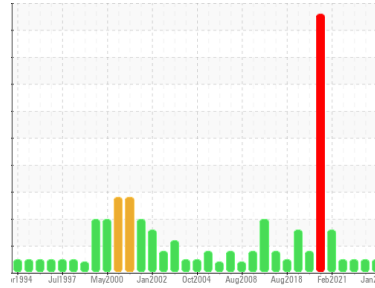




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Area  
**MSE**  
 Machine Id  
**41P13 HYD**

Component  
**Hydraulic System**  
 Fluid

**QUAKER CHEMICAL QUINTOLUBRIC 888-46 (300 LTR)**

## DIAGNOSIS

### Recommendation

Échantillonner de nouveau l'équipement au prochain intervalle de vidange afin d'en surveiller la condition.

### 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		<b>WC0827945</b>	WC0730749	WC0676137
Sample Date	Client Info		<b>07 Jan 2024</b>	09 Nov 2022	07 Apr 2022
Machine Age	hrs	Client Info	<b>0</b>	0	0
Oil Age	hrs	Client Info	<b>0</b>	0	0
Oil Changed	Client Info		<b>N/A</b>	N/A	N/A
Sample Status			<b>NORMAL</b>	NORMAL	NORMAL

## WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>20	<b>2</b>	3	3
Chromium	ppm	ASTM D5185(m)	>20	<b>8</b>	10	8
Nickel	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>20	<b>2</b>	2	2
Lead	ppm	ASTM D5185(m)	>20	<b>2</b>	<1	1
Copper	ppm	ASTM D5185(m)	>20	<b>2</b>	2	2
Tin	ppm	ASTM D5185(m)	>20	<b>284</b>	235	229
Antimony	ppm	ASTM D5185(m)		<b>0</b>	0	0
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Beryllium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Cadmium	ppm	ASTM D5185(m)		<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1
Barium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)		<b>0</b>	0	0
Manganese	ppm	ASTM D5185(m)		<b>0</b>	0	0
Magnesium	ppm	ASTM D5185(m)		<b>&lt;1</b>	0	0
Calcium	ppm	ASTM D5185(m)		<b>&lt;1</b>	1	2
Phosphorus	ppm	ASTM D5185(m)		<b>103</b>	116	112
Zinc	ppm	ASTM D5185(m)		<b>16</b>	35	30
Sulfur	ppm	ASTM D5185(m)		<b>551</b>	498	480
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1

## CONTAMINANTS

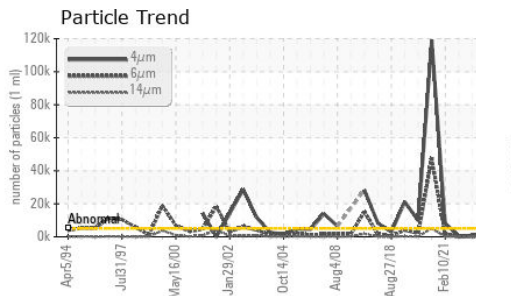
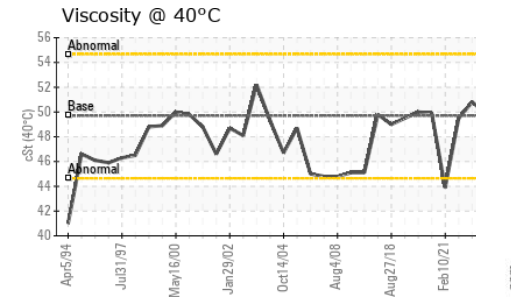
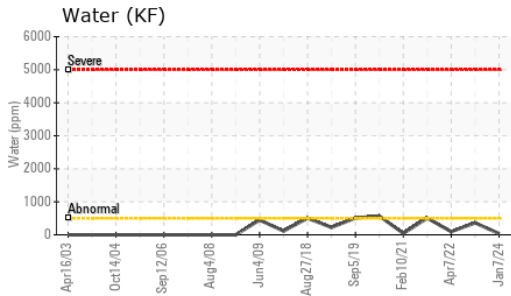
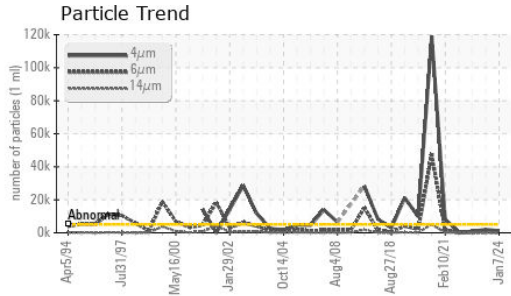
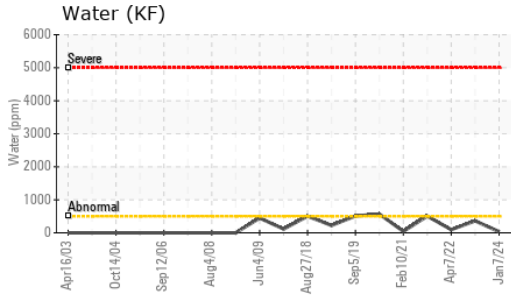
	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>15	<b>2</b>	2	3
Sodium	ppm	ASTM D5185(m)		<b>4</b>	7	7
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	<1
Water	%	ASTM D6304*	>0.05	<b>0.003</b>	0.036	0.009
ppm Water	ppm	ASTM D6304*	>500	<b>34</b>	361.6	96.9

## FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	<b>1228</b>	2016	905
Particles >6µm	ASTM D7647	>1300	<b>294</b>	563	284
Particles >14µm	ASTM D7647	>160	<b>22</b>	44	41
Particles >21µm	ASTM D7647	>40	<b>7</b>	11	8
Particles >38µm	ASTM D7647	>10	<b>1</b>	0	0
Particles >71µm	ASTM D7647	>3	<b>1</b>	0	0
Oil Cleanliness	ISO 4406 (c)	>19/17/14	<b>17/15/12</b>	18/16/13	17/15/13



# OIL ANALYSIS REPORT

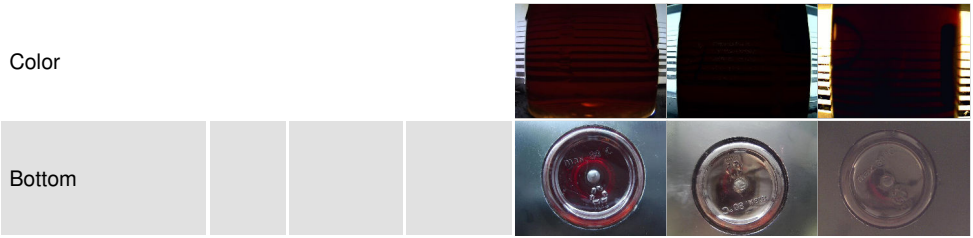


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	2.0	<b>1.84</b>	2.16	2.22

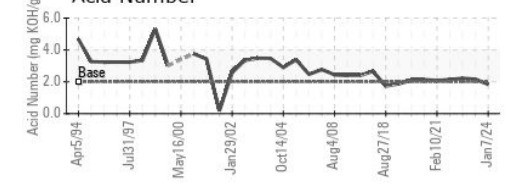
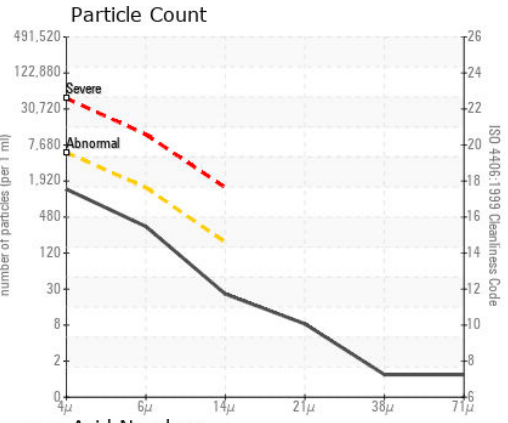
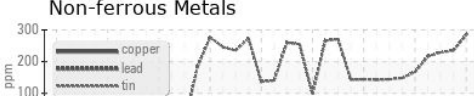
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Precipitate	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Silt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	Visual*	NONE	<b>NONE</b>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

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	49.7	<b>49.1</b>	49.9	50.8

SAMPLE IMAGES		method	limit/base	current	history1	history2
---------------	--	--------	------------	---------	----------	----------



## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0827945 **Received** : 08 Jan 2024  
**Lab Number** : **02607026** **Diagnosed** : 09 Jan 2024  
**Unique Number** : 5708112 **Diagnostician** : Wes Davis  
**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.

**RTA - UGB**  
 C.P. 900  
 Ville de la Baie, QC  
 CA G7B 4G9  
 Contact: Alcan Epc  
 mathieu.tremblay2@riotinto.com  
 T: (418)697-9568  
 F: (418)697-9550