



CONSTRUCTION EQUIPMENT

402428 VOLVO L120H 632080 - DIESEL ENGINE



Sample No: VCP448367
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: 402428



SAMPLE INFORMATION

Sample Number	VCP448367	VCP430128	VCP392873	VCP394346
Sample Date	07 May 2024	11 Mar 2024	18 Jan 2024	03 Nov 2023
Machine Hours	34330	33670	33132	32397
Oil Hours	1000	500	500	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

STRONGCO EQUIP (AB)
 6 - 38403 BURNT LAKE TRAIL
 RED DEER COUNTY, AB
 CA T4S 2L4
 Contact: Perry Doyle
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 T: (403)391-3520
 F: (403)346-3487



OIL CONDITION

Visc @ 100°C	cSt	13.3	13.3	13.3	13.2
Oxidation (PA)	%	82	84	87	84



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.4	0.4	0.4	0.2
Nitration (PA)	%	64	63	67	58
Sulfation (PA)	%	63	63	65	64
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	3	4	5	4
Sodium	ppm	2	2	2	2
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 oil. The condition of the oil is acceptable for the time in service.



WEAR METALS

Iron	ppm	9	10	14	8
Copper	ppm	<1	<1	<1	<1
Lead	ppm	0	0	0	0
Tin	ppm	0	0	0	0
Aluminum	ppm	4	3	4	2
Chromium	ppm	<1	<1	<1	0
Molybdenum	ppm	40	41	41	41
Nickel	ppm	0	<1	0	<1
Titanium	ppm	0	0	0	0
Silver	ppm	0	0	0	<1
Manganese	ppm	<1	0	0	0
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	1740	1739	1765	1756
Magnesium	ppm	510	510	516	513
Zinc	ppm	1088	1079	1105	1114
Phosphorus	ppm	899	947	951	933
Barium	ppm	<1	0	0	<1
Boron	ppm	31	37	35	36

Depot: VOLVO9652
Unique No: 5775664
Signed: Wes Davis
Report Date: 10 May 2024

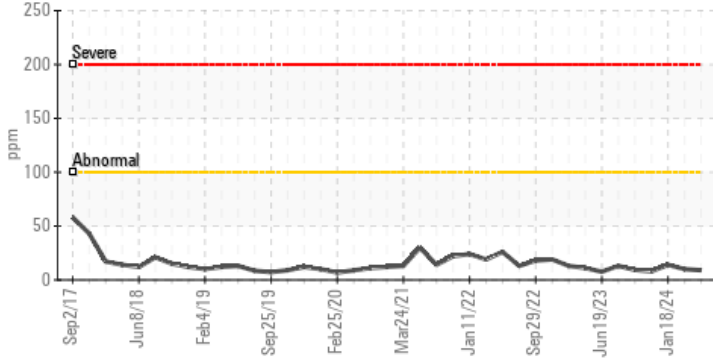


CONSTRUCTION EQUIPMENT

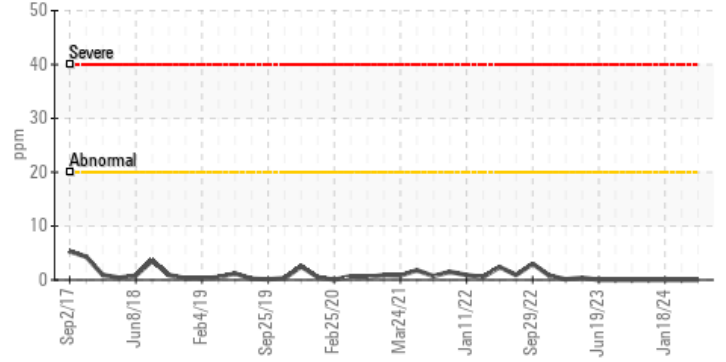


GRAPHS

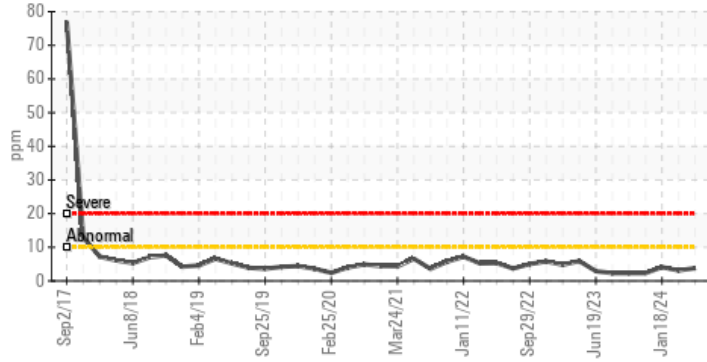
Iron (ppm)



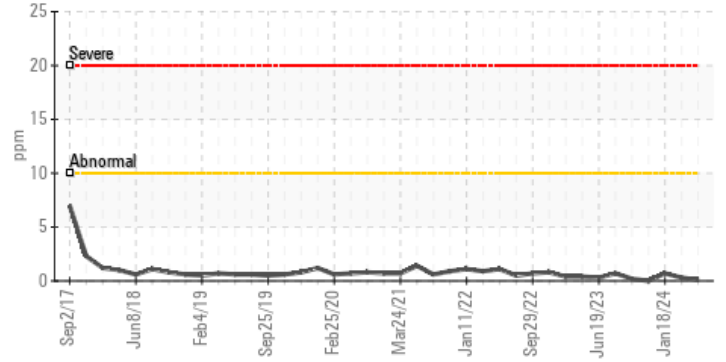
Lead (ppm)



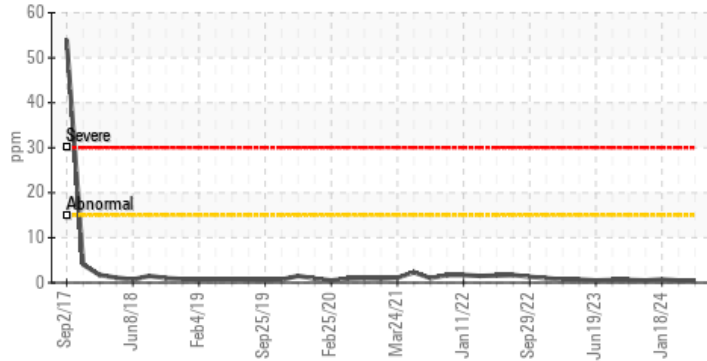
Aluminum (ppm)



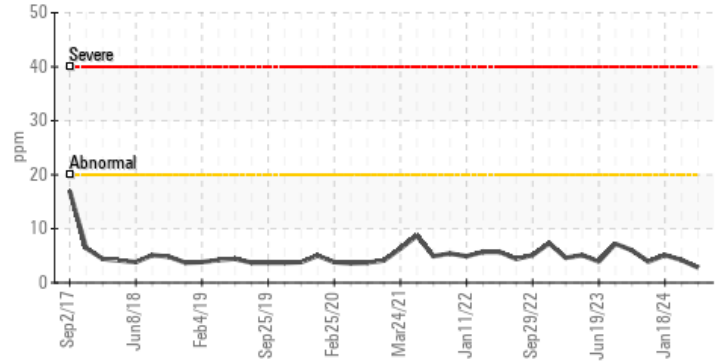
Chromium (ppm)



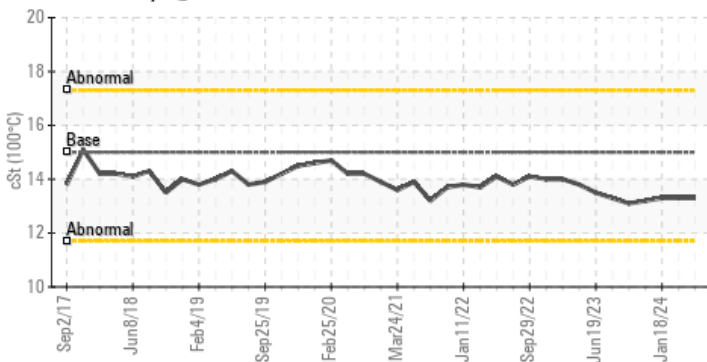
Copper (ppm)



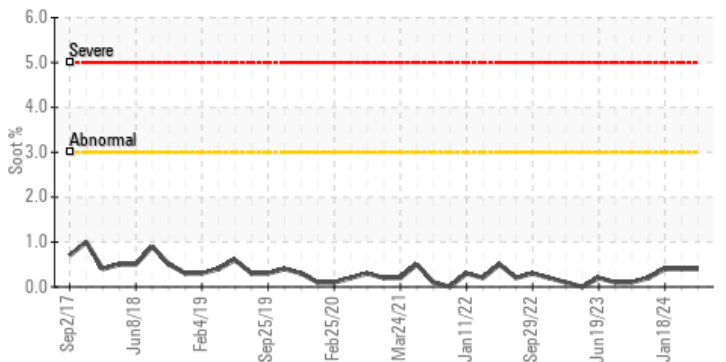
Silicon (ppm)



Viscosity @ 100°C



Soot %





CONSTRUCTION EQUIPMENT

368538 VOLVO L120H 632080 - TRANSMISSION (AUTO)



Sample No: VCP392199
Oil Type: VOLVO AUTOMATIC TRANSMISSION FLUID AT102
Job No: 368538



SAMPLE INFORMATION

Sample Number	VCP392199	VCP353089	VCP233203	VCP297696
Sample Date	19 Jun 2023	29 Sep 2022	03 Aug 2021	30 Jun 2021
Machine Hours	30691	27509	20739	20306
Oil Hours	4000	0	400	0
Oil Changed	Changed	Changed	Not Changd	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

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 F: (403)346-3487



OIL CONDITION

Visc @ 40°C	cSt	26.9	29.0	33.3	26.6
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CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Silicon	ppm	7	8	5	9
Sodium	ppm	2	2	<1	2
Potassium	ppm	1	<1	<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	8	21	17	60
Copper	ppm	27	124	3	14
Lead	ppm	<1	3	<1	<1
Tin	ppm	0	0	0	0
Aluminum	ppm	1	2	<1	2
Chromium	ppm	0	0	0	<1
Molybdenum	ppm	0	0	<1	<1
Nickel	ppm	0	0	<1	<1
Titanium	ppm	0	0	0	0
Silver	ppm	0	0	<1	0
Manganese	ppm	<1	<1	<1	1
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	110	74	75	85
Magnesium	ppm	<1	<1	1	1
Zinc	ppm	23	40	47	11
Phosphorus	ppm	190	214	212	162
Barium	ppm	0	0	0	0
Boron	ppm	65	70	76	63

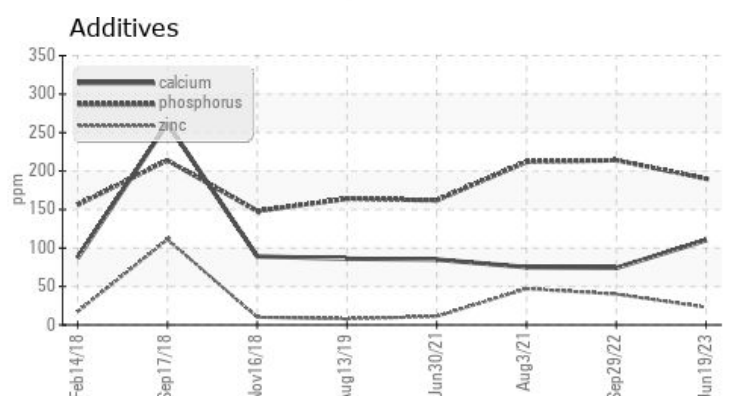
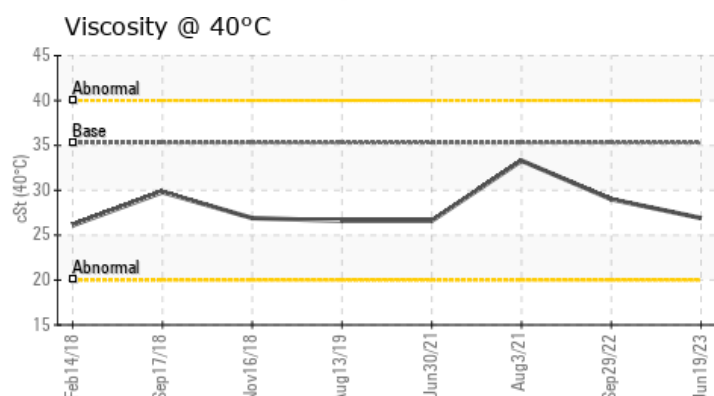
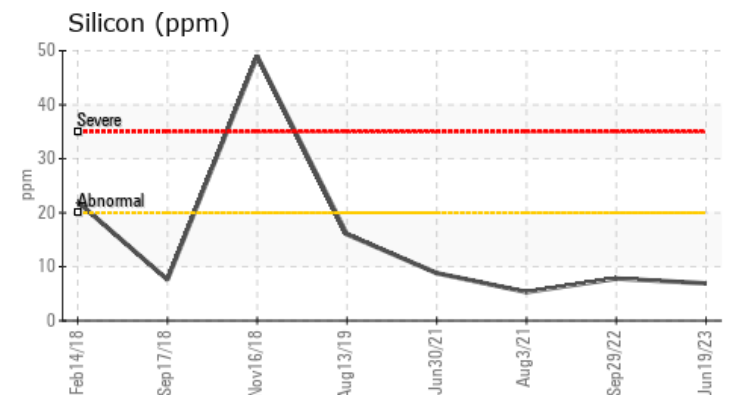
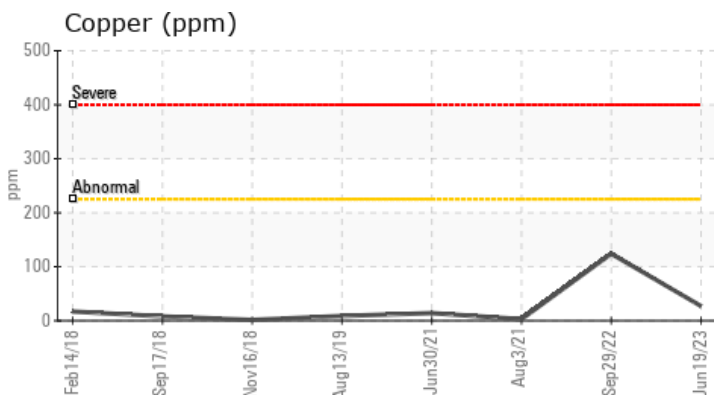
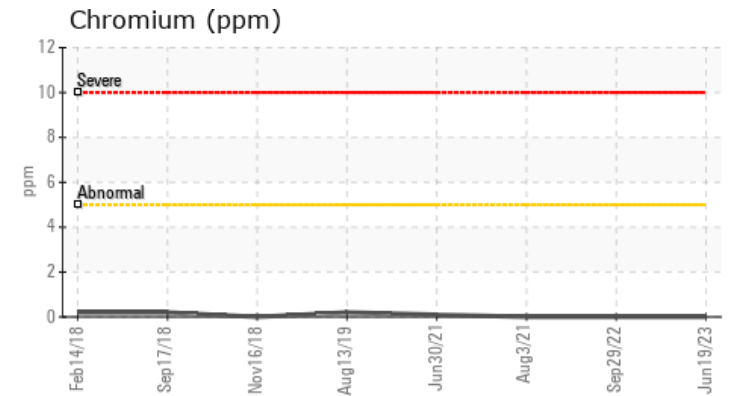
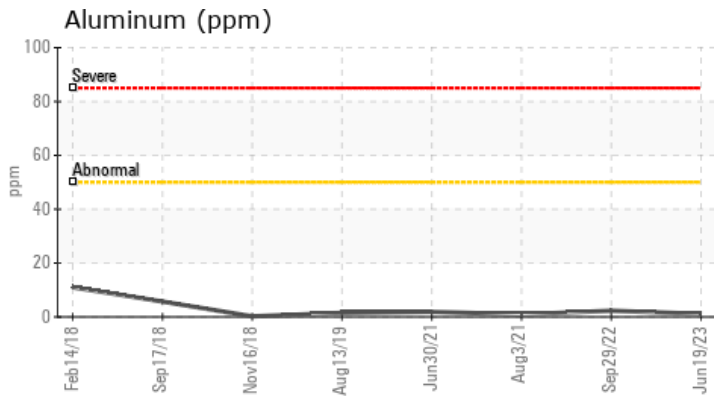
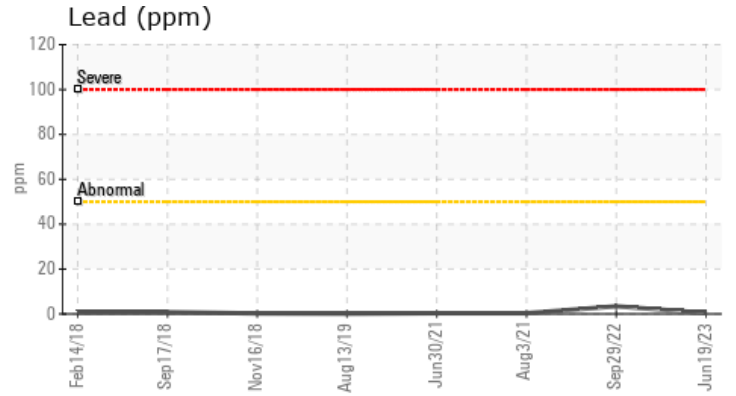
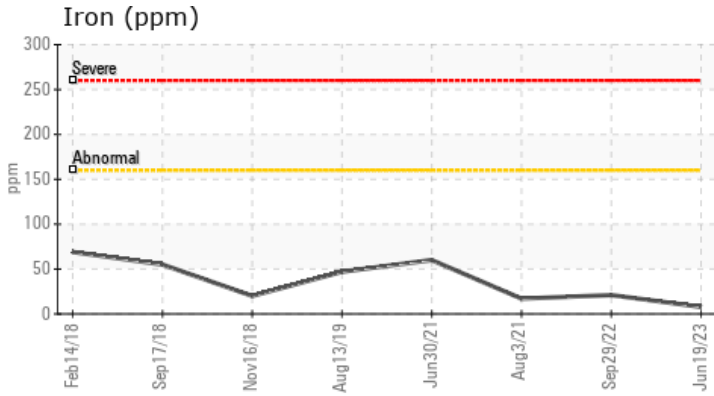
Depot: VOLVO9652
Unique No: 5594392
Signed: Wes Davis
Report Date: 21 Jun 2023



CONSTRUCTION EQUIPMENT



VOLVO GRAPHS





CONSTRUCTION EQUIPMENT

368538 VOLVO L120H 632080 - HYDRAULIC SYSTEM



Sample No: VCP392200
Oil Type: VOLVO SUPER HYDRAULIC OIL 46
Job No: 368538



SAMPLE INFORMATION

Sample Number	VCP392200	VCP297710	VCP240887	VCP221548
Sample Date	19 Jun 2023	30 Jun 2021	13 Aug 2019	16 Nov 2018
Machine Hours	30691	20306	12083	8245
Oil Hours	4000	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	SEVERE	ATTENTION	NORMAL	NORMAL

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 F: (403)346-3487



OIL CONDITION

Visc @ 40°C	cSt	41.1	40.6	39.9	41.5
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CONTAMINATION

Particles >4µm		79774	3721	903	1452
Particles >6µm		24186	1239	283	441
Particles >14µm		974	132	20	64
ISO 4406:1999 (c)		23/22/17	19/17/14	17/15/11	18/16/13
Silicon	ppm	7	12	9	5
Sodium	ppm	1	2	<1	<1
Potassium	ppm	<1	2	1	<1

Diagnosis

We advise that you check all areas where contaminants can enter the system. The oil change at the time of sampling has been noted. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. Resample in 30-45 days to monitor this situation. All component wear rates are normal. There is a high amount of particulates (2 to 100 microns in size) present in the oil. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.



WEAR METALS

Iron	ppm	8	11	8	3
Copper	ppm	2	2	2	<1
Lead	ppm	<1	<1	<1	<1
Tin	ppm	0	<1	0	0
Aluminum	ppm	1	2	2	<1
Chromium	ppm	1	1	<1	0
Molybdenum	ppm	0	0	0	0
Nickel	ppm	<1	0	0	0
Titanium	ppm	0	0	<1	0
Silver	ppm	0	0	0	0
Manganese	ppm	0	<1	<1	<1
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	59	64	63	60
Magnesium	ppm	<1	1	<1	<1
Zinc	ppm	432	436	444	436
Phosphorus	ppm	372	357	354	325
Barium	ppm	0	0	<1	0
Boron	ppm	<1	1	<1	<1

Depot: VOLVO9652
Unique No: 5594371
Signed: Wes Davis
Report Date: 21 Jun 2023

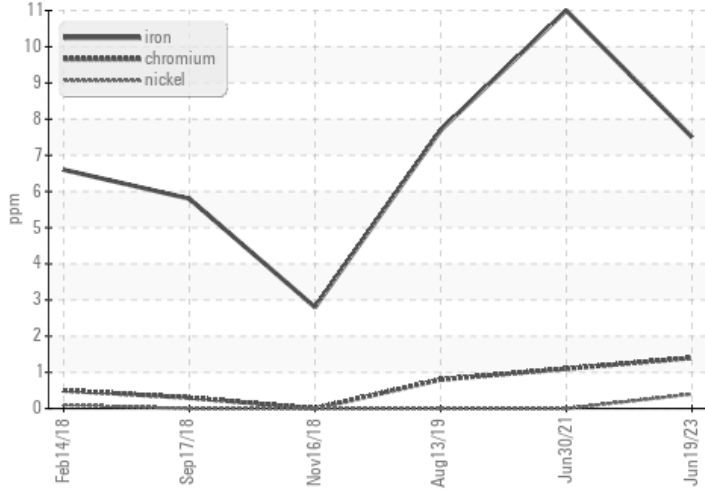


CONSTRUCTION EQUIPMENT

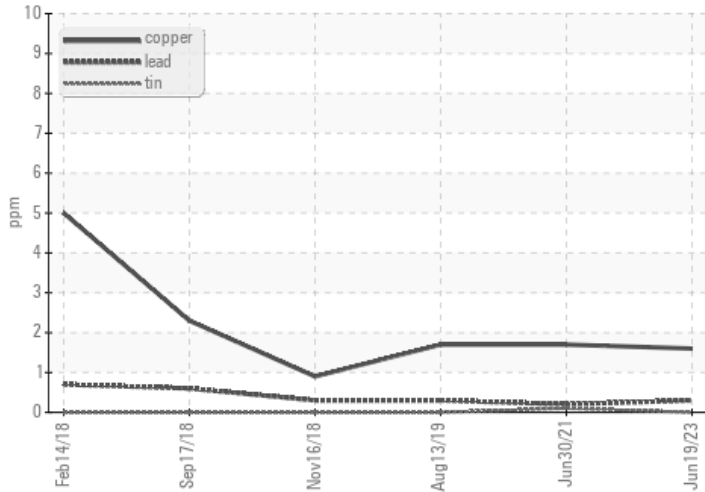


VOLVO GRAPHS

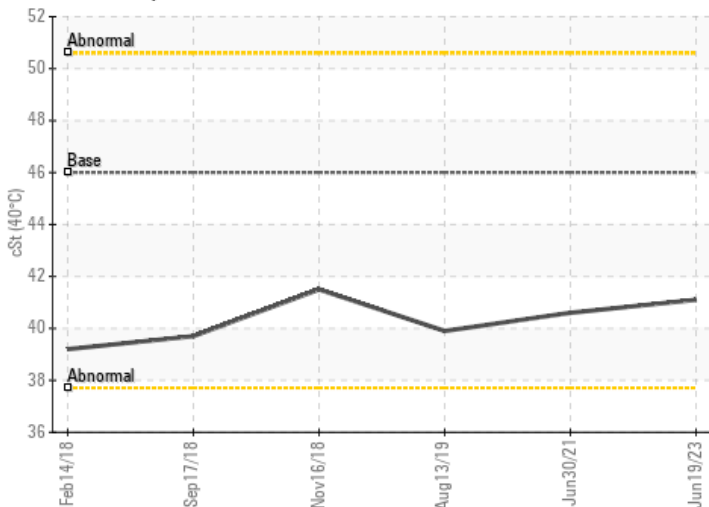
Ferrous Alloys



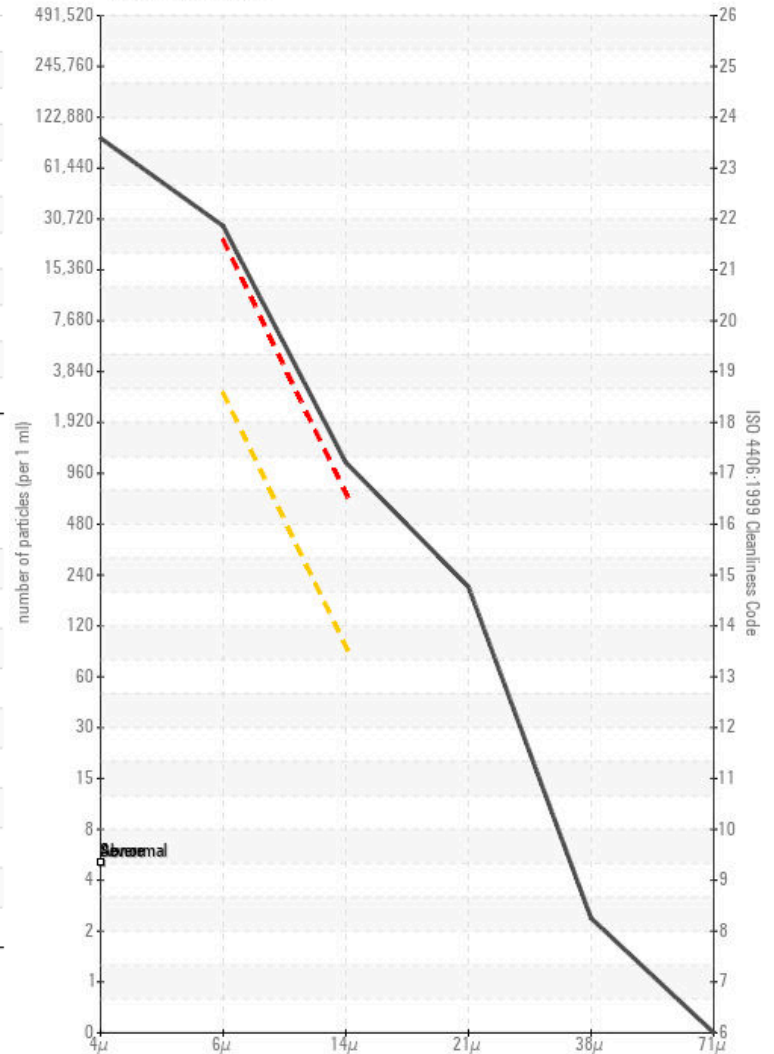
Non-ferrous Metals



Viscosity @ 40°C



Particle Count





CONSTRUCTION EQUIPMENT

391128 VOLVO L120H 632080 - FRONT AXLE



Sample No: VCP392864
Oil Type: VOLVO SUPER WET BRAKE TRANSAXLE OIL WB102
Job No: 391128



SAMPLE INFORMATION

Sample Number	VCP392864	VCP353088	VCP334109	VCP299308
Sample Date	18 Jan 2024	29 Sep 2022	11 Jan 2022	30 Jun 2021
Machine Hours	33132	27509	22798	20306
Oil Hours	2000	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

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 F: (403)346-3487



OIL CONDITION

Visc @ 40°C	cSt	48.6	49.4	50.3	49.8
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CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Silicon	ppm	17	15	15	14
Sodium	ppm	1	15	9	7
Potassium	ppm	<1	9	1	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	18	32	25	25
Copper	ppm	<1	<1	<1	<1
Lead	ppm	0	<1	0	0
Tin	ppm	0	0	<1	0
Aluminum	ppm	2	1	<1	<1
Chromium	ppm	0	<1	<1	<1
Molybdenum	ppm	0	<1	<1	<1
Nickel	ppm	0	0	<1	<1
Titanium	ppm	0	<1	0	0
Silver	ppm	<1	0	0	0
Manganese	ppm	0	<1	<1	<1
Vanadium	ppm	0	0	0	<1



ADDITIVES

Calcium	ppm	3829	3874	3676	3610
Magnesium	ppm	16	18	16	14
Zinc	ppm	1470	1439	1465	1465
Phosphorus	ppm	1207	1273	1196	1227
Barium	ppm	0	0	0	0
Boron	ppm	108	109	107	110

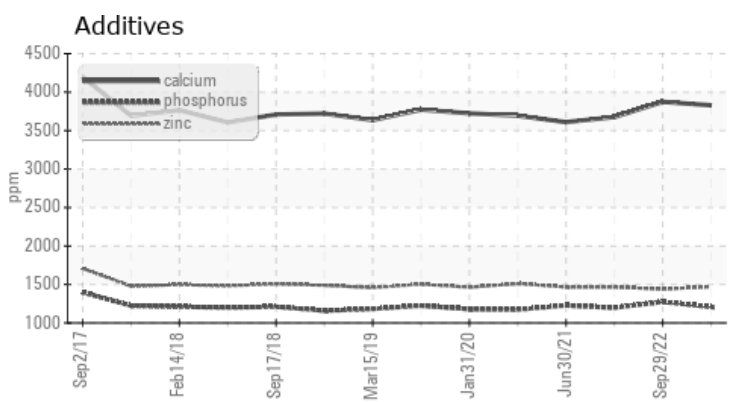
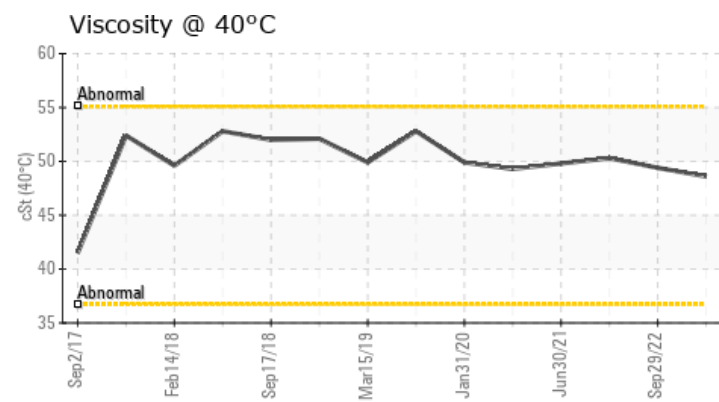
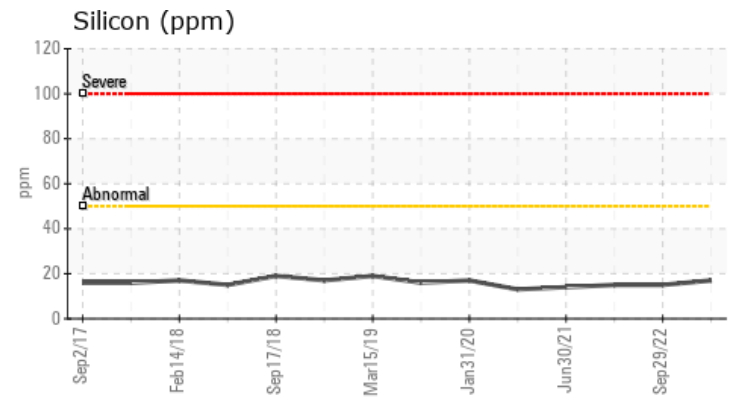
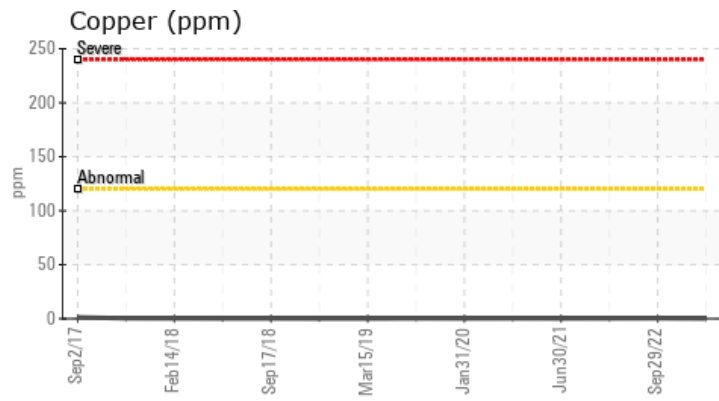
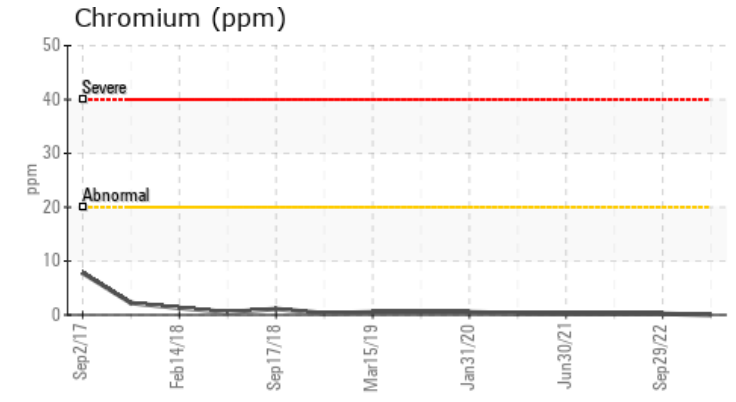
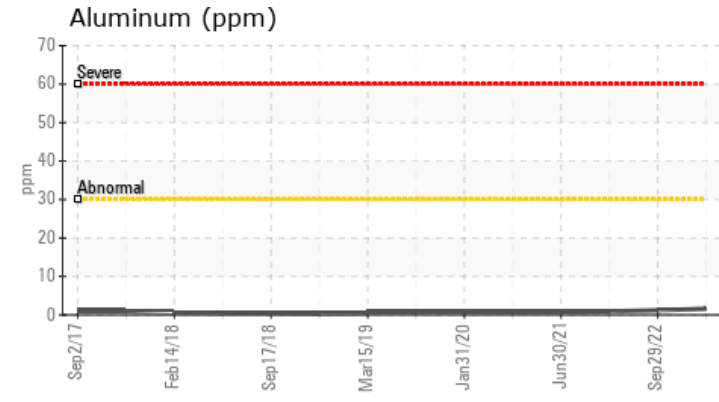
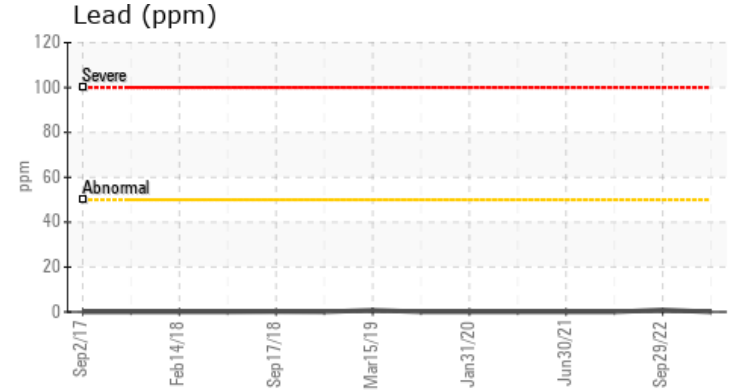
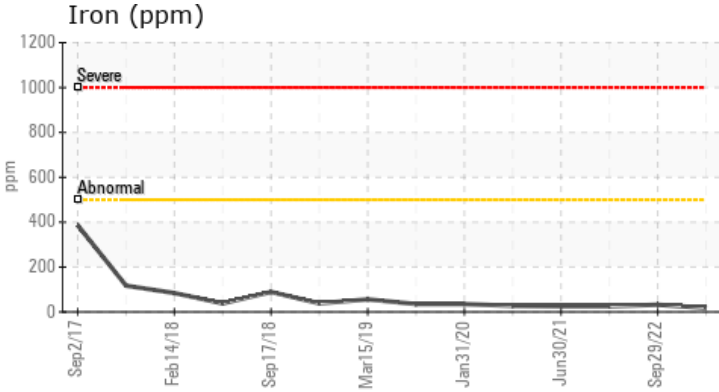
Depot: VOLVO9652
Unique No: 5711747
Signed: Wes Davis
Report Date: 23 Jan 2024



CONSTRUCTION EQUIPMENT



VOLVO GRAPHS





CONSTRUCTION EQUIPMENT

391128 VOLVO L120H 632080 - REAR AXLE



Sample No: VCP392846
Oil Type: VOLVO SUPER WET BRAKE TRANSAXLE OIL WB102
Job No: 391128



SAMPLE INFORMATION

Sample Number	VCP392846	VCP392206	VCP353087	VCP334105
Sample Date	18 Jan 2024	19 Jun 2023	29 Sep 2022	11 Jan 2022
Machine Hours	33132	30691	27509	22798
Oil Hours	2000	2000	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

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OIL CONDITION

Visc @ 40°C	cSt	48.9	49.5	50.0	50.7
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CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Silicon	ppm	19	16	20	17
Sodium	ppm	<1	5	16	9
Potassium	ppm	<1	<1	7	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 oil. The condition of the oil is acceptable for the time in service.



WEAR METALS

Iron	ppm	19	24	63	37
Copper	ppm	<1	<1	<1	<1
Lead	ppm	0	0	<1	0
Tin	ppm	0	0	0	0
Aluminum	ppm	2	1	2	<1
Chromium	ppm	0	<1	<1	<1
Molybdenum	ppm	0	<1	<1	<1
Nickel	ppm	<1	<1	0	<1
Titanium	ppm	0	0	<1	0
Silver	ppm	0	0	0	0
Manganese	ppm	0	<1	<1	<1
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	3821	3624	3785	3717
Magnesium	ppm	17	17	19	17
Zinc	ppm	1447	1435	1408	1506
Phosphorus	ppm	1186	1255	1267	1197
Barium	ppm	0	0	0	0
Boron	ppm	108	104	108	108

Depot: VOLVO9652
Unique No: 5711746
Signed: Wes Davis
Report Date: 23 Jan 2024



CONSTRUCTION EQUIPMENT



VOLVO GRAPHS

