



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
JOHN DEERE 1DW648LXAFF670477
 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		JR0210286	JR0184543	JR0041153
Sample Date		Client Info		07 May 2024	06 Nov 2023	03 Apr 2020
Machine Age	hrs	Client Info		7810	60	5004
Oil Age	hrs	Client Info		0	60	0
Filter Age	hrs	Client Info		0	60	0
Oil Changed		Client Info		Changed	Changed	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	17	10	28
Chromium	ppm	ASTM D5185m	>11	<1	<1	<1
Nickel	ppm	ASTM D5185m	>5	2	<1	<1
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m	>31	8	4	8
Lead	ppm	ASTM D5185m	>26	<1	<1	0
Copper	ppm	ASTM D5185m	>26	5	8	12
Tin	ppm	ASTM D5185m	>4	1	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.

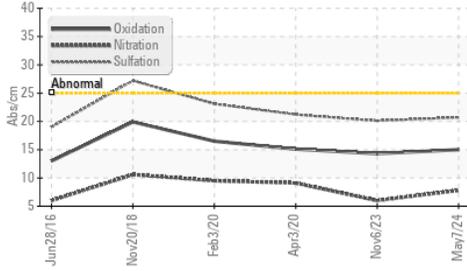
Silicon	ppm	ASTM D5185m	>22	10	9	5
Potassium	ppm	ASTM D5185m	>20	4	3	2
Fuel		WC Method	>2.1	<1.0	0.2	<1.0
Water		WC Method	>0.21	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.2	0.1	1.1
Nitration	Abs/cm	*ASTM D7624	>20	7.8	6.0	9.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.7	20.1	21.2
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

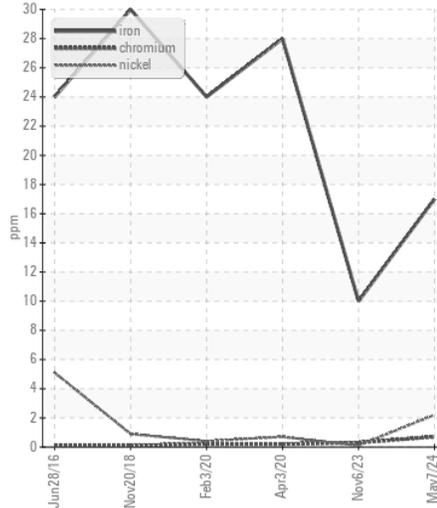
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m	>31	5	<1	4
Boron	ppm	ASTM D5185m		399	306	130
Barium	ppm	ASTM D5185m		3	2	0
Molybdenum	ppm	ASTM D5185m		371	256	247
Manganese	ppm	ASTM D5185m		1	2	<1
Magnesium	ppm	ASTM D5185m		1102	785	738
Calcium	ppm	ASTM D5185m		1909	1344	1302
Phosphorus	ppm	ASTM D5185m		1229	814	789
Zinc	ppm	ASTM D5185m		1478	1041	894
Sulfur	ppm	ASTM D5185m		4352	3296	1705
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.0	14.3	15.1
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	9.1	9.8	5.3
Visc @ 100°C	cSt	ASTM D445	15.4	13.4	9.9	14.8

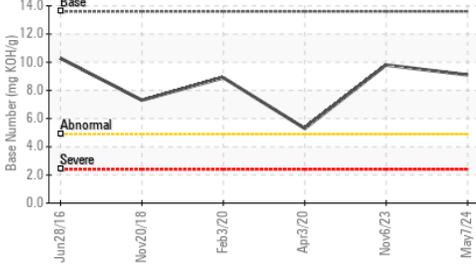
FT-IR (Direct Trend)



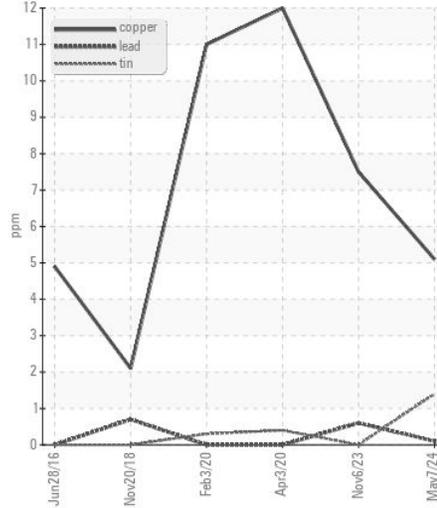
Ferrous Alloys



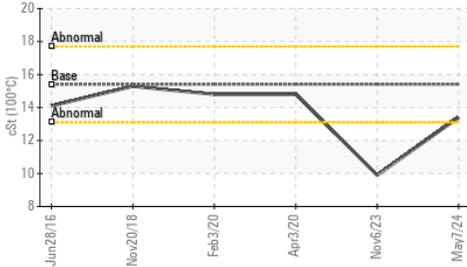
Base Number



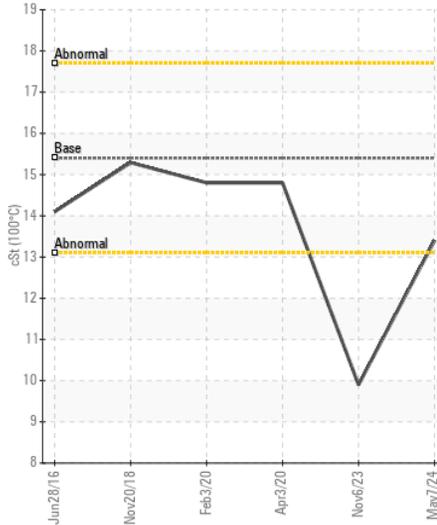
Non-ferrous Metals



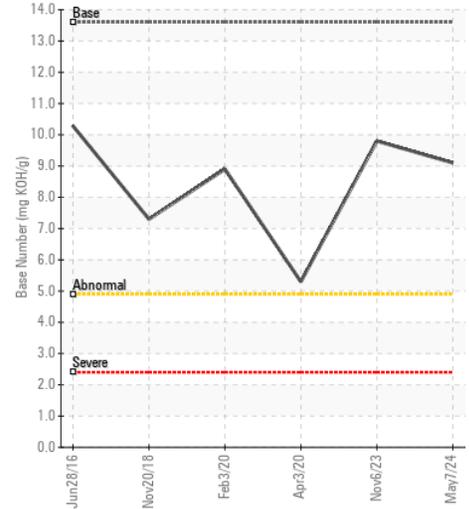
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0210286
Lab Number : 06178473
Unique Number : 11029799
Test Package : CONST (Additional Tests: TBN)

Received : 14 May 2024
Tested : 15 May 2024
Diagnosed : 16 May 2024 - Sean Felton

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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)