## OIL ANALYSIS REPORT

## WEAR NORMAL CONTAMINATION NORMAL FLUID CONDITION NORMAL

## Area THOMAS GILLINGHAM [SAM] Machine Id VOLVO PENTA 7008539178

## Starboard Diesel Engine

VÕLVO PENTA SAE 15W40 (9 GAL)

RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Resample at the next service interval to monitor.	Sample Number		Client Info		VPA059168		
Resample at the next service interval to monitor.	Sample Date		Client Info		10 Jan 2024		
	Machine Age	hrs	Client Info		350		
	Oil Age	hrs	Client Info		190		
	Filter Age	hrs	Client Info		0		
	Oil Changed		Client Info		Changed		
	Filter Changed		Client Info		Changed		
	Sample Status				NORMAL		
WEAR	Iron	ppm	ASTM D5185m		35		
All component wear rates are normal.	Chromium	ppm	ASTM D5185m		2		
	Nickel	ppm	ASTM D5185m		2		
	Titanium	ppm	ASTM D5185m		<1		
	Silver	ppm	ASTM D5185m		<1		
	Aluminum	ppm	ASTM D5185m		5		
	Lead	ppm	ASTM D5185m	>95	<1		
	Copper	ppm	ASTM D5185m		94		
	Tin	ppm	ASTM D5185m	>9	<1		
	Vanadium	ppm	ASTM D5185m		0		
	White Metal	scalar	*Visual	NONE	NONE		
	Yellow Metal	scalar	*Visual	NONE	NONE		
CONTAMINATION	Silicon	nnm	ASTM D5185m	> 25	17		
CONTAMINATION	Potassium	ppm	ASTM D5185m		2		
There is no indication of any contamination in the oil.	Fuel	ppm	WC Method	>20	2 <1.0		
	Water		WC Method		NEG		
	Glycol		WC Method	>0.1	NEG		
	Soot %	%	*ASTM D7844		1.9		
	Nitration	Abs/cm	*ASTM D7624	>20	9.7		
	Sulfation	Abs/.1mm	*ASTM D7024		26.2		
	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		
	Emulsified Water		*Visual	>0.1	NEG		
		Jouran	Vibuai				
FLUID CONDITION	Sodium	ppm	ASTM D5185m		2		
	Boron	ppm	ASTM D5185m		216		
The BN result indicates that there is suitable alkalinity remaining in the	Barium	ppm	ASTM D5185m		0		
oil. The condition of the oil is suitable for further service.	Molybdenum	ppm	ASTM D5185m		119		
	Manganese	ppm	ASTM D5185m		1		
	Magnesium	ppm	ASTM D5185m		733		
	Calcium	ppm	ASTM D5185m		1626		
	Phosphorus	ppm	ASTM D5185m		803		
	Zinc	ppm	ASTM D5185m		963		
	Sulfur	ppm	ASTM D5185m		2620		
	Oxidation		*ASTM D7414	>25	17.6		
	<b>D N I</b> ( <b>D</b> )						

Base Number (BN) mg KOH/g ASTM D2896

ASTM D445

Visc @ 100°C cSt

8.5

14.9



