

OIL ANALYSIS REPORT



HARRY VERBY VOLVO PENTA D6-370D-F A832966 - STARBOARD DIESEL ENGINE

Sample No: VPA036707
Oil Type: SHELL ROTELLA T 15W40

SAMPLE INFORMATION

Sample Number	VPA036707	VPA043532	VPA033095	VPA022853
Sample Date	15 Dec 2023	22 Nov 2022	24 Nov 2021	03 Nov 2020
Machine Hours	369	324	270	220
Oil Hours	369	324	270	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

Larry's Lighthouse Marina
 1250
 AQUEBOGUE, NY
 US 11931
 Contact: MAX FUHLBRUGGE
 info@lighthousemarina.com
 T: x
 F: x

OIL CONDITION

Visc @ 100°C	cSt	14.4	14.5	14.9	14.7
Base Number (BN)	mg KOH/g	8.7	9.4	9	---
Oxidation (PA)	%	66	71	69	71

CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.1	0.1	0.1	0.2
Nitration (PA)	%	51	57	53	58
Sulfation (PA)	%	56	61	58	60
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	4	3	4	4
Sodium	ppm	2	2	<1	3
Potassium	ppm	8	7	7	7

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 acceptable for the time in service.

WEAR METALS

Iron	ppm	9	8	10	11
Copper	ppm	2	3	2	4
Lead	ppm	<1	1	3	1
Tin	ppm	<1	<1	<1	<1
Aluminum	ppm	2	2	1	0
Chromium	ppm	<1	<1	<1	<1
Molybdenum	ppm	<1	1	2	2
Nickel	ppm	0	0	<1	<1
Titanium	ppm	0	0	0	<1
Silver	ppm	0	0	0	0
Manganese	ppm	0	<1	<1	<1
Vanadium	ppm	<1	<1	0	0

ADDITIVES

Calcium	ppm	2065	2174	2187	2064
Magnesium	ppm	20	16	20	28
Zinc	ppm	1206	1147	1181	1104
Phosphorus	ppm	1002	959	982	961
Barium	ppm	0	0	0	0
Boron	ppm	182	183	157	202

Depot: VP610438
Unique No: 10843050
Signed: Angela Borella
Report Date: 23 Jan 2024

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VOLVO PENTA

GRAPHS

