



WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Area  
**NADINE URCIUOLI [BEN KOPF]**  
Machine Id  
**VOLVO PENTA 3950006145**  
Component  
**Starboard IPS**  
Fluid  
**VOLVO PENTA GL-5 SAE 75W90 (4 GAL)**

### RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>VPA062262</b>	VPA059540	---
Sample Date		Client Info		<b>13 Jun 2024</b>	15 Nov 2023	---
Machine Age	hrs	Client Info		<b>489</b>	457	---
Oil Age	hrs	Client Info		<b>489</b>	457	---
Filter Age	hrs	Client Info		<b>0</b>	0	---
Oil Changed		Client Info		<b>Not Changd</b>	Changed	---
Filter Changed		Client Info		<b>Not Changd</b>	Changed	---
Sample Status				<b>NORMAL</b>	NORMAL	---

### WEAR

All component wear rates are normal.

PQ		ASTM D8184		<b>20</b>	12	---
Iron	ppm	ASTM D5185m	>275	<b>8</b>	9	---
Chromium	ppm	ASTM D5185m	>4	<b>0</b>	0	---
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	0	---
Titanium	ppm	ASTM D5185m	>3	<b>0</b>	0	---
Silver	ppm	ASTM D5185m		<b>&lt;1</b>	0	---
Aluminum	ppm	ASTM D5185m	>10	<b>&lt;1</b>	0	---
Lead	ppm	ASTM D5185m	>4	<b>0</b>	0	---
Copper	ppm	ASTM D5185m	>30	<b>1</b>	1	---
Tin	ppm	ASTM D5185m	>3	<b>&lt;1</b>	0	---
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	---
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---

### CONTAMINATION

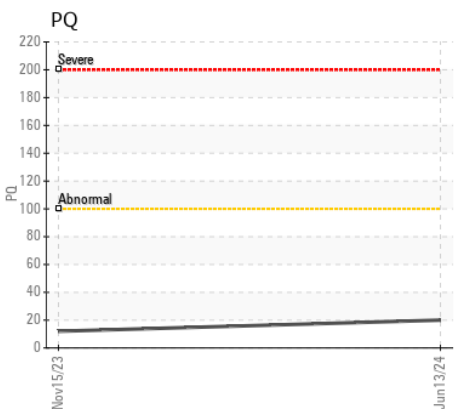
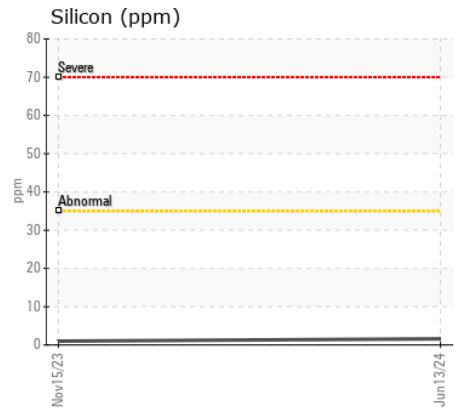
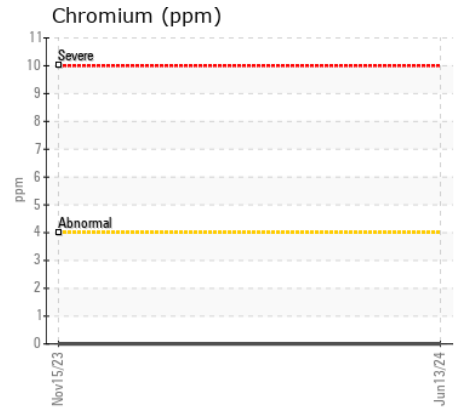
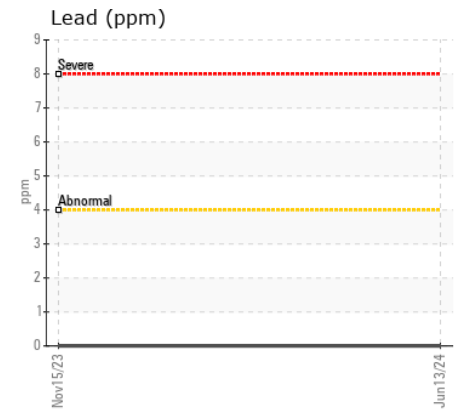
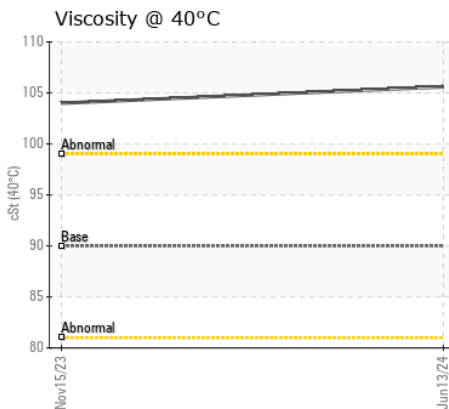
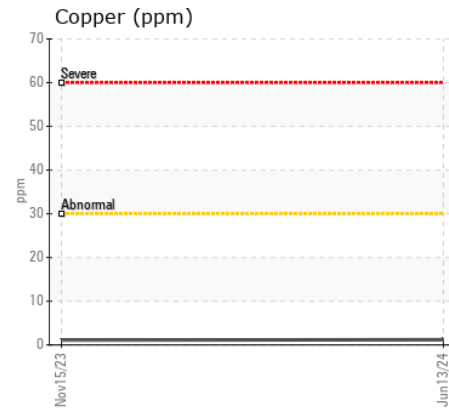
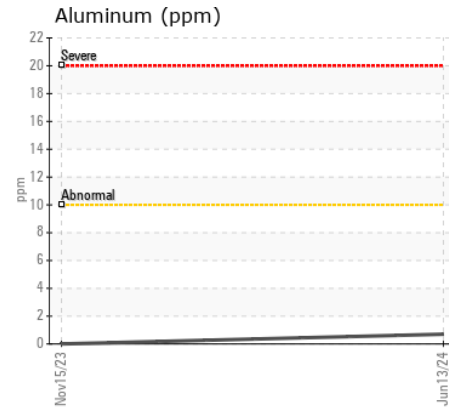
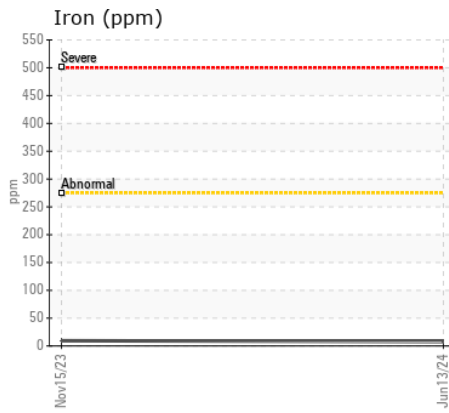
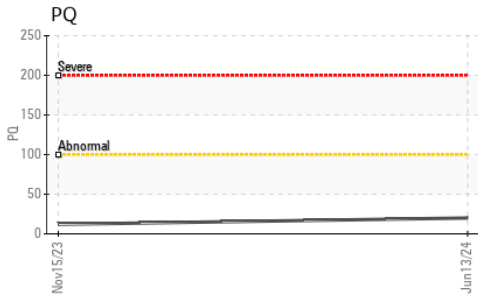
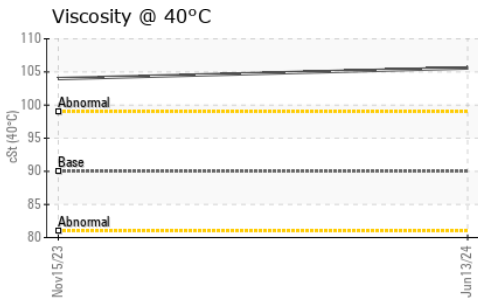
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>35	<b>2</b>	1	---
Potassium	ppm	ASTM D5185m	>20	<b>4</b>	0	---
Water		WC Method	>0.2	<b>NEG</b>	NEG	---
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Debris	scalar	*Visual	NONE	<b>NONE</b>	LIGHT	---
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG	---

### FLUID CONDITION

The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		<b>2</b>	2	---
Boron	ppm	ASTM D5185m		<b>289</b>	307	---
Barium	ppm	ASTM D5185m		<b>0</b>	0	---
Molybdenum	ppm	ASTM D5185m		<b>0</b>	<1	---
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	---
Magnesium	ppm	ASTM D5185m		<b>8</b>	36	---
Calcium	ppm	ASTM D5185m		<b>2</b>	26	---
Phosphorus	ppm	ASTM D5185m		<b>1465</b>	1415	---
Zinc	ppm	ASTM D5185m		<b>6</b>	25	---
Sulfur	ppm	ASTM D5185m		<b>30032</b>	22796	---
Visc @ 40°C	cSt	ASTM D445	90.0	<b>105.6</b>	104	---



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : VPA062262 **Received** : 19 Jun 2024  
**Lab Number** : 06215241 **Tested** : 19 Jun 2024  
**Unique Number** : 11088105 **Diagnosed** : 19 Jun 2024 - Doug Bogart  
**Test Package** : MOB 1 ( Additional Tests: PQ )

**Helmuts Marine Service**  
 619 Canal Street  
 SAN RAFAEL, CA  
 US 94901-3545

Contact: NADINE URUIOLI  
 SERVICE@HELMUTSMARINE.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: x:  
 F: x: