



CONSTRUCTION EQUIPMENT

W07009539 VOLVO A30G 740132 - DIESEL ENGINE



Sample No: VCP336445
Oil Type: MOBIL 15W40
Job No: W07009539



SAMPLE INFORMATION

Sample Number	VCP336445	VCP302535	VCP248879	VCP219025
Sample Date	12 Jan 2022	18 May 2021	03 Sep 2019	19 Sep 2017
Machine Hours	4703	3976	2998	3569
Oil Hours	0	0	500	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

MCCLUNG-LOGAN EQUIPMENT CO - RICHMOND
1345 MOUNTAIN ROAD
GLEN ALLEN, VA
US 23060
Contact: KYLE RATLIFFE
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T:
F: (804)266-1611



OIL CONDITION

Visc @ 100°C	cSt	12.2	13.4	12.4	12.76
Base Number (BN)	mg KOH/g	9.8	---	---	---
Oxidation (PA)	%	85	71	55	72

Diagnosis

Resample at the next service interval to monitor. No other corrective action is recommended at this time. All component wear rates are normal. Light fuel dilution occurring. No other contaminants were detected 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	%	---	0.108	---	---
Soot %	%	0.3	0.4	0.2	0.4
Nitration (PA)	%	80	84	72	67
Sulfation (PA)	%	63	59	51	55
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	2.0	<1.0	<1.0	<1.0
Silicon	ppm	4	5	4	7
Sodium	ppm	2	4	2	3
Potassium	ppm	0	0	2	6



WEAR METALS

Iron	ppm	8	12	6	12
Copper	ppm	2	4	6	2
Lead	ppm	<1	<1	<1	1
Tin	ppm	<1	1	<1	0
Aluminum	ppm	1	2	2	2
Chromium	ppm	<1	<1	<1	1
Molybdenum	ppm	40	45	26	39
Nickel	ppm	0	0	0	<1
Titanium	ppm	<1	<1	8	<1
Silver	ppm	0	0	0	0
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	1652	1408	1356	1580
Magnesium	ppm	578	741	645	546
Zinc	ppm	1189	1037	779	848
Phosphorus	ppm	981	847	706	748
Barium	ppm	0	0	0	0
Boron	ppm	36	36	61	14

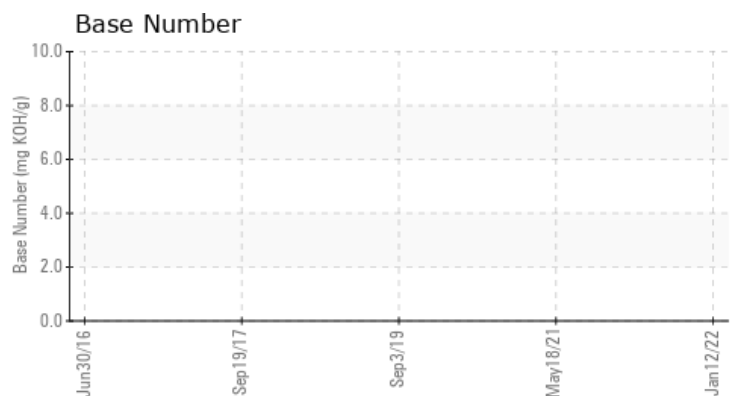
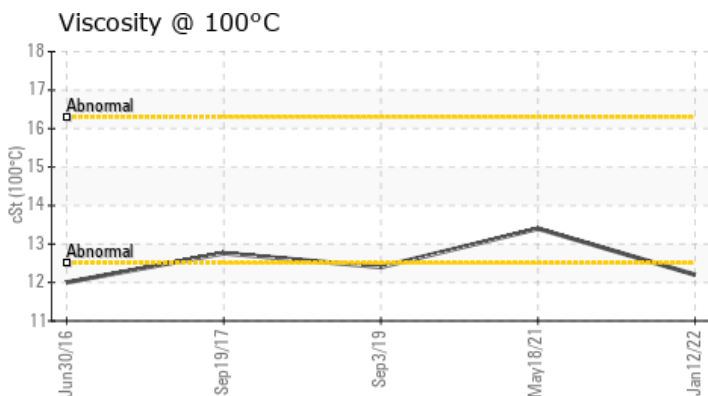
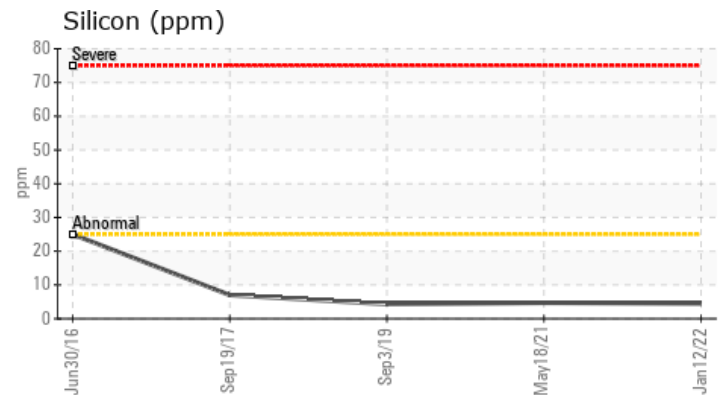
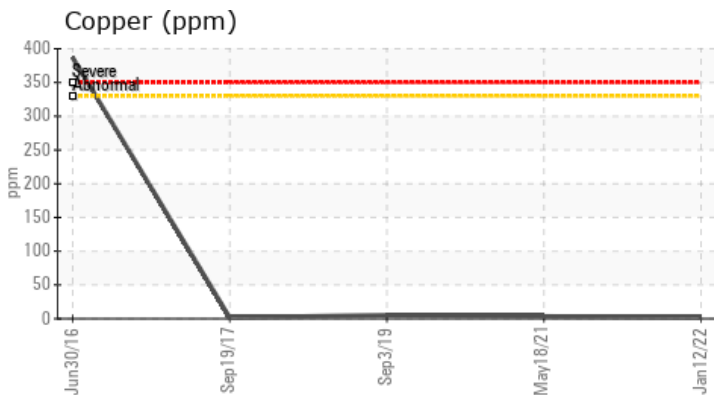
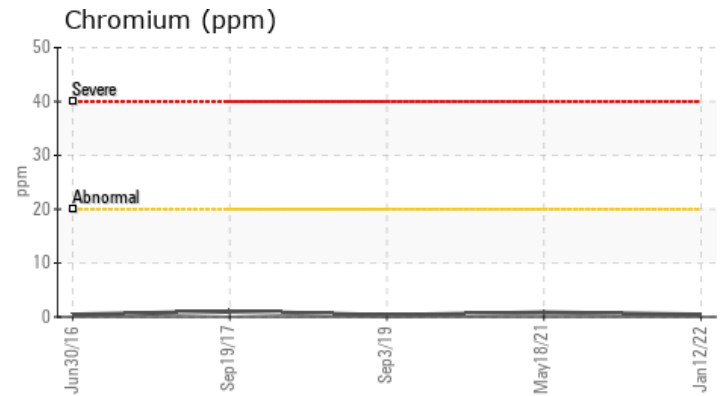
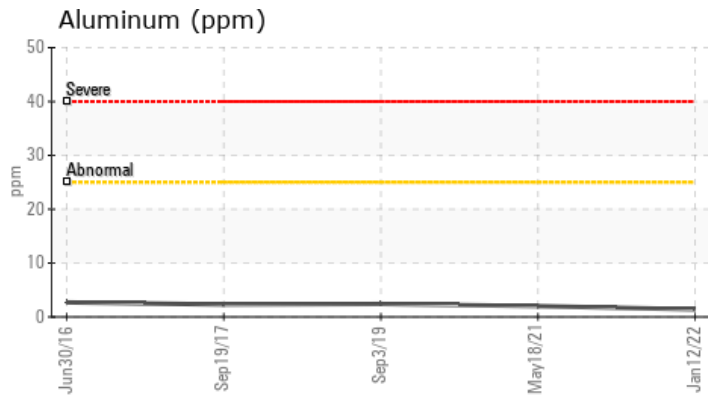
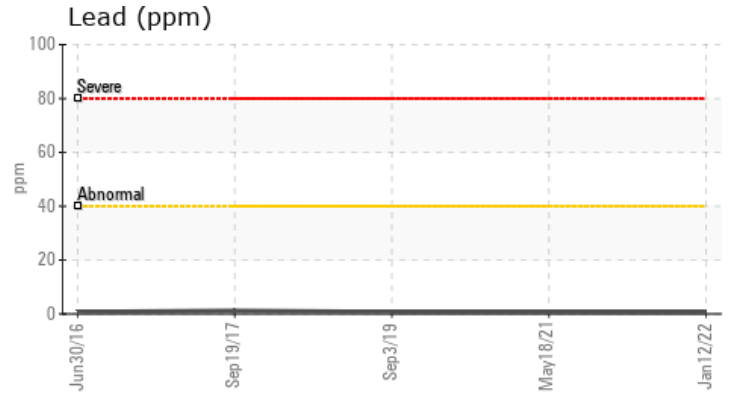
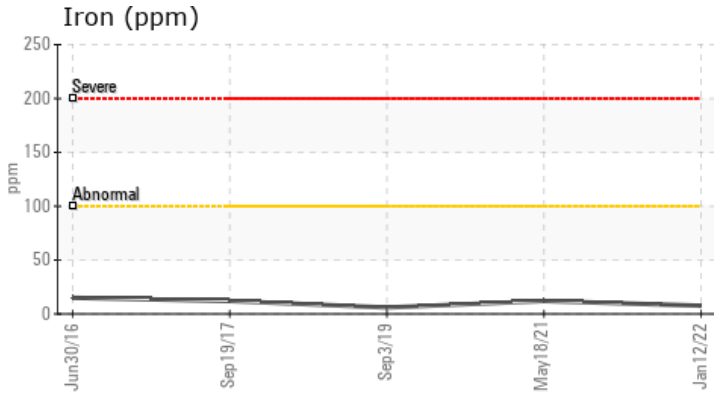
Depot: VOLVO8882
Unique No: 9815410
Signed: Wes Davis
Report Date: 24 Jan 2022



CONSTRUCTION EQUIPMENT



GRAPHS





CONSTRUCTION EQUIPMENT

VOLVO A30G 740132 - TRANSMISSION



Sample No: VCP202421
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No:



SAMPLE INFORMATION

Sample Number	VCP202421	VCE239280	VCE197071	---
Sample Date	08 Nov 2016	18 Aug 2015	17 Aug 2015	---
Machine Hours	2126	17	17	---
Oil Hours	0	17	17	---
Oil Changed	N/A	Changed	Changed	---
Sample Status	NORMAL	NORMAL	NORMAL	---

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 T:
 F: (804)266-1611



OIL CONDITION

Visc @ 40°C	cSt	28.41	30.37	30.75	---
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CONTAMINATION

Water	%	---	---	0.068	---
Silicon	ppm	16	19	20	---
Sodium	ppm	5	4	3	---
Potassium	ppm	3	3	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 component. The condition of the oil is acceptable for the time in service.



WEAR METALS

Iron	ppm	61	19	19	---
Copper	ppm	39	4	3	---
Lead	ppm	<1	<1	0	---
Tin	ppm	9	1	<1	---
Aluminum	ppm	34	2	2	---
Chromium	ppm	<1	<1	<1	---
Molybdenum	ppm	0	0	0	---
Nickel	ppm	7	<1	<1	---
Titanium	ppm	0	0	0	---
Silver	ppm	0	0	0	---
Manganese	ppm	5	4	4	---
Vanadium	ppm	0	0	0	---



ADDITIVES

Calcium	ppm	158	160	158	---
Magnesium	ppm	3	<1	0	---
Zinc	ppm	11	5	1	---
Phosphorus	ppm	251	244	255	---
Barium	ppm	<1	<1	0	---
Boron	ppm	73	90	80	---

