



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Area

Propulsion

Machine Id

12H11 Propulseur d`Etrave (S/N 5003/0081)

Component

Bow Thruster

Fluid

SHELL OMALA 100 (80 LTR)

RECOMMENDATION

We recommend you service the filters on this component. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0811246	WC0549538	WC0627018
Sample Date		Client Info		27 Oct 2023	02 Apr 2023	18 Oct 2022
Machine Age	yrs	Client Info		0	0	0
Oil Age	yrs	Client Info		4	0	0
Filter Age	yrs	Client Info		4	0	0
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		N/A	Not Changd	Not Changd
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>90	5	3	3
Chromium	ppm	ASTM D5185(m)	>10	0	0	0
Nickel	ppm	ASTM D5185(m)	>10	<1	<1	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	0	0
Aluminum	ppm	ASTM D5185(m)	>10	<1	<1	<1
Lead	ppm	ASTM D5185(m)	>20	<1	0	<1
Copper	ppm	ASTM D5185(m)	>20	4	4	3
Tin	ppm	ASTM D5185(m)	>15	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE

CONTAMINATION

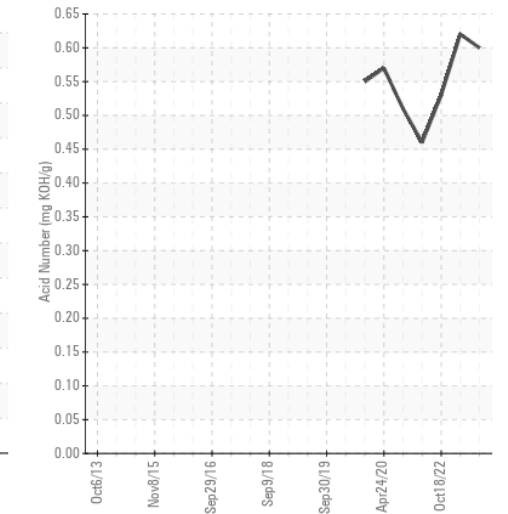
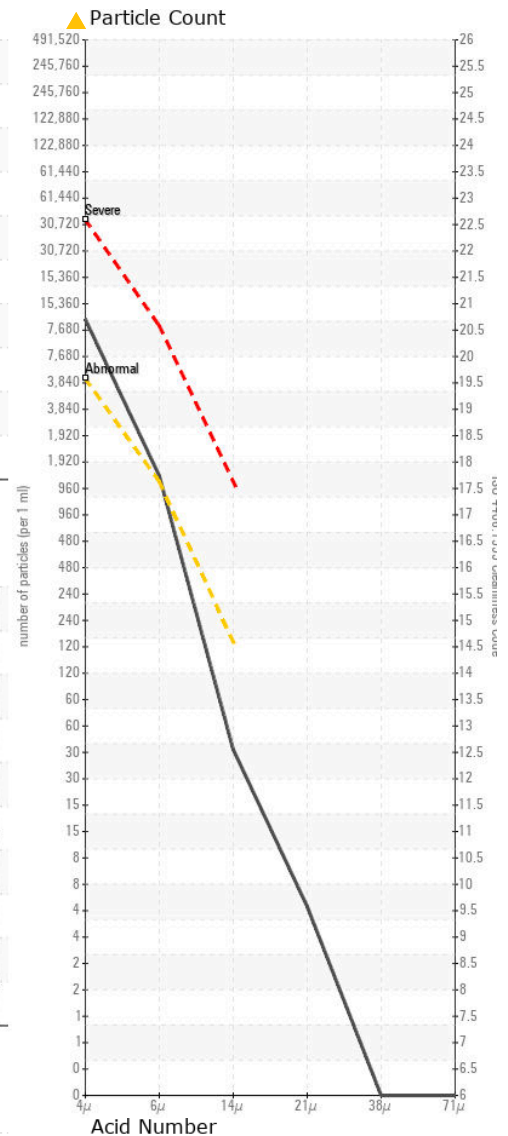
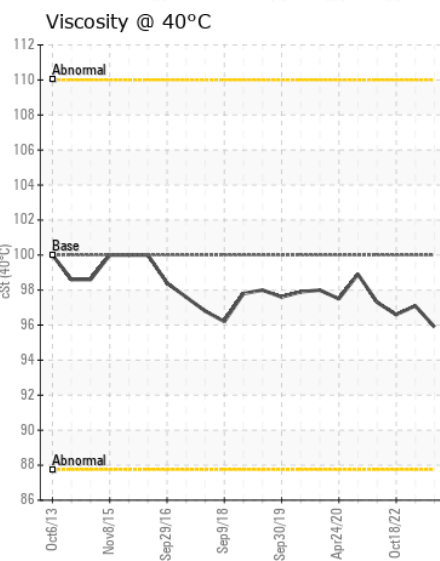
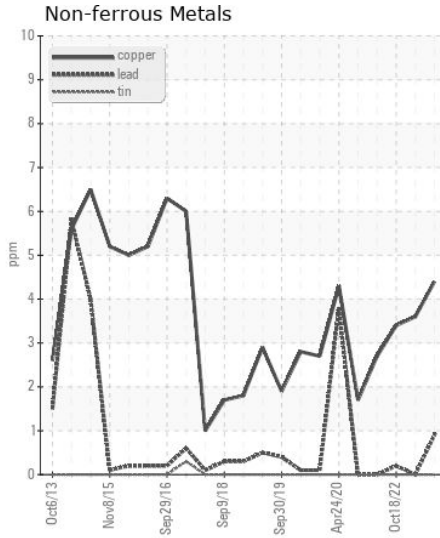
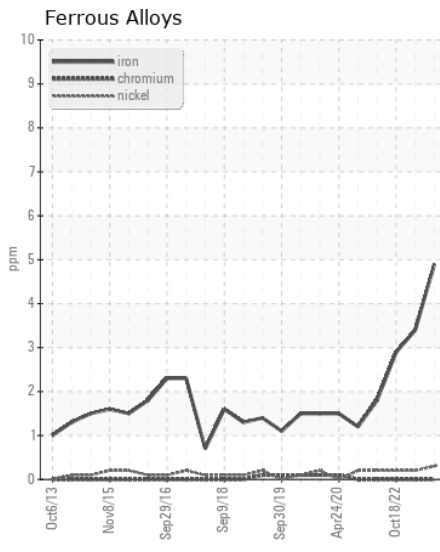
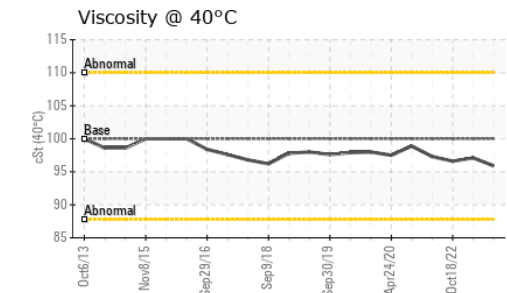
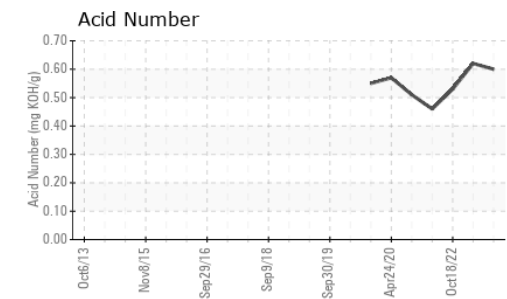
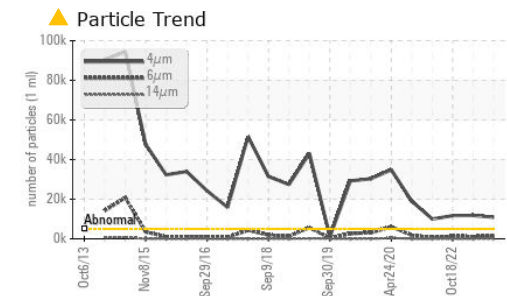
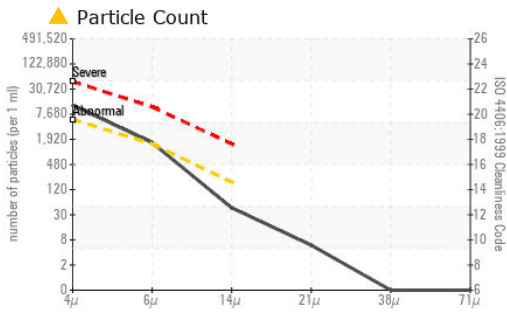
There is a moderate amount of silt (particulates < 14 microns in size) present in the oil.

