info | | 11 Apr 2023 | 18 Apr 2022 | 17 Jun 2021 |
| Machine Age | hrs | Client Info | 0 | 0 | 0 |
| Oil Age | hrs | Client Info | 0 | 0 | 0 |
| Oil Changed | Client Info | | Not Chngd | 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 | <1 | 2 | 2 |
| Chromium | ppm | ASTM D5185m | >20 | 0 | 0 | <1 |
| Nickel | ppm | ASTM D5185m | >20 | 0 | 0 | <1 |
| Titanium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | 0 | 0 | 0 |
| Lead | ppm | ASTM D5185m | >20 | 0 | <1 | <1 |
| Copper | ppm | ASTM D5185m | >20 | 0 | <1 | <1 |
| Tin | ppm | ASTM D5185m | >20 | 0 | 0 | <1 |
| Antimony | ppm | ASTM D5185m | | --- | --- | <1 |
| 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 | <1 | 1 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | <1 | <1 | <1 |
| Manganese | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Magnesium | ppm | ASTM D5185m | | 4 | 0 | 1 |
| Calcium | ppm | ASTM D5185m | 48 | 51 | 50 | 49 |
| Phosphorus | ppm | ASTM D5185m | 340 | 358 | 375 | 332 |
| Zinc | ppm | ASTM D5185m | 430 | 444 | 430 | 417 |
| Sulfur | ppm | ASTM D5185m | | 1110 | 828 | 805 |

CONTAMINANTS

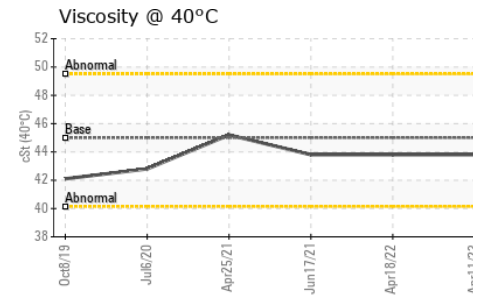
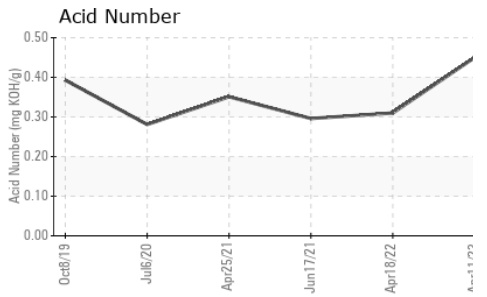
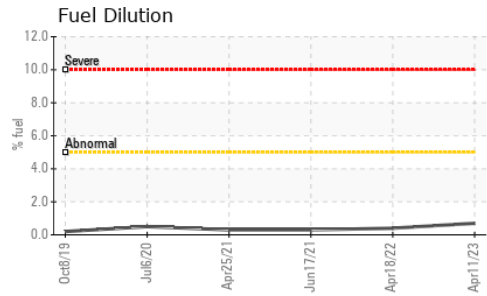
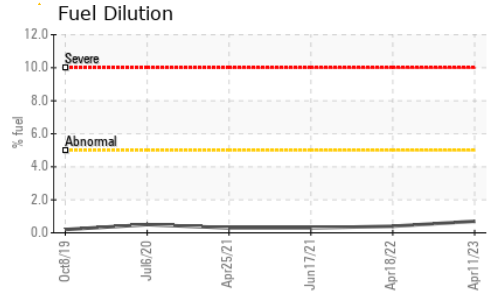
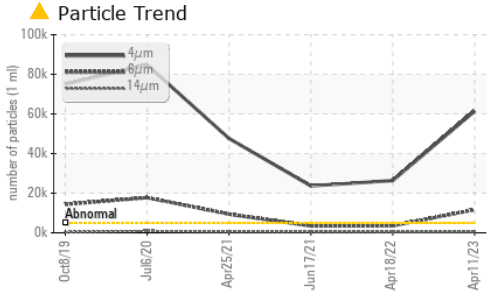
| | method | limit/base | current | history1 | history2 | |
|-----------|--------|-------------|---------|------------|----------|-----|
| Silicon | ppm | ASTM D5185m | >15 | 0 | <1 | <1 |
| Sodium | ppm | ASTM D5185m | | 0 | <1 | <1 |
| Potassium | ppm | ASTM D5185m | >20 | 0 | 0 | <1 |
| Fuel | % | ASTM D3524 | | 0.7 | 0.4 | 0.3 |

