



CONSTRUCTION EQUIPMENT

VOLVO L220H 2211 - DIESEL ENGINE



Sample No: VCP419635
Oil Type: SHELL ROTELLA T3 15W40
Job No:



SAMPLE INFORMATION

Sample Number	VCP419635	VCP420405	VCP370596	VCP370597
Sample Date	12 Jul 2023	12 Jun 2023	15 Dec 2022	21 Nov 2022
Machine Hours	39812	39515	39222	38936
Oil Hours	297	293	286	276
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

COVANTA ENERGY

141 CRANBERRY HWY
 WEST WAREHAM, MA
 US 02576

Contact: SAWYER
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OIL CONDITION

Visc @ 100°C	cSt	13.0	12.7	12.8	13.3
Base Number (BN)	mg KOH/g	8.2	7.9	8.8	9.4
Oxidation (PA)	%	55	63	61	63



CONTAMINATION

Soot %	%	0.1	0.1	0.1	0.1
Nitration (PA)	%	55	50	53	53
Sulfation (PA)	%	52	53	55	56
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	8	17	7	6
Sodium	ppm	2	1	<1	1
Potassium	ppm	<1	1	<1	1



WEAR METALS

Iron	ppm	3	6	4	4
Copper	ppm	<1	<1	<1	<1
Lead	ppm	<1	<1	<1	<1
Tin	ppm	<1	<1	<1	<1
Aluminum	ppm	2	4	<1	1
Chromium	ppm	<1	<1	<1	<1
Molybdenum	ppm	53	64	63	61
Nickel	ppm	1	4	<1	<1
Titanium	ppm	<1	0	0	0
Silver	ppm	0	0	0	0
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	<1	0	0	0



ADDITIVES

Calcium	ppm	2010	1827	1744	1832
Magnesium	ppm	344	420	355	352
Zinc	ppm	1243	1352	1174	1215
Phosphorus	ppm	1013	1057	972	1025
Barium	ppm	0	0	0	0
Boron	ppm	62	91	74	83

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: 10562275
Signed: Wes Davis
Report Date: 18 Jul 2023



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GRAPHS

