



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
FREIGHTLINER 110910

Component
Front Diesel Engine

Fluid
CHEVRON DELO 400 MULTIGRADE 15W40 (10 GAL)

RECOMMENDATION

We recommend you service the filters on this component. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		KLMFA13292	KLMFA13360	KLMFA04310
Sample Date		Client Info		08 Sep 2014	21 Dec 2013	18 May 2012
Machine Age	mls	Client Info		1328983	1260249	1207605
Oil Age	mls	Client Info		121378	52644	57699
Filter Age	mls	Client Info		121378	52644	57699
Oil Changed		Client Info		Not Changd	Not Changd	Changed
Filter Changed		Client Info		Not Changd	Not Changd	Changed
Sample Status				ABNORMAL	NORMAL	MARGINAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>125	104	44	65
Chromium	ppm	ASTM D5185m	>10	5	2	5
Nickel	ppm	ASTM D5185m	>4	0	0	<1
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m		<1	0	0
Aluminum	ppm	ASTM D5185m	>20	8	7	3
Lead	ppm	ASTM D5185m	>30	25	11	9
Copper	ppm	ASTM D5185m	>65	16	5	34
Tin	ppm	ASTM D5185m	>4	2	0	1
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

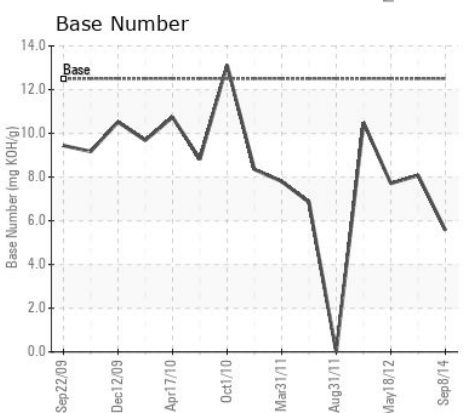
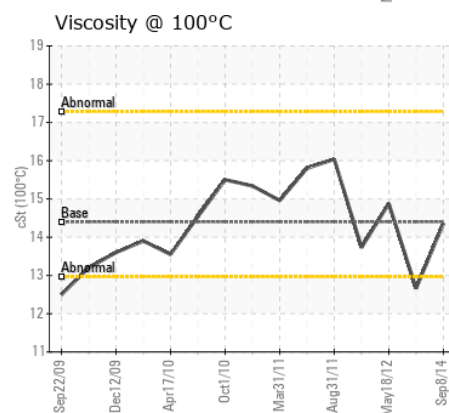
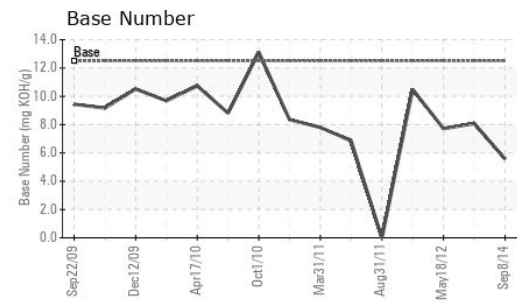
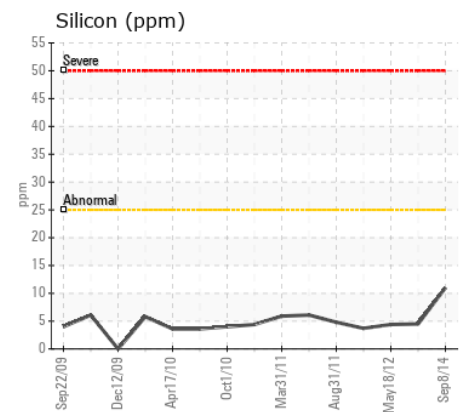
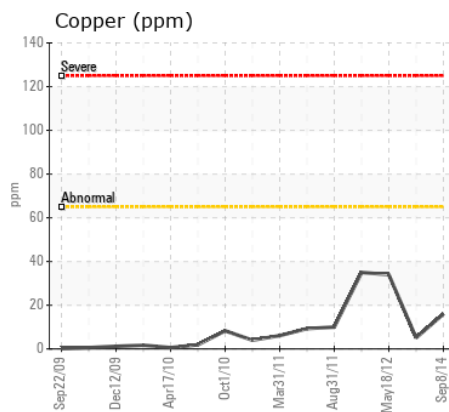
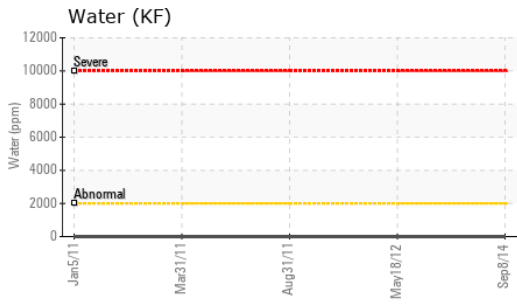
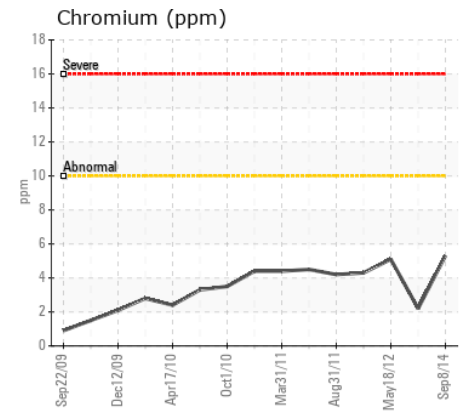
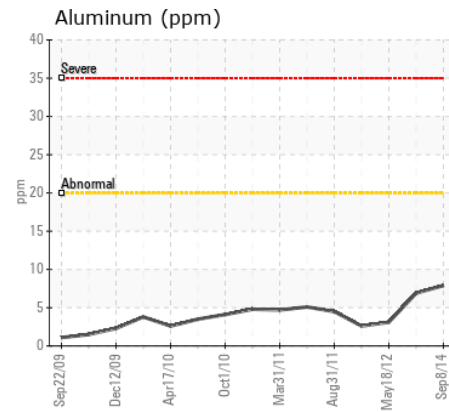
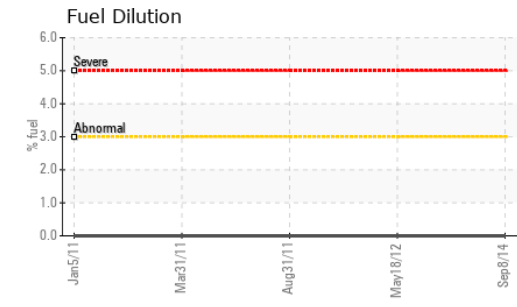
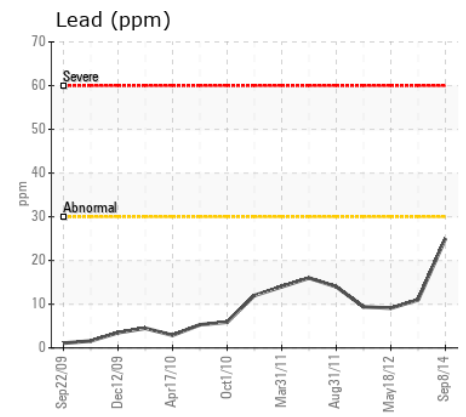
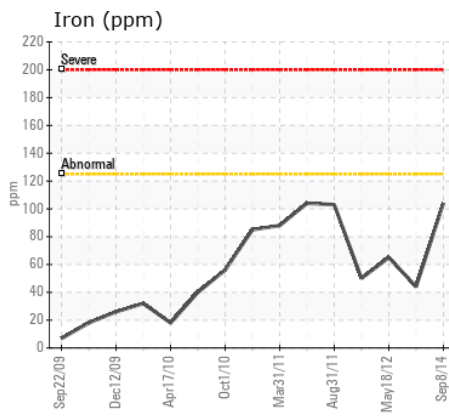
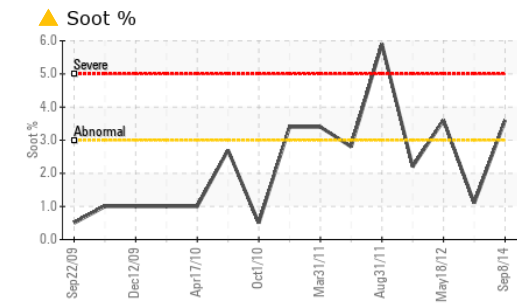
There is an abnormal amount of solids and carbon present in the oil.

Silicon	ppm	ASTM D5185m	>25	11	4	4
Potassium	ppm	ASTM D5185m	>20	0	<1	2
Fuel	%	ASTM D3524	>3.0	<1.0	<1.0	<1.0
Water	%	ASTM D6304	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	▲ 3.6	1.1	▲ 3.6
Nitration	Abs/cm	*ASTM D7624		11.	7.	12.
Sulfation	Abs/.1mm	*ASTM D7415		29.	21.	30.
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	>0.2	NEG	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		5	3	6
Boron	ppm	ASTM D5185m	151	106	216	57
Barium	ppm	ASTM D5185m	0.4	<1	0	0
Molybdenum	ppm	ASTM D5185m	250	95	67	21
Manganese	ppm	ASTM D5185m		1	<1	<1
Magnesium	ppm	ASTM D5185m	0	372	298	97
Calcium	ppm	ASTM D5185m	2046	1769	1610	2684
Phosphorus	ppm	ASTM D5185m	1043	1122	1045	980
Zinc	ppm	ASTM D5185m	943	1293	1191	1242
Sulfur	ppm	ASTM D5185m	5012	1471	1568	3481
Oxidation	Abs/.1mm	*ASTM D7414		19.	15.	21.
Base Number (BN)	mg KOH/g	ASTM D2896	12.5	5.57	8.08	7.71
Visc @ 100°C	cSt	ASTM D445	14.4	14.36	12.66	14.88



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KLMFA13292 **Received** : 16 Sep 2014
Lab Number : 03582387 **Diagnosed** : 17 Sep 2014
Unique Number : 6745315 **Diagnostician** : Jonathan Hester

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

Test Package : MOB 2 (Additional Tests: FuelDilution, KF)
 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)