

#### [W8423] Machine Id HITACHI 210LC-6 1FFDC571LJF340529 Component Right Final Drive Fluid JOHN DEERE GL-5 80W90 (2 GAL)

## 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 advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. ( Customer Sample Comment: W8423 )

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### **WEAR**

Gear wear is indicated.

# CONTAMINATION

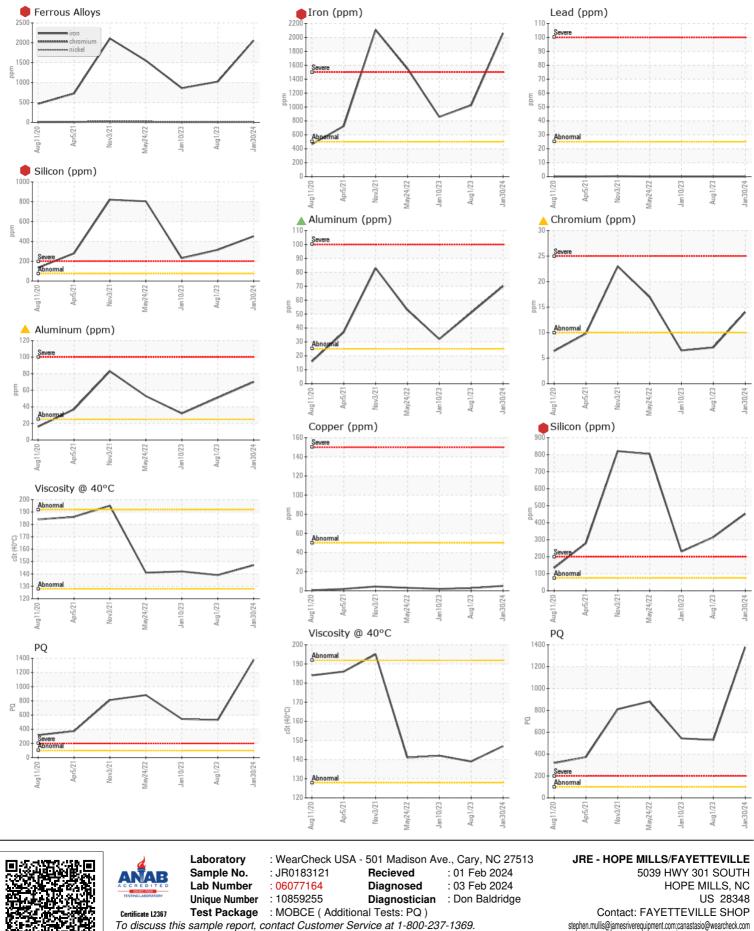
Elemental levels of silicon (Si) and aluminum (Al) indicate aluminasilicate (coarse dirt) ingress.

# FLUID CONDITION

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

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Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0183121	JR0141108	JR0140525
Sample Date		Client Info		30 Jan 2024	01 Aug 2023	10 Jan 2023
Machine Age	hrs	Client Info		4001	2943	2943
Oil Age	hrs	Client Info		2466	1970	2435
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Not Changd	Not Changd
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				SEVERE	ABNORMAL	ABNORMAL
				4077	500	
PQ		ASTM D8184	500	1377	529	544
Iron	ppm	ASTM D5185m	>500	2059	▲ 1024 ¬	A 857
Chromium	ppm	ASTM D5185m	>10	▲ 14	7	6
Nickel	ppm	ASTM D5185m	>10	4	3	2
Titanium	ppm	ASTM D5185m		9	5	4
Silver	ppm	ASTM D5185m	05	0	0	0
Aluminum	ppm	ASTM D5185m	>25	▲ 70 0	▲ 51 0	▲ 32
Lead	ppm	ASTM D5185m	>25	0	0	0
Copper	ppm	ASTM D5185m	>50	5	3	2
Tin	ppm	ASTM D5185m	>10	0	0	0
Vanadium	ppm	ASTM D5185m		<1	<1	<1
White Metal	scalar	*Visual	NONE	NONE	MODER	MODER
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal Silicon	scalar ppm	*Visual ASTM D5185m	NONE	NONE <b>4</b> 52	NONE	NONE
Silicon	ppm	ASTM D5185m	>75	• 452	<b>A</b> 315	<b>2</b> 30
Silicon Potassium	ppm	ASTM D5185m ASTM D5185m	>75 >20	452 11	▲ 315 8	▲ 230 4
Silicon Potassium Water	ppm ppm	ASTM D5185m ASTM D5185m WC Method	>75 >20 >0.2	452 11 NEG	▲ 315 8 NEG	<ul> <li>230</li> <li>4</li> <li>NEG</li> </ul>
Silicon Potassium Water Silt	ppm ppm scalar	ASTM D5185m ASTM D5185m WC Method *Visual	>75 >20 >0.2 NONE	<ul> <li>452</li> <li>11</li> <li>NEG</li> <li>NONE</li> </ul>	<ul> <li>315</li> <li>8</li> <li>NEG</li> <li>NONE</li> </ul>	<ul> <li>230</li> <li>4</li> <li>NEG</li> <li>NONE</li> </ul>
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>452</li> <li>11</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> </ul>	<ul> <li>315</li> <li>8</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> </ul>	<ul> <li>230</li> <li>4</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> </ul>
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>452</li> <li>11</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NONE</li> </ul>	<ul> <li>315</li> <li>8</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NONE</li> </ul>	<ul> <li>230</li> <li>4</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NONE</li> </ul>
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>452</li> <li>11</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> </ul>	<ul> <li>315</li> <li>8</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> </ul>	<ul> <li>230</li> <li>4</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> </ul>
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water	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>452</li> <li>11</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORE</li> <li>NORML</li> <li>NEG</li> </ul>	<ul> <li>315</li> <li>8</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> </ul>	<ul> <li>230</li> <li>4</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> </ul>
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium	ppm ppm scalar scalar scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual ASTM D5185m	>75 >20 >0.2 NONE NONE NONE NORML NORML	<ul> <li>452</li> <li>11</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>0</li> </ul>	<ul> <li>315</li> <li>8</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>2</li> </ul>	<ul> <li>230</li> <li>4</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>3</li> </ul>
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron	ppm ppm scalar scalar scalar scalar scalar scalar gpm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m	>75 >20 >0.2 NONE NONE NONE NORML NORML	<ul> <li>452</li> <li>11</li> <li>NEG</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>0</li> <li>11</li> </ul>	<ul> <li>315</li> <li>8</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>2</li> <li>7</li> </ul>	<ul> <li>230</li> <li>4</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>3</li> <li>5</li> </ul>
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium	ppm ppm scalar scalar scalar scalar scalar scalar ppm ppm	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>452</li> <li>11</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>0</li> <li>11</li> <li>2</li> </ul>	<ul> <li>315</li> <li>8</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>2</li> <li>7</li> <li>0</li> </ul>	<ul> <li>230</li> <li>4</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>3</li> <li>5</li> <li>0</li> </ul>
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum	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>452</li> <li>11</li> <li>NEG</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>0</li> <li>11</li> <li>2</li> <li>2</li> </ul>	<ul> <li>315</li> <li>8</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>2</li> <li>7</li> <li>0</li> <li>&lt;1</li> </ul>	<ul> <li>230</li> <li>4</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>3</li> <li>5</li> <li>0</li> <li>&lt;1</li> </ul>
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>452</li> <li>11</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>0</li> <li>11</li> <li>2</li> <li>2</li> <li>15</li> </ul>	<ul> <li>315</li> <li>8</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>2</li> <li>7</li> <li>0</li> <li>&lt;1</li> <li>8</li> </ul>	<ul> <li>230</li> <li>4</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>3</li> <li>5</li> <li>0</li> <li>&lt;1</li> <li>7</li> </ul>
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium	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	>75 >20 >0.2 NONE NONE NONE NORML NORML	<ul> <li>452</li> <li>11</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>0</li> <li>11</li> <li>2</li> <li>2</li> <li>15</li> <li>4</li> </ul>	<ul> <li>315</li> <li>8</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>2</li> <li>7</li> <li>0</li> <li>&lt;1</li> <li>8</li> <li>2</li> </ul>	<ul> <li>230</li> <li>4</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>3</li> <li>5</li> <li>0</li> <li>&lt;1</li> <li>7</li> <li>2</li> </ul>
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium	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	>75 >20 >0.2 NONE NONE NONE NORML NORML	<ul> <li>452</li> <li>11</li> <li>NEG</li> <li>NONE</li> <li>NORE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>0</li> <li>11</li> <li>2</li> <li>2</li> <li>15</li> <li>4</li> <li>50</li> </ul>	<ul> <li>315</li> <li>8</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>2</li> <li>7</li> <li>0</li> <li>&lt;1</li> <li>8</li> <li>2</li> <li>49</li> </ul>	<ul> <li>230</li> <li>4</li> <li>NEG</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>3</li> <li>5</li> <li>0</li> <li>&lt;1</li> <li>7</li> <li>2</li> <li>40</li> </ul>
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 ASTM D5185m	>75 >20 >0.2 NONE NONE NONE NORML NORML	<ul> <li>452</li> <li>11</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>0</li> <li>11</li> <li>2</li> <li>2</li> <li>15</li> <li>4</li> <li>50</li> <li>308</li> </ul>	<ul> <li>315</li> <li>8</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>2</li> <li>7</li> <li>0</li> <li>&lt;1</li> <li>8</li> <li>2</li> <li>49</li> <li>302</li> </ul>	<ul> <li>230</li> <li>4</li> <li>NEG</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>3</li> <li>5</li> <li>0</li> <li>&lt;1</li> <li>7</li> <li>2</li> <li>40</li> <li>352</li> </ul>
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Malybdenum Manganese Magnesium Calcium	ppm ppm scalar scalar scalar scalar scalar ppm 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 ASTM D5185m	>75 >20 >0.2 NONE NONE NONE NORML NORML	<ul> <li>452</li> <li>11</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>0</li> <li>11</li> <li>2</li> <li>2</li> <li>15</li> <li>4</li> <li>50</li> <li>308</li> <li>5</li> </ul>	<ul> <li>315</li> <li>8</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>2</li> <li>7</li> <li>0</li> <li>&lt;1</li> <li>8</li> <li>2</li> <li>49</li> <li>302</li> <li>21</li> </ul>	<ul> <li>230</li> <li>4</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>3</li> <li>5</li> <li>0</li> <li>&lt;11</li> <li>7</li> <li>2</li> <li>40</li> <li>352</li> <li>7</li> </ul>
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 ASTM D5185m	>75 >20 >0.2 NONE NONE NONE NORML NORML	<ul> <li>452</li> <li>11</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>0</li> <li>11</li> <li>2</li> <li>2</li> <li>15</li> <li>4</li> <li>50</li> <li>308</li> </ul>	<ul> <li>315</li> <li>8</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>2</li> <li>7</li> <li>0</li> <li>&lt;1</li> <li>8</li> <li>2</li> <li>49</li> <li>302</li> </ul>	<ul> <li>230</li> <li>4</li> <li>NEG</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>3</li> <li>5</li> <li>0</li> <li>&lt;1</li> <li>7</li> <li>2</li> <li>40</li> <li>352</li> </ul>

Submitted By: Fayetteville - JUSTIN JACKSON



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

\* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.
Statements of conformity to specifications are based on the simple accentance decision rule (

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