



CONSTRUCTION EQUIPMENT

VOLVO L90F 68992 - DIESEL ENGINE



Sample No: VCP409666

Oil Type: GULF SUPER DUTY + 15W40

Job No:



SAMPLE INFORMATION

Sample Number	VCP409666	VCP409667	VCP371833	VCP371843
Sample Date	03 Sep 2023	27 Jul 2023	04 May 2023	19 Mar 2023
Machine Hours	21090	21162	20586	20303
Oil Hours	290	300	330	303
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	ABNORMAL	NORMAL	NORMAL



WE CARE ORGANICS

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OIL CONDITION

Visc @ 100°C	cSt	14.0	14.6	14.0	14.4
Base Number (BN)	mg KOH/g	7.1	6.8	6.7	8.6
Oxidation (PA)	%	56	80	59	63



CONTAMINATION

Soot %	%	0.2	0.6	0.3	0.4
Nitration (PA)	%	68	88	72	70
Sulfation (PA)	%	52	63	50	55
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	12	24	13	3
Sodium	ppm	3	3	2	0
Potassium	ppm	0	2	2	2



WEAR METALS

Iron	ppm	4	13	5	10
Copper	ppm	<1	3	<1	1
Lead	ppm	1	8	0	<1
Tin	ppm	<1	<1	0	<1
Aluminum	ppm	2	1	2	4
Chromium	ppm	0	<1	0	<1
Molybdenum	ppm	82	91	89	58
Nickel	ppm	0	0	0	0
Titanium	ppm	0	<1	0	0
Silver	ppm	0	<1	0	0
Manganese	ppm	0	<1	<1	<1
Vanadium	ppm	<1	<1	0	0



ADDITIVES

Calcium	ppm	2150	2343	2255	1076
Magnesium	ppm	89	134	179	903
Zinc	ppm	1183	1387	1430	1210
Phosphorus	ppm	985	1059	1107	1003
Barium	ppm	0	0	0	0
Boron	ppm	65	32	56	<1

Diagnosis

Resample at the next service interval to monitor. All 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.

Depot: SYNCOL
Unique No: 10634956
Signed: Wes Davis
Report Date: 08 Sep 2023

VOLVO **GRAPHS**

