



Machine Id  
**JOHN DEERE 648L 1DW648LBTKF694154**

Component  
**Hydraulic System**

Fluid  
**{not provided} (--- GAL)**

### RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0162271	---	---
Sample Date		Client Info		09 Feb 2024	---	---
Machine Age	hrs	Client Info		6980	---	---
Oil Age	hrs	Client Info		0	---	---
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		N/A	---	---
Filter Changed		Client Info		N/A	---	---
Sample Status				ABNORMAL	---	---

### WEAR

The iron level is abnormal. The chromium level is abnormal.

PQ	UOM	Method	Limit/Abn	Current	History1	History2
Iron	ppm	ASTM D5185m	>20	▲ 35	---	---
Chromium	ppm	ASTM D5185m	>10	▲ 13	---	---
Nickel	ppm	ASTM D5185m	>10	<1	---	---
Titanium	ppm	ASTM D5185m		<1	---	---
Silver	ppm	ASTM D5185m		0	---	---
Aluminum	ppm	ASTM D5185m	>10	2	---	---
Lead	ppm	ASTM D5185m	>10	<1	---	---
Copper	ppm	ASTM D5185m	>75	3	---	---
Tin	ppm	ASTM D5185m	>10	<1	---	---
Vanadium	ppm	ASTM D5185m		0	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

### CONTAMINATION

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

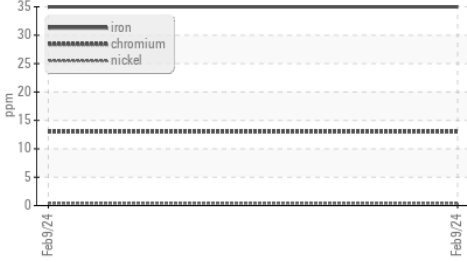
Test	UOM	Method	Limit/Abn	Current	History1	History2
Silicon	ppm	ASTM D5185m	>20	14	---	---
Potassium	ppm	ASTM D5185m	>20	4	---	---
Water		WC Method	>0.1	NEG	---	---
Particles >4µm		ASTM D7647	>5000	▲ 7390	---	---
Particles >6µm		ASTM D7647	>1300	1140	---	---
Particles >14µm		ASTM D7647	>160	103	---	---
Particles >21µm		ASTM D7647	>40	28	---	---
Particles >38µm		ASTM D7647	>10	1	---	---
Particles >71µm		ASTM D7647	>3	0	---	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ 20/17/14	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.1	NEG	---	---

### FLUID CONDITION

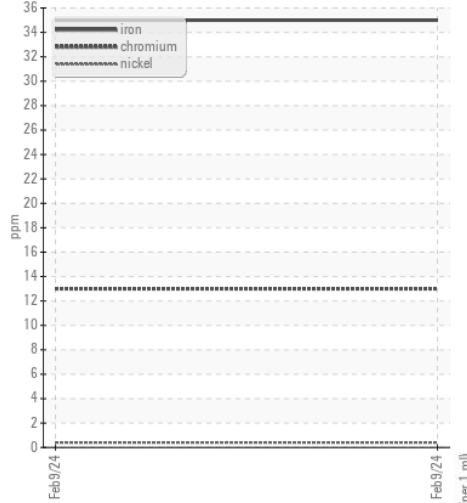
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sodium	ppm	ASTM D5185m		0	---	---
Boron	ppm	ASTM D5185m		3	---	---
Barium	ppm	ASTM D5185m		13	---	---
Molybdenum	ppm	ASTM D5185m		4	---	---
Manganese	ppm	ASTM D5185m		<1	---	---
Magnesium	ppm	ASTM D5185m		8	---	---
Calcium	ppm	ASTM D5185m		129	---	---
Phosphorus	ppm	ASTM D5185m		537	---	---
Zinc	ppm	ASTM D5185m		659	---	---
Sulfur	ppm	ASTM D5185m		1813	---	---
Acid Number (AN)	mg KOH/g	ASTM D8045		0.55	---	---
Visc @ 40°C	cSt	ASTM D445		51.1	---	---

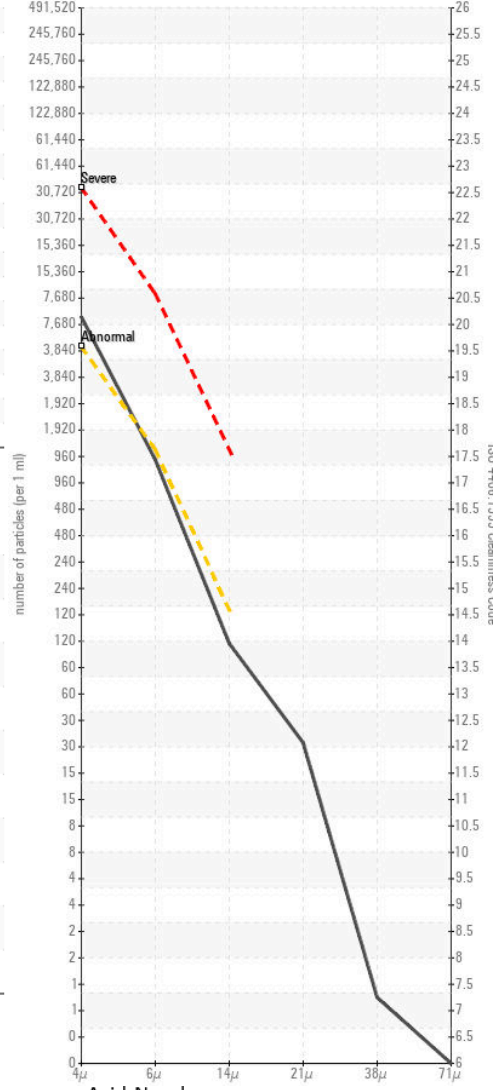
**▲ Ferrous Alloys**



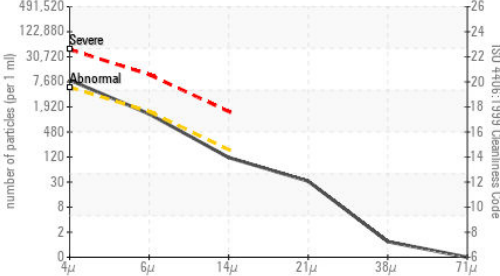
**▲ Ferrous Alloys**



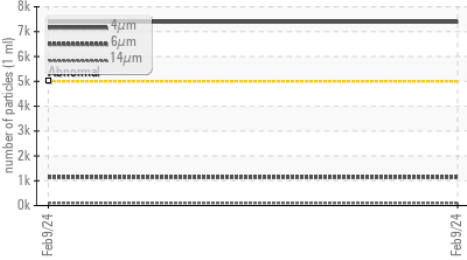
**▲ Particle Count**



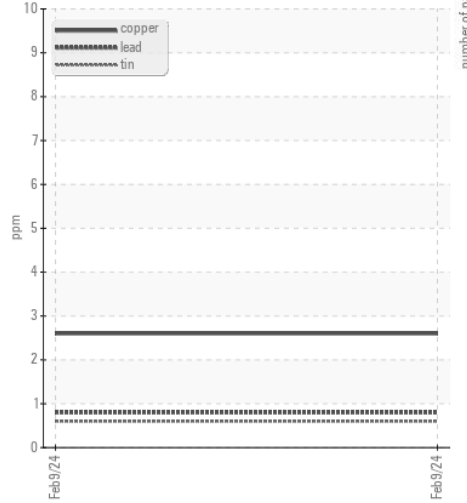
**▲ Particle Count**



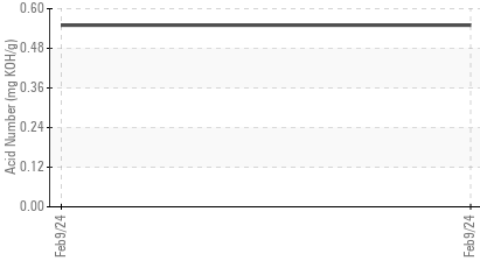
**▲ Particle Trend**



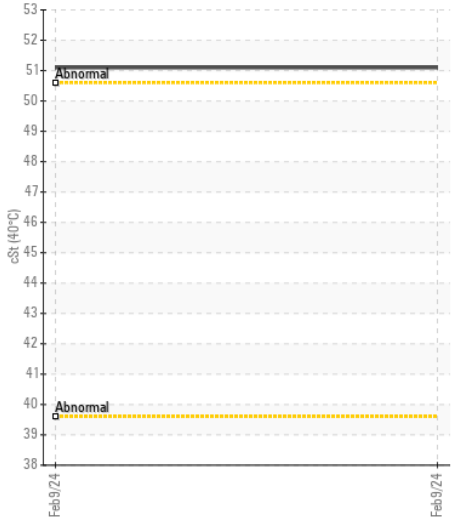
**Non-ferrous Metals**



**Acid Number**



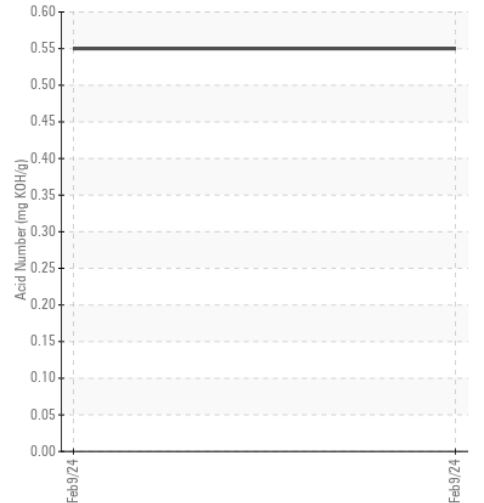
**Viscosity @ 40°C**



**Viscosity @ 40°C**



**Acid Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : JR0162271 **Received** : 12 Feb 2024  
**Lab Number** : 06085987 **Tested** : 13 Feb 2024  
**Unique Number** : 10873432 **Diagnosed** : 13 Feb 2024 - Don Baldrige  
**Test Package** : CONST ( Additional Tests: PQ )

**JRE - MOUNT GILEAD**  
 305 NORTH MAIN STREET  
 MOUNT GILEAD, NC  
 US 27306

Contact: ADAM CRUMP  
 adam.crump@jamesriverequipment.com

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)

T:  
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