



# VOLVO

## OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area  
**[SWO-071952]**  
 Machine Id  
**VOLVO A45G 352969**  
 Component  
**Diesel Engine**  
 Fluid  
**VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3 (--- GAL)**

### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		VCP442563	VCP446712	VCP447587
Sample Date		Client Info		23 May 2024	27 Feb 2024	20 Dec 2023
Machine Age	hrs	Client Info		3944	3453	2980
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		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	ATTENTION

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	8	7	7
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	4	6	4
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	3	2	3
Lead	ppm	ASTM D5185m	>40	<1	1	<1
Copper	ppm	ASTM D5185m	>330	1	<1	2
Tin	ppm	ASTM D5185m	>15	1	1	1
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

### CONTAMINATION

There is no indication of any contamination in the oil.

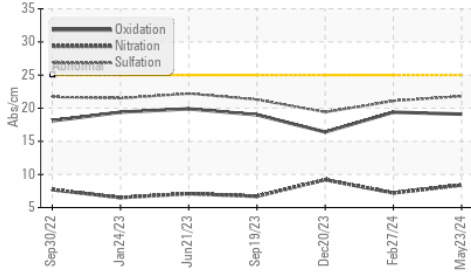
Silicon	ppm	ASTM D5185m	>25	6	4	6
Potassium	ppm	ASTM D5185m	>20	1	<1	<1
Fuel	%	ASTM D3524	>6.0	<1.0	<1.0	0.3
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.6	0.3	0.3
Nitration	Abs/cm	*ASTM D7624	>20	8.4	7.2	9.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.8	21.1	19.4
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	NEG	NEG	NEG

### FLUID CONDITION

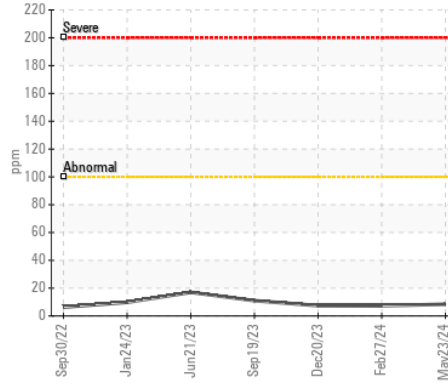
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<1	2	2
Boron	ppm	ASTM D5185m	2.5	59	52	69
Barium	ppm	ASTM D5185m	0.0	1	0	0
Molybdenum	ppm	ASTM D5185m	0.7	69	46	96
Manganese	ppm	ASTM D5185m	0.0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	256	532	494	656
Calcium	ppm	ASTM D5185m	2057	1435	1607	1384
Phosphorus	ppm	ASTM D5185m	935	838	925	815
Zinc	ppm	ASTM D5185m	1223	916	1037	956
Sulfur	ppm	ASTM D5185m	4079	2849	2888	3166
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.1	19.4	16.4
Base Number (BN)	mg KOH/g	ASTM D2896	10	9.4	9.6	6.9
Visc @ 100°C	cSt	ASTM D445	15.0	12.4	12.5	12.4

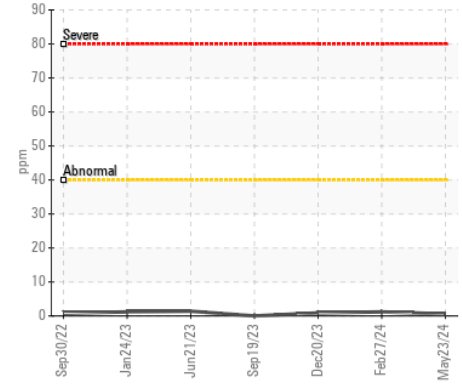
**FT-IR (Direct Trend)**



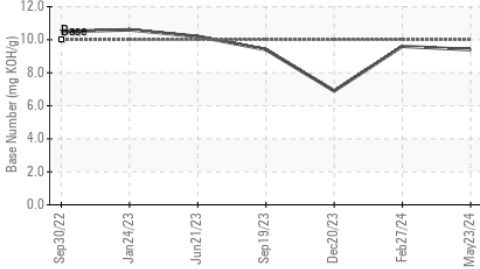
**Iron (ppm)**



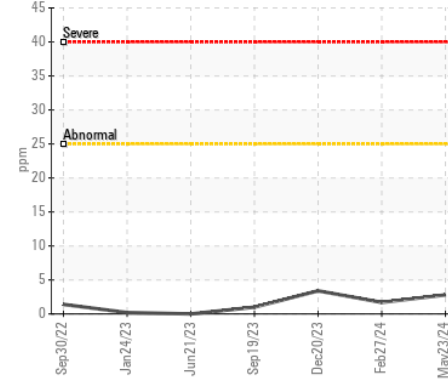
**Lead (ppm)**



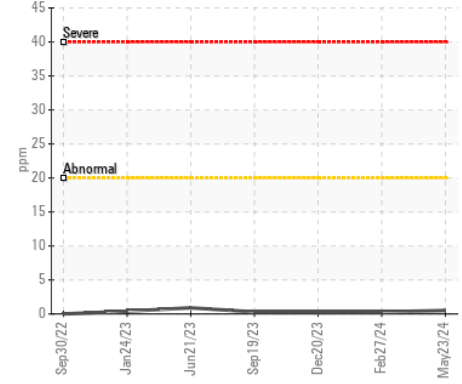
**Base Number**



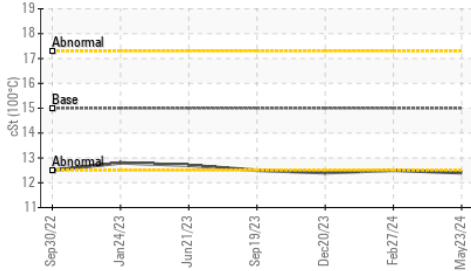
**Aluminum (ppm)**



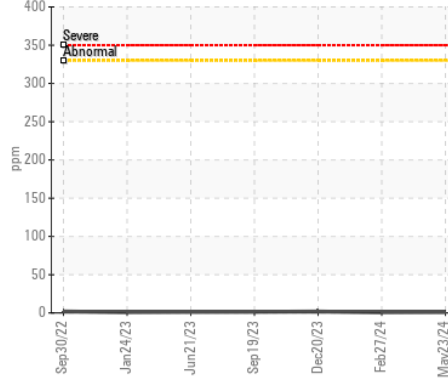
**Chromium (ppm)**



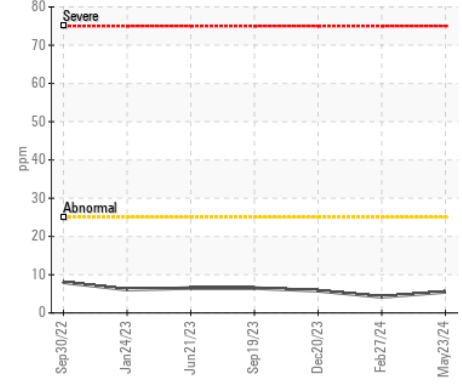
**Viscosity @ 100°C**



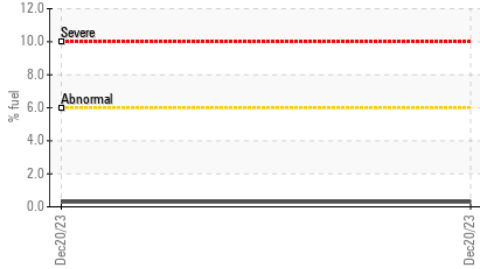
**Copper (ppm)**



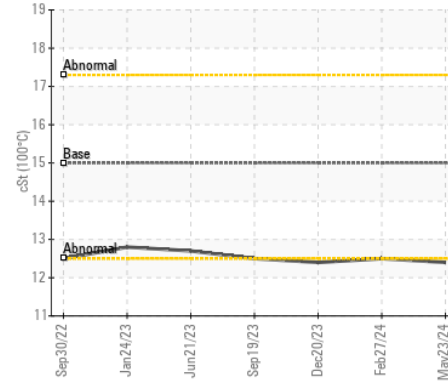
**Silicon (ppm)**



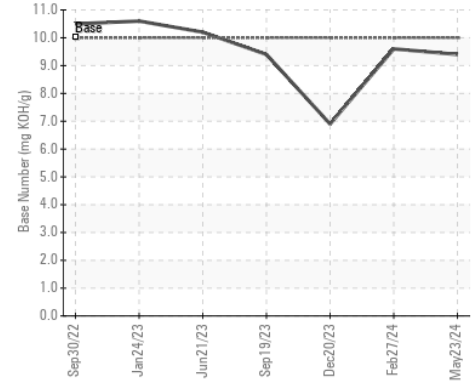
**Fuel Dilution**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : VCP442563 **Received** : 30 May 2024  
**Lab Number** : 06194963 **Tested** : 31 May 2024  
**Unique Number** : 11057086 **Diagnosed** : 31 May 2024 - Jonathan Hester  
**Test Package** : MOB 1 ( Additional Tests: FUELDILUTION, TBN )

**SAIIA CONSTRUCTION LLC**  
 4400 LEWISBURG RD  
 BIRMINGHAM, AL  
 US 35207

Contact: STEPHANI BRITTON  
 sbritton@saiia.com;doug.bogart@wearcheck.com  
 T: (205)943-2268  
 F: (205)943-2269

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)