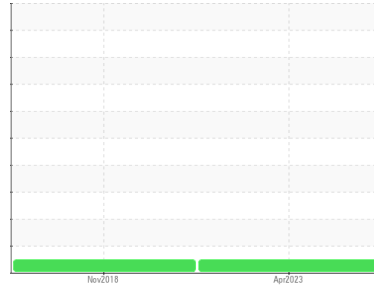




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
HPU 1008

Component
Hydraulic System

Fluid
SHELL TELLUS S2 MX 32 (--- LTR)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample. Please contact your representative for information regarding the proper sampling kits for your service. NOTE: We recommend using MOB 2 test kits, this testkit includes Particle Count to determine the ISO cleanliness of the fluid.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the component(unconfirmed).

Fluid Condition

The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0304897	WC0286908	---
Sample Date	Client Info		24 Apr 2023	13 Nov 2018	---
Machine Age	hrs	Client Info	0	0	---
Oil Age	hrs	Client Info	0	0	---
Oil Changed	Client Info		Not Changed	N/A	---
Sample Status			NORMAL	NORMAL	---

CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.1	NEG	NEG	---

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m) >20	1	<1	---
Chromium	ppm	ASTM D5185(m) >10	0	0	---
Nickel	ppm	ASTM D5185(m) >10	<1	<1	---
Titanium	ppm	ASTM D5185(m)	0	0	---
Silver	ppm	ASTM D5185(m)	0	2	---
Aluminum	ppm	ASTM D5185(m) >10	0	<1	---
Lead	ppm	ASTM D5185(m) >10	<1	<1	---
Copper	ppm	ASTM D5185(m) >75	4	8	---
Tin	ppm	ASTM D5185(m) >10	0	0	---
Antimony	ppm	ASTM D5185(m)	<1	0	---
Vanadium	ppm	ASTM D5185(m)	0	0	---
Beryllium	ppm	ASTM D5185(m)	0	0	---
Cadmium	ppm	ASTM D5185(m)	0	<1	---

ADDITIVES

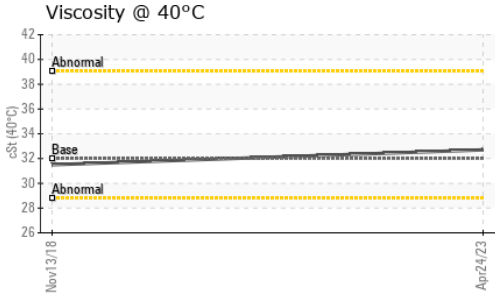
	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	<1	<1	---
Barium	ppm	ASTM D5185(m)	0	0	---
Molybdenum	ppm	ASTM D5185(m)	0	0	---
Manganese	ppm	ASTM D5185(m)	0	<1	---
Magnesium	ppm	ASTM D5185(m)	18	<1	---
Calcium	ppm	ASTM D5185(m)	35	36	---
Phosphorus	ppm	ASTM D5185(m)	303	269	---
Zinc	ppm	ASTM D5185(m)	321	334	---
Sulfur	ppm	ASTM D5185(m)	669	997	---
Lithium	ppm	ASTM D5185(m)	<1	0	---

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >20	5	2	---
Sodium	ppm	ASTM D5185(m)	0	0	---
Potassium	ppm	ASTM D5185(m) >20	<1	0	---



OIL ANALYSIS REPORT



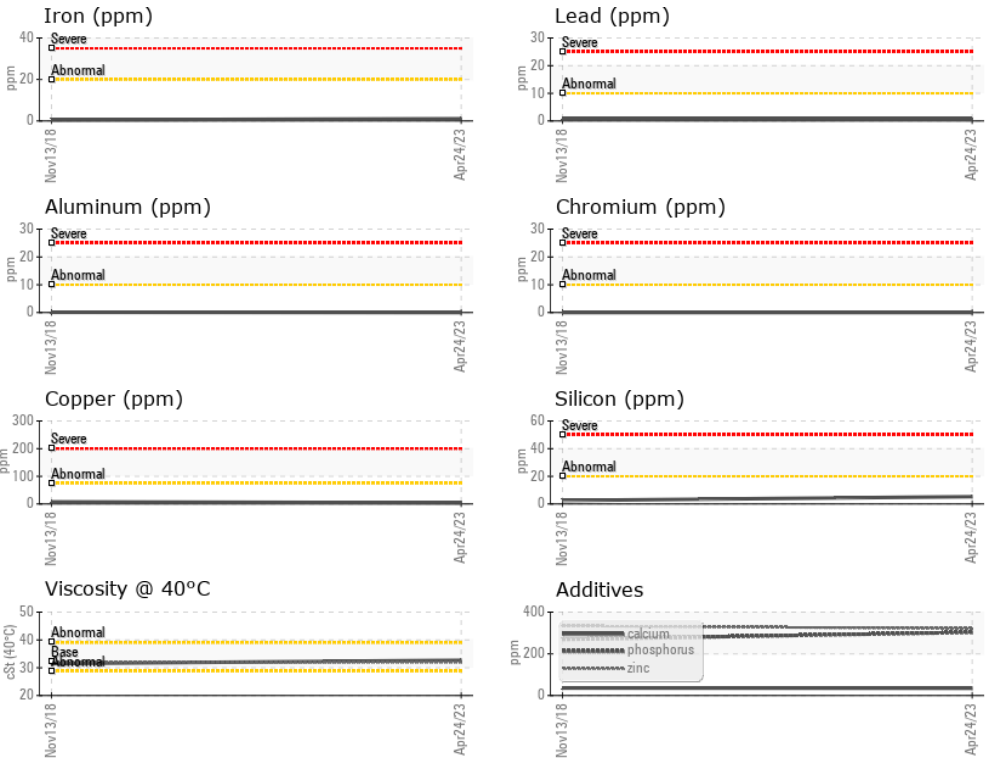
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	---
Yellow Metal	scalar	Visual*	NONE	NONE	---
Precipitate	scalar	Visual*	NONE	NONE	---
Silt	scalar	Visual*	NONE	NONE	---
Debris	scalar	Visual*	NONE	NONE	---
Sand/Dirt	scalar	Visual*	NONE	NONE	---
Appearance	scalar	Visual*	NORML	NORML	---
Odor	scalar	Visual*	NORML	NORML	---
Emulsified Water	scalar	Visual*	>0.1	NEG	---
Free Water	scalar	Visual*		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 40°C	cSt	ASTM D7279(m)	32.0	32.7	31.5	---

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

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0304897 **Received** : 03 May 2023
Lab Number : **02555062** **Diagnosed** : 03 May 2023
Unique Number : 5568077 **Diagnostician** : Wes Davis
Test Package : MOB 1

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