

# **OIL ANALYSIS REPORT**

Sample Rating Trend

**VISUAL METAL** 



NO UNIT PC0075079

Component

**Front Right Wheel Hub** 

**NOT GIVEN (--- LTR)** 

### **DIAGNOSIS**

#### Recommendation

We advise that you check for visible metal particles in the oil. We recommend that you drain the oil from the component if this has not already been done. 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

Light concentration of visible metal present. Gear wear is indicated.

#### Contamination

There is no indication of any contamination in the oil.

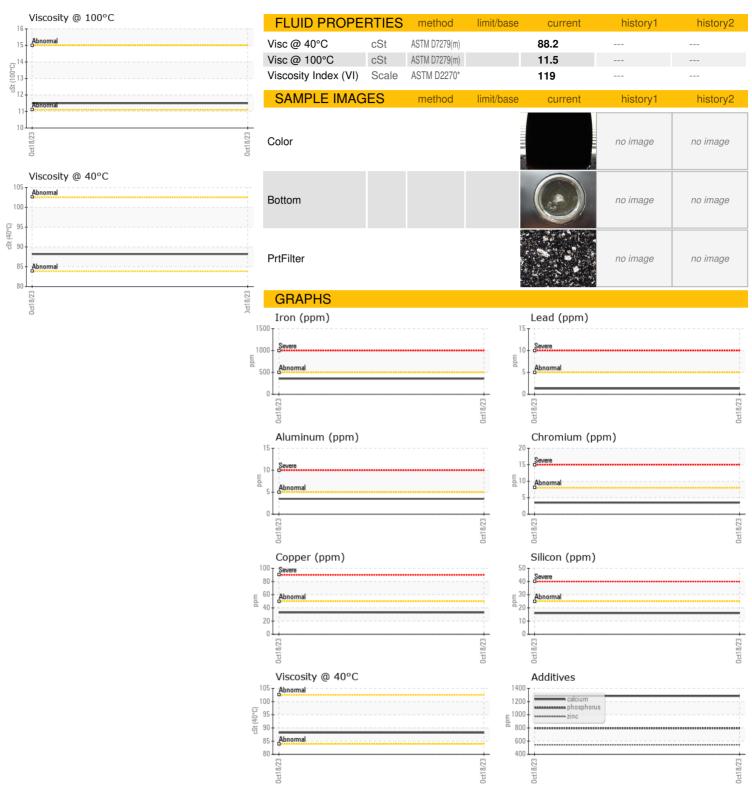
#### **Fluid Condition**

The oil is no longer serviceable as a result of the abnormal and/or severe wear.

				Dct2023		
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PC0075079		
Sample Date		Client Info		18 Oct 2023		
Machine Age	hrs	Client Info		0		
Oil Age	hrs	Client Info		0		
Oil Changed	1115	Client Info		N/A		
Sample Status		Chefit IIIIO		ABNORMAL		
·						
WEAR METAL	5	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>500	357		
Chromium	ppm	ASTM D5185(m)	>8	4		
Nickel	ppm	ASTM D5185(m)	>5	2		
Titanium	ppm	ASTM D5185(m)		0		
Silver	ppm	ASTM D5185(m)		<1		
Aluminum	ppm	ASTM D5185(m)	>5	4		
Lead	ppm	ASTM D5185(m)	>5	1		
Copper	ppm	ASTM D5185(m)	>50	33		
Tin	ppm	ASTM D5185(m)		0		
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)		31		
Barium	ppm	ASTM D5185(m)		<1		
Molybdenum	ppm	ASTM D5185(m)		1		
Manganese	ppm	ASTM D5185(m)		4		
Magnesium	ppm	ASTM D5185(m)		21		
Calcium	ppm	ASTM D5185(m)		1284		
Phosphorus	ppm	ASTM D5185(m)		796		
	1-1-					
Zinc	ppm	ASTM D5185(m)		544		
Zinc Sulfur		ASTM D5185(m) ASTM D5185(m)		544 13393		
	ppm	. ,		•		
Sulfur	ppm ppm	ASTM D5185(m)	limit/base	13393		
Sulfur Lithium	ppm ppm	ASTM D5185(m) ASTM D5185(m)	limit/base >25	13393 <1		
Sulfur Lithium CONTAMINAN	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) method		13393 <1 current	  history1	history2
Sulfur Lithium CONTAMINAN Silicon	ppm ppm ppm TS	ASTM D5185(m) ASTM D5185(m) method ASTM D5185(m)		13393 <1 current	history1	history2
Sulfur Lithium  CONTAMINAN Silicon Sodium	ppm ppm ppm TS ppm	ASTM D5185(m) ASTM D5185(m) method ASTM D5185(m) ASTM D5185(m)	>25	13393 <1 current 16 2	history1	history2
Sulfur Lithium CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm TS ppm	ASTM D5185(m) ASTM D5185(m)  method  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)	>25 >20 limit/base	13393 <1 current 16 2 0	 history1  	 history2  
Sulfur Lithium  CONTAMINAN Silicon Sodium Potassium  VISUAL	ppm ppm ppm TS ppm ppm	ASTM D5185(m) ASTM D5185(m)  method  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  method	>25 >20 limit/base	13393 <1 current 16 2 0	history1 history1	history2 history2
Sulfur Lithium  CONTAMINAN Silicon Sodium Potassium  VISUAL White Metal	ppm ppm ppm TS ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)  method  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  method  Visual*	>25 >20 limit/base NONE	13393 <1	history1 history1 history1	history2 history2 history2
Sulfur Lithium  CONTAMINAN Silicon Sodium Potassium  VISUAL White Metal Yellow Metal	ppm ppm ppm TS ppm ppm ppm ppm scalar scalar	ASTM D5185(m) ASTM D5185(m)  method  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  Method  Visual*  Visual*	>25 >20 limit/base NONE NONE	13393 <1	history1 history1	history2 history2 history2
Sulfur Lithium  CONTAMINAN Silicon Sodium Potassium  VISUAL White Metal Yellow Metal Precipitate	ppm ppm ppm TS ppm ppm ppm ppm scalar scalar	ASTM D5185(m) ASTM D5185(m)  method  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  Method  Visual*  Visual*	>25 >20 limit/base NONE NONE NONE	13393 <1	history1 history1 history1	history2 history2 history2
Sulfur Lithium  CONTAMINAN Silicon Sodium Potassium  VISUAL White Metal Yellow Metal Precipitate Silt	ppm ppm ppm TS ppm ppm ppm ppm scalar scalar scalar	ASTM D5185(m)  method  ASTM D5185(m)  MSTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  METHOD  Wisual*  Visual*  Visual*  Visual*	>25 >20 limit/base NONE NONE NONE NONE	13393 <1  current  16 2 0  current  LTMOD  VLITE  NONE  NONE	history1 history1 history1	history2 history2
Sulfur Lithium  CONTAMINAN  Silicon Sodium Potassium  VISUAL  White Metal Yellow Metal Precipitate Silt Debris	ppm ppm ppm TS ppm ppm ppm ppm scalar scalar scalar scalar scalar	ASTM D5185(m) ASTM D5185(m)  method  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  Wethod  Visual*  Visual*  Visual*  Visual*  Visual*	>25 >20 limit/base NONE NONE NONE NONE NONE NONE	13393 <1  current  16 2 0  current  LTMOD  VLITE  NONE  NONE  NONE	history1 history1	history2 history2
Sulfur Lithium  CONTAMINAN Silicon Sodium Potassium  VISUAL White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt	ppm ppm ppm TS ppm ppm ppm ppm scalar scalar scalar scalar scalar scalar	ASTM D5185(m) ASTM D5185(m)  method  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  Wisual*  Visual*  Visual*  Visual*  Visual*  Visual*	>25 >20 limit/base NONE NONE NONE NONE NONE NONE NONE	13393 <1  current  16 2 0  current  LTMOD  VLITE  NONE  NONE  NONE  NONE	history1 history1	history2 history2
Sulfur Lithium  CONTAMINAN Silicon Sodium Potassium  VISUAL White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt Appearance	ppm ppm ppm ppm ppm ppm ppm ppm scalar scalar scalar scalar scalar scalar scalar	ASTM D5185(m) ASTM D5185(m)  method  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  Method  Visual*	>25  >20  limit/base  NONE  NONE	13393 <1  current  16 2 0  current  LTMOD  VLITE  NONE  NONE  NONE  NONE  NONE  NONE  NONE  NONE  NONE	history1 history1	history2 history2
Sulfur Lithium  CONTAMINAN Silicon Sodium Potassium  VISUAL  White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt Appearance Odor	ppm ppm ppm ppm ppm ppm ppm ppm scalar scalar scalar scalar scalar scalar scalar scalar	ASTM D5185(m) ASTM D5185(m)  method  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  Method  Visual*  Visual*	>25 >20 limit/base NONE NONE NONE NONE NONE NONE NONE NON	13393 <1  Current  16 2 0  Current  LTMOD  VLITE  NONE  NORML	history1 history1	history2 history2



## **OIL ANALYSIS REPORT**





CALA ISO 17025:2017 Accredited Laboratory

Laboratory Sample No. Lab Number Unique Number

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 : PC0075079

: 02590358

: 5659424

Received Diagnosed

Diagnostician : Kevin Marson

: 19 Oct 2023 : 22 Oct 2023

**Lakeshore Gold Timmins West** 

Test Package : MOB 1 (Additional Tests: Bottom, BottomAnalysis, FilterPatch, KV100, VI) Contact: Dale Arseneau darseneau@ca.panamericansilver.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: (705)269-4344

Timmins, ON

CA