



# ASCENDUM

## OIL ANALYSIS REPORT

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

Machine Id  
**VOLVO 633543**  
 Component  
**Diesel Engine**  
 Fluid  
**VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3 (--- GAL)**

### RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		ASC0003284	---	---
Sample Date		Client Info		03 Jul 2024	---	---
Machine Age	hrs	Client Info		536	---	---
Oil Age	hrs	Client Info		536	---	---
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		Changed	---	---
Filter Changed		Client Info		Changed	---	---
Sample Status				ABNORMAL	---	---

### WEAR

The aluminum level is abnormal. All other metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>100	26	---	---
Chromium	ppm	ASTM D5185m	>20	4	---	---
Nickel	ppm	ASTM D5185m	>2	0	---	---
Titanium	ppm	ASTM D5185m		<1	---	---
Silver	ppm	ASTM D5185m	>2	1	---	---
Aluminum	ppm	ASTM D5185m	>25	▲ 76	---	---
Lead	ppm	ASTM D5185m	>40	2	---	---
Copper	ppm	ASTM D5185m	>330	17	---	---
Tin	ppm	ASTM D5185m	>15	3	---	---
Vanadium	ppm	ASTM D5185m		<1	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

### CONTAMINATION

Fuel content negligible. There is no indication of any contamination in the oil.

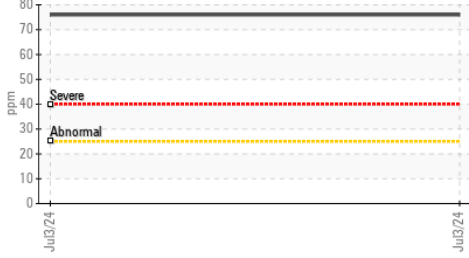
Silicon	ppm	ASTM D5185m	>25	14	---	---
Potassium	ppm	ASTM D5185m	>20	4	---	---
Fuel	%	ASTM D3524	>6.0	0.2	---	---
Water		WC Method	>0.2	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	*ASTM D7844	>3	0.2	---	---
Nitration	Abs/cm	*ASTM D7624	>20	6.4	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.1	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---	---

### FLUID CONDITION

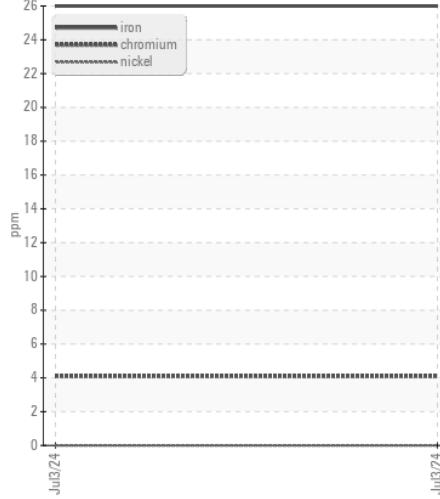
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		5	---	---
Boron	ppm	ASTM D5185m	2.5	54	---	---
Barium	ppm	ASTM D5185m	0.0	32	---	---
Molybdenum	ppm	ASTM D5185m	0.7	42	---	---
Manganese	ppm	ASTM D5185m	0.0	2	---	---
Magnesium	ppm	ASTM D5185m	256	684	---	---
Calcium	ppm	ASTM D5185m	2057	1732	---	---
Phosphorus	ppm	ASTM D5185m	935	1180	---	---
Zinc	ppm	ASTM D5185m	1223	1292	---	---
Sulfur	ppm	ASTM D5185m	4079	4001	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.8	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	10	9.8	---	---
Visc @ 100°C	cSt	ASTM D445	15.0	12.4	---	---

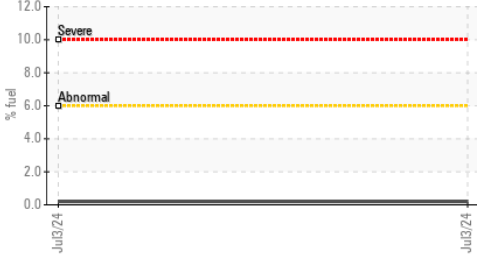
▲ Aluminum (ppm)



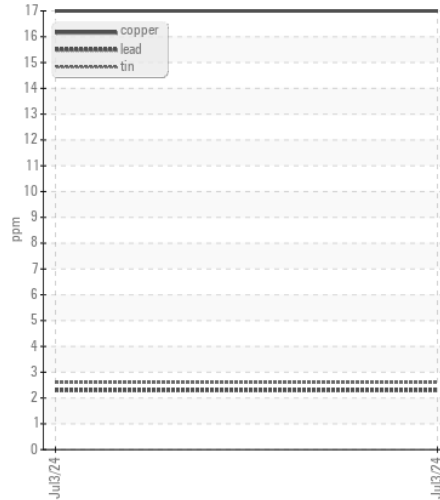
Ferrous Alloys



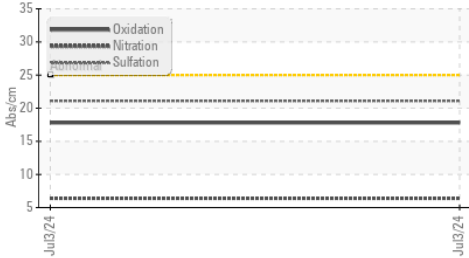
Fuel Dilution



Non-ferrous Metals



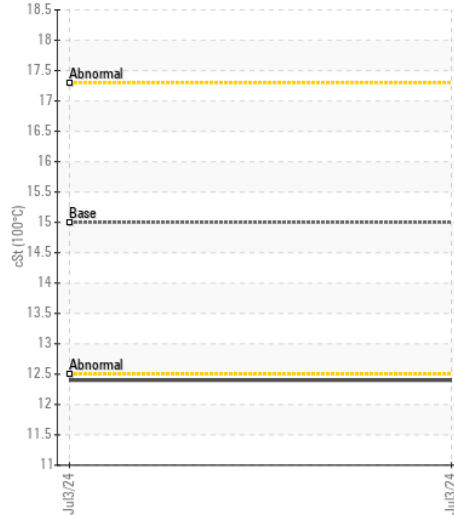
FT-IR (Direct Trend)



Base Number



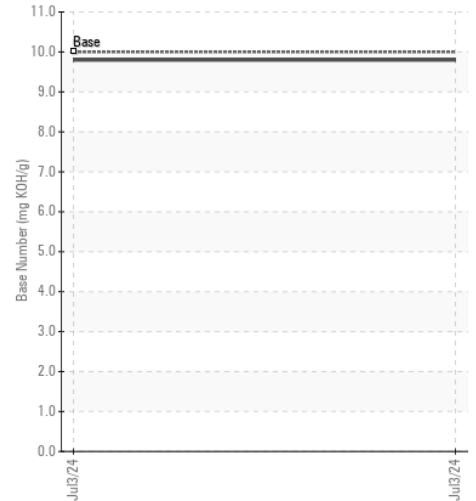
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : ASC0003284 Received : 10 Jul 2024  
 Lab Number : 06231916 Tested : 15 Jul 2024  
 Unique Number : 11115409 Diagnosed : 15 Jul 2024 - Jonathan Hester  
 Test Package : CONST ( Additional Tests: FuelDilution, PercentFuel, TBN )

**PARTON LUMBER CO**  
 251 PARTON RD  
 RUTHERFORDTON, NC  
 US 28139  
 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: