WEAR CONTAMINATION FLUID CONDITION **NORMAL NORMAL NORMAL**

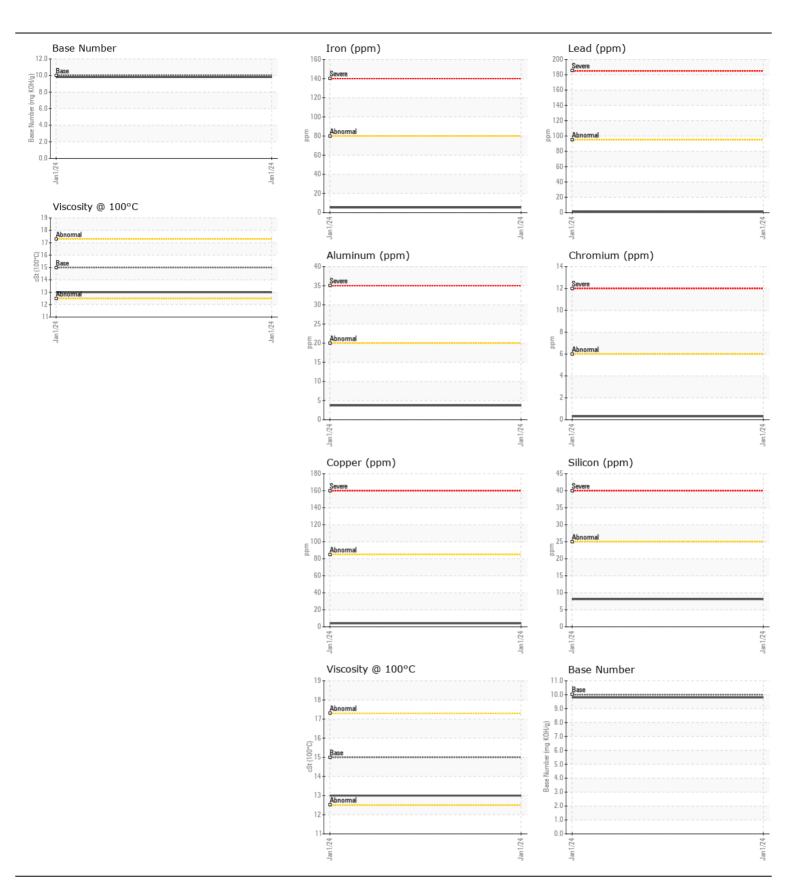
TAYLOR HARVEY [DANIEL/502595]

VOLVO PENTA A1144486

Starboard Diesel Engine

VOLVO III TRA DIESEL ENGINE OIL 15W40 VDS-3 (5 GAL)

		<u>)</u>					
RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Resample at the next service interval to monitor.	Sample Number		Client Info		VPA059352		
	Sample Date		Client Info		01 Jan 2024		
	Machine Age	hrs	Client Info		264		
	Oil Age	hrs	Client Info		0		
	Filter Age	hrs	Client Info		0		
	Oil Changed		Client Info		Changed		
	Filter Changed		Client Info		Changed		
	Sample Status				NORMAL		
WEAR	Iron	ppm	ASTM D5185m	\80	5		
WEATT	Chromium	ppm	ASTM D5185m		<1		
All component wear rates are normal.	Nickel		ASTM D5185m		<1		
	Titanium	ppm	ASTM D5185m		0		
	Silver		ASTM D5185m		0		
	Aluminum	ppm					
		ppm	ASTM D5185m		4		
	Lead	ppm	ASTM D5185m ASTM D5185m		1 4		
	Copper Tin	ppm					
		ppm	ASTM D5185m	>9	<1		
	Vanadium	ppm	ASTM D5185m	NONE	0		
	White Metal	scalar	*Visual	NONE	NONE		
	Yellow Metal	scalar	*Visual	NONE	NONE		
CONTAMINATION	Silicon	ppm	ASTM D5185m	>25	8		
There is no indication of any contamination in the oil.	Potassium	ppm	ASTM D5185m	>20	2		
	Fuel		WC Method	>4.0	<1.0		
	Water		WC Method	>0.1	NEG		
	Glycol		WC Method		NEG		
	Soot %	%	*ASTM D7844		0.1		
	Nitration	Abs/cm	*ASTM D7624	>20	5.0		
	Sulfation	Abs/.1mm	*ASTM D7415	>30	19.1		
	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	scalar	*Visual	>0.1	NEG		
ELUID CONDITION	Codium	nnm	ACTM DE10Em		4		
FLUID CONDITION	Sodium Boron	ppm	ASTM D5185m ASTM D5185m	25	1 42		
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.	Barium	ppm	ASTM D5185m		0		
	Molybdenum	ppm	ASTM D5185m		63		
	-	ppm	ASTM D5185m				
	Manganese Magnesium	ppm	ASTM D5185m		<1 924		
	Calcium	ppm	ASTM D5185m		1055		
	Phosphorus	ppm	ASTM D5185m		1055		
	Zinc	ppm	ASTM D5185m		1219		
	Sulfur	ppm	ASTM D5185m				
	Oxidation	ppm Abo/ 1mm			3149		
	() () () () ()	Abs/.1mm	*ASTM D7414	><0	14.0		
		ma 1/011/-	ACTM DODGO	10	0.0		
	Base Number (BN) Visc @ 100°C	mg KOH/g cSt	ASTM D2896 ASTM D445		9.8 13.0		





Certificate L2367

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

: VPA059352 : 06064961 : 10836343 Test Package : MOB 1 (Additional Tests: TBN)

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Recieved : 18 Jan 2024 Diagnosed : 22 Jan 2024

Diagnostician : Angela Borella

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.

Endor Marine LLC - Coastal Marine - 152124

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Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)