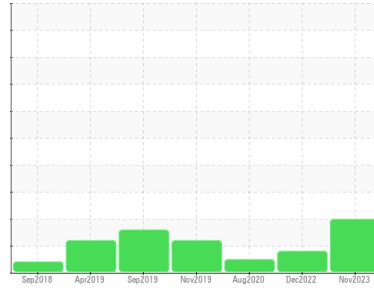


PROBLEM SUMMARY

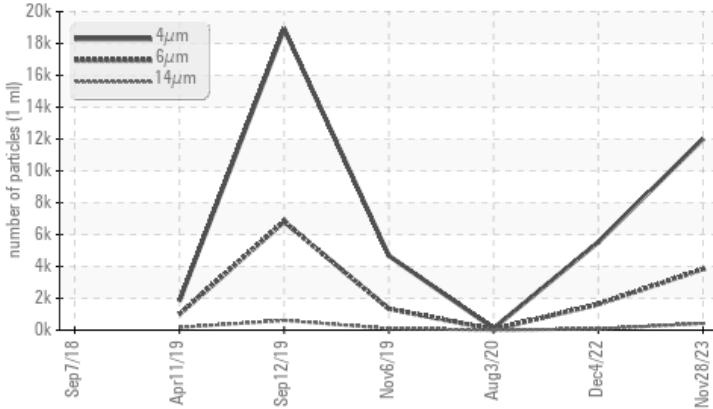
Sample Rating Trend



Machine Id
KAESER DSD 150 3714391 (S/N 1051)
Component
Compressor
Fluid
KAESER SIGMA (OEM) S-460 (--- GAL)

COMPONENT CONDITION SUMMARY

▲ Particle Trend



RECOMMENDATION

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 | ATTENTION | NORMAL |
|-----------------|--------------|-----------|-------------------|------------|--------|
| Particles >6µm | ASTM D7647 | >1300 | ▲ 3828 | ▲ 1628 | 42 |
| Particles >14µm | ASTM D7647 | >80 | ▲ 424 | 75 | 6 |
| Particles >21µm | ASTM D7647 | >20 | ▲ 130 | 17 | 3 |
| Particles >38µm | ASTM D7647 | >4 | ▲ 6 | 3 | 0 |
| Oil Cleanliness | ISO 4406 (c) | >--/17/13 | ▲ 21/19/16 | ▲ 20/18/13 | 13/10 |

Customer Id: NORWIC
Sample No.: KCPA011193
Lab Number: 06026447
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

There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

04 Dec 2022 Diag: Don Baldrige

ISO



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 a moderate amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



03 Aug 2020 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. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



06 Nov 2019 Diag: Jonathan Hester

ISO



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 moderate 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.

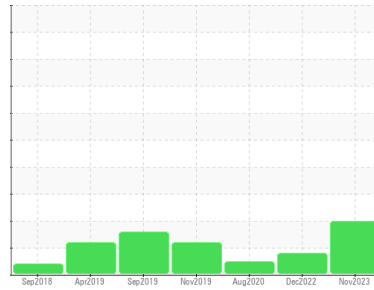
view report





OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id
KAESER DSD 150 3714391 (S/N 1051)

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

DIAGNOSIS

Recommendation

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 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.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|--------------------|-------------|-------------|------------|--------------------|-------------|-------------|
| Sample Number | Client Info | | | KCPA011193 | KCP47616D | KCP29389 |
| Sample Date | Client Info | | | 28 Nov 2023 | 04 Dec 2022 | 03 Aug 2020 |
| Machine Age | hrs | Client Info | | 26860 | 22497 | 3992 |
| Oil Age | hrs | Client Info | | 0 | 0 | 3992 |
| Oil Changed | Client Info | | | N/A | Changed | Changed |
| Sample Status | | | | ABNORMAL | ATTENTION | NORMAL |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|-------------|-----|-------------|------------|--------------|----------|----------|
| Iron | ppm | ASTM D5185m | >50 | 0 | 0 | 0 |
| Chromium | ppm | ASTM D5185m | >10 | 0 | 0 | 0 |
| Nickel | ppm | ASTM D5185m | >3 | 0 | 0 | <1 |
| Titanium | ppm | ASTM D5185m | >3 | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >10 | 0 | 2 | <1 |
| Lead | ppm | ASTM D5185m | >10 | 0 | 0 | 2 |
| Copper | ppm | ASTM D5185m | >50 | 13 | 4 | 4 |
| Tin | ppm | ASTM D5185m | >10 | <1 | 2 | 0 |
| Antimony | ppm | ASTM D5185m | | --- | --- | 0 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | 1 |
| Cadmium | ppm | ASTM D5185m | | 0 | 0 | 0 |

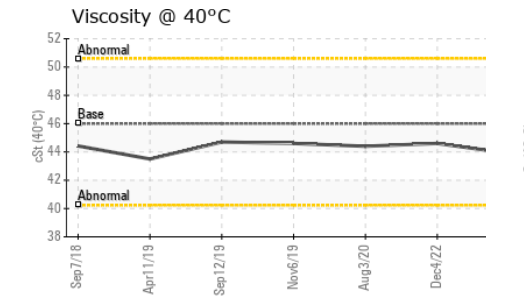
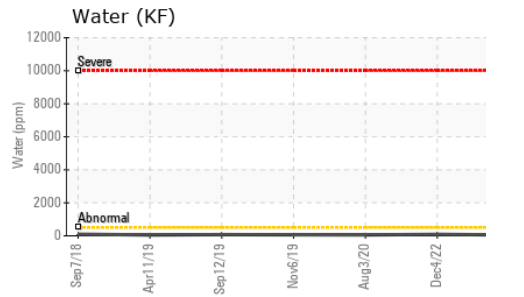
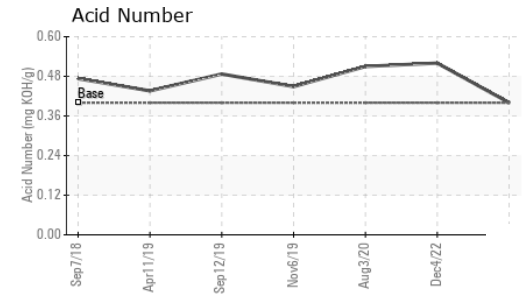
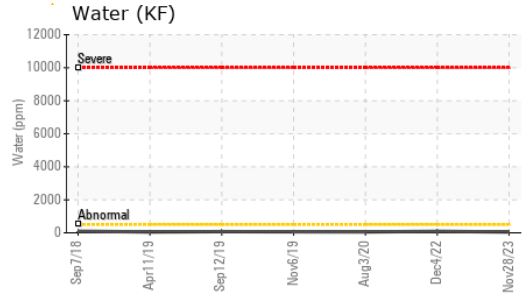
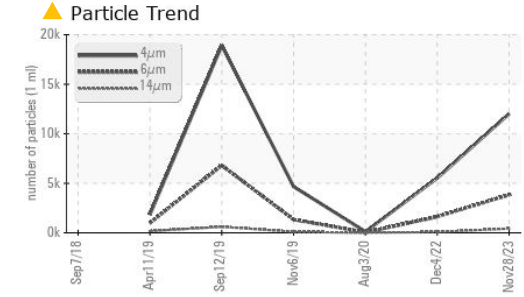
| ADDITIVES | | method | limit/base | current | history1 | history2 |
|------------|-----|-------------|------------|--------------|----------|----------|
| Boron | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Barium | ppm | ASTM D5185m | 90 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Manganese | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Magnesium | ppm | ASTM D5185m | 90 | 0 | <1 | <1 |
| Calcium | ppm | ASTM D5185m | 2 | 0 | 0 | 0 |
| Phosphorus | ppm | ASTM D5185m | | 2 | 21 | <1 |
| Zinc | ppm | ASTM D5185m | | 0 | 0 | 2 |
| Sulfur | ppm | ASTM D5185m | | 13594 | 12008 | 7486 |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|--------------|-----|-------------|------------|--------------|----------|----------|
| Silicon | ppm | ASTM D5185m | >25 | 0 | <1 | 0 |
| Sodium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Potassium | ppm | ASTM D5185m | >20 | 0 | 0 | 7 |
| Water | % | ASTM D6304 | >0.05 | 0.004 | 0.009 | 0.005 |
| ppm Water | ppm | ASTM D6304 | >500 | 48 | 91.0 | 52.9 |

| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|-------------------|--|--------------|------------|-------------------|------------|----------|
| Particles >4µm | | ASTM D7647 | | 12011 | 5530 | 114 |
| Particles >6µm | | ASTM D7647 | >1300 | ▲ 3828 | ▲ 1628 | 42 |
| Particles >14µm | | ASTM D7647 | >80 | ▲ 424 | 75 | 6 |
| Particles >21µm | | ASTM D7647 | >20 | ▲ 130 | 17 | 3 |
| Particles >38µm | | ASTM D7647 | >4 | ▲ 6 | 3 | 0 |
| Particles >71µm | | ASTM D7647 | >3 | 0 | 1 | 0 |
| Oil Cleanliness | | ISO 4406 (c) | >--/17/13 | ▲ 21/19/16 | ▲ 20/18/13 | 13/10 |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|-------------------|----------|------------|------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.4 | 0.40 | 0.52 | 0.510 |

OIL ANALYSIS REPORT

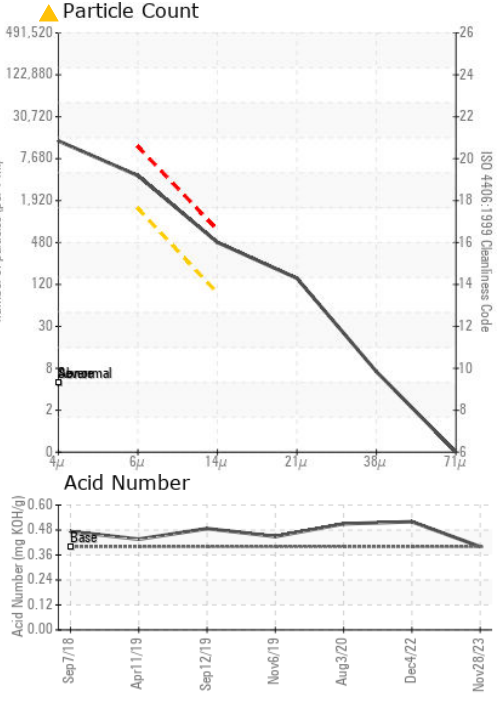
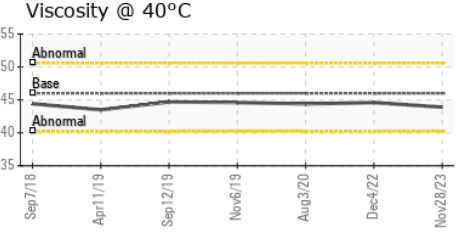
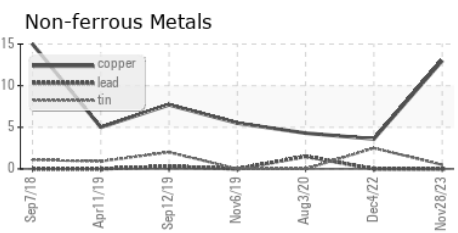
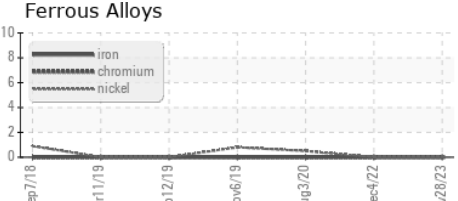


| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | 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 | 43.9 | 44.6 |

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

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KCPA011193 **Received** : 06 Dec 2023
Lab Number : 06026447 **Diagnosed** : 07 Dec 2023
Unique Number : 10776238 **Diagnostician** : Jonathan Hester
Test Package : IND 2 (Additional Tests: KF, PrtCount)

NORTH AMERICAN PIPE CORP
 3348 INDUSTRIAL DR
 WICHITA FALLS, TX
 US 76306
 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)