



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
JOHN DEERE 648L 648L-2
 Component
Hydraulic System
 Fluid
JD (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WE0007494	WE0005334	---
Sample Date		Client Info		29 Jun 2024	24 Feb 2024	---
Machine Age	hrs	Client Info		1889	1230	---
Oil Age	hrs	Client Info		500	500	---
Filter Age	hrs	Client Info		500	500	---
Oil Changed		Client Info		Not Changed	Not Changed	---
Filter Changed		Client Info		Changed	Changed	---
Sample Status				NORMAL	ABNORMAL	---

WEAR

All component wear rates are normal.

PQ	UOM	Method	Limit/Abn	Current	History1	History2
PQ		ASTM D8184		16	15	---
Iron	ppm	ASTM D5185m	>20	2	1	---
Chromium	ppm	ASTM D5185m	>10	1	<1	---
Nickel	ppm	ASTM D5185m	>10	0	0	---
Titanium	ppm	ASTM D5185m		0	0	---
Silver	ppm	ASTM D5185m		0	0	---
Aluminum	ppm	ASTM D5185m	>10	0	0	---
Lead	ppm	ASTM D5185m	>10	0	0	---
Copper	ppm	ASTM D5185m	>75	<1	1	---
Tin	ppm	ASTM D5185m	>10	0	0	---
Vanadium	ppm	ASTM D5185m		0	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

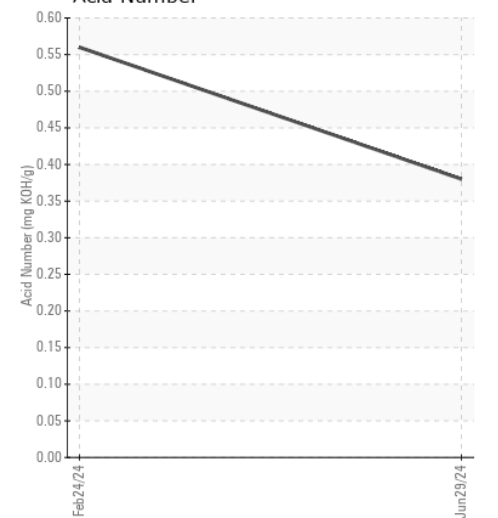
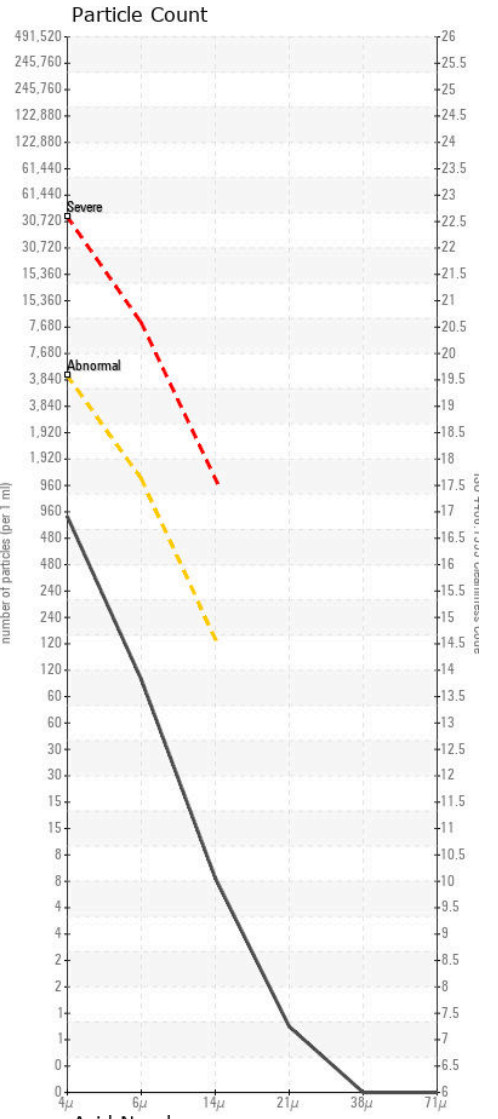
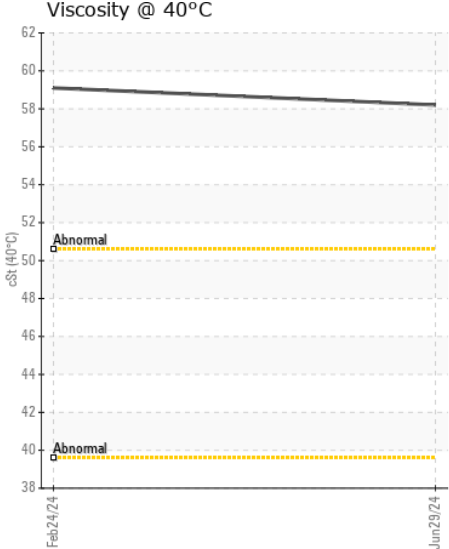
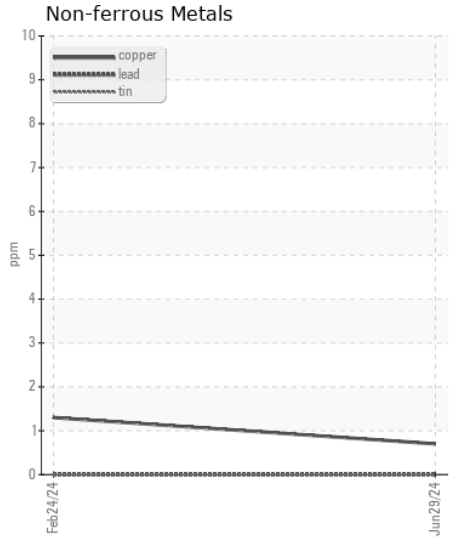
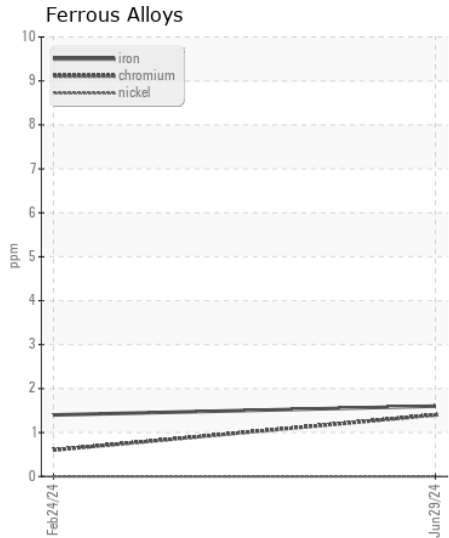
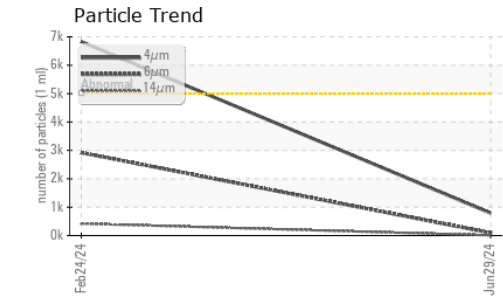
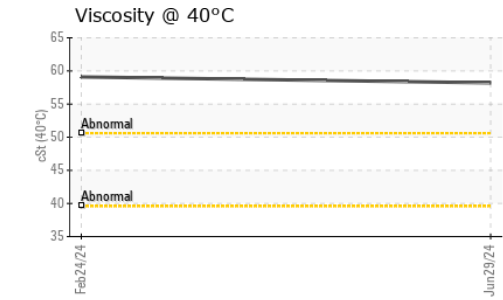
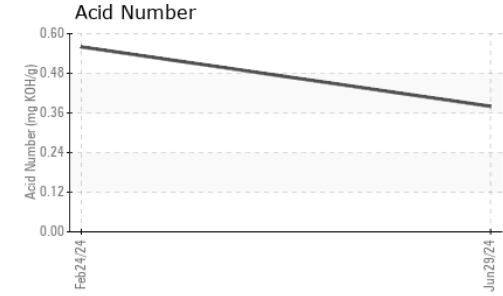
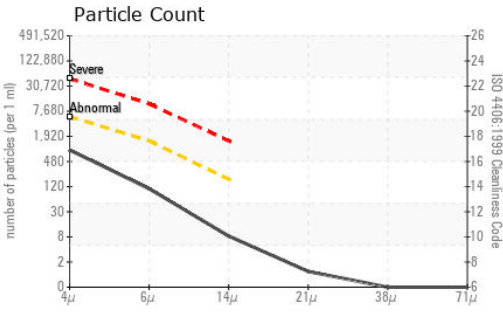
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Silicon	ppm	ASTM D5185m	>20	2	1	---
Potassium	ppm	ASTM D5185m	>20	<1	0	---
Water		WC Method	>0.1	NEG	NEG	---
Particles >4µm		ASTM D7647	>5000	792	▲ 6830	---
Particles >6µm		ASTM D7647	>1300	94	▲ 2920	---
Particles >14µm		ASTM D7647	>160	7	▲ 421	---
Particles >21µm		ASTM D7647	>40	1	▲ 102	---
Particles >38µm		ASTM D7647	>10	0	2	---
Particles >71µm		ASTM D7647	>3	0	0	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	17/14/10	▲ 20/19/16	---
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	>0.1	NEG	NEG	---

FLUID CONDITION

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

Sodium	ppm	ASTM D5185m		1	<1	---
Boron	ppm	ASTM D5185m		0	0	---
Barium	ppm	ASTM D5185m		0	0	---
Molybdenum	ppm	ASTM D5185m		0	0	---
Manganese	ppm	ASTM D5185m		0	0	---
Magnesium	ppm	ASTM D5185m		<1	0	---
Calcium	ppm	ASTM D5185m		123	143	---
Phosphorus	ppm	ASTM D5185m		533	639	---
Zinc	ppm	ASTM D5185m		659	797	---
Sulfur	ppm	ASTM D5185m		1457	1800	---
Acid Number (AN)	mg KOH/g	ASTM D8045		0.38	0.56	---
Visc @ 40°C	cSt	ASTM D445		58.2	59.1	---



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WE0007494 **Received** : 08 Jul 2024
Lab Number : 06230080 **Tested** : 09 Jul 2024
Unique Number : 11113573 **Diagnosed** : 09 Jul 2024 - Wes Davis
Test Package : CONST (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)

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