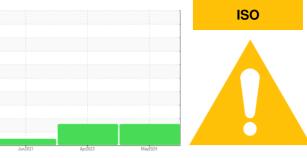


### **OIL ANALYSIS REPORT**

Sample Rating Trend



Machine Id

# **KAESER 7566011**

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 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.

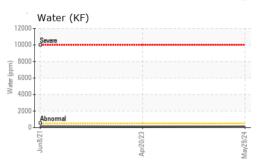
Sample Date     Info     29 May 2024     20 Apr 2023     08 Jun 2021       Machine Age     hrs     Client Info     15751     10748     2020       Oil Age     hrs     Client Info     0     6000     2020       Oil Changed     Client Info     N/A     Changed     Changed     NoRMAL       Sample Status     Image     Image     N/A     Changed     NoRMAL       WEAR METALS     method     Imit/base     current     history1     history2       Iron     ppm     ASTM 05185m     >10     0     0     <1       Nickel     ppm     ASTM 05185m     >3     0     0     <1       Aluminum     ppm     ASTM 05185m     >10     0     0     0       Aduminum     ppm     ASTM 05185m     >10     0     0     0       Aduminum     ppm     ASTM 05185m     >10     0     0     0       Aduminum     ppm     ASTM 05185m     >10     0     0     0	SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Machine Age     hrs     Client Info     15751     10748     2020       Oil Age     hrs     Client Info     0     6000     2020       Oil Changed     Sample Status     Client Info     N/A     Changed     Changed       Sample Status     Client Info     N/A     ABNORMAL     NORMAL     NORMAL       WEAR METALS     method     limit/base     current     history1     history2       Iron     ppm     ASTM D5185m     >50     0     2     2       Chromium     ppm     ASTM D5185m     >10     0     0     0       Silver     ppm     ASTM D5185m     >2     0     <1	Sample Number		Client Info		KC06197631	KC105659	KC93871
Oil Age     hrs     Client Info     0     6000     2020       Oil Changed     Client Info     N/A     Changed     Changed       Sample Status     method     limit/base     current     history1     history2       Iron     ppm     ASTM D5185m     >50     0     2     2       Chromium     ppm     ASTM D5185m     >3     0     0     0       Nickel     ppm     ASTM D5185m     >3     0     0     0       Silver     ppm     ASTM D5185m     >10     0     0     0       Auminum     ppm     ASTM D5185m     >10     0     0     0       Cadadium     ppm     ASTM D5185m     >10     0     0     0       Cadmium     ppm     ASTM D5185m     >0     0     0     0       Adminum     ppm     ASTM D5185m     0     0     0     0       Cadmium     ppm     ASTM D5185m     0     0     0     0	Sample Date		Client Info		29 May 2024	20 Apr 2023	08 Jun 2021
Oil Changed Sample Status     Client Info     N/A ABNORMAL     Changed ABNORMAL     Changed NORMAL       WEAR METALS     method     limit/base     current     history1     history2       Iron     ppm     ASTM 05185m     >50     0     2     2       Chromium     ppm     ASTM 05185m     >30     0     0     0       Nickel     ppm     ASTM 05185m     >3     0     0     0       Silver     ppm     ASTM 05185m     >3     0     0     0       Lead     ppm     ASTM 05185m     >10     0     0     0       Copper     ppm     ASTM 05185m     >10     0     0     0       Vanadium     ppm     ASTM 05185m     >10     0     0     0       Adminum     ppm     ASTM 05185m     0     0     0     0     0       Adminum     ppm     ASTM 05185m     0     0     0     0     0       Adminum     ppm     ASTM 05185m     0	Machine Age	hrs	Client Info		15751	10748	2020
Sample Status     method     Imit/base     current     history1     NORMAL       WEAR METALS     method     limit/base     current     history1     history2       Iron     ppm     ASTM D5185m     >50     0     2     2       Chromium     ppm     ASTM D5185m     >3     0     0     -1       Nickel     ppm     ASTM D5185m     >3     0     0     -1       Silver     ppm     ASTM D5185m     >3     0     0     0       Aluminum     ppm     ASTM D5185m     >10     0     0     0       Copper     ppm     ASTM D5185m     >10     0     0     0       Cadmium     ppm     ASTM D5185m     0     0     0     0       Adadium     ppm     ASTM D5185m     0     0     0     0       Adadium     ppm     ASTM D5185m     0     0     0     0       Adamonu     ppm     ASTM D5185m     0     0     0	Oil Age	hrs	Client Info		0	6000	2020
WEAR METALS     method     limit/base     current     history1     history2       Iron     ppm     ASTM D5185m     >50     0     2     2       Chromium     ppm     ASTM D5185m     >10     0     0     0       Nickel     ppm     ASTM D5185m     >3     0     0     0     0       Silver     ppm     ASTM D5185m     >3     0     0     0     0       Aluminum     ppm     ASTM D5185m     >10     <1	Oil Changed		Client Info		N/A	Changed	Changed
