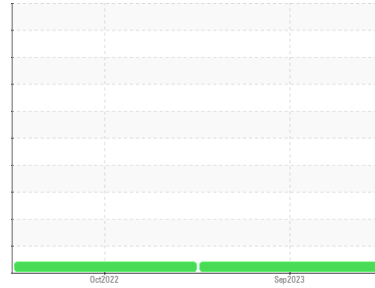


Area
MANCHESTER 40 DRIVE [R812467M]
 Machine Id
VOLVO PENTA 7011481578 - VARIABLE SPEED
 Component
Diesel Engine
 Fluid
VOLVO PENTA SAE 15W40 (10 GAL)



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		VPA056671	VPA048401	---
Sample Date	Client Info		15 Sep 2023	06 Oct 2022	---
Machine Age	hrs	Client Info	210	110	---
Oil Age	hrs	Client Info	0	110	---
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	1.3	---
Glycol	WC Method		NEG	NEG	---

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >120	4	9	---
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	1	---
Lead	ppm	ASTM D5185m >40	0	<1	---
Copper	ppm	ASTM D5185m >300	3	20	---
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	71	8	---
Barium	ppm	ASTM D5185m	0	0	---
Molybdenum	ppm	ASTM D5185m	43	46	---
Manganese	ppm	ASTM D5185m	<1	2	---
Magnesium	ppm	ASTM D5185m	541	733	---
Calcium	ppm	ASTM D5185m	1726	1454	---
Phosphorus	ppm	ASTM D5185m	792	1031	---
Zinc	ppm	ASTM D5185m	969	1254	---
Sulfur	ppm	ASTM D5185m	2879	4293	---

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	18	31	---
Sodium	ppm	ASTM D5185m	2	0	---
Potassium	ppm	ASTM D5185m >20	<1	2	---

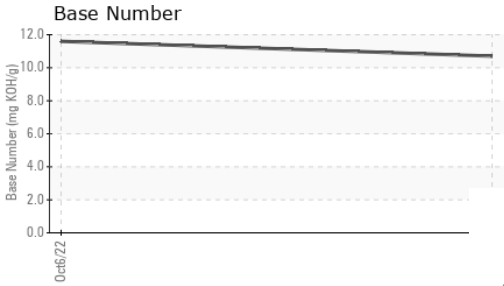
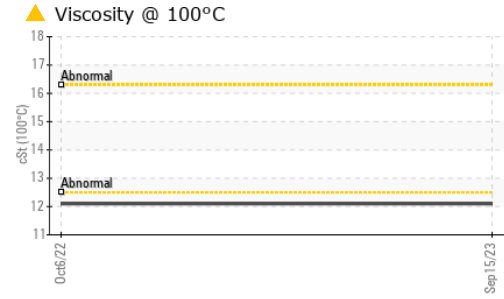
INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	0.1	0.1	---
Nitration	Abs/cm	*ASTM D7624 >20	5.3	5.9	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	20.7	20.0	---

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	18.3	15.7	---
Base Number (BN)	mg KOH/g	ASTM D2896	10.7	11.6	---

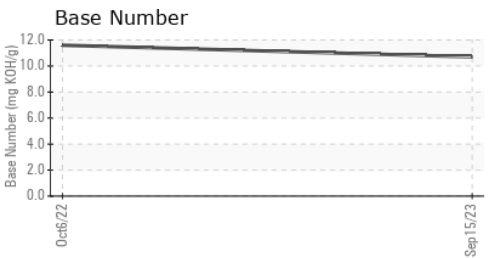
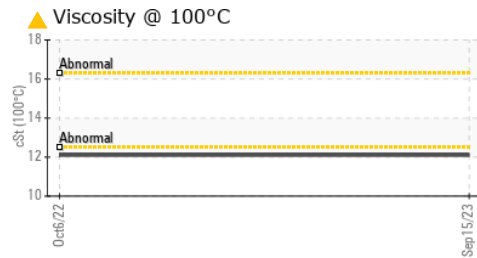
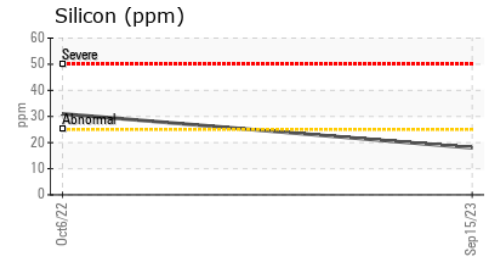
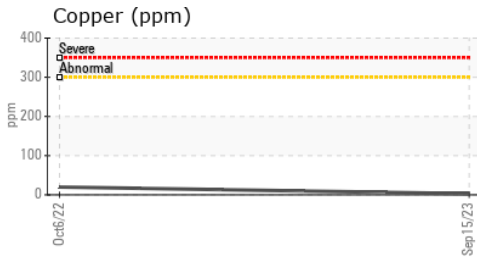
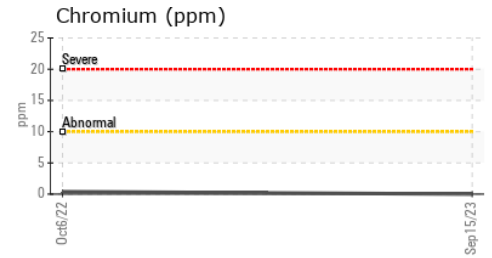
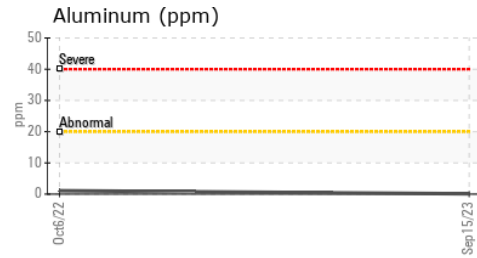
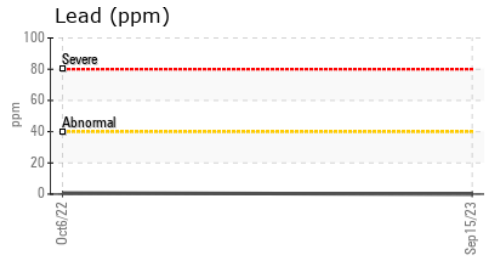
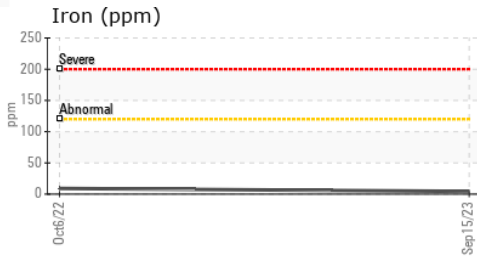
OIL ANALYSIS REPORT



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	▲ 12.1	▲ 12.1	---

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : VPA056671 **Received** : 28 Sep 2023
Lab Number : 05963200 **Diagnosed** : 29 Sep 2023
Unique Number : 10669751 **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

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:
F: