



CONSTRUCTION EQUIPMENT

SPM716242 RENTAL VOLVO A45G 352584 - DIESEL ENGINE



Sample No: VCP452534
Oil Type: DIESEL ENGINE OIL SAE 15W40
Job No: SPM716242 RENTAL



SAMPLE INFORMATION

Sample Number	VCP452534	VCP339423	VCP345359	VCP314262
Sample Date	16 May 2024	28 Jan 2022	08 Nov 2021	25 Jun 2021
Machine Hours	7880	1998	1513	482
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	ATTENTION

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 5000 INDUSTRIAL HWY
 GARY, IN
 US 46406
 Contact: MARK DEROSA
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 T: (248)356-5200
 F:



OIL CONDITION

Visc @ 100°C	cSt	13.1	12.7	13.2	10.8
Base Number (BN)	mg KOH/g	7.2	9.2	---	---
Oxidation (PA)	%	60	63	60	88

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	NEG	NEG
Soot %	%	0.7	0.6	0.5	0.5
Nitration (PA)	%	69	73	57	67
Sulfation (PA)	%	55	58	57	70
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	0.4
Silicon	ppm	9	4	4	38
Sodium	ppm	2	2	0	4
Potassium	ppm	2	<1	<1	1



WEAR METALS

Iron	ppm	17	11	9	33
Copper	ppm	5	35	88	44
Lead	ppm	2	2	<1	2
Tin	ppm	1	1	<1	7
Aluminum	ppm	5	2	0	2
Chromium	ppm	<1	<1	<1	1
Molybdenum	ppm	57	61	59	44
Nickel	ppm	<1	1	<1	2
Titanium	ppm	10	<1	0	<1
Silver	ppm	<1	0	<1	0
Manganese	ppm	<1	<1	<1	2
Vanadium	ppm	<1	0	0	0



ADDITIVES

Calcium	ppm	1313	1150	1133	1613
Magnesium	ppm	973	1024	934	478
Zinc	ppm	1351	1271	1153	1112
Phosphorus	ppm	1152	1102	1032	919
Barium	ppm	0	0	0	0
Boron	ppm	6	4	3	52

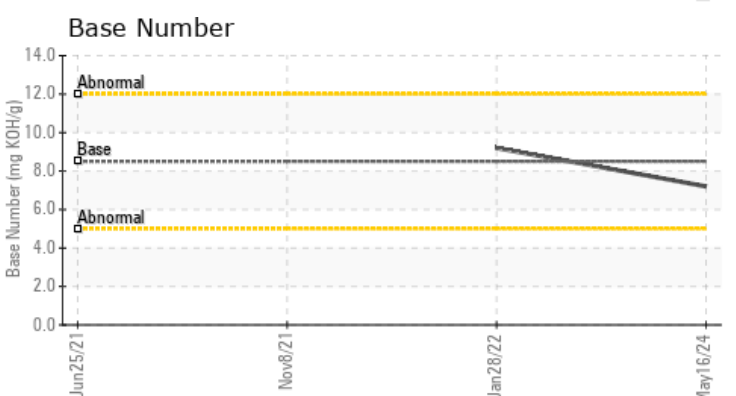
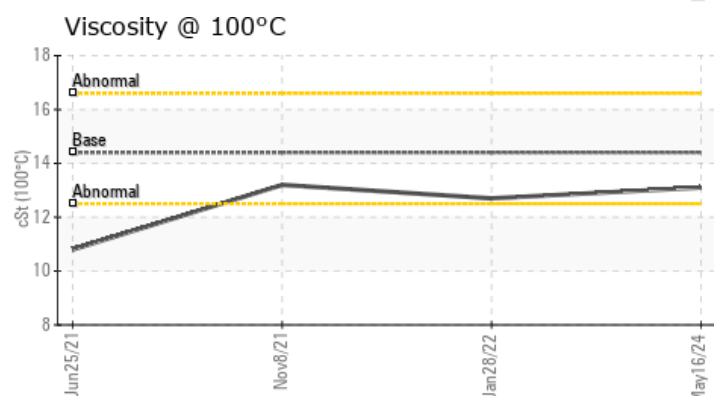
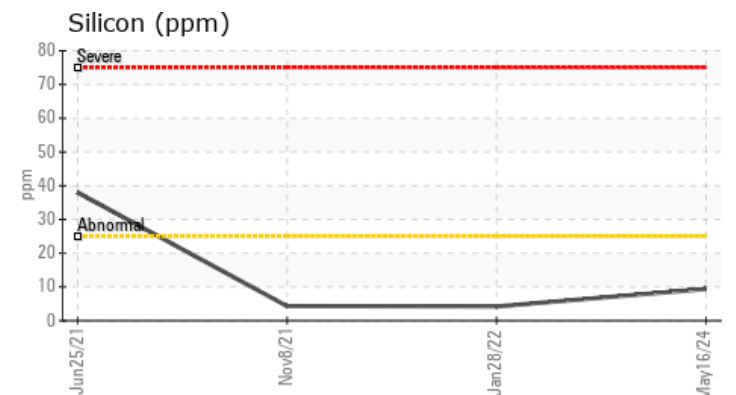
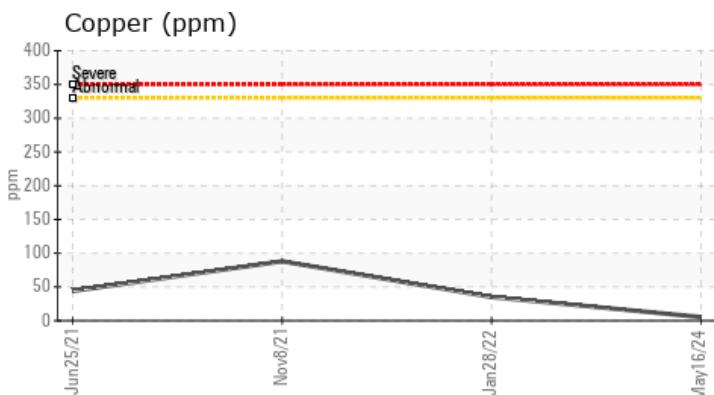
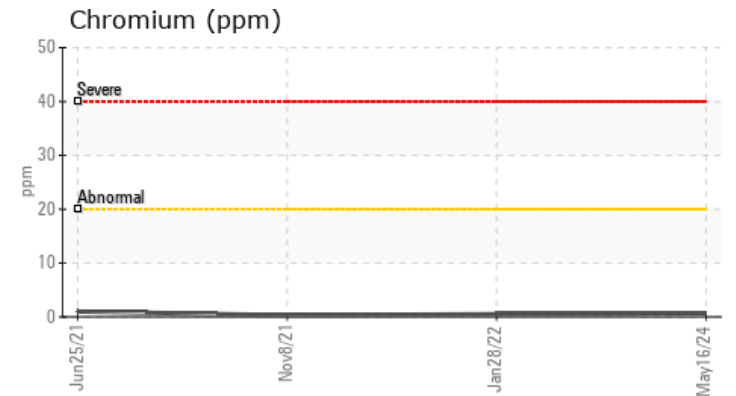
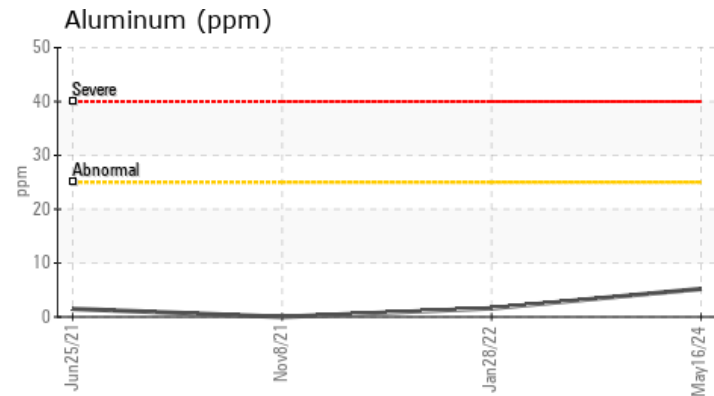
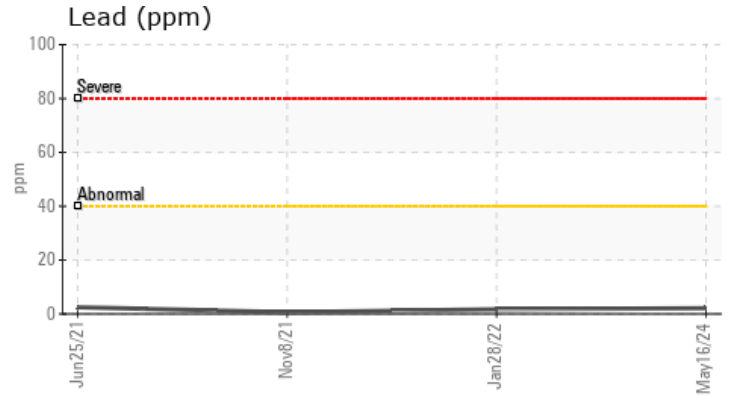
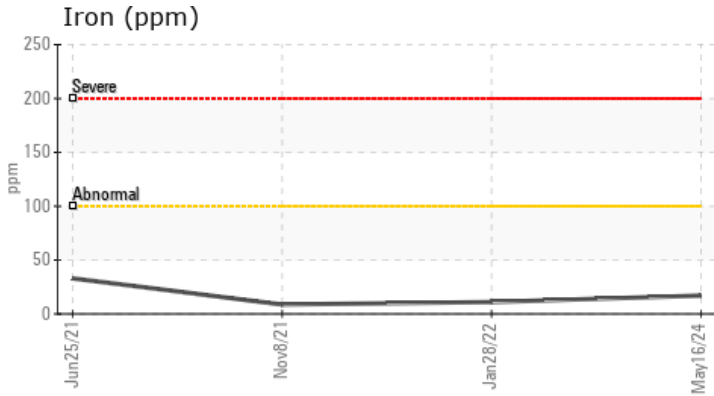
Depot: VOLVO8885
Unique No: 11057211
Signed: Wes Davis
Report Date: 31 May 2024



CONSTRUCTION EQUIPMENT



VOLVO GRAPHS





CONSTRUCTION EQUIPMENT

SPM716242 RENTAL VOLVO A45G 352584 - TRANSMISSION (AUTO)



Sample No: VCP452533
Oil Type: VOLVO AUTOMATIC TRANSMISSION FLUID AT102
Job No: SPM716242 RENTAL



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Contact: MARK DEROSA
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SAMPLE INFORMATION

Sample Number	VCP452533	VCP342869	VCP345355	---
Sample Date	16 May 2024	28 Jan 2022	08 Nov 2021	---
Machine Hours	7880	1998	1513	---
Oil Hours	0	0	0	---
Oil Changed	Changed	Changed	Not Changd	---
Sample Status	NORMAL	NORMAL	NORMAL	---



OIL CONDITION

Visc @ 40°C	cSt	33.0	27.6	47.8	---
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CONTAMINATION

Water	%	NEG	NEG	NEG	---
Silicon	ppm	5	6	6	---
Sodium	ppm	4	4	5	---
Potassium	ppm	2	2	1	---



WEAR METALS

Iron	ppm	21	22	15	---
Copper	ppm	15	32	20	---
Lead	ppm	<1	<1	0	---
Tin	ppm	3	4	2	---
Aluminum	ppm	15	12	8	---
Chromium	ppm	0	0	0	---
Molybdenum	ppm	0	<1	<1	---
Nickel	ppm	2	5	3	---
Titanium	ppm	0	0	0	---
Silver	ppm	0	<1	<1	---
Manganese	ppm	<1	2	2	---
Vanadium	ppm	<1	0	0	---



ADDITIVES

Calcium	ppm	38	82	76	---
Magnesium	ppm	<1	<1	<1	---
Zinc	ppm	4	5	6	---
Phosphorus	ppm	222	200	173	---
Barium	ppm	0	0	0	---
Boron	ppm	104	71	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 fluid. The condition of the fluid is acceptable for the time in service.

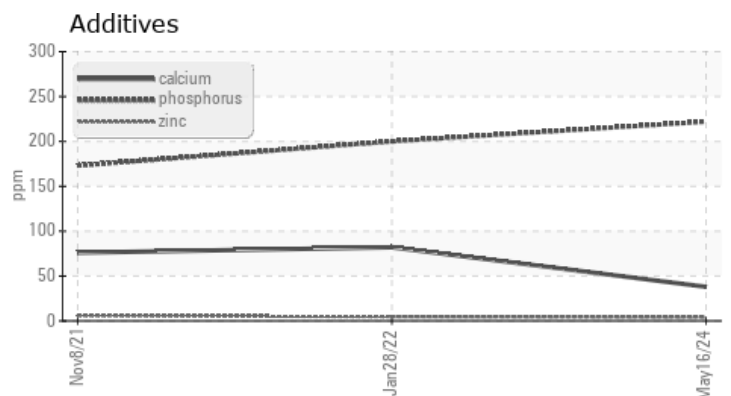
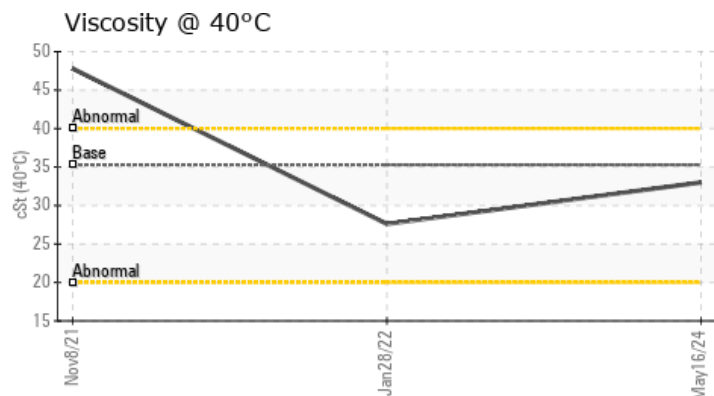
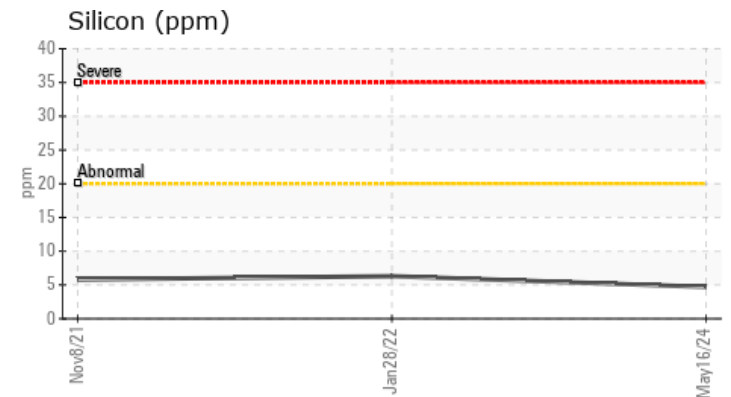
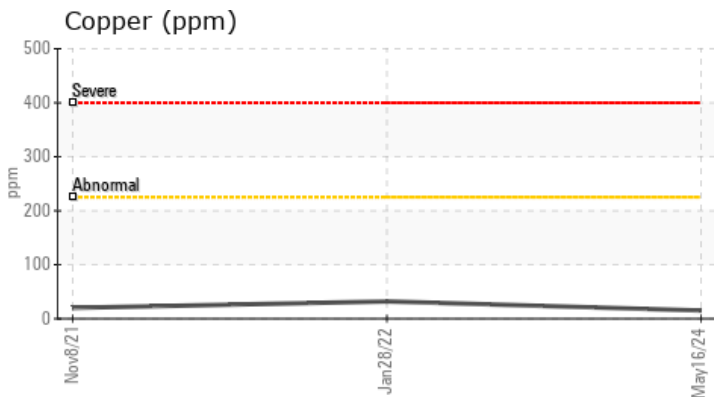
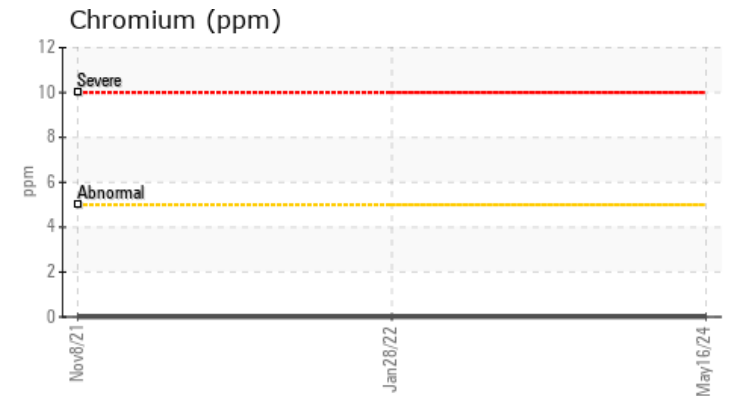
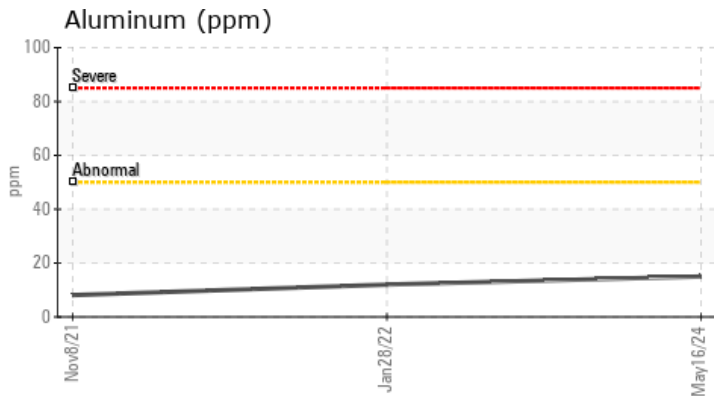
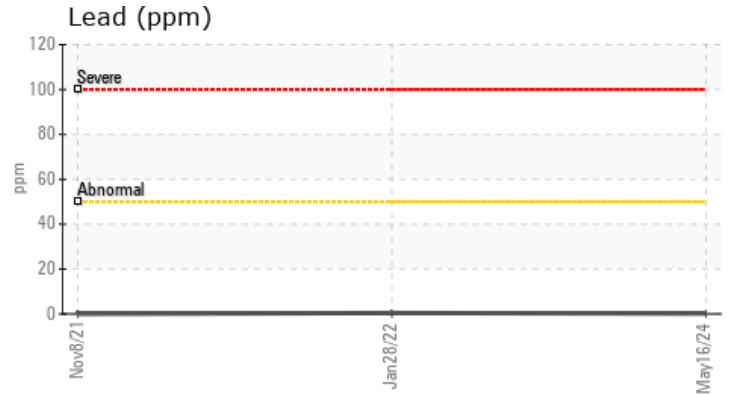
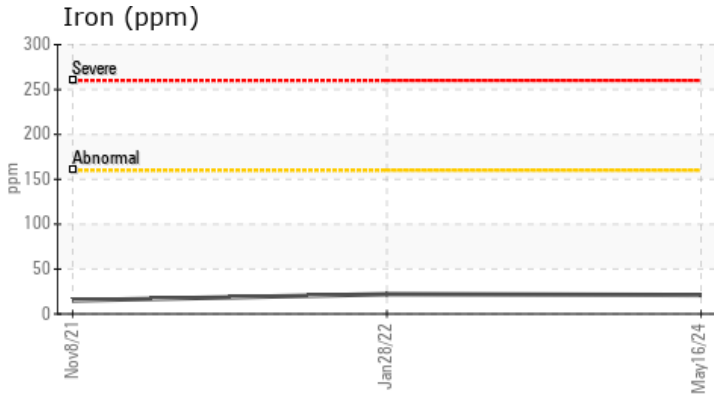
Depot: VOLVO8885
Unique No: 11057947
Signed: Don Baldrige
Report Date: 02 Jun 2024



CONSTRUCTION EQUIPMENT



GRAPHS





CONSTRUCTION EQUIPMENT

SPM716242 RENTAL VOLVO A45G 352584 - WET DISC BRAKE



Sample No: VCP452718
Oil Type: VOLVO WET BRAKE TRANSAXLE OIL
Job No: SPM716242 RENTAL



SAMPLE INFORMATION

Sample Number	VCP452718	VCP342871	---	---
Sample Date	16 May 2024	28 Jan 2022	---	---
Machine Hours	7880	1998	---	---
Oil Hours	0	0	---	---
Oil Changed	Changed	Changed	---	---
Sample Status	NORMAL	ABNORMAL	---	---

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OIL CONDITION

Visc @ 40°C	cSt	49.7	41.1	---	---
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CONTAMINATION

Water	%	NEG	NEG	---	---
Silicon	ppm	16	19	---	---
Sodium	ppm	4	11	---	---
Potassium	ppm	2	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	31	47	---	---
Copper	ppm	45	138	---	---
Lead	ppm	<1	<1	---	---
Tin	ppm	<1	<1	---	---
Aluminum	ppm	2	2	---	---
Chromium	ppm	<1	1	---	---
Molybdenum	ppm	<1	<1	---	---
Nickel	ppm	2	6	---	---
Titanium	ppm	<1	0	---	---
Silver	ppm	0	0	---	---
Manganese	ppm	<1	2	---	---
Vanadium	ppm	<1	0	---	---



ADDITIVES

Calcium	ppm	3388	3972	---	---
Magnesium	ppm	20	14	---	---
Zinc	ppm	1473	1636	---	---
Phosphorus	ppm	1180	1389	---	---
Barium	ppm	<1	0	---	---
Boron	ppm	100	115	---	---

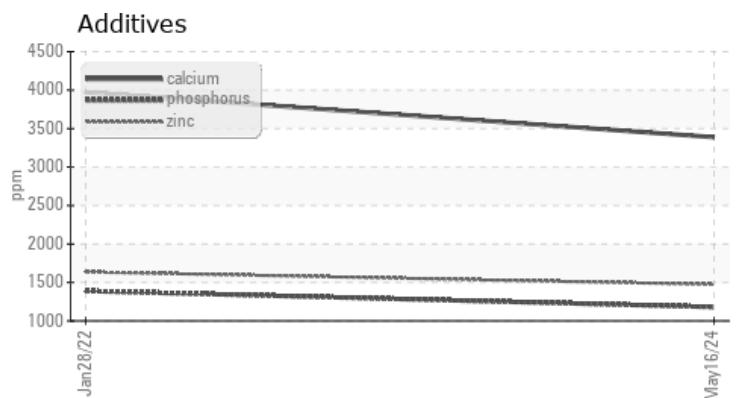
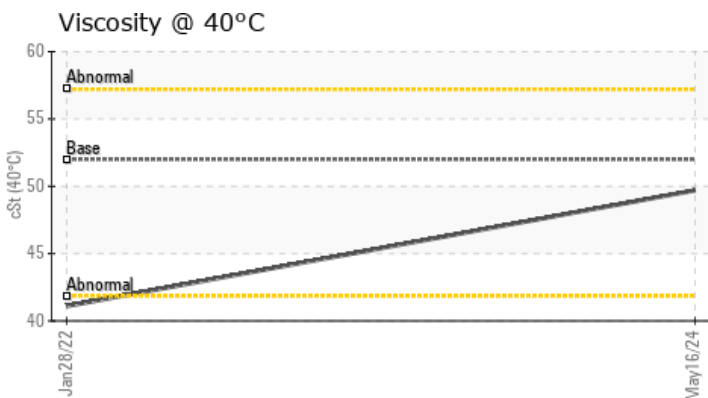
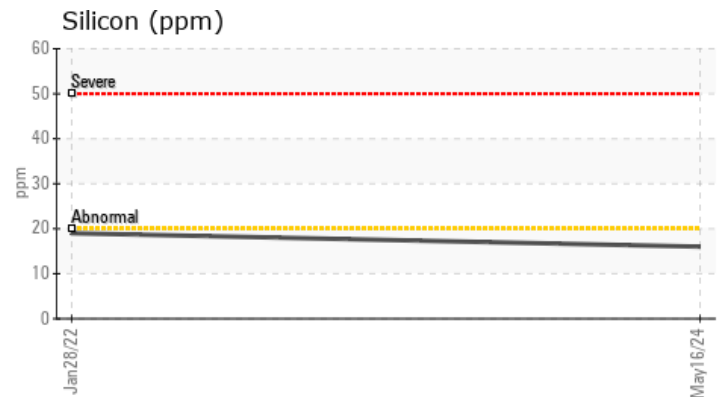
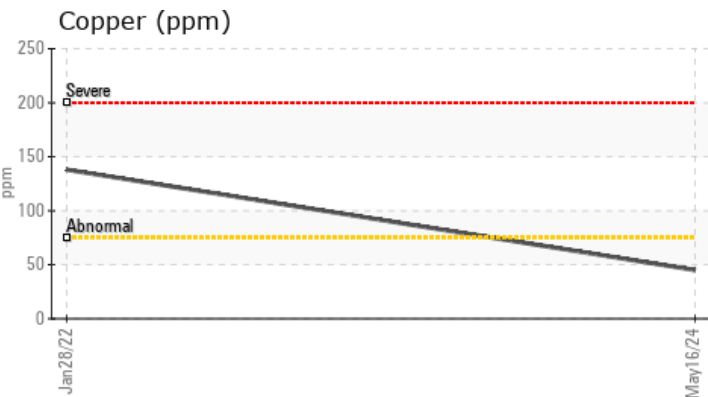
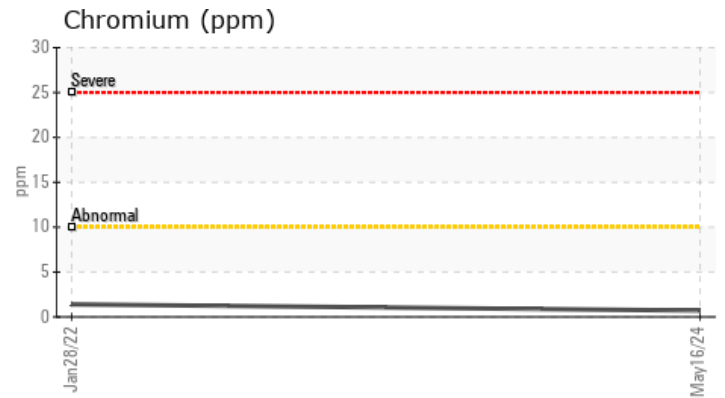
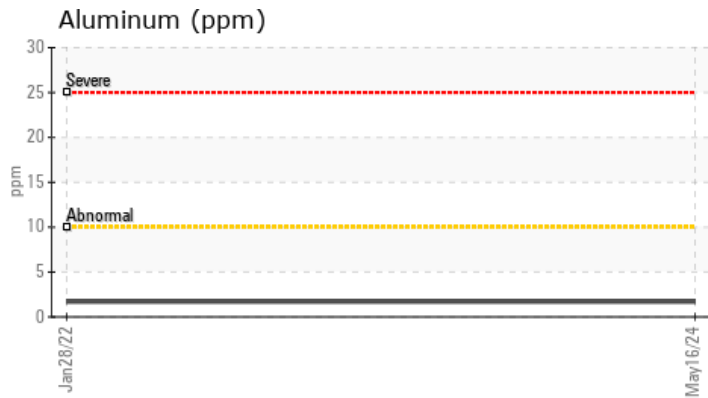
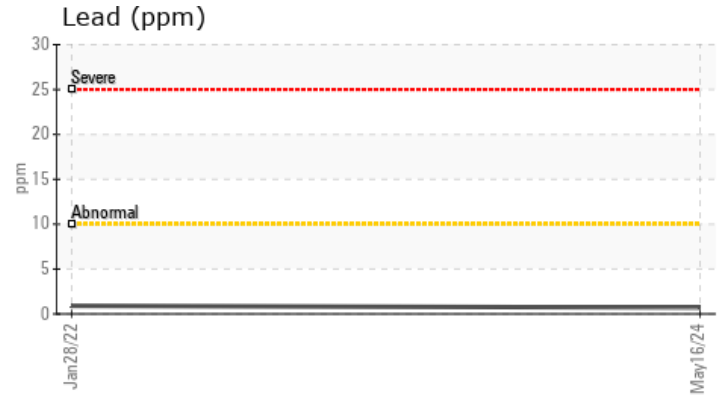
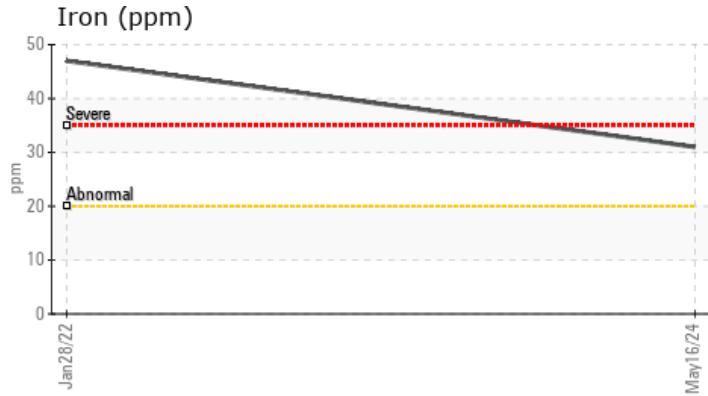
Depot: VOLVO8885
Unique No: 11057878
Signed: Don Baldrige
Report Date: 01 Jun 2024



CONSTRUCTION EQUIPMENT



VOLVO GRAPHS





CONSTRUCTION EQUIPMENT

SPM716242 RENTAL VOLVO A45G 352584 - HYDRAULIC SYSTEM



Sample No: VCP452719
Oil Type: VOLVO SUPER HYDRAULIC OIL 46
Job No: SPM716242 RENTAL



SAMPLE INFORMATION

Sample Number	VCP452719	VCP342867	VCP345357	VCP334843
Sample Date	16 May 2024	28 Jan 2022	08 Nov 2021	27 Sep 2021
Machine Hours	7880	1998	1513	1269
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Not Changd	Not Changd
Sample Status	NORMAL	NORMAL	NORMAL	ATTENTION

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 F:



OIL CONDITION

Visc @ 40°C	cSt	44.5	44.4	43.9	43.9
Acid Number (AN)	mg KOH/g	0.37	0.365	0.247	0.480



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Particles >4µm		2748	7294	2607	71309
Particles >6µm		185	1206	554	7343
Particles >14µm		9	54	20	50
ISO 4406:1999 (c)		19/15/10	20/17/13	19/16/11	23/20/13
Silicon	ppm	6	7	6	6
Sodium	ppm	0	0	<1	<1
Potassium	ppm	<1	<1	0	0

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.



WEAR METALS

Iron	ppm	5	10	9	8
Copper	ppm	2	5	5	5
Lead	ppm	<1	1	<1	<1
Tin	ppm	<1	<1	0	0
Aluminum	ppm	<1	0	<1	<1
Chromium	ppm	<1	2	2	2
Molybdenum	ppm	<1	<1	0	0
Nickel	ppm	0	0	0	0
Titanium	ppm	<1	0	0	0
Silver	ppm	0	0	0	0
Manganese	ppm	0	<1	0	0
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	550	56	55	53
Magnesium	ppm	11	1	0	0
Zinc	ppm	270	425	415	436
Phosphorus	ppm	249	340	323	324
Barium	ppm	0	0	0	0
Boron	ppm	16	2	0	0

Depot: VOLVO8885
Unique No: 11057462
Signed: Don Baldrige
Report Date: 01 Jun 2024

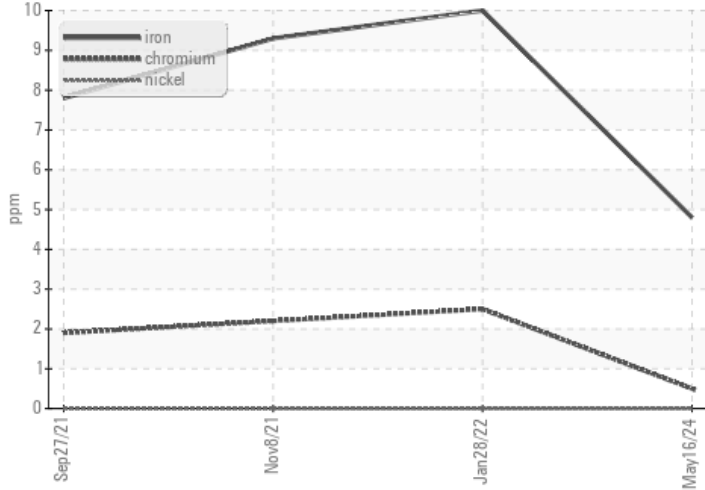


CONSTRUCTION EQUIPMENT

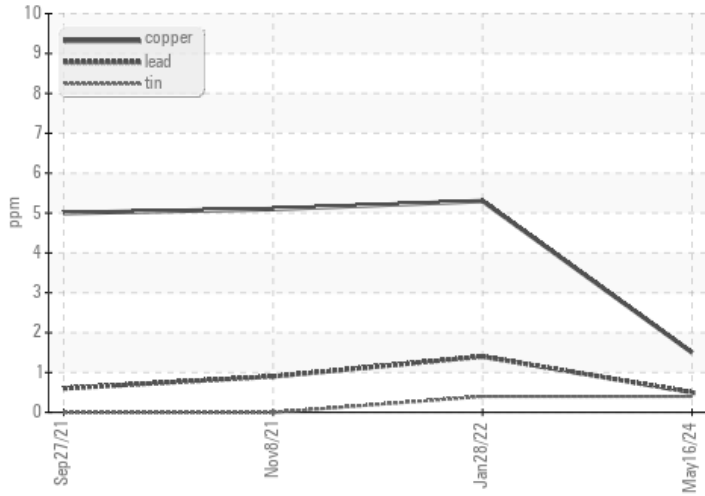


GRAPHS

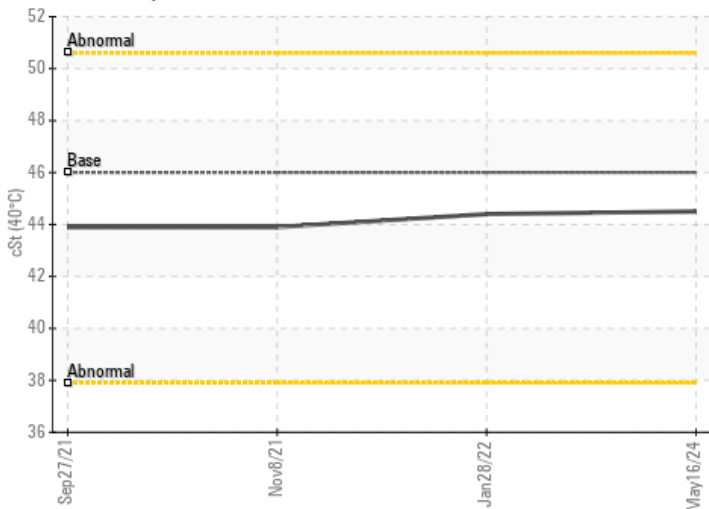
Ferrous Alloys



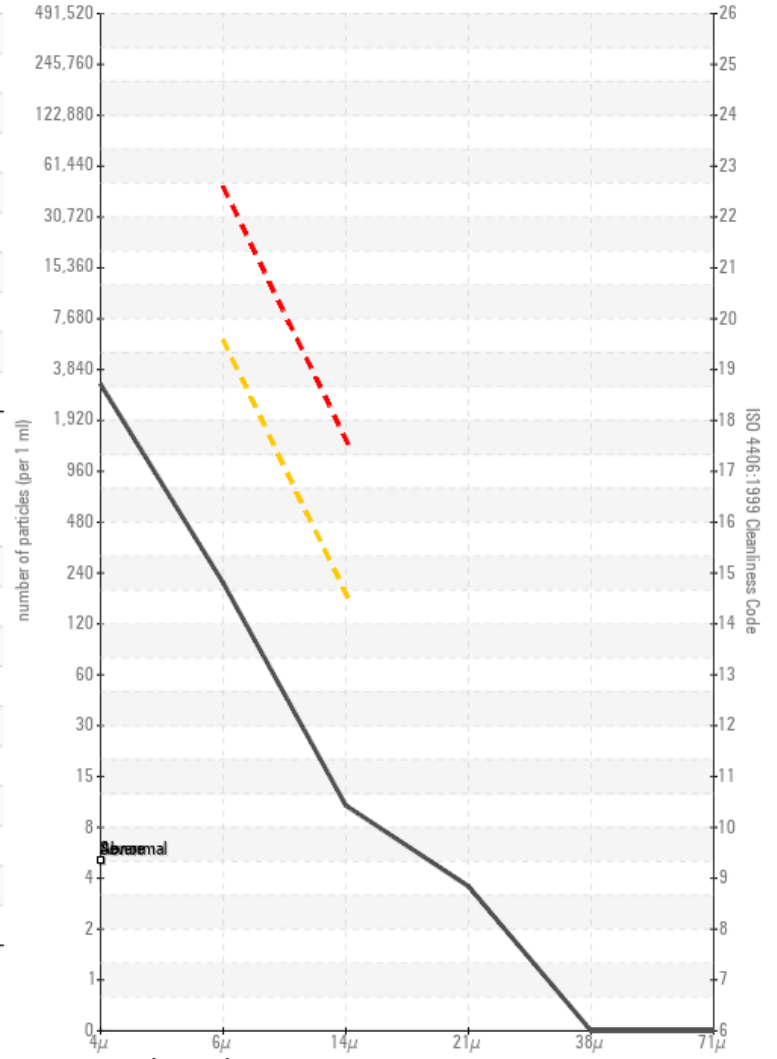
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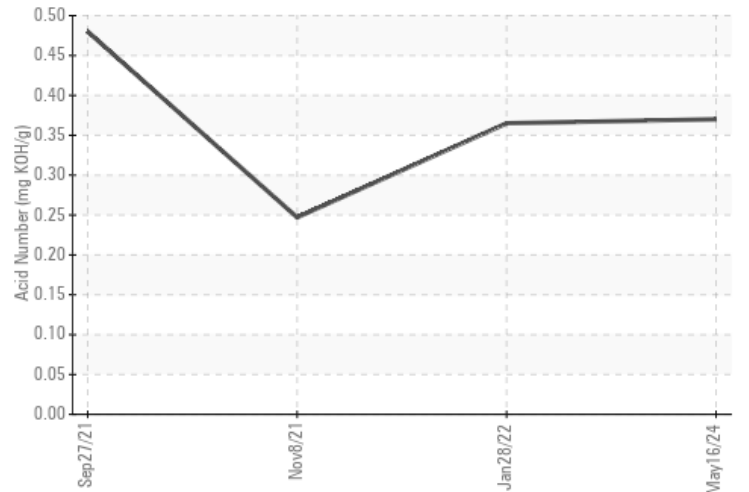
Viscosity @ 40°C



Particle Count



Acid Number





CONSTRUCTION EQUIPMENT

SPM716242 VOLVO A45G 352584 - FRONT AXLE



Sample No: VCP452720
Oil Type: GEAR OIL SAE 80W90
Job No: SPM716242



SAMPLE INFORMATION

Sample Number	VCP452720	VCP339422	VCP345354	---
Sample Date	16 May 2024	28 Jan 2022	08 Nov 2021	---
Machine Hours	7880	1998	1513	---
Oil Hours	0	0	0	---
Oil Changed	Changed	Not Changd	Not Changd	---
Sample Status	ATTENTION	ATTENTION	ABNORMAL	---

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OIL CONDITION

Visc @ 40°C	cSt	95.4	51.9	52.0	---
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CONTAMINATION

Water	%	NEG	NEG	NEG	---
Silicon	ppm	6	13	4	---
Sodium	ppm	1	9	3	---
Potassium	ppm	2	<1	4	---



WEAR METALS

Iron	ppm	159	51	248	---
Copper	ppm	<1	<1	2	---
Lead	ppm	0	<1	0	---
Tin	ppm	<1	<1	<1	---
Aluminum	ppm	<1	1	<1	---
Chromium	ppm	1	2	3	---
Molybdenum	ppm	1	1	7	---
Nickel	ppm	<1	<1	1	---
Titanium	ppm	0	0	0	---
Silver	ppm	0	0	<1	---
Manganese	ppm	2	3	10	---
Vanadium	ppm	<1	0	0	---



ADDITIVES

Calcium	ppm	256	4575	109	---
Magnesium	ppm	7	20	2	---
Zinc	ppm	126	1754	49	---
Phosphorus	ppm	570	1447	2362	---
Barium	ppm	0	0	0	---
Boron	ppm	13	136	254	---

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.

