



OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
FREIGHTLINER 110910

Component
Front Diesel Engine

Fluid
CHEVRON DELO 400 MULTIGRADE 15W40 (10 GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		KLMFA15507	KLMFA09346	KLMFA13348
Sample Date		Client Info		01 Jul 2015	04 Feb 2015	17 Nov 2014
Machine Age	mls	Client Info		1434799	1397782	1367227
Oil Age	mls	Client Info		2227194	190177	159622
Filter Age	mls	Client Info		37017	190177	159622
Oil Changed		Client Info		Changed	Not Changd	Not Changd
Filter Changed		Client Info		Changed	Not Changd	Not Changd
Sample Status				ABNORMAL	ABNORMAL	NORMAL

WEAR

The lead level is abnormal. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>125	109	▲ 156	113
Chromium	ppm	ASTM D5185m	>10	4	6	4
Nickel	ppm	ASTM D5185m	>4	<1	<1	<1
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m		0	<1	0
Aluminum	ppm	ASTM D5185m	>20	6	8	4
Lead	ppm	ASTM D5185m	>30	▲ 41	28	23
Copper	ppm	ASTM D5185m	>65	12	19	15
Tin	ppm	ASTM D5185m	>4	3	0	2
Vanadium	ppm	ASTM D5185m		0	<1	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.

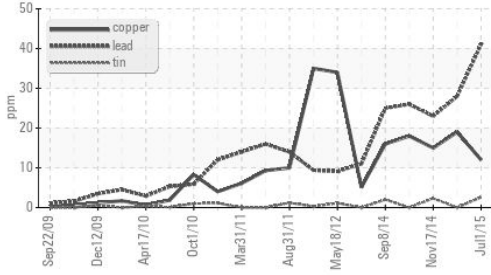
Silicon	ppm	ASTM D5185m	>25	8	11	7
Potassium	ppm	ASTM D5185m	>20	2	<1	2
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	2.1	2.6	2.5
Nitration	Abs/cm	*ASTM D7624		11.	10.	8.
Sulfation	Abs/.1mm	*ASTM D7415		27.	26.	22.
Silt	scalar	*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

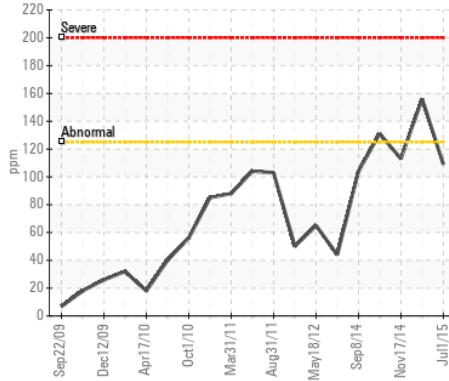
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		6	5	4
Boron	ppm	ASTM D5185m	151	184	102	106
Barium	ppm	ASTM D5185m	0.4	0	0	0
Molybdenum	ppm	ASTM D5185m	250	126	94	81
Manganese	ppm	ASTM D5185m		2	1	1
Magnesium	ppm	ASTM D5185m	0	566	400	392
Calcium	ppm	ASTM D5185m	2046	2569	1813	1800
Phosphorus	ppm	ASTM D5185m	1043	1572	1088	1105
Zinc	ppm	ASTM D5185m	943	1732	1321	1169
Sulfur	ppm	ASTM D5185m	5012	3697	1344	3903
Oxidation	Abs/.1mm	*ASTM D7414		21.	23.	14.
Base Number (BN)	mg KOH/g	ASTM D2896	12.5	6.18	6.85	9.09
Visc @ 100°C	cSt	ASTM D445	14.4	13.09	13.76	14.53

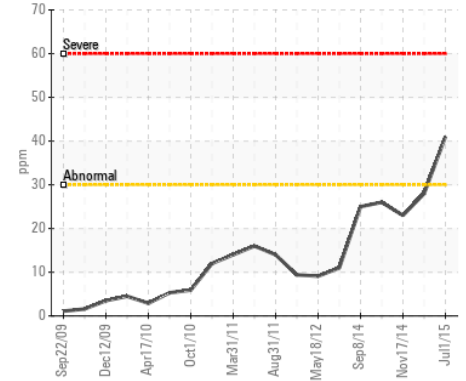
▲ Non-ferrous Metals



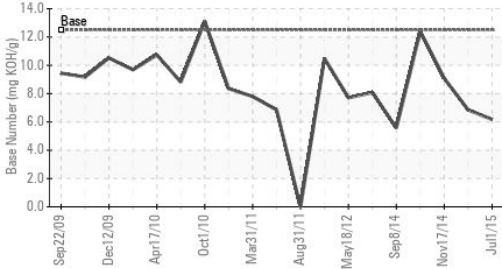
Iron (ppm)



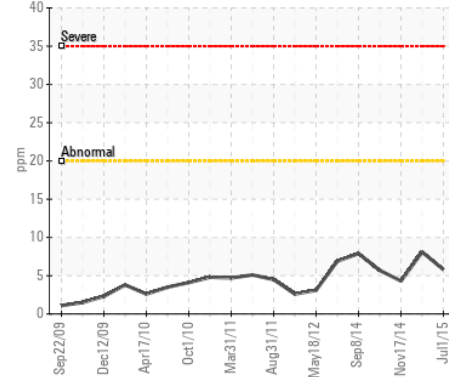
▲ Lead (ppm)



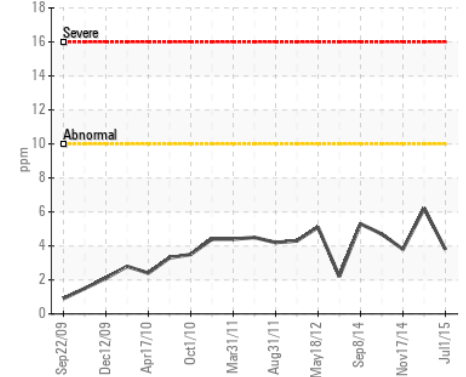
Base Number



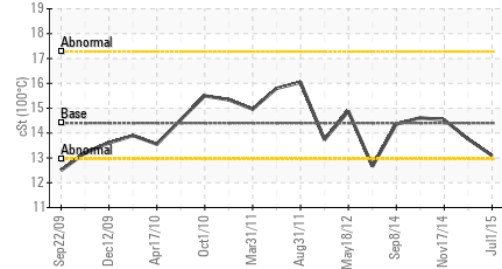
Aluminum (ppm)



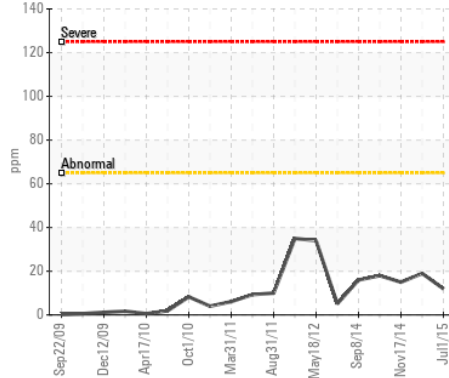
Chromium (ppm)



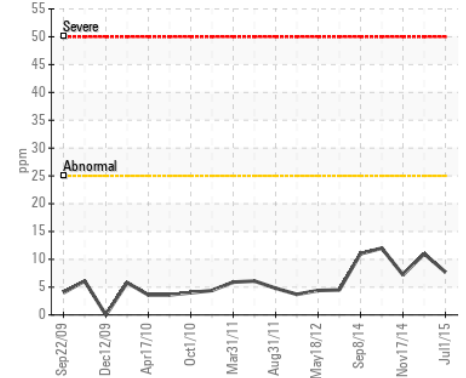
Viscosity @ 100°C



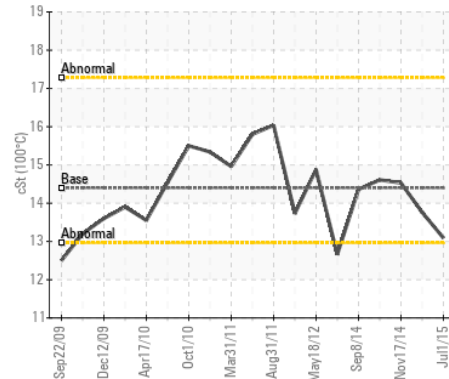
Copper (ppm)



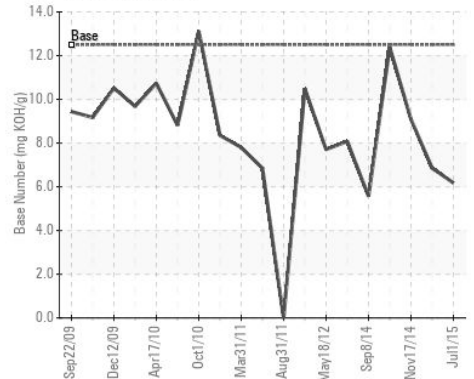
Silicon (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : KLMFA15507 Received : 07 Jul 2015
 Lab Number : 03777758 Diagnosed : 08 Jul 2015
 Unique Number : 7065783 Diagnostician : Don Baldrige
 Test Package : MOB 2

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

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)