WEAR CONTAMINATION **FLUID CONDITION**

NORMAL NORMAL NORMAL

[202401122775]

10576044

Component **Gearbox**

GEAR OIL ISO 220 (GAL)							
Resample at the next service interval to monitor. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) GEAR OIL ISO 220. Please confirm. Please specify the component make and model with your next sample.	Test	UOM	Method	Limit/Abn	Current	History1	History2
	Sample Number	00	Client Info		WC0814355		
	Sample Date		Client Info		01 Apr 2024		
	Machine Age	hrs	Client Info		0		
	Oil Age	hrs	Client Info		0		
	Filter Age	hrs	Client Info		0		
	Oil Changed		Client Info		N/A		
	Filter Changed		Client Info		N/A		
	Sample Status				NORMAL		
WEAR	Iron	ppm	ASTM D5185(m)	>200	61		
All component wear rates are normal.	Chromium	ppm	ASTM D5185(m)	>10	<1		
	Nickel	ppm	ASTM D5185(m)	>10	<1		
	Titanium	ppm	ASTM D5185(m)		0		
	Silver	ppm	ASTM D5185(m)		0		
	Aluminum	ppm	ASTM D5185(m)	>25	<1		
	Lead	ppm	ASTM D5185(m)	>50	0		
	Copper	ppm	ASTM D5185(m)	>200	<1		
	Tin	ppm	ASTM D5185(m)	>10	0		
	Vanadium	ppm	ASTM D5185(m)		0		
	White Metal	scalar	Visual*	NONE	NONE		
	Yellow Metal	scalar	Visual*	NONE	NONE		
CONTAMINATION	Silicon	ppm	ASTM D5185(m)	>50	0		
There is no indication of any contamination in the oil.	Potassium	ppm	ASTM D5185(m)	>20	0		
	Water		WC Method	>0.2	NEG		
	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*	>0.2	NEG		
FLUID CONDITION	Sodium	ppm	ASTM D5185(m)		1		
The condition of the oil is acceptable for the time in service.	Boron	ppm	ASTM D5185(m)	50	<1		
	Barium	ppm	ASTM D5185(m)	15	<1		
	Molybdenum	ppm	ASTM D5185(m)	15	0		
	Manganese	ppm	ASTM D5185(m)		<1		
	Magnesium	ppm	ASTM D5185(m)	50	<1		
	Calcium	ppm	ASTM D5185(m)	50	6		
	Phosphorus	ppm	()	350	225		
	Zinc	ppm	ASTM D5185(m)	100	4		
	Sulfur	ppm	ASTM D5185(m)	12500	8627		
Papart Id: INICODE INICAMIST 02522055 (Caparated: 05/07/2024 15:24:22) Pays 1	Visc @ 40°C	cSt	ASTM D7279(m)	220	219	· Igar Bazbuk	INCORE





CALA ISO 17025:2017 Accredited

Laboratory

Laboratory Sample No.

: WC0814355 Lab Number : 02633966

Unique Number : 5775119 Test Package : MOB 1

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 Received : 07 May 2024 **Tested**

: 07 May 2024 Diagnosed

: 07 May 2024 - Wes Davis

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.