



CONSTRUCTION EQUIPMENT

352371 - DIESEL ENGINE



Sample No: VCP436577
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No:



SAMPLE INFORMATION

Sample Number	VCP436577	VCP455205	VCP442671	VCP349911
Sample Date	10 Jul 2024	09 May 2024	02 Feb 2024	03 Feb 2022
Machine Hours	5560	5551	5814	2372
Oil Hours	0	0	0	0
Oil Changed	Not Changd	Changed	N/A	Not Changd
Sample Status	NORMAL	ABNORMAL	NORMAL	ABNORMAL

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OIL CONDITION

Visc @ 100°C	cSt	13.0	12.8	12.6	15.79
Base Number (BN)	mg KOH/g	10.8	9.3	8.4	12.5
Oxidation (PA)	%	73	77	79	82



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.1	0.5	0.5	0.3
Nitration (PA)	%	45	73	78	73
Sulfation (PA)	%	58	61	60	57
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	10	▲ 29	5	▲ 33
Sodium	ppm	2	0	2	3
Potassium	ppm	<1	3	0	2



WEAR METALS

Iron	ppm	11	38	10	45
Copper	ppm	<1	2	2	2
Lead	ppm	0	2	<1	<1
Tin	ppm	0	2	<1	<1
Aluminum	ppm	3	● 8	3	● 6
Chromium	ppm	<1	3	<1	2
Molybdenum	ppm	40	50	50	44
Nickel	ppm	0	1	3	1
Titanium	ppm	0	<1	0	<1
Silver	ppm	0	0	0	0
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	0	<1	0	0



ADDITIVES

Calcium	ppm	1732	1661	1629	1845
Magnesium	ppm	522	543	567	580
Zinc	ppm	1135	1128	1132	969
Phosphorus	ppm	947	1042	980	825
Barium	ppm	0	2	<1	0
Boron	ppm	61	45	27	72

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: VOLVO0090
Unique No: 11124274
Signed: Wes Davis
Report Date: 15 Jul 2024

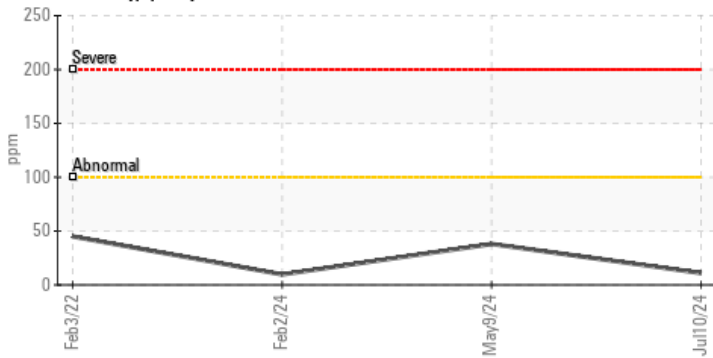


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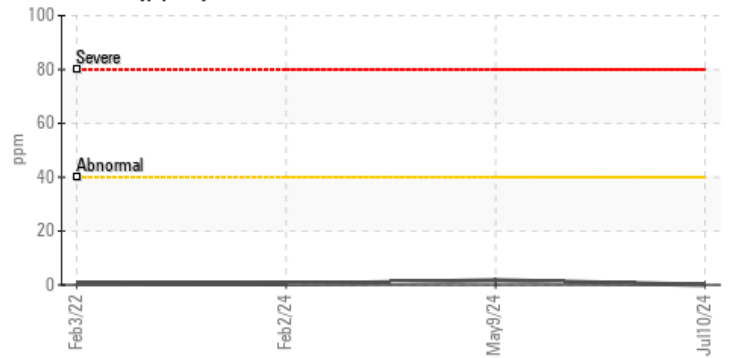


GRAPHS

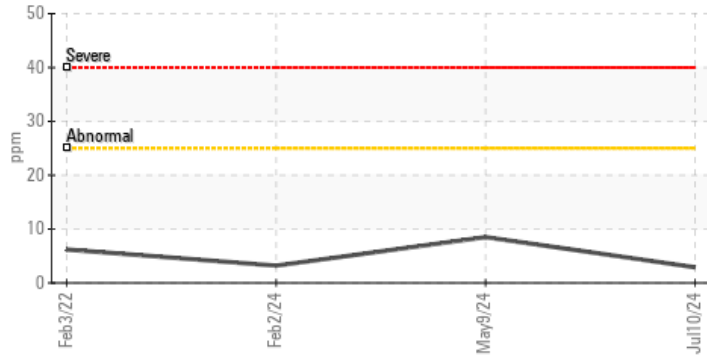
Iron (ppm)



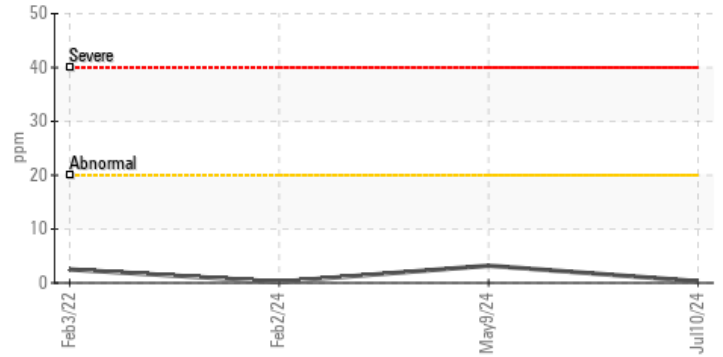
Lead (ppm)



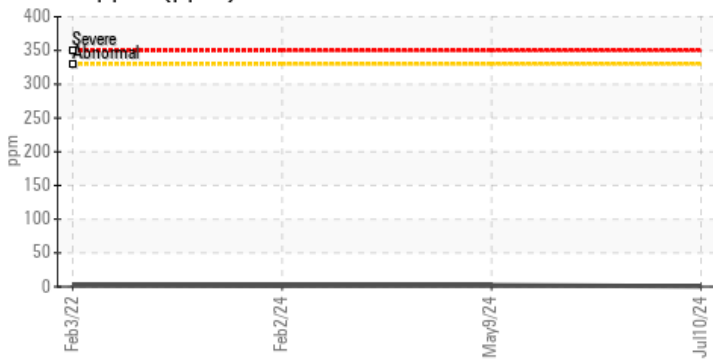
Aluminum (ppm)



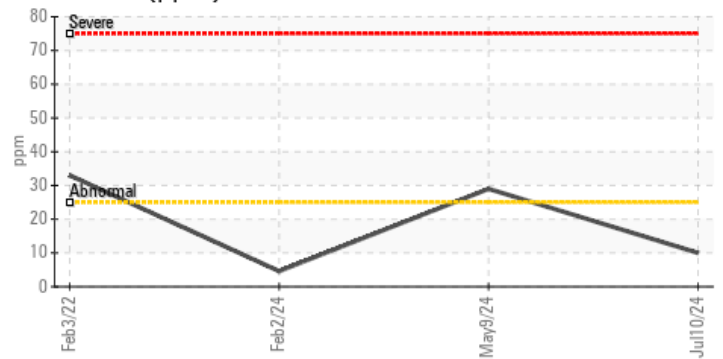
Chromium (ppm)



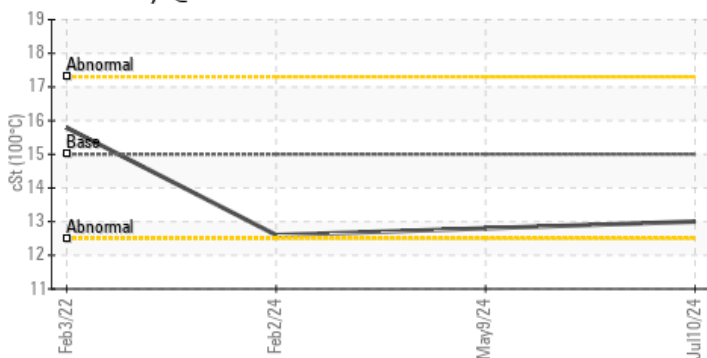
Copper (ppm)



Silicon (ppm)



Viscosity @ 100°C



Base Number

