



# OIL ANALYSIS REPORT

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

Area  
**WMR-Plymouth**  
 Machine Id  
**480152 VOLVO EW240E 320056**  
 Component  
**Diesel Engine**  
 Fluid  
**PHILLIPS 66 15W40 (--- LTR)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>DJJ0009059</b>	DJJ0009063	DJJ0009406
Sample Date		Client Info		<b>22 May 2024</b>	29 Mar 2024	29 Feb 2024
Machine Age	hrs	Client Info		<b>18374</b>	17791	17470
Oil Age	hrs	Client Info		<b>500</b>	320	400
Filter Age	hrs	Client Info		<b>500</b>	320	400
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

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

## CONTAMINATION

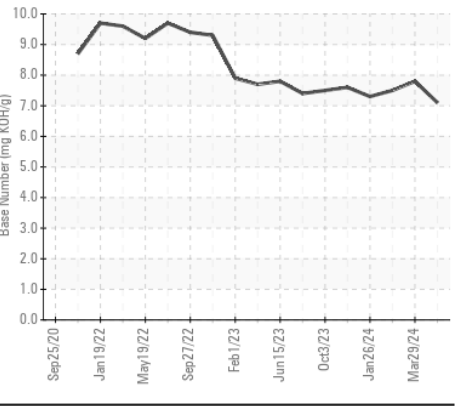
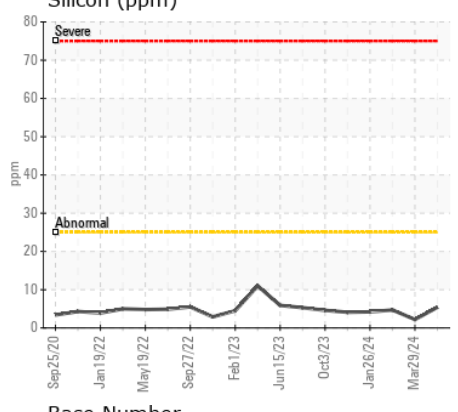
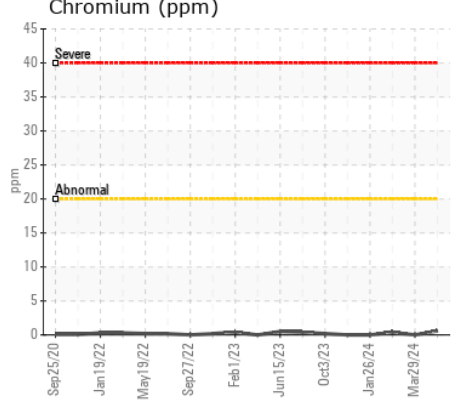
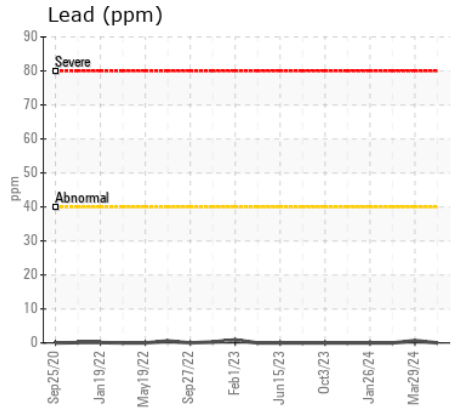
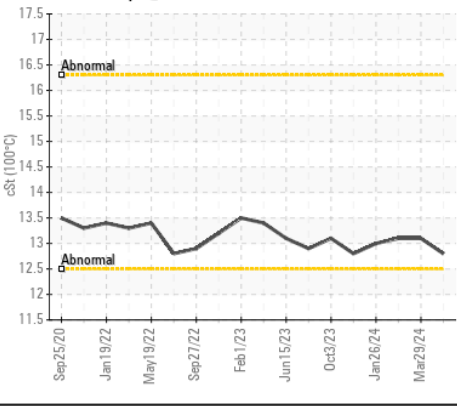
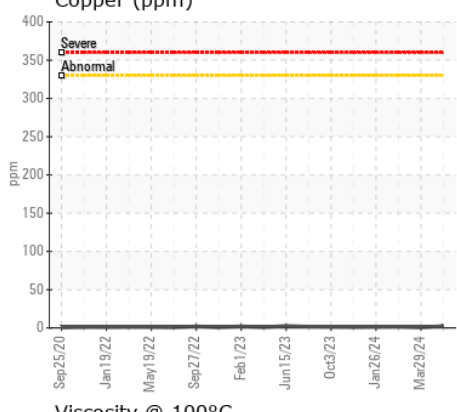
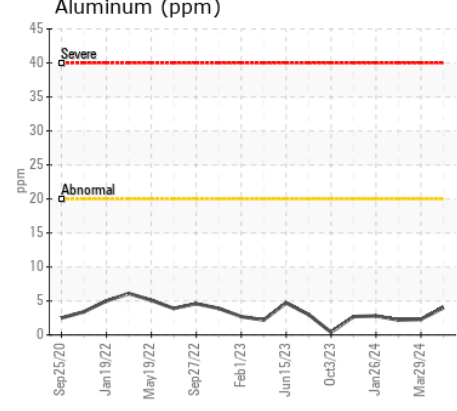
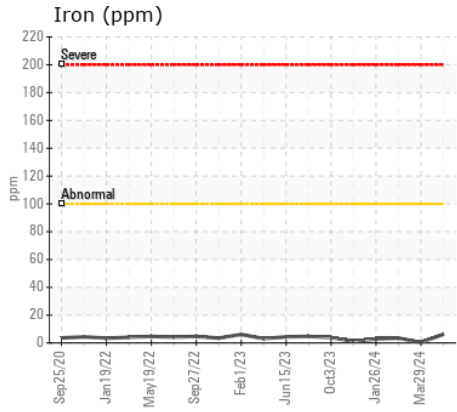
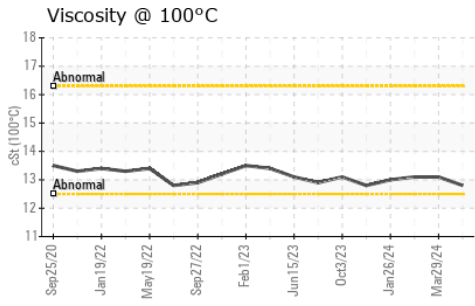
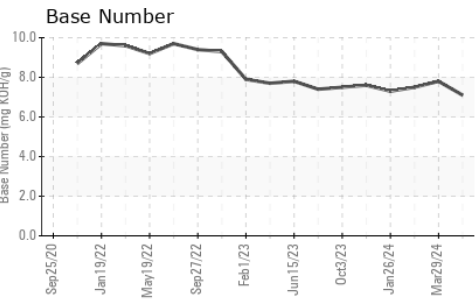
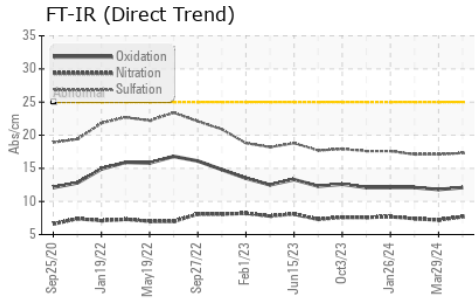
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>5</b>	2	5
Potassium	ppm	ASTM D5185m	>20	<b>6</b>	4	5
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<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>7.7</b>	7.2	7.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>17.3</b>	17.1	17.1
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	>0.2	<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>2</b>	1	2
Boron	ppm	ASTM D5185m		<b>136</b>	92	105
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>12</b>	8	9
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185m		<b>920</b>	660	673
Calcium	ppm	ASTM D5185m		<b>1774</b>	1291	1269
Phosphorus	ppm	ASTM D5185m		<b>990</b>	703	773
Zinc	ppm	ASTM D5185m		<b>1130</b>	811	834
Sulfur	ppm	ASTM D5185m		<b>4307</b>	3451	3268
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>12.1</b>	11.8	12.1
Base Number (BN)	mg KOH/g	ASTM D2896		<b>7.1</b>	7.8	7.5
Visc @ 100°C	cSt	ASTM D445		<b>12.8</b>	13.1	13.1



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : DJJ0009059  
**Lab Number** : 06197417  
**Unique Number** : 11059540  
**Test Package** : MOBCE ( Additional Tests: TBN )

**Received** : 03 Jun 2024  
**Tested** : 04 Jun 2024  
**Diagnosed** : 04 Jun 2024 - Wes Davis

**WESTERN METALS RECYCLING - PLYMOUTH**  
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 T: (435)458-3851  
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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)