



PHIL HOLT 502122 VOLVO PENTA A707067 - CENTER DIESEL ENGINE

Sample No: VPA050579

Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3

Base Number (BN) mg KOH/g					
Sample Date	SAMPLE INFORMAT	TION			
Sample Date	Sample Number		VPA050570	\/D\\0/13311	
Machine Hours					
Oil Changed Changed N/A Sample Status NORMAL NORMAL DIL CONDITION Visc @ 100°C CSt \$\text{\$13.3}\$ \$\text{\$13.5}\$ Base Number (BN) mg KOH/g 9.9 \$\text{\$11.4}\$ CONTAMINATION Soot % % 61 62 CONTAMINATION Soot % % \$0.2 \$0.2 CONTAMINATION Soot % % \$0.2 \$0.2 CONTAMINATION Soot % % \$0.2 \$0.2 \$ </td <td>•</td> <td></td> <td></td> <td></td> <td></td>	•				
Changed Changed N/A Sample Status NORMAL NORMAL NORMAL OIL CONDITION Visc @ 100°C CSt					
NORMAL N					
Dil CONDITION DIL CONDITIO	_				
Visc @ 100°C			NORWAL	NORMAL	
Base Number (BN) mg KOH/g	OIL CONDITION				
CONTAMINATION Soot % 0.2	Visc @ 100°C	cSt	13.3	■13.5	
CONTAMINATION Soot %	Base Number (BN)	mg KOH/g	■9.9	11.4	
Soot %	Oxidation (PA)	%	61	62	
Nitration (PA)	CONTAMINATION				
Nitration (PA)	Soot %	%	0.2	□02	
Sulfation (PA)					
Silicon Silicon Silicon Silicon Sodium Sodium	, ,				
Fuel % <1.0 <1.0 Silicon ppm 3 3 3 Sodium ppm 2 0 0 Sodium ppm 0 0 0 0 Sodium ppm 0 0 0 0 Sodium ppm 13 11 Sodium ppm 12 6 Sodium ppm 12 6 Sodium ppm 12 6 Sodium ppm 14 1 1 1 Sodium ppm 15 1 1 1 Sodium ppm 16 1 1 1 Sodium ppm 16 1 1 1 Sodium ppm 17 1 1 1 1 1 Sodium ppm 18 1175 11058 Sodium ppm 18 1175 11058 Sodium ppm 18 1175 11058 Sodium ppm 18 118 11219					
Solition					
Sodium ppm 2 0 0 Potassium ppm 0 0 0					
WEAR METALS Iron ppm 13 11 Copper ppm 12 6 Lead ppm <1					
WEAR METALS Iron ppm 13 11 Copper ppm 12 6 Lead ppm <1			_		
Tron	Potassium	ppm	<u> </u>	U	
Copper ppm 12 6 Lead ppm <1	WEAR METALS				
Lead	Iron	ppm	13	1 1	
Calcium Calc	Copper		12	6	
Tin ppm <1	Lead		■ <1	1	
Aluminum ppm	Tin		_ ■<1		
Chromium ppm <1	Aluminum				
Molybdenum ppm 63 58 Nickel ppm 1 1 Titanium ppm <1					
Nickel ppm 1 1 Titanium ppm <1					
Titanium ppm	-				
Silver ppm 0 0 0 Manganese ppm <-1 0 Vanadium ppm <-1 0 0 ADDITIVES Calcium ppm 1175 1058 Magnesium ppm 1090 951 Zinc ppm 1313 1219 Phosphorus ppm 1066 1028 Barium ppm 0 0 0				_	
Manganese ppm <1			_		
Vanadium ppm <1 0 ADDITIVES Calcium ppm 1175 1058 Magnesium ppm 1090 951 Zinc ppm 1313 1219 Phosphorus ppm 1066 1028 Barium ppm 0 0					
ADDITIVES Calcium ppm 1175 1058 Magnesium ppm 1090 1951 Zinc ppm 1313 1219 Phosphorus ppm 1066 1028 Barium ppm 0 10 10			_		
Calcium ppm 1175 1058 Magnesium ppm 1090 951 Zinc ppm 1313 1219 Phosphorus ppm 1066 1028 Barium ppm 0 0		ррпп	~1	0	
Magnesium ppm 1090 951 Zinc ppm 1313 1219 Phosphorus ppm 1066 1028 Barium ppm 0 0					
Zinc ppm 1313 1219 Phosphorus ppm 1066 1028 Barium ppm 0 0	Calcium	ppm			
Phosphorus ppm 1066 1028 Barium ppm 0 0	Magnesium	ppm	1090	951	
Phosphorus ppm 1066 1028 Barium ppm 0 0	Zinc	ppm	1313	1219	
Barium ppm ■0 ■0	Phosphorus		1066	1 028	
11	Barium				
	Boron				

Endor Marine LLC - Coastal Marine - 152124 4300 11th Ave. NW SEATTLE, WA US 98107 Contact: WILLOW YANARELLA

service@coastalmarineengine.com

T: (206)784-3703 F: (206)784-8823

Diagnosis

Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Depot:VP794951Unique No:10563362Signed:Jonathan HesterReport Date:20 Jul 2023

OIL ANALYSIS REPORT



