



CONSTRUCTION EQUIPMENT

SW-21319-3 CASTLE VA VOLVO EC210BLC 16751 - DIESEL ENGINE



Sample No: VCP423015
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: SW-21319-3 CASTLE VA



SAMPLE INFORMATION

Sample Number	VCP423015	VCP378659	VCP348859	VCP306597
Sample Date	10 Jul 2023	13 Oct 2022	08 Mar 2022	08 Jul 2021
Machine Hours	1938	1348	827	10627
Oil Hours	500	500	500	500
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	ATTENTION	ABNORMAL	ATTENTION

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OIL CONDITION

Visc @ 100°C	cSt	12.8	12.8	11.7	12.3
Base Number (BN)	mg KOH/g	9.4	11.0	10.5	---
Oxidation (PA)	%	69	75	92	82



CONTAMINATION

Soot %	%	0.4	0.4	0.2	0.1
Nitration (PA)	%	68	73	73	50
Sulfation (PA)	%	57	62	66	65
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	3.3	6.7	2.5
Silicon	ppm	6	6	8	6
Sodium	ppm	0	1	1	2
Potassium	ppm	2	0	1	<1



WEAR METALS

Iron	ppm	14	12	10	3
Copper	ppm	<1	1	<1	<1
Lead	ppm	<1	<1	<1	<1
Tin	ppm	<1	<1	<1	<1
Aluminum	ppm	2	2	3	<1
Chromium	ppm	<1	<1	<1	<1
Molybdenum	ppm	63	52	39	40
Nickel	ppm	<1	0	0	0
Titanium	ppm	0	0	0	0
Silver	ppm	0	0	0	0
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	1290	1230	1615	1535
Magnesium	ppm	709	820	475	479
Zinc	ppm	1020	1148	1119	1043
Phosphorus	ppm	861	953	916	860
Barium	ppm	0	0	0	0
Boron	ppm	73	17	56	78

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 BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Depot: VOLVO8770
Unique No: 10561129
Signed: Don Baldrige
Report Date: 18 Jul 2023



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GRAPHS

