



CONSTRUCTION EQUIPMENT

VOLVO L110H 631695 - DIESEL ENGINE



Sample No: VCP414224
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No:



SAMPLE INFORMATION

Sample Number	VCP414224	VCP407841	VCP386202	VCP353964
Sample Date	11 Jul 2023	26 May 2023	07 Nov 2022	19 Aug 2022
Machine Hours	19050	18421	17370	16204
Oil Hours	0	1000	500	500
Oil Changed	N/A	Changed	Changed	Changed
Sample Status	ATTENTION	ABNORMAL	ABNORMAL	ABNORMAL

COVANTA
 350 FLAKENBURG ROAD
 TAMPA, FL
 US 33619
 Contact: SERVICE MANAGER



OIL CONDITION

Visc @ 100°C	cSt	▲ 12.2	■ 13.1	■ 13.7	■ 14.5
Base Number (BN)	mg KOH/g	■ 9.8	■ 9.0	■ 10.4	■ 7.3
Oxidation (PA)	%	84	92	103	150

T: (813)684-5688
 F:

Diagnosis

We recommend an early resample to monitor this condition. The aluminum level is abnormal. All other component wear rates are normal. Light fuel dilution occurring. Fuel is present in the oil and is lowering the viscosity.



CONTAMINATION

Soot %	%	■ 0.6	■ 0.6	■ 0.6	■ 1.7
Nitration (PA)	%	78	86	103	142
Sulfation (PA)	%	62	64	71	97
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	▲ 4.8	<1.0	<1.0	<1.0
Silicon	ppm	■ 19	▲ 28	▲ 34	▲ 59
Sodium	ppm	■ 2	■ 3	■ 2	■ 3
Potassium	ppm	■ 1	■ <1	■ 1	■ <1



WEAR METALS

Iron	ppm	■ 14	■ 26	■ 34	■ 99
Copper	ppm	■ <1	■ 2	■ 3	■ 7
Lead	ppm	■ <1	■ 1	■ 2	■ 6
Tin	ppm	■ <1	■ <1	■ <1	■ 2
Aluminum	ppm	▲ 15	▲ 25	▲ 17	▲ 41
Chromium	ppm	■ 1	■ 1	■ 2	■ 4
Molybdenum	ppm	■ 45	■ 80	■ 48	■ 44
Nickel	ppm	■ <1	■ <1	■ 0	■ 3
Titanium	ppm	0	0	0	<1
Silver	ppm	■ 0	■ 0	■ 0	<1
Manganese	ppm	■ <1	■ <1	■ <1	■ 1
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	■ 1661	■ 1636	■ 1828	■ 1794
Magnesium	ppm	■ 531	■ 598	■ 580	■ 534
Zinc	ppm	■ 1173	■ 1118	■ 1230	■ 1214
Phosphorus	ppm	■ 950	■ 933	■ 1010	■ 973
Barium	ppm	■ 0	■ 0	■ 0	■ 0
Boron	ppm	■ 23	■ 50	■ 19	■ 23

Depot: COVTAM
Unique No: 10605779
Signed: Doug Bogart
Report Date: 22 Aug 2023



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GRAPHS

