



CONSTRUCTION EQUIPMENT

SWO663481 FIVE STONE VOLVO A40G 352193 - DIESEL ENGINE



Sample No: VCP307679
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: SWO663481 FIVE STONE



SAMPLE INFORMATION

Sample Number	VCP307679	VCP289137	---	---
Sample Date	18 Jul 2021	08 Oct 2020	---	---
Machine Hours	2225	1061	---	---
Oil Hours	0	0	---	---
Oil Changed	Changed	Changed	---	---
Sample Status	ABNORMAL	ABNORMAL	---	---

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OIL CONDITION

Visc @ 100°C	cSt	12.7	12.4	---	---
Oxidation (PA)	%	89	78	---	---



CONTAMINATION

Water	%	0.126	NEG	---	---
Soot %	%	0.3	0.2	---	---
Nitration (PA)	%	80	75	---	---
Sulfation (PA)	%	72	63	---	---
Glycol	%	NEG	NEG	---	---
Fuel	%	<1.0	<1.0	---	---
Silicon	ppm	5	8	---	---
Sodium	ppm	2	3	---	---
Potassium	ppm	0	0	---	---

Diagnosis

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. The copper level has decreased, but is still abnormal. All other 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	8	8	---	---
Copper	ppm	86	273	---	---
Lead	ppm	<1	1	---	---
Tin	ppm	1	0	---	---
Aluminum	ppm	2	2	---	---
Chromium	ppm	<1	<1	---	---
Molybdenum	ppm	41	31	---	---
Nickel	ppm	0	<1	---	---
Titanium	ppm	<1	<1	---	---
Silver	ppm	0	0	---	---
Manganese	ppm	<1	<1	---	---
Vanadium	ppm	0	0	---	---



ADDITIVES

Calcium	ppm	1726	1626	---	---
Magnesium	ppm	506	588	---	---
Zinc	ppm	1098	982	---	---
Phosphorus	ppm	918	911	---	---
Barium	ppm	0	0	---	---
Boron	ppm	30	29	---	---

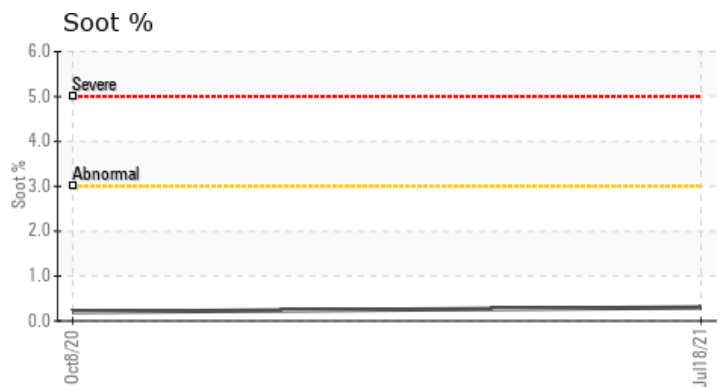
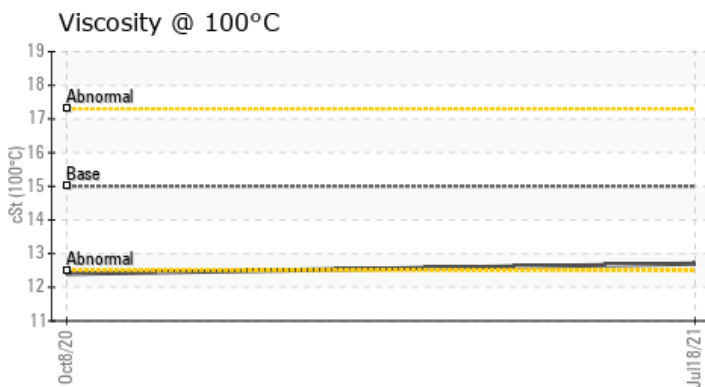
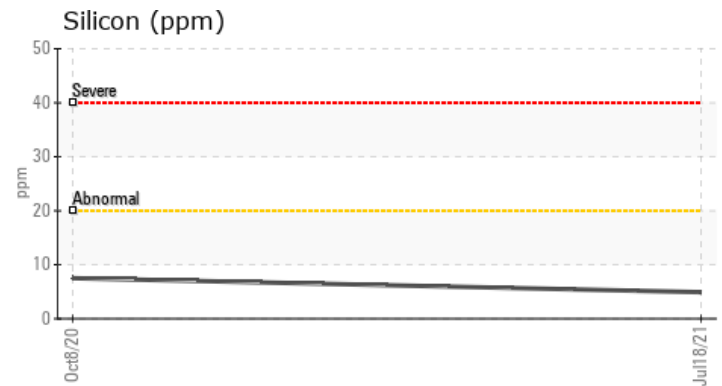
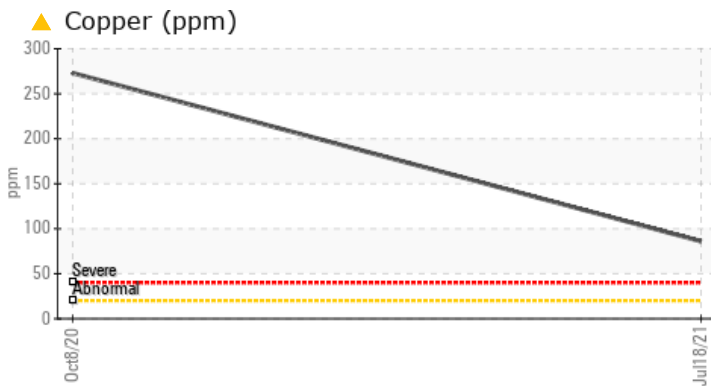
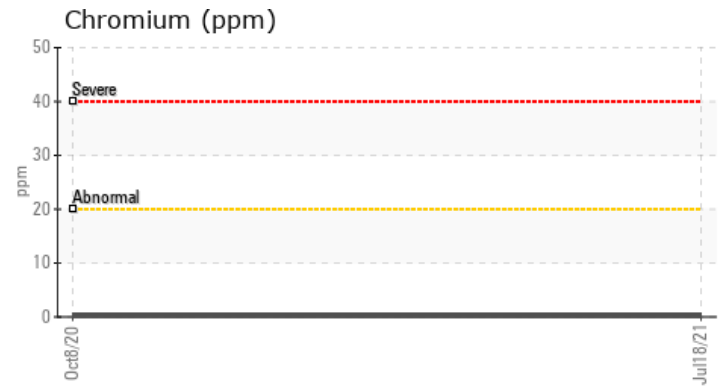
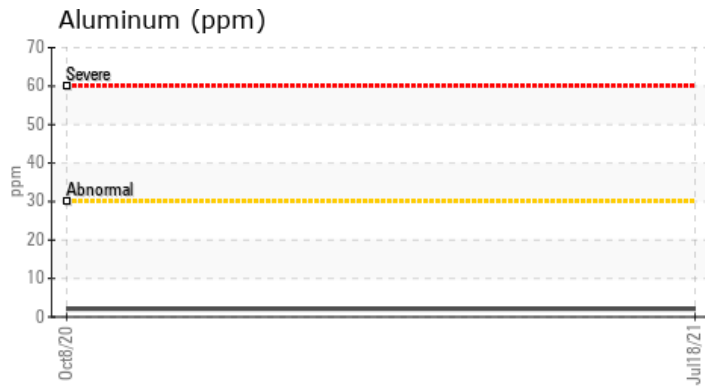
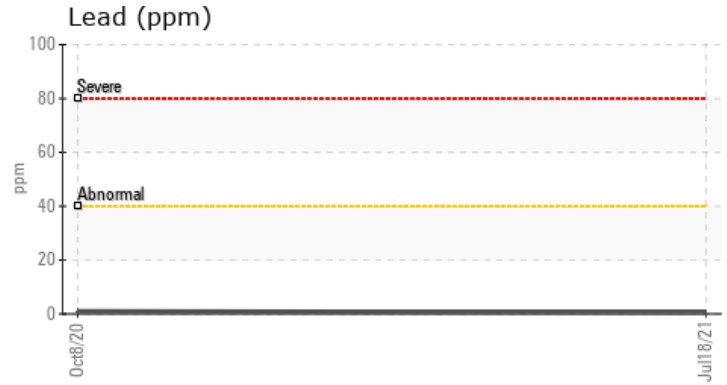
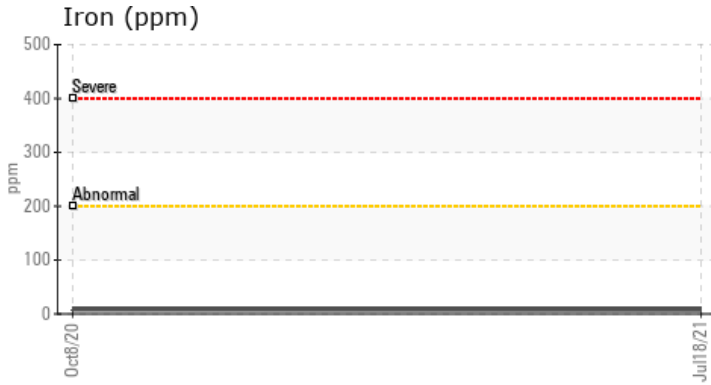
Depot: VOLVO0095
Unique No: 9583707
Signed: Don Baldrige
Report Date: 20 Jul 2021



CONSTRUCTION EQUIPMENT



GRAPHS





CONSTRUCTION EQUIPMENT

SWO663481 FIVE STONE VOLVO A40G 352193 - TRANSMISSION



Sample No: VCP307680
Oil Type: VOLVO WB 102
Job No: SWO663481 FIVE STONE



SAMPLE INFORMATION

Sample Number	VCP307680	VCP289143	VCP270890	---
Sample Date	14 Jul 2021	08 Oct 2020	24 Jun 2020	---
Machine Hours	2225	1061	530	---
Oil Hours	0	0	0	---
Oil Changed	Changed	Not Changd	Not Changd	---
Sample Status	NORMAL	ABNORMAL	ABNORMAL	---

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OIL CONDITION

Visc @ 40°C	cSt	26.5	26.4	29.3	---
-------------	-----	-------------	------	------	-----



CONTAMINATION

Water	%	NEG	NEG	▲ 0.353	---
Silicon	ppm	■ 14	■ 18	■ 7	---
Sodium	ppm	■ 4	■ 5	■ 17	---
Potassium	ppm	■ 3	■ 2	■ 10	---

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	■ 46	■ 29	■ 17	---
Copper	ppm	■ 89	■ 51	■ 3	---
Lead	ppm	■ <1	■ 2	■ 0	---
Tin	ppm	■ 9	■ 6	■ 0	---
Aluminum	ppm	■ 17	■ 13	■ <1	---
Chromium	ppm	■ <1	■ <1	■ <1	---
Molybdenum	ppm	■ <1	<1	2	---
Nickel	ppm	■ 13	■ 8	■ 0	---
Titanium	ppm	0	0	0	---
Silver	ppm	<1	0	0	---
Manganese	ppm	■ 5	4	2	---
Vanadium	ppm	0	0	0	---



ADDITIVES

Calcium	ppm	■ 104	119	158	---
Magnesium	ppm	■ 1	1	2	---
Zinc	ppm	■ 0	8	120	---
Phosphorus	ppm	■ 168	168	157	---
Barium	ppm	■ 2	2	<1	---
Boron	ppm	■ 76	60	65	---

Depot: VOLVO0095
Unique No: 9583814
Signed: Don Baldrige
Report Date: 20 Jul 2021

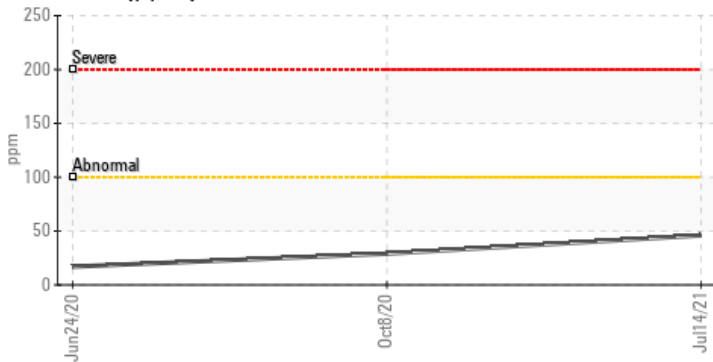


CONSTRUCTION EQUIPMENT

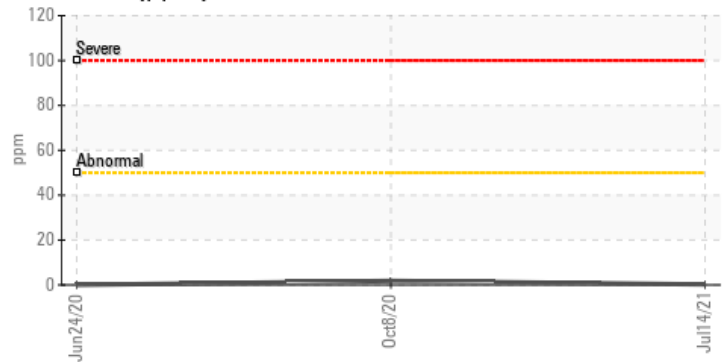


GRAPHS

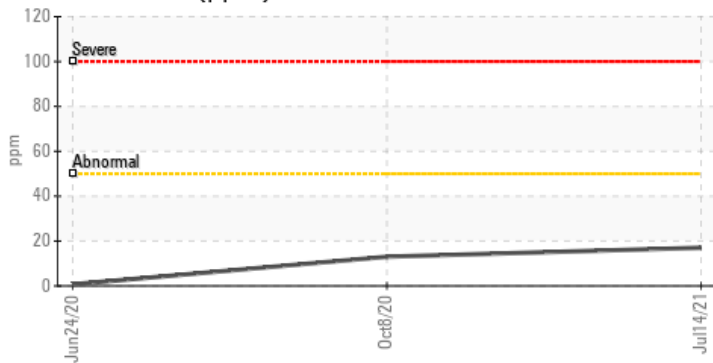
Iron (ppm)



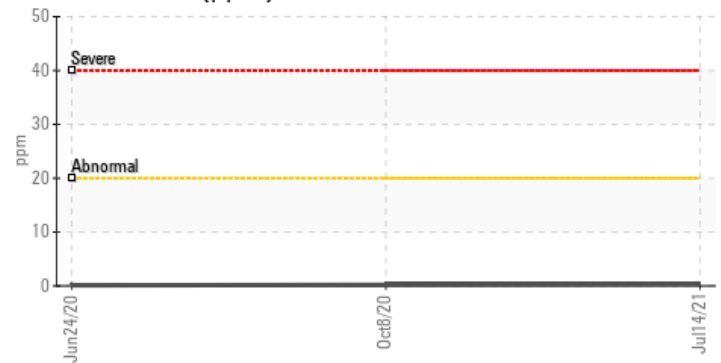
Lead (ppm)



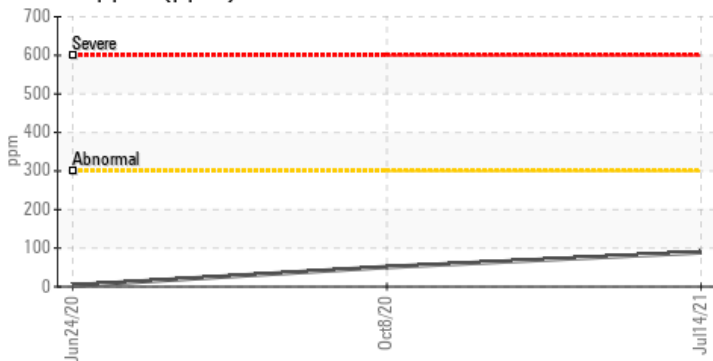
Aluminum (ppm)



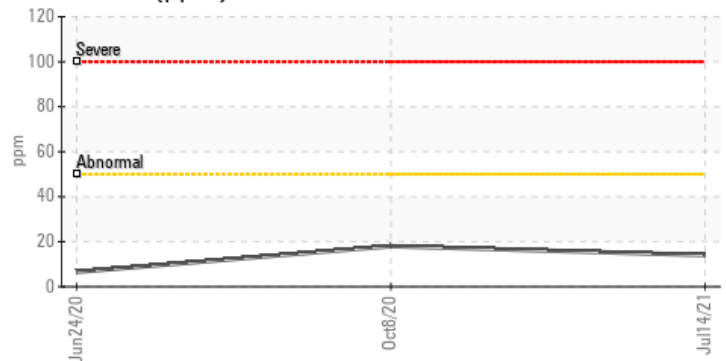
Chromium (ppm)



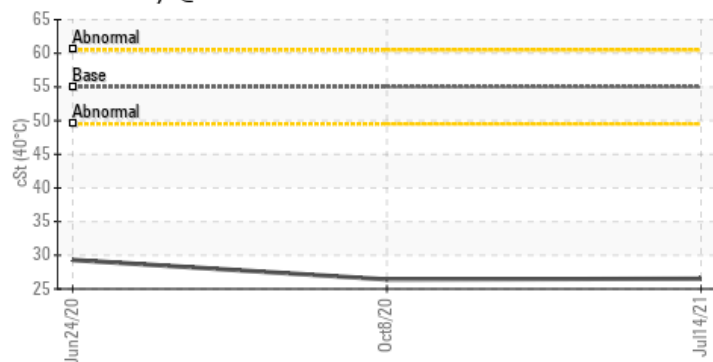
Copper (ppm)



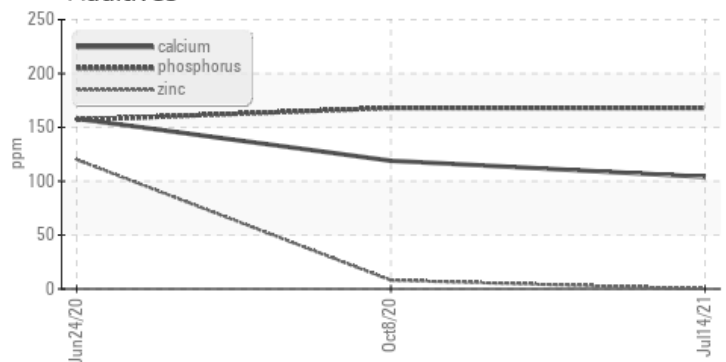
Silicon (ppm)



Viscosity @ 40°C



Additives





CONSTRUCTION EQUIPMENT

SWO58757 FIVE STONE VOLVO A40G 352193 - BRAKE



Sample No: VCP289142
Oil Type: {unknown}
Job No: SWO58757 FIVE STONE



SAMPLE INFORMATION

Sample Number	VCP289142	---	---	---
Sample Date	08 Oct 2020	---	---	---
Machine Hours	1061	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Not Chngd	---	---	---
Sample Status	NORMAL	---	---	---

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US 33314
Contact: GERMAN BLANDON
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OIL CONDITION

Visc @ 40°C	cSt	39.2	---	---	---
-------------	-----	------	-----	-----	-----



CONTAMINATION

Water	%	NEG	---	---	---
Silicon	ppm	19	---	---	---
Sodium	ppm	9	---	---	---
Potassium	ppm	<1	---	---	---

Diagnosis

Resample at the next service interval to monitor. Metal levels are typical for a new component breaking in. 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	12	---	---	---
Copper	ppm	209	---	---	---
Lead	ppm	2	---	---	---
Tin	ppm	0	---	---	---
Aluminum	ppm	<1	---	---	---
Chromium	ppm	<1	---	---	---
Molybdenum	ppm	0	---	---	---
Nickel	ppm	4	---	---	---
Titanium	ppm	<1	---	---	---
Silver	ppm	0	---	---	---
Manganese	ppm	<1	---	---	---
Vanadium	ppm	0	---	---	---



ADDITIVES

Calcium	ppm	3936	---	---	---
Magnesium	ppm	9	---	---	---
Zinc	ppm	1596	---	---	---
Phosphorus	ppm	1374	---	---	---
Barium	ppm	0	---	---	---
Boron	ppm	109	---	---	---

Depot: VOLVO0095
Unique No: 9207947
Signed: Don Baldrige
Report Date: 15 Oct 2020



CONSTRUCTION EQUIPMENT



GRAPHS

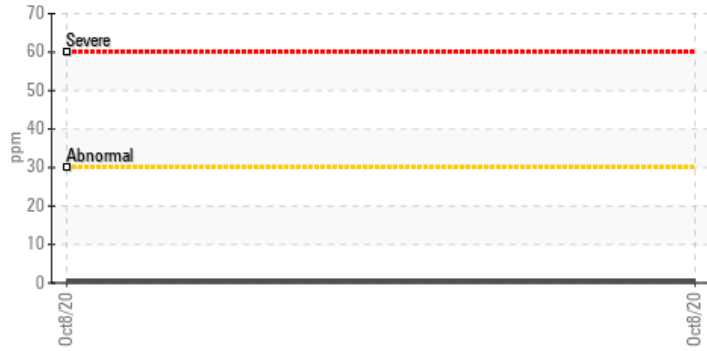
Iron (ppm)



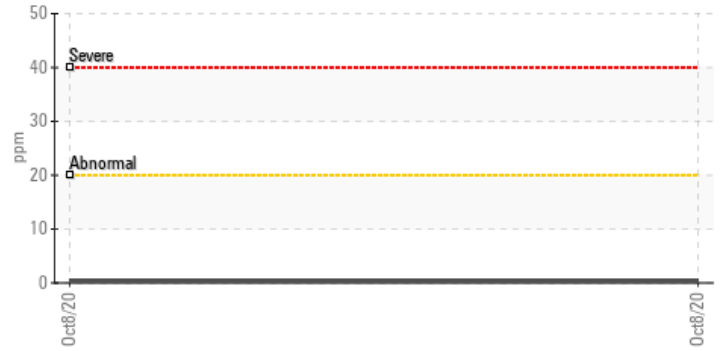
Lead (ppm)



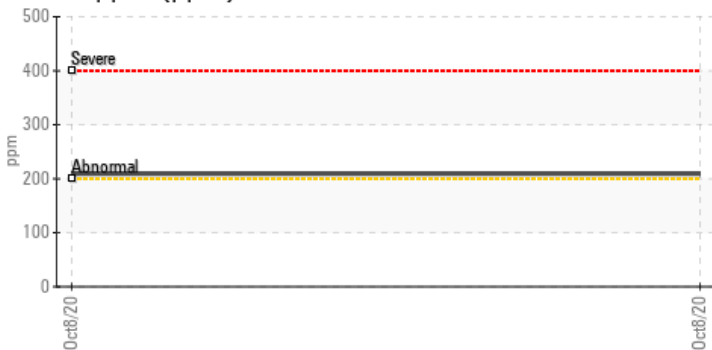
Aluminum (ppm)



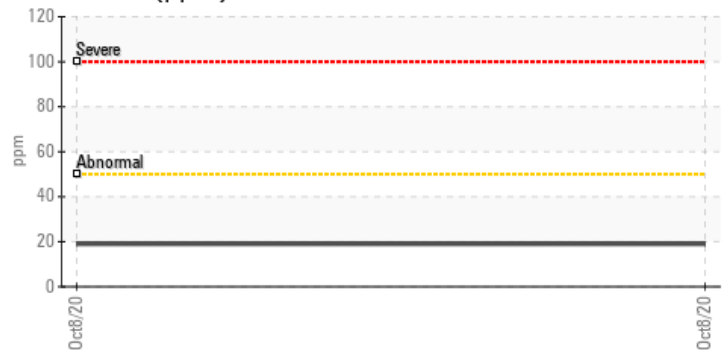
Chromium (ppm)



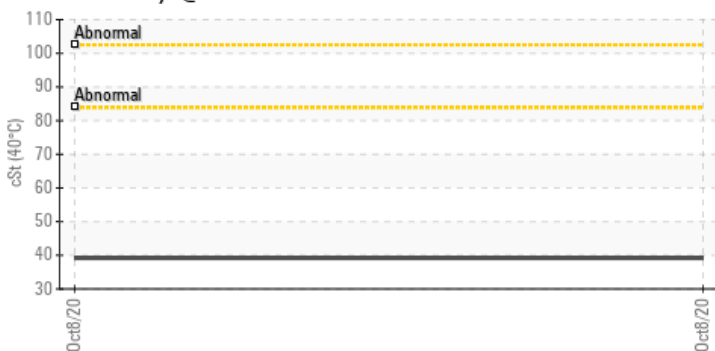
Copper (ppm)



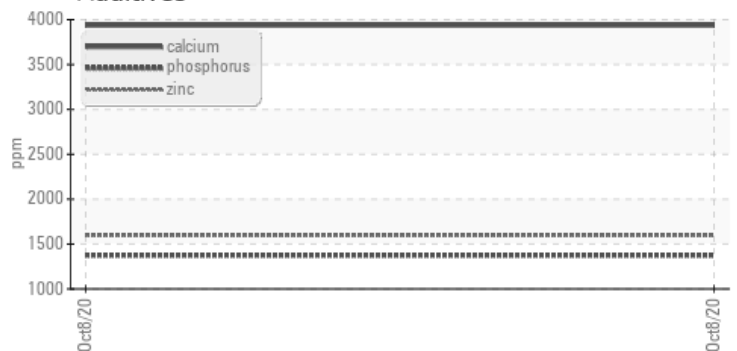
Silicon (ppm)



Viscosity @ 40°C



Additives





CONSTRUCTION EQUIPMENT

SWO58757 FIVE STONE VOLVO A40G 352193 - HYDRAULIC SYSTEM



Sample No: VCP289145
Oil Type: AW HYDRAULIC OIL ISO 46
Job No: SWO58757 FIVE STONE



SAMPLE INFORMATION

Sample Number	VCP289145	---	---	---
Sample Date	08 Oct 2020	---	---	---
Machine Hours	1061	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Not Chngd	---	---	---
Sample Status	NORMAL	---	---	---

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OIL CONDITION

Visc @ 40°C	cSt	█ 42.1	---	---	---
Acid Number (AN)	mg KOH/g	█ 0.620	---	---	---



CONTAMINATION

Water	%	NEG	---	---	---
Particles >4µm		█ 2439	---	---	---
Particles >6µm		█ 712	---	---	---
Particles >14µm		█ 88	---	---	---
ISO 4406:1999 (c)		18/17/14	---	---	---
Silicon	ppm	█ 4	---	---	---
Sodium	ppm	█ 1	---	---	---
Potassium	ppm	█ <1	---	---	---

Diagnosis

Resample at the next service interval to monitor. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) AW HYDRAULIC OIL ISO 46. Please confirm.
 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.



WEAR METALS

Iron	ppm	█ 4	---	---	---
Copper	ppm	█ 4	---	---	---
Lead	ppm	█ 2	---	---	---
Tin	ppm	█ <1	---	---	---
Aluminum	ppm	█ 0	---	---	---
Chromium	ppm	█ <1	---	---	---
Molybdenum	ppm	█ 0	---	---	---
Nickel	ppm	█ 0	---	---	---
Titanium	ppm	0	---	---	---
Silver	ppm	0	---	---	---
Manganese	ppm	█ 0	---	---	---
Vanadium	ppm	0	---	---	---



ADDITIVES

Calcium	ppm	█ 49	---	---	---
Magnesium	ppm	█ 2	---	---	---
Zinc	ppm	█ 432	---	---	---
Phosphorus	ppm	█ 317	---	---	---
Barium	ppm	█ 0	---	---	---
Boron	ppm	█ 4	---	---	---

Depot: VOLVO0095
Unique No: 9207512
Signed: Wes Davis
Report Date: 13 Oct 2020

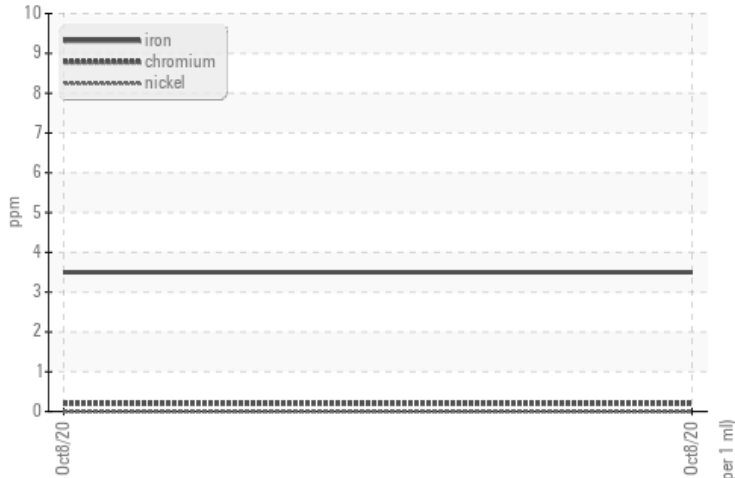


CONSTRUCTION EQUIPMENT

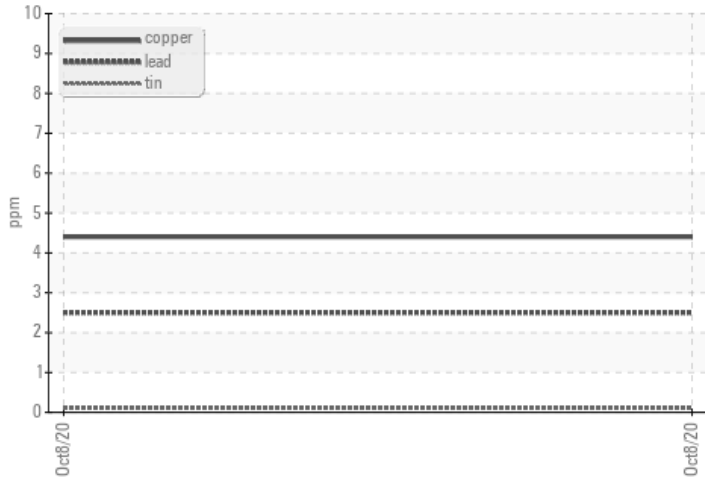


VOLVO GRAPHS

Ferrous Alloys



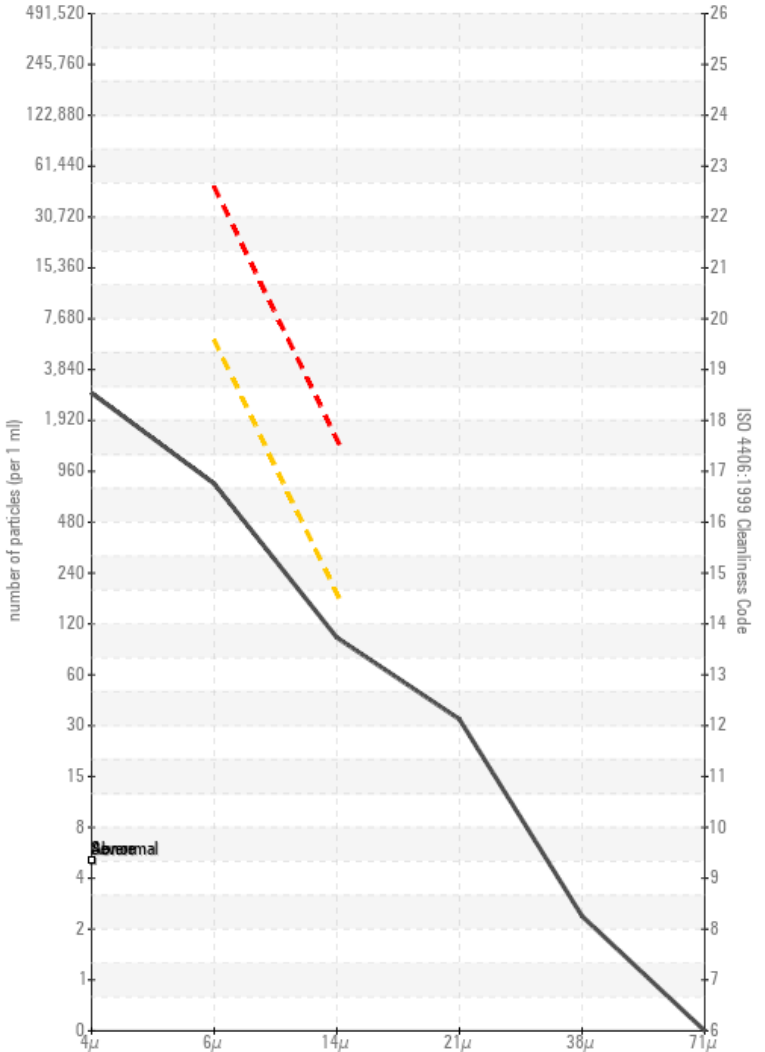
Non-ferrous Metals



Viscosity @ 40°C



Particle Count



Acid Number





CONSTRUCTION EQUIPMENT

SWO58757 FIVE STONE VOLVO A40G 352193 - FRONT AXLE



Sample No: VCP289144
Oil Type: {unknown}
Job No: SWO58757 FIVE STONE



SAMPLE INFORMATION

Sample Number	VCP289144	---	---	---
Sample Date	08 Oct 2020	---	---	---
Machine Hours	1061	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Not Chngd	---	---	---
Sample Status	NORMAL	---	---	---

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 Contact: GERMAN BLANDON
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OIL CONDITION

Visc @ 40°C	cSt	317	---	---	---
-------------	-----	-----	-----	-----	-----



CONTAMINATION

Water	%	NEG	---	---	---
Silicon	ppm	2	---	---	---
Sodium	ppm	<1	---	---	---
Potassium	ppm	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	25	---	---	---
Copper	ppm	<1	---	---	---
Lead	ppm	3	---	---	---
Tin	ppm	0	---	---	---
Aluminum	ppm	0	---	---	---
Chromium	ppm	<1	---	---	---
Molybdenum	ppm	<1	---	---	---
Nickel	ppm	0	---	---	---
Titanium	ppm	<1	---	---	---
Silver	ppm	0	---	---	---
Manganese	ppm	<1	---	---	---
Vanadium	ppm	0	---	---	---



ADDITIVES

Calcium	ppm	3	---	---	---
Magnesium	ppm	<1	---	---	---
Zinc	ppm	3	---	---	---
Phosphorus	ppm	852	---	---	---
Barium	ppm	0	---	---	---
Boron	ppm	143	---	---	---

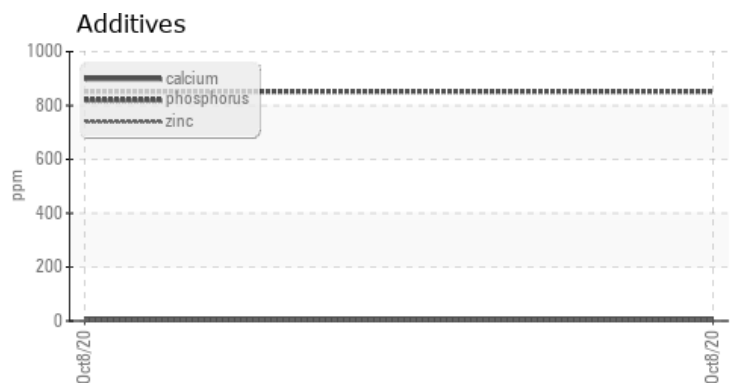
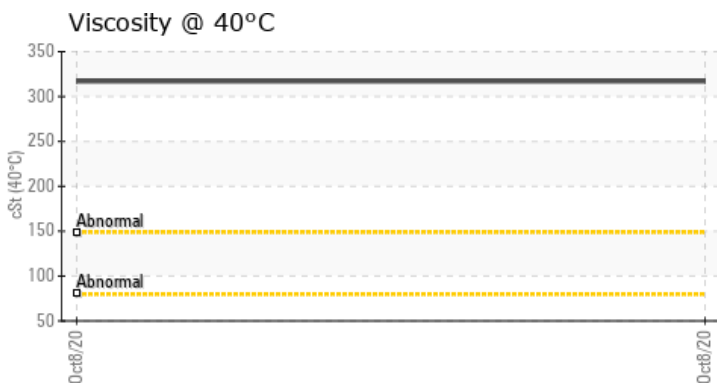
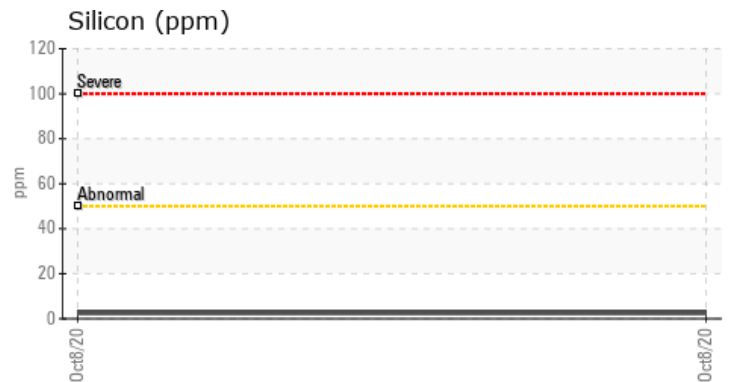
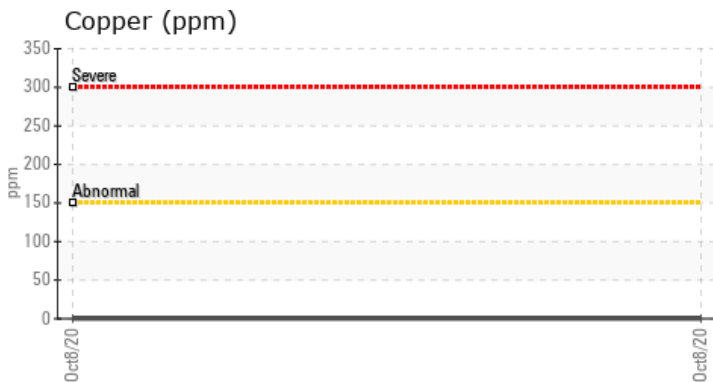
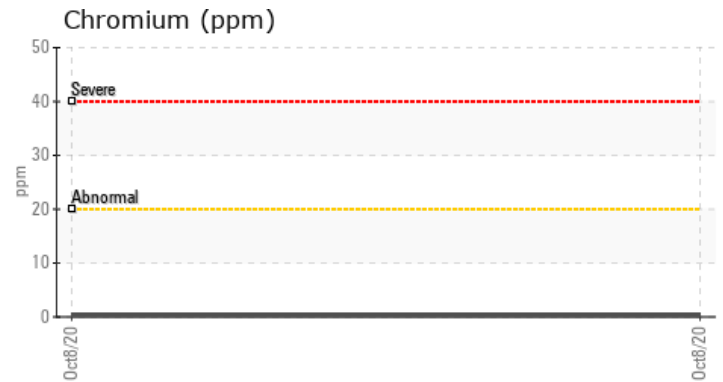
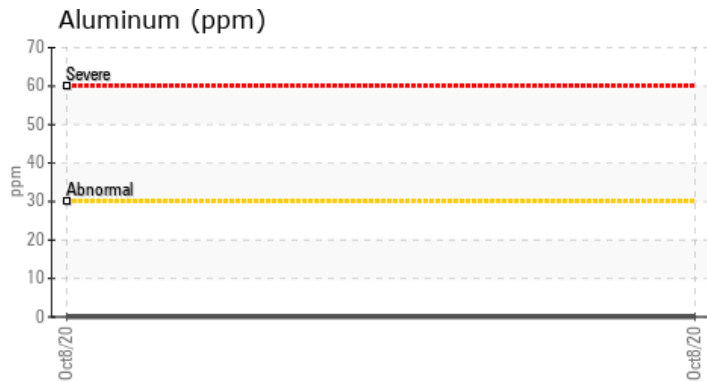
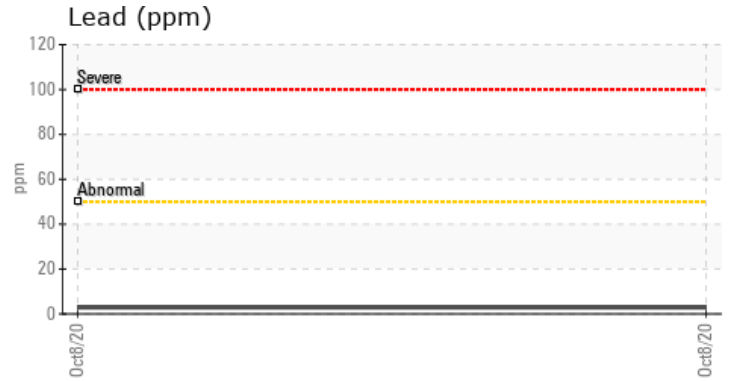
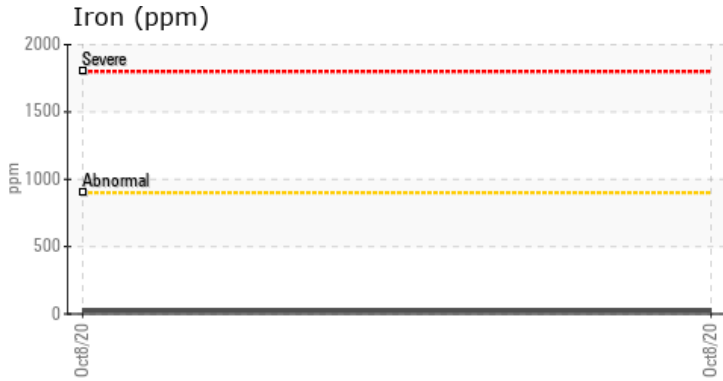
Depot: VOLVO0095
Unique No: 9207944
Signed: Don Baldrige
Report Date: 15 Oct 2020



CONSTRUCTION EQUIPMENT



GRAPHS





CONSTRUCTION EQUIPMENT

SWO58757 FIVE STONE VOLVO A40G 352193 - BOGIE/CENTER AXLE



Sample No: VCP289140
Oil Type: {unknown}
Job No: SWO58757 FIVE STONE



SAMPLE INFORMATION

Sample Number	VCP289140	---	---	---
Sample Date	08 Oct 2020	---	---	---
Machine Hours	1061	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Not Chngd	---	---	---
Sample Status	NORMAL	---	---	---

ALTA EQUIPMENT COMPANY
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DAVIE, FL
US 33314
Contact: GERMAN BLANDON
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F: (954)583-0318



OIL CONDITION

Visc @ 40°C	cSt	317	---	---	---
-------------	-----	-----	-----	-----	-----



CONTAMINATION

Water	%	NEG	---	---	---
Silicon	ppm	1	---	---	---
Sodium	ppm	0	---	---	---
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	10	---	---	---
Copper	ppm	0	---	---	---
Lead	ppm	<1	---	---	---
Tin	ppm	0	---	---	---
Aluminum	ppm	0	---	---	---
Chromium	ppm	<1	---	---	---
Molybdenum	ppm	<1	---	---	---
Nickel	ppm	<1	---	---	---
Titanium	ppm	<1	---	---	---
Silver	ppm	0	---	---	---
Manganese	ppm	<1	---	---	---
Vanadium	ppm	0	---	---	---



ADDITIVES

Calcium	ppm	3	---	---	---
Magnesium	ppm	<1	---	---	---
Zinc	ppm	3	---	---	---
Phosphorus	ppm	881	---	---	---
Barium	ppm	0	---	---	---
Boron	ppm	145	---	---	---

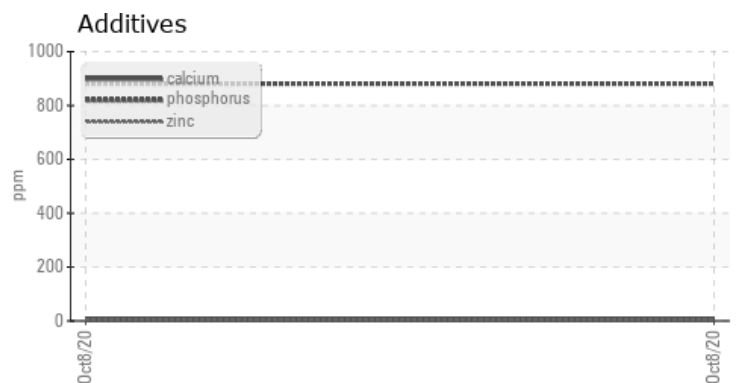
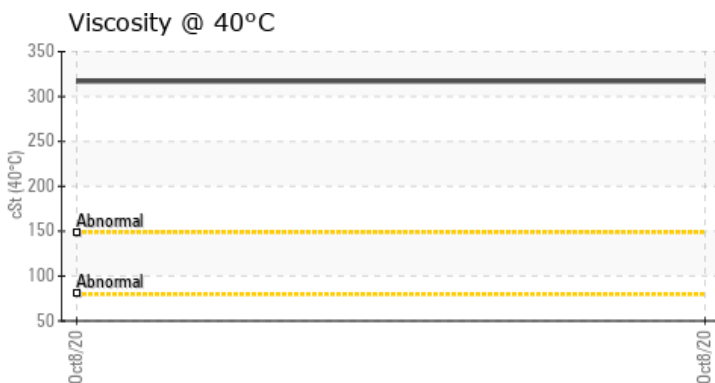
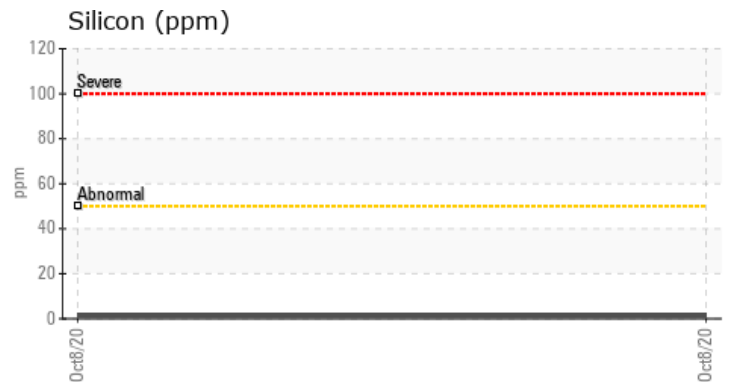
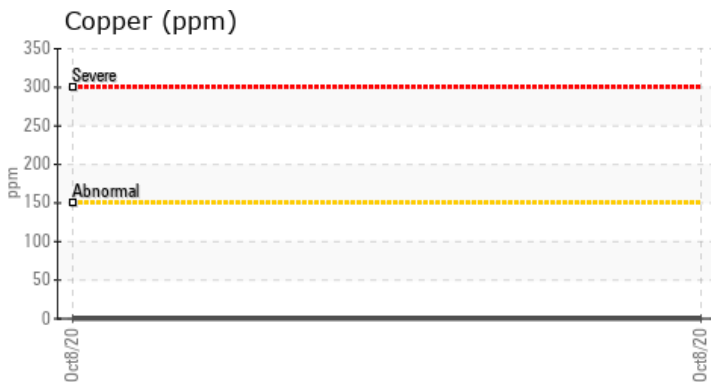
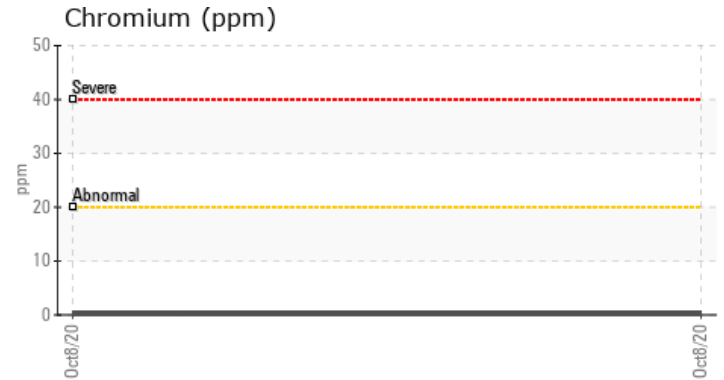
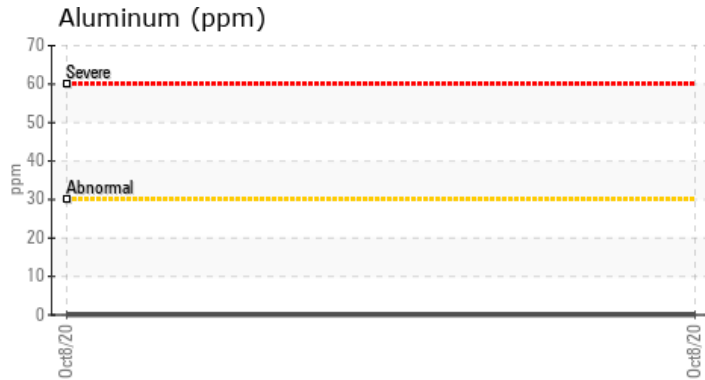
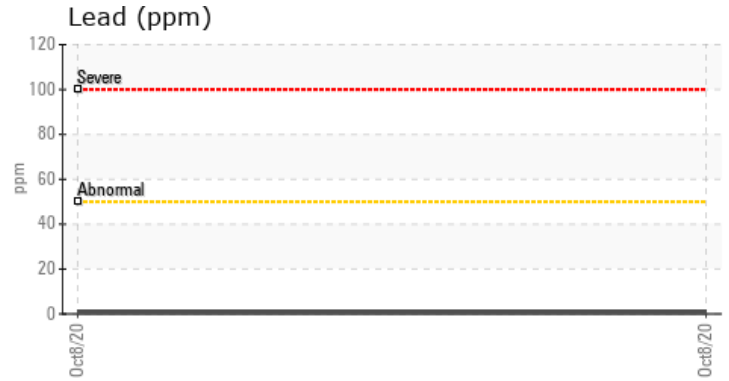
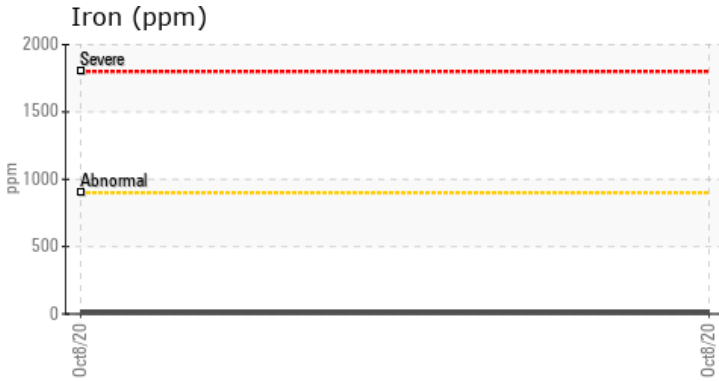
Depot: VOLVO0095
Unique No: 9207943
Signed: Don Baldrige
Report Date: 15 Oct 2020



CONSTRUCTION EQUIPMENT



GRAPHS





CONSTRUCTION EQUIPMENT

SWO58757 FIVE STONE VOLVO A40G 352193 - REAR AXLE



Sample No: VCP289141
Oil Type: {unknown}
Job No: SWO58757 FIVE STONE



SAMPLE INFORMATION

Sample Number	VCP289141	---	---	---
Sample Date	07 Oct 2020	---	---	---
Machine Hours	1061	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Not Chngd	---	---	---
Sample Status	NORMAL	---	---	---

ALTA EQUIPMENT COMPANY
 5210 REESE ROAD
 DAVIE, FL
 US 33314
 Contact: GERMAN BLANDON
 gblandon@flaglerce.com
 T: (954)581-4744
 F: (954)583-0318



OIL CONDITION

Visc @ 40°C	cSt	316	---	---	---
-------------	-----	-----	-----	-----	-----



CONTAMINATION

Water	%	NEG	---	---	---
Silicon	ppm	1	---	---	---
Sodium	ppm	<1	---	---	---
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	9	---	---	---
Copper	ppm	0	---	---	---
Lead	ppm	0	---	---	---
Tin	ppm	0	---	---	---
Aluminum	ppm	0	---	---	---
Chromium	ppm	<1	---	---	---
Molybdenum	ppm	<1	---	---	---
Nickel	ppm	<1	---	---	---
Titanium	ppm	<1	---	---	---
Silver	ppm	0	---	---	---
Manganese	ppm	<1	---	---	---
Vanadium	ppm	0	---	---	---



ADDITIVES

Calcium	ppm	9	---	---	---
Magnesium	ppm	4	---	---	---
Zinc	ppm	3	---	---	---
Phosphorus	ppm	848	---	---	---
Barium	ppm	0	---	---	---
Boron	ppm	144	---	---	---

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