Iron     ppm     ASTM D5185m     >50     0     2     2       Chromium     ppm     ASTM D5185m     >10     0     0     0       Nickel     ppm     ASTM D5185m     >3     0     0     0       Silver     ppm     ASTM D5185m     >2     0     0     0       Aduminum     ppm     ASTM D5185m     >10     <1	Sample Status				ABNORMAL	ABNORMAL	NORMAL
Chromium     ppm     ASTM D5185m     >10     0     0     0       Nickel     ppm     ASTM D5185m     >3     0     0     <1	WEAR METALS		method	limit/base	current	history1	history2
Nickel     ppm     ASTM D5185m     >3     0     0     <1       Titanium     ppm     ASTM D5185m     >3     0     0     0       Silver     ppm     ASTM D5185m     >10     <1	Iron	ppm	ASTM D5185m	>50	0	2	2
Titanium     ppm     ASTM D5185m     >3     0     0     0       Silver     ppm     ASTM D5185m     >2     0     0     <1	Chromium	ppm	ASTM D5185m	>10	0	0	0
Silver     ppm     ASTM D5185m     >2     0     <1     <1       Aluminum     ppm     ASTM D5185m     >10     <1	Nickel	ppm	ASTM D5185m	>3	0	0	<1
Silver     ppm     ASTM D5185m     >2     0     <1     <1       Aluminum     ppm     ASTM D5185m     >10     <1	Titanium		ASTM D5185m	>3	0	0	0
Aluminum     ppm     ASTM D5185m     >10     <1     2     0       Lead     ppm     ASTM D5185m     >10     0     0     0       Copper     ppm     ASTM D5185m     >50     7     17     16       Tin     ppm     ASTM D5185m     >10     0     0     0       Antimony     ppm     ASTM D5185m     0     0     0     0       Vanadium     ppm     ASTM D5185m     0     0     0     0       Cadmium     ppm     ASTM D5185m     0     0     0     0       Boron     ppm     ASTM D5185m     90     0     0     0       Magnesium     ppm     ASTM D5185m     90     <11	Silver		ASTM D5185m	>2	0	0	<1
Lead     ppm     ASTM D5185m     >10     0     0     0       Copper     ppm     ASTM D5185m     >50     7     17     16       Tin     ppm     ASTM D5185m     >10     0     0     0       Antimony     ppm     ASTM D5185m       <1	Aluminum	ppm	ASTM D5185m	>10	<1	2	0
Copper     ppm     ASTM D5185m     >50     7     17     16       Tin     ppm     ASTM D5185m     >10     0     0     0       Antimony     ppm     ASTM D5185m     0     0     0     0       Vanadium     ppm     ASTM D5185m     0     0     0     0       Cadmium     ppm     ASTM D5185m     0     0     0     0       ADDITIVES     method     limit/base     current     history1     history2       Boron     ppm     ASTM D5185m     0     0     0     0       Magnese     ppm     ASTM D5185m     90     <1	Lead						
Tin   ppm   ASTM D5185m   >10   0   0   0     Antimony   ppm   ASTM D5185m   0     <1     Vanadium   ppm   ASTM D5185m   0   0   0   0     Cadmium   ppm   ASTM D5185m   0   0   0   0     ADDITIVES   method   limit/base   current   history1   history2     Boron   ppm   ASTM D5185m   0   0   0   0   0     Barium   ppm   ASTM D5185m   90   0   0   0   0   0     Magnesium   ppm   ASTM D5185m   90   <1   18   20   2   1   18   20   2   1   18   20   2   1   18   20   2   1   18   20   2   1   18   20   2   1   18   20   2   2   1   18   2   1   18   2   1   2   1   2   1   2   1   2   1   2 <td></td> <td></td> <td></td> <td>&gt;50</td> <th></th> <td></td> <td>16</td>				>50			16
Antimony     ppm     ASTM D5185m       <1       Vanadium     ppm     ASTM D5185m     0     0     0     0       Cadmium     ppm     ASTM D5185m     0     0     0     0       ADDITIVES     method     limit/base     current     history1     history2       Boron     ppm     ASTM D5185m     0     0     0     0       Barium     ppm     ASTM D5185m     0     0     0     0       Magnese     ppm     ASTM D5185m     0     <1							
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     0     0     0       Barium     ppm     ASTM D5185m     90     0     0     0       Molybdenum     ppm     ASTM D5185m     90     <1	Antimony		ASTM D5185m				<1
Cadmium     ppm     ASTM D5185m     0     0     0       ADDITIVES     method     limit/base     current     history1     history2       Boron     ppm     ASTM D5185m     0     0     0     <1       Barium     ppm     ASTM D5185m     90     0     0     0     0       Magnese     ppm     ASTM D5185m     90     <1     18     20       Calcium     ppm     ASTM D5185m     90     <1     18     20       Calcium     ppm     ASTM D5185m     90     <1     18     20       Calcium     ppm     ASTM D5185m     90     <1     18     20       Contramino     ppm     ASTM D5185m     2     <1     0     1     3       Silicon     ppm     ASTM D5185m     >25     0     <1     <1     6       Sodium     ppm     ASTM D5185m     >20     0     <1     6       Sodium     ppm     ASTM D5185m     >20	Vanadium				0	0	
