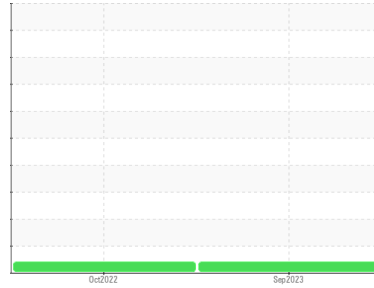


Area
MANCHESTER 50 DRIVE [R812467M]
Machine Id
VOLVO PENTA 7011481196 - VARIABLE SPEED
Component
Diesel Engine
Fluid
VOLVO PENTA SAE 15W40 (10 GAL)



DIAGNOSIS

- ▲ Recommendation**
No corrective action is recommended at this time. Resample at the next service interval to monitor.
- Wear**
Metal levels are typical for a new component breaking in.
- Contamination**
There is no indication of any contamination in the oil.
- ▲ Fluid Condition**
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

SAMPLE INFORMATION method limit/base current history1 history2

Sample Number	Client Info		VPA056677	VPA048406	---
Sample Date	Client Info		15 Sep 2023	06 Oct 2022	---
Machine Age	hrs	Client Info	382	266	---
Oil Age	hrs	Client Info	223	266	---
Oil Changed	Client Info		N/A	N/A	---
Sample Status			ATTENTION	ATTENTION	---

CONTAMINATION method limit/base current history1 history2

Fuel	WC Method	>4.0	<1.0	1.9	---
Glycol	WC Method		NEG	NEG	---

WEAR METALS method limit/base current history1 history2

Iron	ppm	ASTM D5185m	>120	4	16	---
Chromium	ppm	ASTM D5185m	>10	0	<1	---
Nickel	ppm	ASTM D5185m	>5	0	0	---
Titanium	ppm	ASTM D5185m		0	0	---
Silver	ppm	ASTM D5185m	>5	0	0	---
Aluminum	ppm	ASTM D5185m	>20	<1	2	---
Lead	ppm	ASTM D5185m	>40	<1	<1	---
Copper	ppm	ASTM D5185m	>300	4	30	---
Tin	ppm	ASTM D5185m	>10	<1	2	---
Vanadium	ppm	ASTM D5185m		0	0	---
Cadmium	ppm	ASTM D5185m		0	0	---

ADDITIVES method limit/base current history1 history2

Boron	ppm	ASTM D5185m		67	0	---
Barium	ppm	ASTM D5185m		0	0	---
Molybdenum	ppm	ASTM D5185m		43	57	---
Manganese	ppm	ASTM D5185m		<1	3	---
Magnesium	ppm	ASTM D5185m		561	847	---
Calcium	ppm	ASTM D5185m		1696	1219	---
Phosphorus	ppm	ASTM D5185m		804	1084	---
Zinc	ppm	ASTM D5185m		987	1305	---
Sulfur	ppm	ASTM D5185m		2855	4320	---

CONTAMINANTS method limit/base current history1 history2

Silicon	ppm	ASTM D5185m	>25	15	46	---
Sodium	ppm	ASTM D5185m		2	1	---
Potassium	ppm	ASTM D5185m	>20	2	4	---

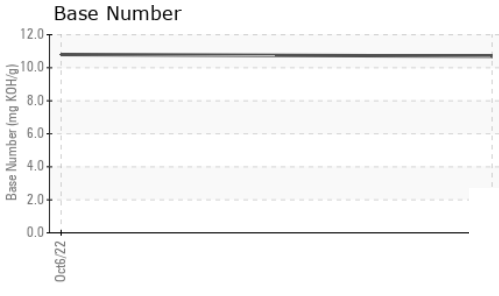
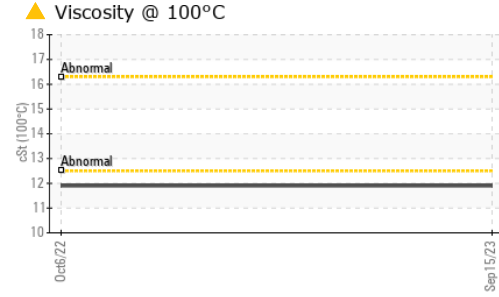
INFRA-RED method limit/base current history1 history2

Soot %	%	*ASTM D7844		0.1	0.2	---
Nitration	Abs/cm	*ASTM D7624	>20	5.8	7.8	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.7	20.5	---

FLUID DEGRADATION method limit/base current history1 history2

Oxidation	Abs/.1mm	*ASTM D7414	>25	18.3	15.8	---
Base Number (BN)	mg KOH/g	ASTM D2896		10.7	10.8	---

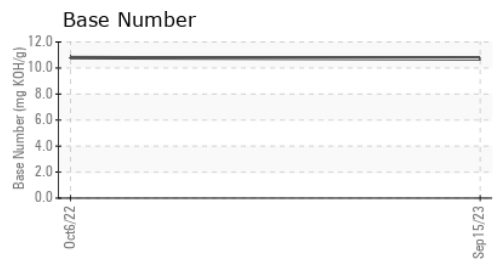
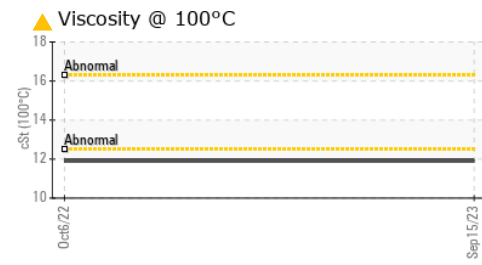
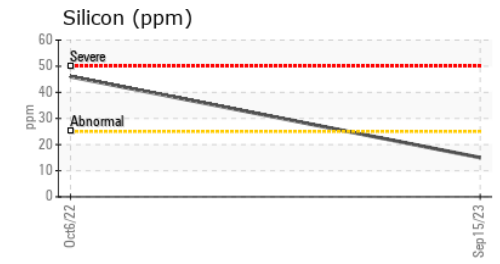
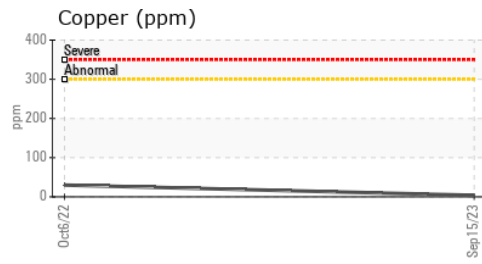
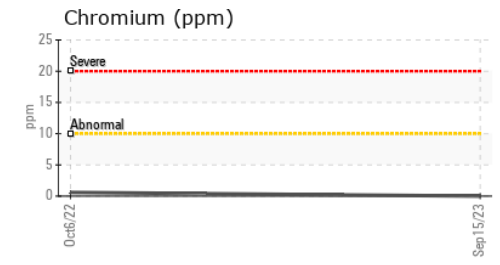
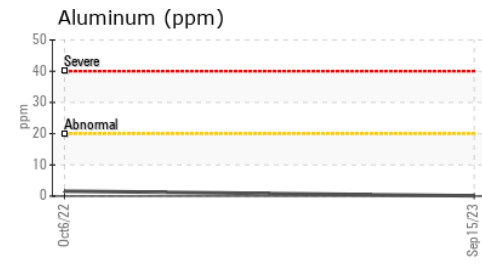
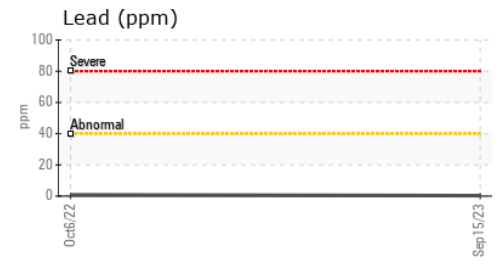
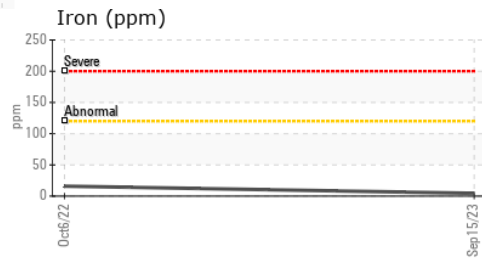
OIL ANALYSIS REPORT



VISUAL	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	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	>0.1	NEG	---
Free Water	scalar	*Visual		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	▲ 11.9	▲ 11.9	---

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : VPA056677 **Received** : 28 Sep 2023
Lab Number : 05963196 **Diagnosed** : 29 Sep 2023
Unique Number : 10669747 **Diagnostician** : Sean Felton
Test Package : MOB 1 (Additional Tests: TBN)

Power Products Systems LLC
 432 Warren Avenue, 432 Warren Ave.
 PORTLAND, ME
 US 04103
 Contact: Cody Clemens
 cclemens@powerprodsys.com

Certificate L2367
 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)