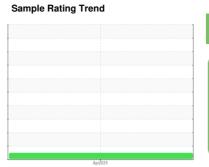


# **GREASE ANALYSIS**

Area **[4100882474]** Machine Id **SOUTH MINE SRS 2000 GREASE** 

Component Grease

SHELL SRS 2000 EXTREME GREASE (--- GAL)





### Recommendation

This is a baseline read-out on the submitted sample.

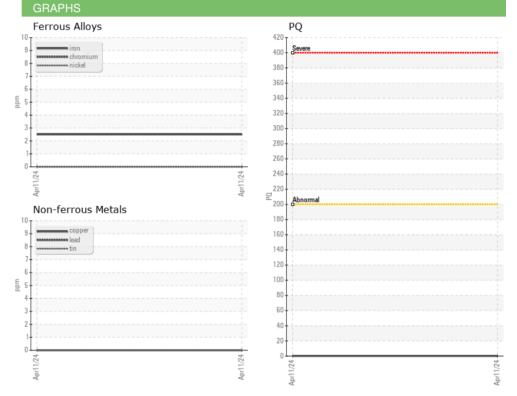
iAL)						
SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PP		
Sample Date		Client Info		11 Apr 2024		
Machine Age	hrs	Client Info		0		
Grease Age	hrs	Client Info		0		
Grease Serviced		Client Info		N/A		
Sample Status				NORMAL		
CONTAMINATIO	N	method	limit/base	current	history1	history2
Water		WC Method	>0.1	NEG		
WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184*	>200	0		
Iron	ppm	ASTM D5185(m)	>250	2		
Chromium	ppm	ASTM D5185(m)	>10	0		
Nickel	ppm	ASTM D5185(m)	>5	0		
Cadmium	ppm	ASTM D5185(m)		0		
Titanium	ppm	ASTM D5185(m)		0		
Vanadium	ppm	ASTM D5185(m)		0		
Lead	ppm	ASTM D5185(m)	>25	0		
Copper	ppm	ASTM D5185(m)	>75	0		
Tin	ppm	ASTM D5185(m)	>5	0		
Silver	ppm	ASTM D5185(m)	>5	0		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	165	163		
Magnesium	ppm	ASTM D5185(m)	0	4		
Manganese	ppm	ASTM D5185(m)	0	0		
Molybdenum	ppm	ASTM D5185(m)	0	0		
		, ,	^			
riiospiiorus	ppm	ASTM D5185(m)	0	0		
Phosphorus Zinc	ppm	. ,	0	0 2		
	ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)				
Zinc	ppm	ASTM D5185(m)	0	2		
Zinc Antimony	ppm	ASTM D5185(m) ASTM D5185(m)	0	2 0		
Zinc Antimony THICKENER/SO	ppm ppm	ASTM D5185(m) ASTM D5185(m) method	0 0 limit/base	2 0 current		
Zinc Antimony THICKENER/SO. Aluminum	ppm ppm AP ppm	ASTM D5185(m) ASTM D5185(m) method ASTM D5185(m)	0 0 limit/base 0	2 0 current 2	history1	history2
Zinc Antimony THICKENER/SO. Aluminum Barium	ppm ppm AP ppm ppm	ASTM D5185(m) ASTM D5185(m) method ASTM D5185(m) ASTM D5185(m)	0 0 limit/base 0 0 4600	2 0 current 2 <1	history1	history2
Zinc Antimony THICKENER/SO Aluminum Barium Calcium	ppm ppm AP ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 limit/base 0 0 4600	2 0 current 2 <1 4624	history1	history2  
Zinc Antimony THICKENER/SO Aluminum Barium Calcium Sodium	ppm ppm AP ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)  method  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)	0 0 limit/base 0 0 0 4600	2 0 current 2 <1 4624 1	history1	history2  
Zinc Antimony THICKENER/SO Aluminum Barium Calcium Sodium Lithium	ppm	ASTM D5185(m) ASTM D5185(m)  method  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)	0 0 limit/base 0 0 0 4600 0	2 0 current 2 <1 4624 1 <1	history 1	history2
Zinc Antimony THICKENER/SO. Aluminum Barium Calcium Sodium Lithium Sulfur	ppm	ASTM D5185(m)  ASTM D5185(m)  method  ASTM D5185(m)	0 0 limit/base 0 0 4600 0 0 700	2 0 current 2 <1 4624 1 <1 701	history1	history2
Zinc Antimony THICKENER/SO Aluminum Barium Calcium Sodium Lithium Sulfur CONTAMINANTS	ppm	ASTM D5185(m) ASTM D5185(m)  method  ASTM D5185(m)	0 0 limit/base 0 0 4600 0 0 700 limit/base	2 0 current 2 <1 4624 1 <1 701 current	history1	history2 history2
Zinc Antimony THICKENER/SO Aluminum Barium Calcium Sodium Lithium Sulfur CONTAMINANTS	ppm	ASTM D5185(m) ASTM D5185(m)  method  ASTM D5185(m)	0 0 limit/base 0 0 4600 0 0 700 limit/base	2 0 current 2 <1 4624 1 <1 701 current <1	history1 history1	history2 history2
Zinc Antimony THICKENER/SO Aluminum Barium Calcium Sodium Lithium Sulfur CONTAMINANTS Silicon Potassium	ppm	ASTM D5185(m) ASTM D5185(m)  method  ASTM D5185(m)	0 0 limit/base 0 0 4600 0 0 700 limit/base >150	2 0 current 2 <1 4624 1 <1 701 current <1 3	history1 history1 history1	history2 history2 history2
Zinc Antimony THICKENER/SO. Aluminum Barium Calcium Sodium Lithium Sulfur CONTAMINANTS Silicon Potassium GREASE CONDI	ppm	ASTM D5185(m) ASTM D5185(m)  method  ASTM D5185(m)  method  ASTM D5185(m)  method	0 0 limit/base 0 0 4600 0 0 700 limit/base >150	2 0 current 2 <1 4624 1 <1 701 current <1 3	history1 history1 history1 history1	history2 history2 history2 history2

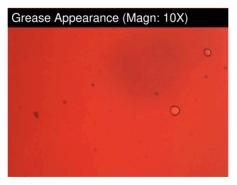


## **GREASE ANALYSIS**











CALA ISO 17025:2017 Accredited Laboratory

Laboratory

Sample No. Lab Number : 02628627 Unique Number : 5761759

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

: PP

Validity of results and interpretation are based on the sample and information as supplied.

Received **Tested** Diagnosed

: 12 Apr 2024 : 15 Apr 2024

: 15 Apr 2024 - Bill Quesnel Test Package : GRS 1 ( Additional Tests: BottomAnalysis )

Vale - Copper Cliff Smelter COPPER CLIFF SMELTER WAREHOUSE, 155 BALSAM ST. COPPER CLIFF, ON CA P0M 1N0

Contact: Andy Kozachanko andrew.kozachanko@vale.com T: (705)682-6687

F: (705)682-6939

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.