MOB I

VOLVO PENTA

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	ABNORMAL

Area
HUBLEY [DUANE]
Machine Id
KOHLER 0793935
Component
Genset
Fluid
{not provided} (3 QTS)

RECOMMENDATION

We advise that you check the fuel injection system. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition.

WEAR

Metal levels are typical for a new component breaking in.

CONTAMINATION

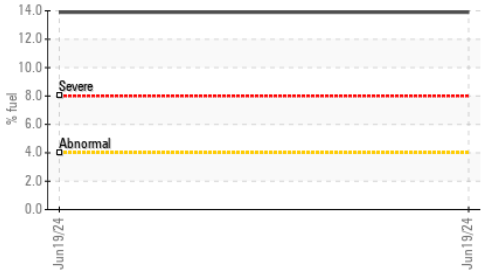
There is a high amount of fuel present in the oil. Elemental level of silicon (Si) above normal indicating ingress of seal material.

FLUID CONDITION

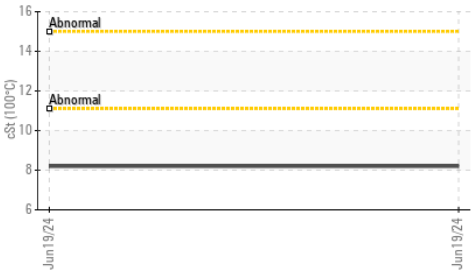
Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		VPA061913	---	---
Sample Date		Client Info		19 Jun 2024	---	---
Machine Age	hrs	Client Info		23	---	---
Oil Age	hrs	Client Info		24	---	---
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	>50	26	---	---
Chromium	ppm	ASTM D5185m	>4	<1	---	---
Nickel	ppm	ASTM D5185m	>2	<1	---	---
Titanium	ppm	ASTM D5185m		<1	---	---
Silver	ppm	ASTM D5185m	>5	0	---	---
Aluminum	ppm	ASTM D5185m	>12	3	---	---
Lead	ppm	ASTM D5185m	>17	5	---	---
Copper	ppm	ASTM D5185m	>70	15	---	---
Tin	ppm	ASTM D5185m	>15	0	---	---
Vanadium	ppm	ASTM D5185m		0	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---
Silicon	ppm	ASTM D5185m	>25	▲ 53	---	---
Potassium	ppm	ASTM D5185m	>20	2	---	---
Fuel	%	ASTM D3524	>4.0	▲ 13.9	---	---
Water		WC Method	>0.1	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	*ASTM D7844		0	---	---
Nitration	Abs/cm	*ASTM D7624	>20	6.3	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	14.8	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	LIGHT	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.1	NEG	---	---
Sodium	ppm	ASTM D5185m		5	---	---
Boron	ppm	ASTM D5185m		60	---	---
Barium	ppm	ASTM D5185m		1	---	---
Molybdenum	ppm	ASTM D5185m		28	---	---
Manganese	ppm	ASTM D5185m		<1	---	---
Magnesium	ppm	ASTM D5185m		88	---	---
Calcium	ppm	ASTM D5185m		2534	---	---
Phosphorus	ppm	ASTM D5185m		852	---	---
Zinc	ppm	ASTM D5185m		1066	---	---
Sulfur	ppm	ASTM D5185m		4859	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	9.3	---	---
Base Number (BN)	mg KOH/g	ASTM D2896		9.6	---	---
Visc @ 100°C	cSt	ASTM D445		▲ 8.2	---	---

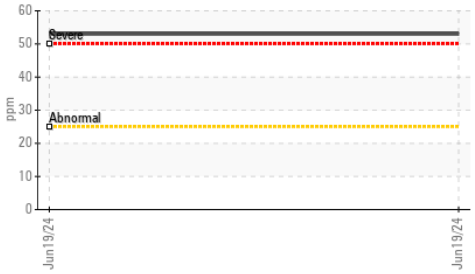
Fuel Dilution



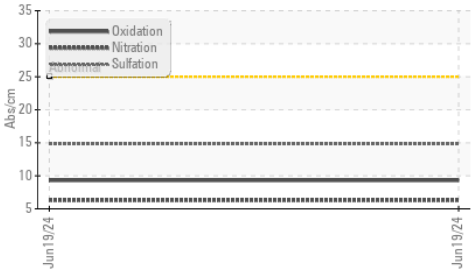
Viscosity @ 100°C



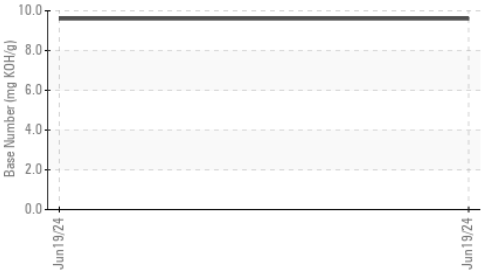
Silicon (ppm)



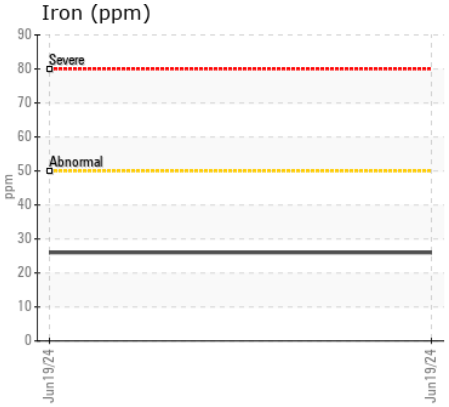
FT-IR (Direct Trend)



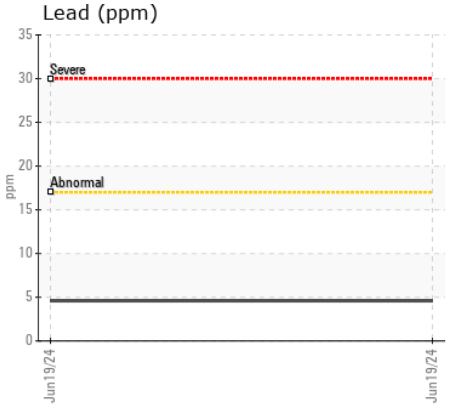
Base Number



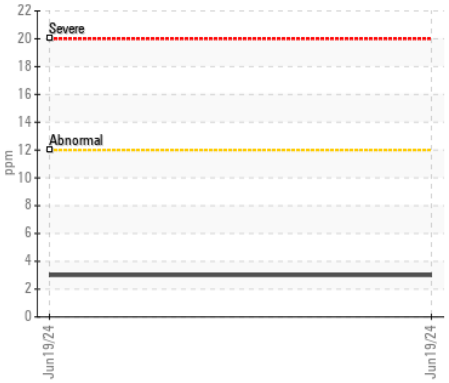
Iron (ppm)



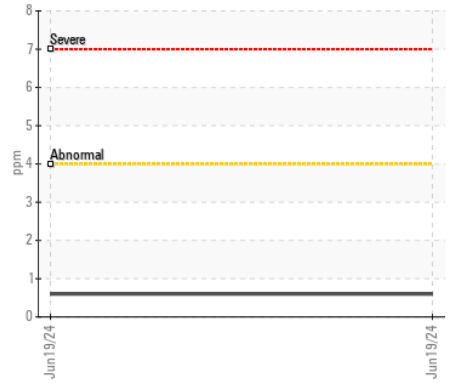
Lead (ppm)



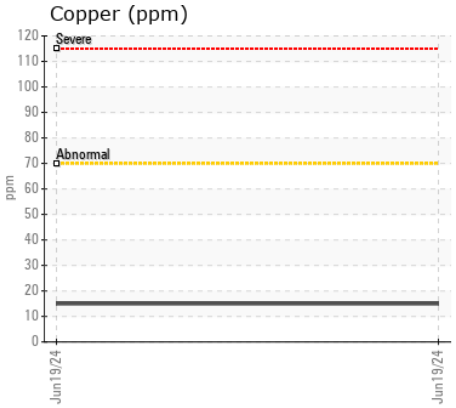
Aluminum (ppm)



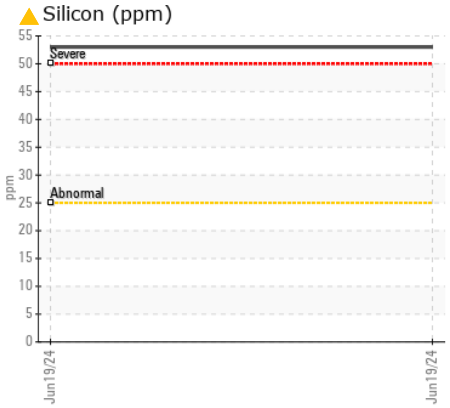
Chromium (ppm)



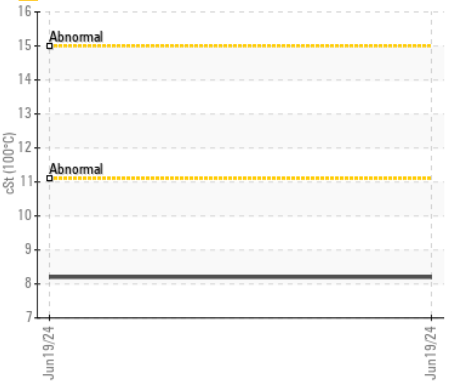
Copper (ppm)



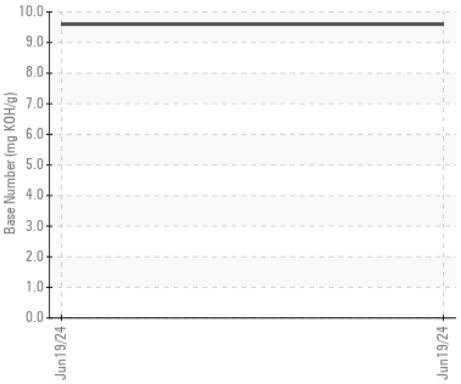
Silicon (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : VPA061913 **Received** : 21 Jun 2024
Lab Number : 06216521 **Tested** : 24 Jun 2024
Unique Number : 11089385 **Diagnosed** : 24 Jun 2024 - Doug Bogart
Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel, TBN)

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)

Mobile Marine Services Inc
01032 Advance Rd South
EAST JORDAN, MI
US 49727
Contact: Duane Kujat
mobilemarine@twin-valley.net
T: Phone
F: