

JOHN DEERE 644 P 1DW644PAEMLZ11990 Component Transmission (Manual) Fluid JOHN DEERE HY-GARD HYD/TRANS (--- GAL)

RECOMMENDATION

Oil and filter 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.

WEAR

All component wear rates are normal.

CONTAMINATION

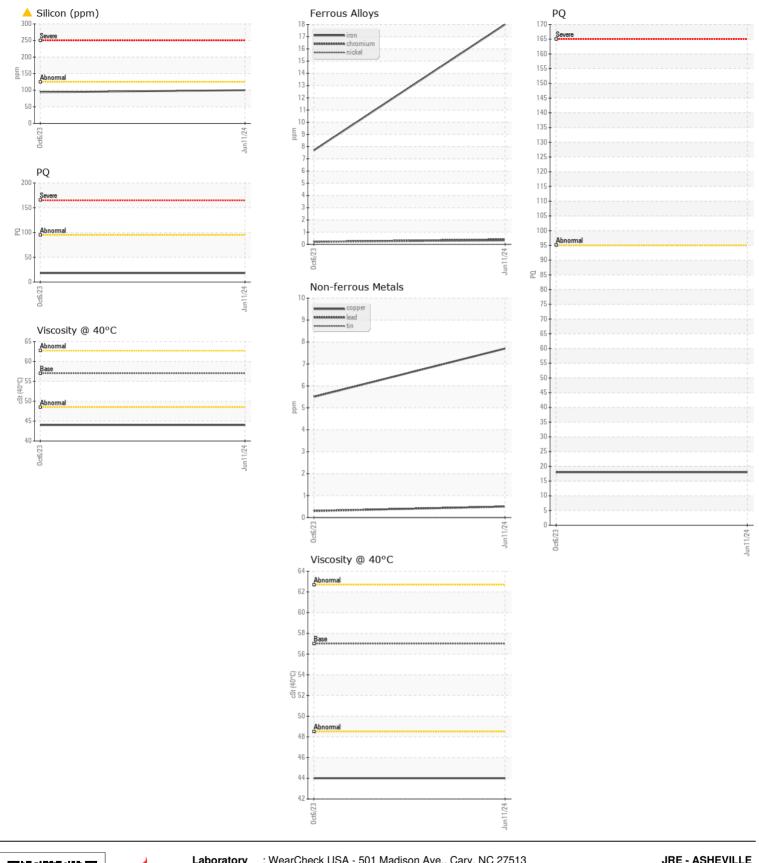
Elemental level of silicon (Si) above normal indicating ingress of seal material.

FLUID CONDITION

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

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0218750	JR0185086	
Sample Date		Client Info		11 Jun 2024	06 Oct 2023	
Machine Age	hrs	Client Info		1985	1470	
Oil Age	hrs	Client Info		1985	1470	
Filter Age	hrs	Client Info		1985	1470	
Oil Changed		Client Info		Changed	Not Changd	
Filter Changed		Client Info		Changed	Not Changd	
Sample Status				ABNORMAL	ABNORMAL	
DO			05	40	10	
PQ	10.10.100	ASTM D8184	>95	18	18	
Iron	ppm	ASTM D5185m	>200	18	8	
Chromium	ppm	ASTM D5185m	>5	<1	<1	
Nickel	ppm	ASTM D5185m	>5	<1	<1	
Titanium	ppm	ASTM D5185m	7	<1	<1	
Silver	ppm	ASTM D5185m	>7	0	0	
Aluminum	ppm	ASTM D5185m	>25	2	1	
Lead	ppm	ASTM D5185m	>45	<1	<1	
Copper	ppm	ASTM D5185m	>225	8	6	
Tin	ppm	ASTM D5185m	>10	0	0	
Vanadium	ppm	ASTM D5185m		0	0	
White Metal	scalar	*Visual	NONE	NONE	NONE	
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
Silicon	ppm	ASTM D5185m	>125	100	▲ 94	
Potassium	ppm	ASTM D5185m	>20	2	2	
Water	1-1-	WC Method	>0.1	NEG	NEG	
Silt	scalar	*Visual	NONE	NONE	NONE	
Debris	scalar	*Visual	NONE	NONE	NONE	
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
Appearance	scalar	*Visual	NORML	NORML	NORML	
Odor	scalar	*Visual	NODM			
	ooului	visuai	NORML	NORML	NORML	
Emulsified Water	scalar	*Visual	>0.1	NORML NEG	NORML NEG	
Emulsified Water				-		
Sodium		*Visual ASTM D5185m		NEG 26	NEG 25	
Sodium Boron	scalar	*Visual ASTM D5185m ASTM D5185m	>0.1 6	NEG 26 5	NEG 25 3	
Sodium Boron Barium	scalar ppm	*Visual ASTM D5185m	>0.1	NEG 26 5 <1	NEG 25 3 2	
Sodium Boron	scalar ppm ppm	*Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>0.1 6	NEG 26 5	NEG 25 3 2 2	
Sodium Boron Barium Molybdenum Manganese	scalar ppm ppm ppm	*Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>0.1 6 0 0	NEG 26 5 <1 10 <1	NEG 25 3 2 2 2 <1	
Sodium Boron Barium Molybdenum Manganese Magnesium	scalar ppm ppm ppm ppm	*Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>0.1 6 0 0 145	NEG 26 5 <1 10 <1 99	NEG 25 3 2 2 2 <1 80	
Sodium Boron Barium Molybdenum Manganese Magnesium Calcium	scalar ppm ppm ppm ppm ppm	*Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>0.1 6 0 0 145 3570	NEG 26 5 <1 10 <1 99 3251	NEG 25 3 2 2 <1 80 2987	
Sodium Boron Barium Molybdenum Manganese Magnesium	scalar ppm ppm ppm ppm ppm ppm	*Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>0.1 6 0 0 145	NEG 26 5 <1 10 <1 99 3251 1025	NEG 25 3 2 2 <1 80 2987 957	
Sodium Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	scalar ppm ppm ppm ppm ppm ppm	*Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>0.1 6 0 0 145 3570	NEG 26 5 <1 10 <1 99 3251	NEG 25 3 2 2 <1 80 2987	
Sodium Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	scalar ppm ppm ppm ppm ppm ppm ppm	*Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>0.1 6 0 0 145 3570 1290	NEG 26 5 <1 10 <1 99 3251 1025	NEG 25 3 2 2 <1 80 2987 957	

Contact/Location: Randy Warren - VANASH



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 **JRE - ASHEVILLE** Sample No. : JR0218750 Received 101 BRUCE DRIVE : 14 Jun 2024 Lab Number : 06210388 Tested ASHEVILLE, NC : 18 Jun 2024 Unique Number : 11083252 Diagnosed : 18 Jun 2024 - Don Baldridge US 28806 Test Package : CONST (Additional Tests: PQ) Contact: Randy Warren Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. randy.warren@jamesriverequipment.com * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: (528)667-0176 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F: (828)667-4865

Contact/Location: Randy Warren - VANASH Page 2 of 2