



CONSTRUCTION EQUIPMENT

24556 VOLVO A40G 352308 - DIESEL ENGINE



Sample No: VCP266440
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: 24556



SAMPLE INFORMATION

Sample Number	VCP266440	VCP425558	VCP302195	VCP290384
Sample Date	08 Feb 2024	20 May 2023	14 Jan 2021	29 Sep 2020
Machine Hours	5737	4979	2421	1916
Oil Hours	0	1000	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	ABNORMAL	ABNORMAL	NORMAL	NORMAL

BALFOUR BEATTY INFRASTRUCTURE INC
 6701 OLD PLANK RD
 PARKTON, NC
 US 28371
 Contact: Service Manager



OIL CONDITION

Visc @ 100°C	cSt	▲ 11.2	■ 12.5	■ 12.4	■ 13.8
Base Number (BN)	mg KOH/g	■ 9.8	■ 7.2	---	---
Oxidation (PA)	%	71	92	75	59

T:
F:

Diagnosis

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. Valve wear is indicated. Fuel content negligible. There is no indication of any contamination in the oil. The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	■ 0.3	■ 0.3	■ 0.2	■ 0.1
Nitration (PA)	%	82	91	66	54
Sulfation (PA)	%	54	66	60	54
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	■ 0.7	<1.0	<1.0	<1.0
Silicon	ppm	■ 7	■ 6	■ 5	■ 2
Sodium	ppm	■ <1	■ 3	■ 2	■ 0
Potassium	ppm	■ 2	■ 3	■ 0	■ 0



WEAR METALS

Iron	ppm	■ 17	■ 17	■ 5	■ 6
Copper	ppm	■ 3	■ 11	■ 4	■ 18
Lead	ppm	■ 0	■ 2	■ 4	■ <1
Tin	ppm	■ <1	■ 2	■ 0	■ <1
Aluminum	ppm	■ 10	■ 8	■ 2	■ <1
Chromium	ppm	■ 1	■ 1	■ <1	■ <1
Molybdenum	ppm	■ 36	■ 43	■ 39	■ 58
Nickel	ppm	▲ 7	▲ 4	■ 2	■ 1
Titanium	ppm	<1	<1	<1	■ 0
Silver	ppm	■ 0	■ 0	■ 0	■ <1
Manganese	ppm	■ <1	■ 1	<1	■ <1
Vanadium	ppm	0	<1	0	0



ADDITIVES

Calcium	ppm	■ 1869	■ 1819	■ 1608	■ 1138
Magnesium	ppm	■ 352	■ 492	■ 592	■ 889
Zinc	ppm	■ 1094	■ 1150	■ 1040	■ 1268
Phosphorus	ppm	■ 836	■ 829	■ 912	■ 1022
Barium	ppm	■ 11	■ 0	■ 0	■ 0
Boron	ppm	■ 31	■ 21	■ 39	■ 5

Depot: BALPARNC
Unique No: 10882787
Signed: Jonathan Hester
Report Date: 19 Feb 2024



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GRAPHS

