



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
JOHN DEERE 437E 1T0437EDCNF413757

Component
Hydraulic System

Fluid
JOHN DEERE HYDRAU (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0001461	JR0000460	JR0147460
Sample Date		Client Info		09 Aug 2023	24 Apr 2023	05 Oct 2022
Machine Age	hrs	Client Info		2293	1650	531
Oil Age	hrs	Client Info		293	1650	531
Filter Age	hrs	Client Info		293	1650	531
Oil Changed		Client Info		Not Chngd	Not Chngd	Not Chngd
Filter Changed		Client Info		Not Chngd	Not Chngd	Not Chngd
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

PQ	UOM	Method	Limit/Abn	Current	History1	History2
Iron	ppm	ASTM D5185m	>20	1	4	2
Chromium	ppm	ASTM D5185m	>10	<1	3	0
Nickel	ppm	ASTM D5185m	>10	0	<1	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>10	0	0	<1
Lead	ppm	ASTM D5185m	>10	0	<1	0
Copper	ppm	ASTM D5185m	>75	2	9	1
Tin	ppm	ASTM D5185m	>10	0	0	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

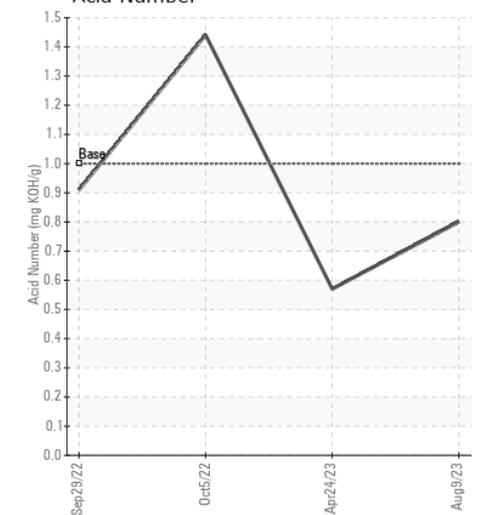
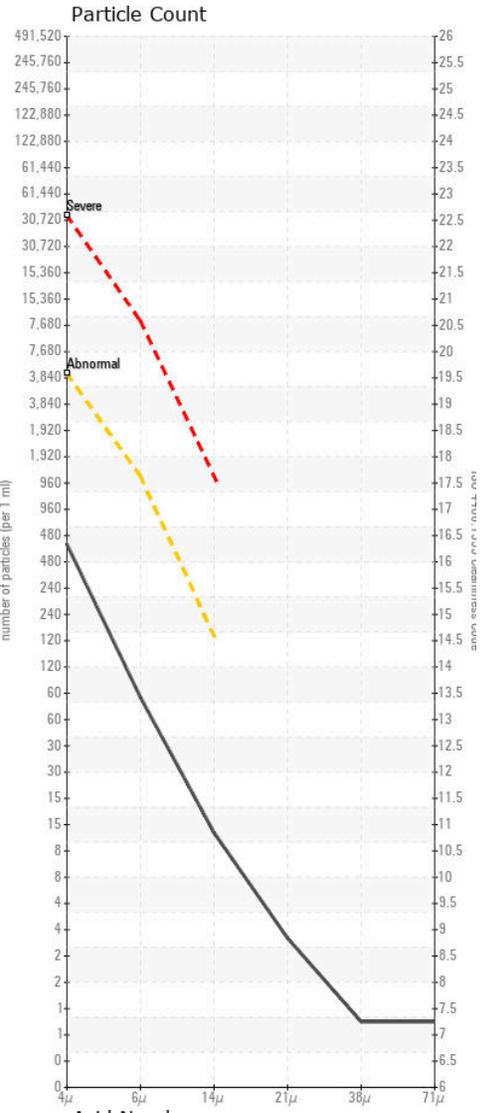
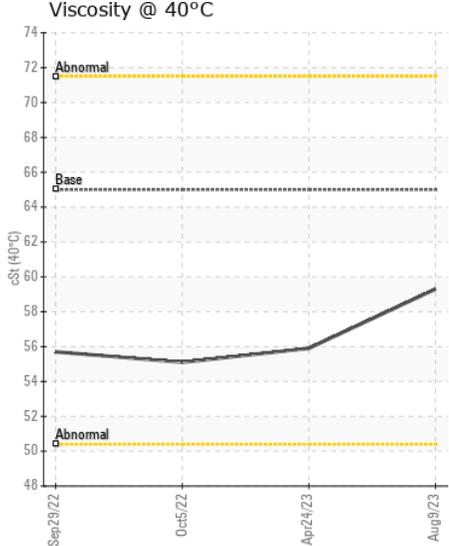
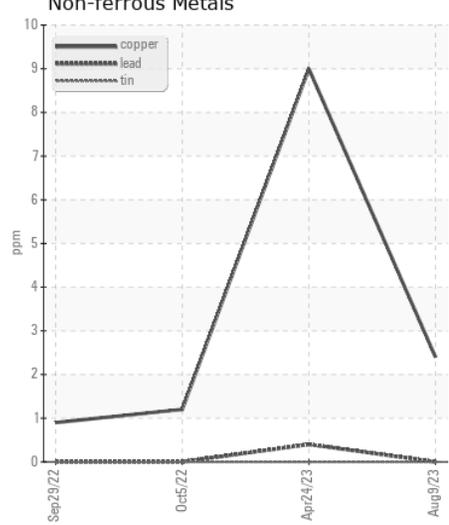
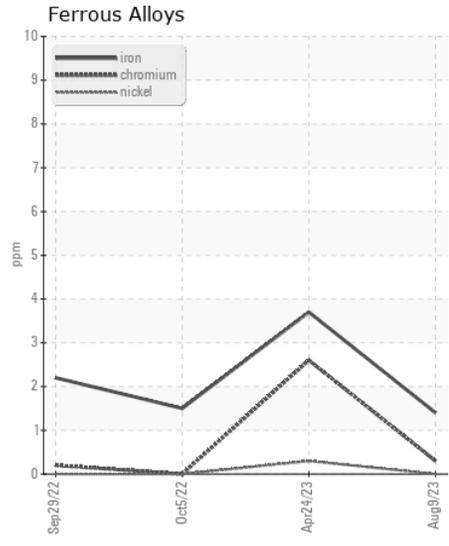
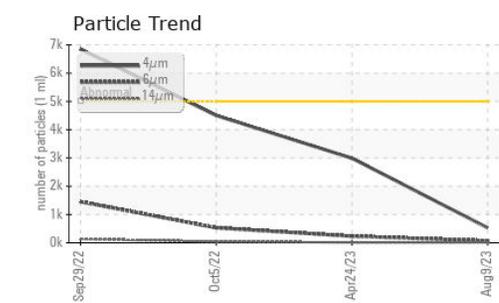
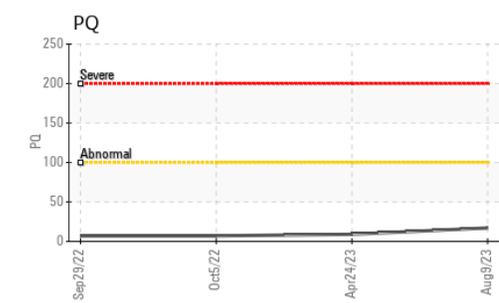
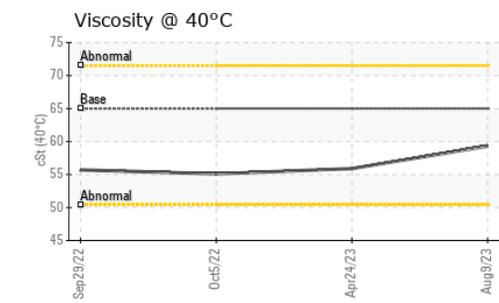
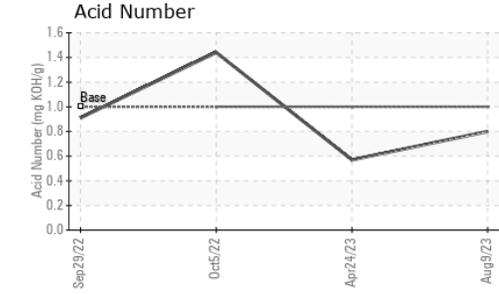
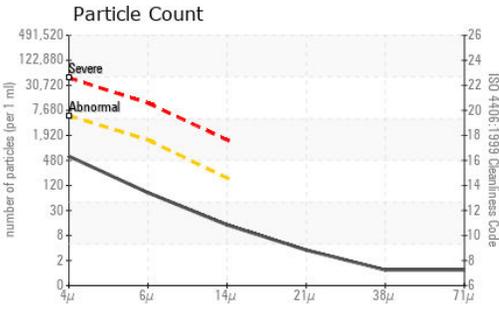
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Silicon	ppm	ASTM D5185m	>20	4	4	2
Potassium	ppm	ASTM D5185m	>20	1	3	3
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>5000	531	2992	4503
Particles >6µm		ASTM D7647	>1300	71	234	530
Particles >14µm		ASTM D7647	>160	12	10	39
Particles >21µm		ASTM D7647	>40	3	1	8
Particles >38µm		ASTM D7647	>10	1	0	1
Particles >71µm		ASTM D7647	>3	1	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	16/13/11	19/15/10	19/16/12
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 suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sodium	ppm	ASTM D5185m		0	0	0
Boron	ppm	ASTM D5185m		0	0	<1
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		0	<1	1
Manganese	ppm	ASTM D5185m		0	<1	0
Magnesium	ppm	ASTM D5185m		2	2	37
Calcium	ppm	ASTM D5185m	87	103	92	1427
Phosphorus	ppm	ASTM D5185m	727	691	637	807
Zinc	ppm	ASTM D5185m	900	943	872	1012
Sulfur	ppm	ASTM D5185m	1500	2115	1622	2832
Acid Number (AN)	mg KOH/g	ASTM D8045	1.0	0.80	0.57	1.441
Visc @ 40°C	cSt	ASTM D445	65	59.3	55.9	55.1



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0001461 **Received** : 10 Aug 2023
Lab Number : 05921336 **Tested** : 11 Aug 2023
Unique Number : 10593250 **Diagnosed** : 11 Aug 2023 - Wes Davis
Test Package : MOBCE (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)

JRE - ASHLAND
 11047 LEADBETTER RD
 ASHLAND, VA
 US 23005
 Contact: DAVID ZIEG
 dzieg@jamesriverequipment.com
 T: (804)798-6001
 F: (804)798-0292