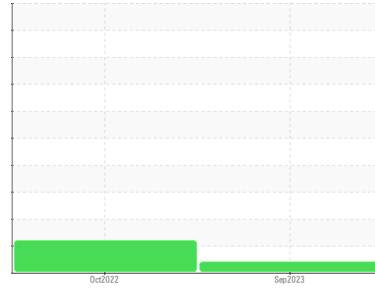


Area
MANCHESTER 30 LEFT AG [R812467M]
Machine Id
VOLVO PENTA 2013930005 - VARIABLE SPEED
Component
Port Diesel Engine
Fluid
VOLVO PENTA SAE 15W40 (10 GAL)



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	VPA056730	VPA048399	---
Sample Date	Client Info	15 Sep 2023	06 Oct 2022	---
Machine Age	hrs	300	203	---
Oil Age	hrs	97	203	---
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	▲ 2.2	---
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	2	11	---
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	57	1	---
Barium	ppm ASTM D5185m	0	0	---
Molybdenum	ppm ASTM D5185m	44	59	---
Manganese	ppm ASTM D5185m	<1	2	---
Magnesium	ppm ASTM D5185m	610	982	---
Calcium	ppm ASTM D5185m	1547	1103	---
Phosphorus	ppm ASTM D5185m	801	1066	---
Zinc	ppm ASTM D5185m	993	1305	---
Sulfur	ppm ASTM D5185m	2849	4130	---

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	8	17	---
Sodium	ppm ASTM D5185m	2	0	---
Potassium	ppm ASTM D5185m >20	2	4	---

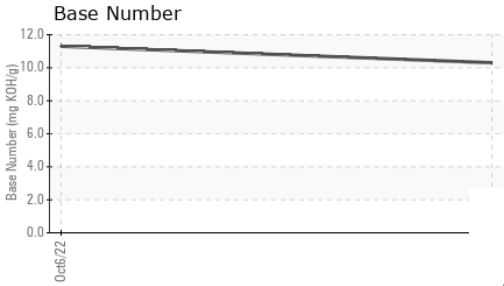
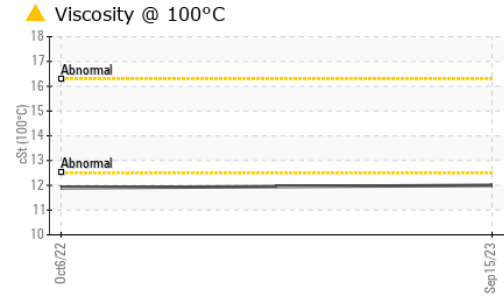
INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844	0	0.1	---
Nitration	Abs/cm *ASTM D7624 >20	5.3	6.2	---
Sulfation	Abs/.1mm *ASTM D7415 >30	20.5	20.0	---

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	17.6	15.2	---
Base Number (BN)	mg KOH/g ASTM D2896	10.3	11.3	---

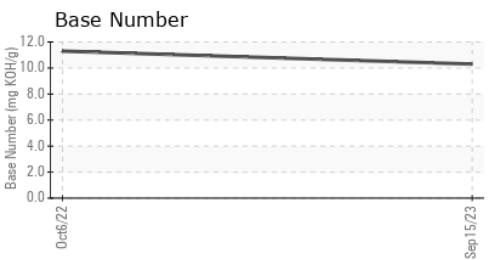
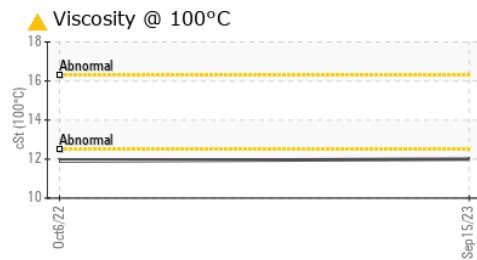
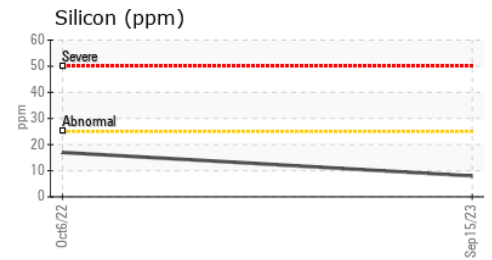
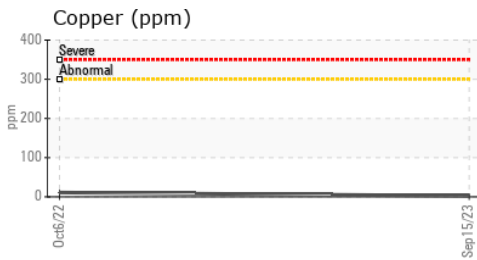
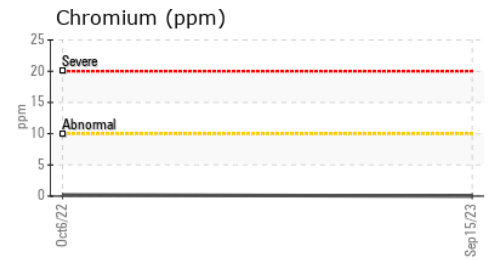
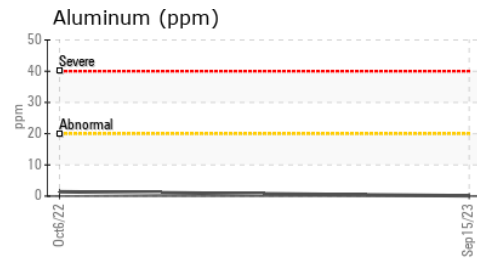
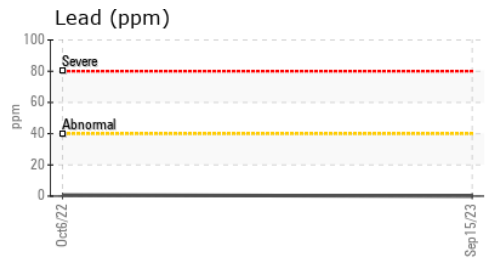
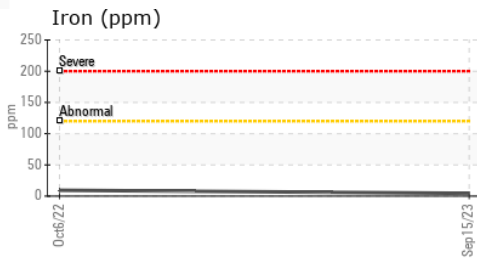
OIL ANALYSIS REPORT



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	▲ 12.0	▲ 11.9	---

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : VPA056730 **Received** : 28 Sep 2023
Lab Number : 05963199 **Diagnosed** : 29 Sep 2023
Unique Number : 10669750 **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)