



CONSTRUCTION EQUIPMENT

SPM659837-10 VOLVO L90H 626191 - DIESEL ENGINE



Sample No: VCP436603
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: SPM659837-10



SAMPLE INFORMATION

Sample Number	VCP436603	VCP395889	VCP400423	VCP375824
Sample Date	17 Jan 2024	01 Aug 2023	09 Jan 2023	10 Jun 2022
Machine Hours	3975	3205	2055	646
Oil Hours	0	0	0	0
Oil Changed	N/A	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

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OIL CONDITION

Visc @ 100°C	cSt	12.8	12.9	13.1	13.0
Base Number (BN)	mg KOH/g	9.8	5.8	8.2	9.1
Oxidation (PA)	%	81	84	76	86

CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.6	0.7	0.6	0.6
Nitration (PA)	%	73	83	76	84
Sulfation (PA)	%	60	61	58	64
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	7	6	8	6
Sodium	ppm	2	3	2	2
Potassium	ppm	3	<1	<1	0

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	11	9	31	14
Copper	ppm	1	2	6	4
Lead	ppm	1	0	1	2
Tin	ppm	1	<1	2	2
Aluminum	ppm	8	4	12	3
Chromium	ppm	<1	<1	3	<1
Molybdenum	ppm	60	47	50	49
Nickel	ppm	<1	<1	<1	1
Titanium	ppm	0	<1	<1	<1
Silver	ppm	0	<1	0	0
Manganese	ppm	<1	<1	1	<1
Vanadium	ppm	<1	<1	0	0

ADDITIVES

Calcium	ppm	1596	1744	1627	1597
Magnesium	ppm	529	538	509	480
Zinc	ppm	1147	1131	1136	1009
Phosphorus	ppm	978	921	873	830
Barium	ppm	0	0	0	0
Boron	ppm	24	34	14	25

Depot: VOLVO0090
Unique No: 10857552
Signed: Wes Davis
Report Date: 01 Feb 2024

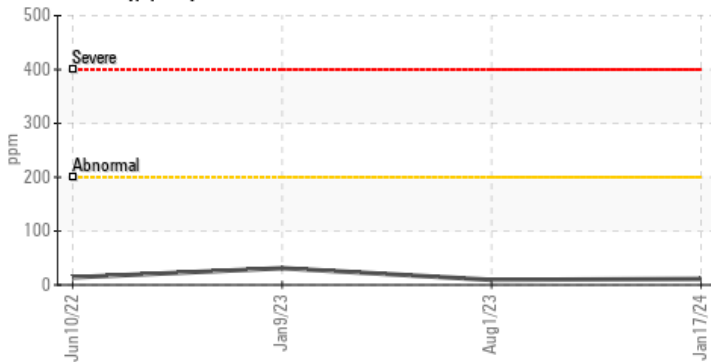


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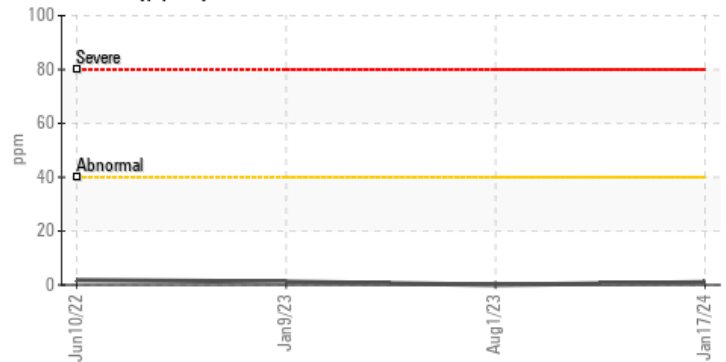


GRAPHS

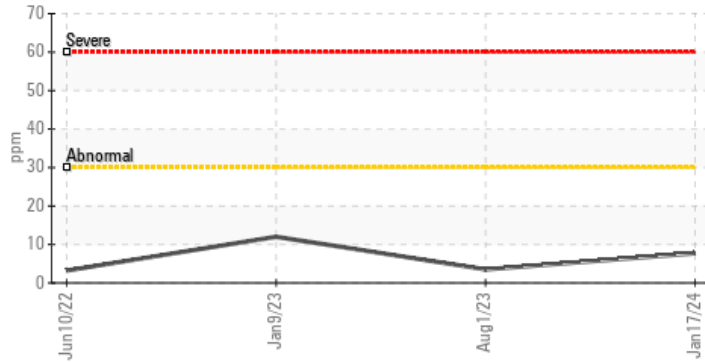
Iron (ppm)



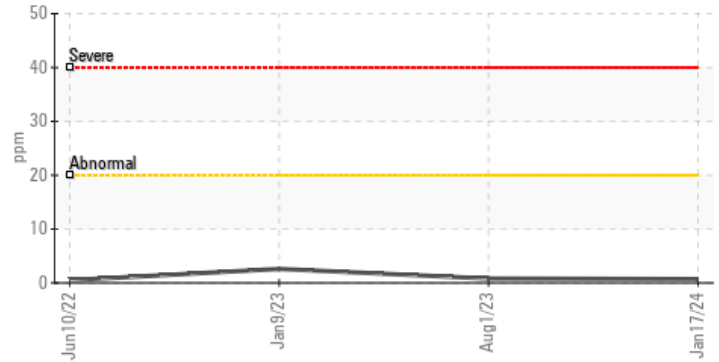
Lead (ppm)



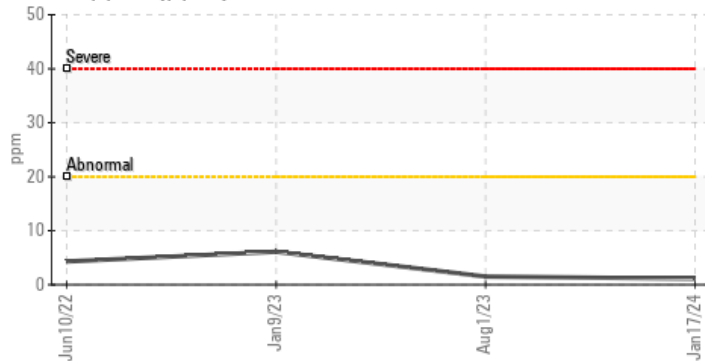
Aluminum (ppm)



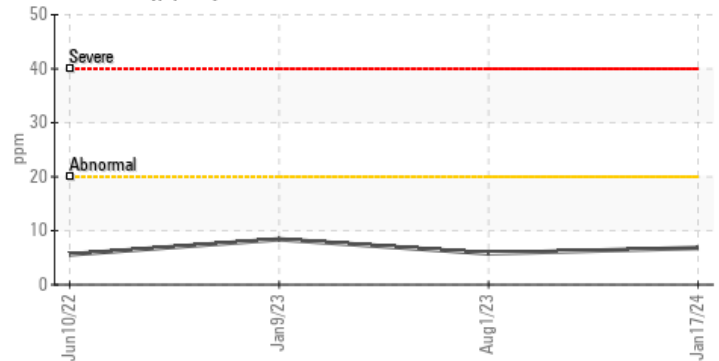
Chromium (ppm)



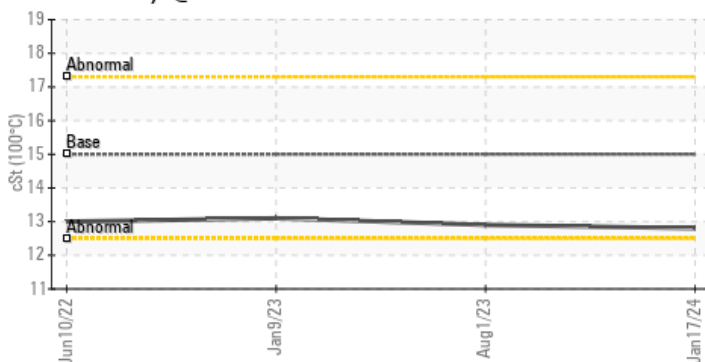
Copper (ppm)



Silicon (ppm)



Viscosity @ 100°C



Base Number

