

OIL ANALYSIS REPORT

Area **1870** 1870-5433-8004 - SERVICE COMPLEX AIR COMPRESSOR Component

Air Compressor

INGERSOLL-RAND SSR ULTRA COOLANT (34 LTR)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

Fluic

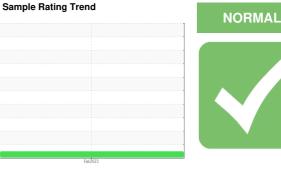
All component wear rates are normal.

Contamination

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The water content is negligible. The system and fluid cleanliness is acceptable.

Fluid Condition

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





SAMPLE INFORM	MATION	method	limit/base	current	history1	history2		
Sample Number		Client Info		PC0040352				
Sample Date		Client Info		24 Feb 2023				
Machine Age	hrs	Client Info		0				
Oil Age	hrs	Client Info		0				
Oil Changed		Client Info		N/A				
Sample Status				NORMAL				
WEAR METAL	S	method	limit/base	current	history1	history2		
PQ		ASTM D8184*		0				
Iron	ppm	ASTM D5185(m)	>4	<1				
Chromium	ppm	ASTM D5185(m)		0				
Nickel	ppm	ASTM D5185(m)		<1				
Titanium	ppm	ASTM D5185(m)		0				
Silver	ppm	ASTM D5185(m)		0				
Aluminum	ppm	ASTM D5185(m)	>10	0				
Lead	ppm	ASTM D5185(m)	>20	<1				
Copper	ppm	ASTM D5185(m)	>40	<1				
Tin	ppm	ASTM D5185(m)	>5	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	limit/base	current	history1	history2		
Boron	ppm	ASTM D5185(m)	0	<1				
Barium	ppm	ASTM D5185(m)	500	1026				
Molybdenum	ppm	ASTM D5185(m)	0	0				
Manganese	ppm	ASTM D5185(m)		0				
Magnesium	ppm	ASTM D5185(m)	0	0				
Calcium	ppm	ASTM D5185(m)	0	<1				
Phosphorus	ppm	ASTM D5185(m)	20	0				
Zinc	ppm	ASTM D5185(m)	0	2				
Sulfur	ppm	ASTM D5185(m)	200	275				
Lithium	ppm	ASTM D5185(m)		<1				
CONTAMINAN	TS	method	limit/base	current	history1	history2		
Silicon	ppm	ASTM D5185(m)	>25	3				
Sodium	ppm	ASTM D5185(m)		4				
Potassium	ppm	ASTM D5185(m)	>20	<1				
Water	%	ASTM D6304*	>0.6	0.080				
ppm Water	ppm	ASTM D6304*	>6000	809.5				
FLUID CLEANL	INESS	method	limit/base	current	history1	history2		
Particles >4µm		ASTM D7647	>10000	6046				
Particles >6µm		ASTM D7647	>2500	1795				
Particles >14µm		ASTM D7647	>320	118				
i altioloo > i ipili								
Particles >21µm		ASTM D7647	>80	25				
· · ·		ASTM D7647 ASTM D7647	>80 >20	25 4				
Particles >21µm								

Contact/Location: Robert Feltham - INCVOS



Severe 0.96 uater Mater

1.20

[≈]0.48 0.24 0.00 Feb24/23

11_T 10 Abnorm 9 cSt (100°C) 8-

PQ 250

Severe 200 150 Р

Abnorm 100 50 0. Feb24/23

12k

number of particles (1 ml)

2k 0k · Feb24/23

70 Severe 65 Abnorm

cSt (40°C) 52 50 45 Severe 40 Feb24/23

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20-	Water		FLUID DEGRAD	ATION	method	limit/base	current	history1	history2
96-	Severe		Acid Number (AN)	mg KOH/g	ASTM D974*		0.02		
72-	Abnormal		VISUAL		method	limit/base	current	history1	history2
18-	9		White Metal	scalar	Visual*	NONE	NONE		
24 -			Yellow Metal	scalar	Visual*	NONE	NONE		
00-		_	Precipitate	scalar	Visual*	NONE	NONE		
	Feb 24/23 Feb 24/23		Silt	scalar	Visual*	NONE	NONE		
	Fet.	-	Debris Sand/Dirt	scalar	Visual*	NONE	NONE NONE		
	Viscosity @ 100°C		Appearance	scalar scalar	Visual* Visual*	NORML	NORML		
11-			Odor	scalar	Visual*	NORML	NORML		
9.	Abnormal		Emulsified Water	scalar	Visual*	>0.6	NEG		
8-			Free Water	scalar	Visual*		NEG		
7. 6.	Abnormal		FLUID PROPE	RTIES	method	limit/base	current	history1	history2
5.	deriver and the second s		Visc @ 40°C	cSt	ASTM D7279(m)	49.4	51.5		
4-	23 + 23 + 23	3	Visc @ 100°C	cSt	ASTM D7279(m)		9.1		
	Feb 24/23 Feb 24/23	1	Viscosity Index (VI)	Scale	ASTM D2270*	161	159		
	PQ	-	SAMPLE IMAG	ES	method	limit/base	current	history1	history2
50-	· •								
00-	Severe		Color					no image	no image
50-	Abnormal						- Harrison		
00-	Actiona								
50-			Bottom					no image	no image
0-	+ - + - + - + - + + + + - + - + - + - + - + + + + + - + + + + + + + + + + + + + +	2							
	Feb 24/23 Feb 24/23	-	GRAPHS						
	Particle Trend		Ferrous Alloys			491,520	Particle Count		т26
2k -	Aunorman 4µm		iron			122,880			-24
JK -	2	maa	5 - seeses chromium			30,720	1		-22
6k -							Abnormal		
4k -			Feb 24/23			789'2 [per 1 m]] 769'2 [per 1 m]]		•	18
2k -			The Non-ferrous Metals			Feb24/23 126,1 m]) 800,7 100,1 10,1 100,10	1		-20 4406:1999 -18 1999 Clea
0k -		_	¹⁰ T	•		Body		_	
	Feb 24/23 Feb 24/23	maa	copper			to 120			-14 niness Code
			tin						10
70-	Viscosity @ 40°C		4/23 c			4/23			-8
35.	Severe		Feb24/23			Feb24/23			
60-	Abnormal		Viscosity @ 40°C			(B)	^{4μ 6μ} Acid Number	14μ 21μ	38µ 71µ́
55-		0	70 Severe Abnormal			(B/H0) 8 KOH/d	Severe		
50-	Reservation and the second sec	t (40°(60 Abnormal 50 Bhopmal			£ 2.00	Abnormal		
45 -	Severe	5	40 Severe			0.00 Per Accid Number Accid Number 33			
40-			Eeb24/23			Feb24/23	Feb24/23		Feb24/23 -
	Feb 24/23		Feb2			Feb2	Febź		Feb 2
	Laboratory Sample No. Lab Number Unique Number Test Package To discuss this sample report, Test denoted (*) outside scope Validity of results and interpre	е , с е с	: 02542932 E : 5539937 E : IND 2 (Additional Te ontact Customer Servic of accreditation, (m) me	Received Diagnost Diagnost ests: KF, ce at 1-8 ethod mo	l : 03 l ed : 06 l ician : Kev KV100, PrtC 00-268-213 l odified, (e) te	Mar 2023 Mar 2023 rin Marson Count, VI) f. sted at extern	Voisey's Bay nal lab.	Mine Site, P.O. Box 70 Contact: I	Voisey`s Bay D1, Stn. C Happy Valley Goose Bay, NL CA AOP 1C0 Robert Feltham ham@vale.com T: F: x: