



CONSTRUCTION EQUIPMENT

8000394721 VOLVO L120H 632927 - DIESEL ENGINE



Sample No: VCP380411
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: 8000394721



SAMPLE INFORMATION

Sample Number	VCP380411	VCP391817	VCP394704	VCP392204
Sample Date	16 Feb 2024	18 Oct 2023	11 Aug 2023	16 Jun 2023
Machine Hours	7646	6487	5896	5404
Oil Hours	1000	2000	500	500
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	SEVERE	NORMAL	NORMAL	NORMAL

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 CA T4S 2L4
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OIL CONDITION

Visc @ 100°C	cSt	13.2	13.0	13.3	13.5
Oxidation (PA)	%	84	82	80	84

CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.3	0.5	0.4	0.4
Nitration (PA)	%	56	56	53	57
Sulfation (PA)	%	64	64	65	65
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	4	4	4	4
Sodium	ppm	3	2	2	2
Potassium	ppm	<1	0	<1	<1

Diagnosis

The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. Silver ppm levels are severe. There is no indication of any contamination in the oil. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

WEAR METALS

Iron	ppm	9	8	7	8
Copper	ppm	<1	<1	<1	<1
Lead	ppm	<1	<1	0	0
Tin	ppm	<1	0	<1	<1
Aluminum	ppm	4	4	3	4
Chromium	ppm	<1	<1	<1	<1
Molybdenum	ppm	40	40	41	41
Nickel	ppm	<1	<1	0	<1
Titanium	ppm	0	0	0	0
Silver	ppm	11	<1	<1	<1
Manganese	ppm	0	0	<1	<1
Vanadium	ppm	0	0	0	0

ADDITIVES

Calcium	ppm	1714	1652	1683	1705
Magnesium	ppm	501	486	513	512
Zinc	ppm	1056	1058	1082	1076
Phosphorus	ppm	932	893	982	995
Barium	ppm	0	<1	0	0
Boron	ppm	45	36	40	39

Depot: VOLVO9652
Unique No: 5734482
Signed: Kevin Marson
Report Date: 22 Feb 2024

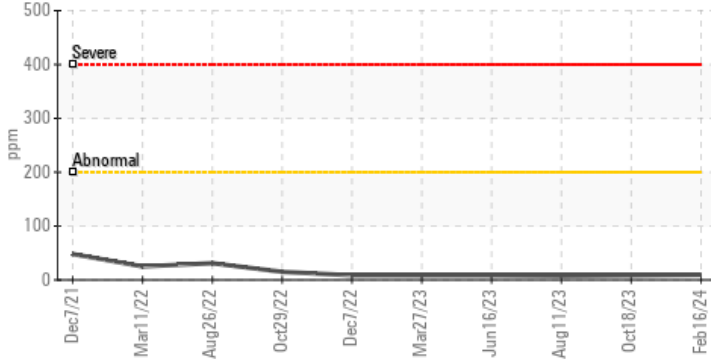


CONSTRUCTION EQUIPMENT

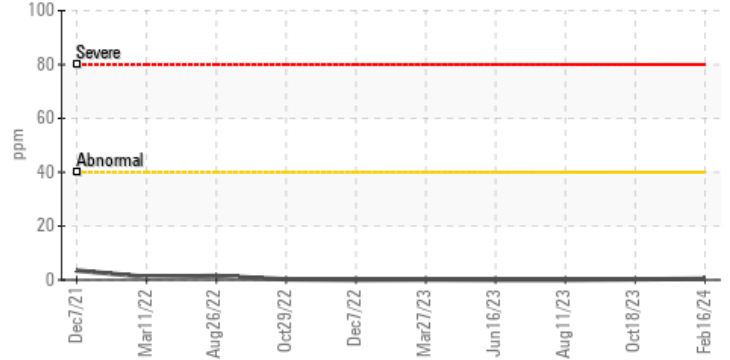


GRAPHS

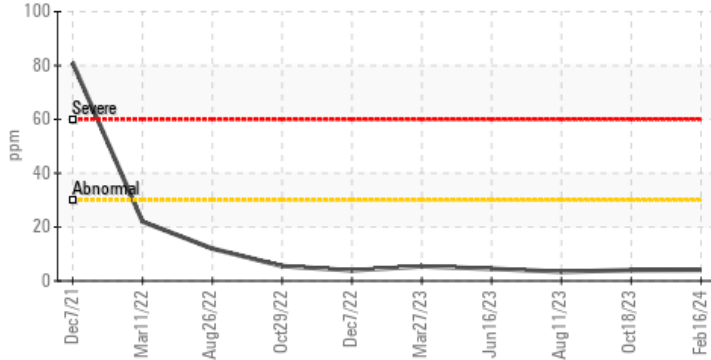
Iron (ppm)



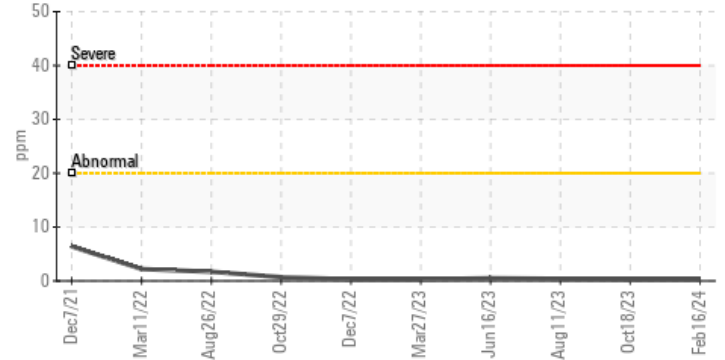
Lead (ppm)



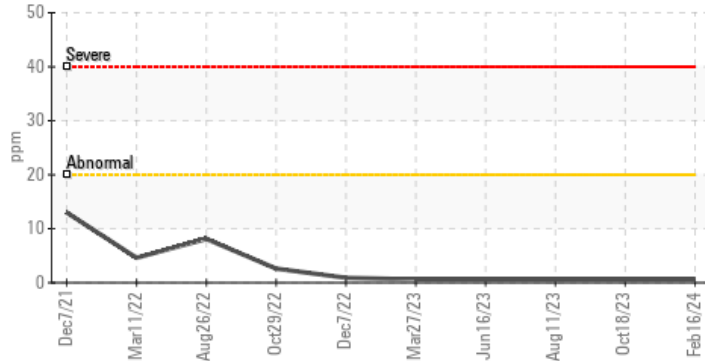
Aluminum (ppm)



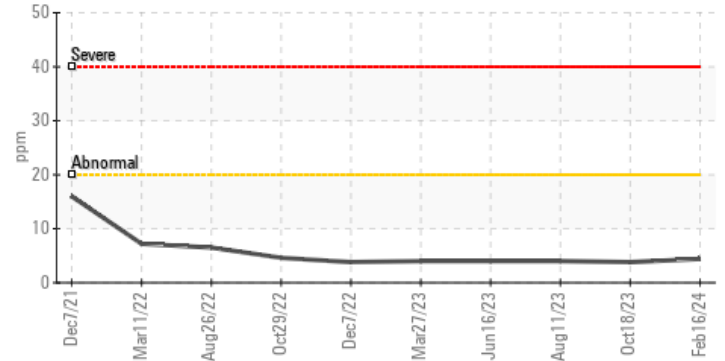
Chromium (ppm)



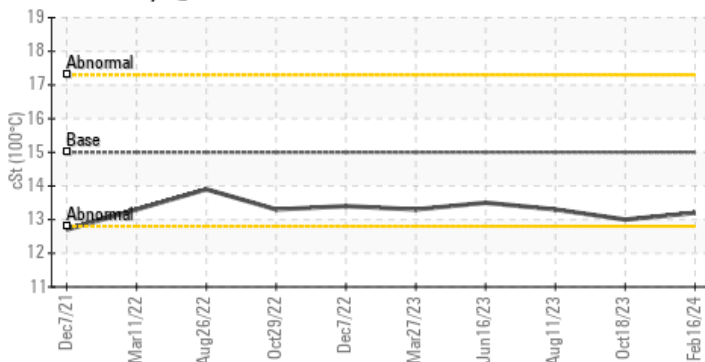
Copper (ppm)



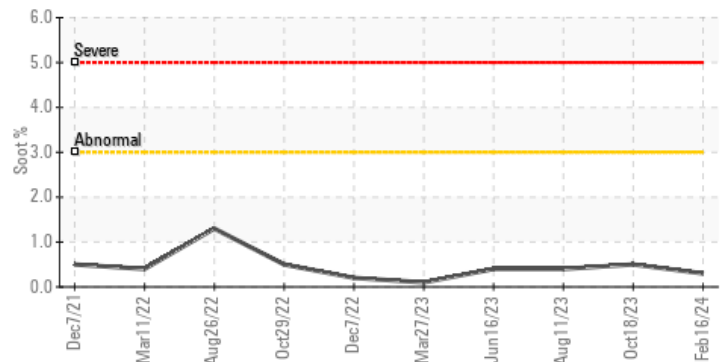
Silicon (ppm)



Viscosity @ 100°C



Soot %





CONSTRUCTION EQUIPMENT

347504 VOLVO L120H 632927 - TRANSMISSION (AUTO)



Sample No: VCP352952
Oil Type: VOLVO EXTRA AUTOMATIC FLUID
Job No: 347504



SAMPLE INFORMATION

Sample Number	VCP352952	---	---	---
Sample Date	07 Dec 2022	---	---	---
Machine Hours	4258	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Changed	---	---	---
Sample Status	NORMAL	---	---	---

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OIL CONDITION

Visc @ 40°C	cSt	█ 28.3	---	---	---
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CONTAMINATION

Water	%	NEG	---	---	---
Silicon	ppm	█ 10	---	---	---
Sodium	ppm	█ 3	---	---	---
Potassium	ppm	█ <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	█ 46	---	---	---
Copper	ppm	█ 13	---	---	---
Lead	ppm	█ <1	---	---	---
Tin	ppm	█ 0	---	---	---
Aluminum	ppm	█ 3	---	---	---
Chromium	ppm	█ 0	---	---	---
Molybdenum	ppm	█ <1	---	---	---
Nickel	ppm	█ 0	---	---	---
Titanium	ppm	0	---	---	---
Silver	ppm	█ 0	---	---	---
Manganese	ppm	█ 3	---	---	---
Vanadium	ppm	0	---	---	---



ADDITIVES

Calcium	ppm	█ 88	---	---	---
Magnesium	ppm	█ 4	---	---	---
Zinc	ppm	█ 16	---	---	---
Phosphorus	ppm	█ 219	---	---	---
Barium	ppm	█ 4	---	---	---
Boron	ppm	█ 77	---	---	---

Depot: VOLVO9652
Unique No: 5501691
Signed: Wes Davis
Report Date: 14 Dec 2022

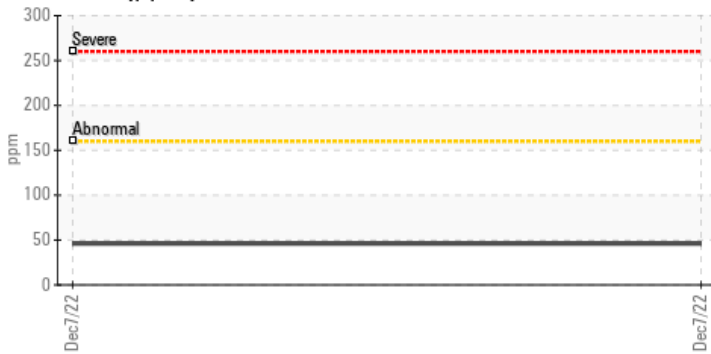


CONSTRUCTION EQUIPMENT



GRAPHS

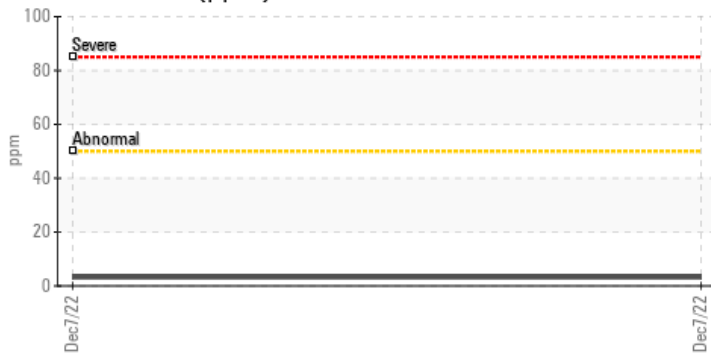
Iron (ppm)



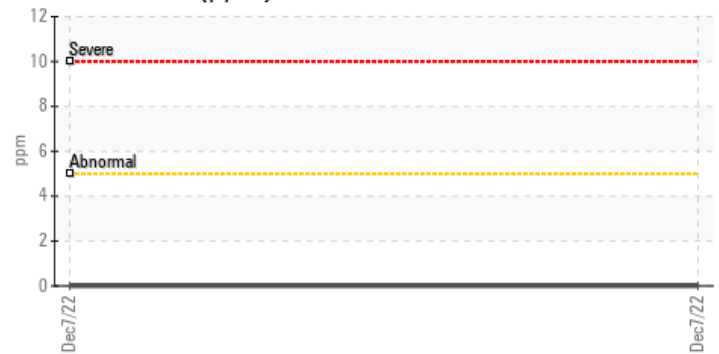
Lead (ppm)



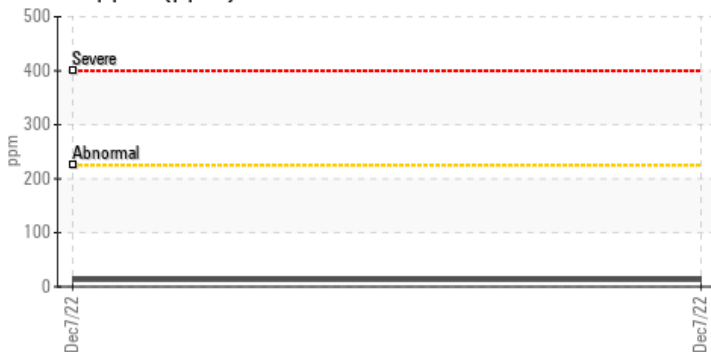
Aluminum (ppm)



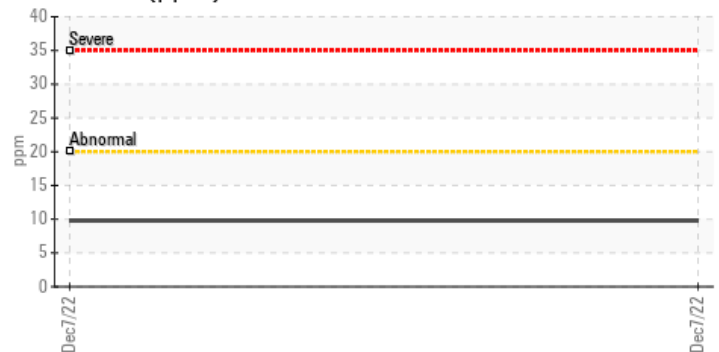
Chromium (ppm)



Copper (ppm)



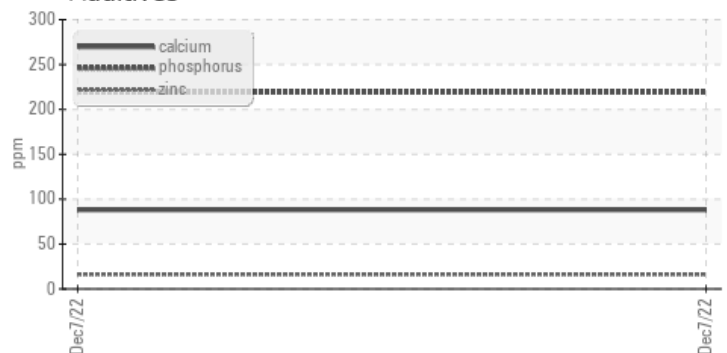
Silicon (ppm)



Viscosity @ 40°C



Additives





CONSTRUCTION EQUIPMENT

347504 VOLVO L120H 632927 - HYDRAULIC SYSTEM



Sample No: VCP352955
Oil Type: VOLVO SUPER HYDRAULIC OIL 46
Job No: 347504



SAMPLE INFORMATION

Sample Number	VCP352955	---	---	---
Sample Date	07 Dec 2022	---	---	---
Machine Hours	4258	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Changed	---	---	---
Sample Status	ATTENTION	---	---	---

STRONGCO EQUIP (AB)

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 F: (403)346-3487



OIL CONDITION

Visc @ 40°C	cSt	■ 39.5	---	---	---
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CONTAMINATION

Water	%	■ NEG	---	---	---
Particles >4µm		● 6297	---	---	---
Particles >6µm		● 1306	---	---	---
Particles >14µm		■ 48	---	---	---
ISO 4406:1999 (c)		20/18/13	---	---	---
Silicon	ppm	■ 5	---	---	---
Sodium	ppm	■ 1	---	---	---
Potassium	ppm	■ <1	---	---	---

Diagnosis

The 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 light amount of silt (particulates < 14 microns in size) present in the oil. The condition of the oil is acceptable for the time in service.



WEAR METALS

Iron	ppm	■ 6	---	---	---
Copper	ppm	■ 2	---	---	---
Lead	ppm	■ <1	---	---	---
Tin	ppm	■ 0	---	---	---
Aluminum	ppm	■ 1	---	---	---
Chromium	ppm	■ 1	---	---	---
Molybdenum	ppm	■ <1	---	---	---
Nickel	ppm	■ <1	---	---	---
Titanium	ppm	0	---	---	---
Silver	ppm	0	---	---	---
Manganese	ppm	■ 0	---	---	---
Vanadium	ppm	0	---	---	---



ADDITIVES

Calcium	ppm	■ 69	---	---	---
Magnesium	ppm	■ 3	---	---	---
Zinc	ppm	■ 421	---	---	---
Phosphorus	ppm	■ 371	---	---	---
Barium	ppm	■ 0	---	---	---
Boron	ppm	■ <1	---	---	---

Depot: VOLVO9652
Unique No: 5501681
Signed: Wes Davis
Report Date: 15 Dec 2022

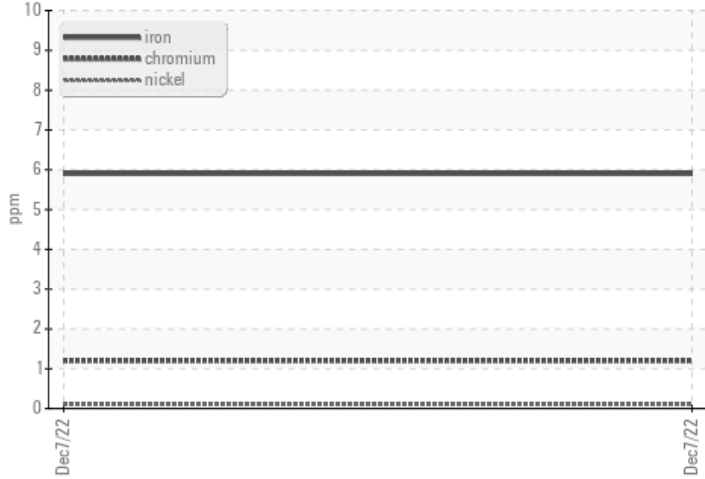


CONSTRUCTION EQUIPMENT

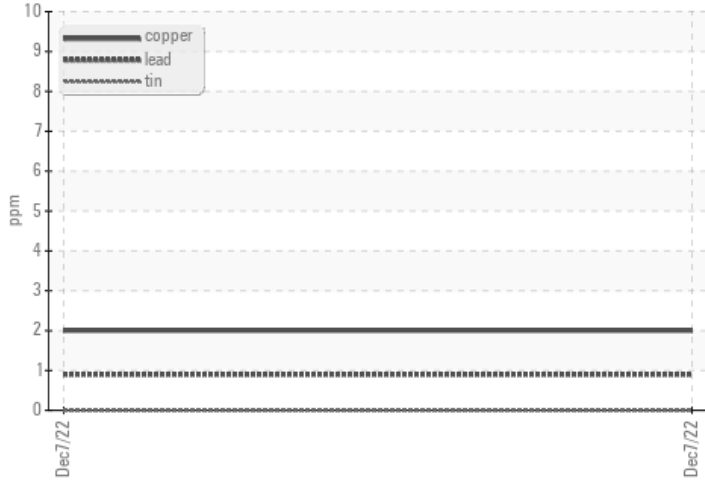


VOLVO GRAPHS

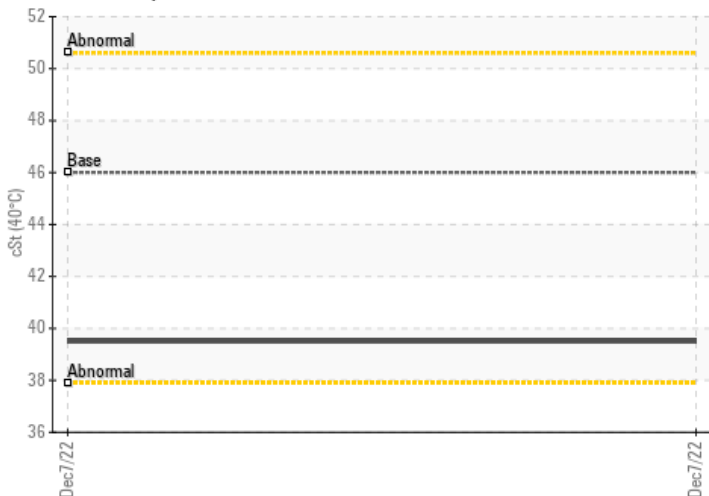
Ferrous Alloys



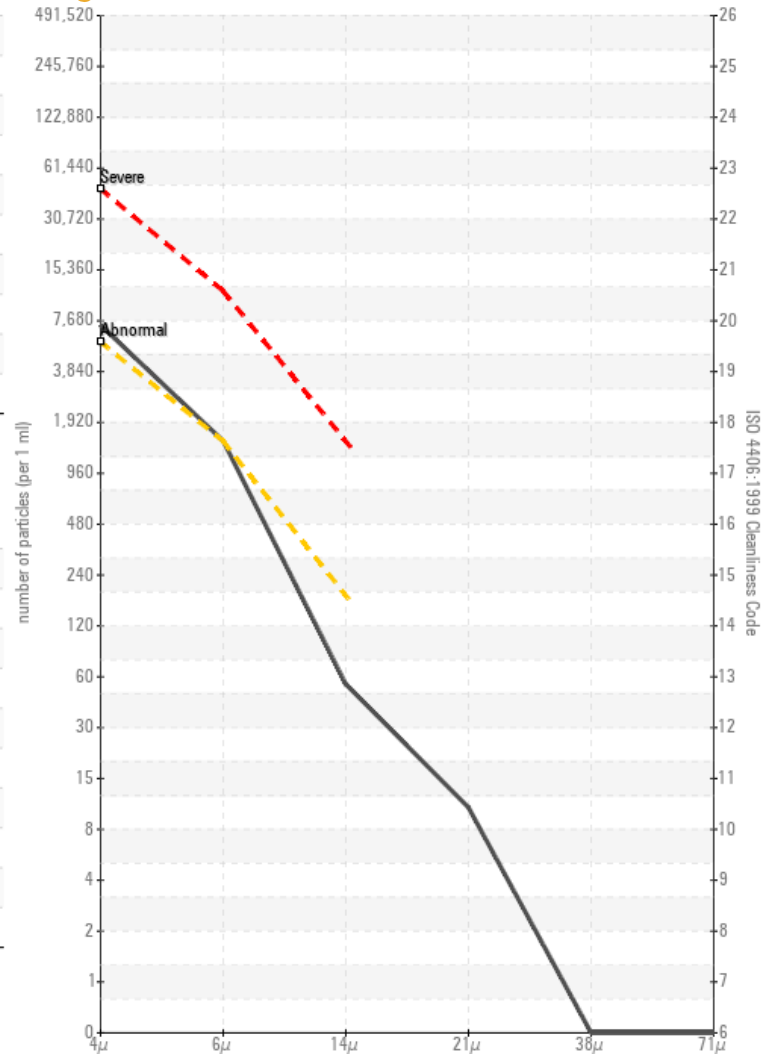
Non-ferrous Metals



Viscosity @ 40°C



Particle Count





CONSTRUCTION EQUIPMENT

401992 VOLVO L120H 632927 - FRONT AXLE



Sample No: VCP381906
Oil Type: VOLVO WB 102
Job No: 401992



SAMPLE INFORMATION

Sample Number	VCP381906	VCP394289	VCP352950	VCP332538
Sample Date	17 May 2024	18 Oct 2023	07 Dec 2022	26 Aug 2022
Machine Hours	8535	6487	4258	3187
Oil Hours	2000	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

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 T: (403)391-3520
 F: (403)346-3487



OIL CONDITION

Visc @ 40°C	cSt	42.4	43.6	49.7	49.5
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CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Silicon	ppm	12	13	17	17
Sodium	ppm	<1	<1	<1	8
Potassium	ppm	<1	<1	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	31	34	51	176
Copper	ppm	0	<1	0	<1
Lead	ppm	0	0	0	0
Tin	ppm	0	0	0	0
Aluminum	ppm	1	1	1	1
Chromium	ppm	<1	<1	<1	4
Molybdenum	ppm	0	0	<1	3
Nickel	ppm	0	<1	<1	1
Titanium	ppm	0	0	<1	<1
Silver	ppm	0	<1	0	0
Manganese	ppm	<1	<1	2	6
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	4116	4185	3824	3825
Magnesium	ppm	15	15	16	18
Zinc	ppm	1633	1599	1435	1475
Phosphorus	ppm	1323	1318	1211	1237
Barium	ppm	0	<1	0	0
Boron	ppm	118	123	107	113

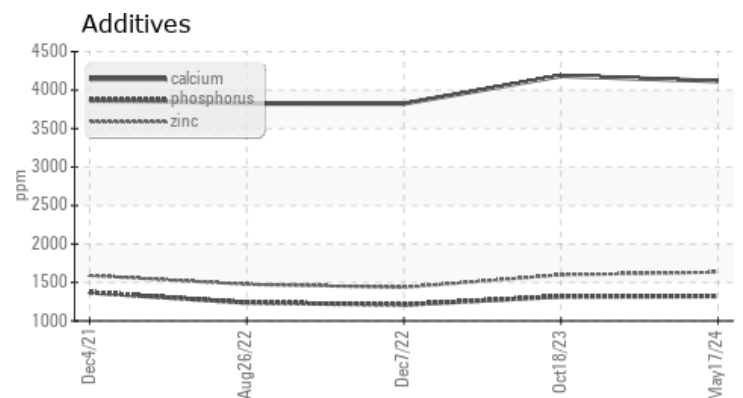
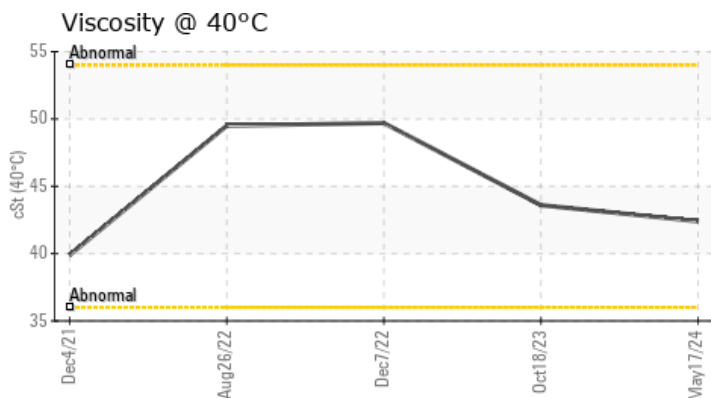
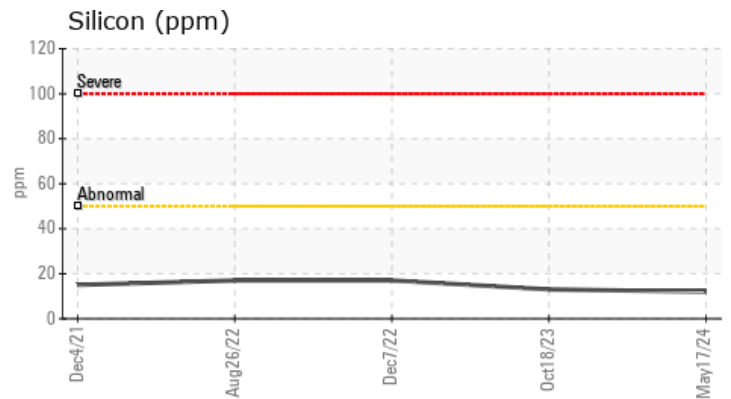
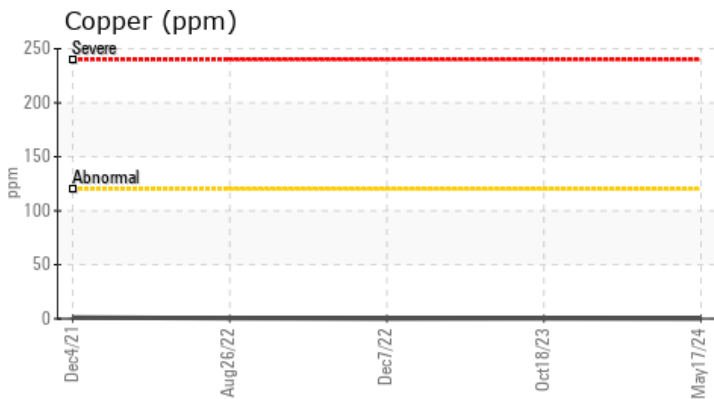
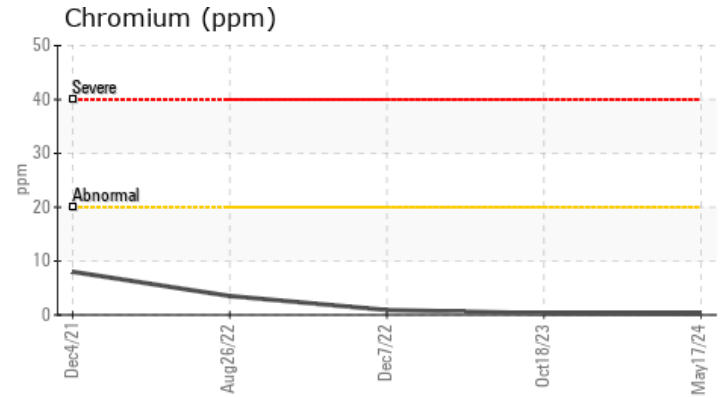
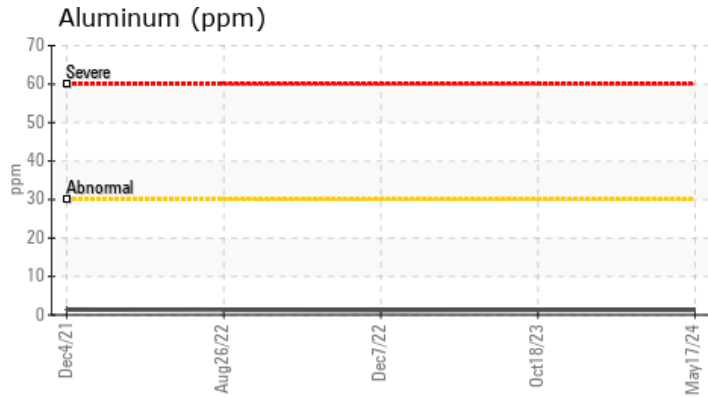
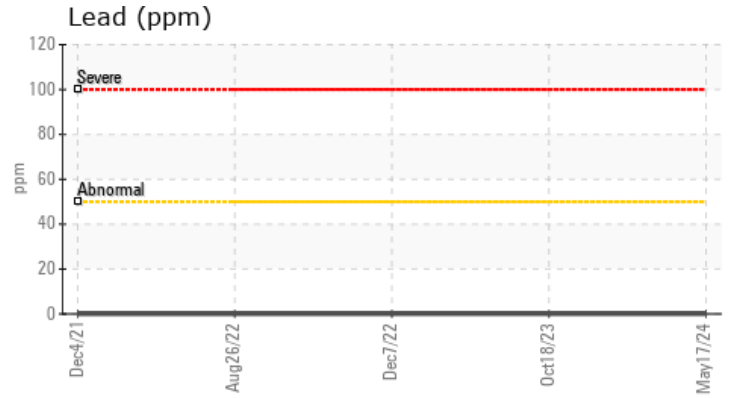
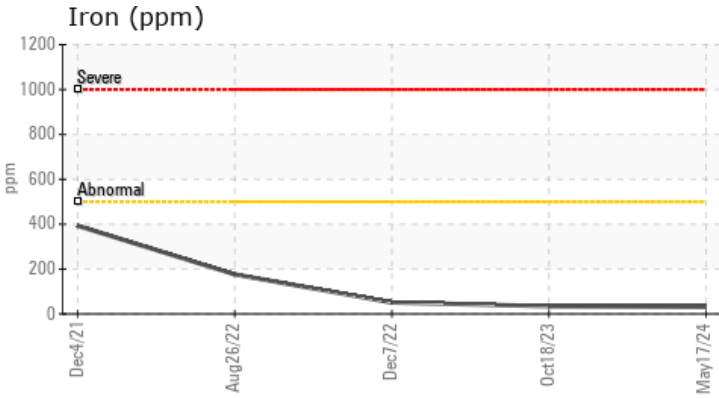
Depot: VOLVO9652
Unique No: 5786122
Signed: Wes Davis
Report Date: 22 May 2024



CONSTRUCTION EQUIPMENT



GRAPHS





CONSTRUCTION EQUIPMENT

401992 VOLVO L120H 632927 - REAR AXLE



Sample No: VCP381907
Oil Type: VOLVO WB 102
Job No: 401992



SAMPLE INFORMATION

Sample Number	VCP381907	VCP391824	VCP352953	VCP331771
Sample Date	17 May 2024	18 Oct 2023	07 Dec 2022	26 Aug 2022
Machine Hours	8535	6487	4258	3187
Oil Hours	2000	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

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OIL CONDITION

Visc @ 40°C	cSt	42.7	43.8	52.1	51.5
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CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Silicon	ppm	12	14	16	16
Sodium	ppm	<1	1	4	8
Potassium	ppm	<1	<1	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	24	35	34	104
Copper	ppm	0	<1	0	<1
Lead	ppm	0	0	0	<1
Tin	ppm	0	0	0	0
Aluminum	ppm	1	1	1	1
Chromium	ppm	0	<1	<1	2
Molybdenum	ppm	0	0	<1	2
Nickel	ppm	0	<1	0	<1
Titanium	ppm	0	0	<1	<1
Silver	ppm	0	<1	0	0
Manganese	ppm	<1	<1	1	4
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	4095	4235	3831	3880
Magnesium	ppm	15	16	16	18
Zinc	ppm	1644	1612	1431	1480
Phosphorus	ppm	1335	1320	1212	1199
Barium	ppm	0	<1	0	0
Boron	ppm	119	123	107	111

Depot: VOLVO9652
Unique No: 5786123
Signed: Wes Davis
Report Date: 22 May 2024



CONSTRUCTION EQUIPMENT



GRAPHS

