

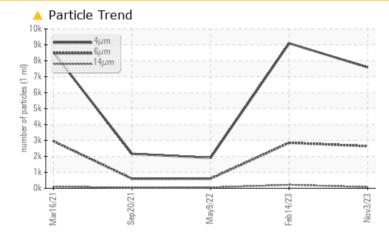
PROBLEM SUMMARY

Sample Rating Trend

Machine Id **7266241 (S/N 1514)** Component

Component Compressor Fluid KAESER SIGMA (OEM) S-460 (--- GAL)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

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

| PROBLEMATIC TEST RESULTS | | | | | | | |
|--------------------------|-------------------|-----------------|------------|----------|--|--|--|
| Sample Status | | ABNORMAL | ABNORMAL | NORMAL | | | |
| Particles >6µm | ASTM D7647 >130 | 0 🔺 2641 | <u> </u> | 603 | | | |
| Oil Cleanliness | ISO 4406 (c) >/17 | 7/13 🔺 20/19/13 | 🔺 20/19/15 | 18/16/13 | | | |

Customer Id: CAVPIT Sample No.: KC124383 Lab Number: 06011516 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

There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

14 Feb 2023 Diag: Don Baldridge



No corrective action is recommended at this time. The 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 a high amount of particulates present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

09 May 2022 Diag: Angela Borella



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. The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.



view repor



20 Sep 2021 Diag: Jonathan Hester



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







OIL ANALYSIS REPORT

Sample Rating Trend ISO

Machine Id 7266241 (S/N 1514) Component

Compressor Fluid KAESER SIGMA (OEM) S-460 (--- GAL)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. The 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 high amount of silt (particulates < 14 microns in size) present in the oil.

Fluid Condition

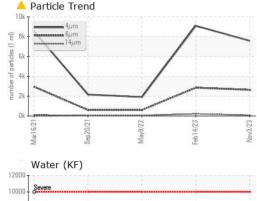
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

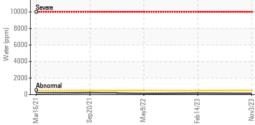
| Machine Age Oil AgehrsClient Info13818100856931Oil Age Sample StatusClient Info026443942WEAR METALSImitable MassABNORMALNORMALWEAR METALSmethodlimitbasecurrenthistory1IronppmASTM D5185m>50<1<1ChromiumppmASTM D5185m>33<100NickelppmASTM D5185m>33<100NickelppmASTM D5185m>33<100NamiumppmASTM D5185m>100<1<1LeadppmASTM D5185m>100<1<1LeadppmASTM D5185m>100<1<1AttimonyppmASTM D5185m>100<1<1AttimonyppmASTM D5185m>100<1<1AttimonyppmASTM D5185m>100<1<1AttimonyppmASTM D5185m<10000AddiniumpmASTM D5185m<10000AbdolenumppmASTM D5185m0000AddiniumpmASTM D5185m0000AddiniumpmASTM D5185m0000AddiniumpmASTM D5185m900<10AddiniumpmASTM D5185m0 | SAMPLE INFORM | ATION | method | limit/base | current | history1 | history2 |
|--|------------------|----------|--------------|-------------|-------------------|--------------|-------------|
| Machine Age hrs Client Info 13818 10085 6931 Oil Age hrs Client Info 0 2644 3942 Oil Changed Client Info N/A NAC Changed Changed Sample Status Image Linet Info N/A ABNORMAL ABNORMAL ABNORMAL NORMAL WEAR METALS method Imit/base current history1 history2 Iron ppm ASTM D5185m >30 <1 | Sample Number | | Client Info | | KC124383 | KC101651 | KC107197 |
| Oil Age hrs Client Info 0 2644 3942 Oil Changed Client Info N/A Not Changed Changed Sample Status Imit Mode ABNORMAL ABNORMAL NORMAL WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >50 <1 | Sample Date | | Client Info | | 03 Nov 2023 | 14 Feb 2023 | 09 May 2022 |
| Oil Changed Sample Status Client Info N/A ABNORMAL Not Changed ABNORMAL Changed ABNORMAL NOT Changed ABNORMAL WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185n >50 <1 | Machine Age | hrs | Client Info | | 13818 | 10085 | 6931 |
| Sample Status method imit/base current history1 NORMAL WEAR METALS method imit/base current history2 history2 Iron ppm ASTM D5185m >50 <1 | Oil Age | hrs | Client Info | | 0 | 2644 | 3942 |
| WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >50 <1 | Oil Changed | | Client Info | | N/A | Not Changd | Changed |
| Iron ppm ASTM D5185m >50 <1 <1 <1 <1 Chromium ppm ASTM D5185m >10 <1 | Sample Status | | | | ABNORMAL | ABNORMAL | NORMAL |
| Dromium ppm ASTM D5185m >10 <1 0 0 Nickel ppm ASTM D5185m >3 <1 | WEAR METALS | | method | limit/base | current | history1 | history2 |
| Nickel ppm ASTM D5185m >3 <1 0 0 Titanium ppm ASTM D5185m >3 <1 | Iron | ppm | ASTM D5185m | >50 | <1 | <1 | <1 |
| Titanium ppm ASTM D5185m >3 <1 0 0 Silver ppm ASTM D5185m >2 0 <1 | Chromium | ppm | ASTM D5185m | >10 | <1 | 0 | 0 |
| Titanium ppm ASTM D5185m >3 <1 0 0 Silver ppm ASTM D5185m >2 0 <1 | Nickel | | ASTM D5185m | >3 | <1 | | 0 |
| Silver ppm ASTM D5185m >2 0 <1 0 Aluminum ppm ASTM D5185m >10 0 0 0 Copper ppm ASTM D5185m >10 0 0 0 Copper ppm ASTM D5185m >10 0 <1 | Titanium | | ASTM D5185m | >3 | <1 | 0 | 0 |
| Aluminum ppm ASTM D5185m >10 <1 <1 <1 <1 Lead ppm ASTM D5185m >10 0 0 0 Copper ppm ASTM D5185m >50 12 8 10 Tin ppm ASTM D5185m >10 0 <1 | Silver | | | | 0 | <1 | 0 |
| Lead ppm ASTM D5185m >10 0 0 0 Copper ppm ASTM D5185m >50 12 8 10 Tin ppm ASTM D5185m >10 0 <1 | Aluminum | | ASTM D5185m | >10 | <1 | <1 | <1 |
| Copper ppm ASTM D5185m >50 12 8 10 Tin ppm ASTM D5185m >10 0 <1 | | | | | | | |
| Tin ppm ASTM D5185m >10 0 <1 <1 Antimony ppm ASTM D5185m <10 0 <1 0 0 Vanadium ppm ASTM D5185m <10 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0 0 Barium ppm ASTM D5185m 90 0 0 0 0 Magnesse ppm ASTM D5185m 90 0 25 35 Calcium ppm ASTM D5185m 90 0 21 0 Magnesium ppm ASTM D5185m 20 3 3 Zinc ppm ASTM D5185m 22 1 <1 Nistory2 Sodium ppm ASTM D5185m 22 1 <1 Nistory2 Silicon ppm ASTM D5185m 22 1 <1 <1 Sodium ppm ASTM D5185m 20 | | | | | | | |
| Antimony ppm ASTM D5185m Vanadium ppm ASTM D5185m <1 | Tin | | | | | | |
| Vanadium ppm ASTM D5185m <1 0 0 Cadmium ppm ASTM D5185m <1 | | | | - | | | |
