TRAAP
Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
JOHN DEERE 40315
Component
Diesel Engine
Fluid
TRC MOLY XL PRO-SPEC IV XP 10W30 (7 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.

WEAR

The copper level is abnormal. Cylinder, crank, or cam shaft wear is indicated. Elemental level of copper (Cu) probably due to leaching of copper from copper components (i.e. cooling core) by the oil additives. All other metal levels are typical for a new component breaking in.

CONTAMINATION

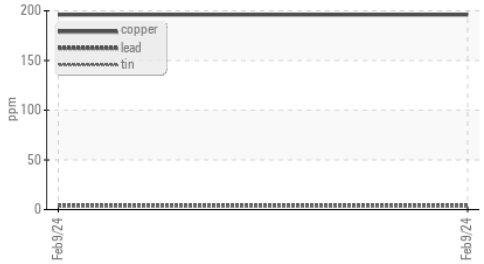
There is no indication of any contamination in the oil.

FLUID CONDITION

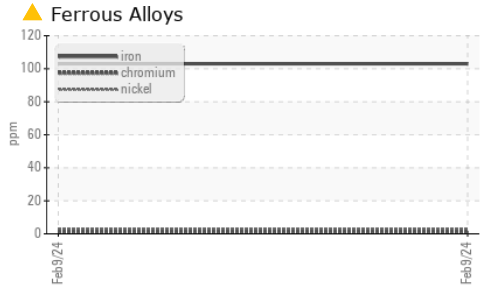
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR06086734	---	---
Sample Date		Client Info		09 Feb 2024	---	---
Machine Age	mls	Client Info		1104	---	---
Oil Age	mls	Client Info		500	---	---
Filter Age	mls	Client Info		500	---	---
Oil Changed		Client Info		Changed	---	---
Filter Changed		Client Info		Changed	---	---
Sample Status				ABNORMAL	---	---
Iron	ppm	ASTM D5185m	>51	▲ 103	---	---
Chromium	ppm	ASTM D5185m	>11	2	---	---
Nickel	ppm	ASTM D5185m	>5	3	---	---
Titanium	ppm	ASTM D5185m		<1	---	---
Silver	ppm	ASTM D5185m	>3	0	---	---
Aluminum	ppm	ASTM D5185m	>31	7	---	---
Lead	ppm	ASTM D5185m	>26	4	---	---
Copper	ppm	ASTM D5185m	>26	▲ 196	---	---
Tin	ppm	ASTM D5185m	>4	4	---	---
Vanadium	ppm	ASTM D5185m		0	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---
Silicon	ppm	ASTM D5185m	>22	8	---	---
Potassium	ppm	ASTM D5185m	>20	1	---	---
Fuel		WC Method	>2.1	<1.0	---	---
Water		WC Method	>0.21	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	*ASTM D7844	>3	0.6	---	---
Nitration	Abs/cm	*ASTM D7624	>20	9.2	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.3	---	---
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	---	---
Sodium	ppm	ASTM D5185m	>31	3	---	---
Boron	ppm	ASTM D5185m		6	---	---
Barium	ppm	ASTM D5185m		0	---	---
Molybdenum	ppm	ASTM D5185m		153	---	---
Manganese	ppm	ASTM D5185m		1	---	---
Magnesium	ppm	ASTM D5185m		80	---	---
Calcium	ppm	ASTM D5185m		4133	---	---
Phosphorus	ppm	ASTM D5185m		817	---	---
Zinc	ppm	ASTM D5185m		1082	---	---
Sulfur	ppm	ASTM D5185m		3768	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	11.9	---	---
Base Number (BN)	mg KOH/g	ASTM D2896		12.19	---	---
Visc @ 100°C	cSt	ASTM D445		11.4	---	---

