



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL

Machine Id
JOHN DEERE 544L 1DW544LZPMF709516
 Component
Diesel Engine
 Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- GAL)

RECOMMENDATION

We advise that you check the fuel injection system. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0216563	JR0158730	JR0129559
Sample Date		Client Info		27 Jun 2024	13 Mar 2024	27 Jan 2023
Machine Age	hrs	Client Info		7867	0	0
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	SEVERE	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>51	23	▲ 132	15
Chromium	ppm	ASTM D5185m	>11	<1	4	<1
Nickel	ppm	ASTM D5185m	>5	0	<1	<1
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>31	3	6	2
Lead	ppm	ASTM D5185m	>26	1	7	1
Copper	ppm	ASTM D5185m	>26	2	8	2
Tin	ppm	ASTM D5185m	>4	<1	2	<1
Vanadium	ppm	ASTM D5185m		<1	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

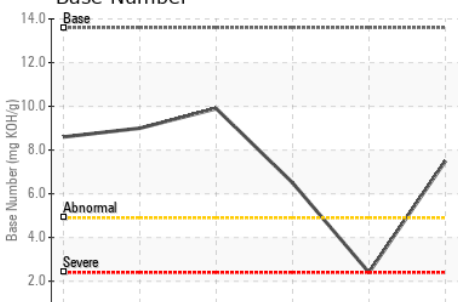
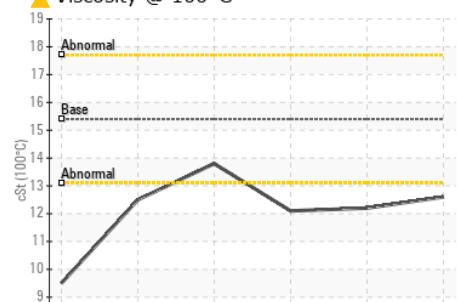
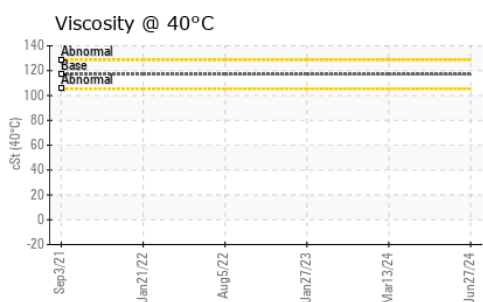
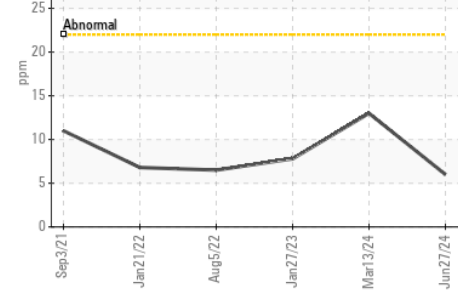
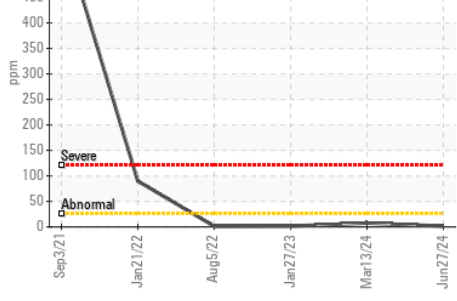
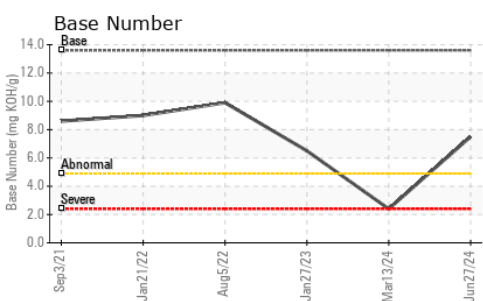
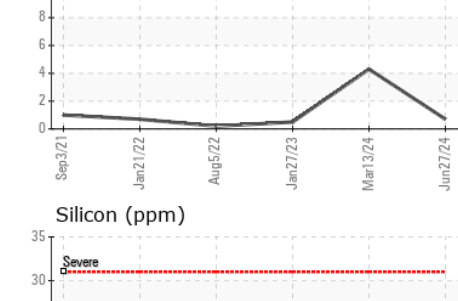
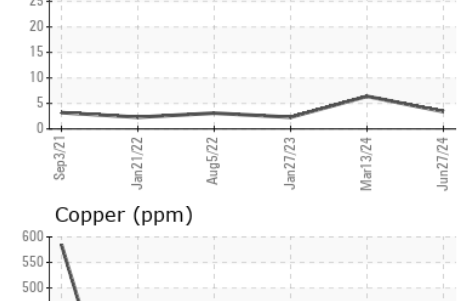
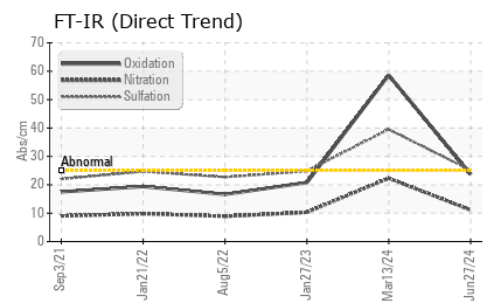
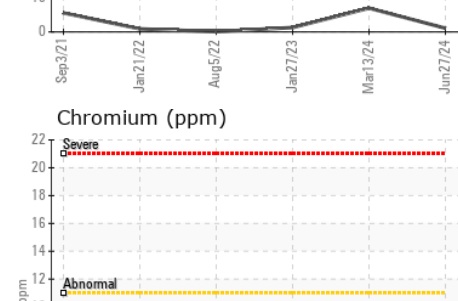
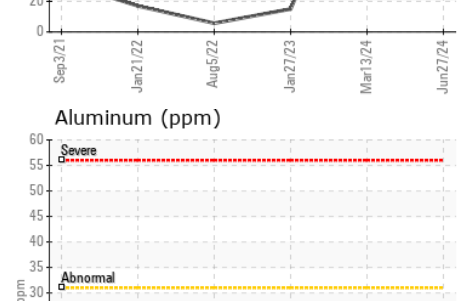
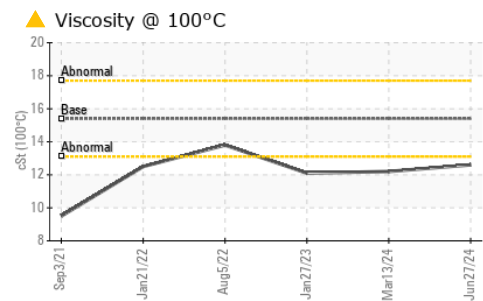
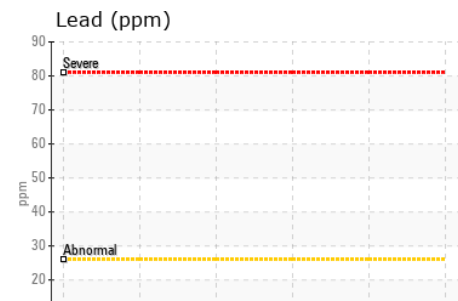
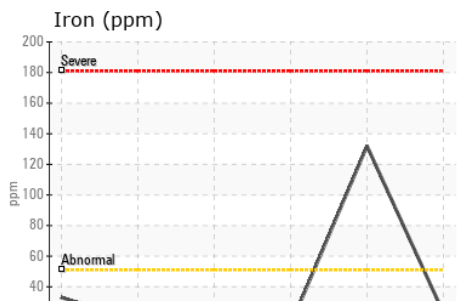
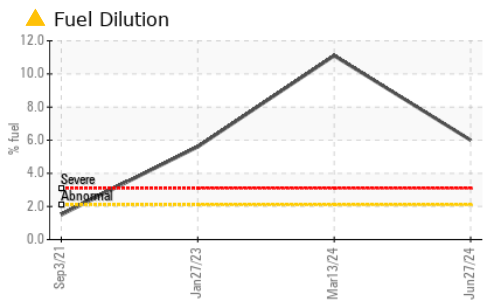
There is a moderate amount of fuel present in the oil.

