

[W68412] A30G753396

Rear Differential

JOHN DEERE GL-5 80W90 (5 GAL)

RECOMMENDATION

Resample at the next service interval to monitor. (Customer Sample Comment: W68412)

WEAR

All component wear rates are normal.

CONTAMINATION

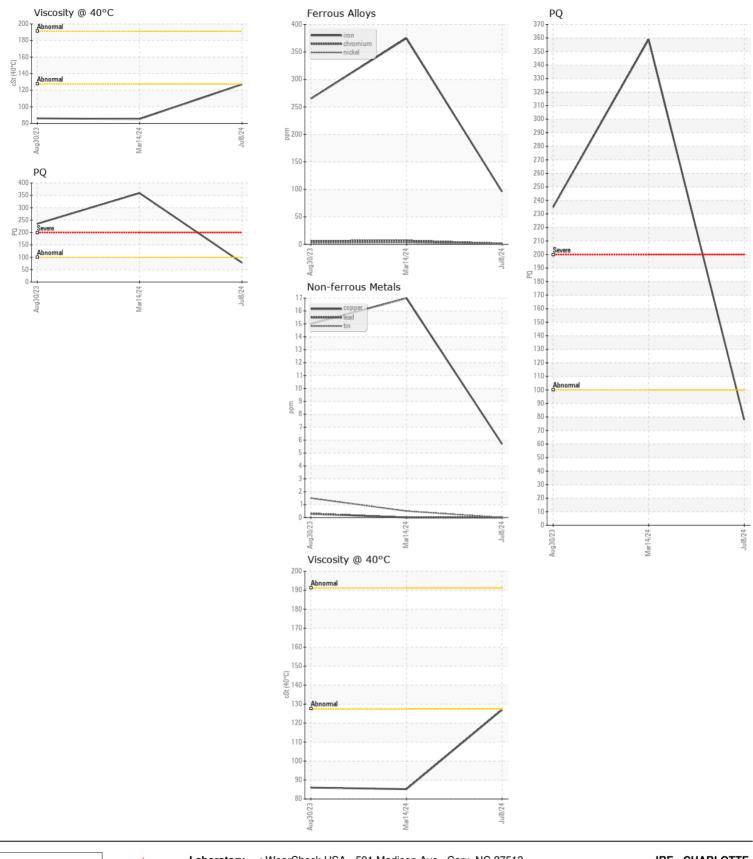
There is no indication of any contamination in the oil.

FLUID CONDITION

The condition of the oil is acceptable for the time in service.

