



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
JOHN DEERE 324L 1LU324LHCZB068261
 Component
Diesel Engine
 Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0209075	JR0167738	---
Sample Date		Client Info		16 Apr 2024	27 Apr 2023	---
Machine Age	hrs	Client Info		1311	543	---
Oil Age	hrs	Client Info		768	543	---
Filter Age	hrs	Client Info		0	543	---
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	22	27	---
Chromium	ppm	ASTM D5185m	>11	1	<1	---
Nickel	ppm	ASTM D5185m	>5	1	0	---
Titanium	ppm	ASTM D5185m		<1	<1	---
Silver	ppm	ASTM D5185m	>3	<1	0	---
Aluminum	ppm	ASTM D5185m	>31	5	2	---
Lead	ppm	ASTM D5185m	>26	2	<1	---
Copper	ppm	ASTM D5185m	>26	8	11	---
Tin	ppm	ASTM D5185m	>4	2	<1	---
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.

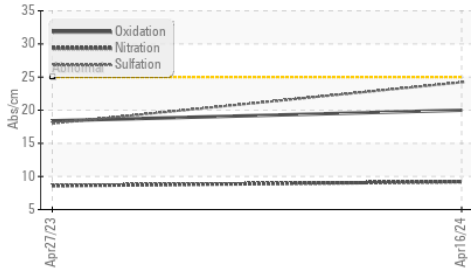
Silicon	ppm	ASTM D5185m	>22	19	▲ 40	---
Potassium	ppm	ASTM D5185m	>20	2	3	---
Fuel	%	ASTM D3524	>2.1	<1.0	1.0	---
Water		WC Method	>0.21	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	0.4	0.3	---
Nitration	Abs/cm	*ASTM D7624	>20	9.2	8.6	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	24.2	18.0	---
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

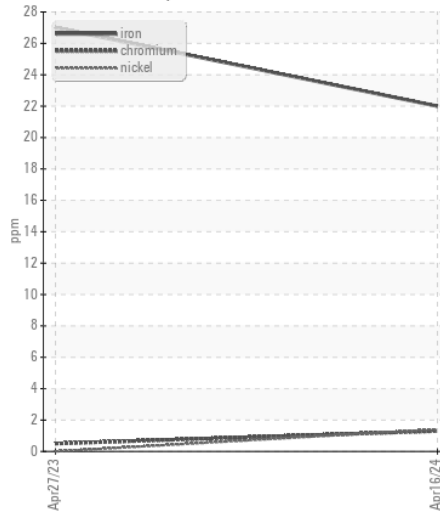
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>31	3	10	---
Boron	ppm	ASTM D5185m		204	140	---
Barium	ppm	ASTM D5185m		1	0	---
Molybdenum	ppm	ASTM D5185m		231	9	---
Manganese	ppm	ASTM D5185m		2	1	---
Magnesium	ppm	ASTM D5185m		780	699	---
Calcium	ppm	ASTM D5185m		1430	1482	---
Phosphorus	ppm	ASTM D5185m		876	763	---
Zinc	ppm	ASTM D5185m		1026	920	---
Sulfur	ppm	ASTM D5185m		3399	3434	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	20.0	18.4	---
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	7.7	6.4	---
Visc @ 100°C	cSt	ASTM D445	15.4	12.7	● 12.1	---

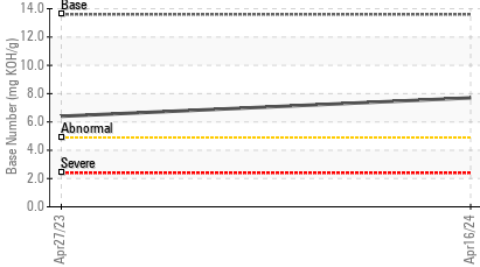
FT-IR (Direct Trend)



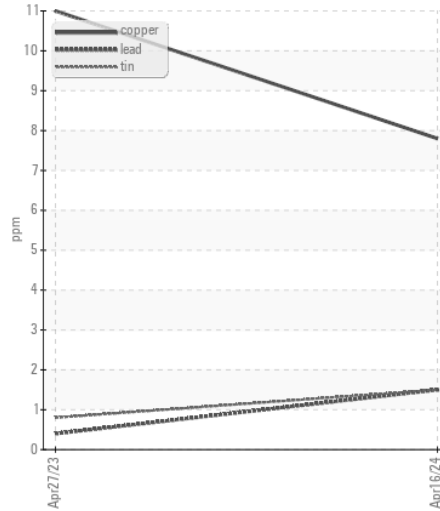
Ferrous Alloys



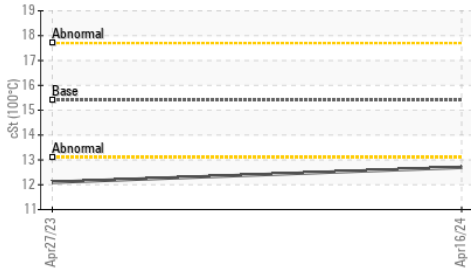
Base Number



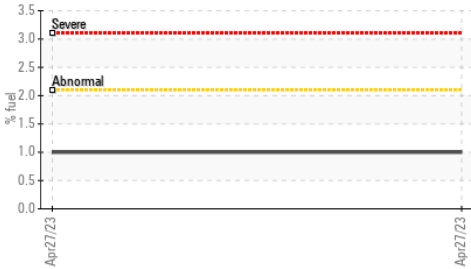
Non-ferrous Metals



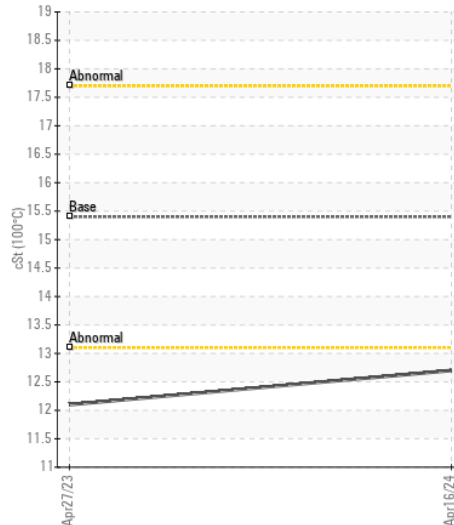
Viscosity @ 100°C



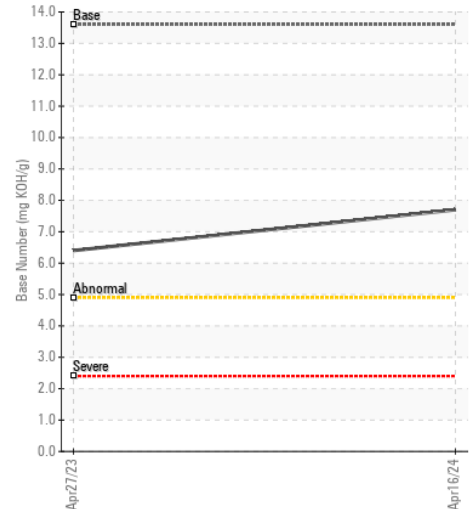
Fuel Dilution



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0209075 **Received** : 18 Apr 2024
Lab Number : 06152880 **Tested** : 19 Apr 2024
Unique Number : 10982958 **Diagnosed** : 22 Apr 2024 - Sean Felton
Test Package : CONST (Additional Tests: FuelDilution, TBN)

JRE - GARNER
 4161 AUBURN CHURCH RD
 GARNER, NC
 US 27529

Contact: RALEIGH SHOP
 sean.betts@jamesriverequipment.com; catherine.anastasio@wearcheck.com

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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