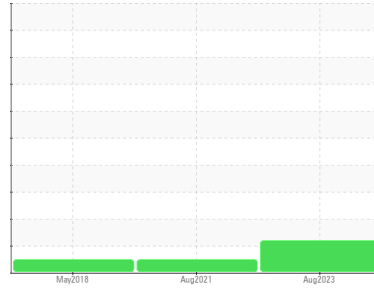


# PROBLEM SUMMARY

Sample Rating Trend



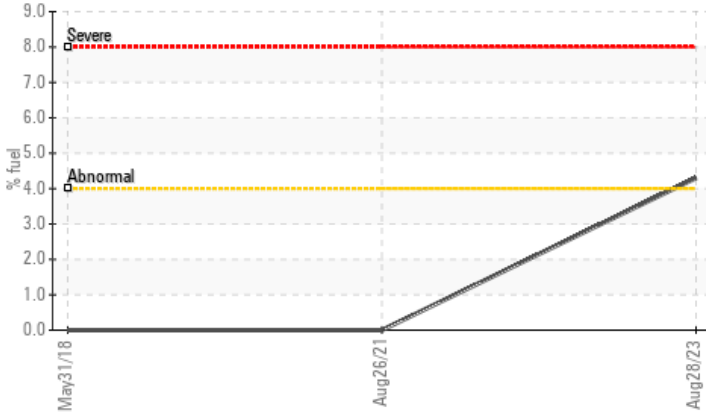
**FUEL**



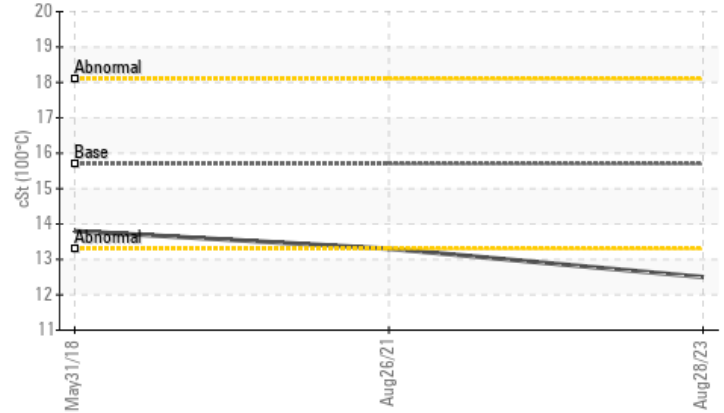
Machine Id  
**1012335373**  
Component  
**Port Diesel Engine**  
Fluid  
**SHELL ROTELLA T 15W40 (--- GAL)**

## COMPONENT CONDITION SUMMARY

▲ Fuel Dilution



▲ Viscosity @ 100°C



## RECOMMENDATION

The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

## PROBLEMATIC TEST RESULTS

Sample Status			<b>ABNORMAL</b>	NORMAL	NORMAL	
Fuel	%	ASTM D7593*	>4.0	▲ <b>4.3</b>	<1.0	<1.0
Visc @ 100°C	cSt	ASTM D7279(m)	15.7	▲ <b>12.5</b>	13.3	13.8

Customer Id: CCGCHE  
Sample No.: WA0016884  
Lab Number: 02580225  
Test Package: MAR 1



To manage this report scan the QR code

To discuss the diagnosis or test data:  
Wes Davis +1 905-569-8600 x223  
[wesd@wearcheck.ca](mailto:wesd@wearcheck.ca)

To change component or sample information:  
Gloria Gonzalez +1 (289)291-4643 x4643  
[gloria.gonzalez@wearcheck.com](mailto:gloria.gonzalez@wearcheck.com)

## RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Resample	---	---	?	We recommend an early resample to monitor this condition.

## HISTORICAL DIAGNOSIS

### 26 Aug 2021 Diag: Wes Davis

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The condition of the oil is acceptable for the time in service.

[view report](#)



### 31 May 2018 Diag: Wes Davis

NORMAL



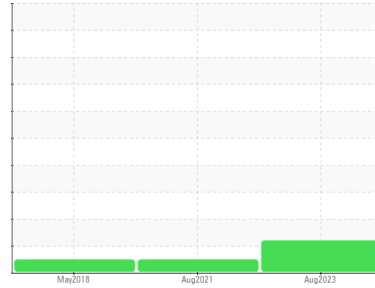
Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The condition of the oil is acceptable for the time in service.

[view report](#)



# OIL ANALYSIS REPORT

Sample Rating Trend



**FUEL**



Machine Id  
**1012335373**

Component  
**Port Diesel Engine**

Fluid  
**SHELL ROTELLA T 15W40 (--- GAL)**

## DIAGNOSIS

### Recommendation

The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

### Wear

All component wear rates are normal.

### Contamination

There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

### Fluid Condition

Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			<b>WA0016884</b>	WA0016878	WA0008720
Sample Date	Client Info			<b>28 Aug 2023</b>	26 Aug 2021	31 May 2018
Machine Age	hrs	Client Info		<b>17644</b>	16026	13579
Oil Age	hrs	Client Info		<b>238</b>	234	238
Oil Changed	Client Info			<b>Changed</b>	Changed	Changed
Sample Status				<b>ABNORMAL</b>	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Glycol	WC Method			<b>NEG</b>	0.0	0.0

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>80	<b>21</b>	22	15
Chromium	ppm	ASTM D5185(m)	>6	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185(m)	>2	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	1	1
Lead	ppm	ASTM D5185(m)	>95	<b>2</b>	1	1
Copper	ppm	ASTM D5185(m)	>85	<b>1</b>	1	<1
Tin	ppm	ASTM D5185(m)	>9	<b>&lt;1</b>	1	0
Antimony	ppm	ASTM D5185(m)		<b>0</b>	<1	1
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

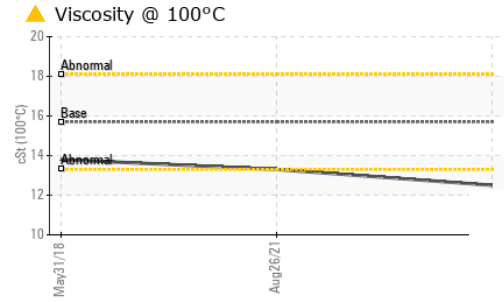
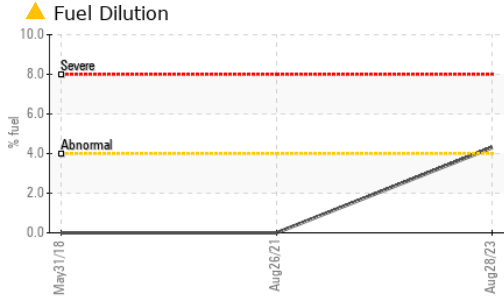
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	35	<b>2</b>	81	114
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	0	<b>60</b>	7	<1
Manganese	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185(m)	10	<b>960</b>	124	12
Calcium	ppm	ASTM D5185(m)	2340	<b>1039</b>	1988	2259
Phosphorus	ppm	ASTM D5185(m)	1110	<b>1071</b>	993	992
Zinc	ppm	ASTM D5185(m)	1210	<b>1185</b>	1149	1213
Sulfur	ppm	ASTM D5185(m)	3890	<b>2512</b>	2802	3025
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	<b>3</b>	4	2
Sodium	ppm	ASTM D5185(m)		<b>2</b>	3	3
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	6	6
Fuel	%	ASTM D7593*	>4.0	<b>▲ 4.3</b>	<1.0	<1.0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*		<b>1.5</b>	1.2	0.5
Nitration	Abs/cm	ASTM D7624*	>20	<b>9.4</b>	9.4	10.2
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>24.1</b>	23.4	24.7

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>16.5</b>	17.9	21.7

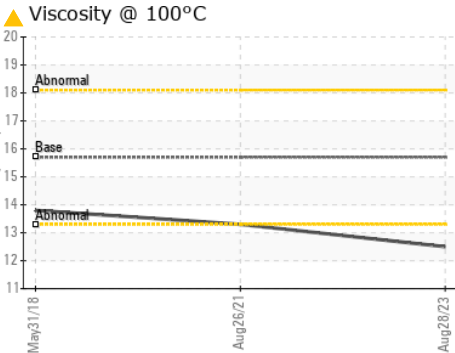
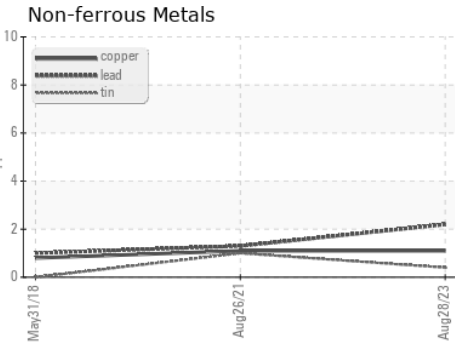
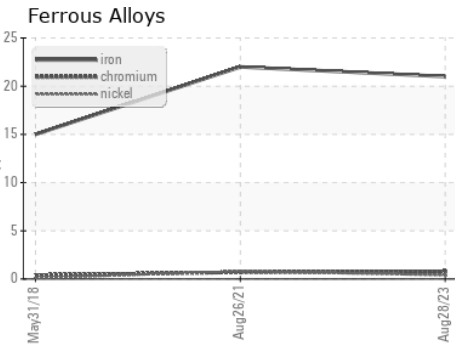
# OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	Visual*	NONE	NONE	---	---
Yellow Metal	scalar	Visual*	NONE	NONE	---	---
Precipitate	scalar	Visual*	NONE	NONE	---	---
Silt	scalar	Visual*	NONE	NONE	---	---
Debris	scalar	Visual*	NONE	NONE	---	---
Sand/Dirt	scalar	Visual*	NONE	NONE	---	---
Appearance	scalar	Visual*	NORML	NORML	---	---
Odor	scalar	Visual*	NORML	NORML	NORML	---
Emulsified Water	scalar	Visual*	>0.1	NEG	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.7 ▲ 12.5	13.3	13.8

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WA0016884 **Received** : 05 Sep 2023  
**Lab Number** : 02580225 **Diagnosed** : 06 Sep 2023  
**Unique Number** : 5633285 **Diagnostician** : Wes Davis  
**Test Package** : MAR 1 ( Additional Tests: FuelDilution, PercentFuel )

**Canadian Coast Guard**  
 CCGS Pointe Caveau, P.O. BOX 63  
 Cheticamp, NS  
 CA B0E 1H0  
 Contact: Chief Engineer  
 ccgs.pointe-caveau@dfo-mpo.gc.ca  
 T: (902)870-1899  
 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.