Silicon	ppm	ASTM D5185m	>22	6	13	8
Potassium	ppm	ASTM D5185m	>20	2	5	<1
Fuel	%	ASTM D3524	>2.1	▲ 6.0	▲ 11.1	▲ 5.6
Water		WC Method	>0.21	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.4	1.4	0.3
Nitration	Abs/cm	*ASTM D7624	>20	11.1	22.3	10.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	25.1	39.5	24.8
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

Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.

Sodium	ppm	ASTM D5185m	>31	3	5	3
Boron	ppm	ASTM D5185m		109	40	115
Barium	ppm	ASTM D5185m		<1	0	0
Molybdenum	ppm	ASTM D5185m		225	202	226
Manganese	ppm	ASTM D5185m		<1	2	<1
Magnesium	ppm	ASTM D5185m		784	653	727
Calcium	ppm	ASTM D5185m		1407	1126	1268
Phosphorus	ppm	ASTM D5185m		841	722	666
Zinc	ppm	ASTM D5185m		1031	850	873
Sulfur	ppm	ASTM D5185m		3265	2229	2997
Oxidation	Abs/.1mm	*ASTM D7414	>25	23.7	58.6	20.8
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	7.5	▲ 2.4	6.5
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 12.6	▲ 12.2	▲ 12.1



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0216563 **Received** : 28 Jun 2024
Lab Number : 06223320 **Tested** : 03 Jul 2024
Unique Number : 11101517 **Diagnosed** : 03 Jul 2024 - Jonathan Hester
Test Package : MOBCE (Additional Tests: KV40, PercentFuel, TBN)
 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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