

OIL ANALYSIS REPORT



DAVID MEINERT 7717976 VOLVO PENTA A288877 - STARBOARD DIESEL ENGINE

Sample No: VPA055316
Oil Type: VOLVO PENTA SAE 15W40

SAMPLE INFORMATION

Sample Number	VPA055316	VPA042164	VPA032025	VPA025659
Sample Date	07 Dec 2023	08 Sep 2022	19 May 2021	23 Mar 2020
Machine Hours	857	705	605	507
Oil Hours	0	100	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	ABNORMAL	ABNORMAL	NORMAL	NORMAL

Pacific Power Group - VP981534
 7215 S 228th St
 Kent, WA
 US 98032
 Contact: PAT RYAN
 pryan@pacificpowergroup.com
 T: (253)520-5163
 F:

OIL CONDITION

Visc @ 100°C	cSt	13.2	13.4	13.3	13.2
Base Number (BN)	mg KOH/g	9.9	11.3	---	---
Oxidation (PA)	%	58	59	59	53

CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.3	0.1	0.1	0.3
Nitration (PA)	%	53	49	47	44
Sulfation (PA)	%	54	55	54	51
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	6	5	4	3
Sodium	ppm	<1	0	4	3
Potassium	ppm	<1	0	<1	0

WEAR METALS

Iron	ppm	22	19	16	25
Copper	ppm	14	9	11	15
Lead	ppm	7	5	8	17
Tin	ppm	0	<1	<1	<1
Aluminum	ppm	▲ 31	▲ 73	58	38
Chromium	ppm	2	3	3	2
Molybdenum	ppm	58	61	61	58
Nickel	ppm	2	<1	2	2
Titanium	ppm	0	0	<1	0
Silver	ppm	0	<1	<1	0
Manganese	ppm	0	<1	<1	<1
Vanadium	ppm	<1	0	0	0

ADDITIVES

Calcium	ppm	1107	1004	1063	971
Magnesium	ppm	931	891	981	865
Zinc	ppm	1310	1232	1170	1038
Phosphorus	ppm	1057	1012	1049	950
Barium	ppm	0	<1	0	0
Boron	ppm	9	0	3	4

Diagnosis

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor. The aluminum level has decreased, but is still abnormal. All other component wear rates are normal. There is no indication of any contamination in the oil. The condition of the oil is acceptable for the time in service.

Depot: VP99031103
Unique No: 10789525
Signed: Sean Felton
Report Date: 18 Dec 2023

OIL ANALYSIS REPORT

**VOLVO
PENTA**

GRAPHS

