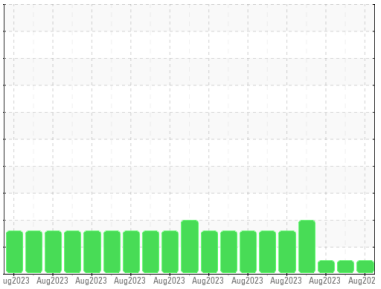
OIL ANALYSIS REPORT

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		**WC0844505**	WC0844502	WC0844501
Sample Date		Client Info		**28 Aug 2023**	25 Aug 2023	24 Aug 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				**---**	---	---

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184	>47	**24**	23	20
Iron	ppm	ASTM D5185m	>78	**55**	53	59
Chromium	ppm	ASTM D5185m	>2	**<1**	<1	<1
Nickel	ppm	ASTM D5185m	>3	**2**	1	0
Titanium	ppm	ASTM D5185m	>2	**0**	0	0
Silver	ppm	ASTM D5185m	>2	**<1**	0	0
Aluminum	ppm	ASTM D5185m	>5	**3**	2	0
Lead	ppm	ASTM D5185m	>11	**9**	8	9
Copper	ppm	ASTM D5185m	>84	**79**	73	80
Tin	ppm	ASTM D5185m	>4	**2**	2	2
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	**107**	101	108
Barium	ppm	ASTM D5185m	0	**2**	<1	3
Molybdenum	ppm	ASTM D5185m	0	**<1**	0	0
Manganese	ppm	ASTM D5185m		**15**	14	16
Magnesium	ppm	ASTM D5185m	145	**20**	20	21
Calcium	ppm	ASTM D5185m	3570	**3563**	3351	3598
Phosphorus	ppm	ASTM D5185m	1290	**1148**	1091	1209
Zinc	ppm	ASTM D5185m	1640	**1385**	1343	1428
Sulfur	ppm	ASTM D5185m		**3478**	3485	3594

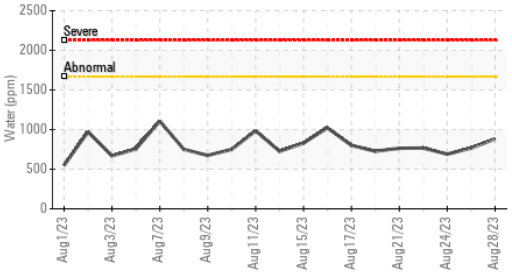
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>11	**7**	8	8
Sodium	ppm	ASTM D5185m	>23	**13**	12	14
Potassium	ppm	ASTM D5185m	>20	**3**	2	2
Water	%	ASTM D6304	>0.1669	**0.088**	0.076	0.068
ppm Water	ppm	ASTM D6304	>1669	**881.8**	766.7	689.7

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	**---**	253739	300571
Particles >6µm		ASTM D7647	>1300	**---**	118409	146375
Particles >14µm		ASTM D7647	>160	**---**	560	976
Particles >21µm		ASTM D7647	>40	**---**	15	27
Particles >38µm		ASTM D7647	>10	**---**	0	0
Particles >71µm		ASTM D7647	>3	**---**	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	**---**	25/24/16	25/24/17

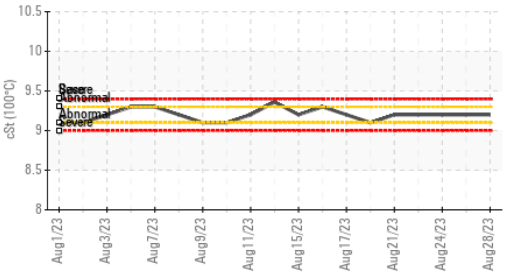
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	1.8	**0.74**	0.85	0.90

OIL ANALYSIS REPORT

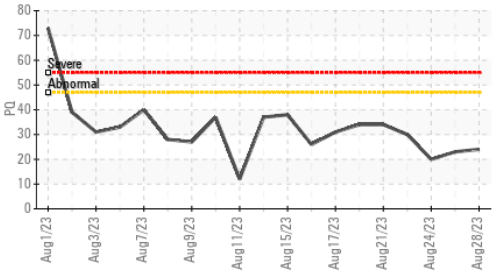
Water (KF)



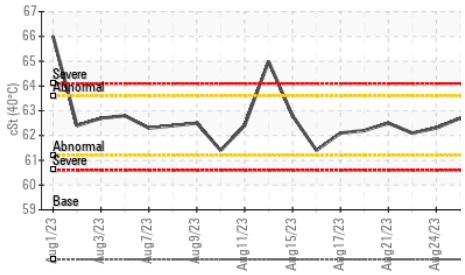
Viscosity @ 100°C



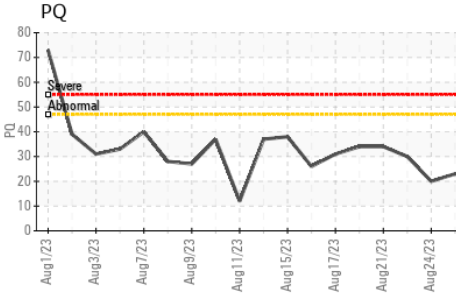
PQ



Viscosity @ 40°C



PQ



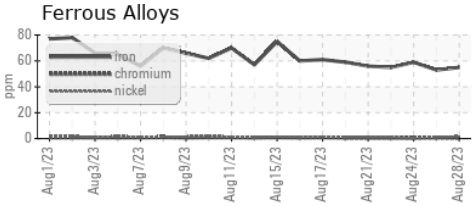
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	▲ **HEAVY**	▲ MODER	▲ MODER
Debris	scalar	*Visual	NONE	**NONE**	NONE	▲ MODER
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	>0.1669	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	57.0	**62.1**	62.7	62.3
Visc @ 100°C	cSt	ASTM D445	9.4	**9.2**	9.2	9.2
Viscosity Index (VI)	Scale	ASTM D2270	147	**126**	▲ 124	125

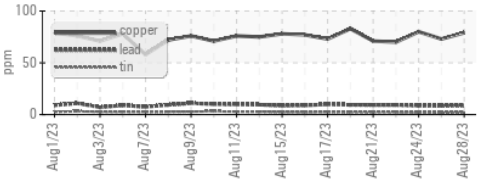
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

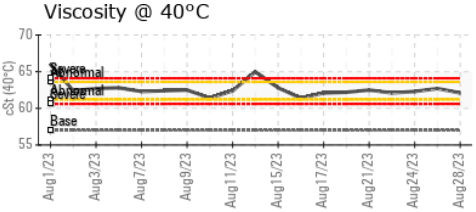
Ferrous Alloys



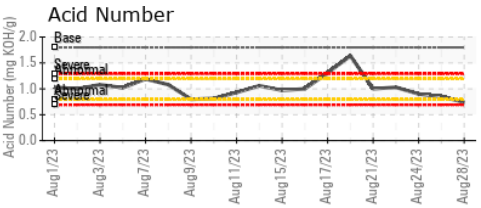
Non-ferrous Metals



Viscosity @ 40°C



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0844505 **Received** : 28 Aug 2023
Lab Number : 05936119 **Diagnosed** : 28 Oct 2023
Unique Number : 10621390 **Diagnostician** : System
Test Package : IND 2 (Additional Tests: KF, KV100, PQ, VI)

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)

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

T: (919)379-4102
F: (919)379-4050