



# CONSTRUCTION EQUIPMENT

SW1022819 MGC VOLVO L110H 631286 - DIESEL ENGINE



**Sample No:** VCP414447  
**Oil Type:** DIESEL ENGINE OIL SAE 15W40  
**Job No:** SW1022819 MGC



## SAMPLE INFORMATION

Sample Number	<b>VCP414447</b>	VCP346222	VCP308562	VCP267094
Sample Date	<b>23 Aug 2023</b>	18 May 2022	16 Apr 2021	07 Apr 2020
Machine Hours	<b>4459</b>	3940	3421	2937
Oil Hours	<b>0</b>	0	0	0
Oil Changed	<b>Changed</b>	Changed	Changed	Changed
Sample Status	<b>ABNORMAL</b>	NORMAL	NORMAL	NORMAL

**ARNOLD MACHINERY COMPANY**  
 4323 EAST WINSLOW AVENUE  
 PHOENIX, AZ  
 US 85040  
 Contact: RANDY PRZEKURAT  
 randyp@arnoldmachinery.com  
 T:  
 F: (602)414-1904

## OIL CONDITION

Visc @ 100°C	cSt	<b>▲ 11.9</b>	■ 12.9	■ 13.0	■ 13.5
Base Number (BN)	mg KOH/g	<b>■ 9.2</b>	■ 10.9	---	---
Oxidation (PA)	%	<b>59</b>	85	88	84

## CONTAMINATION

Soot %	%	<b>■ 0.3</b>	■ 0.2	■ 0.2	■ 0.2
Nitration (PA)	%	<b>56</b>	61	57	57
Sulfation (PA)	%	<b>56</b>	64	65	61
Glycol	%	<b>■ 0.0</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	<1.0
Silicon	ppm	<b>■ 6</b>	■ 5	■ 4	■ 6
Sodium	ppm	<b>■ 2</b>	■ 2	■ 3	■ 3
Potassium	ppm	<b>■ 0</b>	■ <1	■ <1	■ 0

## WEAR METALS

Iron	ppm	<b>■ 21</b>	■ 12	■ 8	■ 8
Copper	ppm	<b>▲ 30</b>	■ 4	■ 3	■ 3
Lead	ppm	<b>■ 0</b>	■ <1	■ <1	■ <1
Tin	ppm	<b>■ 0</b>	■ 2	■ 1	■ 2
Aluminum	ppm	<b>■ 10</b>	■ 10	■ 0	■ 5
Chromium	ppm	<b>■ 1</b>	■ <1	■ <1	■ <1
Molybdenum	ppm	<b>■ 41</b>	■ 41	■ 41	■ 38
Nickel	ppm	<b>■ 0</b>	■ <1	■ 0	■ <1
Titanium	ppm	<b>■ 0</b>	■ <1	■ <1	■ 0
Silver	ppm	<b>■ 0</b>	■ <1	■ <1	■ 0
Manganese	ppm	<b>■ &lt;1</b>	■ <1	■ <1	■ <1
Vanadium	ppm	<b>0</b>	■ <1	■ 0	■ 0

## ADDITIVES

Calcium	ppm	<b>■ 1871</b>	■ 1714	■ 1686	■ 1563
Magnesium	ppm	<b>■ 662</b>	■ 492	■ 486	■ 471
Zinc	ppm	<b>■ 1341</b>	■ 1178	■ 1007	■ 802
Phosphorus	ppm	<b>■ 1074</b>	■ 973	■ 916	■ 727
Barium	ppm	<b>■ 0</b>	■ 0	■ 0	■ 0
Boron	ppm	<b>■ 19</b>	■ 52	■ 55	■ 45

## Diagnosis

Oil and filter change at the time of sampling has been noted. 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. Fuel content negligible. There is no indication of any contamination in the oil. The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

**Depot:** VOLVO6174  
**Unique No:** 10630630  
**Signed:** Don Baldrige  
**Report Date:** 05 Sep 2023



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## GRAPHS

