



CONSTRUCTION EQUIPMENT

A1 VOLVO L110H 632316 - DIESEL ENGINE



Sample No: VCP453639
Oil Type: MOBIL 15W40
Job No: A1



SAMPLE INFORMATION

Sample Number	VCP453639	VCP446067	VCP439454	VCP412833
Sample Date	23 May 2024	15 Mar 2024	20 Dec 2023	04 Oct 2023
Machine Hours	5160	4670	4140	3650
Oil Hours	500	500	500	500
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

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

OIL CONDITION

Visc @ 100°C	cSt	13.8	13.6	13.3	13.3
Base Number (BN)	mg KOH/g	6.3	6.2	6.8	7.1
Oxidation (PA)	%	52	47	47	57

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	0.2	0.2	0.3
Nitration (PA)	%	67	63	58	65
Sulfation (PA)	%	54	52	50	53
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	6	4	3	4
Sodium	ppm	2	2	<1	0
Potassium	ppm	3	2	<1	2

WEAR METALS

Iron	ppm	13	10	8	21
Copper	ppm	2	1	<1	2
Lead	ppm	<1	<1	0	<1
Tin	ppm	1	1	<1	1
Aluminum	ppm	5	5	3	4
Chromium	ppm	1	<1	<1	<1
Molybdenum	ppm	10	10	20	41
Nickel	ppm	<1	<1	0	<1
Titanium	ppm	28	1	<1	<1
Silver	ppm	1	0	0	0
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	<1	<1	0	0

ADDITIVES

Calcium	ppm	2109	2254	1881	1528
Magnesium	ppm	227	107	282	508
Zinc	ppm	1138	1107	1120	1132
Phosphorus	ppm	894	941	935	916
Barium	ppm	<1	0	0	2
Boron	ppm	29	5	7	7

Depot: HMRTOU
Unique No: 11048555
Signed: Wes Davis
Report Date: 29 May 2024



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GRAPHS

