



CONSTRUCTION EQUIPMENT

SPM661225 VOLVO L350 1138 - COOLANT



Sample No: VCP442876
Oil Type: VOLVO COOLANT VCS (YELLOW)
Job No: SPM661225



SAMPLE INFORMATION

Sample Number	VCP442876	VCP439744	VCP351481	VCP395475
Sample Date	30 Jan 2024	04 Oct 2023	11 Aug 2023	25 Apr 2023
Machine Hours	5328	4974	4582	3754
Sample Status	NORMAL	ABNORMAL	ABNORMAL	ABNORMAL



COOLANT CONDITION

pH	Scale 0-14	7.62	7.67	8.02	8.52
Reserve Alkalinity	Scale 0-20	---	---	---	---
Nitrites	ppm	NT	NT	NT	NT
Percentage Glycol	%	57.9	80.5	78.0	71.1
Freezing Point	°C	-52	-51	-56	-66



CONTAMINATION

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

ALTA EQUIPMENT

5985 COURT STREET ROAD
 SYRACUSE, NY
 US 13206
 Contact: JIM STRIGLE
 JIM.STRIGLE@ALTG.COM
 T: (315)437-2611
 F: (315)434-9471

Diagnosis

No corrective action is recommended at this time. The fluid is suitable for further service. There is no indication of any contamination in the coolant. Carboxylate test failed. The glycol level is acceptable. The pH level of this fluid is within the acceptable limits.

Depot: VOLVO0142
Unique No: 10860839
Signed: Jonathan Hester
Report Date: 06 Feb 2024

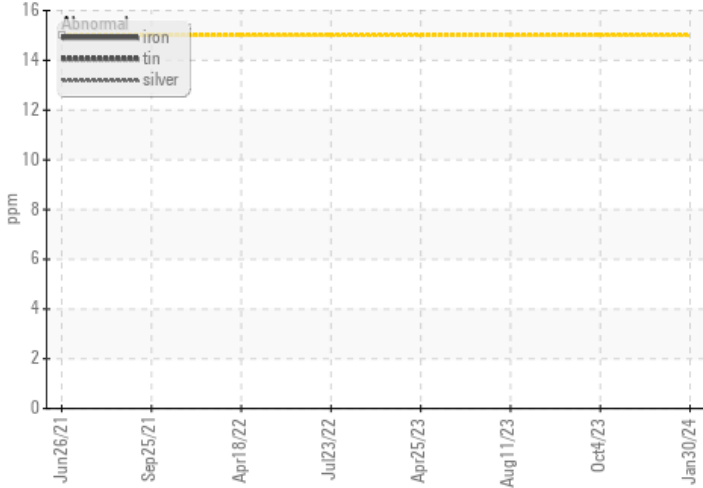


CONSTRUCTION EQUIPMENT

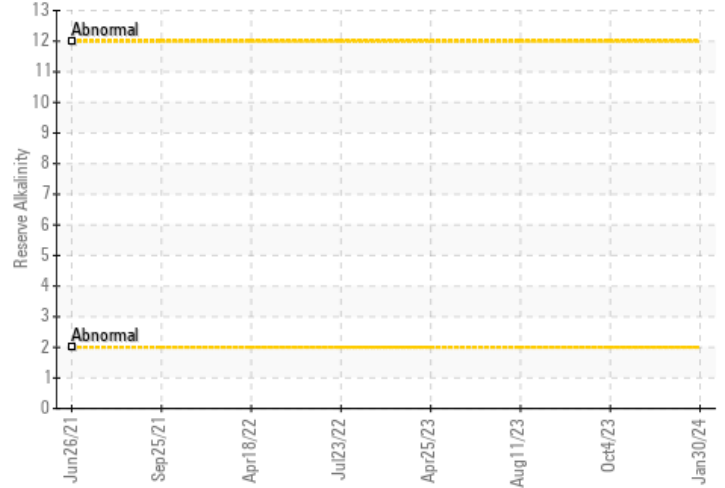


VOLVO GRAPHS

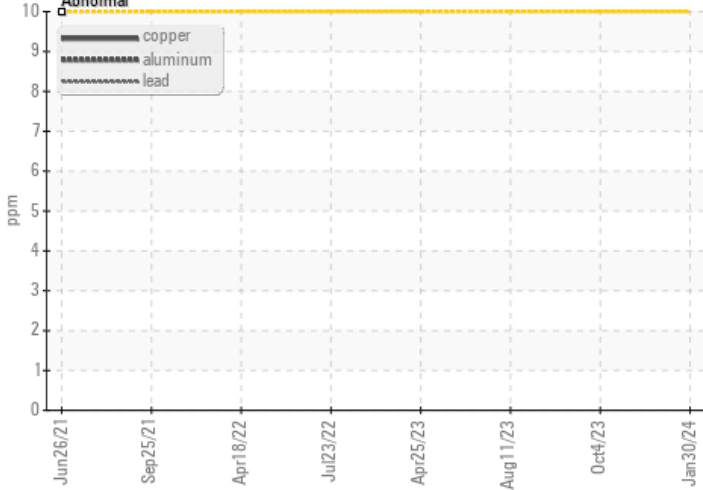
Iron/Tin/Silver



Reserve Alkalinity



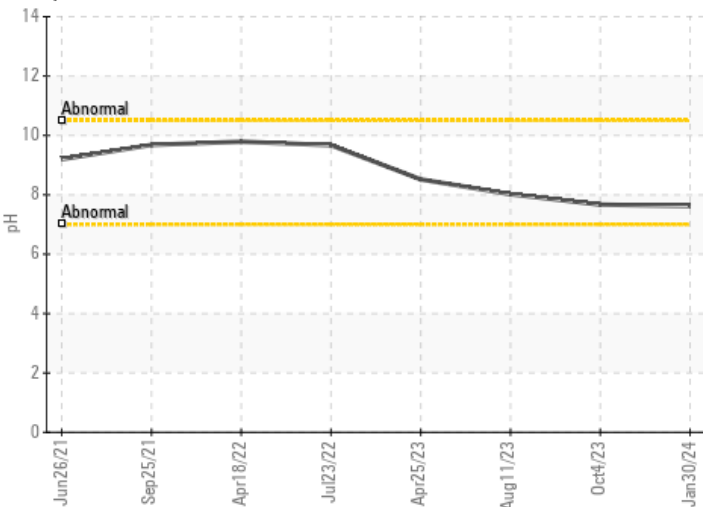
Copper/Aluminum/Lead



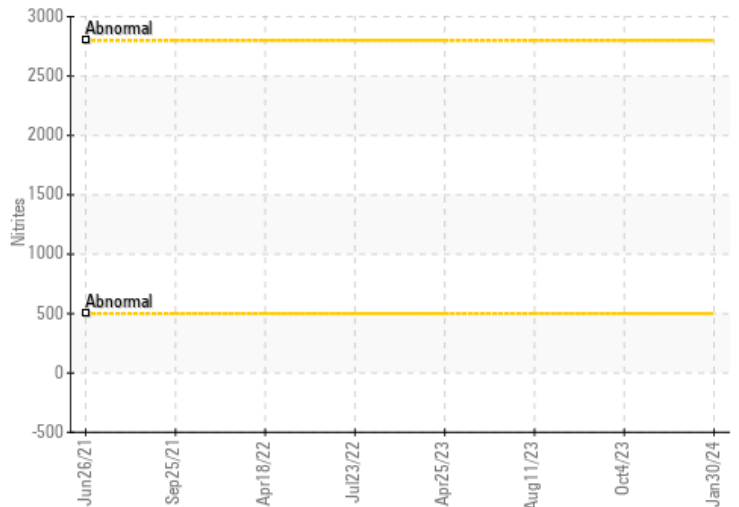
Freeze Point



pH



Nitrites





CONSTRUCTION EQUIPMENT

SPM661225 VOLVO L350 1138 - TRANSMISSION (AUTO)



Sample No: VCP442822
Oil Type: VOLVO AUTOMATIC TRANSMISSION FLUID AT102
Job No: SPM661225



SAMPLE INFORMATION

Sample Number	VCP442822	VCP433567	VCP351476	VCP368619
Sample Date	30 Jan 2024	04 Oct 2023	11 Aug 2023	25 Apr 2023
Machine Hours	5328	4974	4582	3754
Oil Hours	0	0	0	0
Oil Changed	N/A	N/A	N/A	Not Changd
Sample Status	ATTENTION	ATTENTION	ATTENTION	ATTENTION

ALTA EQUIPMENT

5985 COURT STREET ROAD
 SYRACUSE, NY
 US 13206
 Contact: JIM STRIGLE
 JIM.STRIGLE@ALTG.COM
 T: (315)437-2611
 F: (315)434-9471



OIL CONDITION

Visc @ 40°C	cSt	▲ 90.3	▲ 90.1	▲ 90.6	▲ 86.9
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CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Silicon	ppm	■ 11	■ 8	■ 20	■ 12
Sodium	ppm	■ 0	■ 2	■ 5	■ 3
Potassium	ppm	■ 2	■ 1	■ 0	■ 0

Diagnosis

No corrective action is recommended at this time. 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 fluid viscosity is higher than normal. Additive levels indicate the addition of a different brand, or type of oil. Confirm oil type.



WEAR METALS

Iron	ppm	■ 29	■ 10	■ 54	■ 27
Copper	ppm	■ 24	■ 11	■ 47	■ 36
Lead	ppm	■ <1	■ <1	■ 0	■ 0
Tin	ppm	■ 1	■ <1	■ 1	■ <1
Aluminum	ppm	■ <1	■ 1	■ 2	■ 1
Chromium	ppm	■ <1	■ 0	■ <1	■ <1
Molybdenum	ppm	■ 2	■ 0	■ 0	■ <1
Nickel	ppm	■ <1	■ <1	■ 0	■ 0
Titanium	ppm	<1	0	<1	0
Silver	ppm	■ 0	■ 0	■ 0	■ 0
Manganese	ppm	■ <1	■ 0	■ <1	■ <1
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	▲ 2790	▲ 2883	▲ 2934	▲ 3199
Magnesium	ppm	▲ 29	▲ 30	■ 13	■ 15
Zinc	ppm	▲ 1302	▲ 1235	▲ 1200	▲ 1282
Phosphorus	ppm	▲ 956	▲ 1052	▲ 994	▲ 1062
Barium	ppm	■ 0	■ 0	■ 0	■ 0
Boron	ppm	▲ 4	▲ 4	▲ 0	▲ 6

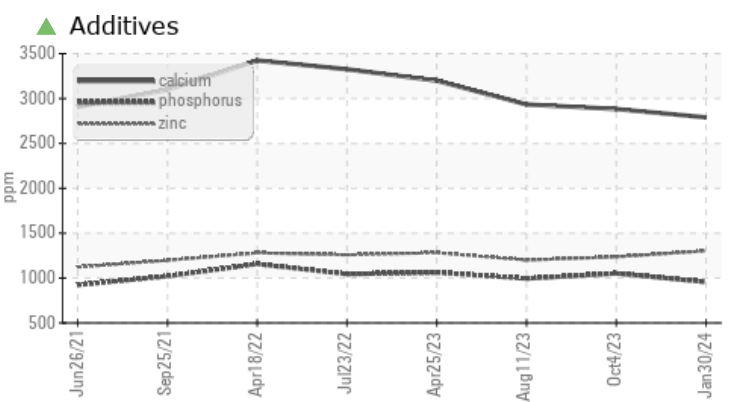
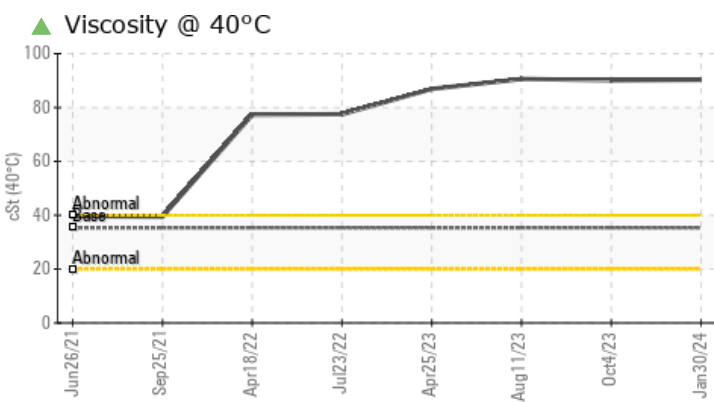
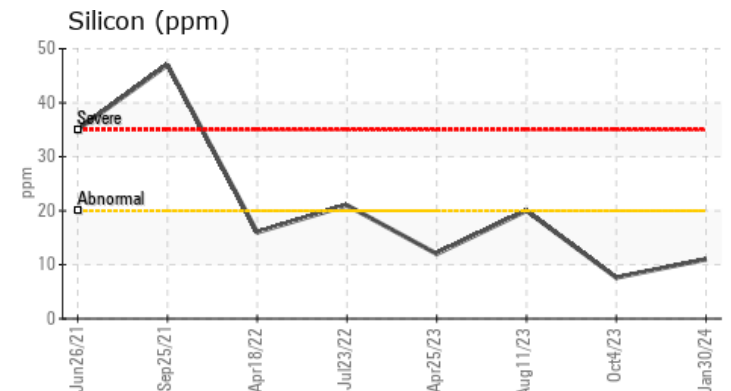
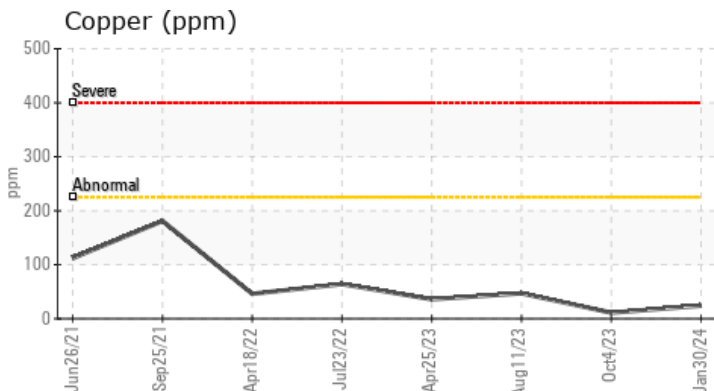
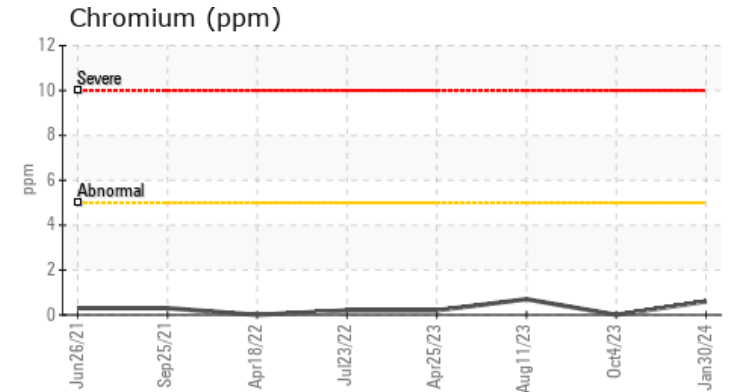
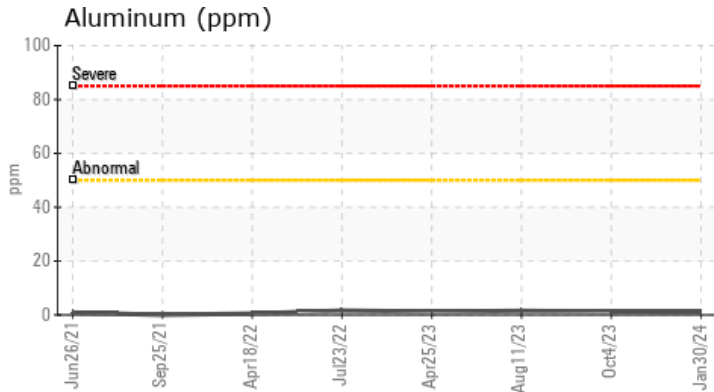
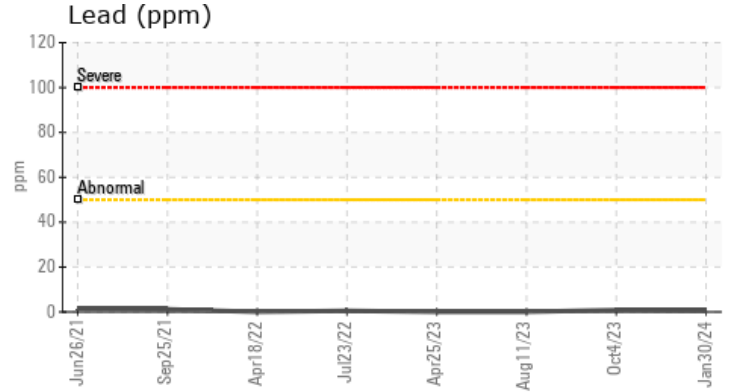
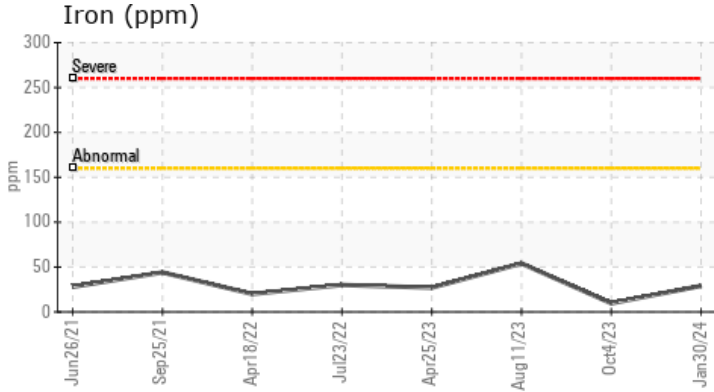
Depot: VOLVO0142
Unique No: 10860739
Signed: Jonathan Hester
Report Date: 06 Feb 2024



CONSTRUCTION EQUIPMENT



VOLVO GRAPHS





CONSTRUCTION EQUIPMENT

SPM661225 VOLVO L350 1138 - HYDRAULIC SYSTEM



Sample No: VCP442823
Oil Type: VOLVO SUPER HYDRAULIC OIL 46
Job No: SPM661225



SAMPLE INFORMATION

Sample Number	VCP442823	VCP434391	VCP351479	VCP404857
Sample Date	30 Jan 2024	04 Oct 2023	11 Aug 2023	25 Apr 2023
Machine Hours	5328	4974	4582	3754
Oil Hours	0	0	0	0
Oil Changed	N/A	N/A	Not Changd	Not Changd
Sample Status	ABNORMAL	ATTENTION	ATTENTION	NORMAL

ALTA EQUIPMENT
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 SYRACUSE, NY
 US 13206
 Contact: JIM STRIGLE
 JIM.STRIGLE@ALTG.COM
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 F: (315)434-9471

OIL CONDITION

Visc @ 40°C	cSt	40.7	40.9	40.9	42.6
Acid Number (AN)	mg KOH/g	1.08	1.03	1.09	1.64

CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Particles >4µm		68680	16523	20437	31209
Particles >6µm		7444	3744	3836	1381
Particles >14µm		90	125	119	36
ISO 4406:1999 (c)		23/20/14	21/19/14	22/19/14	22/18/12
Silicon	ppm	7	5	5	7
Sodium	ppm	3	<1	0	<1
Potassium	ppm	2	<1	2	0

Diagnosis

We recommend you service the filters on this component. We recommend an early resample to monitor this condition. All component wear rates are normal. There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

WEAR METALS

Iron	ppm	4	1	3	4
Copper	ppm	<1	<1	<1	0
Lead	ppm	2	1	1	0
Tin	ppm	<1	<1	<1	0
Aluminum	ppm	1	<1	<1	1
Chromium	ppm	0	0	0	0
Molybdenum	ppm	<1	0	<1	1
Nickel	ppm	0	0	0	0
Titanium	ppm	0	0	0	0
Silver	ppm	0	0	0	0
Manganese	ppm	0	<1	0	<1
Vanadium	ppm	0	0	0	0

ADDITIVES

Calcium	ppm	1781	1854	1847	2778
Magnesium	ppm	17	16	13	24
Zinc	ppm	935	873	897	1270
Phosphorus	ppm	814	779	765	1040
Barium	ppm	0	0	<1	0
Boron	ppm	14	15	16	22

Depot: VOLV00142
Unique No: 10860315
Signed: Wes Davis
Report Date: 05 Feb 2024

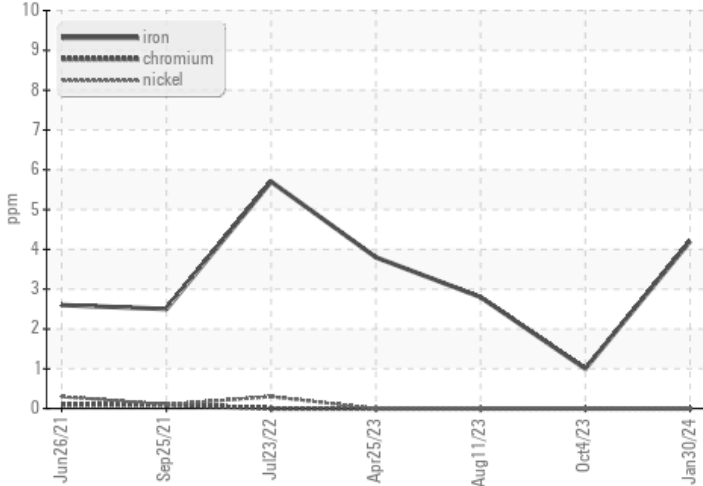


CONSTRUCTION EQUIPMENT

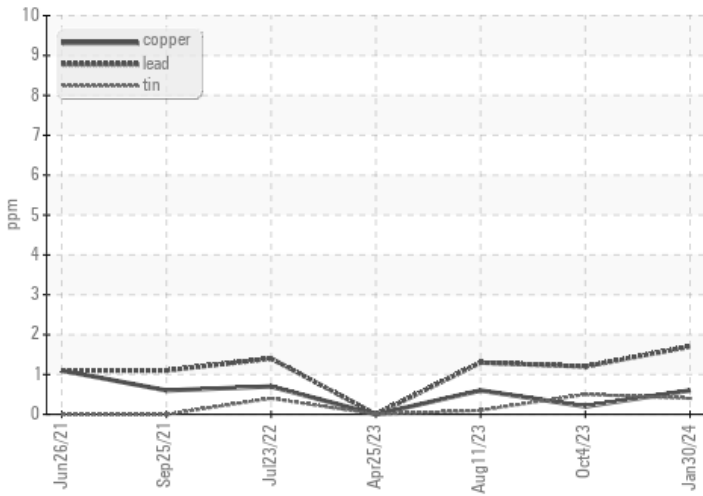


GRAPHS

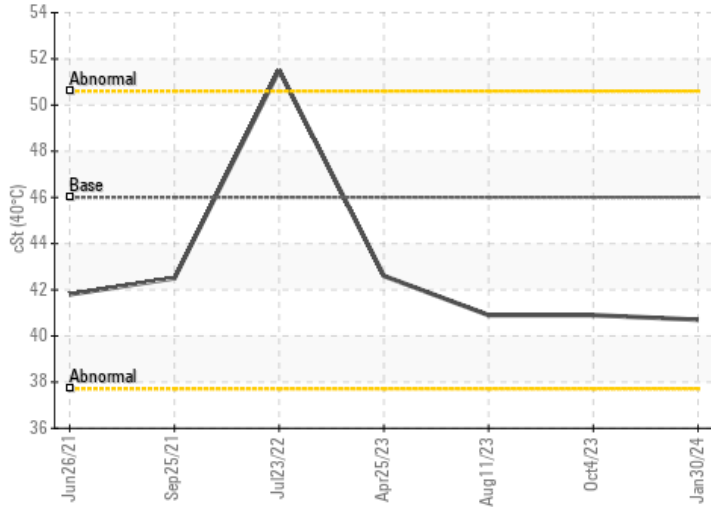
Ferrous Alloys



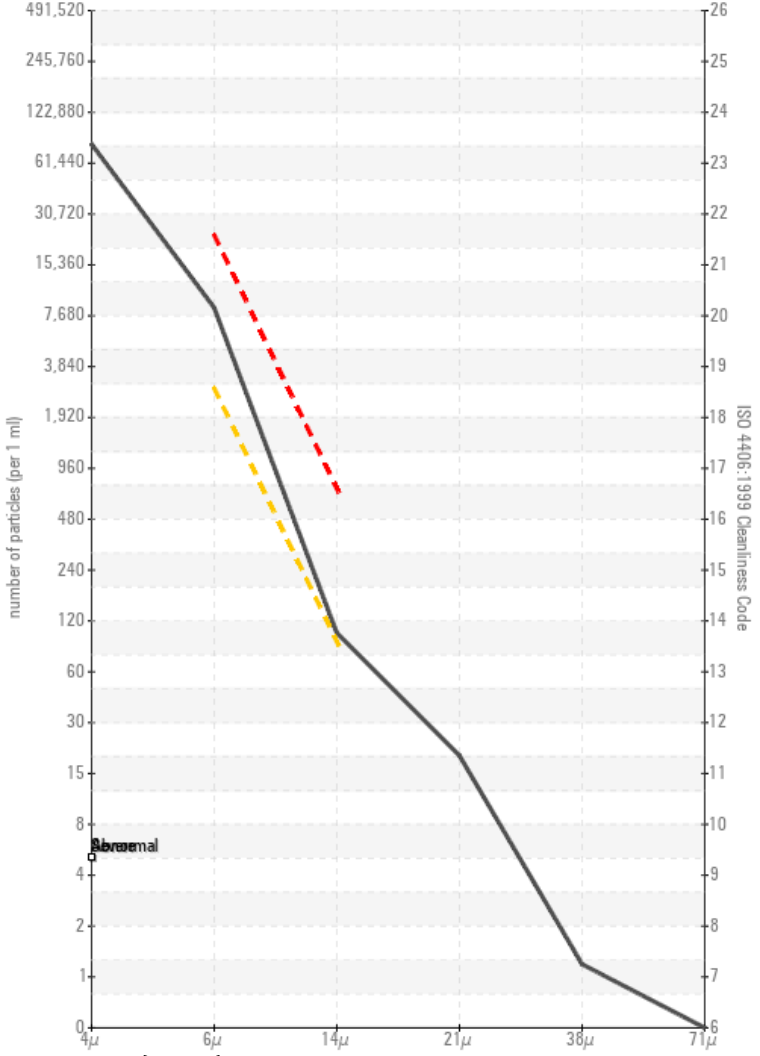
Non-ferrous Metals



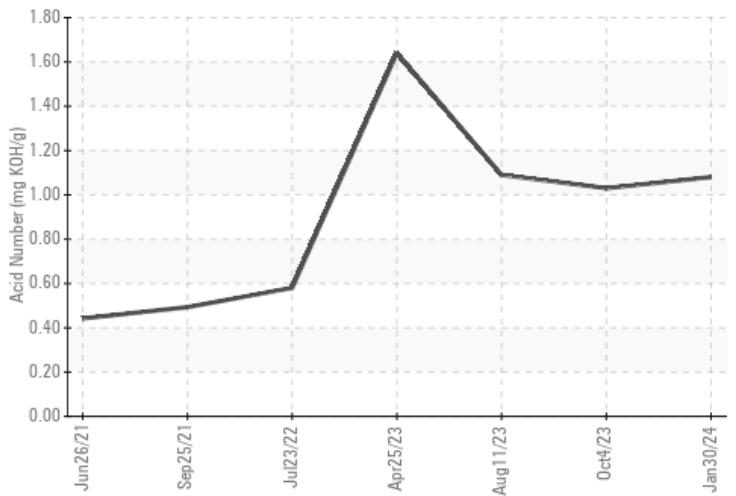
Viscosity @ 40°C



Particle Count



Acid Number





CONSTRUCTION EQUIPMENT

SPM661225 VOLVO L350 1138 - FRONT AXLE



Sample No: VCP442825
Oil Type: VOLVO PREMIUM GEAR OIL 80W-90 GL-5
Job No: SPM661225



SAMPLE INFORMATION

Sample Number	VCP442825	VCP439738	VCP351478	VCP395478
Sample Date	30 Jan 2024	04 Oct 2023	11 Aug 2023	25 Apr 2023
Machine Hours	5328	4974	4582	3754
Oil Hours	0	0	0	0
Oil Changed	N/A	N/A	N/A	N/A
Sample Status	ABNORMAL	ATTENTION	ATTENTION	ATTENTION

ALTA EQUIPMENT

5985 COURT STREET ROAD
 SYRACUSE, NY
 US 13206
 Contact: JIM STRIGLE
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 T: (315)437-2611
 F: (315)434-9471



OIL CONDITION

Visc @ 40°C	cSt	▲ 44.0	▲ 43.1	▲ 43.4	▲ 45.0
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CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Silicon	ppm	■ 26	■ 19	■ 19	■ 24
Sodium	ppm	■ 0	■ 2	■ 4	■ 4
Potassium	ppm	■ 2	■ <1	■ <1	■ 0

Diagnosis

No corrective action is recommended at this time. Resample at the next service interval to monitor. Gear wear is indicated. There is no indication of any contamination in the oil. The oil viscosity is lower than normal. Additive levels indicate the addition of a different brand, or type of oil. Confirm oil type.



WEAR METALS

Iron	ppm	▲ 532	■ 425	■ 385	■ 386
Copper	ppm	■ 11	■ 7	■ 8	■ 6
Lead	ppm	■ 2	■ 1	■ <1	■ 0
Tin	ppm	■ <1	■ 1	■ 1	■ 0
Aluminum	ppm	■ <1	■ 2	■ 3	■ 2
Chromium	ppm	■ 2	■ <1	■ 1	■ 1
Molybdenum	ppm	■ 1	■ 0	■ 0	■ <1
Nickel	ppm	■ <1	■ <1	■ 0	■ 0
Titanium	ppm	<1	<1	<1	<1
Silver	ppm	0	0	0	0
Manganese	ppm	■ 6	■ 4	■ 4	■ 4
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	▲ 3947	■ 3998	■ 3968	■ 4175
Magnesium	ppm	■ 17	■ 20	■ 16	■ 18
Zinc	ppm	▲ 1828	■ 1677	■ 1683	■ 1674
Phosphorus	ppm	■ 1259	■ 1380	■ 1299	■ 1331
Barium	ppm	■ 0	■ 0	■ 0	■ 0
Boron	ppm	■ 148	■ 126	■ 133	■ 153

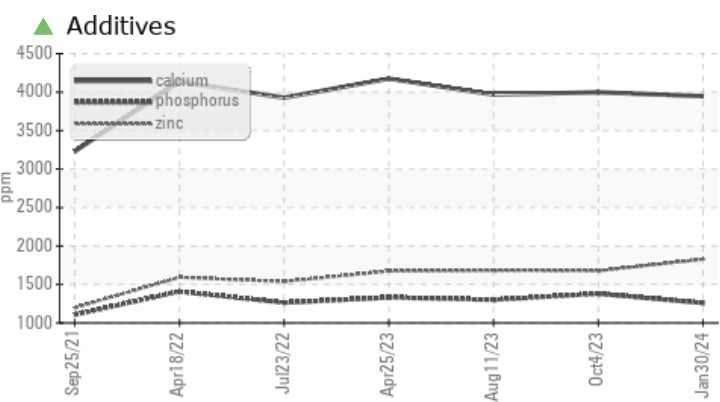
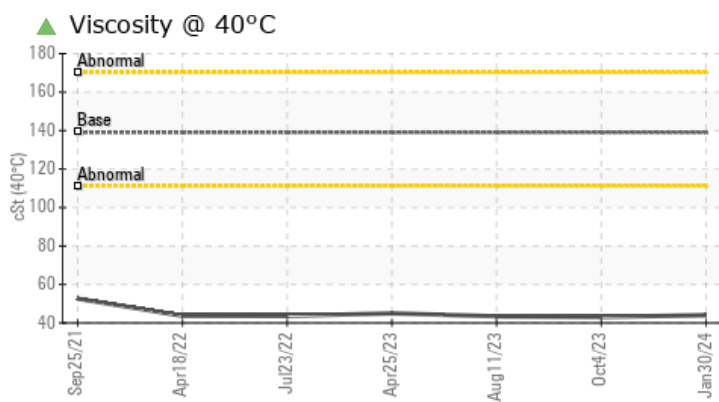
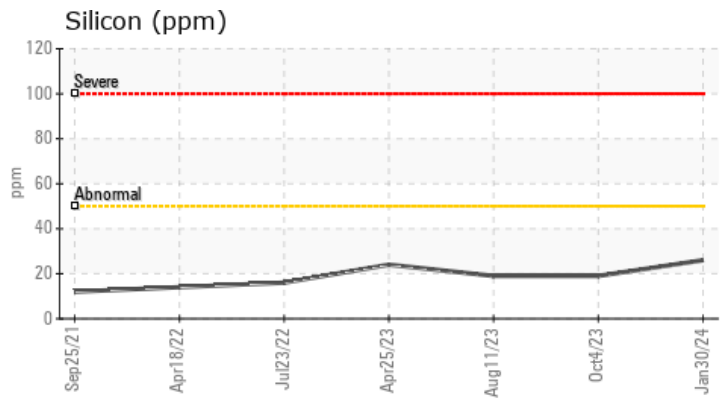
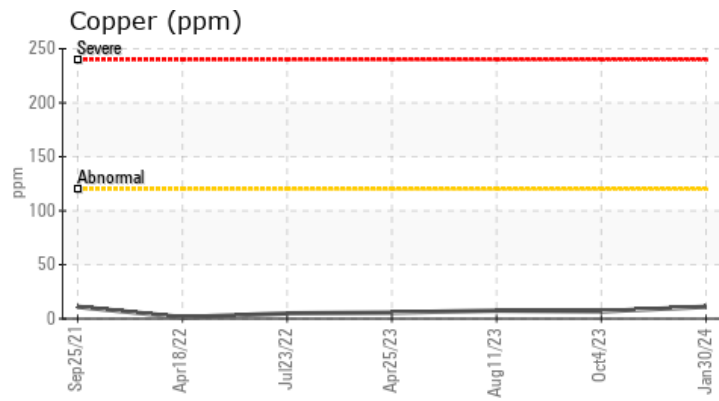
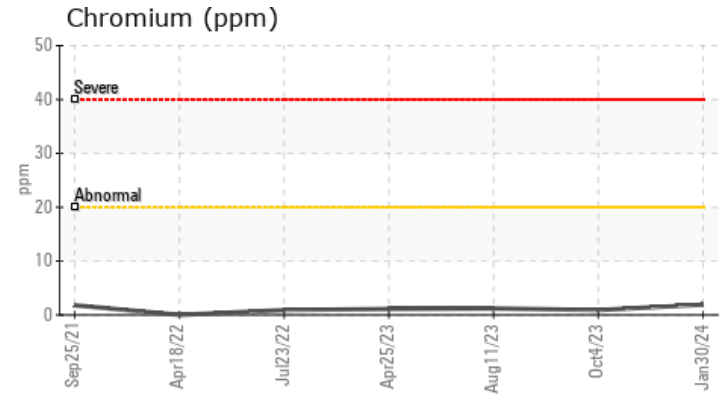
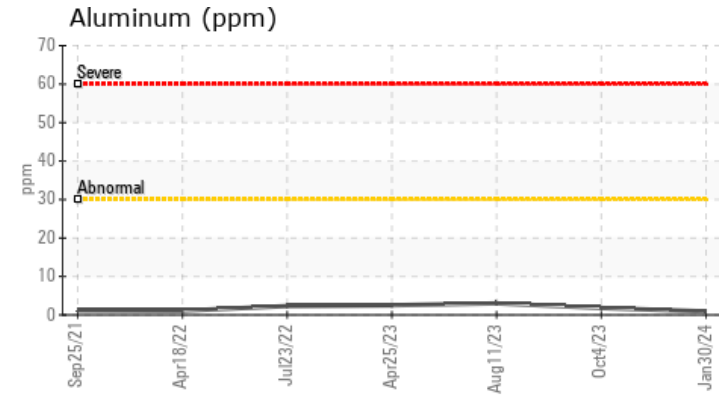
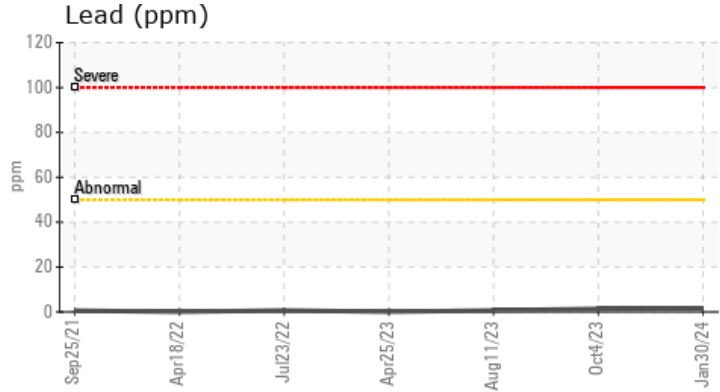
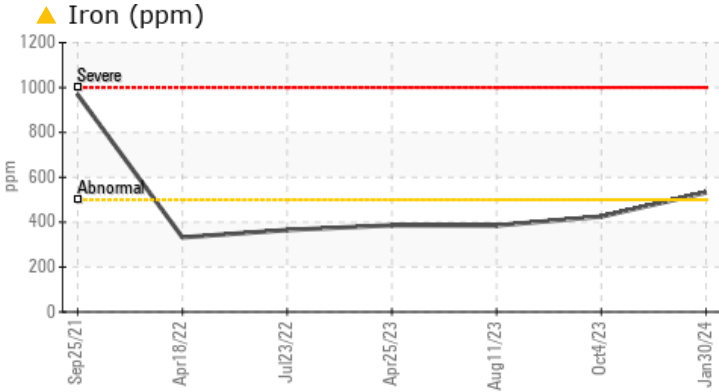
Depot: VOLV00142
Unique No: 10860697
Signed: Jonathan Hester
Report Date: 06 Feb 2024



CONSTRUCTION EQUIPMENT



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CONSTRUCTION EQUIPMENT

SPM661225 VOLVO L350 1138 - REAR AXLE



Sample No: VCP442824
Oil Type: VOLVO PREMIUM GEAR OIL 80W-90 GL-5
Job No: SPM661225



SAMPLE INFORMATION

Sample Number	VCP442824	VCP439741	VCP351477	VCP395471
Sample Date	30 Jan 2024	04 Oct 2023	11 Aug 2023	25 Apr 2023
Machine Hours	5328	4974	4582	3754
Oil Hours	0	0	0	0
Oil Changed	N/A	N/A	N/A	Not Changd
Sample Status	ATTENTION	ATTENTION	ATTENTION	ATTENTION

ALTA EQUIPMENT

5985 COURT STREET ROAD
 SYRACUSE, NY
 US 13206
 Contact: JIM STRIGLE
 JIM.STRIGLE@ALTG.COM
 T: (315)437-2611
 F: (315)434-9471



OIL CONDITION

Visc @ 40°C	cSt	▲ 44.1	▲ 43.7	▲ 43.9	▲ 43.5
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CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Silicon	ppm	■ 24	■ 16	■ 17	■ 22
Sodium	ppm	■ 0	■ 2	■ 4	■ 4
Potassium	ppm	■ 2	■ <1	■ <1	■ 0

Diagnosis

No corrective action is recommended at this time. 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 oil viscosity is lower than normal. Additive levels indicate the addition of a different brand, or type of oil. Confirm oil type.



WEAR METALS

Iron	ppm	■ 298	■ 237	■ 228	■ 218
Copper	ppm	■ 3	■ 0	■ 1	■ 1
Lead	ppm	■ 1	■ 1	■ <1	■ 0
Tin	ppm	■ <1	■ <1	■ <1	■ 0
Aluminum	ppm	■ <1	■ 2	■ 3	■ 2
Chromium	ppm	■ 2	■ <1	■ 1	■ <1
Molybdenum	ppm	■ <1	■ 0	■ 0	■ <1
Nickel	ppm	■ <1	■ <1	■ <1	■ 0
Titanium	ppm	<1	<1	<1	<1
Silver	ppm	0	0	0	0
Manganese	ppm	■ 4	■ 3	■ 3	■ 3
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	▲ 3942	■ 3890	■ 3962	■ 4113
Magnesium	ppm	■ 18	■ 19	■ 18	■ 19
Zinc	ppm	▲ 1770	■ 1633	■ 1638	■ 1650
Phosphorus	ppm	■ 1298	■ 1368	■ 1301	■ 1324
Barium	ppm	■ 0	■ 0	■ 0	■ 0
Boron	ppm	■ 141	■ 121	■ 132	■ 151

Depot: VOLVO0142
Unique No: 10860698
Signed: Jonathan Hester
Report Date: 06 Feb 2024



CONSTRUCTION EQUIPMENT



VOLVO GRAPHS

