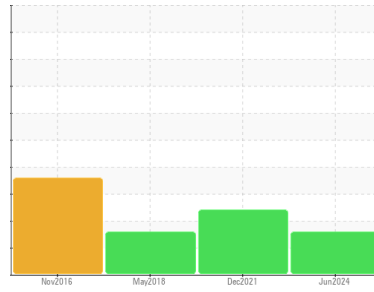




# OIL ANALYSIS REPORT

Sample Rating Trend



**DIRT**



Area

**[12155]**

Machine Id

**KAESER SX5 5329961 (S/N 1387)**

Component

**Compressor**

Fluid

**KAESER SIGMA (OEM) S-460 (--- GAL)**

## DIAGNOSIS

### ▲ Recommendation

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### ▲ Contamination

Elemental level of silicon (Si) above normal. The amount and size of particulates present in the system are acceptable.

### 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 |             | <b>KC102395</b>    | KC95081     | KC81715     |
| Sample Date   | Client Info |             | <b>07 Jun 2024</b> | 01 Dec 2021 | 16 May 2018 |
| Machine Age   | hrs         | Client Info | <b>19982</b>       | 13373       | 4872        |
| Oil Age       | hrs         | Client Info | <b>0</b>           | 2797        | 0           |
| Oil Changed   | Client Info |             | <b>Changed</b>     | Changed     | Changed     |
| Sample Status |             |             | <b>ABNORMAL</b>    | ABNORMAL    | ABNORMAL    |

## WEAR METALS

|          | method | limit/base      | current | history1 | history2 |
|----------|--------|-----------------|---------|----------|----------|
| Iron     | ppm    | ASTM D5185m >50 | <1      | <1       | 1        |
| Chromium | ppm    | ASTM D5185m >10 | <1      | 0        | 0        |
| Nickel   | ppm    | ASTM D5185m >3  | <1      | 0        | 0        |
| Titanium | ppm    | ASTM D5185m >3  | <1      | 0        | 0        |
| Silver   | ppm    | ASTM D5185m >2  | 0       | <1       | 0        |
| Aluminum | ppm    | ASTM D5185m >10 | 2       | 1        | <1       |
| Lead     | ppm    | ASTM D5185m >10 | <1      | 0        | <1       |
| Copper   | ppm    | ASTM D5185m >50 | 23      | 14       | 8        |
| Tin      | ppm    | ASTM D5185m >10 | <1      | <1       | <1       |
| Antimony | ppm    | ASTM D5185m     | ---     | 0        | 0        |
| Vanadium | ppm    | ASTM D5185m     | 0       | 0        | 0        |
| Cadmium  | ppm    | ASTM D5185m     | <1      | 0        | 0        |

## ADDITIVES

|            | method | limit/base     | current | history1 | history2 |
|------------|--------|----------------|---------|----------|----------|
| Boron      | ppm    | ASTM D5185m    | 0       | 3        | 0        |
| Barium     | ppm    | ASTM D5185m 90 | <1      | <1       | 0        |
| Molybdenum | ppm    | ASTM D5185m    | <1      | 0        | <1       |
| Manganese  | ppm    | ASTM D5185m    | <1      | <1       | <1       |
| Magnesium  | ppm    | ASTM D5185m 90 | 15      | 36       | 45       |
| Calcium    | ppm    | ASTM D5185m 2  | 0       | 0        | <1       |
| Phosphorus | ppm    | ASTM D5185m    | 1       | 7        | <1       |
| Zinc       | ppm    | ASTM D5185m    | 69      | 53       | 48       |

## CONTAMINANTS

|           | method | limit/base       | current | history1 | history2 |
|-----------|--------|------------------|---------|----------|----------|
| Silicon   | ppm    | ASTM D5185m >25  | ▲ 49    | ▲ 62     | ▲ 54     |
| Sodium    | ppm    | ASTM D5185m      | 11      | 12       | 16       |
| Potassium | ppm    | ASTM D5185m >20  | 1       | 2        | 2        |
| Water     | %      | ASTM D6304 >0.05 | 0.005   | 0.012    | 0.023    |
| ppm Water | ppm    | ASTM D6304 >500  | 56      | 120.7    | 230      |

