

#### [05W46192] Machine Id HITACHI 350 1FFDDR70AJF940509 Component Left Final Drive

# **JOHN DEERE GL-5 80W90 (10 QTS)**

### RECOMMENDATION

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We advise that you check all areas where dirt can enter the system. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

### **WEAR**

Gear wear is indicated.

## CONTAMINATION

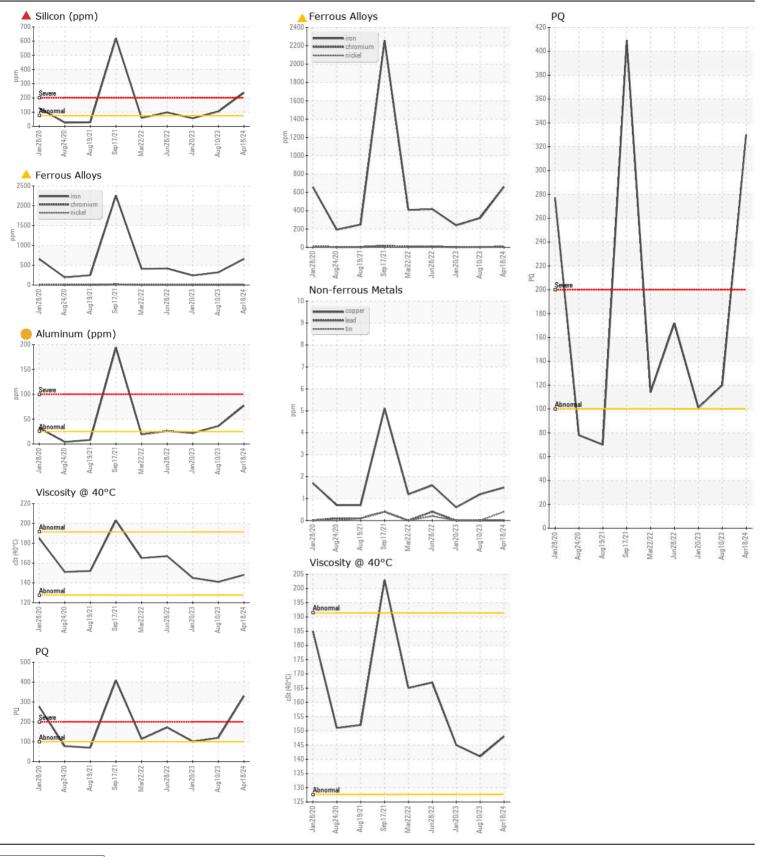
Elemental levels of silicon (Si) and aluminum (Al) indicate aluminasilicate (coarse dirt) ingress.

### FLUID CONDITION

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

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0210955	JR0182121	JR0153122
Sample Date		Client Info		18 Apr 2024	10 Aug 2023	20 Jan 2023
Machine Age	hrs	Client Info		5448	4957	4451
Oil Age	hrs	Client Info		1500	4080	877
Filter Age	hrs	Client Info		0	3574	0
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		N/A	None	None
Sample Status				SEVERE	ABNORMAL	NORMAL
PQ		ASTM D8184		330	120	101
Iron	ppm	ASTM D5185m	>500	660	320	239
Chromium	ppm	ASTM D5185m	>10	6	3	2
Nickel	ppm	ASTM D5185m	>10	<1	<1	<1
Titanium	ppm	ASTM D5185m	Ţ	5	2	1
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>25	77	36	22
Lead	ppm	ASTM D5185m	>25	0	0	0
Copper	ppm	ASTM D5185m	>50	2	1	<1
Tin	ppm	ASTM D5185m	>10	<1	0	0
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	MODER
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>75	<b>2</b> 36	<b>1</b> 04	57
Silicon Potassium		ASTM D5185m ASTM D5185m	>75 >20	▲ 236 11	▲ 104 5	57 2
Silicon Potassium Water	ppm ppm	ASTM D5185m ASTM D5185m WC Method	>75 >20 >0.2	▲ 236 11 NEG	▲ 104 5 NEG	57 2 NEG
Silicon Potassium Water Silt	ppm ppm scalar	ASTM D5185m ASTM D5185m WC Method *Visual	>75 >20 >0.2 NONE	<ul> <li>236</li> <li>11</li> <li>NEG</li> <li>NONE</li> </ul>	<ul> <li>104</li> <li>5</li> <li>NEG</li> <li>NONE</li> </ul>	57 2 NEG MODER
Silicon Potassium Water Silt Debris	ppm ppm scalar scalar	ASTM D5185m ASTM D5185m WC Method *Visual *Visual	>75 >20 >0.2 NONE NONE	<ul> <li>236</li> <li>11</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> </ul>	<ul> <li>104</li> <li>5</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> </ul>	57 2 NEG MODER MODER
Silicon Potassium Water Silt Debris Sand/Dirt	ppm ppm scalar scalar scalar	ASTM D5185m ASTM D5185m WC Method *Visual *Visual	>75 >20 >0.2 NONE NONE NONE	<ul> <li>236</li> <li>11</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NONE</li> </ul>	<ul> <li>104</li> <li>5</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NONE</li> </ul>	57 2 NEG MODER MODER NONE
Silicon Potassium Water Silt Debris Sand/Dirt Appearance	ppm ppm scalar scalar scalar scalar	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual	>75 >20 >0.2 NONE NONE NONE NORML	<ul> <li>236</li> <li>11</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> </ul>	<ul> <li>104</li> <li>5</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> </ul>	57 2 NEG MODER MODER NONE NORML
Silicon Potassium Water Silt Debris Sand/Dirt	ppm ppm scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m WC Method *Visual *Visual	>75 >20 >0.2 NONE NONE NONE	<ul> <li>236</li> <li>11</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NONE</li> </ul>	<ul> <li>104</li> <li>5</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NONE</li> </ul>	57 2 NEG MODER MODER NONE NORML NORML
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor	ppm ppm scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual	>75 >20 >0.2 NONE NONE NONE NORML NORML	<ul> <li>236</li> <li>11</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORE</li> <li>NORML</li> <li>NORML</li> </ul>	<ul> <li>104</li> <li>5</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NONE</li> <li>NORE</li> <li>NORML</li> <li>NORML</li> </ul>	57 2 NEG MODER MODER NONE NORML
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor	ppm ppm scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual	>75 >20 >0.2 NONE NONE NONE NORML NORML	<ul> <li>236</li> <li>11</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>7</li> </ul>	<ul> <li>104</li> <li>5</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NEG</li> <li>5</li> </ul>	57 2 NEG MODER MODER NORME NORML NORML NEG 2
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron	ppm ppm scalar scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual	>75 >20 >0.2 NONE NONE NONE NORML NORML	<ul> <li>236</li> <li>11</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> </ul>	<ul> <li>104</li> <li>5</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> </ul>	57 2 NEG MODER MODER NORML NORML NEG 2 2
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium	ppm ppm scalar scalar scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m	>75 >20 >0.2 NONE NONE NONE NORML NORML	<ul> <li>236</li> <li>11</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>7</li> <li>2</li> <li>0</li> </ul>	<ul> <li>104</li> <li>5</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>5</li> <li>3</li> <li>0</li> </ul>	57 2 NEG MODER MODER NONE NORML NORML NEG 2 2 2 2
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium	ppm ppm scalar scalar scalar scalar scalar scalar gpm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m	>75 >20 >0.2 NONE NONE NONE NORML NORML	<ul> <li>236</li> <li>11</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>7</li> <li>2</li> <li>0</li> <li>2</li> </ul>	<ul> <li>104</li> <li>5</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>5</li> <li>3</li> <li>0</li> <li>2</li> </ul>	57 2 NEG MODER MODER NORML NORML NEG 2 2 2 2 2 2 2 2
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese	ppm ppm scalar scalar scalar scalar scalar scalar ppm ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>75 >20 >0.2 NONE NONE NONE NORML NORML	<ul> <li>236</li> <li>11</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>7</li> <li>2</li> <li>0</li> <li>2</li> <li>7</li> </ul>	<ul> <li>104</li> <li>5</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>5</li> <li>3</li> <li>0</li> <li>2</li> <li>4</li> </ul>	57 2 NEG MODER MODER NONE NORML NORML NEG 2 2 2 2 2 2 2 2 3
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium	ppm ppm scalar scalar scalar scalar scalar scalar ppm ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m	>75 >20 >0.2 NONE NONE NONE NORML NORML	<ul> <li>236</li> <li>11</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>7</li> <li>2</li> <li>0</li> <li>2</li> <li>7</li> <li>13</li> </ul>	<ul> <li>104</li> <li>5</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NORML</li> <li>S</li> <li>3</li> <li>0</li> <li>2</li> <li>4</li> <li>12</li> </ul>	57 2 NEG MODER MODER NORML NORML NEG 2 2 2 2 2 2 2 2 3 8
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Malybdenum Manganese Magnesium	ppm ppm scalar scalar scalar scalar scalar gpm ppm ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>75 >20 >0.2 NONE NONE NONE NORML NORML	<ul> <li>236</li> <li>11</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>7</li> <li>2</li> <li>0</li> <li>2</li> <li>7</li> <li>13</li> <li>36</li> </ul>	<ul> <li>104</li> <li>5</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>5</li> <li>3</li> <li>0</li> <li>2</li> <li>4</li> </ul>	57 2 NEG MODER MODER NORML NORML NEG 2 2 2 2 2 2 2 2 2 3 8 32
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>75 >20 >0.2 NONE NONE NONE NORML NORML	<ul> <li>236</li> <li>11</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>7</li> <li>2</li> <li>0</li> <li>2</li> <li>7</li> <li>13</li> <li>36</li> <li>676</li> </ul>	<ul> <li>104</li> <li>5</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>3</li> <li>0</li> <li>2</li> <li>4</li> <li>12</li> <li>78</li> <li>602</li> </ul>	57 2 NEG MODER MODER NORML NORML NEG 2 2 2 2 2 2 2 3 8 3 3 8 32 609
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>75 >20 >0.2 NONE NONE NONE NORML NORML	<ul> <li>236</li> <li>11</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>7</li> <li>2</li> <li>0</li> <li>2</li> <li>7</li> <li>13</li> <li>36</li> <li>676</li> <li>16</li> </ul>	<ul> <li>104</li> <li>5</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>3</li> <li>0</li> <li>2</li> <li>4</li> <li>12</li> <li>78</li> </ul>	57 2 NEG MODER MODER NORML NORML NEG 2 2 2 2 2 2 2 2 3 8 3 3 8 32 609 20
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>75 >20 >0.2 NONE NONE NONE NORML NORML	<ul> <li>236</li> <li>11</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>7</li> <li>2</li> <li>0</li> <li>2</li> <li>7</li> <li>13</li> <li>36</li> <li>676</li> </ul>	<ul> <li>104</li> <li>5</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>3</li> <li>0</li> <li>2</li> <li>4</li> <li>12</li> <li>78</li> <li>602</li> </ul>	57 2 NEG MODER MODER NORML NORML NORML 2 2 2 2 2 2 2 2 3 3 8 32 609

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**JRE - MANASSAS PARK** Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 Sample No. 9107 OWENS DRIVE : JR0210955 Received : 19 Apr 2024 Lab Number : 06154752 MANASSAS PARK, VA Tested : 22 Apr 2024 : 23 Apr 2024 - Sean Felton US 20111 Unique Number : 10990175 Diagnosed Test Package : CONST (Additional Tests: PQ) Contact: DON VEST Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. dvest@jamesriverequipment.com \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: (703)631-8500 F: (703)631-4715 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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