

Current

LEC0046809

05 Jan 2024

12393

History1

LEC0022292 ---

15 Jul 2021

11375

History2



# Store 2 - Beaver [RO#146800] JOHN DEERE 450D FF450DX913485 Left Propel Gearbox

JOHN DEERE HY-GARD HYD/TRANS (3 GAL)

Test

Sample Number

Sample Date

Machine Age

UOM

hrs

Method

Client Info

**Client Info** 

Client Info

Limit/Abn

## RECOMMENDATION

We advise that you check all areas where dirt can enter the system. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

#### WEAR

Gear wear is indicated.

### CONTAMINATION

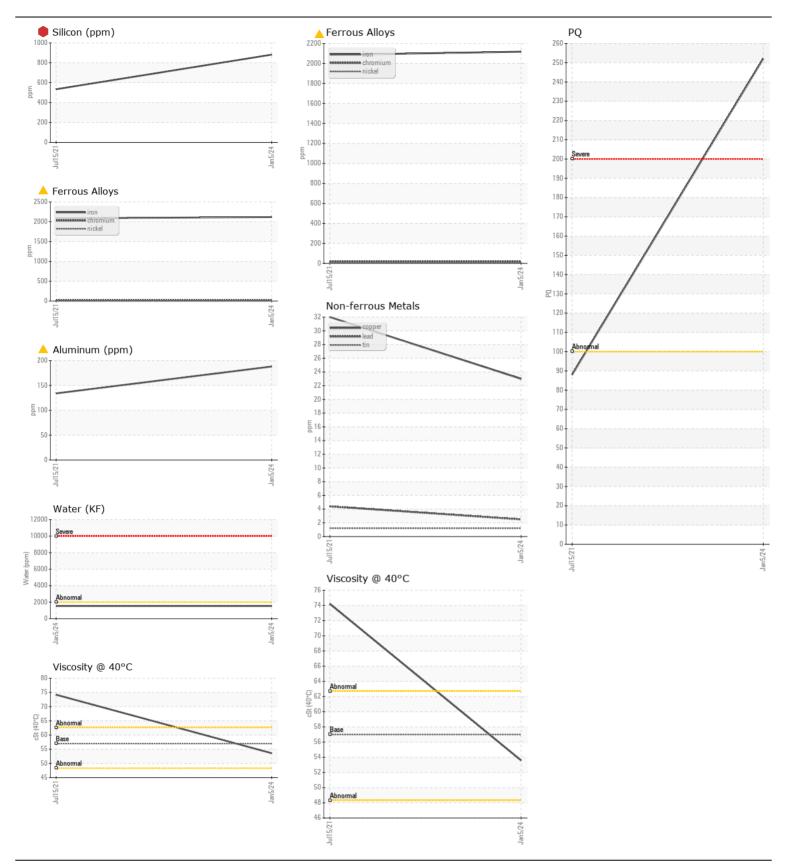
Elemental levels of silicon (Si) and aluminum (AI) indicate aluminasilicate (coarse dirt) ingress.

Oil AgehrsClient Info00340Filter AgehrsClient Info00Oil ChangedClient InfoN/AN/ASample StatusClient InfoN/AN/APQASTM D818425288PQASTM D8185>10A2118A2086PQASTM D5185>101819NickelppmASTM D5185>1032NickelppmASTM D51851032SilverppmASTM D51854188134LeadppmASTM D51852332VanadiumppmASTM D51852332VanadiumppmASTM D51852332VanadiumppmASTM D518521836VanadiumppmASTM D518501VanadiumppmASTM D51852054SiliconppmASTM D51850SiliconppmASTM D51850SiliconppmASTM D51850SiliconppmASTM D518500.154PotassiumppmASTM D51850Silicscalar'VisualNONENONEPotassiu	inderine rige		0.10111 1110				
Oli ChangedClient InfoChangedChangedFilter ChangedClient InfoN/AN/ASample StatusSEVERESEVERESEVEREPQASTM D818425288PQASTM D8185>125021182086ChromiumppmASTM D5185>101819NickelppmASTM D5185>1032SilverppmASTM D5185139AluminumppmASTM D51852332AluminumppmASTM D51852332YanadiumppmASTM D518521<1VanadiumppmASTM D5185<11Yallow Metalscalar'VisualNONENONENONEYallow Metalscalar'VisualNONENONENONEYallow Metalscalar'VisualNONENONEYallow Metalscalar'VisualNONENONENONEYallow Metalscalar'VisualNONENONENONEYallow Metalscalar'VisualNONENONENONEYallow Metalscalar'VisualNONENONENONEYallow Metalscalar'VisualNONENONENONEYallow Metalscalar'Visual	Oil Age	hrs	Client Info		1018	340	
Filter Changed  Client Info  N/A  N/A  N/A     Sample Status  SEVERE  SEVERE  SEVERE  SEVERE     PQ  ASTM D8184  252  88     Iron  ppm  ASTM D5185  >120  A 2086     Chromium  ppm  ASTM D5185  >10  3  2     Nickel  ppm  ASTM D5185  >10  3  2     Silver  ppm  ASTM D5185   0  0     Aluminum  ppm  ASTM D5185   23  32     Copper  ppm  ASTM D5185   <1  1     Vanadium  ppm  ASTM D5185   <1  <1     Vanadium  ppm  ASTM D5185   <882  534     Vanadium  ppm  ASTM D5185  >20  54  34     Vanadium	Filter Age	hrs	Client Info		0	0	
Sample Status  SEVERE  SEVERE  SEVERE     PQ  ASTM D8184  252  88     Iron  ppm  ASTM D5185m  >120  2118  2086     Chromium  ppm  ASTM D5185m  >10  18  19     Nickel  ppm  ASTM D5185m  >10  30  2     Silver  ppm  ASTM D5185m  13  9     Aluminum  ppm  ASTM D5185m  0  0  0     Aluminum  ppm  ASTM D5185m  23  322     Copper  ppm  ASTM D5185m   11  1     Vanadium  ppm  ASTM D5185m   <11  1     Vanadium  ppm  ASTM D5185m   <882  534     Vanadium  ppm  ASTM D5185m  >20  54  344     Yellow Metal  <	Oil Changed		Client Info		Changed	Changed	
PQ  ASTM D8184  252  88     Iron  ppm  ASTM D5185m  >1250  A 2118  A 2086     Chromium  ppm  ASTM D5185m  >10  18  19     Nickel  ppm  ASTM D5185m  >10  3  2     Titanium  ppm  ASTM D5185m  0  0  0     Aluminum  ppm  ASTM D5185m  0  0  0     Aluminum  ppm  ASTM D5185m  23  322     Copper  ppm  ASTM D5185m  21  -11     Vanadium  ppm  ASTM D5185m  23  322     White Metal  scalar  Visual  NONE  MODER     Yellow Metal  scalar  Visual  NONE  MODER     Yellow Metal  scalar  Visual  NONE  MONE     Potassium  ppm	Filter Changed		Client Info		N/A	N/A	
Iron  ppm  ASTM D5185m  >1250  ▲ 2118  ▲ 2086     Chromium  ppm  ASTM D5185m  >10  3  2     Nickel  ppm  ASTM D5185m  >10  3  2     Titanium  ppm  ASTM D5185m  13  9     Aluminum  ppm  ASTM D5185m  4  188  134     Aluminum  ppm  ASTM D5185m  4  188  134     Lead  ppm  ASTM D5185m  23  32     Vanadium  ppm  ASTM D5185m   <1  1     Vanadium  ppm  ASTM D5185m   <1  <1     Vanadium  ppm  ASTM D5185m  <20  NONE  MODER     Vanadium  ppm  ASTM D5185m  >20  0.154      Yellow Metal  scalar  'Visual  NONE  NONE <th>Sample Status</th> <th></th> <th></th> <th></th> <th>SEVERE</th> <th>SEVERE</th> <th></th>	Sample Status				SEVERE	SEVERE	
Iron  ppm  ASTM D5185m  >1250  ▲ 2118  ▲ 2086     Chromium  ppm  ASTM D5185m  >10  3  2     Nickel  ppm  ASTM D5185m  >10  3  2     Titanium  ppm  ASTM D5185m  13  9     Aluminum  ppm  ASTM D5185m  4  188  134     Aluminum  ppm  ASTM D5185m  4  188  134     Lead  ppm  ASTM D5185m  23  32     Vanadium  ppm  ASTM D5185m   <1  1     Vanadium  ppm  ASTM D5185m   <1  <1     Vanadium  ppm  ASTM D5185m  <20  NONE  MODER     Vanadium  ppm  ASTM D5185m  >20  0.154      Yellow Metal  scalar  'Visual  NONE  NONE <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>							
Chromium  ppm  ASTM D5185m  >10  18  19     Nickel  ppm  ASTM D5185m  >10  3  2     Titanium  ppm  ASTM D5185m  I  3  9     Silver  ppm  ASTM D5185m  I  13  9     Aluminum  ppm  ASTM D5185m  I  13  9     Aluminum  ppm  ASTM D5185m  I  1  1     Copper  ppm  ASTM D5185m  I  1  1     Vanadium  ppm  ASTM D5185m  I  1  1     Vanadium  ppm  ASTM D5185m  I  1  1     Vanadium  ppm  ASTM D5185m  I  1  1     Vandoum  ppm  ASTM D5185m  S20  54  34     Silicon  ppm  ASTM D5185m  S20  0.154	PQ				-		
Nickel  ppm  ASTM D5185m  > 10  3  2     Titanium  ppm  ASTM D5185m  13  9     Silver  ppm  ASTM D5185m  0  0     Aluminum  ppm  ASTM D5185m  ▲ 188  134     Lead  ppm  ASTM D5185m  ▲ 188  ▲ 134     Copper  ppm  ASTM D5185m  23  32     Tin  ppm  ASTM D5185m  <1		ppm					
Titanium  ppm  ASTM D5185m  13  9     Silver  ppm  ASTM D5185m  0  0     Aluminum  ppm  ASTM D5185m  A 188  A 134     Lead  ppm  ASTM D5185m  2  4     Copper  ppm  ASTM D5185m  23  32     Vanadium  ppm  ASTM D5185m  11  1     Vanadium  ppm  ASTM D5185m  <1	Chromium	ppm		>10	18	19	
Silver  ppm  ASTM D5185m  0  0     Aluminum  ppm  ASTM D5185m  ▲ 188  ▲ 134     Lead  ppm  ASTM D5185m  23  32     Copper  ppm  ASTM D5185m  1  1     Vanadium  ppm  ASTM D5185m   1     Vanadium  ppm  ASTM D5185m   <1	Nickel	ppm	ASTM D5185m	>10	3	2	
Aluminum  ppm  ASTM D5185m  A  188  134     Lead  ppm  ASTM D5185m  2  4     Copper  ppm  ASTM D5185m  23  322     Tin  ppm  ASTM D5185m  1  1     Vanadium  ppm  ASTM D5185m   <1	Titanium	ppm	ASTM D5185m		13	9	
Lead  ppm  ASTM D5185m  2  4     Copper  ppm  ASTM D5185m  23  32     Tin  ppm  ASTM D5185m  1  1     Vanadium  ppm  ASTM D5185m  <1	Silver	ppm	ASTM D5185m		0	0	
Cooper  ppm  ASTM D5185m  23  32     Tin  ppm  ASTM D5185m  1  1     Vanadium  ppm  ASTM D5185m  <1	Aluminum	ppm	ASTM D5185m		🔺 188	<b>1</b> 34	
