



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
SILVER SEAS YACHTS [BRANDON]

Machine Id
VOLVO PENTA 3940022445

Component
Starboard IPS

Fluid
VOLVO API GL-5 SAE 75W90 (--- QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		VPA052338	VPA051756	VPA034699
Sample Date		Client Info		15 Apr 2024	29 Aug 2023	22 Jun 2020
Machine Age	hrs	Client Info		166	157	91
Oil Age	hrs	Client Info		0	157	10
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	Changed	Not Changd
Filter Changed		Client Info		N/A	Changed	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

PQ		ASTM D8184		16	15	22
Iron	ppm	ASTM D5185m	>200	6	11	13
Chromium	ppm	ASTM D5185m	>10	0	<1	<1
Nickel	ppm	ASTM D5185m	>10	0	<1	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m		0	<1	<1
Lead	ppm	ASTM D5185m		0	0	<1
Copper	ppm	ASTM D5185m		<1	2	3
Tin	ppm	ASTM D5185m		0	0	0
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

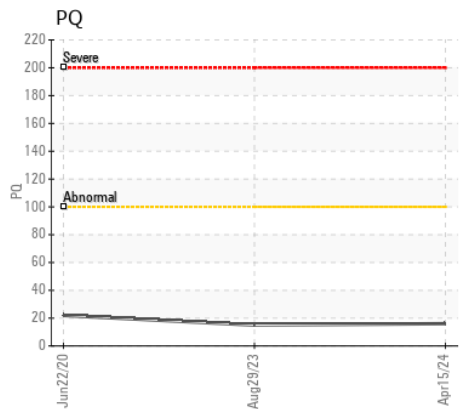
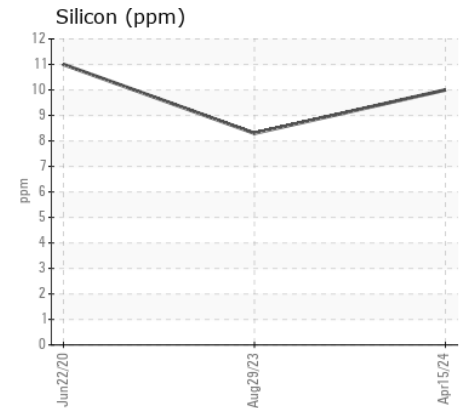
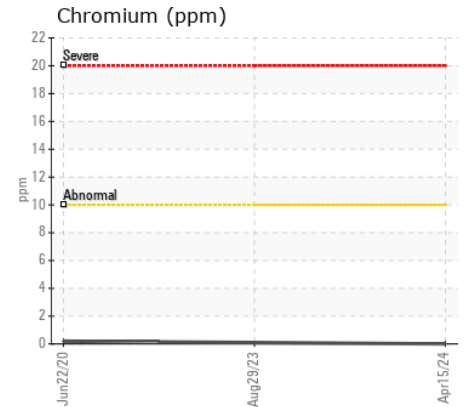
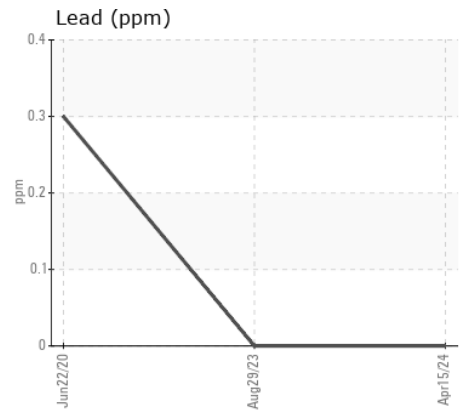
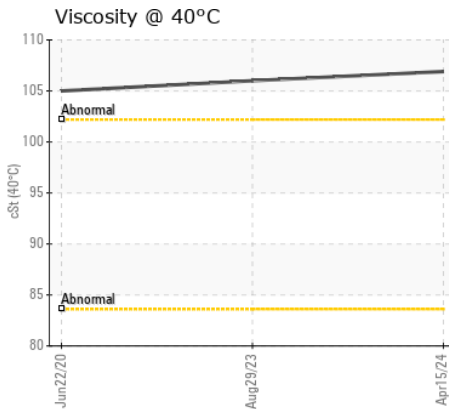
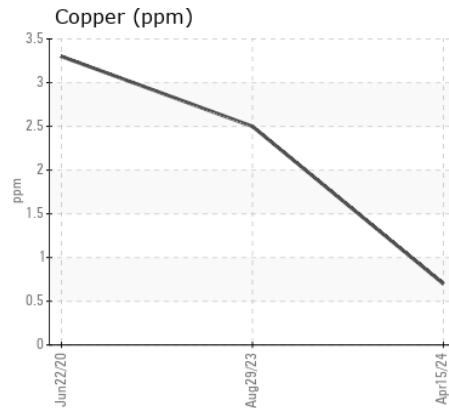
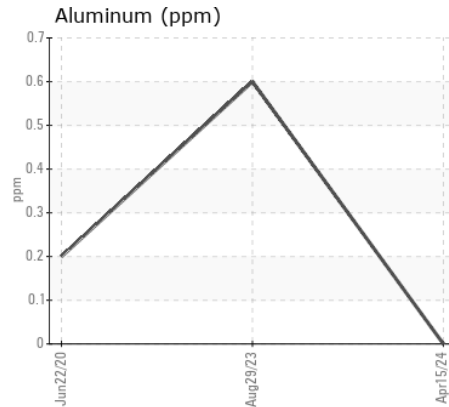
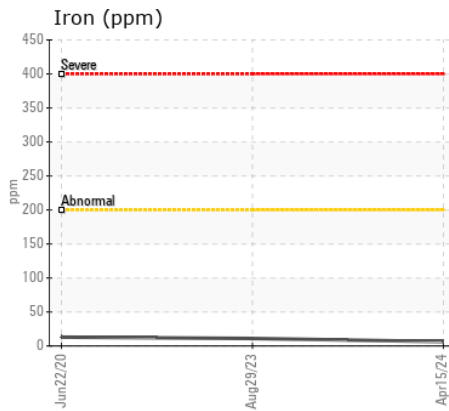
