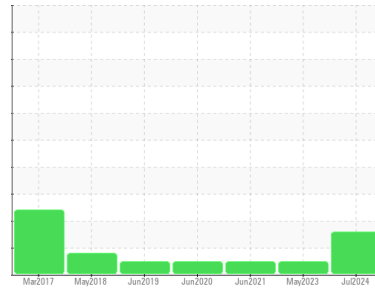




OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id
KAESER AS25T 5574005 (S/N 1270)
 Component
Compressor
 Fluid
KAESER SIGMA (OEM) M-460 (--- QTS)

DIAGNOSIS

Recommendation
 Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear
 All component wear rates are normal.

Contamination
 There is a high amount of particulates 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 | KCPA018742 | KCPA001959 | KCP42343 |
| Sample Date | Client Info | 08 Jul 2024 | 17 May 2023 | 30 Jun 2021 |
| Machine Age | hrs | 30894 | 26432 | 19160 |
| Oil Age | hrs | 4457 | 0 | 4499 |
| Oil Changed | Client Info | Changed | N/A | Changed |
| Sample Status | | ABNORMAL | NORMAL | NORMAL |

WEAR METALS

| method | limit/base | current | history1 | history2 | |
|----------|------------|-----------------|--------------|----------|----|
| Iron | ppm | ASTM D5185m >50 | 0 | <1 | 0 |
| Chromium | ppm | ASTM D5185m >10 | 0 | <1 | 0 |
| Nickel | ppm | ASTM D5185m >3 | <1 | 0 | 0 |
| Titanium | ppm | ASTM D5185m >3 | 0 | <1 | 0 |
| Silver | ppm | ASTM D5185m >2 | 0 | 0 | <1 |
| Aluminum | ppm | ASTM D5185m >10 | 0 | 0 | 0 |
| Lead | ppm | ASTM D5185m >10 | 0 | <1 | <1 |
| Copper | ppm | ASTM D5185m >50 | 12 | 10 | 4 |
| Tin | ppm | ASTM D5185m >10 | 0 | <1 | 0 |
| Antimony | ppm | ASTM D5185m | --- | --- | 0 |
| Vanadium | ppm | ASTM D5185m | 0 | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | 0 | <1 | 0 |

ADDITIVES

| method | limit/base | current | history1 | history2 | |
|------------|------------|-------------------|--------------|----------|-------|
| Boron | ppm | ASTM D5185m 0 | 0 | 0 | 0 |
| Barium | ppm | ASTM D5185m 90 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m 0 | 0 | 0 | 0 |
| Manganese | ppm | ASTM D5185m | 0 | <1 | 0 |
| Magnesium | ppm | ASTM D5185m 100 | 2 | 4 | 2 |
| Calcium | ppm | ASTM D5185m 0 | 0 | 2 | 0 |
| Phosphorus | ppm | ASTM D5185m 0 | 0 | 4 | 8 |
| Zinc | ppm | ASTM D5185m 0 | 4 | <1 | 0 |
| Sulfur | ppm | ASTM D5185m 23500 | 23660 | 23071 | 17669 |

CONTAMINANTS

| method | limit/base | current | history1 | history2 | |
|-----------|------------|------------------|--------------|----------|-------|
| Silicon | ppm | ASTM D5185m >25 | <1 | 1 | 2 |
| Sodium | ppm | ASTM D5185m | <1 | 1 | 0 |
| Potassium | ppm | ASTM D5185m >20 | 0 | 1 | <1 |
| Water | % | ASTM D6304 >0.05 | 0.009 | 0.007 | 0.007 |
| ppm Water | ppm | ASTM D6304 >500 | 92 | 76.4 | 79.9 |

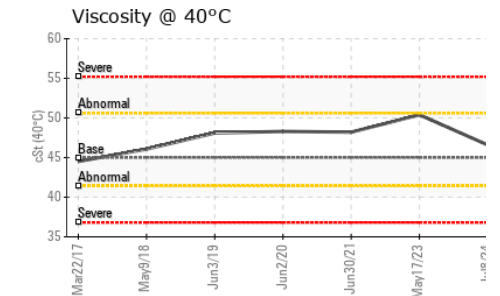
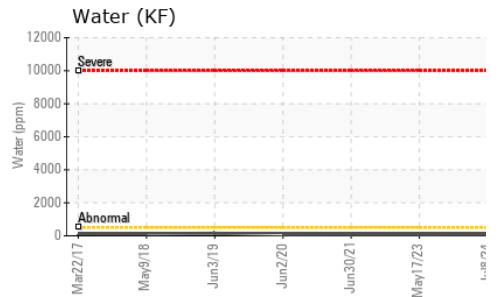
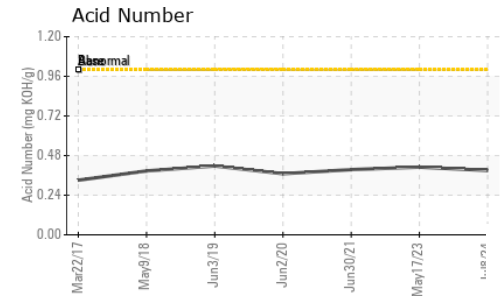
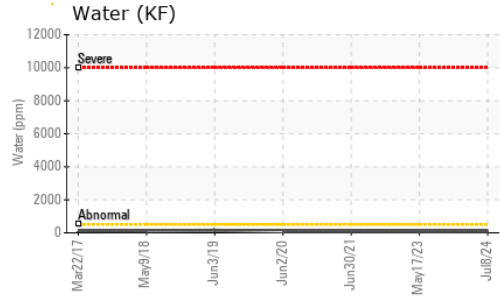
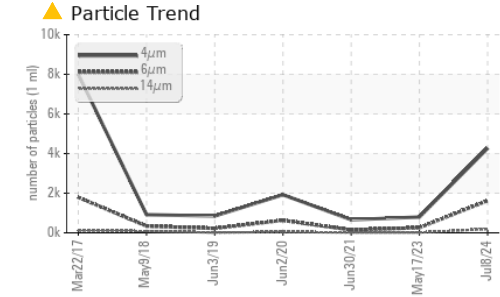
FLUID CLEANLINESS

| method | limit/base | current | history1 | history2 |
|-----------------|------------------------|-------------------|----------|----------|
| Particles >4µm | ASTM D7647 | 4271 | 795 | 660 |
| Particles >6µm | ASTM D7647 >1300 | ▲ 1623 | 257 | 147 |
| Particles >14µm | ASTM D7647 >80 | ▲ 191 | 15 | 15 |
| Particles >21µm | ASTM D7647 >20 | ▲ 54 | 3 | 4 |
| Particles >38µm | ASTM D7647 >4 | 4 | 0 | 0 |
| Particles >71µm | ASTM D7647 >3 | 0 | 0 | 0 |
| Oil Cleanliness | ISO 4406 (c) >--/17/13 | ▲ 19/18/15 | 17/15/11 | 14/11 |

FLUID DEGRADATION

| method | limit/base | current | history1 | history2 | |
|------------------|------------|----------------|-------------|----------|-------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 1.0 | 0.39 | 0.41 | 0.395 |

OIL ANALYSIS REPORT

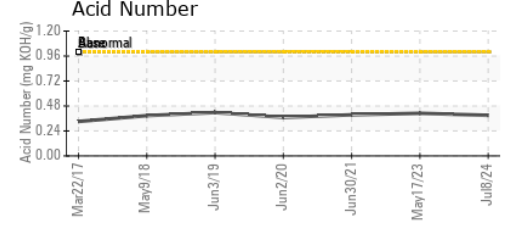
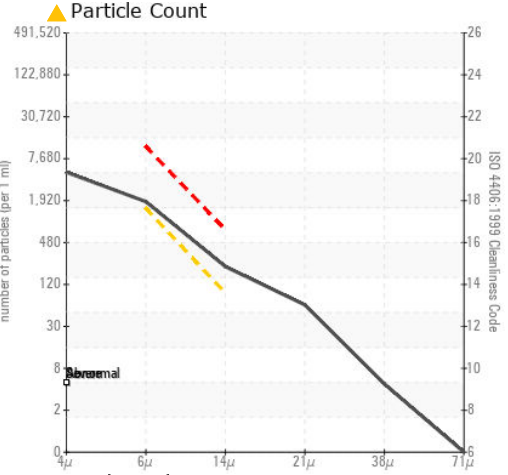
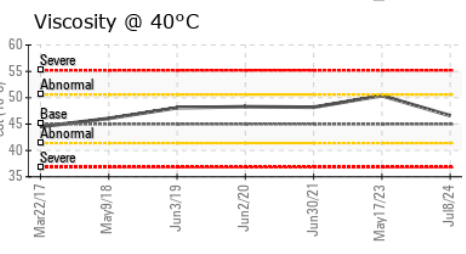
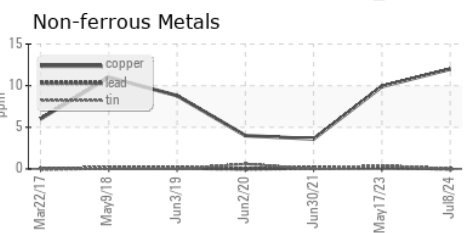
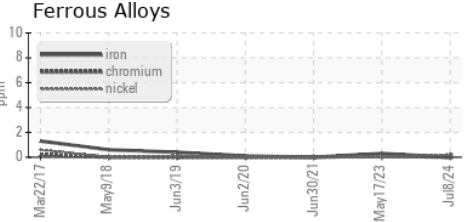


| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | NONE |
| Silt | scalar | *Visual | NONE | NONE | NONE |
| Debris | scalar | *Visual | NONE | NONE | NONE |
| Sand/Dirt | scalar | *Visual | NONE | NONE | NONE |
| Appearance | scalar | *Visual | NORML | NORML | NORML |
| Odor | scalar | *Visual | NORML | NORML | NORML |
| Emulsified Water | scalar | *Visual | >0.05 | NEG | NEG |
| Free Water | scalar | *Visual | | NEG | NEG |

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|--------------|---------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 45 | 46.6 | 50.4 | 48.2 |

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

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KCPA018742 **Received** : 16 Jul 2024
Lab Number : 06238388 **Tested** : 17 Jul 2024
Unique Number : 11127222 **Diagnosed** : 18 Jul 2024 - Don Baldrige
Test Package : IND 2 (Additional Tests: KF, PrtCount)

VILLA MACHINE ASSOCIATES
 61 MCDONALD ST
 DEDHAM, MA
 US 02026
 Contact: LOU VILLA
 lou.villa@villamachine.com

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)