



CONSTRUCTION EQUIPMENT

SWA122170-20 VOLVO L180H 5307 - DIESEL ENGINE



Sample No: VCP367742
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: SWA122170-20



SAMPLE INFORMATION

Sample Number	VCP367742	VCP383605	VCP354237	VCP355682
Sample Date	05 Dec 2022	27 Sep 2022	24 Jun 2022	06 Apr 2022
Machine Hours	6547	6070	5245	4671
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	N/A	Changed
Sample Status	ATTENTION	NORMAL	NORMAL	NORMAL

ALTA EQUIPMENT

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OIL CONDITION

Visc @ 100°C	cSt	▲ 12.4	■ 12.8	■ 12.5	■ 12.6
Base Number (BN)	mg KOH/g	■ 11.5	■ 10.7	■ 9.3	■ 7.9
Oxidation (PA)	%	88	89	74	96

CONTAMINATION

Soot %	%	■ 0.2	■ 0.3	■ 0.2	■ 0.4
Nitration (PA)	%	65	73	64	97
Sulfation (PA)	%	66	67	58	69
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	■ 1.4	<1.0	<1.0	<1.0
Silicon	ppm	■ 4	■ 6	■ 4	■ 4
Sodium	ppm	■ 2	■ 3	■ 2	■ 2
Potassium	ppm	■ 1	■ 3	■ 0	■ <1

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.

WEAR METALS

Iron	ppm	■ 5	■ 7	■ 6	■ 13
Copper	ppm	■ 1	■ 4	■ 3	■ 10
Lead	ppm	■ <1	■ 2	■ 0	■ 1
Tin	ppm	■ <1	■ <1	■ 1	■ 1
Aluminum	ppm	■ <1	■ 1	■ 1	■ 1
Chromium	ppm	■ <1	■ 0	■ <1	■ <1
Molybdenum	ppm	■ 39	■ 40	■ 36	■ 38
Nickel	ppm	■ 0	■ 1	■ <1	■ 0
Titanium	ppm	0	<1	<1	0
Silver	ppm	■ 0	<1	0	<1
Manganese	ppm	■ <1	■ 1	■ <1	■ <1
Vanadium	ppm	0	2	0	0

ADDITIVES

Calcium	ppm	■ 1670	■ 1627	■ 1776	■ 1783
Magnesium	ppm	■ 503	■ 482	■ 417	■ 497
Zinc	ppm	■ 1077	■ 1043	■ 1115	■ 1092
Phosphorus	ppm	■ 894	■ 916	■ 888	■ 896
Barium	ppm	■ 0	■ 0	■ 0	■ 0
Boron	ppm	■ 46	■ 24	■ 38	■ 19

Depot: VOLVO0142
Unique No: 10247982
Signed: Jonathan Hester
Report Date: 13 Dec 2022



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GRAPHS

