



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
JOHN DEERE 410E 1DW410EBENF716069
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0219456	JR0204047	JR0188900
Sample Date		Client Info		15 Jun 2024	20 Feb 2024	20 Oct 2023
Machine Age	hrs	Client Info		2534	2043	1560
Oil Age	hrs	Client Info		491	483	1053
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>51	2	9	15
Chromium	ppm	ASTM D5185m	>11	0	<1	<1
Nickel	ppm	ASTM D5185m	>5	<1	0	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>31	5	3	4
Lead	ppm	ASTM D5185m	>26	<1	3	6
Copper	ppm	ASTM D5185m	>26	2	21	31
Tin	ppm	ASTM D5185m	>4	<1	4	4
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

There is no indication of any contamination in the oil.

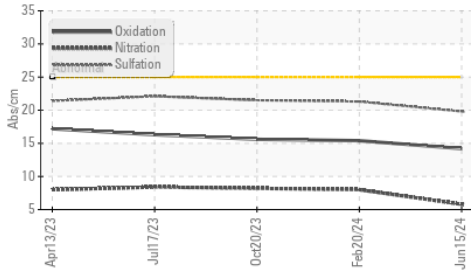
Silicon	ppm	ASTM D5185m	>22	8	0	7
Potassium	ppm	ASTM D5185m	>20	4	0	<1
Fuel		WC Method	>2.1	<1.0	<1.0	<1.0
Water		WC Method	>0.21	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.1	0.2	0.3
Nitration	Abs/cm	*ASTM D7624	>20	5.8	8.0	8.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.8	21.3	21.5
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.21	NEG	NEG	NEG

FLUID CONDITION

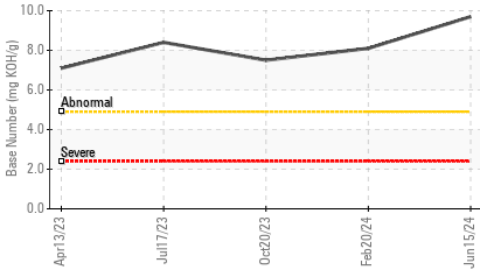
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>75	2	3	3
Boron	ppm	ASTM D5185m		255	223	173
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		231	229	252
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		802	750	829
Calcium	ppm	ASTM D5185m		1320	1311	1473
Phosphorus	ppm	ASTM D5185m		957	870	865
Zinc	ppm	ASTM D5185m		1042	1005	1084
Sulfur	ppm	ASTM D5185m		3550	2816	3025
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.2	15.4	15.6
Base Number (BN)	mg KOH/g	ASTM D2896		9.7	8.1	7.5
Visc @ 100°C	cSt	ASTM D445		13.8	12.8	12.7

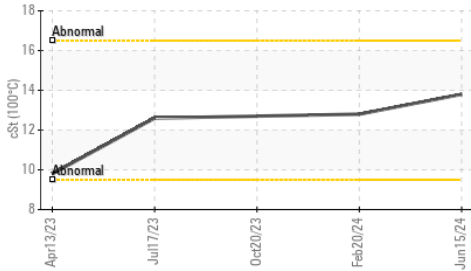
FT-IR (Direct Trend)



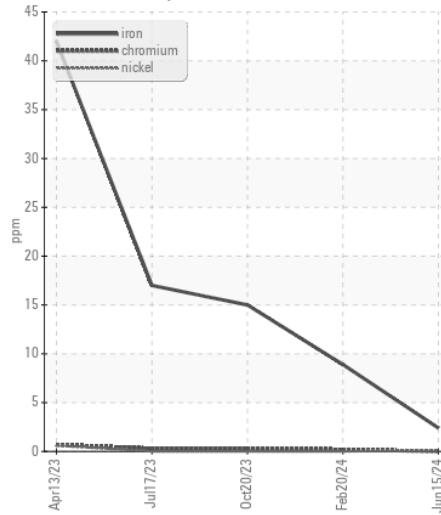
Base Number



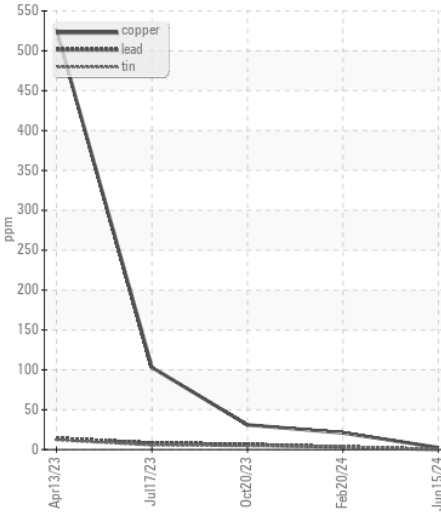
Viscosity @ 100°C



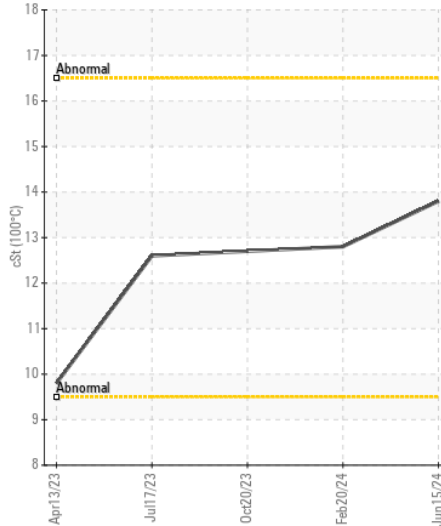
Ferrous Alloys



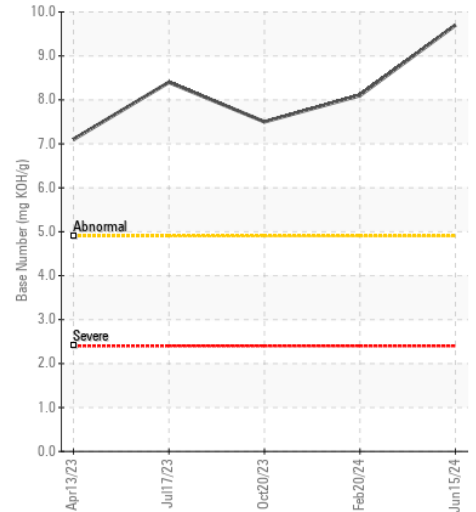
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0219456 **Received** : 18 Jun 2024
Lab Number : 06213319 **Tested** : 19 Jun 2024
Unique Number : 11086183 **Diagnosed** : 19 Jun 2024 - Wes Davis
Test Package : CONST (Additional Tests: TBN)

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 US 28269
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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)