



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL

Machine Id
JOHN DEERE 190G 1FF190GWVLF052087
 Component
Hydraulic System
 Fluid
JOHN DEERE ZINC-FREE HYDRAULIC OIL 46 (--- GAL)

RECOMMENDATION

Recommend drain oil if not already done. Reduce drain interval to 2000 hours or drain and flush and use recommended zinc free oil.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0218517	JR0199243	JR0187801
Sample Date		Client Info		09 Jul 2024	04 Jan 2024	28 Sep 2023
Machine Age	hrs	Client Info		6922	6587	6091
Oil Age	hrs	Client Info		5539	5700	0
Filter Age	hrs	Client Info		5539	496	0
Oil Changed		Client Info		Not Changed	Not Changed	Not Changed
Filter Changed		Client Info		Changed	Not Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

WEAR

All component wear rates are normal.

PQ		ASTM D8184	>50	16	11	12
Iron	ppm	ASTM D5185m	>32	2	4	3
Chromium	ppm	ASTM D5185m	>9	2	2	<1
Nickel	ppm	ASTM D5185m	>5	0	<1	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>9	0	2	<1
Lead	ppm	ASTM D5185m	>28	0	<1	0
Copper	ppm	ASTM D5185m	>50	0	2	<1
Tin	ppm	ASTM D5185m	>5	0	<1	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

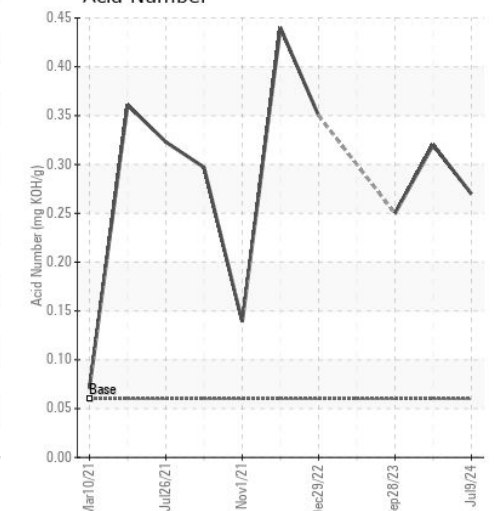
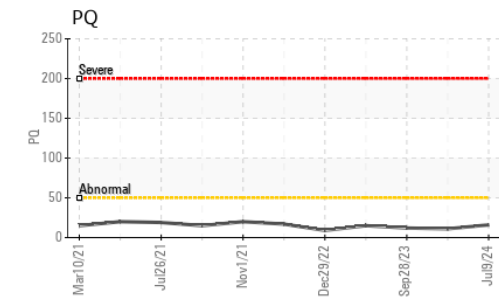
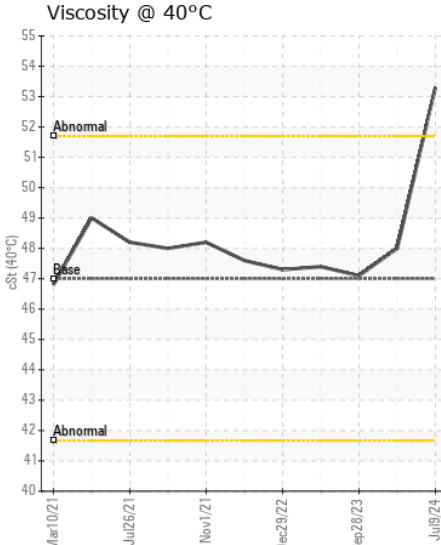
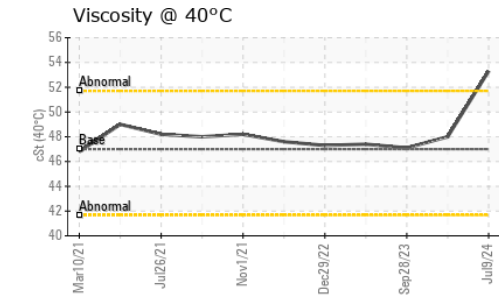
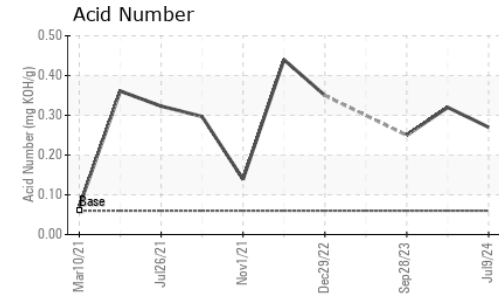
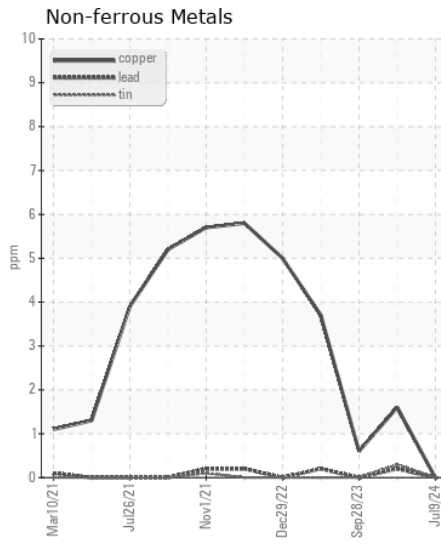
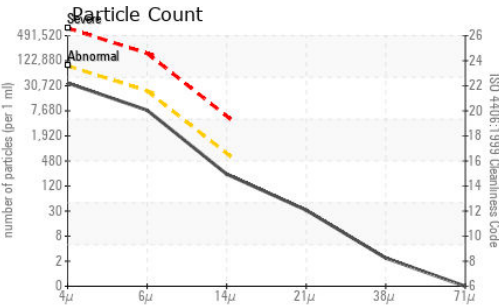
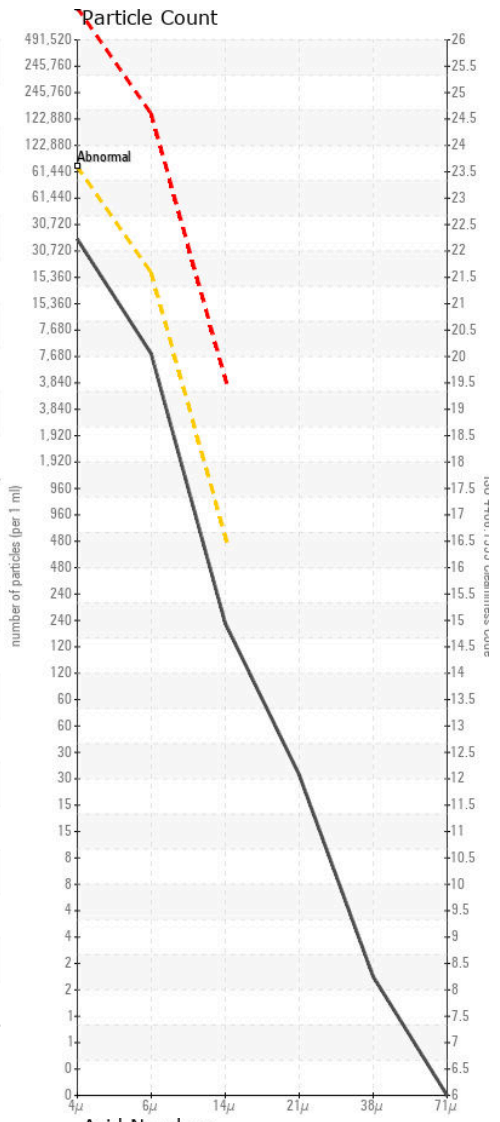
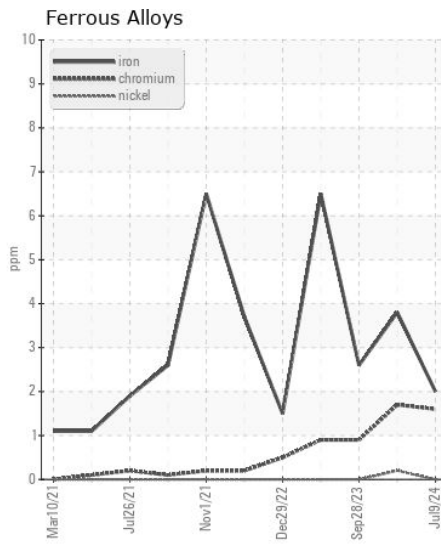
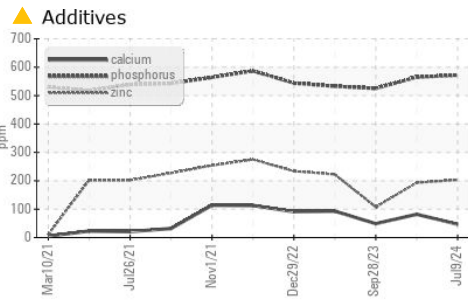
The amount and size of particulates present in the system are acceptable.

Silicon	ppm	ASTM D5185m	>11	<1	1	<1
Potassium	ppm	ASTM D5185m	>20	0	1	0
Water		WC Method	>0.075	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>80000	31063	6370	---
Particles >6µm		ASTM D7647	>20000	6917	921	---
Particles >14µm		ASTM D7647	>640	204	68	---
Particles >21µm		ASTM D7647	>160	28	14	---
Particles >38µm		ASTM D7647	>40	2	0	---
Particles >71µm		ASTM D7647	>10	0	0	---
Oil Cleanliness		ISO 4406 (c)	>23/21/16	22/20/15	20/17/13	---
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	>0.075	NEG	NEG	NEG

FLUID CONDITION

Zinc level above manufacturer's recommendations. The AN level is acceptable for this fluid.

Sodium	ppm	ASTM D5185m	>21	<1	0	<1
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		0	8	0
Molybdenum	ppm	ASTM D5185m		0	<1	<1
Manganese	ppm	ASTM D5185m		0	<1	0
Magnesium	ppm	ASTM D5185m		2	3	6
Calcium	ppm	ASTM D5185m		47	82	49
Phosphorus	ppm	ASTM D5185m		572	565	525
Zinc	ppm	ASTM D5185m		▲ 203	▲ 193	▲ 108
Sulfur	ppm	ASTM D5185m		578	470	320
Acid Number (AN)	mg KOH/g	ASTM D8045	0.06	0.27	0.32	0.25
Visc @ 40°C	cSt	ASTM D445	47	53.3	48.0	47.1



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0218517 **Received** : 11 Jul 2024
Lab Number : 06233175 **Tested** : 12 Jul 2024
Unique Number : 11116668 **Diagnosed** : 12 Jul 2024 - Don Baldrige
Test Package : CONST (Additional Tests: PQ)

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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