



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL



Machine Id  
**VOLVO #985**  
Component  
**Diesel Engine**  
Fluid  
**CASTROL TECTION EXTRA SAE 15W-40 (38 LTR)**

## RECOMMENDATION

The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0781403</b>	WC0781402	WC0679995
Sample Date		Client Info		<b>06 Apr 2024</b>	25 Jan 2024	22 Sep 2023
Machine Age	kms	Client Info		<b>3858590</b>	3832567	3778057
Oil Age	kms	Client Info		<b>26023</b>	54510	22563
Filter Age	kms	Client Info		<b>26023</b>	54510	22563
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>ABNORMAL</b>	ABNORMAL	ABNORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>100	<b>22</b>	61	89
Chromium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	2	2
Nickel	ppm	ASTM D5185(m)	>2	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	>2	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185(m)	>25	<b>2</b>	2	3
Lead	ppm	ASTM D5185(m)	>40	<b>5</b>	9	10
Copper	ppm	ASTM D5185(m)	>330	<b>2</b>	5	33
Tin	ppm	ASTM D5185(m)	>15	<b>&lt;1</b>	2	6
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
White Metal	scalar	Visual*	NONE	<b>NONE</b>	---	VLITE
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	---	NONE

## CONTAMINATION

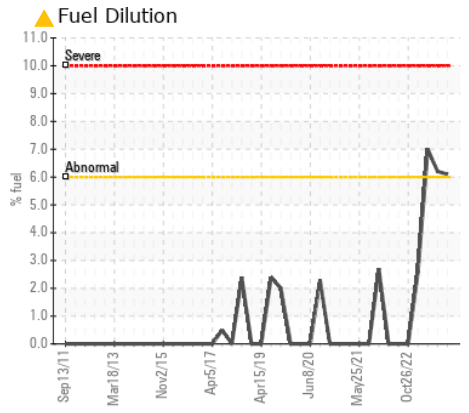
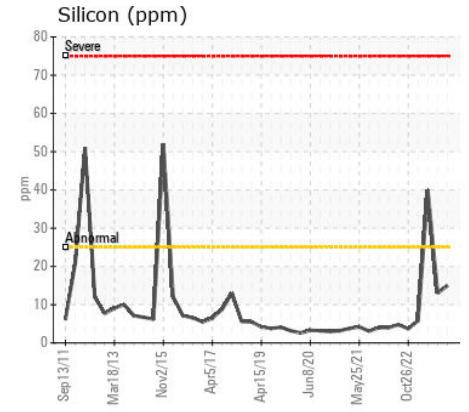
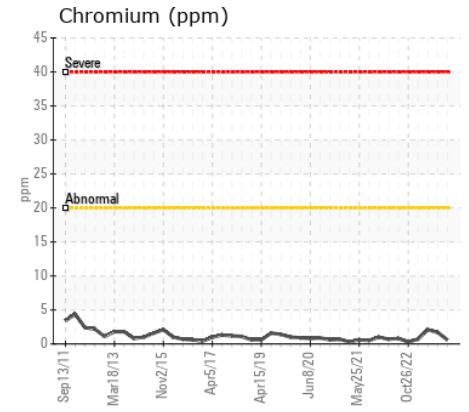
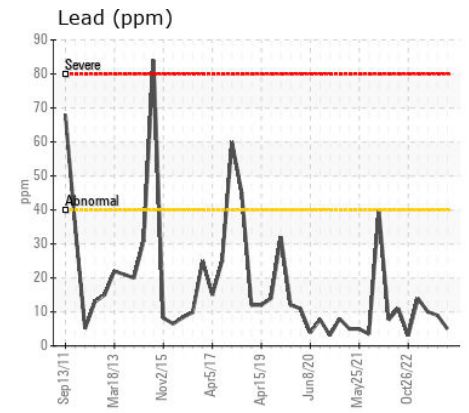
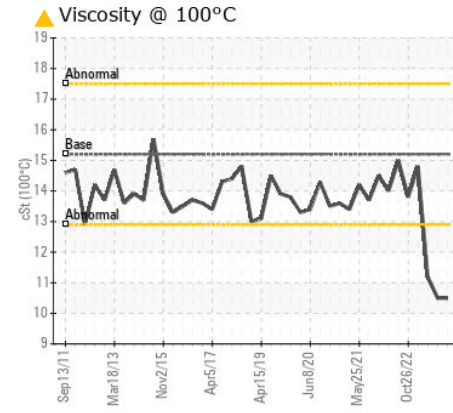
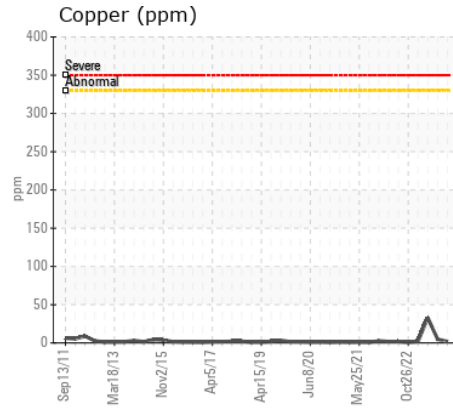
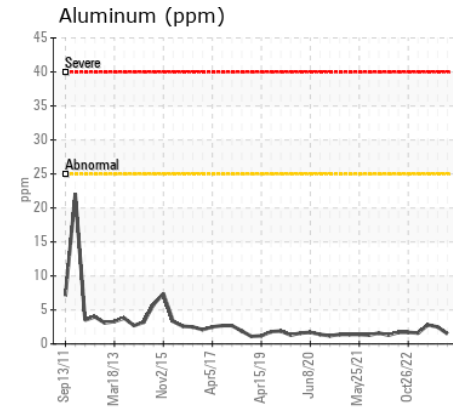
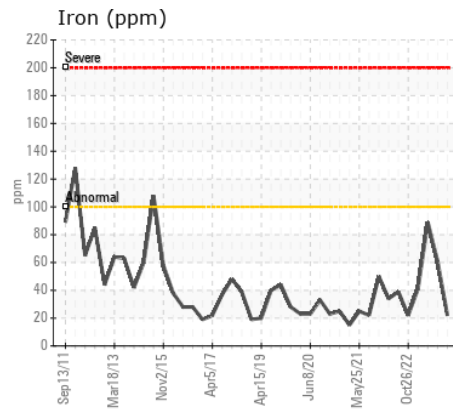
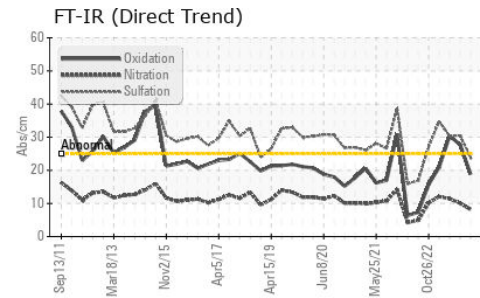
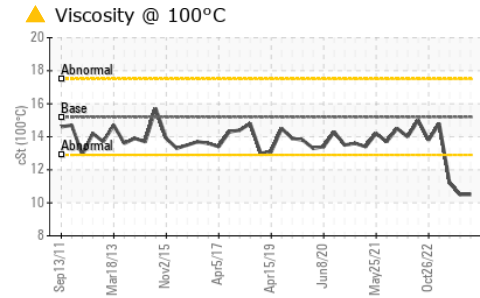
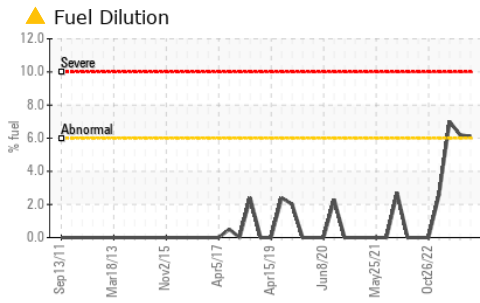
There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Silicon	ppm	ASTM D5185(m)	>25	<b>15</b>	13	▲ 40
Potassium	ppm	ASTM D5185(m)	>20	<b>1</b>	3	10
Fuel	%	ASTM D7593*	>6.0	<b>▲ 6.1</b>	▲ 6.2	▲ 7
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	0.0
Soot %	%	ASTM D7844*	>3	<b>0.5</b>	1.1	1
Nitration	Abs/cm	ASTM D7624*	>20	<b>8.2</b>	10.1	11.4
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>23.9</b>	30.5	30.3
Silt	scalar	Visual*	NONE	<b>NONE</b>	---	NONE
Debris	scalar	Visual*	NONE	<b>VLITE</b>	---	NONE
Sand/Dirt	scalar	Visual*	NONE	<b>NONE</b>	---	NONE
Appearance	scalar	Visual*	NORML	<b>NORML</b>	---	NORML
Odor	scalar	Visual*	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	NEG	NEG

## FLUID CONDITION

The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185(m)		<b>7</b>	8	65
Boron	ppm	ASTM D5185(m)	30	<b>17</b>	14	11
Barium	ppm	ASTM D5185(m)		<b>0</b>	0	<1
Molybdenum	ppm	ASTM D5185(m)		<b>12</b>	15	18
Manganese	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	1
Magnesium	ppm	ASTM D5185(m)	110	<b>91</b>	104	84
Calcium	ppm	ASTM D5185(m)	2740	<b>1994</b>	2062	2058
Phosphorus	ppm	ASTM D5185(m)	1240	<b>783</b>	801	805
Zinc	ppm	ASTM D5185(m)	1350	<b>904</b>	943	1001
Sulfur	ppm	ASTM D5185(m)	3520	<b>2606</b>	2761	2454
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>18.8</b>	27.8	30.3
Visc @ 100°C	cSt	ASTM D7279(m)	15.2	<b>▲ 10.5</b>	▲ 10.5	▲ 11.2



ISO 17025:2017  
Accredited  
Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0781403 **Received** : 17 Apr 2024  
**Lab Number** : 02629450 **Tested** : 18 Apr 2024  
**Unique Number** : 5762582 **Diagnosed** : 18 Apr 2024 - Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: PercentFuel, Visual )

To discuss this sample report, contact Customer Service at 1-800-268-2131.  
 Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.  
 Validity of results and interpretation are based on the sample and information as supplied.

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