**WEAR CONTAMINATION FLUID CONDITION** 

**NORMAL ABNORMAL NORMAL** 

## NADINE URCIUOLI [AL MOORAD]

**VOLVO PENTA 3940020500** 

**Port IPS** 

CEAD OIL SAE 75WOO (-

GEAR OIL SAE 75W90 ( GAL)							
RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
We advise that you check for the source of water entry. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.	Sample Number		Client Info		VPA052311		
	Sample Date		Client Info		09 Jul 2024		
	Machine Age	hrs	Client Info		357		
	Oil Age	hrs	Client Info		357		
	Filter Age	hrs	Client Info		0		
	Oil Changed		Client Info		Changed		
	Filter Changed		Client Info		Changed		
	Sample Status				ABNORMAL		
WEAD							
WEAR	PQ		ASTM D8184	0==	16		
All component wear rates are normal.	Iron	ppm	ASTM D5185m		19		
	Chromium	ppm	ASTM D5185m		<1		
	Nickel	ppm	ASTM D5185m		0		
	Titanium	ppm	ASTM D5185m ASTM D5185m	>3	<1		
	Silver	ppm	ASTM D5185m	. 10	<1		
	Aluminum Lead	ppm	ASTM D5185m	-	4 0		
	Copper	ppm	ASTM D5185m		5		
	Tin	ppm	ASTM D5185m		<1		
	Vanadium	ppm	ASTM D5185m	>0	<1		
	White Metal	scalar	*Visual	NONE	NONE		
	Yellow Metal	scalar	*Visual	NONE	NONE		
	·····		·····				
CONTAMINATION	Silicon	ppm	ASTM D5185m	>35	6		
There is a moderate concentration of water present in the oil.	Potassium	ppm	ASTM D5185m	>20	1		
	Water	%	ASTM D6304	>0.2	<b>0.468</b>		
	ppm Water	ppm	ASTM D6304	>2000	<b>4680</b>		
	Silt	scalar	*Visual	NONE	NONE		
	Debris	scalar	*\ /:1				
			*Visual	NONE	NONE		
	Sand/Dirt	scalar	*Visual	NONE	NONE		
	Appearance	scalar scalar	*Visual *Visual	NONE NORML	NONE NORML		
	Appearance Odor	scalar scalar scalar	*Visual *Visual *Visual	NONE NORML NORML	NONE NORML NORML		
	Appearance	scalar scalar scalar	*Visual *Visual *Visual	NONE NORML	NONE NORML		
FLUID CONDITION	Appearance Odor	scalar scalar scalar scalar	*Visual  *Visual  *Visual  *Visual	NONE NORML NORML	NONE NORML NORML		
FLUID CONDITION	Appearance Odor Emulsified Water Sodium	scalar scalar scalar scalar ppm	*Visual  *Visual  *Visual  *Visual  ASTM D5185m	NONE NORML NORML >0.2	NONE NORML NORML  0.2%	  	
FLUID CONDITION  The oil is no longer serviceable due to the presence of contaminants.	Appearance Odor Emulsified Water Sodium Boron	scalar scalar scalar scalar ppm ppm	*Visual  *Visual  *Visual  *Visual	NONE NORML NORML >0.2	NONE NORML NORML	  	
	Appearance Odor Emulsified Water Sodium	scalar scalar scalar scalar ppm ppm	*Visual  *Visual  *Visual  *Visual  ASTM D5185m  ASTM D5185m	NONE NORML NORML >0.2 400 200	NONE NORML NORML  0.2%  0 366 0	   	
	Appearance Odor Emulsified Water Sodium Boron Barium	scalar scalar scalar scalar ppm ppm	*Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m	NONE NORML NORML >0.2 400 200	NONE NORML NORML  0.2%  0 366	   	
	Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum	scalar scalar scalar scalar ppm ppm ppm	*Visual  *Visual  *Visual  *Visual  ASTM D5185m  ASTM D5185m  ASTM D5185m	NONE NORML NORML >0.2 400 200 12	NONE NORML NORML  0.2%  0 366 0 <1	   	
	Appearance Odor Emulsified Water  Sodium Boron Barium Molybdenum Manganese	scalar scalar scalar scalar ppm ppm ppm ppm	*Visual  *Visual  *Visual  *Visual  ASTM D5185m  ASTM D5185m  ASTM D5185m  ASTM D5185m  ASTM D5185m	NONE NORML NORML >0.2  400 200 12	NONE NORML NORML  0.2%  0 366 0 <1 <1	    	
	Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium	scalar scalar scalar scalar ppm ppm ppm ppm ppm	*Visual  *Visual  *Visual  *Visual  ASTM D5185m  ASTM D5185m  ASTM D5185m  ASTM D5185m  ASTM D5185m	NONE NORML NORML >0.2  400 200 12  12 150	NONE NORML NORML  0.2%  0 366 0 <1 <1 1	     	    
	Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium	scalar scalar scalar scalar ppm ppm ppm ppm ppm ppm	*Visual *Visual *Visual *Visual *Visual ASTM D5185m	NONE NORML NORML >0.2  400 200 12  12 150 1650	NONE NORML NORML  0.2%  0 366 0 <1 <1 1 6	     	
	Appearance Odor Emulsified Water  Sodium Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	scalar scalar scalar scalar ppm ppm ppm ppm ppm ppm ppm	*Visual  *Visual  *Visual  *Visual  *Visual  ASTM D5185m  ASTM D5185m	NONE NORML NORML >0.2  400 200 12  12 150 1650 125	NONE NORML NORML  0.2%  0 366 0 <1 <1 1 6 1401		





Certificate L2367

Laboratory Sample No.

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

: VPA052311 Lab Number : 06240636 Unique Number : 11129470

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

Received : 18 Jul 2024 **Tested** : 19 Jul 2024 Diagnosed

: 20 Jul 2024 - Don Baldridge

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

Contact: NADINE URCIUOLI 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)

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