**WEAR CONTAMINATION FLUID CONDITION**  **NORMAL NORMAL NORMAL** 

STEVE GALLO

**VOLVO PENTA A6380502** 

**Starboard Diesel Engine** 

RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
No corrective action is recommended at this time. Resample at the next service interval to monitor.	Sample Number	20.01	Client Info		VPA061894		
	Sample Date		Client Info		25 Jun 2024		
	Machine Age	hrs	Client Info		267		
	Oil Age	hrs	Client Info		0		
	Filter Age	hrs	Client Info		0		
	Oil Changed		Client Info		Not Changd		
	Filter Changed		Client Info		Not Changd		
	Sample Status				NORMAL		
VEA D							
WEAR	Iron	ppm	ASTM D5185m		3		
All component wear rates are normal.	Chromium	ppm	ASTM D5185m		<1		
	Nickel	ppm	ASTM D5185m		<1		
	Titanium	ppm	ASTM D5185m		<1		
	Silver	ppm	ASTM D5185m		0		
	Aluminum	ppm	ASTM D5185m		4		
	Lead	ppm	ASTM D5185m		<1		
	Copper	ppm	ASTM D5185m		<1		
	Tin	ppm	ASTM D5185m	>9	<1		
	Vanadium	ppm	ASTM D5185m	NICAIE	<1 NONE		
	White Metal	scalar	*Visual	NONE	NONE		
	Yellow Metal	scalar	*Visual	NONE	NONE		
CONTAMINATION	Silicon	ppm	ASTM D5185m	>25	7		
SCHTAIMILATION	Potassium	ppm	ASTM D5185m		5		
There is no indication of any contamination in the oil.	Fuel	le le · · ·	WC Method		<1.0		
	Water		WC Method	>0.1	NEG		
	Glycol		WC Method		NEG		
	Soot %	%	*ASTM D7844		0		
	Nitration	Abs/cm	*ASTM D7624	>20	5.4		
	Sulfation	Abs/.1mm	*ASTM D7415	>30	19.6		
	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		
	<b>Emulsified Water</b>	scalar	*Visual	>0.1	NEG		
LUID CONDITION	On all area		ACTM DE 40E			[	
FLUID CONDITION	Sodium	ppm	ASTM D5185m		9		
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.	Boron	ppm	ASTM D5185m		145		
	Barium	ppm	ASTM D5185m		0		
	Molybdenum	ppm	ASTM D5185m		28		
	Manganese	ppm	ASTM D5185m		<1		
	Magnesium Calcium	ppm	ASTM D5185m		358		
		ppm	ASTM D5185m		1946		
	Phosphorus	ppm	ASTM D5185m		1128		
	Zinc Sulfur	ppm	ASTM D5185m ASTM D5185m		1380 4062		
	Oxidation	ppm Abs/1mm	*ASTM D5185m	> 2F			
	Base Number (BN)	Abs/.1mm		>20	15.5 9.3		
	Pase Milliper (RM)	IIIII NUMIN	HO LIVI LIZAYA		4.5		





Certificate L2367

Laboratory Sample No.

: VPA061894 Lab Number : 06221965 Unique Number : 11100162

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

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

: 27 Jun 2024

: 27 Jun 2024

: 27 Jun 2024 - Doug Bogart

US 49727 Contact: Duane Kujat mobilemarine@twin-valley.net T: Phone

**Mobile Marine Services Inc** 

01032 Advance Rd South

EAST JORDAN, MI

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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