



CONSTRUCTION EQUIPMENT

VOLVO A45G 752059 - DIESEL ENGINE



Sample No: VCP449978
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No:



SAMPLE INFORMATION

Sample Number	VCP449978	VCP445954	---	---
Sample Date	04 Jun 2024	29 Feb 2024	---	---
Machine Hours	1204	732	---	---
Oil Hours	0	0	---	---
Oil Changed	Changed	Changed	---	---
Sample Status	NORMAL	ATTENTION	---	---

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 5151 DR MARTIN LUTHER KING BLVD
 FORT MYERS, FL
 US 33905
 Contact: TODD LARK
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 T:
 F: (239)481-3302



OIL CONDITION

Visc @ 100°C	cSt	12.3	10.8	---	---
Base Number (BN)	mg KOH/g	9.0	5.3	---	---
Oxidation (PA)	%	77	57	---	---

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 %	%	0.3	0.4	---	---
Nitration (PA)	%	61	78	---	---
Sulfation (PA)	%	63	57	---	---
Glycol	%	NEG	NEG	---	---
Fuel	%	<1.0	0.7	---	---
Silicon	ppm	8	26	---	---
Sodium	ppm	<1	4	---	---
Potassium	ppm	1	0	---	---



WEAR METALS

Iron	ppm	10	22	---	---
Copper	ppm	98	230	---	---
Lead	ppm	<1	2	---	---
Tin	ppm	2	4	---	---
Aluminum	ppm	2	3	---	---
Chromium	ppm	<1	1	---	---
Molybdenum	ppm	47	80	---	---
Nickel	ppm	2	9	---	---
Titanium	ppm	<1	0	---	---
Silver	ppm	0	0	---	---
Manganese	ppm	<1	1	---	---
Vanadium	ppm	0	0	---	---



ADDITIVES

Calcium	ppm	1693	2197	---	---
Magnesium	ppm	445	23	---	---
Zinc	ppm	1104	1074	---	---
Phosphorus	ppm	898	956	---	---
Barium	ppm	0	0	---	---
Boron	ppm	32	22	---	---

Depot: VOLVO0090
Unique No: 11073567
Signed: Sean Felton
Report Date: 13 Jun 2024

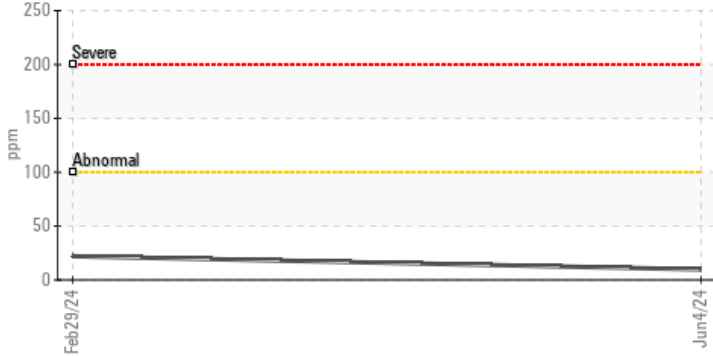


CONSTRUCTION EQUIPMENT



GRAPHS

Iron (ppm)



Lead (ppm)



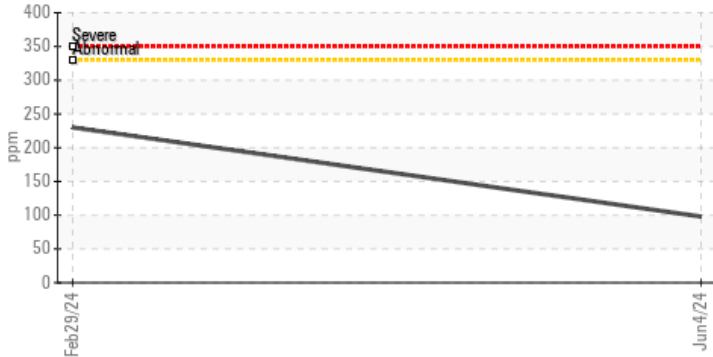
Aluminum (ppm)



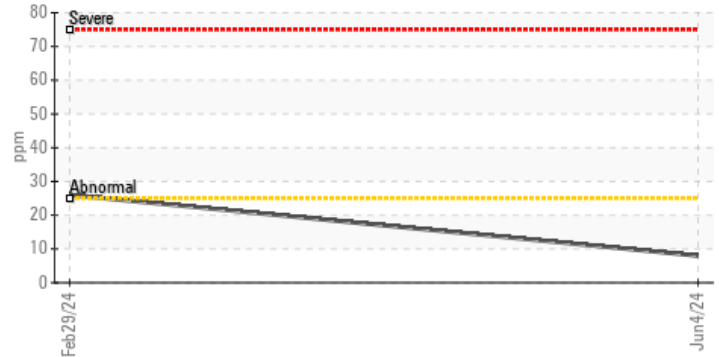
Chromium (ppm)



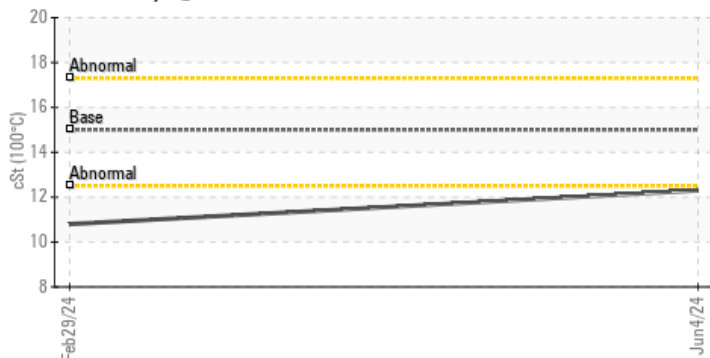
Copper (ppm)



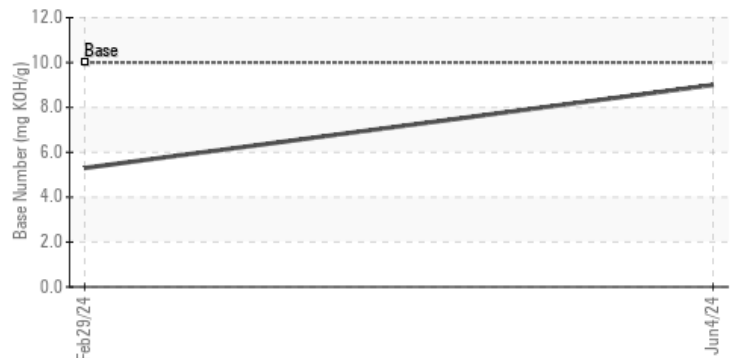
Silicon (ppm)



Viscosity @ 100°C



Base Number





CONSTRUCTION EQUIPMENT

VOLVO A45G 752059 - TRANSMISSION (AUTO)



Sample No: VCP449977
Oil Type: VOLVO AUTOMATIC TRANSMISSION FLUID AT102
Job No:



SAMPLE INFORMATION

Sample Number	VCP449977	VCP445618	---	---
Sample Date	04 Jun 2024	29 Feb 2024	---	---
Machine Hours	1204	732	---	---
Oil Hours	0	0	---	---
Oil Changed	Not Chngd	Not Chngd	---	---
Sample Status	ABNORMAL	NORMAL	---	---

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OIL CONDITION

Visc @ 40°C	cSt	28.4	29.6	---	---
-------------	-----	-------------	------	-----	-----



CONTAMINATION

Water	%	NEG	NEG	---	---
Silicon	ppm	11	12	---	---
Sodium	ppm	5	4	---	---
Potassium	ppm	5	<1	---	---

Diagnosis

The 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 moderate amount of visible silt present in the sample. The condition of the fluid is acceptable for the time in service.



WEAR METALS

Iron	ppm	28	25	---	---
Copper	ppm	23	19	---	---
Lead	ppm	4	0	---	---
Tin	ppm	4	2	---	---
Aluminum	ppm	14	12	---	---
Chromium	ppm	<1	0	---	---
Molybdenum	ppm	2	0	---	---
Nickel	ppm	2	1	---	---
Titanium	ppm	0	0	---	---
Silver	ppm	0	0	---	---
Manganese	ppm	4	3	---	---
Vanadium	ppm	0	0	---	---



ADDITIVES

Calcium	ppm	55	71	---	---
Magnesium	ppm	<1	0	---	---
Zinc	ppm	0	5	---	---
Phosphorus	ppm	139	185	---	---
Barium	ppm	0	0	---	---
Boron	ppm	59	81	---	---

Depot: VOLVO0090
Unique No: 11074450
Signed: Don Baldrige
Report Date: 13 Jun 2024



CONSTRUCTION EQUIPMENT



GRAPHS

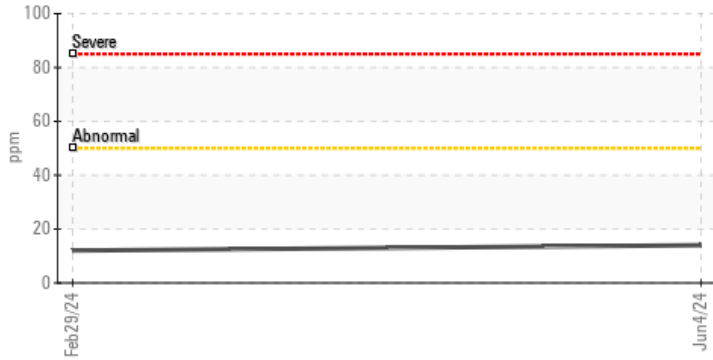
Iron (ppm)



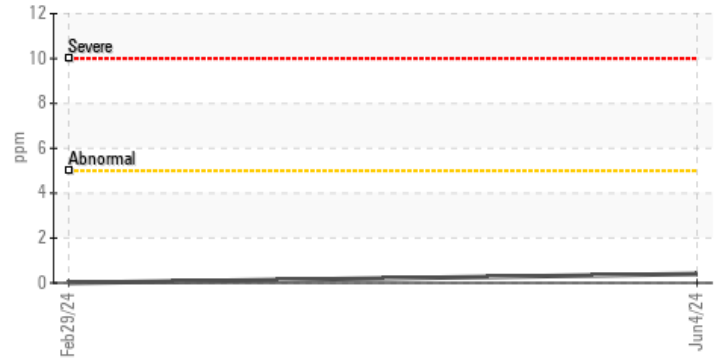
Lead (ppm)



Aluminum (ppm)



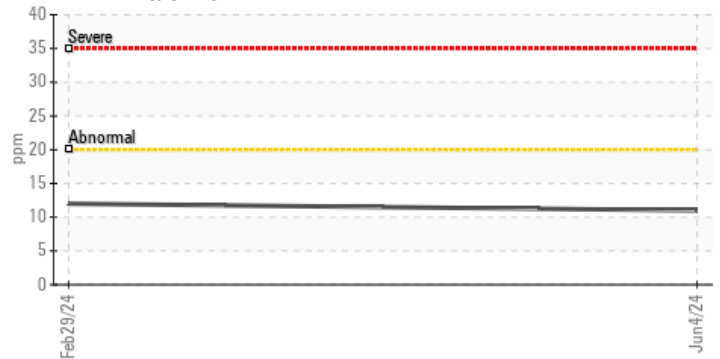
Chromium (ppm)



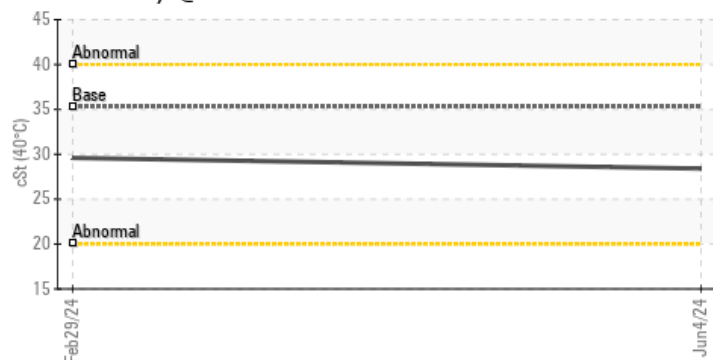
Copper (ppm)



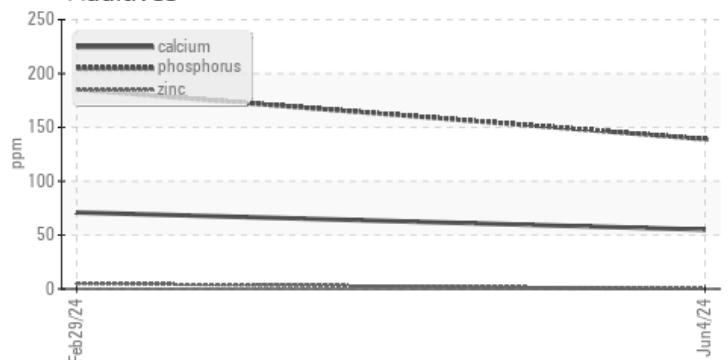
Silicon (ppm)



Viscosity @ 40°C



Additives





CONSTRUCTION EQUIPMENT

VOLVO A45G 752059 - WET DISC BRAKE



Sample No: VCP449975
Oil Type: VOLVO WET BRAKE TRANSAXLE OIL
Job No:



SAMPLE INFORMATION

Sample Number	VCP449975	VCP445617	---	---
Sample Date	04 Jun 2024	29 Feb 2024	---	---
Machine Hours	1204	732	---	---
Oil Hours	0	0	---	---
Oil Changed	Not Chngd	Not Chngd	---	---
Sample Status	ABNORMAL	NORMAL	---	---

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OIL CONDITION

Visc @ 40°C	cSt	44.0	47.2	---	---
-------------	-----	-------------	------	-----	-----



CONTAMINATION

Water	%	NEG	NEG	---	---
Silicon	ppm	14	14	---	---
Sodium	ppm	5	4	---	---
Potassium	ppm	6	<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 oil. The condition of the oil is acceptable for the time in service.



WEAR METALS

Iron	ppm	21	18	---	---
Copper	ppm	112	77	---	---
Lead	ppm	4	0	---	---
Tin	ppm	2	0	---	---
Aluminum	ppm	1	0	---	---
Chromium	ppm	<1	0	---	---
Molybdenum	ppm	2	0	---	---
Nickel	ppm	4	2	---	---
Titanium	ppm	0	0	---	---
Silver	ppm	0	0	---	---
Manganese	ppm	1	<1	---	---
Vanadium	ppm	0	0	---	---



ADDITIVES

Calcium	ppm	3557	3536	---	---
Magnesium	ppm	7	7	---	---
Zinc	ppm	1486	1469	---	---
Phosphorus	ppm	1241	1261	---	---
Barium	ppm	0	0	---	---
Boron	ppm	128	117	---	---

Depot: VOLVO0090
Unique No: 11074379
Signed: Don Baldrige
Report Date: 13 Jun 2024

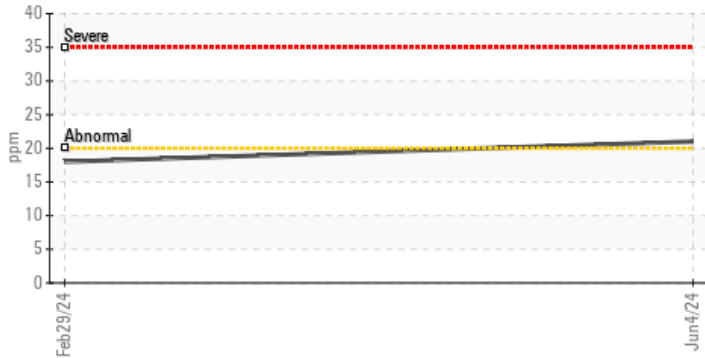


CONSTRUCTION EQUIPMENT

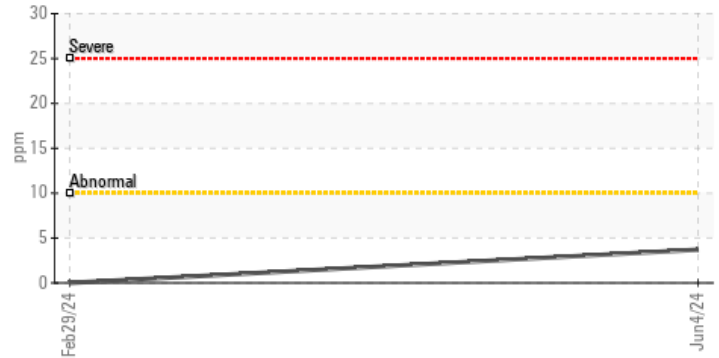


GRAPHS

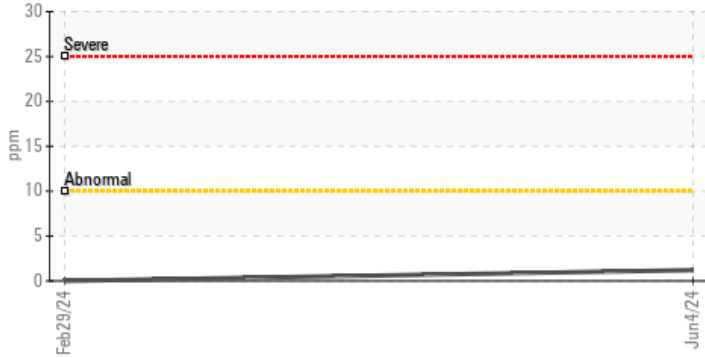
Iron (ppm)



Lead (ppm)



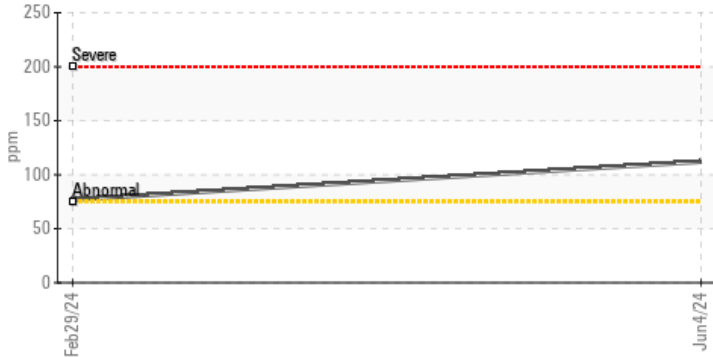
Aluminum (ppm)



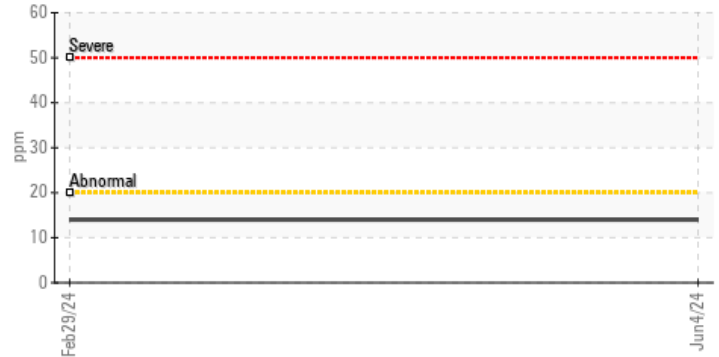
Chromium (ppm)



▲ Copper (ppm)



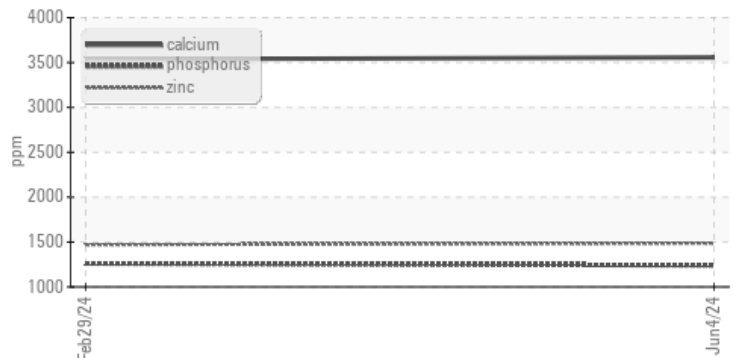
Silicon (ppm)



Viscosity @ 40°C



Additives





CONSTRUCTION EQUIPMENT

VOLVO A45G 752059 - HYDRAULIC SYSTEM



Sample No: VCP449976
Oil Type: VOLVO SUPER HYDRAULIC OIL 46
Job No:



SAMPLE INFORMATION

Sample Number	VCP449976	VCP445948	---	---
Sample Date	04 Jun 2024	29 Feb 2024	---	---
Machine Hours	1204	732	---	---
Oil Hours	0	0	---	---
Oil Changed	Not Chngd	Not Chngd	---	---
Sample Status	NORMAL	ABNORMAL	---	---

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OIL CONDITION

Visc @ 40°C	cSt	43.6	43.6	---	---
Acid Number (AN)	mg KOH/g	0.39	0.47	---	---

CONTAMINATION

Water	%	NEG	NEG	---	---
Particles >4µm		1622	16249	---	---
Particles >6µm		513	6029	---	---
Particles >14µm		28	376	---	---
ISO 4406:1999 (c)		18/16/12	21/20/16	---	---
Silicon	ppm	2	<1	---	---
Sodium	ppm	1	<1	---	---
Potassium	ppm	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	4	2	---	---
Copper	ppm	2	1	---	---
Lead	ppm	0	0	---	---
Tin	ppm	0	<1	---	---
Aluminum	ppm	0	0	---	---
Chromium	ppm	0	0	---	---
Molybdenum	ppm	0	0	---	---
Nickel	ppm	0	0	---	---
Titanium	ppm	0	0	---	---
Silver	ppm	0	0	---	---
Manganese	ppm	0	0	---	---
Vanadium	ppm	0	0	---	---

ADDITIVES

Calcium	ppm	77	78	---	---
Magnesium	ppm	0	0	---	---
Zinc	ppm	404	403	---	---
Phosphorus	ppm	319	323	---	---
Barium	ppm	0	0	---	---
Boron	ppm	0	0	---	---

Depot: VOLVO0090
Unique No: 11073889
Signed: Wes Davis
Report Date: 13 Jun 2024

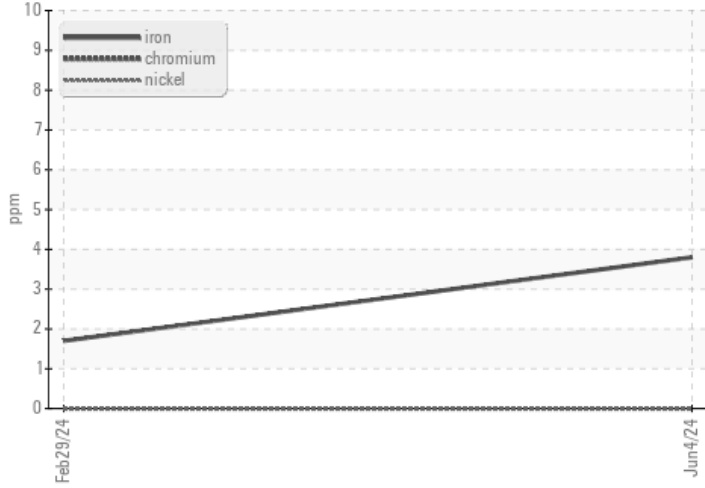


CONSTRUCTION EQUIPMENT

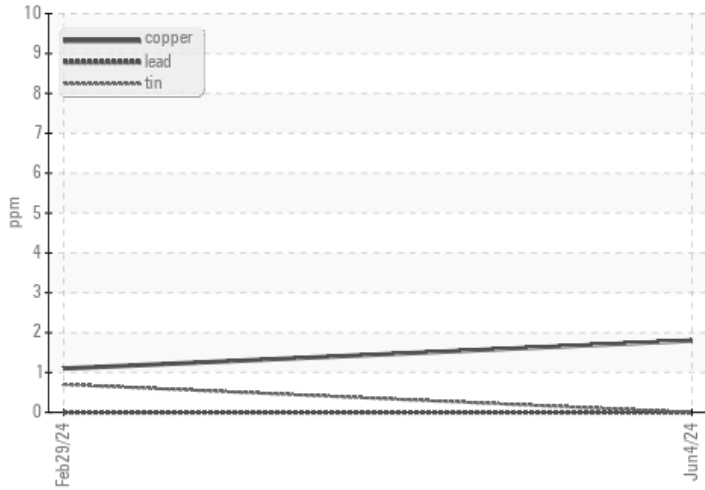


GRAPHS

Ferrous Alloys



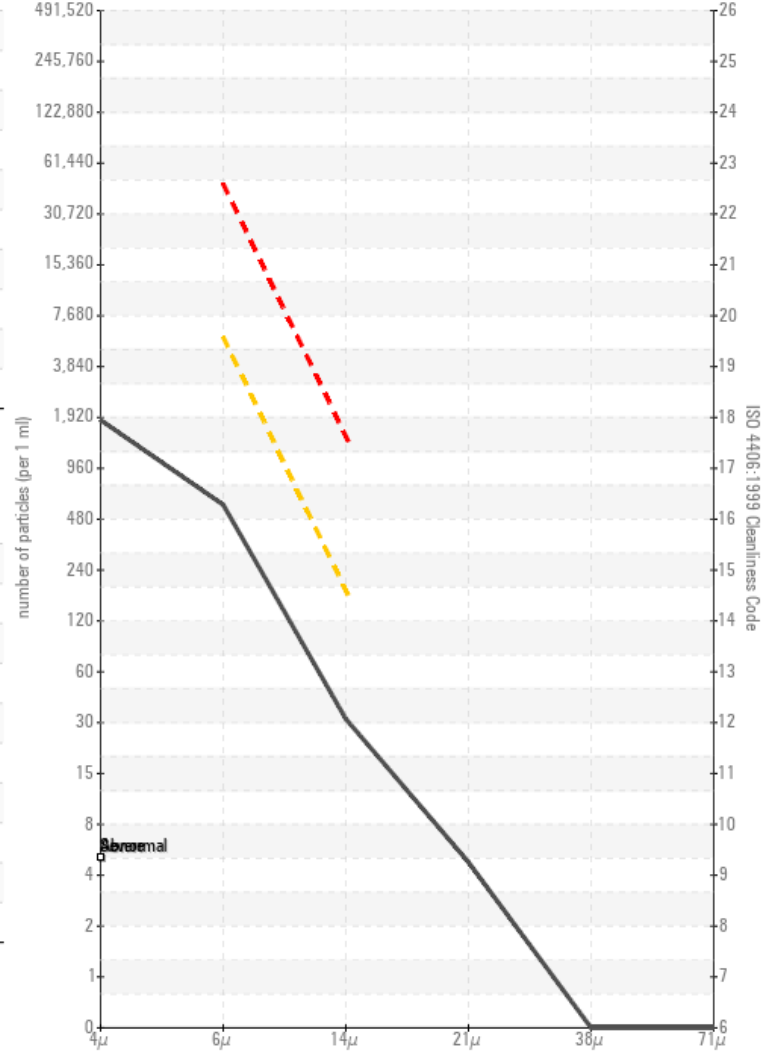
Non-ferrous Metals



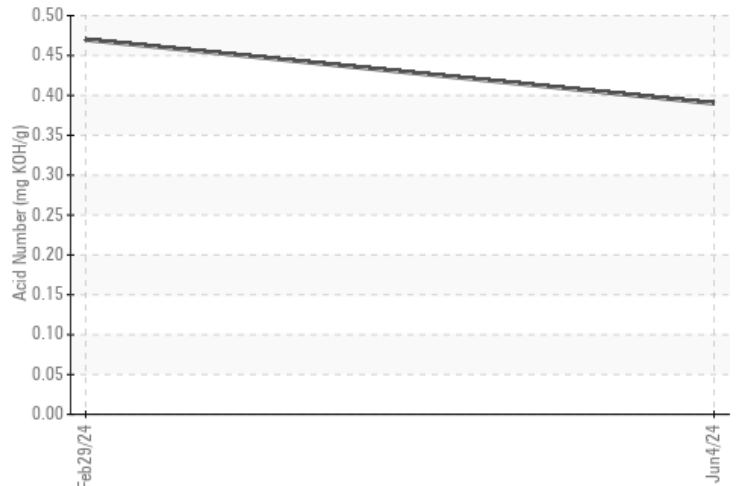
Viscosity @ 40°C



Particle Count



Acid Number





CONSTRUCTION EQUIPMENT

VOLVO A45G 752059 - FRONT AXLE



Sample No: VCP449996
Oil Type: VOLVO PREMIUM GEAR OIL 85W-140 GL-5
Job No:



SAMPLE INFORMATION

Sample Number	VCP449996	---	---	---
Sample Date	04 Jun 2024	---	---	---
Machine Hours	1204	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Changed	---	---	---
Sample Status	ATTENTION	---	---	---

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OIL CONDITION

Visc @ 40°C	cSt	52.7	---	---	---
-------------	-----	------	-----	-----	-----



CONTAMINATION

Water	%	NEG	---	---	---
Silicon	ppm	4	---	---	---
Sodium	ppm	3	---	---	---
Potassium	ppm	5	---	---	---



WEAR METALS

Iron	ppm	166	---	---	---
Copper	ppm	4	---	---	---
Lead	ppm	3	---	---	---
Tin	ppm	1	---	---	---
Aluminum	ppm	<1	---	---	---
Chromium	ppm	2	---	---	---
Molybdenum	ppm	7	---	---	---
Nickel	ppm	<1	---	---	---
Titanium	ppm	0	---	---	---
Silver	ppm	0	---	---	---
Manganese	ppm	7	---	---	---
Vanadium	ppm	0	---	---	---



ADDITIVES

Calcium	ppm	131	---	---	---
Magnesium	ppm	1	---	---	---
Zinc	ppm	39	---	---	---
Phosphorus	ppm	2117	---	---	---
Barium	ppm	0	---	---	---
Boron	ppm	237	---	---	---

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.

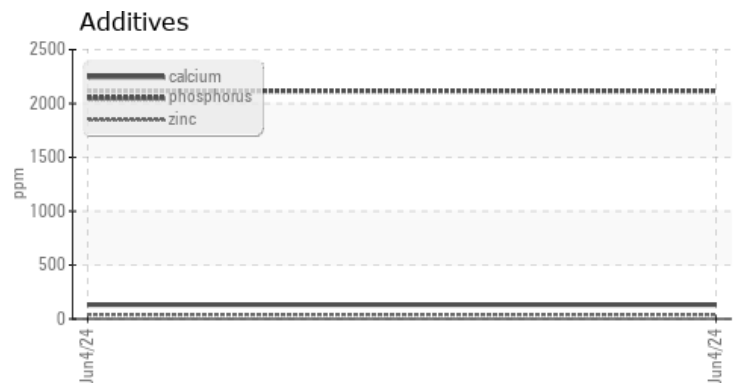
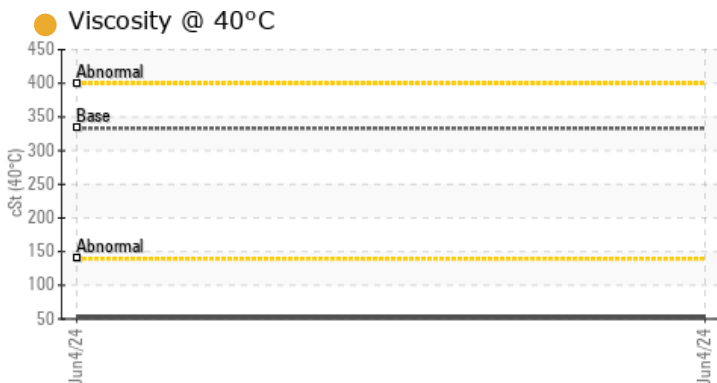
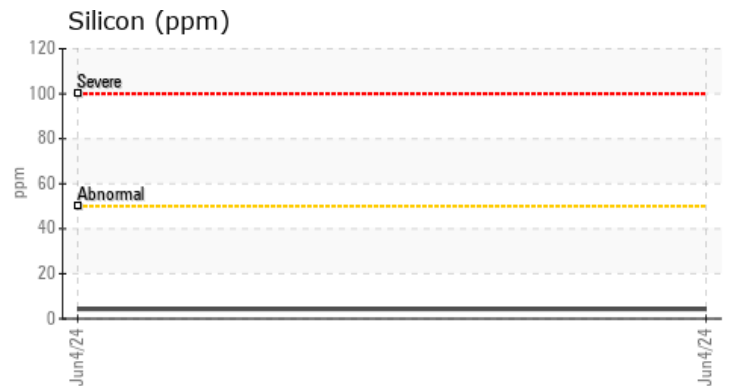
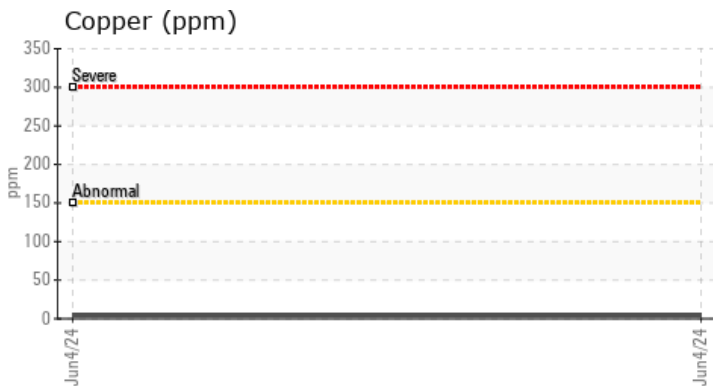
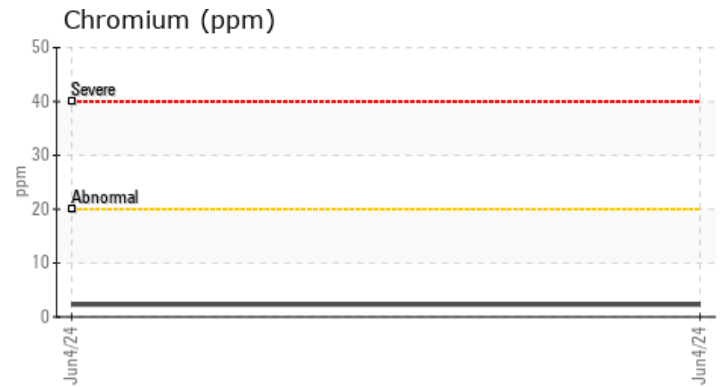
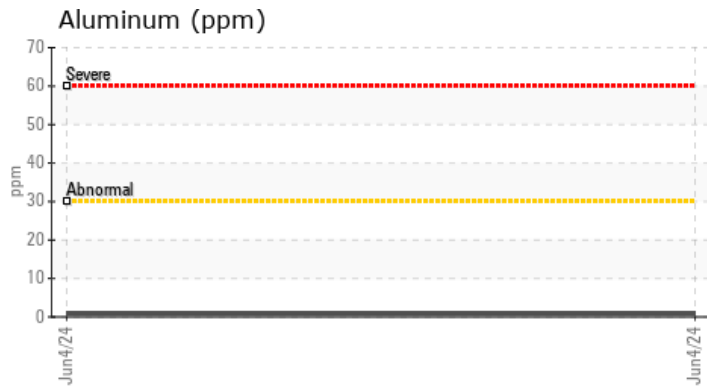
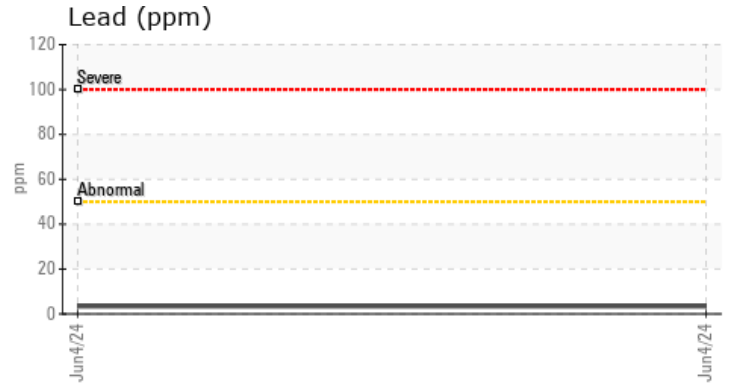
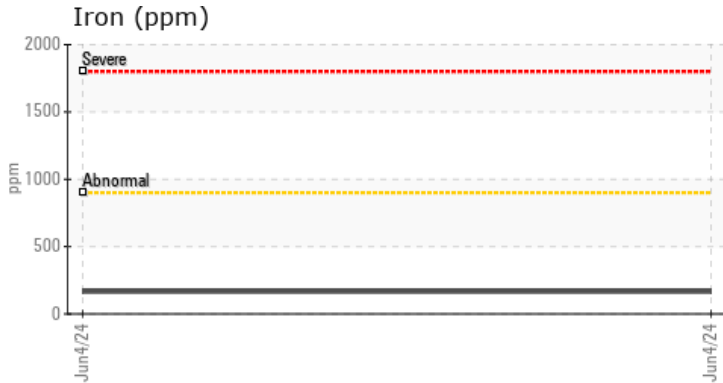
Depot: VOLVO0090
Unique No: 11074377
Signed: Don Baldrige
Report Date: 13 Jun 2024



CONSTRUCTION EQUIPMENT



GRAPHS





CONSTRUCTION EQUIPMENT

VOLVO A45G 752059 - BOGIE/CENTER AXLE



Sample No: VCP447746
Oil Type: VOLVO PREMIUM GEAR OIL 85W-140 GL-5
Job No:



SAMPLE INFORMATION

Sample Number	VCP447746	---	---	---
Sample Date	04 Jun 2024	---	---	---
Machine Hours	1204	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Changed	---	---	---
Sample Status	ATTENTION	---	---	---

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 US 33905
 Contact: TODD LARK
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OIL CONDITION

Visc @ 40°C	cSt	52.5	---	---	---
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CONTAMINATION

Water	%	NEG	---	---	---
Silicon	ppm	5	---	---	---
Sodium	ppm	3	---	---	---
Potassium	ppm	5	---	---	---



WEAR METALS

Iron	ppm	160	---	---	---
Copper	ppm	4	---	---	---
Lead	ppm	4	---	---	---
Tin	ppm	2	---	---	---
Aluminum	ppm	<1	---	---	---
Chromium	ppm	2	---	---	---
Molybdenum	ppm	7	---	---	---
Nickel	ppm	<1	---	---	---
Titanium	ppm	0	---	---	---
Silver	ppm	0	---	---	---
Manganese	ppm	7	---	---	---
Vanadium	ppm	0	---	---	---



ADDITIVES

Calcium	ppm	137	---	---	---
Magnesium	ppm	2	---	---	---
Zinc	ppm	45	---	---	---
Phosphorus	ppm	2080	---	---	---
Barium	ppm	0	---	---	---
Boron	ppm	229	---	---	---

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.

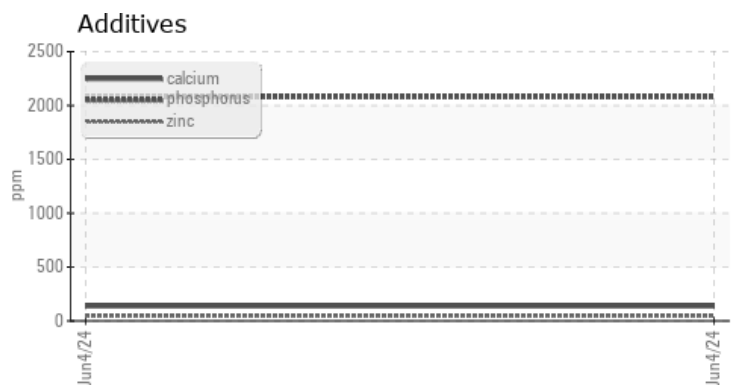
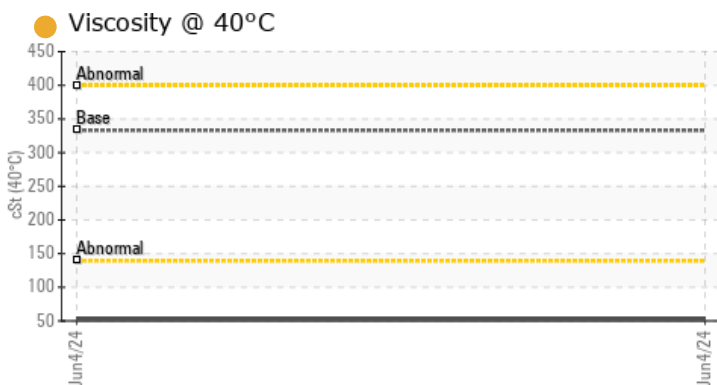
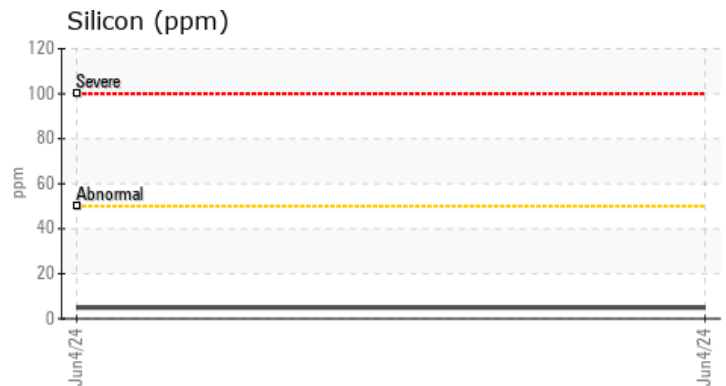
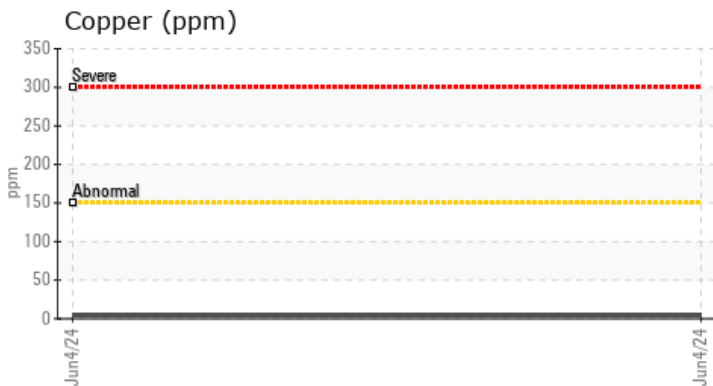
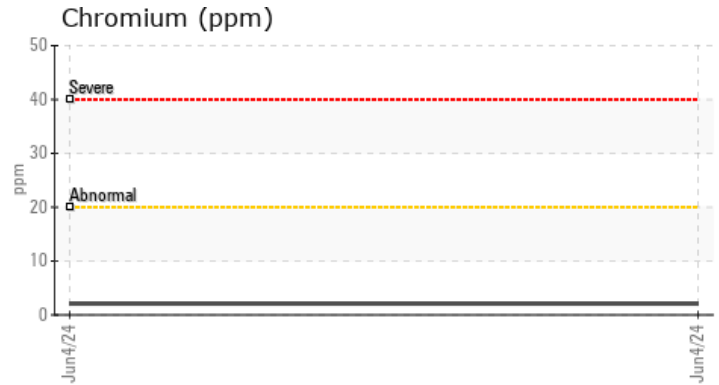
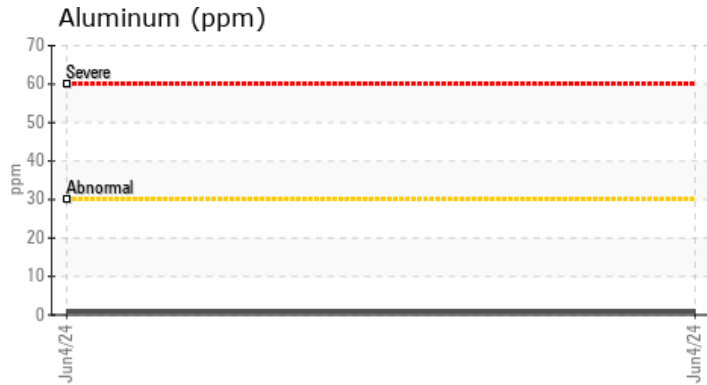
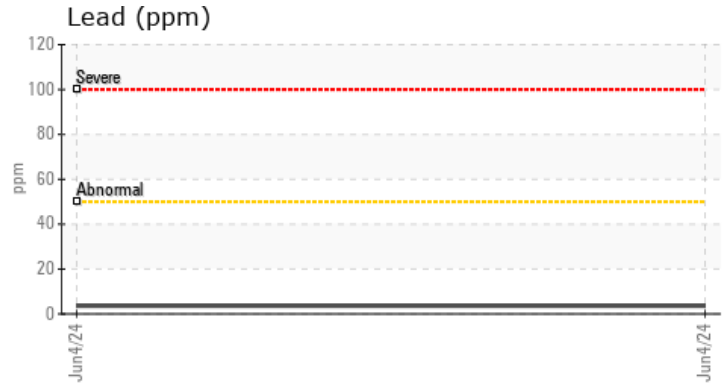
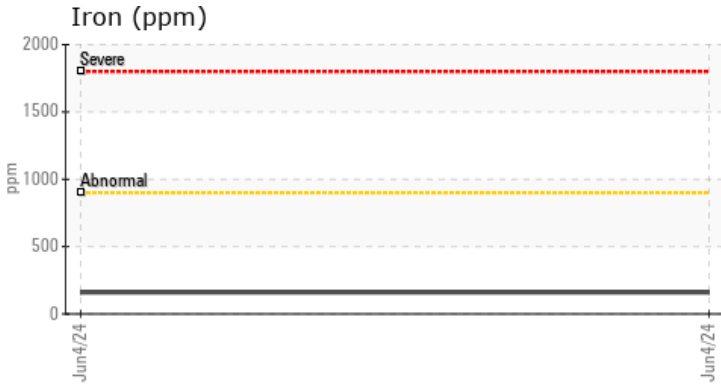
Depot: VOLVO0090
Unique No: 11074374
Signed: Don Baldrige
Report Date: 13 Jun 2024



CONSTRUCTION EQUIPMENT



GRAPHS





CONSTRUCTION EQUIPMENT

VOLVO A45G 752059 - REAR AXLE



Sample No: VCP436687
Oil Type: VOLVO PREMIUM GEAR OIL 85W-140 GL-5
Job No:



SAMPLE INFORMATION

Sample Number	VCP436687	---	---	---
Sample Date	04 Jun 2024	---	---	---
Machine Hours	1204	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Changed	---	---	---
Sample Status	ATTENTION	---	---	---

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 US 33905
 Contact: TODD LARK
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OIL CONDITION

Visc @ 40°C	cSt	● 52.3	---	---	---
-------------	-----	--------	-----	-----	-----



CONTAMINATION

Water	%	NEG	---	---	---
Silicon	ppm	■ 4	---	---	---
Sodium	ppm	■ 3	---	---	---
Potassium	ppm	■ 6	---	---	---



WEAR METALS

Iron	ppm	■ 121	---	---	---
Copper	ppm	■ 4	---	---	---
Lead	ppm	■ 3	---	---	---
Tin	ppm	■ 1	---	---	---
Aluminum	ppm	■ <1	---	---	---
Chromium	ppm	■ 2	---	---	---
Molybdenum	ppm	■ 9	---	---	---
Nickel	ppm	■ <1	---	---	---
Titanium	ppm	0	---	---	---
Silver	ppm	0	---	---	---
Manganese	ppm	■ 10	---	---	---
Vanadium	ppm	0	---	---	---



ADDITIVES

Calcium	ppm	■ 145	---	---	---
Magnesium	ppm	■ 2	---	---	---
Zinc	ppm	■ 43	---	---	---
Phosphorus	ppm	■ 2149	---	---	---
Barium	ppm	■ 0	---	---	---
Boron	ppm	■ 273	---	---	---

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.

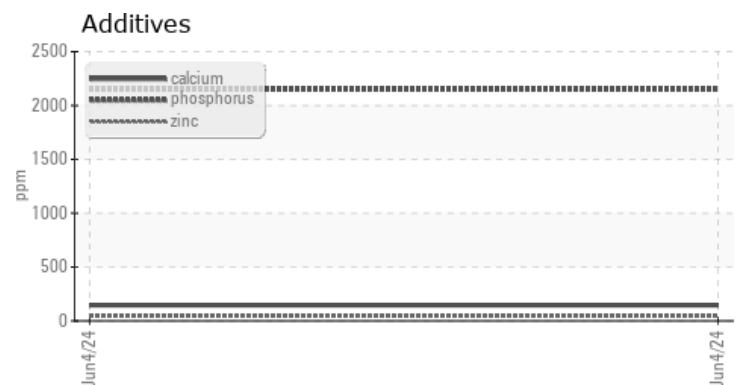
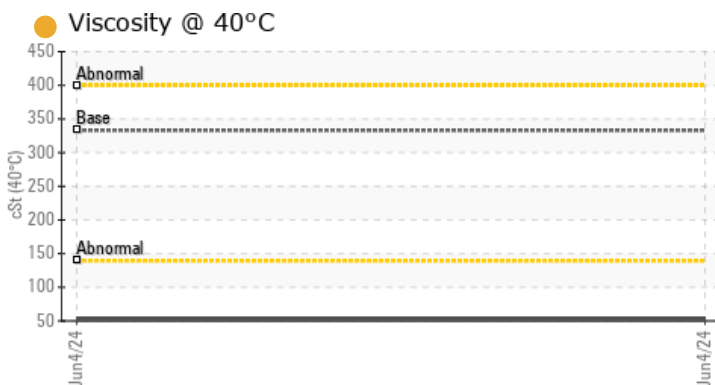
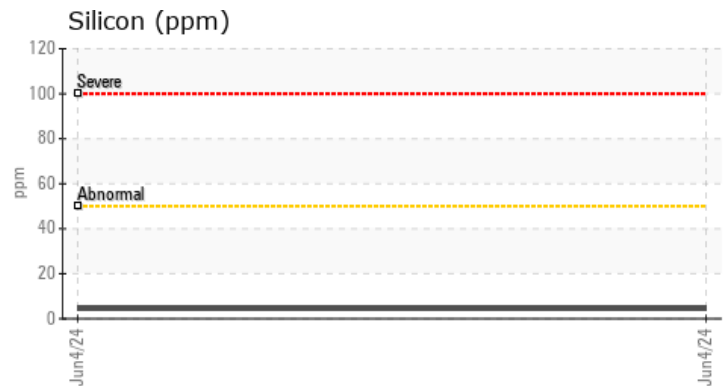
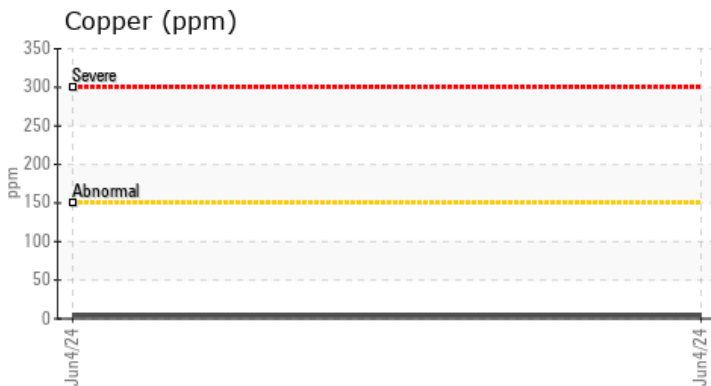
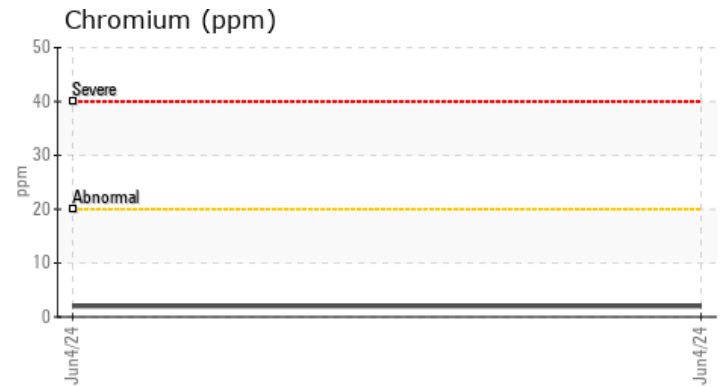
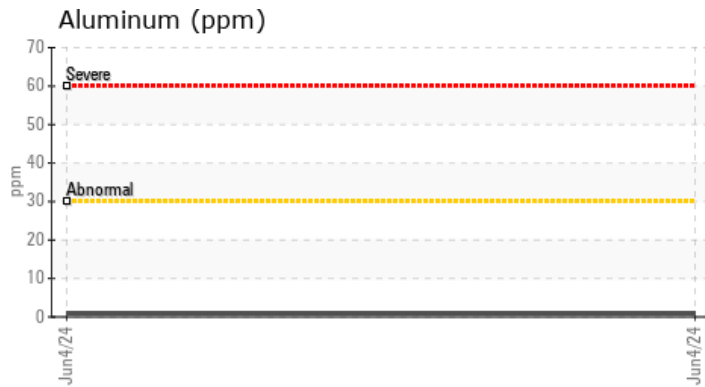
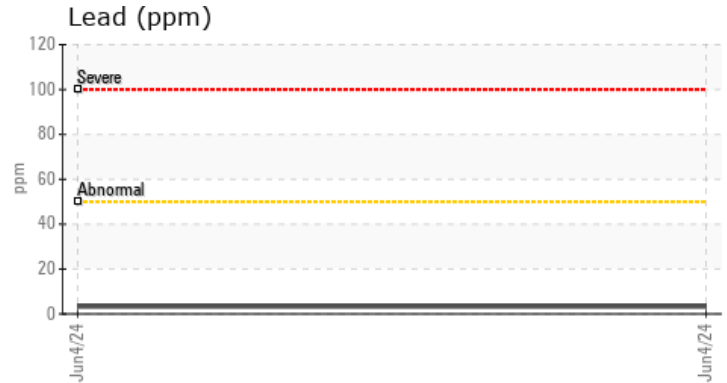
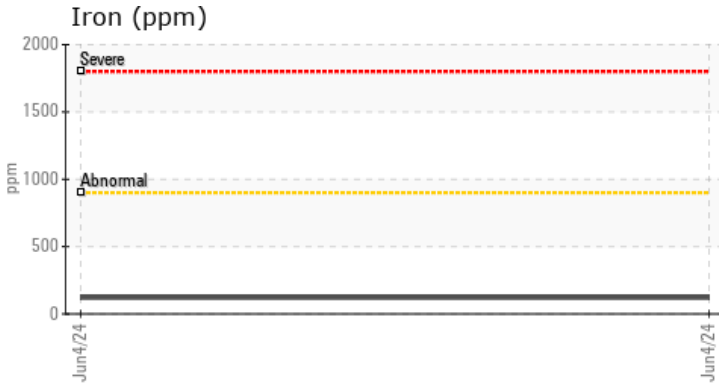
Depot: VOLVO0090
Unique No: 11074378
Signed: Don Baldrige
Report Date: 13 Jun 2024



CONSTRUCTION EQUIPMENT



GRAPHS





CONSTRUCTION EQUIPMENT

VOLVO A45G 752059 - DROP BOX



Sample No: VCP449984
Oil Type: VOLVO PREMIUM GEAR OIL 85W-140 GL-5
Job No:



SAMPLE INFORMATION

Sample Number	VCP449984	---	---	---
Sample Date	04 Jun 2024	---	---	---
Machine Hours	1204	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Changed	---	---	---
Sample Status	ATTENTION	---	---	---

ALTA EQUIPMENT COMPANY
 5151 DR MARTIN LUTHER KING BLVD
 FORT MYERS, FL
 US 33905
 Contact: TODD LARK
 tlark@altaequipfl.com
 T:
 F: (239)481-3302



OIL CONDITION

Visc @ 40°C	cSt	● 49.9	---	---	---
-------------	-----	--------	-----	-----	-----



CONTAMINATION

Water	%	NEG	---	---	---
Silicon	ppm	■ 27	---	---	---
Sodium	ppm	■ 8	---	---	---
Potassium	ppm	■ 5	---	---	---



WEAR METALS

Iron	ppm	■ 321	---	---	---
Copper	ppm	■ 18	---	---	---
Lead	ppm	■ 3	---	---	---
Tin	ppm	■ 2	---	---	---
Aluminum	ppm	■ <1	---	---	---
Chromium	ppm	■ 2	---	---	---
Molybdenum	ppm	■ 8	---	---	---
Nickel	ppm	■ 2	---	---	---
Titanium	ppm	0	---	---	---
Silver	ppm	0	---	---	---
Manganese	ppm	■ 8	---	---	---
Vanadium	ppm	0	---	---	---



ADDITIVES

Calcium	ppm	■ 64	---	---	---
Magnesium	ppm	■ 2	---	---	---
Zinc	ppm	■ 85	---	---	---
Phosphorus	ppm	1883	---	---	---
Barium	ppm	■ 0	---	---	---
Boron	ppm	■ 94	---	---	---

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: VOLVO0090
Unique No: 11074371
Signed: Don Baldrige
Report Date: 13 Jun 2024

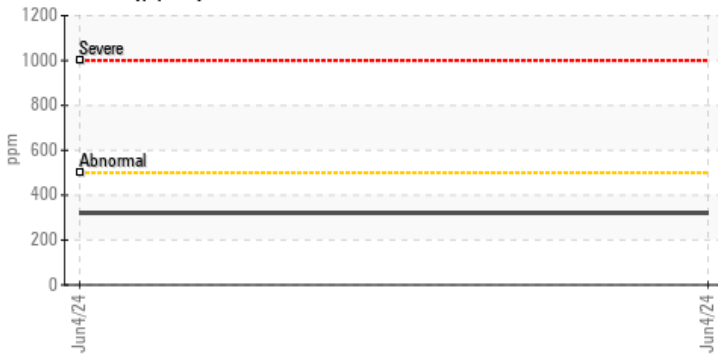


CONSTRUCTION EQUIPMENT

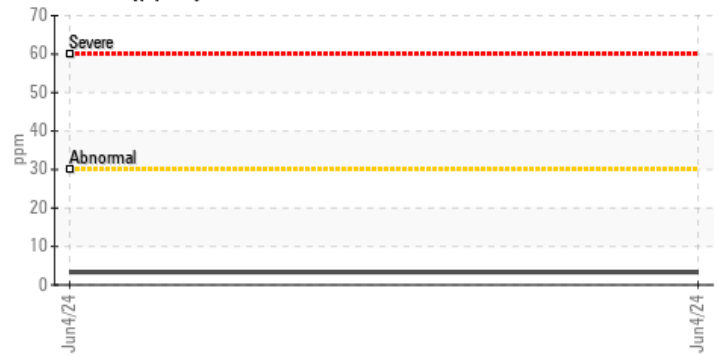


GRAPHS

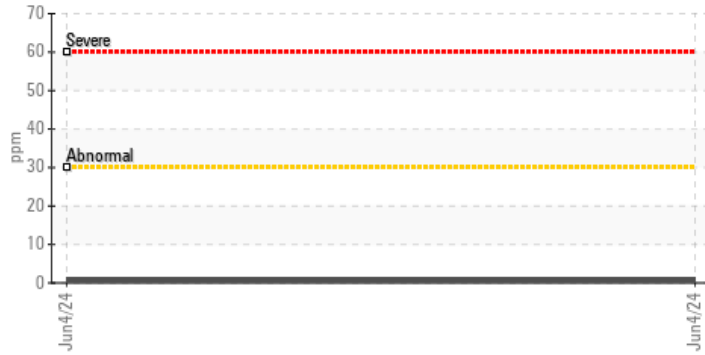
Iron (ppm)



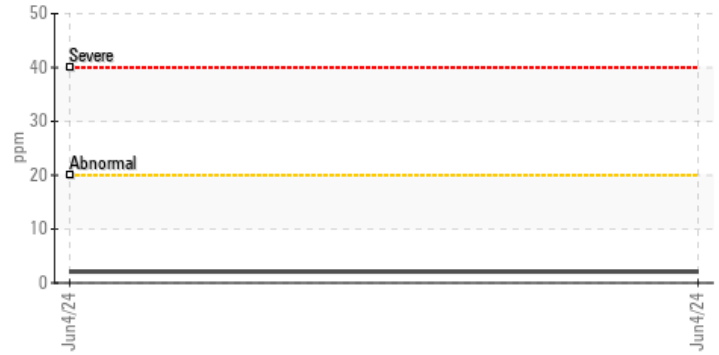
Lead (ppm)



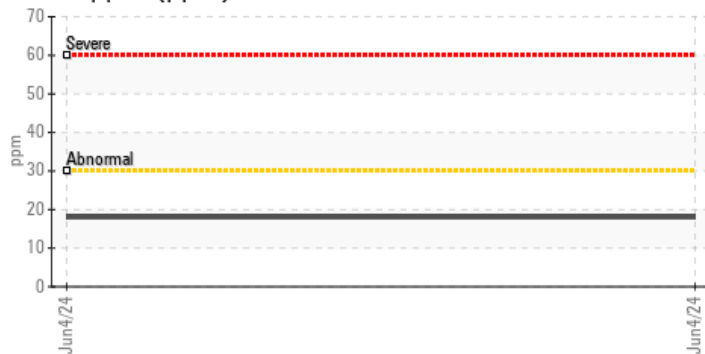
Aluminum (ppm)



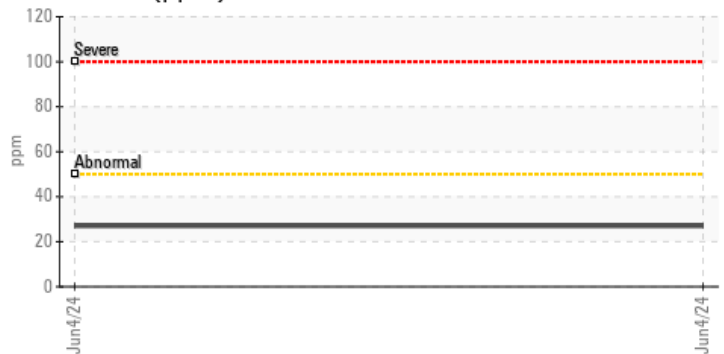
Chromium (ppm)



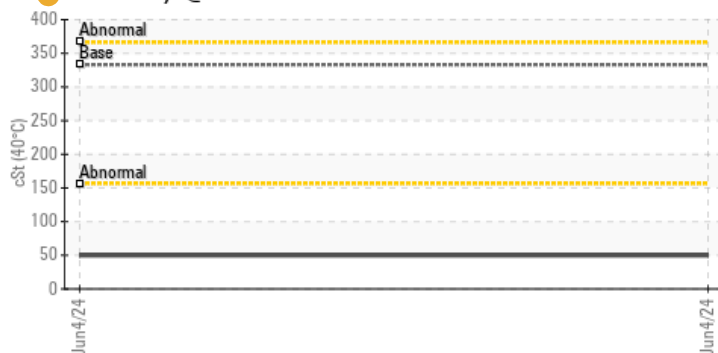
Copper (ppm)



Silicon (ppm)



● Viscosity @ 40°C



Additives

