

OIL ANALYSIS REPORT



VOLVO PENTA A394746 - PORT DIESEL ENGINE

Sample No: VPA048691

Oil Type: SHELL ROTELLA T 15W40

SAMPLE INFORMATION

Sample Number	VPA048691	VPA048693	VPA048695	VPA042460
Sample Date	11 Apr 2024	22 Jun 2023	06 Mar 2023	20 Sep 2022
Machine Hours	776	693	469	287
Oil Hours	83	224	182	10
Oil Changed	Changed	Changed	Changed	N/A
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

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OIL CONDITION

Visc @ 100°C	cSt	14.1	13.1	13.6	13.9
Base Number (BN)	mg KOH/g	8.6	10.0	10.1	11.2
Oxidation (PA)	%	64	61	62	62

CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.1	0.2	0.2	0.1
Nitration (PA)	%	50	55	55	48
Sulfation (PA)	%	55	55	55	56
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	5	9	8	6
Sodium	ppm	1	4	4	3
Potassium	ppm	3	3	3	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 acceptable for the time in service.

WEAR METALS

Iron	ppm	6	18	10	4
Copper	ppm	2	5	3	1
Lead	ppm	<1	2	<1	0
Tin	ppm	0	<1	<1	<1
Aluminum	ppm	2	5	7	5
Chromium	ppm	<1	3	2	<1
Molybdenum	ppm	14	59	38	56
Nickel	ppm	<1	4	1	0
Titanium	ppm	<1	<1	<1	0
Silver	ppm	0	0	0	0
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	<1	0	0	0

ADDITIVES

Calcium	ppm	2306	1149	840	1162
Magnesium	ppm	308	954	614	802
Zinc	ppm	1525	1258	832	1111
Phosphorus	ppm	1216	1008	664	928
Barium	ppm	0	<1	<1	0
Boron	ppm	144	7	17	24

Depot: VPMARGRE
Unique No: 11101481
Signed: Don Baldrige
Report Date: 01 Jul 2024

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**VOLVO
PENTA**

GRAPHS

