

OIL ANALYSIS REPORT

Building 17 Powerhouse **COMPRESSOR 5**

Component **Reservoir Compressor** COMPRESSOR OIL (PAG) ISO 46 (--- GAL)

DIAGNOSIS

Recommendation

We recommend you service the filters on this component. Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please provide more complete information on your next sample.

Wear

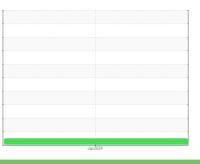
All component wear rates are normal.

Contamination

There is a light amount of silt (particulates < 14 microns in size) present in the oil. The water content is negligible.

Fluid Condition

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



Sample Rating Trend



NORMAL

SAMPLE INFORM	NATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC		
Sample Date		Client Info		08 Jan 2024		
Machine Age	hrs	Client Info		0		
Oil Age	hrs	Client Info		0		
Oil Changed		Client Info		N/A		
Sample Status				NORMAL		
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>50	0		
Chromium	ppm	ASTM D5185(m)	>10	0		
Nickel	ppm	ASTM D5185(m)		<1		
Titanium	ppm	ASTM D5185(m)		0		
Silver	ppm	ASTM D5185(m)		0		
Aluminum	ppm	ASTM D5185(m)	>25	<1		
Lead	ppm	ASTM D5185(m)	>25	6		
Copper	ppm	ASTM D5185(m)	>50	2		
Tin	ppm	ASTM D5185(m)	>15	0		
Antimony	ppm	ASTM D5185(m)		0		
Vanadium	ppm	ASTM D5185(m)		0		
Beryllium	ppm	ASTM D5185(m)		0		
Cadmium	ppm	ASTM D5185(m)		0		
ADDITIVES		method				history2
ADDITIVES Boron	ppm	method ASTM D5185(m)	limit/base	current <1	history1	history2
	ppm ppm					
Boron		ASTM D5185(m)	2	<1		
Boron Barium	ppm	ASTM D5185(m) ASTM D5185(m)	2 525	<1 417		
Boron Barium Molybdenum	ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	2 525	<1 417 0		
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	2 525 10	<1 417 0 0		
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	2 525 10 5	<1 417 0 0 <1		
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	2 525 10 5 10	<1 417 0 0 <1 3		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	2 525 10 5 10 250	<1 417 0 0 <1 3 0	 	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	2 525 10 5 10 250 100	<1 417 0 0 <1 3 0 4		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	2 525 10 5 10 250 100	<1 417 0 0 <1 3 0 4 200		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	2 525 10 5 10 250 100 400	<1 417 0 41 3 0 4 200 <1		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	2 525 10 5 10 250 100 400 400 limit/base >25	<1 417 0 0 <1 3 0 4 200 <1 200 <1		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) method ASTM D5185(m)	2 525 10 5 10 250 100 400 400 limit/base >25	<1 417 0 0 <1 3 0 4 200 <1 200 <1 200 <1		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) method ASTM D5185(m) ASTM D5185(m)	2 525 10 5 10 250 100 250 100 400 limit/base >25	<1 417 0 0 41 3 0 4 200 <1 current <1 2		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	2 525 10 5 10 250 100 400 400 limit/base >25	<1 417 0 0 <1 3 0 4 200 <1 200 <1 <i>current</i> 2 2	 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium Water	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	2 525 10 5 10 250 100 400 400 imit/base >25 >25	<1 417 0 0 417 0 4 200 <1 current <1 2 2 0.243	 history1 	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium Water ppm Water	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	2 525 10 5 10 250 100 250 100 400 binit/base >25 binit/base >25 >20 >0.8 >8000	<1 417 0 0 <1 3 0 4 200 <1 200 <1 <i>current</i> <1 2 2 0.243 2431	 history1 	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium Water ppm Water	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5304*	2 525 10 5 10 250 100 400 400 imit/base >25 >20 >0.8 >8000	<1 417 0 0 <1 3 0 4 200 <1 200 <1 <i>current</i> 2 2 0.243 2431	history1	 history2 history2

ASTM D7647 >80

ASTM D7647 >20

ISO 4406 (c) >20/18/15

ASTM D7647 >4

46

5

1

21/18/15

Particles >21µm

Particles >38µm

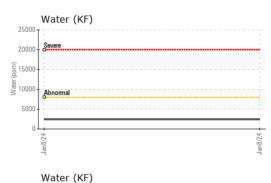
Particles >71µm

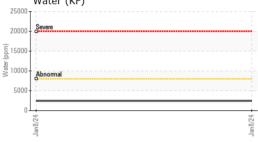
Oil Cleanliness

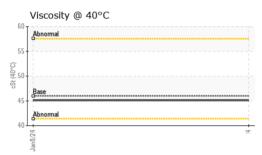
Contact/Location: Matt Morand - HIRWIN



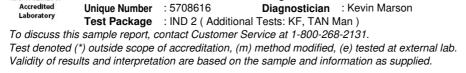
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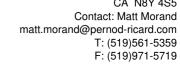






		method	innin base	Guirent	matory	matoryz
Acid Number (AN)	mg KOH/g	ASTM D974*		0.30		
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE		
Yellow Metal	scalar	Visual*	NONE	NONE		
Precipitate	scalar	Visual*	NONE	NONE		
Silt	scalar	Visual*	NONE	NONE		
Debris	scalar	Visual*	NONE	VLITE		
Sand/Dirt	scalar	Visual*	NONE	NONE		
Appearance	scalar	Visual*	NORML	NORML		
Odor	scalar	Visual*	NORML	NORML		
Emulsified Water	scalar	Visual*	>0.8	NEG		
Free Water	scalar	Visual*		NEG		
FLUID PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	46	45.1		
SAMPLE IMAGES	\$	method	limit/base	current	history1	history2
Color					no image	no image
				-		
Bottom					no image	no image
Bottom					nomago	no imago
GRAPHS						
Ferrous Alloys				Particle Count		
			491,520	Ι		1 ²⁶
5 - nickel			122,880	Severe		-24
			30,720			-22
0			= 7,680	Abnormal		-20
Jan 8/24			Jan8/24 per 1 ml]			10
-			leg jes 1.920			10
Non-ferrous Metals	5		june 480		2	-16
copper			1,500 1,900	-		+20 +18 +16 +14 +12
5 - tin			^E 30	-	/	-12
			8	-		10
24						
Jan 8/24			an o			1º
Viscosity @ 40°C			~ 0	μ 6μ	14µ 21µ	38µ 71µ
			₽0.30	Acid Number		
⁰ T Abnormal			20.20			
Abriofinal			E 0.20			
Base						
5 - Base Abnormal			4 0.10			
5 Automation 5 Base 5 Abnormal			24 Acid Number (mg KOH(g) 00.0 0	24		
5 - Base Abnormal			Jan8/24	Jan 8/24		
5 Automation 5 Base 5 Abnormal			Jan8/24	Jan 8/24		
Base Abnormal			lington, ON L	^{2/guer} 7L 5H9 HII		& SONS LTE
WearCheck - C8-117 WC F	75 Apple Recieved Diagnose	:09	Jan 8/2	^{2/guer} 7L 5H9 HII	ERSIDE DRIVE	& SONS LTE





CALA

ISO 17025:2017

Laboratory

Sample No. Lab Number