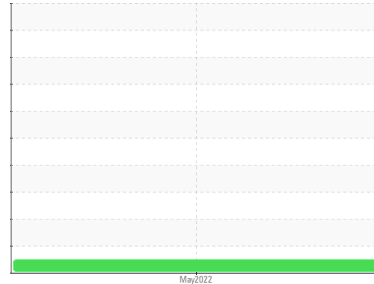


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
CAL010
 Component
Diesel Engine
 Fluid
MOBIL MOBILGARD 412 (6000 LTR)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

Metal levels are typical for a components first oil change.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			PC0052803	---	---
Sample Date	Client Info			16 May 2022	---	---
Machine Age	hrs	Client Info		12903	---	---
Oil Age	hrs	Client Info		12903	---	---
Oil Changed	Client Info			Not Changed	---	---
Sample Status				NORMAL	---	---

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>4.0		<1.0	---	---
Water	WC Method	>0.1		NEG	---	---
Glycol	WC Method			NEG	---	---

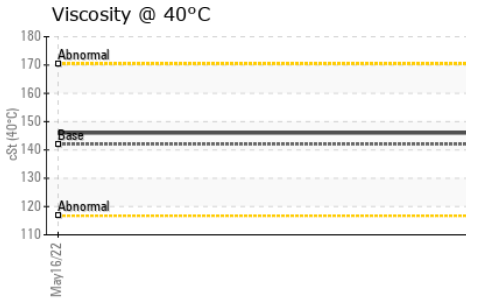
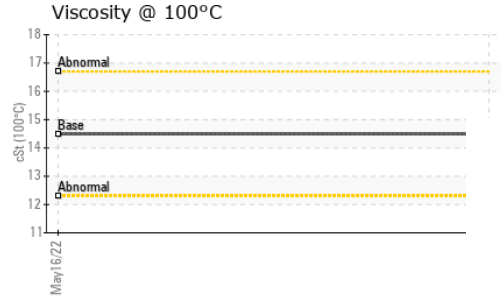
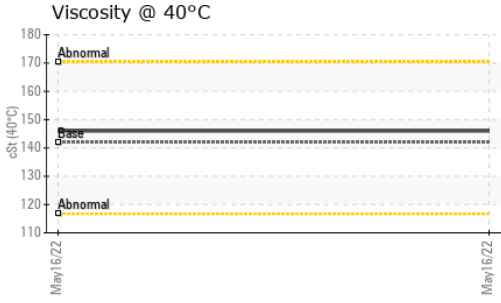
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>50	5	---	---
Chromium	ppm	ASTM D5185(m)	>10	0	---	---
Nickel	ppm	ASTM D5185(m)	>5	<1	---	---
Titanium	ppm	ASTM D5185(m)	>2	0	---	---
Silver	ppm	ASTM D5185(m)	>2	0	---	---
Aluminum	ppm	ASTM D5185(m)	>20	2	---	---
Lead	ppm	ASTM D5185(m)	>20	<1	---	---
Copper	ppm	ASTM D5185(m)	>15	4	---	---
Tin	ppm	ASTM D5185(m)	>10	0	---	---
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)	0	1	---	---
Barium	ppm	ASTM D5185(m)	0	0	---	---
Molybdenum	ppm	ASTM D5185(m)	0	<1	---	---
Manganese	ppm	ASTM D5185(m)	0	<1	---	---
Magnesium	ppm	ASTM D5185(m)	18	28	---	---
Calcium	ppm	ASTM D5185(m)	6350	6291	---	---
Phosphorus	ppm	ASTM D5185(m)	200	207	---	---
Zinc	ppm	ASTM D5185(m)	380	361	---	---
Sulfur	ppm	ASTM D5185(m)	6950	4858	---	---
Lithium	ppm	ASTM D5185(m)		<1	---	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>20	7	---	---
Sodium	ppm	ASTM D5185(m)		4	---	---
Potassium	ppm	ASTM D5185(m)	>20	<1	---	---

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>1.5	0.1	---	---
Nitration	Abs/cm	ASTM D7624*	>20	8.5	---	---
Sulfation	Abs./1mm	ASTM D7415*	>30	16.7	---	---

OIL ANALYSIS REPORT

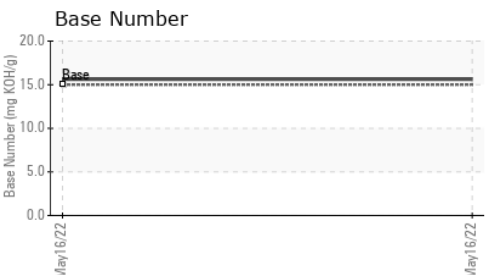
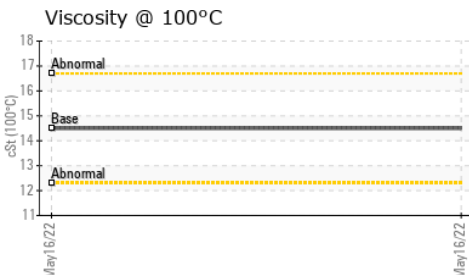
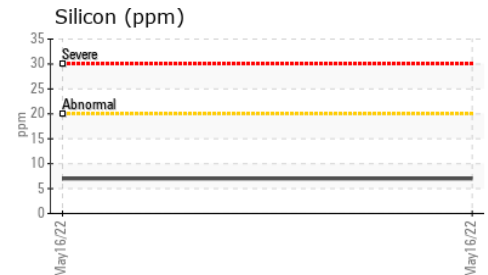
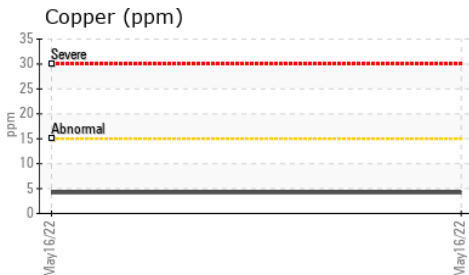
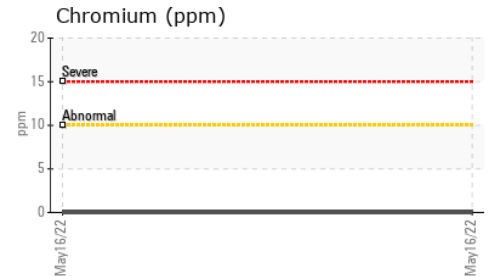
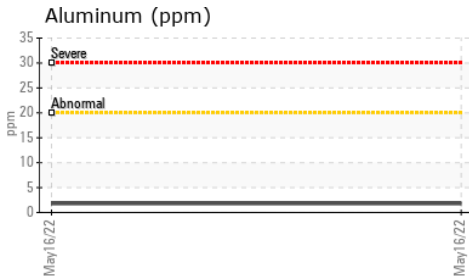
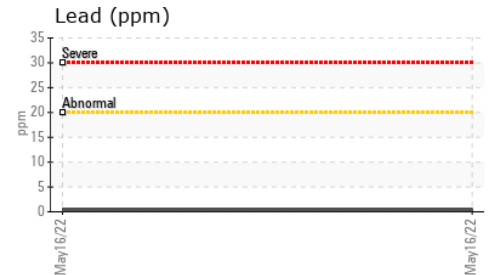
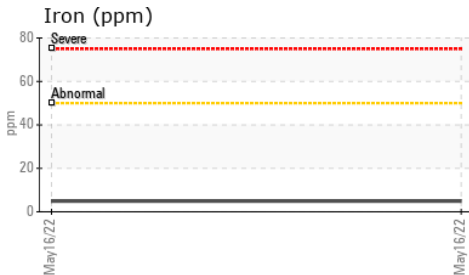


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	6.8	---	---
Base Number (BN)	mg KOH/g	ASTM D2896*	15	15.63	---	---

VISUAL		method	limit/base	current	history1	history2
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)	142	146	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	14.5	14.5	---	---
Viscosity Index (VI)	Scale	ASTM D2270*	100	97	---	---

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **Ocean Choice International - MV Calvert**
Sample No. : PC0052803 **Received** : 31 Aug 2022 1315 Topsail Rd, P.O. Box 8190
Lab Number : **02508017** **Diagnosed** : 31 Aug 2022 St. John's, NL
Unique Number : 5448987 **Diagnostician** : Wes Davis CA A1B 3N4
Test Package : MOB 2 (Additional Tests: KV40, VI)

To discuss this sample report, contact Customer Service at 1-800-268-2131. Contact: Calvert Engine Control Room calvertengine@oceanchoice.com
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab. T:
 Validity of results and interpretation are based on the sample and information as supplied. F: