



CONSTRUCTION EQUIPMENT

SW-27009-2 CASTLE VA VOLVO EC350EL 310786 - DIESEL ENGINE



Sample No: VCP442151
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: SW-27009-2 CASTLE VA



SAMPLE INFORMATION

Sample Number	VCP442151	VCP432504	VCP419289	VCP400933
Sample Date	29 Nov 2023	20 Sep 2023	06 Jul 2023	20 Apr 2023
Machine Hours	8434	7914	7380	6846
Oil Hours	520	520	540	518
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

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OIL CONDITION

Visc @ 100°C	cSt	12.2	12.3	12.3	12.3
Base Number (BN)	mg KOH/g	8.0	8.4	8.9	8.4
Oxidation (PA)	%	60	65	62	60

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 acceptable for the time in service.



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.1	0.1	0.2	0.2
Nitration (PA)	%	68	63	63	66
Sulfation (PA)	%	52	55	53	52
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	3	3	3	4
Sodium	ppm	<1	1	2	2
Potassium	ppm	<1	1	<1	<1



WEAR METALS

Iron	ppm	3	3	5	6
Copper	ppm	<1	<1	2	2
Lead	ppm	0	<1	<1	0
Tin	ppm	0	0	<1	0
Aluminum	ppm	1	<1	<1	<1
Chromium	ppm	<1	0	<1	0
Molybdenum	ppm	62	60	63	67
Nickel	ppm	0	0	0	0
Titanium	ppm	<1	0	0	0
Silver	ppm	0	0	0	0
Manganese	ppm	0	0	<1	<1
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	1037	1132	1201	1181
Magnesium	ppm	883	1034	1005	1008
Zinc	ppm	1142	1312	1346	1316
Phosphorus	ppm	932	1052	1089	1023
Barium	ppm	2	0	0	0
Boron	ppm	4	1	7	9

Depot: VOLVO8770
Unique No: 10776013
Signed: Don Baldrige
Report Date: 07 Dec 2023



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GRAPHS

