



CONSTRUCTION EQUIPMENT

W1218005002 TMT VOLVO L220G 12565 - COOLANT



Sample No: VCP147882
Oil Type: VOLVO COOLANT VCS (YELLOW)
Job No: W1218005002 TMT



SAMPLE INFORMATION

Sample Number	VCP147882	VCP150694	---	---
Sample Date	02 May 2019	07 Nov 2015	---	---
Machine Hours	8698	1880	---	---
Sample Status	NORMAL	NORMAL	---	---

ALTA EQUIPMENT

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US 13206

Contact: JIM STRIGLE
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COOLANT CONDITION

pH	Scale 0-14	7.12	7.20	---	---
Reserve Alkalinity	Scale 0-20	---	---	---	---
Nitrites	ppm	0	0	---	---
Percentage Glycol	%	51	53	---	---
Freezing Point	°C	-41	-36	---	---

Diagnosis

The fluid is suitable for further service. There is no indication of any contamination in the component. The carboxylate level of this fluid is acceptable. The glycol level is acceptable. The pH level of this fluid is within the acceptable limits.



CONTAMINATION

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

Depot: VOLVO0142
Unique No: 8591652
Signed: Jonathan Hester
Report Date: 10 May 2019



CONSTRUCTION EQUIPMENT

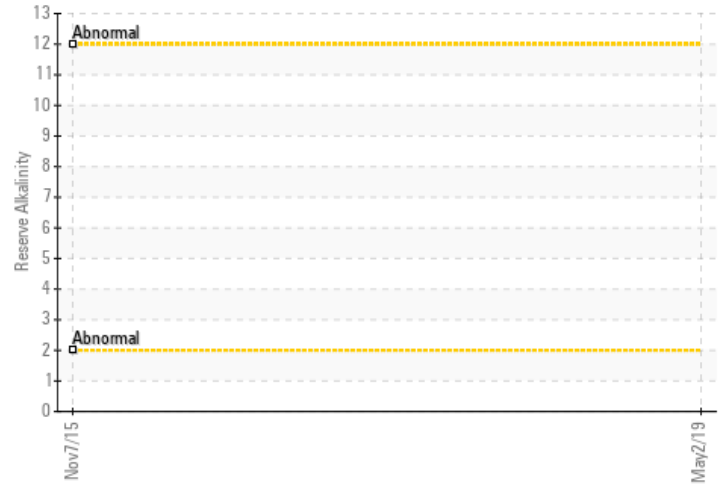


GRAPHS

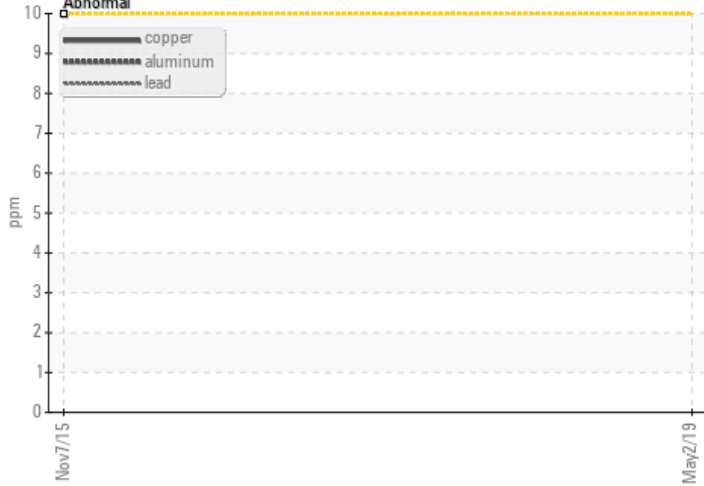
Iron/Tin/Silver



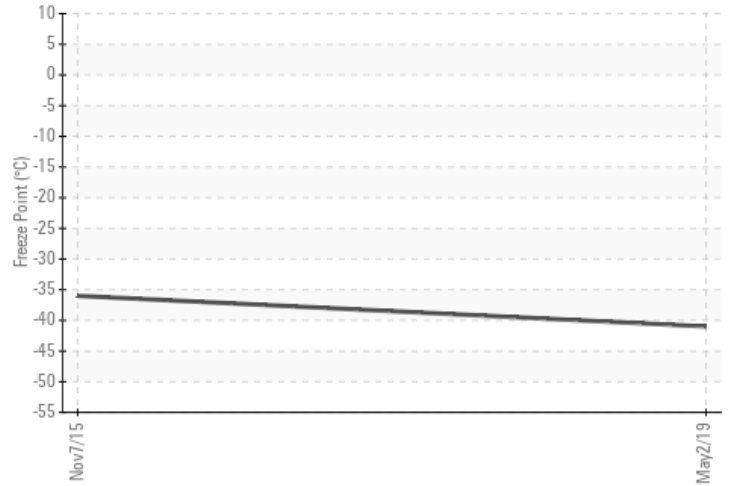
Reserve Alkalinity



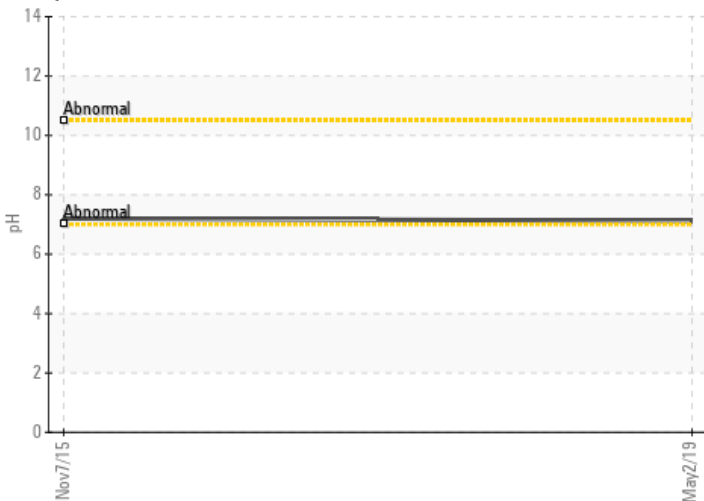
Copper/Aluminum/Lead



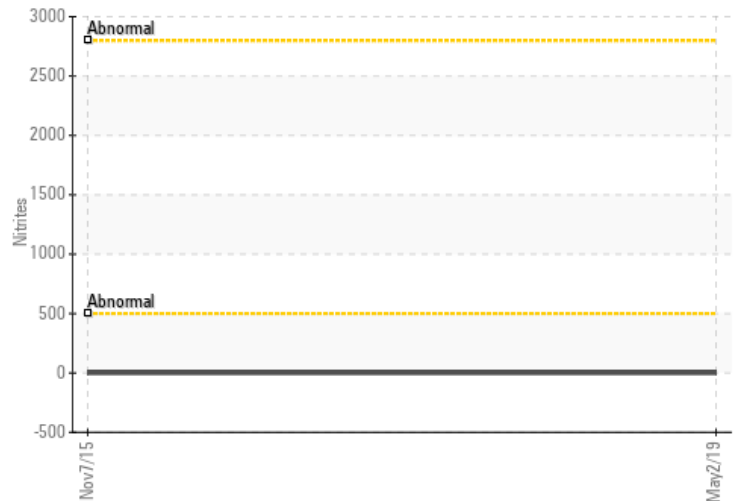
Freeze Point



pH



Nitrites





CONSTRUCTION EQUIPMENT

W1218005SBL2 TMT VOLVO L220G 12565 - DIESEL ENGINE



Sample No: VCP147880
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: W1218005SBL2 TMT



SAMPLE INFORMATION

Sample Number	VCP147880	VCP150696	---	---
Sample Date	02 May 2019	07 Nov 2015	---	---
Machine Hours	8698	1880	---	---
Oil Hours	0	250	---	---
Oil Changed	Changed	Changed	---	---
Sample Status	ABNORMAL	NORMAL	---	---



ALTA EQUIPMENT

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OIL CONDITION

Visc @ 100°C	cSt	11.6	14.1	---	---
Oxidation (PA)	%	66	40	---	---



CONTAMINATION

Water	%	0.119	NEG	---	---
Soot %	%	0.3	0.3	---	---
Nitration (PA)	%	58	42	---	---
Sulfation (PA)	%	55	30	---	---
Glycol	%	NEG	NEG	---	---
Fuel	%	0.5	<1.0	---	---
Silicon	ppm	5	9	---	---
Sodium	ppm	3	6	---	---
Potassium	ppm	0	1	---	---

Diagnosis

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 trace of moisture present in the oil. Tests indicate that there is no fuel present in the oil. The oil viscosity is lower than normal. Confirm oil type.



WEAR METALS

Iron	ppm	18	16	---	---
Copper	ppm	1	3	---	---
Lead	ppm	1	0	---	---
Tin	ppm	0	1	---	---
Aluminum	ppm	2	3	---	---
Chromium	ppm	<1	<1	---	---
Molybdenum	ppm	<1	46	---	---
Nickel	ppm	<1	3	---	---
Titanium	ppm	<1	0	---	---
Silver	ppm	0	0	---	---
Manganese	ppm	<1	<1	---	---
Vanadium	ppm	0	0	---	---



ADDITIVES

Calcium	ppm	1600	1296	---	---
Magnesium	ppm	10	845	---	---
Zinc	ppm	842	1010	---	---
Phosphorus	ppm	715	872	---	---
Barium	ppm	0	0	---	---
Boron	ppm	129	32	---	---

Depot: VOLV00142
Unique No: 8591038
Signed: Jonathan Hester
Report Date: 13 May 2019

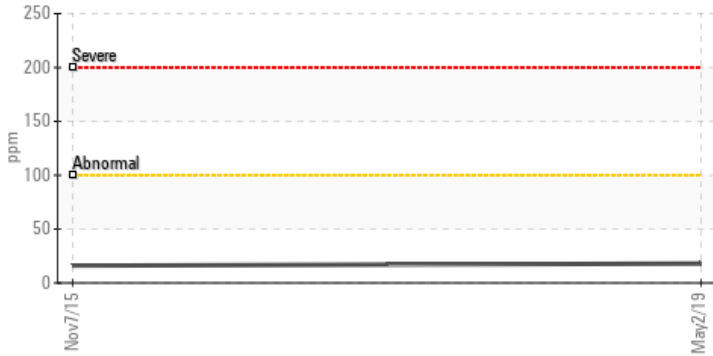


CONSTRUCTION EQUIPMENT

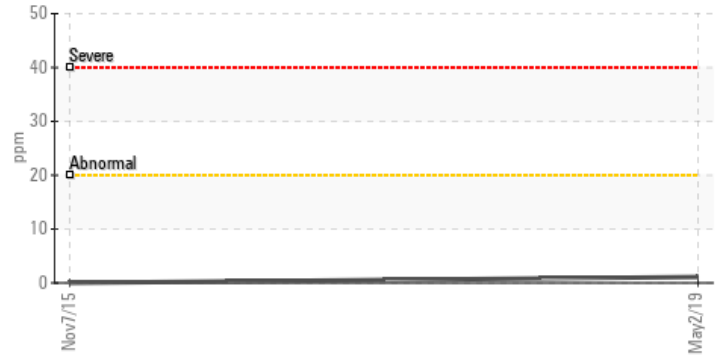


GRAPHS

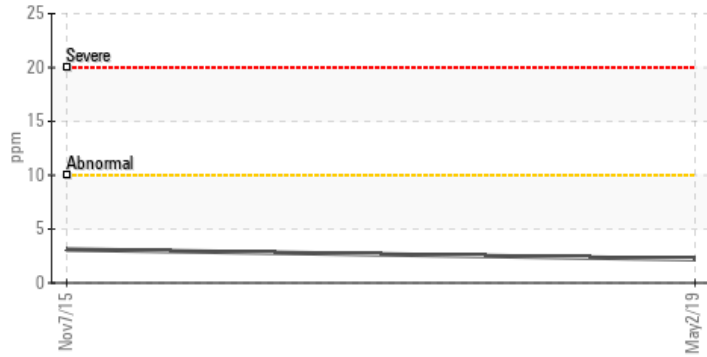
Iron (ppm)



Lead (ppm)



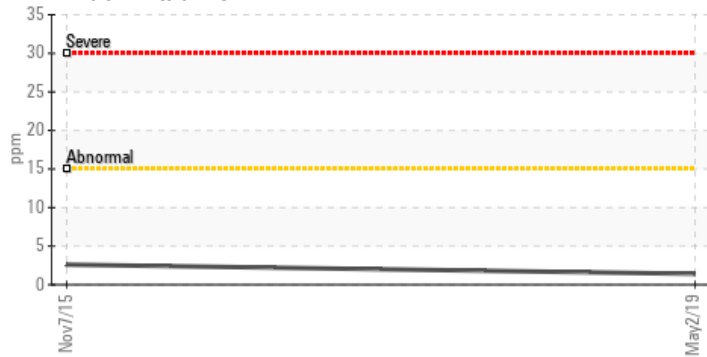
Aluminum (ppm)



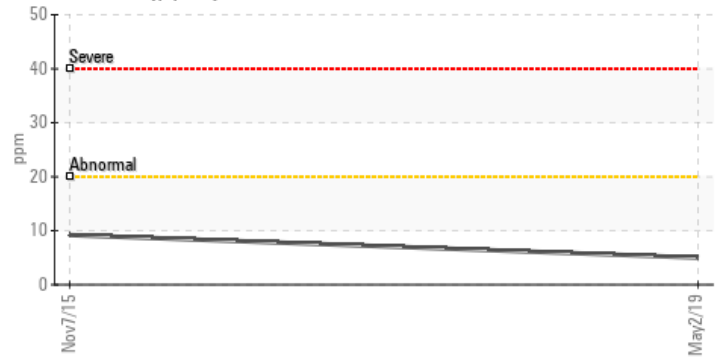
Chromium (ppm)



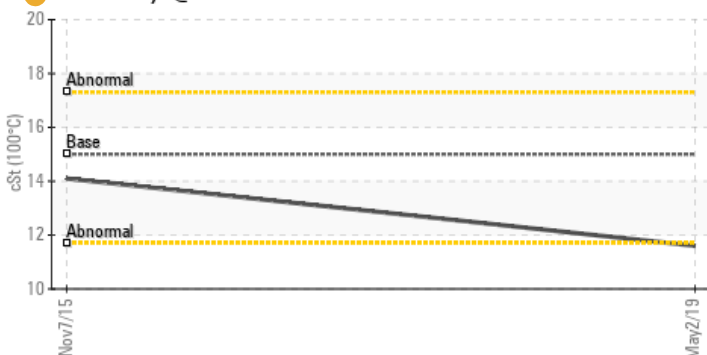
Copper (ppm)



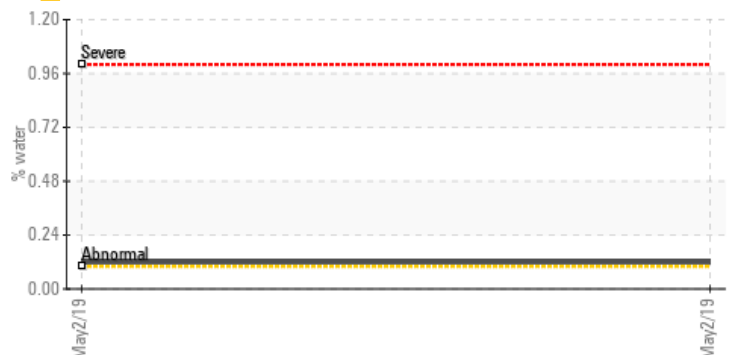
Silicon (ppm)



● Viscosity @ 100°C



▲ Water





CONSTRUCTION EQUIPMENT

SWA092282-10 VOLVO L220G 12565 - TRANSMISSION (AUTO)



Sample No: VCP370769
Oil Type: DEXRON III
Job No: SWA092282-10



SAMPLE INFORMATION

Sample Number	VCP370769	VCP147885	---	---
Sample Date	21 Oct 2022	02 May 2019	---	---
Machine Hours	13648	8698	---	---
Oil Hours	0	0	---	---
Oil Changed	Changed	N/A	---	---
Sample Status	ABNORMAL	NORMAL	---	---

ALTA EQUIPMENT

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 US 13206
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 F: (315)434-9471



OIL CONDITION

Visc @ 40°C	cSt	28.6	27.3	---	---
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CONTAMINATION

Water	%	NEG	NEG	---	---
Silicon	ppm	17	4	---	---
Sodium	ppm	<1	<1	---	---
Potassium	ppm	0	0	---	---

Diagnosis

The fluid change at the time of sampling has been noted. Resample at the next service interval to monitor. All component wear rates are normal. Moderate concentration of visible dirt/debris present in the fluid. The condition of the fluid is acceptable for the time in service.



WEAR METALS

Iron	ppm	32	67	---	---
Copper	ppm	4	7	---	---
Lead	ppm	0	0	---	---
Tin	ppm	0	0	---	---
Aluminum	ppm	2	3	---	---
Chromium	ppm	0	<1	---	---
Molybdenum	ppm	0	0	---	---
Nickel	ppm	0	<1	---	---
Titanium	ppm	0	0	---	---
Silver	ppm	0	<1	---	---
Manganese	ppm	3	<1	---	---
Vanadium	ppm	0	0	---	---



ADDITIVES

Calcium	ppm	68	79	---	---
Magnesium	ppm	<1	0	---	---
Zinc	ppm	7	42	---	---
Phosphorus	ppm	183	137	---	---
Barium	ppm	2	0	---	---
Boron	ppm	82	60	---	---

Depot: VOLV00142
Unique No: 10192929
Signed: Don Baldrige
Report Date: 31 Oct 2022

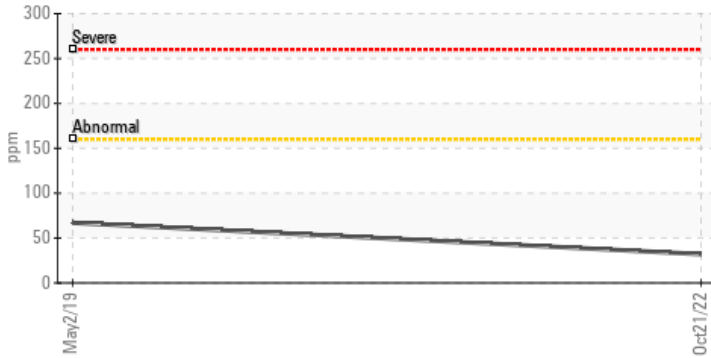


CONSTRUCTION EQUIPMENT



GRAPHS

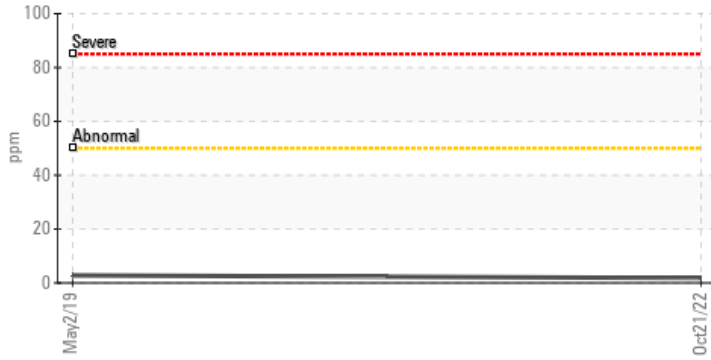
Iron (ppm)



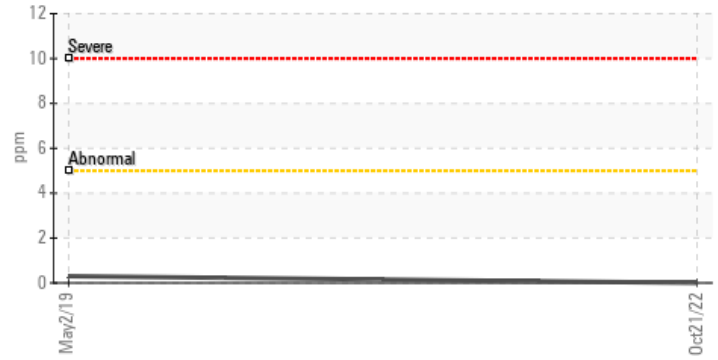
Lead (ppm)



Aluminum (ppm)



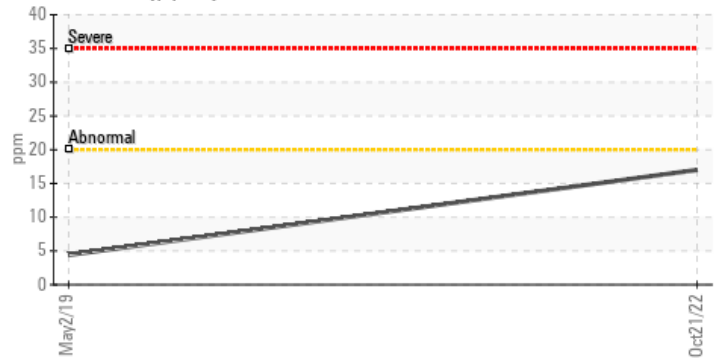
Chromium (ppm)



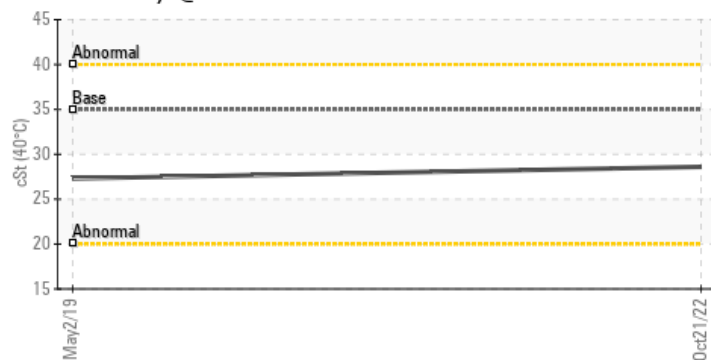
Copper (ppm)



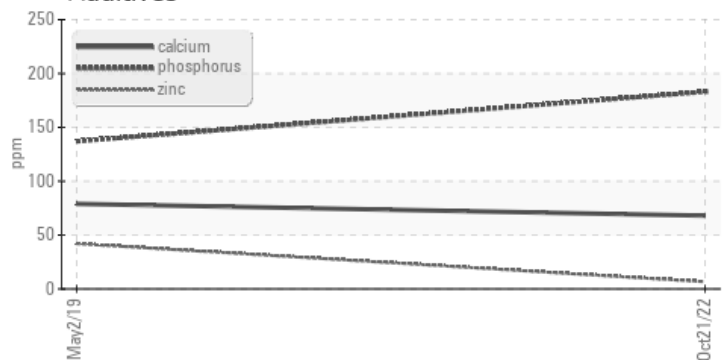
Silicon (ppm)



Viscosity @ 40°C



Additives





CONSTRUCTION EQUIPMENT

W1218005002 TMT VOLVO L220G 12565 - HYDRAULIC SYSTEM



Sample No: VCP147881
Oil Type: {unknown}
Job No: W1218005002 TMT



SAMPLE INFORMATION

Sample Number	VCP147881	---	---	---
Sample Date	02 May 2019	---	---	---
Machine Hours	8698	---	---	---
Oil Hours	0	---	---	---
Oil Changed	N/A	---	---	---
Sample Status	NORMAL	---	---	---

ALTA EQUIPMENT

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Contact: JIM STRIGLE
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OIL CONDITION

Visc @ 40°C	cSt	39.9	---	---	---
Acid Number (AN)	mg KOH/g	0.395	---	---	---

CONTAMINATION

Water	%	NEG	---	---	---
Particles >4µm		3225	---	---	---
Particles >6µm		629	---	---	---
Particles >14µm		37	---	---	---
ISO 4406:1999 (c)		19/16/12	---	---	---
Silicon	ppm	19	---	---	---
Sodium	ppm	2	---	---	---
Potassium	ppm	3	---	---	---

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	10	---	---	---
Copper	ppm	3	---	---	---
Lead	ppm	<1	---	---	---
Tin	ppm	0	---	---	---
Aluminum	ppm	8	---	---	---
Chromium	ppm	<1	---	---	---
Molybdenum	ppm	<1	---	---	---
Nickel	ppm	<1	---	---	---
Titanium	ppm	<1	---	---	---
Silver	ppm	0	---	---	---
Manganese	ppm	<1	---	---	---
Vanadium	ppm	0	---	---	---

ADDITIVES

Calcium	ppm	167	---	---	---
Magnesium	ppm	2	---	---	---
Zinc	ppm	461	---	---	---
Phosphorus	ppm	352	---	---	---
Barium	ppm	0	---	---	---
Boron	ppm	3	---	---	---

Depot: VOLV00142
Unique No: 8590738
Signed: Don Baldrige
Report Date: 09 May 2019

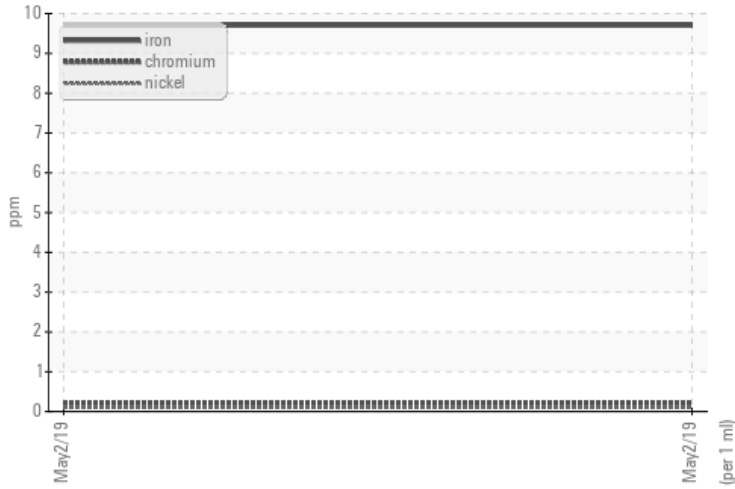


CONSTRUCTION EQUIPMENT

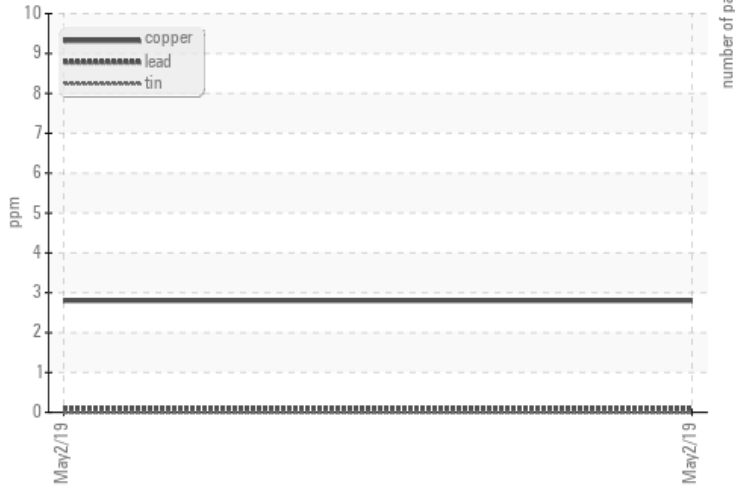


VOLVO GRAPHS

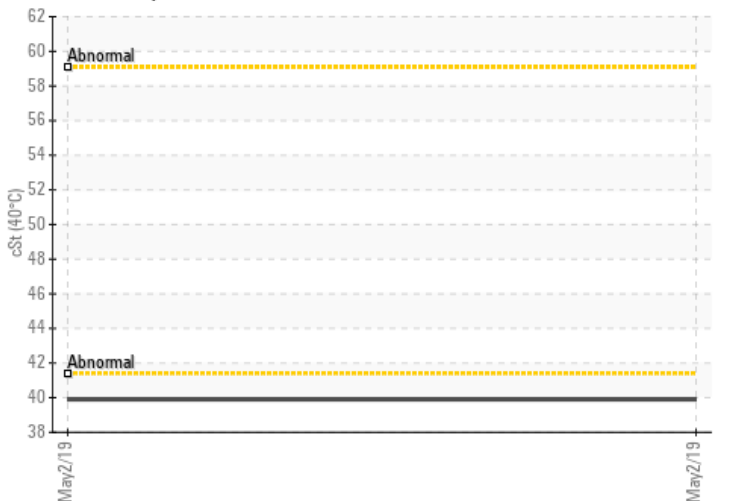
Ferrous Alloys



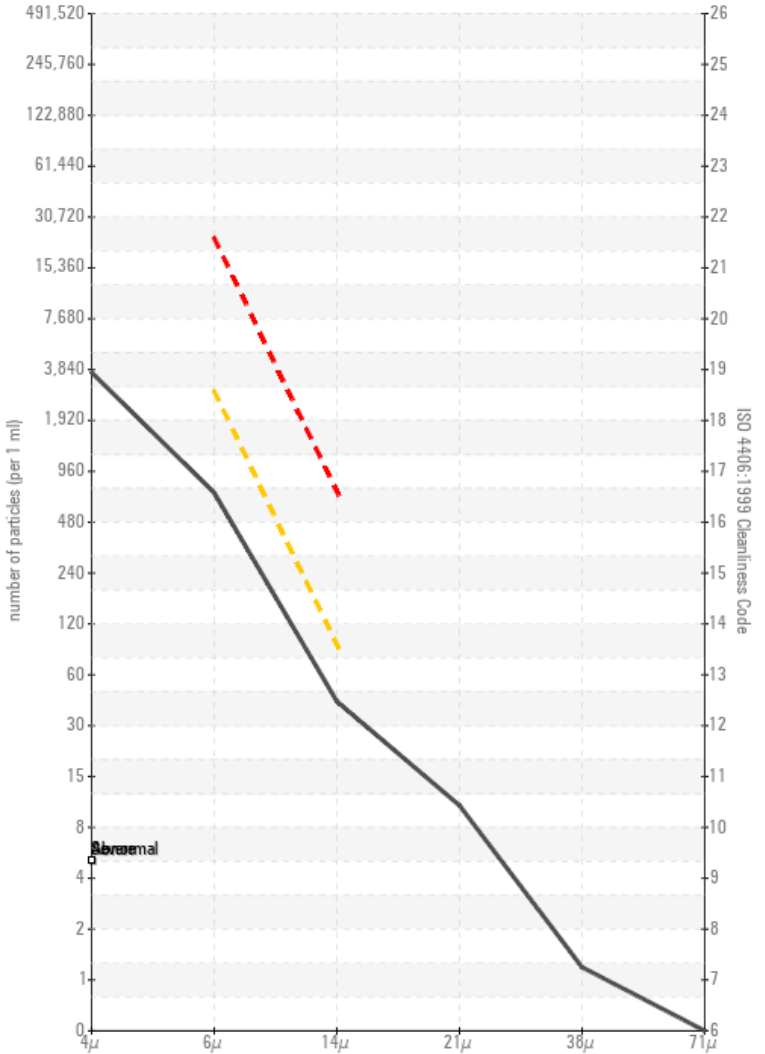
Non-ferrous Metals



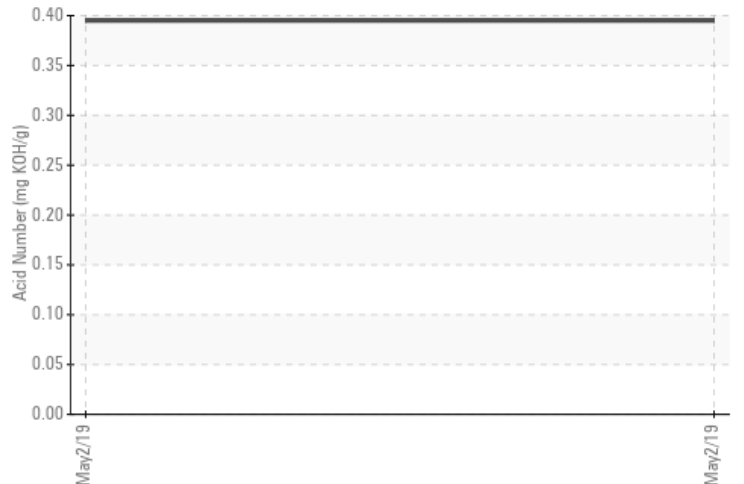
Viscosity @ 40°C



Particle Count



Acid Number





CONSTRUCTION EQUIPMENT

W121800SRL2 TMT VOLVO L220G 12565 - FRONT AXLE



Sample No: VCP147883
Oil Type: {unknown}
Job No: W121800SRL2 TMT



SAMPLE INFORMATION

Sample Number	VCP147883	---	---	---
Sample Date	02 May 2019	---	---	---
Machine Hours	8698	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Changed	---	---	---
Sample Status	NORMAL	---	---	---

ALTA EQUIPMENT

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US 13206
Contact: JIM STRIGLE
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F: (315)434-9471



OIL CONDITION

Visc @ 40°C	cSt	40.6	---	---	---
-------------	-----	------	-----	-----	-----



CONTAMINATION

Water	%	NEG	---	---	---
Silicon	ppm	11	---	---	---
Sodium	ppm	1	---	---	---
Potassium	ppm	17	---	---	---

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	39	---	---	---
Copper	ppm	<1	---	---	---
Lead	ppm	<1	---	---	---
Tin	ppm	0	---	---	---
Aluminum	ppm	1	---	---	---
Chromium	ppm	<1	---	---	---
Molybdenum	ppm	0	---	---	---
Nickel	ppm	<1	---	---	---
Titanium	ppm	<1	---	---	---
Silver	ppm	0	---	---	---
Manganese	ppm	<1	---	---	---
Vanadium	ppm	0	---	---	---



ADDITIVES

Calcium	ppm	3648	---	---	---
Magnesium	ppm	11	---	---	---
Zinc	ppm	1497	---	---	---
Phosphorus	ppm	1088	---	---	---
Barium	ppm	0	---	---	---
Boron	ppm	109	---	---	---

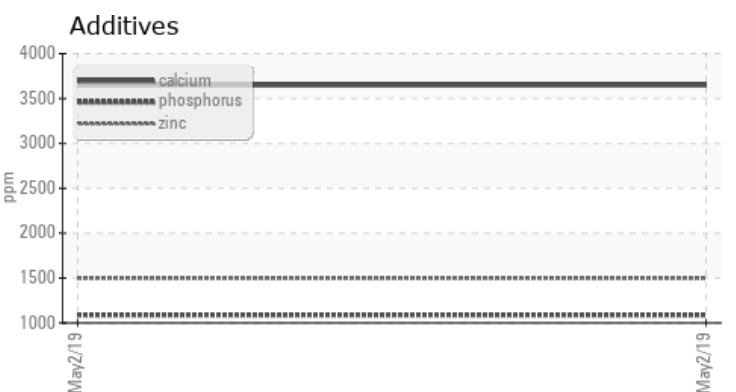
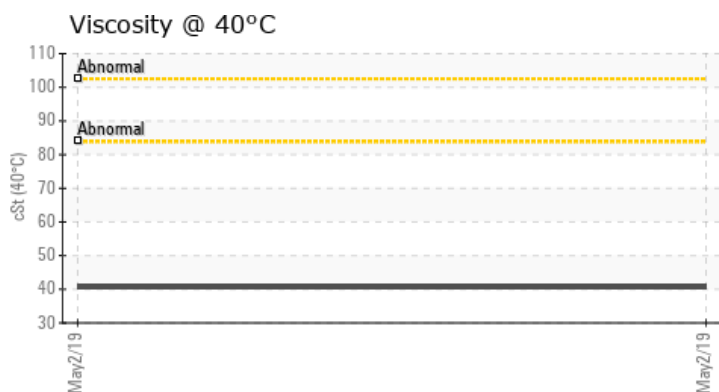
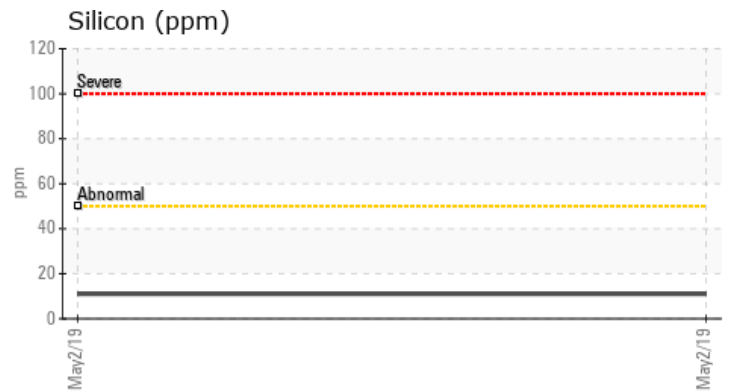
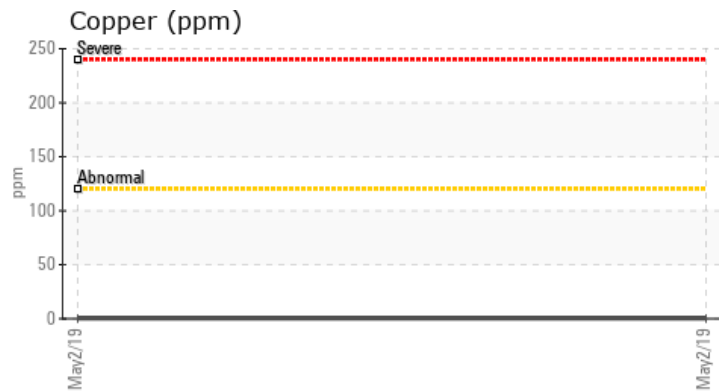
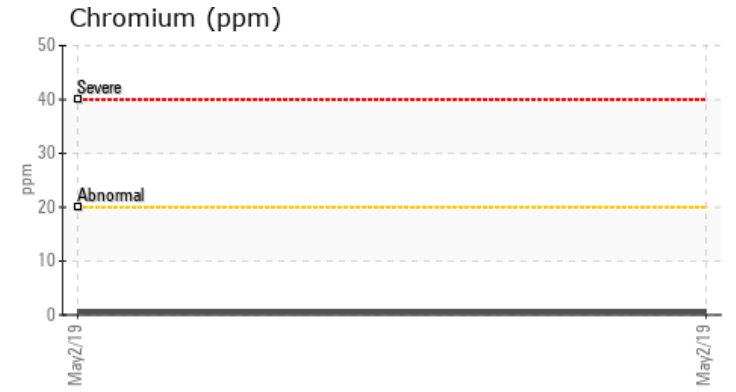
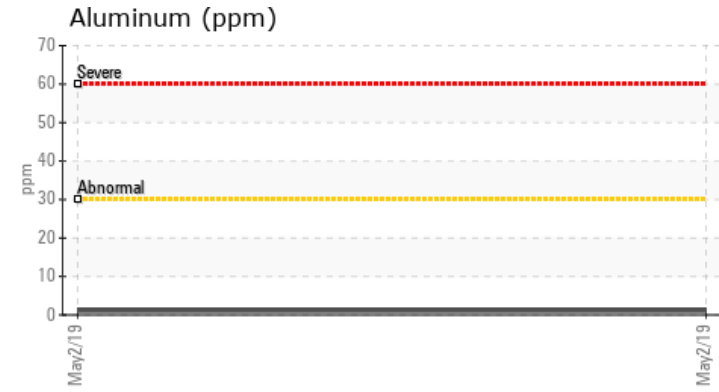
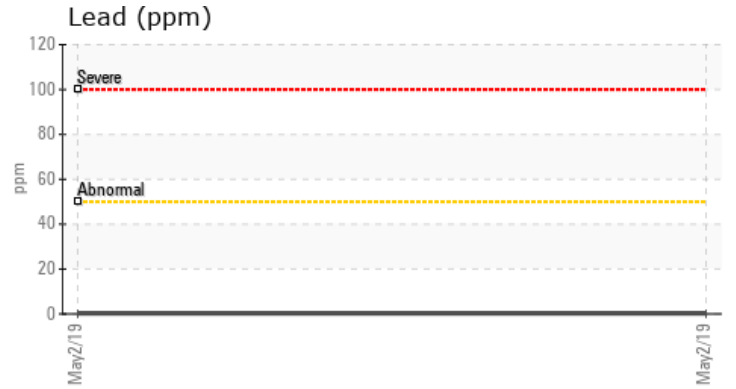
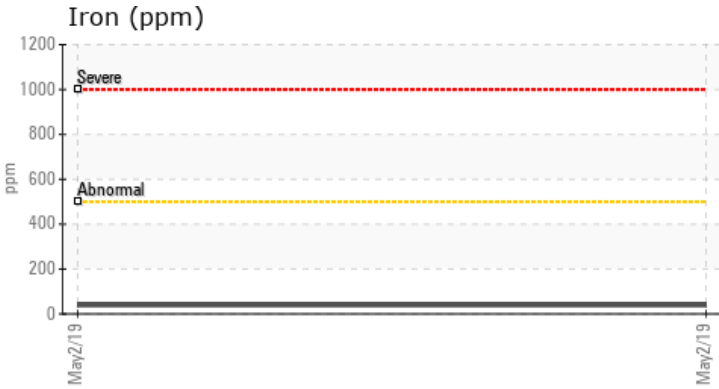
Depot: VOLVO0142
Unique No: 8591058
Signed: Jonathan Hester
Report Date: 10 May 2019



CONSTRUCTION EQUIPMENT



VOLVO GRAPHS





CONSTRUCTION EQUIPMENT

W1218005002 TMT VOLVO L220G 12565 - REAR AXLE



Sample No: VCP147884
Oil Type: {unknown}
Job No: W1218005002 TMT



SAMPLE INFORMATION

Sample Number	VCP147884	---	---	---
Sample Date	02 May 2019	---	---	---
Machine Hours	8698	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Changed	---	---	---
Sample Status	NORMAL	---	---	---

ALTA EQUIPMENT

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Contact: JIM STRIGLE
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OIL CONDITION

Visc @ 40°C	cSt	41.0	---	---	---
-------------	-----	------	-----	-----	-----



CONTAMINATION

Water	%	NEG	---	---	---
Silicon	ppm	10	---	---	---
Sodium	ppm	1	---	---	---
Potassium	ppm	4	---	---	---



WEAR METALS

Iron	ppm	35	---	---	---
Copper	ppm	<1	---	---	---
Lead	ppm	<1	---	---	---
Tin	ppm	0	---	---	---
Aluminum	ppm	<1	---	---	---
Chromium	ppm	<1	---	---	---
Molybdenum	ppm	0	---	---	---
Nickel	ppm	0	---	---	---
Titanium	ppm	<1	---	---	---
Silver	ppm	0	---	---	---
Manganese	ppm	<1	---	---	---
Vanadium	ppm	0	---	---	---



ADDITIVES

Calcium	ppm	3852	---	---	---
Magnesium	ppm	11	---	---	---
Zinc	ppm	1562	---	---	---
Phosphorus	ppm	1122	---	---	---
Barium	ppm	0	---	---	---
Boron	ppm	115	---	---	---

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.

Depot: VOLVO0142
Unique No: 8591059
Signed: Don Baldrige
Report Date: 09 May 2019



CONSTRUCTION EQUIPMENT



GRAPHS

