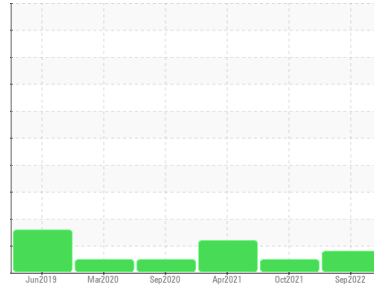




# OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id  
**KAESER BSD 50 6341469 (S/N 1870)**

Component  
**Compressor**

Fluid  
**KAESER SIGMA (OEM) S-460 (--- QTS)**

## 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

There is a moderate 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 |             | <b>KCP50283</b>    | KCP36118    | KCP32634    |
| Sample Date   | Client Info |             | <b>02 Sep 2022</b> | 31 Oct 2021 | 06 Apr 2021 |
| Machine Age   | hrs         | Client Info | <b>18966</b>       | 13657       | 10602       |
| Oil Age       | hrs         | Client Info | <b>5309</b>        | 5347        | 2392        |
| Oil Changed   | Client Info |             | <b>Changed</b>     | Changed     | Not Changed |
| Sample Status |             |             | <b>ATTENTION</b>   | NORMAL      | ABNORMAL    |

## WEAR METALS

|          | method | limit/base      | current      | history1 | history2 |
|----------|--------|-----------------|--------------|----------|----------|
| Iron     | ppm    | ASTM D5185m >50 | <b>&lt;1</b> | <1       | <1       |
| Chromium | ppm    | ASTM D5185m >10 | <b>0</b>     | 0        | 0        |
| Nickel   | ppm    | ASTM D5185m >3  | <b>0</b>     | 0        | 0        |
| Titanium | ppm    | ASTM D5185m >3  | <b>0</b>     | 0        | 0        |
| Silver   | ppm    | ASTM D5185m >2  | <b>0</b>     | <1       | 0        |
| Aluminum | ppm    | ASTM D5185m >10 | <b>&lt;1</b> | 0        | <1       |
| Lead     | ppm    | ASTM D5185m >10 | <b>0</b>     | 0        | <1       |
| Copper   | ppm    | ASTM D5185m >50 | <b>15</b>    | 23       | 2        |
| Tin      | ppm    | ASTM D5185m >10 | <b>0</b>     | <1       | 0        |
| Antimony | ppm    | ASTM D5185m     | <b>---</b>   | <1       | 0        |
| Vanadium | ppm    | ASTM D5185m     | <b>0</b>     | 0        | 0        |
| Cadmium  | ppm    | ASTM D5185m     | <b>0</b>     | 0        | 0        |

## ADDITIVES

|            | method | limit/base     | current      | history1 | history2 |
|------------|--------|----------------|--------------|----------|----------|
| Boron      | ppm    | ASTM D5185m    | <b>0</b>     | 0        | 0        |
| Barium     | ppm    | ASTM D5185m 90 | <b>0</b>     | 0        | 35       |
| Molybdenum | ppm    | ASTM D5185m    | <b>0</b>     | 0        | 0        |
| Manganese  | ppm    | ASTM D5185m    | <b>0</b>     | <1       | 0        |
| Magnesium  | ppm    | ASTM D5185m 90 | <b>11</b>    | 27       | 73       |
| Calcium    | ppm    | ASTM D5185m 2  | <b>0</b>     | 0        | 3        |
| Phosphorus | ppm    | ASTM D5185m    | <b>2</b>     | 4        | 2        |
| Zinc       | ppm    | ASTM D5185m    | <b>19</b>    | 30       | 15       |
| Sulfur     | ppm    | ASTM D5185m    | <b>16063</b> | 16897    | 18151    |

## CONTAMINANTS

|           | method | limit/base       | current      | history1 | history2 |
|-----------|--------|------------------|--------------|----------|----------|
| Silicon   | ppm    | ASTM D5185m >25  | <b>0</b>     | <1       | 0        |
| Sodium    | ppm    | ASTM D5185m      | <b>6</b>     | 15       | 24       |
| Potassium | ppm    | ASTM D5185m >20  | <b>&lt;1</b> | 7        | 0        |
| Water     | %      | ASTM D6304 >0.05 | <b>0.014</b> | 0.017    | 0.022    |
| ppm Water | ppm    | ASTM D6304 >500  | <b>145.7</b> | 175.9    | 224.6    |

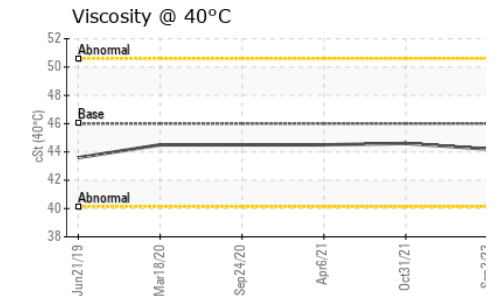
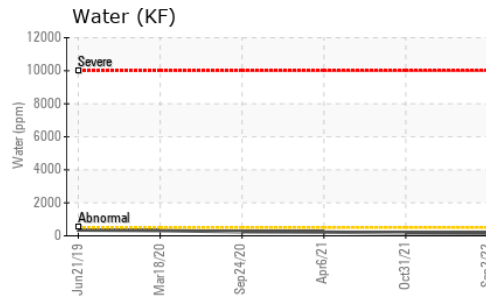
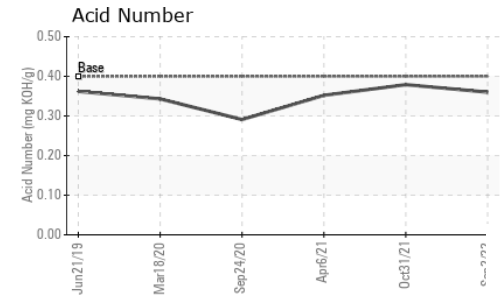
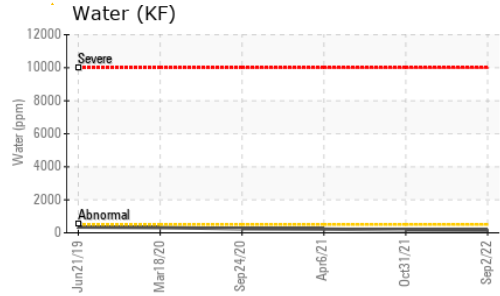
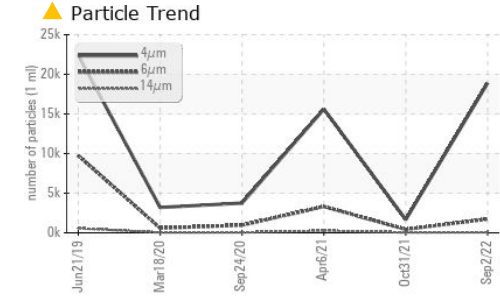
## FLUID CLEANLINESS

|                 | method                 | limit/base | current           | history1 | history2 |
|-----------------|------------------------|------------|-------------------|----------|----------|
| Particles >4µm  | ASTM D7647             |            | <b>18891</b>      | 1661     | 15604    |
| Particles >6µm  | ASTM D7647 >1300       |            | <b>▲ 1740</b>     | 427      | ▲ 3313   |
| Particles >14µm | ASTM D7647 >80         |            | <b>55</b>         | 36       | ▲ 263    |
| Particles >21µm | ASTM D7647 >20         |            | <b>7</b>          | 8        | ▲ 73     |
| Particles >38µm | ASTM D7647 >4          |            | <b>1</b>          | 0        | 3        |
| Particles >71µm | ASTM D7647 >3          |            | <b>1</b>          | 0        | 0        |
| Oil Cleanliness | ISO 4406 (c) >--/17/13 |            | <b>▲ 21/18/13</b> | 16/12    | ▲ 19/15  |

## FLUID DEGRADATION

|                  | method   | limit/base     | current     | history1 | history2 |
|------------------|----------|----------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 0.4 | <b>0.36</b> | 0.379    | 0.352    |

