



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



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

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		KLMFA08634	KLMFA08633	KLMFA03562
Sample Date		Client Info		20 Apr 2013	28 Jan 2013	10 Dec 2012
Machine Age	mls	Client Info		450829	419110	387442
Oil Age	mls	Client Info		63389	31668	155337
Filter Age	mls	Client Info		63389	31668	155337
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m		145	60	358
Chromium	ppm	ASTM D5185m		5	1	6
Nickel	ppm	ASTM D5185m		6	1	6
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m		22	9	20
Lead	ppm	ASTM D5185m		23	12	11
Copper	ppm	ASTM D5185m		31	11	36
Tin	ppm	ASTM D5185m		4	3	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

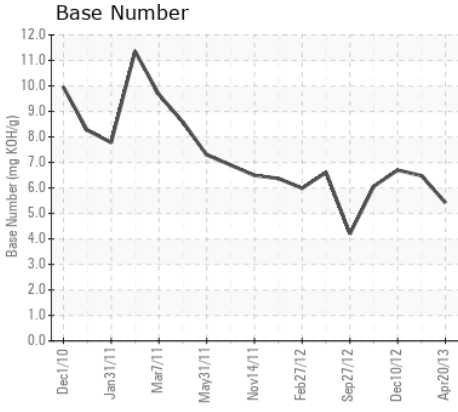
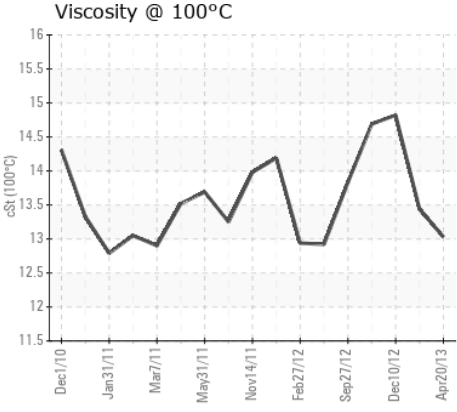
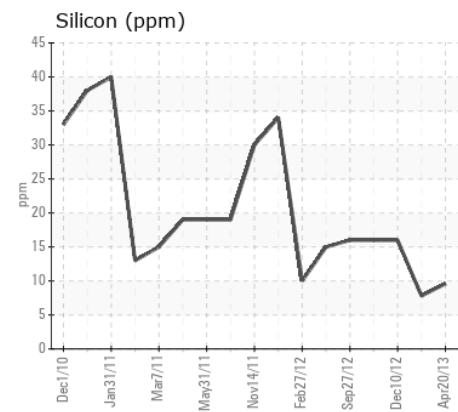
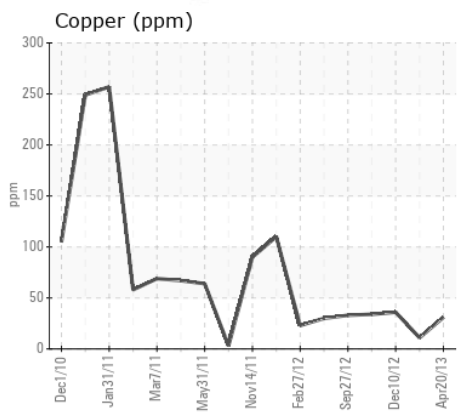
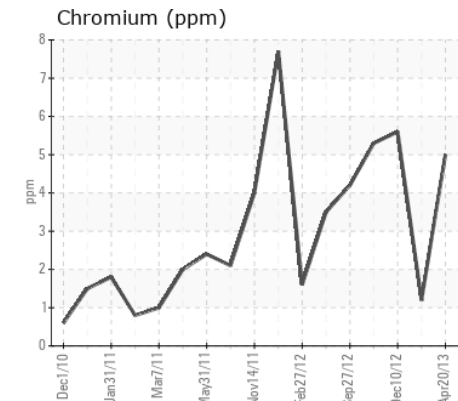
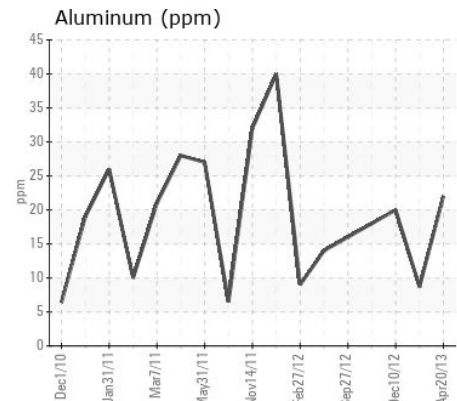
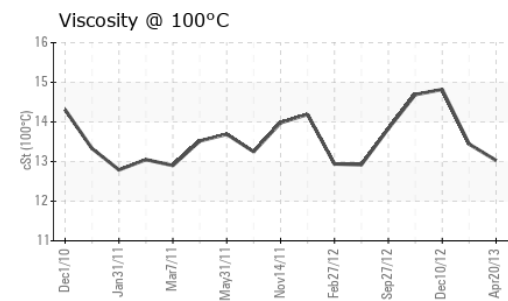
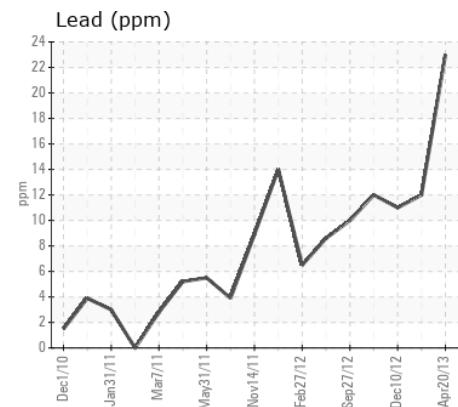
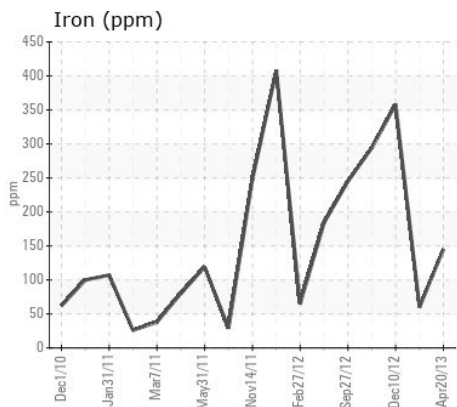
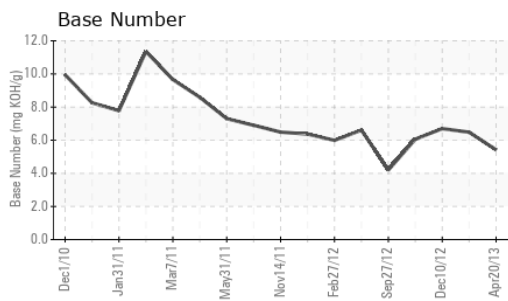
There is no indication of any contamination in the component.

Silicon	ppm	ASTM D5185m		10	8	16
Potassium	ppm	ASTM D5185m		6	6	15
Fuel		WC Method		<1.0	<1.0	<1.0
Water		WC Method		NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		1.1	0.8	1.9
Nitration	Abs/cm	*ASTM D7624		12.	10.	13.
Sulfation	Abs/.1mm	*ASTM D7415		28.	25.	32.
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 oil is suitable for further service.

Sodium	ppm	ASTM D5185m		12	5	12
Boron	ppm	ASTM D5185m		35	126	35
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		62	67	59
Manganese	ppm	ASTM D5185m		4	1	5
Magnesium	ppm	ASTM D5185m		231	286	224
Calcium	ppm	ASTM D5185m		1664	1611	1902
Phosphorus	ppm	ASTM D5185m		941	1020	994
Zinc	ppm	ASTM D5185m		980	1080	1105
Sulfur	ppm	ASTM D5185m		4410	2827	2393
Oxidation	Abs/.1mm	*ASTM D7414		27.	21.	29.
Base Number (BN)	mg KOH/g	ASTM D2896		5.42	6.48	6.70
Visc @ 100°C	cSt	ASTM D445		13.03	13.44	14.82
Fluid Type		*In-house		*SAE_ENG_DE	SAE_ENG_DE	UNKNOWN



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KLMFA08634 **Received** : 06 May 2013
Lab Number : 03279134 **Diagnosed** : 08 May 2013
Unique Number : 6251792 **Diagnostician** : Don Baldrige
Test Package : MOB 2 (Additional Tests: FluidDetermination, PQ)

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Certificate L2367
 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)