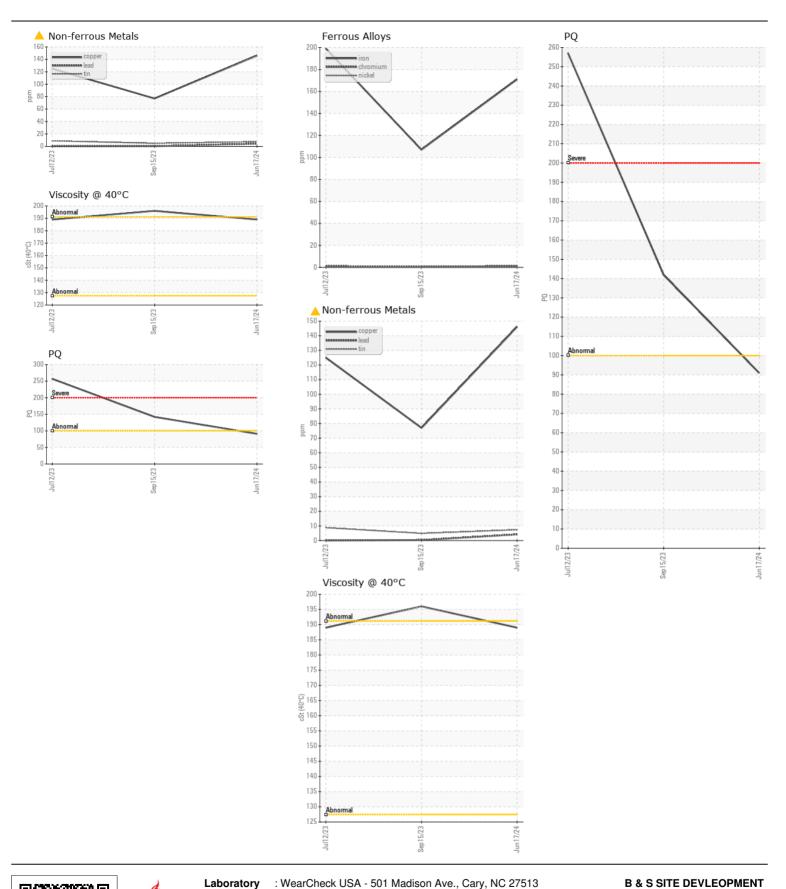
WEAR CONTAMINATION FLUID CONDITION **ABNORMAL NORMAL NORMAL**

HAMM H12IP H284.0055 (S/N H284-0053)

Rear Differential

JOHN DEERE GL-5 80W90 (QTS)							
RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
The oil change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.	Sample Number		Client Info		JR0218072	JR0187662	JR0182097
	Sample Date		Client Info		17 Jun 2024	15 Sep 2023	12 Jul 2023
	Machine Age	hrs	Client Info		1975	1436	1327
	Oil Age	hrs	Client Info		0	109	0
	Filter Age	hrs	Client Info		0	0	0
	Oil Changed		Client Info		Changed	N/A	Changed
	Filter Changed		Client Info		N/A	N/A	N/A
	Sample Status				ABNORMAL	NORMAL	ABNORMAL
WEAR	PQ		ASTM D8184		91	142	257
The copper level is abnormal. All other component wear rates are normal.	Iron	ppm	ASTM D5185m	>500	171	107	199
	Chromium	ppm	ASTM D5185m	>10	1	<1	1
	Nickel	ppm	ASTM D5185m	>10	0	0	0
	Titanium	ppm	ASTM D5185m		<1	<1	0
	Silver	ppm	ASTM D5185m		0	0	0
	Aluminum	ppm	ASTM D5185m		2	2	3
	Lead	ppm	ASTM D5185m		4	<1	0
	Copper	ppm	ASTM D5185m		<u> </u>	77	<u>125</u>
	Tin	ppm	ASTM D5185m	>10	7	5	9
	Vanadium	ppm	ASTM D5185m		0	<1	0
	White Metal	scalar	*Visual	NONE	NONE	NONE	MODER
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
CONTAMINATION There is no indication of any contamination in the oil.	Silicon	ppm	ASTM D5185m	>75	8	8	16
	Potassium	ppm	ASTM D5185m	>20	1	<1	0
	Water		WC Method	>.2	NEG	NEG	NEG
	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	>.2	NEG	NEG	NEG
FLUID CONDITION	Sodium	ppm	ASTM D5185m		4	6	11
The condition of the oil is acceptable for the time in service.	Boron	ppm	ASTM D5185m		3	4	6
	Barium	ppm	ASTM D5185m		171	176	0
	Molybdenum	ppm	ASTM D5185m		0	0	<1
	Manganese	ppm	ASTM D5185m		4	3	5
	Magnesium	ppm	ASTM D5185m		2	0	0
	Calcium	ppm	ASTM D5185m		4	16	24
	Phosphorus	ppm	ASTM D5185m		1469	1673	2333
	Zinc	ppm	ASTM D5185m		61	32	147
	Sulfur	ppm	ASTM D5185m		24053	25056	33141
Depart Id. DCC/MAD [M] ICCAD] 0C012010 (Conserted) 0C/01/0004 10:45-50) Days 1	Visc @ 40°C	cSt	ASTM D445	0.4	189	196	189





Certificate L2367

Report Id: BSSWAR [WUSCAR] 06213810 (Generated: 06/21/2024 19:45:56) Rev: 1

Laboratory Sample No.

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : JR0218072 Lab Number : 06213810 Unique Number : 11086674

Test Package : CONST (Additional Tests: PQ)

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Received **Tested** Diagnosed

: 18 Jun 2024 : 20 Jun 2024

: 20 Jun 2024 - Sean Felton

To discuss this sample report, contact Customer Service at 1-800-237-1369.

BRISTOW, VA US 20136 Contact: DANNY HUFF dhuff@bandssite.com T: (540)270-3203 F: (703)753-0605

7800 PINEY BRANCH LANE

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Submitted By: TECHNICIAN ACCOUNT