WEAR CONTAMINATION FLUID CONDITION

NORMAL NORMAL

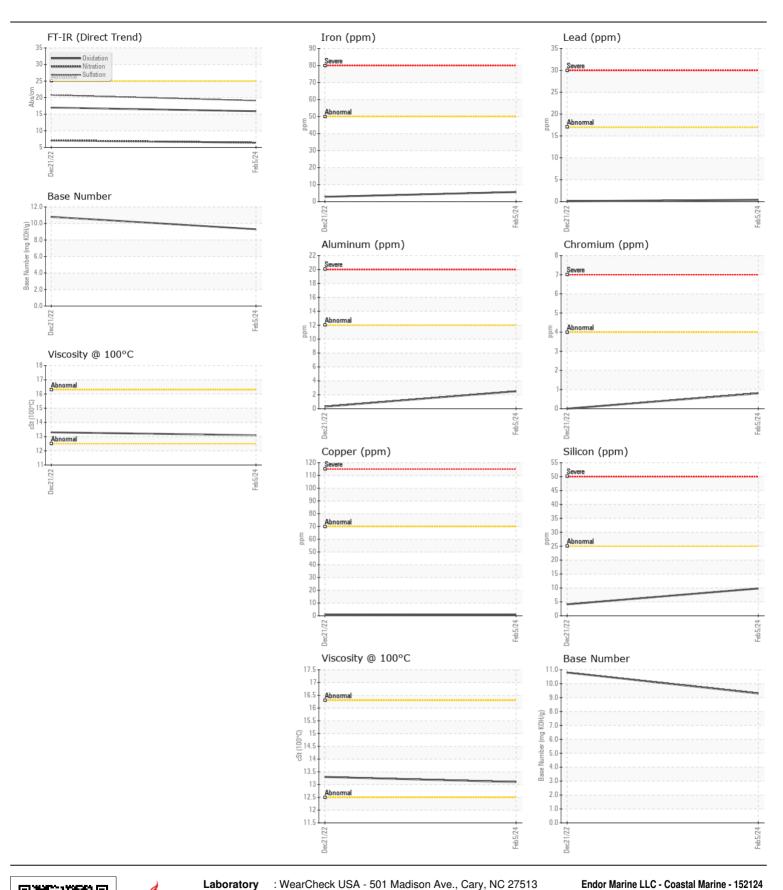
DAVID BOVEE [SAM]

**KOHLER 2091237** 

Genset

**VOLVO PENTA SAE 15W40 (--- GAL)** 

RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
RECOMMENDATION	Sample Number	UUIVI	Client Info	LIIIII/AUN	VPA055092	VPA044857	
Resample at the next service interval to monitor.	Sample Date		Client Info		05 Feb 2024	21 Dec 2022	
	Machine Age	hrs	Client Info		1346	1248	
	Oil Age	hrs	Client Info		0	0	
	Filter Age	hrs	Client Info		0	0	
	Oil Changed		Client Info		Changed	N/A	
	Filter Changed		Client Info		Changed	N/A	
	Sample Status				NORMAL	NORMAL	
WEAR	Iron	ppm	ASTM D5185m	>50	6	3	
All component wear rates are normal.	Chromium	ppm	ASTM D5185m	>4	<1	0	
	Nickel	ppm	ASTM D5185m	>2	<1	0	
	Titanium	ppm	ASTM D5185m		<1	0	
	Silver	ppm	ASTM D5185m	>5	0	0	
	Aluminum	ppm	ASTM D5185m	>12	2	<1	
	Lead	ppm	ASTM D5185m	>17	<1	<1	
	Copper	ppm	ASTM D5185m	>70	<1	<1	
	Tin	ppm	ASTM D5185m	>15	<1	<1	
	Vanadium	ppm	ASTM D5185m		0	0	
	White Metal	scalar	*Visual	NONE	NONE	NONE	
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
CONTAMINATION	Silicon	ppm	ASTM D5185m	>25	10	4	
There is no indication of any contamination in the oil.	Potassium	ppm	ASTM D5185m	>20	2	2	
	Fuel		WC Method	>4.0	<1.0	<1.0	
	Water		WC Method	>0.1	NEG	NEG	
	Glycol		WC Method		NEG	NEG	
	Soot %	%	*ASTM D7844		0.1	0.1	
	Nitration	Abs/cm	*ASTM D7624		6.4	7.1	
	Sulfation	Abs/.1mm	*ASTM D7415		19.1	20.8	
	Silt	scalar	*Visual	NONE	NONE	NONE	
	Debris	scalar	*Visual	NONE	NONE	NONE	
	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
	Appearance Odor	scalar scalar	*Visual *Visual	NORML NORML	NORML NORML	NORML NORML	
	Emulsified Water		*Visual	>0.1	NEG	NEG	
THE CONDITION							
LUID CONDITION	Sodium	ppm	ASTM D5185m		2	0	
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.	Boron	ppm	ASTM D5185m		11	9	
	Barium	ppm	ASTM D5185m ASTM D5185m		0 89	0 57	
	Molybdenum Manganese	ppm	ASTM D5185m		δ9 <1	0	
	Magnesium	ppm	ASTM D5185m		1505	883	
	Calcium	ppm	ASTM D5185m		1551	1182	
	Phosphorus	ppm	ASTM D5185m		1534	1041	
	Zinc	ppm	ASTM D5185m		1915	1239	
	Sulfur	ppm	ASTM D5185m		4978	3851	
	Oxidation	Abs/.1mm	*ASTM D7414	>25	15.9	17.0	
	Base Number (BN)		ASTM D2896		9.3	10.8	
		99					





Laboratory Sample No.

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Lab Number : 06085187

: VPA055092

Received **Tested** Unique Number : 10872632

: 12 Feb 2024 Diagnosed : 12 Feb 2024 - Don Baldridge

: 09 Feb 2024

4300 11th Ave. NW SEATTLE, WA US 98107 Contact: WILLOW YANARELLA

Test Package : MOB 1 ( Additional Tests: TBN ) Certificate L2367 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