



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
WESTERN STAR 118787

Component
Front Diesel Engine

Fluid
SAE 15W40 (11 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		KLMFA13460	KLMFA13372	KLMFA13436
Sample Date		Client Info		20 Jan 2014	29 Nov 2013	21 Oct 2013
Machine Age	mls	Client Info		682878	654129	624567
Oil Age	mls	Client Info		525559	496810	467248
Filter Age	mls	Client Info		206782	178033	148471
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal for time on oil.

Iron	ppm	ASTM D5185m	>100	116	145	183
Chromium	ppm	ASTM D5185m	>20	2	3	3
Nickel	ppm	ASTM D5185m	>2	1	<1	<1
Titanium	ppm	ASTM D5185m	>2	0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	5	6	6
Lead	ppm	ASTM D5185m	>40	4	2	3
Copper	ppm	ASTM D5185m	>330	8	9	11
Tin	ppm	ASTM D5185m	>15	1	0	1
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

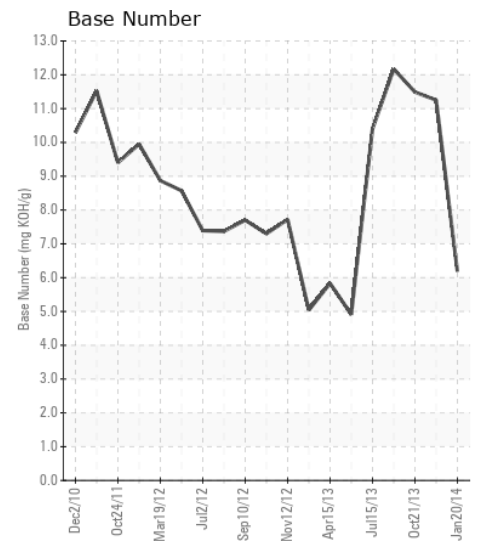
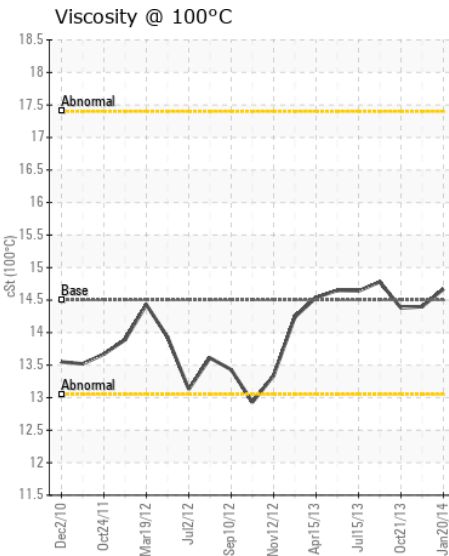
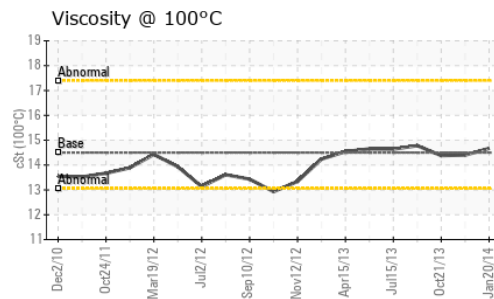
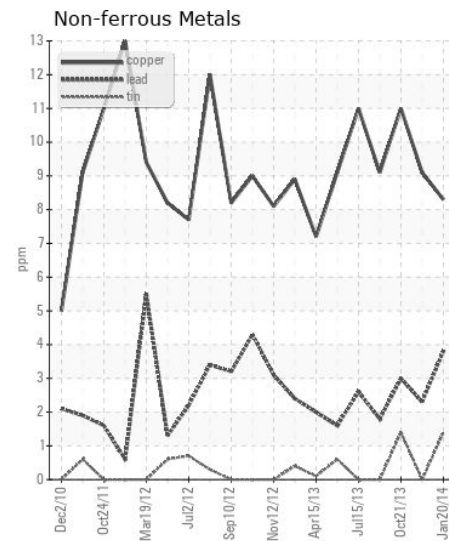
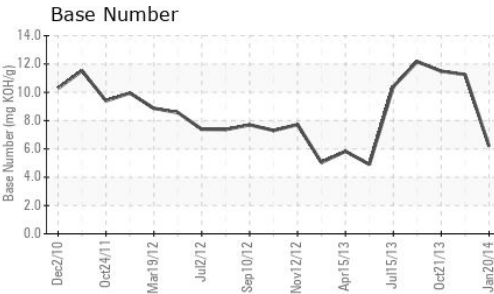
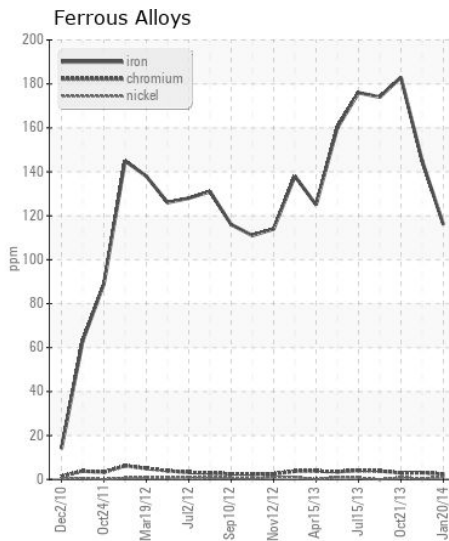
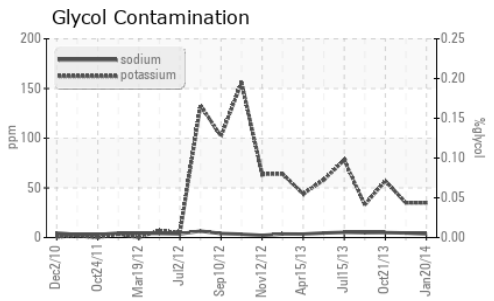
There is no indication of any contamination in the component.

Silicon	ppm	ASTM D5185m	>25	5	7	9
Potassium	ppm	ASTM D5185m	>20	35	35	57
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol	%	*ASTM D2982		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.5	0	0.3
Nitration	Abs/cm	*ASTM D7624		11.	3.	5.
Sulfation	Abs/.1mm	*ASTM D7415		25.	11.	14.
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	>0.1	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		4	5	5
Boron	ppm	ASTM D5185m		154	157	92
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		75	83	80
Manganese	ppm	ASTM D5185m		1	<1	2
Magnesium	ppm	ASTM D5185m		338	353	353
Calcium	ppm	ASTM D5185m		1642	1620	1635
Phosphorus	ppm	ASTM D5185m		969	959	983
Zinc	ppm	ASTM D5185m		1101	1215	1174
Sulfur	ppm	ASTM D5185m		3075	1509	1595
Oxidation	Abs/.1mm	*ASTM D7414		26.	6.	9.
Base Number (BN)	mg KOH/g	ASTM D2896		6.19	11.25	11.49
Visc @ 100°C	cSt	ASTM D445	14.5	14.67	14.4	14.38
Pour Point	°C	ASTM D5950		-54	---	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KLMFA13460 **Received** : 24 Jan 2014
Lab Number : 03436502 **Diagnosed** : 27 Jan 2014
Unique Number : 6509304 **Diagnostician** : Jonathan Hester
Test Package : MOB 2 (Additional Tests: Glycol, PourPt, PQ, PrtCount)

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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