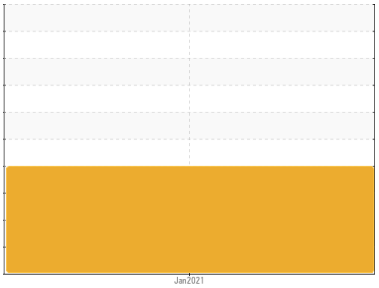
# PROBLEM SUMMARY

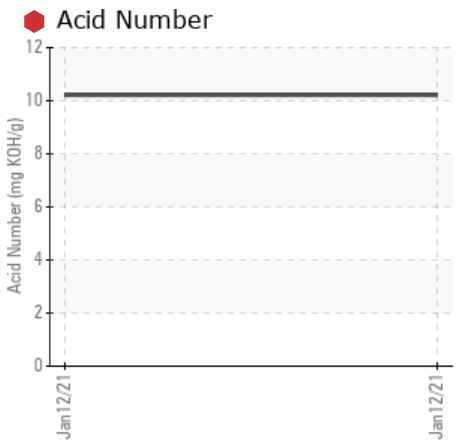
Sample Rating Trend

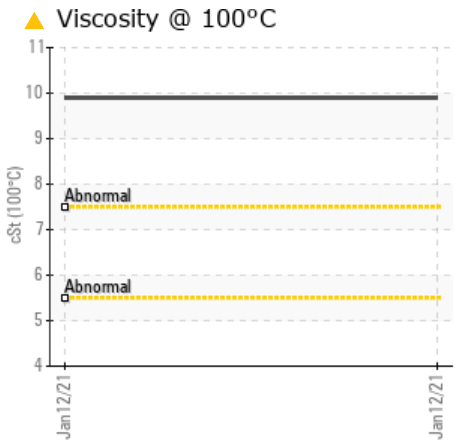


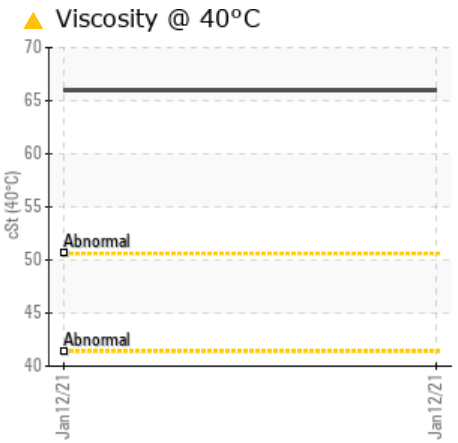

**DEGRADATION**

Machine Id
## KAESER 4516 SOUTH
Component
**Air Compressor**
Fluid
**BEACON SIGNAL TEC AIR 46 H1 (--- GAL)**

## COMPONENT CONDITION SUMMARY




## RECOMMENDATION

We advise that you check for a possible overheat condition. Recommend drain oil if not already done and flush with cleaner before refilling with oil. We recommend an early resample to monitor this condition. Please note that this is a corrected copy for laboratory data and diagnostic comment updates.

## PROBLEMATIC TEST RESULTS

| | | | | | | |
|---|---|---|---|---|---|---|
| Sample Status | | | | **SEVERE** | --- | --- |
| Acid Number (AN) | mg KOH/g | ASTM D8045 | | **10.22** | --- | --- |
| Visc @ 40°C | cSt | ASTM D445 | | **66.0** | --- | --- |
| Visc @ 100°C | cSt | ASTM D445 | | **9.9** | --- | --- |

**Customer Id:** BEADEI
**Sample No.:** WCI2277568
**Lab Number:** 05161896
**Test Package:** IND 2

*To manage this report scan the QR code*

*To discuss the diagnosis or test data:*
Doug Bogart +1 (800)237-1369 x4016
dougb@wearcheckusa.com

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

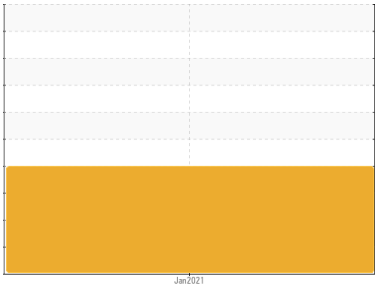
## RECOMMENDED ACTIONS

| Action | Status | Date | Done By | Description |
|---|---|---|---|---|
| Change Fluid | MISSED | Feb 22 2021 | ? | Recommend drain oil if not already done and flush with cleaner before refilling with oil. |
| Flush System | MISSED | Feb 22 2021 | ? | Recommend drain oil if not already done and flush with cleaner before refilling with oil. |
| Resample | MISSED | Feb 22 2021 | ? | We recommend an early resample to monitor this condition. |
| Check For Overheating | MISSED | Feb 22 2021 | ? | We advise that you check for a possible overheat condition. |

## HISTORICAL DIAGNOSIS

# OIL ANALYSIS REPORT

Sample Rating Trend




DEGRADATION

Machine Id
## KAESER 4516 SOUTH
Component
**Air Compressor**
Fluid
**BEACON SIGNAL TEC AIR 46 H1 (--- GAL)**

## DIAGNOSIS

**Recommendation**

We advise that you check for a possible overheat condition. Recommend drain oil if not already done and flush with cleaner before refilling with oil. We recommend an early resample to monitor this condition. Please note that this is a corrected copy for laboratory data and diagnostic comment updates.

