



WEAR	ABNORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
JOHN DEERE 5100E 1LV5100EVKK407240

Component
Hydraulic System

Fluid
JOHN DEERE HY-GARD HYD/TRANS (--- QTS)

RECOMMENDATION

We recommend you service the filters on this component. We recommend an early resample to monitor this condition. We were unable to perform a particle count due to a high concentration of particles present in this sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0189704	JR0093503	JR0048238
Sample Date		Client Info		18 Dec 2023	31 Dec 2021	08 Mar 2021
Machine Age	hrs	Client Info		302	139	91
Oil Age	hrs	Client Info		0	139	0
Filter Age	hrs	Client Info		0	139	0
Oil Changed		Client Info		N/A	Not Changd	Not Changd
Filter Changed		Client Info		N/A	Changed	Not Changd
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

WEAR

The iron level is abnormal. The copper level is abnormal.

PQ	UOM	Method	Limit/Abn	Current	History1	History2
Iron	ppm	ASTM D5185m	>20	52	50	34
Chromium	ppm	ASTM D5185m	>10	<1	<1	<1
Nickel	ppm	ASTM D5185m	>10	<1	0	<1
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m		<1	<1	<1
Aluminum	ppm	ASTM D5185m	>10	2	3	0
Lead	ppm	ASTM D5185m	>10	3	3	3
Copper	ppm	ASTM D5185m	>75	246	245	168
Tin	ppm	ASTM D5185m	>10	8	10	7
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

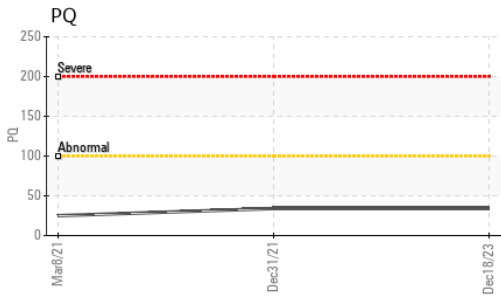
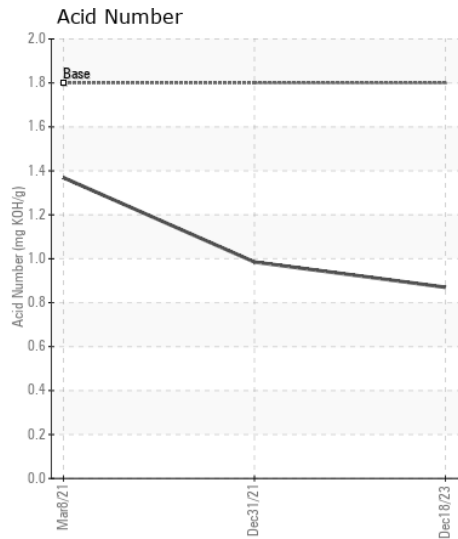
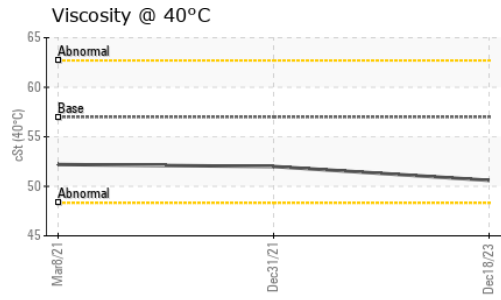
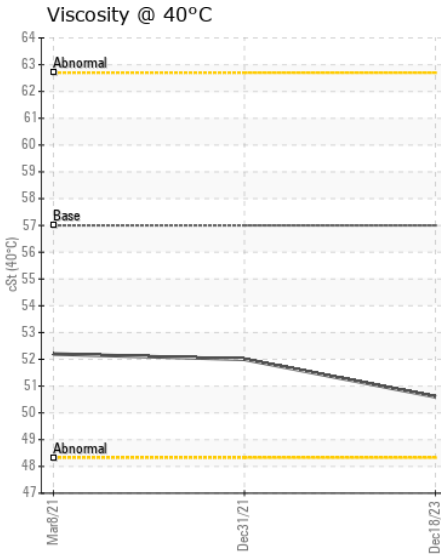
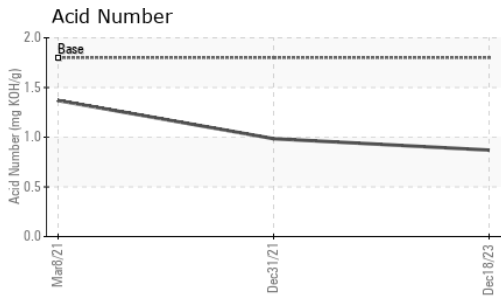
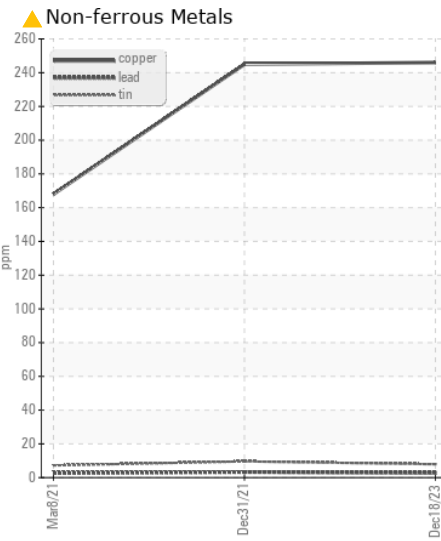
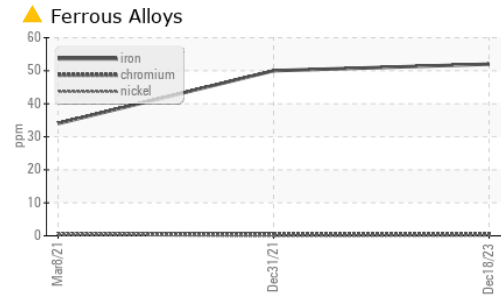
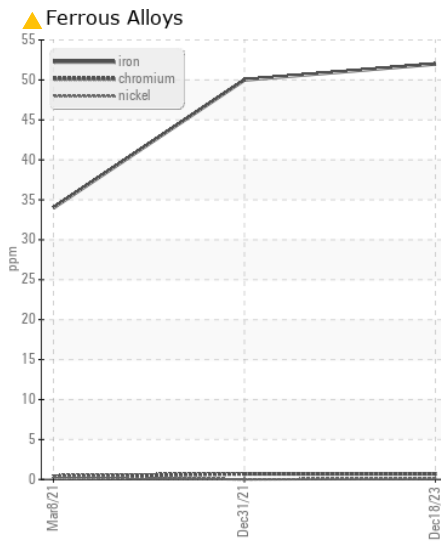
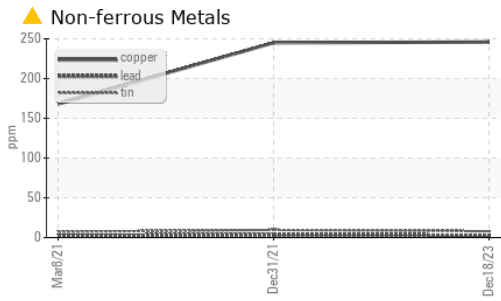
Moderate concentration of visible dirt/debris present in the oil.

Silicon	ppm	ASTM D5185m	>20	6	6	0
Potassium	ppm	ASTM D5185m	>20	4	4	3
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>5000	---	174299	---
Particles >6µm		ASTM D7647	>1300	---	31930	---
Particles >14µm		ASTM D7647	>160	---	160	---
Particles >21µm		ASTM D7647	>40	---	19	---
Particles >38µm		ASTM D7647	>10	---	0	---
Particles >71µm		ASTM D7647	>3	---	0	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	---	25/22/14	---
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	MODER	NONE	MODER
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		4	7	7
Boron	ppm	ASTM D5185m	6	9	12	11
Barium	ppm	ASTM D5185m	0	1	2	2
Molybdenum	ppm	ASTM D5185m	0	2	<1	<1
Manganese	ppm	ASTM D5185m		3	4	3
Magnesium	ppm	ASTM D5185m	145	85	89	85
Calcium	ppm	ASTM D5185m	3570	2894	3141	3198
Phosphorus	ppm	ASTM D5185m	1290	923	956	947
Zinc	ppm	ASTM D5185m	1640	1055	1157	1078
Sulfur	ppm	ASTM D5185m		3876	3403	3005
Acid Number (AN)	mg KOH/g	ASTM D8045	1.8	0.87	0.985	1.369
Visc @ 40°C	cSt	ASTM D445	57.0	50.6	52.0	52.2



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0189704 **Received** : 11 Jan 2024
Lab Number : 06057997 **Diagnosed** : 12 Jan 2024
Unique Number : 10829379 **Diagnostician** : Don Baldrige
Test Package : CONST (Additional Tests: PQ)

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 LA CROSSE, VA
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 F: (434)447-1329

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)