

OIL ANALYSIS REPORT



VOLVO PENTA 1013543198 - PORT DIESEL ENGINE

Sample No: VPA020825

Oil Type: CHEVRON DELO 400 LE 15W40

SAMPLE INFORMATION

Sample Number	VPA020825	VPA020711	VPA020717	VPA020313
Sample Date	31 Jan 2024	13 Nov 2023	22 Aug 2023	17 May 2023
Machine Hours	6956	6479	6000	5492
Oil Hours	477	443	500	482
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

CHARLESTON NAVIGATION
 6 CONCORD STREET
 CHARLESTON, SC
 US 29401
 Contact: David Matash
 dmatash@charlestonpilots.com
 T: (843)296-8344
 F: (843)577-0632

OIL CONDITION

Visc @ 100°C	cSt	13.1	13.1	13.4	13.2
Base Number (BN)	mg KOH/g	6.4	7.3	5.9	6.9
Oxidation (PA)	%	67	67	67	66

CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.5	0.6	0.8	0.5
Nitration (PA)	%	66	69	73	70
Sulfation (PA)	%	64	64	65	65
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	6	5	6	5
Sodium	ppm	0	0	1	0
Potassium	ppm	<1	0	1	2

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.

WEAR METALS

Iron	ppm	17	12	23	16
Copper	ppm	2	<1	1	1
Lead	ppm	1	1	2	1
Tin	ppm	<1	<1	<1	<1
Aluminum	ppm	2	3	4	3
Chromium	ppm	1	<1	<1	<1
Molybdenum	ppm	97	98	87	107
Nickel	ppm	1	<1	0	1
Titanium	ppm	<1	0	0	0
Silver	ppm	0	0	0	0
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	0	0	0	0

ADDITIVES

Calcium	ppm	1295	1423	1408	1442
Magnesium	ppm	436	537	440	479
Zinc	ppm	1268	1115	1286	1072
Phosphorus	ppm	904	911	1022	864
Barium	ppm	0	0	0	0
Boron	ppm	292	197	143	211

Depot: VPCHACHA
Unique No: 10860863
Signed: Don Baldrige
Report Date: 06 Feb 2024

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GRAPHS

