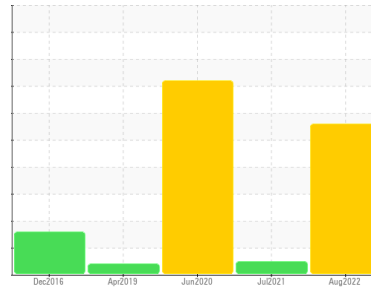


PROBLEM SUMMARY

Sample Rating Trend



WATER



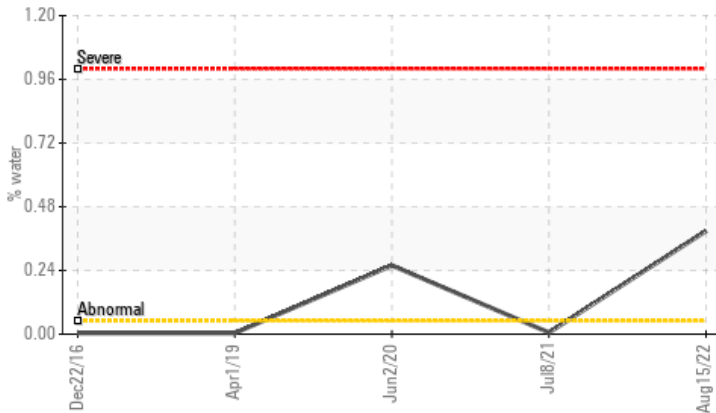
Machine Id
KAESER DSD 150 4594612 (S/N 1060)

Component
Compressor

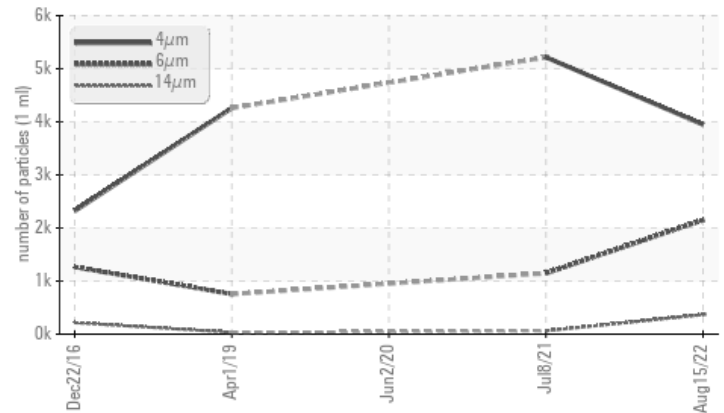
Fluid
KAESER SIGMA (OEM) M-460 (--- GAL)

COMPONENT CONDITION SUMMARY

▲ Water



▲ Particle Trend



RECOMMENDATION

Oil and filter change at the time of sampling has been noted. We recommend an early resample in 500 hours to monitor this condition.

PROBLEMATIC TEST RESULTS

| Sample Status | | | | ABNORMAL | NORMAL | SEVERE |
|-----------------|--------|--------------|-----------|-------------------|--------|---------|
| Water | % | ASTM D6304 | >0.05 | ▲ 0.389 | 0.006 | ▲ 0.259 |
| ppm Water | ppm | ASTM D6304 | >500 | ▲ 3890 | 66.2 | ▲ 2590 |
| Particles >6µm | | ASTM D7647 | >1300 | ▲ 2150 | 1147 | --- |
| Particles >14µm | | ASTM D7647 | >80 | ▲ 366 | 62 | --- |
| Particles >21µm | | ASTM D7647 | >20 | ▲ 123 | 17 | --- |
| Particles >38µm | | ASTM D7647 | >4 | ▲ 19 | 2 | --- |
| Particles >71µm | | ASTM D7647 | >3 | ▲ 2 | 0 | --- |
| Oil Cleanliness | | ISO 4406 (c) | >--/17/13 | ▲ 19/18/16 | 17/13 | --- |
| Free Water | scalar | *Visual | | ▲ 1.0 | NEG | ◆ 5.0 |

Customer Id: OLDROC
Sample No.: KCP48392
Lab Number: 05623857
Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
Jonathan Hester +1 919-379-4092 x4092
jhester@wearcheckusa.com

To change component or sample information:
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

| Action | Status | Date | Done By | Description |
|---------------|--------|------|---------|---|
| Change Fluid | --- | --- | ? | Oil and filter change at the time of sampling has been noted. |
| Change Filter | --- | --- | ? | Oil and filter change at the time of sampling has been noted. |

HISTORICAL DIAGNOSIS

08 Jul 2021 Diag: Angela Borella

NORMAL



Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. All component wear rates are normal. The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil. The AN level is acceptable for this fluid.

[view report](#)



02 Jun 2020 Diag: Don Baldrige

WATER



Oil and filter change at the time of sampling has been noted. We recommend an early resample in 500 hours to monitor this condition. There is too much water present in this sample to perform a particle count. All component wear rates are normal. There is a light concentration of water present in the oil. Excessive free water present. The AN level is acceptable for this fluid.

