



OIL ANALYSIS REPORT

WEAR
CONTAMINATION
FLUID CONDITION

ATTENTION
NORMAL
NORMAL



Machine Id
VOLVO 118518
Component
Front Diesel Engine
Fluid
CHEVRON DELO 400 MULTIGRADE 15W40 (40 QTS)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		KLMFA07580	KLMFA08634	KLMFA08633
Sample Date		Client Info		01 Jun 2013	20 Apr 2013	28 Jan 2013
Machine Age	mls	Client Info		479049	450829	419110
Oil Age	mls	Client Info		91607	63389	31668
Filter Age	mls	Client Info		91607	63389	31668
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				ATTENTION	NORMAL	NORMAL

WEAR

The copper level is marginal. All other component wear rates are normal.

Iron	ppm	ASTM D5185m		208	145	60
Chromium	ppm	ASTM D5185m		6	5	1
Nickel	ppm	ASTM D5185m		6	6	1
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m		23	22	9
Lead	ppm	ASTM D5185m		46	23	12
Copper	ppm	ASTM D5185m		▲ 94	31	11
Tin	ppm	ASTM D5185m		6	4	3
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

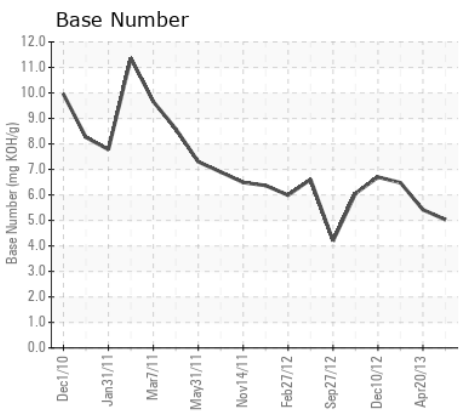
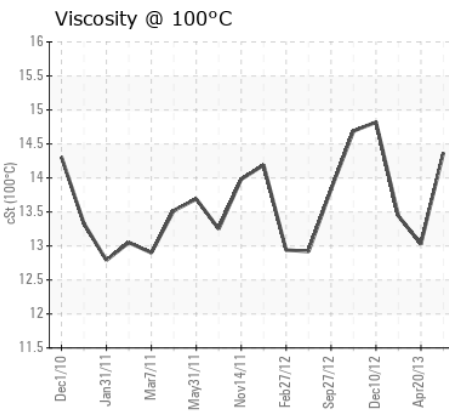
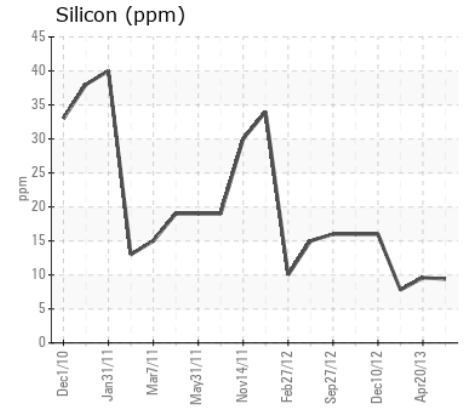
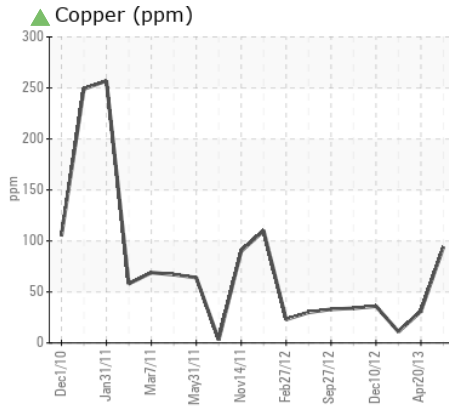
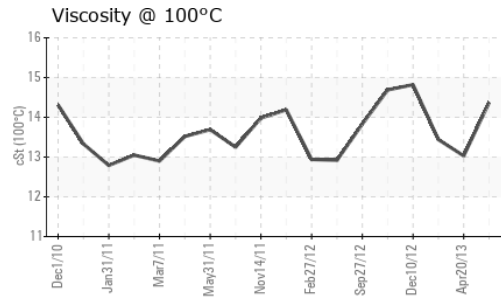
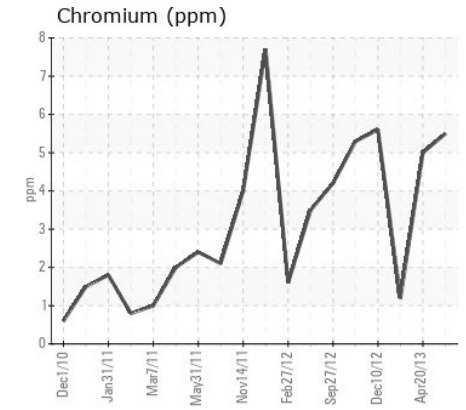
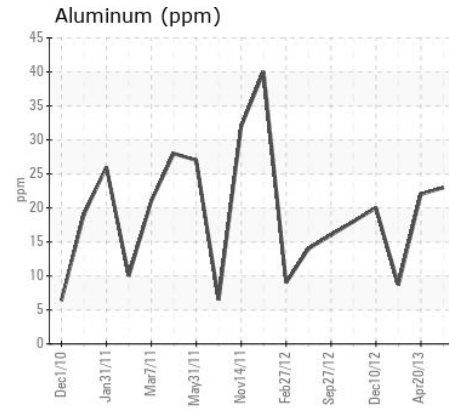
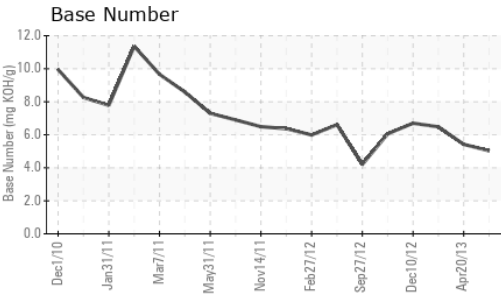
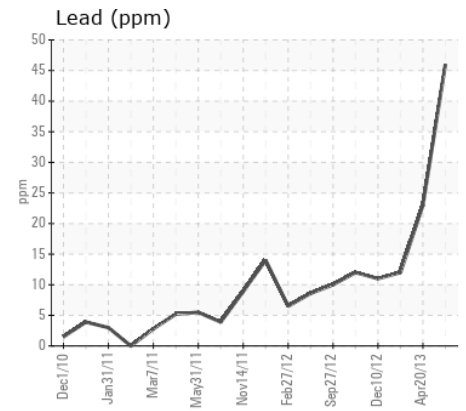
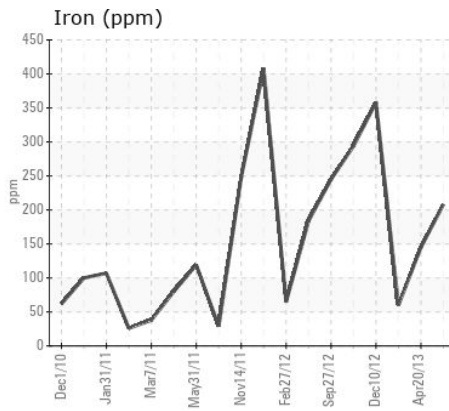
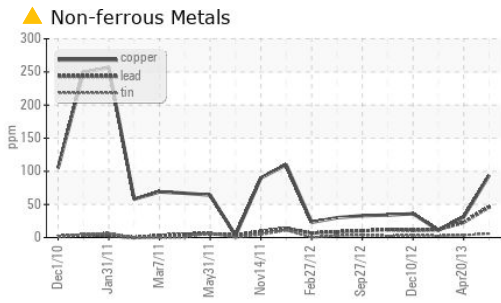
There is no indication of any contamination in the component.

Silicon	ppm	ASTM D5185m		9	10	8
Potassium	ppm	ASTM D5185m		6	6	6
Fuel		WC Method		<1.0	<1.0	<1.0
Water		WC Method		NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		1.4	1.1	0.8
Nitration	Abs/cm	*ASTM D7624		13.	12.	10.
Sulfation	Abs/.1mm	*ASTM D7415		31.	28.	25.
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual		NEG	NEG	NEG

FLUID CONDITION

The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		15	12	5
Boron	ppm	ASTM D5185m		42	35	126
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		71	62	67
Manganese	ppm	ASTM D5185m		6	4	1
Magnesium	ppm	ASTM D5185m		266	231	286
Calcium	ppm	ASTM D5185m		1661	1664	1611
Phosphorus	ppm	ASTM D5185m		1014	941	1020
Zinc	ppm	ASTM D5185m		1098	980	1080
Sulfur	ppm	ASTM D5185m		3906	4410	2827
Oxidation	Abs/.1mm	*ASTM D7414		31.	27.	21.
Base Number (BN)	mg KOH/g	ASTM D2896		5.03	5.42	6.48
Visc @ 100°C	cSt	ASTM D445		14.37	13.03	13.44
Fluid Type		*In-house		SAE_ENG_DE	*SAE_ENG_DE	SAE_ENG_DE



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KLMFA07580 **Received** : 10 Jun 2013
Lab Number : 03300895 **Diagnosed** : 12 Jun 2013
Unique Number : 6288572 **Diagnostician** : Elizabeth Valachovic
Test Package : MOB 2 (Additional Tests: FluidDetermination, PQ)

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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)