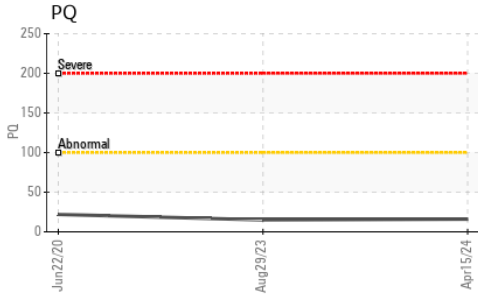
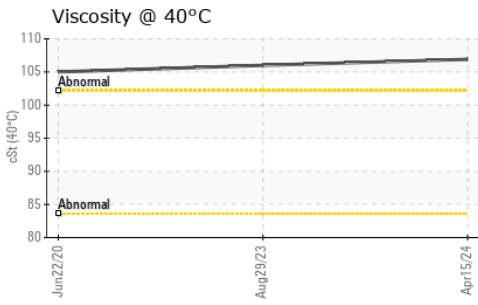
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m		10	8	11
Potassium	ppm	ASTM D5185m	>20	0	<1	<1
Water		WC Method	>0.2	NEG	NEG	NEG
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	LIGHT	LIGHT
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 condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		1	1	<1
Boron	ppm	ASTM D5185m		312	360	320
Barium	ppm	ASTM D5185m		0	2	0
Molybdenum	ppm	ASTM D5185m		0	0	<1
Manganese	ppm	ASTM D5185m		<1	<1	1
Magnesium	ppm	ASTM D5185m		1	2	80
Calcium	ppm	ASTM D5185m		2	2	8
Phosphorus	ppm	ASTM D5185m		1213	1408	1316
Zinc	ppm	ASTM D5185m		0	4	6
Sulfur	ppm	ASTM D5185m		27246	26425	18037
Visc @ 40°C	cSt	ASTM D445		106.9	106	105



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : VPA052338 **Received** : 22 Apr 2024
Lab Number : 06156574 **Tested** : 22 Apr 2024
Unique Number : 10991997 **Diagnosed** : 22 Apr 2024 - Doug Bogart
Test Package : MOB 1 (Additional Tests: PQ)

Helmuts Marine Service
 619 Canal Street
 SAN RAFAEL, CA
 US 94901-3545

Contact: NADINE URUIOLI
 SERVICE@HELMUTSMARINE.COM

To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

T: x:
 F: x: