



CONSTRUCTION EQUIPMENT

VOLVO L90H 624818 - DIESEL ENGINE



Sample No: VCP415939
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No:



SAMPLE INFORMATION

Sample Number	VCP415939	VCP360703	VCP313197	VCP310893
Sample Date	05 Jun 2023	07 Apr 2022	14 Oct 2021	14 Apr 2021
Machine Hours	3023	2493	2055	1494
Oil Hours	500	500	1500	500
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	ABNORMAL	NORMAL	NORMAL	NORMAL

RIPA AND ASSOCIATES

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

OIL CONDITION

Visc @ 100°C	cSt	█ 13.4	█ 13.2	█ 13.1	█ 13.1
Base Number (BN)	mg KOH/g	█ 11.3	█ 11.7	---	---
Oxidation (PA)	%	83	83	76	74

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 suitable for further service.

CONTAMINATION

Soot %	%	█ 0.5	█ 0.4	█ 0.4	█ 0.2
Nitration (PA)	%	70	68	68	72
Sulfation (PA)	%	61	63	60	60
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	█ 8	█ 7	█ 8	█ 5
Sodium	ppm	█ 2	█ 3	█ 3	█ 3
Potassium	ppm	█ <1	█ 1	█ 0	█ 2

WEAR METALS

Iron	ppm	█ 14	█ 15	█ 20	█ 19
Copper	ppm	█ <1	█ <1	█ 1	█ 1
Lead	ppm	█ 0	█ 0	█ 1	█ 0
Tin	ppm	█ <1	█ <1	█ 1	█ <1
Aluminum	ppm	▲ 18	█ 9	█ 10	█ 4
Chromium	ppm	█ <1	█ 1	█ 2	█ 1
Molybdenum	ppm	█ 38	█ 46	█ 54	█ 37
Nickel	ppm	█ 0	█ <1	█ <1	█ <1
Titanium	ppm	0	<1	<1	<1
Silver	ppm	█ 0	0	0	0
Manganese	ppm	█ <1	█ <1	█ <1	█ <1
Vanadium	ppm	<1	0	0	0

ADDITIVES

Calcium	ppm	█ 1602	█ 1866	█ 1714	█ 1650
Magnesium	ppm	█ 486	█ 659	█ 626	█ 554
Zinc	ppm	█ 1044	█ 1364	█ 1226	█ 1031
Phosphorus	ppm	█ 865	█ 1074	█ 1026	█ 935
Barium	ppm	█ 0	█ 0	█ 0	█ 0
Boron	ppm	█ 33	█ 35	█ 26	█ 43

Depot: RIPTAM
Unique No: 10551675
Signed: Don Baldrige
Report Date: 13 Jul 2023



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GRAPHS

