**WEAR CONTAMINATION FLUID CONDITION**  **ABNORMAL SEVERE NORMAL** 

## NADINE URCIUOLI [LARRY BINKLEY] **VOLVO PENTA 3020298620 - STERNDRIVE**

**Port Gearbox** 

RECOMMENDATION  We advise that you check for the source of water entry. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.	Test	UOM	Method	Limit/Abn	Current	History1	History2
	Sample Number		Client Info		VPA061548	VPA035533	
	Sample Date		Client Info		10 Jun 2024	11 Nov 2020	
	Machine Age	hrs	Client Info		224	91	
	Oil Age	hrs	Client Info		224	0	
	Filter Age	hrs	Client Info		0	0	
	Oil Changed		Client Info		Changed	Not Changd	
	Filter Changed		Client Info		Changed	Not Changd	
	Sample Status				SEVERE	NORMAL	
WEAR	PQ		ASTM D8184		18	16	
Gear wear is indicated.	Iron	ppm	ASTM D5185m	>150	<b>^</b> 209	32	
	Chromium	ppm	ASTM D5185m	>10	2	<1	
	Nickel	ppm	ASTM D5185m	>10	<u> </u>	5	
	Titanium	ppm	ASTM D5185m		0	0	
	Silver	ppm	ASTM D5185m		0	<1	
	Aluminum	ppm	ASTM D5185m	>5	4	1	
	Lead	ppm	ASTM D5185m	>65	0	0	
	Copper	ppm	ASTM D5185m	>80	3	<1	
	Tin	ppm	ASTM D5185m	>8	<1	0	
	Vanadium	ppm	ASTM D5185m		0	0	
	White Metal	scalar	*Visual	NONE	NONE	NONE	
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
CONTAMINATION	Silicon	ppm	ASTM D5185m	>20	4	2	
Appearance is milky. There is a high concentration of water present in the oil.	Potassium	ppm	ASTM D5185m	>20	7	0	
	Water	%	ASTM D6304	>0.2	<b>1.00</b>		
	ppm Water	ppm	ASTM D6304	>2000	<b>1</b> 0000		
	Silt	scalar	*Visual	NONE	NONE	NONE	
	Debris	scalar	*Visual	NONE	NONE	NONE	
	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
	Appearance	scalar	*Visual	NORML	MILKY	NORML	
	Odor	scalar	*Visual	NORML	NORML	NORML	
	Emulsified Water	scalar	*Visual	>0.2	<b>4</b> 0.2%	NEG	
FLUID CONDITION	Sodium	ppm	ASTM D5185m		94	24	
The condition of the oil is acceptable for the time in service.	Boron	ppm	ASTM D5185m		219	328	
	Barium	ppm	ASTM D5185m		0	0	
	Molybdenum	ppm	ASTM D5185m		0	<1	
	Manganese	ppm	ASTM D5185m		4	4	
	Magnesium	ppm	ASTM D5185m		29	55	
	Calcium	ppm	ASTM D5185m		11	10	
	Dhochhoruc	ppm	ASTM D5185m		1419	1322	
	Phosphorus Zinc	ppm	ASTM D5185m		89	24	

Sulfur

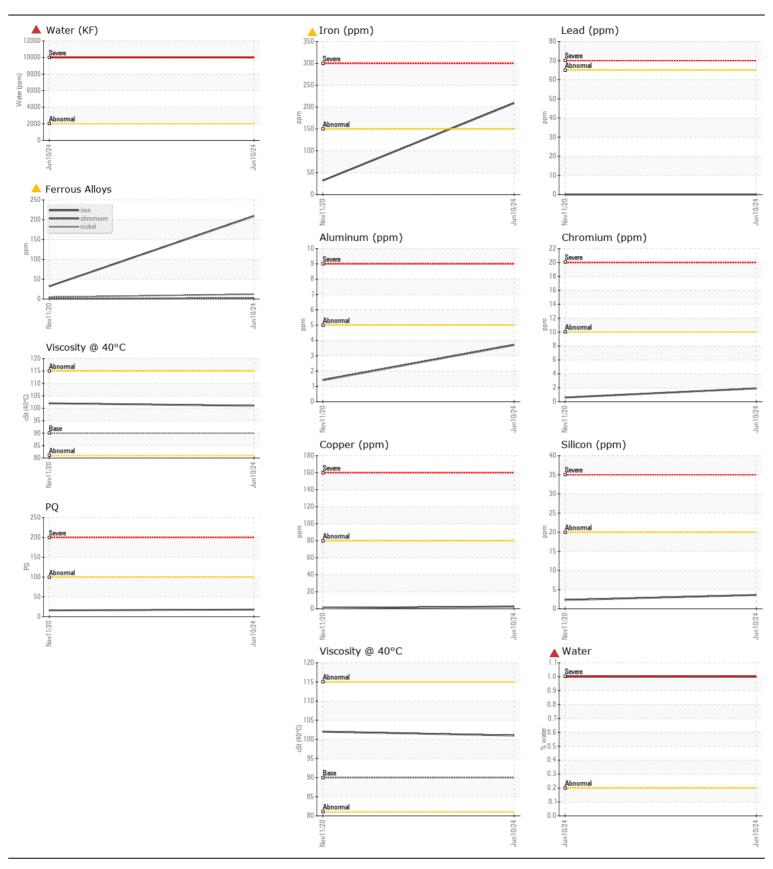
Visc @ 40°C

ppm ASTM D5185m

21198

29163

101





Certificate L2367

Laboratory Sample No. Lab Number

: 06214108 Unique Number : 11086972

: VPA061548

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received **Tested** 

Diagnosed Test Package : MOB 1 ( Additional Tests: KF, PQ )

: 21 Jun 2024 : 21 Jun 2024 - Jonathan Hester

: 18 Jun 2024

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

Contact: NADINE URCIUOLI SERVICE@HELMUTSMARINE.COM T: x:

Contact/Location: NADINE URCIUOLI - VP152741

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)

F: x: