



# OIL ANALYSIS REPORT

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

Machine Id  
**VOLVO LC450 1017**  
Component  
**Diesel Engine**  
Fluid  
**CHEVRON DELO 400 MULTIGRADE 15W40 (--- GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>ML0001478</b>	VCP397990	VCP388692
Sample Date		Client Info		<b>15 May 2024</b>	08 Feb 2023	29 Sep 2022
Machine Age	hrs	Client Info		<b>3574</b>	2089	1519
Oil Age	hrs	Client Info		<b>0</b>	500	500
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>N/A</b>	Changed	Changed
Filter Changed		Client Info		<b>N/A</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>11</b>	9	8
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>4	<b>3</b>	4	4
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>3</b>	4	3
Lead	ppm	ASTM D5185m	>40	<b>1</b>	<1	<1
Copper	ppm	ASTM D5185m	>330	<b>11</b>	13	46
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

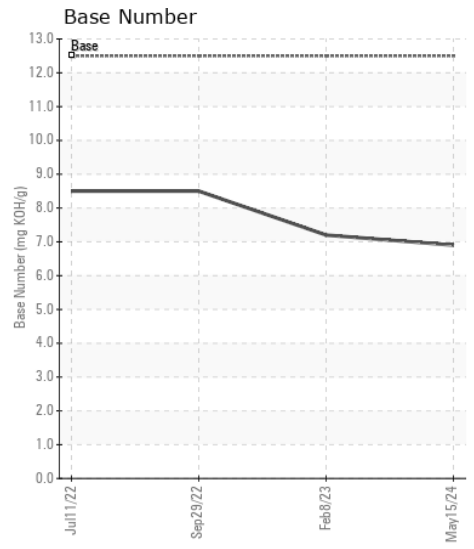
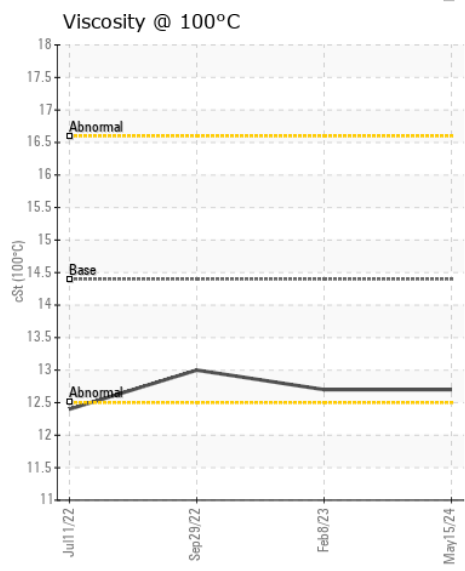
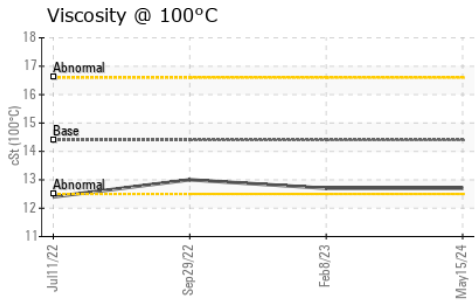
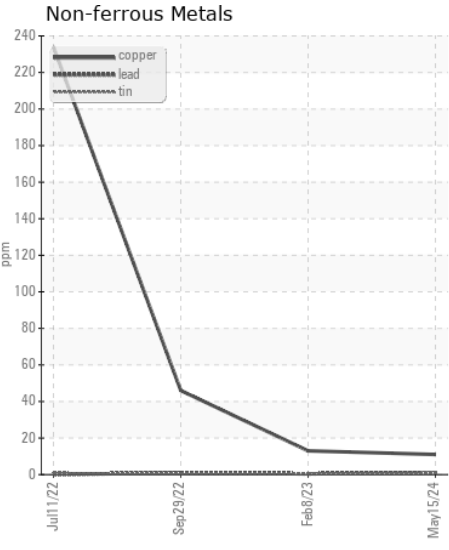
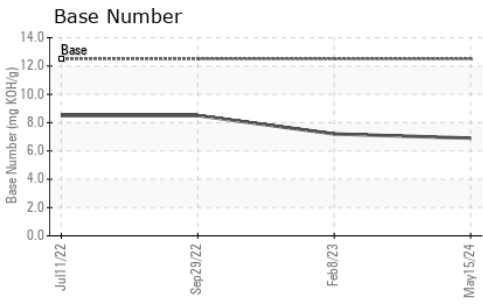
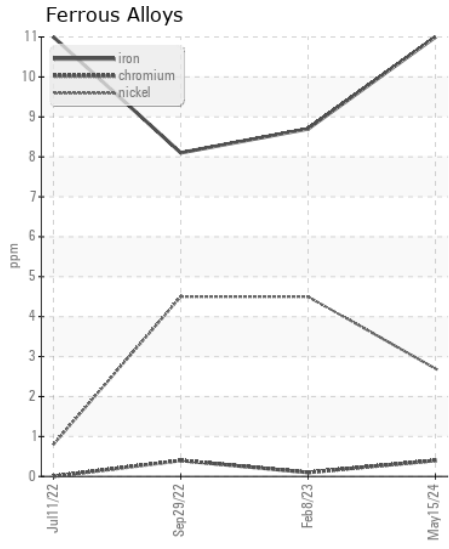
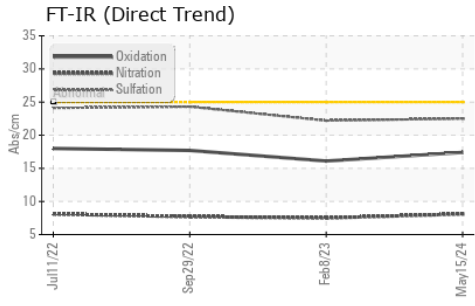
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>11</b>	16	8
Potassium	ppm	ASTM D5185m	>20	<b>10</b>	2	3
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>0.2</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.1</b>	7.5	7.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>22.5</b>	22.2	24.3
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>1</b>	0	0
Boron	ppm	ASTM D5185m	151	<b>295</b>	380	283
Barium	ppm	ASTM D5185m	0.4	<b>&lt;1</b>	<1	0
Molybdenum	ppm	ASTM D5185m	250	<b>95</b>	100	96
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	0	<b>426</b>	425	515
Calcium	ppm	ASTM D5185m	2046	<b>1481</b>	1495	1541
Phosphorus	ppm	ASTM D5185m	1043	<b>1174</b>	983	912
Zinc	ppm	ASTM D5185m	943	<b>1320</b>	1184	1155
Sulfur	ppm	ASTM D5185m	5012	<b>3593</b>	3445	3666
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>17.4</b>	16.1	17.7
Base Number (BN)	mg KOH/g	ASTM D2896	12.5	<b>6.9</b>	7.2	8.5
Visc @ 100°C	cSt	ASTM D445	14.4	<b>12.7</b>	12.7	13.0



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : ML0001478  
**Lab Number** : 06196331  
**Unique Number** : 11058454  
**Test Package** : CONST ( Additional Tests: TBN )

**MCCLUNG-LOGAN EQUIPMENT CO - BRIDGEVILLE**  
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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)