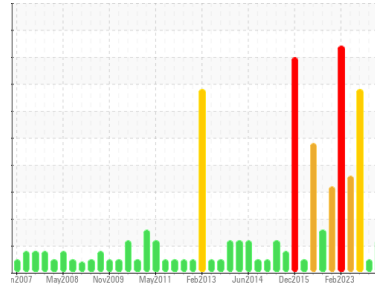




OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area
6801 - TRANSFERT
 Machine Id
68208101 - UNITÉ HYDRAULIQUE - TABLE #2 SUD
 Component
Hydraulic System
 Fluid
QUAKER CHEMICAL QUINTOLUBRIC 888-46 (380 LTR)

DIAGNOSIS

Recommendation

Nous recommandons le remplacement des filtres de ce composant. Nous vous recommandons d'échantillonner de nouveau dès que possible afin de contrôler la situation.

Wear

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

Contamination

Il y a une quantité modérée de particules (de 4 à 14 microns) dans l'huile. La propreté du système est supérieure à la limite acceptable pour votre objectif de propreté ISO 4406.

Fluid Condition

Le AN est acceptable pour ce fluide. l'huile peut encore servir si la contamination peut être réduite à un niveau acceptable.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0852615	WC0817512	WC0649388
Sample Date	Client Info		13 Nov 2023	09 Jun 2023	04 Apr 2023
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			ABNORMAL	NORMAL	SEVERE

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>20	5	4	14
Chromium	ppm	ASTM D5185(m)	>20	5	5	18
Nickel	ppm	ASTM D5185(m)	>20	<1	0	<1
Titanium	ppm	ASTM D5185(m)		1	2	▲ 11
Silver	ppm	ASTM D5185(m)		0	0	0
Aluminum	ppm	ASTM D5185(m)	>20	1	<1	2
Lead	ppm	ASTM D5185(m)	>20	<1	2	4
Copper	ppm	ASTM D5185(m)	>20	2	8	▲ 28
Tin	ppm	ASTM D5185(m)	>20	288	298	251
Antimony	ppm	ASTM D5185(m)		0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	<1
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)		<1	<1	<1
Barium	ppm	ASTM D5185(m)		0	0	0
Molybdenum	ppm	ASTM D5185(m)		0	0	0
Manganese	ppm	ASTM D5185(m)		0	0	<1
Magnesium	ppm	ASTM D5185(m)		<1	<1	<1
Calcium	ppm	ASTM D5185(m)		1	2	2
Phosphorus	ppm	ASTM D5185(m)		106	115	▲ 122
Zinc	ppm	ASTM D5185(m)		20	26	▲ 43
Sulfur	ppm	ASTM D5185(m)		540	500	594
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

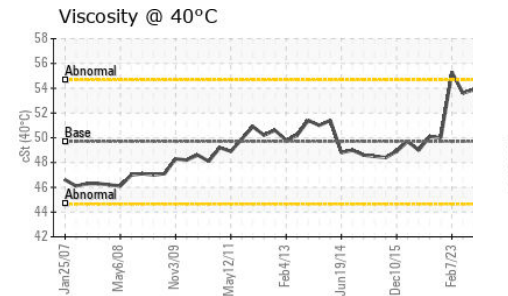
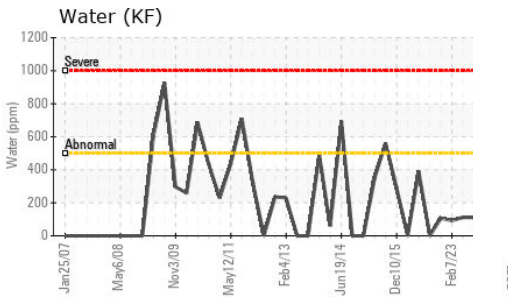
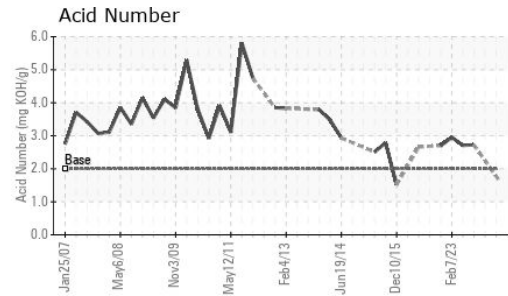
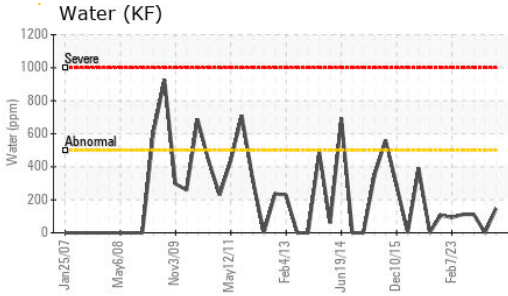
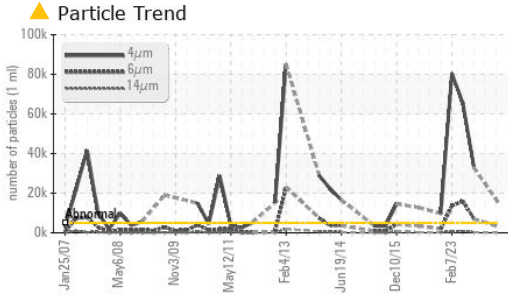
CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>15	3	2	2
Sodium	ppm	ASTM D5185(m)		2	4	6
Potassium	ppm	ASTM D5185(m)	>20	3	<1	<1
Water	%	ASTM D6304*	>0.05	0.014	---	0.011
ppm Water	ppm	ASTM D6304*	>500	146	---	110.8

FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	▲ 16889	---	● 65426
Particles >6µm	ASTM D7647	>1300	▲ 3516	---	● 15995
Particles >14µm	ASTM D7647	>160	147	---	▲ 857
Particles >21µm	ASTM D7647	>40	30	---	▲ 208
Particles >38µm	ASTM D7647	>10	4	---	7
Particles >71µm	ASTM D7647	>3	2	---	0
Oil Cleanliness	ISO 4406 (c)	>19/17/14	▲ 21/19/14	---	● 23/21/17

OIL ANALYSIS REPORT



FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	2.0	1.78	---	2.72

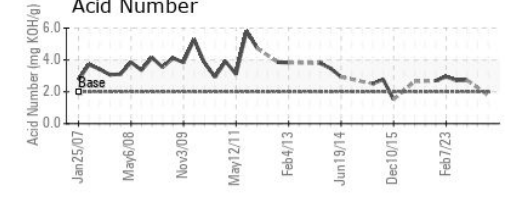
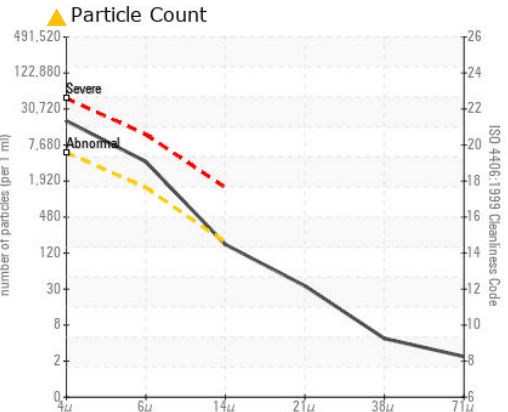
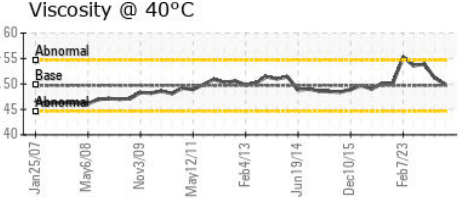
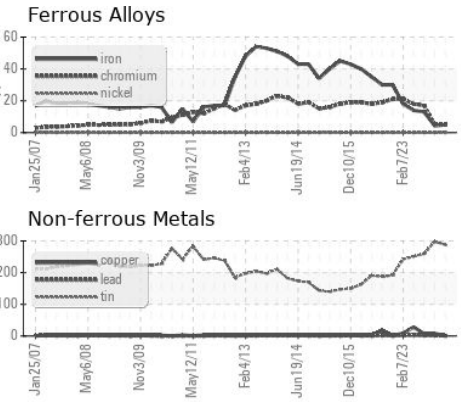
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	VLITE	NONE
Sand/Dirt	scalar	Visual*	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	49.9	51.2	53.9

SAMPLE IMAGES

method	limit/base	current	history1	history2
Color				
Bottom				

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 Rio Tinto Alcan (SECAL) USINE LATERRIERE
Sample No. : WC0852615 **Received** : 02 Jan 2024
Lab Number : 02605921 **Diagnosed** : 03 Jan 2024
Unique Number : 5707007 **Diagnostician** : Kevin Marson
Test Package : IND 2 (Additional Tests: KF)

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.

Contact: Sylvain Payer
 sylvain.payer@riotinto.com
 T: (418)818-9426
 F: (418)678-1876