



CONSTRUCTION EQUIPMENT

A1 VOLVO L110H 632556 - DIESEL ENGINE



Sample No: VCP452784
Oil Type: MOBIL 15W40
Job No: A1



SAMPLE INFORMATION

Sample Number	VCP452784	VCP446199	VCP439458	VCP412740
Sample Date	23 May 2024	07 Mar 2024	21 Dec 2023	05 Oct 2023
Machine Hours	2775	2290	1725	1195
Oil Hours	500	500	500	500
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	ABNORMAL

HMR ASSOCIATES
 PO BOX 485
 TOUGHKENAMON, PA
 US 19374
 Contact: SERVICE MANAGER



OIL CONDITION

Visc @ 100°C	cSt	13.3	13.2	12.9	13.1
Base Number (BN)	mg KOH/g	6.5	6.2	6.4	6.5
Oxidation (PA)	%	49	47	49	55

T:
 F: (610)268-2225

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

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.3	0.3	0.2	0.4
Nitration (PA)	%	64	61	57	62
Sulfation (PA)	%	51	51	51	53
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	5	4	4	6
Sodium	ppm	2	2	<1	<1
Potassium	ppm	4	2	1	2



WEAR METALS

Iron	ppm	12	11	10	23
Copper	ppm	2	2	5	▲ 21
Lead	ppm	<1	<1	0	<1
Tin	ppm	1	1	<1	2
Aluminum	ppm	4	6	5	9
Chromium	ppm	1	1	<1	1
Molybdenum	ppm	8	8	12	23
Nickel	ppm	<1	<1	0	<1
Titanium	ppm	28	1	<1	<1
Silver	ppm	1	0	<1	<1
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	<1	<1	0	0



ADDITIVES

Calcium	ppm	2022	2191	1996	1783
Magnesium	ppm	200	92	173	271
Zinc	ppm	1113	1080	1075	1036
Phosphorus	ppm	908	910	887	853
Barium	ppm	<1	0	0	3
Boron	ppm	36	6	6	6

Depot: HMRTOU
Unique No: 11048557
Signed: Wes Davis
Report Date: 29 May 2024



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GRAPHS

