



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
JOHN DEERE Water pump (S/N PE4045N009455)

Component
Diesel Engine

Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (4 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0196326	JR0167714	---
Sample Date		Client Info		09 Feb 2024	21 Apr 2023	---
Machine Age	hrs	Client Info		2954	2857	---
Oil Age	hrs	Client Info		97	2857	---
Filter Age	hrs	Client Info		97	0	---
Oil Changed		Client Info		Changed	Changed	---
Filter Changed		Client Info		Changed	Changed	---
Sample Status				NORMAL	ABNORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>51	36	▲ 112	---
Chromium	ppm	ASTM D5185m	>11	<1	1	---
Nickel	ppm	ASTM D5185m	>5	0	<1	---
Titanium	ppm	ASTM D5185m		<1	<1	---
Silver	ppm	ASTM D5185m	>3	0	0	---
Aluminum	ppm	ASTM D5185m	>31	4	6	---
Lead	ppm	ASTM D5185m	>26	2	15	---
Copper	ppm	ASTM D5185m	>26	2	3	---
Tin	ppm	ASTM D5185m	>4	0	<1	---
Vanadium	ppm	ASTM D5185m		<1	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

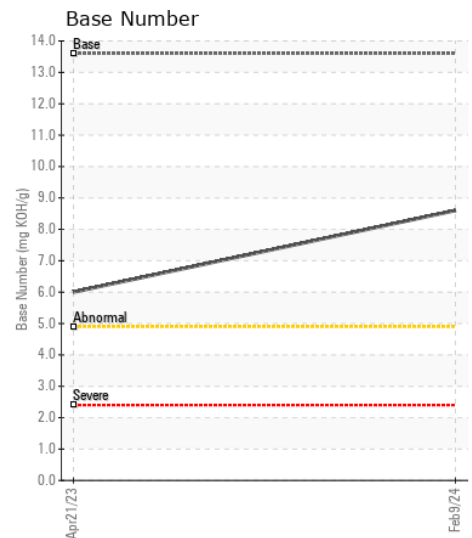
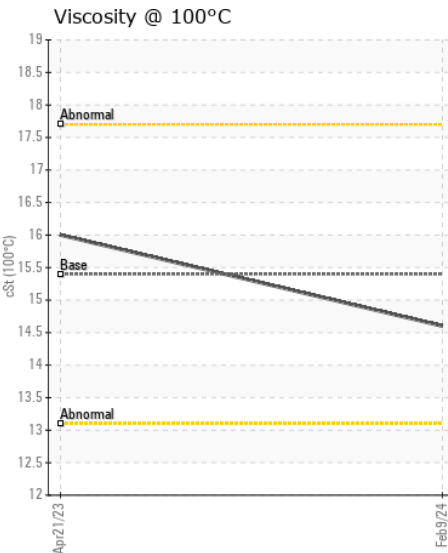
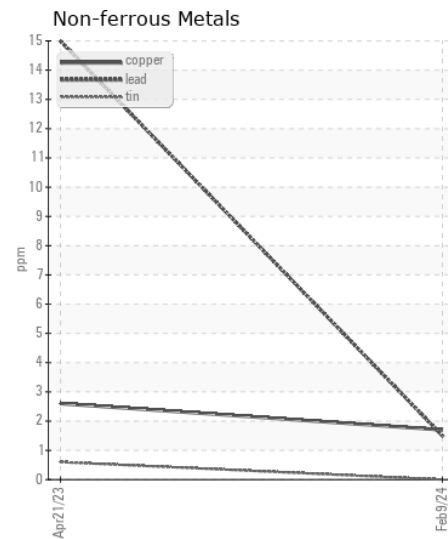
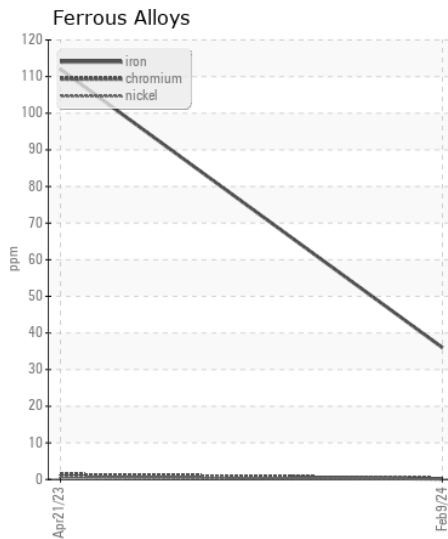
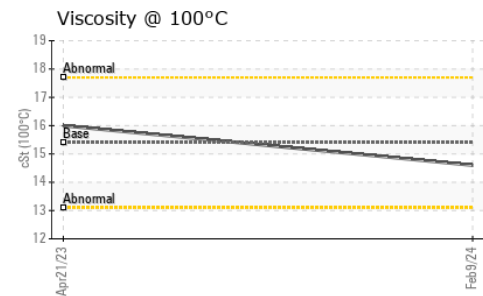
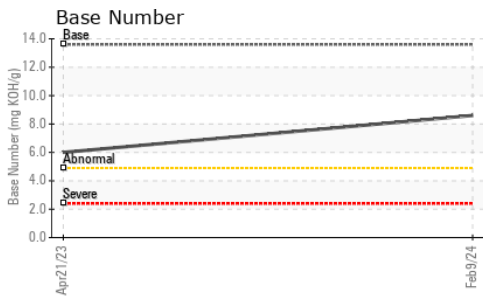
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>22	8	10	---
Potassium	ppm	ASTM D5185m	>20	3	0	---
Fuel		WC Method	>2.1	<1.0	<1.0	---
Water		WC Method	>0.21	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	0.7	2.8	---
Nitration	Abs/cm	*ASTM D7624	>20	7.5	10.7	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.7	28.9	---
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	>0.21	NEG	NEG	---

FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>31	0	2	---
Boron	ppm	ASTM D5185m		279	130	---
Barium	ppm	ASTM D5185m		0	0	---
Molybdenum	ppm	ASTM D5185m		271	252	---
Manganese	ppm	ASTM D5185m		0	2	---
Magnesium	ppm	ASTM D5185m		824	854	---
Calcium	ppm	ASTM D5185m		1387	1585	---
Phosphorus	ppm	ASTM D5185m		870	905	---
Zinc	ppm	ASTM D5185m		1051	1197	---
Sulfur	ppm	ASTM D5185m		2814	2904	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.4	22.0	---
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	8.6	6.0	---
Visc @ 100°C	cSt	ASTM D445	15.4	14.6	16.0	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : JR0196326

Lab Number : 06087085

Unique Number : 10874530

Test Package : CONST (Additional Tests: TBN)

Received : 13 Feb 2024

Tested : 14 Feb 2024

Diagnosed : 14 Feb 2024 - Wes Davis

JRE - CASTLE HAYNE

113 CROWATAN ROAD

CASTLE HAYNE, NC

US 28429-5819

Contact: WILMINGTON SHOP

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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)