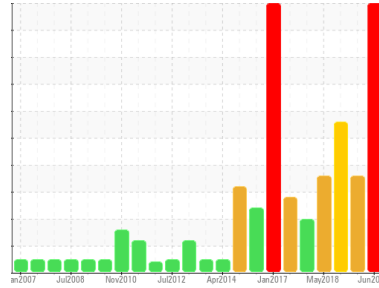
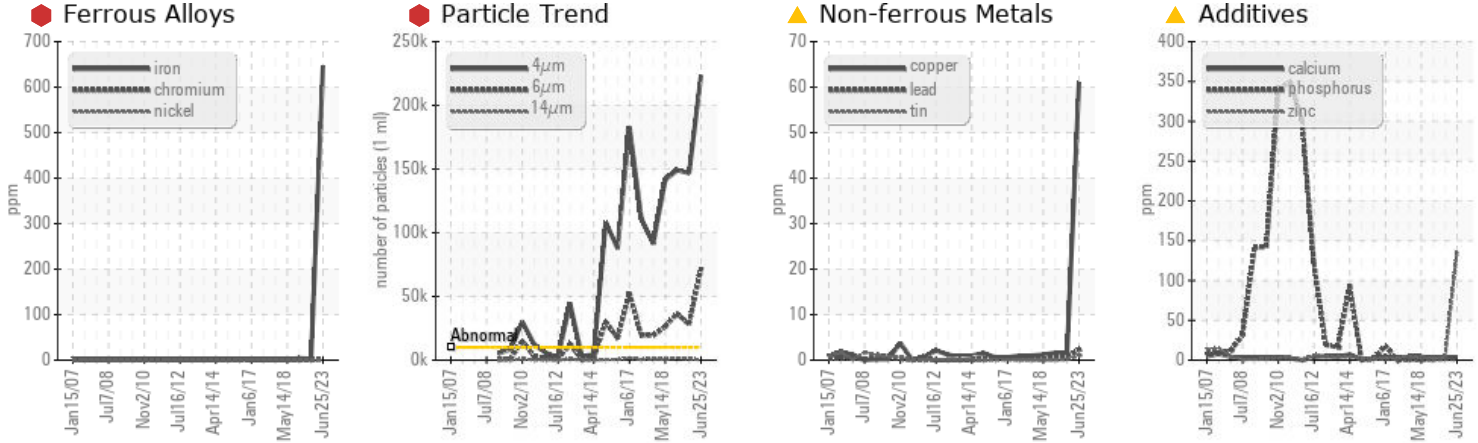


Area  
**1480**  
Machine Id  
**1480-5433-4002 - PLANT AIR COMPRESSOR 1**  
Component  
**Air Compressor**  
Fluid  
**INGERSOLL-RAND SSR ULTRA COOLANT (87 LTR)**



**COMPONENT CONDITION SUMMARY**



**RECOMMENDATION**

Check seals and/or filters for points of contaminant entry. The oil is near the end of its useful service life, recommend schedule an oil change. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend you service the filters on this component. Resample in 30-45 days to monitor this situation.

**PROBLEMATIC TEST RESULTS**

Sample Status			SEVERE	SEVERE	SEVERE
Iron	ppm	ASTM D5185(m)	>50	646	3 4
Copper	ppm	ASTM D5185(m)	>40	61	2 2
Zinc	ppm	ASTM D5185(m)	0	136	3 2
Particles >4µm		ASTM D7647	>10000	223303	146819 149102
Particles >6µm		ASTM D7647	>2500	71051	28074 36564
Oil Cleanliness		ISO 4406 (c)	>20/18/15	25/23/15	24/22/17 24/22/18

Customer Id: INCVOS  
Sample No.: PC0040495  
Lab Number: 02568817  
Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:  
Kevin Marson +1 (289)291-4644 x4644  
[Kevin.Marson@wearcheck.com](mailto:Kevin.Marson@wearcheck.com)

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

## RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Service/change Fluid	---	---	?	The oil is near the end of it's useful service life, recommend schedule an oil change.
Change Filter	---	---	?	We recommend you service the filters on this component.
Resample	---	---	?	Resample in 30-45 days to monitor this situation.
Check Breathers	---	---	?	The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather.
Check Seals	---	---	?	Check seals and/or filters for points of contaminant entry.

## HISTORICAL DIAGNOSIS

### 25 Jun 2021 Diag: Wes Davis

ISO



Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend you service the filters on this component. Resample in 30-45 days to monitor this situation. All component wear rates are normal. Particles >6µm are severely high. Particles >4µm are severely high. Particles >14µm are abnormally high. Particles >21µm are notably high. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



### 20 Dec 2020 Diag: Wes Davis

ISO



We advise that you check all areas where contaminants can enter the system. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. Resample in 30-45 days to monitor this situation. All component wear rates are normal. Particles >21µm are severely high. Particles >6µm are severely high. Particles >4µm are severely high. Particles >38µm are abnormally high. Particles >14µm are abnormally high. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



### 14 May 2018 Diag: Wes Davis

ISO

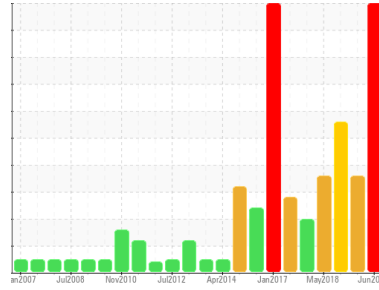


Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend you service the filters on this component. Resample in 30-45 days to monitor this situation. All component wear rates are normal. Particles >6µm are severely high. Particles >4µm are severely high. Particles >14µm are notably high. Particles >21µm are notably high. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



Area  
**1480**  
Machine Id  
**1480-5433-4002 - PLANT AIR COMPRESSOR 1**  
Component  
**Air Compressor**  
Fluid  
**INGERSOLL-RAND SSR ULTRA COOLANT (87 LTR)**



**DIAGNOSIS**

**Recommendation**  
Check seals and/or filters for points of contaminant entry. The oil is near the end of its useful service life, recommend schedule an oil change. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend you service the filters on this component. Resample in 30-45 days to monitor this situation.

**Wear**  
Iron ppm levels are severe. Copper ppm levels are abnormal. Bearing wear is indicated. The low ferrous density (PQ) index indicates the wear metal levels are due to corrosion.

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

**Fluid Condition**  
Zinc ppm levels are abnormal. The AN level is acceptable for this fluid. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

**SAMPLE INFORMATION**

method	limit/base	current	history 1	history 2
Sample Number	Client Info	<b>PC0040495</b>	PC0030004	PC0022892
Sample Date	Client Info	<b>25 Jun 2023</b>	25 Jun 2021	20 Dec 2020
Machine Age	wks Client Info	<b>0</b>	0	0
Oil Age	wks Client Info	<b>0</b>	0	0
Oil Changed	Client Info	<b>N/A</b>	N/A	N/A
Sample Status		<b>SEVERE</b>	SEVERE	SEVERE

**WEAR METALS**

method	limit/base	current	history 1	history 2
PQ	ASTM D8184*	<b>0</b>	17	6
Iron	ppm ASTM D5185(m) >50	<b>646</b>	3	4
Chromium	ppm ASTM D5185(m) >4	<b>3</b>	0	0
Nickel	ppm ASTM D5185(m) >4	<b>1</b>	<1	<1
Titanium	ppm ASTM D5185(m)	<b>0</b>	0	0
Silver	ppm ASTM D5185(m)	<b>0</b>	<1	<1
Aluminum	ppm ASTM D5185(m) >10	<b>&lt;1</b>	<1	<1
Lead	ppm ASTM D5185(m) >20	<b>2</b>	<1	<1
Copper	ppm ASTM D5185(m) >40	<b>61</b>	2	2
Tin	ppm ASTM D5185(m) >5	<b>&lt;1</b>	<1	0
Antimony	ppm ASTM D5185(m)	<b>0</b>	0	0
Vanadium	ppm ASTM D5185(m)	<b>0</b>	0	0
Beryllium	ppm ASTM D5185(m)	<b>0</b>	0	0
Cadmium	ppm ASTM D5185(m)	<b>&lt;1</b>	<1	<1

**ADDITIVES**

method	limit/base	current	history 1	history 2
Boron	ppm ASTM D5185(m) 0	<b>&lt;1</b>	2	<1
Barium	ppm ASTM D5185(m) 500	<b>855</b>	937	871
Molybdenum	ppm ASTM D5185(m) 0	<b>&lt;1</b>	<1	0
Manganese	ppm ASTM D5185(m)	<b>5</b>	0	0
Magnesium	ppm ASTM D5185(m) 0	<b>1</b>	<1	<1
Calcium	ppm ASTM D5185(m) 0	<b>3</b>	4	3
Phosphorus	ppm ASTM D5185(m) 20	<b>1</b>	2	<1
Zinc	ppm ASTM D5185(m) 0	<b>136</b>	3	2
Sulfur	ppm ASTM D5185(m) 200	<b>264</b>	337	290
Lithium	ppm ASTM D5185(m)	<b>&lt;1</b>	<1	<1

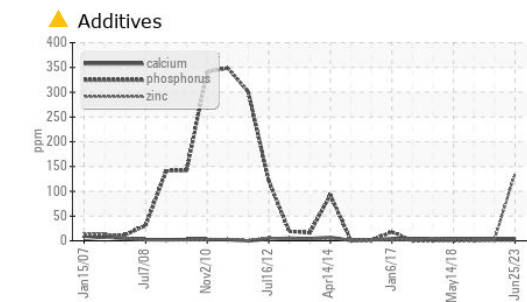
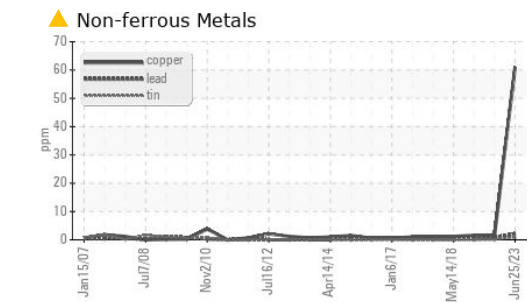
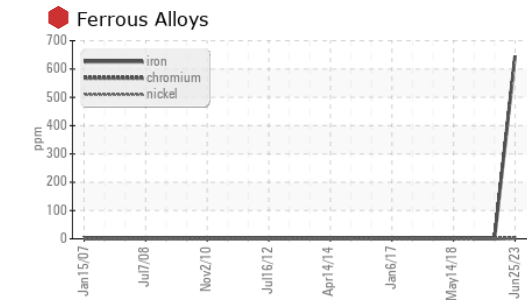
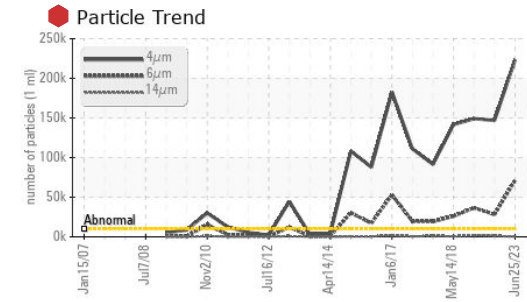
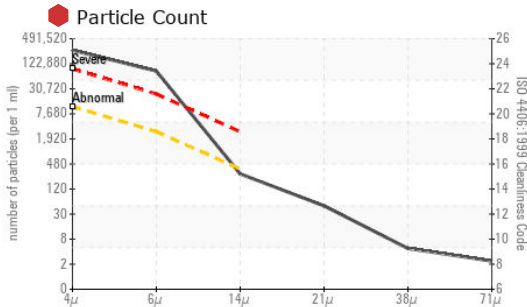
**CONTAMINANTS**

method	limit/base	current	history 1	history 2
Silicon	ppm ASTM D5185(m) >25	<b>6</b>	2	3
Sodium	ppm ASTM D5185(m)	<b>7</b>	19	11
Potassium	ppm ASTM D5185(m) >20	<b>2</b>	2	2
Water	% ASTM D6304* >0.6	<b>0.161</b>	---	---
ppm Water	ppm ASTM D6304* >6000	<b>1619.4</b>	---	---

**FLUID CLEANLINESS**

method	limit/base	current	history 1	history 2
Particles >4µm	ASTM D7647 >10000	<b>223303</b>	146819	149102
Particles >6µm	ASTM D7647 >2500	<b>71051</b>	28074	36564
Particles >14µm	ASTM D7647 >320	<b>244</b>	1019	1774
Particles >21µm	ASTM D7647 >80	<b>42</b>	135	694
Particles >38µm	ASTM D7647 >20	<b>4</b>	5	113
Particles >71µm	ASTM D7647 >4	<b>2</b>	0	5
Oil Cleanliness	ISO 4406 (c) >20/18/15	<b>25/23/15</b>	24/22/17	24/22/18

# OIL ANALYSIS REPORT

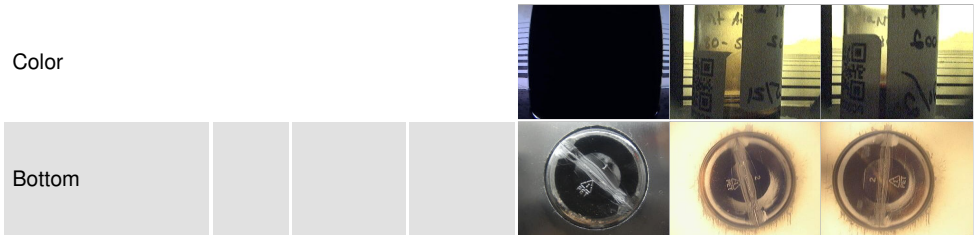


FLUID DEGRADATION		method	limit/base	current	history 1	history 2
Acid Number (AN)	mg KOH/g	ASTM D974*		<b>0.48</b>	0.18	0.02

VISUAL		method	limit/base	current	history 1	history 2
White Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	VLITE
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Precipitate	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Silt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	<b>NONE</b>	NONE	LIGHT
Appearance	scalar	Visual*	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	Visual*	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	Visual*	>0.6	<b>NEG</b>	NEG	NEG
Free Water	scalar	Visual*		<b>NEG</b>	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history 1	history 2
Visc @ 40°C	cSt	ASTM D7279(m)	49.4	<b>51.2</b>	51.6	49.6
Visc @ 100°C	cSt	ASTM D7279(m)		<b>9.1</b>	9.1	8.9
Viscosity Index (VI)	Scale	ASTM D2270*	161	<b>160</b>	158	160

## SAMPLE IMAGES



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC0040495  
**Lab Number** : **02568817**  
**Unique Number** : 5605863  
**Test Package** : IND 2 ( Additional Tests: KF, KV100, PQ, PrtCount, TAN Man, VI )

**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.

T:  
F: x: