



CONSTRUCTION EQUIPMENT

VOLVO A40G 352778 - DIESEL ENGINE



Sample No: VCP438447
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No:



SAMPLE INFORMATION

Sample Number	VCP438447	VCP402219	VCP415814	VCP344076
Sample Date	20 Feb 2024	18 Oct 2023	29 Jun 2023	21 Jan 2022
Machine Hours	4770	4162	3734	0
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	ABNORMAL	ABNORMAL	ABNORMAL	NORMAL

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OIL CONDITION

Visc @ 100°C	cSt	12.4	12.2	12.3	12.5
Base Number (BN)	mg KOH/g	3.1	3.5	4.8	10.2
Oxidation (PA)	%	120	100	104	86

CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.9	0.7	0.6	0.2
Nitration (PA)	%	119	100	108	73
Sulfation (PA)	%	81	72	74	66
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	11	9	8	8
Sodium	ppm	6	4	4	2
Potassium	ppm	4	2	2	0

Diagnosis

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. The copper level is abnormal. All other component wear rates are normal. There is no indication of any contamination in the oil. The oil viscosity is lower than normal. The BN level is low. Confirm oil type.

WEAR METALS

Iron	ppm	55	36	26	10
Copper	ppm	62	67	66	7
Lead	ppm	3	2	2	<1
Tin	ppm	3	3	3	1
Aluminum	ppm	8	7	5	1
Chromium	ppm	2	1	<1	<1
Molybdenum	ppm	53	51	49	48
Nickel	ppm	13	11	9	<1
Titanium	ppm	<1	<1	0	<1
Silver	ppm	0	0	0	<1
Manganese	ppm	2	1	2	<1
Vanadium	ppm	<1	0	0	0

ADDITIVES

Calcium	ppm	1458	1627	1759	1708
Magnesium	ppm	448	480	512	463
Zinc	ppm	982	1068	1116	1099
Phosphorus	ppm	712	738	835	912
Barium	ppm	1	0	0	0
Boron	ppm	13	8	6	38

Depot: VOLVO0090
Unique No: 10899672
Signed: Jonathan Hester
Report Date: 29 Feb 2024



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VOLVO GRAPHS

