



CONSTRUCTION EQUIPMENT

SW-29976-2 CASTLE VA VOLVO EC480E 314667 - DIESEL ENGINE



Sample No: VCP440148
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: SW-29976-2 CASTLE VA



SAMPLE INFORMATION

Sample Number	VCP440148	VCP443486	VCP411628	VCP419293
Sample Date	19 Feb 2024	27 Nov 2023	11 Sep 2023	25 Jul 2023
Machine Hours	5031	4494	4022	3680
Oil Hours	230	490	400	530
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	ATTENTION	NORMAL	NORMAL	NORMAL

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OIL CONDITION

Visc @ 100°C	cSt	▲ 11.9	■ 12.4	■ 12.5	■ 12.5
Base Number (BN)	mg KOH/g	■ 6.0	■ 7.3	■ 8.4	■ 8.1
Oxidation (PA)	%	61	62	60	66

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. Fuel content negligible. There is no indication of any contamination in the oil. The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	■ 0.1	■ 0.1	■ 0.2	■ 0.3
Nitration (PA)	%	76	69	58	70
Sulfation (PA)	%	54	53	53	55
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	■ 0.5	<1.0	<1.0	<1.0
Silicon	ppm	■ 4	■ 4	■ 4	■ 4
Sodium	ppm	■ 2	■ <1	■ 2	■ 7
Potassium	ppm	■ 1	■ <1	■ 1	■ 0



WEAR METALS

Iron	ppm	■ 5	■ 5	■ 4	■ 7
Copper	ppm	■ 1	■ <1	■ 1	■ 3
Lead	ppm	■ <1	■ 0	■ <1	■ <1
Tin	ppm	■ <1	■ <1	■ <1	■ 0
Aluminum	ppm	■ 2	■ 2	■ <1	■ 2
Chromium	ppm	■ <1	■ <1	■ 0	■ 0
Molybdenum	ppm	■ 60	■ 62	■ 67	■ 61
Nickel	ppm	■ <1	■ <1	■ 0	■ 0
Titanium	ppm	1	<1	<1	<1
Silver	ppm	■ 0	■ 0	■ 0	■ 0
Manganese	ppm	■ <1	■ 0	■ <1	■ <1
Vanadium	ppm	<1	0	<1	<1



ADDITIVES

Calcium	ppm	■ 1154	■ 1169	■ 1240	■ 1143
Magnesium	ppm	■ 723	■ 745	■ 1087	■ 974
Zinc	ppm	■ 1122	■ 1151	■ 1350	■ 1204
Phosphorus	ppm	■ 863	■ 925	■ 1090	■ 985
Barium	ppm	■ 34	■ 2	■ 0	■ 0
Boron	ppm	■ 10	■ 15	■ 6	■ 6

Depot: VOLVO8770
Unique No: 10898162
Signed: Don Baldrige
Report Date: 28 Feb 2024



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GRAPHS

