



OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
Store 2 - Beaver [WELLSTON COAL]
Machine Id
JOHN DEERE 350GL 1FF350GXEDE809225
Component
Diesel Engine
Fluid
SHELL ROTELLA T 15W40 (7 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		LECP131398	LECP131384	---
Sample Date		Client Info		27 Jan 2014	03 Dec 2013	---
Machine Age	hrs	Client Info		1060	554	---
Oil Age	hrs	Client Info		506	10	---
Filter Age	hrs	Client Info		506	10	---
Oil Changed		Client Info		Changed	Changed	---
Filter Changed		Client Info		Changed	Changed	---
Sample Status				ABNORMAL	ABNORMAL	---

WEAR

The iron level is abnormal. The copper level is abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core).

Iron	ppm	ASTM D5185m	>51	▲ 138	35	---
Chromium	ppm	ASTM D5185m	>11	5	1	---
Nickel	ppm	ASTM D5185m	>5	3	2	---
Titanium	ppm	ASTM D5185m		0	0	---
Silver	ppm	ASTM D5185m		0	0	---
Aluminum	ppm	ASTM D5185m	>31	4	2	---
Lead	ppm	ASTM D5185m	>26	<1	<1	---
Copper	ppm	ASTM D5185m	>26	▲ 172	▲ 48	---
Tin	ppm	ASTM D5185m	>4	<1	<1	---
Vanadium	ppm	ASTM D5185m		<1	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

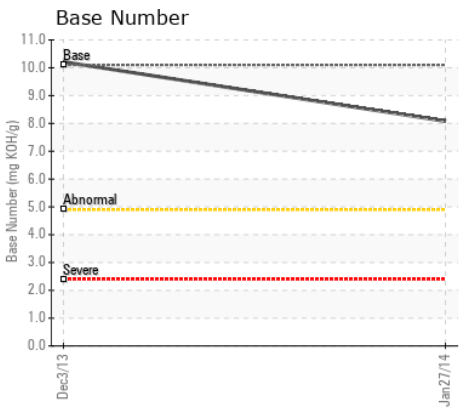
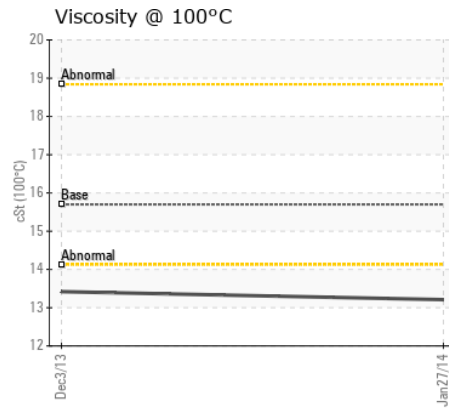
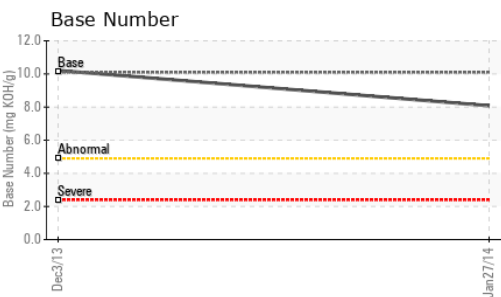
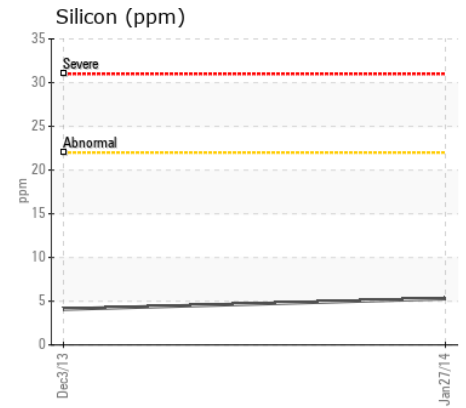
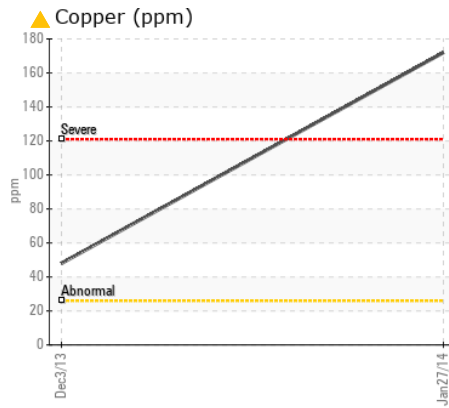
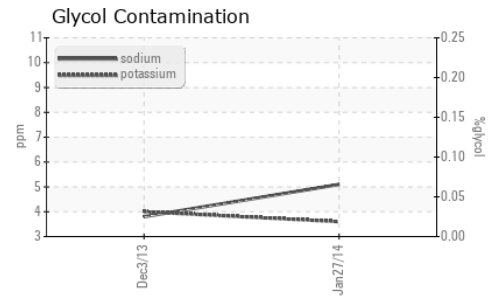
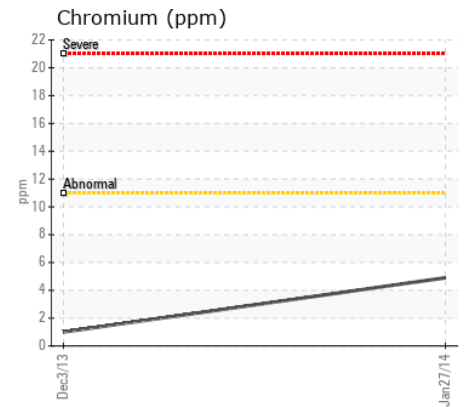
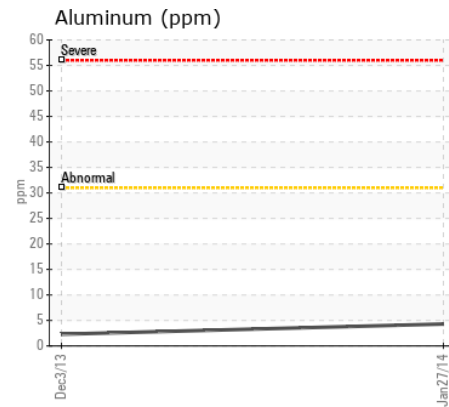
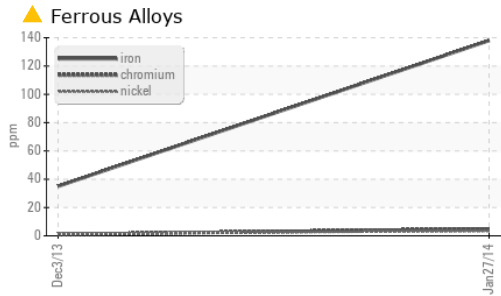
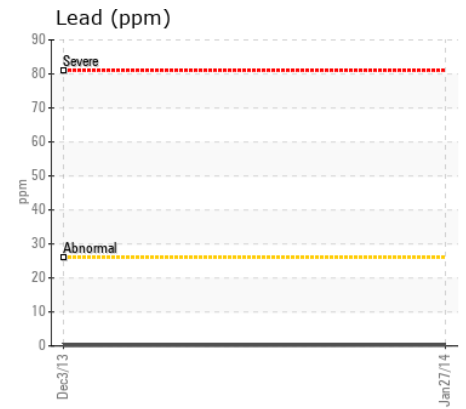
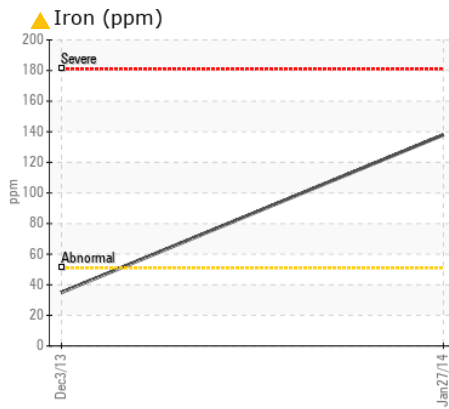
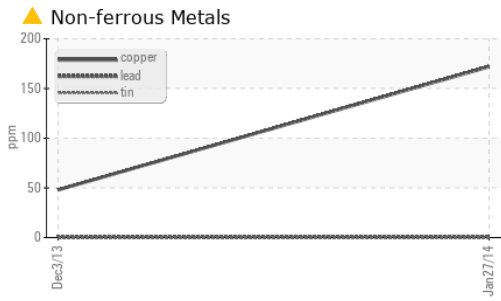
There is no indication of any contamination in the component.

Silicon	ppm	ASTM D5185m	>22	5	4	---
Potassium	ppm	ASTM D5185m	>20	4	4	---
Fuel	%	ASTM D3524	>2.1	<1.0	<1.0	---
Water		WC Method	>0.21	NEG	NEG	---
Glycol	%	*ASTM D2982		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	0.2	0	---
Nitration	Abs/cm	*ASTM D7624		6.	4.	---
Sulfation	Abs/.1mm	*ASTM D7415		15.	16.	---
Silt	scalar	*Visual	NONE	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.21	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	>31	5	4	---
Boron	ppm	ASTM D5185m	316	25	56	---
Barium	ppm	ASTM D5185m	0.0	0	0	---
Molybdenum	ppm	ASTM D5185m	1.2	53	40	---
Manganese	ppm	ASTM D5185m		2	<1	---
Magnesium	ppm	ASTM D5185m	24	163	133	---
Calcium	ppm	ASTM D5185m	2292	2315	2085	---
Phosphorus	ppm	ASTM D5185m	1064	1129	989	---
Zinc	ppm	ASTM D5185m	1160	1280	1050	---
Sulfur	ppm	ASTM D5185m	4996	3781	4807	---
Oxidation	Abs/.1mm	*ASTM D7414		12.	11.	---
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	8.08	10.21	---
Visc @ 100°C	cSt	ASTM D445	15.7	13.21	13.42	---



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LECP131398 **Received** : 03 Feb 2014
Lab Number : 03441850 **Diagnosed** : 05 Feb 2014
Unique Number : 6519657 **Diagnostician** : Jonathan Hester
Test Package : MOB 2 (Additional Tests: FuelDilution, Glycol, PercentFuel, PQ)

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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)