MOB I VOLVO PENTA

OIL ANALYSIS REPORT

WEAR	SEVERE
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Area
LICCLARDELLO
Machine Id
DETROIT LICCLARDELLO (S/N N/A)
Component
Starboard Diesel Engine
Fluid
{not provided} (28 QTS)

RECOMMENDATION

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. We recommend that you drain the oil and perform a filter service on this component if not already done. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

WEAR

Cylinder, crank, or cam shaft wear is indicated. Bearing and/or bushing wear is indicated.

CONTAMINATION

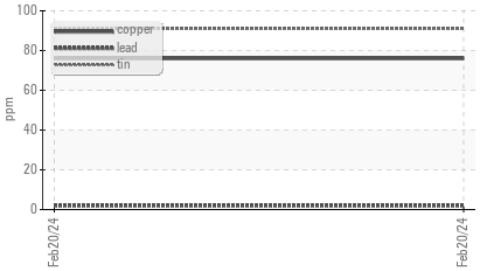
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

FLUID CONDITION

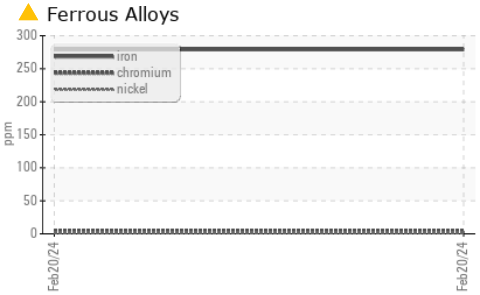
The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		VPA036647	---	---
Sample Date		Client Info		20 Feb 2024	---	---
Machine Age	hrs	Client Info		0	---	---
Oil Age	hrs	Client Info		0	---	---
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		Not Changd	---	---
Filter Changed		Client Info		Not Changd	---	---
Sample Status				SEVERE	---	---
Iron	ppm	ASTM D5185m	>200	▲ 279	---	---
Chromium	ppm	ASTM D5185m	>20	4	---	---
Nickel	ppm	ASTM D5185m	>2	1	---	---
Titanium	ppm	ASTM D5185m	>2	1	---	---
Silver	ppm	ASTM D5185m	>2	0	---	---
Aluminum	ppm	ASTM D5185m	>30	● 11	---	---
Lead	ppm	ASTM D5185m	>30	2	---	---
Copper	ppm	ASTM D5185m	>30	▲ 76	---	---
Tin	ppm	ASTM D5185m	>15	▲ 91	---	---
Vanadium	ppm	ASTM D5185m		<1	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---
Silicon	ppm	ASTM D5185m	>30	▲ 35	---	---
Potassium	ppm	ASTM D5185m	>20	11	---	---
Fuel		WC Method	>3.0	<1.0	---	---
Water		WC Method	>0.2	NEG	---	---
Glycol	%	*ASTM D2982		NEG	---	---
Soot %	%	*ASTM D7844	>3	0.3	---	---
Nitration	Abs/cm	*ASTM D7624	>20	8.8	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.8	---	---
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	>0.2	NEG	---	---
Sodium	ppm	ASTM D5185m		12	---	---
Boron	ppm	ASTM D5185m		81	---	---
Barium	ppm	ASTM D5185m		0	---	---
Molybdenum	ppm	ASTM D5185m		71	---	---
Manganese	ppm	ASTM D5185m		3	---	---
Magnesium	ppm	ASTM D5185m		1114	---	---
Calcium	ppm	ASTM D5185m		1564	---	---
Phosphorus	ppm	ASTM D5185m		1126	---	---
Zinc	ppm	ASTM D5185m		1348	---	---
Sulfur	ppm	ASTM D5185m		4067	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	22.0	---	---
Base Number (BN)	mg KOH/g	ASTM D2896		7.6	---	---
Visc @ 100°C	cSt	ASTM D445		12.5	---	---

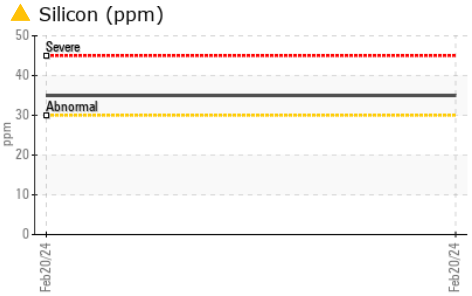
Non-ferrous Metals



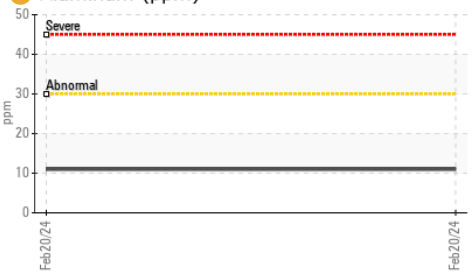
Ferrous Alloys



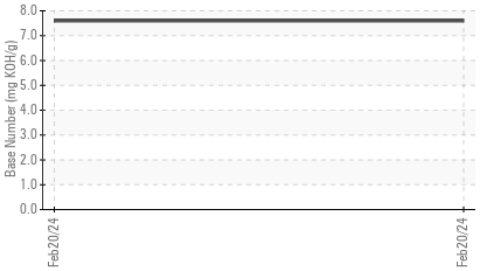
Silicon (ppm)



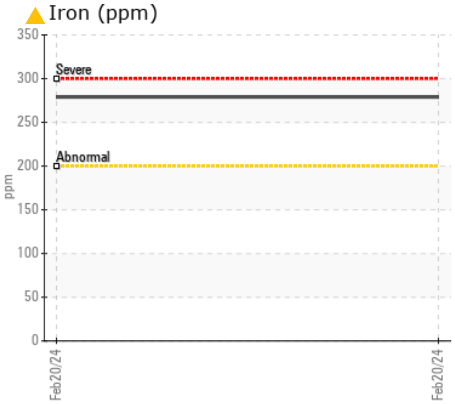
Aluminum (ppm)



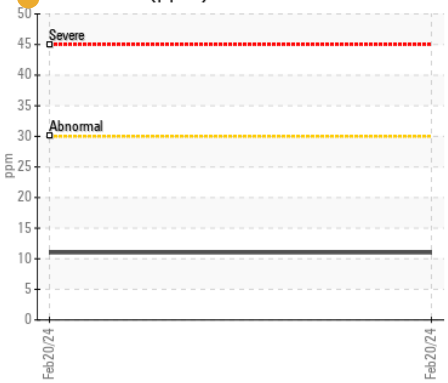
Base Number



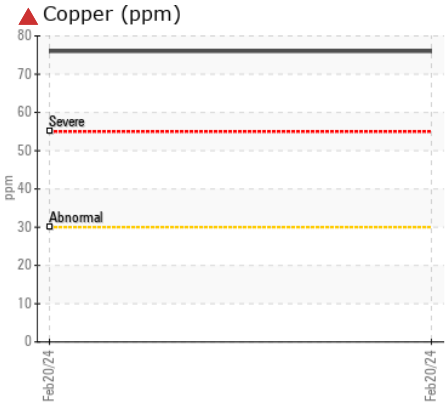
Iron (ppm)



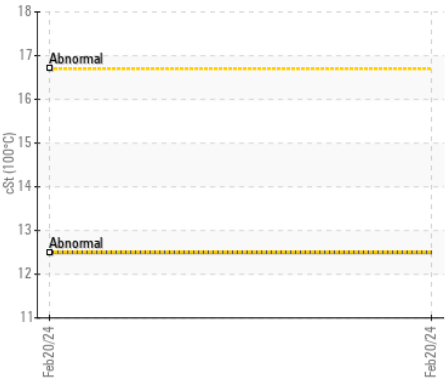
Aluminum (ppm)



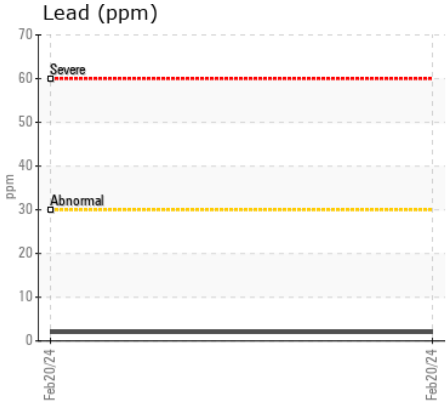
Copper (ppm)



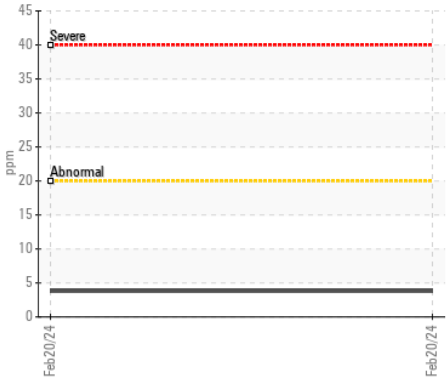
Viscosity @ 100°C



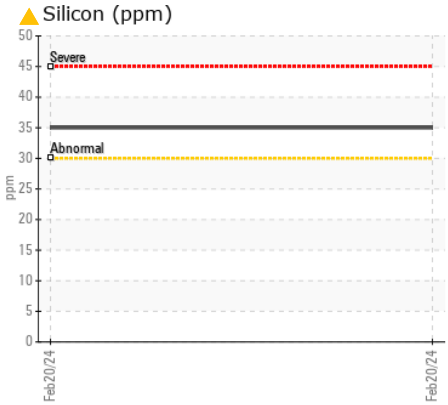
Lead (ppm)



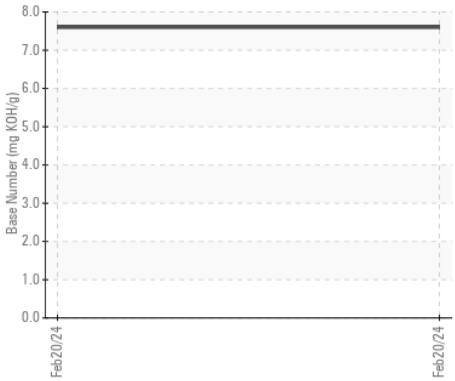
Chromium (ppm)



Silicon (ppm)



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : VPA036647
Lab Number : 06123449
Unique Number : 10937600
Test Package : MOB 1 (Additional Tests: Glycol, TBN)

Received : 20 Mar 2024
Tested : 22 Mar 2024
Diagnosed : 22 Mar 2024 - Jonathan Hester

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)

Richey Boat & Motor - 806884
13213 Us 19
HUDSON, FL
US 34667
Contact: Kyle Messier
kylemessier@hotmail.com
T:
F: