



PERFORMANCE
UNDER
PRESSURE

OIL ANALYSIS REPORT

| | |
|-----------------|--------|
| WEAR | NORMAL |
| CONTAMINATION | SEVERE |
| FLUID CONDITION | NORMAL |

Area
UTL
Machine Id
UTL - PRI CLAR LEFT SEC BULL GR (S/N 79031933)
Component
Gearbox
Fluid
SHELL OMALA 680 (--- GAL)

RECOMMENDATION

We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | RP0030407 | RP0034382 | RP0023534 |
| Sample Date | | Client Info | | 06 Feb 2024 | 12 Nov 2023 | 28 Aug 2023 |
| Machine Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Age | hrs | Client Info | | 0 | 0 | 0 |
| Filter Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | N/A | N/A | N/A |
| Filter Changed | | Client Info | | N/A | N/A | N/A |
| Sample Status | | | | SEVERE | SEVERE | ABNORMAL |

WEAR

All component wear rates are normal.

| PQ | UOM | Method | Limit/Abn | Current | History1 | History2 |
|--------------|--------|-------------|-----------|--------------|----------|----------|
| Iron | ppm | ASTM D5185m | >200 | 80 | 69 | 29 |
| Chromium | ppm | ASTM D5185m | >15 | <1 | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >15 | <1 | 1 | <1 |
| Titanium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >25 | 2 | 2 | 3 |
| Lead | ppm | ASTM D5185m | >100 | 2 | 4 | 0 |
| Copper | ppm | ASTM D5185m | >200 | 140 | 87 | 21 |
| Tin | ppm | ASTM D5185m | >25 | 2 | 1 | 0 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | ▲ MODER |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

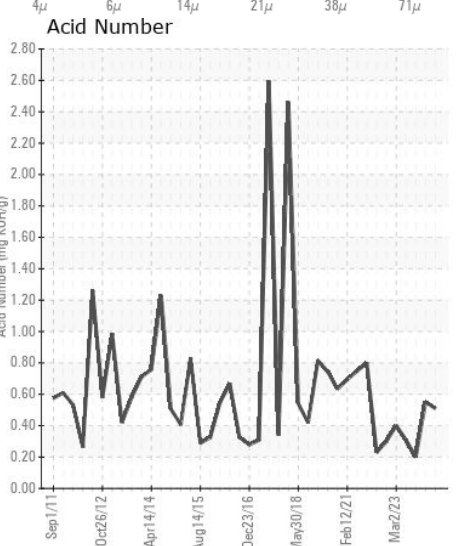
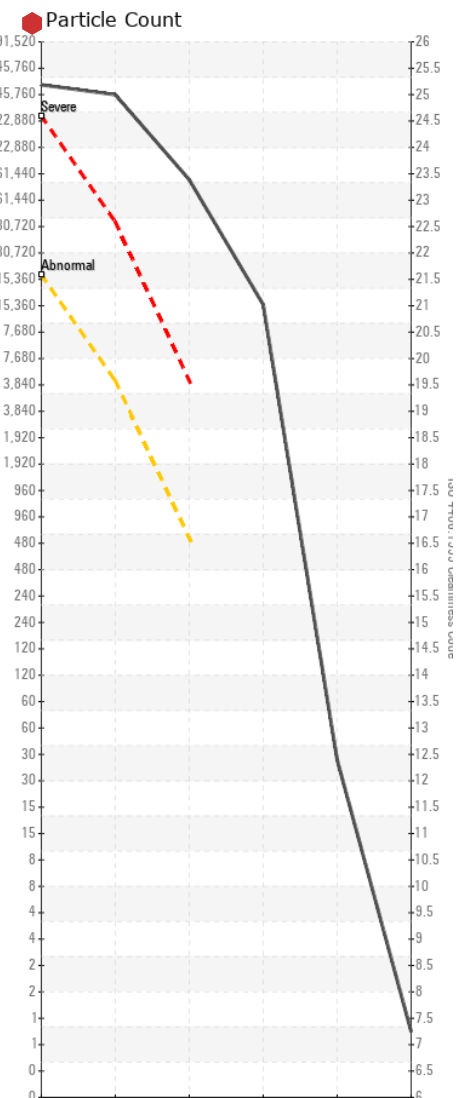
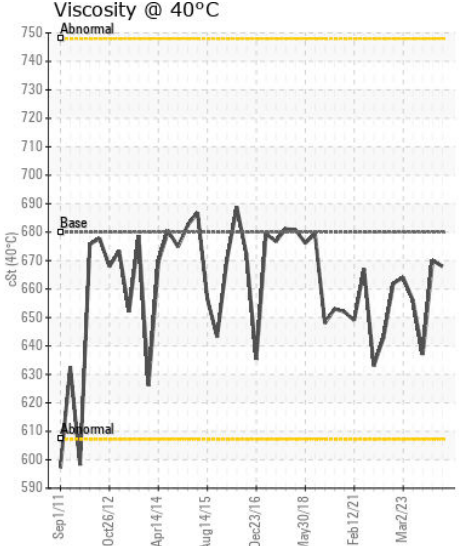
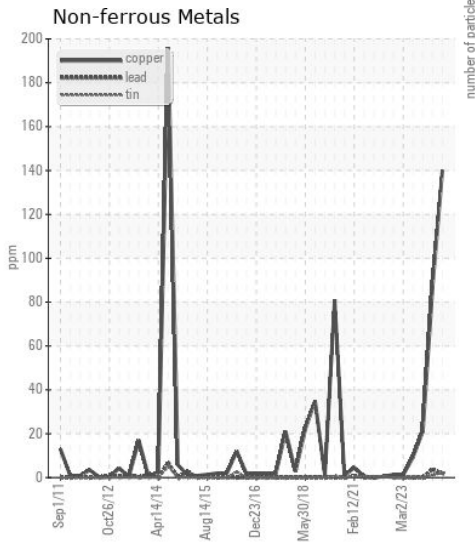
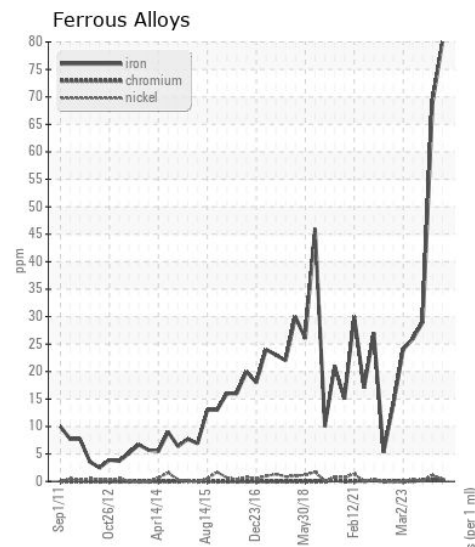
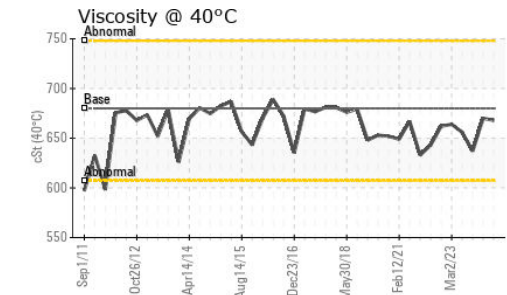
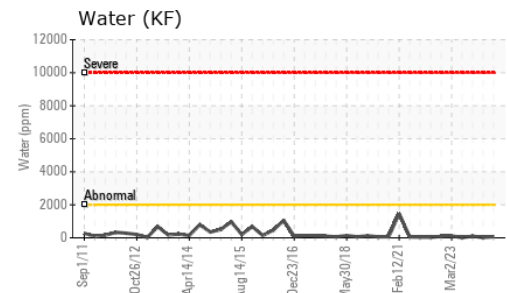
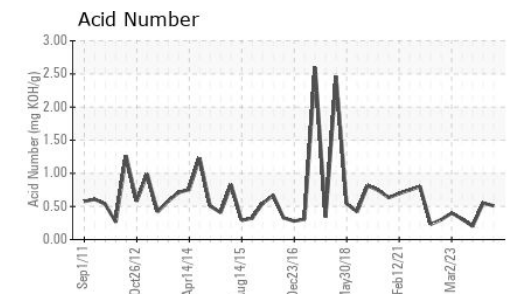
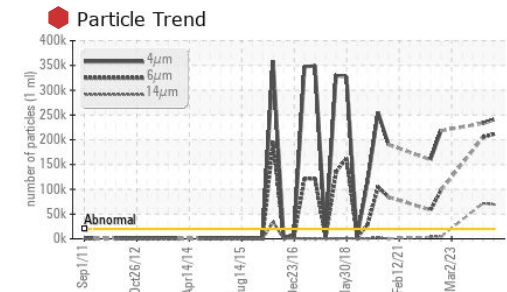
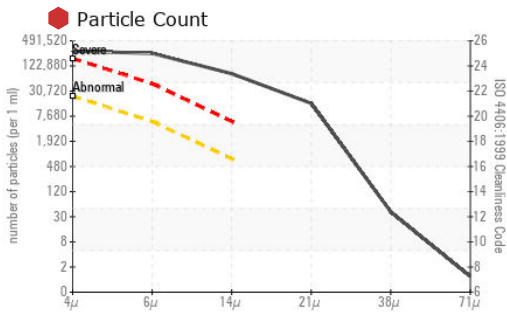
There is a high amount of particulates present in the oil.

