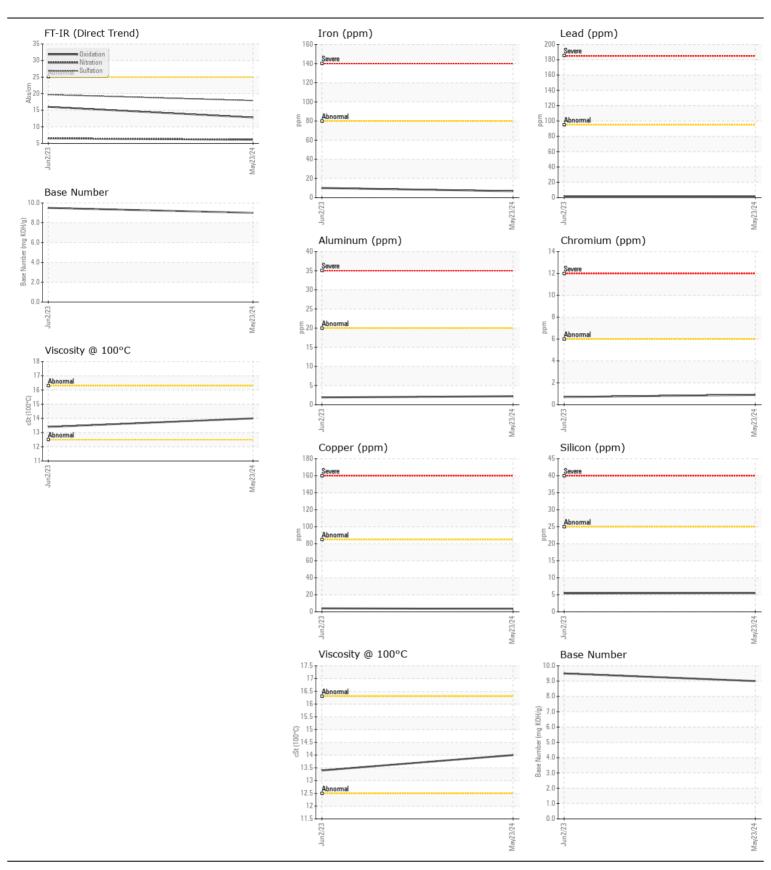
WEAR CONTAMINATION FLUID CONDITION

NORMAL NORMAL

MIKE ROSSMAN [GEOFF] WOLVO PENTA A729580

Port Diesel Engine

ECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Resample at the next service interval to monitor.	Sample Number		Client Info		VPA061932		
	Sample Date		Client Info		23 May 2024	02 Jun 2023	
	Machine Age	hrs	Client Info		892	823	
	Oil Age	hrs	Client Info		10	0	
	Filter Age	hrs	Client Info		0	0	
	Oil Changed		Client Info		Not Changd	Not Changd	
	Filter Changed		Client Info		Not Changd	Not Changd	
	Sample Status				NORMAL	NORMAL	
/EAR	Iron	ppm	ASTM D5185m	>80	7	10	
	Chromium	ppm	ASTM D5185m	>6	<1	<1	
All component wear rates are normal.	Nickel	ppm	ASTM D5185m		1	2	
	Titanium	ppm	ASTM D5185m		<1	0	
	Silver	ppm	ASTM D5185m		1	0	
	Aluminum	ppm	ASTM D5185m		2	2	
	Lead	ppm	ASTM D5185m		1	1	
	Copper	ppm	ASTM D5185m		3	4	
	Tin	ppm	ASTM D5185m		<1	1	
	Vanadium		ASTM D5185m	/3	<1	<1	
	White Metal	ppm scalar	*Visual	NONE	NONE	NONE	
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
ONTAMINATION	Silicon	ppm	ASTM D5185m		6	5	
There is no indication of any contamination in the oil.	Potassium	ppm	ASTM D5185m		3	2	
	Fuel		WC Method		<1.0	<1.0	
	Water		WC Method	>0.1	NEG	NEG	
	Glycol		WC Method		NEG	NEG	
	Soot %	%	*ASTM D7844		0.1	0.2	
	Nitration	Abs/cm	*ASTM D7624	>20	6.1	6.5	
	Sulfation	Abs/.1mm	*ASTM D7415	>30	17.9	19.7	
	Silt	scalar	*Visual	NONE	NONE	NONE	
	Debris	scalar	*Visual	NONE	NONE	NONE	
	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
	Appearance	scalar	*Visual	NORML	NORML	NORML	
	Odor	scalar	*Visual	NORML	NORML	NORML	
	Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	
LUID CONDITION	Sodium	ppm	ASTM D5185m		3	<1	
	Boron	ppm	ASTM D5185m		52	6	
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	0	
	Molybdenum	ppm	ASTM D5185m		29	53	
	Manganese	ppm	ASTM D5185m		<1	<1	
	Magnesium	ppm	ASTM D5185m		818	986	
	Calcium	ppm	ASTM D5185m		1153	1097	
	Phosphorus	ppm	ASTM D5185m		844	1089	
	Zinc	ppm	ASTM D5185m		984	1345	
	Sulfur	ppm	ASTM D5185m		3117	4175	
	Oxidation		*ASTM D7414	> 2F			
	Oxidation	Abs/.1mm		>20	12.8	16.0	
	Base Number (BN)	ma 1/011/-	ACTM DOOGO		9.0	9.5	





Certificate L2367

Laboratory Sample No.

Lab Number : 06191955 Unique Number : 11048707

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : VPA061932

Received **Tested** Diagnosed

: 28 May 2024 Test Package : MOB 1 (Additional Tests: TBN)

: 29 May 2024 : 30 May 2024 - Don Baldridge

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

US 98107 Contact: WILLOW YANARELLA

To discuss this sample report, contact Customer Service at 1-800-237-1369. service@coastalmarineengine.com * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: (206)784-3703 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F: (206)784-8823