



OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Machine Id
TOTE 232

Component
Oil
Fluid
SHELL OMALA S2 GX 68 (275 GAL)

DIAGNOSIS

▲ Recommendation

This is a baseline read-out on the submitted sample.

● Wear

The iron level is noted.

▲ Contamination

There is a high amount of silt (particulates < 14 microns in size) 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 | | TLC0001381A | --- | --- |
| Sample Date | Client Info | | 01 Feb 2024 | --- | --- |
| Machine Age | hrs | Client Info | 0 | --- | --- |
| Oil Age | hrs | Client Info | 0 | --- | --- |
| Oil Changed | Client Info | | N/A | --- | --- |
| Sample Status | | | ABNORMAL | --- | --- |

WEAR METALS

| | method | limit/base | current | history1 | history2 |
|----------|------------|-----------------|--------------|----------|----------|
| PQ | ASTM D8184 | | 15 | --- | --- |
| Iron | ppm | ASTM D5185m >20 | ● 23 | --- | --- |
| Chromium | ppm | ASTM D5185m >20 | 1 | --- | --- |
| Nickel | ppm | ASTM D5185m >20 | 0 | --- | --- |
| Titanium | ppm | ASTM D5185m | 0 | --- | --- |
| Silver | ppm | ASTM D5185m | 0 | --- | --- |
| Aluminum | ppm | ASTM D5185m >20 | <1 | --- | --- |
| Lead | ppm | ASTM D5185m >20 | 0 | --- | --- |
| Copper | ppm | ASTM D5185m >20 | 2 | --- | --- |
| Tin | ppm | ASTM D5185m >20 | <1 | --- | --- |
| Vanadium | ppm | ASTM D5185m | 0 | --- | --- |
| Cadmium | ppm | ASTM D5185m | 0 | --- | --- |

ADDITIVES

| | method | limit/base | current | history1 | history2 |
|------------|--------|-------------|--------------|----------|----------|
| Boron | ppm | ASTM D5185m | <1 | --- | --- |
| Barium | ppm | ASTM D5185m | 0 | --- | --- |
| Molybdenum | ppm | ASTM D5185m | 0 | --- | --- |
| Manganese | ppm | ASTM D5185m | <1 | --- | --- |
| Magnesium | ppm | ASTM D5185m | 4 | --- | --- |
| Calcium | ppm | ASTM D5185m | 193 | --- | --- |
| Phosphorus | ppm | ASTM D5185m | 282 | --- | --- |
| Zinc | ppm | ASTM D5185m | 30 | --- | --- |
| Sulfur | ppm | ASTM D5185m | 7985 | --- | --- |

CONTAMINANTS

| | method | limit/base | current | history1 | history2 |
|-----------|--------|-----------------|--------------|----------|----------|
| Silicon | ppm | ASTM D5185m >15 | 3 | --- | --- |
| Sodium | ppm | ASTM D5185m | 8 | --- | --- |
| Potassium | ppm | ASTM D5185m >20 | <1 | --- | --- |
| Water | % | ASTM D6304 | NEG | --- | --- |

FLUID CLEANLINESS

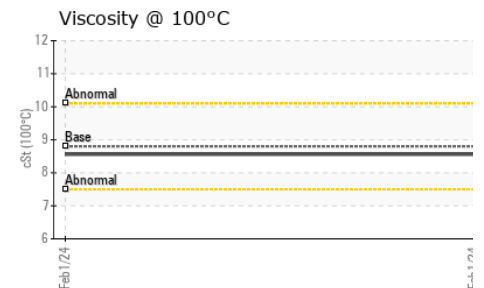
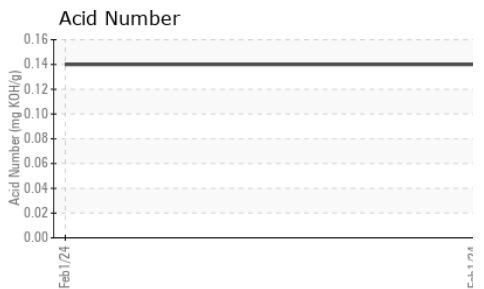
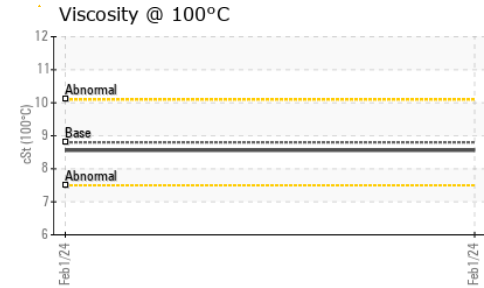
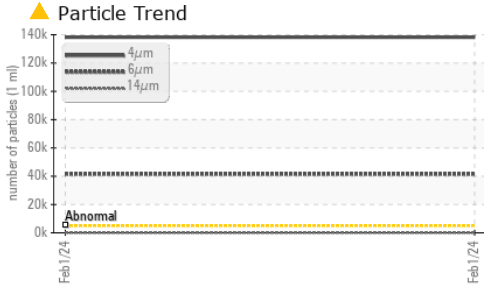
| | method | limit/base | current | history1 | history2 |
|-----------------|--------------|------------|-------------------|----------|----------|
| Particles >4µm | ASTM D7647 | >5000 | ▲ 138179 | --- | --- |
| Particles >6µm | ASTM D7647 | >1300 | ▲ 41573 | --- | --- |
| Particles >14µm | ASTM D7647 | >160 | 94 | --- | --- |
| Particles >21µm | ASTM D7647 | >40 | 4 | --- | --- |
| Particles >38µm | ASTM D7647 | >10 | 0 | --- | --- |
| Particles >71µm | ASTM D7647 | >3 | 0 | --- | --- |
| Oil Cleanliness | ISO 4406 (c) | >19/17/14 | ▲ 24/23/14 | --- | --- |

FLUID DEGRADATION

| | method | limit/base | current | history1 | history2 |
|------------------|----------|------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.14 | --- | --- |



OIL ANALYSIS REPORT



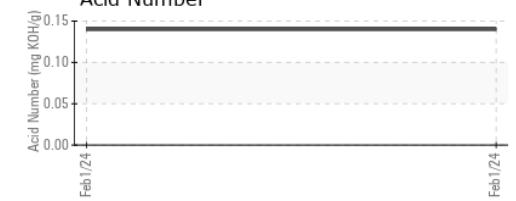
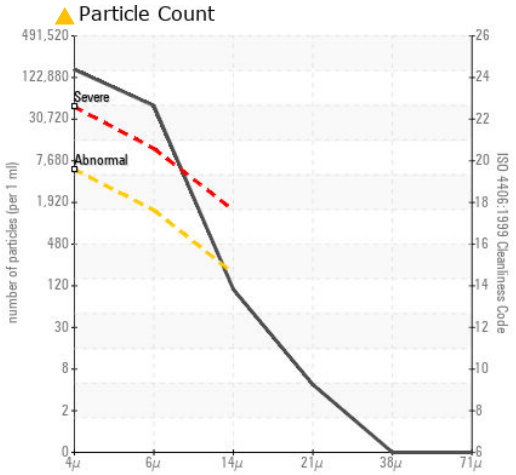
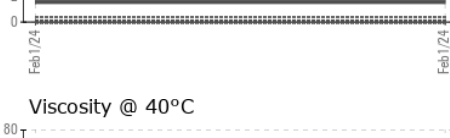
| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|--------------|----------|
| White Metal | scalar | *Visual | NONE | NONE | --- |
| Yellow Metal | scalar | *Visual | NONE | NONE | --- |
| Precipitate | scalar | *Visual | NONE | NONE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

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|----------------------|--------|------------|---------|--------------|----------|
| Visc @ 40°C | cSt | ASTM D445 | 68 | 64.12 | --- |
| Visc @ 100°C | cSt | ASTM D445 | 8.8 | 8.56 | --- |
| Viscosity Index (VI) | Scale | ASTM D2270 | 101 | 104 | --- |

SAMPLE IMAGES

| | method | limit/base | current | history1 | history2 |
|--------|--------|------------|---------|-----------------|-----------------|
| Color | | | | <i>no image</i> | <i>no image</i> |
| Bottom | | | | <i>no image</i> | <i>no image</i> |

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TLC0001381A **Received** : 22 Feb 2024
Lab Number : 06097335 **Tested** : 04 Mar 2024
Unique Number : 10890188 **Diagnosed** : 04 Mar 2024 - Doug Bogart
Test Package : PLANT (Additional Tests: KV100, VI)

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Certificate L2367
 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)