



# OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>MARGINAL</b>

Area  
**T.M.B.**  
Machine Id  
**5502-CWC-200 (S/N 17)**  
Component  
**2 Gearbox**  
Fluid  
**CHEVRON CYLINDER OIL W ISO 680 (20 LTR)**

## RECOMMENDATION

Nous vous recommandons de vérifier tous les endroits par lesquels des contaminants peuvent pénétrer dans le système. Nous vous recommandons de vidanger l'huile de ce composant si vous ne l'avez pas déjà fait. Nous vous recommandons d'échantillonner de nouveau dès que possible afin de contrôler la situation.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0928347</b>	WC0902406	WC0884533
Sample Date		Client Info		<b>22 May 2024</b>	14 Mar 2024	06 Dec 2023
Machine Age	hrs	Client Info		<b>0</b>	0	0
Oil Age	hrs	Client Info		<b>0</b>	0	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>N/A</b>	N/A	N/A
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>MARGINAL</b>	NORMAL	NORMAL

## WEAR

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

PQ		ASTM D8184*		<b>1</b>	0	8
Iron	ppm	ASTM D5185(m)	>200	<b>18</b>	16	20
Chromium	ppm	ASTM D5185(m)	>15	<b>0</b>	0	0
Nickel	ppm	ASTM D5185(m)	>15	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)		<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185(m)	>25	<b>1</b>	1	2
Lead	ppm	ASTM D5185(m)	>100	<b>0</b>	0	0
Copper	ppm	ASTM D5185(m)	>200	<b>1</b>	1	2
Tin	ppm	ASTM D5185(m)	>25	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
White Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

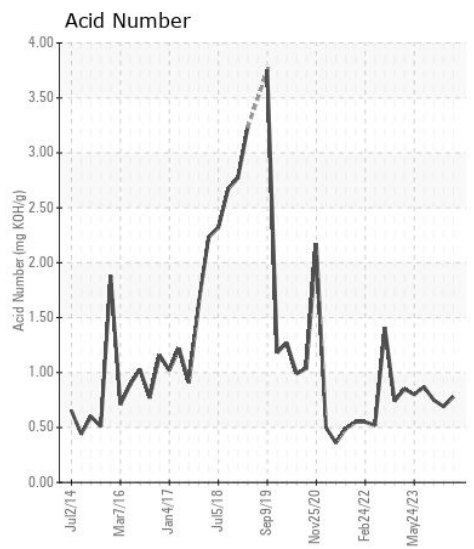
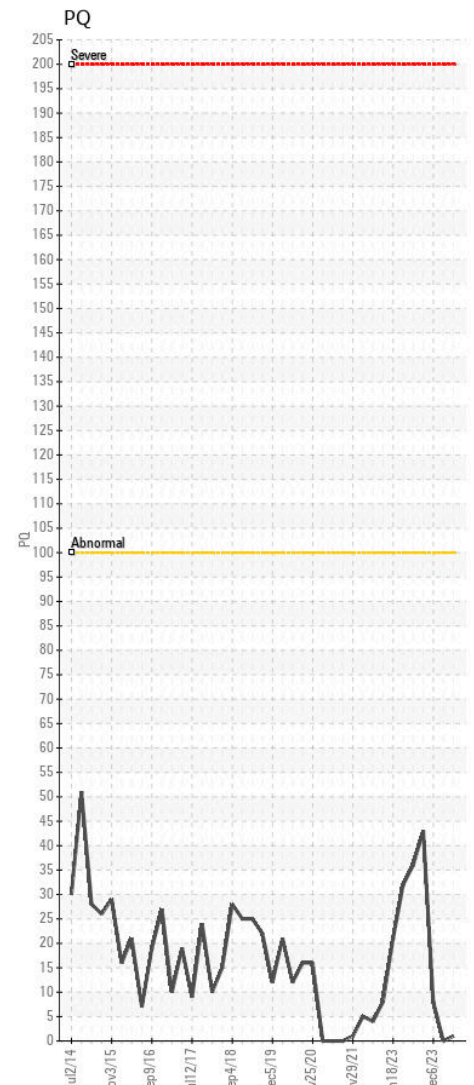
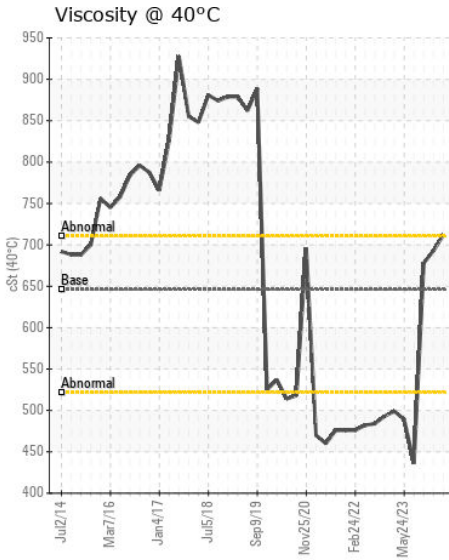
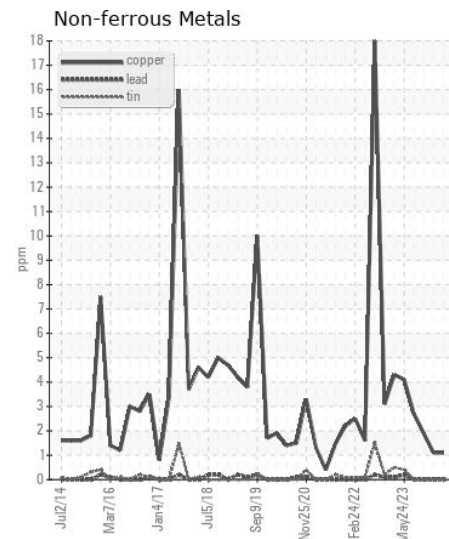
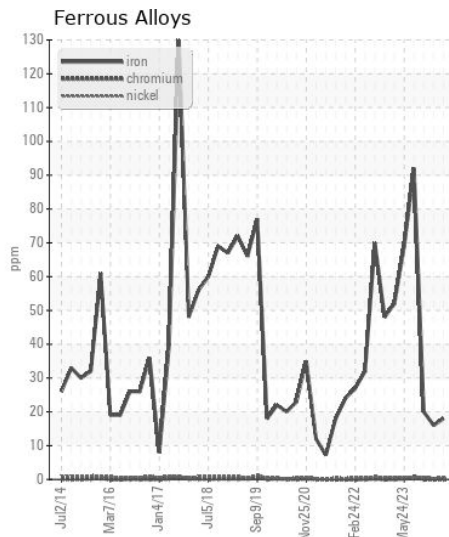
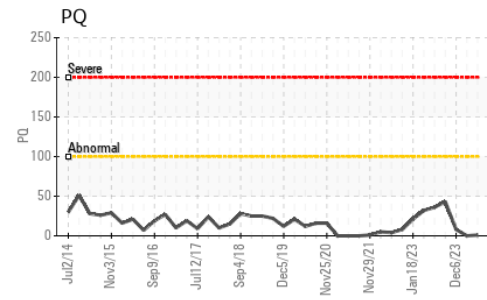
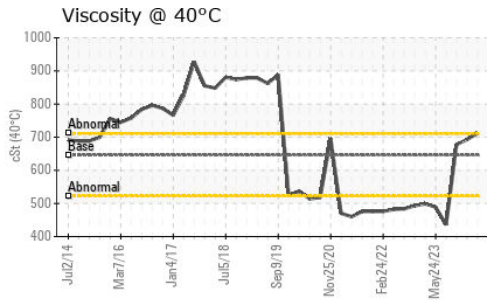
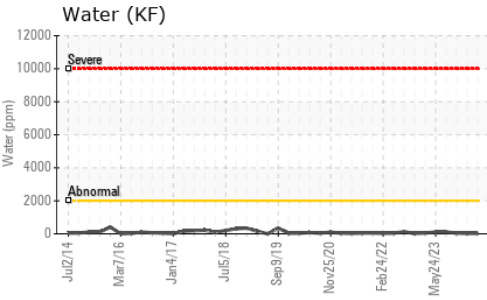
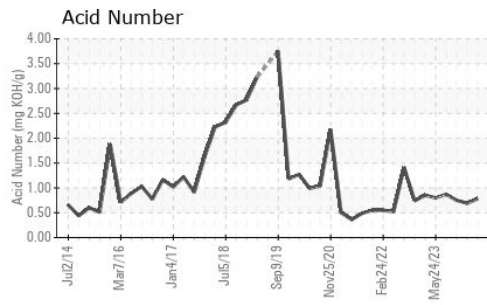
Lithium (Li) niveau marginal @10ppm., indique une éventuelle contamination par la graisse. La teneur en eau est négligeable.

Silicon	ppm	ASTM D5185(m)	>50	<b>2</b>	1	3
Potassium	ppm	ASTM D5185(m)	>20	<b>0</b>	<1	0
Water	%	ASTM D6304*	>0.2	<b>0.001</b>	0.002	0.004
ppm Water	ppm	ASTM D6304*	>2000	<b>9</b>	17	41
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*	>0.2	<b>NEG</b>	NEG	NEG

## FLUID CONDITION

La viscosité de l'huile est plus élevée que la normale. Le AN est acceptable pour ce fluide. l'huile ne peut plus être utilisée en raison de la présence de contaminants.

Sodium	ppm	ASTM D5185(m)		<b>1</b>	<1	<1
Boron	ppm	ASTM D5185(m)		<b>2</b>	<1	<1
Barium	ppm	ASTM D5185(m)		<b>0</b>	0	<1
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>	<1	0
Calcium	ppm	ASTM D5185(m)		<b>0</b>	0	<1
Phosphorus	ppm	ASTM D5185(m)		<b>7</b>	2	2
Zinc	ppm	ASTM D5185(m)		<b>9</b>	3	3
Sulfur	ppm	ASTM D5185(m)		<b>3952</b>	3958	4118
Acid Number (AN)	mg KOH/g	ASTM D974*		<b>0.78</b>	0.69	0.75
Visc @ 40°C	cSt	ASTM D7279(m)	646	<b>712</b>	693	678



ISO 17025:2017  
Accredited  
Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0928347  
**Lab Number** : 02639475  
**Unique Number** : 5788637  
**Test Package** : IND 2 ( Additional Tests: KF, TAN Man )

**Received** : 03 Jun 2024  
**Tested** : 04 Jun 2024  
**Diagnosed** : 04 Jun 2024 - Kevin Marson

**RTA - ALMA**  
 3000 RUE DES PINS OUEST, BATISSE 7103 MEZZALINE  
 ALMA, QC  
 CA G8B 6T3  
 Contact: Guy Dufour  
 guy.dufour-almacou@riotinto.com

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.

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