



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area

[BOURN ENVIROMENTAL]

Machine Id

HYDREMA 912HM 13127

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		JR0211018	JR0208238	---
Sample Date		Client Info		19 Apr 2024	26 Mar 2024	---
Machine Age	hrs	Client Info		3592	3565	---
Oil Age	hrs	Client Info		0	0	---
Filter Age	hrs	Client Info		0	0	---
Oil Changed		Client Info		Changed	Changed	---
Filter Changed		Client Info		Changed	Changed	---
Sample Status				NORMAL	NORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	8	15	---
Chromium	ppm	ASTM D5185m	>20	<1	<1	---
Nickel	ppm	ASTM D5185m	>4	0	<1	---
Titanium	ppm	ASTM D5185m		0	<1	---
Silver	ppm	ASTM D5185m	>3	0	0	---
Aluminum	ppm	ASTM D5185m	>20	4	4	---
Lead	ppm	ASTM D5185m	>40	0	9	---
Copper	ppm	ASTM D5185m	>330	2	4	---
Tin	ppm	ASTM D5185m	>15	0	<1	---
Vanadium	ppm	ASTM D5185m		0	<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.

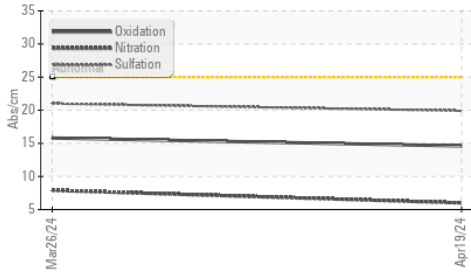
Silicon	ppm	ASTM D5185m	>25	7	10	---
Potassium	ppm	ASTM D5185m	>20	<1	3	---
Fuel		WC Method	>5	<1.0	<1.0	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	0.1	0.1	---
Nitration	Abs/cm	*ASTM D7624	>20	6.0	7.9	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.9	21.0	---
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	>0.2	NEG	NEG	---

FLUID CONDITION

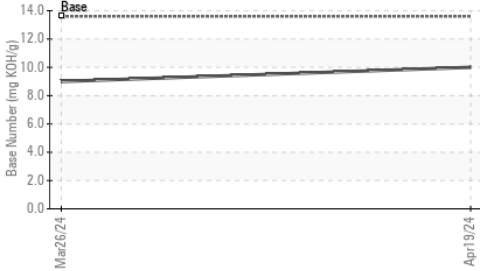
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		0	0	---
Boron	ppm	ASTM D5185m		289	266	---
Barium	ppm	ASTM D5185m		0	1	---
Molybdenum	ppm	ASTM D5185m		247	256	---
Manganese	ppm	ASTM D5185m		<1	1	---
Magnesium	ppm	ASTM D5185m		826	795	---
Calcium	ppm	ASTM D5185m		1430	1478	---
Phosphorus	ppm	ASTM D5185m		902	942	---
Zinc	ppm	ASTM D5185m		1048	1029	---
Sulfur	ppm	ASTM D5185m		3494	3087	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.6	15.8	---
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	10.0	9.0	---
Visc @ 100°C	cSt	ASTM D445	15.4	13.8	13.5	---

FT-IR (Direct Trend)



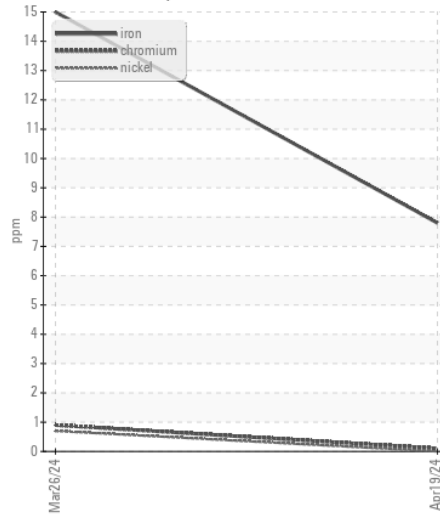
Base Number



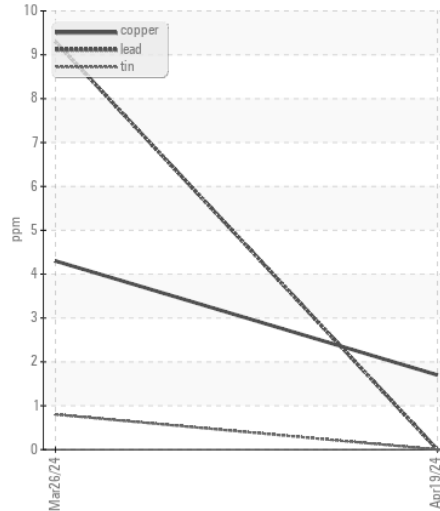
Viscosity @ 100°C



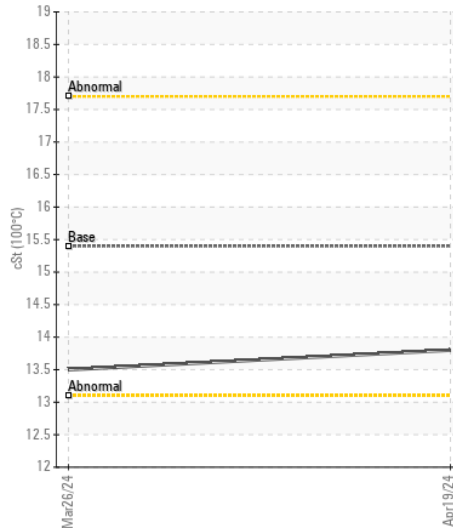
Ferrous Alloys



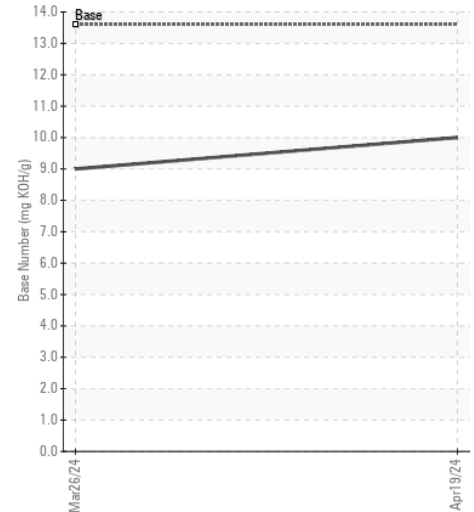
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0211018 **Received** : 23 Apr 2024
Lab Number : 06158276 **Tested** : 24 Apr 2024
Unique Number : 10993699 **Diagnosed** : 24 Apr 2024 - Wes Davis
Test Package : CONST (Additional Tests: TBN)

JRE - MANASSAS PARK
 9107 OWENS DRIVE
 MANASSAS PARK, VA
 US 20111

Contact: DON VEST
 dvest@jamesriverequipment.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)

T: (703)631-8500
 F: (703)631-4715