

OIL ANALYSIS REPORT



Machine Id 5422233 (S/N 1102) Component

Compressor Fluid KAESER SIGMA (OEM) S-460 (--- GAL)

DIAGNOSIS

Recommendation

The filter change at the time of sampling has been noted. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample.

Wear

All component wear rates are normal.

Contamination

Light concentration of visible dirt/debris present in the oil.

Fluid Condition

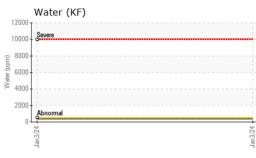
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

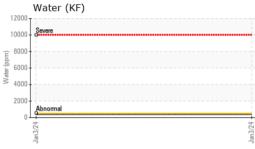
SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		KCPA010689		
Sample Date		Client Info		03 Jan 2024		
Machine Age	hrs	Client Info		16331		
Oil Age	hrs	Client Info		0		
Oil Changed		Client Info		N/A		
Sample Status				ABNORMAL		
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	<1		
Chromium	ppm	ASTM D5185m	>10	<1		
Nickel	ppm	ASTM D5185m	>3	0		
Titanium	ppm	ASTM D5185m	>3	0		
Silver	ppm	ASTM D5185m	>2	0		
Aluminum	ppm	ASTM D5185m	>10	2		
Lead	ppm	ASTM D5185m	>10	0		
Copper	ppm	ASTM D5185m	>50	13		
Tin	ppm	ASTM D5185m	>10	0		
Vanadium	ppm	ASTM D5185m		0		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 0	history1	history2
	ppm ppm		limit/base 90			
Boron		ASTM D5185m		0		
Boron Barium	ppm	ASTM D5185m ASTM D5185m		0 3		
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m		0 3 0		
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	90	0 3 0 0		
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	90 90	0 3 0 0 0		
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	90 90	0 3 0 0 0 <1	 	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	90 90	0 3 0 0 0 <1 46	 	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	90 90	0 3 0 0 0 <1 46 0	 	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	90 90 2	0 3 0 0 0 <1 46 0 18087		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	90 90 2 limit/base	0 3 0 0 0 <1 46 0 18087 current	 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	90 90 2 limit/base	0 3 0 0 0 <1 46 0 18087 current 0	 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	90 90 2 2 limit/base >25	0 3 0 0 0 <1 46 0 18087 2 urrent 0 0	history1	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	90 90 2 ////////////////////////////////	0 3 0 0 0 <1 46 0 18087 current 0 0 0 <1		 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	90 90 2 2 <u>limit/base</u> >25 >20 >0.05	0 3 0 0 0 <1 46 0 18087 current 0 0 0 <1 0.041	history1	history2

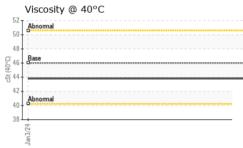


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VISUAL







	White Metal						
		scalar	*Visual	NONE	MODER		
	Yellow Metal	scalar	*Visual	NONE	NONE		
	Precipitate	scalar	*Visual	NONE	NONE		
	Silt	scalar	*Visual	NONE	NONE		
	Debris	scalar	*Visual	NONE			
	Sand/Dirt	scalar	*Visual	NONE	NONE		
č		scalar	*Visual	NORML	NORML		
	E						
	Ouoi	scalar	*Visual	NORML	NORML		
	Emulsified Wate		*Visual	>0.05	0.2%		
	Free Water	scalar	*Visual		NEG		
	FLUID PROF	PERTIES	method	limit/base	e current	history1	history2
	Visc @ 40°C	cSt	ASTM D445	46	43.8		
	SAMPLE IMA	AGES	method	limit/base	e current	history1	history2
	Ball Project Color					no image	no image
	Bottom					no image	no image
	10 8 6 4 2 0 4 2 0 4 2 0 4 2 0 4 2 0 4 2 0 4 2 0 4 2 0 4 4 4 4 4 4 4 4 4 4 4 4 4]		Jan3/24			
	Non-ferrous N	Metals					
		Metals		Jan3/24			
	Viscosity @ 4			Jan3/24	Acid Number		
	Viscosity @ 4			Jan3/24			
	Viscosity @ 4			Jan3/24			
	Viscosity @ 4			Jan3/24			
	Viscosity @ 4			Jan3/24			
	Viscosity @ 4			Jan3/24 Jan3/24 Gird Number (mg KOH(g))	1.50 1.40 1.30 1.20 1.20		
	Viscosity @ 4			Jan3/24 Acid Number (mg KOH/g)	Base 3.30 1.20 1.10		
	Viscosity @ 4			Jan3/24 Jan3/24 Gird Number (mg KOH(g))	1.50 1.40 1.30 1.20 1.20		
Laboratory Sample No. Lab Number Unique Number Test Packag	Viscosity @ 4 Viscosity @ 4 Solution Soluti	0°C GA - 501 Madia Recieved Diagnost Diagnost nal Tests: KF,	d : 17 . ed : 19 . ti cian : Jon PrtCount)	ry, NC 275 Jan 2024 Jan 2024 athan Hest	133		SPECIALTIE 550 E 3RD S OXNARD, C US 9303 ervice Manage

limit/base

current

method

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

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history2

history1