



CONSTRUCTION EQUIPMENT

VOLVO L90H 624903 - DIESEL ENGINE



Sample No: VCP410714
Oil Type: SHELL ROTELLA T3 15W40
Job No:



SAMPLE INFORMATION

Sample Number	VCP410714	VCP419619	VCP408057	VCP408067
Sample Date	21 Aug 2023	13 Jul 2023	06 Jun 2023	01 May 2023
Machine Hours	9161	8814	8495	8218
Oil Hours	347	319	277	283
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

COVANTA ENERGY
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OIL CONDITION

Visc @ 100°C	cSt	12.9	13.1	13.3	12.9
Base Number (BN)	mg KOH/g	7.3	8.2	8.5	8.8
Oxidation (PA)	%	51	52	56	59



CONTAMINATION

Soot %	%	0.4	0.3	0.2	0.2
Nitration (PA)	%	59	63	53	53
Sulfation (PA)	%	50	50	52	53
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	9	8	7	7
Sodium	ppm	2	3	1	2
Potassium	ppm	4	0	<1	1



WEAR METALS

Iron	ppm	41	53	47	47
Copper	ppm	<1	0	<1	<1
Lead	ppm	1	0	0	0
Tin	ppm	<1	<1	<1	<1
Aluminum	ppm	3	1	<1	<1
Chromium	ppm	1	<1	<1	<1
Molybdenum	ppm	41	54	58	62
Nickel	ppm	0	0	<1	0
Titanium	ppm	<1	<1	0	<1
Silver	ppm	0	0	0	0
Manganese	ppm	1	1	<1	<1
Vanadium	ppm	<1	<1	0	0



ADDITIVES

Calcium	ppm	1856	2023	1790	1800
Magnesium	ppm	253	336	348	407
Zinc	ppm	1104	1198	1168	1237
Phosphorus	ppm	937	1057	1016	1033
Barium	ppm	0	0	0	0
Boron	ppm	43	73	80	88

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: 10622188
Signed: Wes Davis
Report Date: 29 Aug 2023



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GRAPHS

