WEAR CONTAMINATION FLUID CONDITION

NORMAL NORMAL NORMAL

THOMAS DEUEL [502853/5250]

**VOLVO PENTA 5102500710** 

**Center Diesel Engine** 

**VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3 (2 GAL)** 

RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Resample at the next service interval to monitor.	Sample Number		Client Info		VPA060423		
	Sample Date		Client Info		09 May 2024		
	Machine Age	hrs	Client Info		2187		
	Oil Age	hrs	Client Info		0		
	Filter Age	hrs	Client Info		0		
	Oil Changed		Client Info		N/A		
	Filter Changed		Client Info		N/A		
	Sample Status				NORMAL		
WEAR	Iron	ppm	ASTM D5185m	>80	30		
	Chromium	ppm	ASTM D5185m		4		
Metal levels are typical for a new component breaking in.	Nickel	ppm	ASTM D5185m		- <1		
	Titanium	ppm	ASTM D5185m		1		
	Silver	ppm	ASTM D5185m		0		
	Aluminum	ppm	ASTM D5185m		7		
	Lead	ppm	ASTM D5185m		<1		
	Copper	ppm	ASTM D5185m		3		
	Tin	ppm	ASTM D5185m		1		
	Vanadium	ppm	ASTM D5185m		<1		
	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	6		
	Fuel		WC Method	>4.0	<1.0		
	Water		WC Method	>0.1	NEG		
	Glycol		WC Method		NEG		
	Soot %	%	*ASTM D7844		0.3		
	Nitration	Abs/cm	*ASTM D7624		9.0		
	Sulfation	Abs/.1mm	*ASTM D7415		20.6		
	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		
	Emulsified Water	scalar	*Visual	>0.1	NEG		
FLUID CONDITION	Sodium	ppm	ASTM D5185m		<1		
	Boron	ppm	ASTM D5185m	2.5	121		
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		1		
	Molybdenum	ppm	ASTM D5185m		7		
	Manganese	ppm	ASTM D5185m		<1		
	Magnesium	ppm	ASTM D5185m		633		
	Calcium	ppm	ASTM D5185m		1638		
	Phosphorus	ppm	ASTM D5185m		788		
	Zinc	ppm	ASTM D5185m		917		
	Sulfur	ppm	ASTM D5185m		3133		
	Oxidation	Abs/.1mm	*ASTM D7414		16.5		
	Base Number (BN)		ASTM D2896		7.4		
	Visc @ 100°C		ASTM D445		14.6		





Certificate L2367

Laboratory Sample No.

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

: VPA060423 Lab Number : 06176820 Unique Number : 11022873

Received **Tested** 

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

: 14 May 2024 : 14 May 2024 - Sean Felton

: 13 May 2024

Endor Marine LLC - Coastal Marine - 152124 4300 11th Ave. NW

SEATTLE, WA US 98107

Contact: WILLOW YANARELLA service@coastalmarineengine.com T: (206)784-3703

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: (206)784-8823