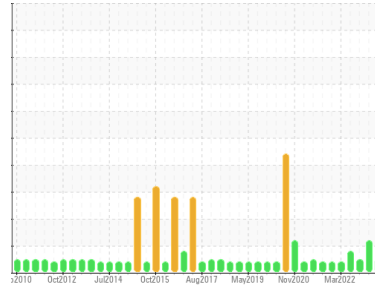




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
Centre de coulé
 Machine Id
47-2840-01

Component
Hydraulic System
 Fluid

QUAKER CHEMICAL QUINTOLUBRIC 888-46 (700 LTR)

DIAGNOSIS

Recommendation

Échantillonner de nouveau l'équipement au prochain intervalle de vidange afin d'en surveiller la condition. (Customer Sample Comment: Échantillon pris dans le réservoir plutôt que sur le point de pression (pompe cadencassée))

Wear

Les taux d'usure de tous les composants sont normaux.

Contamination

La propreté du système est acceptable pour votre objectif de propreté ISO 4406. La propreté du système et du fluide est acceptable.

Fluid Condition

Le AN est acceptable pour ce fluide. L'état de l'huile permet d'en prolonger l'utilisation.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0833025	WC0787982	WC0744030
Sample Date	Client Info		16 Aug 2023	05 Apr 2023	16 Nov 2022
Machine Age	hrs	Client Info	0	0	0
Oil Age	hrs	Client Info	0	0	0
Oil Changed	Client Info		N/A	N/A	N/A
Sample Status			NORMAL	ABNORMAL	NORMAL

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>20	14	14	14
Chromium	ppm	ASTM D5185(m)	>20	5	5	3
Nickel	ppm	ASTM D5185(m)	>20	<1	<1	0
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	0	0
Aluminum	ppm	ASTM D5185(m)	>20	<1	<1	<1
Lead	ppm	ASTM D5185(m)	>20	<1	<1	<1
Copper	ppm	ASTM D5185(m)	>20	6	5	5
Tin	ppm	ASTM D5185(m)	>20	167	163	154
Antimony	ppm	ASTM D5185(m)		0	<1	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0
Beryllium	ppm	ASTM D5185(m)		0	0	0
Cadmium	ppm	ASTM D5185(m)		0	0	0

ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185(m)		2	<1	<1
Barium	ppm	ASTM D5185(m)		0	0	0
Molybdenum	ppm	ASTM D5185(m)		0	0	0
Manganese	ppm	ASTM D5185(m)		<1	<1	<1
Magnesium	ppm	ASTM D5185(m)		<1	<1	<1
Calcium	ppm	ASTM D5185(m)		4	2	4
Phosphorus	ppm	ASTM D5185(m)		112	114	114
Zinc	ppm	ASTM D5185(m)		10	8	9
Sulfur	ppm	ASTM D5185(m)		516	516	517
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS

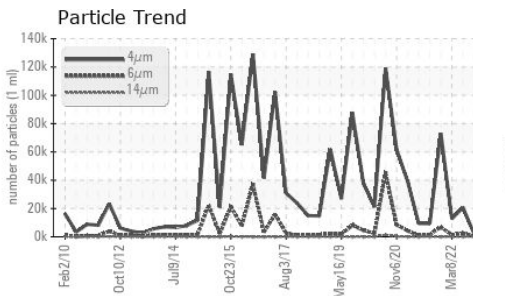
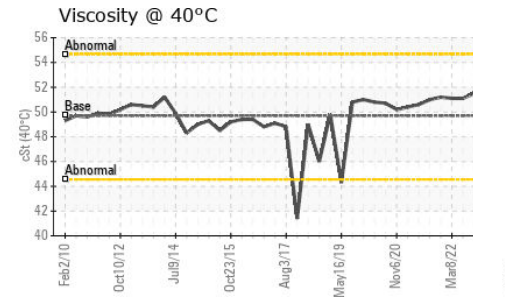
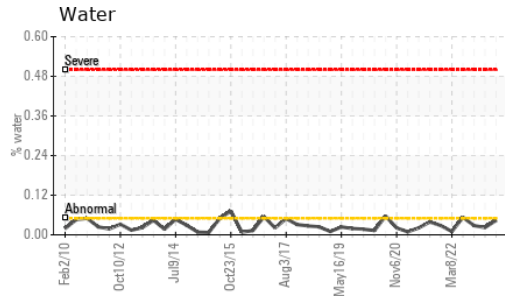
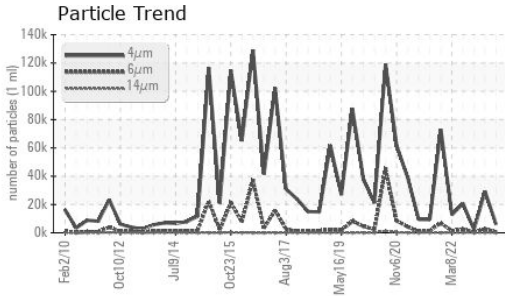
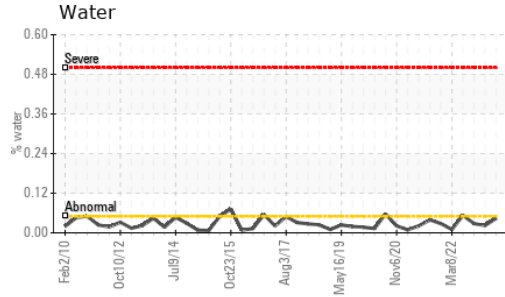
	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>15	7	6	6
Sodium	ppm	ASTM D5185(m)		5	4	5
Potassium	ppm	ASTM D5185(m)	>20	1	<1	<1
Water	%	ASTM D6304*	>0.05	0.044	0.022	0.028
ppm Water	ppm	ASTM D6304*	>500	442.9	221.8	282.8

FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		5967	29292	2400
Particles >6µm	ASTM D7647	>1300	530	▲ 2855	376
Particles >14µm	ASTM D7647	>160	22	▲ 167	29
Particles >21µm	ASTM D7647	>40	5	44	11
Particles >38µm	ASTM D7647	>10	1	2	1
Particles >71µm	ASTM D7647	>3	0	0	0
Oil Cleanliness	ISO 4406 (c)	>--/17/14	20/16/12	▲ 22/19/15	18/16/12



OIL ANALYSIS REPORT

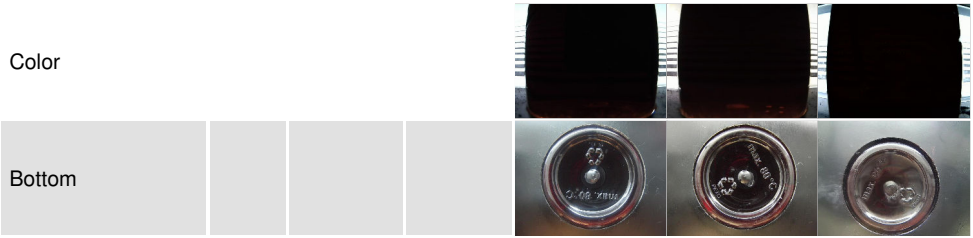


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	2.0	3.48	3.31	3.28

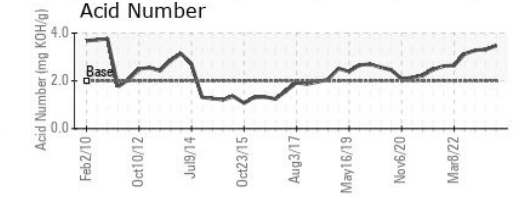
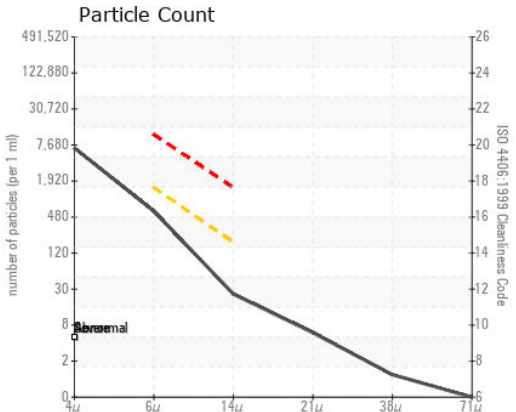
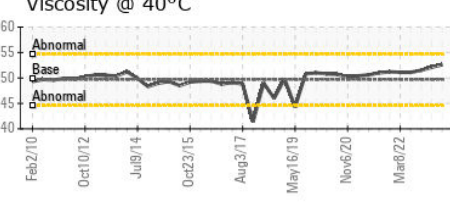
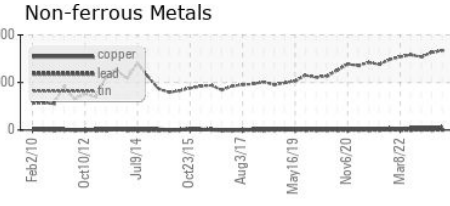
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.05	NEG	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	49.7	52.6	52.1	51.5

SAMPLE IMAGES



GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0833025
Lab Number : 02577169
Unique Number : 5630229
Test Package : IND 2 (Additional Tests: KF)

RTA - UGB
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 Ville de la Baie, QC
 CA G7B 4G9
 Contact: Alcan Epc
 mathieu.tremblay2@riotinto.com
 T: (418)697-9568
 F: (418)697-9550

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.