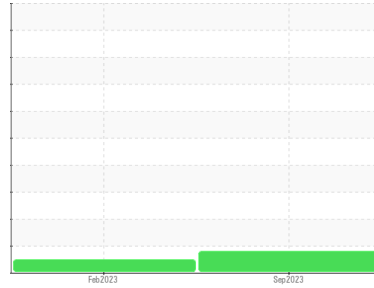




OIL ANALYSIS REPORT

Sample Rating Trend



WEAR



Area

CLARKE & SONS FISHING LTD.

Machine Id

FISHING VESSEL MV JOYFUL SOUND

Component

Transmission

Fluid

SHELL ROTELLA T 30 (40)

DIAGNOSIS

Recommendation

We recommend that you drain the fluid from the component if this has not already been done. Confirm the source of the lubricant being utilized for top-up/fill. We recommend an early resample to monitor this condition.

Wear

Copper ppm levels are abnormal. Clutch disc wear or oil cooler leaching indicated.

Contamination

There is no indication of any contamination in the fluid.

Fluid Condition

Additive levels indicate the addition of a different brand, or type of fluid. The AN level is acceptable for this fluid. The fluid is no longer serviceable as a result of the abnormal and/or severe wear.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		OF0000672	OF0000944	---
Sample Date	Client Info		23 Sep 2023	21 Feb 2023	---
Machine Age	hrs	Client Info	12201	10501	---
Oil Age	hrs	Client Info	1760	60	---
Oil Changed	Client Info		Not Chngd	Not Chngd	---
Sample Status			ABNORMAL	NORMAL	---

CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.1	NEG	NEG	---

WEAR METALS

	method	limit/base	current	history1	history2
PQ	ASTM D8184*		0	0	---
Iron	ppm	ASTM D5185(m) >200	41	19	---
Chromium	ppm	ASTM D5185(m) >10	0	0	---
Nickel	ppm	ASTM D5185(m)	0	0	---
Titanium	ppm	ASTM D5185(m)	0	0	---
Silver	ppm	ASTM D5185(m)	<1	<1	---
Aluminum	ppm	ASTM D5185(m) >50	<1	<1	---
Lead	ppm	ASTM D5185(m) >50	13	10	---
Copper	ppm	ASTM D5185(m) >200	▲ 294	268	---
Tin	ppm	ASTM D5185(m) >10	<1	<1	---
Antimony	ppm	ASTM D5185(m)	0	0	---
Vanadium	ppm	ASTM D5185(m)	0	0	---
Beryllium	ppm	ASTM D5185(m)	0	0	---
Cadmium	ppm	ASTM D5185(m)	0	0	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m) 0	23	4	---
Barium	ppm	ASTM D5185(m)	<1	<1	---
Molybdenum	ppm	ASTM D5185(m) 0	59	66	---
Manganese	ppm	ASTM D5185(m)	<1	0	---
Magnesium	ppm	ASTM D5185(m)	44	25	---
Calcium	ppm	ASTM D5185(m) 1890	2542	2678	---
Phosphorus	ppm	ASTM D5185(m) 680	1001	1040	---
Zinc	ppm	ASTM D5185(m) 750	1071	1120	---
Sulfur	ppm	ASTM D5185(m)	3384	3181	---
Lithium	ppm	ASTM D5185(m)	<1	2	---

CONTAMINANTS

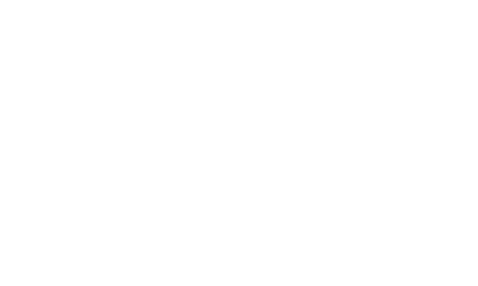
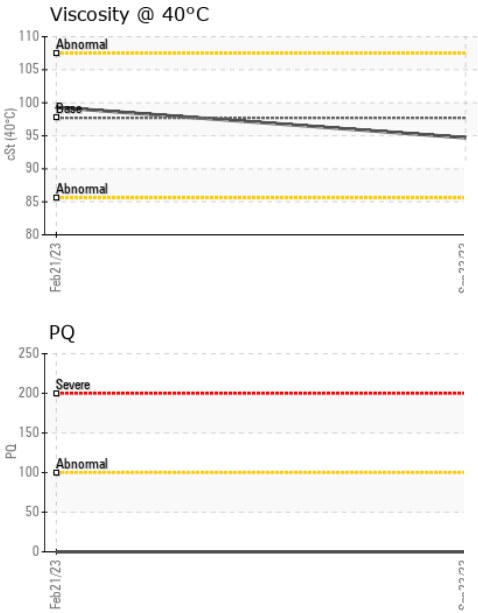
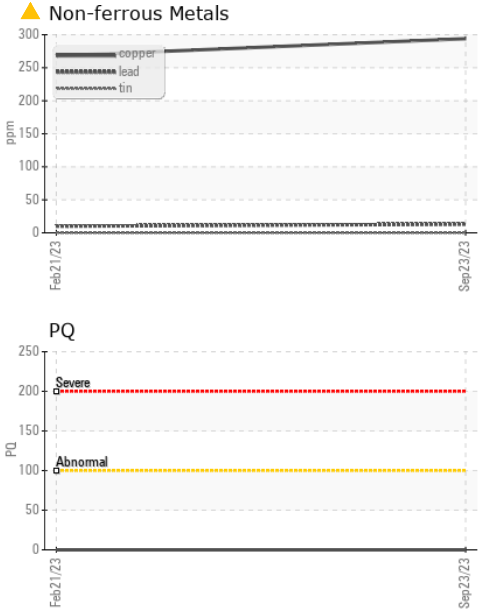
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Silicon	ppm	ASTM D5185(m) >50	5	6	---
Sodium	ppm	ASTM D5185(m)	3	4	---
Potassium	ppm	ASTM D5185(m) >20	<1	1	---

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.76	1.07	---



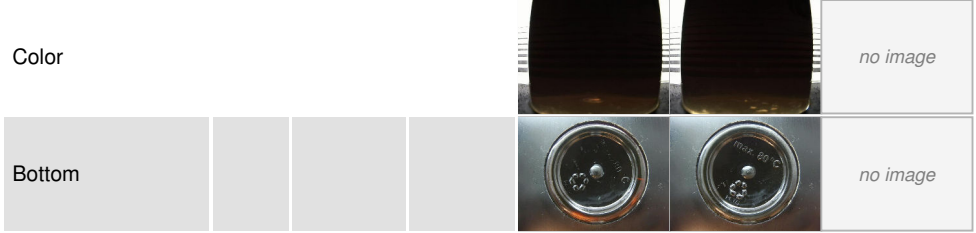
OIL ANALYSIS REPORT



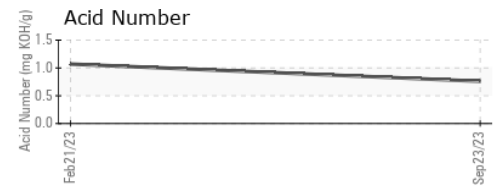
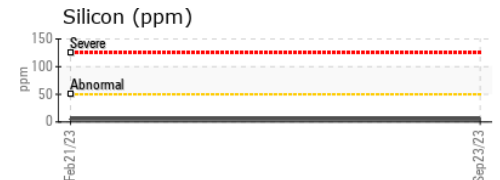
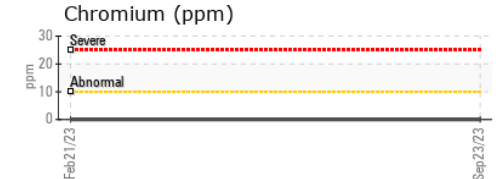
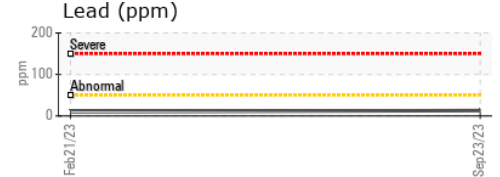
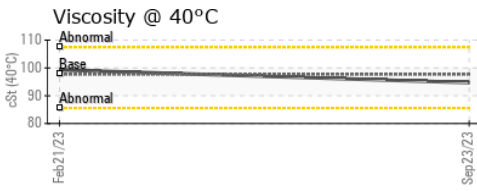
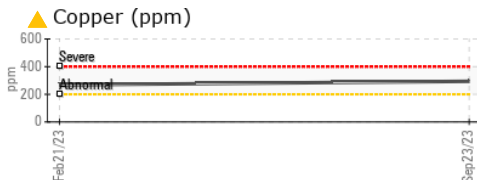
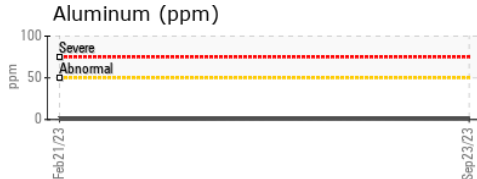
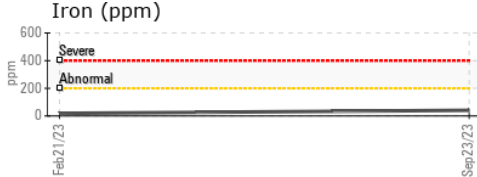
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	LIGHT	---
Yellow Metal	scalar	Visual*	NONE	NONE	---
Precipitate	scalar	Visual*	NONE	NONE	---
Silt	scalar	Visual*	NONE	NONE	---
Debris	scalar	Visual*	NONE	NONE	---
Sand/Dirt	scalar	Visual*	NONE	NONE	---
Appearance	scalar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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	97.7	99.3	---

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. : OF0000672 **Received** : 06 Oct 2023
Lab Number : 02587695 **Tested** : 10 Oct 2023
Unique Number : 5656761 **Diagnosed** : 10 Oct 2023 - Kevin Marson
Test Package : MOB 2 (Additional Tests: PQ)

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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.