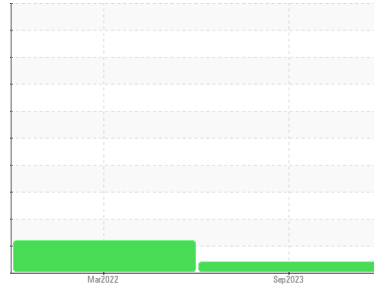


Area
MANCHESTER AIRPORT [R812467M]
Machine Id
VOLVO PENTA 2013910480 - VARIABLE SPEED
Component
Center Diesel Engine
Fluid
VOLVO PENTA SAE 15W40 (--- GAL)



DIAGNOSIS

▲ Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

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		VPA044885	VPA026906	---
Sample Date	Client Info		15 Sep 2023	07 Mar 2022	---
Machine Age	hrs	Client Info	630	372	---
Oil Age	hrs	Client Info	0	0	---
Oil Changed	Client Info		N/A	N/A	---
Sample Status			ATTENTION	ATTENTION	---

CONTAMINATION

	method	limit/base	current	history1	history2
Glycol	WC Method		NEG	NEG	---

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >80	6	15	---
Chromium	ppm	ASTM D5185m >6	0	<1	---
Nickel	ppm	ASTM D5185m >2	0	0	---
Titanium	ppm	ASTM D5185m >2	0	0	---
Silver	ppm	ASTM D5185m >2	0	0	---
Aluminum	ppm	ASTM D5185m >20	<1	2	---
Lead	ppm	ASTM D5185m >95	<1	3	---
Copper	ppm	ASTM D5185m >85	34	▲ 125	---
Tin	ppm	ASTM D5185m >9	1	2	---
Antimony	ppm	ASTM D5185m	---	0	---
Vanadium	ppm	ASTM D5185m	0	0	---
Cadmium	ppm	ASTM D5185m	0	0	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	50	5	---
Barium	ppm	ASTM D5185m	0	0	---
Molybdenum	ppm	ASTM D5185m	46	56	---
Manganese	ppm	ASTM D5185m	<1	2	---
Magnesium	ppm	ASTM D5185m	621	1002	---
Calcium	ppm	ASTM D5185m	1686	1166	---
Phosphorus	ppm	ASTM D5185m	810	1029	---
Zinc	ppm	ASTM D5185m	1008	1185	---
Sulfur	ppm	ASTM D5185m	2712	2528	---

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	10	25	---
Sodium	ppm	ASTM D5185m	4	2	---
Potassium	ppm	ASTM D5185m >20	<1	0	---
Fuel	%	ASTM D3524 >4.0	<1.0	0.7	---

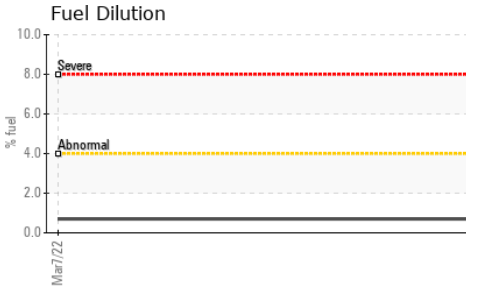
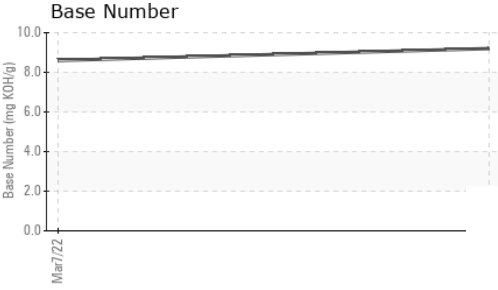
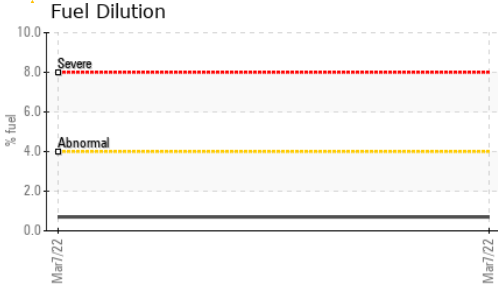
INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	0.1	0.1	---
Nitration	Abs/cm	*ASTM D7624 >20	7.3	8.5	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	22.0	23.1	---

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	20.1	20.4	---
Base Number (BN)	mg KOH/g	ASTM D2896	9.2	8.6	---

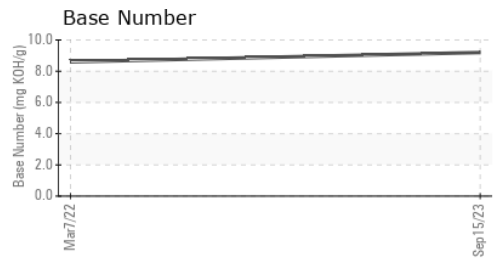
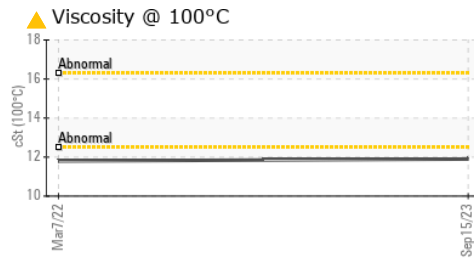
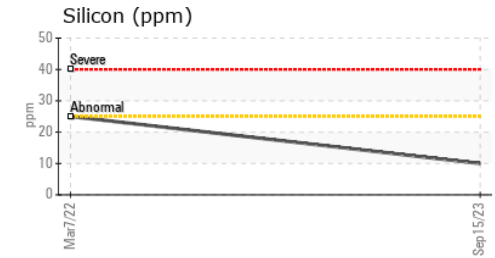
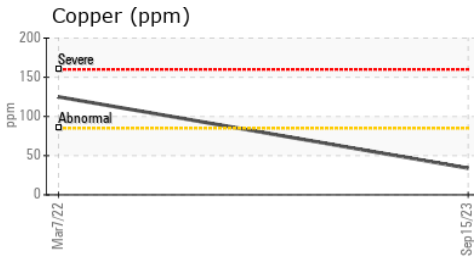
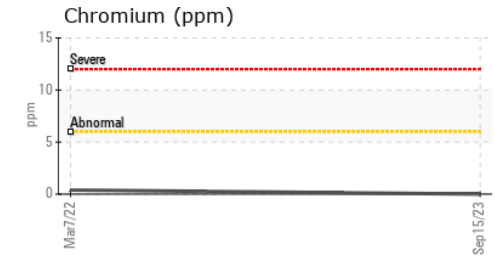
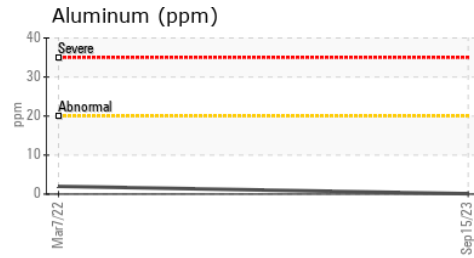
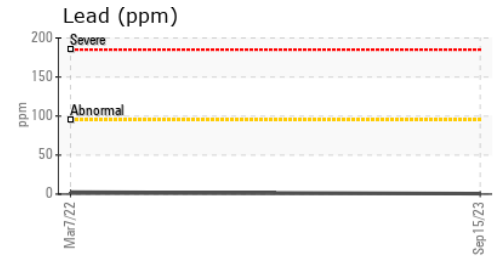
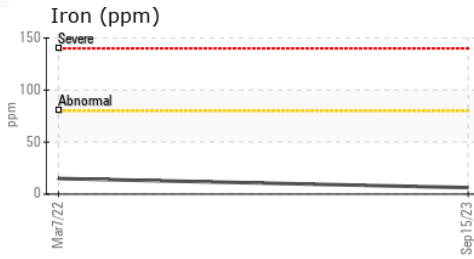
OIL ANALYSIS REPORT



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	▲ 11.9	▲ 11.8	---

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : VPA044885 **Received** : 28 Sep 2023
Lab Number : 05963192 **Diagnosed** : 29 Sep 2023
Unique Number : 10669743 **Diagnostician** : Sean Felton
Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel, 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)

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F: