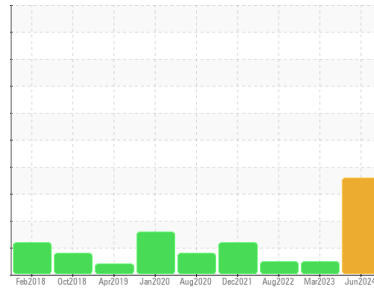




OIL ANALYSIS REPORT

Sample Rating Trend



WATER



Machine Id
KAESER AS 25T 5756585 (S/N 1315)
 Component
Compressor
 Fluid
KAESER SIGMA (OEM) S-460 (--- GAL)

DIAGNOSIS

Recommendation

The filter change at the time of sampling has been noted. We were unable to perform a particle count due to a high concentration of particles present in this sample. We advise that you stop the unit and follow the water drain-off procedure for this component. We recommend an early resample in 500 hours to monitor this condition.

Wear

All component wear rates are normal.

Contamination

Moderate concentration of visible dirt/debris present in the oil. There is a light concentration of water present in the oil. Excessive free water present.

Fluid Condition

The AN level is acceptable for this fluid.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|--------------------|-------------|-------------|------------|--------------------|-------------|-------------|
| Sample Number | Client Info | | | KC129818 | KC108414 | KC91334 |
| Sample Date | Client Info | | | 11 Jun 2024 | 31 Mar 2023 | 08 Aug 2022 |
| Machine Age | hrs | Client Info | | 31906 | 29351 | 26278 |
| Oil Age | hrs | Client Info | | 2000 | 6000 | 3000 |
| Oil Changed | Client Info | | | Not Chngd | Changed | Changed |
| Sample Status | | | | ABNORMAL | NORMAL | NORMAL |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|-------------|-----|-------------|------------|---------|----------|----------|
| Iron | ppm | ASTM D5185m | >50 | <1 | <1 | <1 |
| Chromium | ppm | ASTM D5185m | >10 | 0 | 0 | 0 |
| Nickel | ppm | ASTM D5185m | >3 | 0 | 0 | 1 |
| Titanium | ppm | ASTM D5185m | >3 | <1 | 0 | 0 |
| Silver | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >10 | 0 | 0 | 1 |
| Lead | ppm | ASTM D5185m | >10 | 0 | 0 | 0 |
| Copper | ppm | ASTM D5185m | >50 | 11 | 23 | 2 |
| Tin | ppm | ASTM D5185m | >10 | 0 | 0 | <1 |
| Antimony | ppm | ASTM D5185m | | --- | --- | --- |
| Vanadium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | | 0 | 0 | 0 |

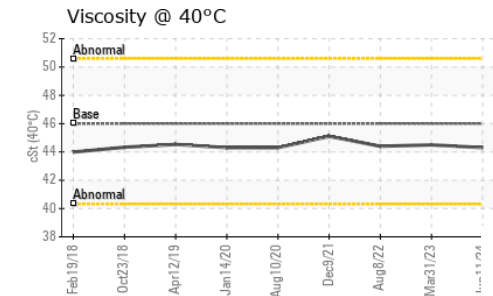
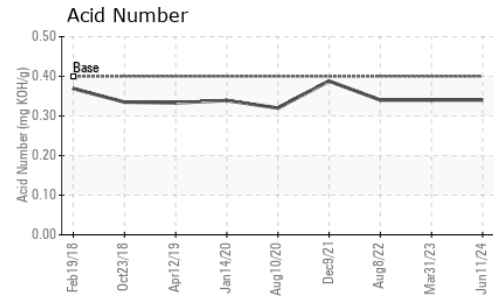
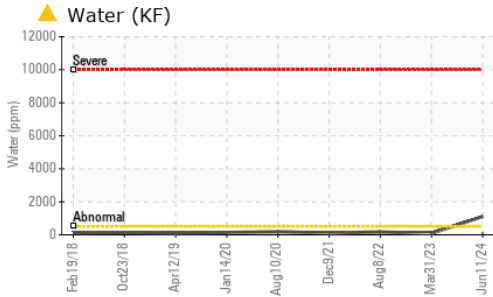
| ADDITIVES | | method | limit/base | current | history1 | history2 |
|------------|-----|-------------|------------|---------|----------|----------|
| Boron | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Barium | ppm | ASTM D5185m | 90 | <1 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Manganese | ppm | ASTM D5185m | | <1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | 90 | 27 | 14 | 49 |
| Calcium | ppm | ASTM D5185m | 2 | <1 | 0 | 0 |
| Phosphorus | ppm | ASTM D5185m | | 2 | 4 | 4 |
| Zinc | ppm | ASTM D5185m | | 13 | 35 | 5 |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|--------------|-----|-------------|------------|----------------|----------|----------|
| Silicon | ppm | ASTM D5185m | >25 | <1 | 0 | <1 |
| Sodium | ppm | ASTM D5185m | | 8 | 6 | 16 |
| Potassium | ppm | ASTM D5185m | >20 | <1 | 0 | 8 |
| Water | % | ASTM D6304 | >0.05 | ▲ 0.111 | 0.008 | 0.017 |
| ppm Water | ppm | ASTM D6304 | >500 | ▲ 1110 | 82.9 | 174.8 |

| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|-------------------|--|--------------|------------|---------|----------|----------|
| Particles >4µm | | ASTM D7647 | | --- | 1880 | 1846 |
| Particles >6µm | | ASTM D7647 | >1300 | --- | 435 | 426 |
| Particles >14µm | | ASTM D7647 | >80 | --- | 19 | 41 |
| Particles >21µm | | ASTM D7647 | >20 | --- | 4 | 10 |
| Particles >38µm | | ASTM D7647 | >4 | --- | 0 | 1 |
| Particles >71µm | | ASTM D7647 | >3 | --- | 0 | 0 |
| Oil Cleanliness | | ISO 4406 (c) | >--/17/13 | --- | 18/16/11 | 18/16/13 |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|-------------------|----------|------------|------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.4 | 0.34 | 0.34 | 0.34 |

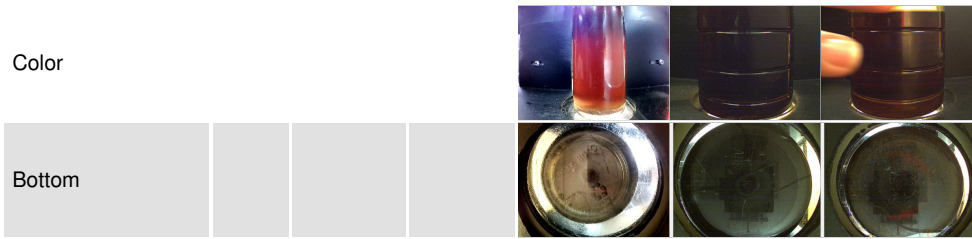
OIL ANALYSIS REPORT



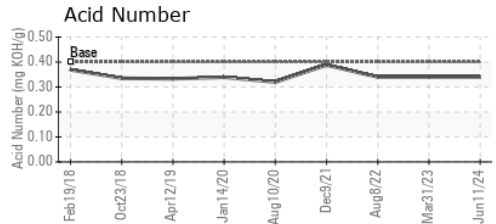
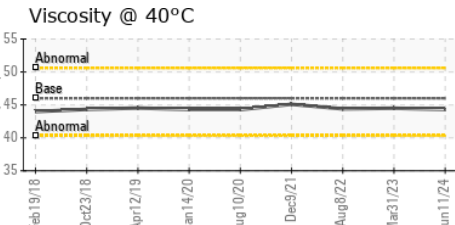
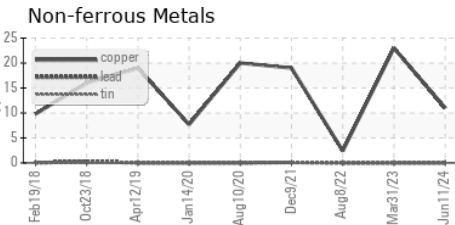
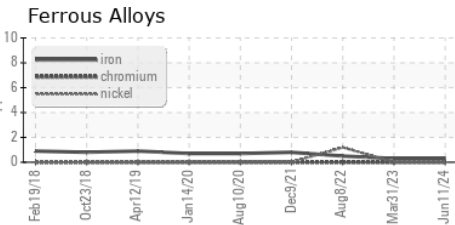
| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | NONE |
| Silt | scalar | *Visual | NONE | NONE | NONE |
| Debris | scalar | *Visual | ▲ MODER | NONE | LIGHT |
| Sand/Dirt | scalar | *Visual | NONE | NONE | NONE |
| Appearance | scalar | *Visual | NORML | NORML | NORML |
| Odor | scalar | *Visual | NORML | NORML | NORML |
| Emulsified Water | scalar | *Visual | ▲ 0.2% | NEG | NEG |
| Free Water | scalar | *Visual | ● >10% | NEG | NEG |

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 | 46 | 44.5 | 44.4 |

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



GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KC129818
Lab Number : 06212377
Unique Number : 11085241
Test Package : IND 2

Received : 17 Jun 2024
Tested : 19 Jun 2024
Diagnosed : 19 Jun 2024 - Don Baldrige

BERNER INTERNATIONAL
 111 PROGRESS AVE
 NEW CASTLE, PA
 US 16101
 Contact: Service Manager

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)