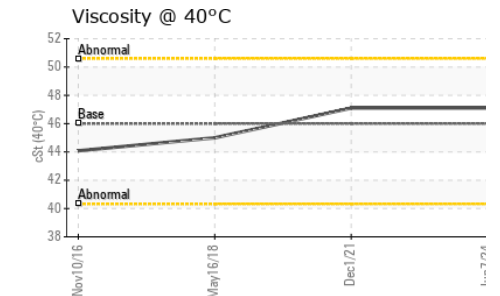
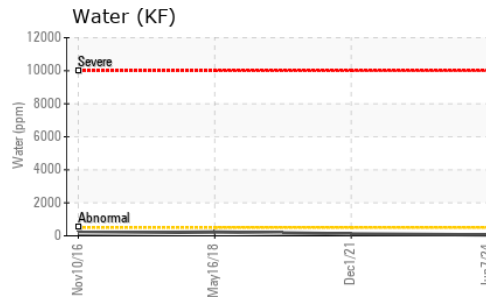
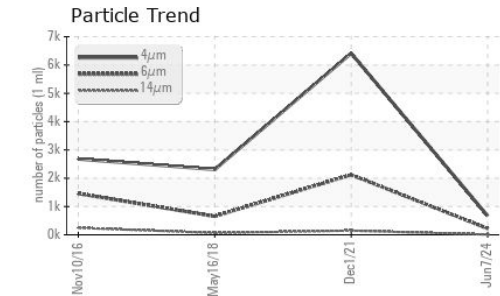
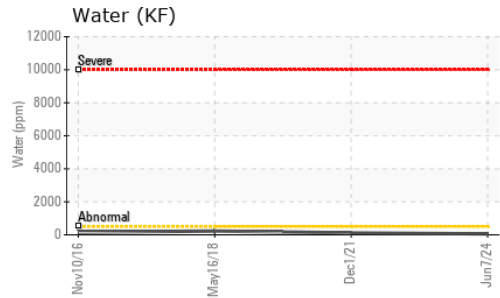
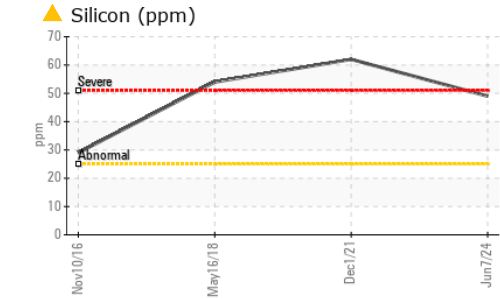
## FLUID CLEANLINESS

|                 | method           | limit/base | current  | history1 | history2 |
|-----------------|------------------|------------|----------|----------|----------|
| Particles >4µm  | ASTM D7647       |            | 672      | 6415     | 2308     |
| Particles >6µm  | ASTM D7647 >1300 |            | 221      | ● 2121   | 654      |
| Particles >14µm | ASTM D7647 >80   |            | 8        | ● 148    | 64       |
| Particles >21µm | ASTM D7647 >20   |            | 3        | 26       | 17       |
| Particles >38µm | ASTM D7647 >4    |            | 0        | 2        | 1        |
| Particles >71µm | ASTM D7647 >3    |            | 0        | 0        | 0        |
| Oil Cleanliness | ISO 4406 (c)     | >--/17/13  | 17/15/10 | ● 18/14  | 17/13    |

## FLUID DEGRADATION

|                  | method   | limit/base     | current | history1 | history2 |
|------------------|----------|----------------|---------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 0.4 | 0.32    | 0.309    | 0.355    |

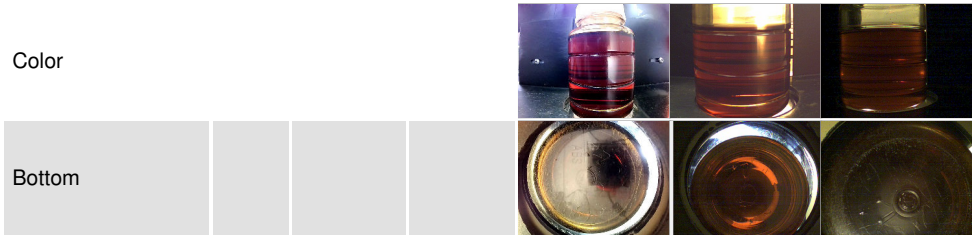
# OIL ANALYSIS REPORT



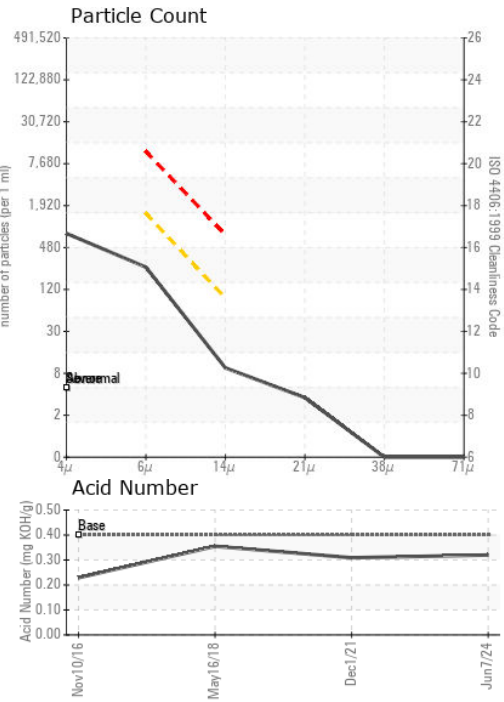
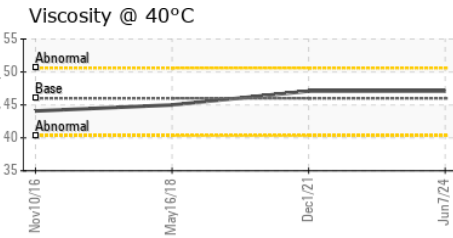
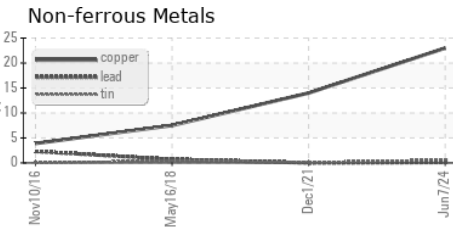
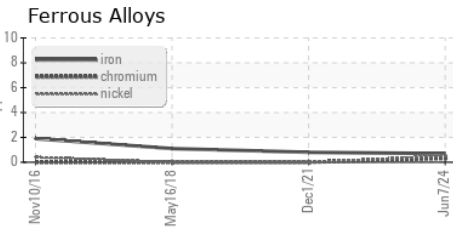
| VISUAL           | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal      | scalar | *Visual    | NONE    | NONE     | NONE     |
| Yellow Metal     | scalar | *Visual    | NONE    | NONE     | NONE     |
| 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  | 46      | 47.1     | 45.00    |

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



## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : KC102395  
**Lab Number** : 06211627  
**Unique Number** : 11084491  
**Test Package** : IND 2  
**Received** : 17 Jun 2024  
**Tested** : 18 Jun 2024  
**Diagnosed** : 18 Jun 2024 - Don Baldrige

**TIDE DRY CLEANERS**  
 26 MORRIS TURNPIKE  
 SUMMIT, NJ  
 US  
 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)