



WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
[W59799]
 Machine Id
JOHN DEERE 650K 1T0650KKPJF344840
 Component
Diesel Engine
 Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- 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. (Customer Sample Comment: W59799)

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0188326	JR0155838	JR0134917
Sample Date		Client Info		14 Sep 2023	10 Feb 2023	10 Jul 2022
Machine Age	hrs	Client Info		4176	3441	2879
Oil Age	hrs	Client Info		3614	0	500
Filter Age	hrs	Client Info		0	0	500
Oil Changed		Client Info		Changed	N/A	Changed
Filter Changed		Client Info		Changed	N/A	Changed
Sample Status				ABNORMAL	NORMAL	ABNORMAL

WEAR

The lead level has decreased, but is still abnormal. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>51	34	20	26
Chromium	ppm	ASTM D5185m	>11	1	<1	<1
Nickel	ppm	ASTM D5185m	>5	<1	<1	<1
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>31	10	5	5
Lead	ppm	ASTM D5185m	>26	▲ 43	14	▲ 44
Copper	ppm	ASTM D5185m	>26	4	3	4
Tin	ppm	ASTM D5185m	>4	1	1	2
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.

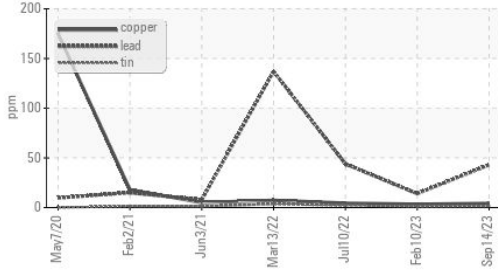
Silicon	ppm	ASTM D5185m	>22	11	9	9
Potassium	ppm	ASTM D5185m	>20	3	<1	0
Fuel		WC Method	>2.1	<1.0	<1.0	<1.0
Water		WC Method	>0.21	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.3	0.8	0.8
Nitration	Abs/cm	*ASTM D7624	>20	11.2	10.6	11.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	29.3	25.4	28.0
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

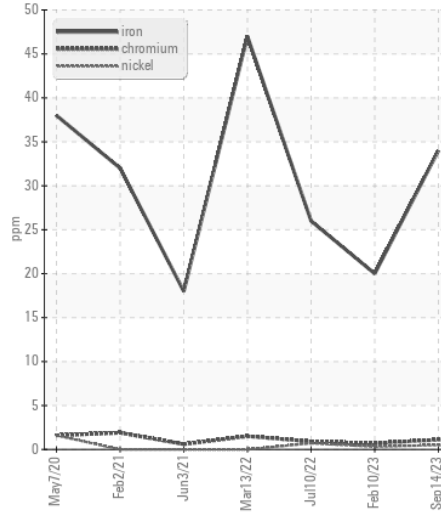
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>31	3	2	2
Boron	ppm	ASTM D5185m		60	134	99
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		306	254	261
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		1079	806	823
Calcium	ppm	ASTM D5185m		1878	1498	1528
Phosphorus	ppm	ASTM D5185m		1177	814	844
Zinc	ppm	ASTM D5185m		1469	1048	1063
Sulfur	ppm	ASTM D5185m		4221	3387	3365
Oxidation	Abs/.1mm	*ASTM D7414	>25	21.6	20.3	24.6
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	8.5	8.2	8.4
Visc @ 100°C	cSt	ASTM D445	15.4	14.8	14.3	14.3

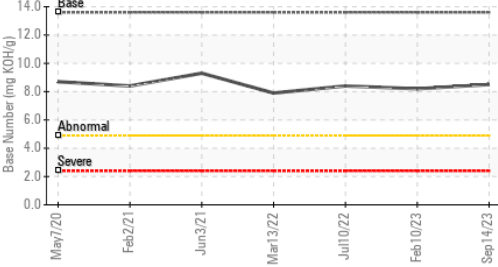
▲ Non-ferrous Metals



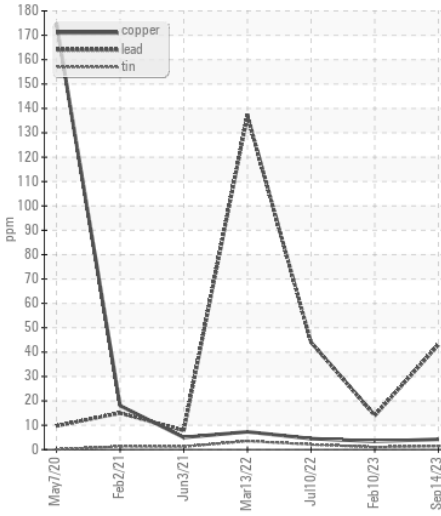
Ferrous Alloys



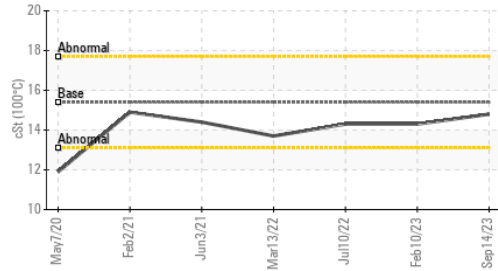
Base Number



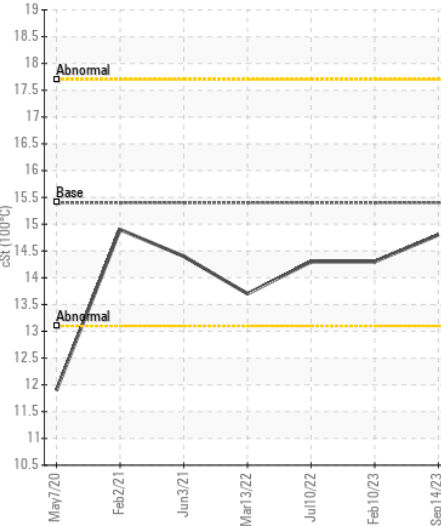
▲ Non-ferrous Metals



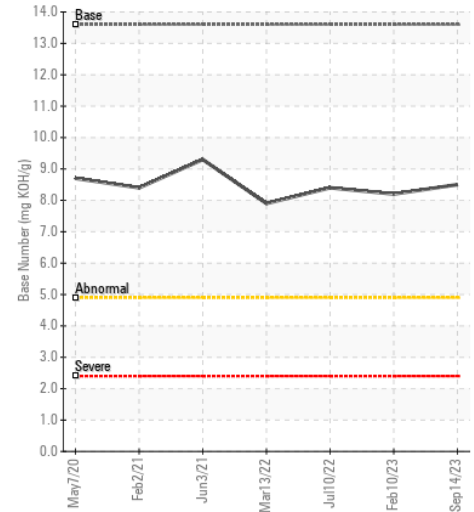
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0188326 **Received** : 20 Sep 2023
Lab Number : 05956307 **Diagnosed** : 22 Sep 2023
Unique Number : 10657520 **Diagnostician** : Jonathan Hester
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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