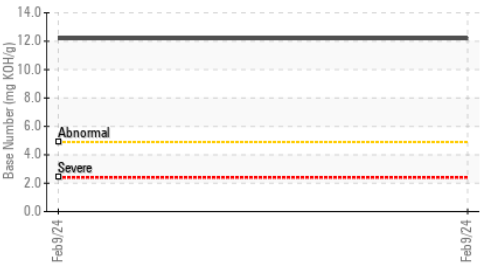
Non-ferrous Metals



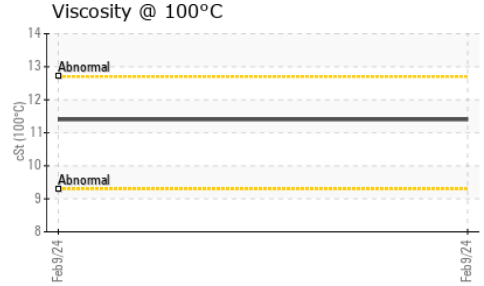
Ferrous Alloys



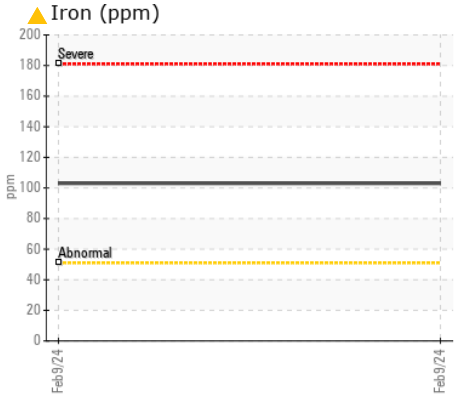
Base Number



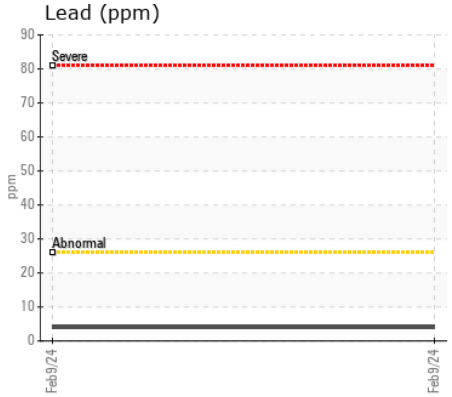
Viscosity @ 100°C



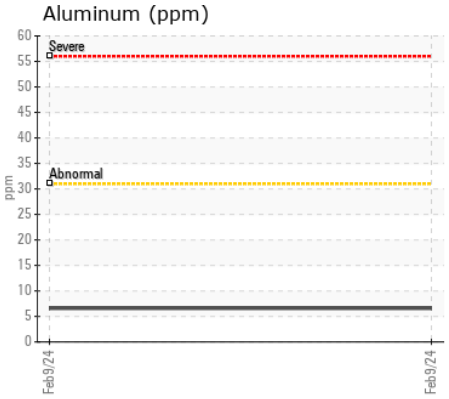
Iron (ppm)



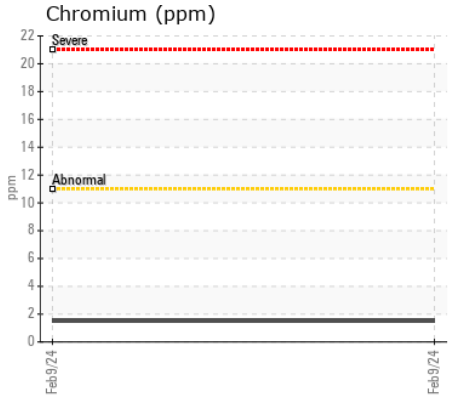
Lead (ppm)



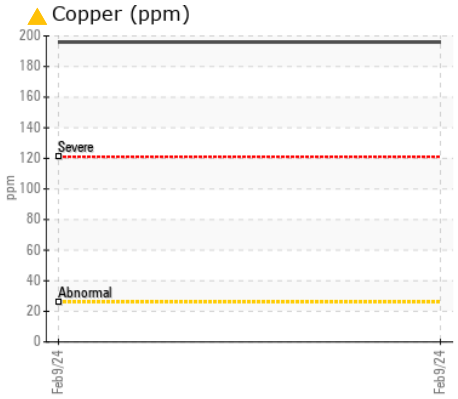
Aluminum (ppm)



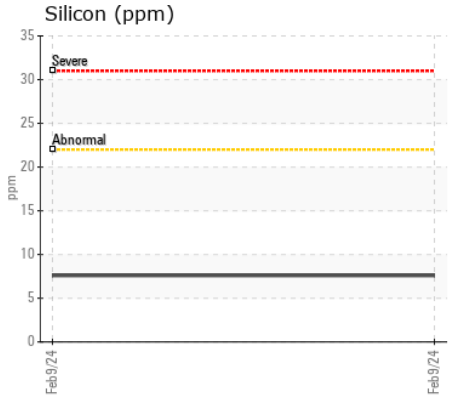
Chromium (ppm)



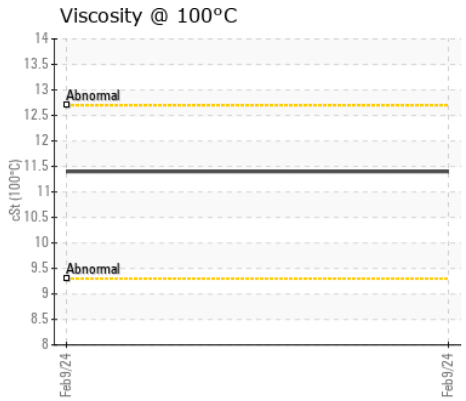
Copper (ppm)



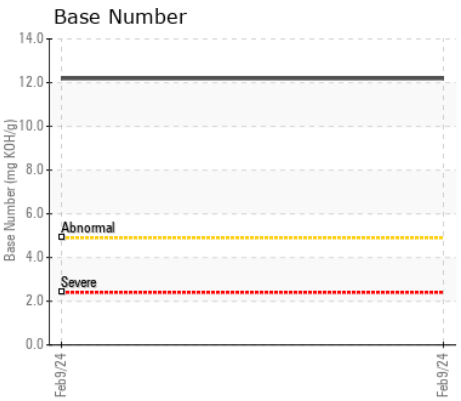
Silicon (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR06086734
Lab Number : 06086734
Unique Number : 10874179
Test Package : MOB 2

Received : 12 Feb 2024
Tested : 13 Feb 2024
Diagnosed : 14 Feb 2024 - Don Baldridge

To discuss this sample report, contact Customer Service at 1-800-827-0711.
** - 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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F: