



CONSTRUCTION EQUIPMENT

10075 ENVIROVANTAGE VOLVO EC380E 314814 - DIESEL ENGINE



Sample No: VCP409454
Oil Type: CHEVRON 15W40
Job No: 10075 ENVIROVANTAGE



SAMPLE INFORMATION

Sample Number	VCP409454	VCP387940	VCP328235	VCP360342
Sample Date	13 Dec 2023	06 Apr 2023	26 Sep 2022	18 Mar 2022
Machine Hours	2128	1662	1227	607
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	ATTENTION	ABNORMAL	ATTENTION	ABNORMAL

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OIL CONDITION

Visc @ 100°C	cSt	▲ 12.0	▲ 11.8	▲ 11.7	▲ 10.4
Base Number (BN)	mg KOH/g	■ 7.0	■ 6.5	■ 7.8	■ 6.7
Oxidation (PA)	%	63	64	77	76

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 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	■ 0.1	■ 0.1
Nitration (PA)	%	62	60	80	75
Sulfation (PA)	%	61	59	69	61
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	■ 0.8
Silicon	ppm	■ 6	■ 9	■ 8	■ 21
Sodium	ppm	■ <1	■ 2	■ 0	■ 1
Potassium	ppm	■ 2	■ 3	■ 2	■ 0



WEAR METALS

Iron	ppm	■ 4	▲ 83	■ 6	■ 13
Copper	ppm	■ 6	■ 2	▲ 186	▲ 417
Lead	ppm	■ 0	■ 0	■ <1	■ <1
Tin	ppm	■ <1	■ 0	■ 1	■ 3
Aluminum	ppm	■ 2	■ 6	■ 3	■ 2
Chromium	ppm	■ 0	■ 2	■ 0	■ <1
Molybdenum	ppm	■ 90	■ 52	■ 120	■ 59
Nickel	ppm	■ <1	■ 0	■ 0	■ 0
Titanium	ppm	<1	0	<1	0
Silver	ppm	■ 0	■ 0	0	<1
Manganese	ppm	■ <1	■ 1	■ <1	■ 2
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	■ 1337	■ 1275	■ 1553	■ 1757
Magnesium	ppm	■ 430	■ 937	■ 578	■ 367
Zinc	ppm	■ 1200	■ 1231	■ 858	■ 1140
Phosphorus	ppm	■ 1041	■ 983	■ 697	■ 1001
Barium	ppm	■ <1	■ 0	■ 0	■ 0
Boron	ppm	■ 391	■ 12	■ 198	■ 81

Depot: VOLV00150
Unique No: 10794199
Signed: Don Baldrige
Report Date: 20 Dec 2023



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GRAPHS