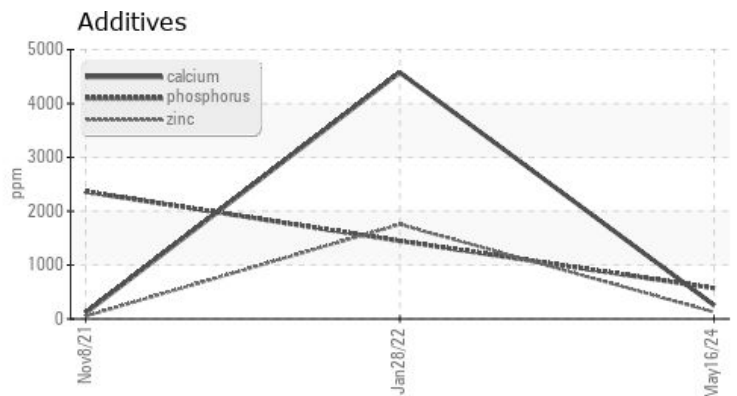
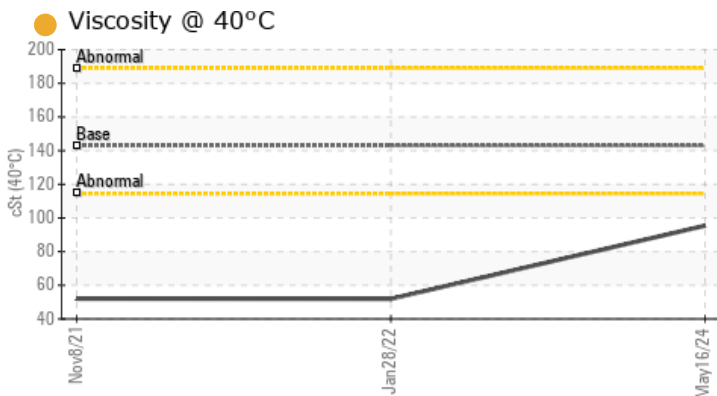
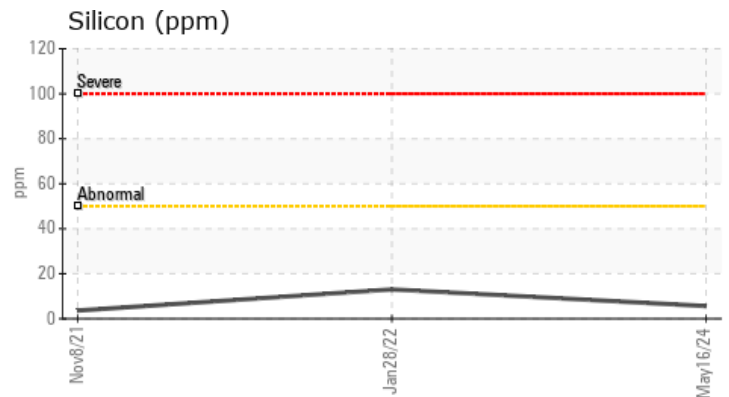
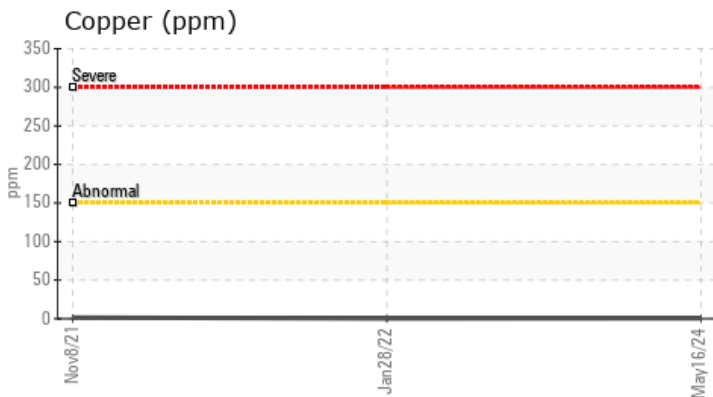
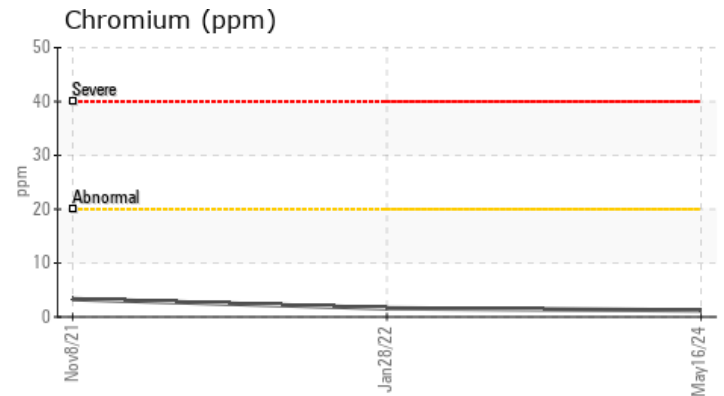
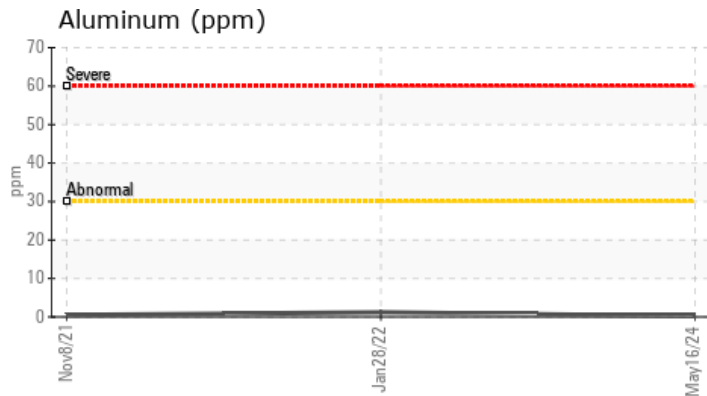
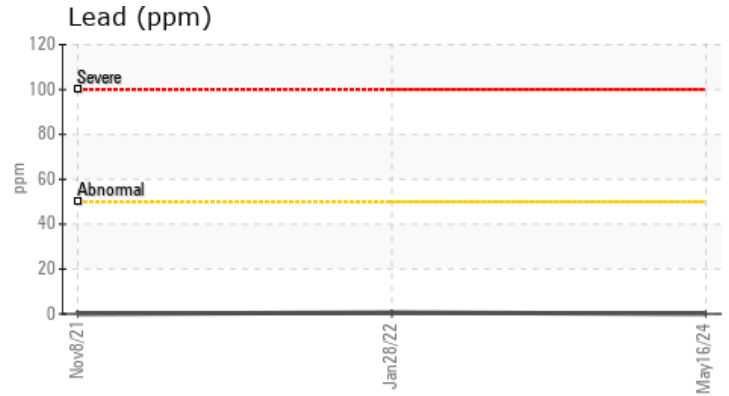
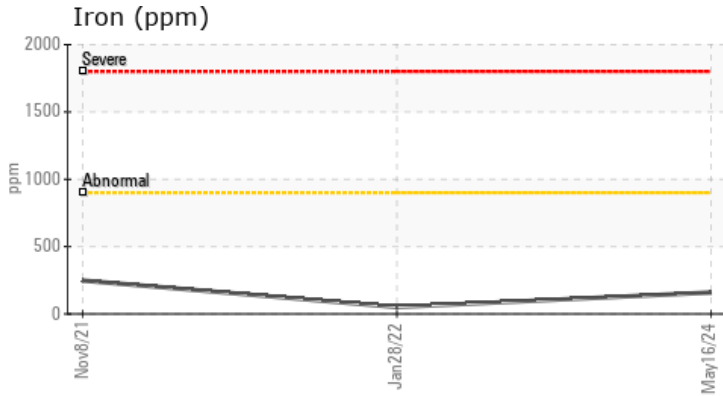
Depot: VOLVO8885
Unique No: 11057874
Signed: Don Baldrige
Report Date: 01 Jun 2024



CONSTRUCTION EQUIPMENT



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CONSTRUCTION EQUIPMENT

SPM716242 RENTAL VOLVO A45G 352584 - BOGIE/CENTER AXLE



Sample No: VCP452717
Oil Type: GEAR OIL SAE 80W90
Job No: SPM716242 RENTAL



SAMPLE INFORMATION

Sample Number	VCP452717	VCP339424	VCP345358	---
Sample Date	16 May 2024	28 Jan 2022	08 Nov 2021	---
Machine Hours	7880	1998	1513	---
Oil Hours	0	0	0	---
Oil Changed	Changed	Changed	Not Changd	---
Sample Status	ATTENTION	NORMAL	ABNORMAL	---

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 F:



OIL CONDITION

Visc @ 40°C	cSt	95.4	52.3	54.1	---
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CONTAMINATION

Water	%	NEG	NEG	NEG	---
Silicon	ppm	3	3	4	---
Sodium	ppm	1	<1	3	---
Potassium	ppm	2	3	2	---



WEAR METALS

Iron	ppm	125	194	251	---
Copper	ppm	<1	2	2	---
Lead	ppm	0	<1	<1	---
Tin	ppm	<1	<1	<1	---
Aluminum	ppm	0	0	<1	---
Chromium	ppm	1	2	3	---
Molybdenum	ppm	<1	5	10	---
Nickel	ppm	<1	1	1	---
Titanium	ppm	0	0	0	---
Silver	ppm	0	0	<1	---
Manganese	ppm	2	8	11	---
Vanadium	ppm	<1	0	0	---



ADDITIVES

Calcium	ppm	76	155	138	---
Magnesium	ppm	2	3	2	---
Zinc	ppm	50	74	63	---
Phosphorus	ppm	460	2624	2378	---
Barium	ppm	<1	0	0	---
Boron	ppm	5	228	249	---

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.

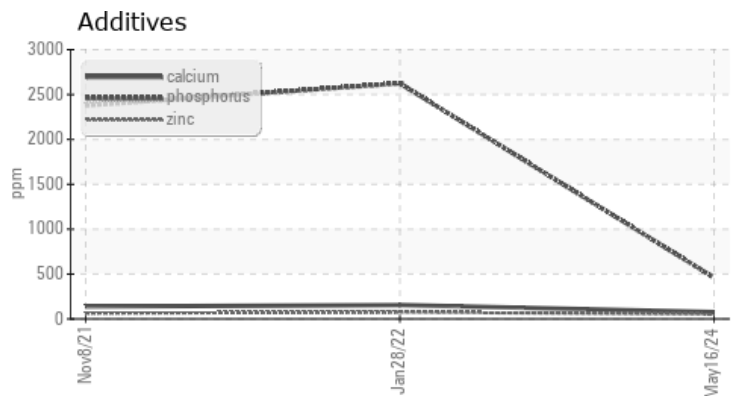
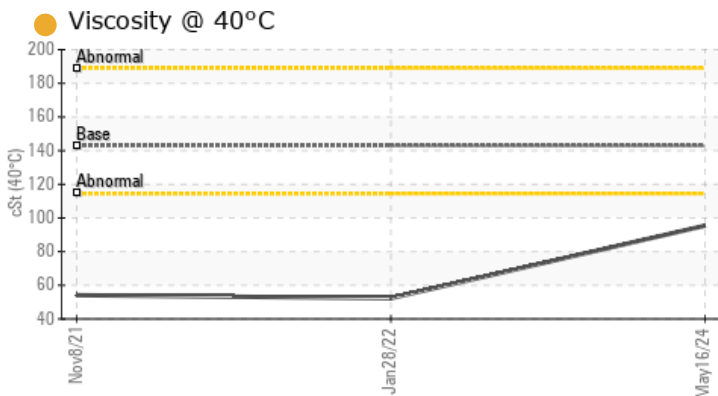
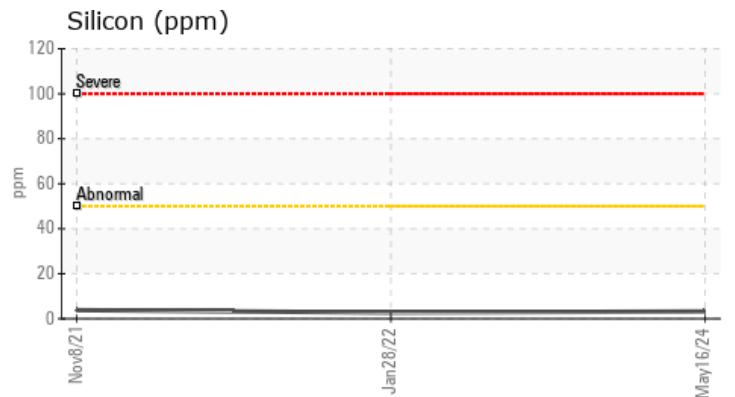
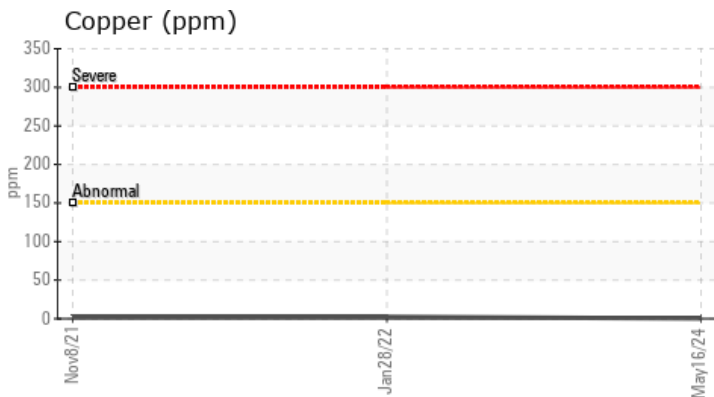
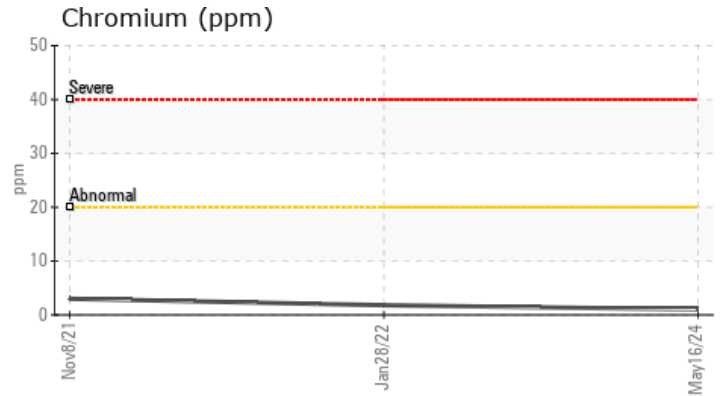
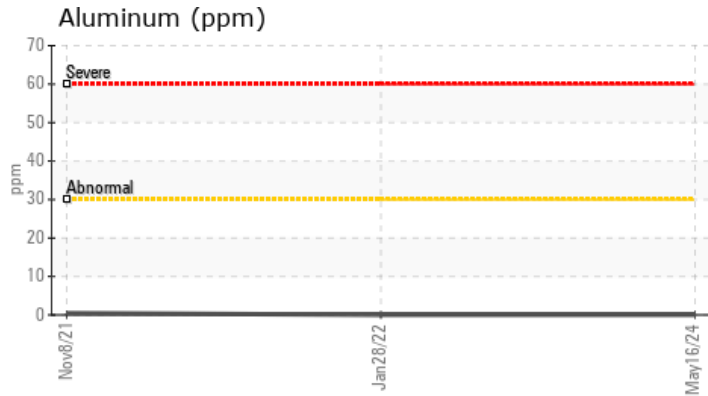
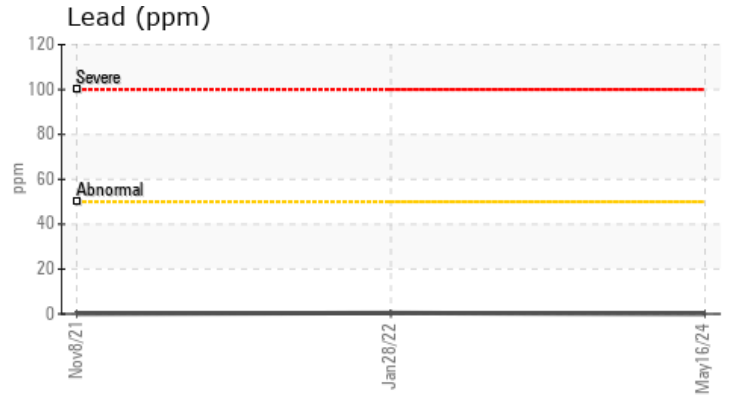
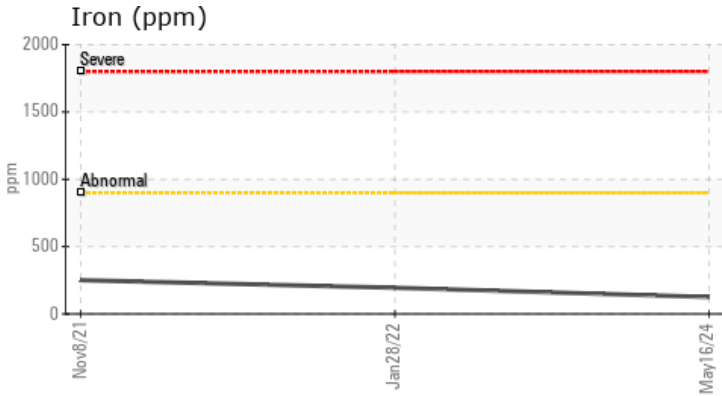
Depot: VOLVO8885
Unique No: 11057876
Signed: Don Baldrige
Report Date: 01 Jun 2024



CONSTRUCTION EQUIPMENT



VOLVO GRAPHS





CONSTRUCTION EQUIPMENT

SPM716242 RENTAL VOLVO A45G 352584 - REAR AXLE



Sample No: VCP452716
Oil Type: GEAR OIL SAE 80W90
Job No: SPM716242 RENTAL



SAMPLE INFORMATION

Sample Number	VCP452716	VCP339425	VCP345360	---
Sample Date	16 May 2024	28 Jan 2022	08 Nov 2021	---
Machine Hours	7880	1998	1513	---
Oil Hours	0	0	0	---
Oil Changed	Changed	Changed	Not Changd	---
Sample Status	ATTENTION	ABNORMAL	ABNORMAL	---

ALTA EQUIPMENT CO - ORLAND PARK
5000 INDUSTRIAL HWY
GARY, IN
US 46406
Contact: DAVE ENG
DAVE.ENG@ALTG.COM
T: (312)350-2560
F:



OIL CONDITION

Visc @ 40°C	cSt	98.5	53.7	53.6	---
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CONTAMINATION

Water	%	NEG	NEG	NEG	---
Silicon	ppm	4	2	3	---
Sodium	ppm	<1	<1	2	---
Potassium	ppm	2	5	5	---



WEAR METALS

Iron	ppm	41	199	212	---
Copper	ppm	<1	1	1	---
Lead	ppm	0	<1	0	---
Tin	ppm	<1	<1	<1	---
Aluminum	ppm	<1	<1	<1	---
Chromium	ppm	<1	2	3	---
Molybdenum	ppm	<1	10	11	---
Nickel	ppm	0	1	<1	---
Titanium	ppm	0	0	0	---
Silver	ppm	0	0	<1	---
Manganese	ppm	<1	7	8	---
Vanadium	ppm	<1	0	0	---



ADDITIVES

Calcium	ppm	122	72	61	---
Magnesium	ppm	3	2	2	---
Zinc	ppm	60	33	29	---
Phosphorus	ppm	477	2567	2377	---
Barium	ppm	0	0	0	---
Boron	ppm	3	248	268	---

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.

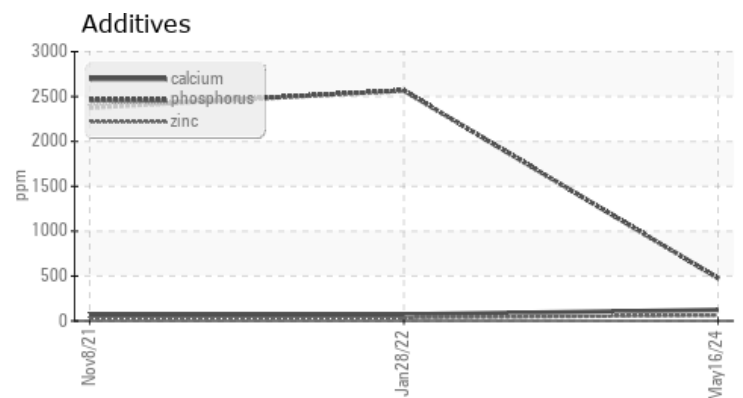
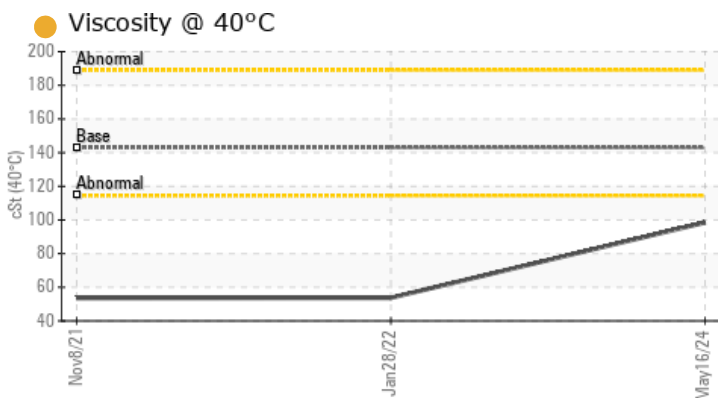
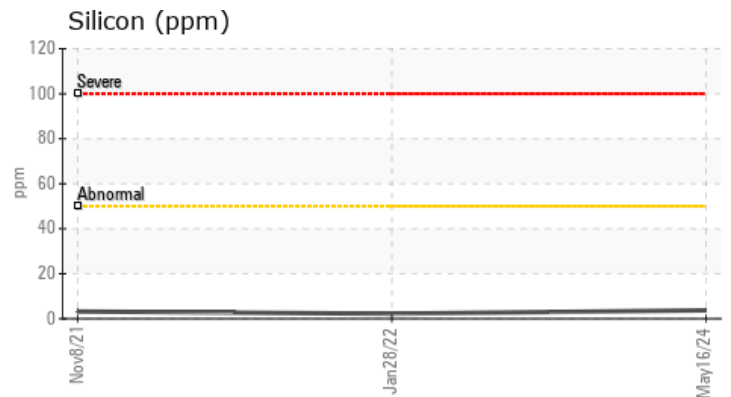
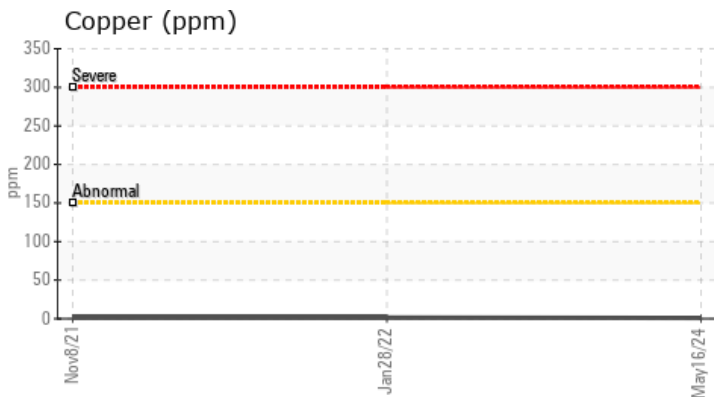
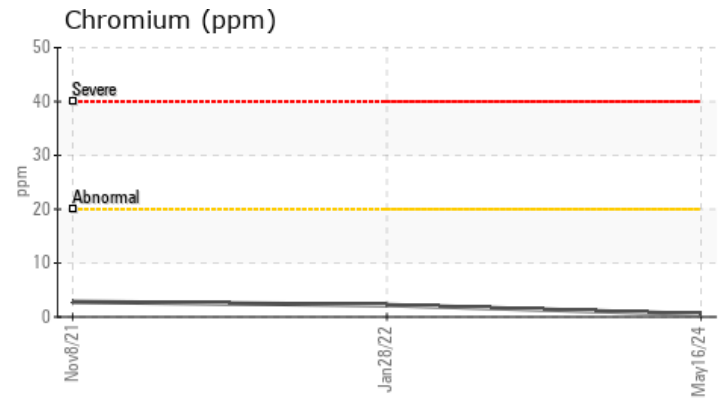
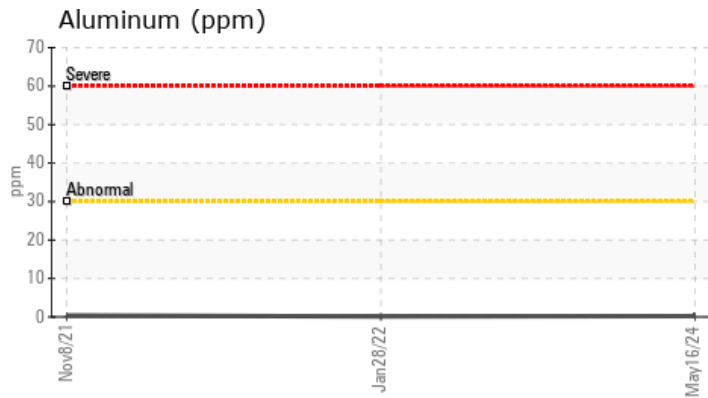
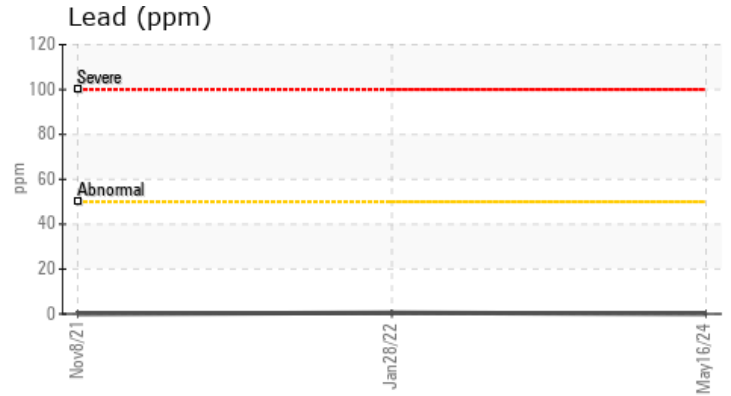
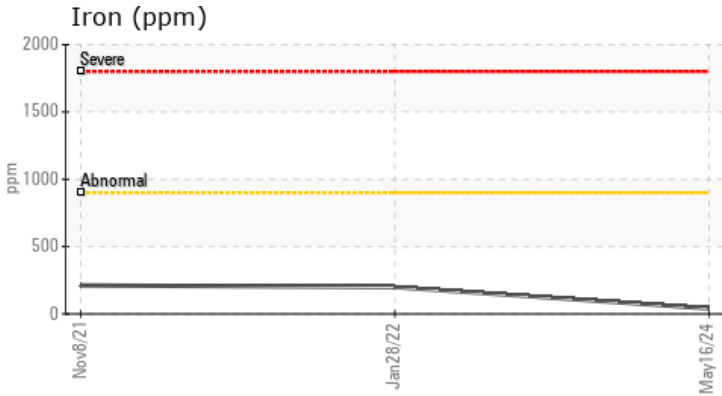
Depot: VOLVO8885
Unique No: 11057879
Signed: Don Baldrige
Report Date: 01 Jun 2024



CONSTRUCTION EQUIPMENT



VOLVO GRAPHS





CONSTRUCTION EQUIPMENT

SPM716242 RENTAL VOLVO A45G 352584 - DROP BOX



Sample No: VCP452713
Oil Type: GEAR OIL SAE 80W90
Job No: SPM716242 RENTAL



SAMPLE INFORMATION

Sample Number	VCP452713	VCP342873	---	---
Sample Date	16 May 2024	28 Jan 2022	---	---
Machine Hours	7880	1998	---	---
Oil Hours	0	0	---	---
Oil Changed	Changed	Changed	---	---
Sample Status	ATTENTION	ATTENTION	---	---

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5000 INDUSTRIAL HWY
GARY, IN
US 46406
Contact: DAVE ENG
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T: (312)350-2560
F:



OIL CONDITION

Visc @ 40°C	cSt	79.5	47.66	---	---
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CONTAMINATION

Water	%	NEG	NEG	---	---
Silicon	ppm	21	5	---	---
Sodium	ppm	2	0	---	---
Potassium	ppm	3	<1	---	---

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.



WEAR METALS

Iron	ppm	61	128	---	---
Copper	ppm	2	0	---	---
Lead	ppm	0	<1	---	---
Tin	ppm	<1	<1	---	---
Aluminum	ppm	1	<1	---	---
Chromium	ppm	<1	2	---	---
Molybdenum	ppm	4	0	---	---
Nickel	ppm	0	<1	---	---
Titanium	ppm	<1	0	---	---
Silver	ppm	0	0	---	---
Manganese	ppm	<1	3	---	---
Vanadium	ppm	<1	0	---	---



ADDITIVES

Calcium	ppm	1893	15	---	---
Magnesium	ppm	56	0	---	---
Zinc	ppm	796	<1	---	---
Phosphorus	ppm	1310	358	---	---
Barium	ppm	0	0	---	---
Boron	ppm	121	0	---	---

Depot: VOLVO8885
Unique No: 11057875
Signed: Don Baldrige
Report Date: 01 Jun 2024



CONSTRUCTION EQUIPMENT



GRAPHS

