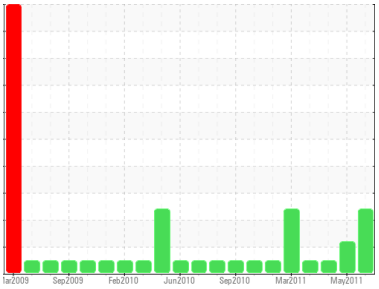
OIL ANALYSIS REPORT

Sample Rating Trend



FUEL

Machine Id
MACK 1661
Component
Diesel Engine
Fluid
CHEVRON DELO 400 LE 15W40 (52 QTS)

DIAGNOSIS

Recommendation
We advise that you check the fuel injection system. We recommend an early resample to monitor this condition.

Wear
All component wear rates are normal.

Contamination
There is a high amount of fuel present in the oil.

Fluid Condition
Fuel is present in the oil and is lowering the viscosity.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WCMF903779**	WCMF903795	WCMF903796
Sample Date		Client Info		**10 Jun 2011**	30 May 2011	01 May 2011
Machine Age	mls	Client Info		**59428**	59396	57304
Oil Age	mls	Client Info		**3292**	3260	1168
Oil Changed		Client Info		**Not Changd**	Not Changd	Changed
Sample Status				**SEVERE**	ABNORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Glycol		WC Method		**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m		**7**	7	6
Chromium	ppm	ASTM D5185m		**<1**	<1	<1
Nickel	ppm	ASTM D5185m		**0**	<1	0
Titanium	ppm	ASTM D5185m		**0**	0	0
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m		**3**	3	3
Lead	ppm	ASTM D5185m		**0**	0	<1
Copper	ppm	ASTM D5185m		**3**	3	6
Tin	ppm	ASTM D5185m		**<1**	<1	<1
Antimony	ppm	ASTM D5185m		**0**	0	0
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**363**	361	401
Barium	ppm	ASTM D5185m		**0**	0	0
Molybdenum	ppm	ASTM D5185m		**76**	78	77
Manganese	ppm	ASTM D5185m		**<1**	<1	<1
Magnesium	ppm	ASTM D5185m		**401**	396	399
Calcium	ppm	ASTM D5185m		**1379**	1547	1450
Phosphorus	ppm	ASTM D5185m		**942**	1202	1040
Zinc	ppm	ASTM D5185m		**1142**	1114	1184
Sulfur	ppm	ASTM D5185m		**2926**	2770	3016

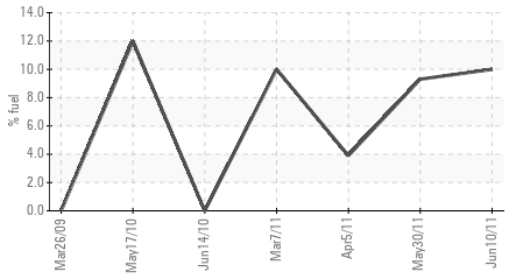
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m		**3**	2	4
Sodium	ppm	ASTM D5185m		**3**	2	3
Potassium	ppm	ASTM D5185m		**1**	2	1
Fuel	%	ASTM D3524		**10.0**	9.3	<1.0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844		**0.2**	0.2	0
Nitration	Abs/cm	*ASTM D7624		**6.**	6.	6.
Sulfation	Abs/.1mm	*ASTM D7415		**19.**	19.	19.

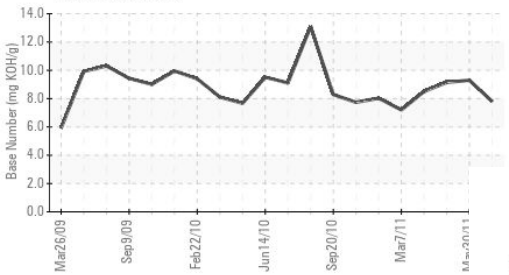
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414		**13.**	13.	14.
Base Number (BN)	mg KOH/g	ASTM D2896		**7.8**	9.30	9.15

