



WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
JOHN DEERE 524 P 1DW524PAKMLT13003

Component
Diesel Engine

Fluid
{not provided} (--- GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0198189	JR0151342	---
Sample Date		Client Info		30 Jan 2024	30 Nov 2022	---
Machine Age	hrs	Client Info		1108	440	---
Oil Age	hrs	Client Info		440	0	---
Filter Age	hrs	Client Info		440	0	---
Oil Changed		Client Info		Changed	N/A	---
Filter Changed		Client Info		Changed	N/A	---
Sample Status				ABNORMAL	ABNORMAL	---

WEAR

The copper level has decreased, but is still abnormal. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>51	22	35	---
Chromium	ppm	ASTM D5185m	>11	<1	1	---
Nickel	ppm	ASTM D5185m	>5	4	6	---
Titanium	ppm	ASTM D5185m		0	<1	---
Silver	ppm	ASTM D5185m	>3	0	0	---
Aluminum	ppm	ASTM D5185m	>31	5	3	---
Lead	ppm	ASTM D5185m	>26	0	<1	---
Copper	ppm	ASTM D5185m	>26	▲ 53	▲ 467	---
Tin	ppm	ASTM D5185m	>4	1	3	---
Vanadium	ppm	ASTM D5185m		<1	<1	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

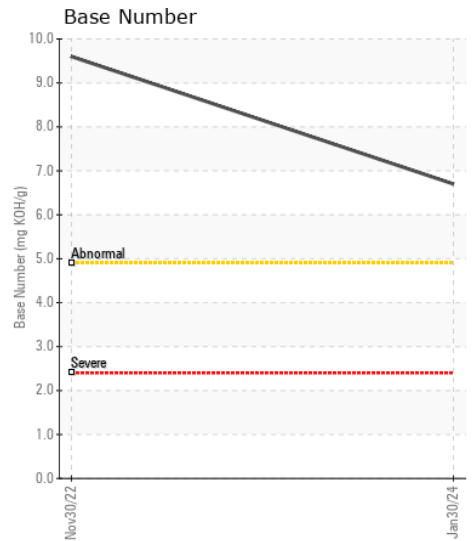
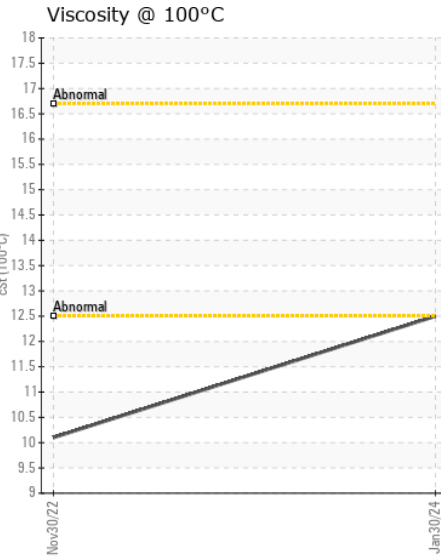
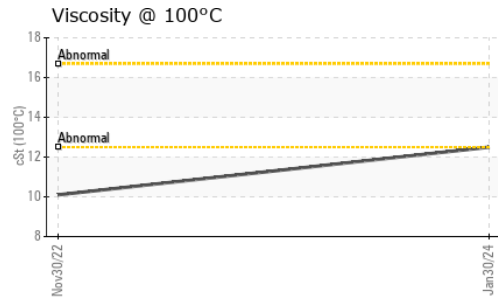
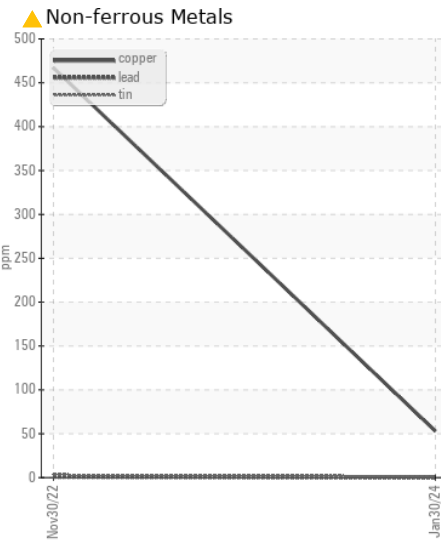
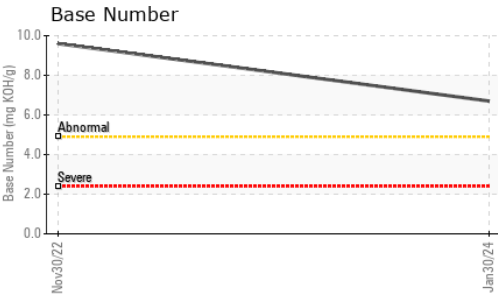
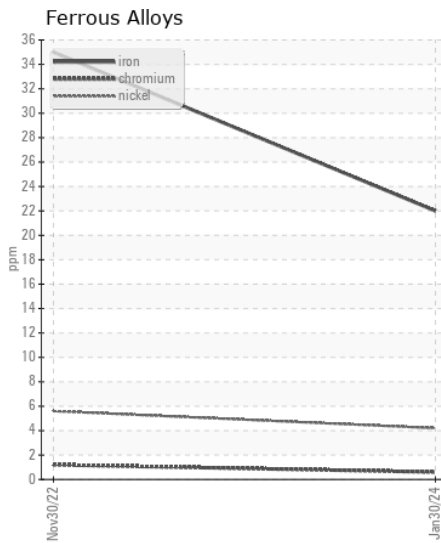
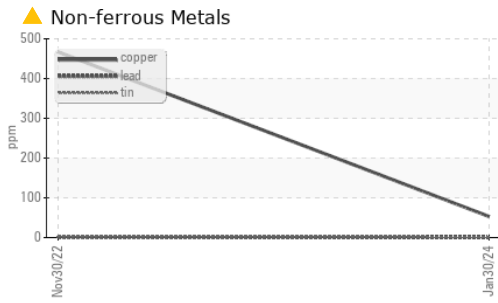
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>22	6	13	---
Potassium	ppm	ASTM D5185m	>20	1	3	---
Fuel		WC Method	>2.1	<1.0	0.5	---
Water		WC Method	>0.21	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	0.4	0.3	---
Nitration	Abs/cm	*ASTM D7624	>20	9.0	9.6	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	26.2	24.3	---
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	3	6	---
Boron	ppm	ASTM D5185m		131	204	---
Barium	ppm	ASTM D5185m		<1	<1	---
Molybdenum	ppm	ASTM D5185m		214	275	---
Manganese	ppm	ASTM D5185m		2	6	---
Magnesium	ppm	ASTM D5185m		716	812	---
Calcium	ppm	ASTM D5185m		1228	1501	---
Phosphorus	ppm	ASTM D5185m		816	925	---
Zinc	ppm	ASTM D5185m		982	1119	---
Sulfur	ppm	ASTM D5185m		2540	3618	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.4	18.8	---
Base Number (BN)	mg KOH/g	ASTM D2896		6.7	9.6	---
Visc @ 100°C	cSt	ASTM D445		12.5	10.1	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0198189 **Received** : 01 Feb 2024
Lab Number : **06076628** **Diagnosed** : 02 Feb 2024
Unique Number : 10858719 **Diagnostician** : Don Baldridge
Test Package : CONST (Additional Tests: 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)

T: (704)547-0211

F: