



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL

Machine Id
JOHN DEERE 824L 1DW824LXVNL714032
 Component
Diesel Engine
 Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- QTS)

RECOMMENDATION

We advise that you check for the source of the coolant leak. Check for low coolant level. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WE0007833	WE0007047	WE0006500
Sample Date		Client Info		11 Jun 2024	08 Mar 2024	14 Dec 2023
Machine Age	hrs	Client Info		4472	3957	3449
Oil Age	hrs	Client Info		472	0	0
Filter Age	hrs	Client Info		472	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	SEVERE

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>51	27	16	14
Chromium	ppm	ASTM D5185m	>11	<1	<1	<1
Nickel	ppm	ASTM D5185m	>5	3	2	2
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	0	<1	0
Aluminum	ppm	ASTM D5185m	>31	6	4	5
Lead	ppm	ASTM D5185m	>26	<1	3	<1
Copper	ppm	ASTM D5185m	>26	3	6	4
Tin	ppm	ASTM D5185m	>4	<1	1	0
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

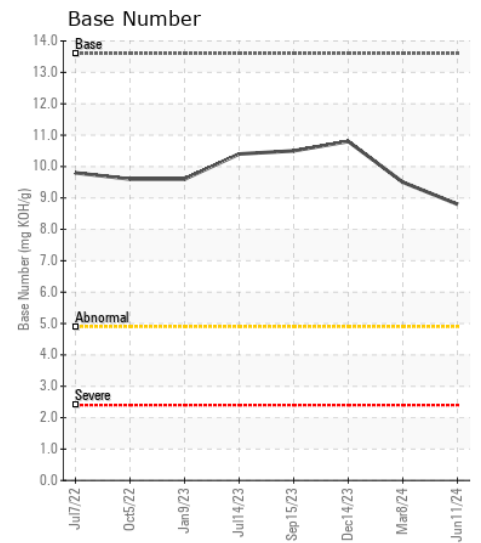
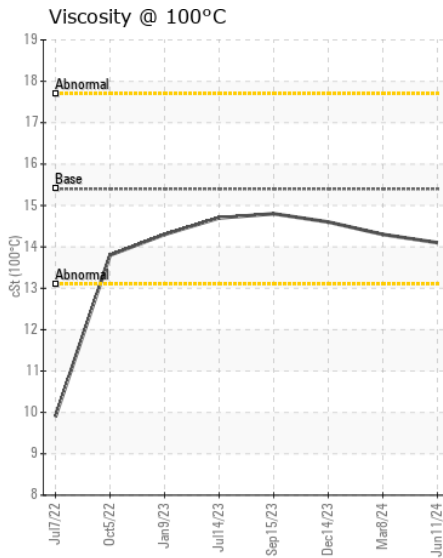
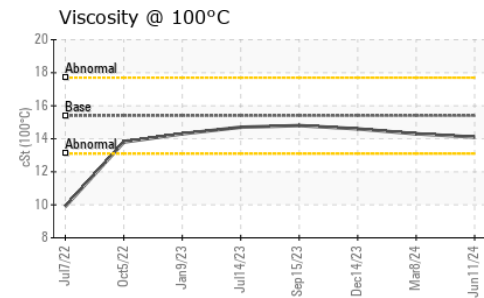
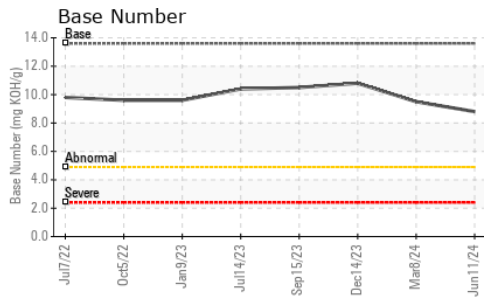
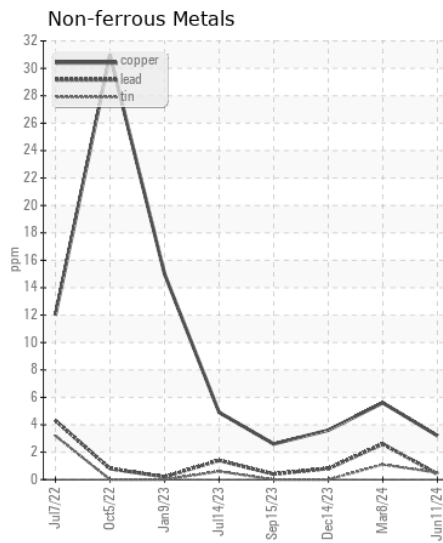
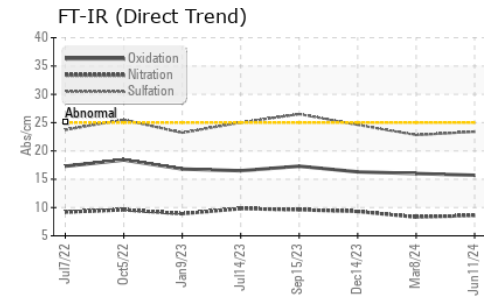
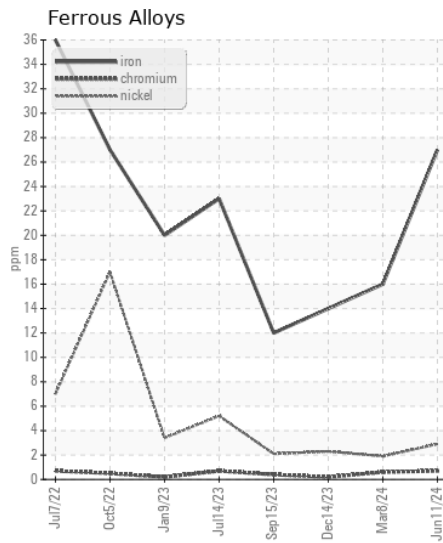
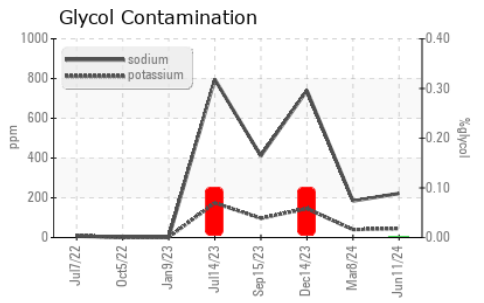
Sodium and/or potassium levels remain high.

Silicon	ppm	ASTM D5185m	>22	20	15	▲ 32
Potassium	ppm	ASTM D5185m	>20	▲ 45	▲ 40	▲ 146
Fuel		WC Method	>2.1	<1.0	<1.0	<1.0
Water		WC Method	>0.21	NEG	NEG	NEG
Glycol	%	*ASTM D2982		0.0	NEG	▲ 0.10
Soot %	%	*ASTM D7844	>3	0.6	0.4	0.4
Nitration	Abs/cm	*ASTM D7624	>20	8.6	8.3	9.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.4	22.8	24.6
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
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	>0.21	NEG	NEG	NEG

FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil.

Sodium	ppm	ASTM D5185m	>31	▲ 222	▲ 184	▲ 740
Boron	ppm	ASTM D5185m		193	178	212
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		273	237	292
Manganese	ppm	ASTM D5185m		<1	1	<1
Magnesium	ppm	ASTM D5185m		837	862	854
Calcium	ppm	ASTM D5185m		1389	1498	1393
Phosphorus	ppm	ASTM D5185m		828	910	974
Zinc	ppm	ASTM D5185m		1099	1144	1115
Sulfur	ppm	ASTM D5185m		3323	3894	3634
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.7	16.0	16.3
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	8.8	9.5	10.8
Visc @ 100°C	cSt	ASTM D445	15.4	14.1	14.3	14.6



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WE0007833
Lab Number : 06209880
Unique Number : 11082744
Test Package : CONST (Additional Tests: Glycol, TBN)

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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)