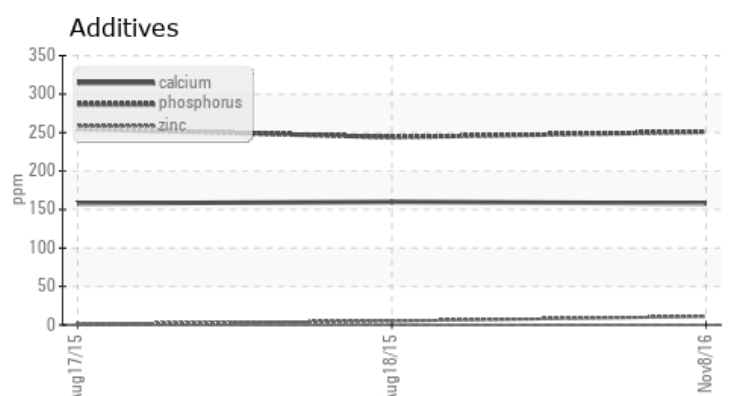
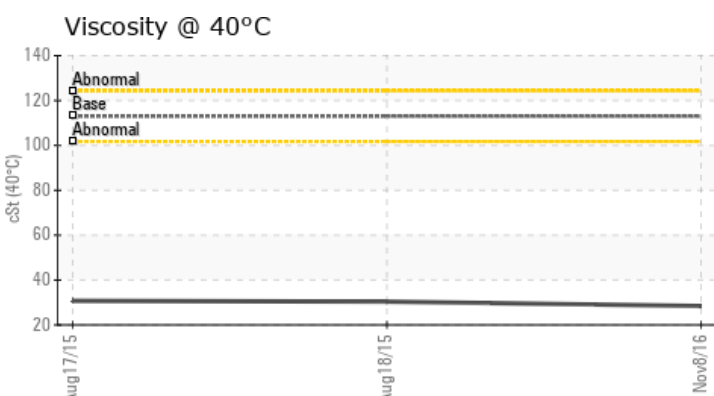
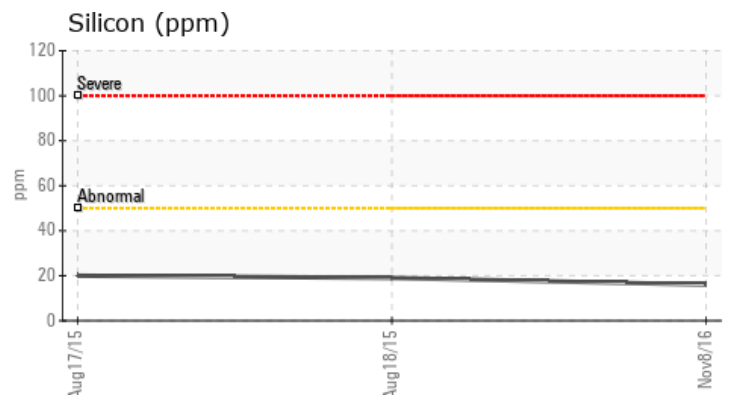
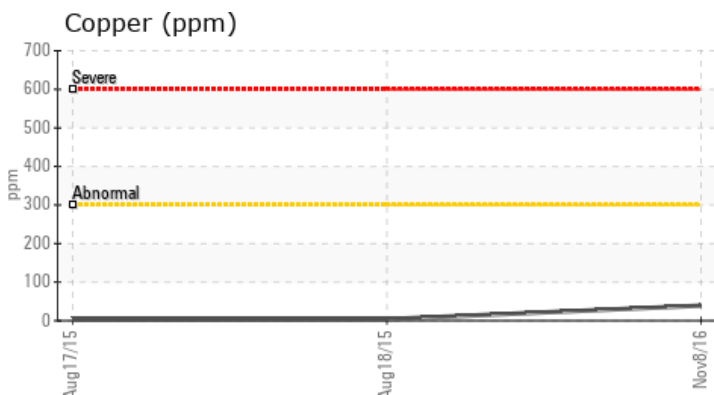
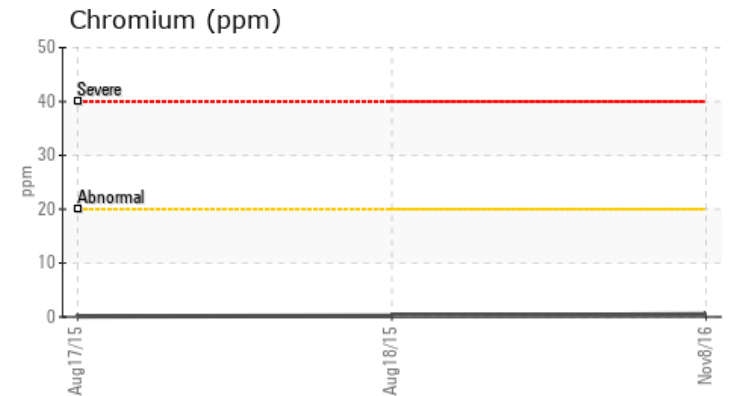
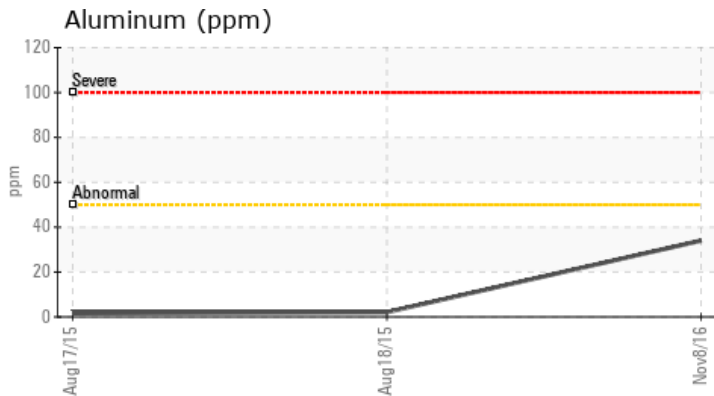
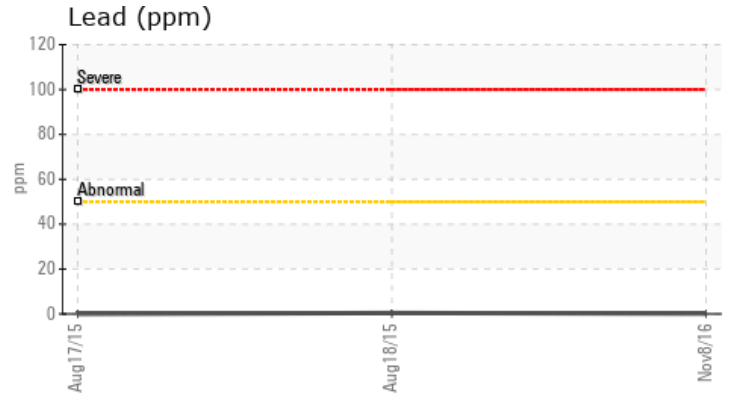
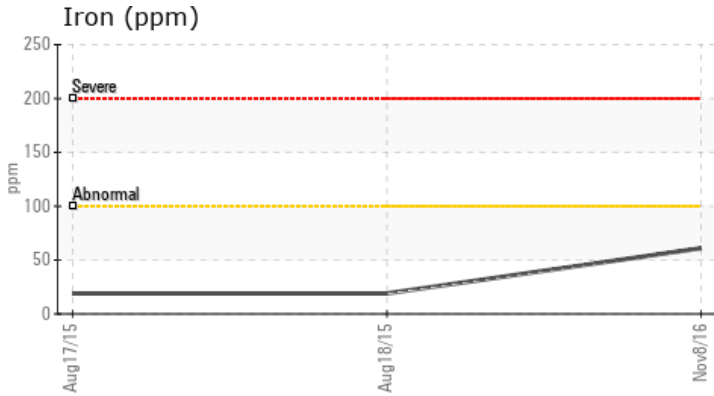
Depot: VOLVO8882
Unique No: 7624033
Signed: Jonathan Hester
Report Date: 05 Dec 2016



CONSTRUCTION EQUIPMENT



GRAPHS





CONSTRUCTION EQUIPMENT

3126 VOLVO A30G 740132 - HYDRAULIC SYSTEM



Sample No: VCP302534
Oil Type: VOLVO SUPER HYDRAULIC OIL 46
Job No: 3126



SAMPLE INFORMATION

Sample Number	VCP302534	---	---	---
Sample Date	18 May 2021	---	---	---
Machine Hours	3976	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Changed	---	---	---
Sample Status	NORMAL	---	---	---

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 US 23060
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 T:
 F: (804)266-1611



OIL CONDITION

Visc @ 40°C	cSt	█ 45.3	---	---	---
Acid Number (AN)	mg KOH/g	█ 0.463	---	---	---



CONTAMINATION

Particles >4µm		417	---	---	---
Particles >6µm		█ 80	---	---	---
Particles >14µm		█ 16	---	---	---
ISO 4406:1999 (c)		16/13/11	---	---	---
Silicon	ppm	█ 8	---	---	---
Sodium	ppm	█ 2	---	---	---
Potassium	ppm	█ <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 no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable. 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	█ 8	---	---	---
Lead	ppm	█ 4	---	---	---
Tin	ppm	█ <1	---	---	---
Aluminum	ppm	█ 3	---	---	---
Chromium	ppm	█ <1	---	---	---
Molybdenum	ppm	█ <1	---	---	---
Nickel	ppm	█ 0	---	---	---
Titanium	ppm	0	---	---	---
Silver	ppm	<1	---	---	---
Manganese	ppm	█ <1	---	---	---
Vanadium	ppm	0	---	---	---



ADDITIVES

Calcium	ppm	█ 69	---	---	---
Magnesium	ppm	█ 2	---	---	---
Zinc	ppm	█ 433	---	---	---
Phosphorus	ppm	█ 337	---	---	---
Barium	ppm	█ 0	---	---	---
Boron	ppm	█ 4	---	---	---

Depot: VOLVO8882
Unique No: 9545435
Signed: Angela Borella
Report Date: 26 Jun 2021

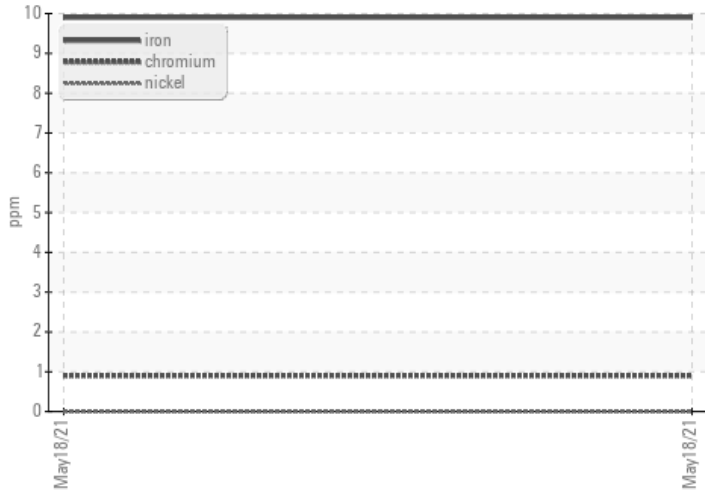


CONSTRUCTION EQUIPMENT

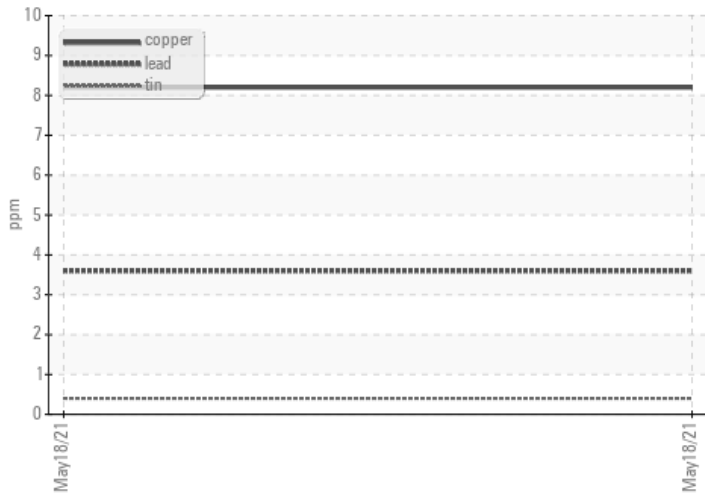


VOLVO GRAPHS

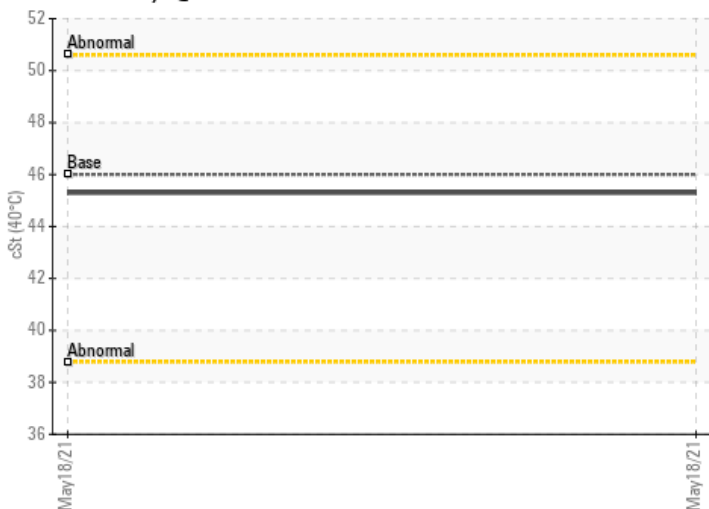
Ferrous Alloys



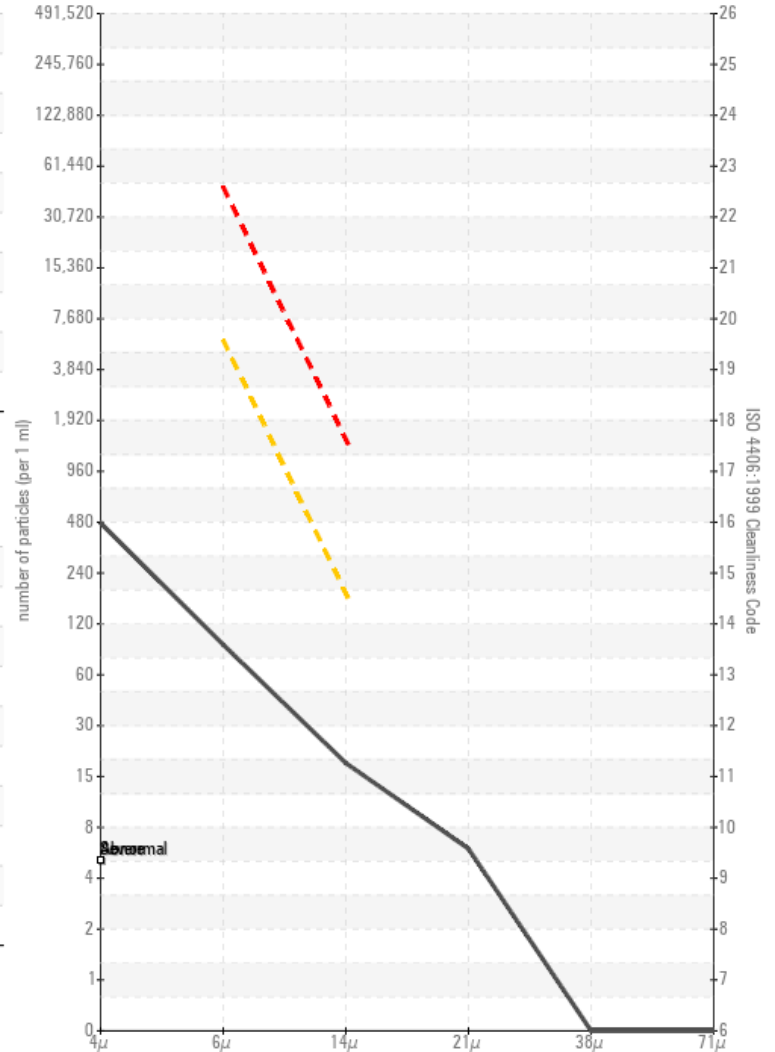
Non-ferrous Metals



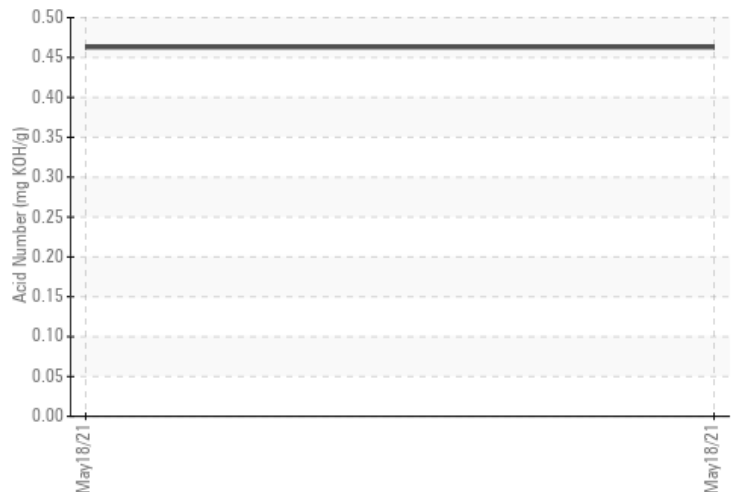
Viscosity @ 40°C



Particle Count



Acid Number





CONSTRUCTION EQUIPMENT

3126 VOLVO A30G 740132 - FRONT AXLE



Sample No: VCP302724
Oil Type: VOLVO WB 102
Job No: 3126



SAMPLE INFORMATION

Sample Number	VCP302724	---	---	---
Sample Date	18 May 2021	---	---	---
Machine Hours	3976	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Changed	---	---	---
Sample Status	NORMAL	---	---	---

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 F: (804)266-1611



OIL CONDITION

Visc @ 40°C	cSt	51.8	---	---	---
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CONTAMINATION

Silicon	ppm	3	---	---	---
Sodium	ppm	4	---	---	---
Potassium	ppm	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	286	---	---	---
Copper	ppm	7	---	---	---
Lead	ppm	<1	---	---	---
Tin	ppm	<1	---	---	---
Aluminum	ppm	0	---	---	---
Chromium	ppm	5	---	---	---
Molybdenum	ppm	<1	---	---	---
Nickel	ppm	2	---	---	---
Titanium	ppm	<1	---	---	---
Silver	ppm	<1	---	---	---
Manganese	ppm	5	---	---	---
Vanadium	ppm	0	---	---	---



ADDITIVES

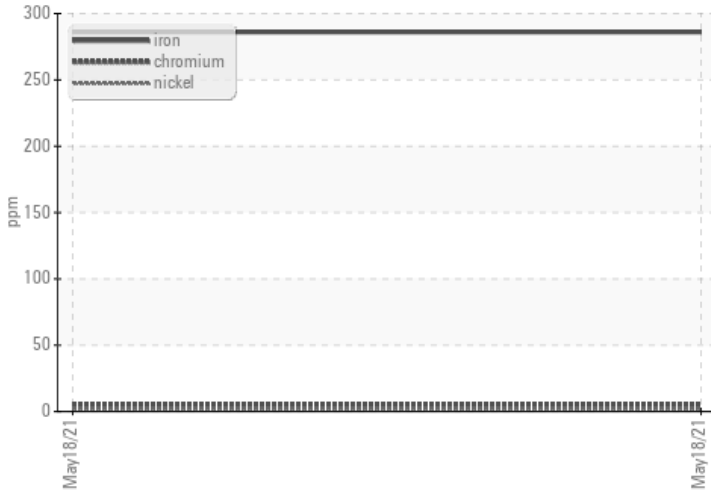
Calcium	ppm	19	---	---	---
Magnesium	ppm	0	---	---	---
Zinc	ppm	7	---	---	---
Phosphorus	ppm	2343	---	---	---
Barium	ppm	0	---	---	---
Boron	ppm	297	---	---	---

Depot: VOLVO8882
Unique No: 9550620
Signed: Don Baldrige
Report Date: 18 Jun 2021

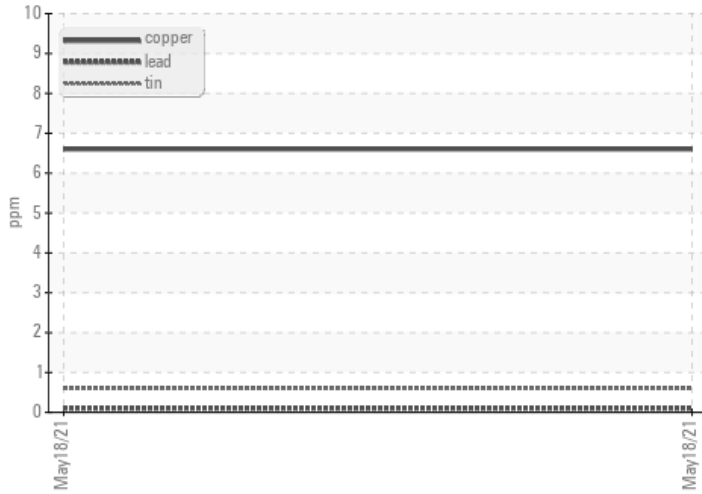


GRAPHS

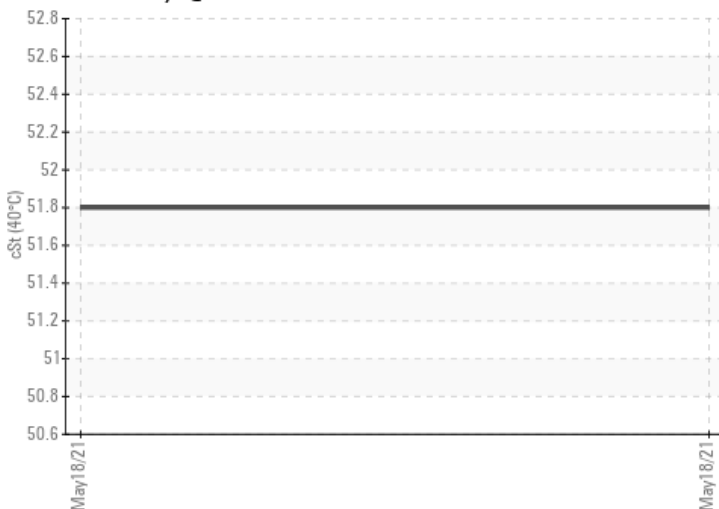
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 40°C





CONSTRUCTION EQUIPMENT

13182 VOLVO A30G 740132 - BOGIE/CENTER AXLE



Sample No: VCP409208
Oil Type: VOLVO WB 102
Job No: 13182



SAMPLE INFORMATION

Sample Number	VCP409208	VCP302726	---	---
Sample Date	09 Oct 2023	18 May 2021	---	---
Machine Hours	6692	3976	---	---
Oil Hours	0	0	---	---
Oil Changed	Changed	Changed	---	---
Sample Status	NORMAL	ABNORMAL	---	---

MCCLUNG-LOGAN EQUIPMENT CO - RICHMOND
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 GLEN ALLEN, VA
 US 23060
 Contact: KYLE RATLIFFE
 KRATLIFFE@MCCLUNG-LOGAN.COM
 T:
 F: (804)266-1611



OIL CONDITION

Visc @ 40°C	cSt	48.7	51.1	---	---
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CONTAMINATION

Silicon	ppm	14	4	---	---
Sodium	ppm	5	3	---	---
Potassium	ppm	2	0	---	---

Diagnosis

Resample at the next service interval to monitor. All component wear rates are normal. No visible metal detected. 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	147	201	---	---
Copper	ppm	25	10	---	---
Lead	ppm	0	0	---	---
Tin	ppm	1	<1	---	---
Aluminum	ppm	2	0	---	---
Chromium	ppm	2	3	---	---
Molybdenum	ppm	0	<1	---	---
Nickel	ppm	1	1	---	---
Titanium	ppm	<1	0	---	---
Silver	ppm	0	0	---	---
Manganese	ppm	3	4	---	---
Vanadium	ppm	0	0	---	---



ADDITIVES

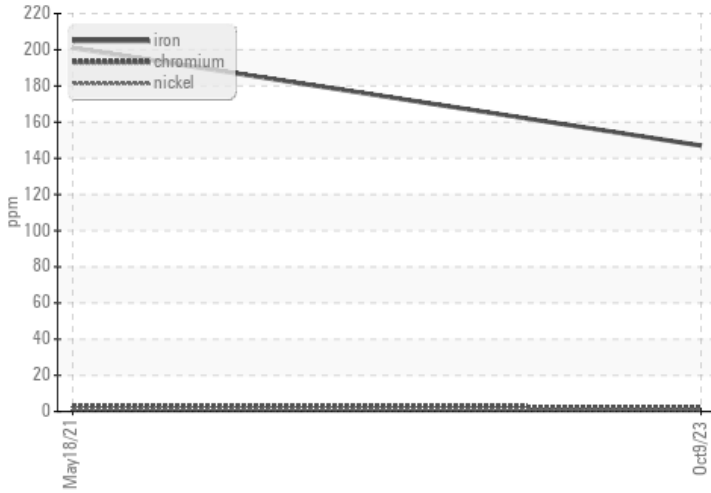
Calcium	ppm	2720	44	---	---
Magnesium	ppm	14	2	---	---
Zinc	ppm	1125	16	---	---
Phosphorus	ppm	1526	2297	---	---
Barium	ppm	0	0	---	---
Boron	ppm	186	290	---	---

Depot: VOLVO8882
Unique No: 10695155
Signed: Don Baldrige
Report Date: 16 Oct 2023

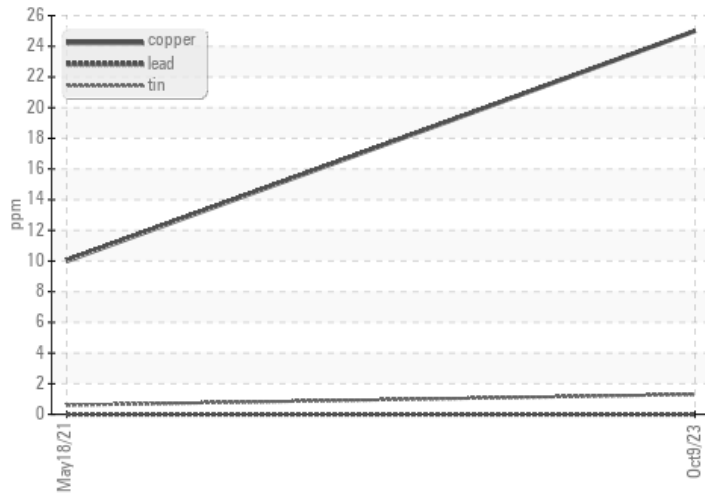


GRAPHS

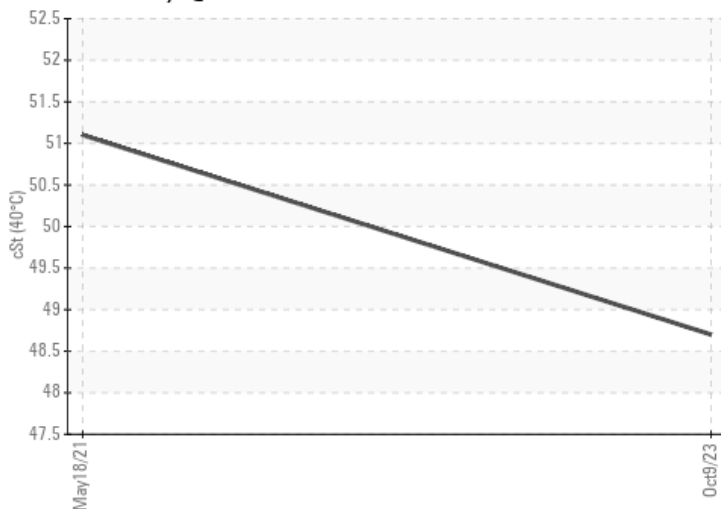
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 40°C





CONSTRUCTION EQUIPMENT

13182 VOLVO A30G 740132 - BOGIE/CENTER RIGHT FINAL DRIVE



Sample No: VCP418103
Oil Type: NOT GIVEN
Job No: 13182



SAMPLE INFORMATION

Sample Number	VCP418103	---	---	---
Sample Date	03 Oct 2023	---	---	---
Machine Hours	6692	---	---	---
Oil Hours	0	---	---	---
Oil Changed	N/A	---	---	---
Sample Status	NORMAL	---	---	---

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 GLEN ALLEN, VA
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 Contact: KYLE RATLIFFE
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 T:
 F: (804)266-1611



OIL CONDITION

Visc @ 40°C	cSt	■ 48.8	---	---	---
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CONTAMINATION

Silicon	ppm	■ 15	---	---	---
Sodium	ppm	■ 3	---	---	---
Potassium	ppm	■ 0	---	---	---

Diagnosis

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample. All component wear rates are normal. There is no indication of any contamination in the oil. Viscosity of sample indicates oil is within ISO 46 range, advise investigate. Confirm oil type.



WEAR METALS

Iron	ppm	■ 170	---	---	---
Copper	ppm	■ 24	---	---	---
Lead	ppm	■ <1	---	---	---
Tin	ppm	■ 1	---	---	---
Aluminum	ppm	■ <1	---	---	---
Chromium	ppm	■ 2	---	---	---
Molybdenum	ppm	■ 0	---	---	---
Nickel	ppm	■ <1	---	---	---
Titanium	ppm	■ 0	---	---	---
Silver	ppm	■ 0	---	---	---
Manganese	ppm	■ 3	---	---	---
Vanadium	ppm	■ 0	---	---	---



ADDITIVES

Calcium	ppm	■ 2305	---	---	---
Magnesium	ppm	■ 10	---	---	---
Zinc	ppm	■ 974	---	---	---
Phosphorus	ppm	■ 1320	---	---	---
Barium	ppm	■ 0	---	---	---
Boron	ppm	■ 202	---	---	---

Depot: VOLVO8882
Unique No: 10681832
Signed: Angela Borella
Report Date: 09 Oct 2023

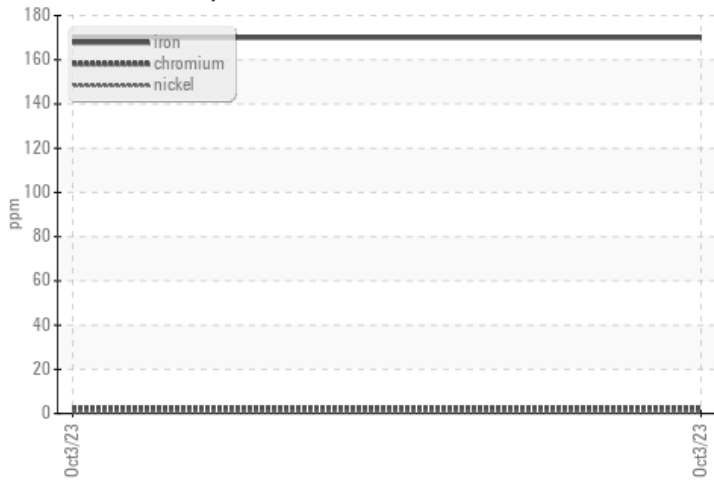


CONSTRUCTION EQUIPMENT

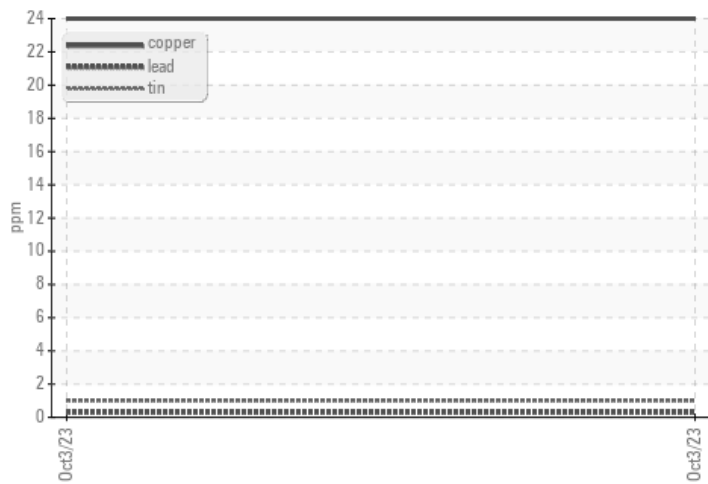


GRAPHS

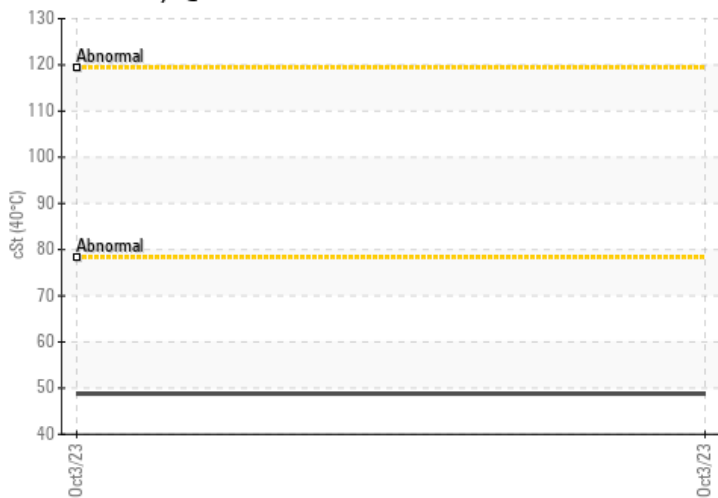
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 40°C





CONSTRUCTION EQUIPMENT

3126 VOLVO A30G 740132 - REAR AXLE



Sample No: VCP302718
Oil Type: VOLVO WB 102
Job No: 3126



SAMPLE INFORMATION

Sample Number	VCP302718	---	---	---
Sample Date	18 May 2021	---	---	---
Machine Hours	3976	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Changed	---	---	---
Sample Status	NORMAL	---	---	---

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 F: (804)266-1611



OIL CONDITION

Visc @ 40°C	cSt	52.9	---	---	---
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CONTAMINATION

Silicon	ppm	5	---	---	---
Sodium	ppm	4	---	---	---
Potassium	ppm	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	369	---	---	---
Copper	ppm	6	---	---	---
Lead	ppm	0	---	---	---
Tin	ppm	<1	---	---	---
Aluminum	ppm	<1	---	---	---
Chromium	ppm	7	---	---	---
Molybdenum	ppm	<1	---	---	---
Nickel	ppm	2	---	---	---
Titanium	ppm	<1	---	---	---
Silver	ppm	0	---	---	---
Manganese	ppm	6	---	---	---
Vanadium	ppm	0	---	---	---



ADDITIVES

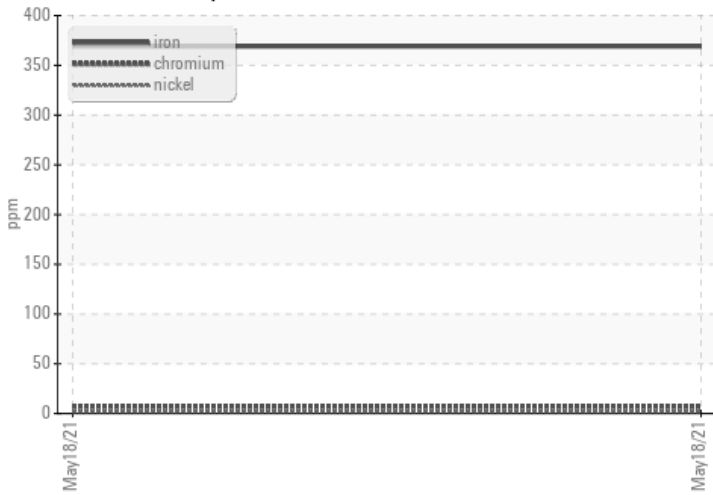
Calcium	ppm	49	---	---	---
Magnesium	ppm	0	---	---	---
Zinc	ppm	21	---	---	---
Phosphorus	ppm	2315	---	---	---
Barium	ppm	0	---	---	---
Boron	ppm	301	---	---	---

Depot: VOLVO8882
Unique No: 9550626
Signed: Don Baldrige
Report Date: 18 Jun 2021

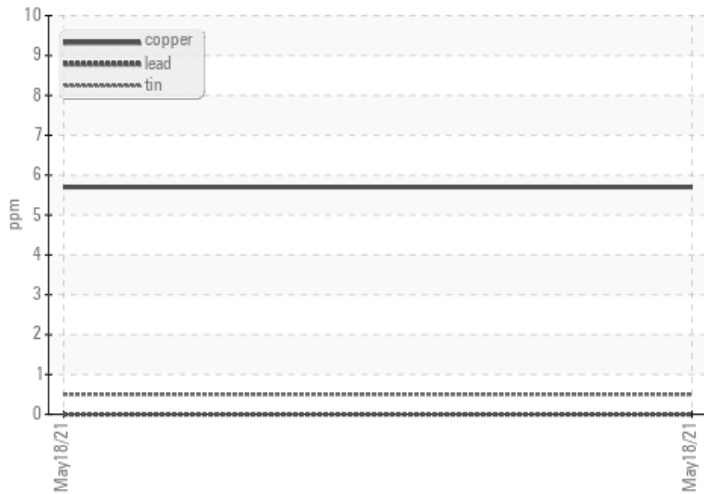


GRAPHS

Ferrous Alloys



Non-ferrous Metals



Viscosity @ 40°C

