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## PATRICK SEARS [P SEARS] VOLVO PENTA 513007511173 Com nonen

## **Center Diesel Engine**

VOLVO PENTA SAE 15W40 (45 QTS)

RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
The oil change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.	Sample Number		Client Info		VPA061715		
	Sample Date		Client Info		02 Jul 2024		
	Machine Age	hrs	Client Info		1200		
	Oil Age	hrs	Client Info		200		
	Filter Age	hrs	Client Info		0		
	Oil Changed		Client Info		Changed		
	Filter Changed		Client Info		N/A		
	Sample Status				ATTENTION		
WEAR	Iron	ppm	ASTM D5185m		28		
All component wear rates are normal.	Chromium	ppm	ASTM D5185m		0		
	Nickel	ppm	ASTM D5185m		0		
	Titanium	ppm	ASTM D5185m		<1		
	Silver	ppm	ASTM D5185m		0		
	Aluminum	ppm	ASTM D5185m		7		
	Lead	ppm	ASTM D5185m		3		
	Copper	ppm	ASTM D5185m		44		
	Tin	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	7		
Tests indicate that there is no fuel present in the oil. There is no indication of any contamination in the oil.	Potassium	ppm	ASTM D5185m		2		
	Fuel	%	ASTM D310311		0.2		
	Water	70	WC Method		NEG		
	Glycol		WC Method	20.1	NEG		
	Soot %	%	*ASTM D7844		0		
	Nitration	Abs/cm	*ASTM D7624	>20	4.6		
	Sulfation	Abs/.1mm	*ASTM D7415		17.1		
	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		
FLUID CONDITION	Sodium	ppm	ASTM D5185m		18		
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.	Boron	ppm	ASTM D5185m		40		
	Barium	ppm	ASTM D5185m		0		
	Molybdenum	ppm	ASTM D5185m		60		
	Manganese	ppm	ASTM D5185m		<1		
	Magnesium	ppm	ASTM D5185m		918		
	Calcium	ppm	ASTM D5185m		1204		
	Phosphorus	ppm	ASTM D5185m		1197		
	Zinc	ppm	ASTM D5185m		1315		
	Sulfur	ppm	ASTM D5185m		4338		
	<b>O I I I</b>		ALOTH DEVICE	~ -		4	

Oxidation

Visc @ 100°C cSt

12.5

10.1

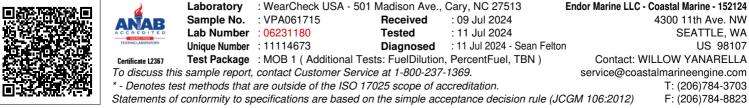
10.5

Abs/.1mm \*ASTM D7414 >25

ASTM D445

Base Number (BN) mg KOH/g ASTM D2896





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