



# VOLVO

## OIL ANALYSIS REPORT

WEAR  
CONTAMINATION  
FLUID CONDITION

**SEVERE**

**SEVERE**

**ABNORMAL**

Area

[SWO-069177]

Machine Id

TAKEUCHI TL6 406001662

Component

Rear Left Final Drive

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. The oil change at the time of sampling has been noted. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

### WEAR

Gear wear is indicated.

### CONTAMINATION

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

### FLUID CONDITION

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

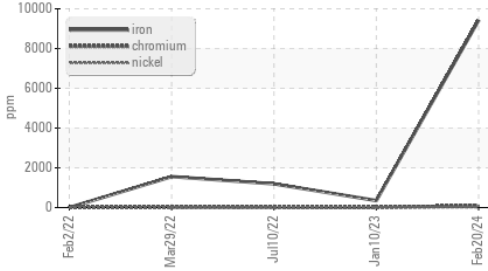
Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		VCP444471	VCP380773	VCP372892
Sample Date		Client Info		20 Feb 2024	10 Jan 2023	10 Jul 2022
Machine Age	hrs	Client Info		3140	3027	2241
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Not Changed	Not Changed	Not Changed
Sample Status				SEVERE	ATTENTION	ABNORMAL

Iron	ppm	ASTM D5185m	>500	▲ 9424	353	▲ 1194
Chromium	ppm	ASTM D5185m	>10	▲ 97	4	▲ 11
Nickel	ppm	ASTM D5185m	>10	16	<1	2
Titanium	ppm	ASTM D5185m		37	<1	2
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>25	● 582	2	● 39
Lead	ppm	ASTM D5185m	>25	2	0	<1
Copper	ppm	ASTM D5185m	>50	21	<1	6
Tin	ppm	ASTM D5185m	>10	2	<1	<1
Vanadium	ppm	ASTM D5185m		1	0	0
White Metal	scalar	*Visual	NONE	MODER	MODER	MODER
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

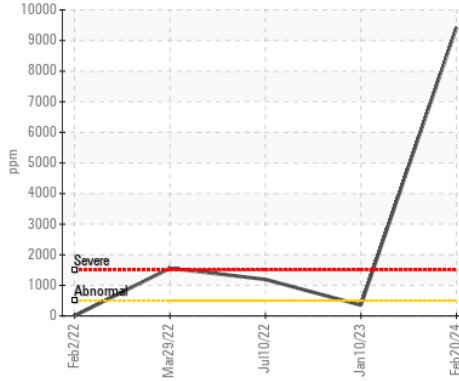
Silicon	ppm	ASTM D5185m	>75	▲ 2044	14	▲ 111
Potassium	ppm	ASTM D5185m	>20	288	0	15
Water	%	ASTM D6304	>0.2	▲ 0.409	---	---
ppm Water	ppm	ASTM D6304	>2000	▲ 4090	---	---
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	0.2%	NEG	NEG

Sodium	ppm	ASTM D5185m		48	3	2
Boron	ppm	ASTM D5185m	111	120	4	71
Barium	ppm	ASTM D5185m	0.0	7	0	0
Molybdenum	ppm	ASTM D5185m	0.9	14	<1	1
Manganese	ppm	ASTM D5185m	0.0	82	4	8
Magnesium	ppm	ASTM D5185m	39	1133	2	101
Calcium	ppm	ASTM D5185m	93	4943	18	517
Phosphorus	ppm	ASTM D5185m	920	812	243	504
Zinc	ppm	ASTM D5185m	104	98	0	22
Sulfur	ppm	ASTM D5185m	20179	48803	21916	20113
Visc @ 40°C	cSt	ASTM D445	333	▲ 5228	● 157	338

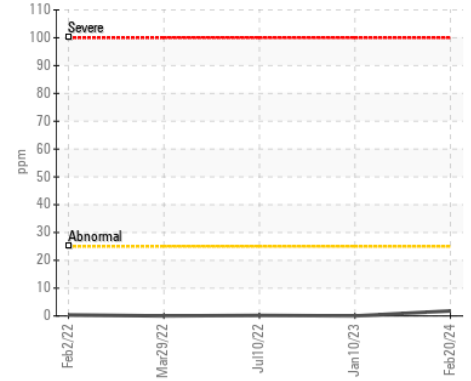
▲ Ferrous Alloys



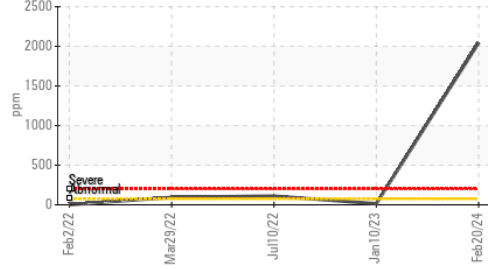
▲ Iron (ppm)



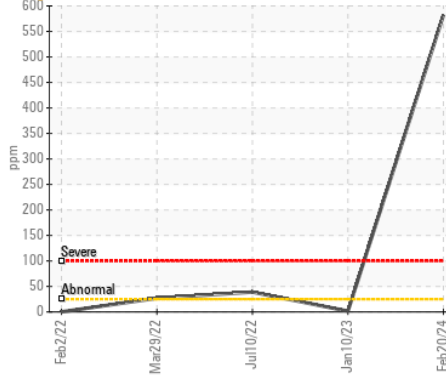
▲ Lead (ppm)



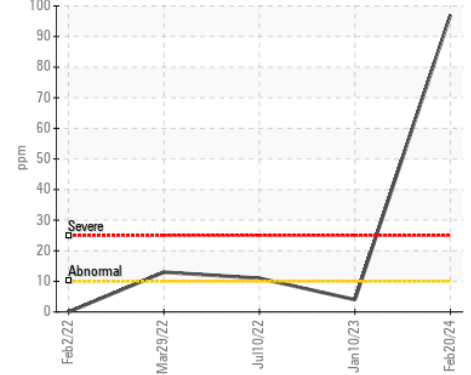
▲ Silicon (ppm)



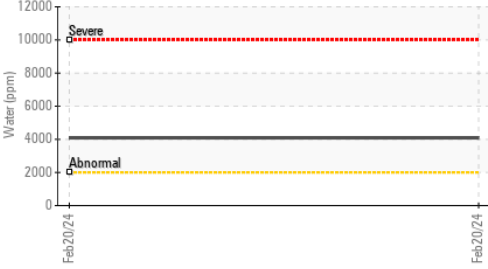
● Aluminum (ppm)



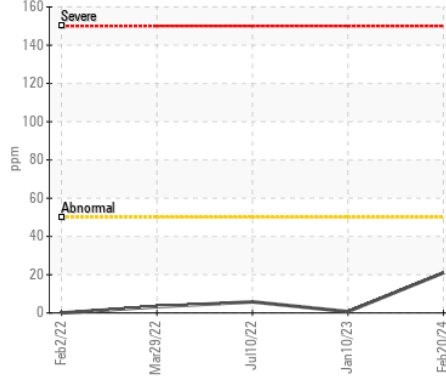
▲ Chromium (ppm)



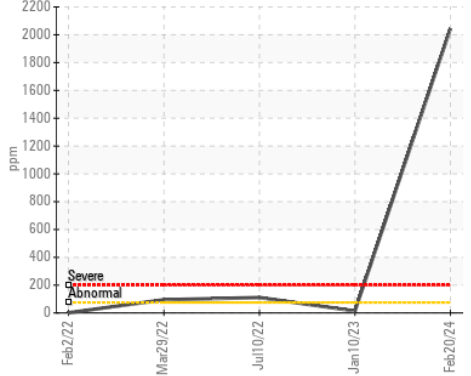
▲ Water (KF)



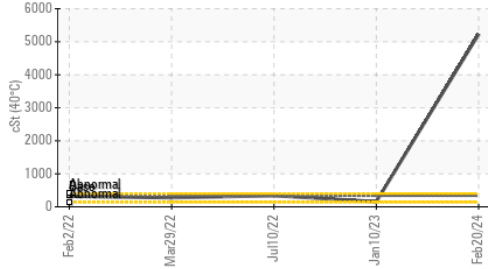
▲ Copper (ppm)



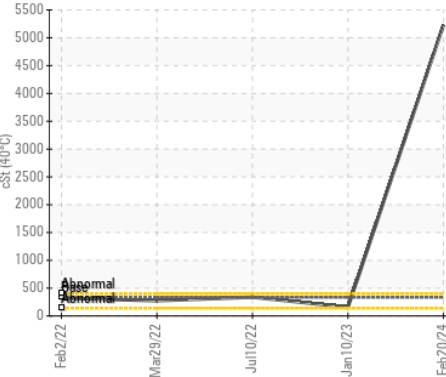
▲ Silicon (ppm)



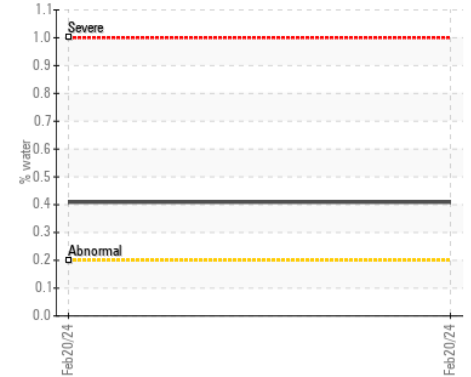
▲ Viscosity @ 40°C



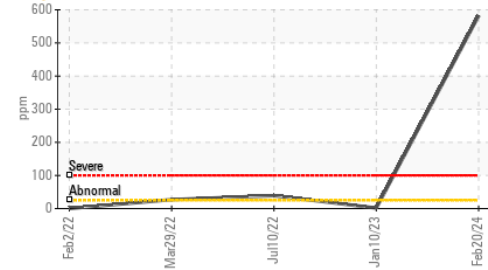
▲ Viscosity @ 40°C



▲ Water



● Aluminum (ppm)



Certificate L2367

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

Sample No. : VCP444471

Lab Number : 06102054

Unique Number : 10900284

Test Package : MOB 1 ( Additional Tests: KF )

Received : 27 Feb 2024

Tested : 28 Feb 2024

Diagnosed : 29 Feb 2024 - Jonathan Hester

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F:

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)