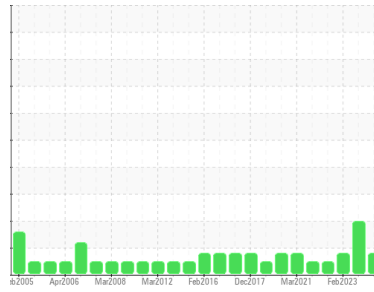




OIL ANALYSIS REPORT

Sample Rating Trend



WEAR



Machine Id

MACHINE 535 (S/N 718803)

Component

Hydraulic System

Fluid

SHELL TELLUS 46 (250 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

The copper level is abnormal. All other component wear rates are normal.

Contamination

There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

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 | | WC0933782 | WC0847492 | WC0761964 |
| Sample Date | Client Info | | 28 May 2024 | 24 Aug 2023 | 16 Feb 2023 |
| Machine Age | hrs | Client Info | 55141 | 52330 | 0 |
| Oil Age | hrs | Client Info | 15000 | 7610 | 0 |
| Oil Changed | Client Info | | Not Changed | Not Changed | Not Changed |
| 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 | 1 | 0 |
| Chromium | ppm | ASTM D5185m >20 | 0 | 0 | 0 |
| Nickel | ppm | ASTM D5185m >20 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | <1 | 0 | <1 |
| Silver | ppm | ASTM D5185m | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m >20 | 0 | 0 | <1 |
| Lead | ppm | ASTM D5185m >20 | 0 | 0 | 0 |
| Copper | ppm | ASTM D5185m >20 | ▲ 21 | ▲ 22 | ▲ 23 |
| Tin | ppm | ASTM D5185m >20 | 0 | 0 | 0 |
| Vanadium | ppm | ASTM D5185m | <1 | <1 | 0 |
| Cadmium | ppm | ASTM D5185m | 0 | 0 | 0 |

ADDITIVES

| | method | limit/base | current | history1 | history2 |
|------------|--------|------------------|--------------|----------|----------|
| Boron | ppm | ASTM D5185m 0.0 | 0 | 0 | 0 |
| Barium | ppm | ASTM D5185m 0 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m 0 | <1 | <1 | <1 |
| Manganese | ppm | ASTM D5185m | <1 | 0 | <1 |
| Magnesium | ppm | ASTM D5185m 11 | 0 | 0 | 4 |
| Calcium | ppm | ASTM D5185m 35 | 102 | 114 | 104 |
| Phosphorus | ppm | ASTM D5185m 266 | 323 | 341 | 291 |
| Zinc | ppm | ASTM D5185m 276 | 400 | 390 | 346 |
| Sulfur | ppm | ASTM D5185m 1847 | 5382 | 5329 | 4548 |

CONTAMINANTS

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

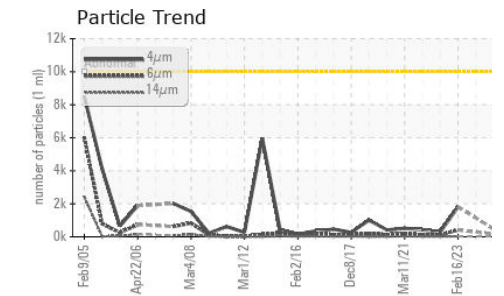
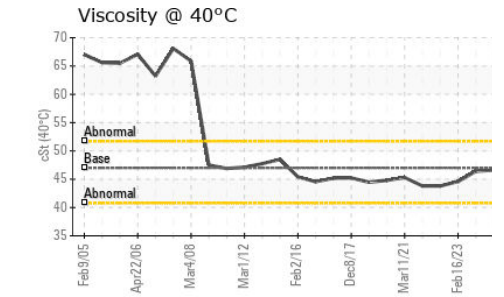
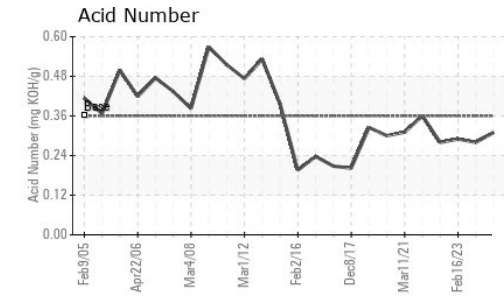
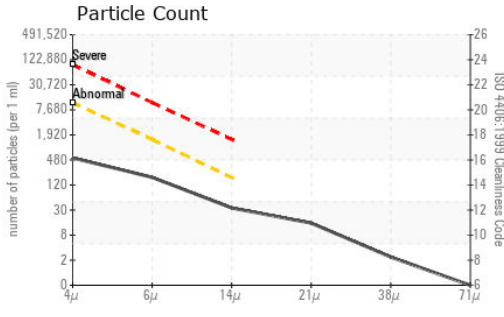
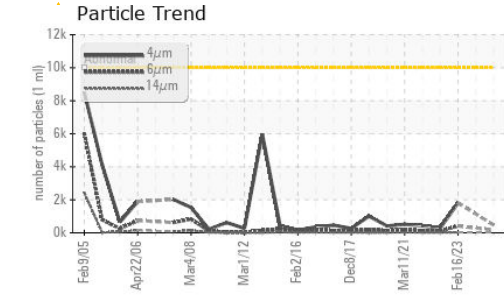
FLUID CLEANLINESS

| | method | limit/base | current | history1 | history2 |
|-----------------|--------------|------------|-----------------|----------|----------|
| Particles >4µm | ASTM D7647 | >10000 | 473 | --- | 1813 |
| Particles >6µm | ASTM D7647 | >1300 | 162 | --- | 418 |
| Particles >14µm | ASTM D7647 | >160 | 30 | --- | 26 |
| Particles >21µm | ASTM D7647 | >40 | 13 | --- | 6 |
| Particles >38µm | ASTM D7647 | >10 | 2 | --- | 0 |
| Particles >71µm | ASTM D7647 | >3 | 0 | --- | 0 |
| Oil Cleanliness | ISO 4406 (c) | >20/17/14 | 16/15/12 | --- | 18/16/12 |

FLUID DEGRADATION

| | method | limit/base | current | history1 | history2 |
|------------------|----------|-----------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 0.36 | 0.31 | 0.28 | 0.29 |

OIL ANALYSIS REPORT

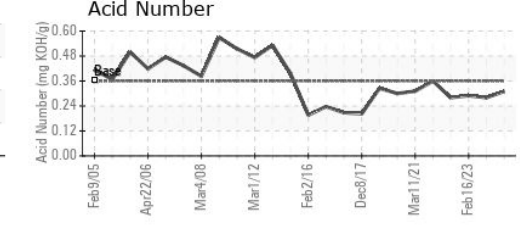
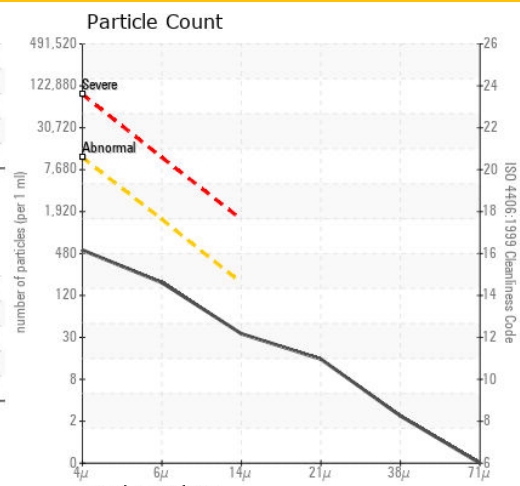
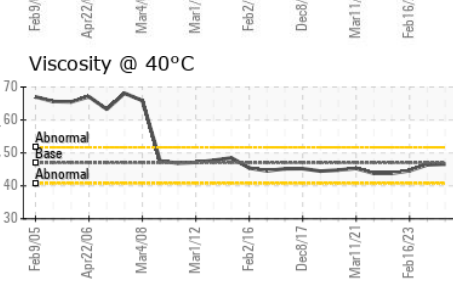
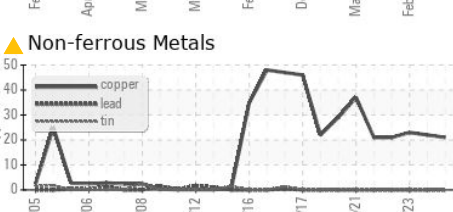
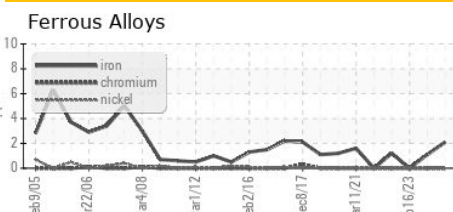


| VISUAL | method | limit/base | current | history1 | history2 | |
|------------------|--------|------------|---------|--------------|----------|-------|
| White Metal | scalar | *Visual | NONE | LIGHT | ▲ MODER | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Precipitate | 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 | 46.99 | 46.6 | 46.4 | 44.6 |

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

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0933782 **Received** : 05 Jun 2024
Lab Number : **06200737** **Tested** : 06 Jun 2024
Unique Number : 11062860 **Diagnosed** : 07 Jun 2024 - Don Baldrige
Test Package : IND 2

ALLIANCE PRECISION PLASTICS
 1220 LEE RD
 ROCHESTER, NY
 US 14606
 Contact: RON ORT
 rort@allianceppc.com
 T:

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) F: (716)425-7251