

PROBLEM SUMMARY

Sample Rating Trend



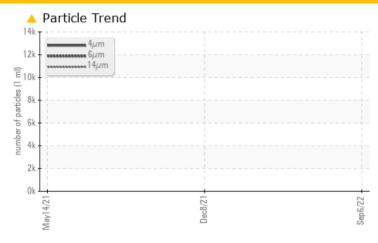
Machine Id **5106986 (S/N 2619)**

Component

Compressor

KAESER SIGMA (OEM) M-460 (--- QTS)

COMPONENT CONDITION SUMMARY



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.

| PROBLEMATIC TEST RESULTS | | | | | | | |
|--------------------------|--------------|---------|-----------------|----------|----------|--|--|
| Sample Status | | | ABNORMAL | ABNORMAL | ABNORMAL | | |
| Particles >6µm | ASTM D7647 | >1300 | <u> </u> | | | | |
| Particles >14µm | ASTM D7647 | >80 | <u> </u> | | | | |
| Particles >21µm | ASTM D7647 | >20 | <u>^</u> 22 | | | | |
| Oil Cleanliness | ISO 4406 (c) | >/17/13 | 21/19/15 | | | | |

Customer Id: AMDHUN Sample No.: KCP50705 Lab Number: 05635639 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:

Don Baldridge +1 don.b505@comcast.net

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 Dec 2021 Diag: Jonathan Hester

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. We were unable to perform a particle count due to a high concentration of particles present in this sample. All component wear rates are normal. Appearance is hazy. There is a light concentration of water present in the oil. Moderate concentration of visible dirt/debris present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



14 May 2021 Diag: Don Baldridge

VIS DEBRIS



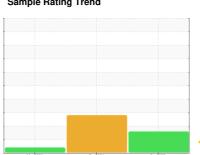
No corrective action is recommended at this time. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample. All component wear rates are normal. Moderate concentration of visible dirt/debris present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.





OIL ANALYSIS REPORT

Sample Rating Trend



ISO

5106986 (S/N 2619)

Component

Compressor

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.

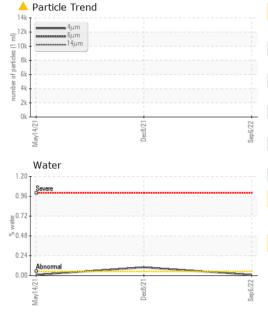
Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

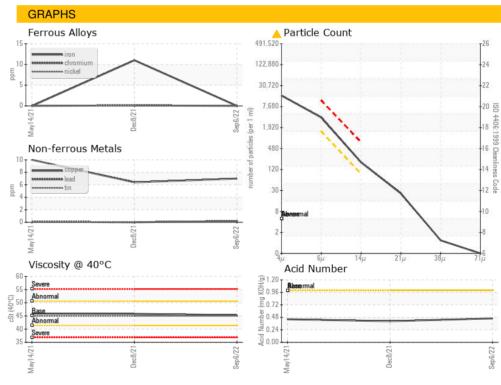
| | May/2021 Dec2021 Sap/2022 | | | | | |
|------------------|---------------------------|--------------|------------|-----------------|---------------|-------------|
| SAMPLE INFORM | MATION | method | limit/base | current | history 1 | history 2 |
| Sample Number | | | | KCP50705 | KCP35237 | KCP32219 |
| Sample Date | | | | 06 Sep 2022 | 08 Dec 2021 | 14 May 2021 |
| Machine Age | hrs | | | 20074 | 16781 | 13552 |
| Oil Age | hrs | | | 0 | 3200 | 2640 |
| Oil Changed | | | | Changed | Changed | Changed |
| Sample Status | | | | ABNORMAL | ABNORMAL | ABNORMAL |
| WEAR METALS | | method | limit/base | current | history 1 | history 2 |
| Iron | ppm | ASTM D5185m | >50 | 0 | 11 | 0 |
| Chromium | ppm | ASTM D5185m | >10 | 0 | <1 | 0 |
| Nickel | ppm | ASTM D5185m | >3 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | >3 | 0 | <1 | 0 |
| Silver | ppm | ASTM D5185m | >2 | <1 | 0 | <1 |
| Aluminum | ppm | ASTM D5185m | >10 | <1 | <1 | 0 |
| Lead | ppm | ASTM D5185m | >10 | <1 | 0 | <1 |
| Copper | ppm | ASTM D5185m | >50 | 7 | 6 | 10 |
| Tin | ppm | ASTM D5185m | >10 | <1 | 0 | 0 |
| Antimony | ppm | ASTM D5185m | | | <1 | 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 | <1 | 0 |
| Barium | ppm | ASTM D5185m | 90 | 0 | 2 | 0 |
| Molybdenum | ppm | ASTM D5185m | 0 | 0 | <1 | 0 |
| Manganese | ppm | ASTM D5185m | | 0 | <1 | 0 |
| Magnesium | ppm | ASTM D5185m | 100 | 3 | 25 | 2 |
| Calcium | ppm | ASTM D5185m | | 0 | 2 | 0 |
| Phosphorus | ppm | ASTM D5185m | 0 | 4 | 3 | 3 |
| Zinc | ppm | ASTM D5185m | 0 | 43 | 86 | 53 |
| Sulfur | ppm | ASTM D5185m | 23500 | 17909 | 17895 | 18929 |
| CONTAMINANTS | | method | limit/base | current | history 1 | history 2 |
| Silicon | ppm | ASTM D5185m | >25 | <1 | <1 | 0 |
| Sodium | ppm | ASTM D5185m | | 0 | 4 | 0 |
| Potassium | ppm | ASTM D5185m | >20 | 1 | 3 | 0 |
| Water | % | ASTM D6304 | >0.05 | 0.008 | 0.099 | 0.009 |
| ppm Water | ppm | ASTM D6304 | >500 | 83.8 | <u>\$ 990</u> | 95.4 |
| FLUID CLEANLIN | IESS | method | limit/base | current | history 1 | history 2 |
| Particles >4µm | | ASTM D7647 | | 13801 | | |
| Particles >6µm | | ASTM D7647 | >1300 | <u>▲</u> 3261 | | |
| Particles >14μm | | ASTM D7647 | >80 | <u> 171</u> | | |
| Particles >21µm | | ASTM D7647 | >20 | <u>^</u> 22 | | |
| Particles >38µm | | ASTM D7647 | >4 | 1 | | |
| Particles >71µm | | ASTM D7647 | >3 | 0 | | |
| Oil Cleanliness | | ISO 4406 (c) | >/17/13 | <u>21/19/15</u> | | |
| FLUID DEGRADA | TION | method | limit/base | current | history 1 | history 2 |
| Acid Number (AN) | ma KOU/a | VCTM DOUVE | 1.0 | 0.46 | 0.406 | 0.444 |



OIL ANALYSIS REPORT



| VISUAL | | method | limit/base | current | history 1 | history 2 |
|-------------------------|--------|-----------|------------|---------|-----------|-----------|
| White Metal | scalar | *Visual | NONE | NONE | MODER | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | NONE | NONE |
| Silt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Debris | scalar | *Visual | NONE | LIGHT | ▲ MODER | ▲ MODER |
| Sand/Dirt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Appearance | scalar | *Visual | NORML | NORML | ▲ HAZY | NORML |
| Odor | scalar | *Visual | NORML | NORML | NORML | NORML |
| Emulsified Water | scalar | *Visual | >0.05 | NEG | 0.2% | NEG |
| Free Water | scalar | *Visual | | NEG | NEG | NEG |
| FLUID PROPERT | TES | method | limit/base | current | history 1 | history 2 |
| Visc @ 40°C | cSt | ASTM D445 | 45 | 45.3 | 45.8 | 45.9 |
| SAMPLE IMAGES | 3 | method | limit/base | current | history 1 | history 2 |
| Color | | | | | | |
| Bottom | | | | | | |



: 07 Sep 2022





Laboratory Sample No. Lab Number

Unique Number : 10125169

: KCP50705 : 05635639

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received Diagnosed

: 08 Sep 2022 Diagnostician : Don Baldridge

AMD DIRECT INC 17322 GOTHARD ST HUNTINGTON BEACH, CA USA 92647-6203 Contact: Service Manager

Test Package : IND 2 (Additional Tests: KF, PrtCount) Certificate L2367 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)

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F: