



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
JOHN DEERE 326D 1T0326DKCBG205755

Component
Rear Hydraulic System

Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR03593286	TR03546576	TR03416852
Sample Date		Client Info		21 Sep 2014	12 Jul 2014	01 Dec 2013
Machine Age	hrs	Client Info		4490	4040	3032
Oil Age	hrs	Client Info		4490	4040	3032
Filter Age	hrs	Client Info		0	1008	713
Oil Changed		Client Info		Not Changed	Not Changed	Not Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	MARGINAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>71	31	18	29
Chromium	ppm	ASTM D5185m	>11	<1	<1	<1
Nickel	ppm	ASTM D5185m	>6	<1	0	<1
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>11	9	6	9
Lead	ppm	ASTM D5185m	>13	2	4	4
Copper	ppm	ASTM D5185m	>21	9	6	16
Tin	ppm	ASTM D5185m	>5	0	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	LIGHT	LIGHT	LIGHT
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

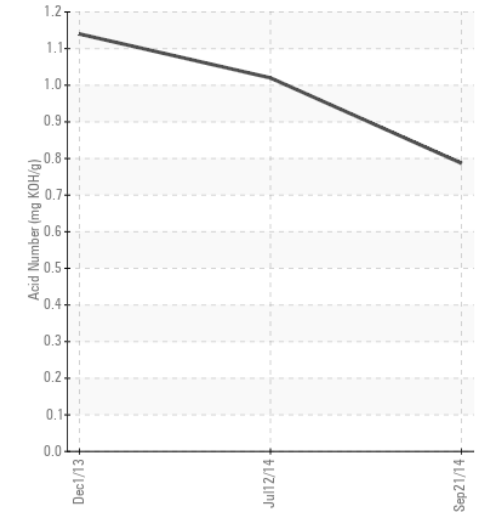
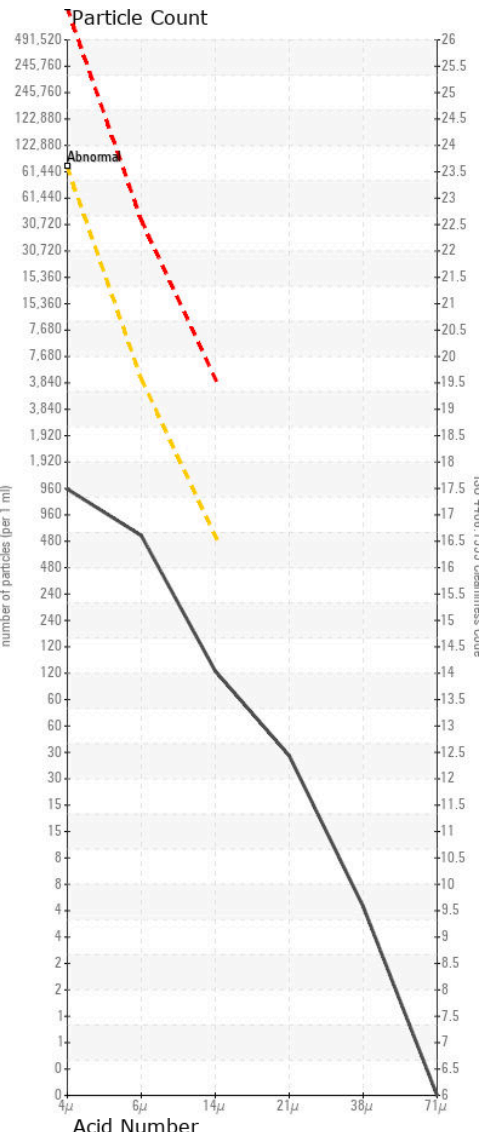
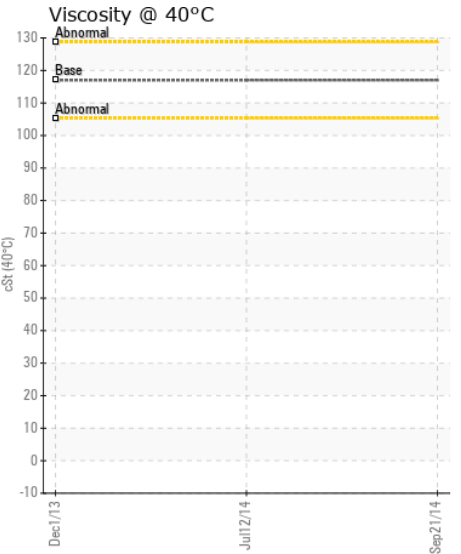
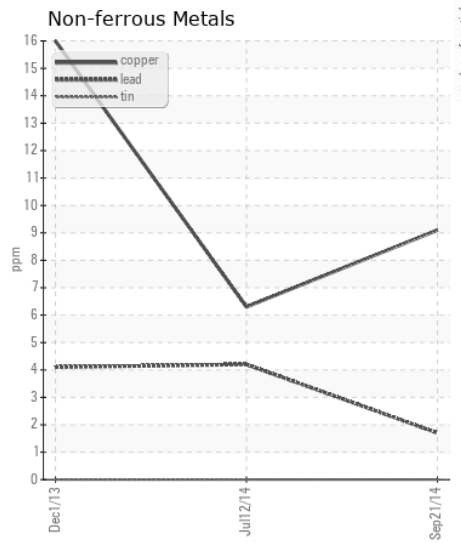
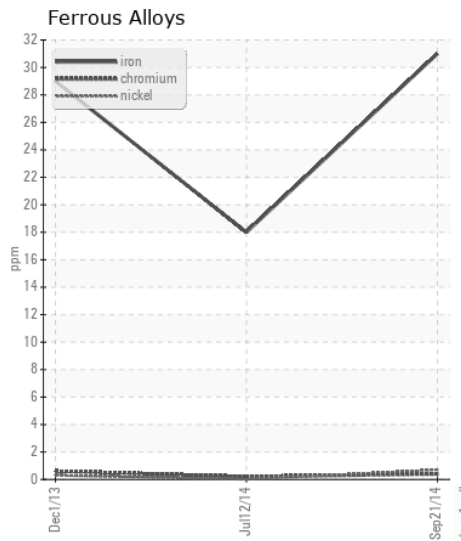
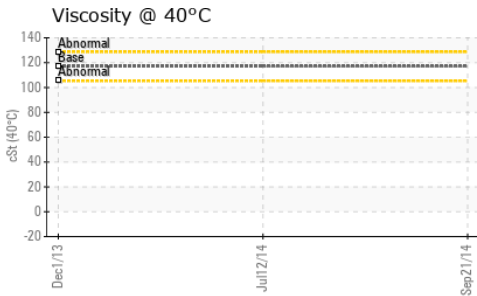
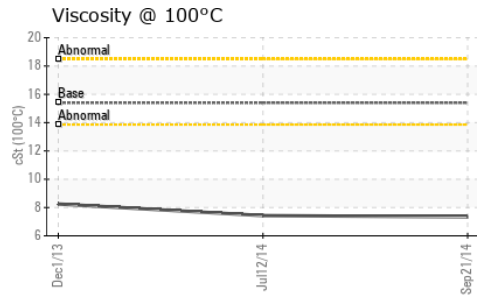
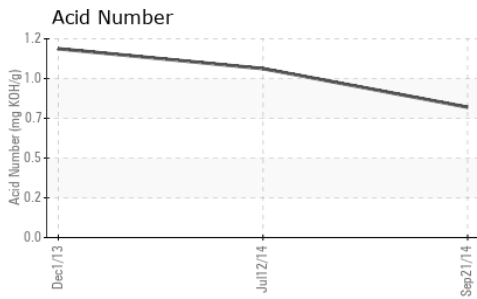
There is no indication of any contamination in the component. The amount and size of particulates present in the system is acceptable.

Silicon	ppm	ASTM D5185m	>24	16	12	18
Potassium	ppm	ASTM D5185m	>20	6	0	0
Water		WC Method	>0.075	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>80000	1179	162	10918
Particles >6µm		ASTM D7647	>5000	642	88	▲ 5947
Particles >14µm		ASTM D7647	>640	109	15	▲ 1013
Particles >21µm		ASTM D7647	>160	36	5	▲ 341
Particles >38µm		ASTM D7647	>40	5	0	▲ 52
Particles >71µm		ASTM D7647	>10	0	0	5
Oil Cleanliness		ISO 4406 (c)	>23/19/16	17/17/14	15/14/11	▲ 21/20/17
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	LIGHT	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	>0.075	NEG	NEG	NEG

FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>21	3	2	6
Boron	ppm	ASTM D5185m		98	92	22
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		82	83	20
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		343	311	283
Calcium	ppm	ASTM D5185m		1162	1032	2044
Phosphorus	ppm	ASTM D5185m		692	647	985
Zinc	ppm	ASTM D5185m		828	728	1177
Sulfur	ppm	ASTM D5185m		2698	2505	3369
Acid Number (AN)	mg KOH/g	ASTM D8045		0.787	1.02	1.14
Visc @ 100°C	cSt	ASTM D445	15.4	7.34	7.43	8.25



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR03593286 **Received** : 01 Oct 2014
Lab Number : 03593286 **Tested** : 02 Oct 2014
Unique Number : 6761215 **Diagnosed** : 02 Oct 2014 - Jonathan Hester
Test Package : MOB 2 (Additional Tests: KV100, VI)

GREATER TEXAS STONE
 PO BOX 328
 SAN SABA, TX
 US 76877
 Contact: AUBREY AKRIDGE

To discuss this sample report, contact Customer Service at 1-800-827-0711.
 * - 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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