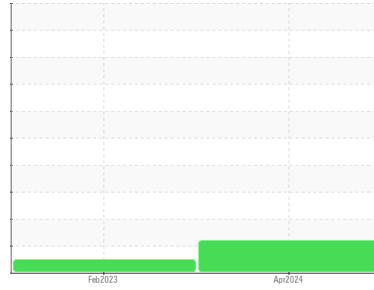


OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area

1870

Machine Id

1870-5433-8004 - SERVICE COMPLEX AIR COMPRESSOR

Component

Air Compressor

Fluid

INGERSOLL-RAND SSR ULTRA COOLANT (34 LTR)

DIAGNOSIS

Recommendation

The filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

There is a moderate 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 oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		PC0077257	PC0040352	---
Sample Date	Client Info		23 Apr 2024	24 Feb 2023	---
Machine Age	hrs	Client Info	13646	0	---
Oil Age	hrs	Client Info	0	0	---
Oil Changed	Client Info		Changed	N/A	---
Sample Status			ABNORMAL	NORMAL	---

WEAR METALS

	method	limit/base	current	history1	history2
PQ	ASTM D8184*		0	0	---
Iron	ppm	ASTM D5185(m) >50	<1	<1	---
Chromium	ppm	ASTM D5185(m) >4	0	0	---
Nickel	ppm	ASTM D5185(m) >4	0	<1	---
Titanium	ppm	ASTM D5185(m)	0	0	---
Silver	ppm	ASTM D5185(m)	0	0	---
Aluminum	ppm	ASTM D5185(m) >10	0	0	---
Lead	ppm	ASTM D5185(m) >20	0	<1	---
Copper	ppm	ASTM D5185(m) >40	<1	<1	---
Tin	ppm	ASTM D5185(m) >5	0	0	---
Antimony	ppm	ASTM D5185(m)	0	0	---
Vanadium	ppm	ASTM D5185(m)	0	0	---
Beryllium	ppm	ASTM D5185(m)	0	0	---
Cadmium	ppm	ASTM D5185(m)	0	0	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m) 0	<1	<1	---
Barium	ppm	ASTM D5185(m) 500	986	1026	---
Molybdenum	ppm	ASTM D5185(m) 0	0	0	---
Manganese	ppm	ASTM D5185(m)	0	0	---
Magnesium	ppm	ASTM D5185(m) 0	1	0	---
Calcium	ppm	ASTM D5185(m) 0	2	<1	---
Phosphorus	ppm	ASTM D5185(m) 20	<1	0	---
Zinc	ppm	ASTM D5185(m) 0	3	2	---
Sulfur	ppm	ASTM D5185(m) 200	272	275	---
Lithium	ppm	ASTM D5185(m)	<1	<1	---

CONTAMINANTS

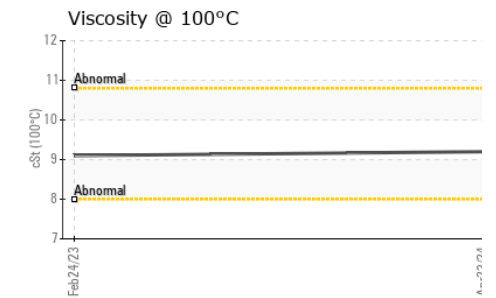
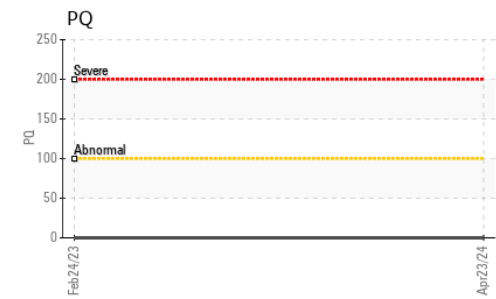
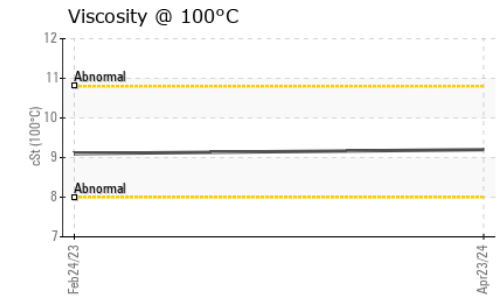
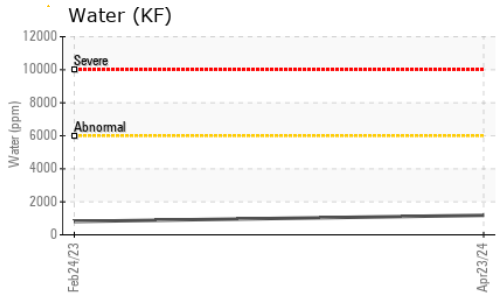
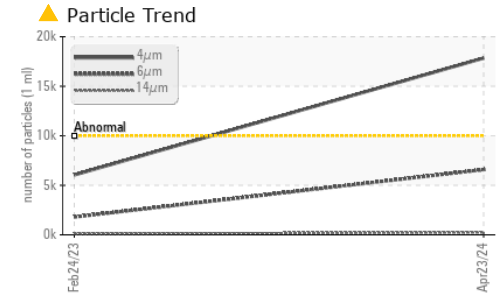
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >25	<1	3	---
Sodium	ppm	ASTM D5185(m)	18	4	---
Potassium	ppm	ASTM D5185(m) >20	3	<1	---
Water	%	ASTM D6304* >0.6	0.118	0.080	---
ppm Water	ppm	ASTM D6304* >6000	1183	809.5	---

FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>10000	17844	6046	---
Particles >6µm	ASTM D7647	>2500	6581	1795	---
Particles >14µm	ASTM D7647	>320	232	118	---
Particles >21µm	ASTM D7647	>80	32	25	---
Particles >38µm	ASTM D7647	>20	2	4	---
Particles >71µm	ASTM D7647	>4	1	4	---

Oil Cleanliness	ISO 4406 (c)	>20/18/15	21/20/15	20/18/14	---
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OIL ANALYSIS REPORT



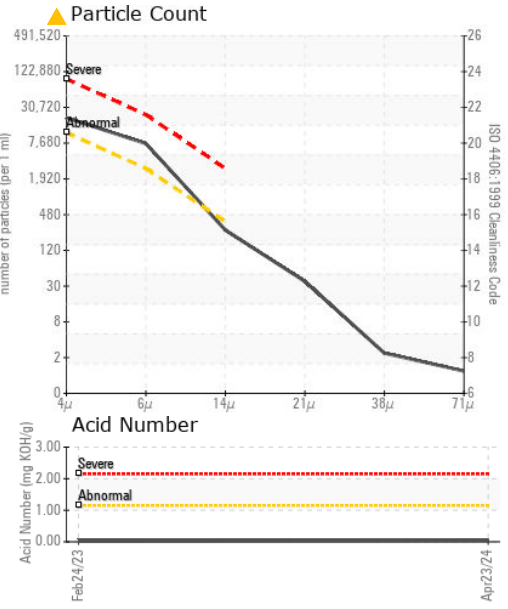
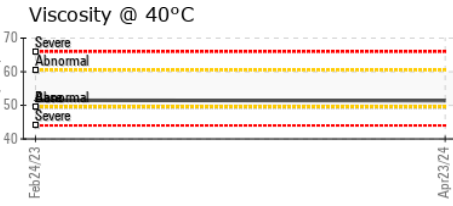
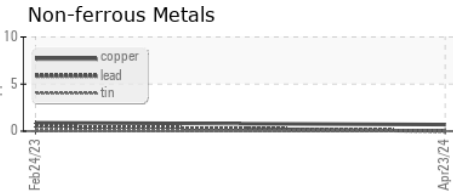
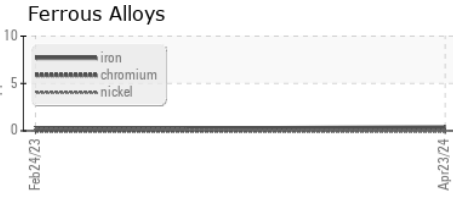
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*		0.04	0.02	---

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	NONE	---
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	---
Precipitate	scalar	Visual*	NONE	NONE	NONE	---
Silt	scalar	Visual*	NONE	VLITE	NONE	---
Debris	scalar	Visual*	NONE	NONE	NONE	---
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	---
Appearance	scalar	Visual*	NORML	NORML	NORML	---
Odor	scalar	Visual*	NORML	NORML	NORML	---
Emulsified Water	scalar	Visual*	>0.6	NEG	NEG	---
Free Water	scalar	Visual*		NEG	NEG	---

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	49.4	51.4	51.5	---
Visc @ 100°C	cSt	ASTM D7279(m)		9.2	9.1	---
Viscosity Index (VI)	Scale	ASTM D2270*	161	162	159	---

SAMPLE IMAGES		method	limit/base	current	history1	history2
Color						no image
Bottom						no image

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0077257
Lab Number : **02634612**
Unique Number : 5775765
Test Package : IND 2 (Additional Tests: KF, KV100, PQ, PrtCount, VI)
Received : 10 May 2024
Tested : 13 May 2024
Diagnosed : 13 May 2024 - Wes Davis

Vale - Voisey's Bay
 Voisey's Bay Mine Site, P.O. Box 7001, Str. C Happy Valley
 Goose Bay, NL
 CA A0P 1C0
 Contact: Robert Feltham
 robert.feltham@vale.com

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.