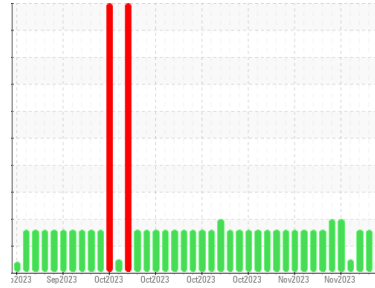




OIL ANALYSIS REPORT

Sample Rating Trend



UNKNOWN



Area
WCLSNC
 Machine Id
QC230801HY
 Component
Hydraulic System
 Fluid
JOHN DEERE HY-GARD HYD/TRANS (--- GAL)

DIAGNOSIS

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			WC0877799	WC0877798	WC0877795
Sample Date	Client Info			14 Nov 2023	13 Nov 2023	10 Nov 2023
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed	Client Info			N/A	N/A	N/A
Sample Status				---	ABNORMAL	ABNORMAL

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184	>47	58	52	74
Iron	ppm	ASTM D5185m	>78	91	96	100
Chromium	ppm	ASTM D5185m	>2	1	1	1
Nickel	ppm	ASTM D5185m	>3	2	2	2
Titanium	ppm	ASTM D5185m	>2	<1	<1	0
Silver	ppm	ASTM D5185m	>2	0	0	<1
Aluminum	ppm	ASTM D5185m	>5	3	3	3
Lead	ppm	ASTM D5185m	>11	9	11	9
Copper	ppm	ASTM D5185m	>84	76	73	73
Tin	ppm	ASTM D5185m	>4	3	4	4
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	6	92	104	99
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	0	<1	0	0
Manganese	ppm	ASTM D5185m		22	23	22
Magnesium	ppm	ASTM D5185m	145	22	0	24
Calcium	ppm	ASTM D5185m	3570	3288	3353	3313
Phosphorus	ppm	ASTM D5185m	1290	1117	1159	1144
Zinc	ppm	ASTM D5185m	1640	1394	1477	1368
Sulfur	ppm	ASTM D5185m		3278	3357	3121

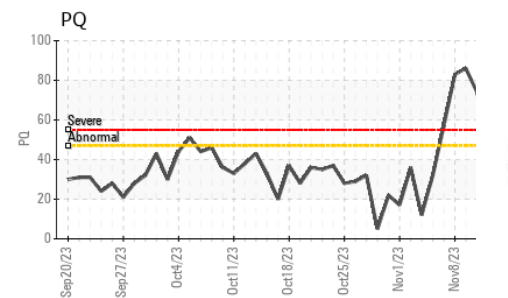
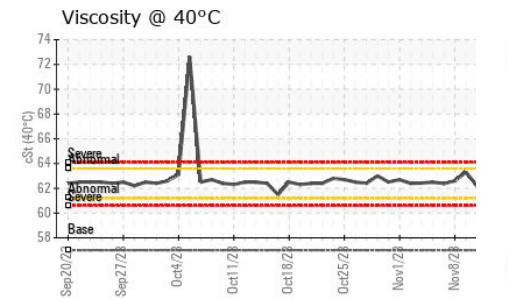
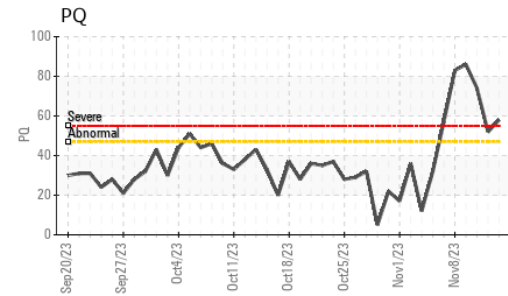
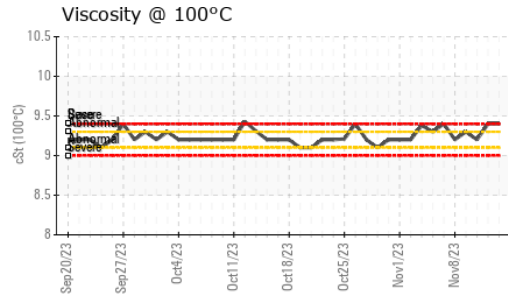
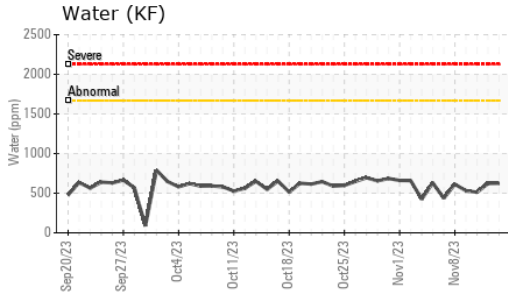
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>11	10	10	10
Sodium	ppm	ASTM D5185m	>23	18	19	19
Potassium	ppm	ASTM D5185m	>20	2	2	1
Water	%	ASTM D6304	>0.1669	0.062	0.062	0.051
ppm Water	ppm	ASTM D6304	>1669	624.9	621.9	511.6

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	---	▲ 280974	▲ 281465
Particles >6µm		ASTM D7647	>1300	---	▲ 140138	▲ 155665
Particles >14µm		ASTM D7647	>160	---	▲ 642	▲ 1361
Particles >21µm		ASTM D7647	>40	---	18	19
Particles >38µm		ASTM D7647	>10	---	1	0
Particles >71µm		ASTM D7647	>3	---	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	---	▲ 25/24/17	▲ 25/24/18

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	1.8	0.663	0.79	0.91



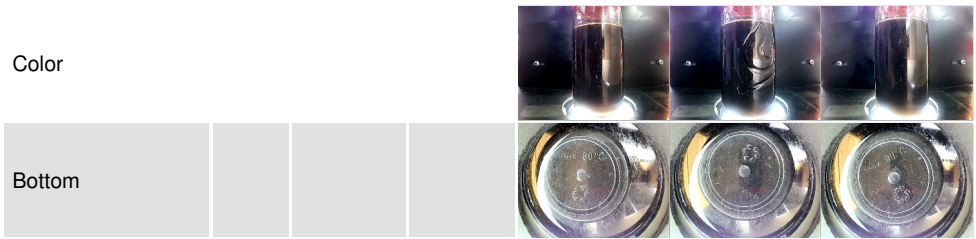
OIL ANALYSIS REPORT



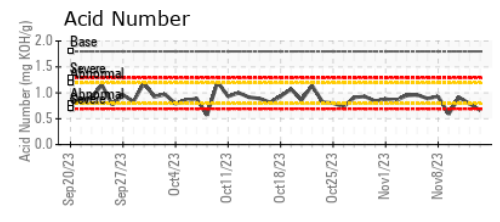
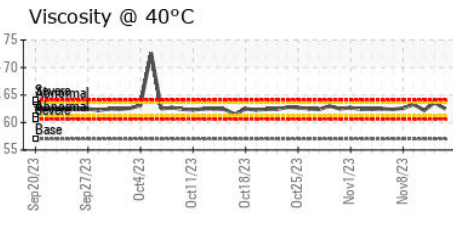
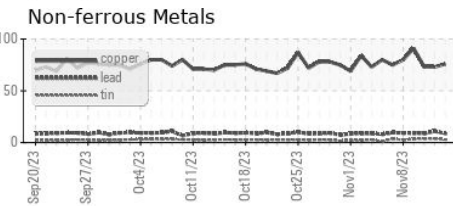
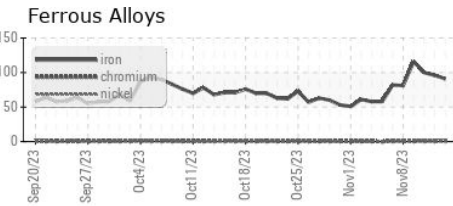
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	▲ MODER	MODER
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1669	NEG	0.2%
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	57.0	62.5	63.6
Visc @ 100°C	cSt	ASTM D445	9.4	9.4	9.2
Viscosity Index (VI)	Scale	ASTM D2270	147	130	127

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0877799 **Received** : 14 Nov 2023
Lab Number : 06006988 **Diagnosed** : 14 Jan 2024
Unique Number : 10740750 **Diagnostician** : System
Test Package : IND 2 (Additional Tests: KF, KV100, PQ, VI)

WEARCHECK LUBRICATION SERVICES QA ACCOUNT
 501 Madison Ave
 Cary, NC
 US 27513
 Contact: WCLS CARY NC

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)

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