

OIL ANALYSIS REPORT

**VOLVO
PENTA**

A725119 - CENTER DIESEL ENGINE

Sample No: VPA022754

Oil Type: CHEVRON DELO 400 SDE SAE 15W40

SAMPLE INFORMATION

Sample Number	VPA022754	VPA016713	VPA016722	VPA016714
Sample Date	13 Aug 2020	29 Aug 2019	08 Dec 2018	27 May 2018
Machine Hours	404	305	199	104
Oil Hours	99	106	95	46
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

WERNER LEHNER

1305 MARINERS PL

ANACORTES, WA

US 98221

Contact: WERNER LEHNER

werner@lehnerusa.com

T: (310)454-7344

F:

OIL CONDITION

Visc @ 100°C	cSt	13.7	13.7	13.7	13.63
Oxidation (PA)	%	66	52	60	40

CONTAMINATION

Soot %	%	0.1	0.3	0.7	0.1
Nitration (PA)	%	49	66	53	33
Sulfation (PA)	%	55	52	62	42
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	5	6	6	8
Sodium	ppm	4	3	2	3
Potassium	ppm	3	0	2	7

WEAR METALS

Iron	ppm	14	14	11	8
Copper	ppm	5	5	4	5
Lead	ppm	1	2	1	2
Tin	ppm	<1	0	<1	<1
Aluminum	ppm	0	3	5	4
Chromium	ppm	<1	<1	<1	<1
Molybdenum	ppm	3	16	76	57
Nickel	ppm	2	<1	1	1
Titanium	ppm	<1	<1	0	<1
Silver	ppm	0	0	0	0
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	0	0	0	0

ADDITIVES

Calcium	ppm	1322	1459	1272	1020
Magnesium	ppm	690	804	656	1024
Zinc	ppm	753	805	762	1106
Phosphorus	ppm	690	688	684	1017
Barium	ppm	0	0	0	0
Boron	ppm	156	112	201	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 condition of the oil is acceptable for the time in service.

Depot: VPWERANA

Unique No: 9140881

Signed: Jonathan Hester

Report Date: 20 Aug 2020

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GRAPHS

