

## **OIL ANALYSIS REPORT**

Sample Rating Trend



Machine Id

# 6607665 (S/N 1080) Compressor

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

#### Recommendation

Resample at the next service interval to monitor.

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

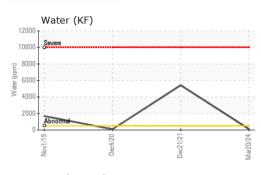
Sample Date         Client Info         20 Mar 2024         21 Dec 2021         04 Dec 2020           Machine Age         hrs         Client Info         1986         1431         964           Oil Age         hrs         Client Info         272         467         964           Sample Status         Imit base         Changed         Not Changed         AttrentTion           WEAR METALS         method         Imit/base         current         history1         history2           Iron         ppm         ASTM 05185n         >50         0         3         1           Okromium         ppm         ASTM 05185n         >10         <1         0         0           Nickel         ppm         ASTM 05185n         >3         <1         0         0           Auminum         ppm         ASTM 05185n         >10         <1         <1         0           Auminum         ppm         ASTM 05185n         >10         <1         <1         0           Auminum         ppm         ASTM 05185n         0         0         0         0           Auminum         ppm         ASTM 05185n         0         0         0         0	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Machine Age         hrs         Client Info         1986         1431         964           Oil Age         hrs         Client Info         272         467         964           Oil Changed         Client Info         272         467         964           Sample Status         NORMAL         ABNORMAL         ABNORMAL         ABNORMAL         ATTENTION           WEAR METALS         method         Imit/base         current         history1         history2           Iron         ppm         ASTM 05185m         >50         0         3         1           Chromium         ppm         ASTM 05185m         >3         <1         0         0           Silver         ppm         ASTM 05185m         >10         <1         <1         0         0           Itaainum         ppm         ASTM 05185m         >10         <1         <1         0         0         0           Autimony         ppm         ASTM 05185m         >10         <1         <1         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0	Sample Number		Client Info		KCPA013872	KCP43115	KCP34468
Oil Age         hrs         Client Info         272         467         964           Oil Changed         Client Info         Changed         Not Changed         Not Changed         Not Changed         Act TChanged         Act TChanged         Act TChanged         Not Changed         Act TChanged         Act TChanged	Sample Date		Client Info		20 Mar 2024	21 Dec 2021	04 Dec 2020
Oil Changed Sample Status         Client Info         Changed NORMAL         Changed ARNORMAL         Not Changed ATTENTION           WEAR METALS         method         Imit/base         current         history1         ATTENTION           WeAR METALS         method         Imit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >50         0         3         1           Chromium         ppm         ASTM D5185m         >3         <1	Machine Age	hrs	Client Info		1986	1431	964
Sample Status         MORMAL         ABNORMAL         ATTENTION           WEAR METALS         method         imitibase         current         history1         history2           Iron         ppm         ASTM D5185m         >50         0         3         1           Chromium         ppm         ASTM D5185m         >3         <1	Oil Age	hrs	Client Info		272	467	964
Sample Status         MORMAL         ABNORMAL         ATTENTION           WEAR METALS         method         imitibase         current         history1         history2           Iron         ppm         ASTM D5185m         >50         0         3         1           Chromium         ppm         ASTM D5185m         >3         <1	-		Client Info		Changed	Changed	Not Changd
Iron         ppm         ASTM D5185m         >50         0         3         1           Chromium         ppm         ASTM D5185m         >10         <1	Sample Status				-		
Chromium         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	0	3	1
Titanium         ppm         ASTM D5185m         >3         <1         0         0           Silver         ppm         ASTM D5185m         >2         0         0         0           Aluminum         ppm         ASTM D5185m         >10         2         <1	Chromium	ppm	ASTM D5185m	>10	<1	0	0
Titanium         ppm         ASTM D5185m         >3         <1         0         0           Silver         ppm         ASTM D5185m         >2         0         0         0           Aluminum         ppm         ASTM D5185m         >10         2         <1	Nickel	ppm	ASTM D5185m	>3	<1	0	0
Silver         ppm         ASTM D5185m         >2         0         0         0           Aluminum         ppm         ASTM D5185m         >10         2         <1	Titanium		ASTM D5185m	>3	<1	0	0
Aluminum         ppm         ASTM D5185m         >10         2         <1         0           Lead         ppm         ASTM D5185m         >10         <1							
Lead         ppm         ASTM D5185m         >10         <1	Aluminum			>10		<1	0
Copper         ppm         ASTM D5185m         >50         3         22         5           Tin         ppm         ASTM D5185m         >10         <1							
Tin         ppm         ASTM D5185m         >10         <1         <1         0           Antimony         ppm         ASTM D5185m         0         0         0           Vanadium         ppm         ASTM D5185m         0         0         0           Cadmium         ppm         ASTM D5185m         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         <1							
Antimony         ppm         ASTM D5185m          0         0           Vanadium         ppm         ASTM D5185m         0         0         0           Cadmium         ppm         ASTM D5185m         <1	••				-		
Vanadium         ppm         ASTM D5185m         0         0         0         0           Cadmium         ppm         ASTM D5185m         <1				210			
Cadmium         ppm         ASTM D5185m         <1         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         <1         0           Barium         ppm         ASTM D5185m         90         0         0         0         0           Barium         ppm         ASTM D5185m         90         0         0         0         0           Magnese         ppm         ASTM D5185m         <1         0         <1         0         <1           Calcium         ppm         ASTM D5185m         2         4         2         0         11           Calcium         ppm         ASTM D5185m         2         4         2         0           Calcium         ppm         ASTM D5185m         2         4         2         0           Sulfur         ppm         ASTM D5185m         2         38         82         53           Sulfur         ppm         ASTM D5185m         23001         15734         16794           CONTAMINANTS         method         limit/base         current         hist							
ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         <1							
Boron         ppm         ASTM D5185m         0         <1         0           Barium         ppm         ASTM D5185m         90         0         0         0           Molybdenum         ppm         ASTM D5185m         <1		ррш			<1		
Barium         ppm         ASTM D5185m         90         0         0         0           Molybdenum         ppm         ASTM D5185m         <1	ADDITIVES			limit/base			
Molybdenum       ppm       ASTM D5185m       <1	Boron	ppm					
Marganese       ppm       ASTM D5185m       <1       0       <1         Magnesium       ppm       ASTM D5185m       90       29       0       11         Calcium       ppm       ASTM D5185m       2       4       2       0         Phosphorus       ppm       ASTM D5185m       0       9       5         Zinc       ppm       ASTM D5185m       0       9       5         Sulfur       ppm       ASTM D5185m       23001       15734       16794         CONTAMINANTS       method       limit/base       current       history1       history2         Silicon       ppm       ASTM D5185m       >25       <1       5       2         Sodium       ppm       ASTM D5185m       >20       2       0       <1         Vater       %       ASTM D6304       >0.05       0.010       0.542       0.007         opm       ASTM D6304       >500       109       5420       77.3         FLUID CLEANLINESS       method       limit/base       current       history1       history2         Particles >4µm       ASTM D7647       1300       616        6747         Particle	Barium	ppm	ASTM D5185m	90	0	0	0
Magnesium         ppm         ASTM D5185m         90         29         0         11           Calcium         ppm         ASTM D5185m         2         4         2         0           Phosphorus         ppm         ASTM D5185m         0         9         5           Zinc         ppm         ASTM D5185m         0         9         5           Sulfur         ppm         ASTM D5185m         23001         15734         16794           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         <1	Molybdenum	ppm	ASTM D5185m		<1	0	0
Calcium         ppm         ASTM D5185m         2         4         2         0           Phosphorus         ppm         ASTM D5185m         0         9         5           Zinc         ppm         ASTM D5185m         38         82         53           Sulfur         ppm         ASTM D5185m         23001         15734         16794           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         <1	Manganese	ppm	ASTM D5185m		<1	0	<1
Phosphorus         ppm         ASTM D5185m         0         9         5           Zinc         ppm         ASTM D5185m         38         82         53           Sulfur         ppm         ASTM D5185m         23001         15734         16794           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         <1	Magnesium	ppm	ASTM D5185m	90	29	0	11
Zinc         ppm         ASTM D5185m         38         82         53           Sulfur         ppm         ASTM D5185m         23001         15734         16794           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         <1	Calcium	ppm	ASTM D5185m	2	4	2	0
Sulfur         ppm         ASTM D5185m         23001         15734         16794           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         <1	Phosphorus	ppm	ASTM D5185m		0	9	5
CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         <1	Zinc	ppm	ASTM D5185m		38	82	53
Silicon       ppm       ASTM D5185m       >25       <1       5       2         Sodium       ppm       ASTM D5185m       >20       8       <1       6         Potassium       ppm       ASTM D5185m       >20       2       0       <1         Water       %       ASTM D6304       >0.05       0.010       ▲ 0.542       0.007         ppm Water       ppm       ASTM D6304       >500       109       ▲ 5420       77.3         FLUID CLEANLINESS       method       limit/base       current       history1       history2         Particles >4µm       ASTM D7647       >1300       616        6747         Particles >6µm       ASTM D7647       >80       47        121         Particles >1µm       ASTM D7647       >20       11        33         Particles >21µm       ASTM D7647       20       11        2         Particles >71µm       ASTM D7647       3       0        2         Particles >71µm       ASTM D7647       3       0        2         Particles >71µm       ASTM D7647       3       0        0 <th< td=""><td>Sulfur</td><td>ppm</td><td>ASTM D5185m</td><td></td><th>23001</th><td>15734</td><td>16794</td></th<>	Sulfur	ppm	ASTM D5185m		23001	15734	16794
Sodium         ppm         ASTM D5185m         8         <1         6           Potassium         ppm         ASTM D5185m         >20         2         0         <1	CONTAMINANTS	5	method	limit/base	current	history1	history2
Potassium         ppm         ASTM D5185m         >20         2         0         <1           Water         %         ASTM D6304         >0.05         0.010         0.542         0.007           ppm Water         ppm         ASTM D6304         >500         109         5420         77.3           FLUID CLEANLINESS         method         limit/base         current         history1         history2           Particles >4µm         ASTM D7647         1675          6747           Particles >6µm         ASTM D7647         >1300         616          1623           Particles >14µm         ASTM D7647         >80         47          121           Particles >21µm         ASTM D7647         >20         11          33           Particles >38µm         ASTM D7647         >3         0          2           Particles >71µm         ASTM D7647         >3         0          0           Oil Cleanliness         ISO 4406 (c)         >/17/13         18/16/13          18/14	Silicon	ppm	ASTM D5185m	>25	<1	5	2
Potassium         ppm         ASTM D5185m         >20         2         0         <1           Water         %         ASTM D6304         >0.05         0.010         △         0.542         0.007           ppm Water         ppm         ASTM D6304         >500         109         △         5420         77.3           FLUID CLEANLINESS         method         limit/base         current         history1         history2           Particles >4µm         ASTM D7647         >1675          6747           Particles >6µm         ASTM D7647         >1300         616          1623           Particles >14µm         ASTM D7647         >80         47          121           Particles >21µm         ASTM D7647         >20         11          33           Particles >38µm         ASTM D7647         >3         0          0           Oil Cleanliness         ISO 4406 (c)         >/17/13         18/16/13          18/14           FLUID DEGRADATION         method         limit/base         current         history1         history2	Sodium	ppm	ASTM D5185m		8	<1	6
Water         %         ASTM D6304         >0.05         0.010         ▲ 0.542         0.007           ppm Water         ppm         ASTM D6304         >500         109         ▲ 5420         77.3           FLUID CLEANLINESS         method         limit/base         current         history1         history2           Particles >4µm         ASTM D7647         1675          6747           Particles >6µm         ASTM D7647         >1300         616          1623           Particles >14µm         ASTM D7647         >80         47          121           Particles >21µm         ASTM D7647         >20         11          33           Particles >38µm         ASTM D7647         >3         0          0           Oil Cleanliness         ISO 4406 (c)         >/17/13         18/16/13          18/14           FLUID DEGRADATION         method         limit/base         current         history1         history2	Potassium		ASTM D5185m	>20	2	0	<1
ppm Water         ppm         ASTM D6304         >500         109         ▲ 5420         77.3           FLUID CLEANLINESS         method         limit/base         current         history1         history2           Particles >4µm         ASTM D7647         1675          6747           Particles >6µm         ASTM D7647         >1300         616          1623           Particles >14µm         ASTM D7647         >80         47          121           Particles >21µm         ASTM D7647         >20         11          33           Particles >38µm         ASTM D7647         >4         0          2           Particles >71µm         ASTM D7647         >3         0          0           Oil Cleanliness         ISO 4406 (c)        /17/13         18/16/13          18/14           FLUID DEGRADATION         method         limit/base         current         history1         history2	Water		ASTM D6304	>0.05		▲ 0.542	0.007
Particles >4μm       ASTM D7647       1675        6747         Particles >6μm       ASTM D7647       >1300       616        1623         Particles >14μm       ASTM D7647       >80       47        121         Particles >21μm       ASTM D7647       >20       11        33         Particles >21μm       ASTM D7647       >20       11        2         Particles >38μm       ASTM D7647       >4       0        2         Particles >71μm       ASTM D7647       >3       0        0         Oil Cleanliness       ISO 4406 (c)       >/17/13       18/16/13        18/14         FLUID DEGRADATION       method       limit/base       current       history1       history2	ppm Water		ASTM D6304	>500	109	▲ 5420	77.3
Particles >6μm         ASTM D7647         >1300         616          1623           Particles >14μm         ASTM D7647         >80         47          121           Particles >21μm         ASTM D7647         >20         11          33           Particles >38μm         ASTM D7647         >4         0          2           Particles >38μm         ASTM D7647         >3         0          2           Particles >71μm         ASTM D7647         >3         0          0           Oil Cleanliness         ISO 4406 (c)         >/17/13         18/16/13          18/14           FLUID DEGRADATION         method         limit/base         current         history1         history2	FLUID CLEANLIN	NESS	method	limit/base	current	history1	history2
Particles >14µm       ASTM D7647       >80       47        121         Particles >21µm       ASTM D7647       >20       11        33         Particles >38µm       ASTM D7647       >4       0        2         Particles >38µm       ASTM D7647       >3       0        0         Particles >71µm       ASTM D7647       >3       0        0         Oil Cleanliness       ISO 4406 (c)       >/17/13       18/16/13        18/14         FLUID DEGRADATION       method       limit/base       current       history1       history2	Particles >4µm		ASTM D7647		1675		6747
Particles >21μm         ASTM D7647         >20         11          33           Particles >38μm         ASTM D7647         >4         0          2           Particles >71μm         ASTM D7647         >3         0          0           Oil Cleanliness         ISO 4406 (c)         >/17/13         18/16/13          18/14           FLUID DEGRADATION         method         limit/base         current         history1         history2	Particles >6µm		ASTM D7647	>1300	616		623
Particles >38μm         ASTM D7647         >4         0          2           Particles >71μm         ASTM D7647         >3         0          0           Oil Cleanliness         ISO 4406 (c)         >/17/13         18/16/13          0           FLUID DEGRADATION         method         limit/base         current         history1         history2	Particles >14µm		ASTM D7647	>80	47		<b>121</b>
Particles >71μm         ASTM D7647         >3         0          0           Oil Cleanliness         ISO 4406 (c)         >/17/13         18/16/13          ● 18/14           FLUID DEGRADATION         method         limit/base         current         history1         history2	Particles >21µm		ASTM D7647	>20	11		33
Oil Cleanliness       ISO 4406 (c) >/17/13       18/16/13        18/14         FLUID DEGRADATION       method       limit/base       current       history1       history2	Particles >38µm		ASTM D7647	>4	0		2
Oil Cleanliness       ISO 4406 (c)       >/17/13       18/16/13        18/14         FLUID DEGRADATION       method       limit/base       current       history1       history2	Particles >71µm		ASTM D7647	>3	0		0
	Oil Cleanliness				18/16/13		18/14
Acid Number (AN) mg KOH/g ASTM D8045 0.4 0.28 0.17 0.166	FLUID DEGRADA	ATION	method	limit/base	current	history1	history2
	Acid Number (AN)	mg KOH/g	ASTM D8045	0.4	0.28	0.17	0.166

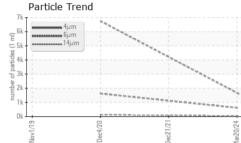
Report Id: BEEGRO [WUSCAR] 06148093 (Generated: 04/17/2024 20:50:04) Rev: 1

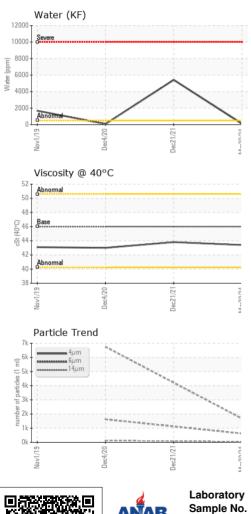
Contact/Location: BILL W - BEEGRO



# **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	LIGHT
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	<b>1</b> .0	NEG
FLUID PROPERT	IES	method	limit/base	current	history1	history2
FLUID PROPERT Visc @ 40°C	TES cSt	method ASTM D445	limit/base 46	current 43.4	history1 43.8	history2 43.0
	cSt				· · · · · ·	
Visc @ 40°C	cSt	ASTM D445	46	43.4	43.8	43.0

Ferrous Alloys Particle Count 491 520 122,880 icke 30,720 7,680 20 8 Dec21/21 Pr4/7 4406 (per 1 1,920 19999 Non-ferrous Metals 480 25 120 20 15 30 Dec21/21 ar4/70 Aar20/74 Viscosity @ 40°C Acid Number 55 (B)0.50 HOX 0.40 Base 50 Ë 0.30 Ba 45 ළි 0.20 Abnorn 40 Jan 0.10 0.00 P 35 Dec21/21-Mar20/24 -Dec4/20. Dec4/20 Dec21/21 01/1/01 Mar20/24 : WearCheck USA - 501 Madison Ave., Cary, NC 27513 **BEER`D BREWING** : KCPA013872 Received : 12 Apr 2024 225 LEONARD DR, UNIT 1B Lab Number : 06148093 Tested : 15 Apr 2024 GROTON, CT US 06340



Unique Number : 10978171 Diagnosed : 17 Apr 2024 - Jonathan Hester Test Package : IND 2 (Additional Tests: KF, PrtCount) Certificate 12367 BILLW@BEERDBREWING.COM 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)

Report Id: BEEGRO [WUSCAR] 06148093 (Generated: 04/17/2024 20:50:04) Rev: 1

Contact/Location: BILL W - BEEGRO Page 2 of 2

Contact: BILL W

T:

F: