



CONSTRUCTION EQUIPMENT

W02007584 VOLVO L90H 623044 - DIESEL ENGINE



Sample No: VCP425212
Oil Type: MOBIL 15W40
Job No: W02007584



SAMPLE INFORMATION

Sample Number	VCP425212	VCP416226	VCP367932	VCP316500
Sample Date	25 Sep 2023	01 Jun 2023	13 Jan 2023	22 Sep 2022
Machine Hours	13539	12965	12389	11955
Oil Hours	500	500	500	500
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	ATTENTION	NORMAL	NORMAL

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OIL CONDITION

Visc @ 100°C	cSt	12.6	12.2	12.9	12.8
Base Number (BN)	mg KOH/g	7.7	8.1	8.8	10.6
Oxidation (PA)	%	68	68	67	78

CONTAMINATION

Soot %	%	0.1	0.1	0.1	0.1
Nitration (PA)	%	71	78	64	65
Sulfation (PA)	%	60	59	60	61
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	3.5	<1.0	<1.0
Silicon	ppm	7	6	7	6
Sodium	ppm	1	<1	2	2
Potassium	ppm	0	0	0	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.

WEAR METALS

Iron	ppm	7	6	7	6
Copper	ppm	<1	<1	<1	<1
Lead	ppm	1	0	<1	<1
Tin	ppm	<1	<1	<1	<1
Aluminum	ppm	<1	2	3	2
Chromium	ppm	<1	<1	<1	<1
Molybdenum	ppm	122	109	104	46
Nickel	ppm	0	0	0	<1
Titanium	ppm	0	<1	0	<1
Silver	ppm	0	0	0	<1
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	<1	0	0	0

ADDITIVES

Calcium	ppm	1507	1593	1499	1507
Magnesium	ppm	637	645	646	620
Zinc	ppm	872	876	890	1107
Phosphorus	ppm	715	693	723	916
Barium	ppm	0	0	0	0
Boron	ppm	229	245	250	37

Depot: VOLVO0002
Unique No: 10673375
Signed: Don Baldrige
Report Date: 04 Oct 2023

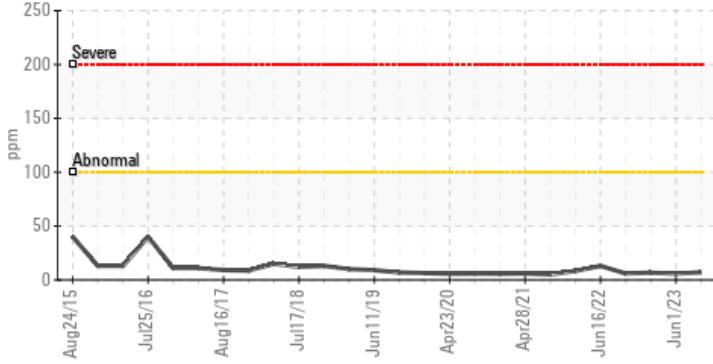


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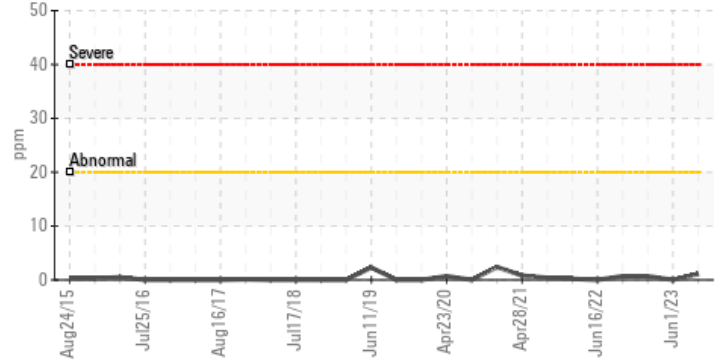


GRAPHS

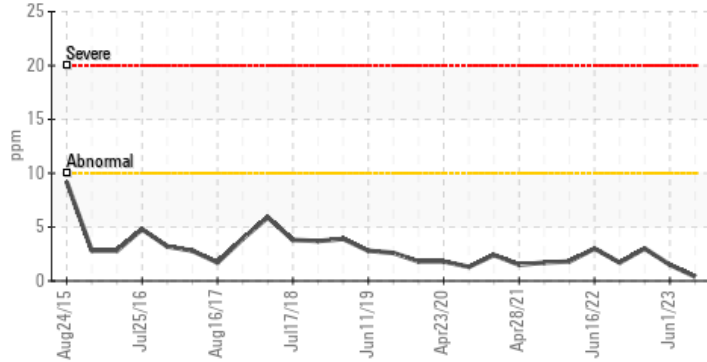
Iron (ppm)



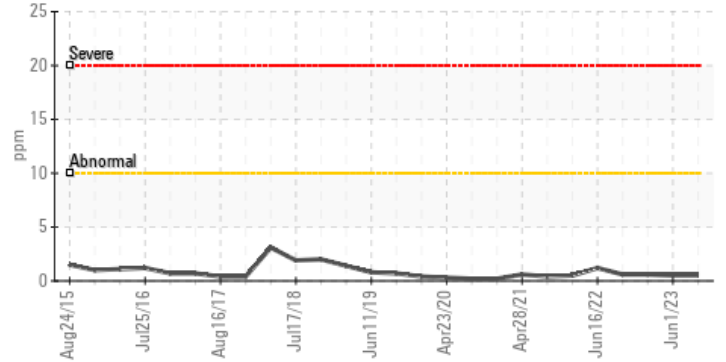
Lead (ppm)



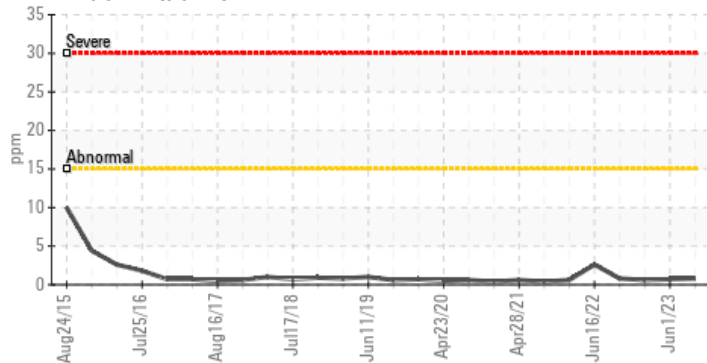
Aluminum (ppm)



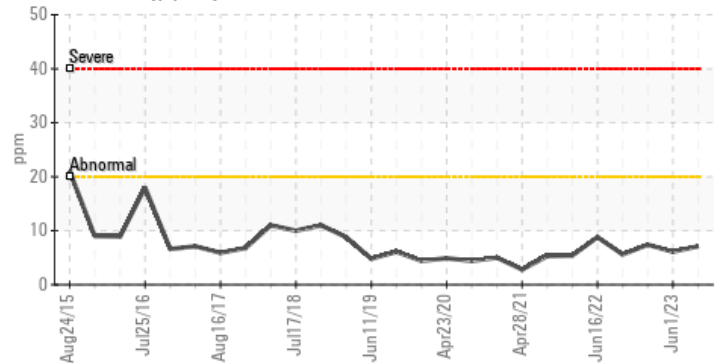
Chromium (ppm)



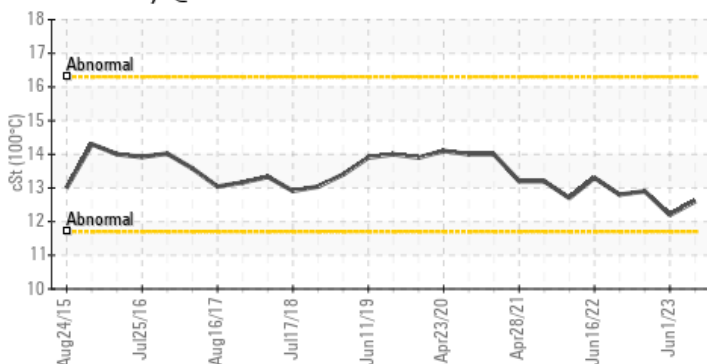
Copper (ppm)



Silicon (ppm)



Viscosity @ 100°C



Base Number

