

# **PROBLEM SUMMARY**

Sample Rating Trend

ISO

A

#### Machine Id

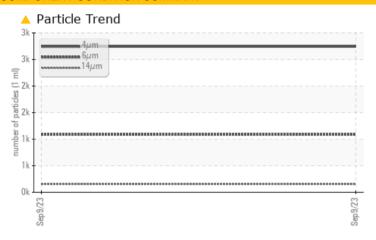
# KAESER ASD 30T 7361057 (S/N 1072)

Component

Compressor

KAESER SIGMA (OEM) M-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			ATTENTION						
Particles >14µm	ASTM D7647	>80	<b>152</b>						
Particles >21µm	ASTM D7647	>20	<b>△</b> 37						
Oil Cleanliness	ISO 4406 (c)	>/17/13	<b>19/17/14</b>						

Customer Id: CARMERMS Sample No.: KCPA006037 Lab Number: 05962232 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



# **OIL ANALYSIS REPORT**

Sample Rating Trend ISO

# KAESER ASD 30T 7361057 (S/N 1072)

Compressor

KAESER SIGMA (OEM) M-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 moderate 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					Sep2023		
Sample Number   Client Info   KCPA006037   Sample Date   Client Info   09 Sep 2023   Sample Date   Client Info   09 Sep 2023   Sample Date   Sample Date   Scient Info   0	SAMPLE INFORM	MATION	method			historv1	historv2
Sample Date			Client Info				
Machine Age			Client Info				
Oil Changed Oil Changed Sample Status         Client Info         N/A             WEAR METALS         method limit/base current history1             Iron ppm ASTM D5185m >50 0         0             Chromium ppm ASTM D5185m > 20 0              Nickel ppm ASTM D5185m > 3 0              Silver ppm ASTM D5185m > 2 0              Aluminum ppm ASTM D5185m > 2 0              Aluminum ppm ASTM D5185m > 2 0              Lead ppm ASTM D5185m > 10 0         1             Copper ppm ASTM D5185m > 50 14              Tin ppm ASTM D5185m > 50 14              Vanadium ppm ASTM D5185m > 0 0              Cadrium ppm ASTM D5185m O 0         0             Boron ppm ASTM D5185m O 0         0             Malegaesium ppm ASTM D5185m O 0         0             Magnesium ppm AST	·	hrs			•		
Oil Changed Sample Status         Client Info         N/A					0		
WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >50         0             Chromium         ppm         ASTM D5185m         >10         0             Nickel         ppm         ASTM D5185m         >3         0             Tittanium         ppm         ASTM D5185m         >2         0             Aluminum         ppm         ASTM D5185m         >10         1             Aluminum         ppm         ASTM D5185m         >10         0             Aluminum         ppm         ASTM D5185m         >10         0             Aluminum         ppm         ASTM D5185m         >10         0             Lead         ppm         ASTM D5185m         >10         0             Copper         ppm         ASTM D5185m         >10         0             Tin         ppm         ASTM D5185m         0         <	-				· ·		
Iron							
Chromium	WEAR METALS		method	limit/base	current	history1	history2
Chromium         ppm         ASTM D5185m         >10         0             Nickel         ppm         ASTM D5185m         >3         0             Titanium         ppm         ASTM D5185m         >3         0             Silver         ppm         ASTM D5185m         >2         0             Aluminum         ppm         ASTM D5185m         >10         1             Aluminum         ppm         ASTM D5185m         >10         0             Lead         ppm         ASTM D5185m         >10         1             Copper         ppm         ASTM D5185m         >10         1             Tin         ppm         ASTM D5185m         0         <1	Iron	mqq	ASTM D5185m	>50	0		
Nickel   ppm   ASTM D5185m   >3   0	Chromium		ASTM D5185m	>10	0		
Titanium   ppm   ASTM D5185m   >3   0       Silver   ppm   ASTM D5185m   >2   0	Nickel		ASTM D5185m	>3	0		
Silver         ppm         ASTM D5185m         >2         0             Aluminum         ppm         ASTM D5185m         >10         1             Lead         ppm         ASTM D5185m         >50         14             Tin         ppm         ASTM D5185m         >50         14             Vanadium         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         0         0             ADITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         0             Barium         ppm         ASTM D5185m         0         0	Titanium		ASTM D5185m	>3	0		
Aluminum         ppm         ASTM D5185m         >10         1             Lead         ppm         ASTM D5185m         >10         0             Copper         ppm         ASTM D5185m         >50         14             Tin         ppm         ASTM D5185m         >10         <1							
Lead         ppm         ASTM D5185m         >10         0             Copper         ppm         ASTM D5185m         >50         14             Tin         ppm         ASTM D5185m         >10         <1							
Copper         ppm         ASTM D5185m         >50         14             Tin         ppm         ASTM D5185m         >10         <1							
Tin ppm ASTM D5185m >10 <1							
Vanadium         ppm         ASTM D5185m         0             Cadmium         ppm         ASTM D5185m         0             ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         0             Barium         ppm         ASTM D5185m         90         0             Molybdenum         ppm         ASTM D5185m         0         0             Manganese         ppm         ASTM D5185m         0         0             Magnesium         ppm         ASTM D5185m         100         25             Calcium         ppm         ASTM D5185m         0         2             Phosphorus         ppm         ASTM D5185m         0         0             Zinc         ppm         ASTM D5185m         0         111             Sulfur         ppm         ASTM D5185m         23500         19019							
Cadmium         ppm         ASTM D5185m         0             ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         0             Barium         ppm         ASTM D5185m         90         0             Molybdenum         ppm         ASTM D5185m         0         0             Magnesium         ppm         ASTM D5185m         100         25             Calcium         ppm         ASTM D5185m         0         2             Phosphorus         ppm         ASTM D5185m         0         0             Zinc         ppm         ASTM D5185m         0         111             Sulfur         ppm         ASTM D5185m         0         111             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         1 <t< td=""><td></td><td></td><td></td><td>&gt;10</td><td></td><td></td><td></td></t<>				>10			
ADDITIVES					-		
Boron         ppm         ASTM D5185m         0         0             Barium         ppm         ASTM D5185m         90         0             Molybdenum         ppm         ASTM D5185m         0         0             Manganese         ppm         ASTM D5185m         100         25             Magnesium         ppm         ASTM D5185m         0         2             Calcium         ppm         ASTM D5185m         0         0             Phosphorus         ppm         ASTM D5185m         0         0             Phosphorus         ppm         ASTM D5185m         0         0             Silfur         ppm         ASTM D5185m         0         111             Sulfur         ppm         ASTM D5185m         >25         1             Silicon         ppm         ASTM D5185m         >25         1             Sodium         ppm         ASTM D5185m         >20		ppm					
Barium         ppm         ASTM D5185m         90         0             Molybdenum         ppm         ASTM D5185m         0         0             Magnesium         ppm         ASTM D5185m         100         25             Calcium         ppm         ASTM D5185m         0         2             Phosphorus         ppm         ASTM D5185m         0         0             Zinc         ppm         ASTM D5185m         0         111             Sulfur         ppm         ASTM D5185m         0         19019             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         1             Sodium         ppm         ASTM D5185m         >20         11             Sodium         ppm         ASTM D5185m         >20         11             Vater         %         ASTM D5185m         >20	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum         ppm         ASTM D5185m         0         0             Manganese         ppm         ASTM D5185m         0         25             Magnesium         ppm         ASTM D5185m         100         25             Calcium         ppm         ASTM D5185m         0         0             Phosphorus         ppm         ASTM D5185m         0         0             Zinc         ppm         ASTM D5185m         0         111             Sulfur         ppm         ASTM D5185m         23500         19019             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         1             Sodium         ppm         ASTM D5185m         >20         11             Sodium         ppm         ASTM D5185m         >20         11             Water         %         ASTM D6185m         >20 <td>Boron</td> <td>ppm</td> <td>ASTM D5185m</td> <td>0</td> <td></td> <td></td> <td></td>	Boron	ppm	ASTM D5185m	0			
Manganese         ppm         ASTM D5185m         <1             Magnesium         ppm         ASTM D5185m         1 0 0         25             Calcium         ppm         ASTM D5185m         0         2             Phosphorus         ppm         ASTM D5185m         0         0             Zinc         ppm         ASTM D5185m         0         111             Sulfur         ppm         ASTM D5185m         23500         19019             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         1             Sodium         ppm         ASTM D5185m         >25         1             Sodium         ppm         ASTM D5185m         >20         11             Water         %         ASTM D5185m         >20         11             Water         %         ASTM D6304         >0.05         0.009<		ppm	ASTM D5185m	90	0		
Magnesium         ppm         ASTM D5185m         100         25             Calcium         ppm         ASTM D5185m         0         2             Phosphorus         ppm         ASTM D5185m         0         0             Zinc         ppm         ASTM D5185m         0         111             Sulfur         ppm         ASTM D5185m         23500         19019             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         25         1             Sodium         ppm         ASTM D5185m         20         11             Potassium         ppm         ASTM D5185m         >20         11             Water         %         ASTM D6185m         >20         11             Water         %         ASTM D6304         >0.009             ppm Water         ppm         ASTM D6304         >50.0         90.	Molybdenum	ppm	ASTM D5185m	0	0		
Calcium         ppm         ASTM D5185m         0         2             Phosphorus         ppm         ASTM D5185m         0         0             Zinc         ppm         ASTM D5185m         0         111             Sulfur         ppm         ASTM D5185m         23500         19019             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         1             Sodium         ppm         ASTM D5185m         >20         11             Potassium         ppm         ASTM D5185m         >20         11             Water         %         ASTM D5185m         >20         11             Water         %         ASTM D6185m         >20         11             Particles >4µm         ASTM D6304         >500         90.7             FLUID DEGRADATION         ASTM D7647         >1300         1087	Manganese	ppm	ASTM D5185m		<1		
Phosphorus         ppm         ASTM D5185m         0         0             Zinc         ppm         ASTM D5185m         0         111             Sulfur         ppm         ASTM D5185m         23500         19019             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         1             Sodium         ppm         ASTM D5185m         >25         1             Potassium         ppm         ASTM D5185m         >20         11             Water         %         ASTM D5185m         >20         11             Water         %         ASTM D5185m         >20         11             Ppm Water         %         ASTM D6304         >0.05         0.009             FLUID CLEANLINESS         method         limit/base         current         history1         history2           Particles >4µm         ASTM D7647         >80	Magnesium	ppm	ASTM D5185m	100	25		
Zinc         ppm         ASTM D5185m         0         111             Sulfur         ppm         ASTM D5185m         23500         19019             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         1             Sodium         ppm         ASTM D5185m         >20         11             Potassium         ppm         ASTM D5185m         >20         11             Water         %         ASTM D6304         >0.05         0.009             Water         %         ASTM D6304         >500         90.7             ppm Water         ppm         ASTM D6304         >500         90.7             FLUID CLEANLINESS         method         limit/base         current         history1         history2           Particles >4µm         ASTM D7647         >1300         1087             Particles >21µm         ASTM D7647         >20	Calcium	ppm	ASTM D5185m	0	2		
Sulfur         ppm         ASTM D5185m         23500         19019             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         1             Sodium         ppm         ASTM D5185m         >20         11             Potassium         ppm         ASTM D5185m         >20         11             Water         %         ASTM D5185m         >20         11             Water         %         ASTM D5185m         >20         11             Water         %         ASTM D6304         >0.009             ppm Water         ppm         ASTM D6304         >500         90.7             FLUID CLEANLINESS         method         limit/base         current         history1         history2           Particles >4µm         ASTM D7647         >1300         1087             Particles >21µm         ASTM D7647         >20         37	Phosphorus	ppm	ASTM D5185m	0	0		
CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         1             Sodium         ppm         ASTM D5185m         >20         11             Potassium         ppm         ASTM D5185m         >20         11             Water         %         ASTM D6304         >0.05         0.009             ppm Water         ppm         ASTM D6304         >500         90.7             FLUID CLEANLINESS         method         limit/base         current         history1         history2           Particles >4µm         ASTM D7647         >1300         1087             Particles >6µm         ASTM D7647         >80         152             Particles >21µm         ASTM D7647         >20         37             Particles >38µm         ASTM D7647         >3         0             Particles >71µm         ASTM D7647         >3         0 <t< td=""><td>Zinc</td><td>ppm</td><td>ASTM D5185m</td><td>0</td><td>111</td><td></td><td></td></t<>	Zinc	ppm	ASTM D5185m	0	111		
Silicon ppm ASTM D5185m >25 1 Sodium ppm ASTM D5185m   18     Sodium ppm ASTM D5185m   20 11       Sodium ppm ASTM D6304   >0.05   0.009         Sodium ppm ASTM D6304   >500   90.7         Sodium ppm ASTM D6304   >500   90.7         Sodium ppm ASTM D6304   >500   90.7       Sodium ppm ASTM D7647   >500   90.7         Sodium ppm ASTM D7647   >1300   1087         Sodium ppm ASTM D7647   >80	Sulfur	ppm	ASTM D5185m	23500	19019		
Sodium         ppm         ASTM D5185m         18             Potassium         ppm         ASTM D5185m         >20         11             Water         %         ASTM D6304         >0.05         0.0099             ppm Water         ppm         ASTM D6304         >500         90.7             FLUID CLEANLINESS         method         limit/base         current         history1         history2           Particles >4μm         ASTM D7647         2744             Particles >6μm         ASTM D7647         >1300         1087            Particles >14μm         ASTM D7647         >80         152            Particles >21μm         ASTM D7647         >20         37            Particles >38μm         ASTM D7647         >3         0            Particles >71μm         ASTM D7647         >3         0            Oil Cleanliness         ISO 4406 (c)         >/17/13         19/17/14            FLUID DEGRADATION         method         limit/base         current         history1 <t< td=""><td>CONTAMINANTS</td><td>6</td><td>method</td><td>limit/base</td><td>current</td><td>history1</td><td>history2</td></t<>	CONTAMINANTS	6	method	limit/base	current	history1	history2
Sodium         ppm         ASTM D5185m         18             Potassium         ppm         ASTM D5185m         >20         11             Water         %         ASTM D6304         >0.05         0.009             ppm Water         ppm         ASTM D6304         >500         90.7             FLUID CLEANLINESS         method         limit/base         current         history1         history2           Particles >4μm         ASTM D7647         2744             Particles >6μm         ASTM D7647         >1300         1087            Particles >14μm         ASTM D7647         >80         152            Particles >21μm         ASTM D7647         >20         37            Particles >38μm         ASTM D7647         >3         0            Particles >71μm         ASTM D7647         >3         0            Oil Cleanliness         ISO 4406 (c)         >/17/13         19/17/14            FLUID DEGRADATION         method         limit/base         current         history1 <t< td=""><td>Silicon</td><td>ppm</td><td>ASTM D5185m</td><td>&gt;25</td><td>1</td><td></td><td></td></t<>	Silicon	ppm	ASTM D5185m	>25	1		
Potassium         ppm         ASTM D5185m         >20         11             Water         %         ASTM D6304         >0.05         0.009             ppm Water         ppm         ASTM D6304         >500         90.7             FLUID CLEANLINESS         method         limit/base         current         history1         history2           Particles >4μm         ASTM D7647         2744             Particles >6μm         ASTM D7647         >1300         1087            Particles >14μm         ASTM D7647         >80         152            Particles >21μm         ASTM D7647         >20         37            Particles >38μm         ASTM D7647         >4         1            Particles >71μm         ASTM D7647         >3         0            Oil Cleanliness         ISO 4406 (c)         >/17/13         19/17/14            FLUID DEGRADATION         method         limit/base         current         history1         history2	Sodium		ASTM D5185m		18		