| | | | | | | |
|------------------|--------|--------------|-----------|-----------------|----------|-------|
| Silicon | ppm | ASTM D5185m | >50 | 15 | 15 | 15 |
| Potassium | ppm | ASTM D5185m | >20 | 0 | 2 | 0 |
| Water | % | ASTM D6304 | >0.2 | 0.006 | 0.002 | 0.010 |
| ppm Water | ppm | ASTM D6304 | >2000 | 67 | 16.1 | 101.2 |
| Particles >4µm | | ASTM D7647 | >20000 | 240370 | 233341 | --- |
| Particles >6µm | | ASTM D7647 | >5000 | 211191 | 205006 | --- |
| Particles >14µm | | ASTM D7647 | >640 | 69452 | 71562 | --- |
| Particles >21µm | | ASTM D7647 | >160 | 13533 | 13662 | --- |
| Particles >38µm | | ASTM D7647 | >40 | 35 | 42 | --- |
| Particles >71µm | | ASTM D7647 | >10 | 1 | 0 | --- |
| Oil Cleanliness | | ISO 4406 (c) | >21/19/16 | 25/25/23 | 25/25/23 | --- |
| 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 | >0.2 | NEG | NEG | NEG |

FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

| | | | | | | |
|------------------|----------|-------------|-----|-------------|------|------|
| Sodium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Boron | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 0 | <1 | 0 |
| Manganese | ppm | ASTM D5185m | | 2 | 1 | <1 |
| Magnesium | ppm | ASTM D5185m | | 0 | 0 | <1 |
| Calcium | ppm | ASTM D5185m | | 0 | 0 | 15 |
| Phosphorus | ppm | ASTM D5185m | 512 | 209 | 198 | 117 |
| Zinc | ppm | ASTM D5185m | 3.8 | 74 | 67 | 15 |
| Acid Number (AN) | mg KOH/g | ASTM D8045 | | 0.51 | 0.55 | 0.20 |
| Visc @ 40°C | cSt | ASTM D445 | 680 | 668 | 670 | 637 |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : RP0030407
Lab Number : 06082560
Unique Number : 10870005
Test Package : IND 2 (Additional Tests: PQ, PrtCount)

Kimberly-Clark - Mobile - UTL
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 MOBILE, AL
 US 36610
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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)