



Machine Id
JOHN DEERE 324L 1LU324LXEZB071649

Component
Diesel Engine

Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- 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		JR0197870	---	---
Sample Date		Client Info		15 Jan 2024	---	---
Machine Age	hrs	Client Info		496	---	---
Oil Age	hrs	Client Info		496	---	---
Filter Age	hrs	Client Info		496	---	---
Oil Changed		Client Info		Changed	---	---
Filter Changed		Client Info		Changed	---	---
Sample Status				ABNORMAL	---	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>51	27	---	---
Chromium	ppm	ASTM D5185m	>11	<1	---	---
Nickel	ppm	ASTM D5185m	>5	<1	---	---
Titanium	ppm	ASTM D5185m		<1	---	---
Silver	ppm	ASTM D5185m	>3	0	---	---
Aluminum	ppm	ASTM D5185m	>31	5	---	---
Lead	ppm	ASTM D5185m	>26	0	---	---
Copper	ppm	ASTM D5185m	>26	10	---	---
Tin	ppm	ASTM D5185m	>4	<1	---	---
Vanadium	ppm	ASTM D5185m		<1	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

Fuel content negligible. Elemental level of silicon (Si) above normal indicating ingress of seal material.

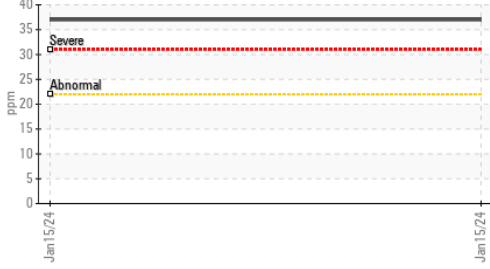
Silicon	ppm	ASTM D5185m	>22	▲ 37	---	---
Potassium	ppm	ASTM D5185m	>20	1	---	---
Fuel	%	ASTM D3524	>2.1	1.4	---	---
Water		WC Method	>0.21	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	*ASTM D7844	>3	0.2	---	---
Nitration	Abs/cm	*ASTM D7624	>20	9.2	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.8	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.21	NEG	---	---

FLUID CONDITION

The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Sodium	ppm	ASTM D5185m	>31	9	---	---
Boron	ppm	ASTM D5185m		157	---	---
Barium	ppm	ASTM D5185m		0	---	---
Molybdenum	ppm	ASTM D5185m		35	---	---
Manganese	ppm	ASTM D5185m		1	---	---
Magnesium	ppm	ASTM D5185m		776	---	---
Calcium	ppm	ASTM D5185m		1504	---	---
Phosphorus	ppm	ASTM D5185m		796	---	---
Zinc	ppm	ASTM D5185m		966	---	---
Sulfur	ppm	ASTM D5185m		3689	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.3	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	7.6	---	---
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 11.2	---	---

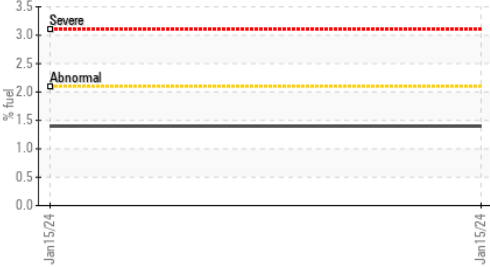
▲ Silicon (ppm)



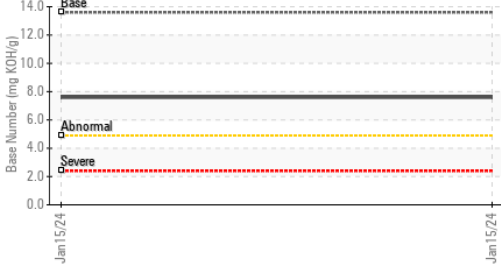
▲ Viscosity @ 100°C



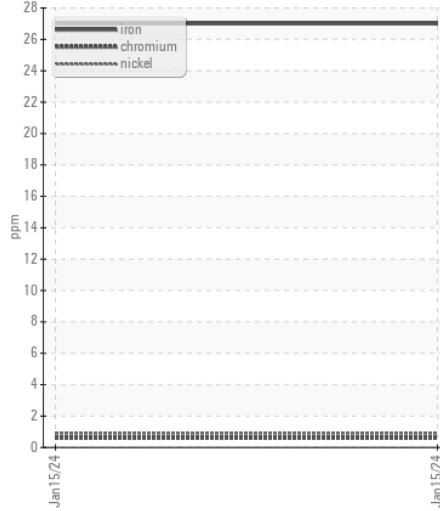
Fuel Dilution



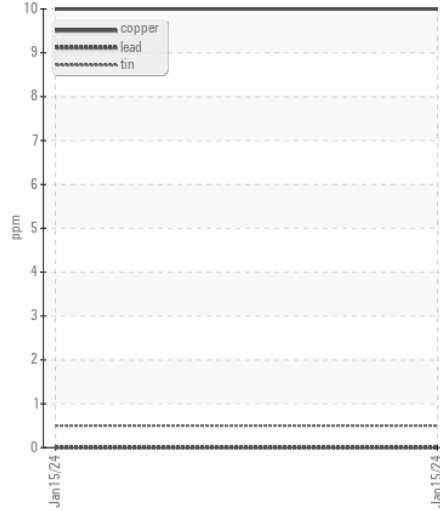
Base Number



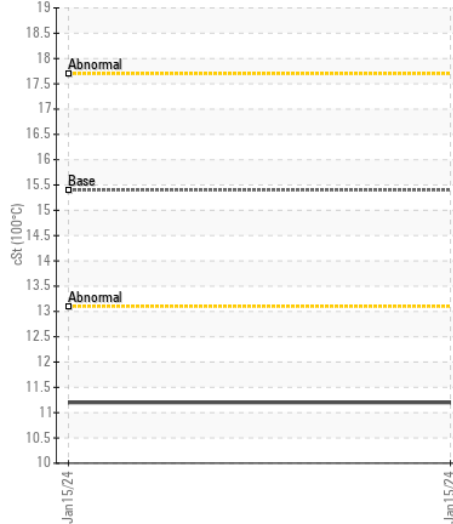
Ferrous Alloys



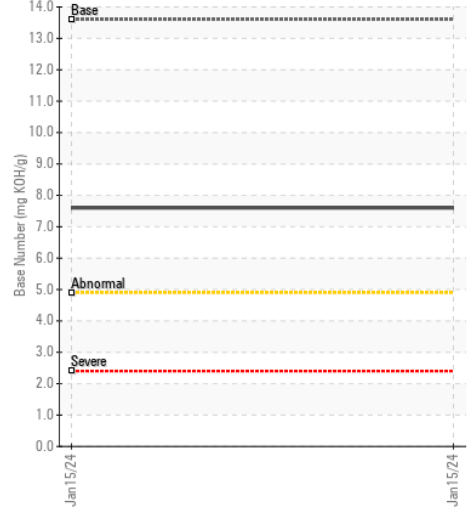
Non-ferrous Metals



▲ Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0197870 **Received** : 17 Jan 2024
Lab Number : 06062489 **Diagnosed** : 19 Jan 2024
Unique Number : 10833871 **Diagnostician** : Don Baldrige
Test Package : CONST (Additional Tests: FuelDilution, PercentFuel, 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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