



CONSTRUCTION EQUIPMENT

VOLVO L220H 3440 - DIESEL ENGINE



Sample No: VCP415185
Oil Type: SHELL ROTELLA T3 15W40
Job No:



SAMPLE INFORMATION

Sample Number	VCP415185	VCP415184	VCP410516	VCP410517
Sample Date	21 Sep 2023	05 Sep 2023	18 Aug 2023	04 Aug 2023
Machine Hours	5008	4714	4413	4142
Oil Hours	294	301	271	278
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

COVANTA ENERGY
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OIL CONDITION

Visc @ 100°C	cSt	13.4	13.4	13.2	13.3
Base Number (BN)	mg KOH/g	7.0	---	7.4	7.3
Oxidation (PA)	%	45	47	48	49



CONTAMINATION

Soot %	%	0.1	0.1	0.1	0.1
Nitration (PA)	%	53	54	50	50
Sulfation (PA)	%	47	49	47	48
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	14	13	11	11
Sodium	ppm	1	<1	3	2
Potassium	ppm	<1	0	4	2



WEAR METALS

Iron	ppm	2	2	2	2
Copper	ppm	<1	1	<1	<1
Lead	ppm	<1	0	1	0
Tin	ppm	<1	0	<1	<1
Aluminum	ppm	0	1	1	<1
Chromium	ppm	0	<1	<1	<1
Molybdenum	ppm	30	32	40	44
Nickel	ppm	0	0	0	0
Titanium	ppm	<1	0	<1	<1
Silver	ppm	0	0	0	<1
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	<1	0	<1	<1



ADDITIVES

Calcium	ppm	2128	2224	1900	2000
Magnesium	ppm	185	205	252	268
Zinc	ppm	1164	1201	1164	1200
Phosphorus	ppm	944	987	923	975
Barium	ppm	0	0	0	0
Boron	ppm	37	36	52	54

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: 10661527
Signed: Wes Davis
Report Date: 26 Sep 2023



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GRAPHS

