

### **OIL ANALYSIS REPORT**

Sample Rating Trend



Machine Id

# 2282172 (S/N 1125)

Component Compressor Fluid KAESER SIGMA (OEM) S-460 (--- QTS)

#### DIAGNOSIS

#### Recommendation

Oil and 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

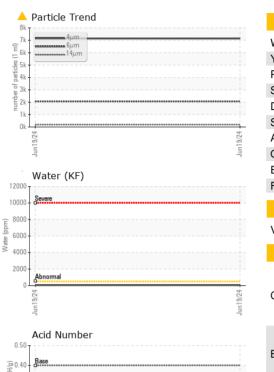
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

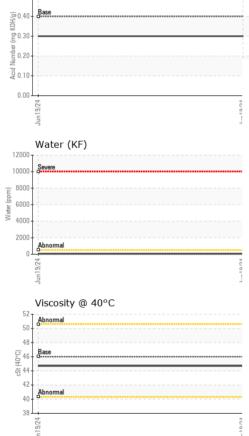
Sample Number       Client Info       KCPA019473           Sample Date       I       Client Info       19 Jun 2024           Oil Age       hrs       Client Info       4140           Oil Age       hrs       Client Info       4140           Sample Status       I       rethod       MakNorRMAL           WEAR METALS       rethod       Imikbase       current       history!       history!          Nickel       ppm       ASTM 0518m       >50       0            Nickel       ppm       ASTM 0518m       >30       <1            AIuminum       ppm       ASTM 0518m       >10       <1            AIuminum       ppm       ASTM 0518m       >10       <1            AIuminum       ppm       ASTM 0518m       >10       <1            Auminum       ppm       ASTM 0518m       >10       <1            Auminum </th <th>SAMPLE INFORM</th> <th>IATION</th> <th>method</th> <th>limit/base</th> <th>current</th> <th>history1</th> <th>history2</th>	SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Machine Age         hrs         Client Info         4140             Oil Age         hrs         Client Info         ABNORMAL             Sample Status         Client Info         ABNORMAL             WEAR METALS         method         Imit/base         current         history1         history2           Iron         ppm         ASTM 05185m         >50         0             Nickel         ppm         ASTM 05185m         >33         <1	Sample Number		Client Info		KCPA019473		
Oil Age         hrs         Client Info         4140             Sample Status         Client Info         Changed             WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >50         0             Nickel         ppm         ASTM D5185m         >3         <1	Sample Date		Client Info		19 Jun 2024		
Oli Changed         Client Info         Changed              WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185n         >50         0             Chromium         ppm         ASTM D5185n         >3         <1	Machine Age	hrs	Client Info		4140		
Sample Status         method         Imit/base         current         history1         history2           Iron         ppm         ASTM D5185n         >50         0             Nickel         ppm         ASTM D5185n         >30         <1	Oil Age	hrs	Client Info		4140		
WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >50         0             Nickel         ppm         ASTM D5185m         >3         <1	Oil Changed		Client Info		Changed		
Inn         ppm         ASTM D5185m         >50         0             Nickel         ppm         ASTM D5185m         >3         <1	Sample Status				ABNORMAL		
Chromium         ppm         ASTM D5185m         >10         <1	WEAR METALS		method	limit/base	current	history1	history2
Chromium         ppm         ASTM D5185m         >10         <1             Nickel         ppm         ASTM D5185m         >3         <1	Iron	maa	ASTM D5185m	>50	0		
Nickel       ppm       ASTM D5185m       >3       <1	Chromium		ASTM D5185m	>10			
Titanium         ppm         ASTM D5185m         >3         <1             Silver         ppm         ASTM D5185m         >2         <1							
Silver       ppm       ASTM D5185m       >2       <1           Aluminum       ppm       ASTM D5185m       >10       3           Lead       ppm       ASTM D5185m       >10       <1							
Aluminum       ppm       ASTM D5185m       >10       3           Lead       ppm       ASTM D5185m       >10       <1							
Lead         ppm         ASTM D5185m         >10         <1            Copper         ppm         ASTM D5185m         >50         30             Tin         ppm         ASTM D5185m         >10         <1							
Copper         ppm         ASTM D5185m         >50         30             Tin         ppm         ASTM D5185m         >10         <1							
Tin       ppm       ASTM D5185m       >10       <1							
Vanadium         ppm         ASTM D5185m         <  <							
Add         ppm         ASTM D5185m         <1             ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0             Barium         ppm         ASTM D5185m         0         1             Manganese         ppm         ASTM D5185m         <1             Magnesium         ppm         ASTM D5185m         <1             Magnese         ppm         ASTM D5185m         2         0             Calcium         ppm         ASTM D5185m         2         0             Galcium         ppm         ASTM D5185m         2         0             Contraminon         ppm         ASTM D5185m         2         0             Stilicon         ppm         ASTM D5185m         25         <1             Sodium         ppm         ASTM D5185m         >20         2				>10			
ADDITIVES       method       limit/base       current       history1       history2         Boron       ppm       ASTM D5185m       0           Barium       ppm       ASTM D5185m       90       1           Molybdenum       ppm       ASTM D5185m       <1							
Boron         ppm         ASTM D5185m         0             Barium         ppm         ASTM D5185m         90         1             Molybdenum         ppm         ASTM D5185m         <1		ppm		line it /le e e e		la la la mud	la i ata muQ
Barium       ppm       ASTM D5185m       90       1           Molybdenum       ppm       ASTM D5185m       <1				limit/base			
Molybdenum       ppm       ASTM D5185m       <1							
Manganese         ppm         ASTM D5185m         <1             Magnesium         ppm         ASTM D5185m         90         2             Calcium         ppm         ASTM D5185m         2         0             Phosphorus         ppm         ASTM D5185m         <1				90	-		
Magnesium         ppm         ASTM D5185m         90         2             Calcium         ppm         ASTM D5185m         2         0             Phosphorus         ppm         ASTM D5185m         <1	-						
Calcium         ppm         ASTM D5185m         2         0             Phosphorus         ppm         ASTM D5185m         <1	•	ppm	ASTM D5185m		<1		
Phosphorus         ppm         ASTM D5185m         <1             Zinc         ppm         ASTM D5185m         6             Sulfur         ppm         ASTM D5185m         15080             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         <1	Magnesium	ppm	ASTM D5185m	90	2		
Zinc         ppm         ASTM D5185m         6             Sulfur         ppm         ASTM D5185m         15080             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         <1	Calcium	ppm	ASTM D5185m	2	0		
SulfurppmASTM D5185m15080CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>25<1	Phosphorus	ppm	ASTM D5185m		<1		
CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         <1	Zinc	ppm	ASTM D5185m		6		
Silicon       ppm       ASTM D5185m       >25       <1	Sulfur	ppm	ASTM D5185m		15080		
Sodium         ppm         ASTM D5185m         0             Potassium         ppm         ASTM D5185m         >20         2             Water         %         ASTM D6304         >0.05         0.004             ppm Water         ppm         ASTM D6304         >500         49             FLUID CLEANLINESS         method         limit/base         current         history1         history2           Particles >4µm         ASTM D7647         7140              Particles >6µm         ASTM D7647         >1300         2068             Particles >14µm         ASTM D7647         >80         188             Particles >21µm         ASTM D7647         >20         41             Particles >38µm         ASTM D7647         >3         0             Oil Cleanliness         ISO 4406 (c)         >/17/13         20/18/15             FLUID DEGRADATION         method         limit/base         current         history1 <t< th=""><th>CONTAMINANTS</th><th></th><th>method</th><th>limit/base</th><th>current</th><th>history1</th><th>history2</th></t<>	CONTAMINANTS		method	limit/base	current	history1	history2
Potassium       ppm       ASTM D5185m       >20       2           Water       %       ASTM D6304       >0.05       0.004           ppm Water       ppm       ASTM D6304       >500       49           FLUID CLEANLINESS       method       limit/base       current       history1       history2         Particles >4µm       ASTM D7647       7140           Particles >6µm       ASTM D7647       >1300       2068           Particles >14µm       ASTM D7647       >80       188           Particles >21µm       ASTM D7647       >20       41           Particles >38µm       ASTM D7647       >3       0           Particles >71µm       ASTM D7647       >3       0           Oil Cleanliness       ISO 4406 (c)      /17/13       20/18/15           FLUID DEGRADATION       method       limit/base       current       history1       history2	Silicon	ppm	ASTM D5185m	>25	<1		
Water         %         ASTM D6304         >0.05         0.004             ppm Water         ppm         ASTM D6304         >500         49             FLUID CLEANLINESS         method         limit/base         current         history1         history2           Particles >4µm         ASTM D7647         7140             Particles >6µm         ASTM D7647         >1300         2068             Particles >14µm         ASTM D7647         >80         188             Particles >21µm         ASTM D7647         >20         41             Particles >38µm         ASTM D7647         >3         0             Particles >71µm         ASTM D7647         >3         0             Particles >71µm         ASTM D7647         >3         0             Oil Cleanliness         ISO 4406 (c)         >/17/13         20/18/15             FLUID DEGRADATION         method         limit/base         current         history1         history2	Sodium	ppm	ASTM D5185m		0		
ppm Water         ppm         ASTM D6304         >500         49             FLUID CLEANLINESS         method         limit/base         current         history1         history2           Particles >4µm         ASTM D7647         7140             Particles >6µm         ASTM D7647         >1300         2068             Particles >14µm         ASTM D7647         >80         188             Particles >21µm         ASTM D7647         >20         41             Particles >38µm         ASTM D7647         >4         1             Particles >71µm         ASTM D7647         >3         0             Particles >71µm         ASTM D7647         >3         0             Oil Cleanliness         ISO 4406 (c)        /17/13         20/18/15             FLUID DEGRADATION         method         limit/base         current         history1         history2	Potassium	ppm	ASTM D5185m	>20	2		
FLUID CLEANLINESS       method       limit/base       current       history1       history2         Particles >4µm       ASTM D7647       7140           Particles >6µm       ASTM D7647       >1300       2068           Particles >14µm       ASTM D7647       >80       188           Particles >21µm       ASTM D7647       >20       411           Particles >21µm       ASTM D7647       >4       1           Particles >38µm       ASTM D7647       >4       1           Particles >71µm       ASTM D7647       >3       0           Oil Cleanliness       ISO 4406 (c)       >/17/13       20/18/15           FLUID DEGRADATION       method       limit/base       current       history1       history2	Water	%	ASTM D6304	>0.05	0.004		
Particles >4μm       ASTM D7647       7140           Particles >6μm       ASTM D7647       >1300       2068           Particles >14μm       ASTM D7647       >80       188           Particles >21μm       ASTM D7647       >20       41           Particles >21μm       ASTM D7647       >20       41           Particles >38μm       ASTM D7647       >4       1           Particles >71μm       ASTM D7647       >3       0           Oil Cleanliness       ISO 4406 (c)       >/17/13       20/18/15           FLUID DEGRADATION       method       limit/base       current       history1       history2	ppm Water	ppm	ASTM D6304	>500	49		
Particles >6µm       ASTM D7647       >1300       ▲ 2068           Particles >14µm       ASTM D7647       >80       ▲ 188           Particles >21µm       ASTM D7647       >20       ▲ 41           Particles >21µm       ASTM D7647       >20       ▲ 41           Particles >38µm       ASTM D7647       >4       1           Particles >71µm       ASTM D7647       >3       0           Oil Cleanliness       ISO 4406 (c)       >/17/13       ▲ 20/18/15           FLUID DEGRADATION       method       limit/base       current       history1       history2	FLUID CLEANLIN	ESS	method	limit/base	current	history1	history2
Particles >14μm       ASTM D7647       >80       ▲ 188           Particles >21μm       ASTM D7647       >20       ▲ 41           Particles >21μm       ASTM D7647       >20       ▲ 41           Particles >38μm       ASTM D7647       >4       1           Particles >71μm       ASTM D7647       >3       0           Oil Cleanliness       ISO 4406 (c)       >/17/13       ▲ 20/18/15           FLUID DEGRADATION       method       limit/base       current       history1       history2	Particles >4µm		ASTM D7647		7140		
Particles >21µm         ASTM D7647         >20         ▲ 41             Particles >38µm         ASTM D7647         >4         1             Particles >38µm         ASTM D7647         >3         0             Particles >71µm         ASTM D7647         >3         0             Oil Cleanliness         ISO 4406 (c)         >/17/13         20/18/15             FLUID DEGRADATION         method         limit/base         current         history1         history2	Particles >6µm		ASTM D7647	>1300	<u> </u>		
Particles >38μm         ASTM D7647         >4         1             Particles >71μm         ASTM D7647         >3         0             Oil Cleanliness         ISO 4406 (c)         >/17/13         20/18/15             FLUID DEGRADATION         method         limit/base         current         history1         history2	Particles >14µm		ASTM D7647	>80	<b>188</b>		
Particles >71μm         ASTM D7647         >3         0             Oil Cleanliness         ISO 4406 (c)         >/17/13         ▲ 20/18/15             FLUID DEGRADATION         method         limit/base         current         history1         history2	Particles >21µm		ASTM D7647	>20	<u> </u>		
Particles >71μm         ASTM D7647         >3         0             Oil Cleanliness         ISO 4406 (c)         >/17/13         ▲ 20/18/15             FLUID DEGRADATION         method         limit/base         current         history1         history2	Particles >38µm		ASTM D7647	>4	1		
Oil Cleanliness         ISO 4406 (c)         >/17/13         20/18/15             FLUID DEGRADATION         method         limit/base         current         history1         history2			ASTM D7647	>3	0		
			ISO 4406 (c)	>/17/13	<b>20/18/15</b>		
	FLUID DEGRADA	TION	method	limit/base	current	historv1	history2
	Acid Number (AN)	mg KOH/g	ASTM D8045		0.30		

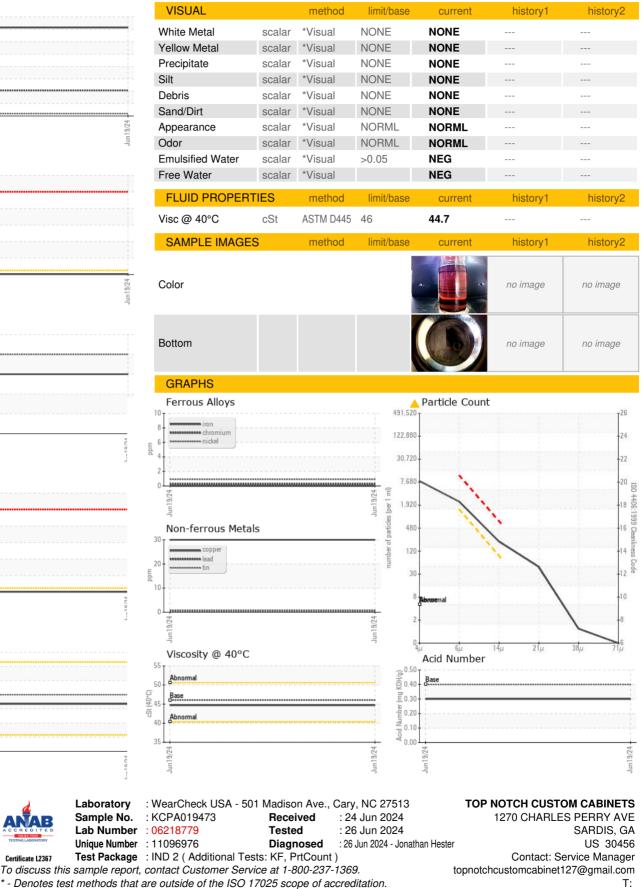


Built for a lifetime

## **OIL ANALYSIS REPORT**







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

Report Id: TOPSAR [WUSCAR] 06218779 (Generated: 06/26/2024 15:19:20) Rev: 1

Certificate 12367

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Laboratory

Sample No.

Lab Number

Contact/Location: Service Manager - TOPSAR

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