OIL ANALYSIS REPORT

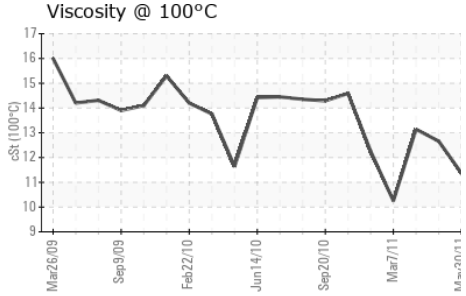
Fuel Dilution



Base Number



Viscosity @ 100°C

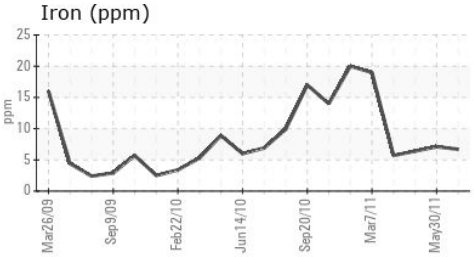


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	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
Free Water	scalar	*Visual		**NEG**	NEG	NEG

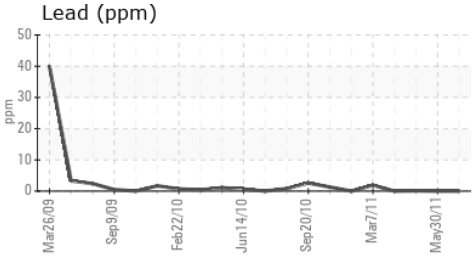
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445		▲ **10.74**	▲ 11.37	12.66

GRAPHS

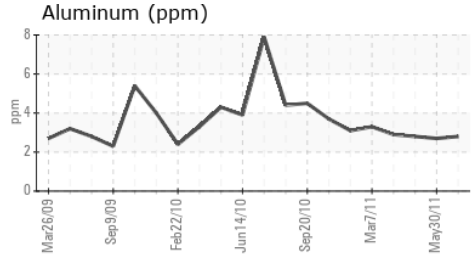
Iron (ppm)



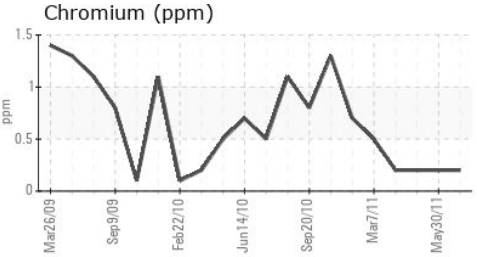
Lead (ppm)



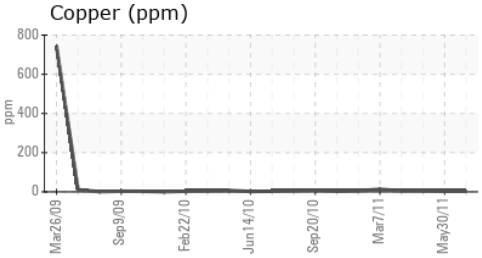
Aluminum (ppm)



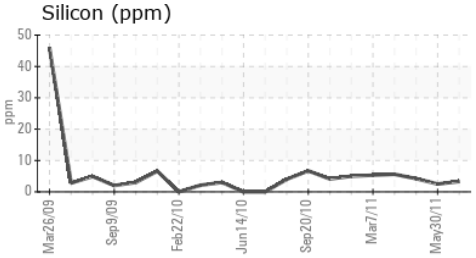
Chromium (ppm)



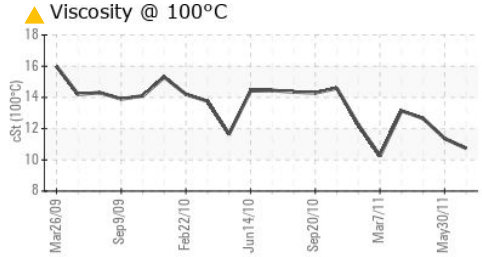
Copper (ppm)



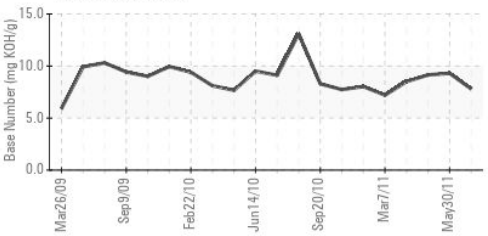
Silicon (ppm)



▲ Viscosity @ 100°C



Base Number



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WCMF903779
Lab Number : 02872110
Unique Number : 5588623
Test Package : MOB 2 (Additional Tests: PercentFuel)

Received : 13 Jun 2011
Diagnosed : 14 Jun 2011
Diagnostician : Elizabeth Valachovic

Certificate L2367

GFL Environmental - 9999 - Moved No Longer Used Units

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US
Contact:

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)

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