OIL ANALYSIS REPORT

70112037590 - STARBOARD DIESEL ENGINE

Sample No:	VPA056365		
Oil Type:	VOLVO		

SAMPLE INFORMATION

Sample Number		VPA056365	 	
Sample Date		27 Nov 2023	 	
Machine Hours		135	 	
Oil Hours		0	 	
Oil Changed		Not Changd	 	
Sample Status		ATTENTION	 	
OIL CONDITION				
Visc @ 100°C	cSt	10.9	 	
Base Number (BN)	mg KOH/g	7.5	 	
Oxidation (PA)	%	61	 	
CONTRAMINATION				
CONTAMINATION				
Water	%	NEG	 	
Soot %	%	0.3	 	
Nitration (PA)	%	68	 	
Sulfation (PA)	%	52	 	
Glycol	%	NEG	 	
Fuel	%	<1.0	 	
Silicon	ppm	4 5	 	
Sodium	ppm	2	 	
Potassium	ppm	5	 	
WEAR METALS				
Iron	ppm	1 4	 	
Copper	ppm	1 31	 	
Lead	ppm	2	 	
Tin	ppm	2	 	
Aluminum	ppm	2	 	
Chromium	ppm	2	 	
Molybdenum	ppm	75	 	
Nickel	ppm	∎1	 	
Titanium	ppm	 <1	 	
Silver	ppm	□ <1	 	
Manganese	ppm	2	 	
Vanadium	ppm	0	 	
ADDITIVES				
Calcium	ppm	2038	 	
Magnesium	ppm	109	 	
Zinc	ppm	1053	 	
Phosphorus	ppm	889	 	
Barium	ppm	2	 	
Boron	ppm	62	 	

VOLVO PENTA

ADVANCED YACHT SUPPORT

30197 MATTHEWSTOWN RD EASTON, MD US 21601 Contact: CHUCK EMMONS chuck@advancedyachtsupport.net T: E:

Diagnosis

No corrective action is recommended at this time. Resample at the next service interval to monitor.In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). Metal levels are typical for a new component breaking in. Elemental level of silicon (Si) above normal indicating ingress of seal (break-in) material. The BN result indicates that there is suitable alkalinity remaining in the oil. Assuming 30W break-in oil, the condition of the oil is acceptable for the time in service.

 Depot:
 VPADVEAS

 Unique No:
 10764040

 Signed:
 Doug Bogart

 Report Date:
 29 Nov 2023

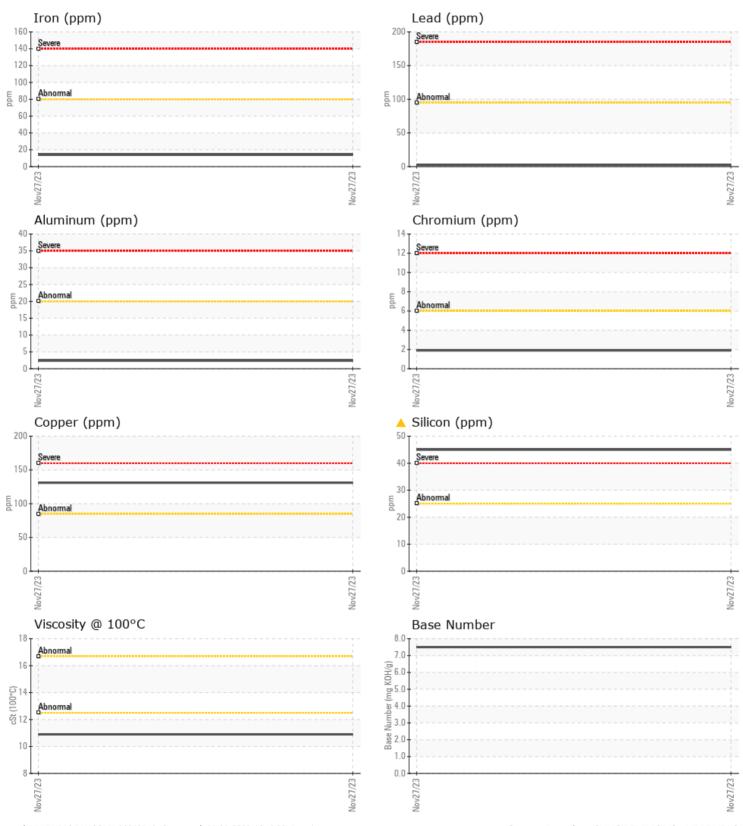
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Contact/Location: CHUCK EMMONS - VPADVEAS

OIL ANALYSIS REPORT



GRAPHS



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Contact/Location: CHUCK EMMONS - VPADVEAS