CONSTRUCTION EQUIPMENT

1846 IAA BAY POINT VOLVO L90G 617359 - DIESEL ENGINE

Sample No: VCP439437

Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3

Job No: 1846 IAA BAY POINT

VCES- VOLVO CONSTRUCTION EQUIPMENT
1944 MARINA BLVD
SAN LEANDRO, CA
US 94577
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SAMPLE INFORMATION

Sample Number		**VCP439437**	VCP403986	VCP340933	VCP343081
Sample Date		**22 Feb 2024**	07 Nov 2023	19 Jul 2023	24 Mar 2023
Machine Hours		**17399**	16929	16466	16042
Oil Hours		**0**	0	0	0
Oil Changed		**Changed**	Changed	Changed	Changed
Sample Status		**ABNORMAL**	NORMAL	NORMAL	NORMAL

OIL CONDITION

Visc @ 100°C	cSt	**12.7**	12.7	13.1	13.0
Base Number (BN)	mg KOH/g	**10.4**	10.6	10.5	8.6
Oxidation (PA)	%	**80**	82	80	88

CONTAMINATION

Water	%	**NEG**	NEG	NEG	NEG
Soot %	%	**0.3**	0.3	0.3	0.6
Nitration (PA)	%	**59**	58	57	96
Sulfation (PA)	%	**61**	61	60	70
Glycol	%	**NEG**	NEG	NEG	NEG
Fuel	%	**<1.0**	<1.0	<1.0	<1.0
Silicon	ppm	**8**	7	7	7
Sodium	ppm	▲ **157**	78	44	34
Potassium	ppm	▲ **50**	29	23	20

WEAR METALS

Iron	ppm	**13**	9	5	6
Copper	ppm	**<1**	<1	<1	<1
Lead	ppm	**0**	<1	0	0
Tin	ppm	**<1**	0	<1	<1
Aluminum	ppm	**7**	5	5	6
Chromium	ppm	**<1**	0	<1	<1
Molybdenum	ppm	**43**	41	41	42
Nickel	ppm	**0**	0	0	0
Titanium	ppm	**0**	0	0	<1
Silver	ppm	**<1**	<1	<1	0
Manganese	ppm	**<1**	<1	<1	1
Vanadium	ppm	**0**	0	0	0

ADDITIVES

Calcium	ppm	**1728**	1703	1797	1768
Magnesium	ppm	**527**	508	525	529
Zinc	ppm	**1131**	1141	1183	1210
Phosphorus	ppm	**991**	960	981	960
Barium	ppm	**0**	<1	1	0
Boron	ppm	**42**	37	41	40

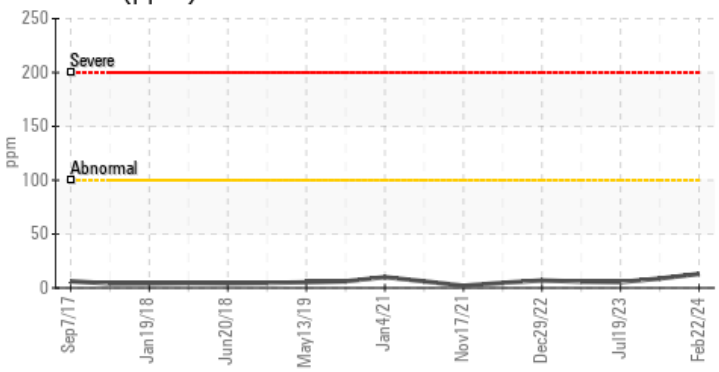
Diagnosis

We advise that you check for the source of the coolant leak. Check for low coolant level. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.All component wear rates are normal. Sodium and/or potassium levels are high. The BN result indicates that there is suitable alkalinity remaining in the oil.

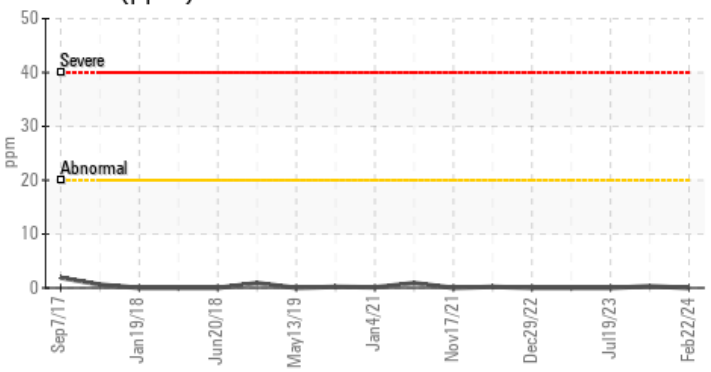
Depot: VOLVO4487
Unique No: 10901691
Signed: Jonathan Hester
Report Date: 04 Mar 2024

GRAPHS

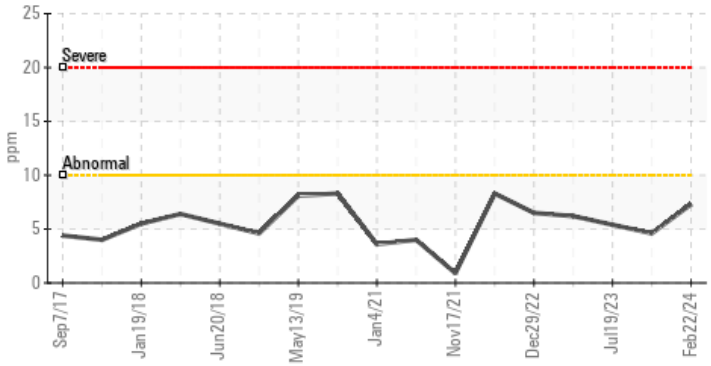
Iron (ppm)



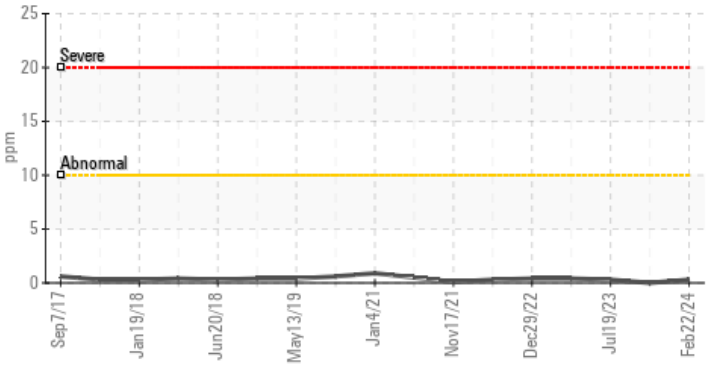
Lead (ppm)



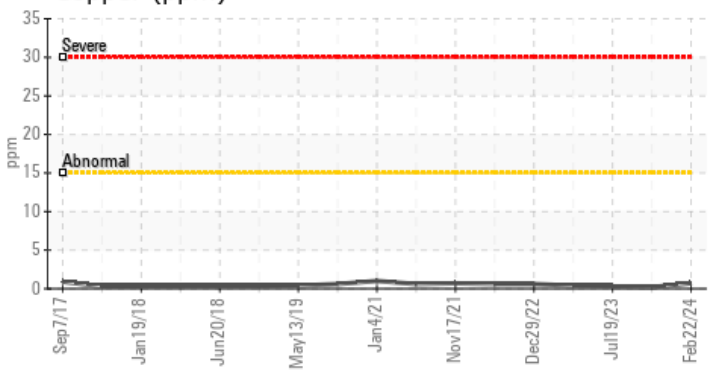
Aluminum (ppm)



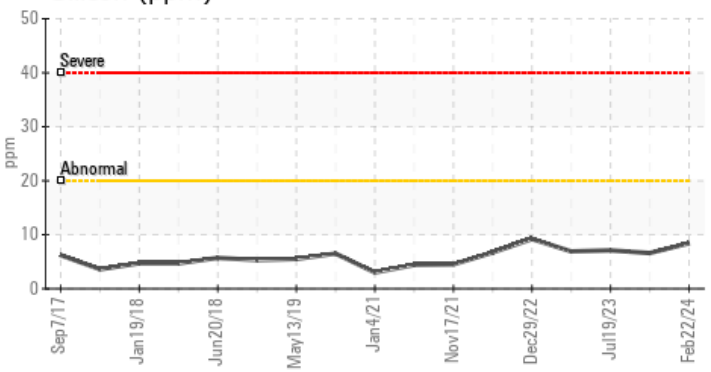
Chromium (ppm)



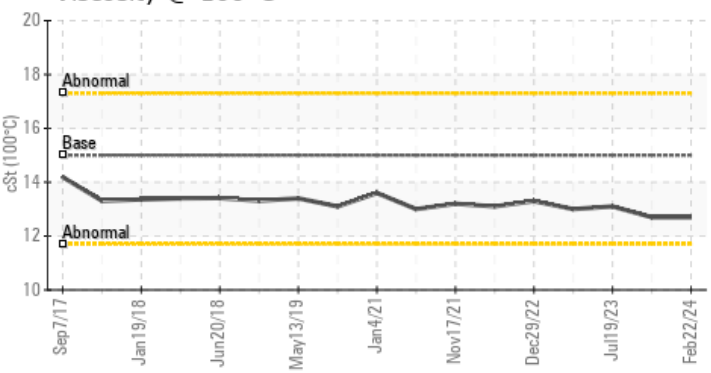
Copper (ppm)



Silicon (ppm)



Viscosity @ 100°C



Base Number