



OIL ANALYSIS REPORT

WEAR	SEVERE
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
[ro#146831]
 Machine Id
JOHN DEERE 310E 1DW310EXANF714535
 Component
Middle Axle
 Fluid
JOHN DEERE HY-GARD HYD/TRANS (10 GAL)

RECOMMENDATION

We recommend that you drain the oil from the component if this has not already been done. 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		LEC0046785	LEC0037635	LEC0036880
Sample Date		Client Info		12 Jan 2024	05 Jun 2023	18 Jan 2023
Machine Age	hrs	Client Info		1661	1041	636
Oil Age	hrs	Client Info		1025	405	636
Filter Age	hrs	Client Info		0	1041	0
Oil Changed		Client Info		Not Changd	Not Changd	Changed
Filter Changed		Client Info		N/A	Not Changd	Not Changd
Sample Status				SEVERE	ABNORMAL	NORMAL

WEAR

Bearing and/or bushing wear is indicated.

PQ		ASTM D8184		269	96	164
Iron	ppm	ASTM D5185m	>1501	467	174	198
Chromium	ppm	ASTM D5185m	>11	3	2	2
Nickel	ppm	ASTM D5185m	>10	6	3	6
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>21	2	1	3
Lead	ppm	ASTM D5185m	>51	0	0	2
Copper	ppm	ASTM D5185m	>101	500	▲ 114	93
Tin	ppm	ASTM D5185m	>10	11	3	4
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	MODER

CONTAMINATION

There is no indication of any contamination in the oil.

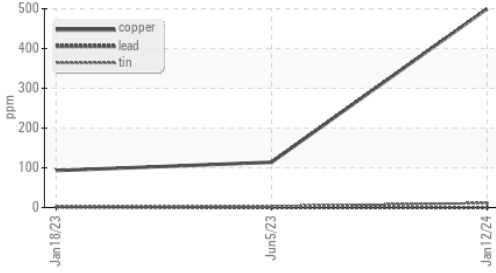
Silicon	ppm	ASTM D5185m	>31	25	15	17
Potassium	ppm	ASTM D5185m	>20	5	2	3
Water		WC Method	>0.1	NEG	NEG	NEG
Silt	scalar	*Visual	NONE	LIGHT	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	NEG

FLUID CONDITION

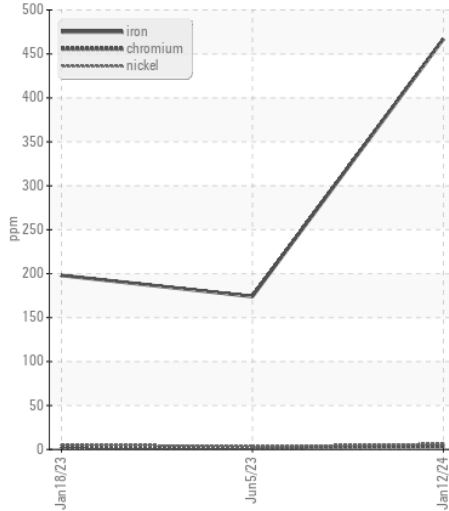
The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Sodium	ppm	ASTM D5185m	>51	8	10	22
Boron	ppm	ASTM D5185m	6	51	49	105
Barium	ppm	ASTM D5185m	0	7	2	14
Molybdenum	ppm	ASTM D5185m	0	10	10	<1
Manganese	ppm	ASTM D5185m		7	4	4
Magnesium	ppm	ASTM D5185m	145	113	117	15
Calcium	ppm	ASTM D5185m	3570	3393	3523	3118
Phosphorus	ppm	ASTM D5185m	1290	1031	1096	1000
Zinc	ppm	ASTM D5185m	1640	1379	1389	1303
Sulfur	ppm	ASTM D5185m		3762	4329	3264
Visc @ 40°C	cSt	ASTM D445	57.0	55.4	56.6	64.0

