



CONSTRUCTION EQUIPMENT

SW1027987 DIAMOND VOLVO A40D 60013 - DIESEL ENGINE



Sample No: VCP415122
Oil Type: CHEVRON DELO 400 MULTIGRADE 15W40
Job No: SW1027987 DIAMOND



SAMPLE INFORMATION

Sample Number	VCP415122	VC109922	VC027460	VC043174
Sample Date	20 Dec 2023	23 Apr 2004	29 Dec 2003	14 Mar 2003
Machine Hours	4671	3941	3263	2053
Oil Hours	0	0	545	674
Oil Changed	Changed	Changed	N/A	Changed
Sample Status	NORMAL	ABNORMAL	NORMAL	NORMAL

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OIL CONDITION

Visc @ 100°C	cSt	14.7	14.77	12.9	12.56
Base Number (BN)	mg KOH/g	7.7	---	---	---
Oxidation (PA)	%	69	---	---	40



CONTAMINATION

Water	%	NEG	0.120	NEG	NEG
Soot %	%	2.9	2.3	1.1	0.9
Nitration (PA)	%	89	55	50	40
Sulfation (PA)	%	69	---	97	60
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	3	6	1	9
Sodium	ppm	2	<1	2	3
Potassium	ppm	0	2	4	0



WEAR METALS

Iron	ppm	28	80	50	46
Copper	ppm	1	4	3	11
Lead	ppm	9	12	7	2
Tin	ppm	1	1	0	0
Aluminum	ppm	3	3	<1	2
Chromium	ppm	<1	1	<1	<1
Molybdenum	ppm	73	10	9	13
Nickel	ppm	0	4	3	4
Titanium	ppm	<1	0	0	<1
Silver	ppm	0	0	0	0
Manganese	ppm	<1	2	2	<1
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	1740	3000	3380	2217
Magnesium	ppm	588	8	12	470
Zinc	ppm	1329	1142	1381	1374
Phosphorus	ppm	1106	1005	1174	1211
Barium	ppm	0	<1	0	0
Boron	ppm	32	2	1	18

Diagnosis

Oil and filter change at the time of sampling has been noted. 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.

Depot: VOLVO6174
Unique No: 10808099
Signed: Sean Felton
Report Date: 02 Jan 2024



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GRAPHS

