CONSTRUCTION EQUIPMENT
VOLVO L260H 81 (S/N 1171) - DIESEL ENGINE

Sample No: VCP411603
Oil Type: SHELL ROTELLA T 15W40
Job No:

SAMPLE INFORMATION

Sample Number		**VCP411603**	VCP405449	VCP396284	VCP331125
Sample Date		**01 Nov 2023**	21 Jul 2023	08 Feb 2023	29 Aug 2022
Machine Hours		**11594**	10700	10700	9605
Oil Hours		**0**	500	0	0
Oil Changed		**Changed**	Changed	Changed	Changed
Sample Status		**SEVERE**	NORMAL	ATTENTION	NORMAL

OIL CONDITION

Visc @ 100°C	cSt	**5.1**	12.3	11.6	12.3
Base Number (BN)	mg KOH/g	**7.3**	6.1	3.9	7.4
Oxidation (PA)	%	**42**	62	67	61

CONTAMINATION

Water	%	**NEG**	NEG	NEG	NEG
Soot %	%	**0.1**	0.3	0.4	0.2
Nitration (PA)	%	**52**	69	73	64
Sulfation (PA)	%	**43**	57	65	57
Glycol	%	**NEG**	NEG	NEG	NEG
Fuel	%	**30.7**	<1.0	1.2	<1.0
Silicon	ppm	**4**	5	6	4
Sodium	ppm	**2**	3	4	2
Potassium	ppm	**3**	3	2	2

WEAR METALS

Iron	ppm	**6**	12	10	5
Copper	ppm	**2**	6	2	2
Lead	ppm	**0**	<1	3	<1
Tin	ppm	**0**	<1	<1	<1
Aluminum	ppm	**<1**	2	1	2
Chromium	ppm	**<1**	<1	<1	<1
Molybdenum	ppm	**18**	56	69	46
Nickel	ppm	**<1**	<1	0	0
Titanium	ppm	**<1**	<1	0	0
Silver	ppm	**0**	0	0	0
Manganese	ppm	**0**	<1	<1	<1
Vanadium	ppm	**0**	0	0	0

ADDITIVES

Calcium	ppm	**1307**	1710	1743	1608
Magnesium	ppm	**88**	268	161	288
Zinc	ppm	**733**	1101	985	1114
Phosphorus	ppm	**624**	915	805	942
Barium	ppm	**3**	3	0	0
Boron	ppm	**61**	41	14	85

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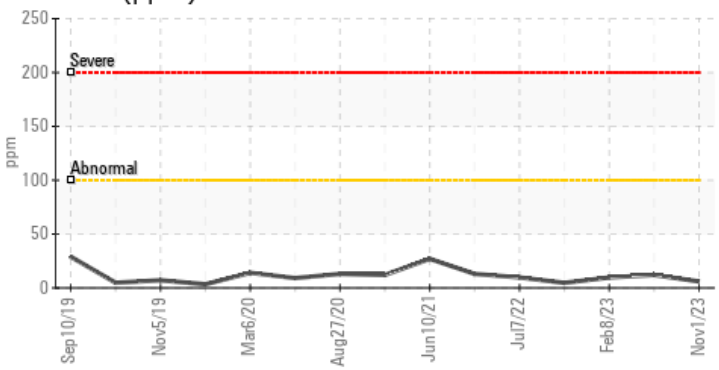
Diagnosis

We advise that you check the fuel injection system. 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. There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

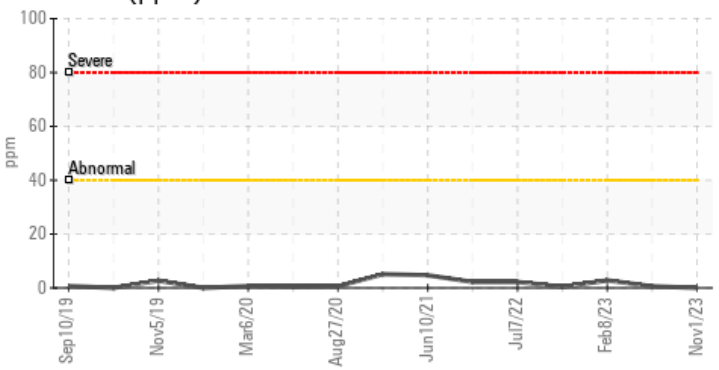
Depot: JMHMAR
Unique No: 10781131
Signed: Wes Davis
Report Date: 18 Dec 2023

GRAPHS

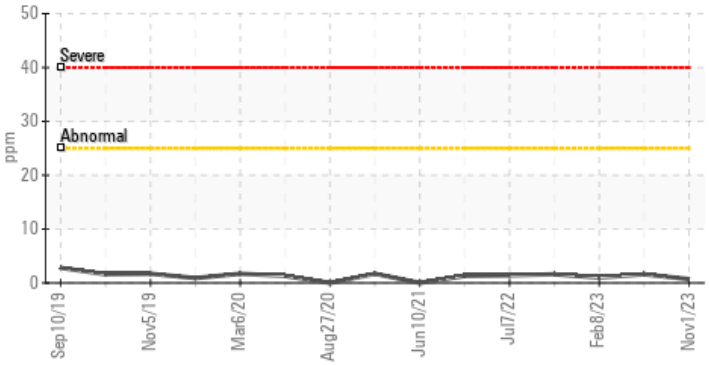
Iron (ppm)



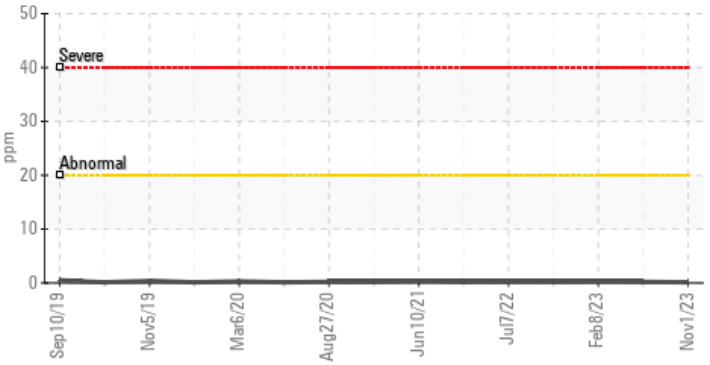
Lead (ppm)



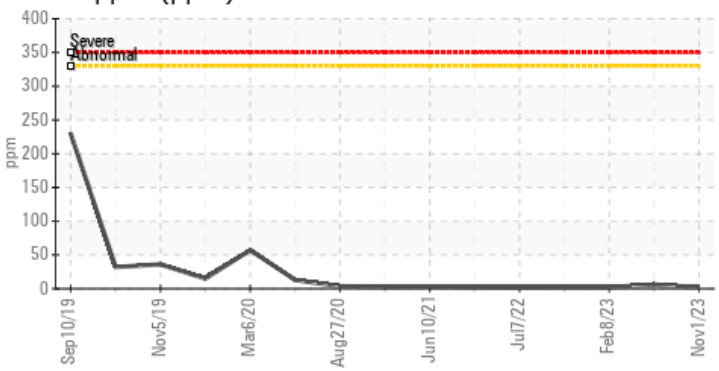
Aluminum (ppm)



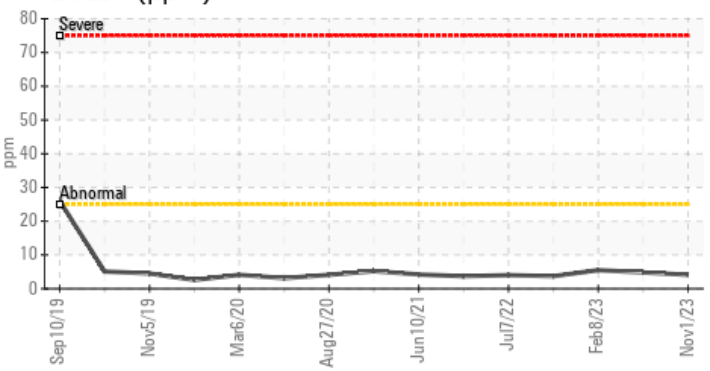
Chromium (ppm)



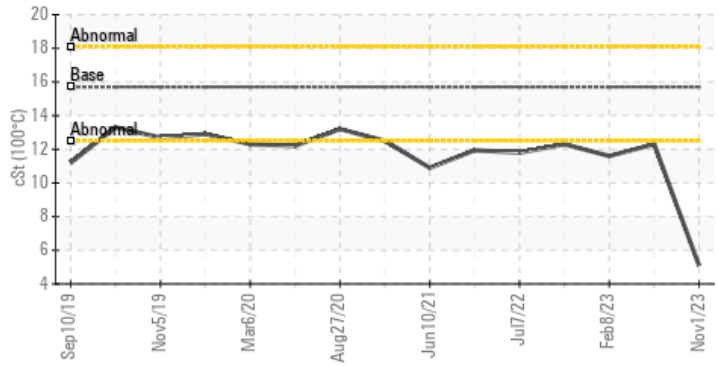
Copper (ppm)



Silicon (ppm)



Viscosity @ 100°C



Base Number