



# VOLVO

## OIL ANALYSIS REPORT

WEAR	<b>ABNORMAL</b>
CONTAMINATION	<b>ABNORMAL</b>
FLUID CONDITION	<b>NORMAL</b>



Area  
**[19707]**  
Machine Id  
**VOLVO A45G 353450**  
Component  
**Diesel Engine**  
Fluid  
**{not provided} (--- GAL)**

### RECOMMENDATION

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>VCP403334</b>	VCP425958	VCP410728
Sample Date		Client Info		<b>20 Oct 2023</b>	22 Jun 2023	19 Apr 2023
Machine Age	hrs	Client Info		<b>2515</b>	1520	653
Oil Age	hrs	Client Info		<b>0</b>	0	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	N/A	Changed
Sample Status				<b>ABNORMAL</b>	NORMAL	NORMAL

### WEAR

Valve wear is indicated. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>45</b>	12	25
Chromium	ppm	ASTM D5185m	>20	<b>2</b>	<1	1
Nickel	ppm	ASTM D5185m	>2	<b>▲ 8</b>	4	2
Titanium	ppm	ASTM D5185m		<b>0</b>	0	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>25	<b>▲ 7</b>	0	2
Lead	ppm	ASTM D5185m	>40	<b>2</b>	<1	0
Copper	ppm	ASTM D5185m	>330	<b>19</b>	54	239
Tin	ppm	ASTM D5185m	>15	<b>2</b>	1	4
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

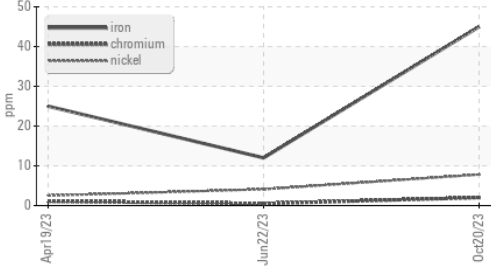
Silicon	ppm	ASTM D5185m	>25	<b>▲ 35</b>	7	29
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	<1	2
Fuel	%	ASTM D3524	>6.0	<b>&lt;1.0</b>	<1.0	1.3
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.7</b>	0.4	0.4
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.8</b>	7.4	9.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>20.0</b>	19.9	20.5
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	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>NEG</b>	NEG	NEG

### FLUID CONDITION

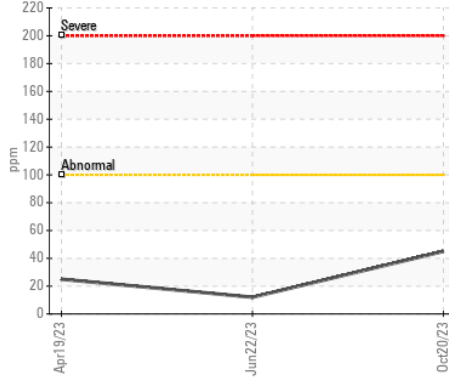
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>4</b>	0	5
Boron	ppm	ASTM D5185m		<b>&lt;1</b>	3	38
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>56</b>	62	81
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	2
Magnesium	ppm	ASTM D5185m		<b>860</b>	877	35
Calcium	ppm	ASTM D5185m		<b>996</b>	1081	2157
Phosphorus	ppm	ASTM D5185m		<b>825</b>	979	940
Zinc	ppm	ASTM D5185m		<b>1172</b>	1200	1142
Sulfur	ppm	ASTM D5185m		<b>2444</b>	3036	3855
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>14.8</b>	15.6	16.1
Base Number (BN)	mg KOH/g	ASTM D2896		<b>6.4</b>	7.4	5.4
Visc @ 100°C	cSt	ASTM D445		<b>11.6</b>	12.1	10.7

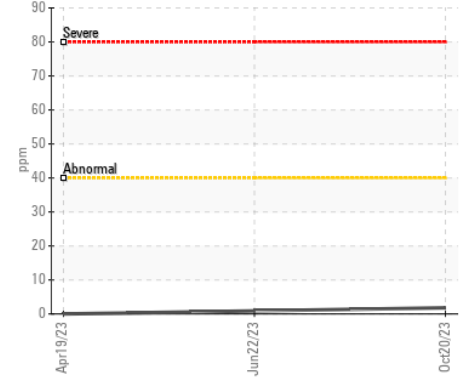
▲ Ferrous Alloys



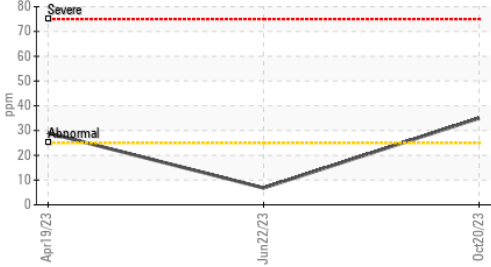
Iron (ppm)



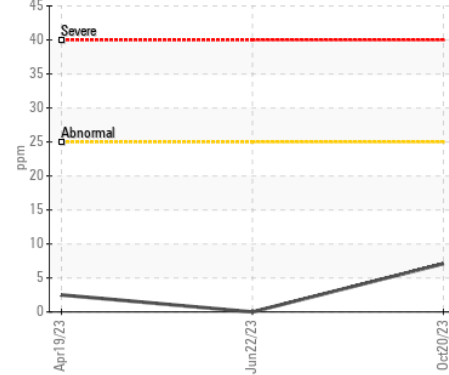
Lead (ppm)



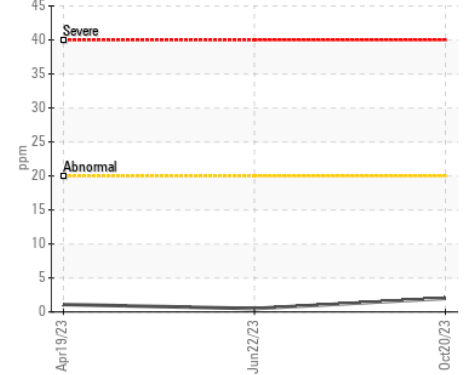
▲ Silicon (ppm)



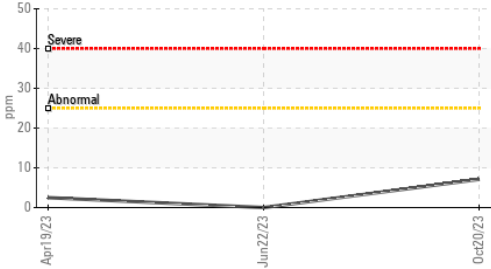
▲ Aluminum (ppm)



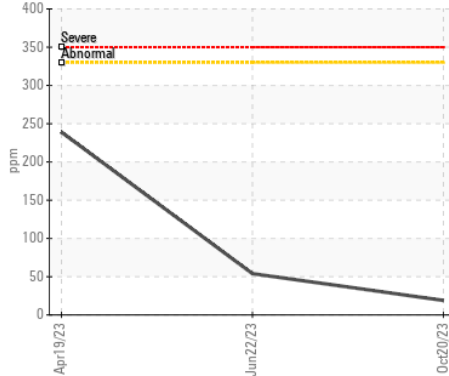
Chromium (ppm)



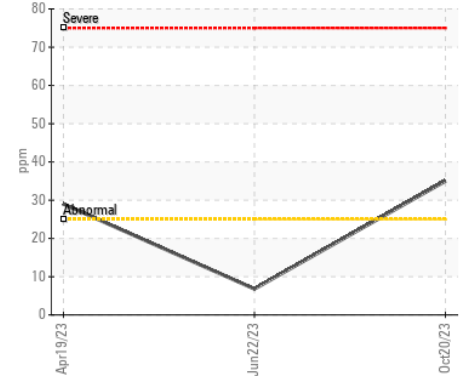
▲ Aluminum (ppm)



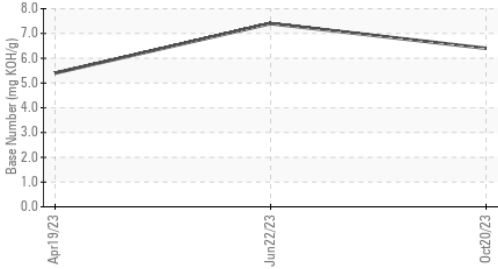
Copper (ppm)



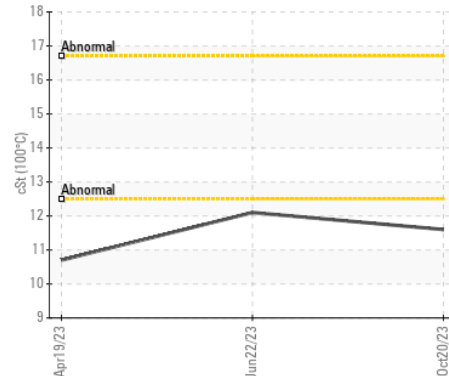
▲ Silicon (ppm)



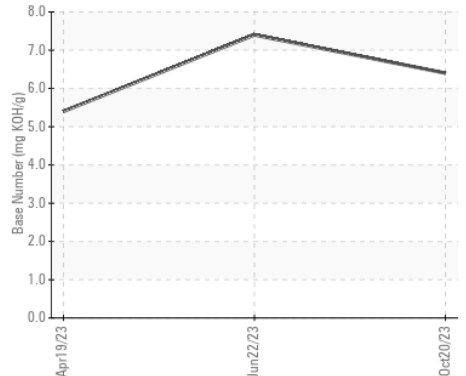
Base Number



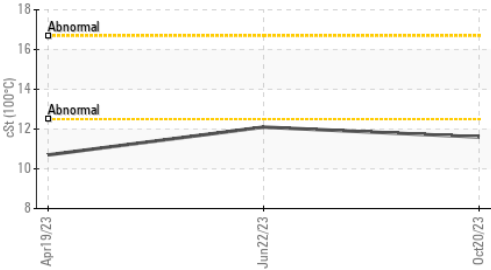
Viscosity @ 100°C



Base Number



Viscosity @ 100°C



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : VCP403334 **Received** : 11 Jan 2024  
**Lab Number** : 06057648 **Diagnosed** : 12 Jan 2024  
**Unique Number** : 10823597 **Diagnostician** : Don Baldridge  
**Test Package** : MOB 1 ( Additional Tests: FuelDilution, PercentFuel, TBN )

**TRADER CONSTRUCTION-VC**  
 P.O. DRAWER 1578  
 NEW BERN, NC  
 US 28563  
 Contact: JOSH HUMPHREYS

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)

T: (252)633-1399  
 F: (252)633-3981