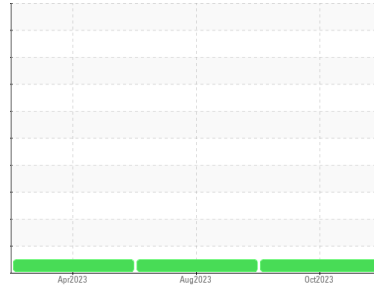




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Area
Thrusters
 Machine Id
Stern Thruster

Component
Rear Sternthruster
 Fluid

PETRO CANADA ENDURATEX EP 68 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.
 NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. (Customer Sample Comment: Top Up Amount: ~25L)

Wear

An increase in the copper level is noted. All other component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0848606	WC0810854	WC0763474
Sample Date	Client Info		08 Oct 2023	05 Aug 2023	08 Apr 2023
Machine Age	hrs	Client Info	26803	0	0
Oil Age	hrs	Client Info	50	0	0
Oil Changed	Client Info		Oil Added	Oil Added	N/A
Sample Status			NORMAL	NORMAL	NORMAL

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>25	3	3	4
Chromium	ppm	ASTM D5185(m)	>3	0	0	0
Nickel	ppm	ASTM D5185(m)	>2	<1	<1	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		<1	<1	0
Aluminum	ppm	ASTM D5185(m)	>2	<1	<1	<1
Lead	ppm	ASTM D5185(m)	>3	<1	<1	<1
Copper	ppm	ASTM D5185(m)	>3	6	4	3
Tin	ppm	ASTM D5185(m)	>3	0	0	0
Antimony	ppm	ASTM D5185(m)		0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
Beryllium	ppm	ASTM D5185(m)		0	0	0
Cadmium	ppm	ASTM D5185(m)		0	0	0

ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185(m)	69	71	70	67
Barium	ppm	ASTM D5185(m)	1	<1	0	0
Molybdenum	ppm	ASTM D5185(m)	1	0	0	0
Manganese	ppm	ASTM D5185(m)	1	0	0	0
Magnesium	ppm	ASTM D5185(m)	1	<1	<1	0
Calcium	ppm	ASTM D5185(m)	1	4	4	2
Phosphorus	ppm	ASTM D5185(m)	246	285	304	304
Zinc	ppm	ASTM D5185(m)	1	8	11	10
Sulfur	ppm	ASTM D5185(m)	3670	4558	4419	4584
Lithium	ppm	ASTM D5185(m)		1	1	2

CONTAMINANTS

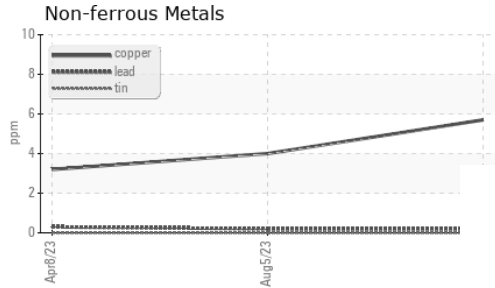
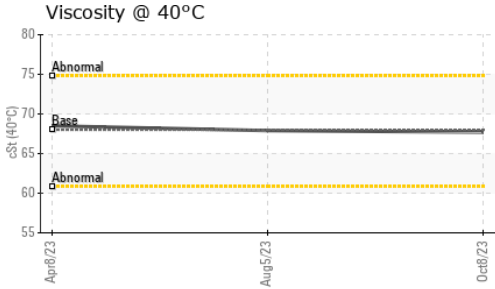
	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>10	3	4	4
Sodium	ppm	ASTM D5185(m)		<1	<1	<1
Potassium	ppm	ASTM D5185(m)	>20	0	<1	0

VISUAL

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

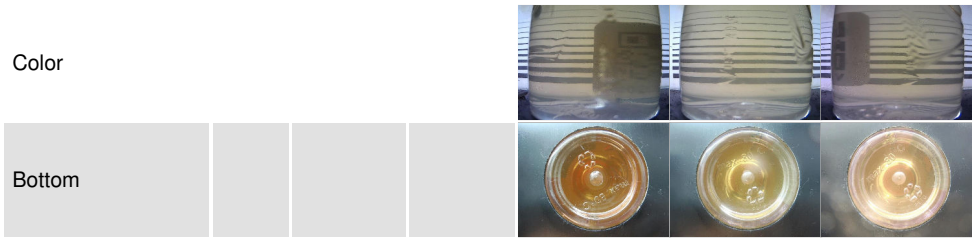


OIL ANALYSIS REPORT

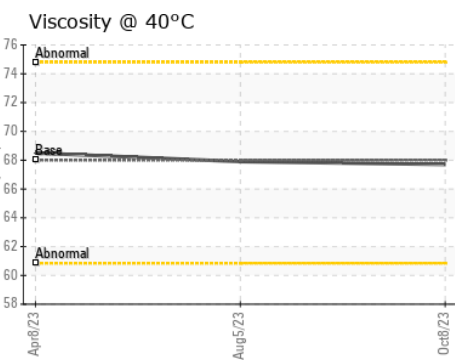
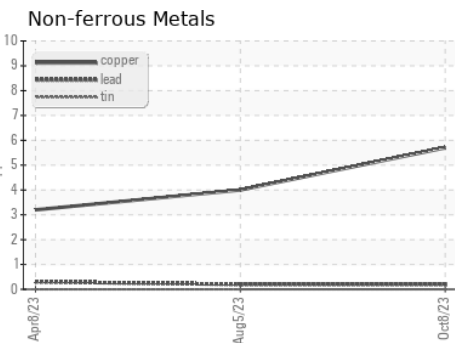
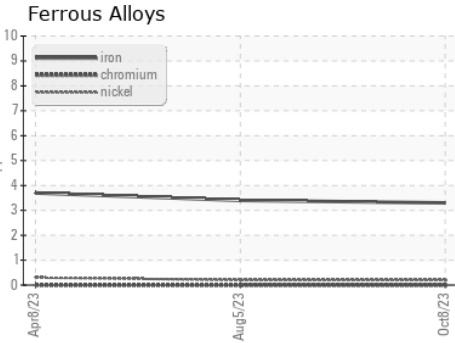


FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 40°C	cSt	ASTM D7279(m)	68.0	67.7	67.9	68.5

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0848606 **Received** : 11 Oct 2023
Lab Number : **02588283** **Diagnosed** : 11 Oct 2023
Unique Number : 5657349 **Diagnostician** : Kevin Marson
Test Package : MAR 1

Canadian Coast Guard
 CCGS Vincent Massey, 101 Boul. Champlain
 Quebec, QC
 CA G1K 7Y7
 Contact: Vincent Massey
 vincentmasseyse@ccgs-ngcc.gc.ca
 T:
 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.