



CONSTRUCTION EQUIPMENT

VOLVO L110H 05632247 - COOLANT



Sample No: VCP436457
Oil Type: VOLVO COOLANT VCS (YELLOW)
Job No:



SAMPLE INFORMATION

Sample Number	VCP436457	VCP438670	VCP407129	VCP407081
Sample Date	09 Apr 2024	12 Feb 2024	16 Oct 2023	09 Aug 2023
Machine Hours	6919	0	5396	4793
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

CITY CARTING

221 OLD GATE LN
MILFORD, CT
US 06460
Contact: TAVINS BANKS
tavins@citycart.net
T: (203)223-3885
F:



COOLANT CONDITION

pH	Scale 0-14	6.91	7.15	6.98	7.03
Reserve Alkalinity	Scale 0-20	---	---	---	---
Nitrites	ppm	NT	NT	NT	NT
Percentage Glycol	%	52.7	52.9	52.2	51.9
Freezing Point	°C	-40	-40	-40	-38

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.



CONTAMINATION

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

Depot: CITMILCON
Unique No: 10980944
Signed: Doug Bogart
Report Date: 19 Apr 2024

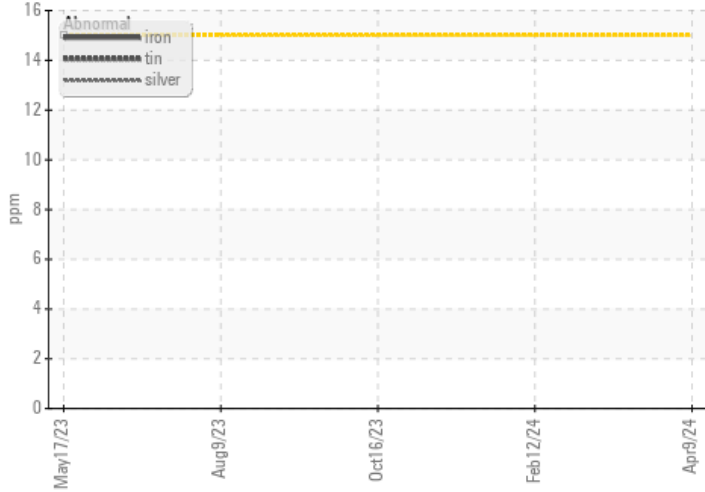


CONSTRUCTION EQUIPMENT

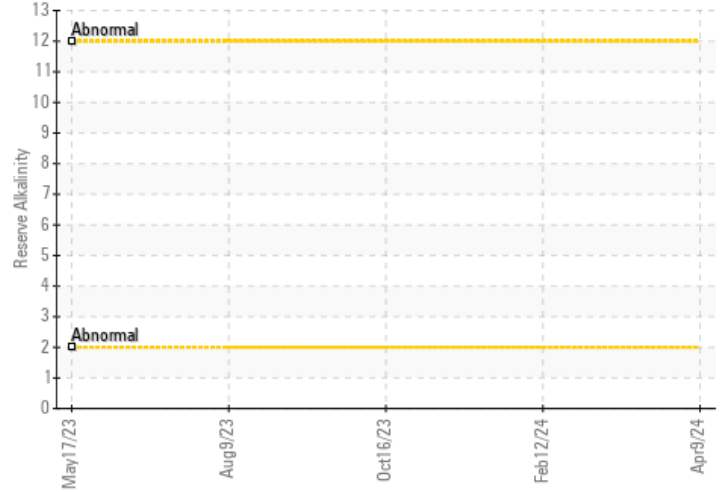


VOLVO GRAPHS

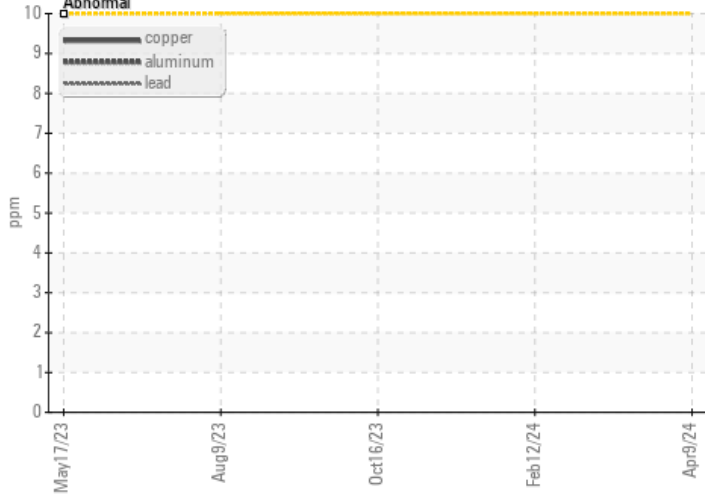
Iron/Tin/Silver



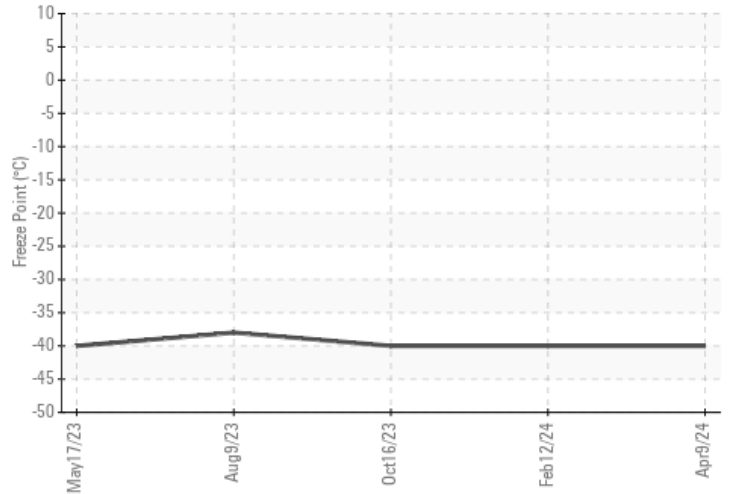
Reserve Alkalinity



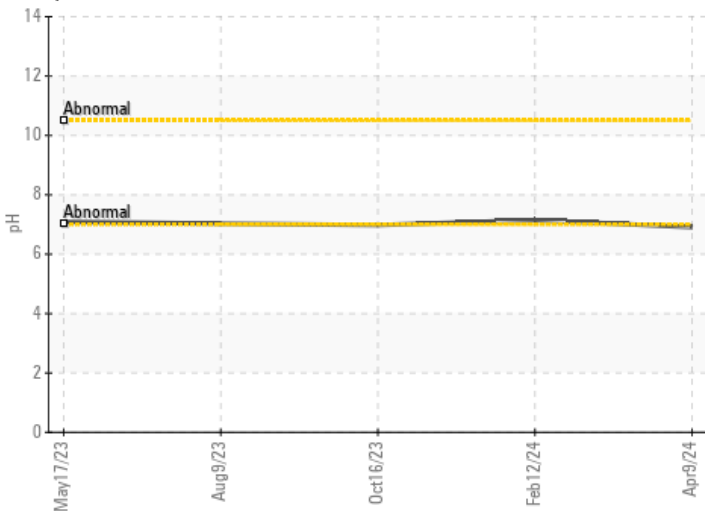
Copper/Aluminum/Lead



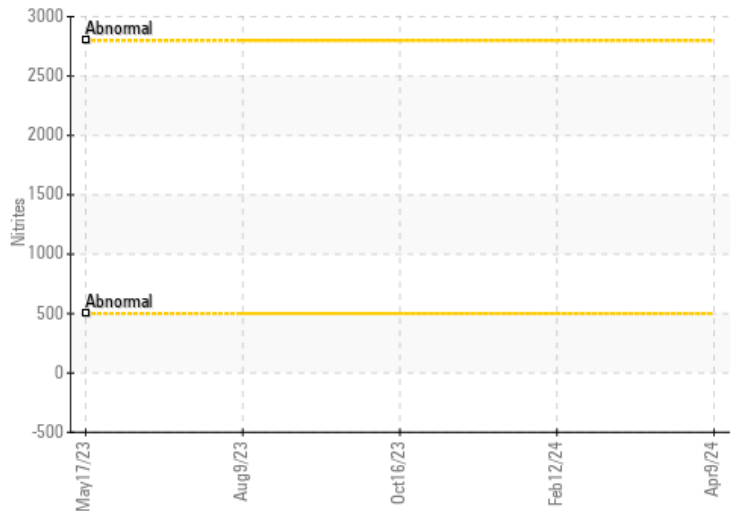
Freeze Point



pH



Nitrites





CONSTRUCTION EQUIPMENT

VOLVO L110H 05632247 - DIESEL ENGINE



Sample No: VCP438764
Oil Type: VALVOLINE 15W40
Job No:



SAMPLE INFORMATION

Sample Number	VCP438764	VCP436454	VCP436562	VCP430925
Sample Date	10 May 2024	09 Apr 2024	12 Mar 2024	12 Feb 2024
Machine Hours	7201	6919	6669	0
Oil Hours	0	250	258	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	ABNORMAL	NORMAL	NORMAL	NORMAL

CITY CARTING
 221 OLD GATE LN
 MILFORD, CT
 US 06460
 Contact: TAVINS BANKS
 tavins@citycart.net
 T: (203)223-3885
 F:

OIL CONDITION

Visc @ 100°C	cSt	▲ 11.9	■ 12.6	■ 12.4	■ 12.0
Base Number (BN)	mg KOH/g	■ 6.5	■ 6.9	■ 7.0	■ 6.8
Oxidation (PA)	%	36	36	37	42

Diagnosis

We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. All component wear rates are normal. There is a moderate amount of fuel present in the oil. Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.

CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	■ 0.1	■ 0.1	■ 0.1	■ 0.1
Nitration (PA)	%	48	48	51	48
Sulfation (PA)	%	43	43	43	45
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	▲ 6.7	<1.0	<1.0	<1.0
Silicon	ppm	■ 8	■ 4	■ 4	■ 5
Sodium	ppm	■ 3	■ <1	■ <1	■ <1
Potassium	ppm	■ 4	■ <1	■ <1	■ <1

WEAR METALS

Iron	ppm	■ 6	■ 4	■ 3	■ 1
Copper	ppm	■ 3	■ <1	■ <1	■ 0
Lead	ppm	■ 3	■ 0	■ 0	■ 0
Tin	ppm	■ 3	■ 1	■ 0	■ 0
Aluminum	ppm	■ 6	■ 2	■ 2	■ 3
Chromium	ppm	■ 3	■ 0	■ <1	■ 0
Molybdenum	ppm	■ 47	■ 22	■ 25	■ 55
Nickel	ppm	■ 3	■ 0	■ 0	■ 0
Titanium	ppm	■ 2	■ 0	■ 0	■ <1
Silver	ppm	■ 3	■ 0	■ 0	■ 0
Manganese	ppm	■ 2	■ 0	■ <1	■ 0
Vanadium	ppm	2	0	0	<1

ADDITIVES

Calcium	ppm	■ 1879	■ 2069	1997	■ 2033
Magnesium	ppm	167	■ 150	179	137
Zinc	ppm	■ 922	■ 944	■ 976	■ 1055
Phosphorus	ppm	■ 788	■ 792	■ 840	■ 878
Barium	ppm	■ 2	■ 0	■ 0	■ 0
Boron	ppm	■ 36	■ 31	■ 26	■ 48

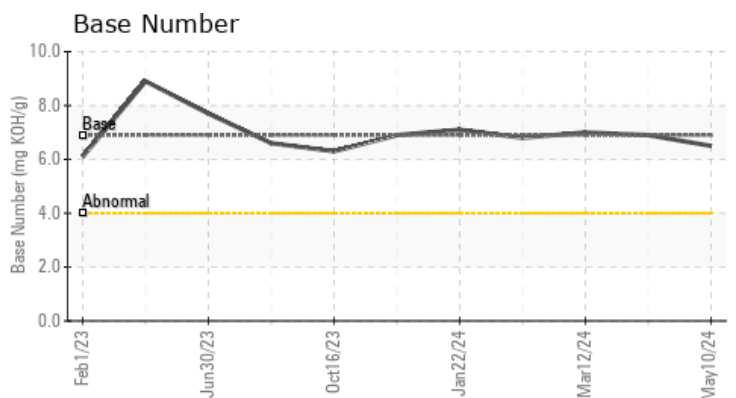
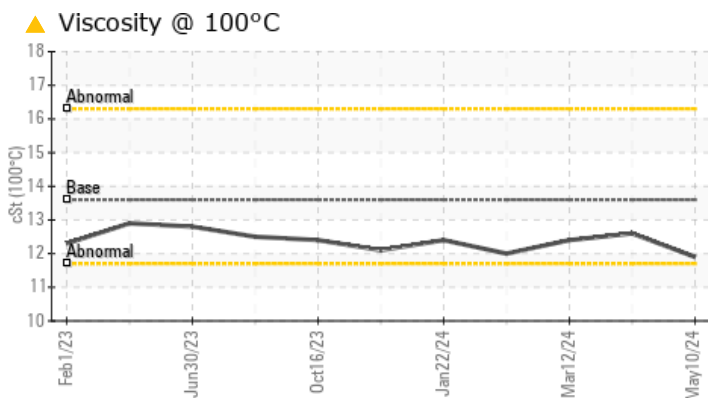
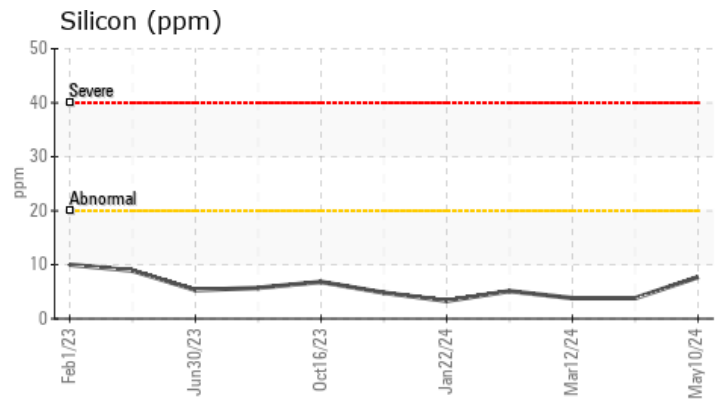
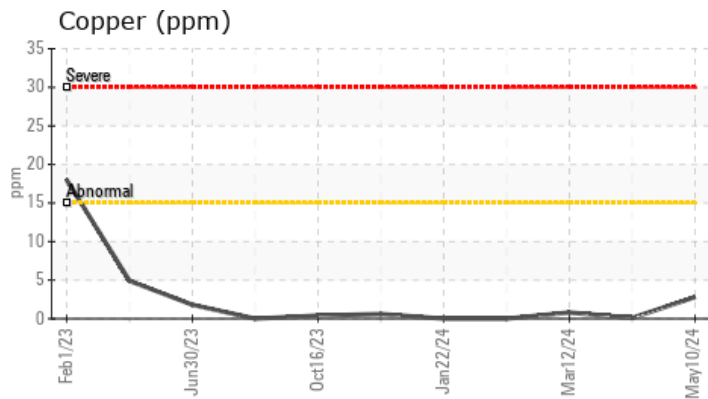
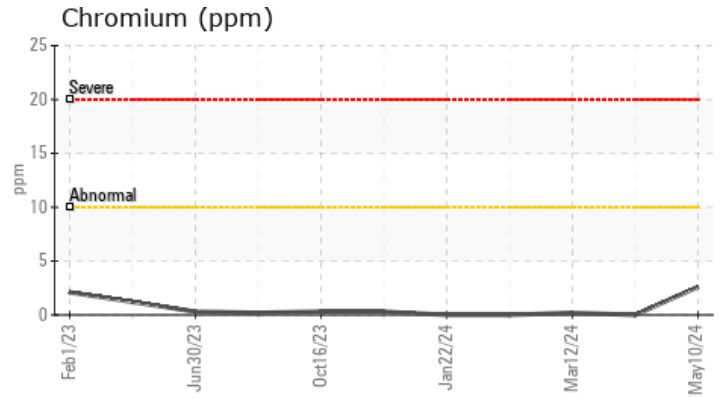
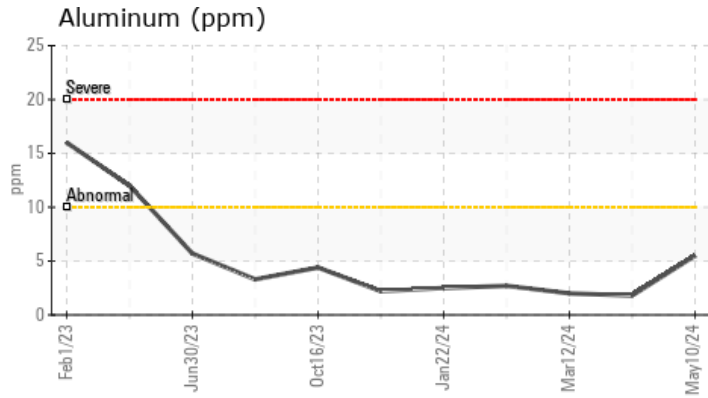
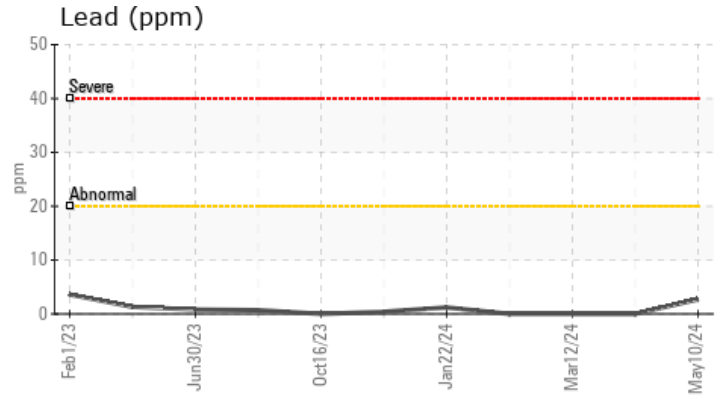
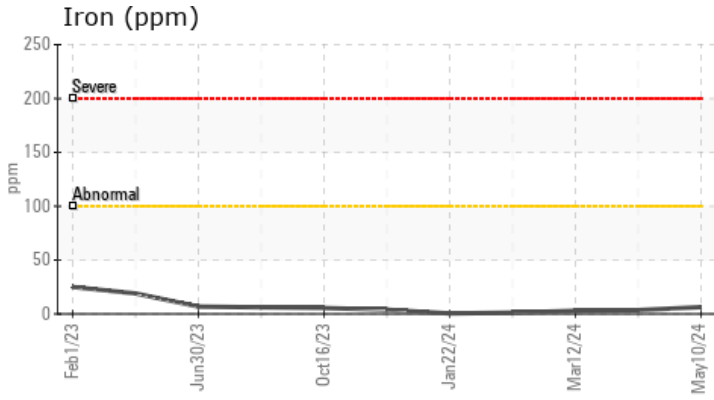
Depot: CITMILCON
Unique No: 11033699
Signed: Don Baldrige
Report Date: 22 May 2024



CONSTRUCTION EQUIPMENT



GRAPHS





CONSTRUCTION EQUIPMENT

VOLVO L110H 05632247 - TRANSMISSION (AUTO)



Sample No: VCP436456
Oil Type: VOLVO AUTOMATIC TRANSMISSION FLUID AT102
Job No:



SAMPLE INFORMATION

Sample Number	VCP436456	VCP443064	VCP406528	VCP407154
Sample Date	09 Apr 2024	12 Feb 2024	16 Oct 2023	09 Aug 2023
Machine Hours	6919	0	5396	4793
Oil Hours	508	0	0	0
Oil Changed	Not Chngd	Changed	Changed	Not Chngd
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

CITY CARTING
 221 OLD GATE LN
 MILFORD, CT
 US 06460
 Contact: TAVINS BANKS
 tavins@citycart.net
 T: (203)223-3885
 F:



OIL CONDITION

Visc @ 40°C	cSt	28.3	27.9	28.5	28.2
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CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Silicon	ppm	3	3	5	3
Sodium	ppm	3	<1	3	0
Potassium	ppm	0	1	<1	0

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	27	19	19	17
Copper	ppm	8	7	6	1
Lead	ppm	0	0	0	0
Tin	ppm	0	0	0	0
Aluminum	ppm	2	3	4	4
Chromium	ppm	<1	<1	0	0
Molybdenum	ppm	0	<1	0	0
Nickel	ppm	0	0	0	0
Titanium	ppm	0	<1	0	0
Silver	ppm	0	0	0	0
Manganese	ppm	2	<1	1	0
Vanadium	ppm	0	0	0	0

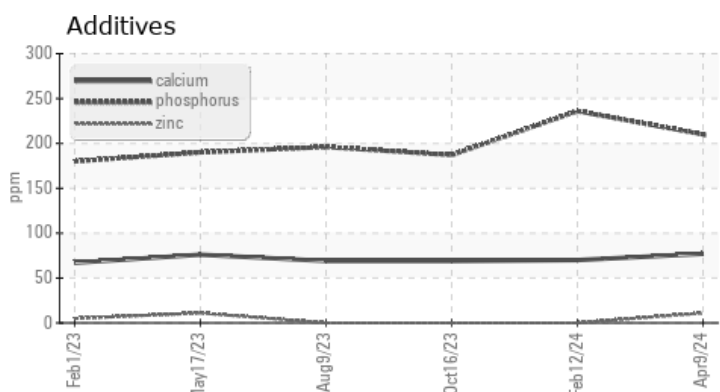
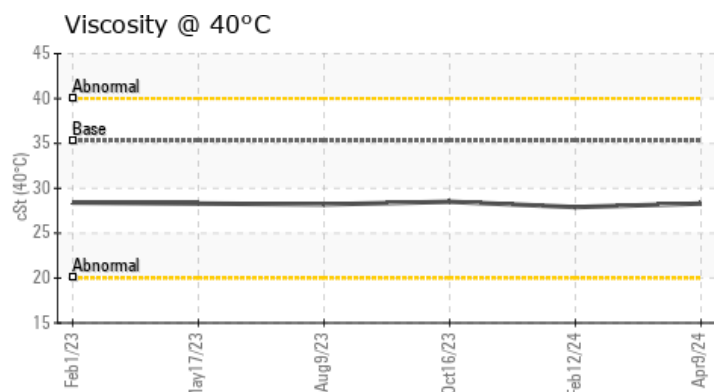
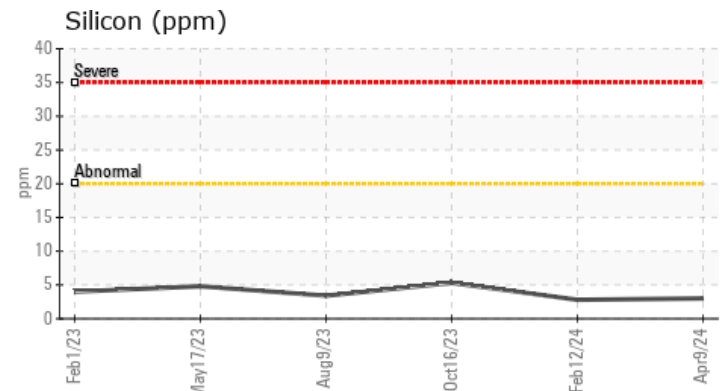
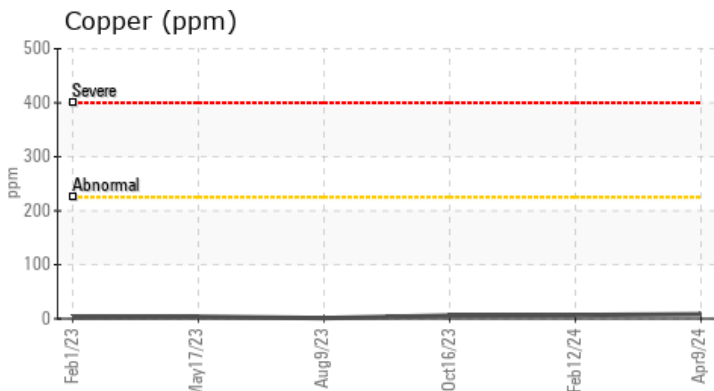
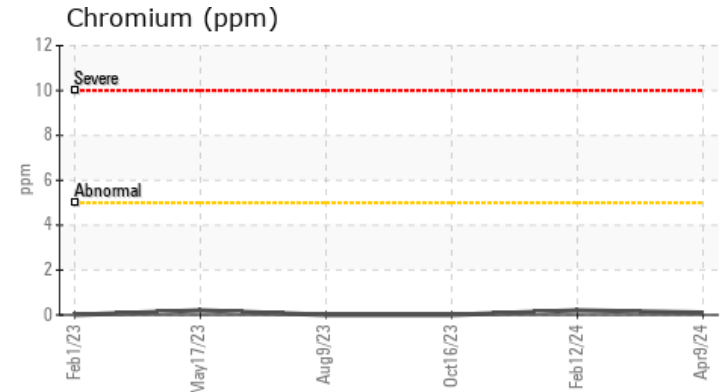
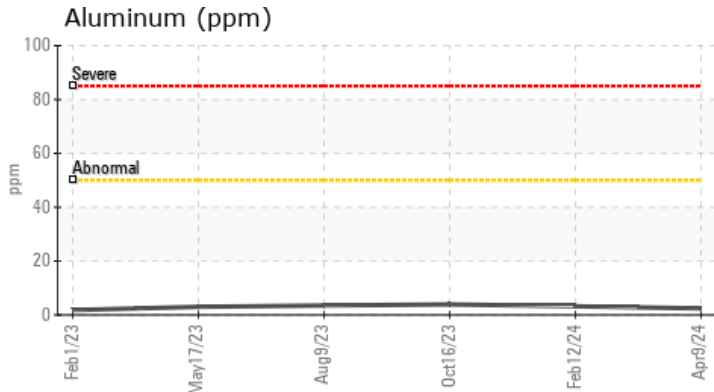
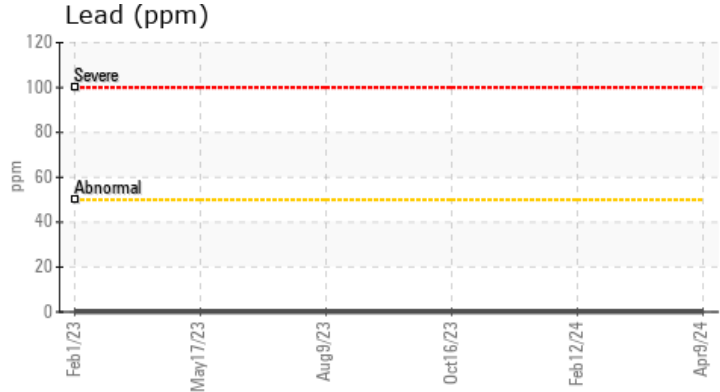
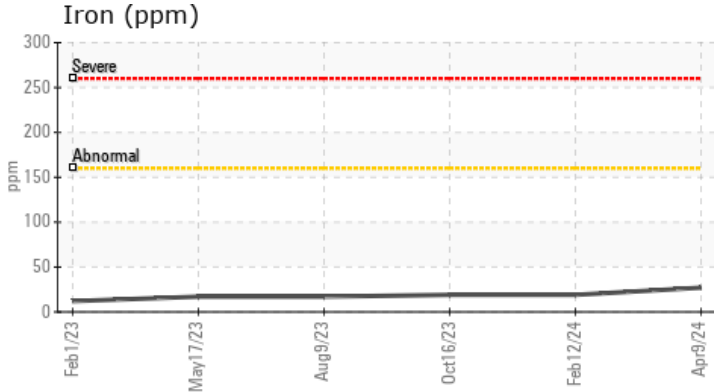


ADDITIVES

Calcium	ppm	77	70	69	69
Magnesium	ppm	0	1	0	0
Zinc	ppm	11	0	0	0
Phosphorus	ppm	210	236	187	196
Barium	ppm	<1	10	0	0
Boron	ppm	93	82	88	99

Depot: CITMILCON
Unique No: 10980899
Signed: Sean Felton
Report Date: 18 Apr 2024

VOLVO GRAPHS





CONSTRUCTION EQUIPMENT

VOLVO L110H 05632247 - HYDRAULIC SYSTEM



Sample No: VCP443991
Oil Type: VOLVO SUPER HYDRAULIC OIL 46
Job No:



SAMPLE INFORMATION

Sample Number	VCP443991	VCP436460	VCP438672	VCP407159
Sample Date	11 Jun 2024	09 Apr 2024	12 Feb 2024	16 Oct 2023
Machine Hours	7473	6919	0	5396
Oil Hours	0	1523	0	0
Oil Changed	Changed	Not Chngd	Changed	Changed
Sample Status	NORMAL	ABNORMAL	ABNORMAL	NORMAL

CITY CARTING
 221 OLD GATE LN
 MILFORD, CT
 US 06460
 Contact: TAVINS BANKS
 tavins@citycart.net
 T: (203)223-3885
 F:



OIL CONDITION

Visc @ 40°C	cSt	40.9	40.9	41.1	42.3
Acid Number (AN)	mg KOH/g	0.79	0.97	1.00	0.24



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Particles >4µm		217	6189	27122	1181
Particles >6µm		57	2049	8524	165
Particles >14µm		6	172	543	11
ISO 4406:1999 (c)		15/13/10	20/18/15	22/20/16	17/15/11
Silicon	ppm	4	3	6	4
Sodium	ppm	3	4	3	0
Potassium	ppm	2	<1	3	2

Diagnosis

Resample at the next service interval to monitor. All component wear rates are normal. The amount and size of particulates present in the system are acceptable. There is no indication of any contamination 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	3	4	3	8
Copper	ppm	5	4	4	3
Lead	ppm	2	<1	2	2
Tin	ppm	0	<1	<1	0
Aluminum	ppm	<1	0	1	2
Chromium	ppm	3	2	2	3
Molybdenum	ppm	45	37	44	18
Nickel	ppm	0	0	<1	0
Titanium	ppm	0	0	0	<1
Silver	ppm	0	0	0	0
Manganese	ppm	<1	0	<1	0
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	1448	1353	1393	811
Magnesium	ppm	140	118	137	58
Zinc	ppm	804	627	812	633
Phosphorus	ppm	683	593	688	508
Barium	ppm	0	<1	0	3
Boron	ppm	35	32	38	16

Depot: CITMILCON
Unique No: 11099333
Signed: Don Baldrige
Report Date: 27 Jun 2024

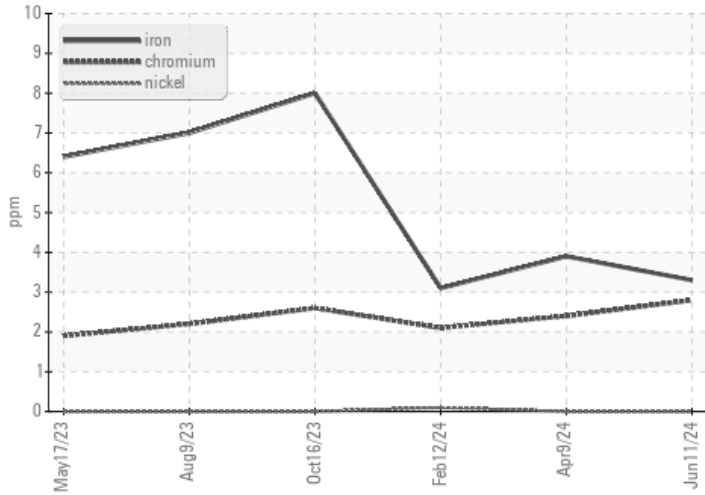


CONSTRUCTION EQUIPMENT

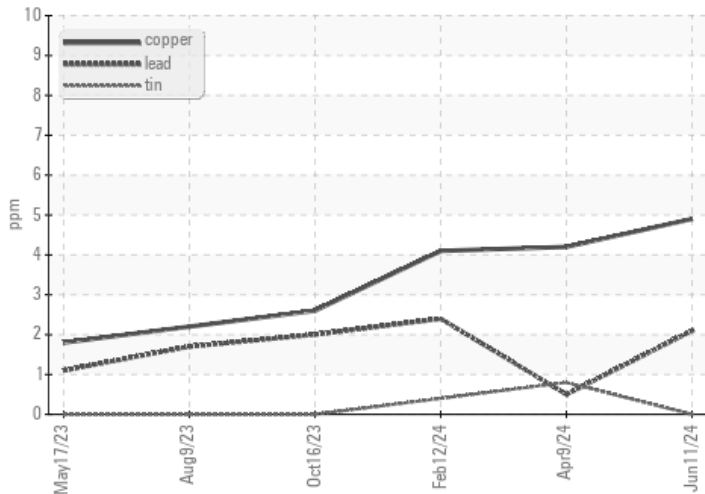


VOLVO GRAPHS

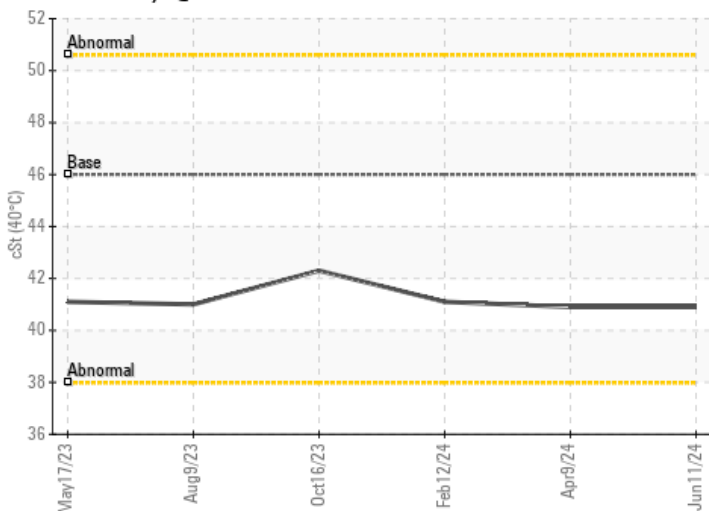
Ferrous Alloys



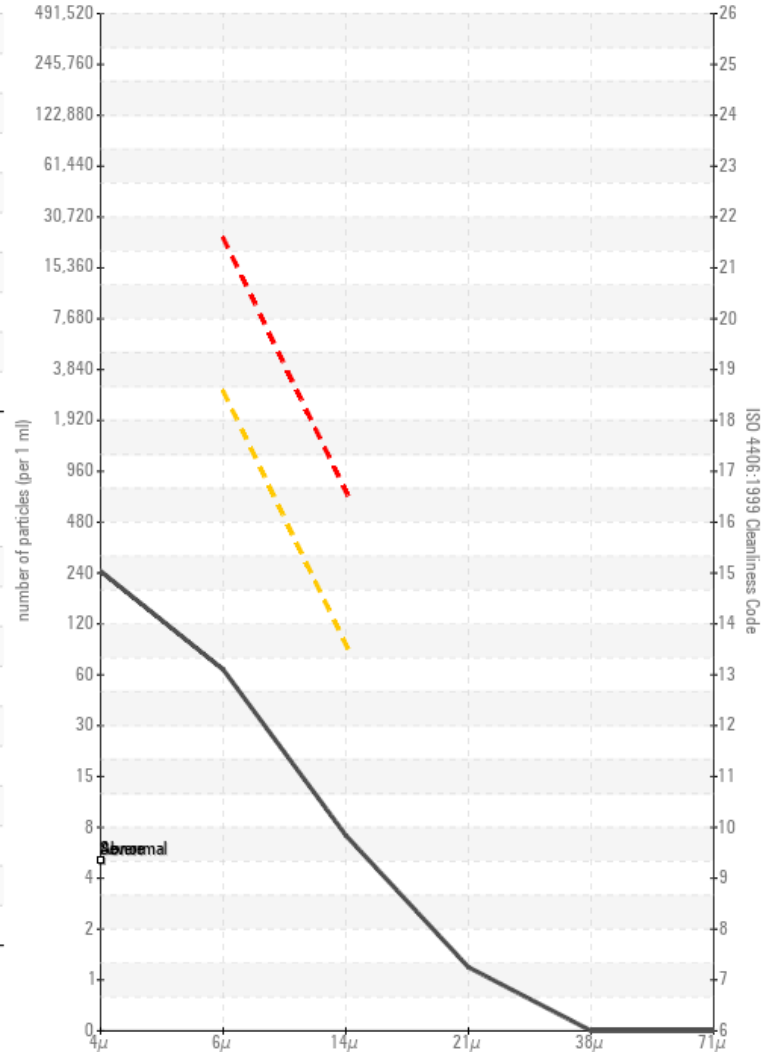
Non-ferrous Metals



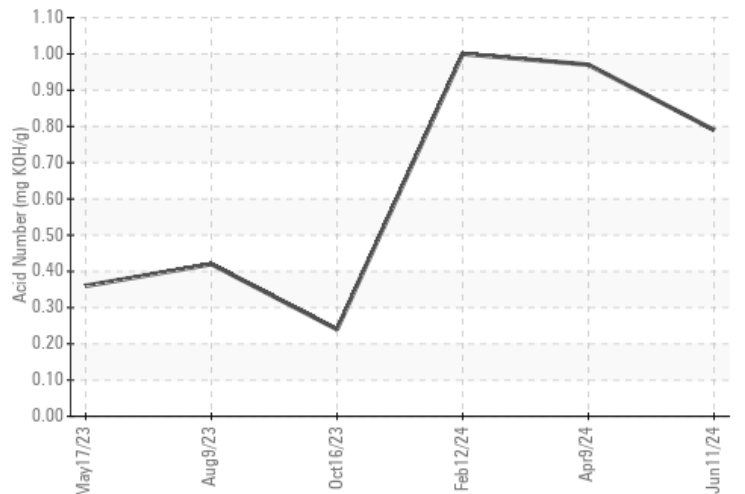
Viscosity @ 40°C



Particle Count



Acid Number





CONSTRUCTION EQUIPMENT

VOLVO L110H 05632247 - FRONT AXLE



Sample No: VCP436453
Oil Type: VALVOLINE ALLFLEET 10W
Job No:



SAMPLE INFORMATION

Sample Number	VCP436453	VCP438680	VCP407353	VCP407140
Sample Date	09 Apr 2024	12 Feb 2024	16 Oct 2023	09 Aug 2023
Machine Hours	6919	0	5396	4793
Oil Hours	1523	0	0	0
Oil Changed	Not Chngd	Changed	Changed	Not Chngd
Sample Status	NORMAL	ABNORMAL	NORMAL	NORMAL

CITY CARTING
 221 OLD GATE LN
 MILFORD, CT
 US 06460
 Contact: JOHN LINARES
 jlinares@win-waste.com
 T:
 F:



OIL CONDITION

Visc @ 40°C	cSt	42.7	46.9	42.8	42.6
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CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Silicon	ppm	15	13	14	13
Sodium	ppm	<1	0	2	<1
Potassium	ppm	0	2	0	0

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	53	37	77	66
Copper	ppm	0	<1	<1	0
Lead	ppm	0	0	<1	<1
Tin	ppm	0	0	<1	0
Aluminum	ppm	<1	2	1	<1
Chromium	ppm	<1	<1	2	1
Molybdenum	ppm	<1	<1	<1	2
Nickel	ppm	0	0	<1	0
Titanium	ppm	0	<1	<1	0
Silver	ppm	0	0	0	0
Manganese	ppm	2	<1	3	2
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	4286	3768	4037	4110
Magnesium	ppm	26	20	18	19
Zinc	ppm	1714	1594	1663	1677
Phosphorus	ppm	1464	1280	1309	1284
Barium	ppm	0	10	0	0
Boron	ppm	148	121	136	144

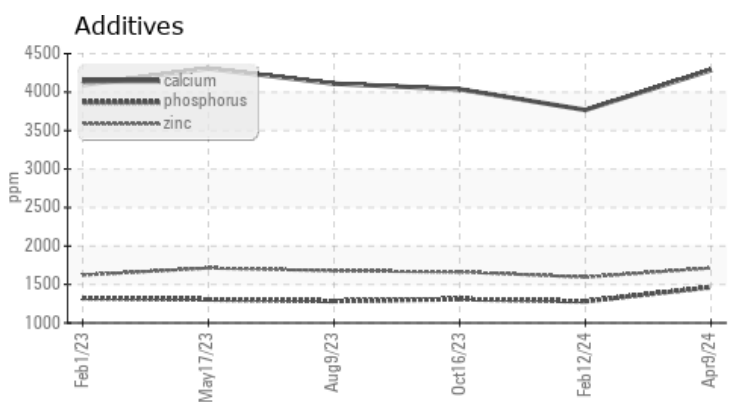
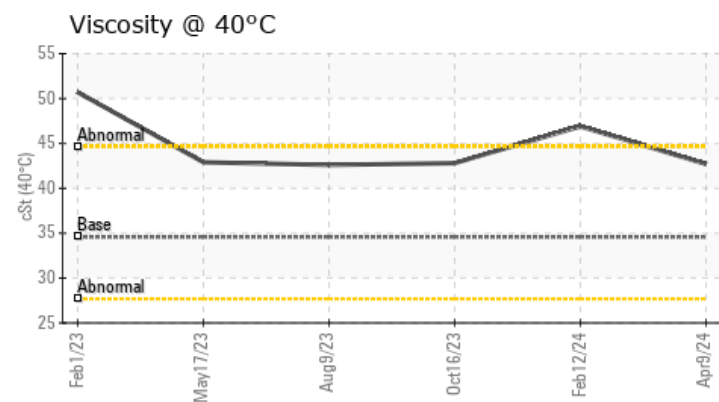
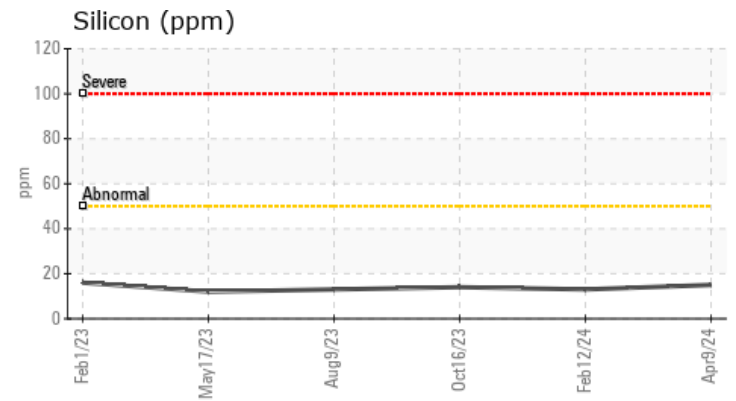
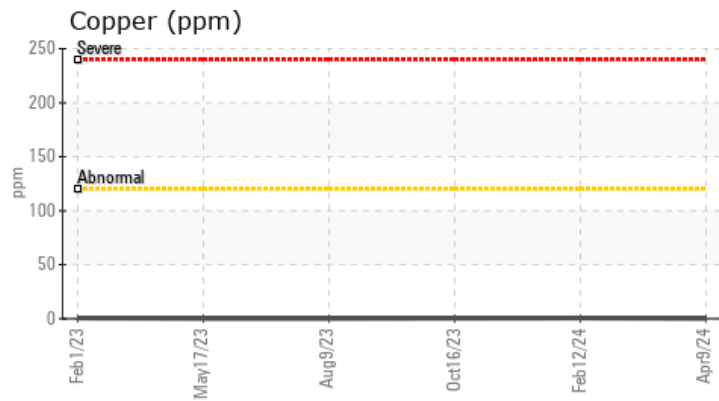
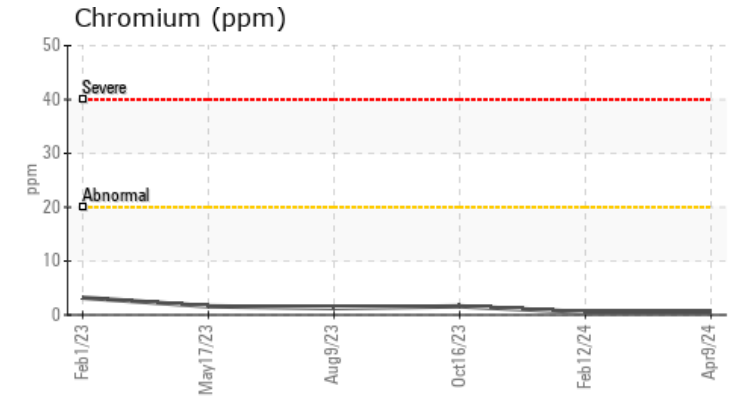
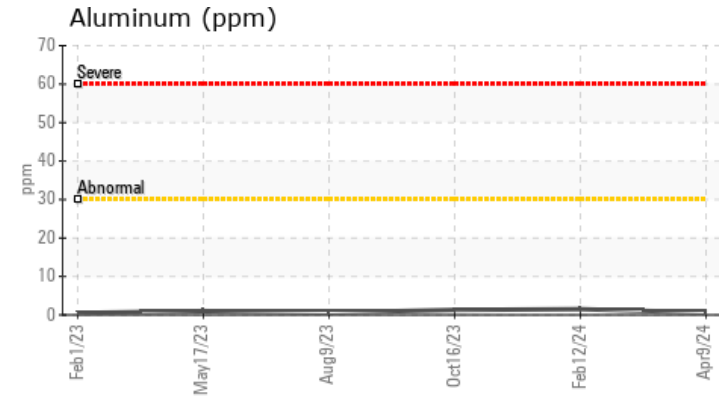
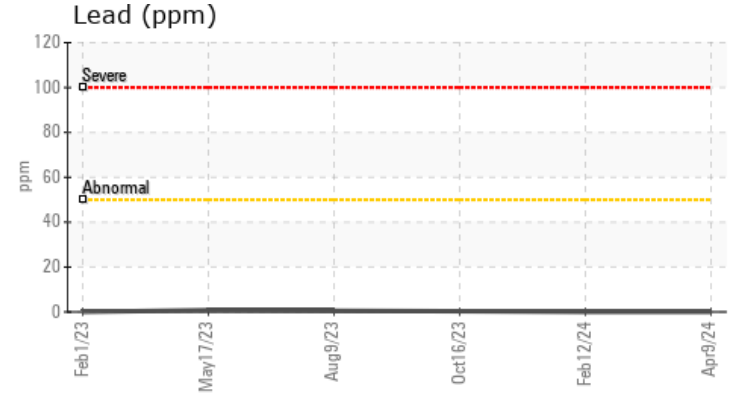
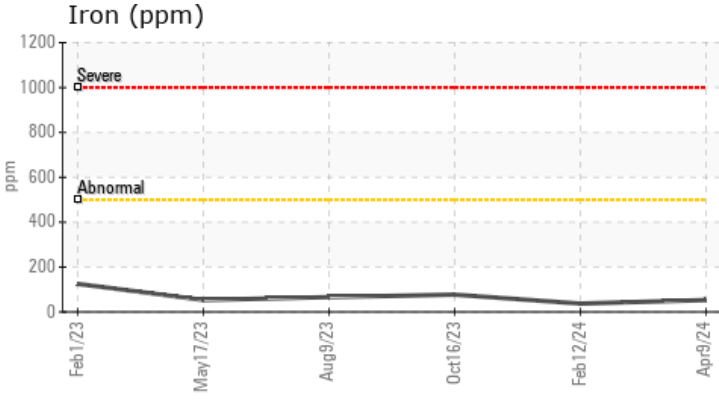
Depot: CITMILCON
Unique No: 10980890
Signed: Sean Felton
Report Date: 18 Apr 2024



CONSTRUCTION EQUIPMENT



VOLVO GRAPHS





CONSTRUCTION EQUIPMENT

VOLVO L110H 05632247 - REAR AXLE



Sample No: VCP453894
Oil Type: VOLVO WB 102
Job No:



SAMPLE INFORMATION

Sample Number	VCP453894	VCP436455	VCP438674	VCP407128
Sample Date	11 Jun 2024	09 Apr 2024	12 Feb 2024	16 Oct 2023
Machine Hours	7473	6919	0	5396
Oil Hours	0	1523	0	0
Oil Changed	Changed	Not Chngd	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

CITY CARTING
 221 OLD GATE LN
 MILFORD, CT
 US 06460
 Contact: TAVINS BANKS
 tavins@citycart.net
 T: (203)223-3885
 F:



OIL CONDITION

Visc @ 40°C	cSt	44.7	43.1	43.2	43.0
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CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Silicon	ppm	12	16	14	13
Sodium	ppm	2	2	<1	2
Potassium	ppm	0	0	0	0

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	50	59	33	69
Copper	ppm	<1	4	0	0
Lead	ppm	0	10	<1	<1
Tin	ppm	0	<1	0	<1
Aluminum	ppm	<1	<1	2	1
Chromium	ppm	<1	<1	<1	1
Molybdenum	ppm	3	3	3	4
Nickel	ppm	0	0	0	0
Titanium	ppm	0	0	<1	0
Silver	ppm	0	0	0	0
Manganese	ppm	<1	1	<1	2
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	3885	4196	3950	3925
Magnesium	ppm	23	26	26	17
Zinc	ppm	1513	1697	1627	1627
Phosphorus	ppm	1205	1455	1319	1294
Barium	ppm	0	<1	0	0
Boron	ppm	119	151	130	129

Depot: CITMILCON
Unique No: 11099802
Signed: Wes Davis
Report Date: 27 Jun 2024



CONSTRUCTION EQUIPMENT



GRAPHS

