



# OIL ANALYSIS REPORT

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

Area

[717192 HILLSBOROUGH]

Machine Id

**VOLVO EW160E 323454**

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		<b>VCP440031</b>	VCP416286	VCP396944
Sample Date		Client Info		<b>28 May 2024</b>	21 Aug 2023	14 Feb 2023
Machine Age	hrs	Client Info		<b>6198</b>	4967	4094
Oil Age	hrs	Client Info		<b>500</b>	0	500
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	N/A	Changed
Filter Changed		Client Info		<b>Changed</b>	N/A	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>4</b>	4	11
Chromium	ppm	ASTM D5185m	>10	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185m	>10	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>10	<b>2</b>	2	3
Lead	ppm	ASTM D5185m	>20	<b>0</b>	<1	0
Copper	ppm	ASTM D5185m	>15	<b>0</b>	<1	6
Tin	ppm	ASTM D5185m	>10	<b>0</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

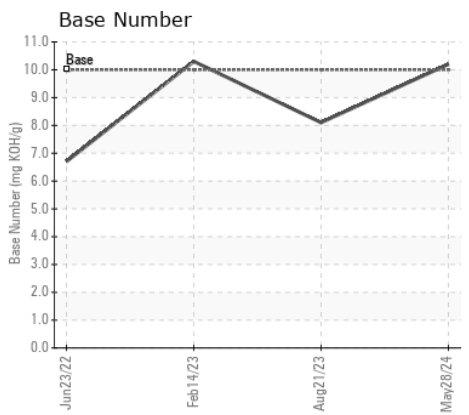
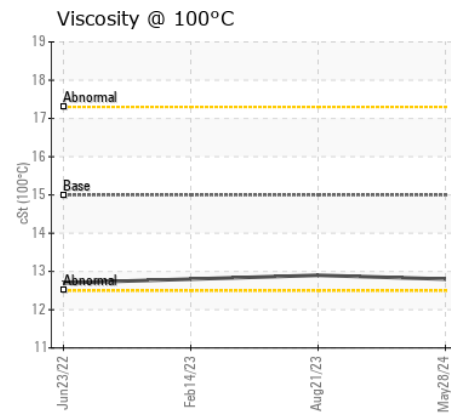
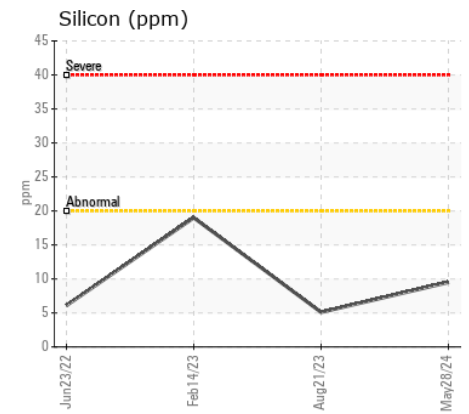
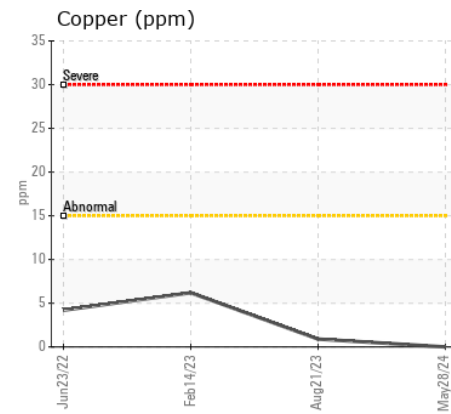
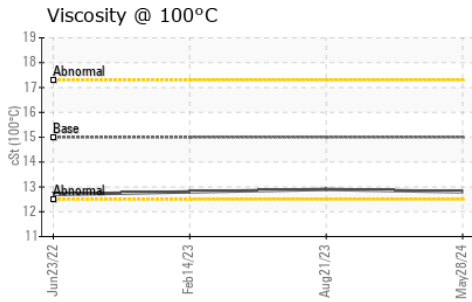
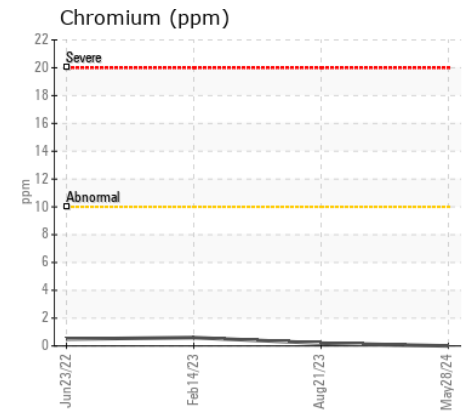
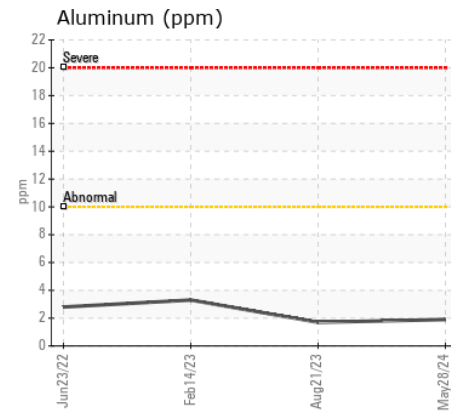
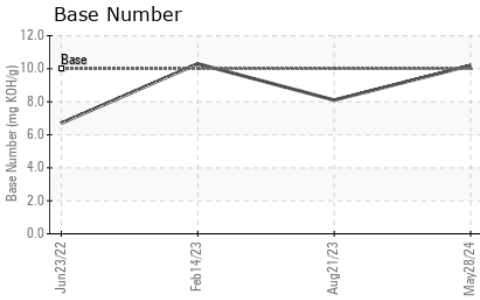
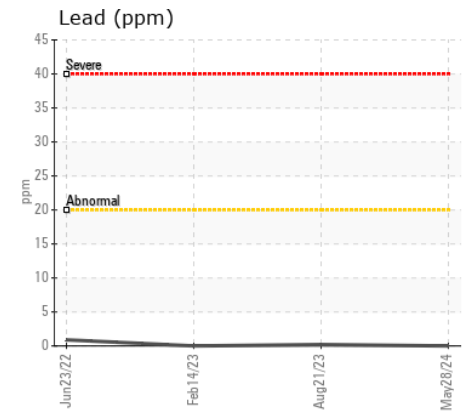
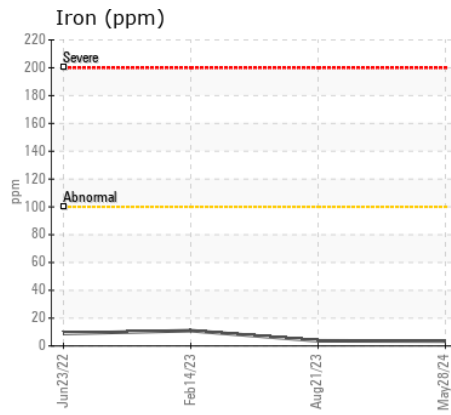
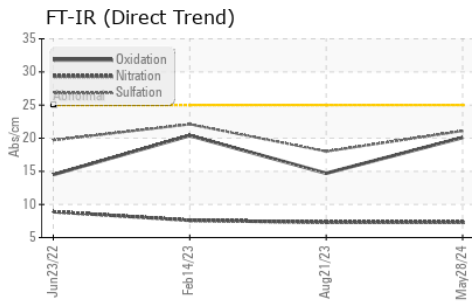
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>10</b>	5	19
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	4	7
Fuel		WC Method	>6.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.1</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.3</b>	7.3	7.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.1</b>	18.0	22.1
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	>0.1	<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>3</b>	3	3
Boron	ppm	ASTM D5185m	2.5	<b>33</b>	59	35
Barium	ppm	ASTM D5185m	0.0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	0.7	<b>41</b>	60	43
Manganese	ppm	ASTM D5185m	0.0	<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m	256	<b>537</b>	724	473
Calcium	ppm	ASTM D5185m	2057	<b>1843</b>	1316	1764
Phosphorus	ppm	ASTM D5185m	935	<b>995</b>	982	946
Zinc	ppm	ASTM D5185m	1223	<b>1158</b>	1201	1151
Sulfur	ppm	ASTM D5185m	4079	<b>3679</b>	3836	3053
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>20.1</b>	14.7	20.4
Base Number (BN)	mg KOH/g	ASTM D2896	10	<b>10.2</b>	8.1	10.3
Visc @ 100°C	cSt	ASTM D445	15.0	<b>12.8</b>	12.9	12.8



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : VCP440031 **Received** : 19 Jun 2024  
**Lab Number** : 06214319 **Tested** : 25 Jun 2024  
**Unique Number** : 11087183 **Diagnosed** : 25 Jun 2024 - Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: TBN )

**ALTA EQUIPMENT/FLAGLER CONSTRUCTION EQUIPMENT LLC**  
 8418 PALM RIVER ROAD  
 TAMPA, FL  
 US 33619  
 Contact: JOHN FARDELLA  
 john.fardella@altg.com  
 T: (813)630-0077  
 F: (813)630-2233

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)