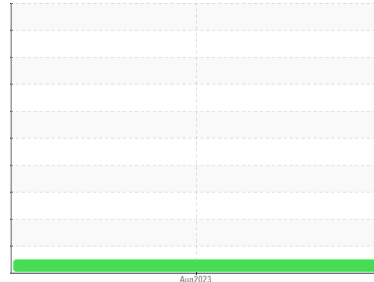




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
CRUSADER MARINE STARBOARD ENGINE

Component
Starboard Gasoline Engine

Fluid
MERCURY 4 STROKE SAE 25W40 (--- GAL)

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

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0840675	---	---
Sample Date	Client Info		21 Aug 2023	---	---
Machine Age	hrs	Client Info	2018	---	---
Oil Age	hrs	Client Info	35	---	---
Oil Changed	Client Info		Changed	---	---
Sample Status			NORMAL	---	---

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>4.0	<1.0	---	---
Glycol	WC Method		NEG	---	---

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m) >150	26	---	---
Chromium	ppm	ASTM D5185(m) >20	<1	---	---
Nickel	ppm	ASTM D5185(m) >5	0	---	---
Titanium	ppm	ASTM D5185(m)	0	---	---
Silver	ppm	ASTM D5185(m) >2	<1	---	---
Aluminum	ppm	ASTM D5185(m) >40	4	---	---
Lead	ppm	ASTM D5185(m) >50	3	---	---
Copper	ppm	ASTM D5185(m) >155	13	---	---
Tin	ppm	ASTM D5185(m) >10	1	---	---
Antimony	ppm	ASTM D5185(m)	0	---	---
Vanadium	ppm	ASTM D5185(m)	0	---	---
Beryllium	ppm	ASTM D5185(m)	0	---	---
Cadmium	ppm	ASTM D5185(m)	0	---	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	125	---	---
Barium	ppm	ASTM D5185(m)	0	---	---
Molybdenum	ppm	ASTM D5185(m)	53	---	---
Manganese	ppm	ASTM D5185(m)	<1	---	---
Magnesium	ppm	ASTM D5185(m)	11	---	---
Calcium	ppm	ASTM D5185(m)	2190	---	---
Phosphorus	ppm	ASTM D5185(m)	779	---	---
Zinc	ppm	ASTM D5185(m)	845	---	---
Sulfur	ppm	ASTM D5185(m)	1926	---	---
Lithium	ppm	ASTM D5185(m)	<1	---	---

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >30	10	---	---
Sodium	ppm	ASTM D5185(m) >400	2	---	---
Potassium	ppm	ASTM D5185(m) >20	0	---	---

INFRA-RED

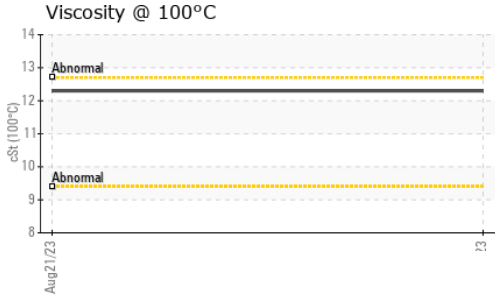
	method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	0	---	---
Nitration	Abs/cm	ASTM D7624* >20	7.8	---	---
Sulfation	Abs/.1mm	ASTM D7415* >30	18.6	---	---

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414* >25	11.9	---	---



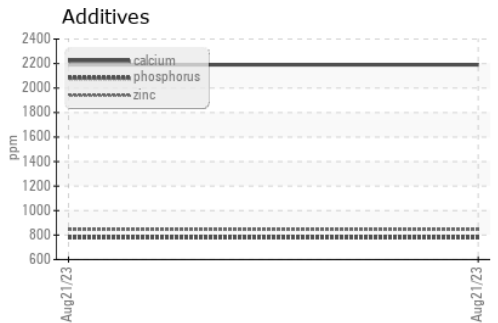
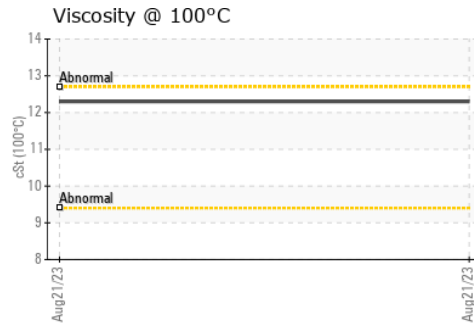
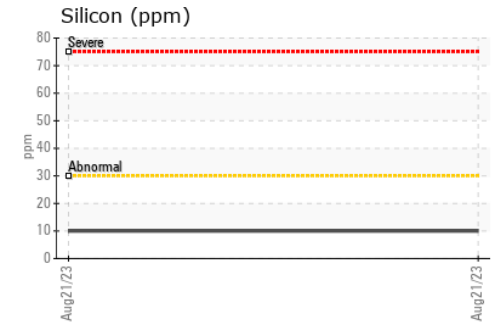
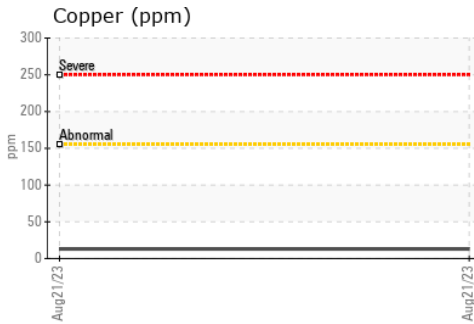
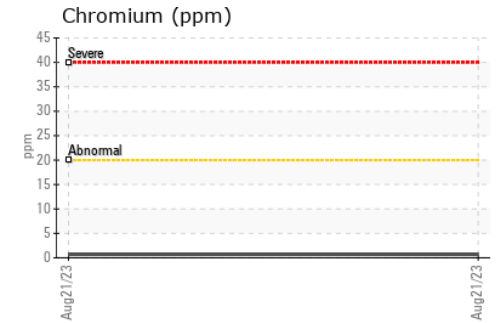
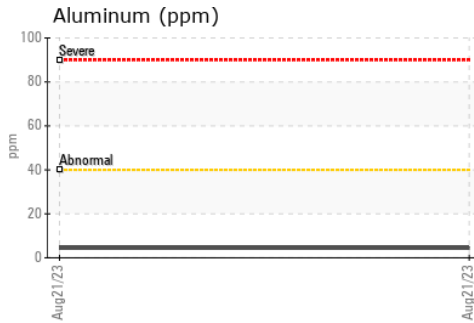
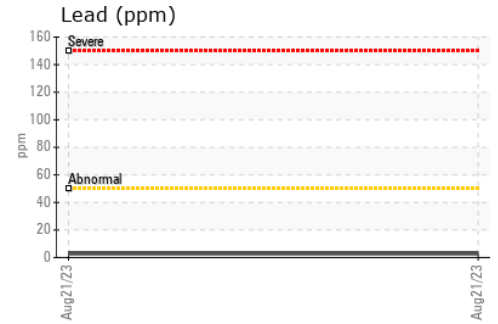
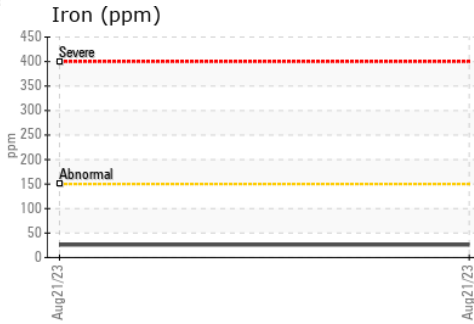
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.2	NEG	---
Free Water	scalar	Visual*		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	12.3	---	---

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0840675 **Received** : 29 Aug 2023
Lab Number : 02579021 **Diagnosed** : 29 Aug 2023
Unique Number : 5632081 **Diagnostician** : Wes Davis
Test Package : MOB 1

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 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.