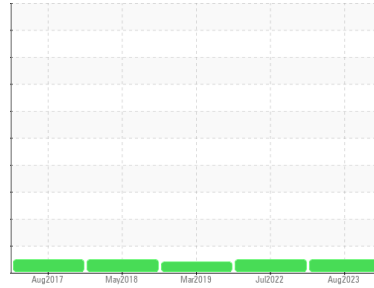




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Area
SYNOIL 8K
 Machine Id
KAESER 100898.1 / 1051 - SPEEDY METALS LLC
 Component
Compressor

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the component.

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 | | | UCZ05932180 | UCZ05612799 | UCZ04680361 |
| Sample Date | Client Info | | | 16 Aug 2023 | 07 Jul 2022 | 14 Mar 2019 |
| Machine Age | hrs | Client Info | | 34950 | 0 | 24473 |
| Oil Age | hrs | Client Info | | 1000 | 0 | 8000 |
| Oil Changed | Client Info | | | Changed | Changed | Changed |
| Sample Status | | | | NORMAL | NORMAL | ABNORMAL |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|-------------|-----|-------------|------------|--------------|----------|----------|
| Iron | ppm | ASTM D5185m | >50 | <1 | <1 | <1 |
| Chromium | ppm | ASTM D5185m | >10 | 0 | <1 | 0 |
| Nickel | ppm | ASTM D5185m | >3 | 0 | 6 | 0 |
| Titanium | ppm | ASTM D5185m | >3 | 0 | <1 | 0 |
| Silver | ppm | ASTM D5185m | >2 | 0 | <1 | 0 |
| Aluminum | ppm | ASTM D5185m | >10 | <1 | <1 | 0 |
| Lead | ppm | ASTM D5185m | >10 | 0 | 2 | <1 |
| Copper | ppm | ASTM D5185m | >50 | 1 | 2 | 2 |
| Tin | ppm | ASTM D5185m | >10 | 0 | <1 | 0 |
| Antimony | ppm | ASTM D5185m | | --- | --- | 0 |
| Vanadium | ppm | ASTM D5185m | | <1 | <1 | 0 |
| Cadmium | ppm | ASTM D5185m | | 0 | <1 | 0 |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|------------|-----|-------------|------------|--------------|----------|----------|
| Boron | ppm | ASTM D5185m | 0.3 | 0 | <1 | <1 |
| Barium | ppm | ASTM D5185m | 0.3 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 0 | 0 | <1 | <1 |
| Manganese | ppm | ASTM D5185m | 0.9 | <1 | <1 | 0 |
| Magnesium | ppm | ASTM D5185m | 0.2 | 0 | 6 | 0 |
| Calcium | ppm | ASTM D5185m | 0.1 | 0 | 3 | 0 |
| Phosphorus | ppm | ASTM D5185m | 429 | 378 | 141 | 254 |
| Zinc | ppm | ASTM D5185m | 0.3 | 78 | 27 | 10 |
| Sulfur | ppm | ASTM D5185m | 1336 | 519 | 175 | ▲ 4577 |

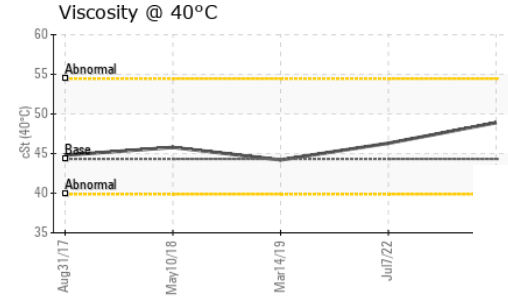
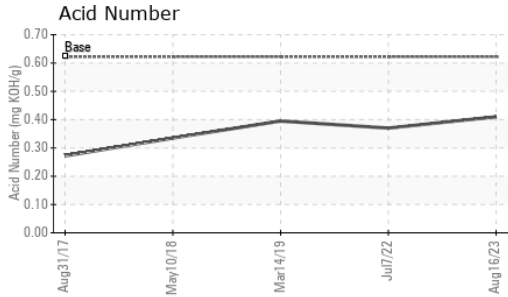
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|--------------|-----|-------------|------------|--------------|----------|----------|
| Silicon | ppm | ASTM D5185m | >25 | <1 | 1 | 3 |
| Sodium | ppm | ASTM D5185m | | 0 | 2 | 0 |
| Potassium | ppm | ASTM D5185m | >20 | 0 | 10 | <1 |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|-------------------|----------|------------|------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.622 | 0.41 | 0.37 | 0.395 |

| 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 | NONE |
| Debris | scalar | *Visual | NONE | LIGHT | NONE | MODER |
| 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 |



OIL ANALYSIS REPORT

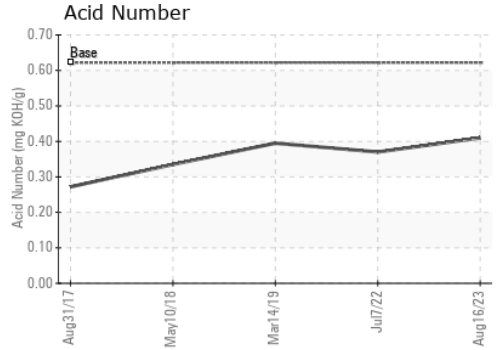
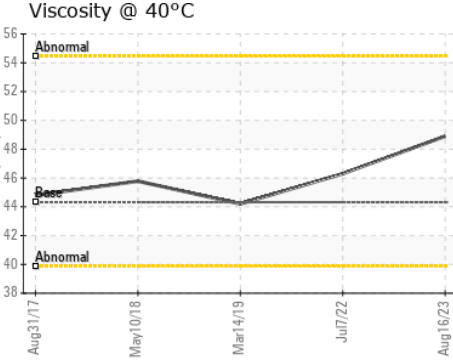
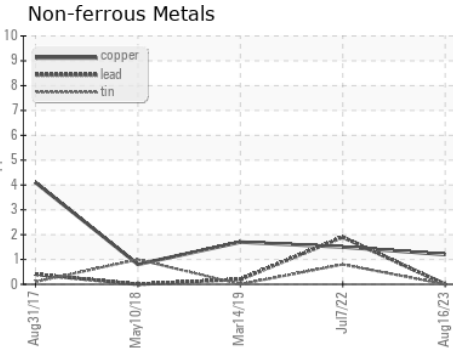
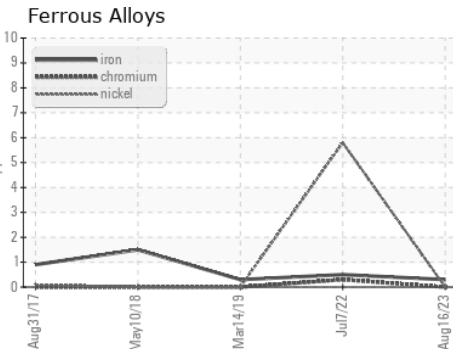


| FLUID PROPERTIES | method | limit/base | current | history1 | history2 | |
|------------------|--------|------------|---------|-------------|----------|------|
| Visc @ 40°C | cSt | ASTM D445 | 44.32 | 48.9 | 46.3 | 44.2 |

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



GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : UCZ05932180 **Received** : 23 Aug 2023
Lab Number : **05932180** **Diagnosed** : 24 Aug 2023
Unique Number : 10617451 **Diagnostician** : Don Baldrige
Test Package : IND 2

ZORN COMPRESSOR EQUIPMENT
 227 AMBROSIO DR, SUITE A
 GURNEE, IL
 US 60031
 Contact: Rachel Pesnikov
 rachel.pesnikov@zornair.com
 T: (847)599-1333
 F: x:

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)