



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Machine Id
EPIROC T35-12 JPS22SED2701

Component
Diesel Engine

Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- GAL)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0212661	JR0197484	JR0197592
Sample Date		Client Info		21 May 2024	21 Mar 2024	23 Jan 2024
Machine Age	hrs	Client Info		2384	2023	1740
Oil Age	hrs	Client Info		361	283	624
Filter Age	hrs	Client Info		361	283	624
Oil Changed		Client Info		Not Chngd	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ATTENTION	ATTENTION	ATTENTION

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	16	14	23
Chromium	ppm	ASTM D5185m	>20	1	<1	1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	4	4	8
Lead	ppm	ASTM D5185m	>40	<1	0	<1
Copper	ppm	ASTM D5185m	>330	4	4	13
Tin	ppm	ASTM D5185m	>15	0	0	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

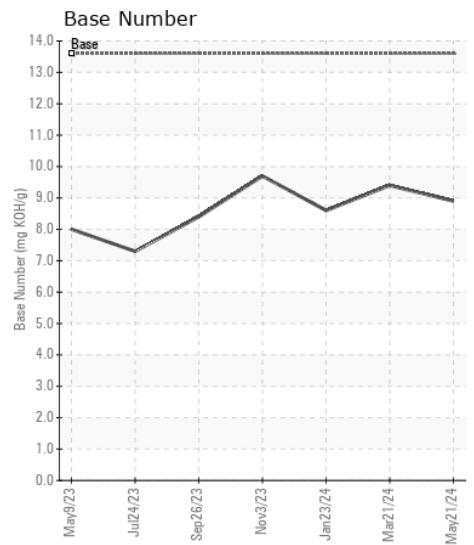
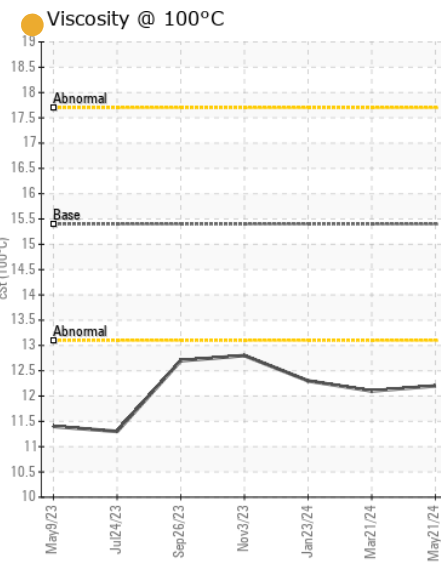
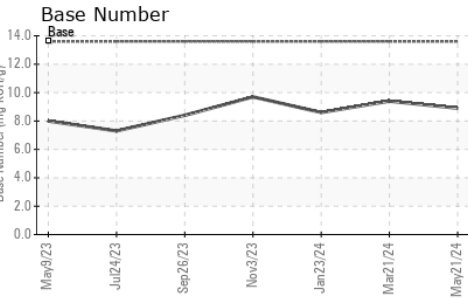
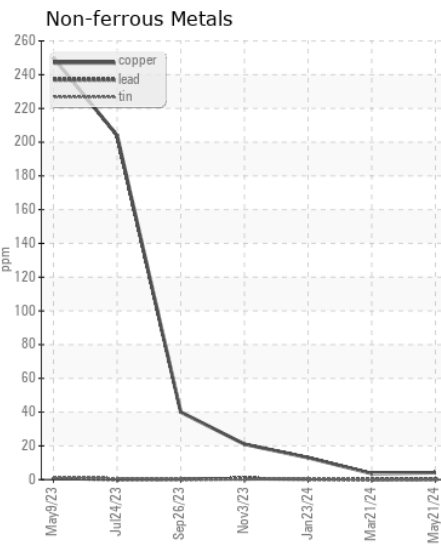
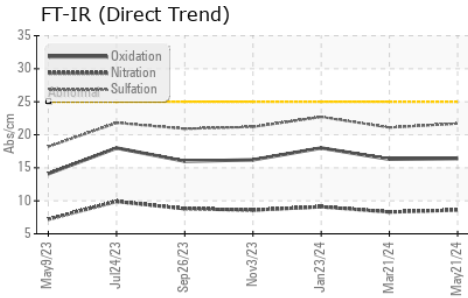
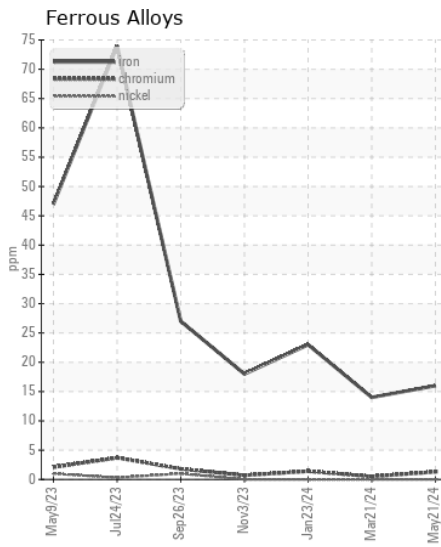
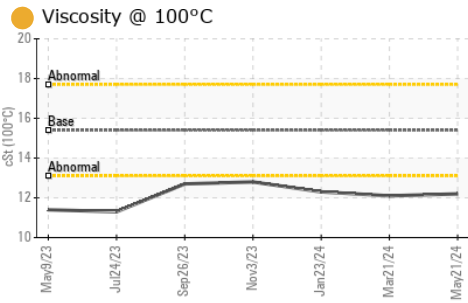
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	9	9	13
Potassium	ppm	ASTM D5185m	>20	2	<1	0
Fuel		WC Method	>5	<1.0	<1.0	0.3
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.2	0.2	0.3
Nitration	Abs/cm	*ASTM D7624	>20	8.6	8.3	9.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.7	21.1	22.7
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	>0.2	NEG	NEG	NEG

FLUID CONDITION

The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Sodium	ppm	ASTM D5185m		2	1	<1
Boron	ppm	ASTM D5185m		249	224	172
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		250	258	232
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m		835	888	896
Calcium	ppm	ASTM D5185m		1506	1602	1518
Phosphorus	ppm	ASTM D5185m		935	973	940
Zinc	ppm	ASTM D5185m		1080	1130	998
Sulfur	ppm	ASTM D5185m		3473	3812	2812
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.4	16.3	18.0
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	8.9	9.4	8.6
Visc @ 100°C	cSt	ASTM D445	15.4	12.2	12.1	12.3



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0212661 **Received** : 24 May 2024
Lab Number : 06191414 **Tested** : 29 May 2024
Unique Number : 11048166 **Diagnosed** : 29 May 2024 - Sean Felton
Test Package : CONST (Additional Tests: TBN)

CAROLINA CIVIL
 PO BOX 80337
 RALEIGH, NC
 US 27623
 Contact:

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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F: