



# VOLVO

## OIL ANALYSIS REPORT

WEAR  
CONTAMINATION  
FLUID CONDITION

**SEVERE**  
**ABNORMAL**  
**ATTENTION**



Area  
**[8-400712]**  
Machine Id  
**27-4550**  
Component  
**Rear Right Final Drive**  
Fluid  
**GEAR OIL SAE 80W90 (--- GAL)**

### RECOMMENDATION

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

### WEAR

PQ levels are severe. Titanium and iron ppm levels are abnormal. Aluminum ppm levels are noted. Gear wear is indicated. The very high ferrous density (PQ) index indicates that severe wear is occurring.

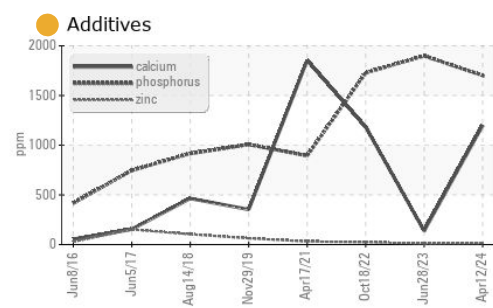
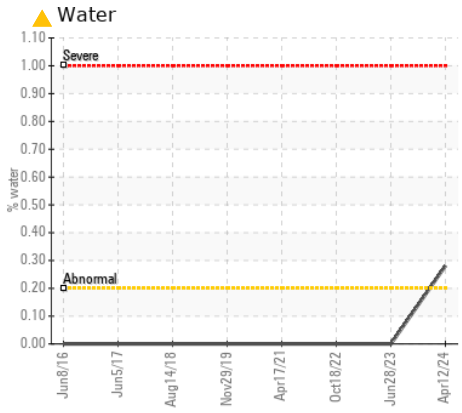
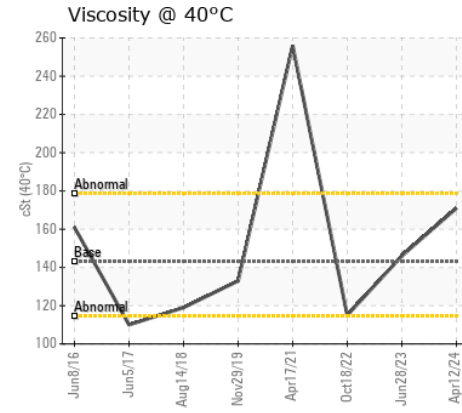
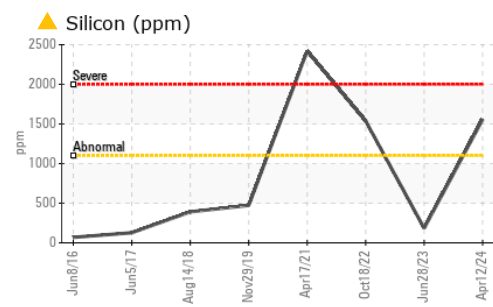
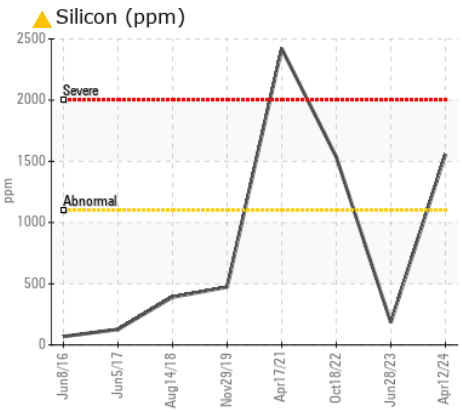
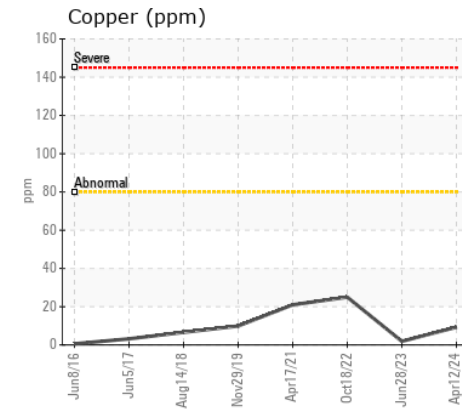
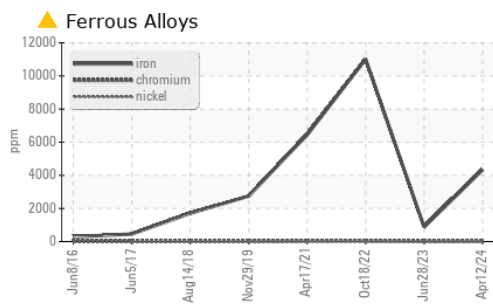
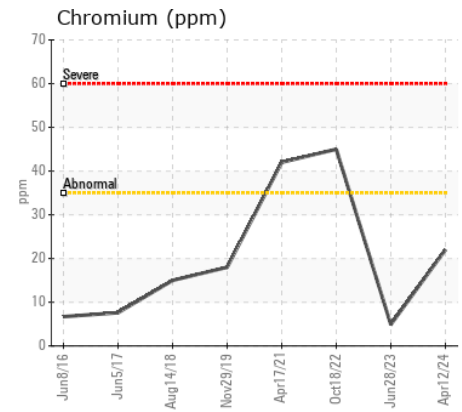
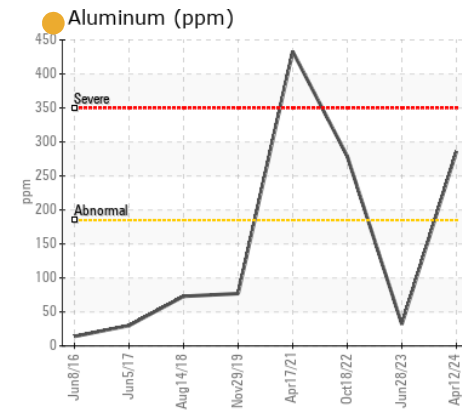
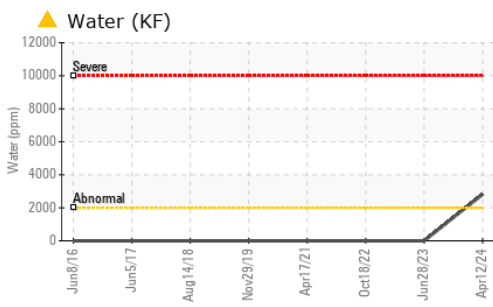
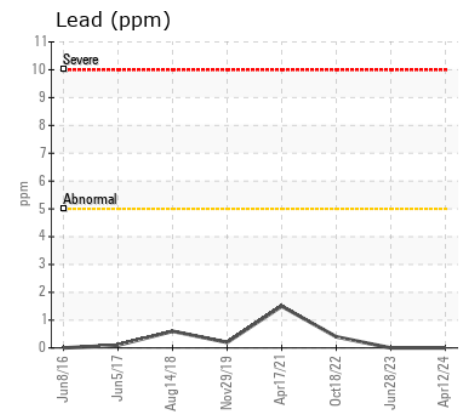
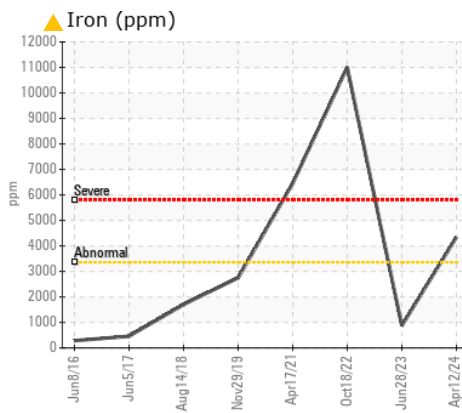
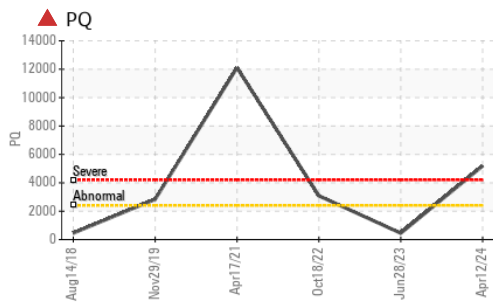
### CONTAMINATION

There is a moderate concentration of water present in the oil. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. High amount of ingressed dirt has caused abrasive wear to the component.

### FLUID CONDITION

Additive levels indicate the addition of a different brand, or type of oil. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>VCP450195</b>	VCP394581	VCP352417
Sample Date		Client Info		<b>12 Apr 2024</b>	28 Jun 2023	18 Oct 2022
Machine Age	hrs	Client Info		<b>12023</b>	11005	10003
Oil Age	hrs	Client Info		<b>2000</b>	0	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>N/A</b>	Not Changd	Changed
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>SEVERE</b>	NORMAL	SEVERE
PQ		ASTM D8184*	>2400	<b>▲ 5186</b>	449	▲ 3081
Iron	ppm	ASTM D5185(m)	>3360	<b>▲ 4341</b>	874	▲ 11004
Chromium	ppm	ASTM D5185(m)	>35	<b>22</b>	5	▲ 45
Nickel	ppm	ASTM D5185(m)	>8	<b>1</b>	<1	0
Titanium	ppm	ASTM D5185(m)	>15	<b>▲ 17</b>	2	▲ 20
Silver	ppm	ASTM D5185(m)		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>185	<b>● 286</b>	32	● 279
Lead	ppm	ASTM D5185(m)	>5	<b>0</b>	0	<1
Copper	ppm	ASTM D5185(m)	>80	<b>9</b>	2	25
Tin	ppm	ASTM D5185(m)	>8	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	<1
White Metal	scalar	Visual*	NONE	<b>LIGHT</b>	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Silicon	ppm	ASTM D5185(m)	>1100	<b>▲ 1556</b>	184	▲ 1537
Potassium	ppm	ASTM D5185(m)	>20	<b>98</b>	11	93
Water	%	ASTM D6304*	>0.2	<b>▲ 0.281</b>	---	---
ppm Water	ppm	ASTM D6304*	>2000	<b>▲ 2816</b>	---	---
Silt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	Visual*	NONE	<b>NONE</b>	VLITE	NONE
Sand/Dirt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	Visual*	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	Visual*	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	<b>▲ .2%</b>	NEG	NEG
Sodium	ppm	ASTM D5185(m)	>170	<b>107</b>	12	106
Boron	ppm	ASTM D5185(m)	400	<b>121</b>	99	190
Barium	ppm	ASTM D5185(m)	200	<b>0</b>	<1	0
Molybdenum	ppm	ASTM D5185(m)	12	<b>&lt;1</b>	<1	3
Manganese	ppm	ASTM D5185(m)		<b>28</b>	6	51
Magnesium	ppm	ASTM D5185(m)	12	<b>87</b>	11	75
Calcium	ppm	ASTM D5185(m)	150	<b>● 1198</b>	138	1183
Phosphorus	ppm	ASTM D5185(m)	1650	<b>1701</b>	1899	1728
Zinc	ppm	ASTM D5185(m)	125	<b>13</b>	9	24
Sulfur	ppm	ASTM D5185(m)	22500	<b>20000</b>	14435	58281
Visc @ 40°C	cSt	ASTM D7279(m)	143	<b>171</b>	146	115



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : VCP450195 **Received** : 26 Apr 2024  
**Lab Number** : 02631779 **Tested** : 30 Apr 2024  
**Unique Number** : 5772932 **Diagnosed** : 30 Apr 2024 - Kevin Marson  
**Test Package** : MOB 1 ( Additional Tests: KF, PQ )

**CRH CANADA GROUP INC.**  
 P.O. BOX 5400  
 CONCORD, ON  
 CA L4K 1B6  
 Contact: Dan Brown  
 dan.brown@ca.crh.com

To discuss this sample report, contact Customer Service at 1-800-268-2131.  
 Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.  
 Validity of results and interpretation are based on the sample and information as supplied.