



CONSTRUCTION EQUIPMENT

VOLVO EC220EL 315670 - DIESEL ENGINE



Sample No: VCP451400
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No:



SAMPLE INFORMATION

Sample Number	VCP451400	VCP438455	VCP435538	VCP433588
Sample Date	06 Jul 2024	23 Apr 2024	13 Feb 2024	03 Nov 2023
Machine Hours	2502	1935	1394	582
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	ATTENTION	NORMAL

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OIL CONDITION

Visc @ 100°C	cSt	14.0	13.3	12.0	12.9
Base Number (BN)	mg KOH/g	8.1	7.6	5.4	5.9
Oxidation (PA)	%	110	89	65	53

CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.2	0.2	0.1	0.1
Nitration (PA)	%	101	83	64	58
Sulfation (PA)	%	70	63	55	56
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	0.6	<1.0
Silicon	ppm	11	8	10	15
Sodium	ppm	4	1	3	0
Potassium	ppm	3	2	2	3

WEAR METALS

Iron	ppm	12	9	10	16
Copper	ppm	3	1	2	8
Lead	ppm	2	1	2	2
Tin	ppm	1	<1	<1	2
Aluminum	ppm	3	2	4	2
Chromium	ppm	<1	<1	<1	<1
Molybdenum	ppm	48	55	114	32
Nickel	ppm	<1	0	<1	4
Titanium	ppm	<1	<1	<1	<1
Silver	ppm	0	0	0	0
Manganese	ppm	<1	0	0	2
Vanadium	ppm	0	<1	0	0

ADDITIVES

Calcium	ppm	1995	1568	1752	1823
Magnesium	ppm	618	443	522	180
Zinc	ppm	1342	1185	1592	1073
Phosphorus	ppm	1113	993	1355	977
Barium	ppm	0	0	10	6
Boron	ppm	23	71	225	92

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: VOLVO0090
Unique No: 11115406
Signed: Don Baldrige
Report Date: 11 Jul 2024



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GRAPHS

