



# RAPPORT D'ANALYSE D'HUILE

USURE	<b>NORMAL</b>
CONTAMINANTS	<b>NORMAL</b>
ÉTAT DU FLUIDE	<b>NORMAL</b>

Secteur

## Propulsion/Salle des Machines

Identité de la machine

### 12A02#01 (S/N M4110-R)

Composant

### Moteur diesel 1

Fluide

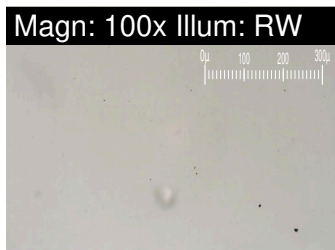
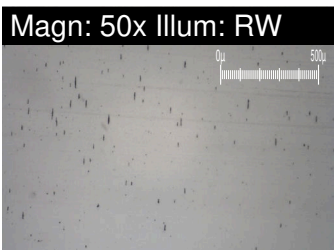
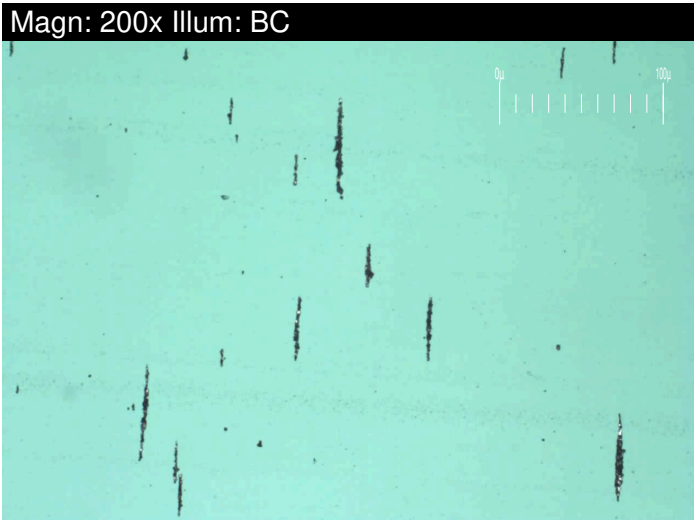
### PETRO CANADA RALUBE 40 CFS (720 LTR)

## RECOMMANDATION

Resample at the next service interval to monitor.

## USURE

All component wear rates are normal. The ferrography results are normal indicating no abnormal wear in the system.



Test	UOM	Method	Limit/Abn	Current	History1	History2
Numéro d'échant.		Client Info		<b>WC0751426</b>	WC0751419	WC
Date d'échant.		Client Info		<b>24 Oct 2023</b>	05 Apr 2023	18 Oct 2022
Âge d la Machine	hrs	Client Info		<b>19103</b>	18308	17964
Âge de l'huile	hrs	Client Info		<b>723</b>	1225	881
Âge du filtre	hrs	Client Info		<b>723</b>	1225	881
Huile changée		Client Info		<b>Not Changd</b>	Not Changd	Not Changd
Filtre changé		Client Info		<b>N/A</b>	Not Changd	Not Changd
Statut de l'échant.				<b>NORMAL</b>	NORMAL	NORMAL
PQ		ASTM D8184*		<b>0</b>	0	---
Fer	ppm	ASTM D5185(m)	>100	<b>5</b>	5	5
Chrome	ppm	ASTM D5185(m)	>20	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185(m)	>4	<b>&lt;1</b>	<1	0
Titane	ppm	ASTM D5185(m)		<b>0</b>	0	0
Argent	ppm	ASTM D5185(m)	>3	<b>&lt;1</b>	0	0
Aluminium	ppm	ASTM D5185(m)	>20	<b>2</b>	2	2
Plomb	ppm	ASTM D5185(m)	>40	<b>&lt;1</b>	<1	<1
Cuivre	ppm	ASTM D5185(m)	>330	<b>&lt;1</b>	<1	<1
Étain	ppm	ASTM D5185(m)	>15	<b>0</b>	<1	<1
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Grosses particules		DR-Ferr*		<b>4.0</b>	6.0	---
Petites particules		DR-Ferr*		<b>2.1</b>	5.0	---
Total de particules		DR-Ferr*	>---	<b>6.1</b>	11	---
Pourcentage de grosses particules	%	DR-Ferr*		<b>31.1</b>	9.1	---
Indice de sévérité		DR-Ferr*		<b>8</b>	6	---
Frottement ferreux	Scale 0-10	ASTM D7684*		<b>3</b>	2	
Glissement ferreux	Scale 0-10	ASTM D7684*				
Copeaux ferreux	Scale 0-10	ASTM D7684*				
Roulement ferreux	Scale 0-10	ASTM D7684*		<b>1</b>	1	
Rodage ferreux	Scale 0-10	ASTM D7684*				
Sphères ferreuses	Scale 0-10	ASTM D7684*				
Oxydes ferreux noirs	Scale 0-10	ASTM D7684*		<b>1</b>		
Oxydes rouges ferreux	Scale 0-10	ASTM D7684*				
Corrosion ferreuse	Scale 0-10	ASTM D7684*			1	
Autres particules ferreuses	Scale 0-10	ASTM D7684*				
Frottement non-ferreux	Scale 0-10	ASTM D7684*				
Glissement non-ferreux	Scale 0-10	ASTM D7684*				
Copeaux non ferreux	Scale 0-10	ASTM D7684*				
Roulement non-ferreux	Scale 0-10	ASTM D7684*				
Autres particules non-ferreuses	Scale 0-10	ASTM D7684*				

## CONTAMINANTS

There is no indication of any contamination in the oil.

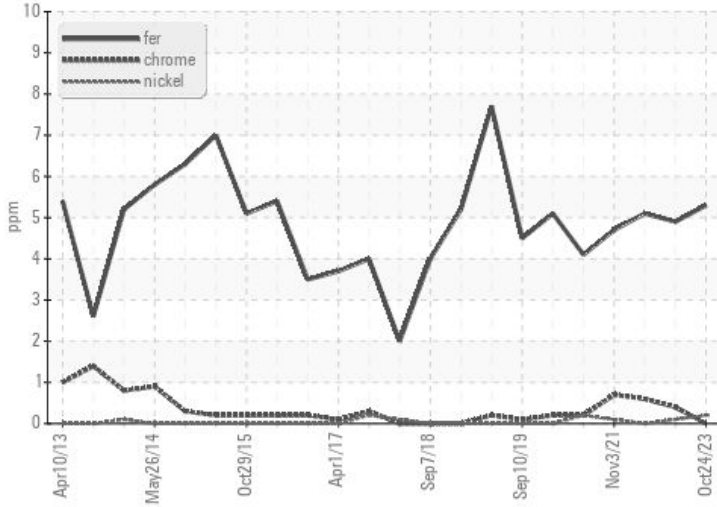
Silicium	ppm	ASTM D5185(m)	>25	<b>3</b>	4	4
Potassium	ppm	ASTM D5185(m)	>20	<b>0</b>	3	1
Essence		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Glycol		WC Method		<b>NEG</b>	NEG	NEG
% de suie	%	ASTM D7844*	>2	<b>0</b>	0	0
Nitration	Abs/cm	ASTM D7624*	>20	<b>12.4</b>	12.2	12.7
Sulfatation	Abs/.1mm	ASTM D7415*	>30	<b>14.4</b>	14.3	15.3
Eau émulsifiée	scalar	Visual*	>0.2	<b>NEG</b>	NEG	NEG
Matière carbonée	Scale 0-10	ASTM D7684*				
Sable/saleté	Scale 0-10	ASTM D7684*		<b>1</b>	1	
Fibres	Scale 0-10	ASTM D7684*				
Sphères	Scale 0-10	ASTM D7684*				
Autres particules	Scale 0-10	ASTM D7684*		<b>1</b>	1	

## ÉTAT DU FLUIDE

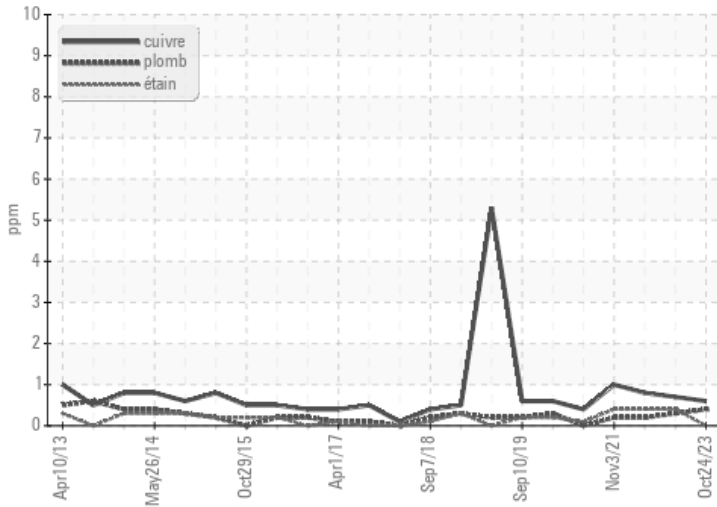
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185(m)		<b>3</b>	3	3
Bore	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	<1	<1
Baryum	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	0	0
Molybdène	ppm	ASTM D5185(m)	0	<b>0</b>	<1	<1
Manganèse	ppm	ASTM D5185(m)	0	<b>0</b>	<1	<1
Magnésium	ppm	ASTM D5185(m)	25	<b>16</b>	23	21
Calcium	ppm	ASTM D5185(m)	4300	<b>4735</b>	4784	4771
Phosphore	ppm	ASTM D5185(m)	1.6	<b>4</b>	3	2
Zinc	ppm	ASTM D5185(m)	2	<b>6</b>	5	5
Soufre	ppm	ASTM D5185(m)	1500	<b>3067</b>	3160	3104
Oxydation	Abs/.1mm	ASTM D7414*	>25	<b>10.3</b>	10.5	11.1
Indice d'alcalinité	mg KOH/g	ASTM D2896*	14.0	<b>13.65</b>	13.51	---
Visc 100°C	cSt	ASTM D7279(m)	14.8	<b>14.5</b>	14.5	14.6
Dégradation du lubrifiant	Scale 0-10	ASTM D7684*				

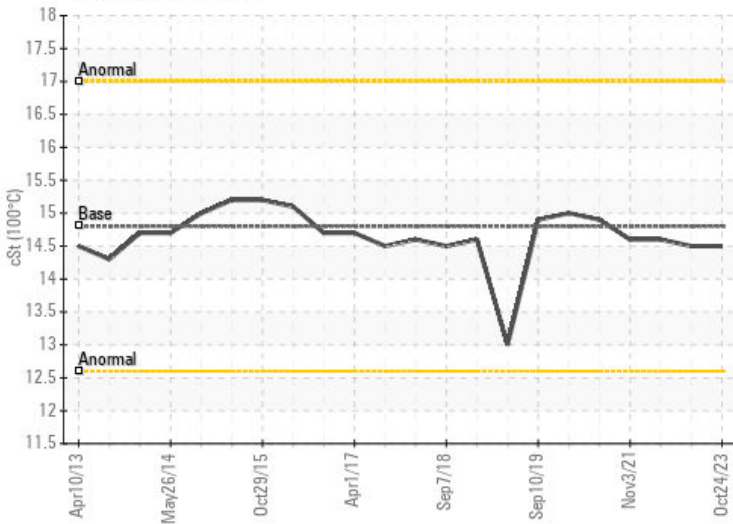
### Alliages ferreux



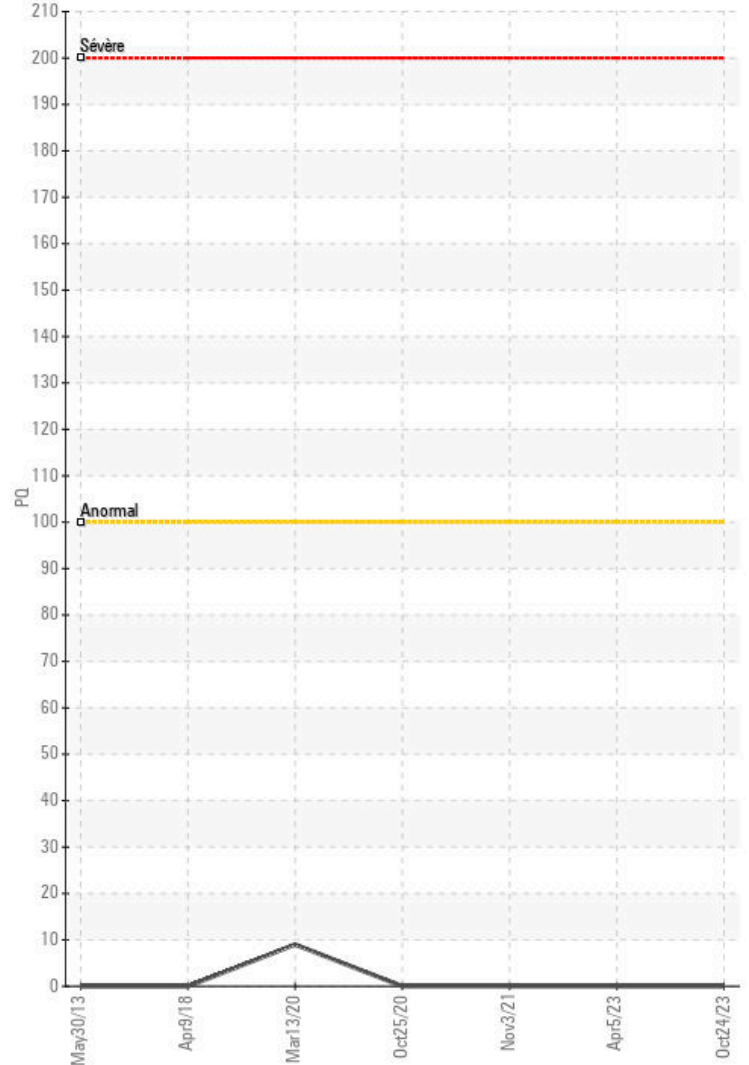
### Métaux non-ferreux



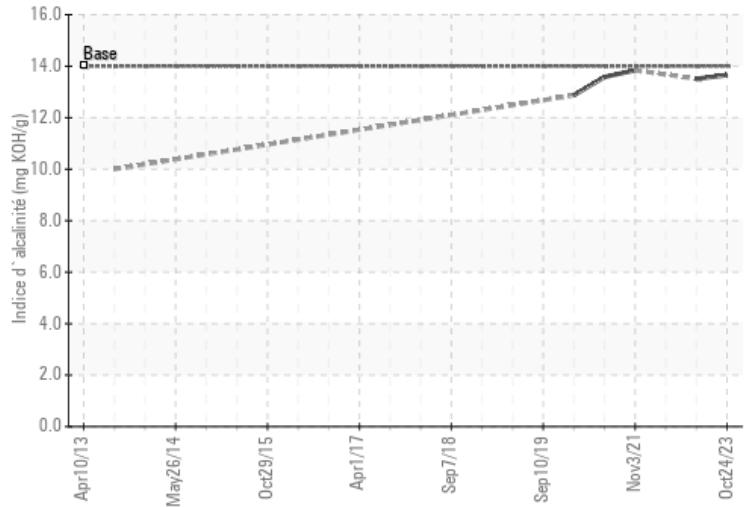
### Viscosité 100°C



### PQ



### Indice d'alcalinité



ISO 17025:2017  
Accredited  
Laboratory

**Laboratoire** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**N° d'échantillon** : WC0751426  
**N° de laboratoire** : 02593088  
**Numéro unique** : 5670167  
**Analyse** : MAR 3 ( Additional Tests: BottomAnalysis, FILTERPATCH )

**Canadian Coast Guard**  
 CCGS Amundsen, 101 Boul. Champlain  
 Quebec, QC  
 CA G1K 7Y7  
 Contact: Chief Engineer  
 amundsense@ccgs-ngcc.gc.ca  
 T: (418)953-8233  
 F: x:

Pour discuter ce rapport, contacter le service à la clientèle au 1-800-268-2131.

Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.

La validez de los resultados y la interpretación se basan en la muestra y la información proporcionada.

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