

### **OIL ANALYSIS REPORT**

# KAESER BSD 60T 5994731 (S/N 4124)

Compressor Fluid FG ELITE (--- 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

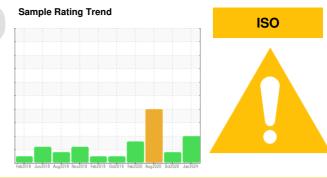
All component wear rates are normal.

#### Contamination

There is a high amount of particulates present in the oil.

#### Fluid Condition

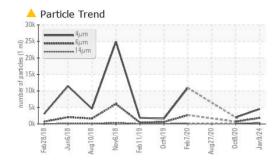
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

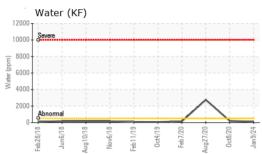


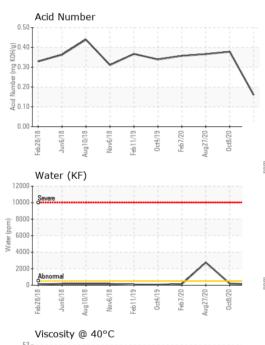
Sample Date         Client Info         09 Jan 2024         08 Oct 2020         27 Aug           Machine Age         hrs         Client Info         20049         13223         12798           Oil Age         hrs         Client Info         0         2055         58           Oil Changed         Client Info         N/A         Changed         Not Ch           Sample Status         Image         Image         Not Ch         ABNOFMAL         ATTENTION         ABNOF           WEAR METALS         method         Imit/base         current         history1         Als           Iron         ppm         ASTM D5185m         >50         0         <1         <1           Titanium         ppm         ASTM D5185m         >30         0         0         0           Silver         ppm         ASTM D5185m         >10         0         <1         <1           Lead         ppm         ASTM D5185m         >10         0         <1         <1           Copper         ppm         ASTM D5185m         >10         0         <1         <1           Cadaium         ppm         ASTM D5185m         0         0         0         0           <	SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Sample Date         Client Info         09 Jan 2024         08 Oct 2020         27 Aug           Machine Age         hrs         Client Info         20049         13223         12798           Oil Age         hrs         Client Info         0         2055         58           Oil Changed         Client Info         N/A         Changed         Not Changed           Sample Status         Client Info         N/A         ABNORMAL         ATTENTION         ABNOF           WEAR METALS         method         limit/base         current         history1         ABNOF           Iron         ppm         ASTM D5185m         >50         0         <1	ample Number		Client Info		KC127461	KC94199	KC81705
Oil Age         hrs         Client Info         NA         Changed         Not Ch           Sample Status         Image         Client Info         NA         ABNORMAL         ATTENTION         ABNOF           WEAR METALS         method         Imit/base         current         history1         Mis           Iron         ppm         ASTM D5185m         >50         0         <1	ample Date		Client Info		09 Jan 2024	08 Oct 2020	27 Aug 2020
Oil ChangedClient InfoN/AChangedNot Ch. ABNORMALSample Statusmethodlimit/basecurrenthistory1ABNORWEAR METALSmethodlimit/basecurrenthistory1clientIronppmASTM D5185m>500<1	lachine Age	hrs	Client Info		20049	13223	12798
Sample Status         method         limit/base         current         history1         ABNOF           WEAR METALS         method         limit/base         current         history1         history1         history1           Iron         ppm         ASTM D5185m         >50         0         <1	Dil Age	hrs	Client Info		0	2055	58
WEAR METALS         method         limit/base         current         history1         history1           Iron         ppm         ASTM D5165m         >50         0         <1	)il Changed		Client Info		N/A	Changed	Not Changd
Iron         ppm         ASTM D5185m         >50         0         <1         <1           Chromium         ppm         ASTM D5185m         >3         0         <1	Sample Status				ABNORMAL	ATTENTION	ABNORMAL
Chromium         ppm         ASTM D5185m         >10         0         0         0           Nickel         ppm         ASTM D5185m         >3         0         <1	WEAR METALS		method	limit/base	current	history1	history2
Nickel         ppm         ASTM D5185m         >3         0         <1         <1           Titanium         ppm         ASTM D5185m         >3         0         0         0           Silver         ppm         ASTM D5185m         >2         0         0         0           Aluminum         ppm         ASTM D5185m         >10         0         <1	on	ppm	ASTM D5185m	>50	0	<1	<1
Titanium         ppm         ASTM D5185m         >3         0         0         0           Silver         ppm         ASTM D5185m         >2         0         0         <1	Chromium	ppm	ASTM D5185m	>10	0	0	0
Titanium         ppm         ASTM D5185m         >3         0         0         0           Silver         ppm         ASTM D5185m         >2         0         0         0           Aluminum         ppm         ASTM D5185m         >10         0         -1         <1	lickel		ASTM D5185m	>3	0	<1	<1
Silver         ppm         ASTM D5185m         >2         0         0         0           Aluminum         ppm         ASTM D5185m         >10         0         <1	ïtanium		ASTM D5185m	>3	0	0	0
Aluminum         ppm         ASTM D5185m         >10         0         <1         <1           Lead         ppm         ASTM D5185m         >10         0         0         <1	liver		ASTM D5185m	>2	0	0	0
Lead         ppm         ASTM D5185m         >10         0         0         <1           Copper         ppm         ASTM D5185m         >50         2         5         4           Tin         ppm         ASTM D5185m         >10         0         <1	luminum		ASTM D5185m	>10		<1	<1
Copper         ppm         ASTM D5185m         >50         2         5         4           Tin         ppm         ASTM D5185m         >10         0         <1							
Tin       ppm       ASTM D5185m       >10       0       <1       0         Antimony       ppm       ASTM D5185m       0        <1       <1       <1         Vanadium       ppm       ASTM D5185m       0       0       0       0       0         Cadmium       ppm       ASTM D5185m       0       0       0       0       0         ADDITIVES       method       limit/base       current       history1       history1       history1         Barium       ppm       ASTM D5185m       0       0       0       0       0         Molybdenum       ppm       ASTM D5185m       0       0       0       0       0         Magnesium       ppm       ASTM D5185m       0       0       0       0       46         Calcium       ppm       ASTM D5185m       2       2       1       0       21       1         Disophorus       ppm       ASTM D5185m       32       2       1       0       <1       15         CONTAMINANTS       method       limit/base       current       history1       history1       hist         Silicon       ppm       ASTM D5							
Antimony         ppm         ASTM D5185m          <1         <1           Vanadium         ppm         ASTM D5185m         0         0         0           Cadmium         ppm         ASTM D5185m         0         0         0         0           ADDITIVES         method         limit/base         current         history1         hist           Boron         ppm         ASTM D5185m         0         0         21         1           Barium         ppm         ASTM D5185m         0         0         0         <1							
VanadiumppmASTM D5185m000CadmiumppmASTM D5185m000ADDITIVESmethodlimit/basecurrenthistory1hisBoronppmASTM D5185m0121BariumppmASTM D5185m000MolybdenumppmASTM D5185m0000MagneseppmASTM D5185m0000MagnesiumppmASTM D5185m05046CalciumppmASTM D5185m3221PhosphorusppmASTM D5185m32221ZincppmASTM D5185m32210SoliumppmASTM D5185m>25<10<1PotassiumppmASTM D5185m>20054Water%ASTM D5185m>200.019 $^{\circ}$ 0.27ppm WaterppASTM D5030>500110198.22760FLUID CLEANLINESSmethodlimit/basecurrenthistory1histParticles >4µmASTM D764745452008Particles >4µmASTM D7647>3001840708Particles >21µmASTM D7647>2011437Particles >38µmASTM D7647>3000Particles >71µmASTM D7647>3000Particles							
Cadmium         ppm         ASTM D5185m         0         0         0           ADDITIVES         method         limit/base         current         history1         history1           Boron         ppm         ASTM D5185m         0         12         1           Barium         ppm         ASTM D5185m         0         0         <1							
ADDITIVESmethodlimit/basecurrenthistory1histBoronppmASTM D5185m0121BariumppmASTM D5185m000MolybdenumppmASTM D5185m000MaganeseppmASTM D5185m05046CalciumppmASTM D5185m05046CalciumppmASTM D5185m3221PhosphorusppmASTM D5185m36105CONTAMINANTSmethodlimit/basecurrenthistory1hisSiliconppmASTM D5185m225<1							
Boron         ppm         ASTM D5185m         0         12         1           Barium         ppm         ASTM D5185m         0         0         <1		ppin		limit/base	-		history2
Barium         ppm         ASTM D5185m         0         0         <1           Molybdenum         ppm         ASTM D5185m         0         0         0         0           Manganese         ppm         ASTM D5185m         0         50         46           Calcium         ppm         ASTM D5185m         0         50         46           Calcium         ppm         ASTM D5185m         0         50         46           Calcium         ppm         ASTM D5185m         32         2         1           Phosphorus         ppm         ASTM D5185m         36         10         5           CONTAMINANTS         method         limit/base         current         history1         history1           Silicon         ppm         ASTM D5185m         >25         <1				in the base			
Molybdenum         ppm         ASTM D5185m         0         0         0         0           Manganese         ppm         ASTM D5185m         0         50         46           Magnesium         ppm         ASTM D5185m         0         50         46           Calcium         ppm         ASTM D5185m         0         50         46           Calcium         ppm         ASTM D5185m         32         2         1           Phosphorus         ppm         ASTM D5185m         36         10         5           CONTAMINANTS         method         limit/base         current         history1         his           Solicon         ppm         ASTM D5185m         >25         <1							
Maganese       ppm       ASTM D5185m       <1					-		
Magnesium       ppm       ASTM D5185m       0       50       46         Calcium       ppm       ASTM D5185m        <1       0       <1         Phosphorus       ppm       ASTM D5185m       32       2       1         Zinc       ppm       ASTM D5185m       32       2       1         Zinc       ppm       ASTM D5185m       36       10       5         CONTAMINANTS       method       limit/base       current       history1       his         Silicon       ppm       ASTM D5185m       >25       <1       0       <1         Sodium       ppm       ASTM D5185m       >20       0       22       10         Potassium       ppm       ASTM D5185m       >20       0       5       4         Water       %       ASTM D6304       >0.05       0.010       0.019       0.27         ppm Water       ppm       ASTM D7647       4545       2008          Particles >4µm       ASTM D7647       >1300       1840       708          Particles >6µm       ASTM D7647       >80       339       101       Particles >6µm <th< td=""><td>-</td><td></td><td></td><td></td><th>-</th><td></td><td></td></th<>	-				-		
Calcium       ppm       ASTM D5185m       <1       0       <1         Phosphorus       ppm       ASTM D5185m       32       2       1         Zinc       ppm       ASTM D5185m       36       10       5         CONTAMINANTS       method       limit/base       current       history1       his         Silicon       ppm       ASTM D5185m       >25       <1	•						
Phosphorus         ppm         ASTM D5185m         32         2         1           Zinc         ppm         ASTM D5185m         36         10         5           CONTAMINANTS         method         limit/base         current         history1         his           Silicon         ppm         ASTM D5185m         >25         <1         0         <1           Sodium         ppm         ASTM D5185m         >25         <1         0         <1           Sodium         ppm         ASTM D5185m         >20         0         5         4           Potassium         ppm         ASTM D5185m         >20         0         5         4           Water         %         ASTM D6304         >0.05         0.010         0.019         △.0.27           ppm Water         ppm         ASTM D6304         >500         110         198.2         2760           FLUID CLEANLINESS         method         limit/base         current         history1         hist           Particles >4µm         ASTM D7647         4545         2008            Particles >6µm         ASTM D7647         >80         339         101            P	-				-		
Zinc         ppm         ASTM D5185m         36         10         5           CONTAMINANTS         method         limit/base         current         history1         his           Silicon         ppm         ASTM D5185m         >25         <1							
CONTAMINANTS         method         limit/base         current         history1         his           Silicon         ppm         ASTM D5185m         >25         <1					-		
Silicon       ppm       ASTM D5185m       >25       <1       0       <1         Sodium       ppm       ASTM D5185m       >20       0       22       10         Potassium       ppm       ASTM D5185m       >20       0       5       4         Water       %       ASTM D5185m       >20       0.010       0.019       ▲ 0.27         ppm       ASTM D6304       >0.05       0.010       0.019       ▲ 0.27         ppm Water       ppm       ASTM D6304       >500       110       198.2       2760         FLUID CLEANLINESS       method       limit/base       current       history1       his         Particles >4µm       ASTM D7647       >1300       1840       708          Particles >6µm       ASTM D7647       >80       339       101          Particles >14µm       ASTM D7647       >20       114       37          Particles >21µm       ASTM D7647       >4       6       3          Particles >71µm       ASTM D7647       >3       0       0          Oil Cleanliness       ISO 4406 (c)      /17/13       19/18/16       17/14      <	INC	ppm	ASTM D5185m		36	10	5
Sodium         ppm         ASTM D5185m         0         22         10           Potassium         ppm         ASTM D5185m         >20         0         5         4           Water         %         ASTM D6304         >0.05         0.010         0.019         0.27           ppm Water         ppm         ASTM D6304         >500         110         198.2         2760           FLUID CLEANLINESS         method         limit/base         current         history1         his           Particles >4µm         ASTM D7647         4545         2008            Particles >6µm         ASTM D7647         >1300         1840         708            Particles >14µm         ASTM D7647         >20         114         37            Particles >21µm         ASTM D7647         >20         114         37            Particles >38µm         ASTM D7647         >4         6         3            Particles >71µm         ASTM D7647         >3         0         0            Oil Cleanliness         ISO 4406 (c)         >/17/13         19/18/16         17/14	CONTAMINANTS		method	limit/base	current	history1	history2
Potassium         ppm         ASTM D5185m         >20         0         5         4           Water         %         ASTM D6304         >0.05         0.010         0.019         ▲ 0.27           ppm         ASTM D6304         >500         110         198.2         ▲ 2760           FLUID CLEANLINESS         method         limit/base         current         history1         his           Particles >4µm         ASTM D7647         4545         2008            Particles >6µm         ASTM D7647         >1300         1840         708            Particles >14µm         ASTM D7647         >20         114         37            Particles >21µm         ASTM D7647         >20         114         37            Particles >38µm         ASTM D7647         >4         6         3            Particles >71µm         ASTM D7647         33         0         0            Oil Cleanliness         ISO 4406 (c)        /17/13         19/18/16         17/14		ppm	ASTM D5185m	>25			
Water       %       ASTM D6304       >0.05       0.010       0.019       ▲ 0.27         ppm Water       ppm       ASTM D6304       >500       110       198.2       2760         FLUID CLEANLINESS       method       limit/base       current       history1       his         Particles >4µm       ASTM D7647       4545       2008          Particles >6µm       ASTM D7647       >1300       1840       708          Particles >6µm       ASTM D7647       >80       339       101          Particles >14µm       ASTM D7647       >20       114       37          Particles >21µm       ASTM D7647       >20       114       37          Particles >38µm       ASTM D7647       >4       6       3          Particles >71µm       ASTM D7647       >3       0       0          Oil Cleanliness       ISO 4406 (c)       >/17/13       19/18/16       17/14		ppm	ASTM D5185m		-		
ppm Water         ppm         ASTM D6304         >500         110         198.2         ≥ 2760           FLUID CLEANLINESS         method         limit/base         current         history1         hist           Particles >4µm         ASTM D7647         4545         2008            Particles >6µm         ASTM D7647         >1300         1840         708            Particles >6µm         ASTM D7647         >80         339         101            Particles >14µm         ASTM D7647         >20         114         37            Particles >21µm         ASTM D7647         >4         6         3            Particles >38µm         ASTM D7647         >3         0         0            Oil Cleanliness         ISO 4406 (c)         >/17/13         19/18/16         17/14	otassium					5	
FLUID CLEANLINESS       method       limit/base       current       history1       history1         Particles >4µm       ASTM D7647       4545       2008          Particles >6µm       ASTM D7647       >1300       1840       708          Particles >6µm       ASTM D7647       >80       339       101          Particles >14µm       ASTM D7647       >20       114       37          Particles >21µm       ASTM D7647       >20       114       37          Particles >38µm       ASTM D7647       >4       6       3          Particles >71µm       ASTM D7647       >3       0       0          Oil Cleanliness       ISO 4406 (c)       >/17/13       19/18/16       17/14		%			0.010		▲ 0.276
Particles >4μm       ASTM D7647       4545       2008          Particles >6μm       ASTM D7647       >1300       1840       708          Particles >6μm       ASTM D7647       >80       339       101          Particles >14μm       ASTM D7647       >80       339       101          Particles >21μm       ASTM D7647       >20       114       37          Particles >38μm       ASTM D7647       >4       6       3          Particles >71μm       ASTM D7647       >3       0       0          Oil Cleanliness       ISO 4406 (c)       >/17/13       19/18/16       17/14	pm Water	ppm	ASTM D6304	>500	110	198.2	<b>2</b> 760
Particles >6µm       ASTM D7647       >1300       ▲ 1840       708          Particles >14µm       ASTM D7647       >80       ▲ 339       ▲ 101          Particles >21µm       ASTM D7647       >20       ▲ 114       ▲ 37          Particles >21µm       ASTM D7647       >20       ▲ 114       ▲ 37          Particles >38µm       ASTM D7647       >4       ▲ 6       3          Particles >71µm       ASTM D7647       >3       0       0          Oil Cleanliness       ISO 4406 (c)       >/17/13       ▲ 19/18/16       ▲ 17/14	FLUID CLEANLIN	ESS	method	limit/base	current	history1	history2
Particles >14µm       ASTM D7647       >80       ▲ 339       ▲ 101          Particles >21µm       ASTM D7647       >20       ▲ 114       ▲ 37          Particles >38µm       ASTM D7647       >4       ▲ 6       3          Particles >38µm       ASTM D7647       >4       ▲ 6       3          Particles >71µm       ASTM D7647       >3       0       0          Oil Cleanliness       ISO 4406 (c)       >/17/13       ▲ 19/18/16       ▲ 17/14							
Particles >21µm         ASTM D7647         >20         ▲ 114         ▲ 37            Particles >38µm         ASTM D7647         >4         ▲ 6         3            Particles >71µm         ASTM D7647         >3         0         0            Oil Cleanliness         ISO 4406 (c)         >/17/13         ▲ 19/18/16         ▲ 17/14			ASTM D7647	>1300		708	
Particles >38μm         ASTM D7647         >4         6         3            Particles >71μm         ASTM D7647         >3         0         0            Oil Cleanliness         ISO 4406 (c)         >/17/13         ▲ 19/18/16         ▲ 17/14							
Particles >71μm         ASTM D7647         >3         0         0            Oil Cleanliness         ISO 4406 (c)         >/17/13         ▲ 19/18/16         ▲ 17/14			ASTM D7647	>20	<u> </u>	<b>A</b> 37	
Oil Cleanliness ISO 4406 (c) >/17/13 ▲ 19/18/16 ▲ 17/14	articles >38μm				<u> </u>	3	
	articles >71μm		ASTM D7647	>3	0	0	
FLUID DEGRADATION method limit/base current history1 his	Dil Cleanliness		ISO 4406 (c)	>/17/13	<b>1</b> 9/18/16	▲ 17/14	
	FLUID DEGRADA	TION	method	limit/base	current	history1	history2
Acid Number (AN)         mg KOH/g         ASTM D8045         0.16         0.378         0.36	cid Number (AN)	mg KOH/g	ASTM D8045		0.16	0.378	0.366

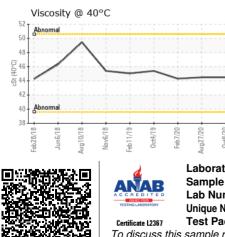


## **OIL ANALYSIS REPORT**



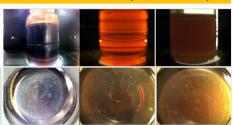




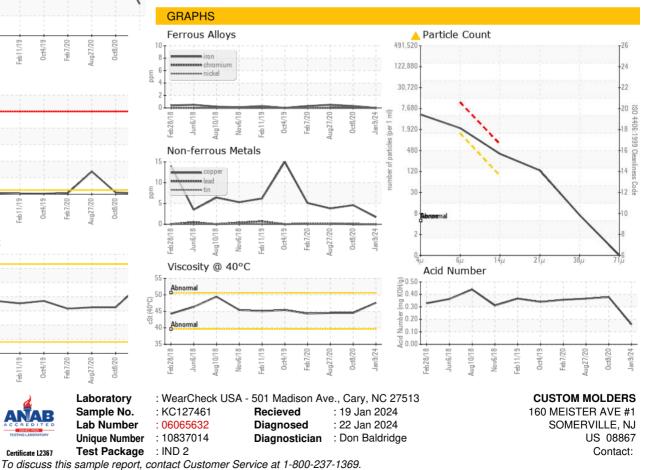


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	🔺 MODER
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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	▲ 0.2%
Free Water	scalar	*Visual		NEG	NEG	<b>1</b> .0
FLUID PROPERT	TIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445		47.6	44.5	44.5
SAMPLE IMAGES	S	method	limit/base	current	history1	history2





Bottom



\* - 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)

Contact/Location: ? ? - CUSSOM