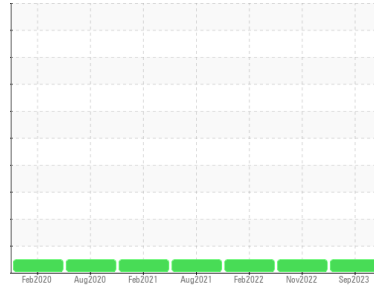




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**PORT MAIN ENGINE**  
 Component  
**Port Main Engine**  
 Fluid  
**SHELL ROTELLA T4 15W40 (75 LTR)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the oil.

### Fluid Condition

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

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			<b>WC0732103</b>	WC0732095	WC0616894
Sample Date	Client Info			<b>19 Sep 2023</b>	29 Nov 2022	17 Feb 2022
Machine Age	hrs	Client Info		<b>1383</b>	1108	859
Oil Age	hrs	Client Info		<b>180</b>	251	352
Oil Changed	Client Info			<b>Not Chngd</b>	Not Chngd	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method		>4.0	<b>&lt;1.0</b>	<1.0	<1.0
Glycol	WC Method			<b>NEG</b>	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>75	<b>5</b>	6	8
Chromium	ppm	ASTM D5185(m)	>8	<b>0</b>	0	<1
Nickel	ppm	ASTM D5185(m)	>2	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185(m)	>3	<b>0</b>	<1	0
Silver	ppm	ASTM D5185(m)	>2	<b>&lt;1</b>	<1	0
Aluminum	ppm	ASTM D5185(m)	>15	<b>1</b>	1	<1
Lead	ppm	ASTM D5185(m)	>18	<b>&lt;1</b>	<1	<1
Copper	ppm	ASTM D5185(m)	>80	<b>2</b>	2	4
Tin	ppm	ASTM D5185(m)	>14	<b>0</b>	<1	<1
Antimony	ppm	ASTM D5185(m)		<b>0</b>	<1	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

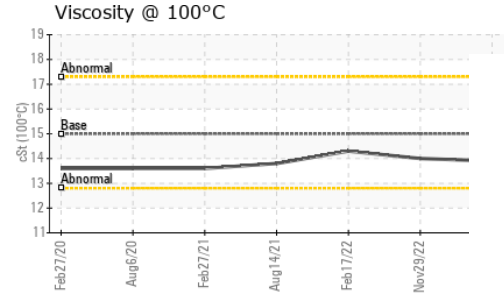
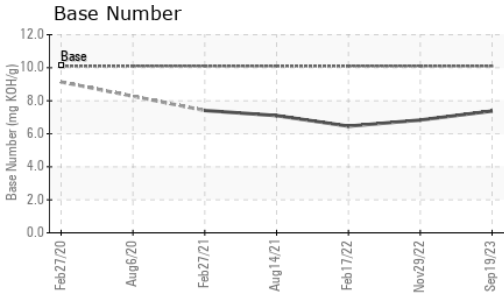
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		<b>113</b>	115	76
Barium	ppm	ASTM D5185(m)		<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185(m)		<b>2</b>	15	2
Manganese	ppm	ASTM D5185(m)		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185(m)		<b>23</b>	86	23
Calcium	ppm	ASTM D5185(m)		<b>2311</b>	2359	2317
Phosphorus	ppm	ASTM D5185(m)		<b>1002</b>	1055	1041
Zinc	ppm	ASTM D5185(m)		<b>1219</b>	1198	1230
Sulfur	ppm	ASTM D5185(m)		<b>2945</b>	2961	2950
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>20	<b>6</b>	2	2
Sodium	ppm	ASTM D5185(m)	>75	<b>4</b>	3	2
Potassium	ppm	ASTM D5185(m)	>20	<b>6</b>	7	8

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*		<b>0.2</b>	0.1	0
Nitration	Abs/cm	ASTM D7624*	>20	<b>8.6</b>	9.6	4.3
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>22.1</b>	24.4	14.9



# OIL ANALYSIS REPORT

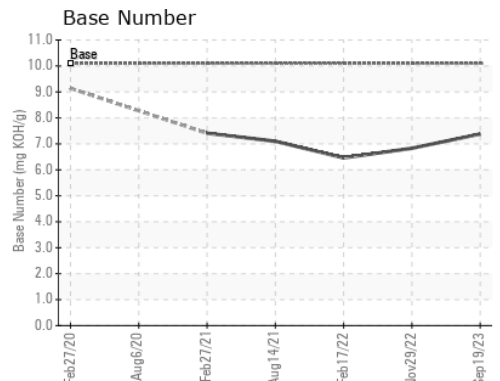
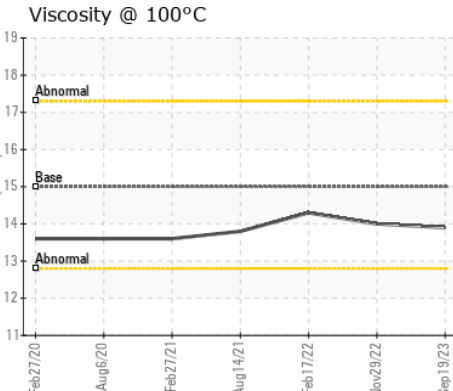
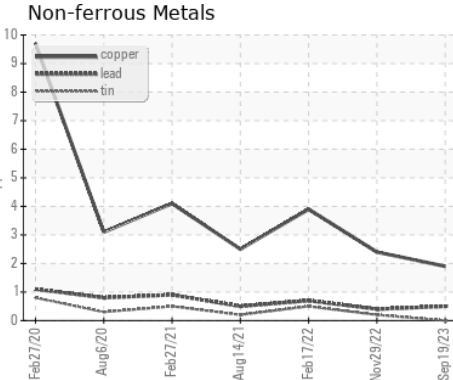
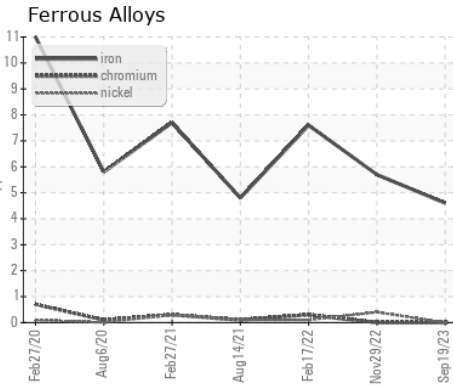


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>18.0</b>	20.2	8.1
Base Number (BN)	mg KOH/g	ASTM D2896*	10.1	<b>7.38</b>	6.83	6.46

VISUAL		method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.1	<b>NEG</b>	NEG	NEG
Free Water	scalar	Visual*		<b>NEG</b>	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15	<b>13.9</b>	14.0	14.3

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0732103  
**Lab Number** : **02587035**  
**Unique Number** : 5656101  
**Test Package** : MAR 2

**CANADIAN COAST GUARD**  
 CCGS CONCEPTION BAY, 280 SOUTHSIDE RD, BOX 5667  
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 Contact: Chief Engineer  
 CCG.ConceptionBayCE-BaiedeConceptionIE.GCC@dfo-mpo.gc.ca  
 T: 1(709)884-8513  
 F:

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.