



WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Area
[BOONE LOGGING]

Machine Id
JOHN DEERE 437E 1T0437EDEM396715

Component
Hydraulic System

Fluid
{not provided} (--- GAL)

RECOMMENDATION

We recommend you service the filters on this component. We recommend an early resample to monitor this condition. Please specify the brand, type, and viscosity of the oil on your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0208923	JR0165190	JR0099280
Sample Date		Client Info		22 May 2024	27 Oct 2023	01 Sep 2021
Machine Age	hrs	Client Info		4655	3862	522
Oil Age	hrs	Client Info		0	3862	0
Filter Age	hrs	Client Info		0	3862	0
Oil Changed		Client Info		N/A	N/A	Not Changd
Filter Changed		Client Info		N/A	N/A	Not Changd
Sample Status				ABNORMAL	ABNORMAL	MARGINAL

WEAR

All component wear rates are normal.

PQ	UOM	Method	Limit/Abn	Current	History1	History2
PQ		ASTM D8184		16	9	---
Iron	ppm	ASTM D5185m	>20	2	2	3
Chromium	ppm	ASTM D5185m	>10	<1	0	<1
Nickel	ppm	ASTM D5185m	>10	0	0	0
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m		0	0	▲ 14
Aluminum	ppm	ASTM D5185m	>10	<1	1	1
Lead	ppm	ASTM D5185m	>10	<1	0	<1
Copper	ppm	ASTM D5185m	>75	1	<1	2
Tin	ppm	ASTM D5185m	>10	<1	<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

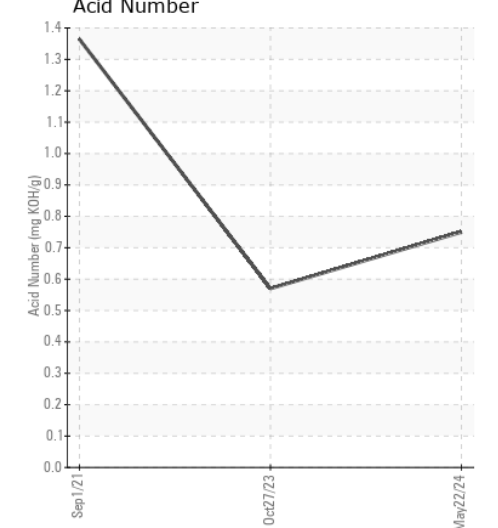
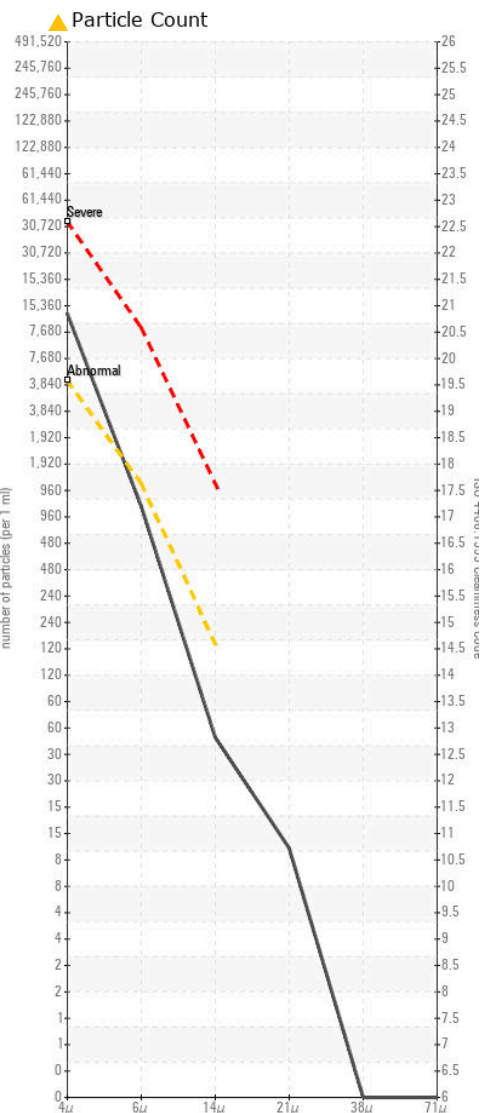
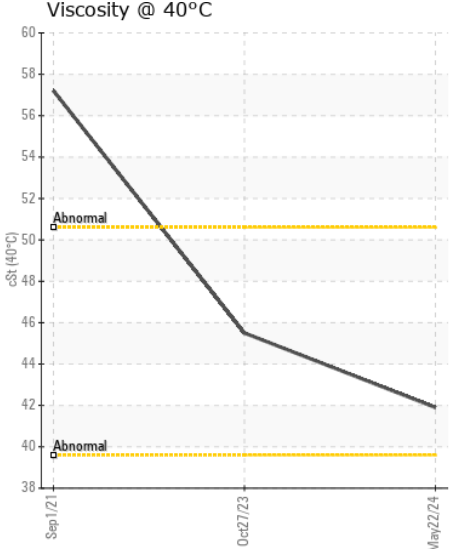
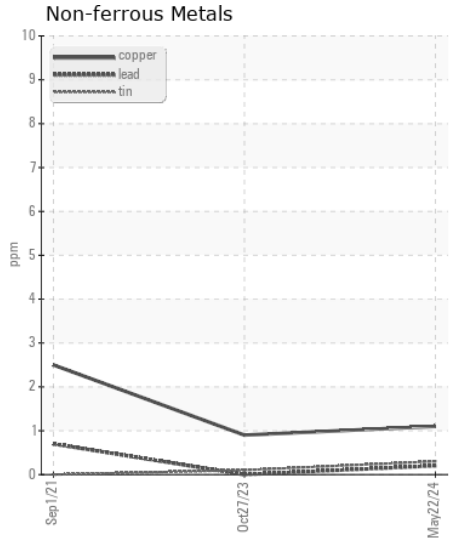
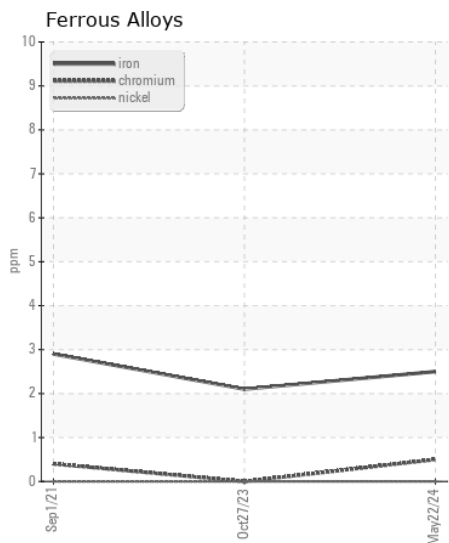
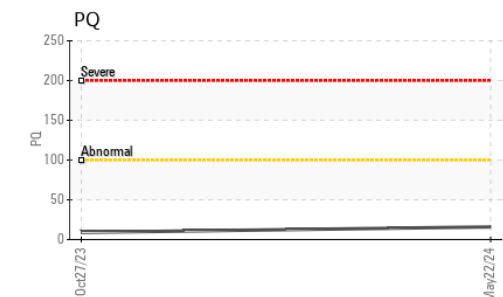
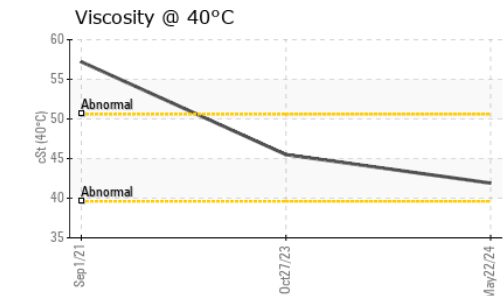
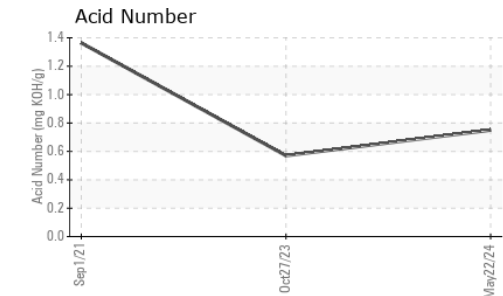
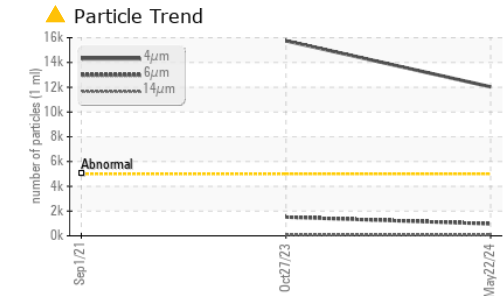
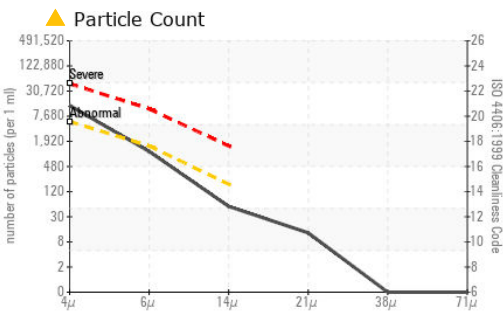
There is a moderate amount of silt (particulates < 14 microns in size) present in the oil.

Silicon	ppm	ASTM D5185m	>20	5	6	<1
Potassium	ppm	ASTM D5185m	>20	4	4	4
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>5000	▲ 12029	▲ 15752	---
Particles >6µm		ASTM D7647	>1300	966	● 1510	---
Particles >14µm		ASTM D7647	>160	47	65	---
Particles >21µm		ASTM D7647	>40	11	12	---
Particles >38µm		ASTM D7647	>10	0	1	---
Particles >71µm		ASTM D7647	>3	0	0	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ 21/17/13	▲ 21/18/13	---
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 oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

Sodium	ppm	ASTM D5185m		4	6	0
Boron	ppm	ASTM D5185m		34	38	7
Barium	ppm	ASTM D5185m		0	0	1
Molybdenum	ppm	ASTM D5185m		18	21	1
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m		71	80	27
Calcium	ppm	ASTM D5185m		1624	2128	873
Phosphorus	ppm	ASTM D5185m		680	881	676
Zinc	ppm	ASTM D5185m		795	1034	868
Sulfur	ppm	ASTM D5185m		2799	3141	1798
Acid Number (AN)	mg KOH/g	ASTM D8045		0.75	0.57	1.364
Visc @ 40°C	cSt	ASTM D445		41.9	45.5	57.21



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0208923 **Received** : 30 May 2024
Lab Number : 06195310 **Tested** : 31 May 2024
Unique Number : 11057433 **Diagnosed** : 31 May 2024 - Wes Davis
Test Package : CONST (Additional Tests: PQ)

JRE - GREENVILLE
 3604 HIGHWAY 264 E
 GREENVILLE, NC
 US 27834-5800

Certificate L2367
 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)

Contact: GREENVILLE SHOP
 christopher.martin@jamesriverequipment.com
 T:
 F: