



CONSTRUCTION EQUIPMENT

SW-31414-2 CASTLE VA VOLVO EC220EL 310178 - DIESEL ENGINE



Sample No: VCP446681
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: SW-31414-2 CASTLE VA



SAMPLE INFORMATION

Sample Number	VCP446681	VCP412191	VCP383477	VCP354160
Sample Date	12 Mar 2024	07 Sep 2023	04 Jan 2023	12 Jul 2022
Machine Hours	6753	6228	5709	5043
Oil Hours	525	500	700	600
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

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OIL CONDITION

Visc @ 100°C	cSt	14.4	14.6	14.4	14.4
Base Number (BN)	mg KOH/g	8.1	8.1	9.1	10.0
Oxidation (PA)	%	78	83	80	101

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.



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.1	0.2	0.2	0.2
Nitration (PA)	%	79	86	81	97
Sulfation (PA)	%	61	63	63	71
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	6	8	13	6
Sodium	ppm	2	2	<1	1
Potassium	ppm	1	0	<1	1



WEAR METALS

Iron	ppm	7	8	12	8
Copper	ppm	1	1	2	<1
Lead	ppm	<1	<1	<1	1
Tin	ppm	1	<1	<1	<1
Aluminum	ppm	3	4	2	2
Chromium	ppm	1	<1	1	<1
Molybdenum	ppm	85	89	87	79
Nickel	ppm	<1	0	0	0
Titanium	ppm	<1	<1	0	0
Silver	ppm	0	0	0	0
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	<1	0	0	0



ADDITIVES

Calcium	ppm	1260	1368	1364	1645
Magnesium	ppm	890	988	930	699
Zinc	ppm	1170	1208	1243	1134
Phosphorus	ppm	975	1009	1019	919
Barium	ppm	0	0	0	0
Boron	ppm	86	86	93	100

Depot: VOLVO8770
Unique No: 10937604
Signed: Don Baldrige
Report Date: 22 Mar 2024



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VOLVO GRAPHS

