



WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
JOHN DEERE 9670 1H009670SAB0741755

Component
Diesel Engine

Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- QTS)

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		JR0193221	---	---
Sample Date		Client Info		10 Jan 2024	---	---
Machine Age	hrs	Client Info		2781	---	---
Oil Age	hrs	Client Info		500	---	---
Filter Age	hrs	Client Info		500	---	---
Oil Changed		Client Info		Not Changd	---	---
Filter Changed		Client Info		Not Changd	---	---
Sample Status				ABNORMAL	---	---

WEAR

Valve wear is indicated. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>51	43	---	---
Chromium	ppm	ASTM D5185m	>11	<1	---	---
Nickel	ppm	ASTM D5185m	>5	▲ 25	---	---
Titanium	ppm	ASTM D5185m		0	---	---
Silver	ppm	ASTM D5185m	>3	0	---	---
Aluminum	ppm	ASTM D5185m	>31	3	---	---
Lead	ppm	ASTM D5185m	>26	0	---	---
Copper	ppm	ASTM D5185m	>26	4	---	---
Tin	ppm	ASTM D5185m	>4	0	---	---
Vanadium	ppm	ASTM D5185m		0	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

There is no indication of any contamination in the oil.

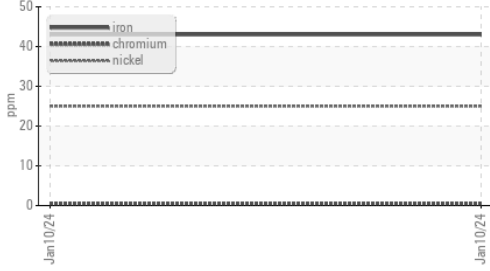
Silicon	ppm	ASTM D5185m	>22	10	---	---
Potassium	ppm	ASTM D5185m	>20	8	---	---
Fuel		WC Method	>2.1	<1.0	---	---
Water		WC Method	>0.21	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	*ASTM D7844	>3	0.3	---	---
Nitration	Abs/cm	*ASTM D7624	>20	8.3	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.0	---	---
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

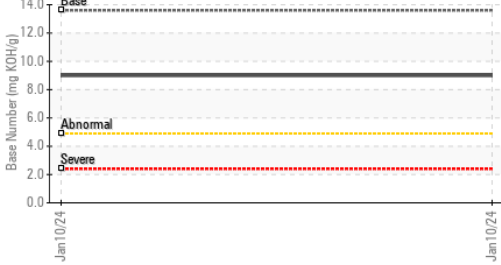
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m	>31	0	---	---
Boron	ppm	ASTM D5185m		233	---	---
Barium	ppm	ASTM D5185m		4	---	---
Molybdenum	ppm	ASTM D5185m		245	---	---
Manganese	ppm	ASTM D5185m		1	---	---
Magnesium	ppm	ASTM D5185m		865	---	---
Calcium	ppm	ASTM D5185m		1387	---	---
Phosphorus	ppm	ASTM D5185m		910	---	---
Zinc	ppm	ASTM D5185m		1093	---	---
Sulfur	ppm	ASTM D5185m		3397	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.4	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	9.0	---	---
Visc @ 100°C	cSt	ASTM D445	15.4	14.2	---	---

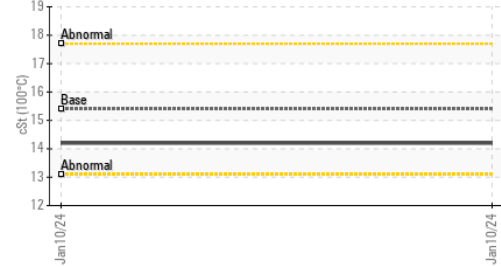
▲ Ferrous Alloys



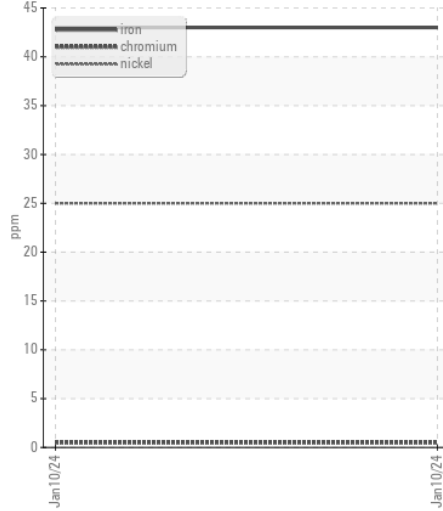
Base Number



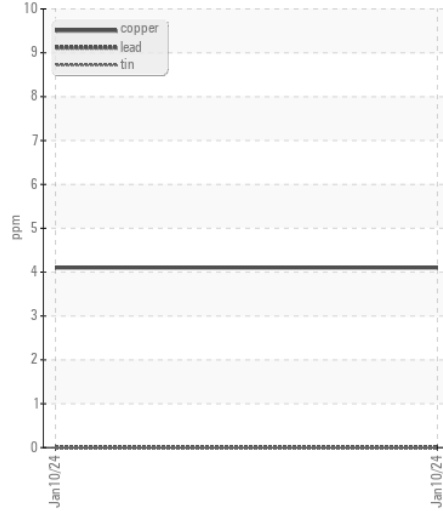
Viscosity @ 100°C



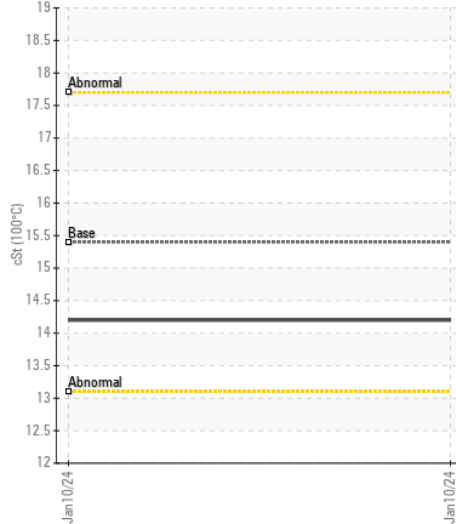
▲ Ferrous Alloys



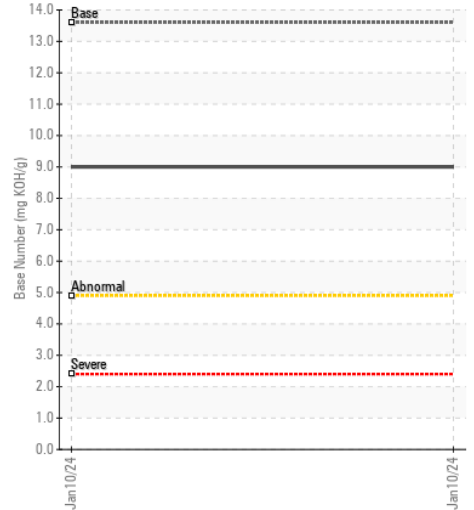
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0193221 **Received** : 18 Jan 2024
Lab Number : 06064031 **Diagnosed** : 20 Jan 2024
Unique Number : 10835413 **Diagnostician** : Don Baldrige
Test Package : CONST (Additional Tests: 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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