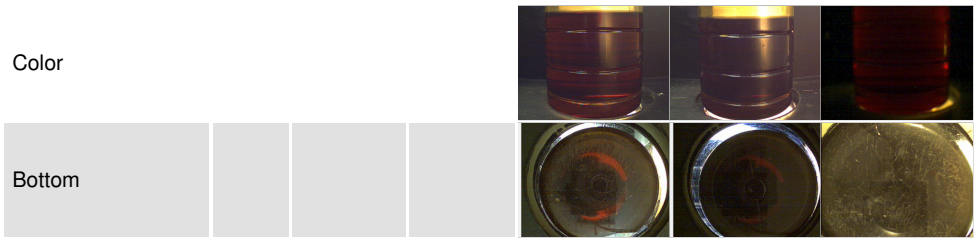
# OIL ANALYSIS REPORT



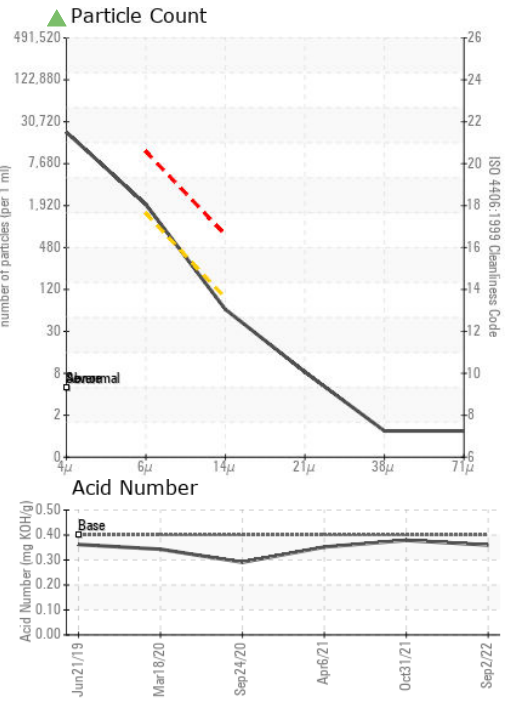
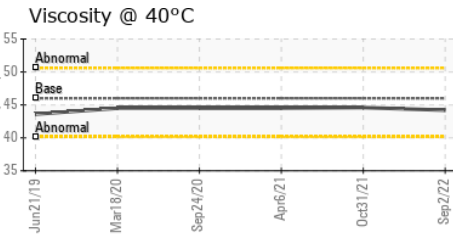
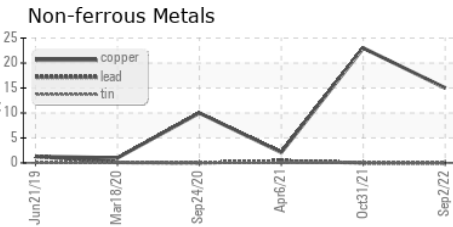
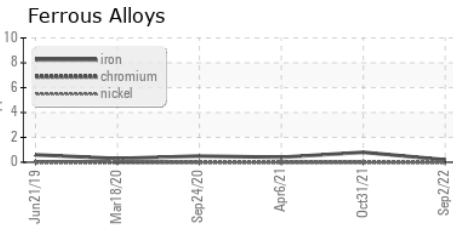
| VISUAL           | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal      | scalar | *Visual    | NONE    | NONE     | NONE     |
| Yellow Metal     | scalar | *Visual    | NONE    | NONE     | NONE     |
|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

| FLUID PROPERTIES | method | limit/base   | current | history1 | history2 |
|------------------|--------|--------------|---------|----------|----------|
| Visc @ 40°C      | cSt    | ASTM D445 46 | 44.2    | 44.6     | 44.5     |

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



## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : KCP50283  
**Lab Number** : 05635090  
**Unique Number** : 10124620  
**Test Package** : IND 2 ( Additional Tests: KF, PrtCount )  
**Received** : 06 Sep 2022  
**Tested** : 07 Sep 2022  
**Diagnosed** : 08 Sep 2022 - Don Baldrige

**MORRISTOWN MANUFACTURING - IATRIC**  
 328 HAMBLEN AVE  
 MORRISTOWN, TN  
 US 37813  
 Contact: D. DORSEY  
 ddorsey@iaticmfg.com  
 T:  
 F:

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)