ADDITIVES     method     limit/base     current     history1     history2       Boron     ppm     ASTM D5185m     0     0     <1	Cadmium						
Boron     ppm     ASTM D5185m     0     0     <1       Barium     ppm     ASTM D5185m     90     0     0     0       Molybdenum     ppm     ASTM D5185m     0     0     0     0       Manganese     ppm     ASTM D5185m     0     <1		le le		limit/base	-		
Barium     ppm     ASTM D5185m     90     0     0     0       Molybdenum     ppm     ASTM D5185m     0     0     0       Manganese     ppm     ASTM D5185m     90     <1		nom		IIIIII/base			
Molybdenum     ppm     ASTM D5185m     0     0     0       Manganese     ppm     ASTM D5185m     90     <1				00			
Manganese   ppm   ASTM D5185m   0   <1   <1     Magnesium   ppm   ASTM D5185m   90   <1				90			
Magnesium     ppm     ASTM D5185m     90     <1     18     20       Calcium     ppm     ASTM D5185m     2     <1	-				-		
Calcium     ppm     ASTM D5185m     2     <1     0     0       Phosphorus     ppm     ASTM D5185m     0     1     3       Zinc     ppm     ASTM D5185m     0     122     76       CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >25     0     <1	•			00	-		
Phosphorus     ppm     ASTM D5185m     0     1     3       Zinc     ppm     ASTM D5185m     100     122     76       CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >25     0     <1     3       Sodium     ppm     ASTM D5185m     >25     0     <1     <1     3       Sodium     ppm     ASTM D5185m     >20     0     <1     6       Vater     %     ASTM D6304     >0.05     0.007     0.013     0.016       ppm Water     ppm     ASTM D6304     >500     72     137.2     169.5       FLUID CLEANLINESS     method     limit/base     current     history1     history2       Particles >4µm     ASTM D7647     >1300     3288     3181     1137       Particles >6µm     ASTM D7647     >80     288     300     27       Particles >21µm     ASTM D7647     20     63     30     10	0						
Zinc     ppm     ASTM D5185m     100     122     76       CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >25     0     <1				2			
CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >25     0     <1					-		
Silicon   ppm   ASTM D5185m   >25   0   <1   <1     Sodium   ppm   ASTM D5185m   20   0   <1   6     Potassium   ppm   ASTM D5185m   >20   0   <1   6     Water   %   ASTM D6304   >0.05   0.007   0.013   0.016     ppm Water   ppm   ASTM D6304   >500   72   137.2   169.5     FLUID CLEANLINESS   method   limit/base   current   history1   history2     Particles >4µm   ASTM D7647   10489   8846   16699     Particles >6µm   ASTM D7647   >1300   3288   3181   1137     Particles >14µm   ASTM D7647   >20   63   30   10     Particles >21µm   ASTM D7647   >20   63   30   0   0     Particles >38µm   ASTM D7647   >3   0   0   0   0     Particles >71µm   ASTM D7647   >3   0   0   0   0     Oil Cleanliness   ISO 4406 (c)   >/17/13   21/19/15							
Sodium     ppm     ASTM D5185m     2     4     5       Potassium     ppm     ASTM D5185m     >20     0     <1							
Potassium     ppm     ASTM D5185m     >20     0     <1     6       Water     %     ASTM D6304     >0.05     0.007     0.013     0.016       ppm     ASTM D6304     >500     72     137.2     169.5       FLUID CLEANLINESS     method     limit/base     current     history1     history2       Particles >4µm     ASTM D7647     10489     8846     16699     11137       Particles >6µm     ASTM D7647     >1300     3288     3181     1137       Particles >14µm     ASTM D7647     >20     63     30     10       Particles >21µm     ASTM D7647     >20     63     30     0     0       Particles >38µm     ASTM D7647     >3     0     0     0     0       Oil Cleanliness     ISO 4406 (c)     >/17/13     21/19/15     20/19/14     17/12       FLUID DEGRADATION     method     limit/base     current     history1     history2				>25			
Water     %     ASTM D6304     >0.05     0.007     0.013     0.016       ppm Water     ppm     ASTM D6304     >500     72     137.2     169.5       FLUID CLEANLINESS     method     limit/base     current     history1     history2       Particles >4µm     ASTM D7647     10489     8846     16699       Particles >6µm     ASTM D7647     >1300     3288     3181     1137       Particles >6µm     ASTM D7647     >80     288     130     27       Particles >14µm     ASTM D7647     >20     63     30     10       Particles >21µm     ASTM D7647     >4     3     0     0       Particles >38µm     ASTM D7647     >3     0     0     0       Particles >71µm     ASTM D7647     >3     0     0     0       Oli Cleanliness     ISO 4406 (c)     >/17/13     21/19/15     20/19/14     17/12       FLUID DEGRADATION     method     limit/base     current     history1     history2							
