



# OIL ANALYSIS REPORT

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

Machine Id  
**FREIGHTLINER 118582**

Component  
**Front Diesel Engine**

Fluid  
**CHEVRON DELO 400 MULTIGRADE 15W40 (11 GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>KLMFA07628</b>	KLMFA08639	KLMFA08632
Sample Date		Client Info		<b>15 Jul 2013</b>	03 Jun 2013	22 Apr 2013
Machine Age	mls	Client Info		<b>1722367</b>	1693821	1665054
Oil Age	mls	Client Info		<b>28538</b>	252472	213705
Filter Age	mls	Client Info		<b>28538</b>	252472	213705
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>	SEVERE	ABNORMAL

## WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m		<b>43</b>	162	147
Chromium	ppm	ASTM D5185m		<b>2</b>	5	4
Nickel	ppm	ASTM D5185m		<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		<b>5</b>	8	8
Lead	ppm	ASTM D5185m		<b>12</b>	5	4
Copper	ppm	ASTM D5185m		<b>13</b>	81	84
Tin	ppm	ASTM D5185m		<b>0</b>	3	2
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

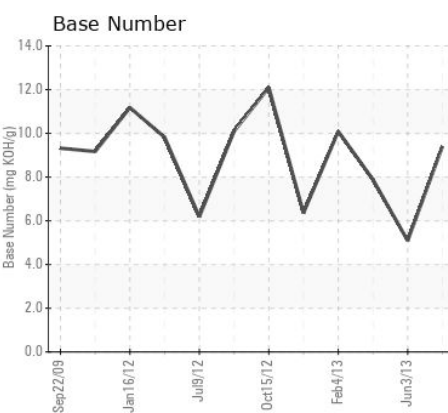
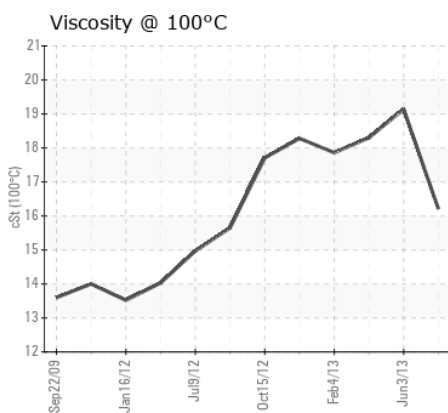
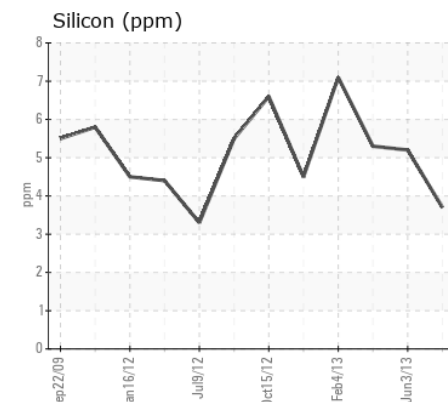
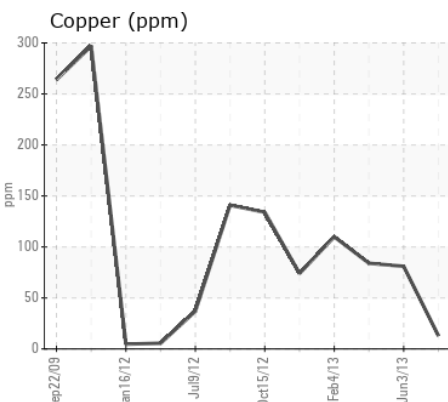
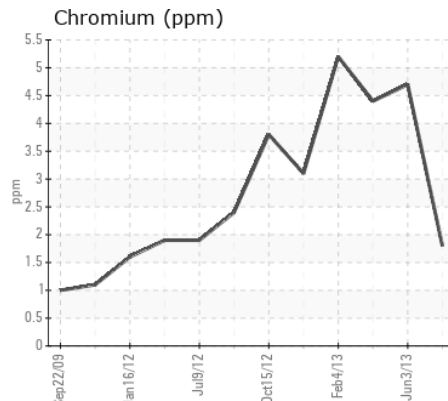
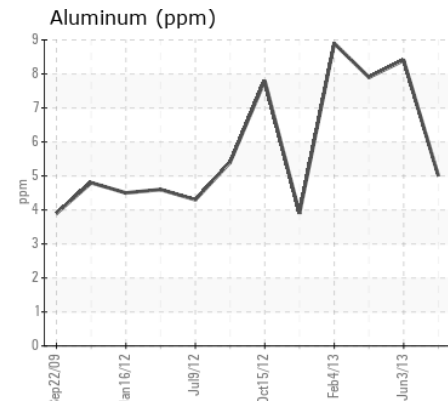
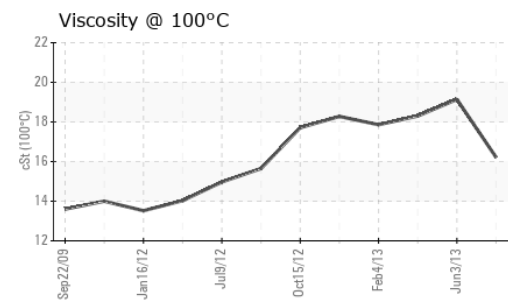
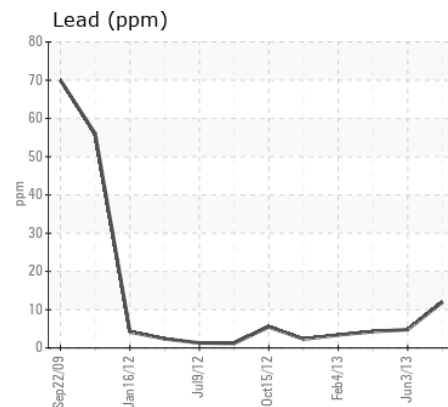
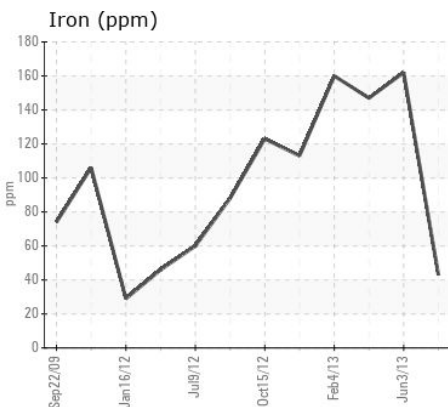
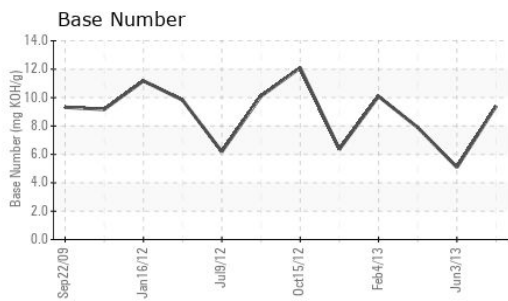
There is no indication of any contamination in the component.

Silicon	ppm	ASTM D5185m		<b>4</b>	5	5
Potassium	ppm	ASTM D5185m		<b>2</b>	3	3
Fuel		WC Method		<b>&lt;1.0</b>	0.0	<1.0
Water		WC Method		<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844		<b>1.9</b>	5.3	4.8
Nitration	Abs/cm	*ASTM D7624		<b>6.</b>	13.	12.
Sulfation	Abs/.1mm	*ASTM D7415		<b>19.</b>	30.	29.
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		<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>2</b>	6	5
Boron	ppm	ASTM D5185m		<b>180</b>	36	52
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>66</b>	60	52
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	2	1
Magnesium	ppm	ASTM D5185m		<b>289</b>	280	241
Calcium	ppm	ASTM D5185m		<b>1654</b>	1935	2036
Phosphorus	ppm	ASTM D5185m		<b>966</b>	994	969
Zinc	ppm	ASTM D5185m		<b>1208</b>	1129	1043
Sulfur	ppm	ASTM D5185m		<b>3742</b>	4052	4591
Oxidation	Abs/.1mm	*ASTM D7414		<b>10.</b>	19.	19.
Base Number (BN)	mg KOH/g	ASTM D2896		<b>9.4</b>	5.09	7.89
Visc @ 100°C	cSt	ASTM D445		<b>16.21</b>	19.14	18.3
Fluid Type		*In-house		<b>*SAE_ENG_DE</b>	*SAE_ENG_DE	*SAE_ENG_DE



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : KLMFA07628 **Received** : 22 Jul 2013  
**Lab Number** : 03324733 **Diagnosed** : 23 Jul 2013  
**Unique Number** : 6327433 **Diagnostician** : Don Baldrige  
**Test Package** : MOB 2 ( Additional Tests: FluidDetermination )

**EDAN FARMS INC.**  
 13549 WOODWORTH RD.  
 NEW SPRINGFIELD, OH  
 US 44443  
 Contact: ERIC SCHAEFER  
 leslie.edan@zoominternet.net  
 T: (330)549-5567  
 F: (330)549-0255

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)