



OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id
NO UNIT 02590338

Component
Rear Left Wheel Hub
Fluid
NOT GIVEN (--- GAL)

DIAGNOSIS

▲ Recommendation

We recommend you service the filters on this component. We recommend an early resample to monitor this condition. Please specify the component make and model with your next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

Wear

All component wear rates are normal.

▲ Contamination

There is a moderate amount of silt (particulates < 14 microns in size) present in the oil.

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	WC	---	---
Sample Date	Client Info	18 Oct 2023	---	---
Machine Age	hrs Client Info	0	---	---
Oil Age	hrs Client Info	0	---	---
Oil Changed	Client Info	N/A	---	---
Sample Status		ABNORMAL	---	---

WEAR METALS

method	limit/base	current	history1	history2
Iron ppm	ASTM D5185(m) >500	20	---	---
Chromium ppm	ASTM D5185(m) >8	<1	---	---
Nickel ppm	ASTM D5185(m) >5	<1	---	---
Titanium ppm	ASTM D5185(m)	0	---	---
Silver ppm	ASTM D5185(m)	<1	---	---
Aluminum ppm	ASTM D5185(m) >5	2	---	---
Lead ppm	ASTM D5185(m) >5	1	---	---
Copper ppm	ASTM D5185(m) >50	47	---	---
Tin ppm	ASTM D5185(m)	1	---	---
Antimony ppm	ASTM D5185(m) >5	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)	66	---	---
Barium ppm	ASTM D5185(m)	<1	---	---
Molybdenum ppm	ASTM D5185(m)	<1	---	---
Manganese ppm	ASTM D5185(m)	0	---	---
Magnesium ppm	ASTM D5185(m)	15	---	---
Calcium ppm	ASTM D5185(m)	3258	---	---
Phosphorus ppm	ASTM D5185(m)	1046	---	---
Zinc ppm	ASTM D5185(m)	1288	---	---
Sulfur ppm	ASTM D5185(m)	3876	---	---
Lithium ppm	ASTM D5185(m)	<1	---	---

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon ppm	ASTM D5185(m) >25	12	---	---
Sodium ppm	ASTM D5185(m)	3	---	---
Potassium ppm	ASTM D5185(m) >20	5	---	---

FLUID CLEANLINESS

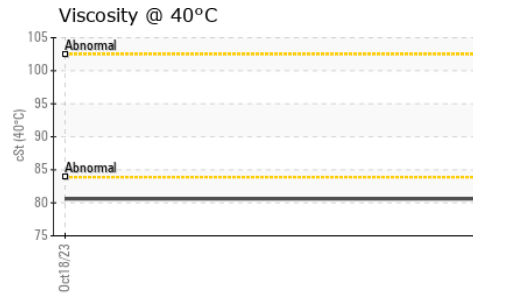
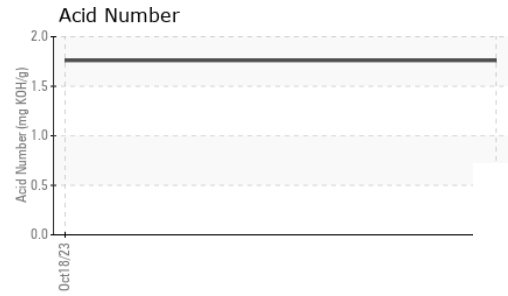
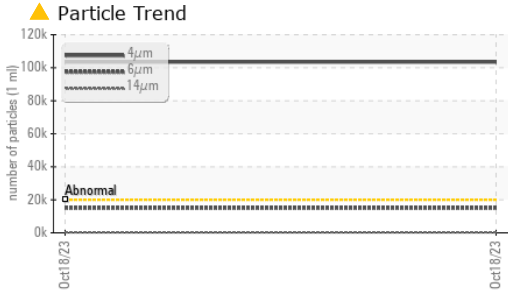
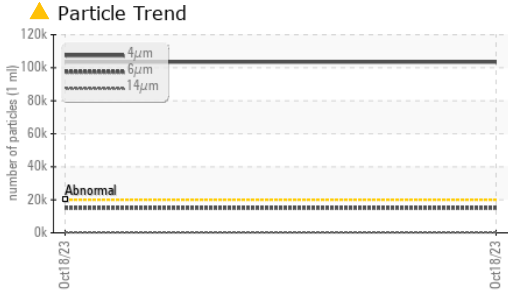
method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >20000	▲ 103453	---	---
Particles >6µm	ASTM D7647 >5000	▲ 15068	---	---
Particles >14µm	ASTM D7647 >640	304	---	---
Particles >21µm	ASTM D7647 >160	56	---	---
Particles >38µm	ASTM D7647 >40	3	---	---
Particles >71µm	ASTM D7647 >10	1	---	---
Oil Cleanliness	ISO 4406 (c) >21/19/16	▲ 24/21/15	---	---

FLUID DEGRADATION

method	limit/base	current	history1	history2
Acid Number (AN) mg KOH/g	ASTM D974*	1.76	---	---



OIL ANALYSIS REPORT



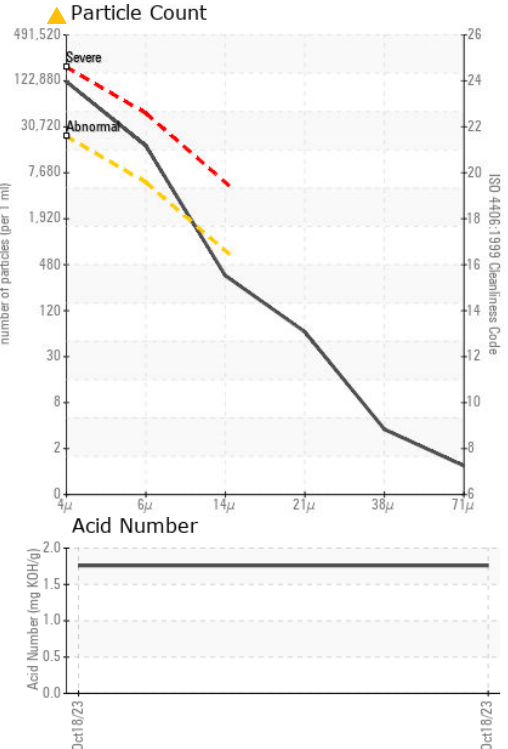
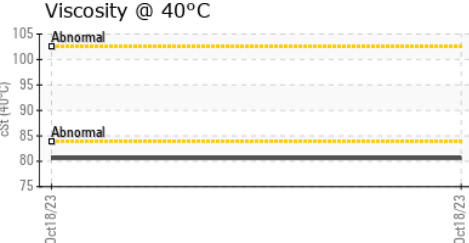
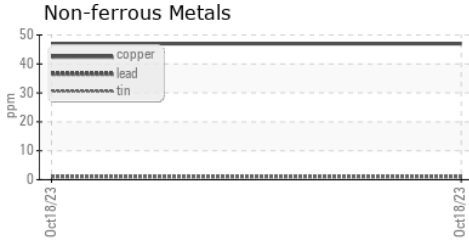
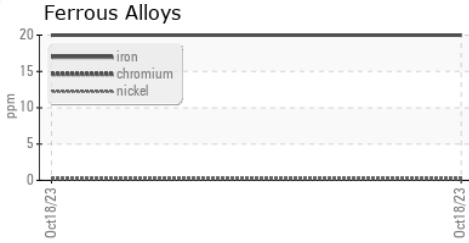
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	---
Yellow Metal	scalar	Visual*	NONE	NONE	---
Precipitate	scalar	Visual*	NONE	NONE	---
Silt	scalar	Visual*	NONE	NONE	---
Debris	scalar	Visual*	NONE	VLITE	---
Sand/Dirt	scalar	Visual*	NONE	NONE	---
Appearance	scalar	Visual*	NORML	NORML	---
Odor	scalar	Visual*	NORML	NORML	---
Emulsified Water	scalar	Visual*	>0.2	NEG	---
Free Water	scalar	Visual*		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	80.6	---	---

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. : WC **Received** : 19 Oct 2023
Lab Number : 02590338 **Diagnosed** : 20 Oct 2023
Unique Number : 5659404 **Diagnostician** : Kevin Marson
Test Package : MOB 1 (Additional Tests: PrtCount, TAN Auto, TAN Man)

Lakeshore Gold Timmins West
 Timmins, ON
 CA
 Contact: Dale Arseneau
 darseneau@ca.panamericansilver.com
 T: (705)269-4344
 F:

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.