

OIL ANALYSIS REPORT



NADINE URUIOLI IAN TOLLER VOLVO DI-20 5102346179 - PORT DIESEL ENGINE

Sample No: VPA052310
Oil Type: VOLVO PENTA SAE 15W40

SAMPLE INFORMATION

Sample Number	VPA052310	VPA032510	VPA027161	VPA023134
Sample Date	11 Mar 2024	21 Sep 2020	11 Sep 2019	26 Sep 2018
Machine Hours	986	858	782	722
Oil Hours	986	0	60	62
Oil Changed	Changed	Not Changd	Not Changd	Not Changd
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

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 SAN RAFAEL, CA
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OIL CONDITION

Visc @ 100°C	cSt	12.5	12.7	12.8	13.32
Base Number (BN)	mg KOH/g	9.6	---	---	---
Oxidation (PA)	%	58	58	54	55

CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.1	0	0.1	0.1
Nitration (PA)	%	40	41	41	40
Sulfation (PA)	%	51	53	50	49
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	3	4	3	4
Sodium	ppm	0	2	3	3
Potassium	ppm	2	0	0	1

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	3	4	6	5
Copper	ppm	2	2	2	2
Lead	ppm	<1	1	0	<1
Tin	ppm	<1	0	0	0
Aluminum	ppm	2	<1	1	<1
Chromium	ppm	<1	<1	<1	<1
Molybdenum	ppm	61	58	50	59
Nickel	ppm	0	<1	0	<1
Titanium	ppm	<1	<1	<1	0
Silver	ppm	0	1	0	0
Manganese	ppm	<1	<1	<1	1
Vanadium	ppm	<1	0	0	0

ADDITIVES

Calcium	ppm	1087	986	898	1069
Magnesium	ppm	913	940	878	996
Zinc	ppm	1174	1131	1004	1160
Phosphorus	ppm	1020	1076	889	875
Barium	ppm	0	0	0	0
Boron	ppm	2	6	4	8

Depot: VP152741
Unique No: 10928136
Signed: Don Baldrige
Report Date: 18 Mar 2024

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VOLVO PENTA

GRAPHS

