



CONSTRUCTION EQUIPMENT

VOLVO L220H 2211 - DIESEL ENGINE



Sample No: VCP410713
Oil Type: SHELL ROTELLA T3 15W40
Job No:



SAMPLE INFORMATION

Sample Number	VCP410713	VCP410513	VCP419635	VCP420405
Sample Date	25 Aug 2023	04 Aug 2023	12 Jul 2023	12 Jun 2023
Machine Hours	40381	40081	39812	39515
Oil Hours	300	269	297	293
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

COVANTA ENERGY
 141 CRANBERRY HWY
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OIL CONDITION

Visc @ 100°C	cSt	13.1	13.1	13.0	12.7
Base Number (BN)	mg KOH/g	7.4	7.4	8.2	7.9
Oxidation (PA)	%	51	53	55	63

CONTAMINATION

Soot %	%	0.1	0.1	0.1	0.1
Nitration (PA)	%	54	53	55	50
Sulfation (PA)	%	50	49	52	53
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	11	9	8	17
Sodium	ppm	1	2	2	1
Potassium	ppm	<1	2	<1	1

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.

WEAR METALS

Iron	ppm	4	3	3	6
Copper	ppm	<1	<1	<1	<1
Lead	ppm	<1	0	<1	<1
Tin	ppm	<1	<1	<1	<1
Aluminum	ppm	1	<1	2	4
Chromium	ppm	<1	<1	<1	<1
Molybdenum	ppm	42	44	53	64
Nickel	ppm	2	1	1	4
Titanium	ppm	0	<1	<1	0
Silver	ppm	0	<1	0	0
Manganese	ppm	0	<1	<1	<1
Vanadium	ppm	0	<1	<1	0

ADDITIVES

Calcium	ppm	1834	1964	2010	1827
Magnesium	ppm	236	272	344	420
Zinc	ppm	1080	1183	1243	1352
Phosphorus	ppm	911	956	1013	1057
Barium	ppm	0	0	0	0
Boron	ppm	42	49	62	91

Depot: COVWES
Unique No: 10630066
Signed: Wes Davis
Report Date: 01 Sep 2023



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GRAPHS