**Wear**

All component wear rates are normal.

**Contamination**

There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

**Fluid Condition**

The AN level is above the recommended limit. The oil viscosity is higher than normal. This plus the additive levels indicates the addition of a different brand, or type of oil. Confirm oil type. The oil is no longer serviceable.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **WCI2277568** | --- | --- |
| Sample Date | | Client Info | | **12 Jan 2021** | --- | --- |
| Machine Age | hrs | Client Info | | **66382** | --- | --- |
| Oil Age | hrs | Client Info | | **575** | --- | --- |
| Oil Changed | | Client Info | | **Not Changd** | --- | --- |
| Sample Status | | | | **SEVERE** | --- | --- |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >50 | **2** | --- | --- |
| Chromium | ppm | ASTM D5185m | >4 | **0** | --- | --- |
| Nickel | ppm | ASTM D5185m | >4 | **<1** | --- | --- |
| Titanium | ppm | ASTM D5185m | | **0** | --- | --- |
| Silver | ppm | ASTM D5185m | | **0** | --- | --- |
| Aluminum | ppm | ASTM D5185m | >10 | **<1** | --- | --- |
| Lead | ppm | ASTM D5185m | >20 | **1** | --- | --- |
| Copper | ppm | ASTM D5185m | >40 | **28** | --- | --- |
| Tin | ppm | ASTM D5185m | >5 | **0** | --- | --- |
| Antimony | ppm | ASTM D5185m | | **0** | --- | --- |
| Vanadium | ppm | ASTM D5185m | | **0** | --- | --- |
| Cadmium | ppm | ASTM D5185m | | **0** | --- | --- |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | | **1** | --- | --- |
| Barium | ppm | ASTM D5185m | | **3** | --- | --- |
| Molybdenum | ppm | ASTM D5185m | | **2** | --- | --- |
| Manganese | ppm | ASTM D5185m | | **0** | --- | --- |
| Magnesium | ppm | ASTM D5185m | | **<1** | --- | --- |
| Calcium | ppm | ASTM D5185m | | **<1** | --- | --- |
| Phosphorus | ppm | ASTM D5185m | | **60** | --- | --- |
| Zinc | ppm | ASTM D5185m | | **101** | --- | --- |
| Sulfur | ppm | ASTM D5185m | | **126** | --- | --- |

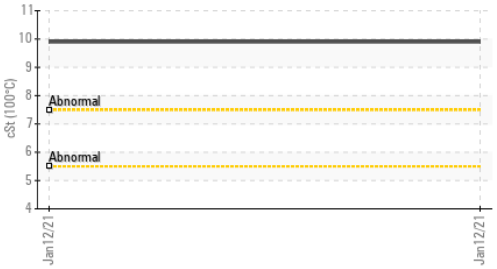
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >25 | **<1** | --- | --- |
| Sodium | ppm | ASTM D5185m | | **3** | --- | --- |
| Potassium | ppm | ASTM D5185m | >20 | **0** | --- | --- |

| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Particles >4µm | | ASTM D7647 | | **1590** | --- | --- |
| Particles >6µm | | ASTM D7647 | >1300 | **283** | --- | --- |
| Particles >14µm | | ASTM D7647 | >80 | **23** | --- | --- |
| Particles >21µm | | ASTM D7647 | >20 | **6** | --- | --- |
| Particles >38µm | | ASTM D7647 | >4 | **0** | --- | --- |
| Particles >71µm | | ASTM D7647 | >3 | **0** | --- | --- |
| Oil Cleanliness | | ISO 4406 (c) | >--/17/13 | **18/15/12** | --- | --- |

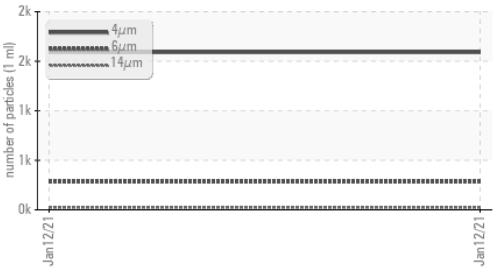
| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | | **10.22** | --- | --- |

# OIL ANALYSIS REPORT

Viscosity @ 100°C

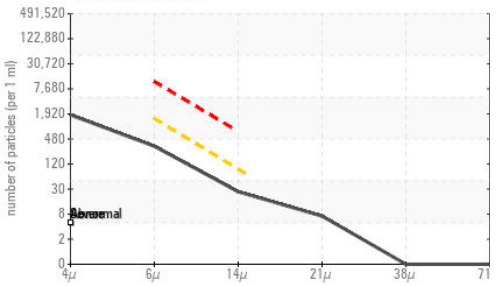



Particle Trend

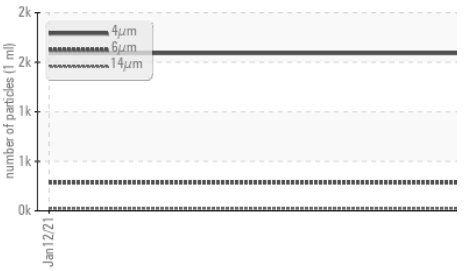



Viscosity @ 40°C


Particle Count




Particle Trend



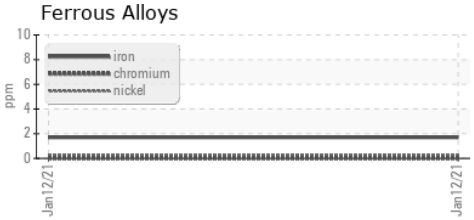

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | --- | --- |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | --- | --- |
| Precipitate | scalar | *Visual | NONE | **NONE** | --- | --- |
| Silt | scalar | *Visual | NONE | **NONE** | --- | --- |
| Debris | scalar | *Visual | NONE | **NONE** | --- | --- |
| Sand/Dirt | scalar | *Visual | NONE | **NONE** | --- | --- |
| Appearance | scalar | *Visual | NORML | **NORML** | --- | --- |
| Odor | scalar | *Visual | NORML | **NORML** | --- | --- |
| Emulsified Water | scalar | *Visual | >0.6 | **NEG** | --- | --- |
| Free Water | scalar | *Visual | | **NEG** | --- | --- |

| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D445 | | ▲ **66.0** | --- | --- |
| Visc @ 100°C | cSt | ASTM D445 | | ▲ **9.9** | --- | --- |
| Viscosity Index (VI) | Scale | ASTM D2270 | | **133** | --- | --- |

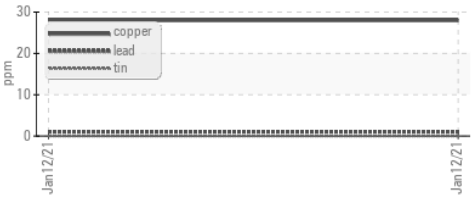
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Color | | |  | *no image* | *no image* |
| Bottom | | |  | *no image* | *no image* |

## GRAPHS

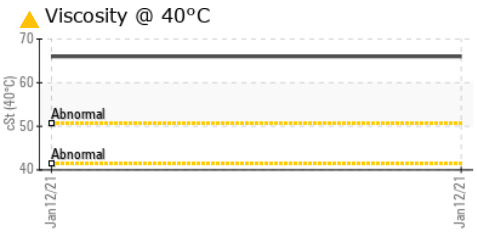
Ferrous Alloys



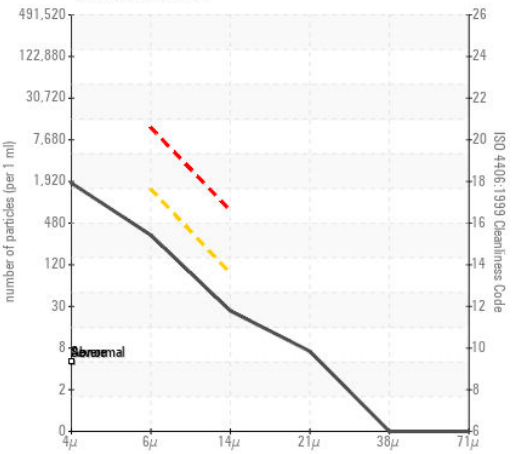

Non-ferrous Metals



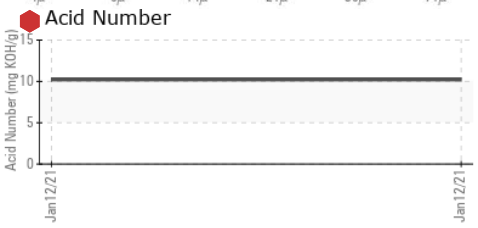

Viscosity @ 40°C




Particle Count




Acid Number




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : WCI2277568 **Received** : 20 Jan 2021
**Lab Number** : 05161896 **Diagnosed** : 28 Jan 2021
**Unique Number** : 9332178 **Diagnostician** : Doug Bogart
**Test Package** : IND 2 ( Additional Tests: KV100, PrtCount, VI )

*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)*


**BEACON LUBRICANTS**
P.O. BOX 754
EDINBORO, PA
US 16412
Contact: Brent Hulings
purchasing@beaconlubricants.com
T: (814)734-7535
F: (814)734-3460