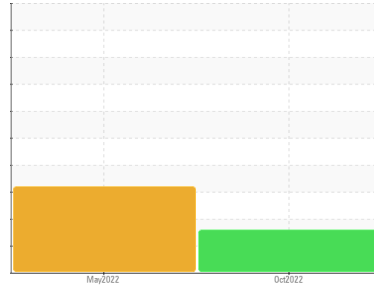


Machine Id
SIMPLEX CAL013

Component
Sterntube

Fluid
VICKERS HYDROX BIO 100 (400 LTR)



DIAGNOSIS

Recommendation

We recommend an early resample to monitor this condition.

Wear

Iron and titanium ppm levels are abnormal. The low ferrous density (PQ) index indicates the wear metal levels are due to corrosion.

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		PC0011796	PC0052812	---
Sample Date	Client Info		08 Oct 2022	17 May 2022	---
Machine Age	hrs	Client Info	0	0	---
Oil Age	hrs	Client Info	0	0	---
Oil Changed	Client Info		N/A	Not Chngd	---
Sample Status			ABNORMAL	ABNORMAL	---

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) >15	▲ 36	▲ 26	---
Chromium	ppm	ASTM D5185(m) >2	<1	<1	---
Nickel	ppm	ASTM D5185(m) >2	<1	<1	---
Titanium	ppm	ASTM D5185(m) >8	▲ 12	▲ 11	---
Silver	ppm	ASTM D5185(m)	0	0	---
Aluminum	ppm	ASTM D5185(m) >4	1	<1	---
Lead	ppm	ASTM D5185(m) >15	6	5	---
Copper	ppm	ASTM D5185(m) >25	8	5	---
Tin	ppm	ASTM D5185(m) >10	2	1	---
Antimony	ppm	ASTM D5185(m)	0	<1	---
Vanadium	ppm	ASTM D5185(m)	<1	<1	---
Beryllium	ppm	ASTM D5185(m)	0	0	---
Cadmium	ppm	ASTM D5185(m)	<1	<1	---

ADDITIVES

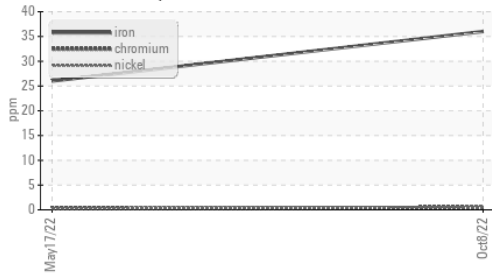
	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	4	1	---
Barium	ppm	ASTM D5185(m)	0	0	---
Molybdenum	ppm	ASTM D5185(m)	0	0	---
Manganese	ppm	ASTM D5185(m)	<1	<1	---
Magnesium	ppm	ASTM D5185(m)	3	2	---
Calcium	ppm	ASTM D5185(m)	5	4	---
Phosphorus	ppm	ASTM D5185(m)	741	642	---
Zinc	ppm	ASTM D5185(m)	8	4	---
Sulfur	ppm	ASTM D5185(m)	1549	1445	---
Lithium	ppm	ASTM D5185(m)	<1	<1	---

CONTAMINANTS

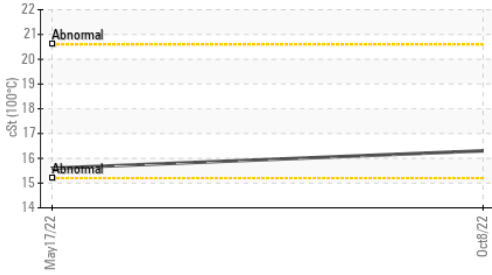
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >25	4	4	---
Sodium	ppm	ASTM D5185(m)	20	18	---
Potassium	ppm	ASTM D5185(m) >20	1	<1	---

OIL ANALYSIS REPORT

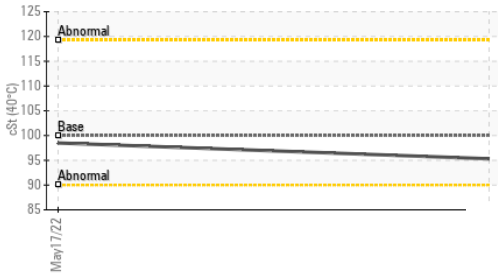
▲ Ferrous Alloys



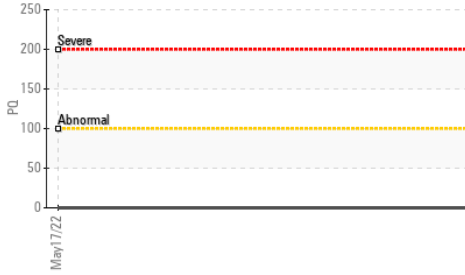
Viscosity @ 100°C



Viscosity @ 40°C



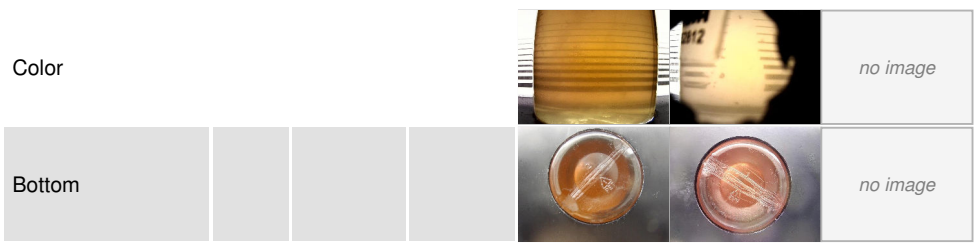
PQ



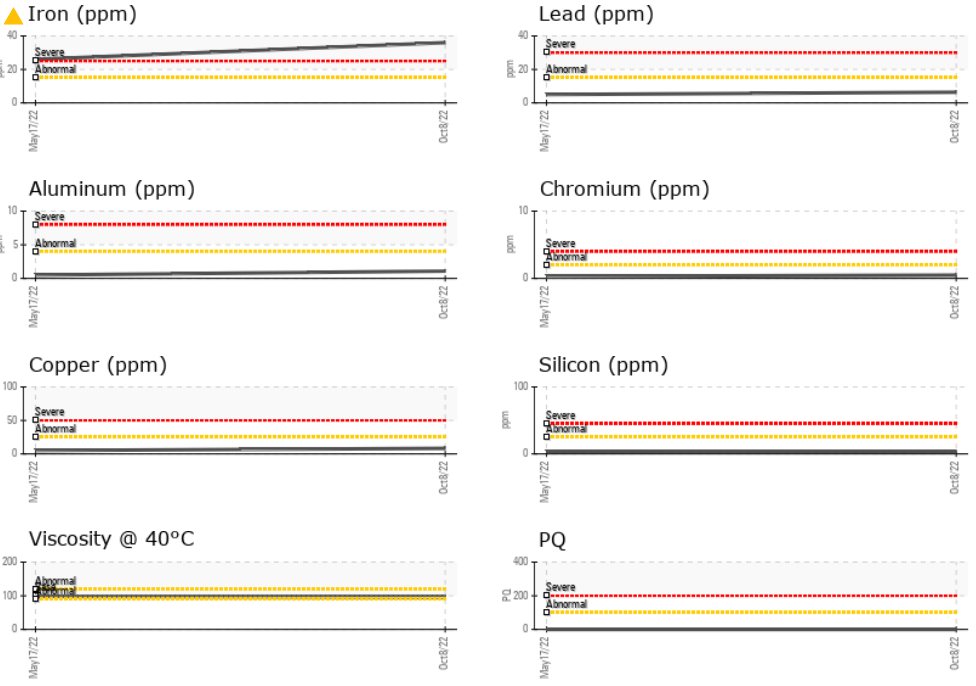
PARAMETER	method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	---
Yellow Metal	scalar	Visual*	NONE	NONE	---
Precipitate	scalar	Visual*	NONE	NONE	---
Silt	scalar	Visual*	NONE	VLITE	VLITE
Debris	scalar	Visual*	NONE	NONE	---
Sand/Dirt	scalar	Visual*	NONE	NONE	---
Appearance	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 D279(m)	100	95.3	98.5
Visc @ 100°C	cSt	ASTM D279(m)		16.3	15.6
Viscosity Index (VI)	Scale	ASTM D2270*	205	184	168

SAMPLE IMAGES



GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **Ocean Choice International - MV Calvert**
Sample No. : PC0011796 **Recieved** : 10 Jan 2023 1315 Topsail Rd, P.O. Box 8190
Lab Number : 02532364 **Diagnosed** : 11 Jan 2023 St. John's, NL
Unique Number : 5513363 **Diagnostician** : Kevin Marson CA A1B 3N4
Test Package : MOB 1 (Additional Tests: KV100, PQ, VI)

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