



CONSTRUCTION EQUIPMENT

SPM453366 VOLVO SD115B 236555 - DIESEL ENGINE



Sample No: VCP386101
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: SPM453366



SAMPLE INFORMATION

Sample Number	VCP386101	VCP359056	VCP343533	VCP314710
Sample Date	13 Sep 2022	02 May 2022	30 Nov 2021	12 Jun 2021
Machine Hours	5481	5221	4650	3986
Oil Hours	500	500	500	500
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	ABNORMAL	NORMAL	NORMAL	ATTENTION

RIPA AND ASSOCIATES

10149 FISHER AVENUE
TAMPA, FL
US 33619
Contact: ROBERT TURNER
rturner@ripatampa.com



OIL CONDITION

Visc @ 100°C	cSt	▲ 11.7	■ 13.0	■ 12.7	▲ 12.4
Base Number (BN)	mg KOH/g	■ 11.0	■ 8.0	■ 9.5	---
Oxidation (PA)	%	87	78	84	74

T:
F:

Diagnosis

We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. All component wear rates are normal. There is a moderate amount of fuel present in the oil. Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	■ 0.7	■ 1	■ 0.5	■ 0.4
Nitration (PA)	%	87	106	95	82
Sulfation (PA)	%	67	64	60	58
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	▲ 5.9	<1.0	<1.0	▲ 3.3
Silicon	ppm	■ 7	■ 7	■ 9	■ 5
Sodium	ppm	■ 2	■ 3	■ 3	■ 4
Potassium	ppm	■ 4	■ 6	■ 4	■ 1



WEAR METALS

Iron	ppm	■ 21	■ 23	■ 18	■ 15
Copper	ppm	■ 1	■ 2	■ 3	■ 3
Lead	ppm	■ <1	■ 2	■ <1	■ <1
Tin	ppm	■ <1	■ 1	■ 2	■ 2
Aluminum	ppm	■ 2	■ 3	■ 5	■ <1
Chromium	ppm	■ 1	■ 2	■ 2	■ 2
Molybdenum	ppm	■ 43	■ 63	■ 52	■ 52
Nickel	ppm	■ 0	■ <1	■ <1	■ <1
Titanium	ppm	0	<1	<1	<1
Silver	ppm	0	0	<1	0
Manganese	ppm	■ <1	■ <1	■ <1	■ <1
Vanadium	ppm	0	<1	<1	0



ADDITIVES

Calcium	ppm	■ 1603	■ 1929	■ 1572	■ 1423
Magnesium	ppm	■ 447	■ 409	728	745
Zinc	ppm	■ 1057	■ 1159	■ 1240	■ 1166
Phosphorus	ppm	■ 866	■ 956	■ 1031	■ 973
Barium	ppm	■ 0	■ 0	■ 0	■ 0
Boron	ppm	■ 22	■ 15	■ 11	■ 20

Depot: RIPTAM
Unique No: 10140885
Signed: Doug Bogart
Report Date: 23 Sep 2022



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VOLVO GRAPHS

