



# ASCENDUM

## OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id  
**VOLVO L90H 623682**

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		ASC0009026	VCP426564	VCP418212
Sample Date		Client Info		08 Jul 2024	05 Sep 2023	28 Jun 2023
Machine Age	hrs	Client Info		13553	12074	11807
Oil Age	hrs	Client Info		500	0	0
Filter Age	hrs	Client Info		500	0	0
Oil Changed		Client Info		N/A	Changed	Changed
Filter Changed		Client Info		N/A	Changed	N/A
Sample Status				NORMAL	NORMAL	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	26	15	32
Chromium	ppm	ASTM D5185m	>10	2	<1	2
Nickel	ppm	ASTM D5185m	>10	<1	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>10	11	4	4
Lead	ppm	ASTM D5185m	>20	0	<1	0
Copper	ppm	ASTM D5185m	>15	1	1	2
Tin	ppm	ASTM D5185m	>10	<1	<1	2
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.

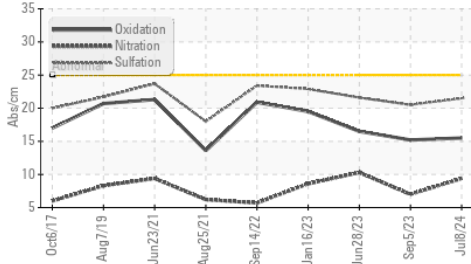
Silicon	ppm	ASTM D5185m	>20	6	5	7
Potassium	ppm	ASTM D5185m	>20	2	<1	<1
Fuel		WC Method	>6.0	<1.0	<1.0	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	1.9	1.1	1.8
Nitration	Abs/cm	*ASTM D7624	>20	9.4	7.0	10.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.5	20.5	21.6
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	>0.1	NEG	NEG	NEG

### FLUID CONDITION

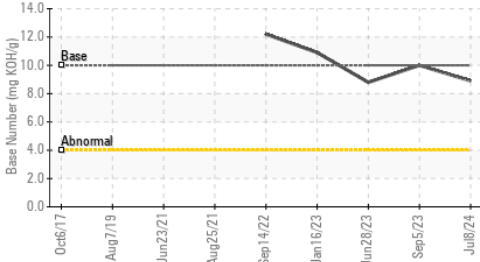
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		2	2	1
Boron	ppm	ASTM D5185m	2.5	5	11	6
Barium	ppm	ASTM D5185m	0.0	0	0	0
Molybdenum	ppm	ASTM D5185m	0.7	58	57	65
Manganese	ppm	ASTM D5185m	0.0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	256	928	886	1005
Calcium	ppm	ASTM D5185m	2057	1133	1388	1294
Phosphorus	ppm	ASTM D5185m	935	1089	1044	1133
Zinc	ppm	ASTM D5185m	1223	1306	1311	1386
Sulfur	ppm	ASTM D5185m	4079	3617	3720	3792
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.5	15.2	16.5
Base Number (BN)	mg KOH/g	ASTM D2896	10	8.9	10.0	8.8
Visc @ 100°C	cSt	ASTM D445	15.0	14.8	14.3	15.1

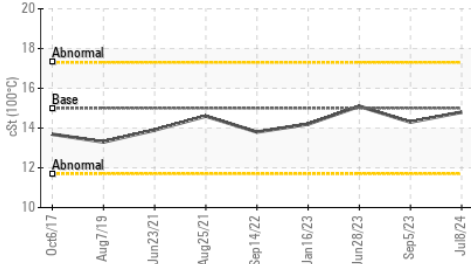
**FT-IR (Direct Trend)**



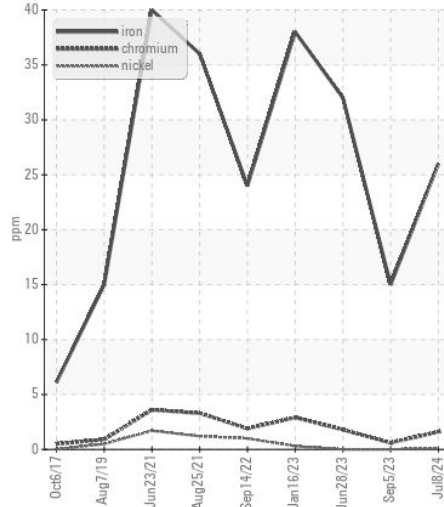
**Base Number**



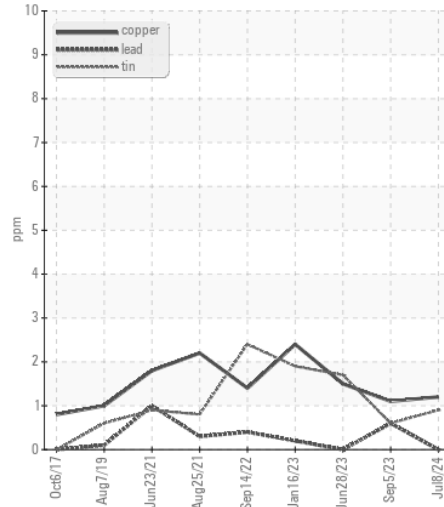
**Viscosity @ 100°C**



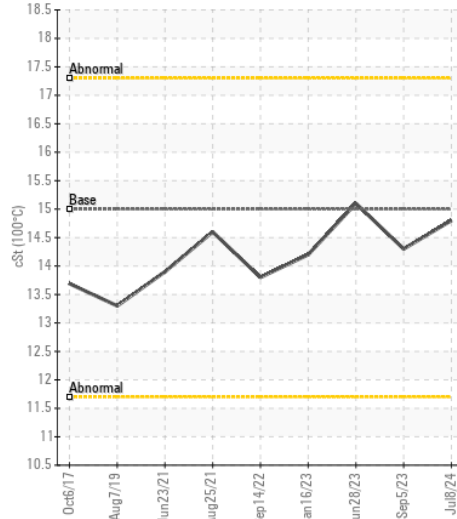
**Ferrous Alloys**



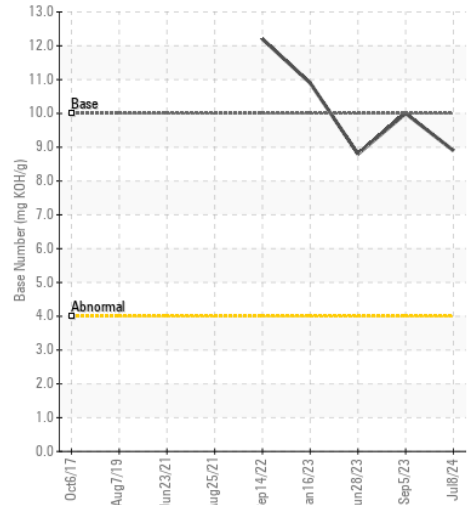
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : ASC0009026 **Received** : 10 Jul 2024  
**Lab Number** : 06231919 **Tested** : 10 Jul 2024  
**Unique Number** : 11115412 **Diagnosed** : 11 Jul 2024 - Don Baldridge  
**Test Package** : CONST ( Additional Tests: TBN )

**IAA - INSURANCE AUTO AUCTIONS - CLAYTON**  
 60 SADISCO RD  
 CLAYTON, NC  
 US 27520  
 Contact: Service Manager

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:  
F: