



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL



Area
Store 4 - Fairmont
Machine Id
JOHN DEERE 350GL 1FF350GXJKF814116
Component
Hydraulic System
Fluid
HITACHI HYDRAULIC SUPER EX 46HN (77 GAL)

RECOMMENDATION

Recommend drain oil if not already done. Reduce drain interval to 2000 hours or drain and flush and use recommended zinc free oil.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LEC0046585	LEC0038090	LEC0011397
Sample Date		Client Info		29 Dec 2023	11 Jan 2023	25 Aug 2022
Machine Age	hrs	Client Info		1460	923	497
Oil Age	hrs	Client Info		1460	923	0
Filter Age	hrs	Client Info		537	923	0
Oil Changed		Client Info		Not Chngd	Not Chngd	Changed
Filter Changed		Client Info		Not Chngd	Changed	Not Chngd
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

PQ		ASTM D8184	>50	13	8	11
Iron	ppm	ASTM D5185m	>32	2	2	3
Chromium	ppm	ASTM D5185m	>9	1	1	0
Nickel	ppm	ASTM D5185m	>5	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	<1
Aluminum	ppm	ASTM D5185m	>9	0	<1	1
Lead	ppm	ASTM D5185m	>28	0	0	0
Copper	ppm	ASTM D5185m	>50	<1	1	2
Tin	ppm	ASTM D5185m	>5	0	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

The amount and size of particulates present in the system are acceptable.

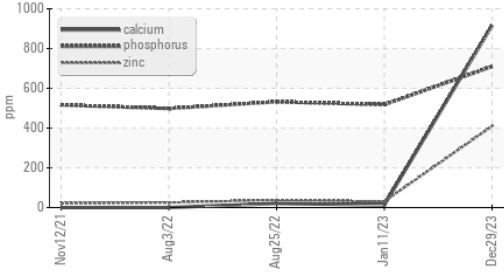
Silicon	ppm	ASTM D5185m	>11	1	<1	0
Potassium	ppm	ASTM D5185m	>20	0	0	0
Water		WC Method	>0.075	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>80000	13186	6918	9615
Particles >6µm		ASTM D7647	>20000	465	286	635
Particles >14µm		ASTM D7647	>640	22	8	13
Particles >21µm		ASTM D7647	>160	8	1	4
Particles >38µm		ASTM D7647	>40	1	0	2
Particles >71µm		ASTM D7647	>10	0	0	2
Oil Cleanliness		ISO 4406 (c)	>23/21/16	21/16/12	20/15/10	20/16/11
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	>0.075	NEG	NEG	NEG

FLUID CONDITION

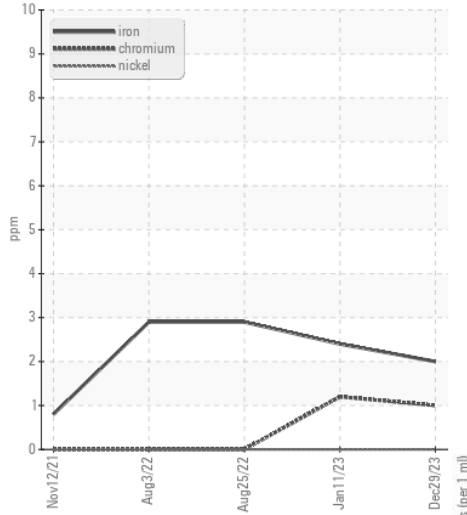
Zinc level above manufacturer's recommendations. The AN level is acceptable for this fluid.

Sodium	ppm	ASTM D5185m	>21	0	0	0
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		0	0	0
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m		1	0	0
Calcium	ppm	ASTM D5185m		916	13	21
Phosphorus	ppm	ASTM D5185m	827	710	518	532
Zinc	ppm	ASTM D5185m	0	▲ 409	30	38
Sulfur	ppm	ASTM D5185m	13	1070	177	136
Acid Number (AN)	mg KOH/g	ASTM D8045	0.06	0.55	0.19	0.09
Visc @ 40°C	cSt	ASTM D445	47	43.7	46.2	46.0

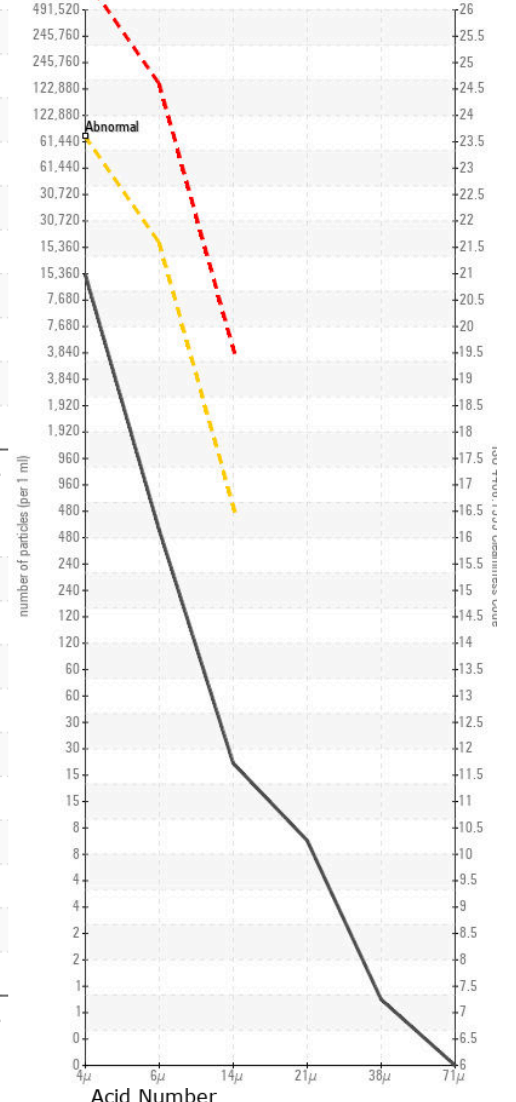
Additives



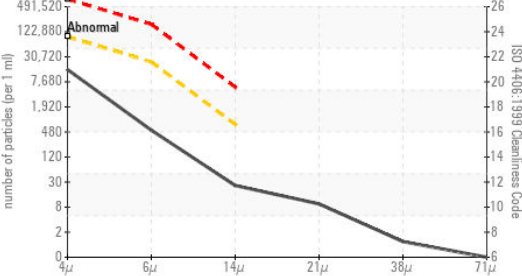
Ferrous Alloys



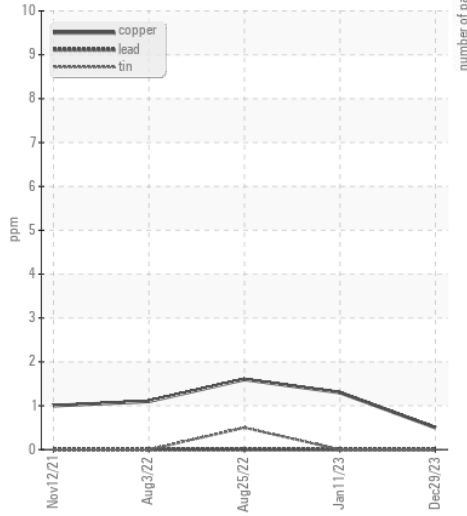
Particle Count



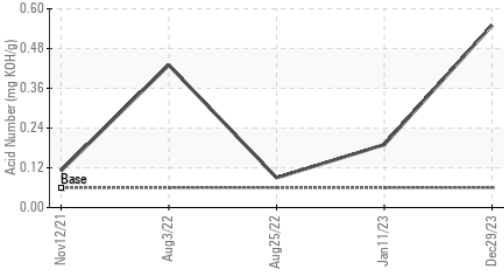
Particle Count



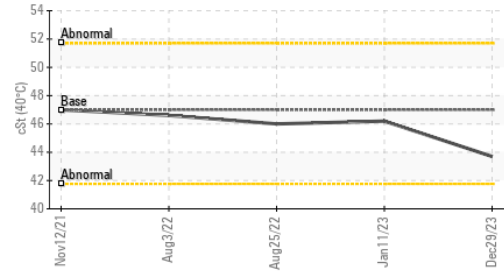
Non-ferrous Metals



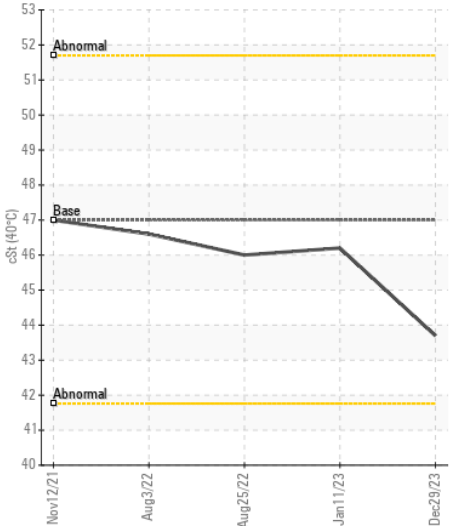
Acid Number



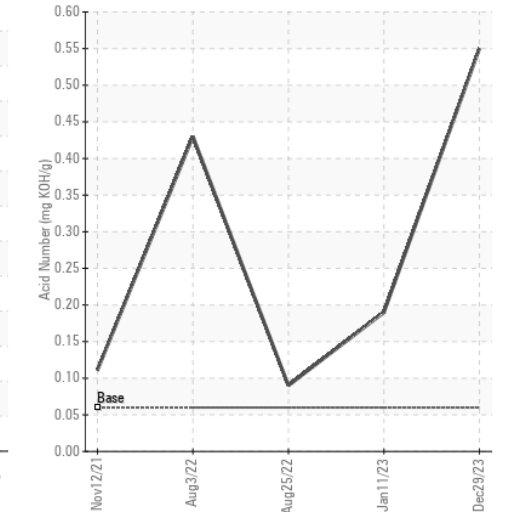
Viscosity @ 40°C



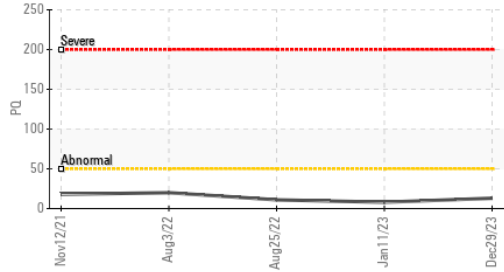
Viscosity @ 40°C



Acid Number



PQ



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LEC0046585 **Received** : 12 Jan 2024
Lab Number : 06059203 **Diagnosed** : 15 Jan 2024
Unique Number : 10830585 **Diagnostician** : Don Baldrige
Test Package : CONST (Additional Tests: PQ)

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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