

OIL ANALYSIS REPORT



DEAN FALCONER 7720272 VOLVO PENTA 1012351052 - STARBOARD DIESEL ENGINE

Sample No: VPA062988

Oil Type: VOLVO VDS-4.5 Premium Motor Oil 15W40

SAMPLE INFORMATION

Sample Number	VPA062988	VPA046318	VPA045393	VPA032370
Sample Date	04 Jun 2024	09 Mar 2023	02 Aug 2022	24 Feb 2021
Machine Hours	5382	5241	5188	5040
Oil Hours	140	0	0	0
Oil Changed	Changed	Changed	Not Changd	Not Changd
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

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OIL CONDITION

Visc @ 100°C	cSt	13.2	13.0	13.8	15.5
Base Number (BN)	mg KOH/g	9.3	9.6	10.7	---
Oxidation (PA)	%	65	68	73	63

CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.4	0.8	0.7	0.2
Nitration (PA)	%	66	76	76	79
Sulfation (PA)	%	57	60	63	56
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	2	4	3	5
Sodium	ppm	4	3	3	5
Potassium	ppm	5	2	3	0

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	1	6	6	5
Copper	ppm	3	4	4	8
Lead	ppm	<1	<1	1	0
Tin	ppm	0	<1	1	0
Aluminum	ppm	<1	<1	<1	<1
Chromium	ppm	0	<1	<1	<1
Molybdenum	ppm	55	53	56	8
Nickel	ppm	<1	0	<1	1
Titanium	ppm	0	<1	<1	1
Silver	ppm	0	0	0	0
Manganese	ppm	1	1	<1	<1
Vanadium	ppm	0	<1	<1	<1

ADDITIVES

Calcium	ppm	1159	1325	1050	1338
Magnesium	ppm	936	845	859	764
Zinc	ppm	1227	1250	1169	864
Phosphorus	ppm	1028	977	949	721
Barium	ppm	0	0	<1	0
Boron	ppm	10	42	21	71

Depot: VP99031103
Unique No: 11076886
Signed: Don Baldrige
Report Date: 17 Jun 2024

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**VOLVO
PENTA**

GRAPHS

