



CONSTRUCTION EQUIPMENT

687744 VOLVO L110H 631322 - DIESEL ENGINE



Sample No: VCP440054
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: 687744



SAMPLE INFORMATION

Sample Number	VCP440054	VCP440630	VCP393753	VCP410340
Sample Date	16 Mar 2024	30 Nov 2023	01 Aug 2023	01 Apr 2023
Machine Hours	11137	10589	9947	9562
Oil Hours	500	0	500	210
Oil Changed	Changed	Changed	Changed	Not Changd
Sample Status	ABNORMAL	ABNORMAL	ABNORMAL	ATTENTION

RIPA AND ASSOCIATES
 10149 FISHER AVENUE
 TAMPA, FL
 US 33619
 Contact: PM Services
 PMServices@ripaconstruction.com
 T:
 F:

OIL CONDITION

Visc @ 100°C	cSt	13.3	14.0	12.9	12.8
Base Number (BN)	mg KOH/g	9.2	8.0	9.4	10.3
Oxidation (PA)	%	74	53	79	76

CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.2	0.1	0.3	0.2
Nitration (PA)	%	65	57	64	52
Sulfation (PA)	%	56	47	58	60
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	6	4	7	5
Sodium	ppm	1	0	3	2
Potassium	ppm	1	3	2	0

Diagnosis

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor. The aluminum level is abnormal. All other component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

WEAR METALS

Iron	ppm	21	6	23	11
Copper	ppm	1	<1	1	<1
Lead	ppm	<1	<1	<1	0
Tin	ppm	<1	<1	1	0
Aluminum	ppm	▲ 14	▲ 17	▲ 37	● 23
Chromium	ppm	1	<1	2	1
Molybdenum	ppm	52	69	47	47
Nickel	ppm	<1	<1	<1	0
Titanium	ppm	<1	<1	<1	0
Silver	ppm	0	0	0	0
Manganese	ppm	<1	0	<1	<1
Vanadium	ppm	<1	<1	0	0

ADDITIVES

Calcium	ppm	1933	1697	1747	1690
Magnesium	ppm	509	212	582	552
Zinc	ppm	1289	1105	1237	1160
Phosphorus	ppm	1051	917	1009	980
Barium	ppm	0	<1	0	0
Boron	ppm	33	58	27	50

Depot: RIPTAM
Unique No: 10970501
Signed: Don Baldrige
Report Date: 14 Apr 2024



CONSTRUCTION EQUIPMENT



VOLVO GRAPHS

