



Area
[LARABEE]
 Machine Id
JOHN DEERE 225DX C257355 (S/N 1FF225DXTA0501599)
 Component
Hydraulic System
 Fluid
HITACHI HYDRAULIC SUPER EX 46HN (--- GAL)

RECOMMENDATION

Recommend drain oil if not already done. Reduce drain interval to 2000 hours or drain and flush and use recommended zinc free oil.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0165850	JR0133350	---
Sample Date		Client Info		25 Oct 2023	09 Aug 2022	---
Machine Age	hrs	Client Info		8125	7809	---
Oil Age	hrs	Client Info		0	7809	---
Filter Age	hrs	Client Info		0	7809	---
Oil Changed		Client Info		Not Changed	Not Changed	---
Filter Changed		Client Info		Changed	Not Changed	---
Sample Status				ABNORMAL	ABNORMAL	---

WEAR

All component wear rates are normal.

PQ		ASTM D8184	>50	16	16	---
Iron	ppm	ASTM D5185m	>32	15	15	---
Chromium	ppm	ASTM D5185m	>9	3	3	---
Nickel	ppm	ASTM D5185m	>5	0	0	---
Titanium	ppm	ASTM D5185m		0	<1	---
Silver	ppm	ASTM D5185m		0	0	---
Aluminum	ppm	ASTM D5185m	>9	3	4	---
Lead	ppm	ASTM D5185m	>28	0	2	---
Copper	ppm	ASTM D5185m	>50	8	10	---
Tin	ppm	ASTM D5185m	>5	0	<1	---
Vanadium	ppm	ASTM D5185m		0	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

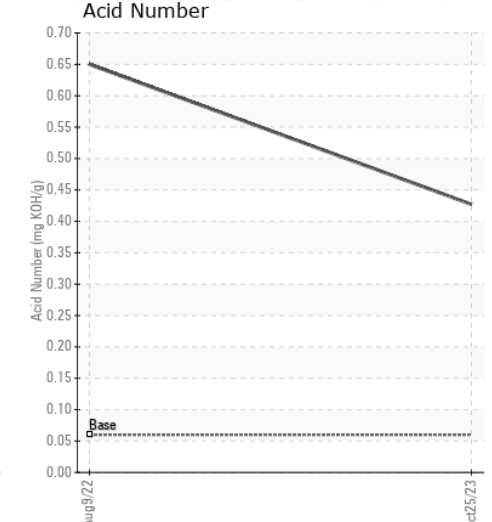
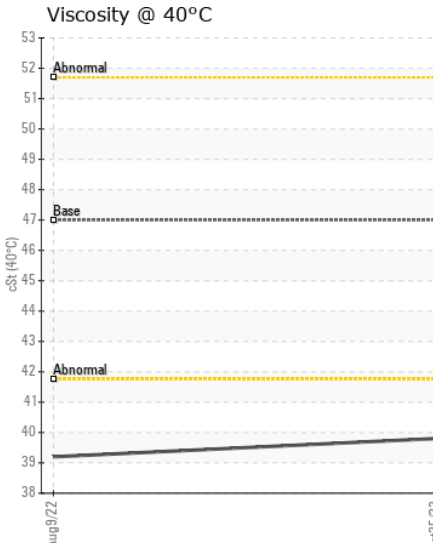
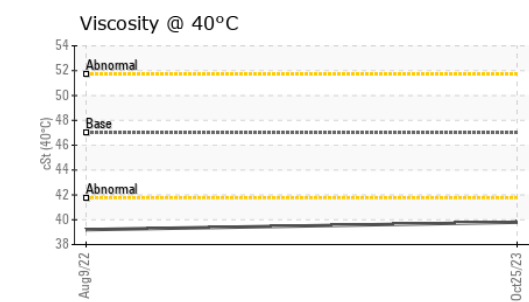
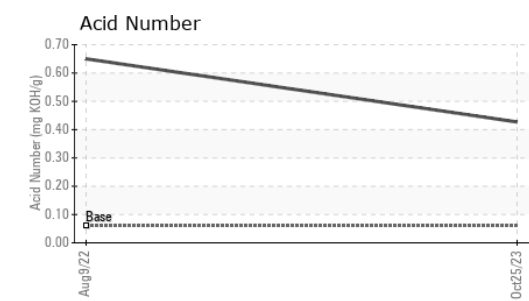
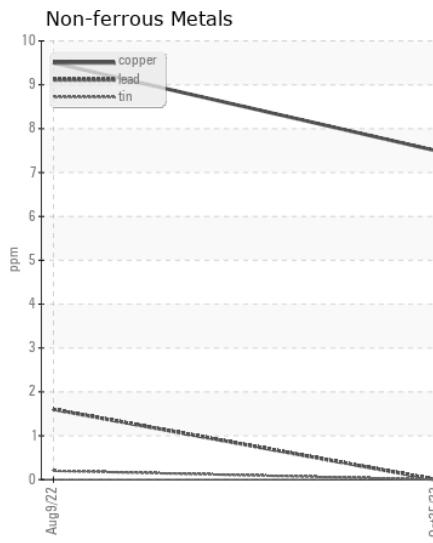
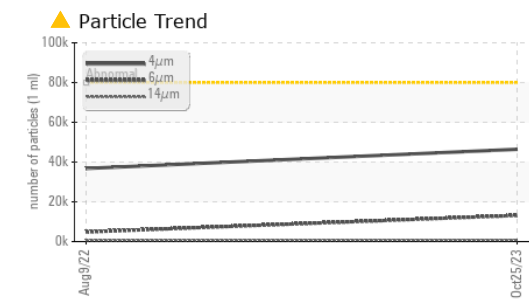
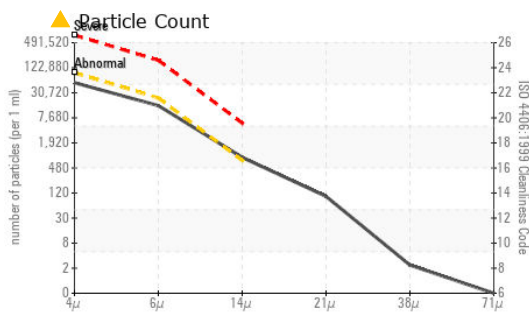
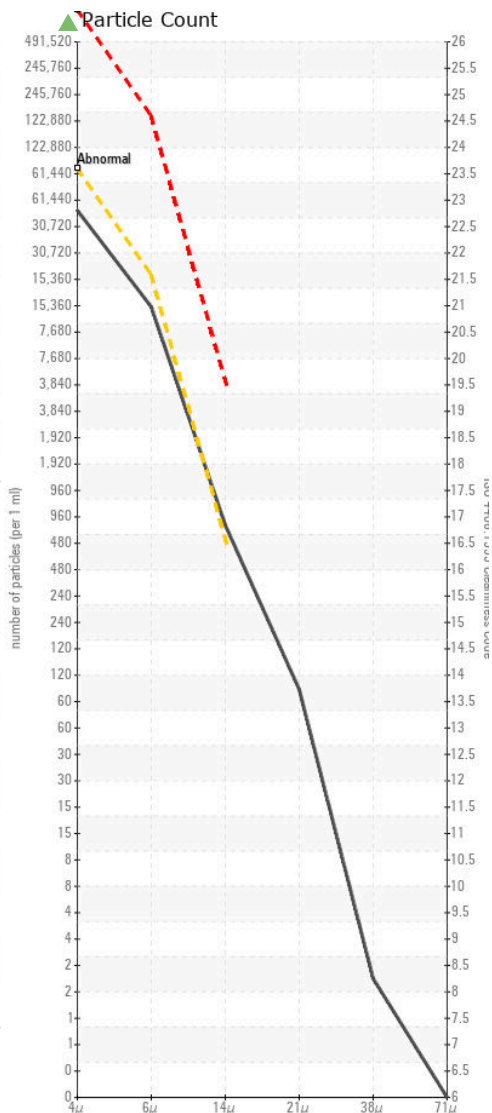
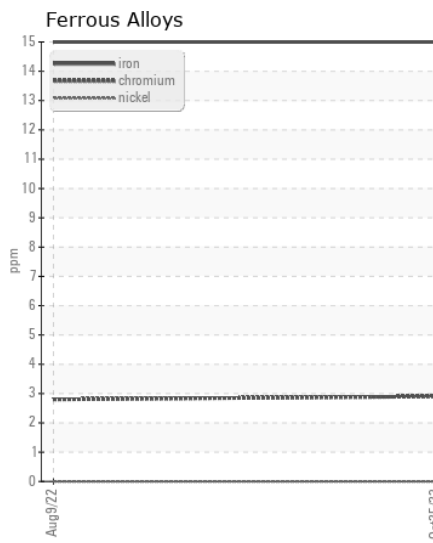
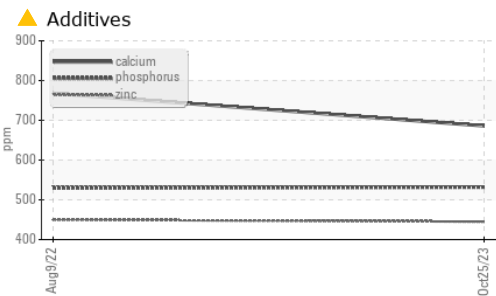
There is a moderate amount of particulates present in the oil.

Silicon	ppm	ASTM D5185m	>11	18	18	---
Potassium	ppm	ASTM D5185m	>20	0	3	---
Water		WC Method	>0.075	NEG	NEG	---
Particles >4µm		ASTM D7647	>80000	46416	36785	---
Particles >6µm		ASTM D7647	>20000	13131	4850	---
Particles >14µm		ASTM D7647	>640	▲ 757	600	---
Particles >21µm		ASTM D7647	>160	88	143	---
Particles >38µm		ASTM D7647	>40	2	10	---
Particles >71µm		ASTM D7647	>10	0	1	---
Oil Cleanliness		ISO 4406 (c)	>23/21/16	▲ 23/21/17	22/19/16	---
Silt	scalar	*Visual	NONE	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	LIGHT	---
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	---

FLUID CONDITION

Zinc level above manufacturer's recommendations. The AN level is acceptable for this fluid.

Sodium	ppm	ASTM D5185m	>21	1	0	---
Boron	ppm	ASTM D5185m		13	24	---
Barium	ppm	ASTM D5185m		0	0	---
Molybdenum	ppm	ASTM D5185m		2	3	---
Manganese	ppm	ASTM D5185m		0	<1	---
Magnesium	ppm	ASTM D5185m		36	38	---
Calcium	ppm	ASTM D5185m		686	768	---
Phosphorus	ppm	ASTM D5185m	827	532	530	---
Zinc	ppm	ASTM D5185m	0	▲ 445	▲ 450	---
Sulfur	ppm	ASTM D5185m	13	1969	1682	---
Acid Number (AN)	mg KOH/g	ASTM D8045	0.06	0.427	0.65	---
Visc @ 40°C	cSt	ASTM D445	47	39.8	39.2	---



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0165850 **Received** : 12 Jan 2024
Lab Number : 06059188 **Diagnosed** : 15 Jan 2024
Unique Number : 10830570 **Diagnostician** : Don Baldrige
Test Package : CONST (Additional Tests: PQ)

JRE - ELIZABETH CITY
 129 KNOBBS CREEK DR
 ELIZABETH CITY, NC
 US 27909
 Contact: CHARLES PARKER
 charles.parker@jamesriverequipment.com
 T: (252)333-2280
 F:

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)