



CONSTRUCTION EQUIPMENT

VOLVO L220H 2211 - DIESEL ENGINE



Sample No: VCP429286
Oil Type: SHELL ROTELLA T3 15W40
Job No:



SAMPLE INFORMATION

Sample Number	VCP429286	VCP404570	VCP415084	VCP410713
Sample Date	15 Nov 2023	10 Oct 2023	15 Sep 2023	25 Aug 2023
Machine Hours	41238	40945	40651	40381
Oil Hours	293	294	270	300
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

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OIL CONDITION

Visc @ 100°C	cSt	13.0	13.1	13.3	13.1
Base Number (BN)	mg KOH/g	6.5	6.6	6.7	7.4
Oxidation (PA)	%	45	47	45	51



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.1	0.1	0.1	0.1
Nitration (PA)	%	56	57	52	54
Sulfation (PA)	%	50	50	47	50
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	16	8	9	11
Sodium	ppm	0	3	1	1
Potassium	ppm	2	3	1	<1



WEAR METALS

Iron	ppm	7	2	4	4
Copper	ppm	<1	1	<1	<1
Lead	ppm	0	<1	<1	<1
Tin	ppm	<1	<1	<1	<1
Aluminum	ppm	2	2	0	1
Chromium	ppm	1	<1	<1	<1
Molybdenum	ppm	27	20	30	42
Nickel	ppm	4	2	2	2
Titanium	ppm	<1	0	<1	0
Silver	ppm	0	<1	0	0
Manganese	ppm	0	<1	<1	0
Vanadium	ppm	0	0	<1	0



ADDITIVES

Calcium	ppm	2118	2188	2070	1834
Magnesium	ppm	146	134	192	236
Zinc	ppm	1077	1183	1139	1080
Phosphorus	ppm	902	995	919	911
Barium	ppm	0	0	0	0
Boron	ppm	28	20	32	42

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 suitable for further service.

Depot: COVWES
Unique No: 10751261
Signed: Sean Felton
Report Date: 21 Nov 2023



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GRAPHS

