



CONSTRUCTION EQUIPMENT

VOLVO L120E 64260 - DIESEL ENGINE



Sample No: VCP395395
Oil Type: LUBRIGUARD 10W30
Job No:



SAMPLE INFORMATION

Sample Number	VCP395395	VCP373517	VCP327807	VCP302779
Sample Date	16 Oct 2023	12 Oct 2022	06 May 2022	17 Oct 2021
Machine Hours	25200	24902	24625	24305
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	SEVERE	ABNORMAL	ABNORMAL	ABNORMAL

WOODBED CORP dba DELULLO TRUCKING
 1022 DELAUM RD
 ST MARYS, PA
 US 15857
 Contact: CRYSTAL WILLIAMS
 crystal@woodbed.com
 T: (814)834-1464
 F: (814)834-9588



OIL CONDITION

Visc @ 100°C	cSt	11.4	12.1	12.1	12.0
Base Number (BN)	mg KOH/g	8.0	9.8	8.8	---
Oxidation (PA)	%	64	75	70	76



CONTAMINATION

Soot %	%	0.6	0.9	0.7	0.7
Nitration (PA)	%	82	84	93	105
Sulfation (PA)	%	55	68	62	65
Glycol	%	0.12	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	6	6	7	9
Sodium	ppm	25	14	37	49
Potassium	ppm	794	401	1178	1589



WEAR METALS

Iron	ppm	16	16	21	24
Copper	ppm	449	142	442	250
Lead	ppm	11	4	11	14
Tin	ppm	<1	<1	1	0
Aluminum	ppm	3	2	2	2
Chromium	ppm	1	<1	2	3
Molybdenum	ppm	35	10	4	5
Nickel	ppm	1	0	<1	1
Titanium	ppm	<1	0	0	<1
Silver	ppm	0	0	0	0
Manganese	ppm	4	1	4	4
Vanadium	ppm	<1	0	0	0



ADDITIVES

Calcium	ppm	1542	2142	2046	2093
Magnesium	ppm	535	81	44	63
Zinc	ppm	1256	1191	1239	1162
Phosphorus	ppm	1001	976	996	904
Barium	ppm	0	2	0	0
Boron	ppm	8	54	31	25

Diagnosis

We advise that you check for the source of the coolant leak. Check for low coolant level. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition. The copper level is abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). Sodium and/or potassium levels are high. Test for glycol is positive. The BN result indicates that there is suitable alkalinity remaining in the oil.

Depot: WOOSTM
Unique No: 10702589
Signed: Doug Bogart
Report Date: 24 Oct 2023



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GRAPHS

