



CONSTRUCTION EQUIPMENT

636420 VOLVO A35F 10350 - DIESEL ENGINE



Sample No: VCP310933
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: 636420



SAMPLE INFORMATION

Sample Number	VCP310933	VCP268153	VCP240419	VCP233827
Sample Date	18 Jun 2021	15 Jan 2020	05 Sep 2019	05 Dec 2018
Machine Hours	11179	10665	10039	8976
Oil Hours	500	500	500	500
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	ABNORMAL	NORMAL	NORMAL	NORMAL

RIPA AND ASSOCIATES

10149 FISHER AVENUE
TAMPA, FL
US 33619
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OIL CONDITION

Visc @ 100°C	cSt	▲ 12.2	■ 13.0	■ 12.8	■ 12.95
Oxidation (PA)	%	82	74	82	80

CONTAMINATION

Water	%	■ 0.109	---	---	---
Soot %	%	■ 0.4	■ 1	■ 1.1	■ 0.6
Nitration (PA)	%	75	74	70	65
Sulfation (PA)	%	66	61	64	61
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	■ 0.8	<1.0	<1.0	<1.0
Silicon	ppm	■ 19	■ 6	■ 8	■ 6
Sodium	ppm	■ 3	■ 3	■ 3	■ 6
Potassium	ppm	■ 2	■ 1	■ 1	■ <1

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. Fuel content negligible. There is no indication of any contamination in the oil. The oil viscosity is lower than normal. Confirm oil type.

WEAR METALS

Iron	ppm	■ 26	■ 12	■ 14	■ 8
Copper	ppm	▲ 25	■ 2	■ 4	■ 1
Lead	ppm	■ 2	■ 1	■ 2	■ 2
Tin	ppm	■ <1	■ <1	■ <1	■ <1
Aluminum	ppm	■ 15	■ 6	■ 8	■ 3
Chromium	ppm	■ 1	■ <1	■ <1	■ <1
Molybdenum	ppm	■ 40	■ 28	■ 40	■ 38
Nickel	ppm	■ 1	■ <1	■ <1	■ <1
Titanium	ppm	<1	0	<1	<1
Silver	ppm	<1	0	0	0
Manganese	ppm	■ <1	■ <1	■ <1	■ <1
Vanadium	ppm	0	0	0	0

ADDITIVES

Calcium	ppm	■ 1582	■ 1532	■ 1679	■ 1562
Magnesium	ppm	■ 544	■ 555	■ 500	■ 461
Zinc	ppm	■ 1014	■ 781	■ 873	■ 786
Phosphorus	ppm	■ 930	■ 726	■ 735	■ 686
Barium	ppm	■ 0	■ 0	■ 0	■ 0
Boron	ppm	■ 60	■ 23	■ 29	■ 22

Depot: RIPTAM
Unique No: 9591536
Signed: Jonathan Hester
Report Date: 23 Jul 2021



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VOLVO GRAPHS

