



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
[W65770]

Machine Id
JOHN DEERE 524 P 1DW524PAPNLT13387

Component
Diesel Engine

Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (6 GAL)

RECOMMENDATION

Resample at the next service interval to monitor. (Customer Sample Comment: W65770)

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0206790	JR0178125	JR0155672
Sample Date		Client Info		15 Apr 2024	07 Sep 2023	15 Dec 2022
Machine Age	hrs	Client Info		1452	1010	441
Oil Age	hrs	Client Info		442	569	500
Filter Age	hrs	Client Info		0	0	500
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	ABNORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>51	9	18	23
Chromium	ppm	ASTM D5185m	>11	<1	<1	<1
Nickel	ppm	ASTM D5185m	>5	<1	1	2
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>31	4	4	3
Lead	ppm	ASTM D5185m	>26	0	2	7
Copper	ppm	ASTM D5185m	>26	5	▲ 57	▲ 463
Tin	ppm	ASTM D5185m	>4	0	1	4
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

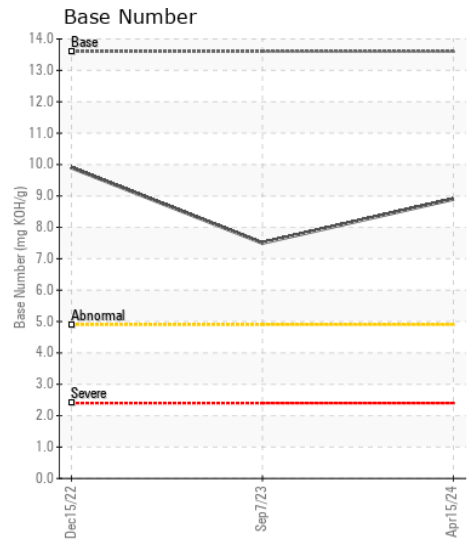
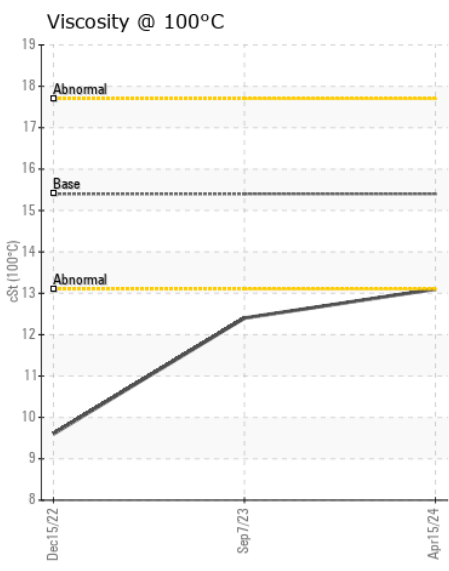
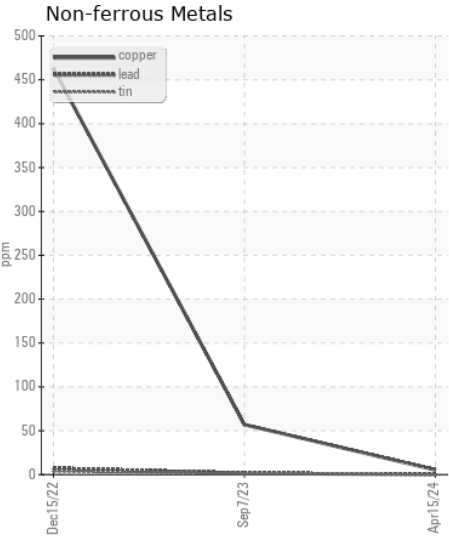
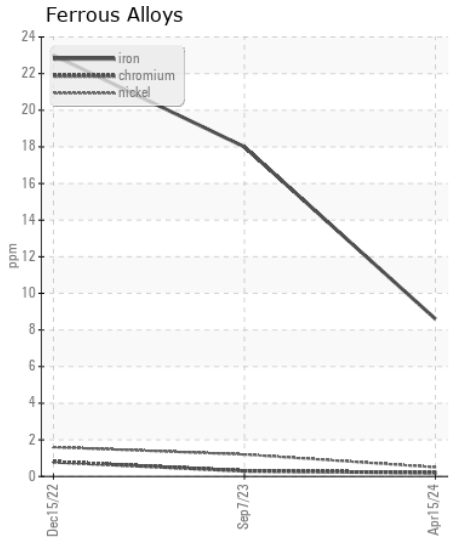
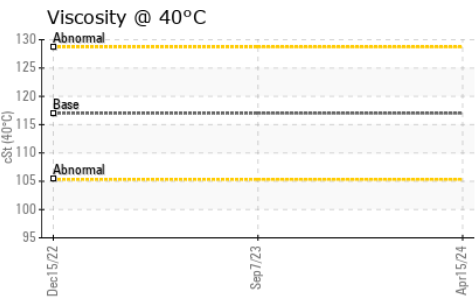
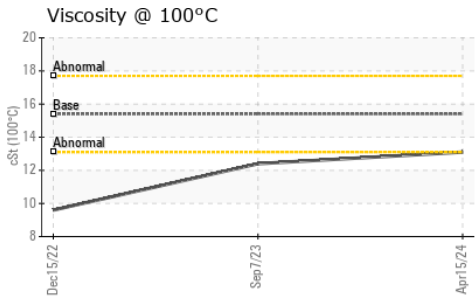
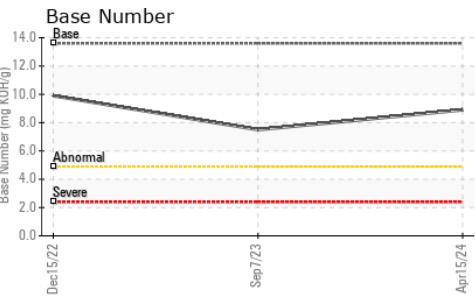
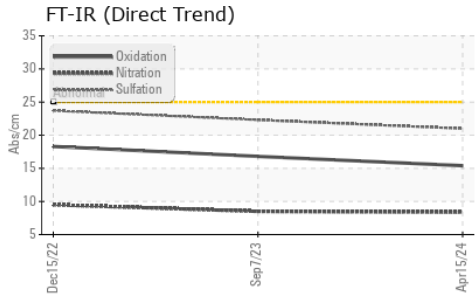
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>22	6	7	11
Potassium	ppm	ASTM D5185m	>20	2	2	0
Fuel		WC Method	>2.1	<1.0	<1.0	1.0
Water		WC Method	>0.21	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.2	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	8.4	8.5	9.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.0	22.3	23.7
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. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>31	2	4	7
Boron	ppm	ASTM D5185m		247	202	243
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		260	239	231
Manganese	ppm	ASTM D5185m		0	1	4
Magnesium	ppm	ASTM D5185m		803	828	776
Calcium	ppm	ASTM D5185m		1446	1512	1399
Phosphorus	ppm	ASTM D5185m		1008	853	897
Zinc	ppm	ASTM D5185m		1119	1065	945
Sulfur	ppm	ASTM D5185m		3106	3352	2685
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.4	16.8	18.3
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	8.9	7.5	9.9
Visc @ 40°C	cSt	ASTM D445	117	---	---	97.36
Visc @ 100°C	cSt	ASTM D445	15.4	13.1	12.4	9.6



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0206790 **Received** : 17 Apr 2024
Lab Number : 06151752 **Tested** : 22 Apr 2024
Unique Number : 10981830 **Diagnosed** : 22 Apr 2024 - Jonathan Hester
Test Package : CONST (Additional Tests: KV40, PQ, TBN)

CARLTON'S BACKHOE
 9550 STATESVILLE ROAD
 CHARLOTTE, NC
 US 28269
 Contact: LEO

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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