



CONSTRUCTION EQUIPMENT

VOLVO L90H 05625448 - DIESEL ENGINE



Sample No: VCP438662
Oil Type: VALVOLINE 15W40
Job No:



SAMPLE INFORMATION

Sample Number	VCP438662	VCP430821	VCP416427	VCP294687
Sample Date	22 Jan 2024	14 Dec 2023	10 Oct 2023	23 Dec 2020
Machine Hours	6059	5859	5552	770
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	ATTENTION	NORMAL	NORMAL	ATTENTION

CITY CARTING
 221 OLD GATE LN
 MILFORD, CT
 US 06460
 Contact: TAVINS BANKS
 tavins@citycart.net
 T: (203)223-3885
 F:



OIL CONDITION

Visc @ 100°C	cSt	▲ 11.8	■ 12.59	■ 13.2	▲ 11.7
Base Number (BN)	mg KOH/g	■ 6.5	■ 7.1	■ 9.9	---
Oxidation (PA)	%	■ 34	■ 43	■ 89	■ 36

Diagnosis

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. All component wear rates are normal. Fuel content negligible. There is no indication of any contamination in the oil. The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	■ 0.1	■ 0.1	■ 0.2	■ 0.2
Nitration (PA)	%	■ 50	■ 56	■ 66	■ 55
Sulfation (PA)	%	■ 43	■ 47	■ 62	■ 46
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	■ 0.3	■ 0.4	<1.0	■ 0.3
Silicon	ppm	■ 6	■ 7	■ 11	■ 6
Sodium	ppm	■ 8	■ <1	■ 2	■ 2
Potassium	ppm	■ 14	■ 2	■ 0	■ 1



WEAR METALS

Iron	ppm	■ 3	■ 3	■ 10	■ 12
Copper	ppm	■ <1	■ 0	■ <1	■ 2
Lead	ppm	■ 1	■ 0	■ 0	■ <1
Tin	ppm	■ <1	■ <1	■ <1	■ 1
Aluminum	ppm	■ 3	■ 3	■ 4	■ 3
Chromium	ppm	■ <1	■ <1	■ <1	■ <1
Molybdenum	ppm	■ 26	■ 53	■ 43	■ 20
Nickel	ppm	■ 1	■ 0	■ 0	■ 0
Titanium	ppm	■ 0	■ 0	■ 0	■ <1
Silver	ppm	■ 0	■ 0	■ 0	■ 0
Manganese	ppm	■ <1	■ <1	■ <1	■ <1
Vanadium	ppm	■ <1	■ 0	■ 0	■ 0



ADDITIVES

Calcium	ppm	■ 1724	■ 1932	■ 1754	■ 2167
Magnesium	ppm	■ 123	■ 201	■ 512	■ 170
Zinc	ppm	■ 948	■ 979	■ 1175	■ 1066
Phosphorus	ppm	■ 816	■ 763	■ 970	■ 889
Barium	ppm	■ 0	■ <1	■ 0	■ 0
Boron	ppm	■ 20	■ 26	■ 30	■ 21

Depot: CITMILCON
Unique No: 10857577
Signed: Jonathan Hester
Report Date: 02 Feb 2024



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GRAPHS