FLUID CLEANLINESS

| | method | limit/base | current | history1 | history2 |
|-----------------|--------------|------------|-------------------|------------|------------|
| Particles >4µm | ASTM D7647 | >5000 | ▲ 61388 | ▲ 26371 | ▲ 23671 |
| Particles >6µm | ASTM D7647 | >1300 | ▲ 11629 | ▲ 3536 | ▲ 3495 |
| Particles >14µm | ASTM D7647 | >160 | ▲ 472 | ▲ 378 | ▲ 467 |
| Particles >21µm | ASTM D7647 | >40 | ▲ 119 | ▲ 131 | ▲ 167 |
| Particles >38µm | ASTM D7647 | >10 | 8 | 5 | 4 |
| Particles >71µm | ASTM D7647 | >3 | 1 | 0 | 0 |
| Oil Cleanliness | ISO 4406 (c) | >19/17/14 | ▲ 23/21/16 | ▲ 22/19/16 | ▲ 22/19/16 |



OIL ANALYSIS REPORT

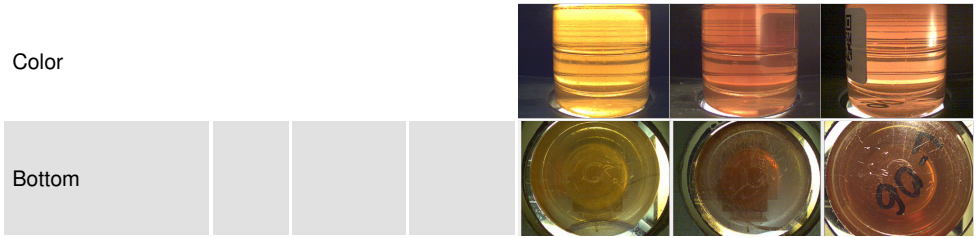


| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|-------------------|----------|------------|------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | | 0.45 | 0.31 | 0.296 |

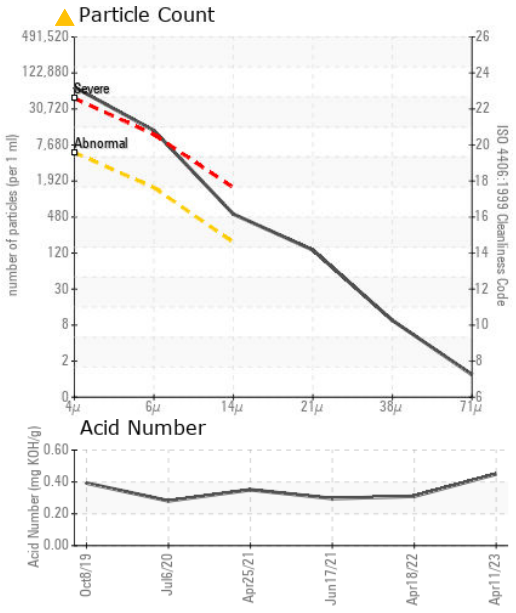
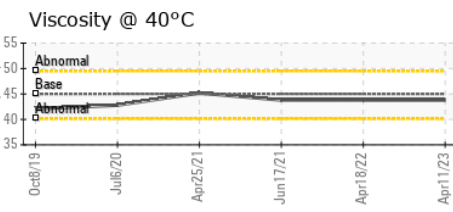
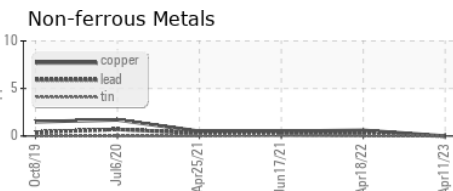
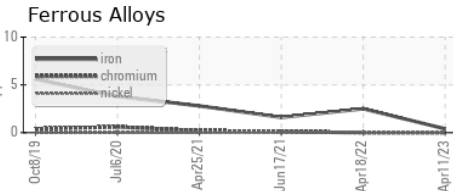
| VISUAL | | method | limit/base | current | history1 | history2 |
|------------------|--------|---------|------------|--------------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | VLITE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | NONE | NONE |
| Silt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Debris | scalar | *Visual | NONE | NONE | NONE | 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 | >0.05 | NEG | NEG | NEG |
| Free Water | scalar | *Visual | | NEG | NEG | NEG |

| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|------------------|-----|-----------|------------|-------------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 | 45.0 | 43.8 | 43.8 | 43.8 |

SAMPLE IMAGES



GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0801310 **Received** : 12 Apr 2023
Lab Number : 05818171 **Tested** : 19 Apr 2023
Unique Number : 10426254 **Diagnosed** : 19 Apr 2023 - Doug Bogart
Test Package : IND 2 (Additional Tests: FuelDilution, PERCENTFUEL)

Altium Packaging - TRACY - Plant 1308A
 75 W VALPICO RD
 TRACY, CA
 US 95376
 Contact: Rojie Sarmiento
 rojie.sarmiento@altiumpkg.com
 T: (209)831-2908
 F: (209)820-1735

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)