

WEAR NORMAL CONTAMINATION SEVERE FLUID CONDITION ABNORMAL

TERRY JENSEN [EVAN/502662] Machine Id VOLVO PENTA 4012149801 Center Gasoline Engine

VOLVO 10W40 (5 QTS)

RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
	Sample Number		Client Info		VPA059637		
We advise that you check the fuel injection system. We recommend an early resample to monitor this condition.	Sample Date		Client Info		23 Apr 2024		
	Machine Age	hrs	Client Info		2908		
	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				SEVERE		
WEAR	Iron	ppm	ASTM D5185m	>150	57		
	Chromium	ppm	ASTM D5185m	>20	1		
All component wear rates are normal.	Nickel	ppm	ASTM D5185m	>5	0		
	Titanium	ppm	ASTM D5185m		0		
	Silver	ppm	ASTM D5185m	>2	0		
	Aluminum	ppm	ASTM D5185m	>40	2		
	Lead	ppm	ASTM D5185m		4		
	Copper	ppm	ASTM D5185m		7		
	Tin	ppm	ASTM D5185m		0		
	Vanadium	ppm	ASTM D5185m		0		
	White Metal	scalar	*Visual	NONE	NONE		
	Yellow Metal	scalar	*Visual	NONE	NONE		
CONTAMINATION	Silicon	ppm	ASTM D5185m	>30	4 99		
Elemental level of silicon (Si) above normal indicating ingress of seal material. There is a moderate amount of fuel present in the oil.	Potassium	ppm	ASTM D5185m	>20	4		
	Fuel	%	ASTM D3524	>4.0	6 .5		
	Water		WC Method	>0.1	NEG		
	Glycol		WC Method		NEG		
	Soot %	%	*ASTM D7844		0.4		
	Nitration	Abs/cm	*ASTM D7624	>20	11.8		
	Sulfation	Abs/.1mm	*ASTM D7415	>30	22.9		
	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		44		
	Boron	ppm	ASTM D5185m		101		
Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.	Barium	ppm	ASTM D5185m		<1		
	Molybdenum	ppm	ASTM D5185m		23		
	Manganese	ppm	ASTM D5185m		2		
	Magnesium	ppm	ASTM D5185m		624		
	Calcium	ppm	ASTM D5185m		1373		
	Phosphorus	ppm	ASTM D5185m		669		
	Zinc	ppm	ASTM D5185m		886		
	Culture	P P 111	ACTM DE105m		000		

Sulfur

Oxidation

Visc @ 100°C cSt

ppm ASTM D5185m

Base Number (BN) mg KOH/g ASTM D2896

Abs/.1mm *ASTM D7414 >25

ASTM D445

3312

15.6 10.8

9.6

