



CONSTRUCTION EQUIPMENT

VOLVO EC300EL 313148 - COOLANT



Sample No: VCP437550
Oil Type: VOLVO COOLANT VCS (YELLOW)
Job No:



SAMPLE INFORMATION

Sample Number	VCP437550	---	---	---
Sample Date	14 May 2024	---	---	---
Machine Hours	7144	---	---	---
Sample Status	NORMAL	---	---	---

CITY CARTING
 221 OLD GATE LN
 MILFORD, CT
 US 06460
 Contact: TAVINS BANKS
 tavins@citycart.net
 T: (203)223-3885
 F:



COOLANT CONDITION

pH	Scale 0-14	■ 7.74	---	---	---
Reserve Alkalinity	Scale 0-20	---	---	---	---
Nitrites	ppm	■ NT	---	---	---
Percentage Glycol	%	■ 51.2	---	---	---
Freezing Point	°C	■ -38	---	---	---

Diagnosis

No corrective action is recommended at this time. The fluid is suitable for further service. There is no indication of any contamination in the coolant. Carboxylate test failed. The glycol level is acceptable. The pH level of this fluid is within the acceptable limits.



CONTAMINATION

Coolant Appearance	normal	---	---	---
Coolant Color	Orange	---	---	---

Depot: CITMILCON
Unique No: 11056715
Signed: Jonathan Hester
Report Date: 03 Jun 2024



CONSTRUCTION EQUIPMENT

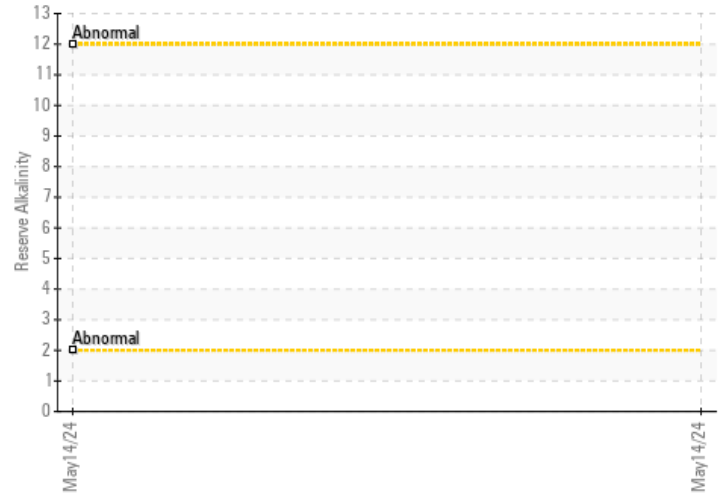


GRAPHS

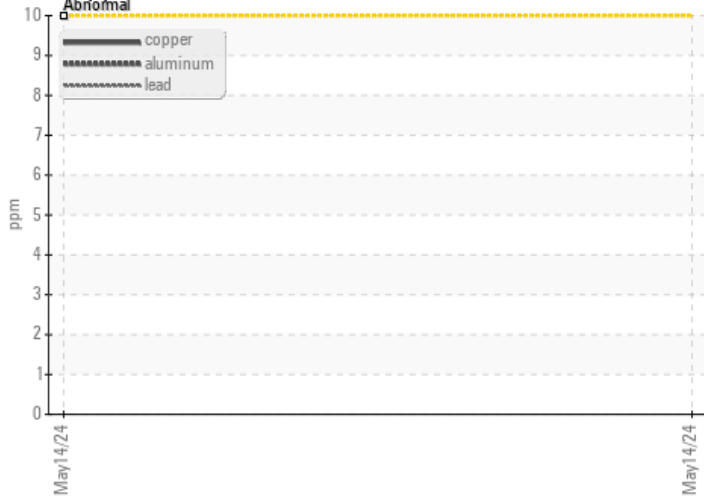
Iron/Tin/Silver



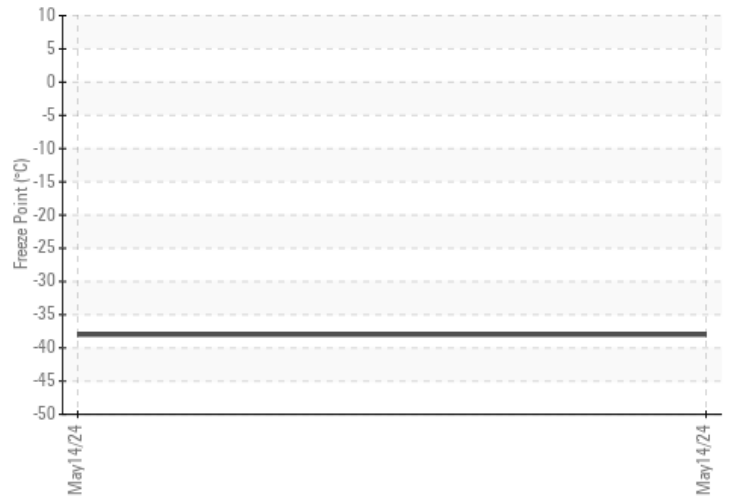
Reserve Alkalinity



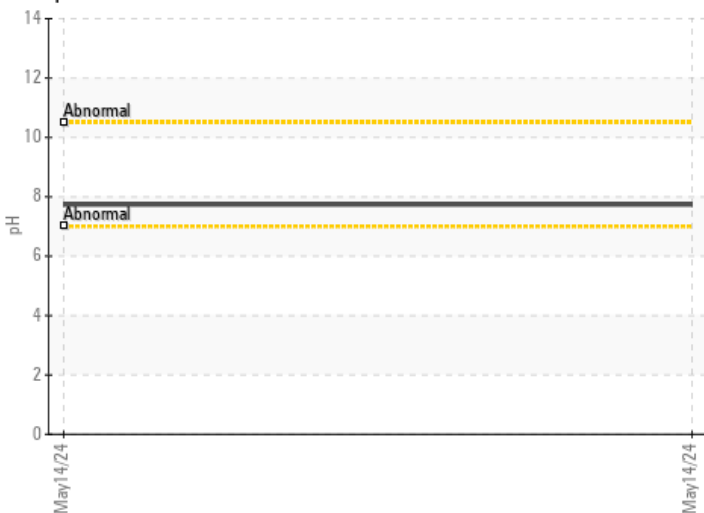
Copper/Aluminum/Lead



Freeze Point



pH



Nitrites





CONSTRUCTION EQUIPMENT

VOLVO EC300EL 313148 - DIESEL ENGINE



Sample No: VCP437546
Oil Type: VALVOLINE 15W40
Job No:



SAMPLE INFORMATION

Sample Number	VCP437546	VCP432584	VCP412084	VCP294682
Sample Date	14 May 2024	28 Feb 2024	25 Oct 2023	15 Feb 2021
Machine Hours	7144	6788	6401	1909
Oil Hours	0	0	292	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	ATTENTION

CITY CARTING
 221 OLD GATE LN
 MILFORD, CT
 US 06460
 Contact: TAVINS BANKS
 tavins@citycart.net
 T: (203)223-3885
 F:



OIL CONDITION

Visc @ 100°C	cSt	12.4	12.4	13.0	11.2
Base Number (BN)	mg KOH/g	6.5	6.9	7.2	---
Oxidation (PA)	%	39	37	47	45

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 %	%	0.1	0.1	0.1	0.1
Nitration (PA)	%	57	53	53	62
Sulfation (PA)	%	47	44	47	51
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	0.3
Silicon	ppm	12	12	13	10
Sodium	ppm	3	0	1	2
Potassium	ppm	4	3	1	3



WEAR METALS

Iron	ppm	8	6	5	9
Copper	ppm	3	1	<1	1
Lead	ppm	<1	<1	0	<1
Tin	ppm	<1	<1	0	<1
Aluminum	ppm	5	3	3	5
Chromium	ppm	1	<1	0	<1
Molybdenum	ppm	35	46	50	46
Nickel	ppm	<1	<1	0	<1
Titanium	ppm	<1	<1	0	0
Silver	ppm	1	<1	0	0
Manganese	ppm	<1	<1	<1	0
Vanadium	ppm	<1	<1	0	0



ADDITIVES

Calcium	ppm	1979	2091	1723	2131
Magnesium	ppm	172	170	268	163
Zinc	ppm	1008	1038	959	1048
Phosphorus	ppm	867	914	871	893
Barium	ppm	0	0	4	0
Boron	ppm	30	29	30	28

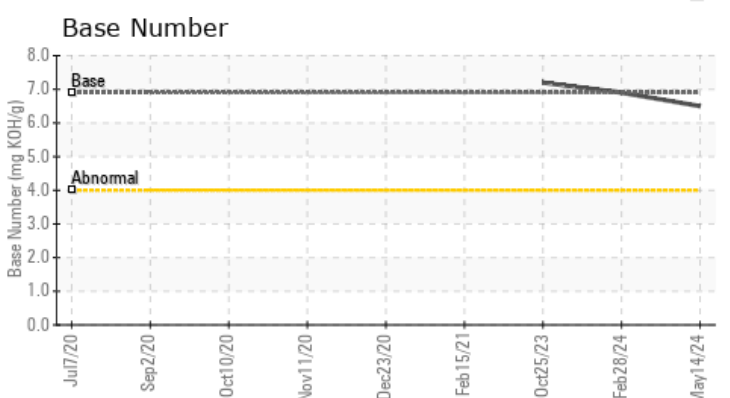
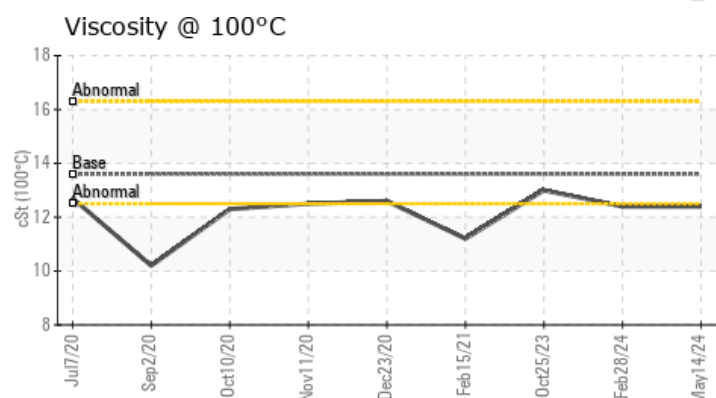
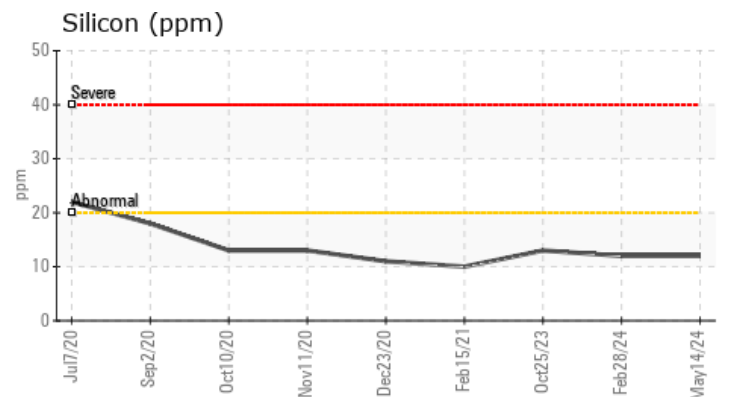
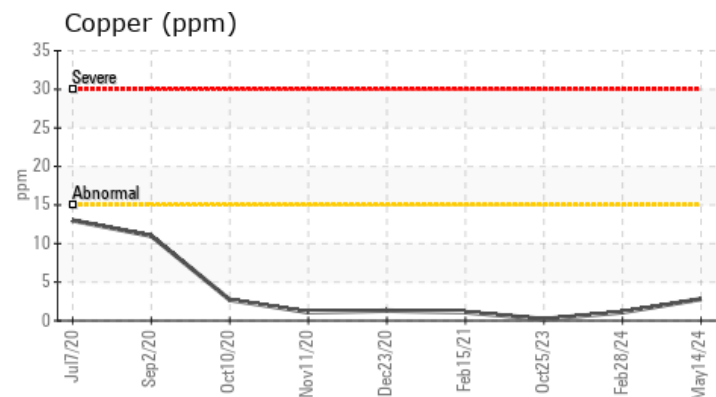
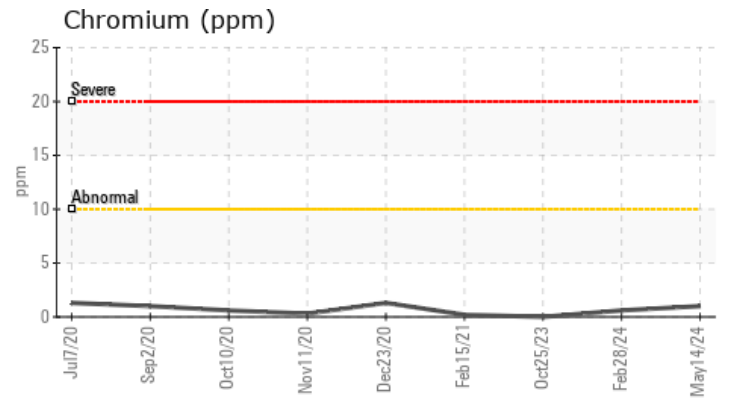
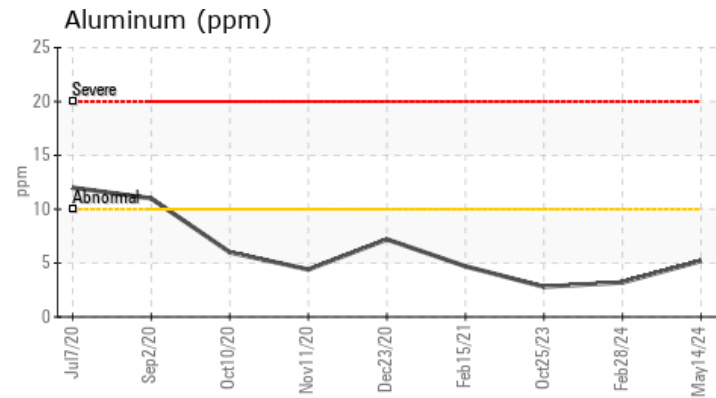
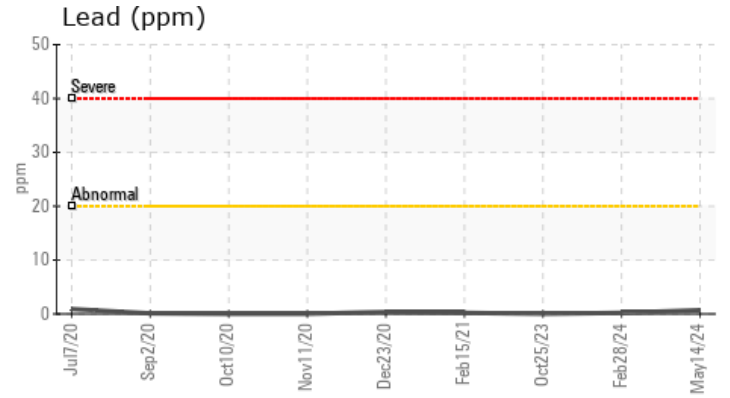
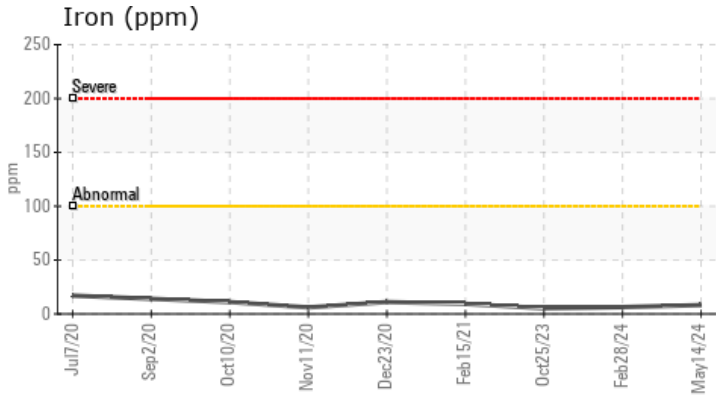
Depot: CITMILCON
Unique No: 11050422
Signed: Wes Davis
Report Date: 30 May 2024



CONSTRUCTION EQUIPMENT



VOLVO GRAPHS





CONSTRUCTION EQUIPMENT

VOLVO EC300EL 3 13 148 - HYDRAULIC SYSTEM



Sample No: VCP437549
Oil Type: VALVOLINE HD SUPER 10W
Job No:



SAMPLE INFORMATION

Sample Number	VCP437549	VCP281613	---	---
Sample Date	14 May 2024	11 Nov 2020	---	---
Machine Hours	7144	1161	---	---
Oil Hours	0	0	---	---
Oil Changed	Not Chngd	Not Chngd	---	---
Sample Status	NORMAL	NORMAL	---	---

CITY CARTING
 221 OLD GATE LN
 MILFORD, CT
 US 06460
 Contact: TAVINS BANKS
 tavins@citycart.net
 T: (203)223-3885
 F:



OIL CONDITION

Visc @ 40°C	cSt	42.3	86.3	---	---
Acid Number (AN)	mg KOH/g	0.58	1.758	---	---



CONTAMINATION

Water	%	NEG	NEG	---	---
Particles >4µm		28969	10753	---	---
Particles >6µm		2703	3196	---	---
Particles >14µm		77	383	---	---
ISO 4406:1999 (c)		22/19/13	21/19/16	---	---
Silicon	ppm	3	6	---	---
Sodium	ppm	2	<1	---	---
Potassium	ppm	2	<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. 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 acceptable for the time in service.



WEAR METALS

Iron	ppm	3	1	---	---
Copper	ppm	8	0	---	---
Lead	ppm	<1	0	---	---
Tin	ppm	<1	<1	---	---
Aluminum	ppm	<1	<1	---	---
Chromium	ppm	3	<1	---	---
Molybdenum	ppm	8	32	---	---
Nickel	ppm	0	0	---	---
Titanium	ppm	<1	<1	---	---
Silver	ppm	<1	<1	---	---
Manganese	ppm	<1	<1	---	---
Vanadium	ppm	<1	0	---	---



ADDITIVES

Calcium	ppm	733	1977	---	---
Magnesium	ppm	69	114	---	---
Zinc	ppm	499	944	---	---
Phosphorus	ppm	437	844	---	---
Barium	ppm	0	0	---	---
Boron	ppm	7	35	---	---

Depot: CITMILCON
Unique No: 11056037
Signed: Angela Borella
Report Date: 31 May 2024

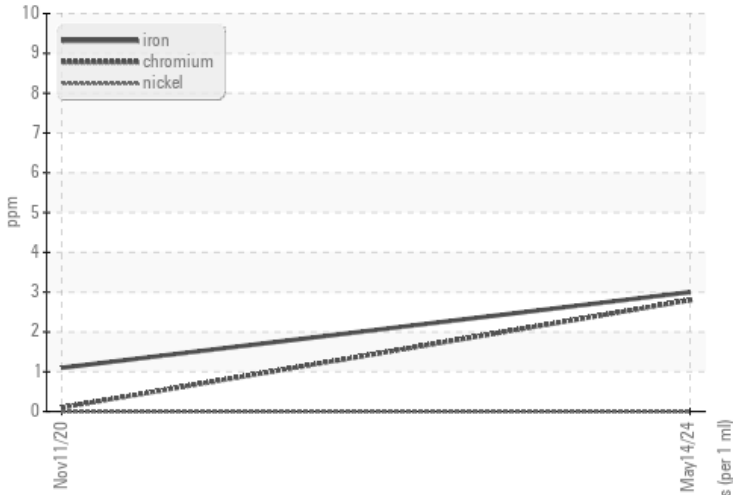


CONSTRUCTION EQUIPMENT

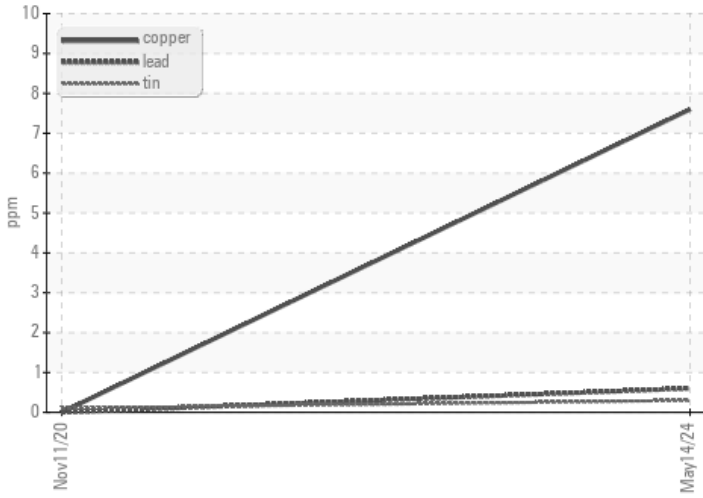


GRAPHS

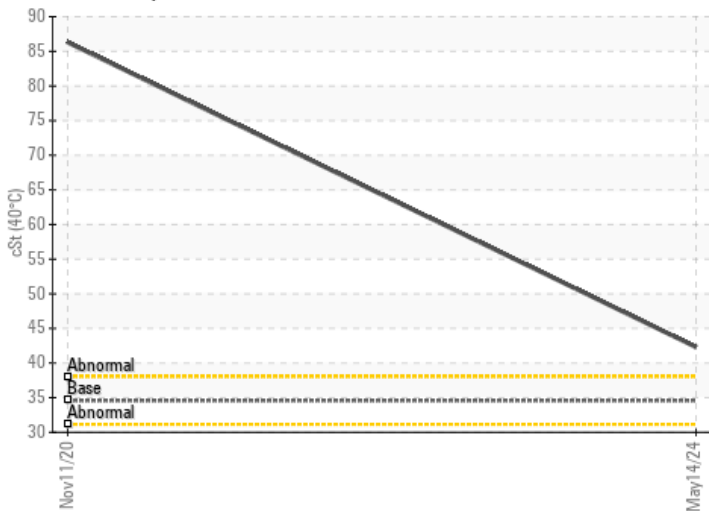
Ferrous Alloys



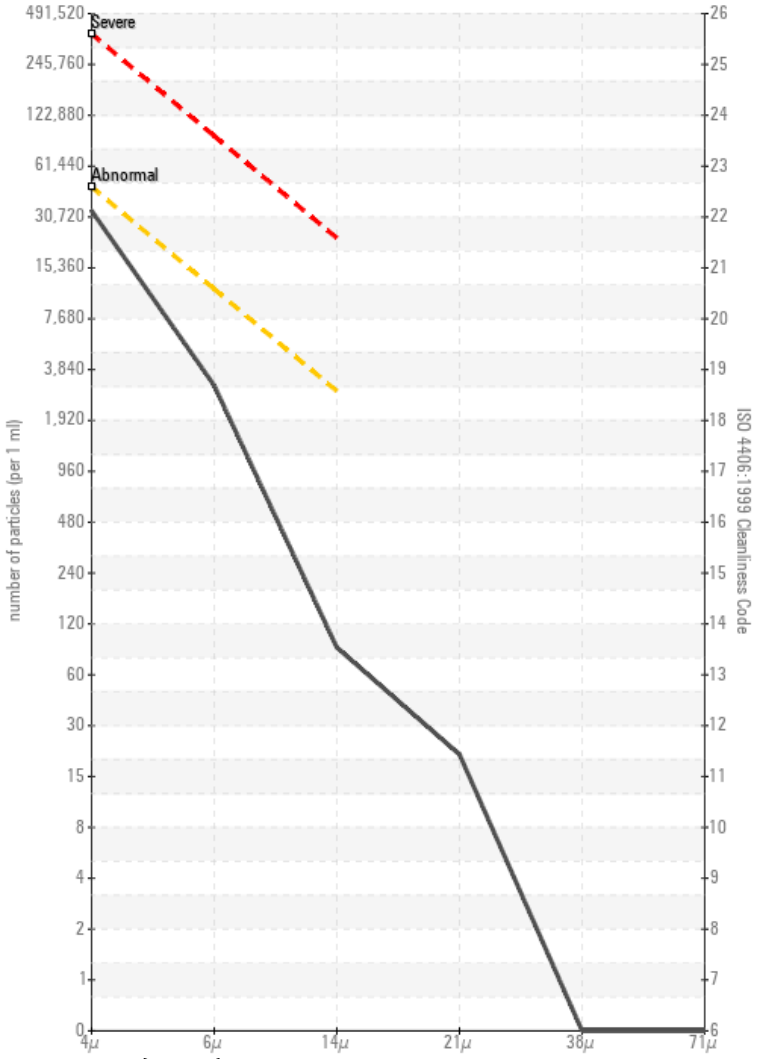
Non-ferrous Metals



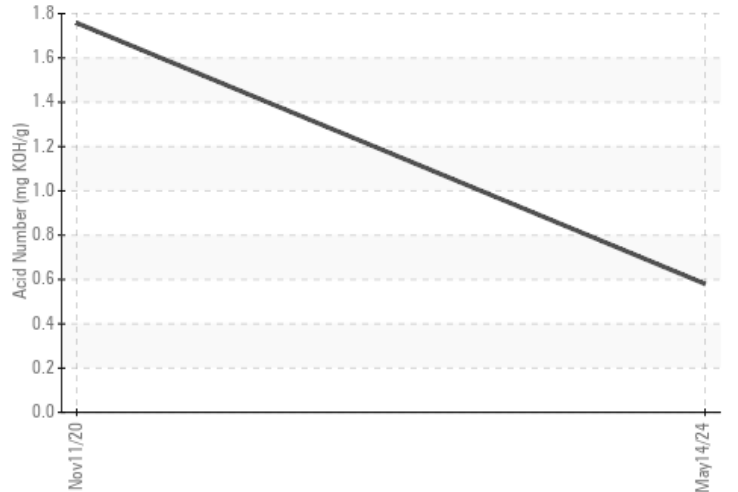
Viscosity @ 40°C



Particle Count



Acid Number





CONSTRUCTION EQUIPMENT

VOLVO EC300EL 313148 - SWING DRIVE



Sample No: VCP437553
Oil Type: VOLVO PREMIUM GEAR OIL 80W-90 GL-5
Job No:



SAMPLE INFORMATION

Sample Number	VCP437553	VCP281589	---	---
Sample Date	14 May 2024	11 Nov 2020	---	---
Machine Hours	7144	1161	---	---
Oil Hours	0	0	---	---
Oil Changed	Changed	Not Chngd	---	---
Sample Status	NORMAL	NORMAL	---	---

CITY CARTING
 221 OLD GATE LN
 MILFORD, CT
 US 06460
 Contact: TAVINS BANKS
 tavins@citycart.net
 T: (203)223-3885
 F:



OIL CONDITION

Visc @ 40°C	cSt	181	178	---	---
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CONTAMINATION

Water	%	NEG	NEG	---	---
Silicon	ppm	8	12	---	---
Sodium	ppm	<1	1	---	---
Potassium	ppm	0	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	245	282	---	---
Copper	ppm	3	10	---	---
Lead	ppm	0	<1	---	---
Tin	ppm	0	0	---	---
Aluminum	ppm	0	<1	---	---
Chromium	ppm	3	5	---	---
Molybdenum	ppm	0	0	---	---
Nickel	ppm	0	<1	---	---
Titanium	ppm	0	<1	---	---
Silver	ppm	0	<1	---	---
Manganese	ppm	3	5	---	---
Vanadium	ppm	0	<1	---	---



ADDITIVES

Calcium	ppm	14	13	---	---
Magnesium	ppm	<1	2	---	---
Zinc	ppm	2	12	---	---
Phosphorus	ppm	1697	483	---	---
Barium	ppm	0	1	---	---
Boron	ppm	114	<1	---	---

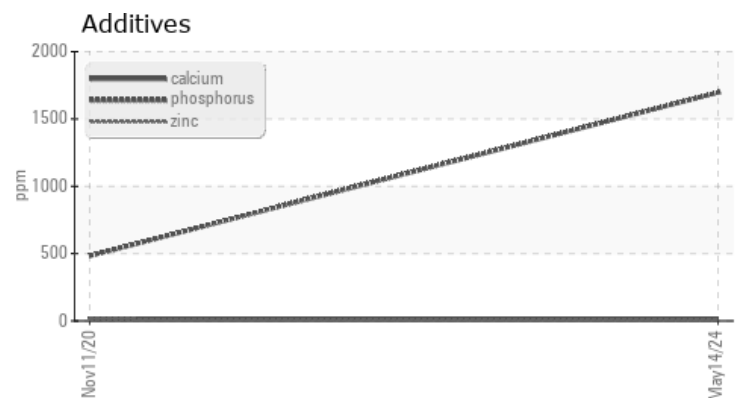
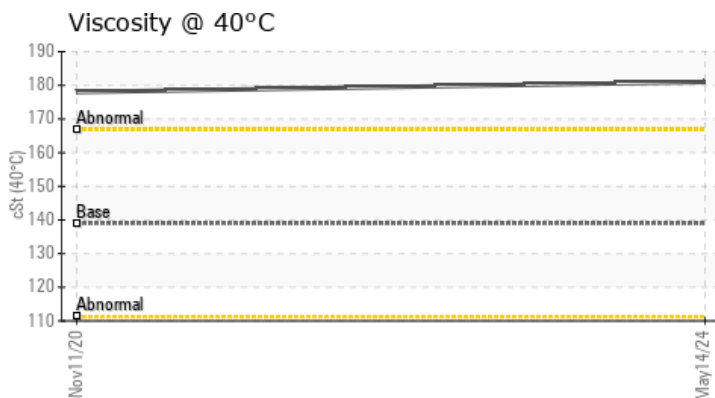
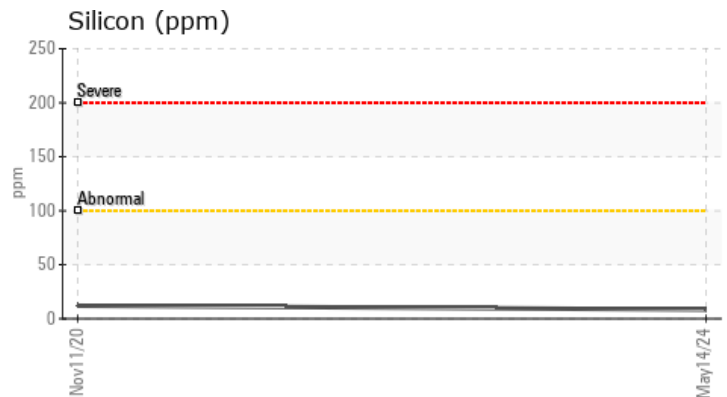
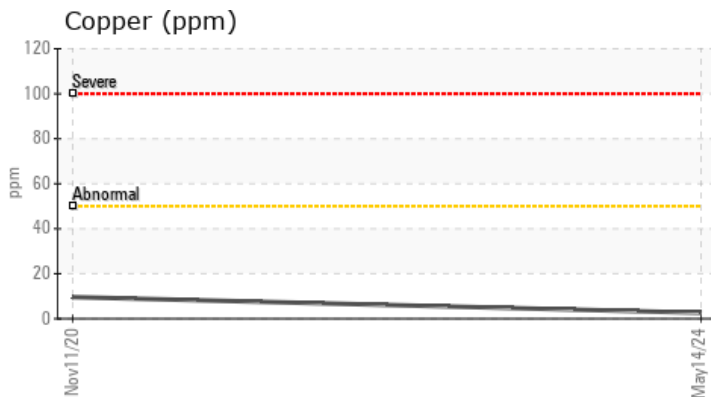
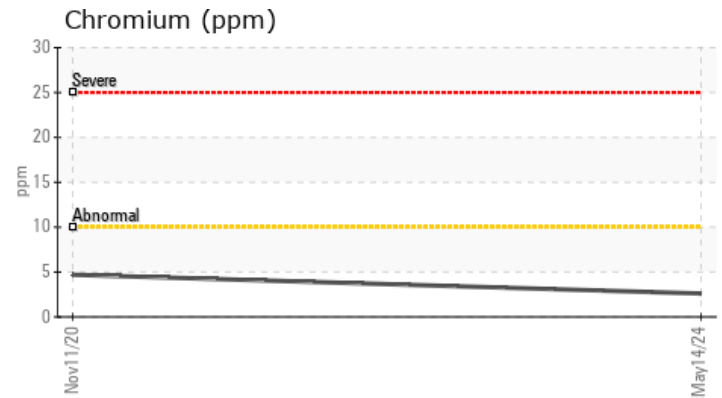
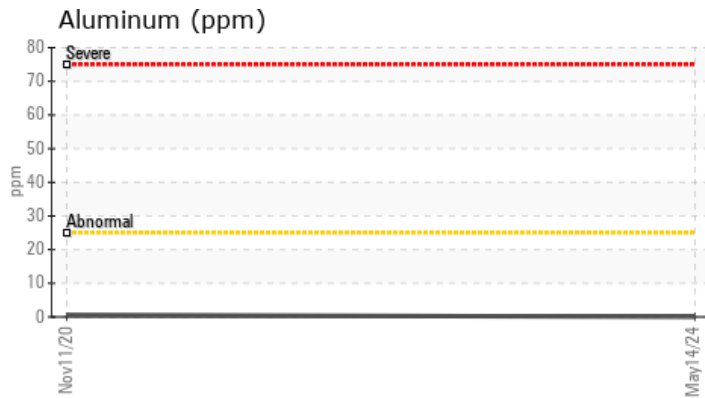
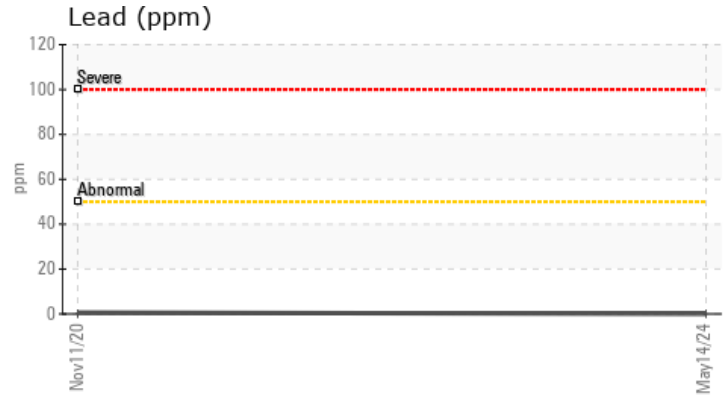
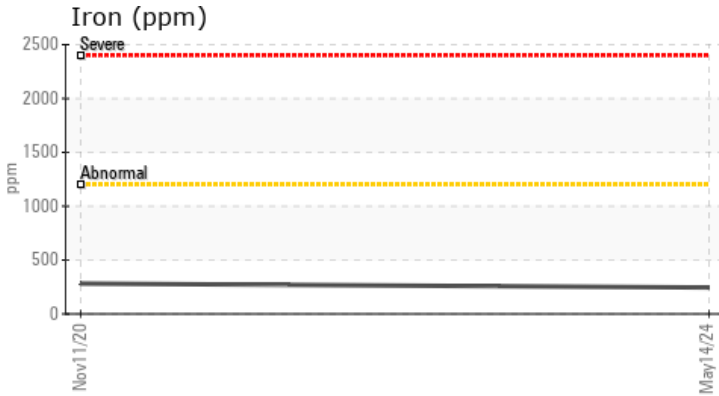
Depot: CITMILCON
Unique No: 11056546
Signed: Don Baldrige
Report Date: 31 May 2024



CONSTRUCTION EQUIPMENT



GRAPHS





CONSTRUCTION EQUIPMENT

VOLVO EC300EL 3 13 148 - REAR LEFT FINAL DRIVE



Sample No: VCP437551
Oil Type: VOLVO PREMIUM GEAR OIL 80W-90 GL-5
Job No:



SAMPLE INFORMATION

Sample Number	VCP437551	---	---	---
Sample Date	14 May 2024	---	---	---
Machine Hours	7144	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Not Changed	---	---	---
Sample Status	NORMAL	---	---	---

CITY CARTING
 221 OLD GATE LN
 MILFORD, CT
 US 06460
 Contact: TAVINS BANKS
 tavins@citycart.net
 T: (203)223-3885
 F:



OIL CONDITION

Visc @ 40°C	cSt	█ 194	---	---	---
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CONTAMINATION

Water	%	NEG	---	---	---
Silicon	ppm	█ 8	---	---	---
Sodium	ppm	█ 2	---	---	---
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	█ 445	---	---	---
Copper	ppm	█ 0	---	---	---
Lead	ppm	█ 0	---	---	---
Tin	ppm	█ 0	---	---	---
Aluminum	ppm	█ 0	---	---	---
Chromium	ppm	█ 9	---	---	---
Molybdenum	ppm	█ 0	---	---	---
Nickel	ppm	█ 0	---	---	---
Titanium	ppm	0	---	---	---
Silver	ppm	0	---	---	---
Manganese	ppm	█ 5	---	---	---
Vanadium	ppm	0	---	---	---



ADDITIVES

Calcium	ppm	█ 14	---	---	---
Magnesium	ppm	█ 0	---	---	---
Zinc	ppm	█ 4	---	---	---
Phosphorus	ppm	█ 1532	---	---	---
Barium	ppm	█ <1	---	---	---
Boron	ppm	█ 67	---	---	---

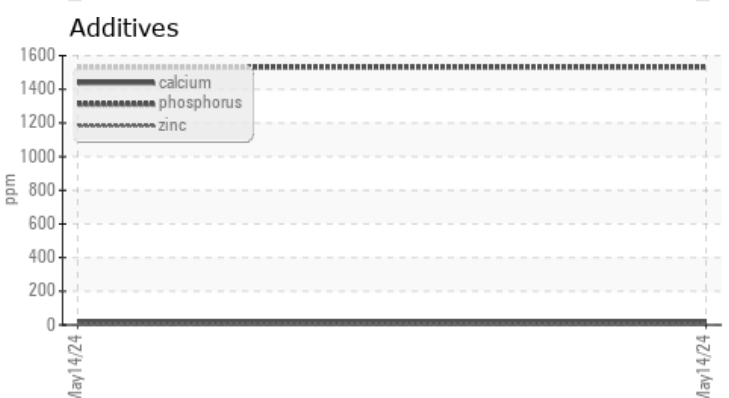
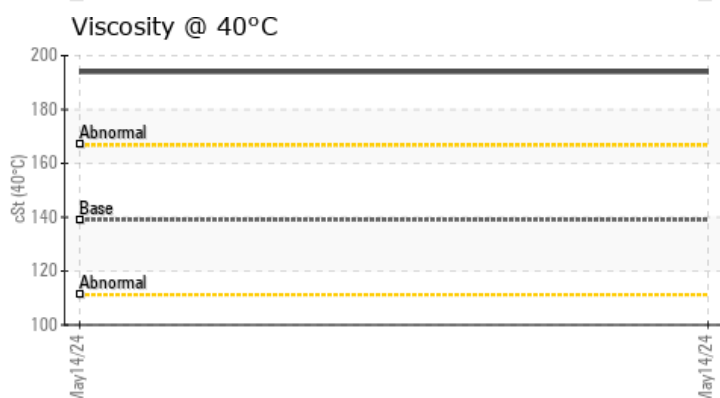
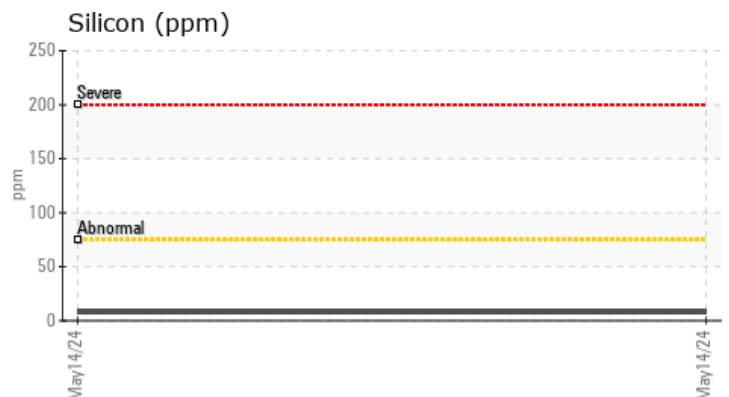
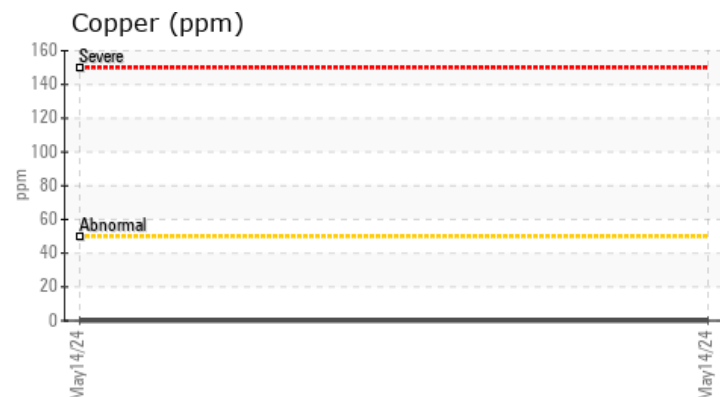
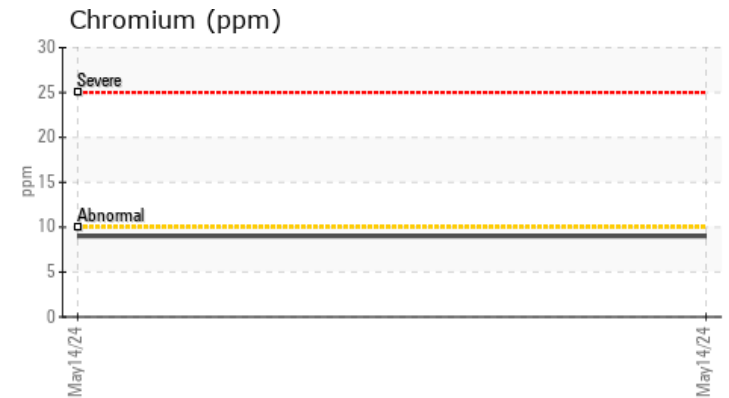
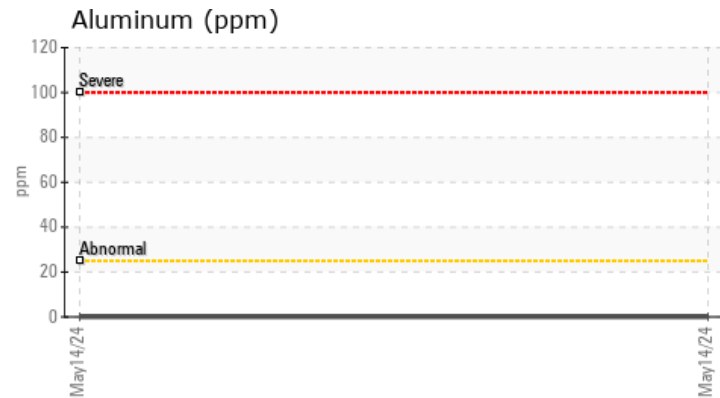
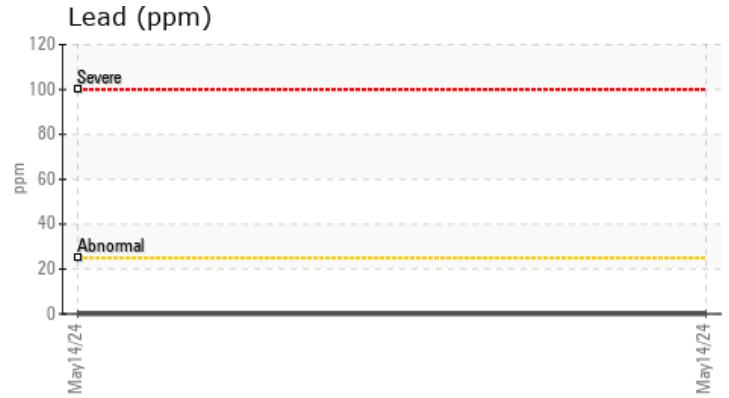
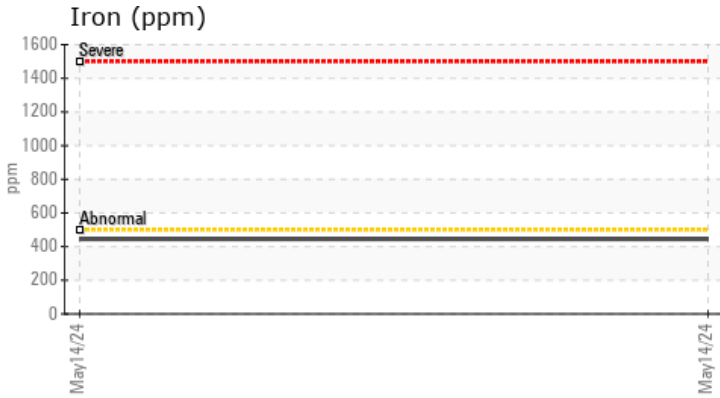
Depot: CITMILCON
Unique No: 11056547
Signed: Don Baldrige
Report Date: 31 May 2024



CONSTRUCTION EQUIPMENT



GRAPHS





CONSTRUCTION EQUIPMENT

VOLVO EC300EL 3 13 148 - REAR RIGHT FINAL DRIVE



Sample No: VCP437552
Oil Type: VOLVO PREMIUM GEAR OIL 80W-90 GL-5
Job No:



SAMPLE INFORMATION

Sample Number	VCP437552	---	---	---
Sample Date	14 May 2024	---	---	---
Machine Hours	7144	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Not Chngd	---	---	---
Sample Status	NORMAL	---	---	---

CITY CARTING
 221 OLD GATE LN
 MILFORD, CT
 US 06460
 Contact: TAVINS BANKS
 tavins@citycart.net
 T: (203)223-3885
 F:



OIL CONDITION

Visc @ 40°C	cSt	█ 184	---	---	---
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CONTAMINATION

Water	%	NEG	---	---	---
Silicon	ppm	█ 7	---	---	---
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	█ 389	---	---	---
Copper	ppm	█ 0	---	---	---
Lead	ppm	█ 0	---	---	---
Tin	ppm	█ 0	---	---	---
Aluminum	ppm	█ 0	---	---	---
Chromium	ppm	█ 8	---	---	---
Molybdenum	ppm	█ 0	---	---	---
Nickel	ppm	█ 0	---	---	---
Titanium	ppm	0	---	---	---
Silver	ppm	0	---	---	---
Manganese	ppm	█ 4	---	---	---
Vanadium	ppm	0	---	---	---



ADDITIVES

Calcium	ppm	█ 17	---	---	---
Magnesium	ppm	█ 1	---	---	---
Zinc	ppm	█ 5	---	---	---
Phosphorus	ppm	█ 1465	---	---	---
Barium	ppm	█ <1	---	---	---
Boron	ppm	█ 66	---	---	---

Depot: CITMILCON
Unique No: 11056548
Signed: Don Baldrige
Report Date: 31 May 2024



CONSTRUCTION EQUIPMENT



GRAPHS

