

PROBLEM SUMMARY

Sample Rating Trend

ISO

Area 1622

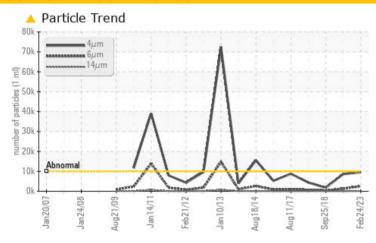
1622-5433-6002 - CONCENTRATE STORAGE AIR COMPRESSOR

Component

Air Compressor

INGERSOLL-RAND SSR ULTRA COOLANT (20 LTR)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

We recommend you service the filters on this component. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS							
Sample Status			ATTENTION	NORMAL	NORMAL		
Particles >6μm	ASTM D7647	>2500	<u> </u>	1287	353		
Oil Cleanliness	ISO 4406 (c)	>20/18/15	20/19/14	20/17/13	18/16/11		

Customer Id: INCVOS Sample No.: PC0040343 Lab Number: 02542933 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data: Wes Davis +1 905-569-8600 x223 wesd@wearcheck.ca

To change component or sample information: Gloria Gonzalez +1 (289)291-4643 x4643 gloria.gonzalez@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Filter			?	We recommend you service the filters on this component.

HISTORICAL DIAGNOSIS

10 Feb 2021 Diag: Wes Davis





Resample at the next service interval to monitor. All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



25 Sep 2018 Diag: Wes Davis

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



25 Jan 2018 Diag: Kevin Marson

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.





OIL ANALYSIS REPORT

Sample Rating Trend

ISO

Area 1622

1622-5433-6002 - CONCENTRATE STORAGE AIR COMPRESSOR

Component

Air Compressor

INGERSOLL-RAND SSR ULTRA COOLANT (20 LTR)

DIAGNOSIS

Recommendation

We recommend you service the filters on this component. Resample at the next service interval to monitor.

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

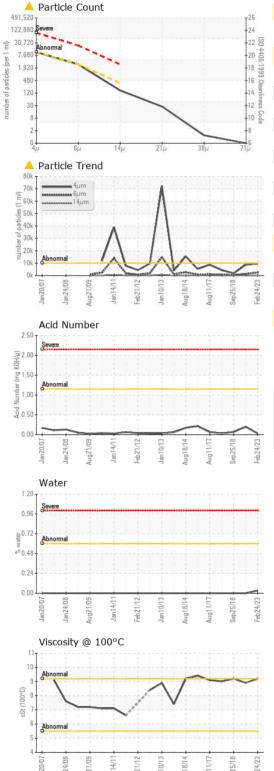
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

(20 LTR)						
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PC0040343	PC0022883	PC411508
Sample Date		Client Info		24 Feb 2023	10 Feb 2021	25 Sep 2018
Machine Age	days	Client Info		0	0	0
Oil Age	days	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				ATTENTION	NORMAL	NORMAL
WEAR METAL	.S	method	limit/base	current	history1	history2
PQ		ASTM D8184*		0	0	23
on	ppm	ASTM D5185(m)	>50	<1	<1	<1
Chromium	ppm	ASTM D5185(m)	>4	0	0	0
lickel	ppm	ASTM D5185(m)	>4	0	<1	0
itanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	0	0
luminum	ppm	ASTM D5185(m)	>10	0	<1	<1
ead	ppm	ASTM D5185(m)	>20	0	<1	<1
Copper	ppm	ASTM D5185(m)	>40	0	<1	<1
in	ppm	ASTM D5185(m)	>5	0	0	0
Intimony	ppm	ASTM D5185(m)		0	0	0
anadium	ppm	ASTM D5185(m)		0	0	0
eryllium	ppm	ASTM D5185(m)		0	0	0
admium	ppm	ASTM D5185(m)		0	0	<1
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	0	<1	<1	<1
Barium	ppm	ASTM D5185(m)	500	1041	931	828
Nolybdenum	ppm	ASTM D5185(m)	0	0	0	0
/anganese	ppm	ASTM D5185(m)	0	0	0	<1
Magnesium	ppm	ASTM D5185(m)	0	<1	0	<1
Calcium	ppm	ASTM D5185(m)		<1	2	4
Phosphorus		ASTM D5185(m)	20	0	<1	1
inc	ppm	ASTM D5185(m)	0	2	1	11
Sulfur	ppm	(/		311	303	317
ithium	ppm	ASTM D5185(m) ASTM D5185(m)	200	۱۱۰ <1	<1	0
			1111/1			
CONTAMINAN		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	<1	2	<1 17
Sodium	ppm	ASTM D5185(m)	00	4		
otassium	ppm	ASTM D5185(m)	>20	0	<1	<1
Vater	%	ASTM D6304*	>0.6	0.032		
pm Water	ppm	ASTM D6304*	>6000	323.5		
FLUID CLEAN	LINESS		limit/base	current	history1	history2
articles >4µm		ASTM D7647	>10000	9547	8669	1850
articles >6µm		ASTM D7647	>2500	<u>^</u> 2507	1287	353
articles >14µm		ASTM D7647	>320	141	43	19
Particles >21µm		ASTM D7647	>80	24	8	6
articles >38μm		ASTM D7647	>20	1	0	0
Particles >71μm		ASTM D7647	>4	0	0	0
Oil Cleanliness		ISO 4406 (c)	>20/18/15	20/19/14	20/17/13	18/16/11

Contact/Location: Robert Feltham - INCVOS



OIL ANALYSIS REPORT



FLUID DEGRAD	NOITAC	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*		0.03	0.20	0.07
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	NONE
Debris	scalar	Visual*	NONE	NONE	NONE	VLITE
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*	>0.6	NEG	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG	NEG
FLUID PROPE	RTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	49.4	51.2	50.1	50.9
Visc @ 100°C	cSt	ASTM D7279(m)		9.2	8.9	9.2
Viscosity Index (VI)	Scale	ASTM D2270*	161	163	158	164
SAMPLE IMAG	ES	method	limit/base	current	history1	history2
Color					PC0022883	
Bottom						



CALA ISO 17025:2017 Accredited

Laboratory Sample No. Lab Number Unique Number : 5539938

: PC0040343 : 02542933

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 Received Diagnosed

Test Package : IND 2 (Additional Tests: KF, KV100, PrtCount, VI)

: 03 Mar 2023 : 06 Mar 2023 Diagnostician : Wes Davis

Voisey's Bay Mine Site, P.O. Box 7001, Stn. C Happy Valley

Goose Bay, NL CA A0P 1C0

Vale - Voisey's Bay

Contact: Robert Feltham robert.feltham@vale.com T:

To discuss this sample report, contact Customer Service at 1-800-268-2131. Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab. Validity of results and interpretation are based on the sample and information as supplied.

F: x:

Contact/Location: Robert Feltham - INCVOS