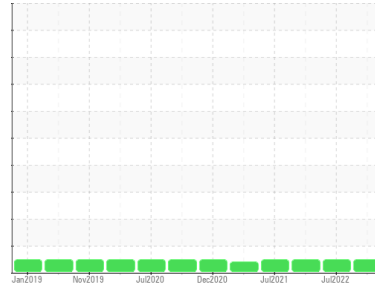


OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL

 Machine Id
JOHN DEERE 310E 1DW310EXCJF688316
 Component
Hydraulic System
 Fluid
JOHN DEERE HYDRAU (30 GAL)

DIAGNOSIS
Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

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

Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		JR0180426	JR0125774	JR0104248
Sample Date	Client Info		13 Oct 2023	12 Jul 2022	14 Oct 2021
Machine Age	hrs	Client Info	4998	4450	4137
Oil Age	hrs	Client Info	0	0	0
Oil Changed	Client Info		Not Chngd	Not Chngd	N/A
Sample Status			NORMAL	NORMAL	NORMAL

WEAR METALS

	method	limit/base	current	history1	history2
PQ	ASTM D8184	>50	14	13	18
Iron	ppm	ASTM D5185m	>71	12	10
Chromium	ppm	ASTM D5185m	>11	<1	<1
Nickel	ppm	ASTM D5185m	>6	0	0
Titanium	ppm	ASTM D5185m		0	<1
Silver	ppm	ASTM D5185m		0	<1
Aluminum	ppm	ASTM D5185m	>11	1	1
Lead	ppm	ASTM D5185m	>13	0	0
Copper	ppm	ASTM D5185m	>21	2	1
Tin	ppm	ASTM D5185m	>5	0	0
Antimony	ppm	ASTM D5185m		---	0
Vanadium	ppm	ASTM D5185m		0	0
Cadmium	ppm	ASTM D5185m		0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		0	0
Barium	ppm	ASTM D5185m		0	0
Molybdenum	ppm	ASTM D5185m		1	1
Manganese	ppm	ASTM D5185m		0	<1
Magnesium	ppm	ASTM D5185m		1	8
Calcium	ppm	ASTM D5185m	87	173	141
Phosphorus	ppm	ASTM D5185m	727	501	553
Zinc	ppm	ASTM D5185m	900	667	664
Sulfur	ppm	ASTM D5185m	1500	1391	1697

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>24	2	2
Sodium	ppm	ASTM D5185m	>21	2	1
Potassium	ppm	ASTM D5185m	>20	0	0

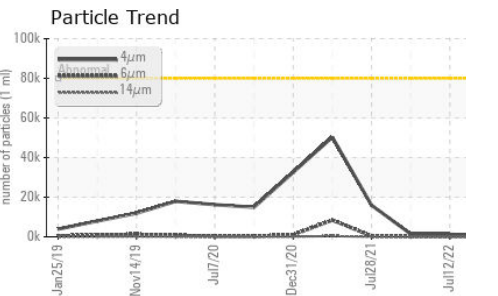
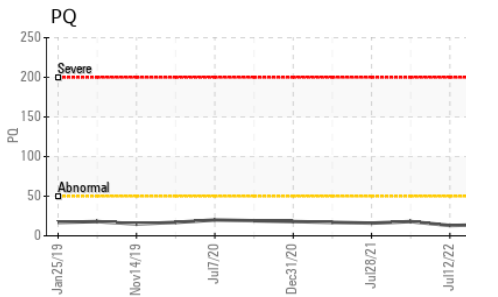
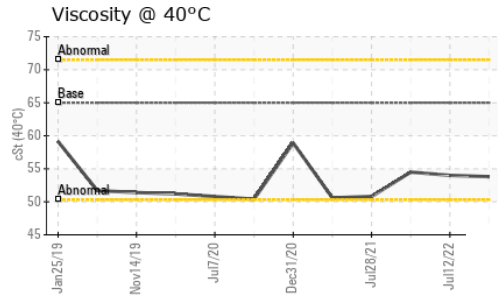
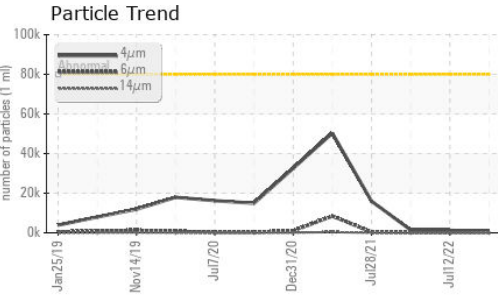
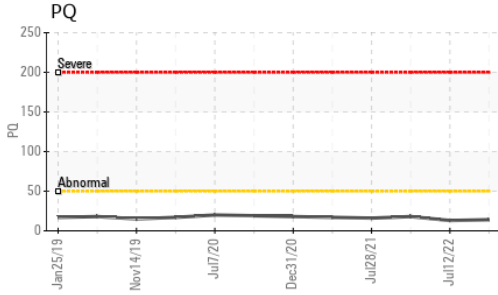
FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>80000	673	1233	1403
Particles >6µm	ASTM D7647	>5000	126	135	212
Particles >14µm	ASTM D7647	>640	14	19	22
Particles >21µm	ASTM D7647	>160	5	6	6
Particles >38µm	ASTM D7647	>40	0	0	0
Particles >71µm	ASTM D7647	>10	0	0	0
Oil Cleanliness	ISO 4406 (c)	>23/19/16	17/14/11	17/14/11	18/15/12

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	1.0	0.60	0.45

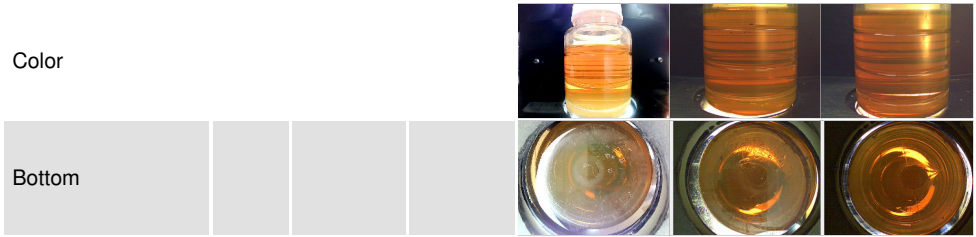
OIL ANALYSIS REPORT



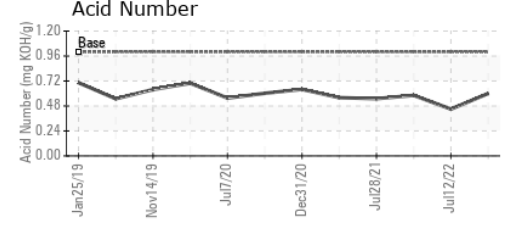
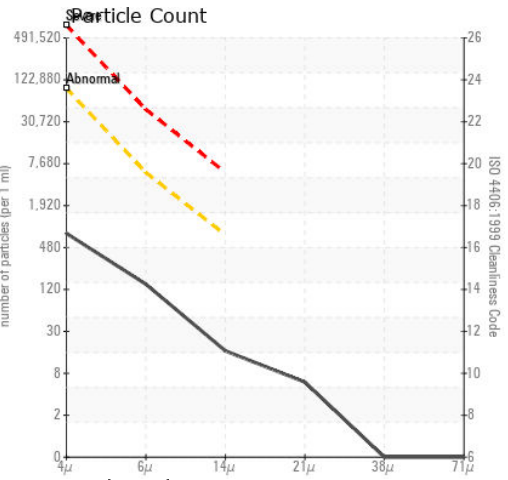
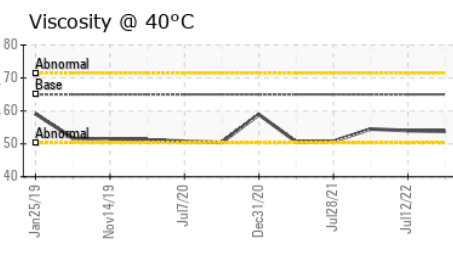
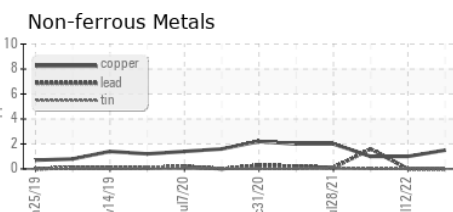
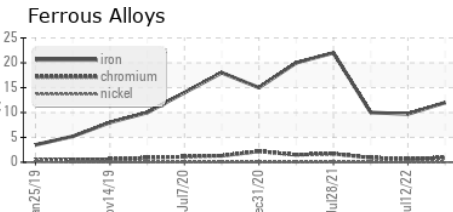
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.075	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445 65	53.8	54.0	54.5

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0180426 **Received** : 17 Oct 2023
Lab Number : 05981151 **Diagnosed** : 18 Oct 2023
Unique Number : 10698446 **Diagnostician** : Wes Davis
Test Package : CONST (Additional Tests: PQ)

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

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)