



CONSTRUCTION EQUIPMENT

477843 VOLVO A30G 752221 - DIESEL ENGINE



Sample No: VCP440911
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: 477843



SAMPLE INFORMATION

Sample Number	VCP440911	VCP337704	---	---
Sample Date	14 Feb 2024	21 May 2022	---	---
Machine Hours	2683	1204	---	---
Oil Hours	0	0	---	---
Oil Changed	N/A	Changed	---	---
Sample Status	NORMAL	ATTENTION	---	---

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OIL CONDITION

Visc @ 100°C	cSt	█ 12.7	▲ 12.3	---	---
Base Number (BN)	mg KOH/g	█ 9.2	█ 9.9	---	---
Oxidation (PA)	%	80	75	---	---

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 BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.



CONTAMINATION

Water	%	NEG	NEG	---	---
Soot %	%	█ 0.4	█ 0.2	---	---
Nitration (PA)	%	68	62	---	---
Sulfation (PA)	%	61	60	---	---
Glycol	%	NEG	NEG	---	---
Fuel	%	<1.0	█ 0.3	---	---
Silicon	ppm	█ 5	█ 6	---	---
Sodium	ppm	█ 0	█ <1	---	---
Potassium	ppm	█ 2	█ 2	---	---



WEAR METALS

Iron	ppm	█ 14	█ 13	---	---
Copper	ppm	█ 10	█ 15	---	---
Lead	ppm	█ 0	█ <1	---	---
Tin	ppm	█ <1	█ 2	---	---
Aluminum	ppm	█ 3	█ 2	---	---
Chromium	ppm	█ <1	█ <1	---	---
Molybdenum	ppm	█ 36	█ 48	---	---
Nickel	ppm	█ 3	█ 5	---	---
Titanium	ppm	<1	<1	---	---
Silver	ppm	█ 0	<1	---	---
Manganese	ppm	█ <1	█ 1	---	---
Vanadium	ppm	0	0	---	---



ADDITIVES

Calcium	ppm	█ 1549	█ 1725	---	---
Magnesium	ppm	█ 463	█ 475	---	---
Zinc	ppm	█ 1075	█ 1147	---	---
Phosphorus	ppm	█ 970	█ 948	---	---
Barium	ppm	█ 10	█ 0	---	---
Boron	ppm	█ 31	█ 50	---	---

Depot: VOLVO0093
Unique No: 10885593
Signed: Wes Davis
Report Date: 20 Feb 2024

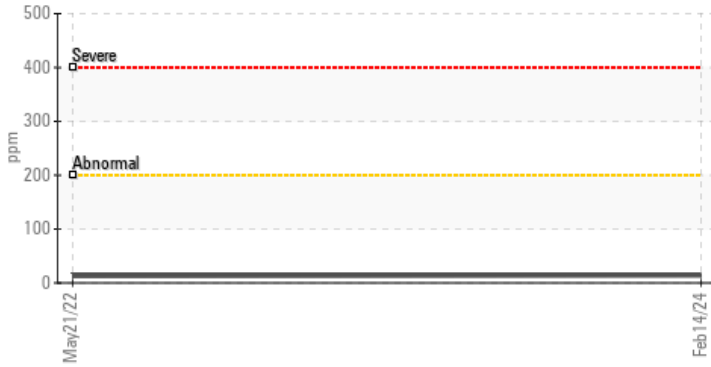


CONSTRUCTION EQUIPMENT

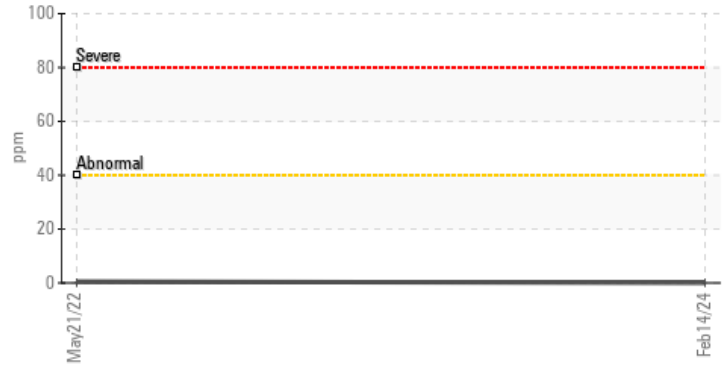


GRAPHS

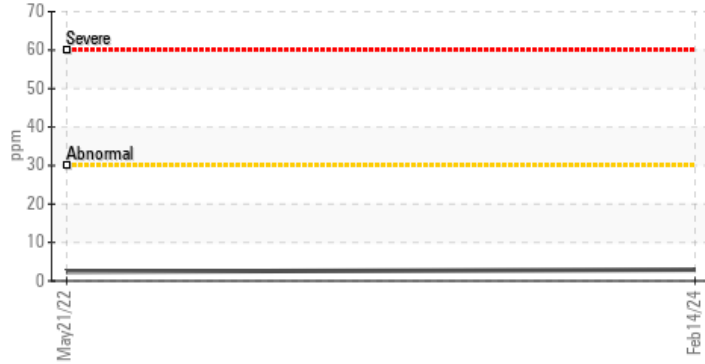
Iron (ppm)



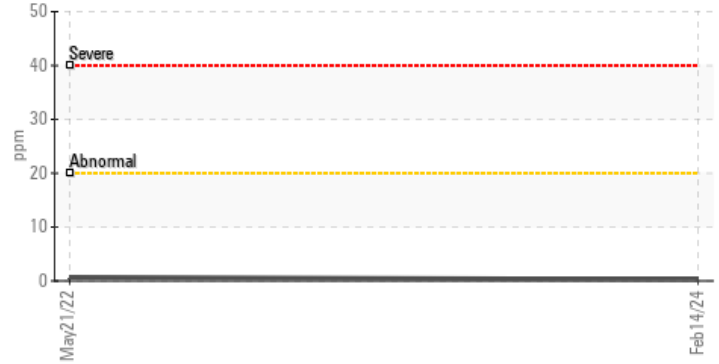
Lead (ppm)



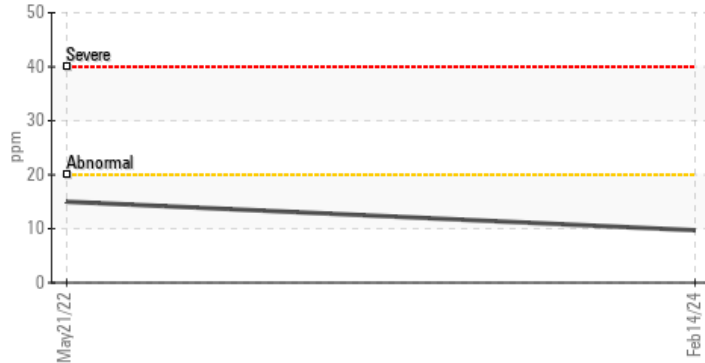
Aluminum (ppm)



Chromium (ppm)



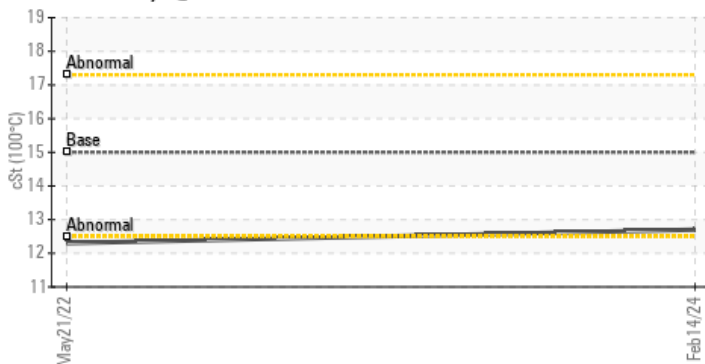
Copper (ppm)



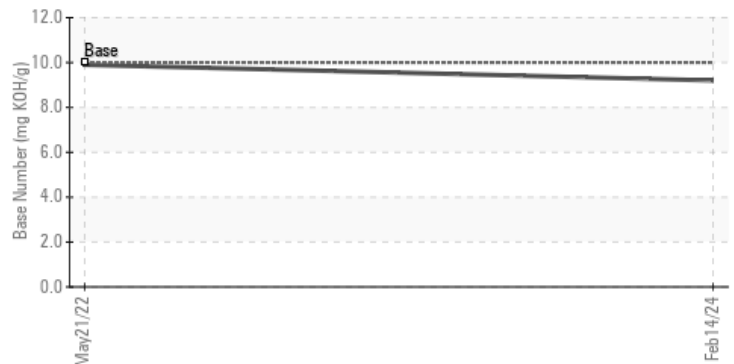
Silicon (ppm)



Viscosity @ 100°C



Base Number





CONSTRUCTION EQUIPMENT

409192 RENTAL VOLVO A30G 75221 - TANK DIESEL EXHAUST FLUID (DEF)



Sample No: VCP440649
Oil Type: {unknown}
Job No: 409192 RENTAL



SAMPLE INFORMATION

Sample Number	VCP440649	---	---	---
Sample Date	16 Nov 2023	---	---	---
Machine Hours	2481	---	---	---
Oil Hours	0	---	---	---
Oil Changed	N/A	---	---	---
Sample Status	NORMAL	---	---	---

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CONTAMINATION

Hydrocarbon	scalar	■ NONE	---	---	---
-------------	--------	--------	-----	-----	-----

DEF CONDITION

Urea Content	%	■ 32.7	---	---	---
Density @ 20°C	g/cm3	■ 1.0898	---	---	---
Refracting Index		■ 1.3828	---	---	---
Appearance	scalar	■ Clear & Bright	---	---	---

Diagnosis

Fluid meets ISO 22241-2 requirements and is suitable for use. Appearance is acceptable. There is no indication of any contamination in the diesel exhaust fluid (def). Urea content is normal.

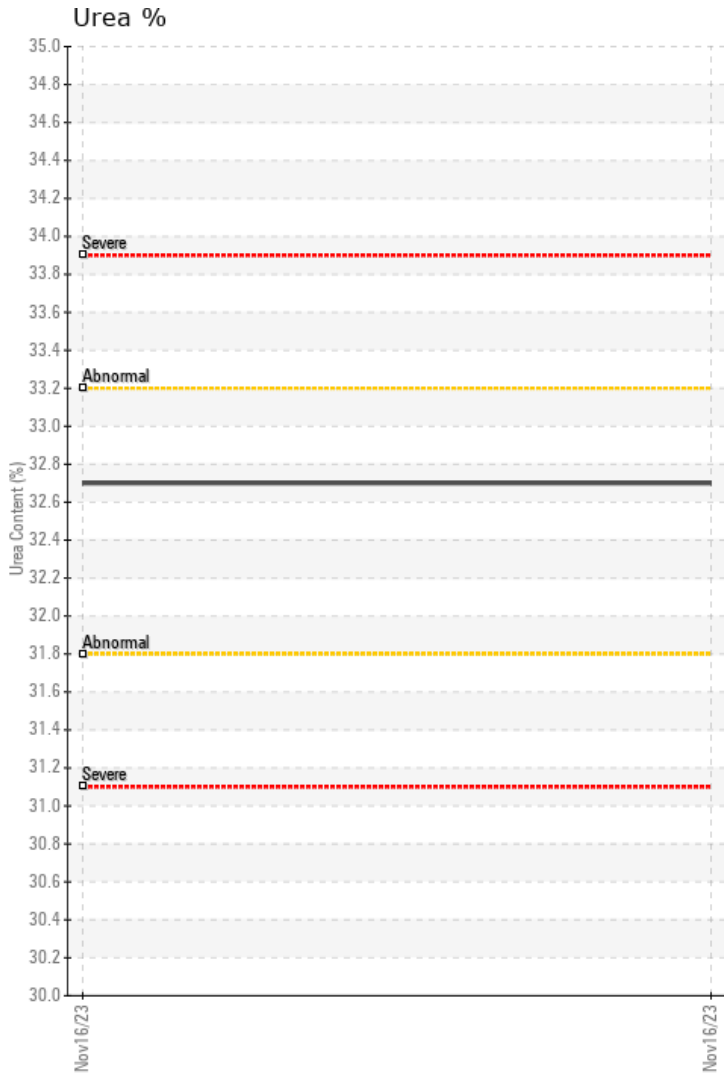
Depot: VOLVO0093
Unique No: 10750351
Signed: Doug Bogart
Report Date: 05 Dec 2023



CONSTRUCTION EQUIPMENT



GRAPHS



Sample Color & Clarity





CONSTRUCTION EQUIPMENT

477843 VOLVO A30G 752221 - TRANSMISSION (AUTO)



Sample No: VCP440901
Oil Type: VOLVO AUTOMATIC TRANSMISSION FLUID AT102
Job No: 477843



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SAMPLE INFORMATION

Sample Number	VCP440901	VCP337714	---	---
Sample Date	14 Feb 2024	21 May 2022	---	---
Machine Hours	2683	1204	---	---
Oil Hours	0	0	---	---
Oil Changed	N/A	Not Changd	---	---
Sample Status	ABNORMAL	NORMAL	---	---



OIL CONDITION

Visc @ 40°C	cSt	█ 28.6	█ 29.3	---	---
-------------	-----	--------	--------	-----	-----



CONTAMINATION

Water	%	NEG	NEG	---	---
Silicon	ppm	█ 4	█ 5	---	---
Sodium	ppm	█ 3	█ 4	---	---
Potassium	ppm	█ 0	█ 2	---	---



WEAR METALS

Iron	ppm	█ 12	█ 11	---	---
Copper	ppm	█ 7	█ 10	---	---
Lead	ppm	█ 0	█ 0	---	---
Tin	ppm	█ 1	█ 2	---	---
Aluminum	ppm	█ 8	█ 8	---	---
Chromium	ppm	█ 0	█ 0	---	---
Molybdenum	ppm	█ <1	█ 2	---	---
Nickel	ppm	█ <1	█ <1	---	---
Titanium	ppm	0	0	---	---
Silver	ppm	█ 0	█ <1	---	---
Manganese	ppm	█ 0	█ 1	---	---
Vanadium	ppm	0	0	---	---



ADDITIVES

Calcium	ppm	█ 73	█ 100	---	---
Magnesium	ppm	█ 3	█ 21	---	---
Zinc	ppm	█ 6	█ 38	---	---
Phosphorus	ppm	█ 193	█ 238	---	---
Barium	ppm	█ 0	█ 0	---	---
Boron	ppm	█ 88	█ 83	---	---

Diagnosis

No corrective action is recommended at this time. Resample at the next service interval to monitor. Moderate concentration of visible metal present. 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.

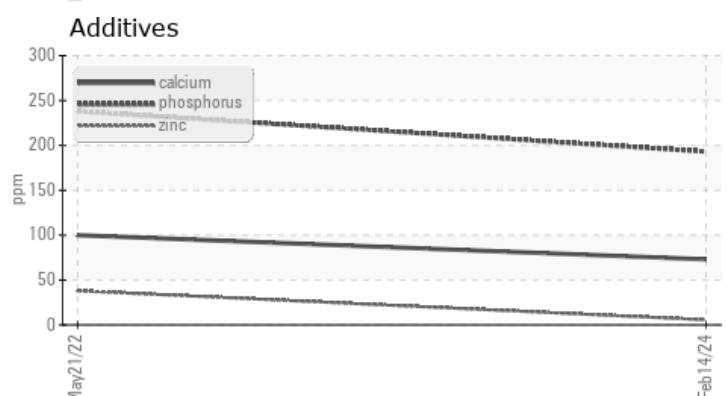
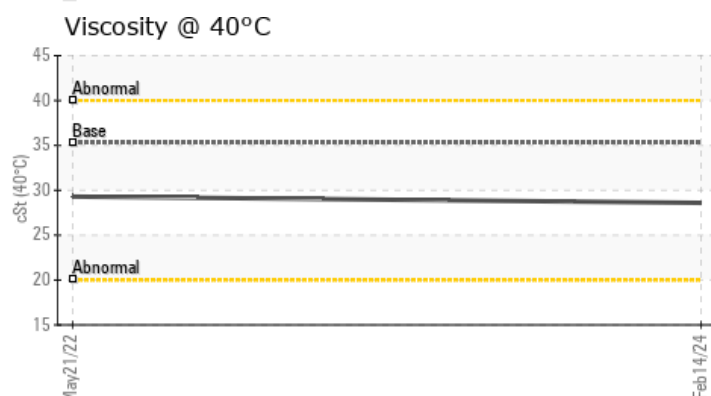
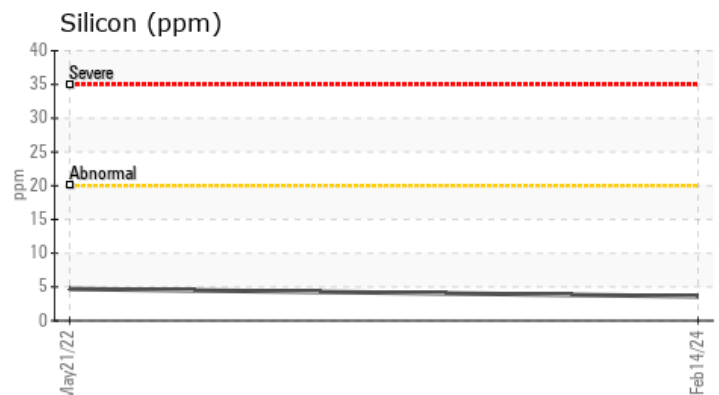
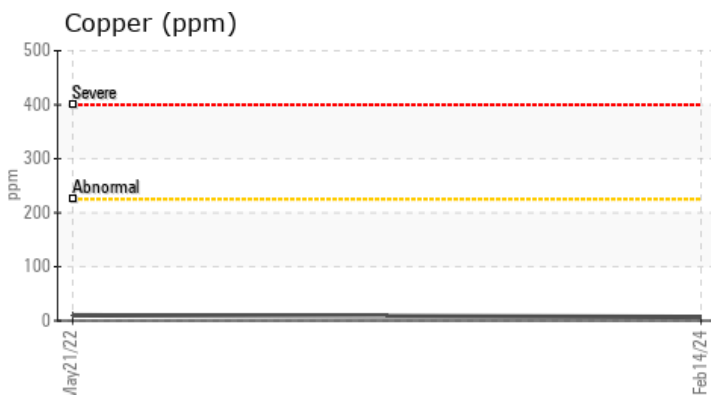
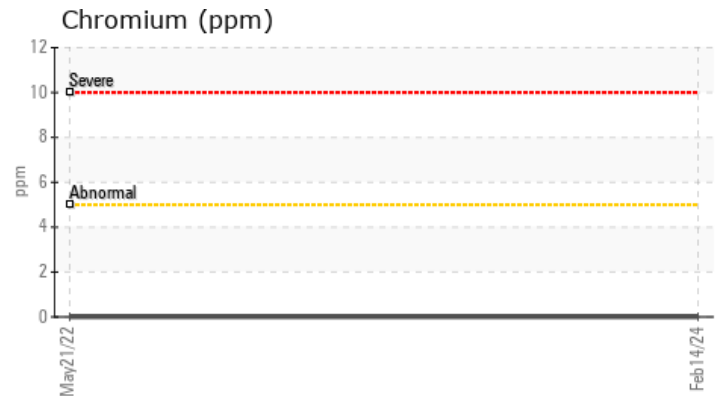
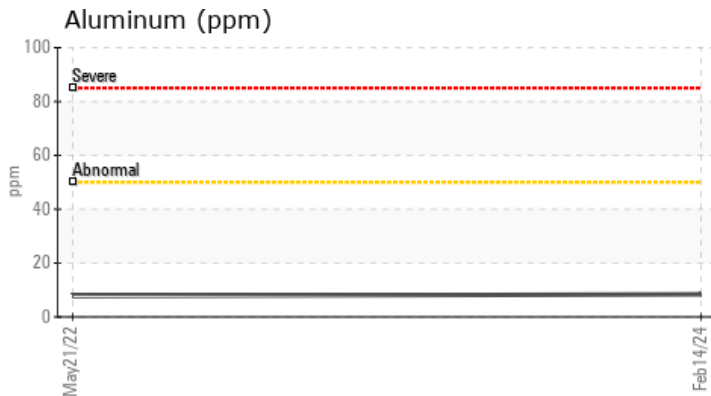
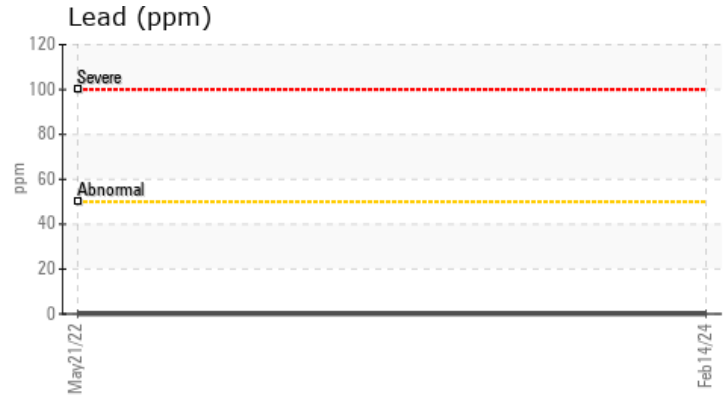
Depot: VOLVO0093
Unique No: 10886233
Signed: Sean Felton
Report Date: 21 Feb 2024



CONSTRUCTION EQUIPMENT



GRAPHS





CONSTRUCTION EQUIPMENT

SWO921227 VOLVO A30G 75221 - BRAKE COOLING SYSTEM



Sample No: VCP337712
Oil Type: VOLVO WB 102
Job No: SWO921227



SAMPLE INFORMATION

Sample Number	VCP337712	---	---	---
Sample Date	21 May 2022	---	---	---
Machine Hours	1204	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Not Chngd	---	---	---
Sample Status	ABNORMAL	---	---	---

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OIL CONDITION

Visc @ 40°C	cSt	■ 39.7	---	---	---
-------------	-----	--------	-----	-----	-----



CONTAMINATION

Water	%	NEG	---	---	---
Silicon	ppm	■ 12	---	---	---
Sodium	ppm	■ 11	---	---	---
Potassium	ppm	■ 1	---	---	---

Diagnosis

No corrective action is recommended at this time. Resample at the next service interval to monitor. The copper level is abnormal. All other 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	■ 9	---	---	---
Copper	ppm	▲ 289	---	---	---
Lead	ppm	■ 2	---	---	---
Tin	ppm	■ <1	---	---	---
Aluminum	ppm	■ <1	---	---	---
Chromium	ppm	■ <1	---	---	---
Molybdenum	ppm	■ <1	---	---	---
Nickel	ppm	■ <1	---	---	---
Titanium	ppm	<1	---	---	---
Silver	ppm	2	---	---	---
Manganese	ppm	■ 1	---	---	---
Vanadium	ppm	0	---	---	---



ADDITIVES

Calcium	ppm	■ 3740	---	---	---
Magnesium	ppm	■ 12	---	---	---
Zinc	ppm	■ 1507	---	---	---
Phosphorus	ppm	■ 1316	---	---	---
Barium	ppm	■ 0	---	---	---
Boron	ppm	■ 112	---	---	---

Depot: VOLVO0093
Unique No: 9993584
Signed: Don Baldrige
Report Date: 27 May 2022

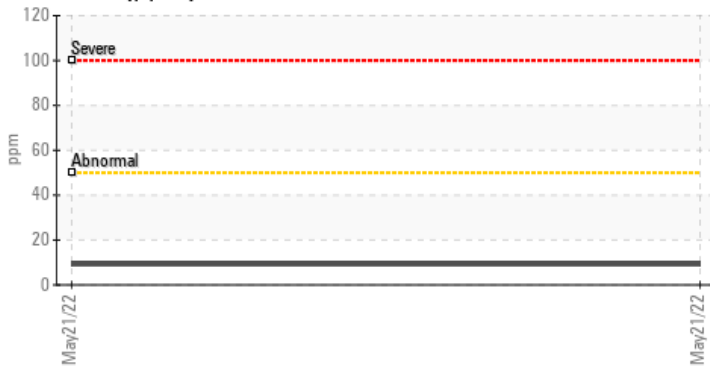


CONSTRUCTION EQUIPMENT



GRAPHS

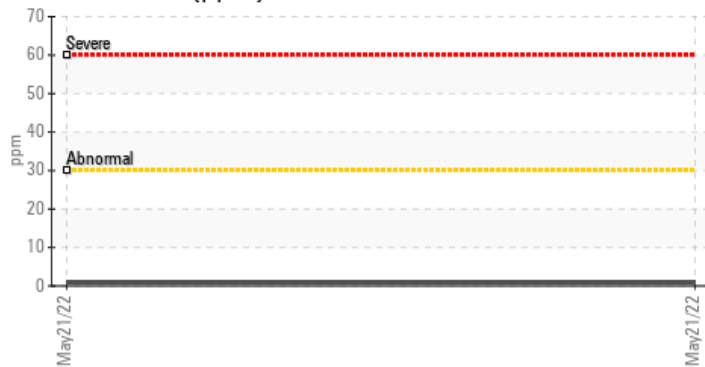
Iron (ppm)



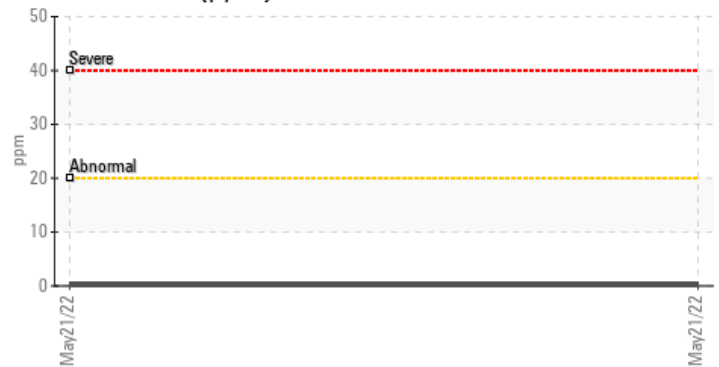
Lead (ppm)



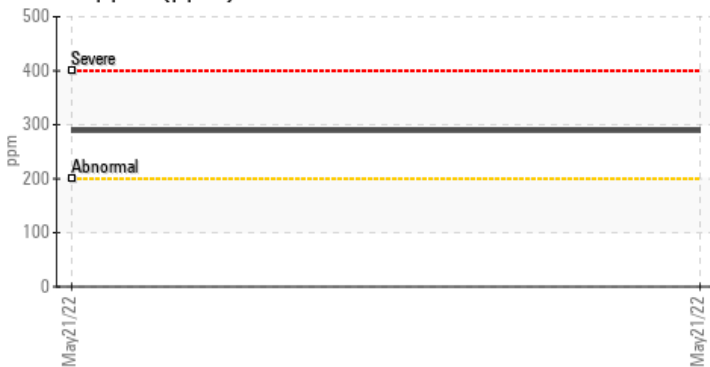
Aluminum (ppm)



Chromium (ppm)



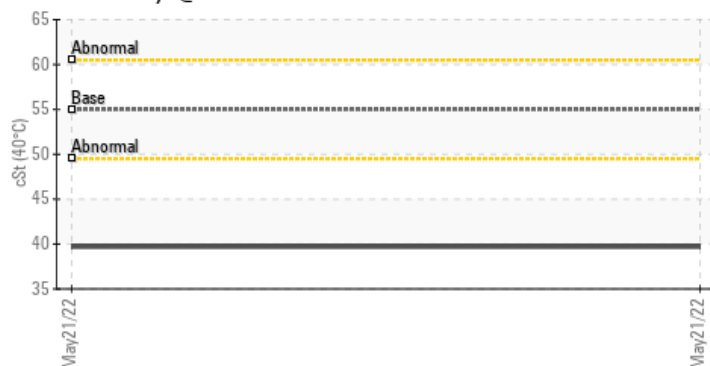
▲ Copper (ppm)



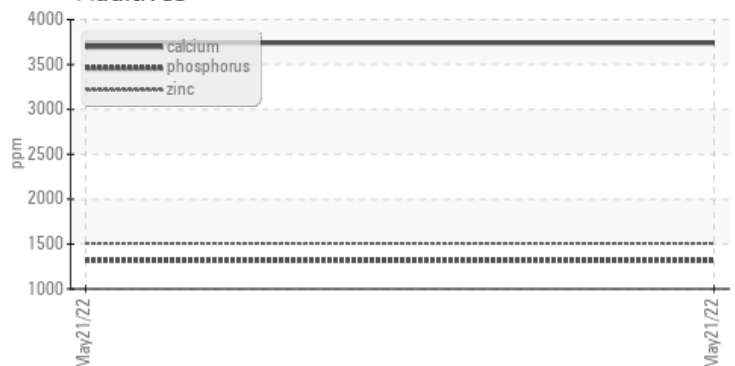
Silicon (ppm)



Viscosity @ 40°C



Additives





CONSTRUCTION EQUIPMENT

SWO921227 VOLVO A30G 75221 - HYDRAULIC SYSTEM



Sample No: VCP337709
Oil Type: VOLVO SUPER HYDRAULIC OIL 46
Job No: SWO921227



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SAMPLE INFORMATION

Sample Number	VCP337709	---	---	---
Sample Date	21 May 2022	---	---	---
Machine Hours	1204	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Not Chngd	---	---	---
Sample Status	NORMAL	---	---	---



OIL CONDITION

Visc @ 40°C	cSt	█ 44.8	---	---	---
Acid Number (AN)	mg KOH/g	█ 0.49	---	---	---



CONTAMINATION

Water	%	NEG	---	---	---
Particles >4µm		█ 1040	---	---	---
Particles >6µm		█ 158	---	---	---
Particles >14µm		█ 11	---	---	---
ISO 4406:1999 (c)		17/14/11	---	---	---
Silicon	ppm	█ 3	---	---	---
Sodium	ppm	█ 0	---	---	---
Potassium	ppm	█ <1	---	---	---



WEAR METALS

Iron	ppm	█ 6	---	---	---
Copper	ppm	█ 5	---	---	---
Lead	ppm	█ 4	---	---	---
Tin	ppm	█ <1	---	---	---
Aluminum	ppm	█ <1	---	---	---
Chromium	ppm	█ <1	---	---	---
Molybdenum	ppm	█ <1	---	---	---
Nickel	ppm	█ 0	---	---	---
Titanium	ppm	0	---	---	---
Silver	ppm	<1	---	---	---
Manganese	ppm	█ 0	---	---	---
Vanadium	ppm	0	---	---	---



ADDITIVES

Calcium	ppm	█ 57	---	---	---
Magnesium	ppm	█ 2	---	---	---
Zinc	ppm	█ 500	---	---	---
Phosphorus	ppm	█ 368	---	---	---
Barium	ppm	█ 0	---	---	---
Boron	ppm	█ <1	---	---	---

Diagnosis

Resample at the next service interval to monitor. All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Depot: VOLVO0093
Unique No: 9988037
Signed: Wes Davis
Report Date: 26 May 2022

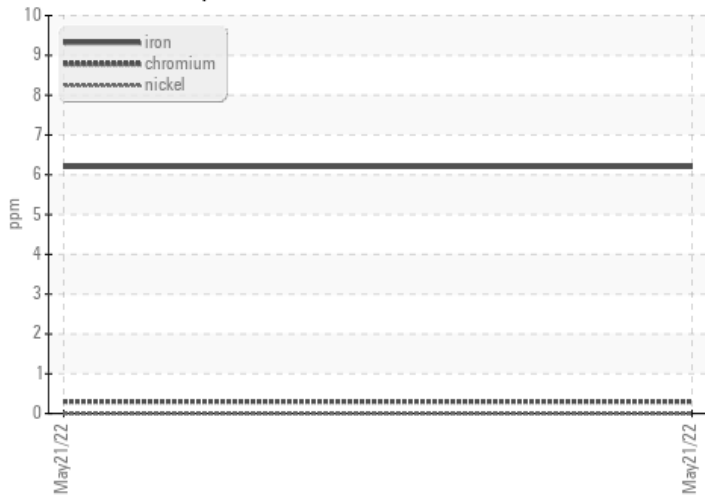


CONSTRUCTION EQUIPMENT

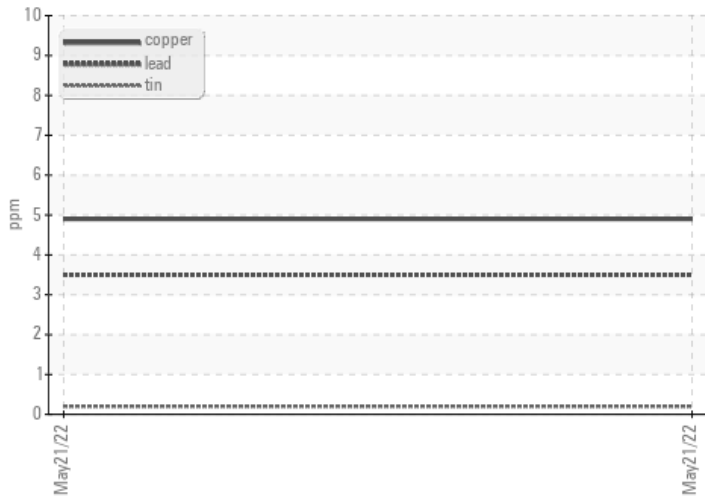


GRAPHS

Ferrous Alloys



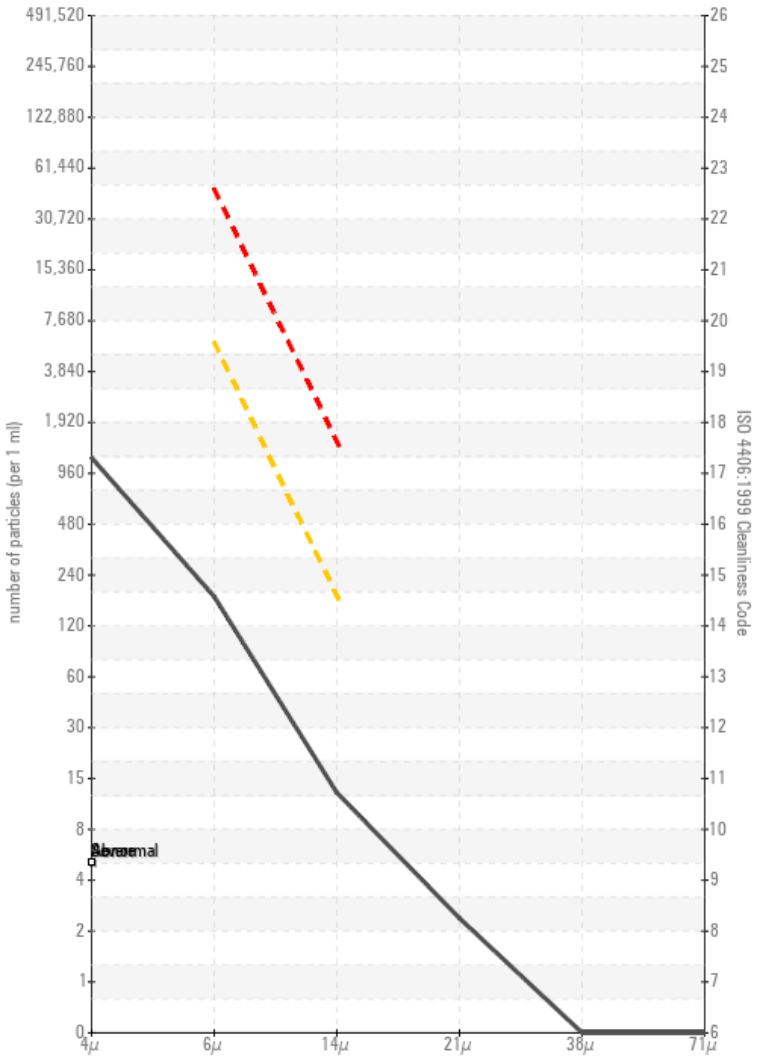
Non-ferrous Metals



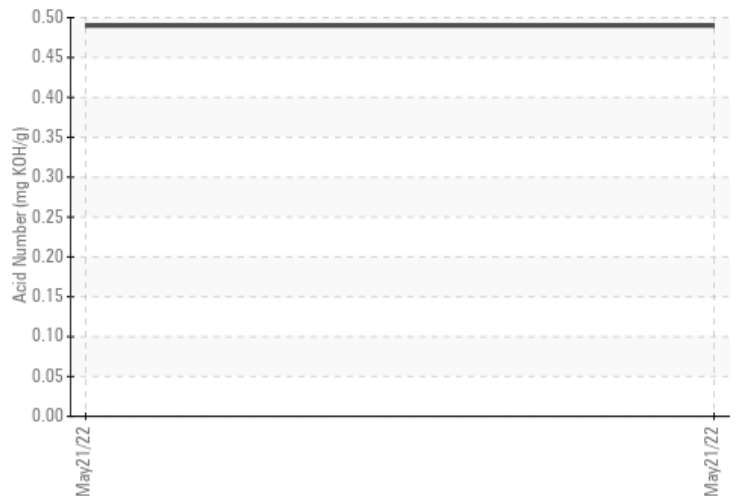
Viscosity @ 40°C



Particle Count



Acid Number





CONSTRUCTION EQUIPMENT

SW0921227 VOLVO A30G 75221 - FRONT AXLE



Sample No: VCP337708
Oil Type: VOLVO PREMIUM GEAR OIL 85W-140 GL-5
Job No: SW0921227



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SAMPLE INFORMATION

Sample Number	VCP337708	---	---	---
Sample Date	21 May 2022	---	---	---
Machine Hours	1204	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Changed	---	---	---
Sample Status	ATTENTION	---	---	---



OIL CONDITION

Visc @ 40°C	cSt	83.7	---	---	---
-------------	-----	------	-----	-----	-----



CONTAMINATION

Water	%	NEG	---	---	---
Silicon	ppm	4	---	---	---
Sodium	ppm	2	---	---	---
Potassium	ppm	4	---	---	---



WEAR METALS

Iron	ppm	208	---	---	---
Copper	ppm	18	---	---	---
Lead	ppm	<1	---	---	---
Tin	ppm	<1	---	---	---
Aluminum	ppm	<1	---	---	---
Chromium	ppm	4	---	---	---
Molybdenum	ppm	5	---	---	---
Nickel	ppm	2	---	---	---
Titanium	ppm	0	---	---	---
Silver	ppm	<1	---	---	---
Manganese	ppm	13	---	---	---
Vanadium	ppm	0	---	---	---



ADDITIVES

Calcium	ppm	868	---	---	---
Magnesium	ppm	3	---	---	---
Zinc	ppm	364	---	---	---
Phosphorus	ppm	1443	---	---	---
Barium	ppm	1	---	---	---
Boron	ppm	157	---	---	---

Diagnosis

The oil 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 no indication of any contamination in the oil. The oil viscosity is lower than normal. Confirm oil type.

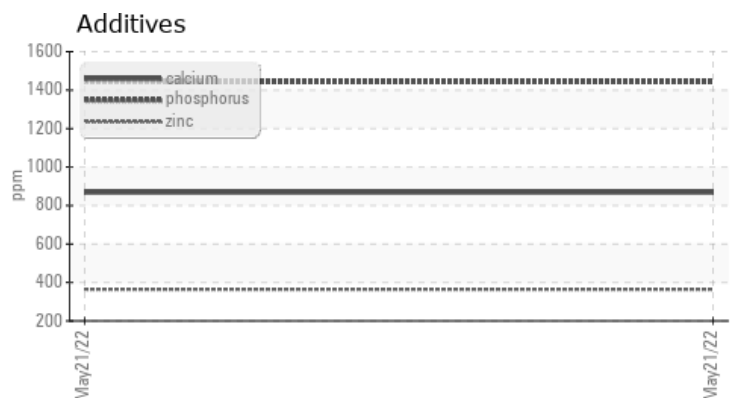
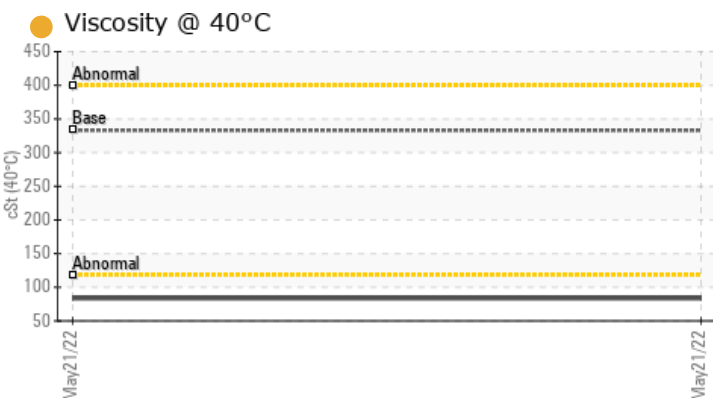
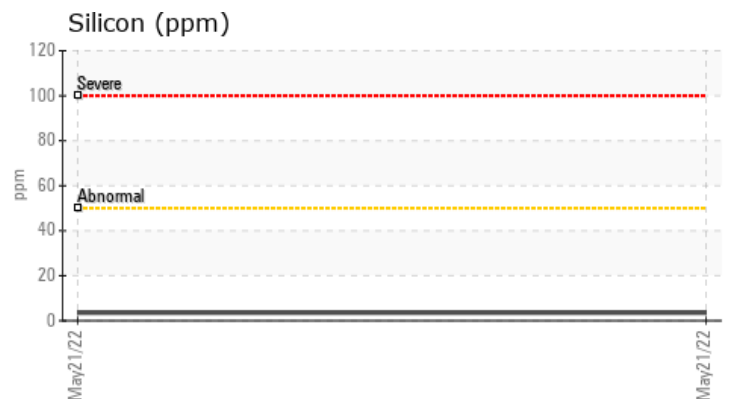
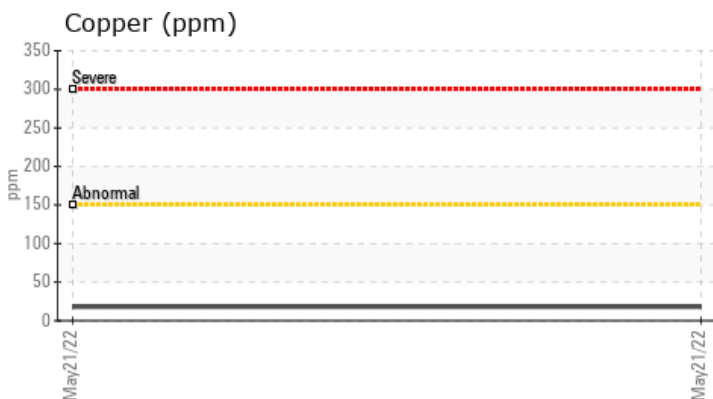
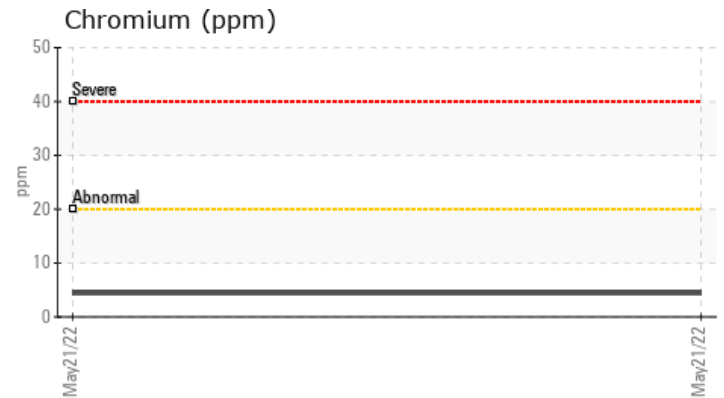
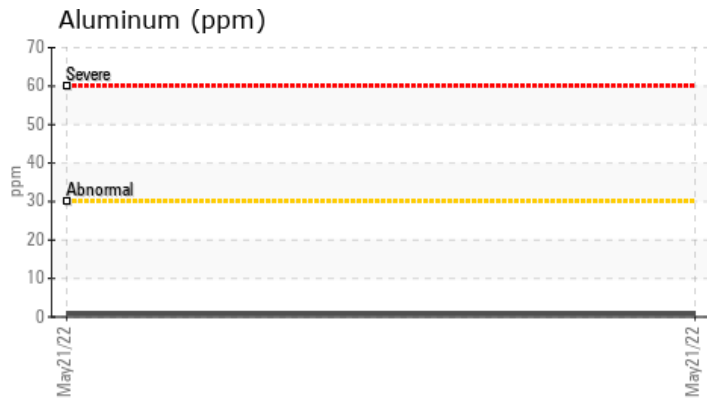
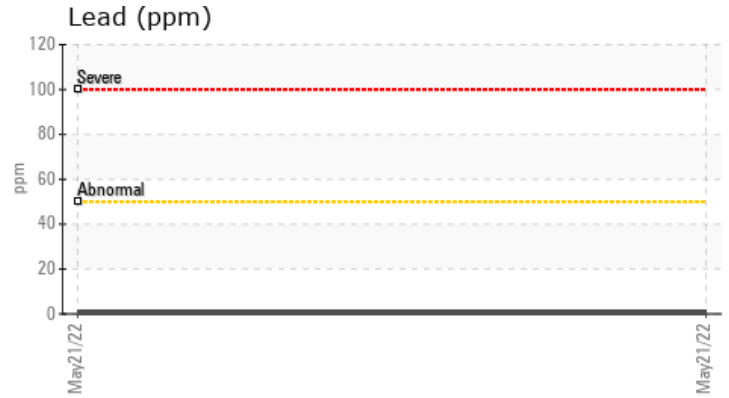
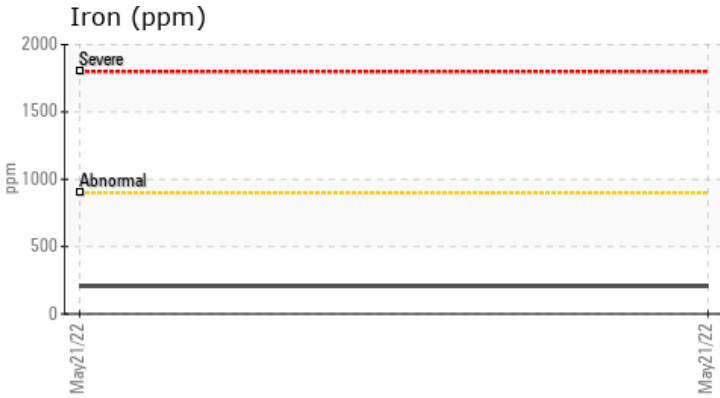
Depot: VOLVO0093
Unique No: 9993578
Signed: Don Baldrige
Report Date: 27 May 2022



CONSTRUCTION EQUIPMENT



VOLVO GRAPHS





CONSTRUCTION EQUIPMENT

SW0921227 VOLVO A30G 75221 - BOGIE/CENTER AXLE



Sample No: VCP337705
Oil Type: VOLVO PREMIUM GEAR OIL 85W-140 GL-5
Job No: SW0921227



SAMPLE INFORMATION

Sample Number	VCP337705	---	---	---
Sample Date	21 May 2022	---	---	---
Machine Hours	1204	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Changed	---	---	---
Sample Status	ATTENTION	---	---	---

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OIL CONDITION

Visc @ 40°C	cSt	88.1	---	---	---
-------------	-----	------	-----	-----	-----



CONTAMINATION

Water	%	NEG	---	---	---
Silicon	ppm	4	---	---	---
Sodium	ppm	2	---	---	---
Potassium	ppm	4	---	---	---



WEAR METALS

Iron	ppm	199	---	---	---
Copper	ppm	22	---	---	---
Lead	ppm	<1	---	---	---
Tin	ppm	2	---	---	---
Aluminum	ppm	<1	---	---	---
Chromium	ppm	5	---	---	---
Molybdenum	ppm	6	---	---	---
Nickel	ppm	2	---	---	---
Titanium	ppm	0	---	---	---
Silver	ppm	<1	---	---	---
Manganese	ppm	16	---	---	---
Vanadium	ppm	0	---	---	---



ADDITIVES

Calcium	ppm	760	---	---	---
Magnesium	ppm	3	---	---	---
Zinc	ppm	323	---	---	---
Phosphorus	ppm	1492	---	---	---
Barium	ppm	2	---	---	---
Boron	ppm	164	---	---	---

Diagnosis

The oil 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 no indication of any contamination in the oil. The oil viscosity is lower than normal. Confirm oil type.

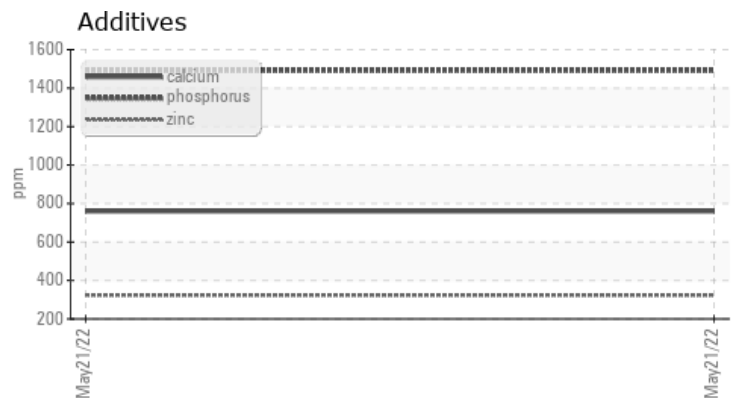
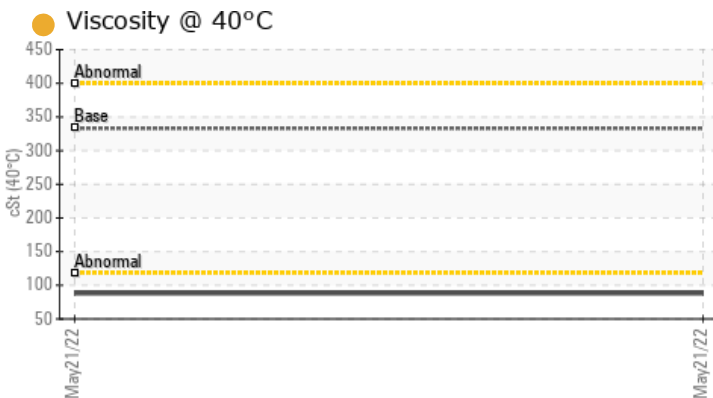
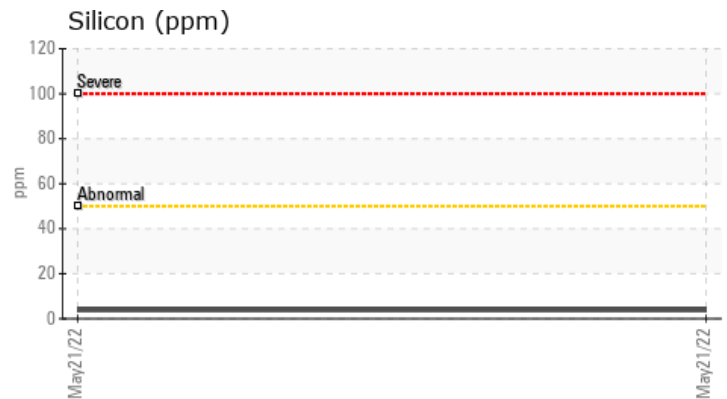
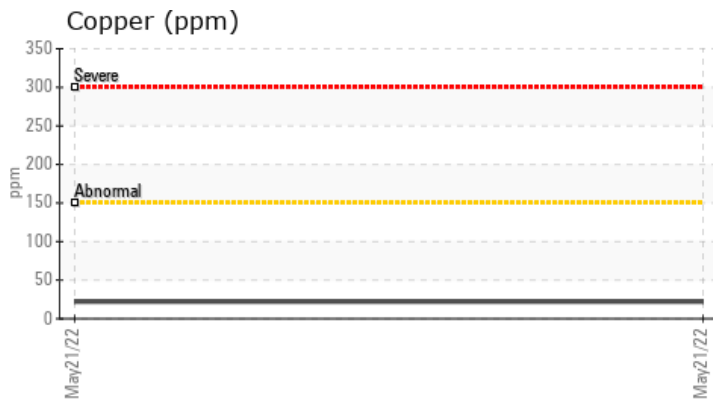
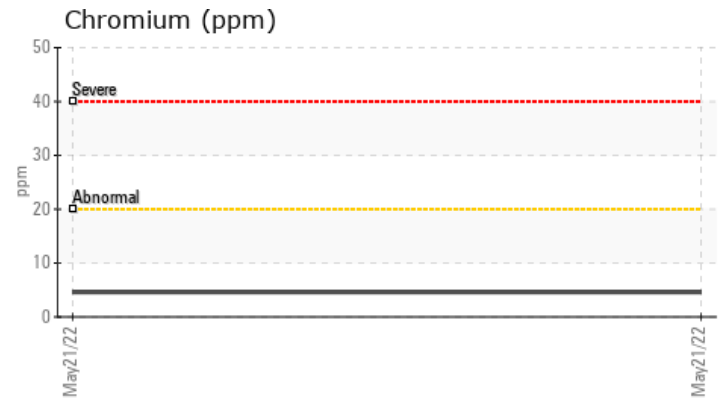
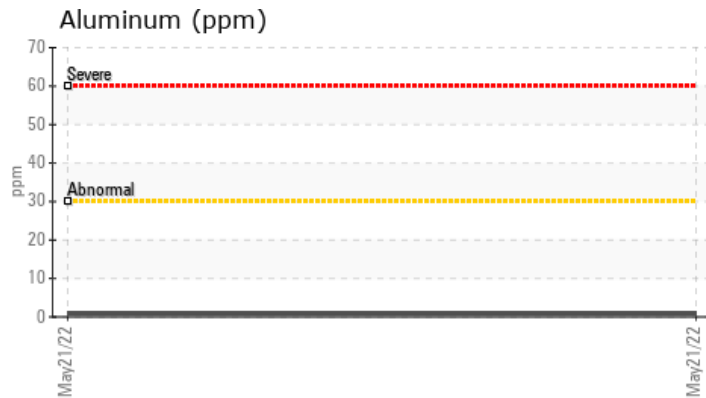
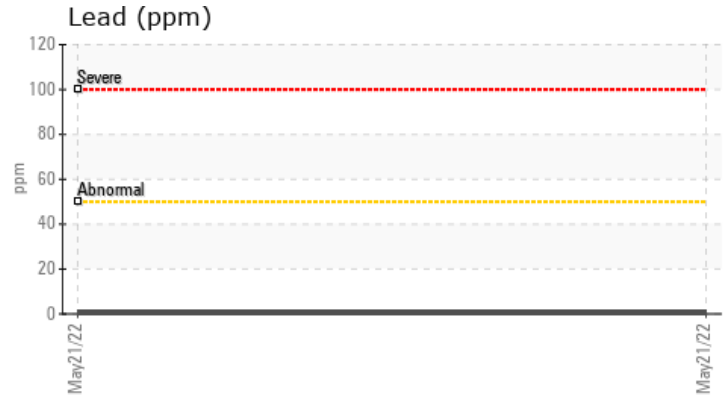
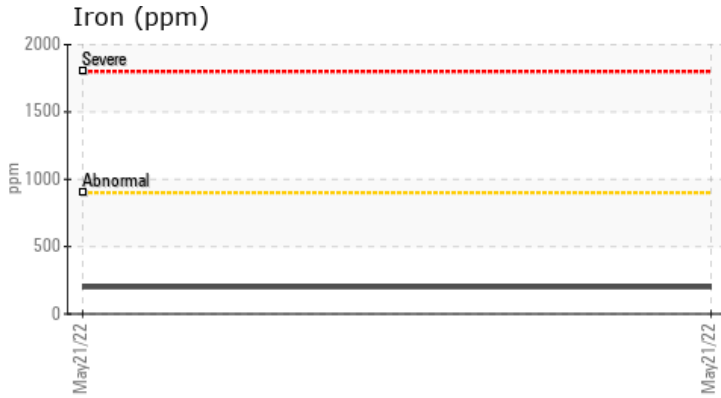
Depot: VOLVO0093
Unique No: 9993582
Signed: Don Baldrige
Report Date: 27 May 2022



CONSTRUCTION EQUIPMENT



GRAPHS





CONSTRUCTION EQUIPMENT

SW0921227 VOLVO A30G 75221 - REAR AXLE



Sample No: VCP337706
Oil Type: VOLVO PREMIUM GEAR OIL 85W-140 GL-5
Job No: SW0921227



SAMPLE INFORMATION

Sample Number	VCP337706	---	---	---
Sample Date	21 May 2022	---	---	---
Machine Hours	1204	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Changed	---	---	---
Sample Status	ATTENTION	---	---	---

ALTA EQUIPMENT/FLAGLER CONSTRUCTION EQUIPMENT LLC
 8418 PALM RIVER ROAD
 TAMPA, FL
 US 33619
 Contact: KENNY HANEY
 khaney@flaglerce.com
 T: (813)630-0077
 F: (813)630-2233



OIL CONDITION

Visc @ 40°C	cSt	● 90.2	---	---	---
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CONTAMINATION

Water	%	NEG	---	---	---
Silicon	ppm	■ 3	---	---	---
Sodium	ppm	■ 2	---	---	---
Potassium	ppm	■ 4	---	---	---



WEAR METALS

Iron	ppm	■ 187	---	---	---
Copper	ppm	■ 25	---	---	---
Lead	ppm	■ <1	---	---	---
Tin	ppm	■ 2	---	---	---
Aluminum	ppm	■ <1	---	---	---
Chromium	ppm	■ 4	---	---	---
Molybdenum	ppm	■ 6	---	---	---
Nickel	ppm	■ 1	---	---	---
Titanium	ppm	0	---	---	---
Silver	ppm	<1	---	---	---
Manganese	ppm	■ 16	---	---	---
Vanadium	ppm	0	---	---	---



ADDITIVES

Calcium	ppm	■ 633	---	---	---
Magnesium	ppm	■ 3	---	---	---
Zinc	ppm	■ 267	---	---	---
Phosphorus	ppm	■ 1507	---	---	---
Barium	ppm	■ 1	---	---	---
Boron	ppm	■ 176	---	---	---

Diagnosis

The oil 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 no indication of any contamination in the oil. The oil viscosity is lower than normal. Confirm oil type.

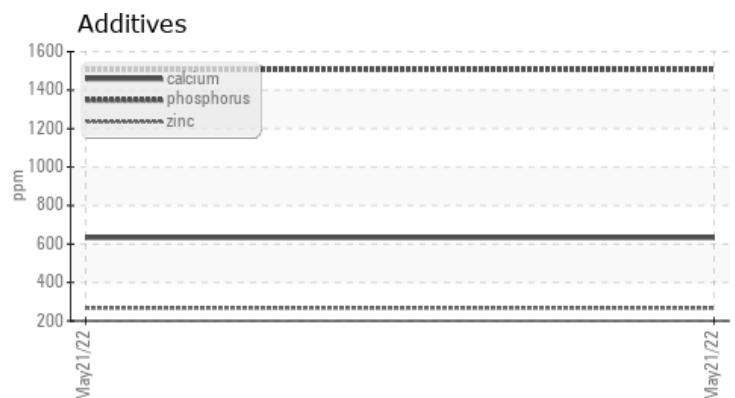
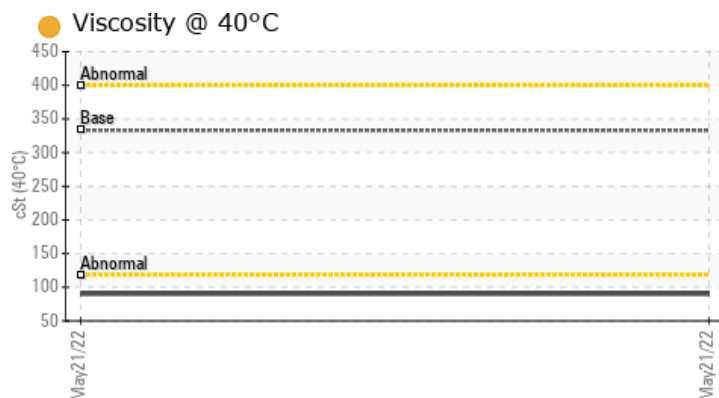
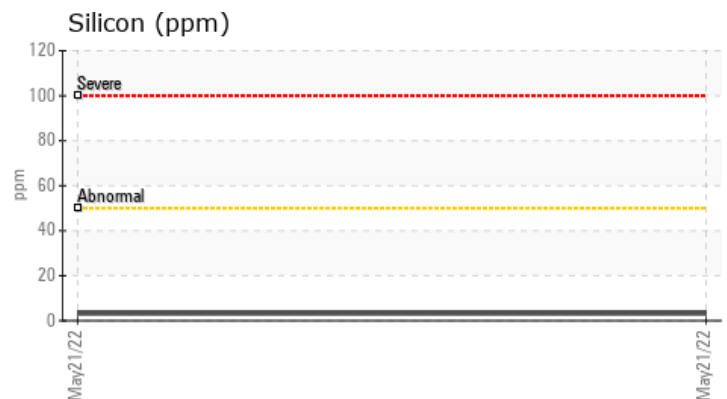
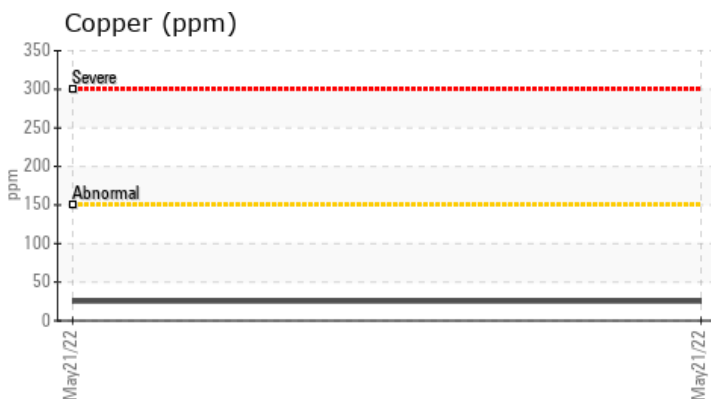
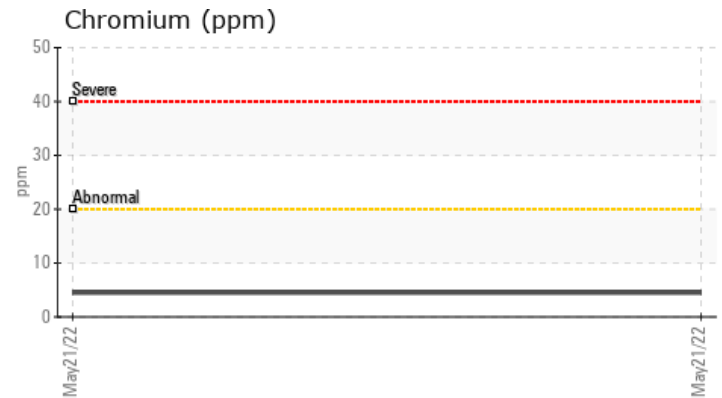
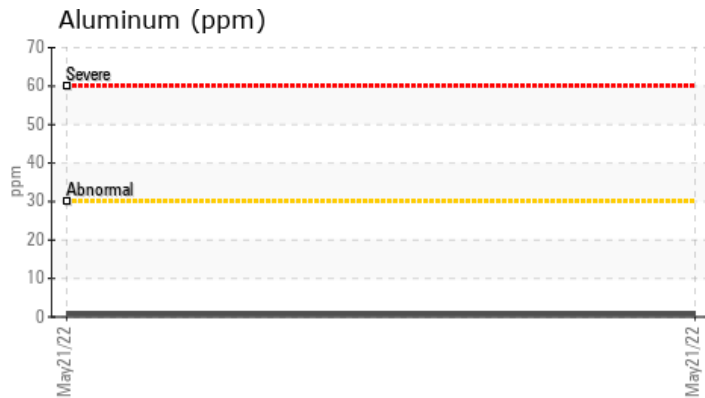
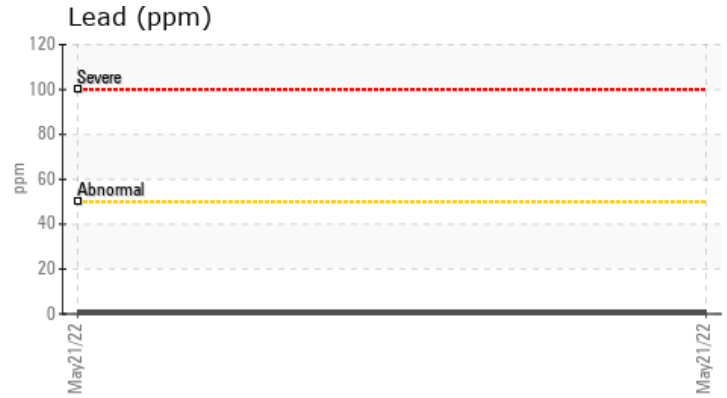
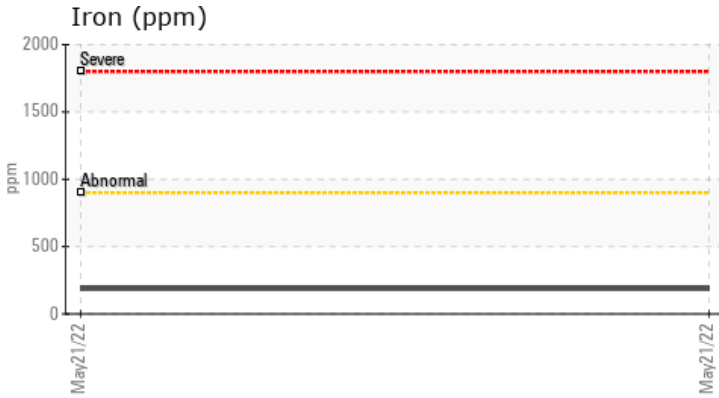
Depot: VOLVO0093
Unique No: 9993585
Signed: Don Baldrige
Report Date: 27 May 2022



CONSTRUCTION EQUIPMENT



GRAPHS





CONSTRUCTION EQUIPMENT

SW0921227 VOLVO A30G 75221 - DROP BOX



Sample No: VCP337713
Oil Type: VOLVO PREMIUM GEAR OIL 85W-140 GL-5
Job No: SW0921227



ALTA EQUIPMENT/FLAGLER CONSTRUCTION EQUIPMENT LLC
 8418 PALM RIVER ROAD
 TAMPA, FL
 US 33619
 Contact: KENNY HANEY
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 F: (813)630-2233



SAMPLE INFORMATION

Sample Number	VCP337713	---	---	---
Sample Date	21 May 2022	---	---	---
Machine Hours	1204	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Changed	---	---	---
Sample Status	ATTENTION	---	---	---



OIL CONDITION

Visc @ 40°C	cSt	57.8	---	---	---
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CONTAMINATION

Water	%	NEG	---	---	---
Silicon	ppm	35	---	---	---
Sodium	ppm	10	---	---	---
Potassium	ppm	<1	---	---	---



WEAR METALS

Iron	ppm	106	---	---	---
Copper	ppm	1	---	---	---
Lead	ppm	<1	---	---	---
Tin	ppm	<1	---	---	---
Aluminum	ppm	5	---	---	---
Chromium	ppm	2	---	---	---
Molybdenum	ppm	9	---	---	---
Nickel	ppm	<1	---	---	---
Titanium	ppm	0	---	---	---
Silver	ppm	<1	---	---	---
Manganese	ppm	2	---	---	---
Vanadium	ppm	0	---	---	---



ADDITIVES

Calcium	ppm	56	---	---	---
Magnesium	ppm	1	---	---	---
Zinc	ppm	52	---	---	---
Phosphorus	ppm	1454	---	---	---
Barium	ppm	0	---	---	---
Boron	ppm	162	---	---	---

Diagnosis

The oil 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 no indication of any contamination in the oil. The oil viscosity is lower than normal. Confirm oil type.

Depot: VOLVO0093
Unique No: 9993587
Signed: Don Baldrige
Report Date: 27 May 2022



CONSTRUCTION EQUIPMENT



GRAPHS

