



CONSTRUCTION EQUIPMENT

A11723 VOLVO L180H 5446 - DIESEL ENGINE



Sample No: VCP439461
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: A11723



SAMPLE INFORMATION

Sample Number	VCP439461	VCP416969	VCP411860	VCP407461
Sample Date	23 Dec 2023	26 Sep 2023	10 Jul 2023	19 Apr 2023
Machine Hours	6982	6540	6010	5525
Oil Hours	500	500	500	500
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	ATTENTION	NORMAL	NORMAL	NORMAL

COVANTA METAL MARKETING LLC
 500 MIDDLE DR
 FAIRLESS HILLS, PA
 US 19030
 Contact: J.P.

OIL CONDITION

Visc @ 100°C	cSt	▲ 11.9	■ 12.9	■ 12.9	■ 12.5
Base Number (BN)	mg KOH/g	■ 6.0	■ 6.6	■ 5.8	■ 10.1
Oxidation (PA)	%	■ 39	■ 43	■ 43	■ 80

T:
F:

Diagnosis

The oil 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	■ 0.2	■ 0.1	■ 0.1
Nitration (PA)	%	■ 58	■ 58	■ 62	■ 55
Sulfation (PA)	%	■ 45	■ 46	■ 47	■ 60
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	■ 0.6	■ <1.0	■ <1.0	■ <1.0
Silicon	ppm	■ 2	■ 4	■ 3	■ 4
Sodium	ppm	■ 0	■ 5	■ <1	■ 1
Potassium	ppm	■ 2	■ 4	■ 2	■ 0

WEAR METALS

Iron	ppm	■ 3	■ 5	■ 4	■ 3
Copper	ppm	■ <1	■ 3	■ 1	■ <1
Lead	ppm	■ <1	■ 1	■ <1	■ 0
Tin	ppm	■ <1	■ <1	■ <1	■ 0
Aluminum	ppm	■ 3	■ 1	■ 1	■ <1
Chromium	ppm	■ <1	■ <1	■ <1	■ 0
Molybdenum	ppm	■ 17	■ 34	■ 15	■ 35
Nickel	ppm	■ <1	■ <1	■ 0	■ 0
Titanium	ppm	<1	<1	<1	0
Silver	ppm	■ 0	■ 0	■ 0	■ 0
Manganese	ppm	■ 0	■ 1	■ <1	■ <1
Vanadium	ppm	0	0	0	0

ADDITIVES

Calcium	ppm	■ 1517	■ 2147	■ 2252	■ 1542
Magnesium	ppm	■ 214	■ 445	■ 161	■ 459
Zinc	ppm	■ 904	■ 1351	■ 1173	■ 1032
Phosphorus	ppm	■ 967	■ 1136	■ 962	■ 821
Barium	ppm	■ 0	■ 0	■ 0	■ 0
Boron	ppm	■ 10	■ 8	■ 9	■ 57

Depot: COVFAI
Unique No: 10821656
Signed: Jonathan Hester
Report Date: 11 Jan 2024



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GRAPHS