ppm Water     ppm     ASTM D6304     >500     72     137.2     169.5       FLUID CLEANLINESS     method     limit/base     current     history1     history2       Particles >4µm     ASTM D7647     10489     8846     16699       Particles >6µm     ASTM D7647     >1300     3288     3181     1137       Particles >6µm     ASTM D7647     >20     4 63     30     10       Particles >21µm     ASTM D7647     >20     63     30     10       Particles >38µm     ASTM D7647     >3     0     0     0       Particles >71µm     ASTM D7647     >3     0     0     0       Oil Cleanliness     ISO 4406 (c)     >/17/13     21/19/15     20/19/14     17/12       FLUID DEGRADATION     method     limit/base     current     history1     history2							
FLUID CLEANLINESS   method   limit/base   current   history1   history2     Particles >4µm   ASTM D7647   10489   8846   16699     Particles >6µm   ASTM D7647   >1300   3288   3181   1137     Particles >6µm   ASTM D7647   >1300   3288   3181   1137     Particles >14µm   ASTM D7647   >80   288   130   27     Particles >21µm   ASTM D7647   >20   63   30   10     Particles >38µm   ASTM D7647   >4   3   0   0     Particles >71µm   ASTM D7647   >3   0   0   0     Oil Cleanliness   ISO 4406 (c)   >/17/13   21/19/15   20/19/14   17/12     FLUID DEGRADATION   method   limit/base   current   history1   history2		%					
Particles >4μm   ASTM D7647   10489   8846   16699     Particles >6μm   ASTM D7647   >1300   ▲ 3288   ▲ 3181   1137     Particles >14μm   ASTM D7647   >80   ▲ 288   ■ 130   27     Particles >21μm   ASTM D7647   >20   ▲ 63   ■ 30   10     Particles >21μm   ASTM D7647   >20   ▲ 63   ■ 30   0     Particles >38μm   ASTM D7647   >4   3   0   0     Particles >71μm   ASTM D7647   >3   0   0   0     Oil Cleanliness   ISO 4406 (c)   >/17/13   ▲ 21/19/15   ▲ 20/19/14   17/12     FLUID DEGRADATION   method   limit/base   current   history1   history2	ppm Water	ppm		>500	72	137.2	169.5
Particles >6µm   ASTM D7647   >1300   ▲ 3288   ▲ 3181   1137     Particles >14µm   ASTM D7647   >80   ▲ 288   130   27     Particles >21µm   ASTM D7647   >20   ▲ 63   30   10     Particles >38µm   ASTM D7647   >4   3   0   0     Particles >38µm   ASTM D7647   >4   3   0   0     Particles >71µm   ASTM D7647   >3   0   0   0     Oil Cleanliness   ISO 4406 (c)   >/17/13   21/19/15   20/19/14   17/12     FLUID DEGRADATION   method   limit/base   current   history1   history2	FLUID CLEANLIN	IESS	method	limit/base	current	history1	history2
Particles >14µm   ASTM D7647   >80   ▲ 288   130   27     Particles >21µm   ASTM D7647   >20   ▲ 63   30   10     Particles >38µm   ASTM D7647   >4   3   0   0     Particles >71µm   ASTM D7647   >3   0   0   0     Oil Cleanliness   ISO 4406 (c)   >/17/13   ▲ 21/19/15   ▲ 20/19/14   17/12     FLUID DEGRADATION   method   limit/base   current   history1   history2	Particles >4µm						
Particles >21μm     ASTM D7647     >20     ▲ 63     30     10       Particles >38μm     ASTM D7647     >4     3     0     0       Particles >38μm     ASTM D7647     >4     3     0     0       Particles >71μm     ASTM D7647     >3     0     0     0       Oil Cleanliness     ISO 4406 (c)     >/17/13     21/19/15     ≥20/19/14     17/12       FLUID DEGRADATION     method     limit/base     current     history1     history2	Particles >6µm			>1300		<u> </u>	
Particles >38μm     ASTM D7647     >4     3     0     0       Particles >71μm     ASTM D7647     >3     0     0     0       Oil Cleanliness     ISO 4406 (c)     >/17/13     ▲ 21/19/15     ▲ 20/19/14     17/12       FLUID DEGRADATION     method     limit/base     current     history1     history2	Particles >14µm						
Particles >71μm     ASTM D7647     >3     0     0     0       Oil Cleanliness     ISO 4406 (c)     >/17/13     ▲ 21/19/15     ▲ 20/19/14     17/12       FLUID DEGRADATION     method     limit/base     current     history1     history2			ASTM D7647	>20		<u> </u>	10
Oil Cleanliness   ISO 4406 (c)   >/17/13   ▲ 21/19/15   ▲ 20/19/14   17/12     FLUID DEGRADATION   method   limit/base   current   history1   history2					3	0	0
FLUID DEGRADATION method limit/base current history1 history2	Particles >71µm		ASTM D7647	>3	0	0	0
	Oil Cleanliness		ISO 4406 (c)	>/17/13	<b>A</b> 21/19/15	▲ 20/19/14	17/12
Acid Number (AN) mg KOH/g ASTM D8045 0.4 0.38 0.42 0.421	FLUID DEGRADA	TION	method	limit/base	current	history1	history2
	Acid Number (AN)	mg KOH/g	ASTM D8045	0.4	0.38	0.42	0.421

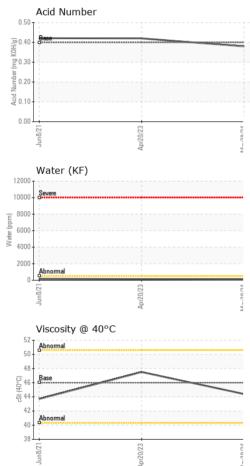
Contact/Location: Service Manager - CINSTR Page 1 of 2



Built for a lifetime.

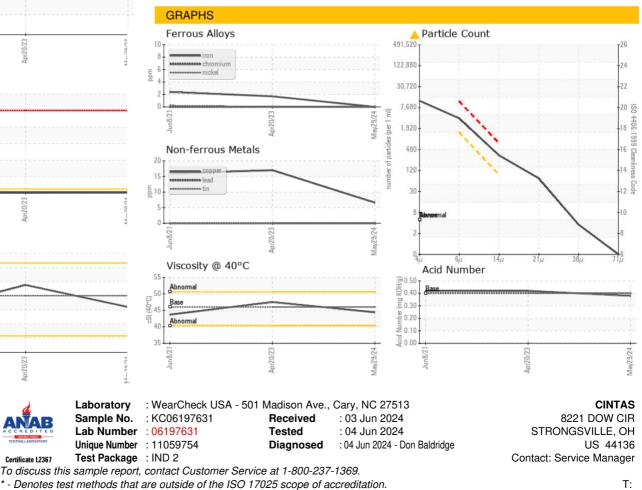
## A Particle Trend 20 /1 ml) umber of particles ( 0





### **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	44.4	47.5	43.7
SAMPLE IMAGES	2	method	11. 11.0			
	2	method	limit/base	current	history1	history2
Color	5	Μετιοά	limit/base	current	history1	history2



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

Certificate 12367

Contact/Location: Service Manager - CINSTR Page 2 of 2