



CONSTRUCTION EQUIPMENT

VOLVO L220H 3440 - DIESEL ENGINE



Sample No: VCP410516
Oil Type: SHELL ROTELLA T3 15W40
Job No:



SAMPLE INFORMATION

Sample Number	VCP410516	VCP410517	VCP410511	VCP419616
Sample Date	18 Aug 2023	04 Aug 2023	21 Jul 2023	05 Jul 2023
Machine Hours	4413	4142	3864	3590
Oil Hours	271	278	274	303
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

COVANTA ENERGY
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OIL CONDITION

Visc @ 100°C	cSt	13.2	13.3	13.2	13.2
Base Number (BN)	mg KOH/g	7.4	7.3	7.8	8.0
Oxidation (PA)	%	48	49	50	53



CONTAMINATION

Soot %	%	0.1	0.1	0.1	0.1
Nitration (PA)	%	50	50	50	52
Sulfation (PA)	%	47	48	49	50
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	11	11	10	9
Sodium	ppm	3	2	2	2
Potassium	ppm	4	2	<1	<1



WEAR METALS

Iron	ppm	2	2	2	4
Copper	ppm	<1	<1	<1	4
Lead	ppm	1	0	0	0
Tin	ppm	<1	<1	<1	0
Aluminum	ppm	1	<1	<1	<1
Chromium	ppm	<1	<1	<1	<1
Molybdenum	ppm	40	44	47	53
Nickel	ppm	0	0	0	0
Titanium	ppm	<1	<1	0	0
Silver	ppm	0	<1	0	0
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	<1	<1	0	0



ADDITIVES

Calcium	ppm	1900	2000	2121	2014
Magnesium	ppm	252	268	288	343
Zinc	ppm	1164	1200	1285	1290
Phosphorus	ppm	923	975	1057	1065
Barium	ppm	0	0	0	0
Boron	ppm	52	54	58	64

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: 10622187
Signed: Wes Davis
Report Date: 29 Aug 2023



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VOLVO GRAPHS

