



CONSTRUCTION EQUIPMENT

A11336 FREEDOM VOLVO EC160E 314382 - DIESEL ENGINE



Sample No: VCP434169
Oil Type: MOBIL 15W40
Job No: A11336 FREEDOM



SAMPLE INFORMATION

Sample Number	VCP434169	VCP416345	VCP410763	VCP400495
Sample Date	27 Oct 2023	07 Jul 2023	27 Mar 2023	26 Jan 2023
Machine Hours	3255	2662	2125	1683
Oil Hours	500	0	500	500
Oil Changed	Changed	N/A	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	MARGINAL

HOFFMAN EQUIPMENT - LIONVILLE
 120 GORDON DRIVE
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OIL CONDITION

Visc @ 100°C	cSt	█ 13.2	█ 12.3	█ 13.2	▲ 12.2
Base Number (BN)	mg KOH/g	█ 9.5	█ 5.7	█ 7.8	█ 9.7
Oxidation (PA)	%	81	47	51	79

Diagnosis

Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.



CONTAMINATION

Soot %	%	█ 0.2	█ 0.2	█ 0.1	█ 0.1
Nitration (PA)	%	71	65	64	63
Sulfation (PA)	%	60	51	50	60
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	█ 0.9	<1.0	█ 1.2
Silicon	ppm	█ 10	█ 11	█ 7	█ 5
Sodium	ppm	█ 3	█ 2	█ 1	█ 3
Potassium	ppm	█ 2	█ 2	█ 2	█ 10



WEAR METALS

Iron	ppm	█ 11	█ 12	█ 8	█ 6
Copper	ppm	█ 2	█ 2	█ <1	█ <1
Lead	ppm	█ 0	█ <1	█ 0	█ 2
Tin	ppm	█ <1	█ <1	█ <1	█ 1
Aluminum	ppm	█ 3	█ 2	█ 1	█ 1
Chromium	ppm	█ <1	█ <1	█ <1	█ <1
Molybdenum	ppm	█ 49	█ 15	█ 28	█ 25
Nickel	ppm	█ <1	█ <1	█ 0	█ <1
Titanium	ppm	<1	<1	<1	0
Silver	ppm	█ 0	█ 0	█ 0	█ <1
Manganese	ppm	█ 0	█ <1	█ <1	█ <1
Vanadium	ppm	<1	0	0	<1



ADDITIVES

Calcium	ppm	█ 1821	█ 2124	█ 1897	█ 1110
Magnesium	ppm	█ 412	█ 170	█ 380	█ 345
Zinc	ppm	█ 1197	█ 1121	█ 1148	█ 820
Phosphorus	ppm	█ 1035	█ 902	█ 980	█ 621
Barium	ppm	█ 7	█ 0	█ 2	█ 0
Boron	ppm	█ 29	█ 4	█ 6	█ 21

Depot: VOLVO8879
Unique No: 1073787
Signed: Wes Davis
Report Date: 10 Nov 2023



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VOLVO GRAPHS

