



WEAR	<b>SEVERE</b>
CONTAMINATION	<b>SEVERE</b>
FLUID CONDITION	<b>NORMAL</b>

Machine Id  
**HITACHI 210LC-6N E200**  
 Component  
**Left Final Drive**  
 Fluid  
**JOHN DEERE GL-5 80W90 (--- 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.

### WEAR

Gear wear is indicated.

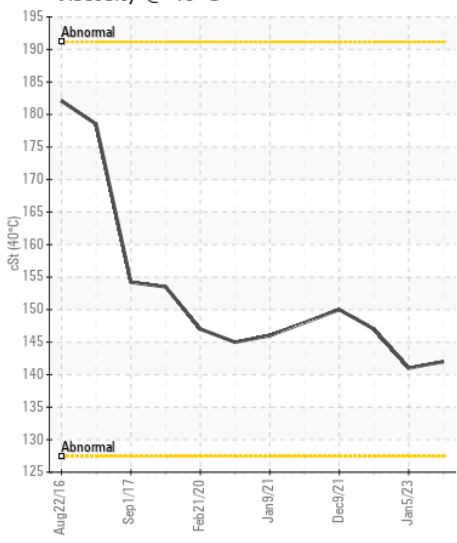
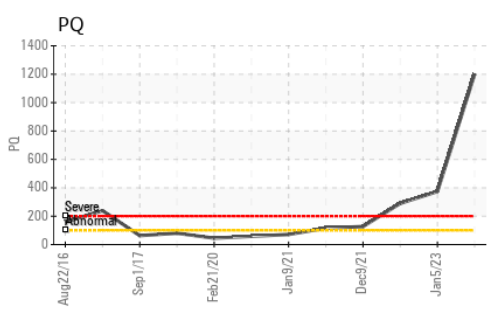
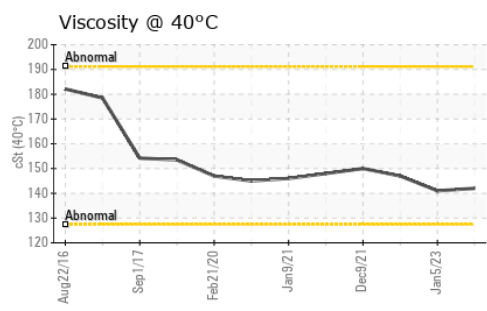
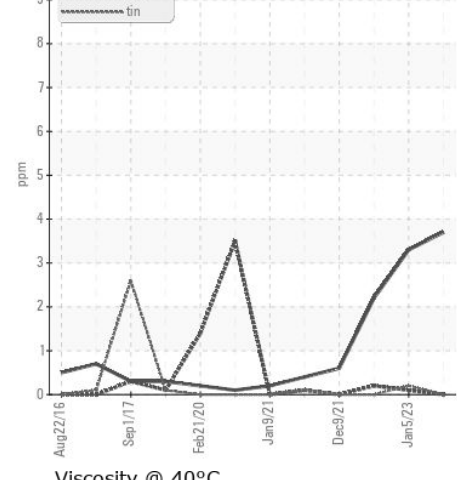
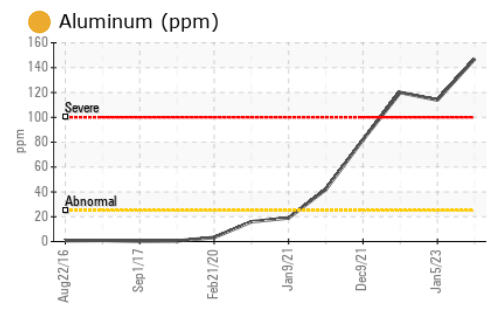
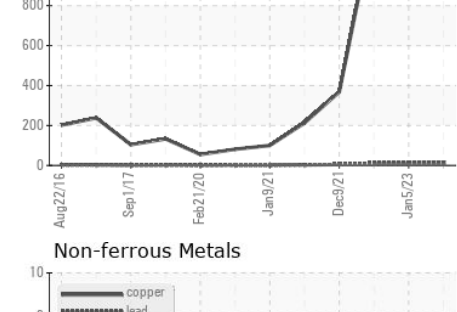
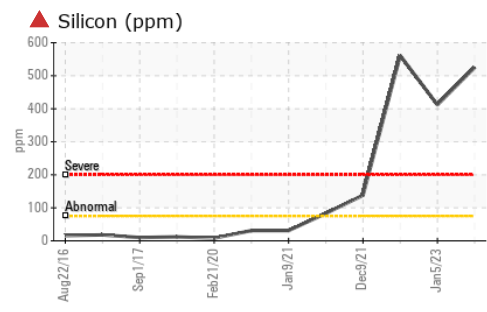
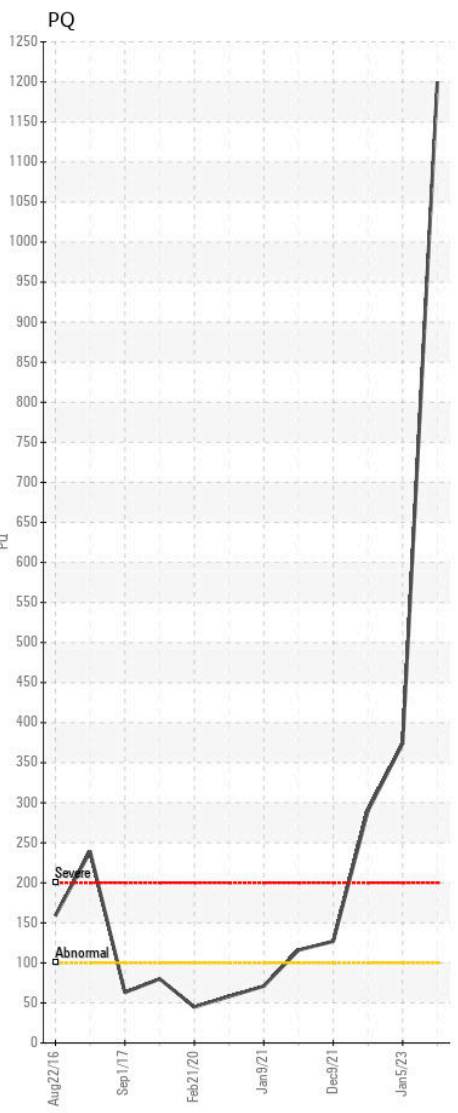
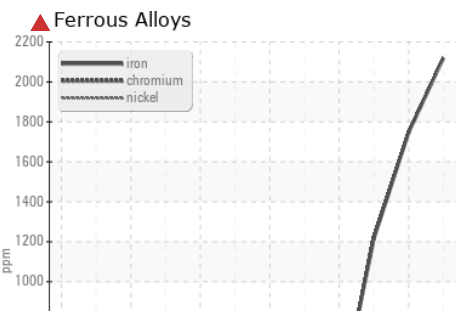
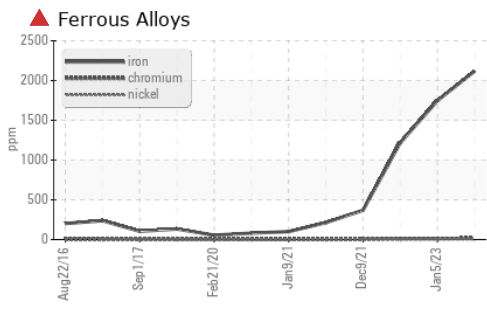
### CONTAMINATION

Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (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		<b>JR0192833</b>	JR0128728	JR0129172
Sample Date		Client Info		<b>10 Jun 2024</b>	05 Jan 2023	16 May 2022
Machine Age	hrs	Client Info		<b>7197</b>	6686	6129
Oil Age	hrs	Client Info		<b>1048</b>	557	1152
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	Not Changd	Changed
Filter Changed		Client Info		<b>Changed</b>	N/A	N/A
Sample Status				<b>SEVERE</b>	SEVERE	SEVERE
PQ		ASTM D8184		<b>1200</b>	▲ 374	290
Iron	ppm	ASTM D5185m	>500	▲ <b>2119</b>	▲ 1747	▲ 1216
Chromium	ppm	ASTM D5185m	>10	▲ <b>16</b>	▲ 13	▲ 12
Nickel	ppm	ASTM D5185m	>10	<b>4</b>	3	3
Titanium	ppm	ASTM D5185m		<b>13</b>	6	16
Silver	ppm	ASTM D5185m		<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m	>25	● <b>147</b>	● 114	● 120
Lead	ppm	ASTM D5185m	>25	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185m	>50	<b>4</b>	3	2
Tin	ppm	ASTM D5185m	>10	<b>0</b>	<1	0
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	MODER	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Silicon	ppm	ASTM D5185m	>75	▲ <b>525</b>	▲ 412	▲ 561
Potassium	ppm	ASTM D5185m	>20	<b>17</b>	11	14
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	LIGHT
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG	NEG
Sodium	ppm	ASTM D5185m		<b>13</b>	10	16
Boron	ppm	ASTM D5185m		<b>90</b>	81	229
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>&lt;1</b>	1	<1
Manganese	ppm	ASTM D5185m		<b>17</b>	13	15
Magnesium	ppm	ASTM D5185m		<b>21</b>	13	41
Calcium	ppm	ASTM D5185m		<b>10</b>	25	52
Phosphorus	ppm	ASTM D5185m		<b>594</b>	497	961
Zinc	ppm	ASTM D5185m		<b>2</b>	0	7
Sulfur	ppm	ASTM D5185m		<b>19268</b>	21763	17493
Visc @ 40°C	cSt	ASTM D445		<b>142</b>	141	147



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : JR0192833 **Received** : 02 Jul 2024  
**Lab Number** : 06226545 **Tested** : 03 Jul 2024  
**Unique Number** : 11110038 **Diagnosed** : 05 Jul 2024 - Don Baldridge  
**Test Package** : CONST ( Additional Tests: PQ )

**MATTHEWS CONSTRUCTION**  
 127 GRAYSON RD  
 ROCK HILL, SC  
 US 29732  
 Contact: Tad Clinton  
 tclinton@matthewsconstructionco.com  
 T: (803)207-5607  
 F:

Certificate L2367  
 To 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 acceptance decision rule (JCGM 106:2012)