



CONSTRUCTION EQUIPMENT

660308 MOSAIC VOLVO A45G 342286 - DIESEL ENGINE



Sample No: VCP454186
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: 660308 MOSAIC



SAMPLE INFORMATION

Sample Number	VCP454186	VCP428796	VCP414729	VCP411587
Sample Date	16 Jan 2024	16 Jan 2024	29 Sep 2023	05 Jun 2023
Machine Hours	3868	3868	7665	7102
Oil Hours	500	500	500	500
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	ABNORMAL	NORMAL	ATTENTION	ATTENTION

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OIL CONDITION

Visc @ 100°C	cSt	▲ 11.7	■ 12.8	▲ 12.3	▲ 11.7
Base Number (BN)	mg KOH/g	■ 8.2	■ 9.8	■ 9.8	■ 9.2
Oxidation (PA)	%	73	80	78	84

Diagnosis

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. Valve wear is indicated. 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 %	%	■ 0.2	■ 0.2	■ 0.2	■ 0.1
Nitration (PA)	%	68	61	58	71
Sulfation (PA)	%	60	60	59	61
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	■ 0.6	<1.0	<1.0	■ 0.6
Silicon	ppm	■ 12	■ 4	■ 4	■ 4
Sodium	ppm	■ 4	■ 2	■ 2	■ 2
Potassium	ppm	■ <1	■ 0	■ <1	■ <1



WEAR METALS

Iron	ppm	■ 16	■ 4	■ 2	■ 4
Copper	ppm	■ 36	■ <1	■ 1	■ 2
Lead	ppm	■ 1	■ 0	■ 1	■ 1
Tin	ppm	■ 2	■ <1	■ 1	■ <1
Aluminum	ppm	■ 3	■ 1	■ 2	■ 2
Chromium	ppm	■ <1	■ 0	■ <1	■ 0
Molybdenum	ppm	■ 47	■ 41	■ 42	■ 45
Nickel	ppm	▲ 11	■ 0	■ <1	■ <1
Titanium	ppm	<1	0	0	<1
Silver	ppm	■ 0	■ 0	■ 0	■ 0
Manganese	ppm	■ 1	■ 0	■ <1	■ <1
Vanadium	ppm	<1	0	0	<1



ADDITIVES

Calcium	ppm	■ 1700	■ 1765	■ 1697	■ 1623
Magnesium	ppm	■ 537	■ 536	■ 504	■ 473
Zinc	ppm	■ 1185	■ 1186	■ 1217	■ 1015
Phosphorus	ppm	■ 973	■ 1008	■ 976	■ 826
Barium	ppm	■ 0	■ 0	■ 0	■ 0
Boron	ppm	■ 26	■ 42	■ 35	■ 24

Depot: VOLVO0093
Unique No: 10886307
Signed: Jonathan Hester
Report Date: 22 Feb 2024



CONSTRUCTION EQUIPMENT



VOLVO GRAPHS