Silicon	ppm	ASTM D5185(m)	>7	2	2	1
Potassium	ppm	ASTM D5185(m)	>20	0	0	0
Water		WC Method	>0.2	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>5000	▲ 10895	▲ 11772	▲ 11694
Particles >6µm		ASTM D7647	>1300	● 1402	1137	1266
Particles >14µm		ASTM D7647	>160	39	9	19
Particles >21µm		ASTM D7647	>40	5	2	4
Particles >38µm		ASTM D7647	>10	0	0	0
Particles >71µm		ASTM D7647	>3	0	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ 21/18/12	▲ 21/17/10	▲ 21/17/11
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*	>0.2	NEG	NEG	NEG

FLUID CONDITION

The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

Sodium	ppm	ASTM D5185(m)		2	2	1
Boron	ppm	ASTM D5185(m)	6.2	13	15	15
Barium	ppm	ASTM D5185(m)	0.0	<1	0	0
Molybdenum	ppm	ASTM D5185(m)	0	0	0	0
Manganese	ppm	ASTM D5185(m)		<1	<1	<1
Magnesium	ppm	ASTM D5185(m)	0	<1	<1	<1
Calcium	ppm	ASTM D5185(m)	0.0	9	8	10
Phosphorus	ppm	ASTM D5185(m)	512	302	333	324
Zinc	ppm	ASTM D5185(m)	3.8	52	39	32
Sulfur	ppm	ASTM D5185(m)	8167	6558	6609	6533
Acid Number (AN)	mg KOH/g	ASTM D974*		0.60	0.62	0.53
Visc @ 40°C	cSt	ASTM D7279(m)	100.0	95.9	97.1	96.6



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0811246
Lab Number : 02593240
Unique Number : 5670319
Test Package : MAR 2

Received : 01 Nov 2023
Tested : 02 Nov 2023
Diagnosed : 02 Nov 2023 - Wes Davis

Canadian Coast Guard
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 Quebec, QC
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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.