Sample DateClient Info08 Jul 202414 Mar 202430 Aug 202Machine AgehrsClient Info18941368565Oil AgehrsClient Info5261368565Filter AgehrsClient Info000Oil ChangedrsClient InfoChangedN/ANc ChangedFilter ChangedoClient InfoN/AChangedN/ASample StatusrsStTM D8185S500963755265PQASTM D5185m>500963755265ChromiumppmASTM D5185m>10176NickelppmASTM D5185m>10033TitaniumppmASTM D5185m>20001SilverppmASTM D5185m>25021CapperppmASTM D5185m>10031ChangedppmASTM D5185m>10011SilverppmASTM D5185m>25021CapperppmASTM D5185m>100<12VanadiumppmASTM D5185m>100<12VanadiumppmASTM D5185m>100<12VanadiumppmASTM D5185m>100<12VanadiumppmASTM D5185m>100<12SiliconppmASTM D518							
Sample DateClient Info08 Jul 202414 Mar 202430 Aug 202Machine AgehrsClient Info18941368565Oil AgehrsClient Info5261368565Filter AgehrsClient Info000Oil ChangedClient InfoNAChangedNACNAGSample StatusClient InfoNAChangedNANAPQASTM D5180NANORMALNORMALNORMALPQASTM D5185>10176ChromiumpmASTM D5185>10176NickelppmASTM D5185>10033TitaniumpmASTM D5185>25021SilverpmASTM D5185>25021CopperpmASTM D5185>1061715TinpmASTM D5185>1061715TinpmASTM D5185>1001Velow Metalscalar'VisualNONENONENONENONEVelow Metalscalar'VisualNONENONENONENONESiltonpmASTM D5185>7266PotassiumpmASTM D5185>7265Siltonscalar'VisualNONENONENONENONESiltonscalar'VisualNONENONE <th>Test</th> <th>UOM</th> <th>Method</th> <th>Limit/Abn</th> <th>Current</th> <th>History1</th> <th>History2</th>	Test	UOM	Method	Limit/Abn	Current	History1	History2
Machine AgehrsClient Info18941368565Oil AgehrsClient Info5261368565Filter AgehrsClient InfoChangedChangedNot ChangeFilter ChangedClient InfoN/AChangedN/ANangedFilter ChangedClient InfoN/AChangedN/ANorMALSample StatusVNANORMALNORMALNORMALPQASTM D5185>50096375265ChromiumppmASTM D5185>101176NickelppmASTM D5185>10033TitaniumppmASTM D5185>10001SilverppmASTM D5185>10001LeadppmASTM D5185>10061715TinppmASTM D5185>1000-12VanadiumppmASTM D5185>100-12VanadiumppmASTM D5185>100-12VanadiumppmASTM D5185>100-12Valend Metalscalar"VisualNONENONENONESiliconppmASTM D5185>72266PotassiumppmASTM D5185>72266SiliconppmASTM D5185>72266Soliduscalar"Visual <td< th=""><th>Sample Number</th><th></th><th>Client Info</th><th></th><th>JR0220339</th><th>JR0205598</th><th>JR0178424</th></td<>	Sample Number		Client Info		JR0220339	JR0205598	JR0178424
Oil Age Filter AgehrsClient InfoS261368565Filter AgehrsClient Info0000Oil ChangedClient InfoNAChangedN/ASample StatusClient InfoNANANORMALNORMALPQASTM D8184783592351IronppmASTM D518550096375265ChromiumppmASTM D5185510176NickelppmASTM D5185510176NickelppmASTM D5185525021SilverppmASTM D5185525021LeadppmASTM D5185520021CopperppmASTM D5185525021VanadiumppmASTM D5185520021VanadiumppmASTM D5185520021VanadiumppmASTM D5185520021VanadiumppmASTM D5185520021VanadiumppmASTM D5185520021VanadiumppmASTM D5185520011VanadiumppmASTM D5185520011VanadiumppmASTM D5185520011VanadiumppmASTM D5185261 <th>Sample Date</th> <th></th> <th>Client Info</th> <th></th> <th>08 Jul 2024</th> <th>14 Mar 2024</th> <th>30 Aug 2023</th>	Sample Date		Client Info		08 Jul 2024	14 Mar 2024	30 Aug 2023
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Oil ChangedClient InfoChangedNat NaNat ChangedNot ChangedFilter ChangedClient InfoNANANANASample StatusNATM DS18478359235IronppmASTM DS185m50096375265ChromiumppmASTM DS185m510176NickelppmASTM DS185m510176NickelppmASTM DS185m510033TitaniumppmASTM DS185m25502-1LeadppmASTM DS185m>25502-1LeadppmASTM DS185m>10061715TinppmASTM DS185m>10061715TinppmASTM DS185m>1000-12VanadiumppmASTM DS185m>10061715TinppmASTM DS185m>1000-10Vellow Metalscalar"VisualNONENONENONEYellow Metalscalar"VisualNONENONENONESiliconppmASTM DS185m>20166VatarwCM ethod>.2NEGNONENONESiliconppmASTM DS185m21666SoliconppmASTM DS185m2NONENONENONESoliconppmASTM DS18	Oil Age	hrs	Client Info		526	1368	565
Filter Changed Sample StatusClient IntoN/AN/AChanged N/AN/APQASTM DS18478359235IronppmASTM DS185m50096375265ChromiumppmASTM DS185m10176NickelppmASTM DS185m10033TitaniumppmASTM DS185m10033TitaniumppmASTM DS185m2502-11LeadppmASTM DS185m>2500-11CopperppmASTM DS185m>2500-11CopperppmASTM DS185m>10061715TinppmASTM DS185m>10061715YanadiumppmASTM DS185m>1000-12VanadiumppmASTM DS185m>75266Yellow Metalscalar'VisualNONENONENONENONEYellow Metalscalar'VisualNONENONENONENONESiliconppmASTM DS185m>20165VaterwC Method>.2NEGNONENONESiliconppmASTM DS185m>75266Debrisscalar'VisualNONENONENONENONESiliconscalar'VisualNORENONENONENONE	Filter Age	hrs	Client Info		0	0	0
Sample StatusNORMALNORMALNORMALNORMALPQASTM D818478359235IronppmASTM D5185>10176NickelppmASTM D5185>10176NickelppmASTM D5185>10033TitaniumppmASTM D5185>10033SilverppmASTM D5185>2502<1LeadppmASTM D5185>2500<11CopperppmASTM D5185>1061715TinppmASTM D5185>100<12VanadiumppmASTM D5185>100<12VanadiumppmASTM D5185>100<12Vellow Metalscalar'VisualNONENONENONENONESiliconppmASTM D5185>20<165VaterWC Method>.2NEGNONENONENONESilitscalar'VisualNONENONENONENONESilitscalar'VisualNORENORMNORMNORMAppearancescalar'VisualNORENORMNORMNORMAppearancescalar'VisualNORMNORMNORMNORMAppearancescalar'VisualNORMNORMNORMNORMAppearance <td< th=""><th>Oil Changed</th><th></th><th>Client Info</th><th></th><th>Changed</th><th>Changed</th><th>Not Chango</th></td<>	Oil Changed		Client Info		Changed	Changed	Not Chango
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IronppmASTM D5185m>50096375265ChromiumppmASTM D5185m>10176NickelppmASTM D5185m>10033TitaniumppmASTM D5185m00<1<1SilverppmASTM D5185m>2502<1LeadppmASTM D5185m>2500<1<1CopperppmASTM D5185m>10061771515TinppmASTM D5185m>1000<120<12VanadiumppmASTM D5185m>1000<120<10<10<10<10<10<10<10<10<10<10<10<10<10<10<10<10<10<10<10<10<10<10<10<10<10<10<10<10<100<100<100<100<100<100<100<100000<1000000000000000000000<	Sample Status				NORMAL	NORMAL	NORMAL
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NickelppmASTM D5185m>10033TitaniumppmASTM D5185m0<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<	Chromium		ASTM D5185m	>10	1	7	6
TitaniumppmASTM D5185m0<1							
Silver ppm ASTM D5185m 0 0 0 Aluminum ppm ASTM D5185m >25 0 2 <1 Lead ppm ASTM D5185m >25 0 0 <1 Copper ppm ASTM D5185m >100 6 17 15 Tin ppm ASTM D5185m >100 0 <1 2 Vanadium ppm ASTM D5185m >100 0 <1 2 Vanadium ppm ASTM D5185m >10 0 <1 2 Vanadium ppm ASTM D5185m >10 0 <1 2 Vanadium ppm ASTM D5185m >75 2 6 6 Potassium ppm ASTM D5185m >20 <1 6 5 Water WC Method >.2 NEG NORE NORE Sand/Dirt scalar *Visual NORE NORML NORM NORM	Titanium				0		<1
Aluminum ppm ASTM D5185m >25 0 2 1 Lead ppm ASTM D5185m >25 0 0 <1 Copper ppm ASTM D5185m >100 6 17 15 Tin ppm ASTM D5185m >100 0 <1 2 Vanadium ppm ASTM D5185m >100 0 <1 2 Vanadium ppm ASTM D5185m >100 0 <1 2 Vanadium ppm ASTM D5185m >100 0 <1 0 Vellow Metal scalar "Visual NONE NONE NONE NONE Silicon ppm ASTM D5185m >20 <1 6 5 Water wC Method >.2 NEG NEG NORE Debris scalar "Visual NORE NORE NORM NORM Appearance scalar "Visual NORM NORM <					-		
Lead ppm ASTM D5185m >25 0 0 <1	Aluminum			>25		2	<1
CopperppmASTM D5185m>10061715TinppmASTM D5185m>100<1	Lead		ASTM D5185m	>25	0		<1
TinppmASTM D5185m>100<1	Copper				6	17	15
VanadiumppmASTM D5185m00<1			ASTM D5185m	>10	0	<1	2
White Metal Yellow Metalscalar*VisualNONENONENONENONENONESiliconppmASTM D5185m>75266PotassiumppmASTM D5185m>20<165WaterWC Method>.2NEGNEGNEGSilitscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNORENORMNONENONEAppearancescalar*VisualNORNORMLNORMLNORMLOdorscalar*VisualNORNORMLNORMLNORMLSodiumppmASTM D5185m202BoronppmASTM D5185m202BariumppmASTM D5185m21010ManganeseppmASTM D5185m31214MagnesiumppmASTM D5185m276CalciumppmASTM D5185m1941101922PhosphorusppmASTM D5185m27913321395ZincppmASTM D5185m52913321395SulfurppmASTM D5185m22065823862	Vanadium				0		<1
SiliconppmASTM D5185m<>75266PotassiumppmASTM D5185m>20<1	White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
PotassiumppmASTM D5185m>20<1	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
PotassiumppmASTM D5185m>20<1	Silicon	nnm	ASTM D5185m	>75	2	6	6
WaterWC Method>.2NEGNEGNEGSiltscalar*VisualNONENONENONENONEDebrisscalar*VisualNONELIGHTNONENONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>.2NEGNEGNEGSodiumppmASTM D5185m2020BariumppmASTM D5185m121010ManganeseppmASTM D5185m31214MagnesiumppmASTM D5185m1941101922PhosphorusppmASTM D5185m52913321395ZincppmASTM D5185m79452386SulfurppmASTM D5185m201022065823862					_		
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Sodium ppm ASTM D5185m 2 0 2 Boron ppm ASTM D5185m 48 258 319 Barium ppm ASTM D5185m <1 4 1 Molybdenum ppm ASTM D5185m <1 4 1 Manganese ppm ASTM D5185m 3 12 14 Magnesium ppm ASTM D5185m 3 12 14 Magnesium ppm ASTM D5185m 3 12 14 Phosphorus ppm ASTM D5185m 194 1101 922 Phosphorus ppm ASTM D5185m 529 1332 1395 Zinc ppm ASTM D5185m 79 452 386 Sulfur ppm ASTM D5185m 20102 20658 23862		scalar	*Visual	NORML	NORML	NORML	NORM
Boron ppm ASTM D5185m 48 258 319 Barium ppm ASTM D5185m <1 4 1 Molybdenum ppm ASTM D5185m 2 10 10 Manganese ppm ASTM D5185m 3 12 14 Magnesium ppm ASTM D5185m 2 7 6 Calcium ppm ASTM D5185m 194 1101 922 Phosphorus ppm ASTM D5185m 529 1332 1395 Zinc ppm ASTM D5185m 79 452 386 Sulfur ppm ASTM D5185m 20102 20658 23862	Emulsified Water	scalar	*Visual	>.2	NEG	NEG	NEG
Boron ppm ASTM D5185m 48 258 319 Barium ppm ASTM D5185m <1 4 1 Molybdenum ppm ASTM D5185m 2 10 10 Manganese ppm ASTM D5185m 3 12 14 Magnesium ppm ASTM D5185m 2 7 6 Calcium ppm ASTM D5185m 194 1101 922 Phosphorus ppm ASTM D5185m 529 1332 1395 Zinc ppm ASTM D5185m 79 452 386 Sulfur ppm ASTM D5185m 20102 20658 23862	Sodium	mag	ASTM D5185m		2	0	2
Barium ppm ASTM D5185m <1	Boron		ASTM D5185m		48	258	319
Manganese ppm ASTM D5185m 3 12 14 Magnesium ppm ASTM D5185m 2 7 6 Calcium ppm ASTM D5185m 194 1101 922 Phosphorus ppm ASTM D5185m 529 1332 1395 Zinc ppm ASTM D5185m 79 452 386 Sulfur ppm ASTM D5185m 20102 20658 23862	Barium		ASTM D5185m		<1	4	1
Manganese ppm ASTM D5185m 3 12 14 Magnesium ppm ASTM D5185m 2 7 6 Calcium ppm ASTM D5185m 194 1101 922 Phosphorus ppm ASTM D5185m 529 1332 1395 Zinc ppm ASTM D5185m 79 452 386 Sulfur ppm ASTM D5185m 20102 20658 23862	Molybdenum	ppm	ASTM D5185m		2	10	10
Magnesium ppm ASTM D5185m 2 7 6 Calcium ppm ASTM D5185m 194 1101 922 Phosphorus ppm ASTM D5185m 529 1332 1395 Zinc ppm ASTM D5185m 79 452 386 Sulfur ppm ASTM D5185m 20102 20658 23862	Manganese				3	12	14
Phosphorus ppm ASTM D5185m 529 1332 1395 Zinc ppm ASTM D5185m 79 452 386 Sulfur ppm ASTM D5185m 20102 20658 23862	Magnesium		ASTM D5185m		2	7	6
Zinc ppm ASTM D5185m 79 452 386 Sulfur ppm ASTM D5185m 20102 20658 23862	-		ASTM D5185m		194	1101	922
Sulfur ppm ASTM D5185m 20102 20658 23862	Phosphorus	ppm	ASTM D5185m		529	1332	1395
	Zinc	ppm	ASTM D5185m		79	452	386
Visc @ 40°C cSt ASTM D445 (127) 85.2 86.0	Sulfur	ppm	ASTM D5185m		20102	20658	23862
	Visc @ 40°C	cSt	ASTM D445		127	85.2	86.0

Submitted By: Mike Young - CHARLOTTE SHOP



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 **JRE - CHARLOTTE** Sample No. : JR0220339 Received 9550 STATESVILLE ROAD : 10 Jul 2024 Lab Number : 06232460 Tested CHARLOTTE, NC : 11 Jul 2024 Diagnosed US 28269 Unique Number : 11115953 : 11 Jul 2024 - Sean Felton Test Package : CONST (Additional Tests: PQ) Contact: CHARLOTTE SHOP Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. myoung@jamesriverequipment.com * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: (704)597-0211 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F: (704)596-6198

Submitted By: Mike Young - CHARLOTTE SHOP Page 2 of 2