



# CONSTRUCTION EQUIPMENT

## SW1027987 DIAMOND VOLVO A40D 60013 - FRONT AXLE



**Sample No:** VCP369184  
**Oil Type:** GEAR OIL SAE 80W90  
**Job No:** SW1027987 DIAMOND



### SAMPLE INFORMATION

Sample Number	<b>VCP369184</b>	VC043195	VC016275	---
Sample Date	<b>20 Dec 2023</b>	14 Mar 2003	20 Aug 2002	---
Machine Hours	<b>4671</b>	2053	1379	---
Oil Hours	<b>0</b>	674	1379	---
Oil Changed	<b>N/A</b>	Not Changd	Changed	---
Sample Status	<b>ABNORMAL</b>	ABNORMAL	ABNORMAL	---

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### OIL CONDITION

Visc @ 40°C	cSt	<b>▲ 283</b>	■ 142.1	136.8	---
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### CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	---
Silicon	ppm	■ <b>19</b>	■ 11	■ 9	---
Sodium	ppm	■ <b>&lt;1</b>	■ 2	■ 2	---
Potassium	ppm	■ <b>9</b>	■ 2	■ 21	---

### Diagnosis

We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. High concentration of visible metal present. Gear wear is indicated. There is no indication of any contamination in the oil. The oil viscosity is higher than normal. Confirm oil type.



### WEAR METALS

Iron	ppm	<b>▲ 608</b>	■ 459	■ 318	---
Copper	ppm	■ <b>23</b>	■ 30	■ 19	---
Lead	ppm	■ <b>0</b>	■ <1	■ <1	---
Tin	ppm	■ <b>&lt;1</b>	■ 0	■ 0	---
Aluminum	ppm	■ <b>1</b>	■ <1	■ <1	---
Chromium	ppm	■ <b>7</b>	■ 7	■ 5	---
Molybdenum	ppm	■ <b>&lt;1</b>	0	0	---
Nickel	ppm	■ <b>2</b>	4	5	---
Titanium	ppm	<b>&lt;1</b>	<1	<1	---
Silver	ppm	<b>0</b>	0	0	---
Manganese	ppm	■ <b>9</b>	11	8	---
Vanadium	ppm	<b>0</b>	0	<1	---



### ADDITIVES

Calcium	ppm	■ <b>68</b>	12	27	---
Magnesium	ppm	■ <b>8</b>	2	1	---
Zinc	ppm	■ <b>16</b>	14	19	---
Phosphorus	ppm	■ <b>958</b>	626	628	---
Barium	ppm	■ <b>0</b>	<1	<1	---
Boron	ppm	■ <b>122</b>	1	1	---

**Depot:** VOLVO6174  
**Unique No:** 10808687  
**Signed:** Don Baldrige  
**Report Date:** 02 Jan 2024



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## GRAPHS

