



OIL ANALYSIS REPORT

Sample Rating Trend



DIRT



Machine Id
10581779 - RETURN AIR FANS 21 FAN 11 SHAFT
 Component
Bearing
 Fluid
SHELL TURBO T ISO 68 (--- GAL)

DIAGNOSIS

▲ Recommendation

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 an early resample to monitor this condition. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

Wear

All component wear rates are normal.

▲ Contamination

Elemental level of silicon (Si) above normal indicating ingress of seal material.

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	WC0540542	---	---
Sample Date	Client Info	28 Feb 2023	---	---
Machine Age	hrs	Client Info	0	---
Oil Age	hrs	Client Info	0	---
Oil Changed	Client Info	N/A	---	---
Sample Status		ABNORMAL	---	---

CONTAMINATION

method	limit/base	current	history1	history2
Water	WC Method >2	NEG	---	---

WEAR METALS

method	limit/base	current	history1	history2
PQ	ASTM D8184*	0	---	---
Iron	ppm	ASTM D5185(m) >20	2	---
Chromium	ppm	ASTM D5185(m) >20	0	---
Nickel	ppm	ASTM D5185(m) >20	0	---
Titanium	ppm	ASTM D5185(m)	0	---
Silver	ppm	ASTM D5185(m)	0	---
Aluminum	ppm	ASTM D5185(m) >20	<1	---
Lead	ppm	ASTM D5185(m) >20	4	---
Copper	ppm	ASTM D5185(m) >20	0	---
Tin	ppm	ASTM D5185(m) >20	<1	---
Antimony	ppm	ASTM D5185(m)	<1	---
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)	<1	---
Barium	ppm	ASTM D5185(m)	0	---
Molybdenum	ppm	ASTM D5185(m)	0	---
Manganese	ppm	ASTM D5185(m)	<1	---
Magnesium	ppm	ASTM D5185(m)	0	---
Calcium	ppm	ASTM D5185(m)	0	---
Phosphorus	ppm	ASTM D5185(m)	<1	---
Zinc	ppm	ASTM D5185(m)	1	---
Sulfur	ppm	ASTM D5185(m)	17	---
Lithium	ppm	ASTM D5185(m)	<1	---

CONTAMINANTS

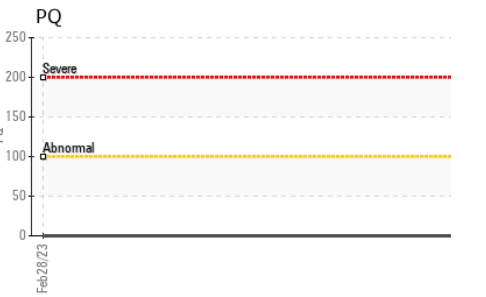
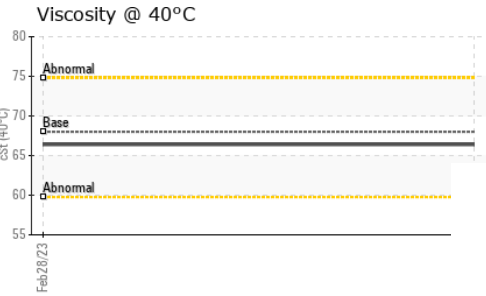
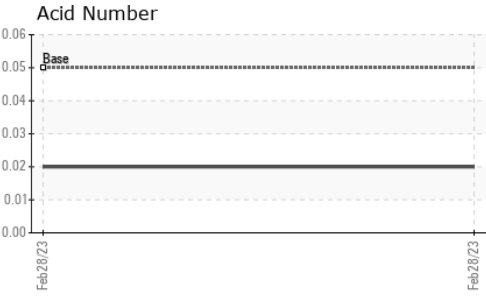
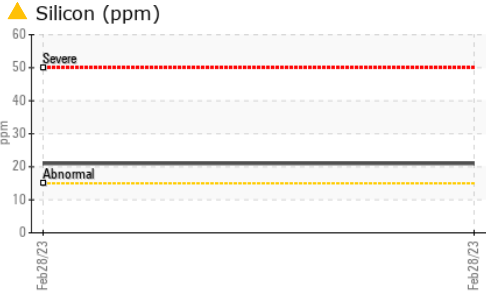
method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >15	▲ 21	---
Sodium	ppm	ASTM D5185(m)	4	---
Potassium	ppm	ASTM D5185(m) >20	0	---

FLUID DEGRADATION

method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974* .05	0.02	---



OIL ANALYSIS REPORT



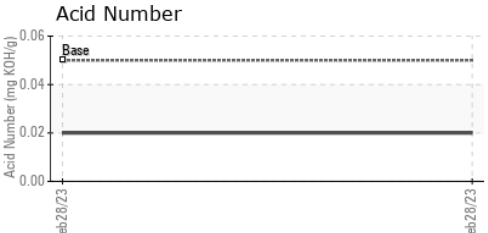
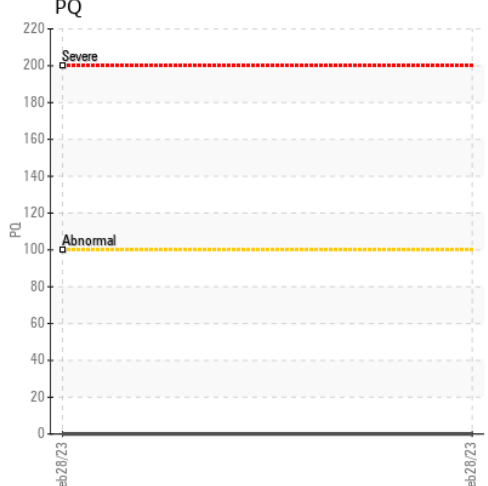
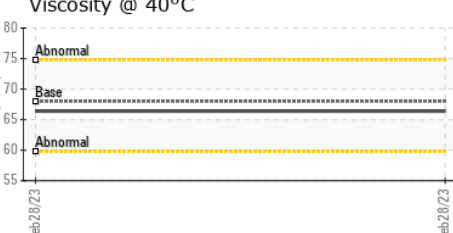
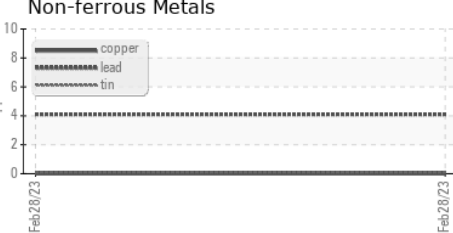
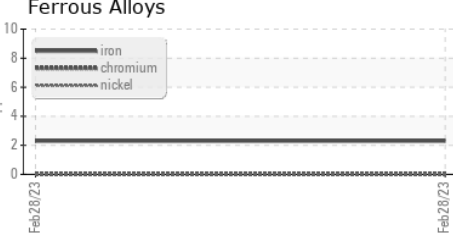
VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	Visual*	NONE	NONE	---	---
Yellow Metal	scalar	Visual*	NONE	NONE	---	---
Precipitate	scalar	Visual*	NONE	NONE	---	---
Silt	scalar	Visual*	NONE	NONE	---	---
Debris	scalar	Visual*	NONE	NONE	---	---
Sand/Dirt	scalar	Visual*	NONE	NONE	---	---
Appearance	scalar	Visual*	NORML	NORML	---	---
Odor	scalar	Visual*	NORML	NORML	---	---
Emulsified Water	scalar	Visual*	>2	NEG	---	---
Free Water	scalar	Visual*		NEG	---	---

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 40°C	cSt	ASTM D7279(m)	68	66.4	---	---

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

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0540542 **Received** : 02 Mar 2023
Lab Number : 02542571 **Diagnosed** : 03 Mar 2023
Unique Number : 5539576 **Diagnostician** : Kevin Marson
Test Package : IND 2

Vale - Creighton Mine
 CREIGHTON MINE MNTCE. (PLANT 17)
 COPPER CLIFF, ON
 CA P0M 1N0
 Contact: Igor Bozhyk
 igor.bozhyk@vale.com
 T: (705)682-7009
 F: x:

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.