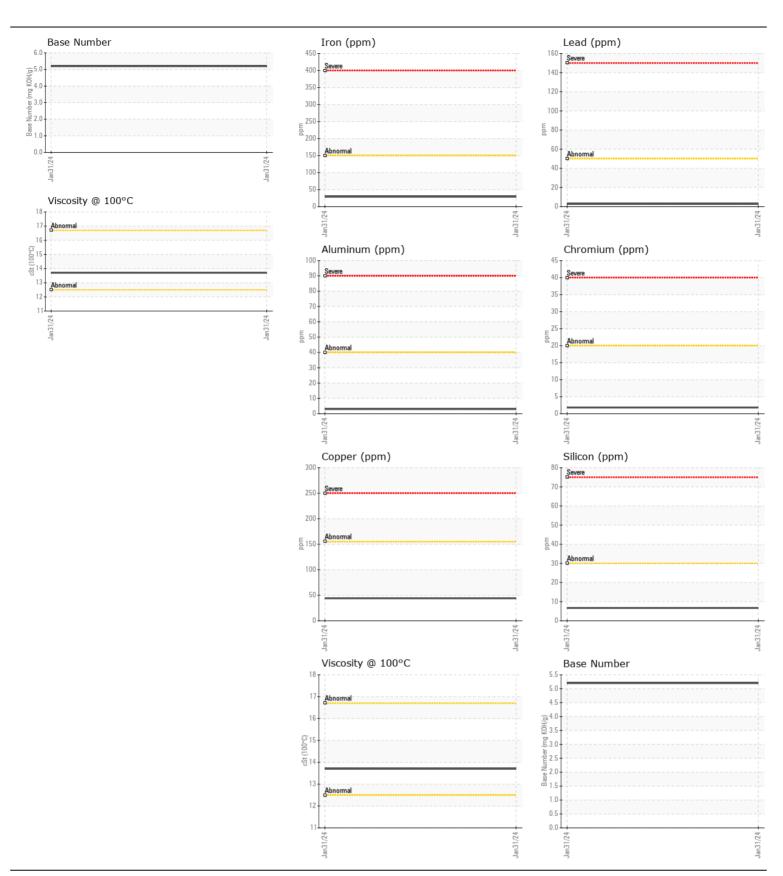
WEAR CONTAMINATION FLUID CONDITION

NORMAL NORMAL NORMAL

NADINE URCIUOLI [16432] **VOLVO PENTA 4012191485**

Gasoline Engine

ECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History
Resample at the next service interval to monitor.	Sample Number		Client Info		VPA051897		
	Sample Date		Client Info		31 Jan 2024		
	Machine Age	hrs	Client Info		0		
	Oil Age	hrs	Client Info		504		
	Filter Age	hrs	Client Info		0		
	Oil Changed		Client Info		Changed		
	Filter Changed		Client Info		Changed		
	Sample Status				NORMAL		
/EAR	Iron	ppm	ASTM D5185m	>150	29		
	Chromium	ppm	ASTM D5185m	>20	2		
All component wear rates are normal.	Nickel	ppm	ASTM D5185m		- <1		
	Titanium	ppm	ASTM D5185m		<1		
	Silver	ppm	ASTM D5185m	>2	0		
	Aluminum	ppm	ASTM D5185m		3		
	Lead	ppm	ASTM D5185m		3		
	Copper	ppm	ASTM D5185m		44		
	Tin	ppm	ASTM D5185m		1		
	Vanadium	ppm	ASTM D5185m		<1		
	White Metal	scalar	*Visual	NONE	NONE		
	Yellow Metal	scalar	*Visual	NONE	NONE		
ONTANUNATION	0:1:		AOTH DE LOS		_		
ONTAMINATION	Silicon	ppm	ASTM D5185m		7		
There is no indication of any contamination in the oil.	Potassium	ppm	ASTM D5185m		2		
	Fuel		WC Method		<1.0		
	Water		WC Method	>0.1	NEG		
	Glycol	21	WC Method		NEG		
	Soot %	%	*ASTM D7844	0.0	0.1		
	Nitration	Abs/cm	*ASTM D7624	>20	7.3		
	Sulfation	Abs/.1mm	*ASTM D7415		16.6		
	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		
<u></u>	Emulsified Water	Scalar	*Visual	>0.1	NEG		
LUID CONDITION	Sodium	ppm	ASTM D5185m		12		
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.	Boron	ppm	ASTM D5185m		0		
	Barium	ppm	ASTM D5185m		0		
	Molybdenum	ppm	ASTM D5185m		35		
	Manganese	ppm	ASTM D5185m		<1		
	Magnesium	ppm	ASTM D5185m		31		
	Calcium	ppm	ASTM D5185m		1578		
	Phosphorus	ppm	ASTM D5185m		601		
	Zinc	ppm	ASTM D5185m		760		
	Sulfur	ppm	ASTM D5185m		1661		
	Oxidation	Abs/.1mm	*ASTM D7414	>25	8.5		
	Base Number (BN)	mg KOH/g	ASTM D2896		5.2		
	Visc @ 100°C	cSt	ASTM D445		13.7		





Certificate L2367

Laboratory Sample No. Lab Number **Unique Number**

: 06076472 : 10858563

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : VPA051897

Recieved Diagnosed Test Package : MOB 1 (Additional Tests: TBN)

: 01 Feb 2024 : 02 Feb 2024 Diagnostician : Don Baldridge

To discuss this sample report, contact Customer Service at 1-800-237-1369.

SAN RAFAEL, CA US 94901-3545 Contact: NADINE URCIUOLI SERVICE@HELMUTSMARINE.COM T: x:

Helmuts Marine Service

619 Canal Street

* - 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)

F: x: