



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id  
**FREIGHTLINER 110910**

Component  
**Front Diesel Engine**

Fluid  
**CHEVRON DELO 400 MULTIGRADE 15W40 (10 GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>KLMFA13360</b>	KLMFA04310	KLMF003344
Sample Date		Client Info		<b>21 Dec 2013</b>	18 May 2012	13 Jan 2012
Machine Age	mls	Client Info		<b>1260249</b>	1207605	1183579
Oil Age	mls	Client Info		<b>52644</b>	57699	33673
Filter Age	mls	Client Info		<b>52644</b>	57699	33673
Oil Changed		Client Info		<b>Not Changd</b>	Changed	Not Changd
Filter Changed		Client Info		<b>Not Changd</b>	Changed	Not Changd
Sample Status				<b>NORMAL</b>	MARGINAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>125	<b>44</b>	65	50
Chromium	ppm	ASTM D5185m	>10	<b>2</b>	5	4
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>7</b>	3	3
Lead	ppm	ASTM D5185m	>30	<b>11</b>	9	9
Copper	ppm	ASTM D5185m	>65	<b>5</b>	34	35
Tin	ppm	ASTM D5185m	>4	<b>0</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**

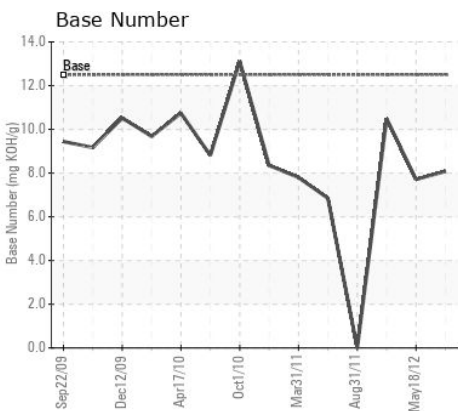
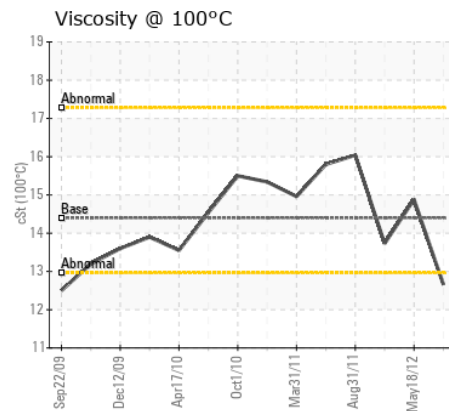
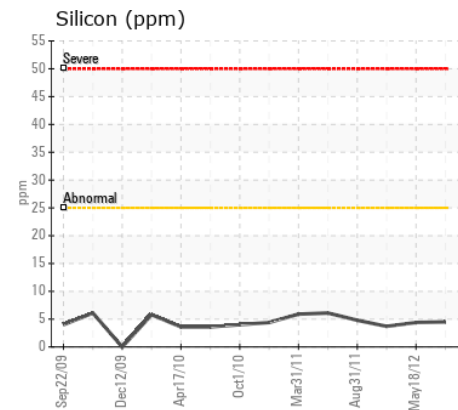
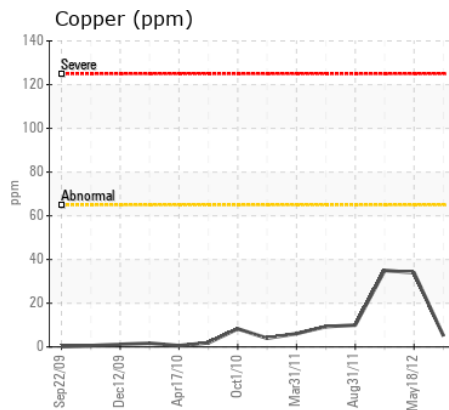
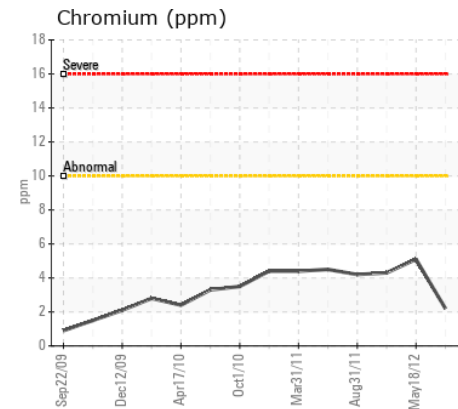
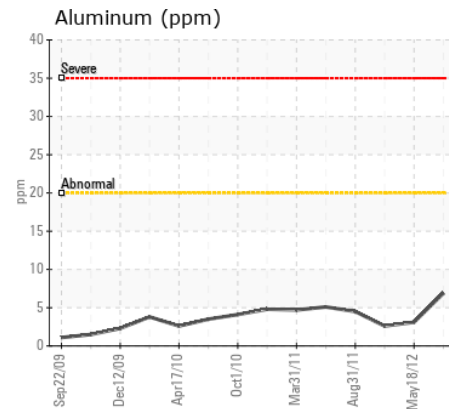
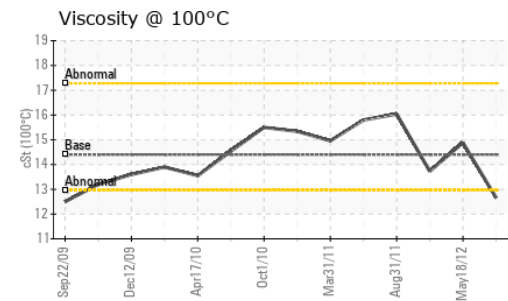
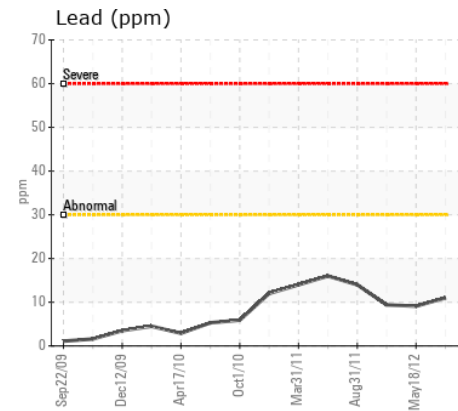
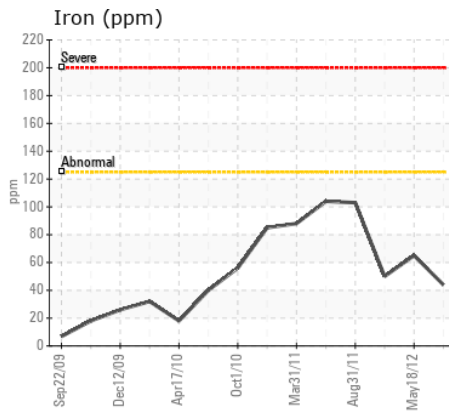
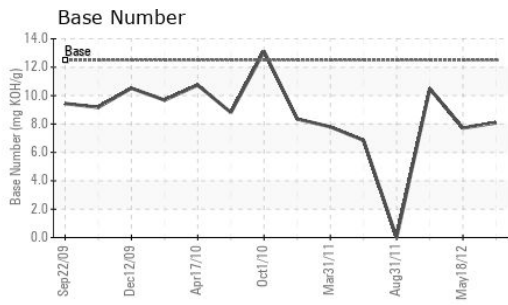
There is no indication of any contamination in the component.

Silicon	ppm	ASTM D5185m	>25	<b>4</b>	4	4
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	2	3
Fuel		WC Method	>3.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>1.1</b>	▲ 3.6	2.2
Nitration	Abs/cm	*ASTM D7624		<b>7.</b>	12.	8.
Sulfation	Abs/.1mm	*ASTM D7415		<b>21.</b>	30.	24.
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	>0.1	<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>3</b>	6	8
Boron	ppm	ASTM D5185m	151	<b>216</b>	57	16
Barium	ppm	ASTM D5185m	0.4	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	250	<b>67</b>	21	6
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	0	<b>298</b>	97	32
Calcium	ppm	ASTM D5185m	2046	<b>1610</b>	2684	3155
Phosphorus	ppm	ASTM D5185m	1043	<b>1045</b>	980	1204
Zinc	ppm	ASTM D5185m	943	<b>1191</b>	1242	1344
Sulfur	ppm	ASTM D5185m	5012	<b>1568</b>	3481	4306
Oxidation	Abs/.1mm	*ASTM D7414		<b>15.</b>	21.	15.
Base Number (BN)	mg KOH/g	ASTM D2896	12.5	<b>8.08</b>	7.71	10.49
Visc @ 100°C	cSt	ASTM D445	14.4	<b>12.66</b>	14.88	13.73



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : KLMFA13360 **Received** : 13 Jan 2014  
**Lab Number** : 03428897 **Diagnosed** : 15 Jan 2014  
**Unique Number** : 6496698 **Diagnostician** : Jonathan Hester  
**Test Package** : MOB 2

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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)