



CONSTRUCTION EQUIPMENT

VOLVO L90G 617433 - DIESEL ENGINE



Sample No: VCP380089

Oil Type: DIESEL ENGINE OIL SAE 15W40

Job No:



SAMPLE INFORMATION

Sample Number	VCP380089	VCP274087	VCP274207	VCP252203
Sample Date	14 Dec 2023	02 Mar 2021	06 Jan 2021	07 Apr 2020
Machine Hours	9479	7015	6590	5987
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	SEVERE	NORMAL	NORMAL	NORMAL

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OIL CONDITION

Visc @ 100°C	cSt	15.2	12.9	12.7	13.5
Oxidation (PA)	%	88	81	67	57

CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.3	0.1	0.3	0
Nitration (PA)	%	141	57	73	72
Sulfation (PA)	%	74	61	56	63
Glycol	%	0.173	0.0	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	19	5	5	3
Sodium	ppm	4032	10	13	4
Potassium	ppm	733	10	6	4

Diagnosis

We advise that you check for the source of the coolant leak. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. Aluminum ppm levels are severe. Copper and lead ppm levels are abnormal. Piston wear is indicated. Bearing wear is indicated. Test for glycol is positive. There is a high concentration of glycol present in the oil. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

WEAR METALS

Iron	ppm	85	10	19	8
Copper	ppm	49	<1	1	<1
Lead	ppm	26	<1	<1	<1
Tin	ppm	4	<1	<1	0
Aluminum	ppm	37	6	10	5
Chromium	ppm	3	<1	<1	<1
Molybdenum	ppm	78	36	16	9
Nickel	ppm	<1	<1	<1	<1
Titanium	ppm	0	0	<1	<1
Silver	ppm	0	<1	<1	<1
Manganese	ppm	5	<1	<1	<1
Vanadium	ppm	0	0	<1	<1

ADDITIVES

Calcium	ppm	1565	1592	1397	1450
Magnesium	ppm	468	512	623	714
Zinc	ppm	1042	912	918	820
Phosphorus	ppm	882	737	776	729
Barium	ppm	<1	0	0	0
Boron	ppm	9	46	49	71

Depot: SHEMIS
Unique No: 5696535
Signed: Kevin Marson
Report Date: 18 Dec 2023



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GRAPHS

