



WEAR	SEVERE
CONTAMINATION	SEVERE
FLUID CONDITION	NORMAL

Machine Id
HITACHI 210LC-5 E184 (S/N 1FFDCJ70KEE330524)

Component
Right Final Drive

Fluid
JOHN DEERE GL-5 80W90 (--- GAL)

RECOMMENDATION

We advise that you check all areas where dirt can enter the system. Oil and filter 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.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0188419	JR0156237	JR0142120
Sample Date		Client Info		10 Jan 2024	28 Mar 2023	12 Sep 2022
Machine Age	hrs	Client Info		9348	8670	8166
Oil Age	hrs	Client Info		1182	580	914
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Not Changd	N/A
Filter Changed		Client Info		Changed	N/A	N/A
Sample Status				SEVERE	ABNORMAL	SEVERE

WEAR

Gear wear is indicated.

PQ		ASTM D8184		▲ 1580	184	▲ 387
Iron	ppm	ASTM D5185m	>500	● 2608	477	▲ 1690
Chromium	ppm	ASTM D5185m	>10	▲ 17	3	▲ 12
Nickel	ppm	ASTM D5185m	>10	6	1	3
Titanium	ppm	ASTM D5185m		14	2	11
Silver	ppm	ASTM D5185m		0	0	<1
Aluminum	ppm	ASTM D5185m	>25	▲ 250	▲ 36	▲ 138
Lead	ppm	ASTM D5185m	>25	0	0	0
Copper	ppm	ASTM D5185m	>50	4	<1	3
Tin	ppm	ASTM D5185m	>10	0	0	<1
Vanadium	ppm	ASTM D5185m		1	<1	<1
White Metal	scalar	*Visual	NONE	NONE	MODER	MODER
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

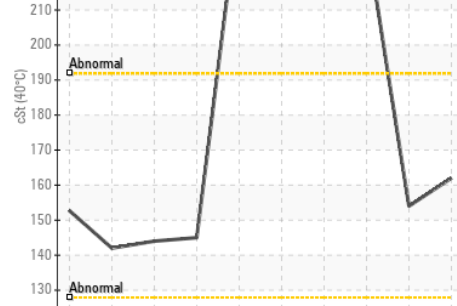
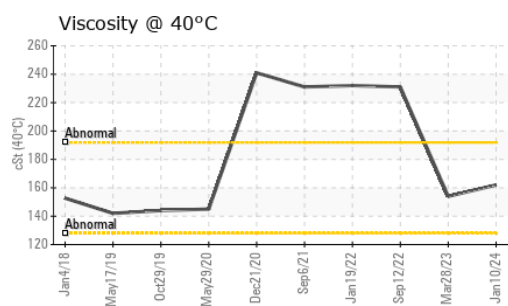
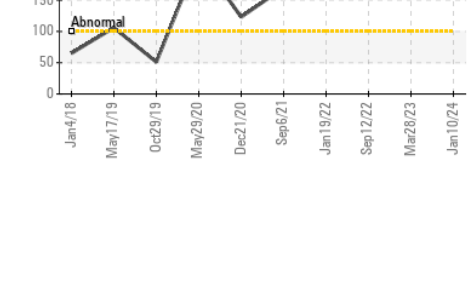
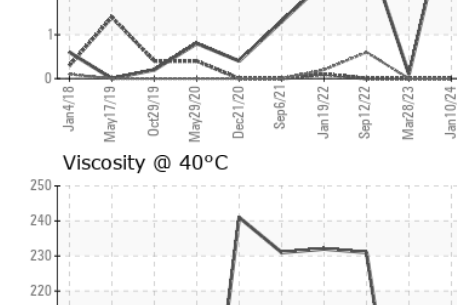
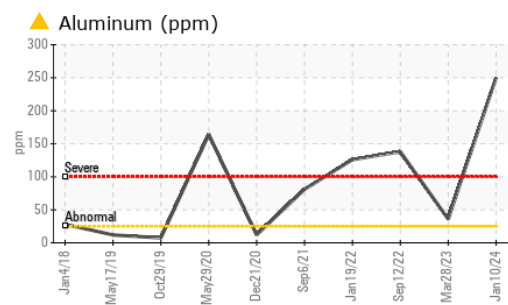
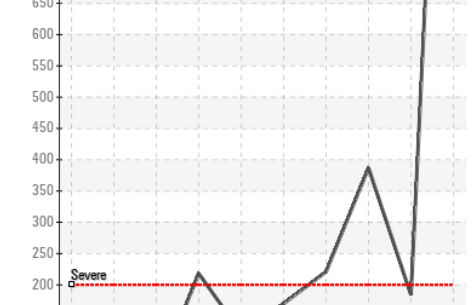
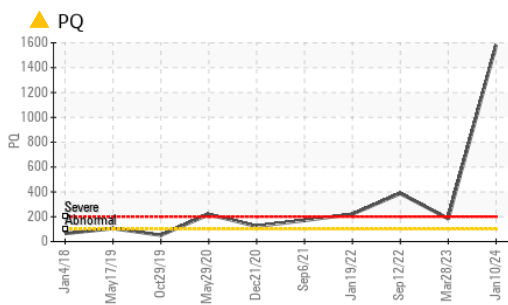
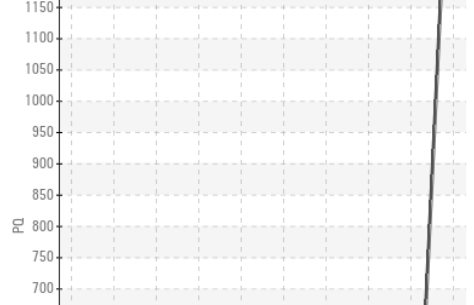
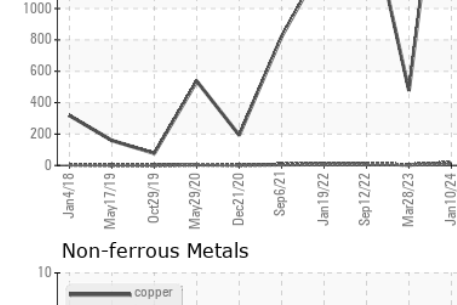
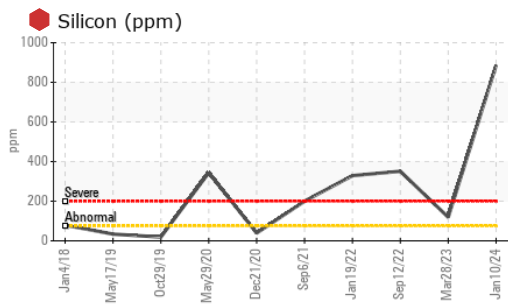
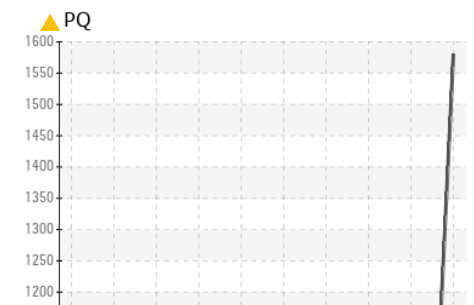
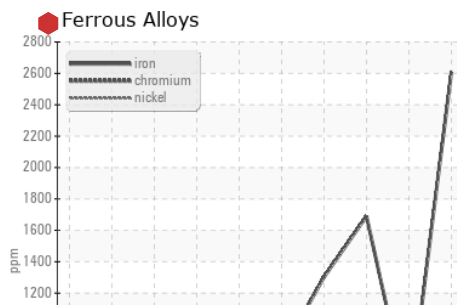
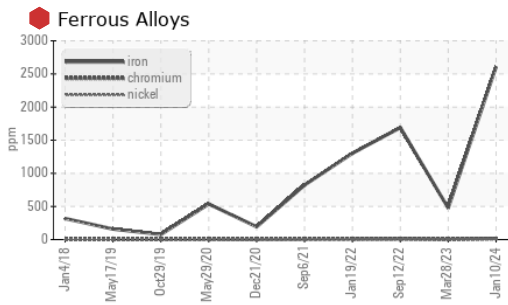
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

Silicon	ppm	ASTM D5185m	>75	● 886	▲ 119	● 351
Potassium	ppm	ASTM D5185m	>20	27	1	12
Water		WC Method	>0.2	NEG	NEG	NEG
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG

FLUID CONDITION

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

Sodium	ppm	ASTM D5185m		36	4	20
Boron	ppm	ASTM D5185m		101	97	200
Barium	ppm	ASTM D5185m		<1	0	<1
Molybdenum	ppm	ASTM D5185m		1	<1	1
Manganese	ppm	ASTM D5185m		20	4	13
Magnesium	ppm	ASTM D5185m		61	0	27
Calcium	ppm	ASTM D5185m		185	9	51
Phosphorus	ppm	ASTM D5185m		553	587	835
Zinc	ppm	ASTM D5185m		24	0	8
Sulfur	ppm	ASTM D5185m		18816	25056	17601
Visc @ 40°C	cSt	ASTM D445		162	154	231



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0188419 **Received** : 17 Jan 2024
Lab Number : 06063022 **Diagnosed** : 18 Jan 2024
Unique Number : 10834404 **Diagnostician** : Sean Felton
Test Package : CONST (Additional Tests: PQ)

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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)