



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
[W60175]
 Machine Id
JOHN DEERE 644K 1DW644KZVED658902
 Component
Diesel Engine
 Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor. (Customer Sample Comment: W60175)

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0189183	JR0172070	JR0151363
Sample Date		Client Info		22 Sep 2023	02 Jun 2023	07 Dec 2022
Machine Age	hrs	Client Info		14702	14284	12398
Oil Age	hrs	Client Info		12398	749	500
Filter Age	hrs	Client Info		0	0	500
Oil Changed		Client Info		Changed	Filtered	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	ATTENTION	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>51	12	13	5
Chromium	ppm	ASTM D5185m	>11	<1	<1	0
Nickel	ppm	ASTM D5185m	>5	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>31	9	▲ 18	4
Lead	ppm	ASTM D5185m	>26	<1	<1	<1
Copper	ppm	ASTM D5185m	>26	8	<1	3
Tin	ppm	ASTM D5185m	>4	<1	0	0
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

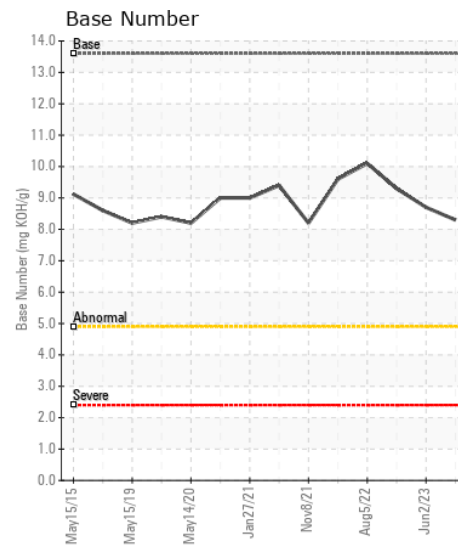
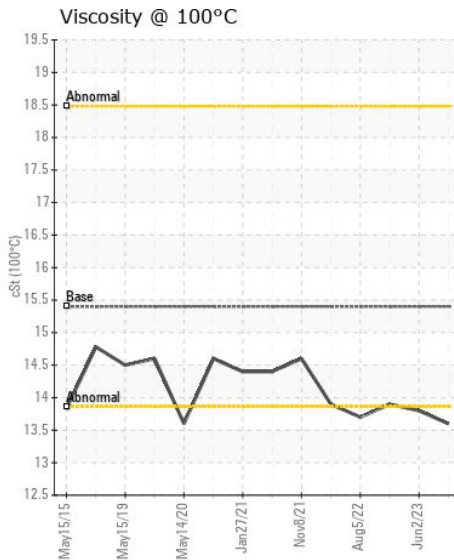
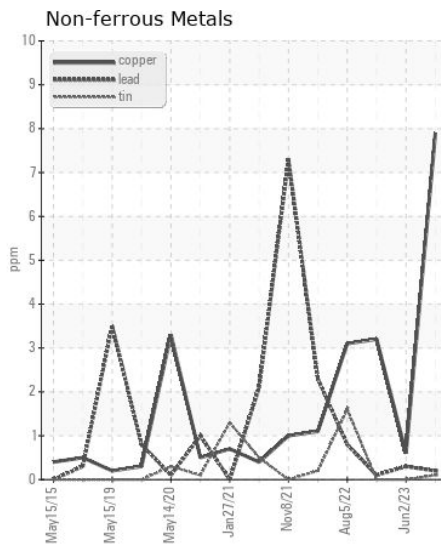
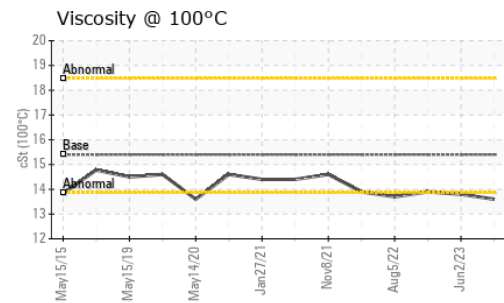
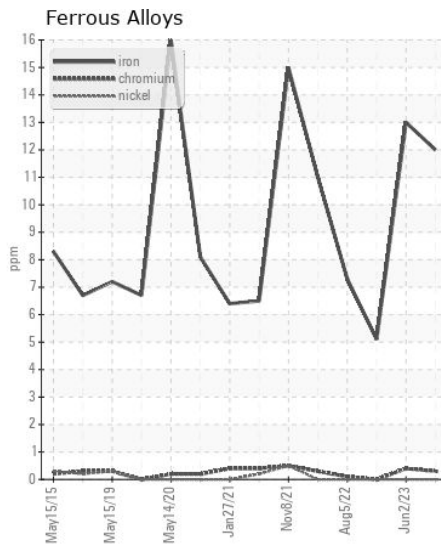
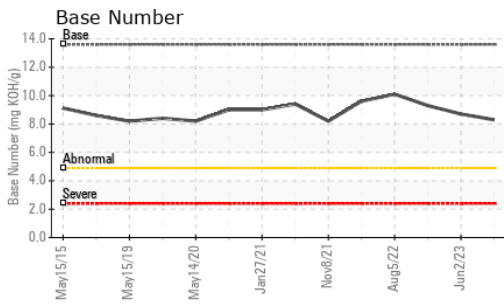
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>22	6	8	5
Potassium	ppm	ASTM D5185m	>20	12	6	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	0.6	0.5	0.8
Nitration	Abs/cm	*ASTM D7624	>20	7.6	8.6	9.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.1	22.0	23.6
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	>31	2	1	0
Boron	ppm	ASTM D5185m		249	248	243
Barium	ppm	ASTM D5185m		<1	3	0
Molybdenum	ppm	ASTM D5185m		246	238	238
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		837	839	812
Calcium	ppm	ASTM D5185m		1461	1453	1505
Phosphorus	ppm	ASTM D5185m		914	903	908
Zinc	ppm	ASTM D5185m		1088	1066	1093
Sulfur	ppm	ASTM D5185m		3055	3510	3615
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.1	16.0	16.7
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	8.3	8.7	9.3
Visc @ 100°C	cSt	ASTM D445	15.4	13.6	13.8	13.9



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0189183 **Received** : 29 Sep 2023
Lab Number : 05964510 **Diagnosed** : 05 Oct 2023
Unique Number : 10671061 **Diagnostician** : Doug Bogart
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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