



# VOLVO

## OIL ANALYSIS REPORT

WEAR  
CONTAMINATION  
FLUID CONDITION

<b>SEVERE</b>
<b>SEVERE</b>
<b>ATTENTION</b>



Area  
**[BABCOCK RANCH]**  
Machine Id  
**VOLVO A45G 352808**  
Component  
**Rear Axle**  
Fluid  
**VOLVO PREMIUM GEAR OIL 85W-140 GL-5 (--- GAL)**

### RECOMMENDATION

We advise that you check all areas where dirt can enter the system. We advise that you check for the source of water entry. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>VCP436718</b>	VCP436142	---
Sample Date		Client Info		<b>19 Apr 2024</b>	17 Feb 2024	---
Machine Age	hrs	Client Info		<b>4322</b>	4096	---
Oil Age	hrs	Client Info		<b>322</b>	0	---
Filter Age	hrs	Client Info		<b>0</b>	0	---
Oil Changed		Client Info		<b>Not Changed</b>	Changed	---
Filter Changed		Client Info		<b>Not Changed</b>	Changed	---
Sample Status				<b>SEVERE</b>	ATTENTION	---

### WEAR

The iron, chrome and nickel levels are severe. Gear wear is indicated.

Iron	ppm	ASTM D5185m	>900	<b>▲ 12417</b>	668	---
Chromium	ppm	ASTM D5185m	>20	<b>▲ 169</b>	8	---
Nickel	ppm	ASTM D5185m	>10	<b>▲ 77</b>	3	---
Titanium	ppm	ASTM D5185m		<b>126</b>	<1	---
Silver	ppm	ASTM D5185m		<b>0</b>	0	---
Aluminum	ppm	ASTM D5185m	>30	<b>● 868</b>	6	---
Lead	ppm	ASTM D5185m	>50	<b>3</b>	0	---
Copper	ppm	ASTM D5185m	>150	<b>98</b>	6	---
Tin	ppm	ASTM D5185m	>20	<b>0</b>	<1	---
Vanadium	ppm	ASTM D5185m		<b>4</b>	0	---
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---

### CONTAMINATION

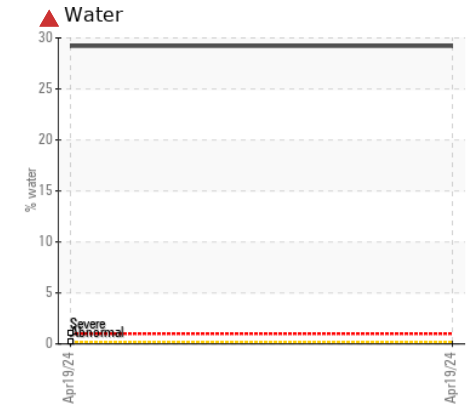
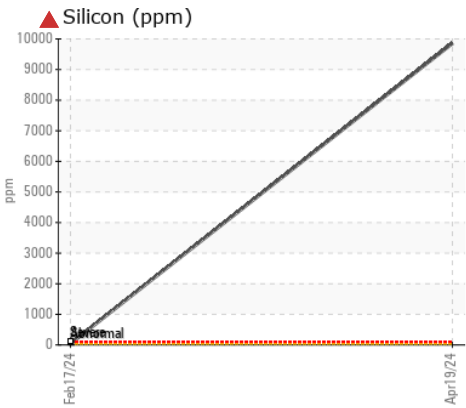
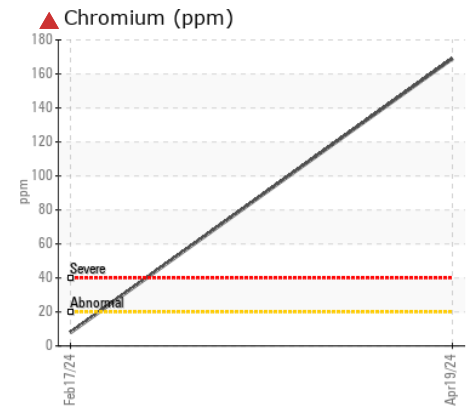
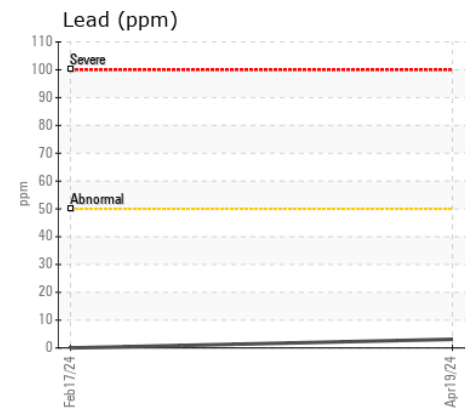
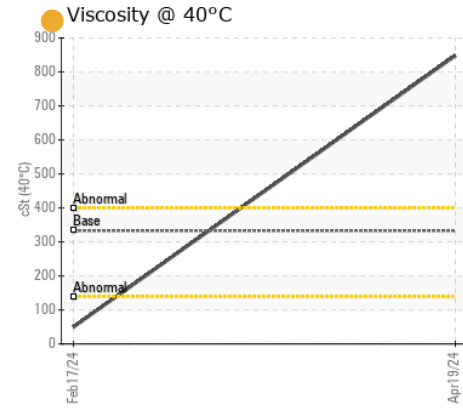
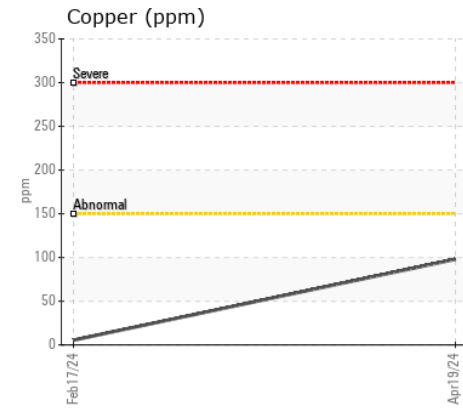
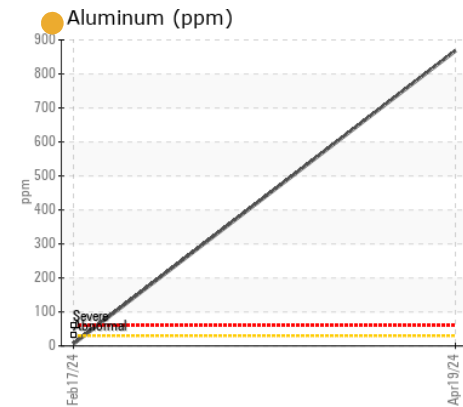
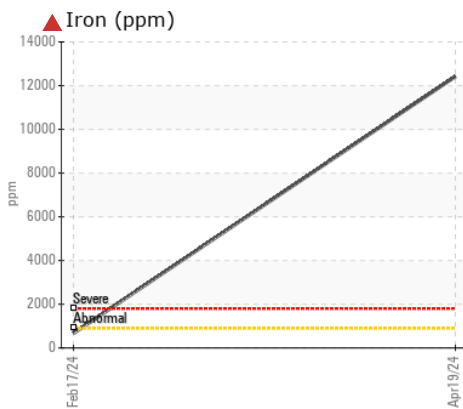
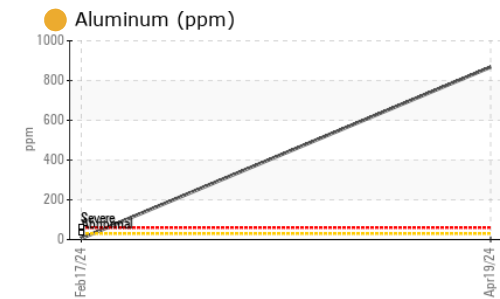
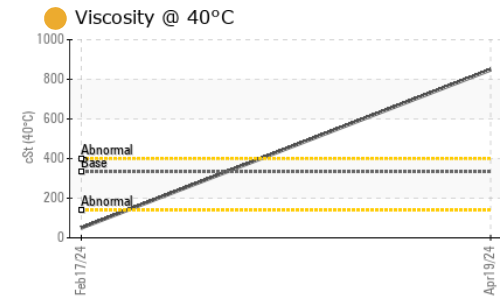
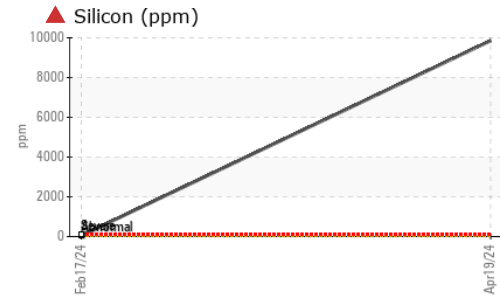
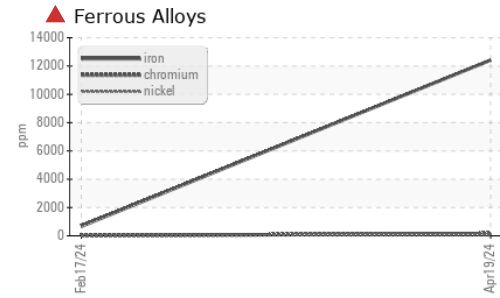
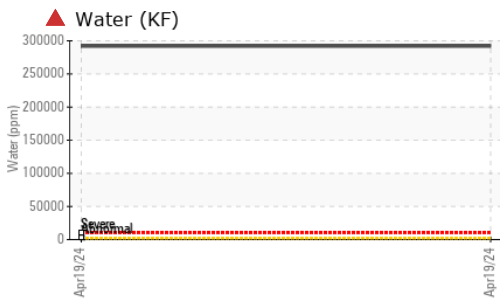
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. There is a very high concentration of water present in the oil.

Silicon	ppm	ASTM D5185m	>50	<b>▲ 9857</b>	42	---
Potassium	ppm	ASTM D5185m	>20	<b>45</b>	3	---
Water	%	ASTM D6304	>0.2	<b>▲ 29.2</b>	---	---
ppm Water	ppm	ASTM D6304	>2000	<b>▲ 292000</b>	---	---
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Emulsified Water	scalar	*Visual	>0.2	<b>▲ 0.2%</b>	NEG	---

### FLUID CONDITION

The oil viscosity is higher than normal. The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185m		<b>8</b>	2	---
Boron	ppm	ASTM D5185m	111	<b>71</b>	131	---
Barium	ppm	ASTM D5185m	0.0	<b>0</b>	0	---
Molybdenum	ppm	ASTM D5185m	0.9	<b>13</b>	9	---
Manganese	ppm	ASTM D5185m	0.0	<b>99</b>	19	---
Magnesium	ppm	ASTM D5185m	39	<b>122</b>	0	---
Calcium	ppm	ASTM D5185m	93	<b>520</b>	84	---
Phosphorus	ppm	ASTM D5185m	920	<b>754</b>	2355	---
Zinc	ppm	ASTM D5185m	104	<b>137</b>	56	---
Sulfur	ppm	ASTM D5185m	20179	<b>20724</b>	25964	---
Visc @ 40°C	cSt	ASTM D445	333	<b>● 848</b>	● 49.6	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : VCP436718

Lab Number : 06158063

Unique Number : 10993486

Test Package : MOB 1 ( Additional Tests: KF )

Received : 23 Apr 2024

Tested : 24 Apr 2024

Diagnosed : 25 Apr 2024 - Don Baldrige

ALTA EQUIPMENT COMPANY

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To discuss this sample report, contact Customer Service at 1-800-237-1369.

\* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)