

OIL ANALYSIS REPORT



ENCORE V (S/N 3940023261) - STARBOARD MAIN ENGINE

Sample No: VPA042623

Oil Type: SHELL ROTELLA T 15W40

SAMPLE INFORMATION

Sample Number	VPA042623	VPA042627	VPA039827	VPA035190
Sample Date	01 Nov 2023	20 Feb 2023	20 Jul 2022	16 Feb 2022
Machine Hours	5712	0	3916	3466
Oil Hours	200	200	200	200
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

BAY STATE CRUISE COMPANY
 200 SEAPORT BLVD, SUITE 50 LOWER LEVEL
 BOSTON, MA
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OIL CONDITION

Visc @ 100°C	cSt	14.5	13.5	14.8	14.1
Base Number (BN)	mg KOH/g	9.3	9.2	10.4	9.1
Oxidation (PA)	%	55	49	58	65

CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.2	0.1	0.1	0.1
Nitration (PA)	%	45	43	49	48
Sulfation (PA)	%	50	47	52	57
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	4	4	3	3
Sodium	ppm	0	3	2	<1
Potassium	ppm	2	<1	2	8

WEAR METALS

Iron	ppm	2	4	4	2
Copper	ppm	2	2	2	<1
Lead	ppm	<1	<1	<1	0
Tin	ppm	<1	<1	<1	0
Aluminum	ppm	1	<1	2	<1
Chromium	ppm	1	<1	<1	0
Molybdenum	ppm	58	59	54	2
Nickel	ppm	2	2	2	0
Titanium	ppm	<1	0	0	0
Silver	ppm	<1	3	0	0
Manganese	ppm	<1	<1	<1	0
Vanadium	ppm	<1	<1	<1	0

ADDITIVES

Calcium	ppm	1058	1051	1016	2256
Magnesium	ppm	963	862	847	22
Zinc	ppm	1197	1137	1146	1261
Phosphorus	ppm	987	944	925	1022
Barium	ppm	0	0	0	0
Boron	ppm	<1	40	9	203

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: VPBAYBOS
Unique No: 10885081
Signed: Jonathan Hester
Report Date: 20 Feb 2024

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VOLVO PENTA

GRAPHS

