



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	MARGINAL

Area

[05W48014]

Machine Id

JOHN DEERE 345G 1FF345GXLKF020612

Component

Diesel Engine

Fluid

JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (50 QTS)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0225433	JR0187484	JR0168906
Sample Date		Client Info		11 Jul 2024	26 Sep 2023	24 Apr 2023
Machine Age	hrs	Client Info		2453	1942	1440
Oil Age	hrs	Client Info		511	502	490
Filter Age	hrs	Client Info		511	502	490
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				MARGINAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>51	9	5	5
Chromium	ppm	ASTM D5185m	>11	0	<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	4	1	3
Lead	ppm	ASTM D5185m	>26	<1	<1	0
Copper	ppm	ASTM D5185m	>26	1	2	2
Tin	ppm	ASTM D5185m	>4	0	1	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

Fuel content negligible. There is no indication of any contamination in the oil.

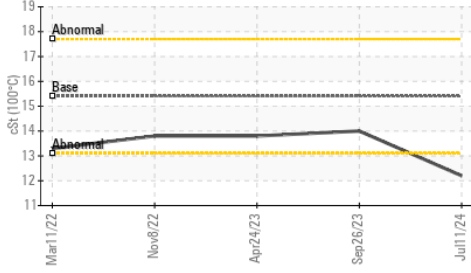
Silicon	ppm	ASTM D5185m	>22	6	6	7
Potassium	ppm	ASTM D5185m	>20	<1	0	0
Fuel	%	ASTM D3524	>2.1	0.1	<1.0	<1.0
Water		WC Method	>0.21	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.2	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	7.2	7.8	7.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.1	21.0	19.3
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

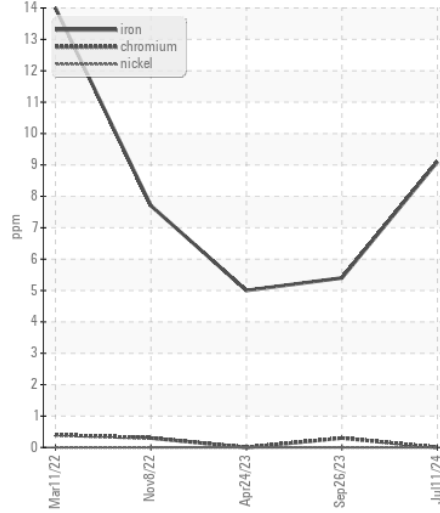
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil.

Sodium	ppm	ASTM D5185m	>31	2	2	1
Boron	ppm	ASTM D5185m		187	260	249
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		188	250	237
Manganese	ppm	ASTM D5185m		<1	<1	1
Magnesium	ppm	ASTM D5185m		670	824	773
Calcium	ppm	ASTM D5185m		2157	1412	1361
Phosphorus	ppm	ASTM D5185m		1013	895	842
Zinc	ppm	ASTM D5185m		1198	1089	1076
Sulfur	ppm	ASTM D5185m		3893	3119	3119
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.6	15.4	14.6
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	9.3	9.4	8.1
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 12.2	14.0	13.8

▲ Viscosity @ 100°C



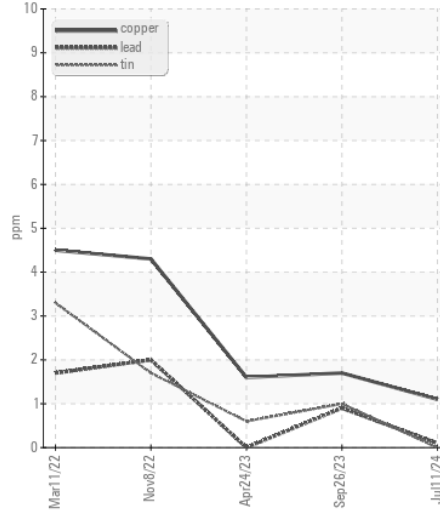
Ferrous Alloys



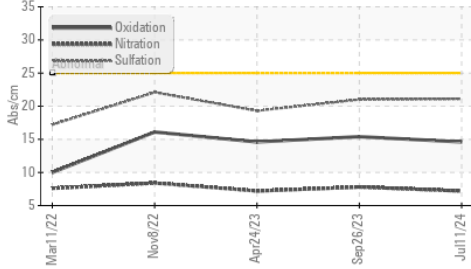
Fuel Dilution



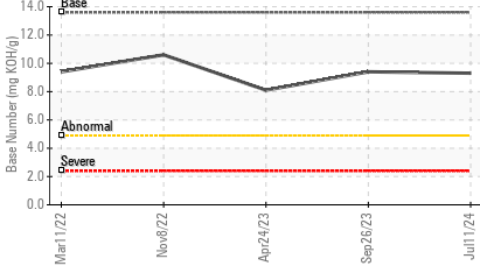
Non-ferrous Metals



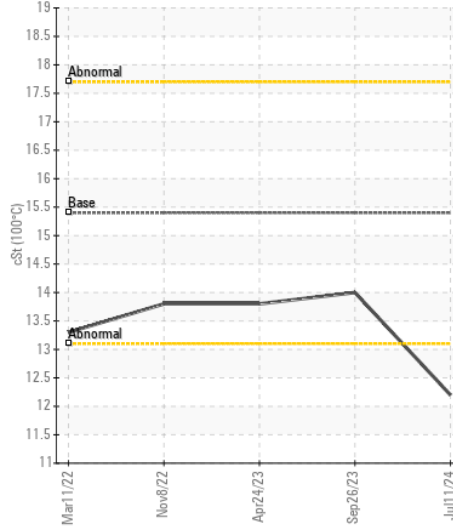
FT-IR (Direct Trend)



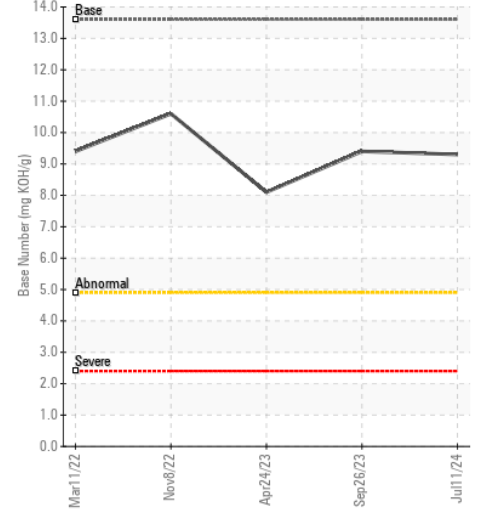
Base Number



▲ Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0225433 **Received** : 15 Jul 2024
Lab Number : 06235700 **Tested** : 17 Jul 2024
Unique Number : 11124534 **Diagnosed** : 17 Jul 2024 - Jonathan Hester
Test Package : CONST (Additional Tests: FuelDilution, PercentFuel, TBN)

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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)