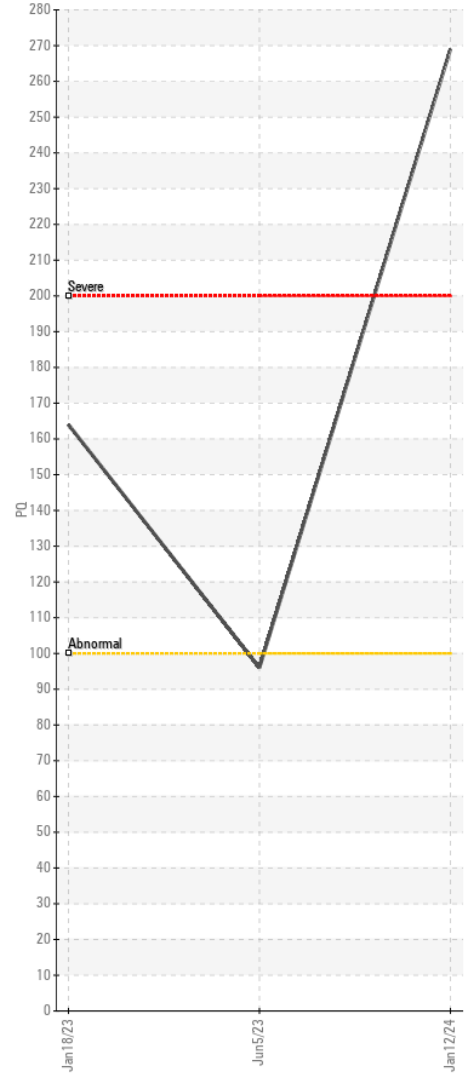
Non-ferrous Metals



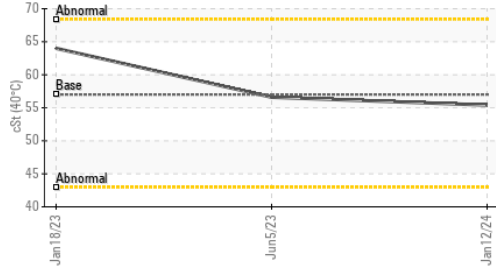
Ferrous Alloys



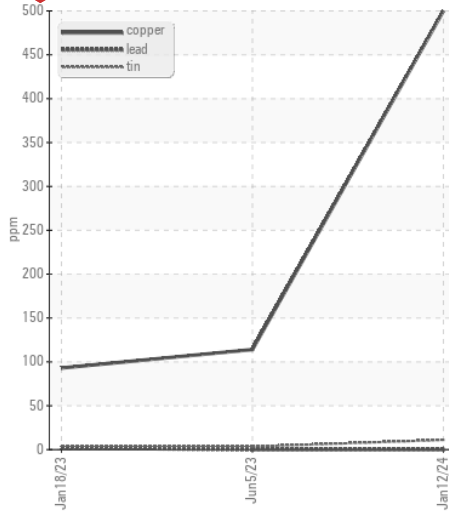
PQ



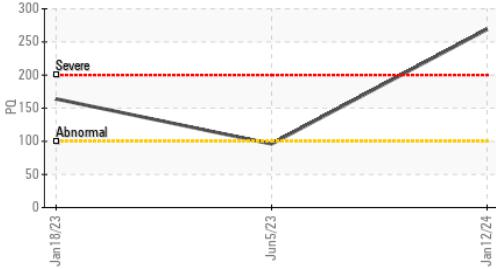
Viscosity @ 40°C



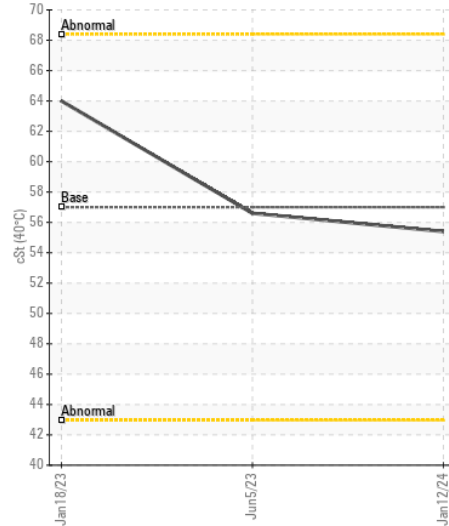
Non-ferrous Metals



PQ



Viscosity @ 40°C



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LEC0046785 **Received** : 18 Jan 2024
Lab Number : 06064574 **Diagnosed** : 22 Jan 2024
Unique Number : 10835956 **Diagnostician** : Sean Felton
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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