



CONSTRUCTION EQUIPMENT

401903 VOLVO L120H 632067 - DIESEL ENGINE



Sample No: VCP448206
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: 401903



SAMPLE INFORMATION

Sample Number	VCP448206	VCP430126	VCP380410	VCP391804
Sample Date	23 Apr 2024	11 Mar 2024	26 Jan 2024	02 Nov 2023
Machine Hours	28920	28056	27270	26442
Oil Hours	500	500	0	500
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
 pdoyle@strongco.com
 T: (403)391-3520
 F: (403)346-3487



OIL CONDITION

Visc @ 100°C	cSt	13.4	13.3	13.1	13.4
Oxidation (PA)	%	82	84	84	84



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.4	0.4	0.3	0.5
Nitration (PA)	%	60	60	59	58
Sulfation (PA)	%	64	65	65	65
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	4	3	7	6
Sodium	ppm	2	2	2	3
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	12	10	16	18
Copper	ppm	<1	<1	<1	<1
Lead	ppm	0	0	<1	<1
Tin	ppm	0	0	0	0
Aluminum	ppm	5	4	8	9
Chromium	ppm	<1	<1	<1	<1
Molybdenum	ppm	40	39	39	42
Nickel	ppm	0	<1	<1	<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	1735	1684	1692	1694
Magnesium	ppm	507	499	497	517
Zinc	ppm	1082	1046	1050	1113
Phosphorus	ppm	908	920	918	927
Barium	ppm	0	0	0	<1
Boron	ppm	36	42	43	37

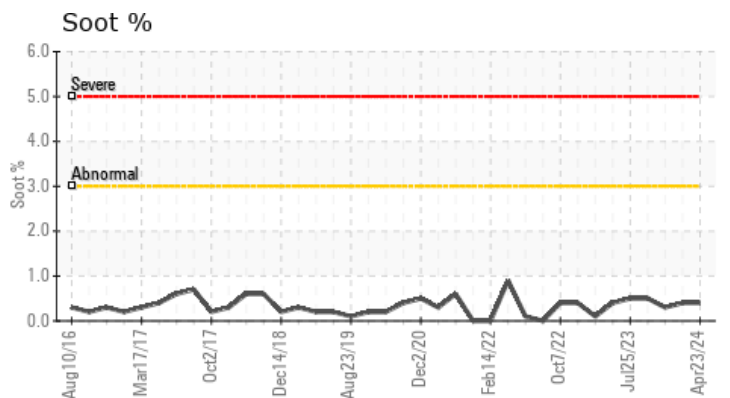
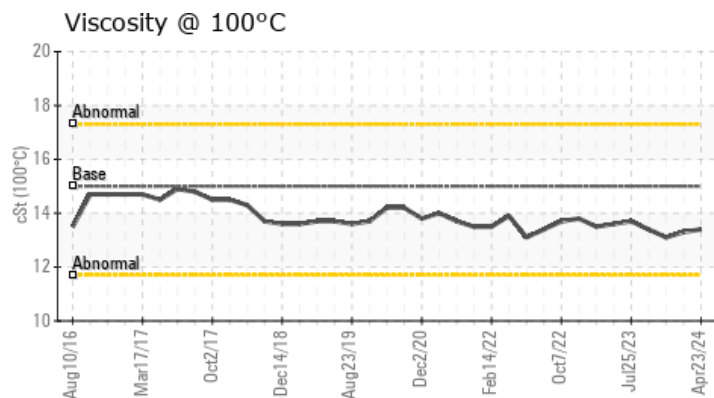
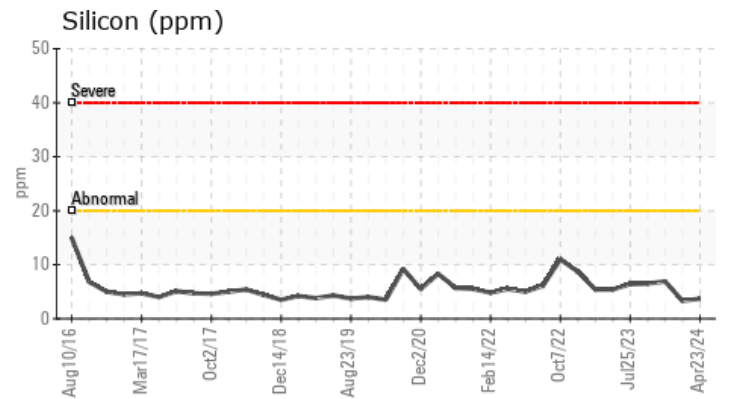
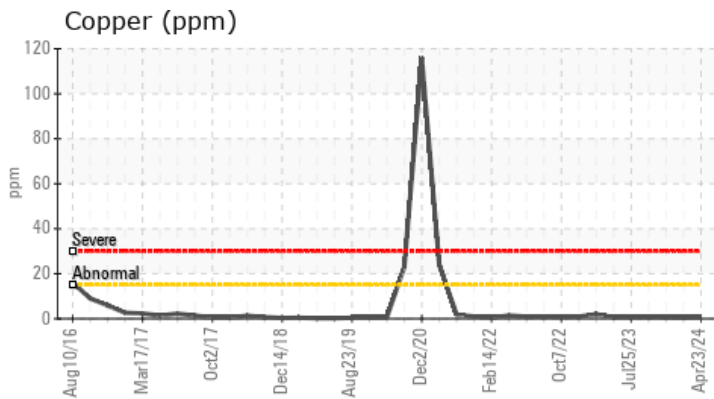
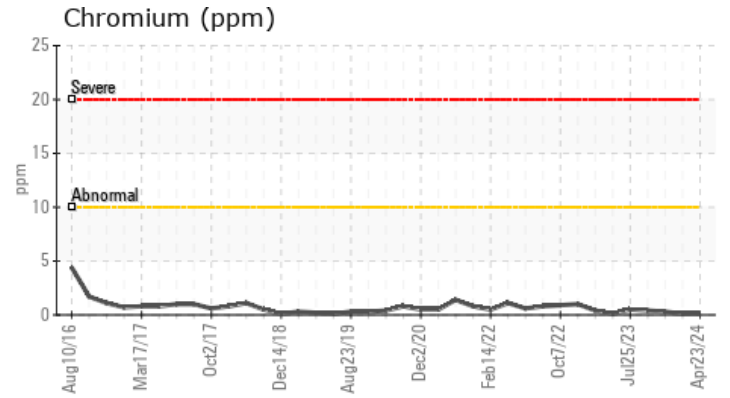
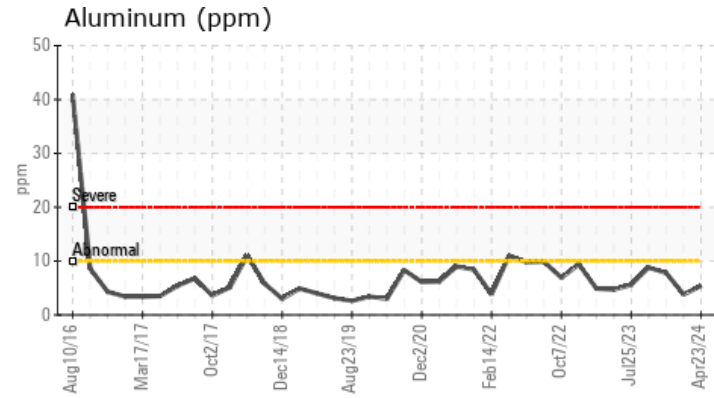
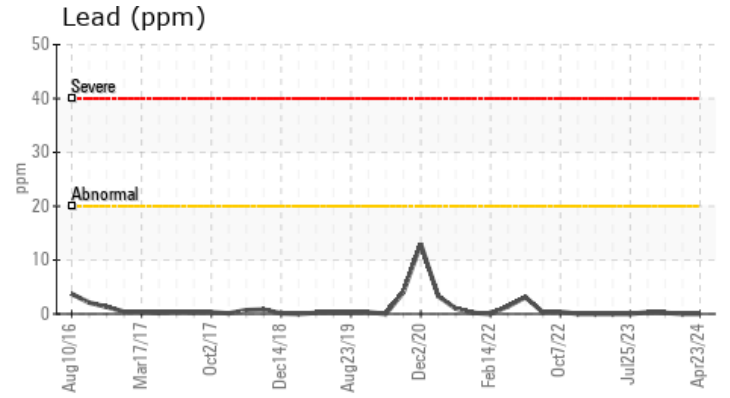
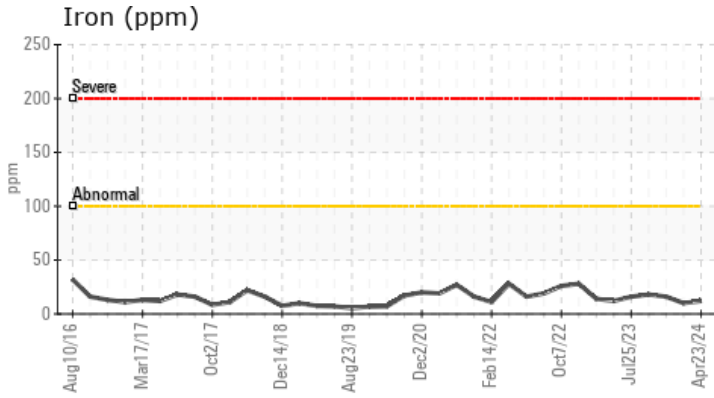
Depot: VOLVO9652
Unique No: 5772689
Signed: Wes Davis
Report Date: 26 Apr 2024



CONSTRUCTION EQUIPMENT



VOLVO GRAPHS





CONSTRUCTION EQUIPMENT

381773 VOLVO L120H 632067 - TRANSMISSION (AUTO)



Sample No: VCP394372
Oil Type: VOLVO AUTOMATIC TRANSMISSION FLUID AT102
Job No: 381773



SAMPLE INFORMATION

Sample Number	VCP394372	VCP382155	VCP332774	VCP334128
Sample Date	13 Oct 2023	24 May 2023	04 May 2022	14 Feb 2022
Machine Hours	26658	25175	21283	19715
Oil Hours	1100	4000	0	0
Oil Changed	Not Chngd	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
 pdoyle@strongco.com
 T: (403)346-3473
 F: (403)346-3487



OIL CONDITION

Visc @ 40°C	cSt	33.4	28.9	38.3	31.9
-------------	-----	-------------	------	------	------



CONTAMINATION

Silicon	ppm	4	5	4	10
Sodium	ppm	3	2	1	1
Potassium	ppm	2	1	1	1



WEAR METALS

Iron	ppm	29	34	22	39
Copper	ppm	60	4	2	5
Lead	ppm	2	0	<1	0
Tin	ppm	0	0	0	<1
Aluminum	ppm	2	3	<1	<1
Chromium	ppm	0	0	0	<1
Molybdenum	ppm	6	3	<1	<1
Nickel	ppm	0	0	<1	<1
Titanium	ppm	0	0	0	0
Silver	ppm	<1	0	0	0
Manganese	ppm	0	<1	<1	<1
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	326	236	89	85
Magnesium	ppm	84	38	<1	2
Zinc	ppm	178	95	6	10
Phosphorus	ppm	309	252	176	164
Barium	ppm	<1	0	0	0
Boron	ppm	76	64	74	64

Diagnosis

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the fluid. Additive levels indicate the addition of a different brand, or type of fluid. The condition of the fluid is acceptable for the time in service.

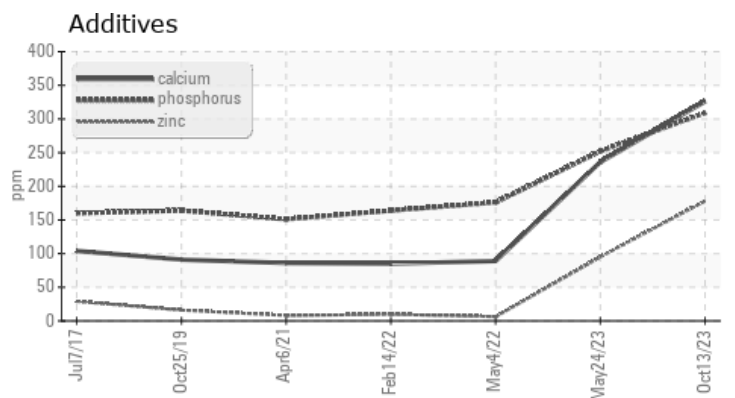
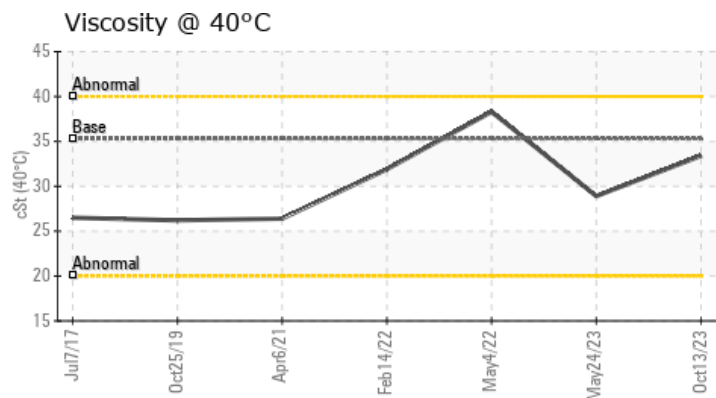
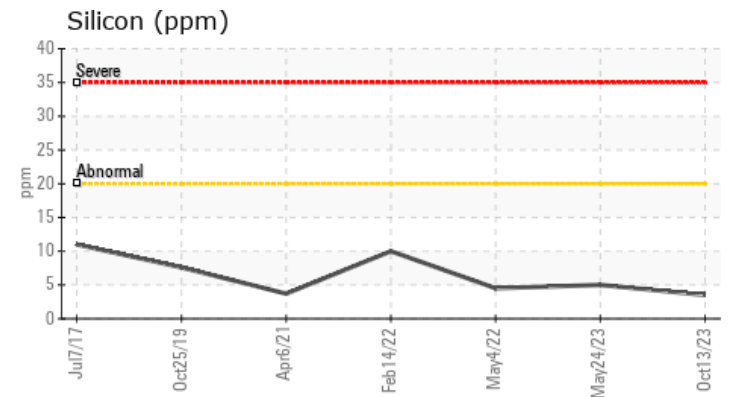
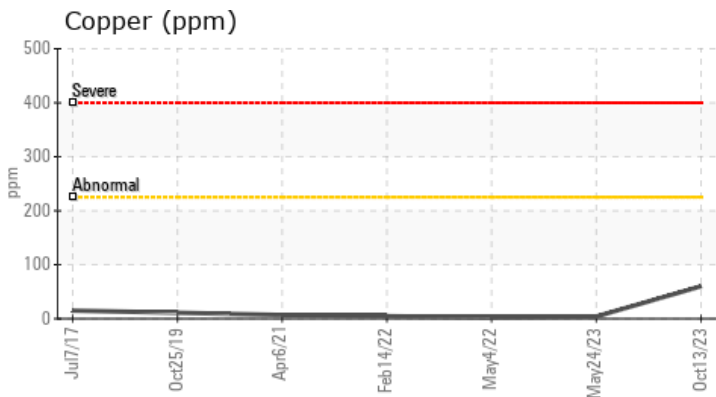
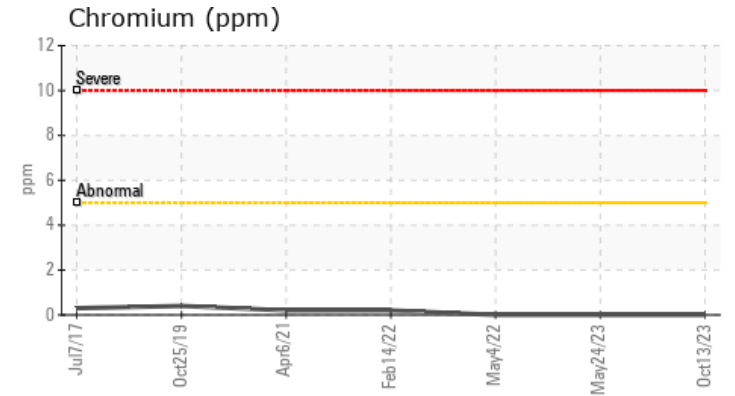
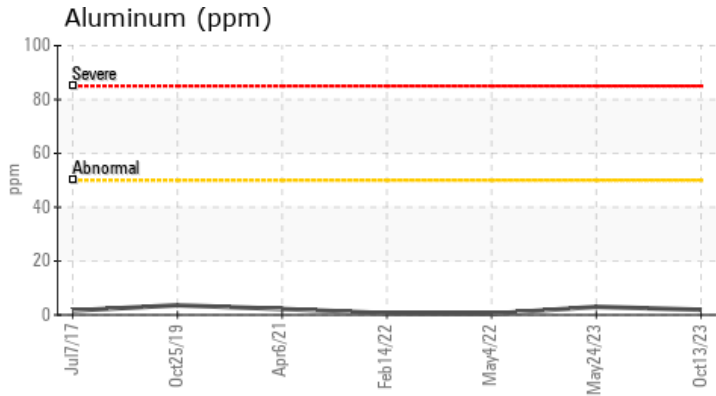
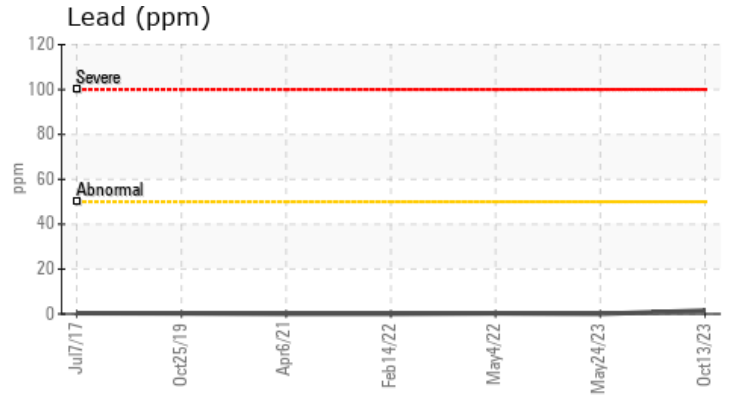
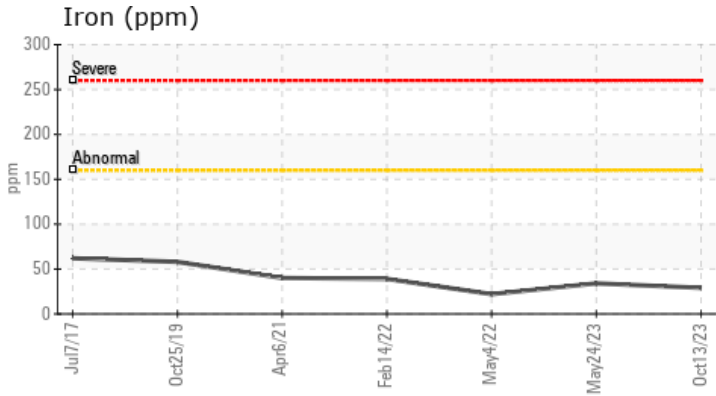
Depot: VOLVO9652
Unique No: 5658750
Signed: Kevin Marson
Report Date: 18 Oct 2023



CONSTRUCTION EQUIPMENT



VOLVO GRAPHS





CONSTRUCTION EQUIPMENT

365439 VOLVO L120H 632067 - HYDRAULIC SYSTEM



Sample No: VCP380879
Oil Type: VOLVO SUPER HYDRAULIC OIL 46
Job No: 365439



SAMPLE INFORMATION

Sample Number	VCP380879	VCP332778	VCP334133	VCP275204
Sample Date	24 May 2023	04 May 2022	14 Feb 2022	06 Apr 2021
Machine Hours	25175	21283	19715	15936
Oil Hours	4000	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	ABNORMAL	ABNORMAL	ABNORMAL	NORMAL

STRONGCO EQUIP (AB)
 6 - 38403 BURNT LAKE TRAIL
 RED DEER COUNTY, AB
 CA T4S 2L4
 Contact: Perry Doyle
 pdoyle@strongco.com
 T: (403)346-3473
 F: (403)346-3487



OIL CONDITION

Visc @ 40°C	cSt	41.5	41.6	41.5	41.2
-------------	-----	-------------	------	------	------



CONTAMINATION

Particles >4µm		7583	15355	59770	2504
Particles >6µm		2242	3367	13863	686
Particles >14µm		271	173	461	53
ISO 4406:1999 (c)		20/18/15	21/19/15	23/21/16	19/17/13
Silicon	ppm	7	8	13	8
Sodium	ppm	1	<1	<1	2
Potassium	ppm	<1	<1	<1	<1

Diagnosis

The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. All component wear rates are normal. There is a moderate 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	6	4	6	6
Copper	ppm	1	<1	2	1
Lead	ppm	<1	<1	<1	<1
Tin	ppm	0	<1	<1	0
Aluminum	ppm	<1	<1	1	2
Chromium	ppm	<1	<1	<1	<1
Molybdenum	ppm	0	0	0	0
Nickel	ppm	<1	<1	0	<1
Titanium	ppm	0	0	0	0
Silver	ppm	0	0	0	<1
Manganese	ppm	0	0	0	<1
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	68	56	58	64
Magnesium	ppm	<1	<1	<1	1
Zinc	ppm	418	443	433	442
Phosphorus	ppm	364	371	353	330
Barium	ppm	0	0	0	0
Boron	ppm	<1	<1	<1	<1

Depot: VOLVO9652
Unique No: 5580878
Signed: Wes Davis
Report Date: 29 May 2023

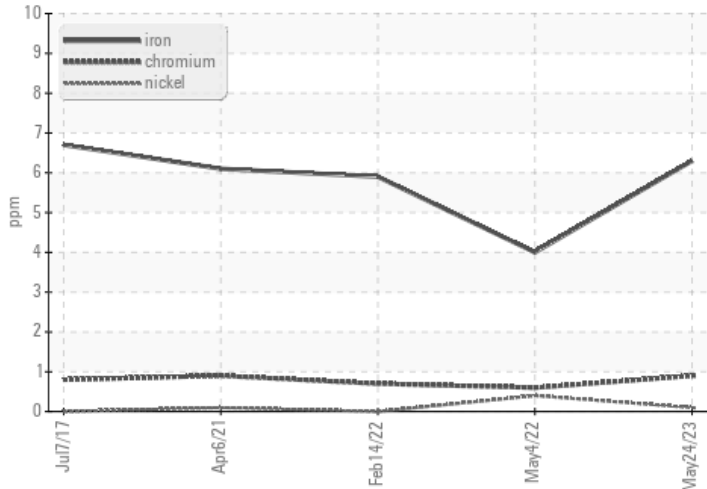


CONSTRUCTION EQUIPMENT

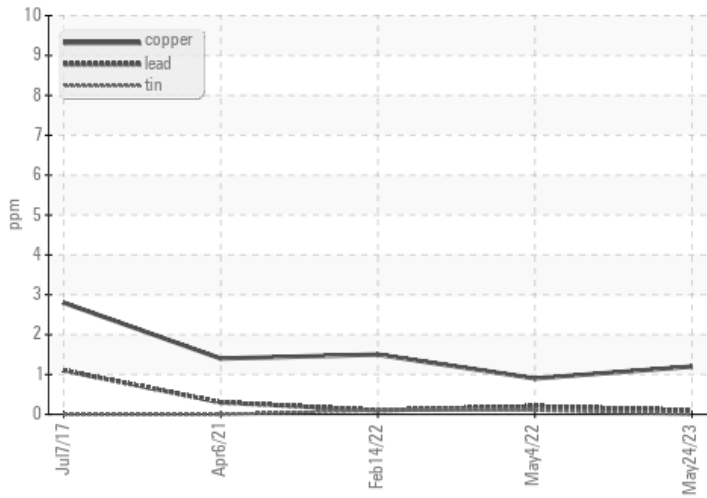


VOLVO GRAPHS

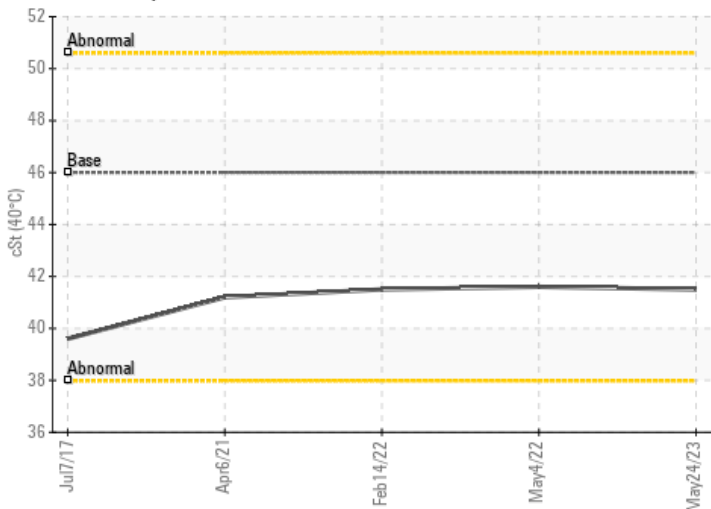
Ferrous Alloys



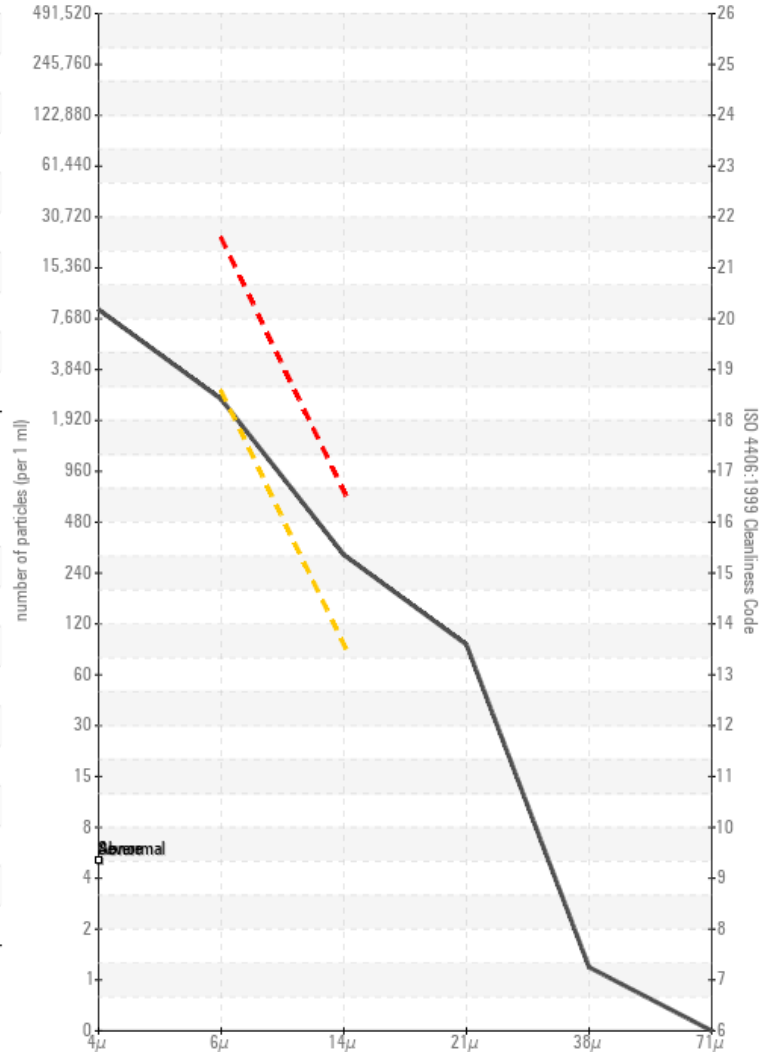
Non-ferrous Metals



Viscosity @ 40°C



Particle Count





CONSTRUCTION EQUIPMENT

401903 VOLVO L120H 632067 - FRONT AXLE



Sample No: VCP448366
Oil Type: VOLVO WET BRAKE TRANSAXLE OIL
Job No: 401903



SAMPLE INFORMATION

Sample Number	VCP448366	VCP380878	VCP349576	VCP332773
Sample Date	23 Apr 2024	24 May 2023	06 Sep 2022	04 May 2022
Machine Hours	28920	25175	22899	21283
Oil Hours	2000	2000	0	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
 pdoyle@strongco.com
 T: (403)391-3520
 F: (403)346-3487



OIL CONDITION

Visc @ 40°C	cSt	47.7	49.5	51.7	51.2
-------------	-----	-------------	------	------	------



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Silicon	ppm	18	20	13	15
Sodium	ppm	<1	<1	9	6
Potassium	ppm	0	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 oil. The condition of the oil is acceptable for the time in service.



WEAR METALS

Iron	ppm	24	23	10	11
Copper	ppm	21	0	0	<1
Lead	ppm	<1	0	0	0
Tin	ppm	2	0	0	0
Aluminum	ppm	1	2	<1	<1
Chromium	ppm	0	0	0	0
Molybdenum	ppm	0	<1	0	<1
Nickel	ppm	0	0	<1	0
Titanium	ppm	0	<1	<1	0
Silver	ppm	0	0	0	0
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	3730	4040	3641	3516
Magnesium	ppm	17	15	16	18
Zinc	ppm	1395	1508	1345	1470
Phosphorus	ppm	1139	1313	1167	1236
Barium	ppm	0	0	0	0
Boron	ppm	106	109	102	111

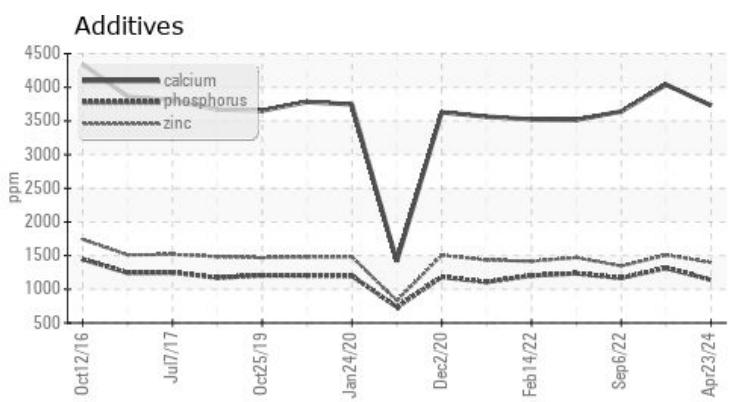
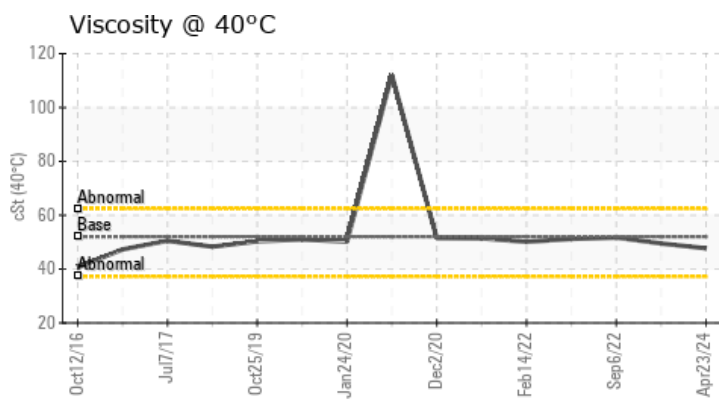
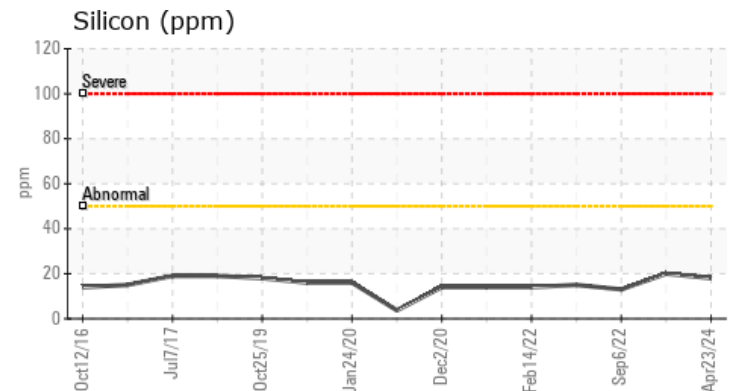
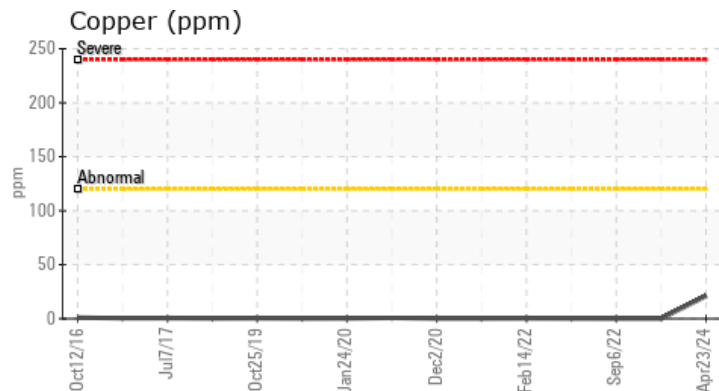
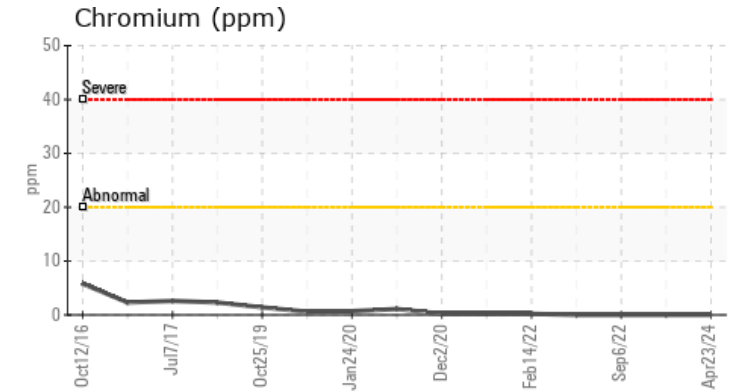
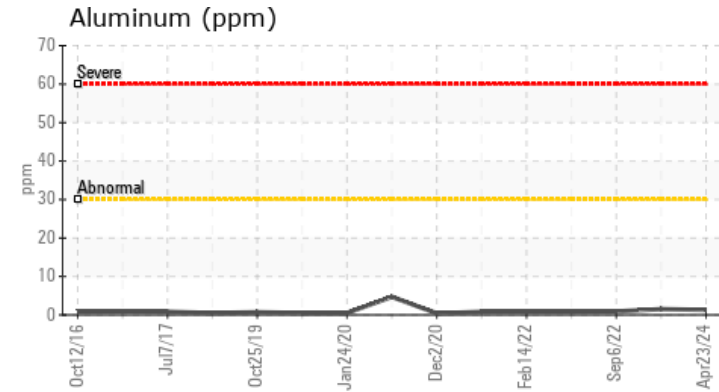
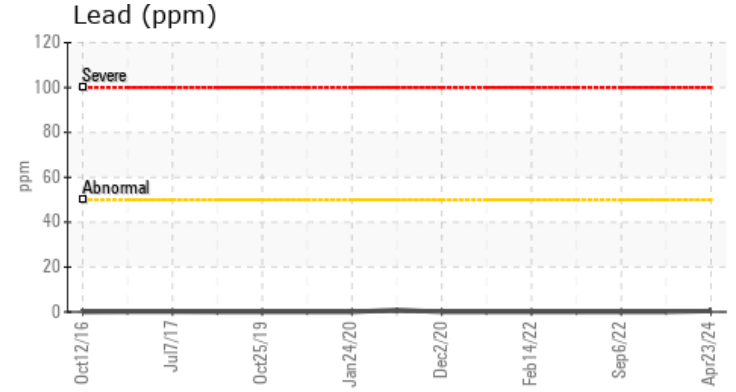
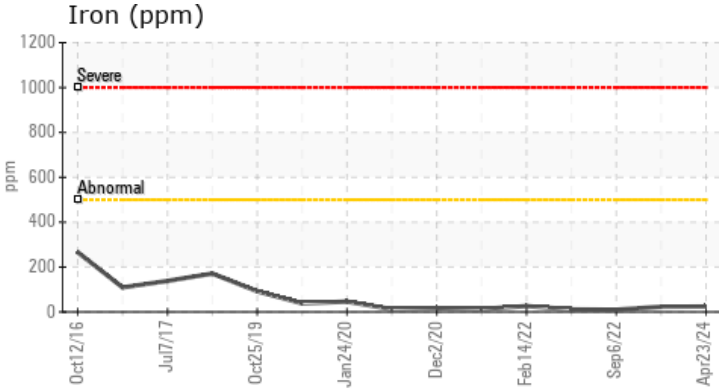
Depot: VOLVO9652
Unique No: 5772856
Signed: Wes Davis
Report Date: 26 Apr 2024



CONSTRUCTION EQUIPMENT



GRAPHS





CONSTRUCTION EQUIPMENT

401903 VOLVO L120H 632067 - REAR AXLE



Sample No: VCP430068
Oil Type: VOLVO WET BRAKE TRANSAXLE OIL
Job No: 401903



SAMPLE INFORMATION

Sample Number	VCP430068	VCP380854	VCP349575	VCP332771
Sample Date	23 Apr 2024	24 May 2023	06 Sep 2022	04 May 2022
Machine Hours	28920	25175	22899	21283
Oil Hours	2000	2000	0	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
 pdoyle@strongco.com
 T: (403)391-3520
 F: (403)346-3487



OIL CONDITION

Visc @ 40°C	cSt	48.2	48.5	51.9	51.1
-------------	-----	-------------	------	------	------



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Silicon	ppm	46	20	16	17
Sodium	ppm	2	<1	7	6
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 oil. The condition of the oil is acceptable for the time in service.



WEAR METALS

Iron	ppm	160	29	18	22
Copper	ppm	<1	0	0	<1
Lead	ppm	0	0	0	0
Tin	ppm	0	0	0	0
Aluminum	ppm	4	2	1	1
Chromium	ppm	1	<1	0	<1
Molybdenum	ppm	0	<1	<1	<1
Nickel	ppm	<1	<1	<1	0
Titanium	ppm	<1	<1	<1	0
Silver	ppm	0	0	0	0
Manganese	ppm	2	<1	<1	<1
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	3748	3954	3618	3389
Magnesium	ppm	17	15	17	17
Zinc	ppm	1417	1469	1370	1446
Phosphorus	ppm	1149	1287	1188	1248
Barium	ppm	0	0	0	0
Boron	ppm	106	109	103	112

Depot: VOLVO9652
Unique No: 5772857
Signed: Wes Davis
Report Date: 26 Apr 2024



CONSTRUCTION EQUIPMENT



VOLVO GRAPHS

