



CONSTRUCTION EQUIPMENT

VOLVO L220H 3589 - DIESEL ENGINE



Sample No: VCP453831
Oil Type: SHELL ROTELLA T3 15W40
Job No:



SAMPLE INFORMATION

Sample Number	VCP453831	VCP453833	VCP441406	VCP441039
Sample Date	03 Jul 2024	17 Jun 2024	29 May 2024	13 May 2024
Machine Hours	2727	2429	2113	1816
Oil Hours	298	316	297	297
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	ABNORMAL	ABNORMAL

COVANTA ENERGY
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OIL CONDITION

Visc @ 100°C	cSt	13.1	13.0	13.1	13.1
Base Number (BN)	mg KOH/g	6.5	6.4	6.3	6.4
Oxidation (PA)	%	38	38	37	39



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.1	0.1	0.1	0.1
Nitration (PA)	%	53	53	52	52
Sulfation (PA)	%	48	47	46	46
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	7	9	7	10
Sodium	ppm	5	<1	<1	3
Potassium	ppm	0	2	2	4



WEAR METALS

Iron	ppm	1	3	3	5
Copper	ppm	3	7	▲ 35	▲ 109
Lead	ppm	0	0	0	3
Tin	ppm	0	0	<1	3
Aluminum	ppm	<1	2	1	3
Chromium	ppm	<1	<1	<1	2
Molybdenum	ppm	11	8	8	13
Nickel	ppm	0	0	<1	2
Titanium	ppm	<1	<1	<1	2
Silver	ppm	<1	0	0	3
Manganese	ppm	<1	0	0	2
Vanadium	ppm	<1	0	0	2



ADDITIVES

Calcium	ppm	2352	2303	2242	2195
Magnesium	ppm	45	59	36	42
Zinc	ppm	966	1113	1057	1029
Phosphorus	ppm	843	917	905	876
Barium	ppm	0	0	0	1
Boron	ppm	13	5	4	10

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: 1111872
Signed: Wes Davis
Report Date: 08 Jul 2024



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GRAPHS

