



CONSTRUCTION EQUIPMENT

222635 VOLVO L120H 632093 - COOLANT



Sample No: VCP256091
Oil Type: VOLVO COOLANT VCS (YELLOW)
Job No: 222635



SAMPLE INFORMATION

Sample Number	VCP256091	---	---	---
Sample Date	22 Sep 2021	---	---	---
Machine Hours	13474	---	---	---
Sample Status	NORMAL	---	---	---

PACWEST MACHINERY
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 KENT, WA
 US 98032
 Contact: CHRIS COPELAND
 ccopeland@pacwestmachinery.com
 T: (800)935-5933
 F: (509)534-5286



COOLANT CONDITION

pH	Scale 0-14	■ 7.99	---	---	---
Reserve Alkalinity	Scale 0-20	---	---	---	---
Nitrites	ppm	■ NT	---	---	---
Percentage Glycol	%	■ 51	---	---	---
Freezing Point	°C	■ -39	---	---	---

Diagnosis

The fluid is suitable for further service. There is no indication of any contamination in the coolant. The carboxylate level of this fluid is acceptable. The glycol level is acceptable. The pH level of this fluid is within the acceptable limits.



CONTAMINATION

Coolant Appearance	normal	---	---	---
Coolant Color	Yllow	---	---	---

Depot: VOLVO1271
Unique No: 9724519
Signed: Jonathan Hester
Report Date: 05 Nov 2021



CONSTRUCTION EQUIPMENT

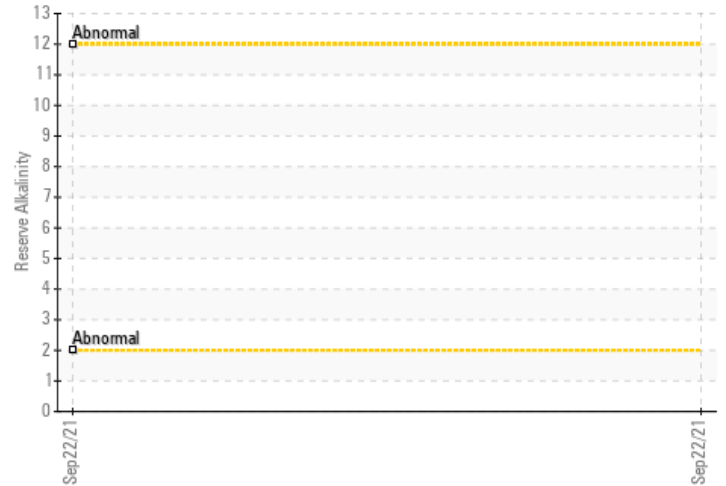


GRAPHS

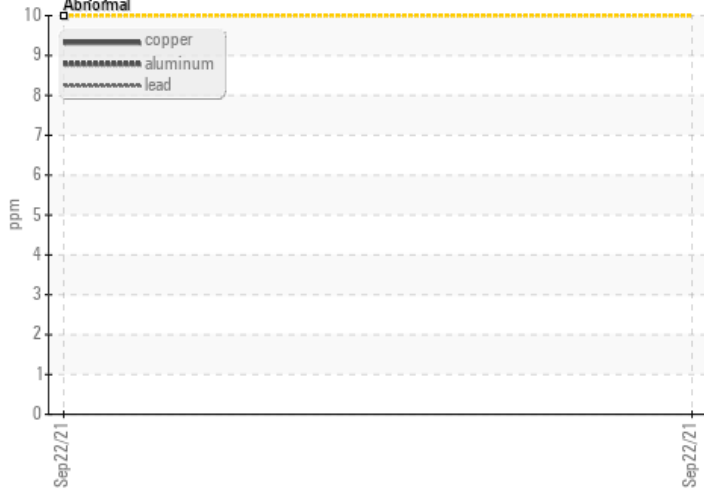
Iron/Tin/Silver



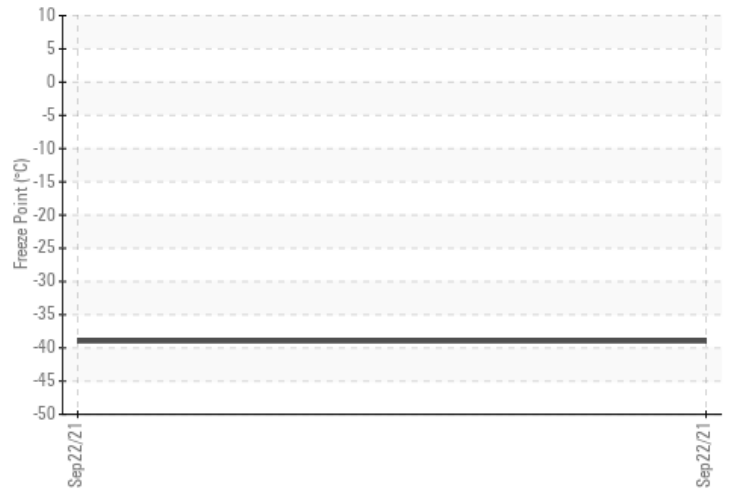
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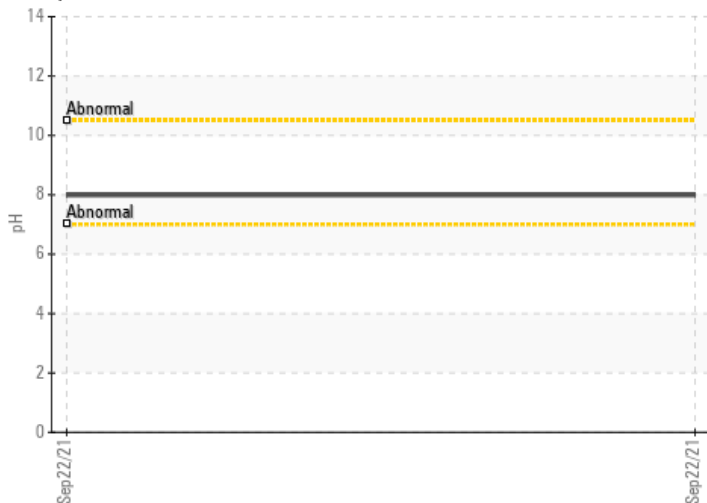
Copper/Aluminum/Lead



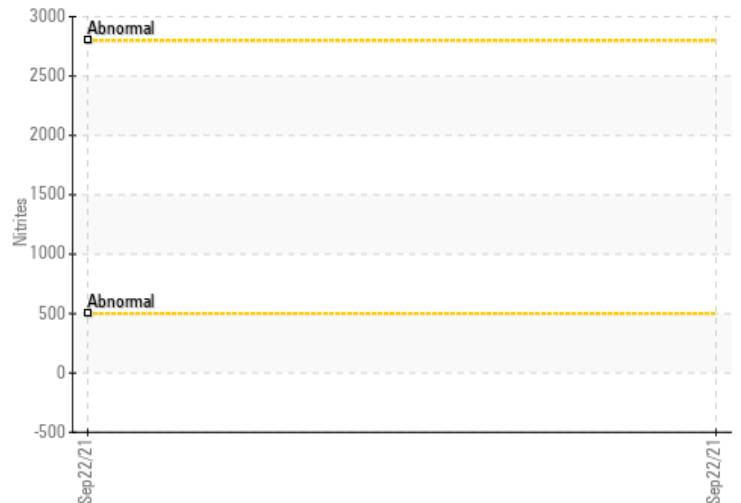
Freeze Point



pH



Nitrites



[[600223]] VOLVO L120H 632093 - DIESEL ENGINE

Sample No: VCP379873

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

SAMPLE INFORMATION

Sample Number	VCP379873	VCP424162	VCP424164	VCP403244
Sample Date	19 Apr 2024	21 Sep 2023	07 Sep 2023	07 Jul 2023
Machine Hours	20875	19017	18922	18667
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Not Changd	Not Changd
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

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OIL CONDITION

Visc @ 100°C	cSt	14.5	13.6	13.6	13.5
Base Number (BN)	mg KOH/g	8.8	10.2	10.0	9.5
Oxidation (PA)	%	92	87	82	88

CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.5	0.4	0.3	0.3
Nitration (PA)	%	89	68	61	77
Sulfation (PA)	%	66	66	63	66
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	11	11	11	7
Sodium	ppm	2	4	4	0
Potassium	ppm	2	0	0	1

WEAR METALS

Iron	ppm	17	12	10	11
Copper	ppm	1	<1	<1	<1
Lead	ppm	<1	0	0	<1
Tin	ppm	<1	<1	<1	<1
Aluminum	ppm	5	3	7	2
Chromium	ppm	<1	<1	<1	<1
Molybdenum	ppm	50	42	44	44
Nickel	ppm	0	0	0	<1
Titanium	ppm	<1	0	<1	<1
Silver	ppm	0	0	0	0
Manganese	ppm	0	<1	<1	<1
Vanadium	ppm	<1	<1	0	0

ADDITIVES

Calcium	ppm	1537	1746	1859	1689
Magnesium	ppm	785	594	611	582
Zinc	ppm	1319	1414	1427	1227
Phosphorus	ppm	1108	1139	1215	1018
Barium	ppm	0	0	0	0
Boron	ppm	41	41	54	43

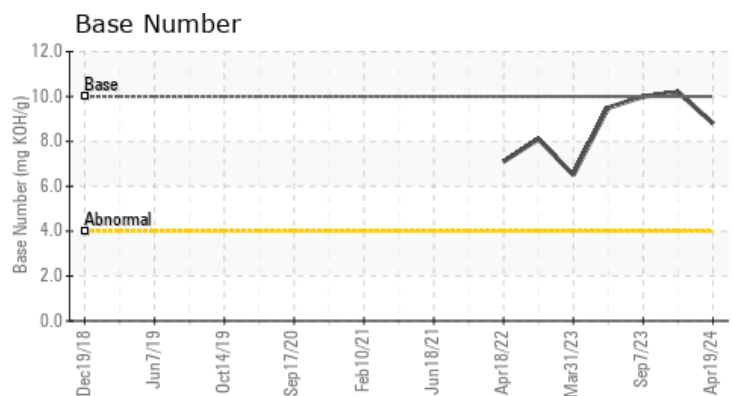
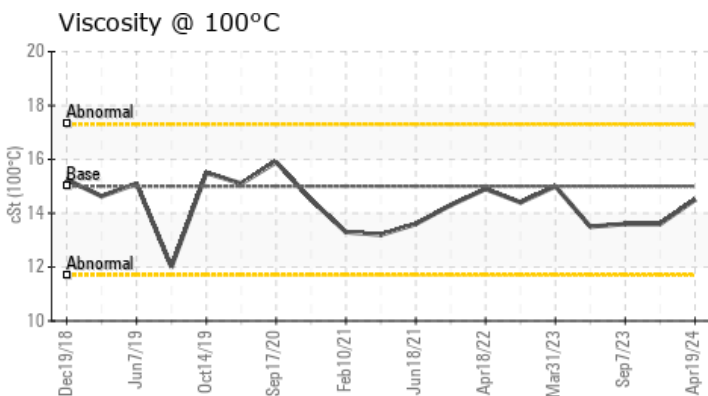
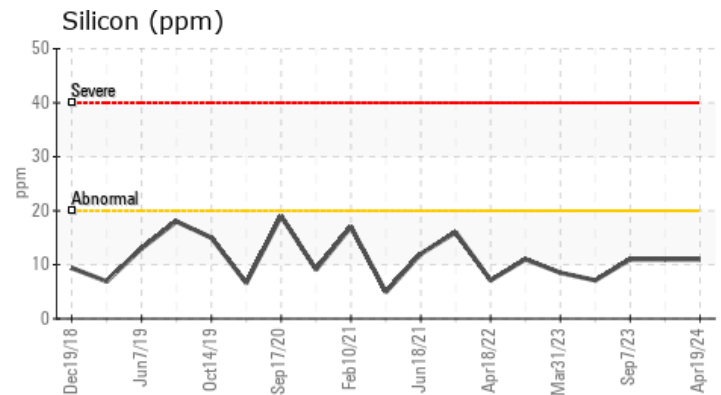
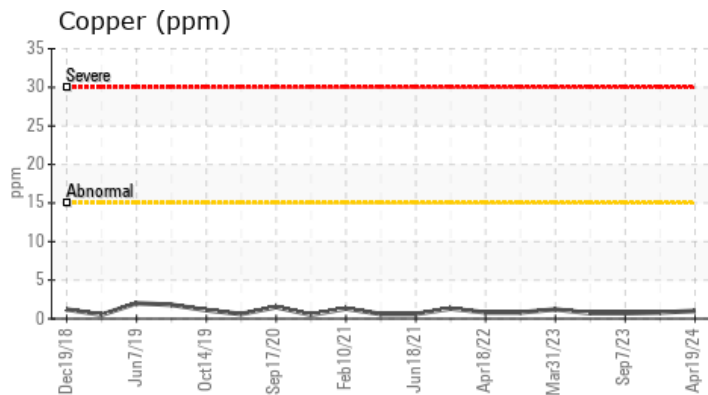
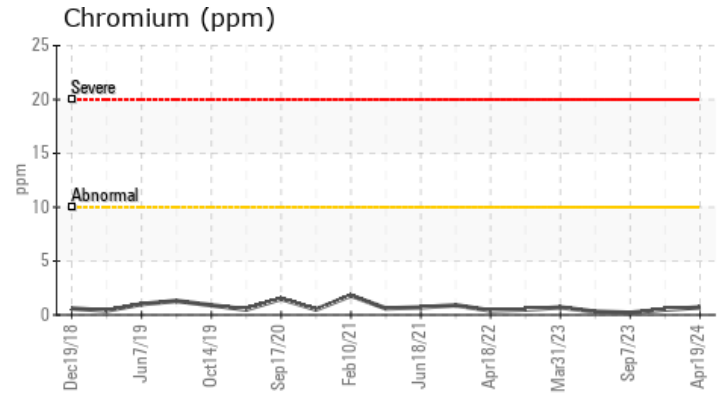
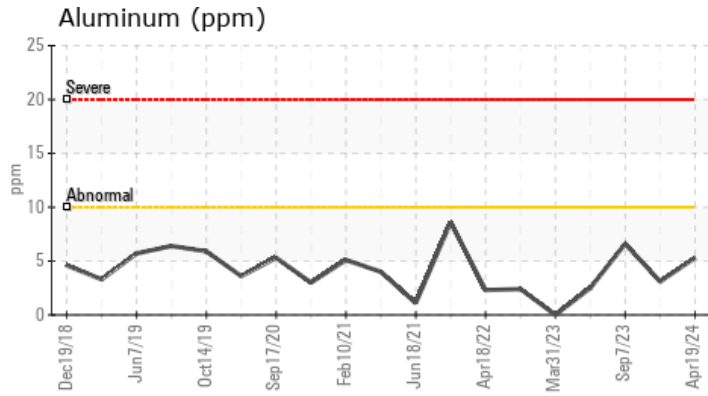
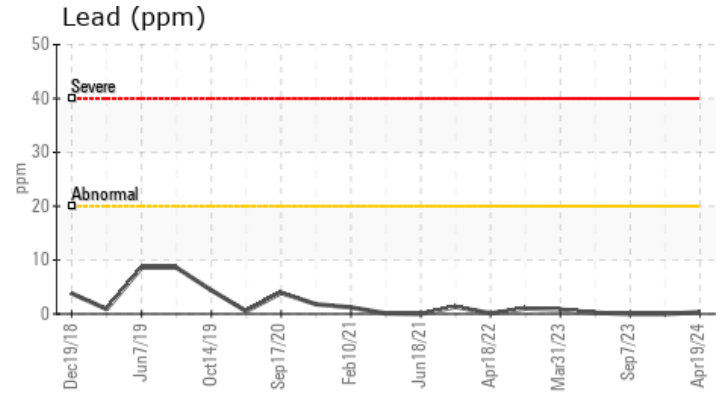
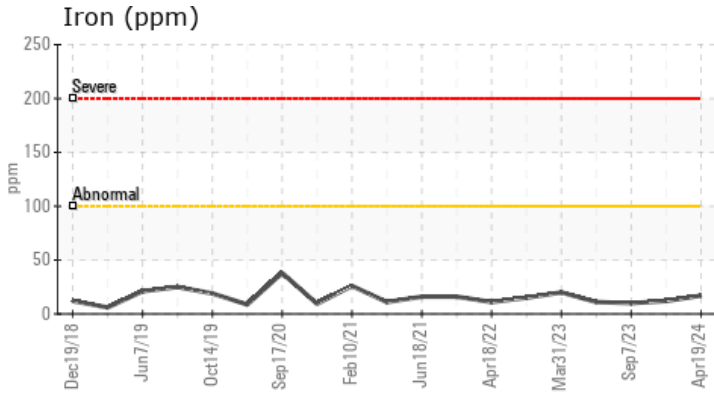
Diagnosis

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: VOLVO1271
Unique No: 11004803
Signed: Wes Davis
Report Date: 01 May 2024

Contact/Location: CHRIS COPELAND - VOLVO1271

GRAPHS





CONSTRUCTION EQUIPMENT

225249 CRC VOLVO L120H 632093 - TRANSMISSION (AUTO)



Sample No: VCP435181
Oil Type: VOLVO AUTOMATIC TRANSMISSION FLUID AT102
Job No: 225249 CRC



SAMPLE INFORMATION

Sample Number	VCP435181	VCP424204	VCP403242	VCP346238
Sample Date	21 Sep 2023	07 Sep 2023	01 Aug 2023	31 Mar 2023
Machine Hours	19017	18922	18768	0
Oil Hours	0	0	0	0
Oil Changed	Not Chngd	Not Chngd	Changed	N/A
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

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F: (509)534-5286



OIL CONDITION

Visc @ 40°C	cSt	30.8	28.8	27.3	27.6
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CONTAMINATION

Silicon	ppm	2	2	5	5
Sodium	ppm	<1	0	0	0
Potassium	ppm	<1	0	1	<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 fluid. The condition of the fluid is acceptable for the time in service.



WEAR METALS

Iron	ppm	16	10	28	28
Copper	ppm	2	2	5	4
Lead	ppm	0	<1	0	<1
Tin	ppm	0	0	0	<1
Aluminum	ppm	2	3	6	5
Chromium	ppm	0	0	0	0
Molybdenum	ppm	<1	0	<1	0
Nickel	ppm	0	<1	0	<1
Titanium	ppm	0	0	0	0
Silver	ppm	0	0	0	0
Manganese	ppm	<1	<1	<1	1
Vanadium	ppm	<1	0	0	0



ADDITIVES

Calcium	ppm	94	83	69	70
Magnesium	ppm	6	1	0	2
Zinc	ppm	6	0	5	7
Phosphorus	ppm	206	197	191	188
Barium	ppm	0	0	0	2
Boron	ppm	108	99	87	84

Depot: VOLVO1271
Unique No: 10674636
Signed: Wes Davis
Report Date: 04 Oct 2023

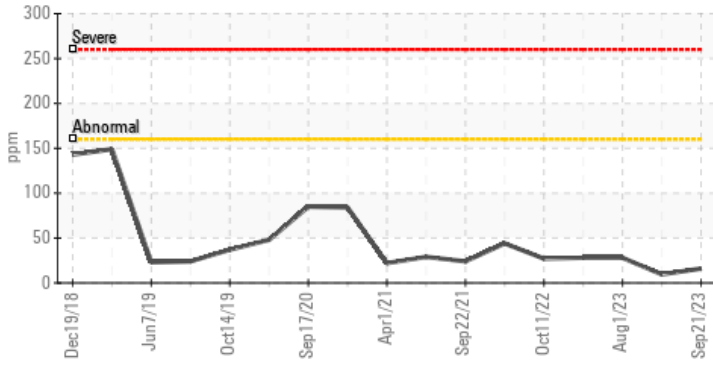


CONSTRUCTION EQUIPMENT

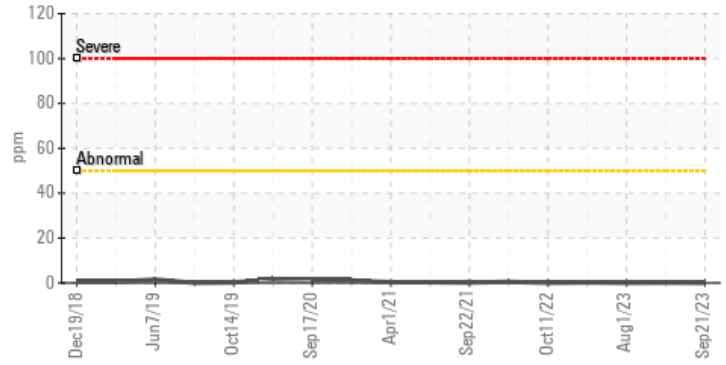


VOLVO GRAPHS

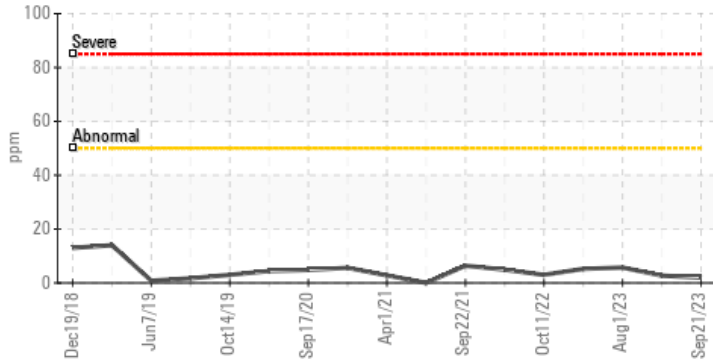
Iron (ppm)



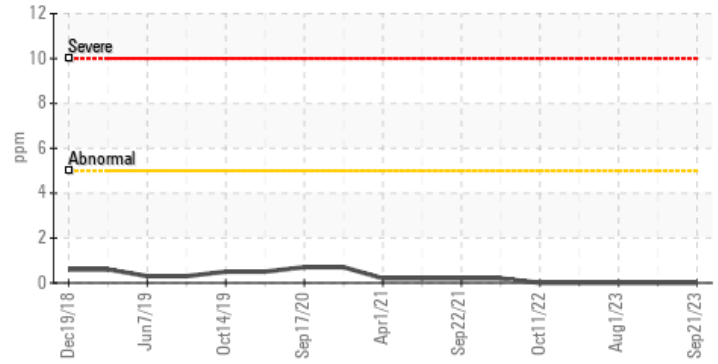
Lead (ppm)



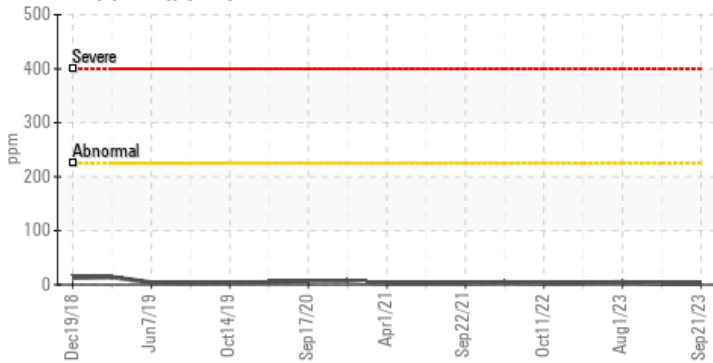
Aluminum (ppm)



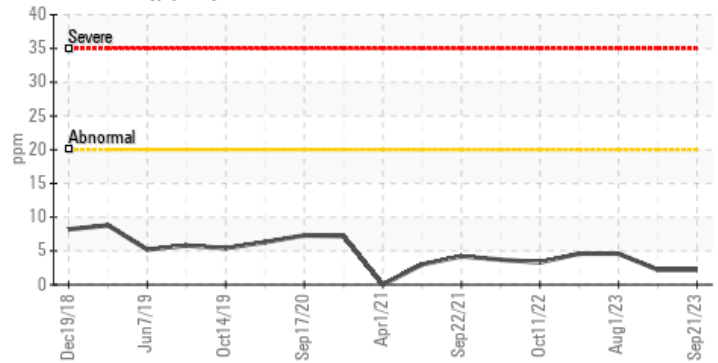
Chromium (ppm)



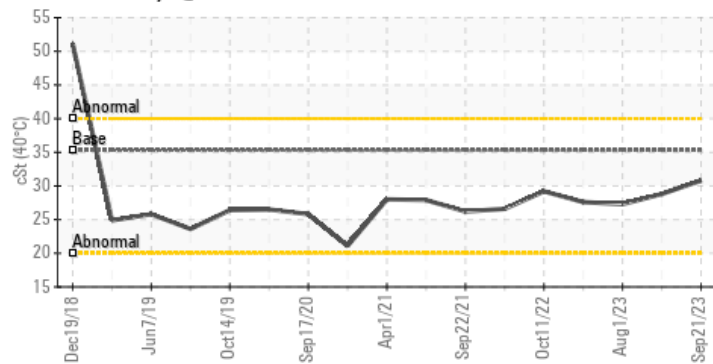
Copper (ppm)



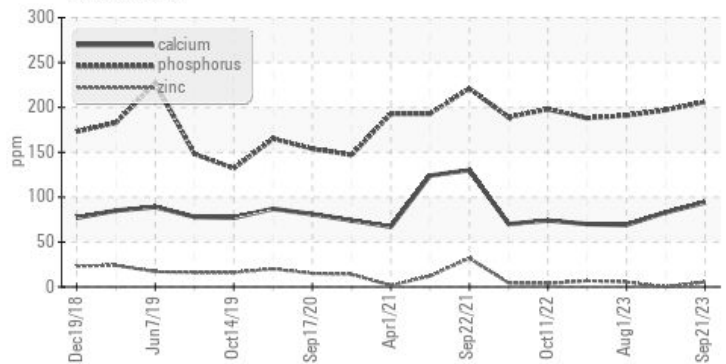
Silicon (ppm)



Viscosity @ 40°C



Additives





CONSTRUCTION EQUIPMENT

225249 CRC VOLVO L120H 632093 - HYDRAULIC SYSTEM



Sample No: VCP424170
Oil Type: VOLVO SUPER HYDRAULIC OIL 46
Job No: 225249 CRC



SAMPLE INFORMATION

Sample Number	VCP424170	VCP424202	VCP403240	VCP346233
Sample Date	21 Sep 2023	07 Sep 2023	01 Aug 2023	31 Mar 2023
Machine Hours	19017	18922	18768	0
Oil Hours	0	0	0	0
Oil Changed	Not Chngd	Not Chngd	Changed	N/A
Sample Status	ATTENTION	ABNORMAL	SEVERE	NORMAL

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Contact: DAN SLAGLE
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T: (206)482-4179
F: (509)534-5286



OIL CONDITION

Visc @ 40°C	cSt	42.6	43.2	42.3	42.3
Acid Number (AN)	mg KOH/g	0.40	0.35	0.43	0.32



CONTAMINATION

Particles >4µm		4189	19181	127045	450
Particles >6µm		1532	6114	51021	137
Particles >14µm		134	435	1775	11
ISO 4406:1999 (c)		19/18/14	21/20/16	24/23/18	16/14/11
Silicon	ppm	2	2	5	2
Sodium	ppm	0	0	6	6
Potassium	ppm	1	0	3	1

Diagnosis

We recommend you service the filters on this component. Resample at the next service interval to monitor. All component wear rates are normal. There is a light amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



WEAR METALS

Iron	ppm	2	1	4	4
Copper	ppm	<1	<1	4	2
Lead	ppm	0	<1	2	0
Tin	ppm	<1	0	<1	<1
Aluminum	ppm	0	<1	<1	0
Chromium	ppm	<1	<1	<1	1
Molybdenum	ppm	<1	0	2	<1
Nickel	ppm	0	0	<1	0
Titanium	ppm	0	0	<1	0
Silver	ppm	0	0	0	0
Manganese	ppm	0	<1	2	<1
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	60	67	88	99
Magnesium	ppm	2	3	2	6
Zinc	ppm	441	472	402	487
Phosphorus	ppm	331	365	326	387
Barium	ppm	0	0	0	0
Boron	ppm	0	0	0	0

Depot: VOLVO1271
Unique No: 10674256
Signed: Wes Davis
Report Date: 04 Oct 2023

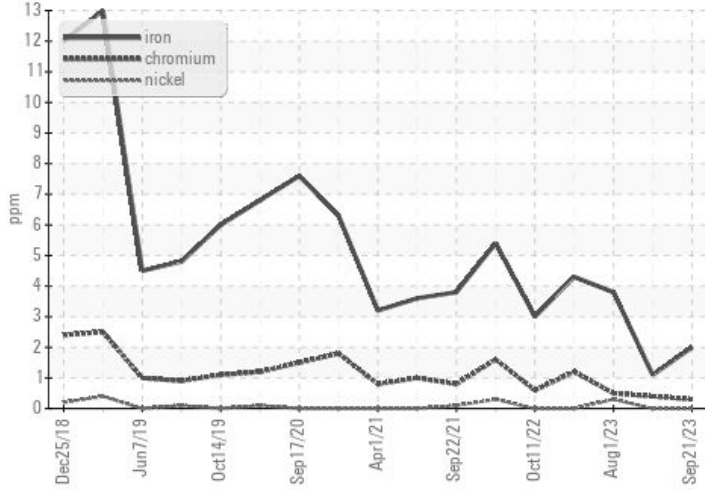


CONSTRUCTION EQUIPMENT

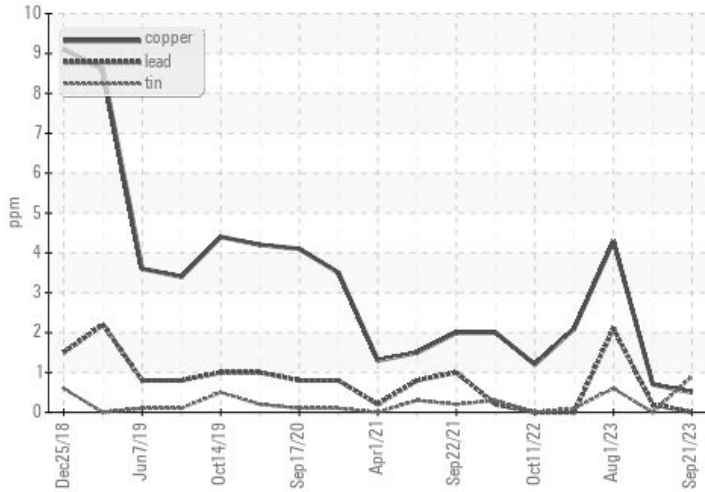


GRAPHS

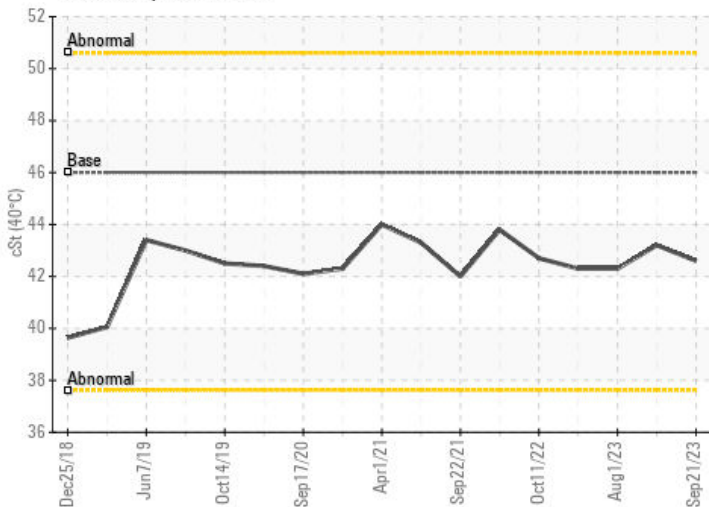
Ferrous Alloys



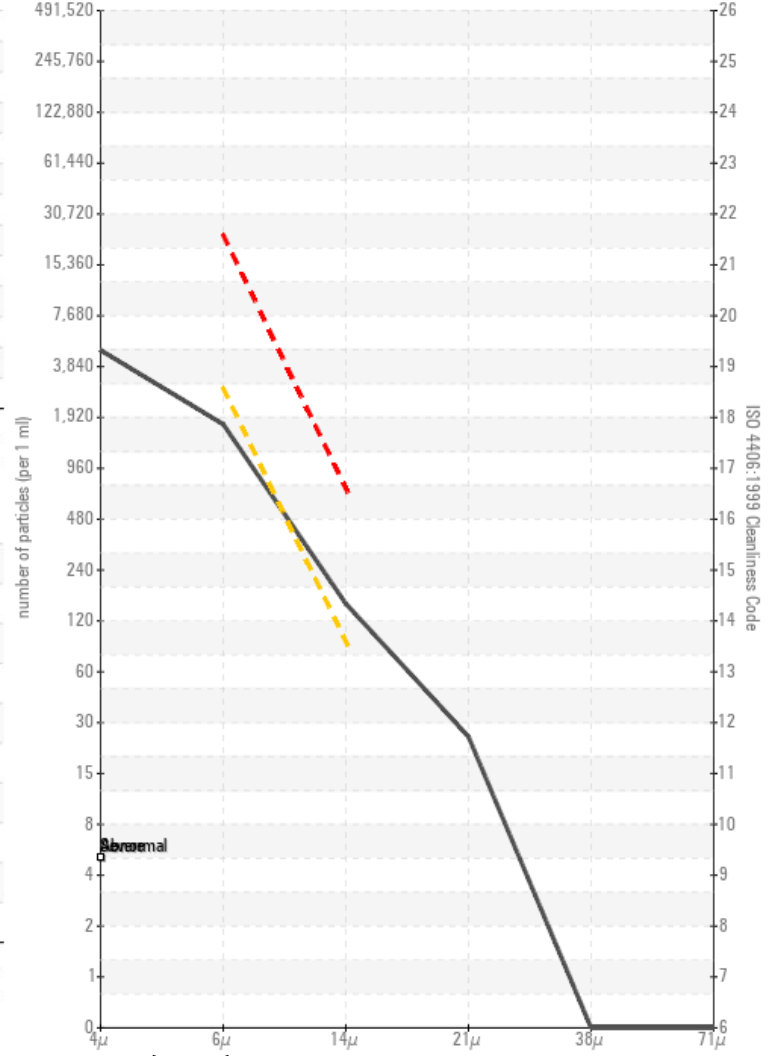
Non-ferrous Metals



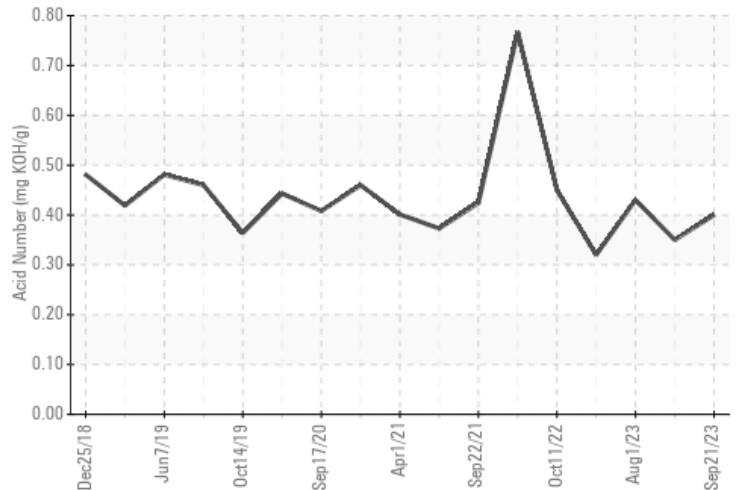
Viscosity @ 40°C



Particle Count



Acid Number





CONSTRUCTION EQUIPMENT

225249 CRC VOLVO L120H 632093 - FRONT AXLE



Sample No: VCP434588
Oil Type: VOLVO WB 102
Job No: 225249 CRC



SAMPLE INFORMATION

Sample Number	VCP434588	VCP424193	VCP403243	VCP05960852
Sample Date	21 Sep 2023	07 Sep 2023	01 Aug 2023	31 Mar 2023
Machine Hours	19017	18922	18768	0
Oil Hours	0	0	0	0
Oil Changed	Not Chngd	Not Chngd	Changed	N/A
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

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OIL CONDITION

Visc @ 40°C	cSt	42.5	42.6	40.0	39.9
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CONTAMINATION

Silicon	ppm	16	9	17	16
Sodium	ppm	4	2	8	8
Potassium	ppm	<1	0	2	2



WEAR METALS

Iron	ppm	109	46	428	334
Copper	ppm	<1	<1	1	<1
Lead	ppm	<1	<1	0	0
Tin	ppm	<1	<1	0	0
Aluminum	ppm	1	2	2	3
Chromium	ppm	1	<1	4	4
Molybdenum	ppm	1	<1	4	<1
Nickel	ppm	<1	<1	2	2
Titanium	ppm	0	0	<1	<1
Silver	ppm	0	0	0	0
Manganese	ppm	2	2	8	8
Vanadium	ppm	<1	0	0	0



ADDITIVES

Calcium	ppm	4170	3860	4149	3998
Magnesium	ppm	18	10	12	14
Zinc	ppm	1721	1551	1642	1620
Phosphorus	ppm	1353	1281	1336	1293
Barium	ppm	0	0	0	1
Boron	ppm	169	139	142	137

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 condition of the oil is acceptable for the time in service.

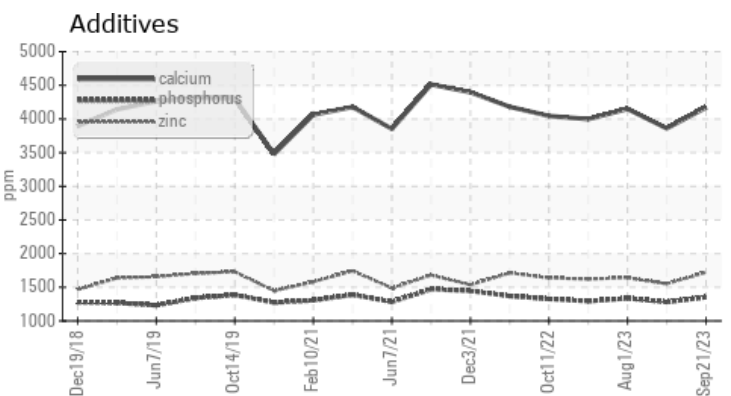
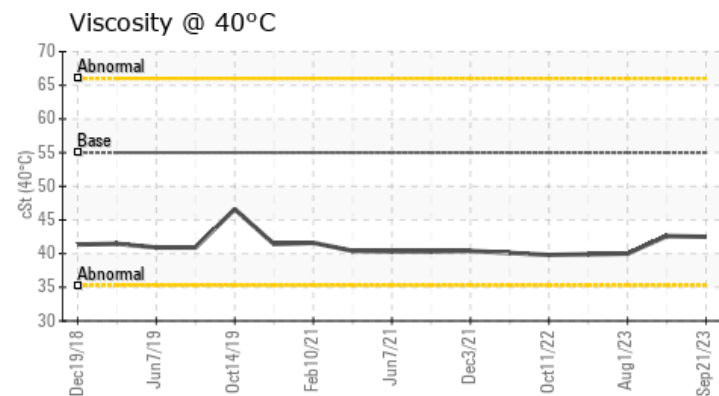
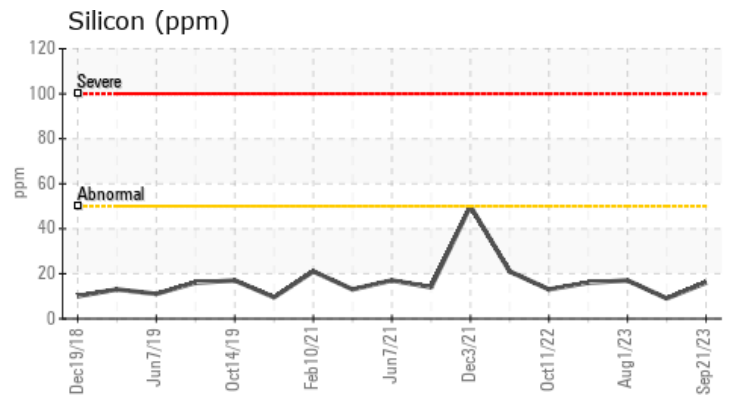
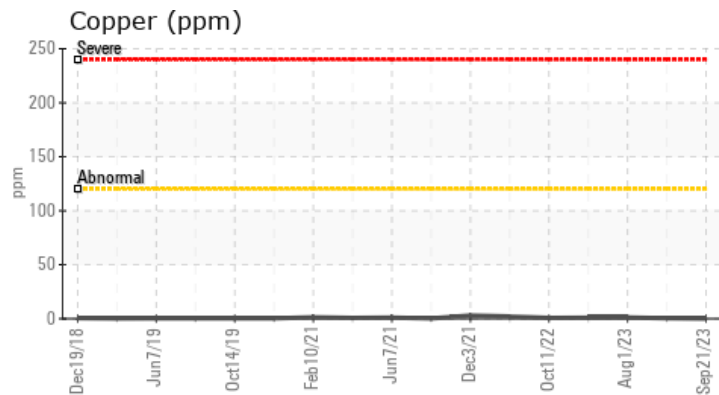
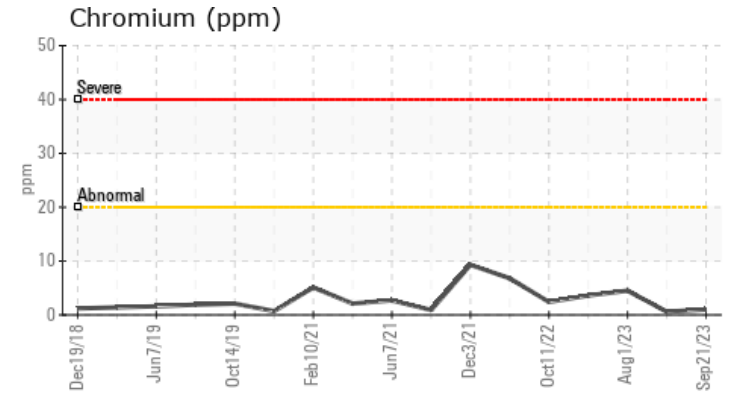
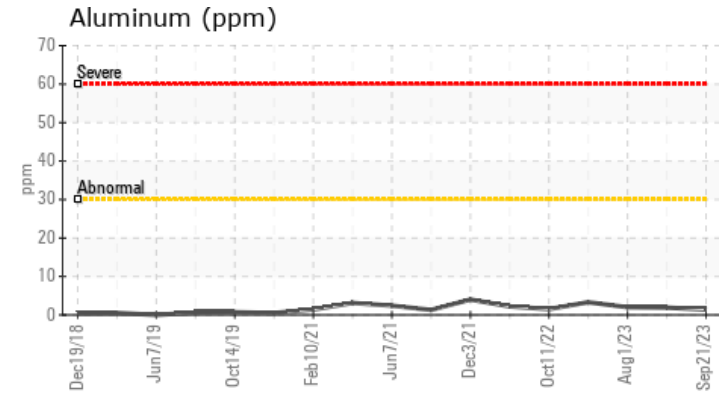
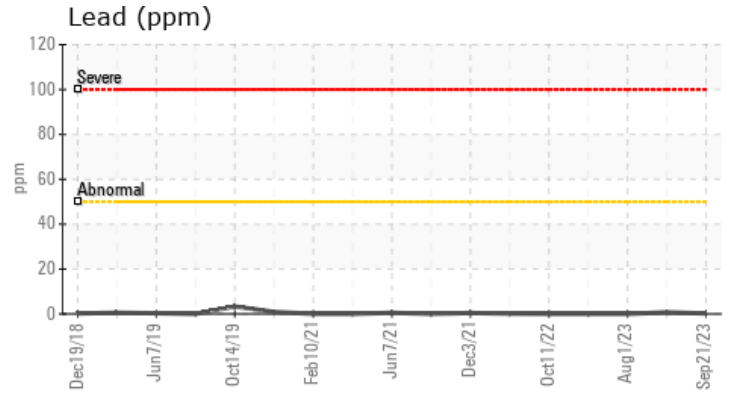
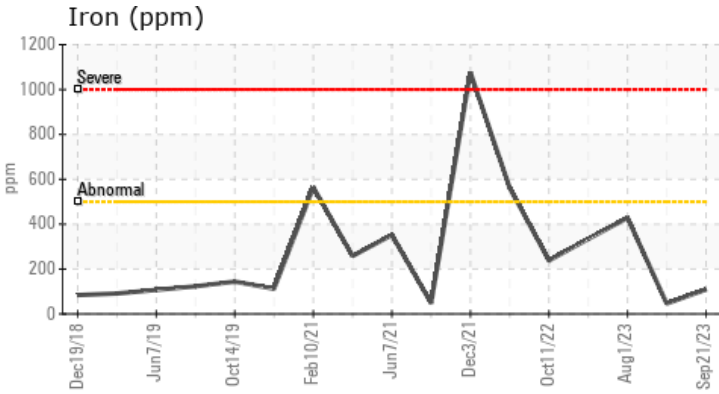
Depot: VOLVO1271
Unique No: 10674582
Signed: Wes Davis
Report Date: 04 Oct 2023



CONSTRUCTION EQUIPMENT



VOLVO GRAPHS





CONSTRUCTION EQUIPMENT

225249 CRC VOLVO L120H 632093 - REAR AXLE



Sample No: VCP424167
Oil Type: VOLVO WB 102
Job No: 225249 CRC



SAMPLE INFORMATION

Sample Number	VCP424167	VCP424197	VCP371203	VCP346239
Sample Date	21 Sep 2023	07 Sep 2023	01 Aug 2023	31 Mar 2023
Machine Hours	19017	18922	18768	0
Oil Hours	0	0	0	0
Oil Changed	Not Chngd	Not Chngd	Changed	N/A
Sample Status	NORMAL	ABNORMAL	NORMAL	NORMAL

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 F: (509)534-5286



OIL CONDITION

Visc @ 40°C	cSt	42.5	42.8	39.8	39.5
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CONTAMINATION

Water	%	---	▲ 0.217	---	---
Silicon	ppm	14	9	11	11
Sodium	ppm	4	2	6	7
Potassium	ppm	0	0	2	2

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 condition of the oil is acceptable for the time in service.



WEAR METALS

Iron	ppm	25	12	84	72
Copper	ppm	0	<1	<1	<1
Lead	ppm	<1	<1	0	0
Tin	ppm	0	<1	0	0
Aluminum	ppm	<1	2	<1	2
Chromium	ppm	0	<1	<1	<1
Molybdenum	ppm	6	2	19	14
Nickel	ppm	0	0	0	<1
Titanium	ppm	0	0	0	0
Silver	ppm	0	0	0	0
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	<1	0	0	0



ADDITIVES

Calcium	ppm	4249	3861	4087	3902
Magnesium	ppm	22	12	11	12
Zinc	ppm	1755	1554	1631	1576
Phosphorus	ppm	1370	1269	1336	1272
Barium	ppm	0	0	0	2
Boron	ppm	171	144	142	135

Depot: VOLVO1271
Unique No: 10674579
Signed: Wes Davis
Report Date: 04 Oct 2023



CONSTRUCTION EQUIPMENT



VOLVO GRAPHS