Water         %         ASTM D6304         >0.05         0.009             ppm Water         ppm         ASTM D6304         >500         90.7             FLUID CLEANLINESS         method         limit/base         current         history1         history2           Particles >4μm         ASTM D7647         2744             Particles >6μm         ASTM D7647         >1300         1087             Particles >14μm         ASTM D7647         >80         152             Particles >21μm         ASTM D7647         >20         37             Particles >38μm         ASTM D7647         >4         1             Particles >71μm         ASTM D7647         >3         0             Oil Cleanliness         ISO 4406 (c)         >/17/13         19/17/14             FLUID DEGRADATION         method         limit/base         current         history1         history2				>20	_		
ppm Water         ppm         ASTM D6304         >500         90.7             FLUID CLEANLINESS         method         limit/base         current         history1         history2           Particles >4μm         ASTM D7647         2744             Particles >6μm         ASTM D7647         >1300         1087             Particles >14μm         ASTM D7647         >80         152             Particles >21μm         ASTM D7647         >20         37             Particles >38μm         ASTM D7647         >4         1             Particles >71μm         ASTM D7647         >3         0             Oil Cleanliness         ISO 4406 (c)         >/17/13         19/17/14             FLUID DEGRADATION         method         limit/base         current         history1         history2							
Particles >4μm       ASTM D7647       2744           Particles >6μm       ASTM D7647       >1300       1087           Particles >14μm       ASTM D7647       >80       152           Particles >21μm       ASTM D7647       >20       37           Particles >38μm       ASTM D7647       >4       1           Particles >71μm       ASTM D7647       >3       0           Oil Cleanliness       ISO 4406 (c)       >/17/13       19/17/14           FLUID DEGRADATION       method       limit/base       current       history1       history2							
Particles >6μm       ASTM D7647       >1300       1087           Particles >14μm       ASTM D7647       >80       152           Particles >21μm       ASTM D7647       >20       37           Particles >38μm       ASTM D7647       >4       1           Particles >71μm       ASTM D7647       >3       0           Oil Cleanliness       ISO 4406 (c)       >/17/13       19/17/14           FLUID DEGRADATION       method       limit/base       current       history1       history2	FLUID CLEANLIN	IESS	method	limit/base	current	history1	history2
Particles >6μm       ASTM D7647       >1300       1087           Particles >14μm       ASTM D7647       >80       152           Particles >21μm       ASTM D7647       >20       37           Particles >38μm       ASTM D7647       >4       1           Particles >71μm       ASTM D7647       >3       0           Oil Cleanliness       ISO 4406 (c)       >/17/13       19/17/14           FLUID DEGRADATION       method       limit/base       current       history1       history2	Particles >4µm		ASTM D7647		2744		
Particles >14μm         ASTM D7647         >80         ▲ 152             Particles >21μm         ASTM D7647         >20         ▲ 37             Particles >38μm         ASTM D7647         >4         1             Particles >71μm         ASTM D7647         >3         0             Oil Cleanliness         ISO 4406 (c)         >/17/13         ▲ 19/17/14             FLUID DEGRADATION         method         limit/base         current         history1         history2	· · · · · · · · · · · · · · · · · · ·		ASTM D7647	>1300	1087		
Particles >21μm         ASTM D7647         >20         37             Particles >38μm         ASTM D7647         >4         1             Particles >71μm         ASTM D7647         >3         0             Oil Cleanliness         ISO 4406 (c)         >/17/13         19/17/14             FLUID DEGRADATION         method         limit/base         current         history1         history2	•						
Particles >38μm         ASTM D7647         >4         1             Particles >71μm         ASTM D7647         >3         0             Oil Cleanliness         ISO 4406 (c)         >/17/13         19/17/14             FLUID DEGRADATION         method         limit/base         current         history1         history2	•						
Particles >71 $\mu$ m   ASTM D7647 >3   0       Oil Cleanliness   ISO 4406 (c) >/17/13   19/17/14       FLUID DEGRADATION   method   limit/base   current   history1   history2	•						
Oil Cleanliness ISO 4406 (c) >/17/13 ▲ 19/17/14							
	·						
	FLUID DEGRADA	ATION	method	limit/base	current	history1	history2



## **OIL ANALYSIS REPORT**





Certificate L2367

Laboratory Sample No. Lab Number **Unique Number** 

: 05962232

: KCPA006037 : 10668783

Received : 27 Sep 2023 Diagnosed

: 28 Sep 2023 Diagnostician : Don Baldridge

Test Package : IND 2 ( Additional Tests: KF, PrtCount ) 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)

**CARAUSTAR - GREIF** 1242 MONTGOMERY DR MERIDIAN, MS

US 39301 Contact: Service Manager

T: F: