

### **OIL ANALYSIS REPORT**

Sample Rating Trend ISO

Machine Id

# KAESER ASD 25T 6598952 (S/N 1007)

Component Compressor Fluid

KAESER SIGMA (OEM) M-460 (--- GAL)

#### DIAGNOSIS

#### Recommendation

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. 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.

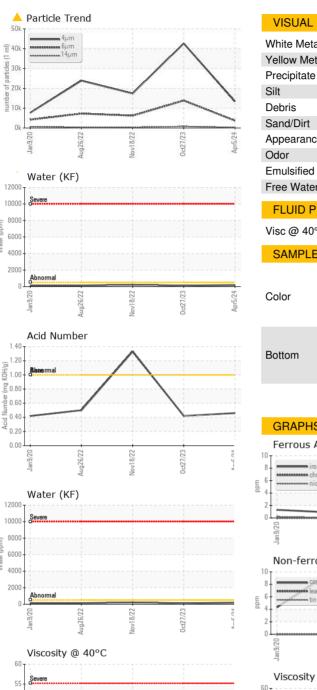
Sample Date     International of the second	SAMPLE INFORM	<b>IATION</b>	method	limit/base	current	history1	history2
Machine Age hrs Client Info 35110 31413 24755   Oil Age hrs Client Info 0 0 1523   Oil Changed Client Info Changed N/A Changed   Sample Status In Intibus current History1 History2   Iron ppm ASTM D5185m >50 0 0 <1	Sample Number		Client Info		KCPA016355	KCPA006573	KCP45801
Oil Age     hrs     Client Info     0     0     1523       Oil Changed     Client Info     Changed     N/A     Changed       Sample Status      Method     Imitibase     current     history1     history2       Iron     ppm     ASTM D5185m     >50     0     0     0     0       Chromium     ppm     ASTM D5185m     >3     0     0     0     0       Nickel     ppm     ASTM D5185m     >3     0     0     0     0       Silver     ppm     ASTM D5185m     >10     1     <1	Sample Date		Client Info		05 Apr 2024	27 Oct 2023	18 Nov 2022
Oil Changed     Client Info     Changed     N/A     Changed       Sample Status     Image     Client Info     ABNORMAL     ABNORMAL     ABNORMAL       WEAR METALS     method     limit/base     current     history1     history2       Iron     ppm     ASTM D5185n     >50     0     0     <1	Machine Age	hrs	Client Info		35110	31413	24755
Sample Status     method     Imit/base     current     history1     ABNORMAL       WEAR METALS     method     limit/base     current     history2       Iron     ppm     ASTM D5185n     >50     0     0     <1	Oil Age	hrs	Client Info		0	0	1523
WEAR METALS     method     limit/base     current     history1     history2       Iron     ppm     ASTM D5185m     >50     0     0     <1	Oil Changed		Client Info		Changed	N/A	Changed
Iron     ppm     ASTM D5185m     >50     0     0     <1	Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
Chromium     ppm     ASTM D5185m     >10     0     0     0       Nickel     ppm     ASTM D5185m     >3     0     0     0       Silver     ppm     ASTM D5185m     >2     0     0     0       Silver     ppm     ASTM D5185m     >10     1     <1     3       Lead     ppm     ASTM D5185m     >10     0     0     0       Copper     ppm     ASTM D5185m     >10     0     0     0       Vanadium     ppm     ASTM D5185m     >10     0     0     0     0       Vanadium     ppm     ASTM D5185m     >10     0     0     0     0       Cadmium     ppm     ASTM D5185m     0     2     16     0     0       Barium     ppm     ASTM D5185m     0     0     0     0     0       Magnesium     ppm     ASTM D5185m     0     0     0     0     0       Calcium     ppm <t< th=""><th>WEAR METALS</th><th></th><th>method</th><th>limit/base</th><th>current</th><th>history1</th><th>history2</th></t<>	WEAR METALS		method	limit/base	current	history1	history2
Nickel     ppm     ASTM D5185m     >3     0     0     0       Titanium     ppm     ASTM D5185m     >3     0     0     0       Silver     ppm     ASTM D5185m     >10     1     <1	Iron	ppm	ASTM D5185m	>50	0	0	<1
Titanium     ppm     ASTM D5185m     >3     0     0     0       Silver     ppm     ASTM D5185m     >2     0     0     0       Aluminum     ppm     ASTM D5185m     >10     1     <1	Chromium	ppm	ASTM D5185m	>10	0	0	0
Silver     ppm     ASTM D5185m     >2     0     0     0       Aluminum     ppm     ASTM D5185m     >10     1     <1	Nickel	ppm	ASTM D5185m	>3	0	0	0
Aluminum     ppm     ASTM D5185m     >10     1     <1     <1     3       Lead     ppm     ASTM D5185m     >10     0     0     0       Copper     ppm     ASTM D5185m     >50     <1	Titanium	ppm	ASTM D5185m	>3	0	0	0
Lead     ppm     ASTM D5185m     >10     0     0     0       Copper     ppm     ASTM D5185m     >50     <1	Silver	ppm	ASTM D5185m	>2	0	0	0
Lead     ppm     ASTM D5185m     >10     0     0     0       Copper     ppm     ASTM D5185m     >50     <1	Aluminum		ASTM D5185m	>10	1	<1	3
Copper     ppm     ASTM D5185m     >50     <1     3     2       Tin     ppm     ASTM D5185m     >10     0     0     <1	Lead				0	0	
Tin     ppm     ASTM D5185m     >10     0     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     <1	Copper		ASTM D5185m	>50	<1	3	2
Vanadium     ppm     ASTM D5185m     0     0     0     0       Cadmium     ppm     ASTM D5185m     0     <1					0		
Cadmium     ppm     ASTM D5185m     0     0     0     0       ADDITIVES     method     limit/base     current     history1     history2       Boron     ppm     ASTM D5185m     0     <1	Vanadium		ASTM D5185m			0	0
Boron     ppm     ASTM D5185m     0     <1     2     16       Barium     ppm     ASTM D5185m     90     28     0     0       Molybdenum     ppm     ASTM D5185m     0     0     0     0     0       Manganese     ppm     ASTM D5185m     100     48     2     16       Calcium     ppm     ASTM D5185m     100     48     2     0     0       Calcium     ppm     ASTM D5185m     0     8     8     354       Calcium     ppm     ASTM D5185m     0     0     0     0     4       Stlifur     ppm     ASTM D5185m     23500     22101     13701     4310       CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >20     3     0     0       Sodium     ppm     ASTM D5185m     >20     3     0     0       Vater     %     ASTM D5185m<							
Barium     ppm     ASTM D5185m     90     28     0     0       Molybdenum     ppm     ASTM D5185m     0     0     0     0       Marganese     ppm     ASTM D5185m     100     48     2     16       Calcium     ppm     ASTM D5185m     100     48     2     0       Phosphorus     ppm     ASTM D5185m     0     0     2     0       Phosphorus     ppm     ASTM D5185m     0     8     8     354       Zinc     ppm     ASTM D5185m     0     0     0     4       Sulfur     ppm     ASTM D5185m     23500     22101     13701     4310       CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >25     0     0     <1       Potassium     ppm     ASTM D5185m     >20     3     0     0       Water     %     ASTM D6304     >0.05	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum     ppm     ASTM D5185m     0     0     0     0     0       Manganese     ppm     ASTM D5185m     100     48     2     16       Calcium     ppm     ASTM D5185m     0     0     2     0       Phosphorus     ppm     ASTM D5185m     0     8     8     354       Zinc     ppm     ASTM D5185m     0     0     0     0     44       Sulfur     ppm     ASTM D5185m     23500     22101     13701     4310       CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >25     0     0     <1	Boron	ppm	ASTM D5185m	0	<1	2	16
Manganese     ppm     ASTM D5185m     0     0     0       Magnesium     ppm     ASTM D5185m     100     48     2     16       Calcium     ppm     ASTM D5185m     0     0     2     0       Phosphorus     ppm     ASTM D5185m     0     0     0     4       Zinc     ppm     ASTM D5185m     0     0     0     4       Sulfur     ppm     ASTM D5185m     23500     22101     13701     4310       CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >25     0     0     <1	Barium	ppm	ASTM D5185m	90	28	0	0
Magnesium     ppm     ASTM D5185m     100     48     2     16       Calcium     ppm     ASTM D5185m     0     0     2     0       Phosphorus     ppm     ASTM D5185m     0     8     8     354       Zinc     ppm     ASTM D5185m     0     0     0     4       Sulfur     ppm     ASTM D5185m     23500     22101     13701     4310       CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >25     0     0     <1	Molybdenum	ppm	ASTM D5185m	0	0	0	0
Calcium     ppm     ASTM D5185m     0     0     2     0       Phosphorus     ppm     ASTM D5185m     0     8     8     354       Zinc     ppm     ASTM D5185m     0     0     0     4       Sulfur     ppm     ASTM D5185m     23500     22101     13701     4310       CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >25     0     0     <1	Manganese	ppm	ASTM D5185m		0	0	0
Phosphorus     ppm     ASTM D5185m     0     8     8     354       Zinc     ppm     ASTM D5185m     0     0     0     0     4       Sulfur     ppm     ASTM D5185m     23500     22101     13701     4310       CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >25     0     0     <1       Sodium     ppm     ASTM D5185m     >25     0     0     <1       Potassium     ppm     ASTM D5185m     >20     3     0     0       Water     %     ASTM D5185m     >20     3     0     0.011     0.021       ppm     ASTM D5044     >0.05     0.019     0.011     0.021       ppm     ASTM D7647     13396     42634     17379       Particles >4µm     ASTM D7647     >1300     3725     13854     6228       Particles >14µm     ASTM D7647     >20     71     126	Magnesium	ppm	ASTM D5185m	100	48	2	16
Zinc     ppm     ASTM D5185m     0     0     0     0     4       Sulfur     ppm     ASTM D5185m     23500     22101     13701     4310       CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >25     0     0     <1	Calcium	ppm	ASTM D5185m	0	0	2	0
Sulfur     ppm     ASTM D5185m     23500     22101     13701     4310       CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >25     0     0     <1       Sodium     ppm     ASTM D5185m     >25     0     0     <1       Potassium     ppm     ASTM D5185m     >20     3     0     0       Water     %     ASTM D6304     >0.05     0.019     0.011     0.021       ppm Water     ppm     ASTM D6304     >500     192     117.8     217.8       FLUID CLEANLINESS     method     limit/base     current     history1     history2       Particles >4µm     ASTM D7647     >1300     3725     13854     6228       Particles >6µm     ASTM D7647     >1300     3725     13854     6228       Particles >1µm     ASTM D7647     >20     71     126     57       Particles >38µm     ASTM D7647     >3     0	Phosphorus	ppm	ASTM D5185m	0	8	8	354
CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >25     0     0     <1	Zinc	ppm	ASTM D5185m	0	0	0	4
Silicon   ppm   ASTM D5185m   >25   0   0   <1     Sodium   ppm   ASTM D5185m   10   0   <1     Potassium   ppm   ASTM D5185m   >20   3   0   0     Water   %   ASTM D6304   >0.05   0.019   0.011   0.021     ppm Water   ppm   ASTM D6304   >500   192   117.8   217.8     FLUID CLEANLINESS   method   limit/base   current   history1   history2     Particles >4µm   ASTM D7647   13396   42634   17379     Particles >6µm   ASTM D7647   >1300   3725   13854   6228     Particles >1µm   ASTM D7647   >20   71   126   57     Particles >21µm   ASTM D7647   >20   71   126   57     Particles >38µm   ASTM D7647   >3   0   0   0     Oil Cleanliness   ISO 4406 (c)   >/17/13   21/19/15   23/21/17   21/20/16     FLUID DEGRADATION   method   limit/base   current   history1   histo	Sulfur	ppm	ASTM D5185m	23500	22101	13701	4310
Sodium     ppm     ASTM D5185m     10     0     <1       Potassium     ppm     ASTM D5185m     >20     3     0     0       Water     %     ASTM D6304     >0.05     0.019     0.011     0.021       ppm Water     ppm     ASTM D6304     >500     192     117.8     217.8       FLUID CLEANLINESS     method     limit/base     current     history1     history2       Particles >4µm     ASTM D7647     13396     42634     17379       Particles >6µm     ASTM D7647     >1300     3725     13854     6228       Particles >14µm     ASTM D7647     >80     254     790     374       Particles >21µm     ASTM D7647     >20     71     126     57       Particles >38µm     ASTM D7647     >3     0     0     0       Oil Cleanliness     ISO 4406 (c)     >/17/13     21/19/15     23/21/17     21/20/16       FLUID DEGRADATION     method     limit/base     current     history1     history2	CONTAMINANTS		method	limit/base	current	history1	history2
Potassium     ppm     ASTM D5185m     >20     3     0     0       Water     %     ASTM D6304     >0.05     0.019     0.011     0.021       ppm     Water     ppm     ASTM D6304     >500     192     117.8     217.8       FLUID CLEANLINESS     method     limit/base     current     history1     history2       Particles >4µm     ASTM D7647     13396     42634     17379       Particles >6µm     ASTM D7647     >1300     3725     13854     6228       Particles >14µm     ASTM D7647     >80     254     790     374       Particles >21µm     ASTM D7647     >20     71     126     57       Particles >38µm     ASTM D7647     >3     0     0     0     0       Oil Cleanliness     ISO 4406 (c)     >/17/13     21/19/15     23/21/17     21/20/16       FLUID DEGRADATION     method     limit/base     current     history1     history2	Silicon	ppm	ASTM D5185m	>25	0	0	<1
Water     %     ASTM D6304     >0.05     0.019     0.011     0.021       ppm Water     ppm     ASTM D6304     >500     192     117.8     217.8       FLUID CLEANLINESS     method     limit/base     current     history1     history2       Particles >4µm     ASTM D7647     13396     42634     17379       Particles >6µm     ASTM D7647     >1300     3725     13854     6228       Particles >14µm     ASTM D7647     >80     254     790     374       Particles >21µm     ASTM D7647     >20     71     126     57       Particles >38µm     ASTM D7647     >3     0     0     0       Oil Cleanliness     ISO 4406 (c)     >/17/13     21/19/15     23/21/17     21/20/16       FLUID DEGRADATION     method     limit/base     current     history1     history2	Sodium	ppm	ASTM D5185m		10	0	<1
ppm Water     ppm     ASTM D6304     >500     192     117.8     217.8       FLUID CLEANLINESS     method     limit/base     current     history1     history2       Particles >4µm     ASTM D7647     13396     42634     17379       Particles >6µm     ASTM D7647     >1300     3725     13854     6228       Particles >14µm     ASTM D7647     >80     254     790     374       Particles >21µm     ASTM D7647     >20     71     126     57       Particles >38µm     ASTM D7647     >4     2     5       Particles >71µm     ASTM D7647     >3     0     0     0       Oil Cleanliness     ISO 4406 (c)    /17/13     21/19/15     23/21/17     21/20/16       FLUID DEGRADATION     method     limit/base     current     history1     history2	Potassium	ppm	ASTM D5185m	>20	3	0	0
FLUID CLEANLINESS     method     limit/base     current     history1     history2       Particles >4μm     ASTM D7647     13396     42634     17379       Particles >6μm     ASTM D7647     >1300     3725     13854     6228       Particles >14μm     ASTM D7647     >80     254     790     374       Particles >21μm     ASTM D7647     >20     711     126     57       Particles >38μm     ASTM D7647     >4     4     2     5       Particles >71μm     ASTM D7647     >3     0     0     0       Oil Cleanliness     ISO 4406 (c)     >/17/13     21/19/15     23/21/17     21/20/16       FLUID DEGRADATION     method     limit/base     current     history1     history2	Water	%	ASTM D6304	>0.05	0.019	0.011	0.021
Particles >4μm   ASTM D7647   13396   42634   17379     Particles >6μm   ASTM D7647   >1300   3725   13854   6228     Particles >14μm   ASTM D7647   >80   254   790   374     Particles >21μm   ASTM D7647   >20   71   126   57     Particles >38μm   ASTM D7647   >4   2   5     Particles >71μm   ASTM D7647   >3   0   0   0     Oil Cleanliness   ISO 4406 (c)   >/17/13   21/19/15   23/21/17   21/20/16	ppm Water	ppm	ASTM D6304	>500	192	117.8	217.8
Particles >6μm   ASTM D7647   >1300   3725   13854   6228     Particles >14μm   ASTM D7647   >80   254   790   374     Particles >21μm   ASTM D7647   >20   71   126   57     Particles >38μm   ASTM D7647   >4   4   2   5     Particles >71μm   ASTM D7647   >3   0   0   0     Oil Cleanliness   ISO 4406 (c)   >/17/13   21/19/15   23/21/17   21/20/16     FLUID DEGRADATION   method   limit/base   current   history1   history2	FLUID CLEANLIN	IESS	method	limit/base	current	history1	history2
Particles >14µm   ASTM D7647   >80   ▲ 254   ▲ 790   ▲ 374     Particles >21µm   ASTM D7647   >20   ▲ 71   ▲ 126   ▲ 57     Particles >38µm   ASTM D7647   >4   4   2   5     Particles >71µm   ASTM D7647   >3   0   0   0     Oil Cleanliness   ISO 4406 (c)   >/17/13   ▲ 21/19/15   ▲ 23/21/17   ▲ 21/20/16     FLUID DEGRADATION   method   limit/base   current   history1   history2							
Particles >21μm     ASTM D7647     >20     71     126     57       Particles >38μm     ASTM D7647     >4     4     2     5       Particles >71μm     ASTM D7647     >3     0     0     0       Oil Cleanliness     ISO 4406 (c)     >/17/13     21/19/15     23/21/17     21/20/16       FLUID DEGRADATION     method     limit/base     current     history1     history2	Particles >6µm						
Particles >38μm     ASTM D7647     >4     4     2     5       Particles >71μm     ASTM D7647     >3     0     0     0       Oil Cleanliness     ISO 4406 (c)     >/17/13     ▲ 21/19/15     ▲ 23/21/17     ▲ 21/20/16       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     ▲ 23/21/17     ▲ 21/20/16       FLUID DEGRADATION     method     limit/base     current     history1     history2			ASTM D7647	>20	<u> </u>	<u>▲</u> 126	
Oil Cleanliness   ISO 4406 (c) >/17/13   21/19/15   23/21/17   21/20/16     FLUID DEGRADATION   method   limit/base   current   history1   history2	Particles >38µm				4	2	5
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	<b>A</b> 23/21/17	<b>A</b> 21/20/16
Acid Number (AN)     mg KOH/g     ASTM D8045     1.0     0.46     0.42     1.33	FLUID DEGRADA	TION	method	limit/base	current	history1	history2
	Acid Number (AN)	mg KOH/g	ASTM D8045	1.0	0.46	0.42	1.33

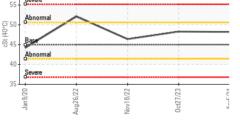


Water (ppm)

Water (ppm)

## **OIL ANALYSIS REPORT**

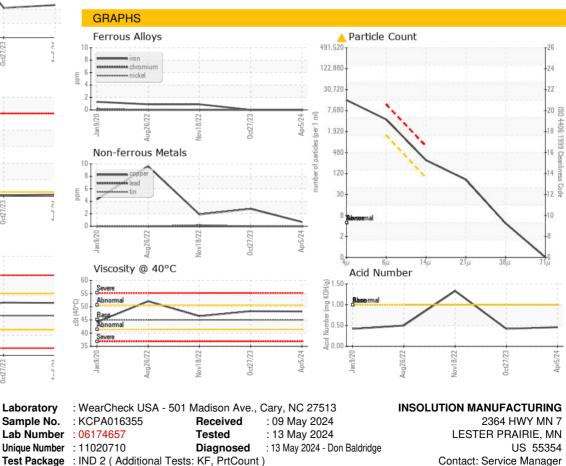






VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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	45	48.2	48.3	46.4
SAMPLE IMAGES	6	method	limit/base	current	history1	history2





\* - 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)

To discuss this sample report, contact Customer Service at 1-800-237-1369.

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Certificate 12367

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

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