

OIL ANALYSIS REPORT



MCGUIRE ANDIAMO ANDIAMO VOLVO D3-C-AQ-1 2003018715 - STARBOARD DIESEL ENGINE

Sample No: VPA022302
Oil Type: SHELL ROTELLA T 15W40

SAMPLE INFORMATION

Sample Number	VPA022302	VPA018308	---	---
Sample Date	05 Jul 2018	19 Jun 2018	---	---
Machine Hours	744	718	---	---
Oil Hours	728	27	---	---
Oil Changed	Changed	Not Changd	---	---
Sample Status	NORMAL	ATTENTION	---	---

McMichael Yacht Yard No1 Inc
 700 Rushmore Ave
 MAMARONECK, NY
 US 10543
 Contact: Patti Hornidge
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 T:
 F:

OIL CONDITION

Visc @ 100°C	cSt	█ 14.75	█ 14.59	---	---
Oxidation (PA)	%	█ 56	█ 44	---	---

CONTAMINATION

Water	%	NEG	NEG	---	---
Soot %	%	█ 0	█ 0	---	---
Nitration (PA)	%	█ 42	█ 42	---	---
Sulfation (PA)	%	█ 50	█ 44	---	---
Glycol	%	NEG	NEG	---	---
Fuel	%	<1.0	<1.0	---	---
Silicon	ppm	█ 7	█ 7	---	---
Sodium	ppm	█ 8	█ 27	---	---
Potassium	ppm	█ 11	█ 8	---	---

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 condition of the oil is acceptable for the time in service.

WEAR METALS

Iron	ppm	█ 30	█ 54	---	---
Copper	ppm	█ 9	█ 20	---	---
Lead	ppm	█ 0	█ <1	---	---
Tin	ppm	█ <1	█ <1	---	---
Aluminum	ppm	█ 7	● 136	---	---
Chromium	ppm	█ 2	█ 6	---	---
Molybdenum	ppm	█ 2	█ 9	---	---
Nickel	ppm	█ 1	█ 1	---	---
Titanium	ppm	<1	0	---	---
Silver	ppm	█ 0	█ 0	---	---
Manganese	ppm	█ <1	█ 1	---	---
Vanadium	ppm	0	0	---	---

ADDITIVES

Calcium	ppm	█ 2170	█ 1895	---	---
Magnesium	ppm	55	█ 130	---	---
Zinc	ppm	█ 1114	█ 1005	---	---
Phosphorus	ppm	█ 1030	█ 974	---	---
Barium	ppm	█ 0	█ 0	---	---
Boron	ppm	█ 164	█ 137	---	---

Depot: VP153367
Unique No: 8261050
Signed: Don Baldrige
Report Date: 11 Jul 2018

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**VOLVO
PENTA**

GRAPHS

