



WEAR	ABNORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

[WOLFES EXCAVATING]

Machine Id
JOHN DEERE 316SJ T0310SJ138262

Component
Hydraulic System

Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (10 GAL)

RECOMMENDATION

We advise that you check all areas where dirt can enter the system. The 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		JR0221808	JRMC417329	JRMC407526
Sample Date		Client Info		27 Jun 2024	06 Jul 2017	03 Feb 2016
Machine Age	hrs	Client Info		4890	3352	2567
Oil Age	hrs	Client Info		0	785	0
Filter Age	hrs	Client Info		0	785	0
Oil Changed		Client Info		Not Changed	Not Changed	Changed
Filter Changed		Client Info		Changed	Not Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	NORMAL

WEAR

The iron level is abnormal. The copper level is abnormal.

PQ	UOM	Method	Limit/Abn	Current	History1	History2
Iron	ppm	ASTM D5185m	>20	▲ 57	▲ 50	45
Chromium	ppm	ASTM D5185m	>10	10	7	6
Nickel	ppm	ASTM D5185m	>10	<1	<1	<1
Titanium	ppm	ASTM D5185m		<1	1	<1
Silver	ppm	ASTM D5185m		<1	0	0
Aluminum	ppm	ASTM D5185m	>10	● 16	● 19	17
Lead	ppm	ASTM D5185m	>10	2	1	2
Copper	ppm	ASTM D5185m	>75	▲ 103	▲ 91	75
Tin	ppm	ASTM D5185m	>10	1	0	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	VLITE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

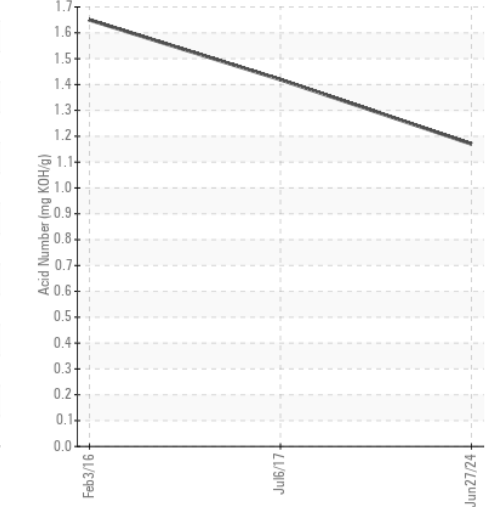
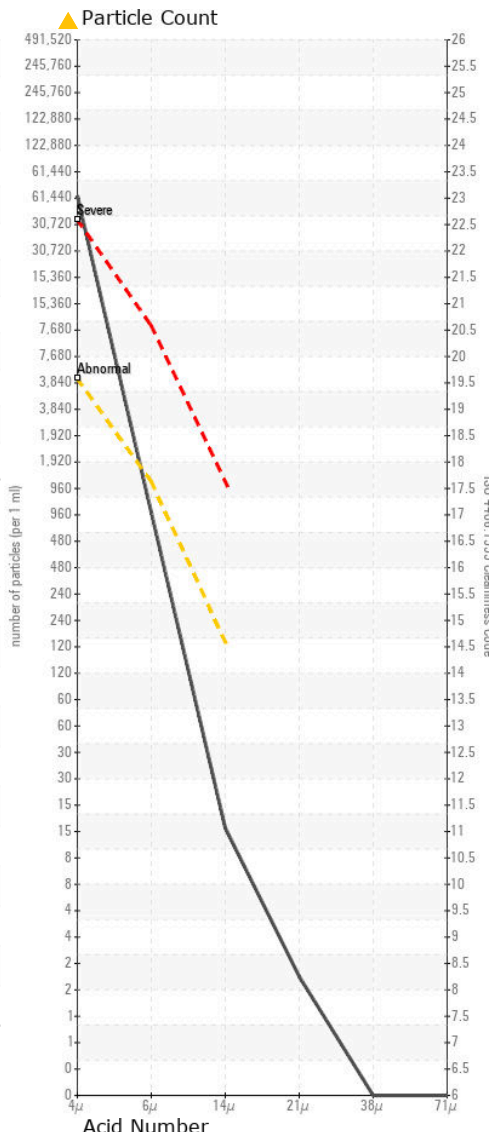
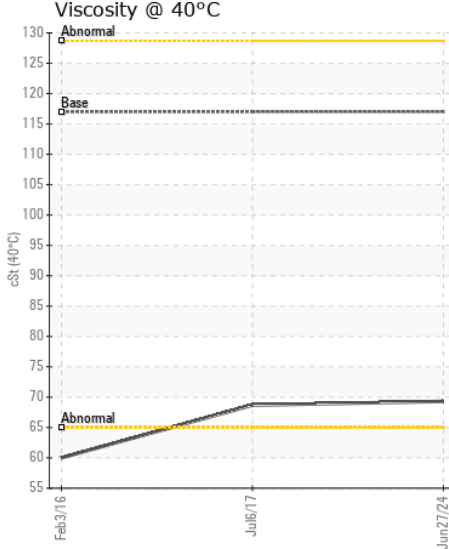
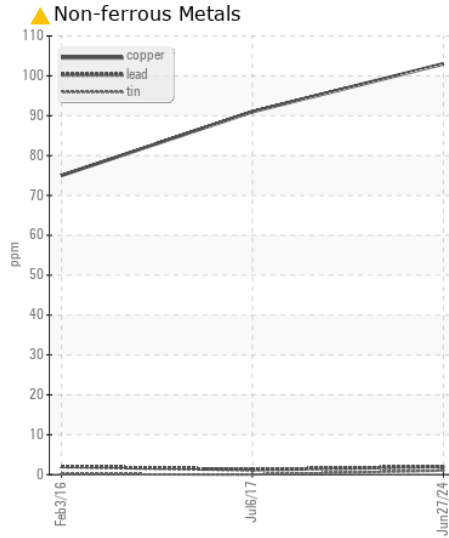
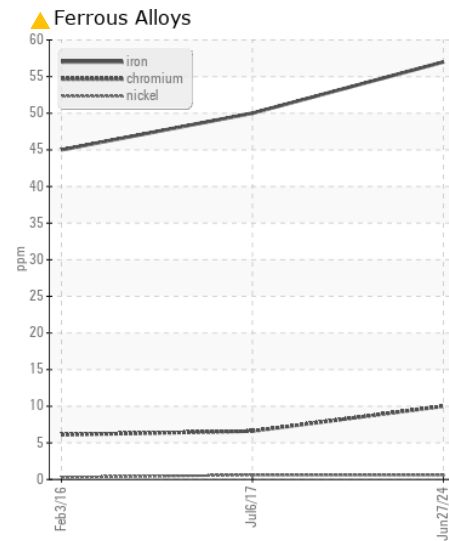
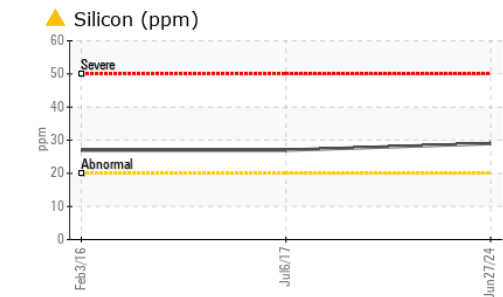
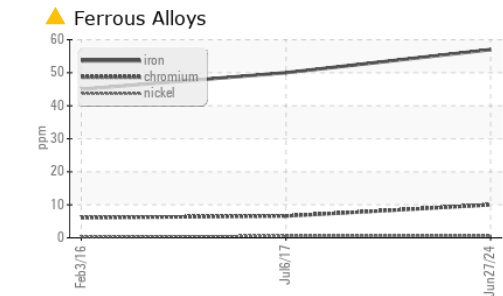
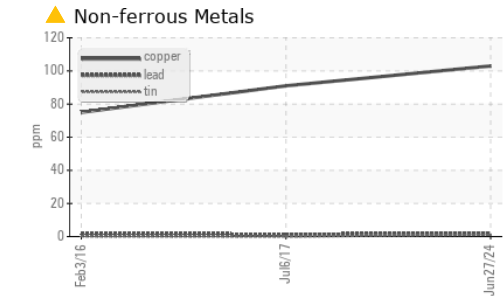
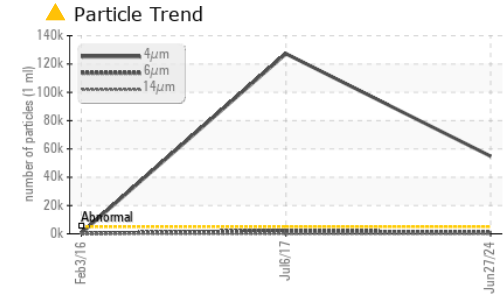
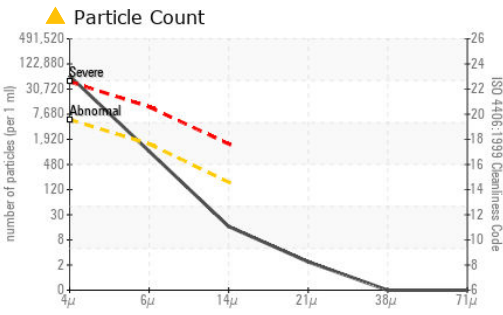
There is a high amount of silt (particulates < 14 microns in size) present in the oil. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

Silicon	ppm	ASTM D5185m	>20	▲ 29	▲ 27	27
Potassium	ppm	ASTM D5185m	>20	8	0	8
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>5000	▲ 54827	▲ 127243	457
Particles >6µm		ASTM D7647	>1300	▲ 870	▲ 2321	249
Particles >14µm		ASTM D7647	>160	14	19	42
Particles >21µm		ASTM D7647	>40	2	6	14
Particles >38µm		ASTM D7647	>10	0	3	2
Particles >71µm		ASTM D7647	>3	0	3	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ 23/17/11	▲ 24/18/11	16/15/13
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 AN level is acceptable for this fluid.

Sodium	ppm	ASTM D5185m		6	6	6
Boron	ppm	ASTM D5185m		142	136	24
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		112	114	23
Manganese	ppm	ASTM D5185m		1	<1	<1
Magnesium	ppm	ASTM D5185m		501	476	311
Calcium	ppm	ASTM D5185m		2016	1851	2218
Phosphorus	ppm	ASTM D5185m		990	976	985
Zinc	ppm	ASTM D5185m		1240	1173	1118
Sulfur	ppm	ASTM D5185m		4911	3154	4147
Acid Number (AN)	mg KOH/g	ASTM D8045		1.17	1.419	1.65
Visc @ 40°C	cSt	ASTM D445	117	69.3	68.68	60.02



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0221808 **Received** : 01 Jul 2024
Lab Number : 06224987 **Tested** : 02 Jul 2024
Unique Number : 11103184 **Diagnosed** : 03 Jul 2024 - Don Baldrige
Test Package : CONST (Additional Tests: 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)