| Cadmium ppm ASTM D5185m <1 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0 0 Barium ppm ASTM D5185m 90 0 0 0 0 Magnesium ppm ASTM D5185m 90 0 25 35 Calcium ppm ASTM D5185m 90 0 21 0 <1 0 Magnesium ppm ASTM D5185m 90 0 25 35 35 Calcium ppm ASTM D5185m 90 0 33 3 Zinc ppm ASTM D5185m 20 0 110 4 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 1 5 8 Sodium ppm ASTM D6185m | Vanadium | | | | <1 | 0 | 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 90 0 0 0 Magnese ppm ASTM D5185m 90 0 25 35 Calcium ppm ASTM D5185m 90 0 <1 | | | | | | | |
| Boron ppm ASTM D5185m 0 0 0 0 Barium ppm ASTM D5185m 90 0 0 0 Molybdenum ppm ASTM D5185m 0 0 0 Magnese ppm ASTM D5185m 0 0 25 35 Calcium ppm ASTM D5185m 90 0 25 35 Calcium ppm ASTM D5185m 90 0 3 3 Phosphorus ppm ASTM D5185m 0 3 3 Zinc ppm ASTM D5185m 0 10 4 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 1 5 8 Vater % ASTM D5185m >20 1 5 8 Water % ASTM D5647 >0 0.017 0.013 ppm Water pm | | pp | | limit/base | | | |
| Barium ppm ASTM D5185m 90 0 0 0 Molybdenum ppm ASTM D5185m 0 0 0 Marganese ppm ASTM D5185m 90 0 25 35 Calcium ppm ASTM D5185m 90 0 21 0 Phosphorus ppm ASTM D5185m 2 0 <1 | | nom | | IIIIII/base | | | |
| Molybdenum ppm ASTM D5185m 0 0 0 Manganese ppm ASTM D5185m 90 0 25 35 Calcium ppm ASTM D5185m 90 0 <1 | | | | 00 | | | |
| Manganese ppm ASTM D5185m | | | | 90 | - | | |
| Magnesium ppm ASTM D5185m 90 0 25 35 Calcium ppm ASTM D5185m 2 0 <1 | - | | | | - | | |
| Calcium ppm ASTM D5185m 2 0 <1 0 Phosphorus ppm ASTM D5185m 0 3 3 Zinc ppm ASTM D5185m 0 3 3 Zinc ppm ASTM D5185m 0 10 4 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 2 1 <1 | • | | | 00 | | | |
| Phosphorus ppm ASTM D5185m 0 3 3 Zinc ppm ASTM D5185m 0 10 4 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 2 1 <1 Sodium ppm ASTM D5185m >20 1 5 12 11 Potassium ppm ASTM D5185m >20 1 5 8 Water % ASTM D6304 >0.05 0.013 0.017 0.013 ppm Water ppm ASTM D6304 >500 134.5 171.5 134.0 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 >1300 2641 2852 603 Particles >14µm ASTM D7647 >80 77 217 50 Particles >21µm ASTM D7647 20 21 55 1 | 0 | | | | - | | |
| Zinc ppm ASTM D5185m 0 10 4 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 2 1 <1 | | | | 2 | - | | |
| CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 2 1 <1 | | | | | - | | |
| Silicon ppm ASTM D5185m >25 2 1 <1 Sodium ppm ASTM D5185m >20 1 5 12 11 Potassium ppm ASTM D5185m >20 1 5 8 Water % ASTM D6304 >0.05 0.013 0.017 0.013 ppm Water ppm ASTM D6304 >500 134.5 171.5 134.0 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 7588 9096 1906 Particles >6µm ASTM D7647 >1300 2641 2852 603 Particles >1µm ASTM D7647 >20 21 55 11 Particles >1µm ASTM D7647 >20 21 55 11 Particles >38µm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 20/19/13 20/19/15 18/16/13 FLUID DEGRADATION method limit/base current <th< td=""><td></td><td></td><td></td><td></td><th>-</th><td></td><td></td></th<> | | | | | - | | |
| Sodium ppm ASTM D5185m 5 12 11 Potassium ppm ASTM D5185m >20 1 5 8 Water % ASTM D6304 >0.05 0.013 0.017 0.013 ppm Water ppm ASTM D6304 >500 134.5 171.5 134.0 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 7588 9096 1906 Particles >6µm ASTM D7647 >1300 2641 2852 603 Particles >14µm ASTM D7647 >20 21 217 50 Particles >14µm ASTM D7647 >20 21 55 11 Particles >38µm ASTM D7647 >4 2 1 0 Particles >71µm ASTM D7647 >3 0 0 0 0 OI Cleanliness ISO 4406 (c) >/17/13 20/19/13 20/19/15 18/16/13 <td></td> <td></td> <td></td> <td></td> <th></th> <td></td> <td></td> | | | | | | | |
| Potassium ppm ASTM D5185m >20 1 5 8 Water % ASTM D6304 >0.05 0.013 0.017 0.013 ppm Water ppm ASTM D6304 >500 134.5 171.5 134.0 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 7588 9096 1906 Particles >6µm ASTM D7647 >1300 2641 2852 603 Particles >14µm ASTM D7647 >20 21 55 11 Particles >21µm ASTM D7647 >20 21 55 11 Particles >38µm ASTM D7647 >3 0 0 0 Particles >71µm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 20/19/13 20/19/15 18/16/13 FLUID DEGRADATION method limit/base current history1 history2 < | | | | >25 | | | |
| Water % ASTM D6304 >0.05 0.013 0.017 0.013 ppm Water ppm ASTM D6304 >500 134.5 171.5 134.0 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 7588 9096 1906 Particles >6µm ASTM D7647 >1300 2641 2852 603 Particles >14µm ASTM D7647 >80 77 217 50 Particles >21µm ASTM D7647 >20 21 55 11 Particles >38µm ASTM D7647 >4 2 1 0 Particles >71µm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 20/19/13 20/19/15 18/16/13 FLUID DEGRADATION method limit/base current history1 history2 | | | | | | | |
| ppm Water ppm ASTM D6304 >500 134.5 171.5 134.0 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 7588 9096 1906 Particles >6µm ASTM D7647 >1300 2641 2852 603 Particles >14µm ASTM D7647 >80 77 217 50 Particles >14µm ASTM D7647 >20 21 55 11 Particles >21µm ASTM D7647 >4 2 1 0 Particles >38µm ASTM D7647 >4 2 1 0 Particles >71µm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) /17/13 20/19/13 20/19/15 18/16/13 FLUID DEGRADATION method limit/base current history1 history2 | | | | | - | | |
| FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 7588 9096 1906 Particles >6µm ASTM D7647 >1300 2641 2852 603 Particles >14µm ASTM D7647 >80 77 217 50 Particles >21µm ASTM D7647 >20 21 55 11 Particles >38µm ASTM D7647 >4 2 1 0 Particles >38µm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 20/19/13 20/19/15 18/16/13 | | % | | | | | |
| Particles >4μm ASTM D7647 7588 9096 1906 Particles >6μm ASTM D7647 >1300 ▲ 2641 ▲ 2852 603 Particles >14μm ASTM D7647 >80 77 ▲ 217 50 Particles >21μm ASTM D7647 >20 21 ▲ 55 11 Particles >21μm ASTM D7647 >4 2 1 0 Particles >38μm ASTM D7647 >4 2 1 0 Particles >71μm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 ▲ 20/19/13 ▲ 20/19/15 18/16/13 FLUID DEGRADATION method limit/base current history1 history2 | ppm Water | ppm | ASTM D6304 | >500 | 134.5 | 171.5 | 134.0 |
| Particles >6µm ASTM D7647 >1300 ▲ 2641 ▲ 2852 603 Particles >14µm ASTM D7647 >80 77 ▲ 217 50 Particles >21µm ASTM D7647 >20 21 ▲ 55 11 Particles >38µm ASTM D7647 >4 2 1 0 Particles >38µm ASTM D7647 >4 2 1 0 Particles >71µm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 ▲ 20/19/13 ▲ 20/19/15 18/16/13 FLUID DEGRADATION method limit/base current history1 history2 | FLUID CLEANLIN | IESS | method | limit/base | current | history1 | history2 |
| Particles >14µm ASTM D7647 >80 77 ▲ 217 50 Particles >21µm ASTM D7647 >20 21 ▲ 55 11 Particles >38µm ASTM D7647 >4 2 1 0 Particles >38µm ASTM D7647 >3 0 0 0 Particles >71µm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 ▲ 20/19/13 ▲ 20/19/15 18/16/13 FLUID DEGRADATION method limit/base current history1 history2 | Particles >4µm | | | | | | |
| Particles >21μm ASTM D7647 >20 21 55 11 Particles >38μm ASTM D7647 >4 2 1 0 Particles >37μm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 20/19/13 20/19/15 18/16/13 FLUID DEGRADATION method limit/base current history1 history2 | | | ASTM D7647 | >1300 | <u> </u> | <u> </u> | 603 |
| Particles >38μm ASTM D7647 >4 2 1 0 Particles >71μm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 ▲ 20/19/13 ▲ 20/19/15 18/16/13 FLUID DEGRADATION method limit/base current history1 history2 | Particles >14µm | | ASTM D7647 | >80 | 77 | A 217 | 50 |
| Particles >71μm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 ▲ 20/19/13 ▲ 20/19/15 18/16/13 FLUID DEGRADATION method limit/base current history1 history2 | | | ASTM D7647 | >20 | 21 | <u> </u> | 11 |
| Oil Cleanliness ISO 4406 (c) >/17/13 20/19/13 20/19/15 18/16/13 FLUID DEGRADATION method limit/base current history1 history2 | Particles >38µm | | | | | 1 | 0 |
| FLUID DEGRADATION method limit/base current history1 history2 | Particles >71µm | | ASTM D7647 | >3 | 0 | 0 | 0 |
| | Oil Cleanliness | | ISO 4406 (c) | >/17/13 | A 20/19/13 | ▲ 20/19/15 | 18/16/13 |
| Acid Number (AN) mg KOH/g ASTM D8045 0.4 0.25 0.31 0.34 | FLUID DEGRADA | TION | method | limit/base | current | history1 | history2 |
| | Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.4 | 0.25 | 0.31 | 0.34 |

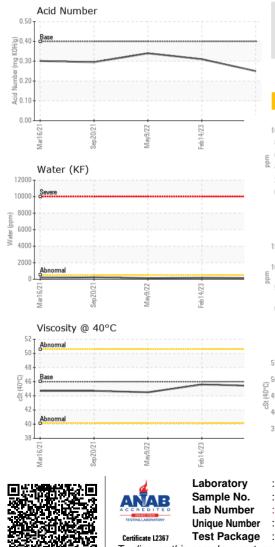
Contact/Location: G. CLARK - CAVPIT



OIL ANALYSIS REPORT

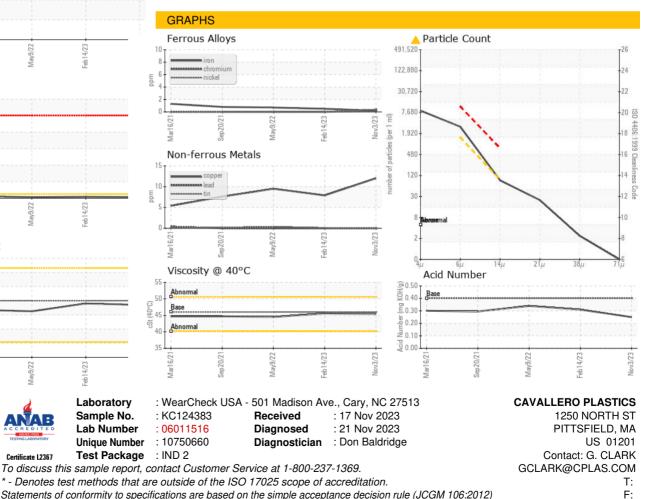






| VISUAL | | method | limit/base | current | history1 | history2 |
|------------------|--------|-----------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | NONE | NONE |
| Silt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Debris | scalar | *Visual | NONE | NONE | LIGHT | NONE |
| Sand/Dirt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Appearance | scalar | *Visual | NORML | NORML | NORML | NORML |
| Odor | scalar | *Visual | NORML | NORML | NORML | NORML |
| Emulsified Water | scalar | *Visual | >0.05 | NEG | NEG | NEG |
| Free Water | scalar | *Visual | | NEG | NEG | NEG |
| FLUID PROPERT | IES | method | limit/base | current | history1 | history2 |
| Visc @ 40°C | cSt | ASTM D445 | 46 | 45.4 | 45.6 | 44.5 |
| SAMPLE IMAGES | 3 | method | limit/base | current | history1 | history2 |
| Color | | | | A. | | |

Bottom



Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Contact/Location: G. CLARK - CAVPIT