



WEAR	ABNORMAL
CONTAMINATION	ATTENTION
FLUID CONDITION	NORMAL

Area
[FALLING OAK]
 Machine Id
JOHN DEERE 437E 1T0437EDENF413756
 Component
Hydraulic System
 Fluid
AW HYDRAULIC OIL ISO 46 (--- GAL)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0222036	JR0209532	JR0164608
Sample Date		Client Info		16 Jul 2024	19 Mar 2024	06 Dec 2023
Machine Age	hrs	Client Info		5538	4820	4156
Oil Age	hrs	Client Info		0	0	4156
Filter Age	hrs	Client Info		0	0	4156
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

WEAR

The iron level is abnormal. All other component wear rates are normal.

PQ	UOM	Method	Limit/Abn	Current	History1	History2
Iron	ppm	ASTM D5185m	>20	▲ 27	▲ 23	▲ 32
Chromium	ppm	ASTM D5185m	>10	<1	4	<1
Nickel	ppm	ASTM D5185m	>10	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>10	<1	1	1
Lead	ppm	ASTM D5185m	>10	0	1	0
Copper	ppm	ASTM D5185m	>75	<1	9	1
Tin	ppm	ASTM D5185m	>10	0	<1	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

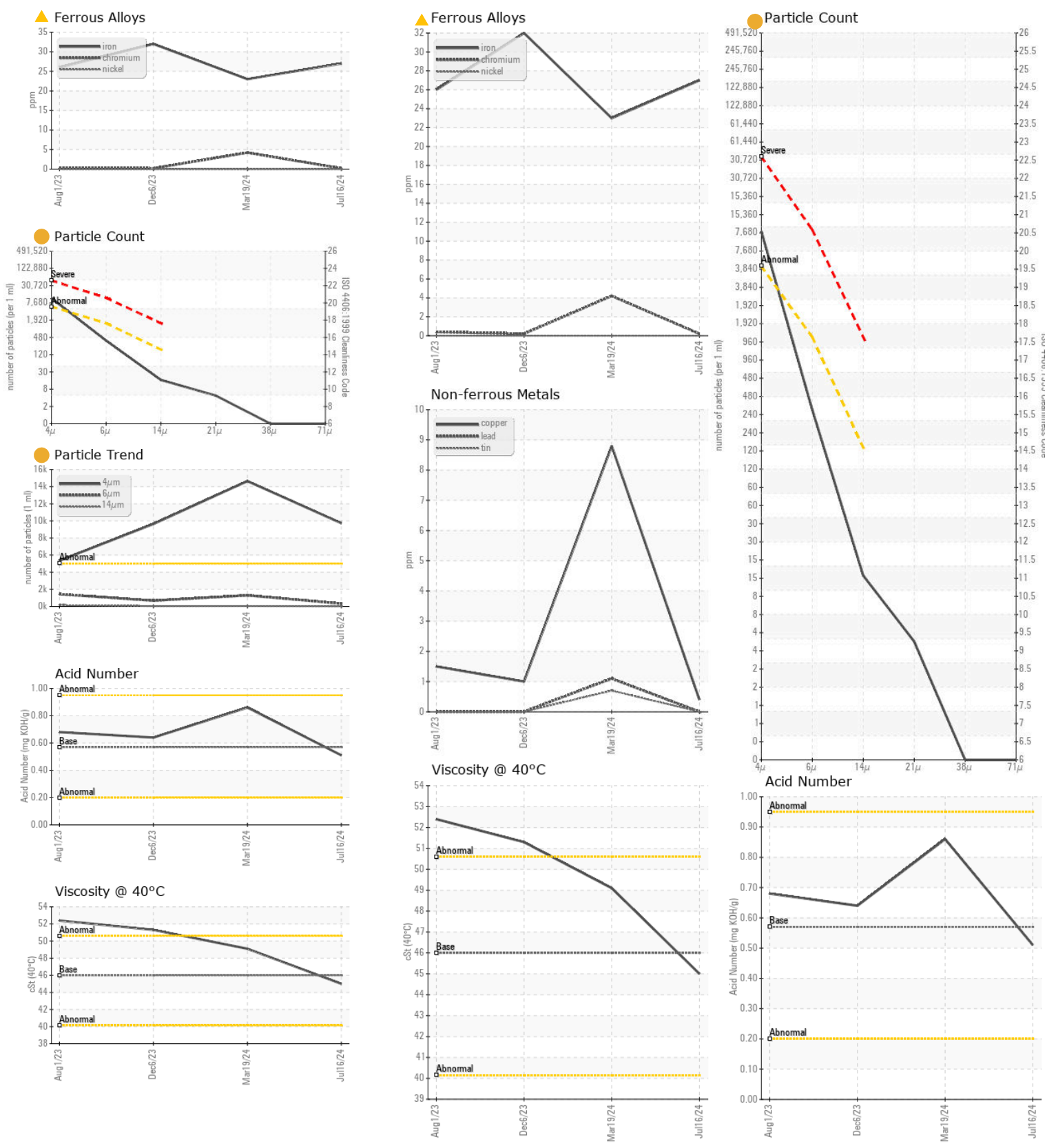
There is a moderate amount of silt (particulates < 14 microns in size) present in the oil.

Silicon	ppm	ASTM D5185m	>20	6	▲ 36	4
Potassium	ppm	ASTM D5185m	>20	<1	6	3
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>5000	● 9721	▲ 14645	● 9633
Particles >6µm		ASTM D7647	>1300	327	1291	666
Particles >14µm		ASTM D7647	>160	14	42	31
Particles >21µm		ASTM D7647	>40	4	9	9
Particles >38µm		ASTM D7647	>10	0	1	0
Particles >71µm		ASTM D7647	>3	0	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	● 20/16/11	▲ 21/17/13	● 20/17/12
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	>0.1	NEG	NEG	NEG

FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		1	4	0
Boron	ppm	ASTM D5185m	5	1	2	<1
Barium	ppm	ASTM D5185m	5	0	0	3
Molybdenum	ppm	ASTM D5185m	5	1	5	1
Manganese	ppm	ASTM D5185m		0	<1	0
Magnesium	ppm	ASTM D5185m	25	8	13	11
Calcium	ppm	ASTM D5185m	200	239	138	196
Phosphorus	ppm	ASTM D5185m	300	397	466	491
Zinc	ppm	ASTM D5185m	370	485	605	626
Sulfur	ppm	ASTM D5185m	2500	1795	1754	1827
Acid Number (AN)	mg KOH/g	ASTM D8045	0.57	0.51	0.86	0.64
Visc @ 40°C	cSt	ASTM D445	46	45.0	49.1	51.3



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0222036 **Received** : 19 Jul 2024
Lab Number : 06241589 **Tested** : 22 Jul 2024
Unique Number : 11130423 **Diagnosed** : 22 Jul 2024 - Don Baldrige
Test Package : CONST (Additional Tests: PQ)

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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)