[view report](#)



01 Apr 2019 Diag: Jonathan Hester

VISCOSITY



Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable. The oil viscosity is higher than normal. The AN level is acceptable for this fluid.

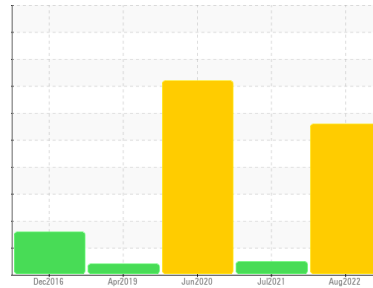
[view report](#)



Machine Id
KAESER DSD 150 4594612 (S/N 1060)

Component
Compressor

Fluid
KAESER SIGMA (OEM) M-460 (--- GAL)



DIAGNOSIS

▲ Recommendation

Oil and filter change at the time of sampling has been noted. We recommend an early resample in 500 hours to monitor this condition.

Wear

All component wear rates are normal.

▲ Contamination

There is a high amount of particulates present in the oil. Free water present. There is a light concentration of water 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 | history 1 | history 2 |
|---------------|--------|------------|--------------------|-------------|-------------|
| Sample Number | | | KCP48392 | KCP42304 | KCP25319 |
| Sample Date | | | 15 Aug 2022 | 08 Jul 2021 | 02 Jun 2020 |
| Machine Age | hrs | | 45970 | 42326 | 34124 |
| Oil Age | hrs | | 3000 | 5000 | 0 |
| Oil Changed | | | Changed | Changed | Changed |
| Sample Status | | | ABNORMAL | NORMAL | SEVERE |

WEAR METALS

| | method | limit/base | current | history 1 | history 2 |
|----------|-----------------|------------|--------------|-----------|-----------|
| Iron | ppm ASTM D5185m | >50 | <1 | 0 | 2 |
| Chromium | ppm ASTM D5185m | >10 | 0 | 0 | 0 |
| Nickel | ppm ASTM D5185m | >3 | <1 | 0 | 0 |
| Titanium | ppm ASTM D5185m | >3 | 0 | 0 | 0 |
| Silver | ppm ASTM D5185m | >2 | 0 | 0 | <1 |
| Aluminum | ppm ASTM D5185m | >10 | <1 | 0 | 0 |
| Lead | ppm ASTM D5185m | >10 | 0 | 0 | 0 |
| Copper | ppm ASTM D5185m | >50 | 7 | 7 | 12 |
| Tin | ppm ASTM D5185m | >10 | <1 | 0 | 0 |
| Antimony | ppm ASTM D5185m | | --- | 0 | 0 |
| Vanadium | ppm ASTM D5185m | | 0 | 0 | 0 |
| Cadmium | ppm ASTM D5185m | | 0 | 0 | 0 |

ADDITIVES

| | method | limit/base | current | history 1 | history 2 |
|------------|-----------------|------------|--------------|-----------|-----------|
| Boron | ppm ASTM D5185m | 0 | 0 | 13 | <1 |
| Barium | ppm ASTM D5185m | 90 | 0 | 0 | <1 |
| Molybdenum | ppm ASTM D5185m | 0 | 0 | 0 | 0 |
| Manganese | ppm ASTM D5185m | | 0 | 0 | 0 |
| Magnesium | ppm ASTM D5185m | 100 | 0 | 1 | <1 |
| Calcium | ppm ASTM D5185m | 0 | 0 | 0 | <1 |
| Phosphorus | ppm ASTM D5185m | 0 | 5 | 3 | 4 |
| Zinc | ppm ASTM D5185m | 0 | 10 | 0 | 0 |
| Sulfur | ppm ASTM D5185m | 23500 | 19851 | 16963 | 14388 |

CONTAMINANTS

| | method | limit/base | current | history 1 | history 2 |
|-----------|-----------------|------------|----------------|-----------|----------------|
| Silicon | ppm ASTM D5185m | >25 | 1 | 1 | <1 |
| Sodium | ppm ASTM D5185m | | <1 | <1 | 0 |
| Potassium | ppm ASTM D5185m | >20 | 0 | 0 | <1 |
| Water | % ASTM D6304 | >0.05 | ▲ 0.389 | 0.006 | ▲ 0.259 |
| ppm Water | ppm ASTM D6304 | >500 | ▲ 3890 | 66.2 | ▲ 2590 |

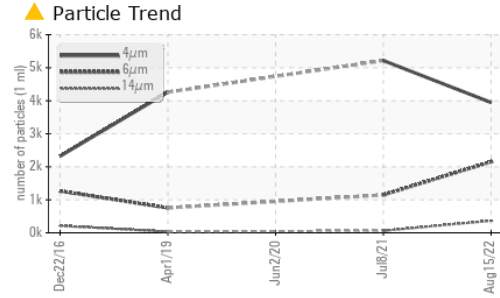
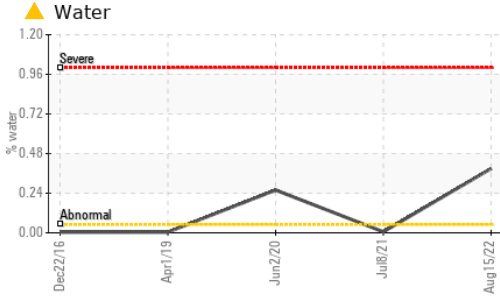
FLUID CLEANLINESS

| | method | limit/base | current | history 1 | history 2 |
|-----------------|--------------|------------|-------------------|-----------|-----------|
| Particles >4µm | ASTM D7647 | | 3948 | 5217 | --- |
| Particles >6µm | ASTM D7647 | >1300 | ▲ 2150 | 1147 | --- |
| Particles >14µm | ASTM D7647 | >80 | ▲ 366 | 62 | --- |
| Particles >21µm | ASTM D7647 | >20 | ▲ 123 | 17 | --- |
| Particles >38µm | ASTM D7647 | >4 | ▲ 19 | 2 | --- |
| Particles >71µm | ASTM D7647 | >3 | ▲ 2 | 0 | --- |
| Oil Cleanliness | ISO 4406 (c) | >--/17/13 | ▲ 19/18/16 | 17/13 | --- |

FLUID DEGRADATION

| | method | limit/base | current | history 1 | history 2 |
|------------------|---------------------|------------|-------------|-----------|-----------|
| Acid Number (AN) | mg KOH/g ASTM D8045 | 1.0 | 0.43 | 0.523 | 0.441 |

OIL ANALYSIS REPORT



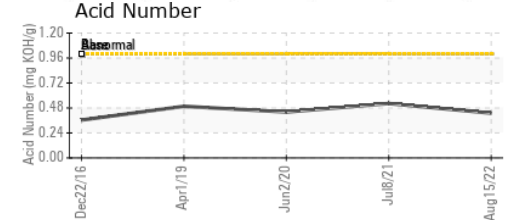
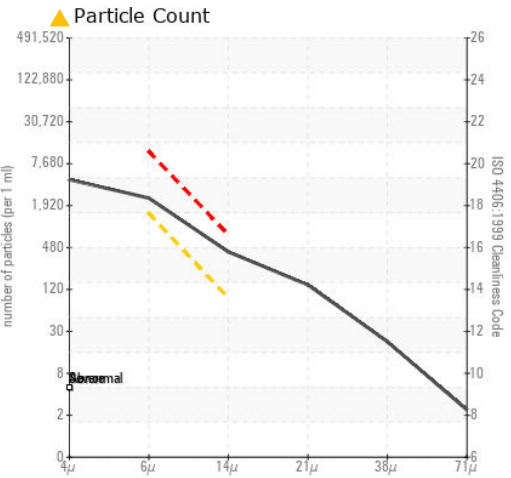
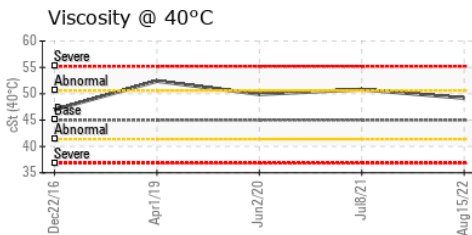
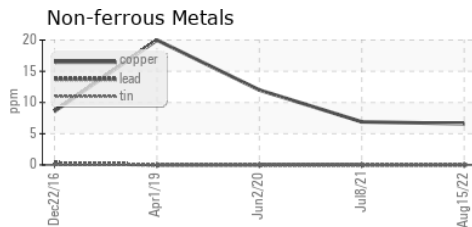
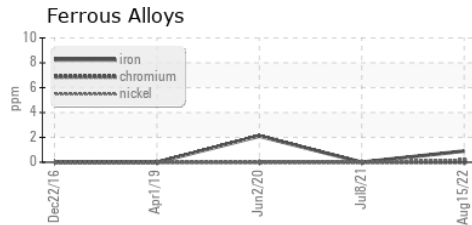
| VISUAL | method | limit/base | current | history 1 | history 2 |
|------------------|--------|------------|---------|-----------|-----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | 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 | ▲ LAYRD |
| Odor | scalar | *Visual | NORML | NORML | NORML |
| Emulsified Water | scalar | *Visual | >0.05 | 0.2% | NEG |
| Free Water | scalar | *Visual | ▲ 1.0 | NEG | ◆ 5.0 |

| FLUID PROPERTIES | method | limit/base | current | history 1 | history 2 | |
|------------------|--------|------------|---------|-----------|-----------|------|
| Visc @ 40°C | cSt | ASTM D445 | 45 | 49.17 | 50.8 | 49.9 |

| SAMPLE IMAGES | method | limit/base | current | history 1 | history 2 |
|---------------|--------|------------|---------|-----------|-----------|
|---------------|--------|------------|---------|-----------|-----------|



GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KCP48392 **Received** : 22 Aug 2022
Lab Number : 05623857 **Diagnosed** : 26 Aug 2022
Unique Number : 10103364 **Diagnostician** : Jonathan Hester
Test Package : IND 2 (Additional Tests: KF, PrtCount)

OLDCASTLE ENVELOPE
 1900 MIDLAND RD
 ROCK HILL, SC
 USA 29730
 Contact:

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)

T:
F: