



CONSTRUCTION EQUIPMENT

24245 VOLVO A40G 352430 - DIESEL ENGINE



Sample No: VCP433231
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: 24245



SAMPLE INFORMATION

Sample Number	VCP433231	VCP384007	VCP365510	VCP378370
Sample Date	24 Oct 2023	08 Jun 2023	14 Sep 2022	19 May 2022
Machine Hours	1069	4133	3532	3064
Oil Hours	1000	1000	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	SEVERE	ABNORMAL	SEVERE	ABNORMAL

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OIL CONDITION

Visc @ 100°C	cSt	13.6	12.8	12.8	12.8
Base Number (BN)	mg KOH/g	6.9	10.2	10.8	7.8
Oxidation (PA)	%	86	80	60	57

CONTAMINATION

Soot %	%	0.8	0.5	0.2	0.2
Nitration (PA)	%	94	71	84	69
Sulfation (PA)	%	64	66	58	51
Glycol	%	NEG	NEG	0.10	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	18	7	12	5
Sodium	ppm	6	208	759	225
Potassium	ppm	3	132	418	29

WEAR METALS

Iron	ppm	62	18	13	10
Copper	ppm	35	6	2	2
Lead	ppm	2	<1	<1	<1
Tin	ppm	4	<1	<1	1
Aluminum	ppm	106	8	2	2
Chromium	ppm	6	<1	<1	<1
Molybdenum	ppm	31	55	96	63
Nickel	ppm	<1	11	2	1
Titanium	ppm	<1	0	0	0
Silver	ppm	1	0	0	<1
Manganese	ppm	3	<1	<1	<1
Vanadium	ppm	0	0	0	0

ADDITIVES

Calcium	ppm	1482	1557	1069	1118
Magnesium	ppm	514	515	877	984
Zinc	ppm	1077	1122	1165	1261
Phosphorus	ppm	927	949	1000	1083
Barium	ppm	15	0	0	0
Boron	ppm	29	32	11	8

Diagnosis

Oil and filter change at the time of sampling has been noted. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. Note that there appears to be a discrepancy in the total time on this component, when compared to the historical data. Piston, ring and cylinder wear is indicated. Bearing and/or bushing wear is indicated. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil.

Depot: VOLVO3387
Unique No: 10715331
Signed: Don Baldrige
Report Date: 31 Oct 2023



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GRAPHS

