



CONSTRUCTION EQUIPMENT

VOLVO L220H 3440 - DIESEL ENGINE



Sample No: VCP404565
Oil Type: SHELL ROTELLA T3 15W40
Job No:



SAMPLE INFORMATION

Sample Number	VCP404565	VCP404569	VCP404561	VCP431636
Sample Date	08 Jan 2024	27 Dec 2023	08 Dec 2023	22 Nov 2023
Machine Hours	7046	6733	6478	6176
Oil Hours	313	255	302	287
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	13.6	13.4	13.4
Base Number (BN)	mg KOH/g	6.7	5.7	6.6	6.7
Oxidation (PA)	%	41	41	42	43



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.1	0.1	0.1	0.1
Nitration (PA)	%	53	54	54	55
Sulfation (PA)	%	47	46	48	48
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	8	10	8	13
Sodium	ppm	1	1	1	1
Potassium	ppm	0	0	2	2



WEAR METALS

Iron	ppm	2	2	3	3
Copper	ppm	<1	0	<1	<1
Lead	ppm	0	0	<1	<1
Tin	ppm	0	0	<1	<1
Aluminum	ppm	<1	<1	1	1
Chromium	ppm	0	0	<1	<1
Molybdenum	ppm	12	17	18	21
Nickel	ppm	0	0	<1	<1
Titanium	ppm	0	0	<1	<1
Silver	ppm	0	0	0	0
Manganese	ppm	0	0	<1	<1
Vanadium	ppm	<1	<1	0	0



ADDITIVES

Calcium	ppm	2160	2102	2264	2259
Magnesium	ppm	53	81	78	94
Zinc	ppm	1132	1131	1104	1126
Phosphorus	ppm	954	973	908	944
Barium	ppm	0	0	11	11
Boron	ppm	14	18	18	22

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: 10832043
Signed: Wes Davis
Report Date: 16 Jan 2024



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VOLVO GRAPHS