TinppmASTM D5185m111VanadiumppmASTM D5185m<1	Lead	ppm	ASTM D5185m		2	4	
VanadiumppmASTM D5185m<	Copper	ppm	ASTM D5185m		23	32	
White Metal  scalar  *Visual  NONE  NONE  MODER     Yellow Metal  scalar  *Visual  NONE  NONE  NONE  NONE     Silicon  ppm  ASTM D5185m  >20  54  34     Potassium  ppm  ASTM D5185m  >20  54  34     Water  %  ASTM D6304  >0.2  0.154      ppm Water  ppm  ASTM D6304  >2000  1540      Silt  scalar  *Visual  NONE  MODER  NONE     Debris  scalar  *Visual  NONE  NONE  NONE     Sand/Dirt  scalar  *Visual  NORM  NORML  NORML     Qdor  scalar  *Visual  NORM  NORML  NORML     Gdor  scalar  *Visual  NORM  NORML      Gdor <th>Tin</th> <th>ppm</th> <th>ASTM D5185m</th> <th></th> <th>1</th> <th>1</th> <th></th>	Tin	ppm	ASTM D5185m		1	1	
Yellow Metalscalar*VisualNONENONENONESiliconppmASTM D5185m>205434PotassiumppmASTM D5185m>205434Water%ASTM D6304>0.20.154ppm WaterppmASTM D6304>20001540Siltscalar*VisualNONEMODERNONEDebrisscalar*VisualNONENONENONESand/Dirtscalar*VisualNORMNORMLNORMLAppearancescalar*VisualNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLBoronppmASTM D5185m614112BariumppmASTM D5185m023MaganeseppmASTM D5185m1518MagnesiumppmASTM D5185m1232375PhosphorusppmASTM D5185m1230626597ZincppmASTM D5185m1640476103SulfurppmASTM D5185m1640476103	Vanadium	ppm	ASTM D5185m		<1	<1	
Silicon  ppm  ASTM D5185m  •  •  882  •  534     Potassium  ppm  ASTM D5185m  >20  54  34     Water  %  ASTM D6304  >0.2  0.154      ppm Water  ppm  ASTM D6304  >2000  1540      Silt  scalar  *Visual  NONE  MODER  NONE     Debris  scalar  *Visual  NONE  NONE  NONE     Appearance  scalar  *Visual  NORM  NORML  NORML     Gdor  scalar  *Visual  NOR  NORM  NORML     Appearance  scalar  *Visual  NORM  NORML  NORML     Gdor  scalar  *Visual  NORM  NORML  NORML     Boron  ppm  ASTM D5185m  6  14  112     Bari	White Metal	scalar	*Visual	NONE	NONE	MODER	
Potassium  ppm  ASTM D5185m  >20  54  34     Water  %  ASTM D6304  >0.2  0.1540      ppm Water  ppm  ASTM D6304  >2000  1540      Silt  scalar  *Visual  NONE  MODER  NONE     Debris  scalar  *Visual  NONE  NONE  NONE     Sand/Dirt  scalar  *Visual  NONE  NONE  NONE     Appearance  scalar  *Visual  NORM  NORML  NORML     Odor  scalar  *Visual  NOR  NORML  NORML     Sodium  ppm  ASTM D5185m  8  9     Boron  ppm  ASTM D5185m  6  14  112     Manganese  ppm  ASTM D5185m  0  0  0     Magnesium  ppm  ASTM D5185m	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
Potassium  ppm  ASTM D5185m  >20  54  34     Water  %  ASTM D6304  >0.2  0.1540      ppm Water  ppm  ASTM D6304  >2000  1540      Silt  scalar  *Visual  NONE  MODER  NONE     Debris  scalar  *Visual  NONE  NONE  NONE     Sand/Dirt  scalar  *Visual  NONE  NONE  NONE     Appearance  scalar  *Visual  NORM  NORML  NORML     Odor  scalar  *Visual  NOR  NORML  NORML     Sodium  ppm  ASTM D5185m  8  9     Boron  ppm  ASTM D5185m  6  14  112     Manganese  ppm  ASTM D5185m  0  0  0     Magnesium  ppm  ASTM D5185m					• • • •	504	
Water%ASTM D6304>0.20.154ppm WaterppmASTM D6304>20001540Siltscalar*VisualNONEMODERNONEDebrisscalar*VisualNONENONENONESand/Dirtscalar*VisualNONENONENONEAppearancescalar*VisualNORMNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLCodorscalar*VisualNORMLNORMLNORMLSodiumppmASTM D5185m589BoronppmASTM D5185m614112BariumppmASTM D5185m000ManganeseppmASTM D5185m1518MagnesiumppmASTM D5185m12323750PhosphorusppmASTM D5185m1240476103ZincppmASTM D5185m1640476103SulfurppmASTM D5185m1640476103				00	· ·	*	
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Sand/Dirtscalar*VisualNONENONENORMLNORMLNORMLNORMLAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.20.2%NEGSodiumppmASTM D5185m614112BoronppmASTM D5185m614112BariumppmASTM D5185m000MolybdenumppmASTM D5185m0233MagnesiumppmASTM D5185m145577300CalciumppmASTM D5185m1290626597PhosphorusppmASTM D5185m1640476103SulfurppmASTM D5185m164027478205							
Appearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.20.2%NEGSodiumppmASTM D5185m89BoronppmASTM D5185m614112BariumppmASTM D5185m000MolybdenumppmASTM D5185m023ManganeseppmASTM D5185m14557730MagnesiumppmASTM D5185m1290626597PhosphorusppmASTM D5185m1240476103SulfurppmASTM D5185m164027478205							
Odorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.20.2%0.2%NEGSodiumppmASTM D5185m614112BoronppmASTM D5185m614112BariumppmASTM D5185m000MolybdenumppmASTM D5185m0233ManganeseppmASTM D5185m145577300MagnesiumppmASTM D5185m1290626597PhosphorusppmASTM D5185m1240476103SulfurppmASTM D5185m1640476103				-	-		
Emulsified Water  scalar  *Visual  >0.2  0.2%  NEG     Sodium  ppm  ASTM D5185m  8  9     Boron  ppm  ASTM D5185m  6  14  112     Barium  ppm  ASTM D5185m  0  0  0     Molybdenum  ppm  ASTM D5185m  0  2  3     Manganese  ppm  ASTM D5185m  15  18     Magnesium  ppm  ASTM D5185m  145  57  30     Calcium  ppm  ASTM D5185m  3570  1232  375     Phosphorus  ppm  ASTM D5185m  1290  626  597     Zinc  ppm  ASTM D5185m  1640  476  103     Sulfur  ppm  ASTM D5185m  640  2747  8205					-		
Sodium  ppm  ASTM D5185m  8  9     Boron  ppm  ASTM D5185m  6  14  112     Barium  ppm  ASTM D5185m  0  0  0     Molybdenum  ppm  ASTM D5185m  0  2  3     Manganese  ppm  ASTM D5185m  0  2  3     Magnesium  ppm  ASTM D5185m  145  577  30     Calcium  ppm  ASTM D5185m  1232  375     Phosphorus  ppm  ASTM D5185m  1290  626  5977     Zinc  ppm  ASTM D5185m  1640  476  103     Sulfur  ppm  ASTM D5185m  6  2747  8205				-	-		
Boron  ppm  ASTM D5185m  6  14  112     Barium  ppm  ASTM D5185m  0  0  0     Molybdenum  ppm  ASTM D5185m  0  2  3     Manganese  ppm  ASTM D5185m  0  2  3     Magnesium  ppm  ASTM D5185m  145  57  30     Calcium  ppm  ASTM D5185m  1232  375     Phosphorus  ppm  ASTM D5185m  1290  626  597     Zinc  ppm  ASTM D5185m  1640  476  103     Sulfur  ppm  ASTM D5185m  6  2747  8205	Emulsified Water	scalar	*Visual	>0.2	0.2%	NEG	
Boron  ppm  ASTM D5185m  6  14  112     Barium  ppm  ASTM D5185m  0  0  0     Molybdenum  ppm  ASTM D5185m  0  2  3     Manganese  ppm  ASTM D5185m  0  2  3     Magnesium  ppm  ASTM D5185m  145  57  30     Calcium  ppm  ASTM D5185m  1232  375     Phosphorus  ppm  ASTM D5185m  1290  626  597     Zinc  ppm  ASTM D5185m  1640  476  103     Sulfur  ppm  ASTM D5185m  6  2747  8205	Sodium	ppm	ASTM D5185m		8	9	
Barium  ppm  ASTM D5185m  0  0  0     Molybdenum  ppm  ASTM D5185m  0  2  3     Manganese  ppm  ASTM D5185m  145  15  18     Magnesium  ppm  ASTM D5185m  145  57  30     Calcium  ppm  ASTM D5185m  3570  1232  3755     Phosphorus  ppm  ASTM D5185m  1290  626  5977     Zinc  ppm  ASTM D5185m  1640  476  103     Sulfur  ppm  ASTM D5185m  1640  2747  8205				6			
Molybdenum  ppm  ASTM D5185m  0  2  3     Manganese  ppm  ASTM D5185m  15  18     Magnesium  ppm  ASTM D5185m  145  57  30     Calcium  ppm  ASTM D5185m  3570  1232  375     Phosphorus  ppm  ASTM D5185m  1290  626  597     Zinc  ppm  ASTM D5185m  1640  476  103     Sulfur  ppm  ASTM D5185m  62747  8205				-			
Manganese  ppm  ASTM D5185m  15  18     Magnesium  ppm  ASTM D5185m  145  57  30     Calcium  ppm  ASTM D5185m  3570  1232  375     Phosphorus  ppm  ASTM D5185m  1290  626  597     Zinc  ppm  ASTM D5185m  1640  476  103     Sulfur  ppm  ASTM D5185m  C  2747  8205				0		3	
Magnesium  ppm  ASTM D5185m  145  57  30     Calcium  ppm  ASTM D5185m  3570  1232  375     Phosphorus  ppm  ASTM D5185m  1290  626  597     Zinc  ppm  ASTM D5185m  1640  476  103     Sulfur  ppm  ASTM D5185m  640  2747  8205					15		
Calcium  ppm  ASTM D5185m  3570  1232  375     Phosphorus  ppm  ASTM D5185m  1290  626  597     Zinc  ppm  ASTM D5185m  1640  476  103     Sulfur  ppm  ASTM D5185m  1640  2747  8205	•			145			
Phosphorus  ppm  ASTM D5185m  1290  626  597     Zinc  ppm  ASTM D5185m  1640  476  103     Sulfur  ppm  ASTM D5185m  1640  2747  8205	•						
Zinc  ppm  ASTM D5185m  1640  476  103     Sulfur  ppm  ASTM D5185m  640  2747  8205					-		
Sulfur  ppm  ASTM D5185m  2747  8205							
	Visc @ 40°C	cSt	ASTM D445	57.0	53.6	▲ 74.2	

### **FLUID CONDITION**

The oil is no longer serviceable due to the presence of contaminants.

Submitted By: STORE 2 - BEAVER - CASEY TONEY



LESLIE EQUIPMENT COMPANY Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 : LEC0046809 Recieved : 11 Jan 2024 105 TENNIS CENTER DR. Sample No. Lab Number MARIETTA, OH : 06058361 Diagnosed : 14 Jan 2024 : 10829743 Diagnostician : Don Baldridge US 45750-9765 **Unique Number** Test Package : CONST (Additional Tests: KF, PQ) Contact: LEANNE KENDALL Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. KendalLeanne@lec1.com \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: F: (740)373-5570 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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