



OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	MARGINAL

Machine Id
JOHN DEERE 1T0317GJKJJ331530
 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		JR0216693	JR0038073	JR0005810
Sample Date		Client Info		29 May 2024	22 Feb 2020	18 May 2019
Machine Age	hrs	Client Info		0	975	457
Oil Age	hrs	Client Info		0	0	457
Filter Age	hrs	Client Info		0	0	457
Oil Changed		Client Info		N/A	Changed	Changed
Filter Changed		Client Info		N/A	Changed	Changed
Sample Status				ABNORMAL	NORMAL	ABNORMAL

WEAR

The aluminum level is abnormal. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>51	42	27	31
Chromium	ppm	ASTM D5185m	>11	2	1	1
Nickel	ppm	ASTM D5185m	>5	0	1	<1
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	<1
Aluminum	ppm	ASTM D5185m	>31	▲ 31	15	11
Lead	ppm	ASTM D5185m	>26	0	2	5
Copper	ppm	ASTM D5185m	>26	4	25	▲ 115
Tin	ppm	ASTM D5185m	>4	1	0	0
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

Fuel content negligible. Elemental level of silicon (Si) above normal indicating ingress of seal material.

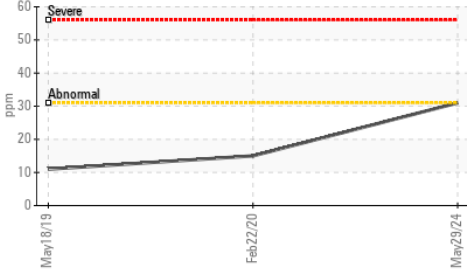
Silicon	ppm	ASTM D5185m	>22	▲ 30	15	31
Potassium	ppm	ASTM D5185m	>20	2	0	0
Fuel	%	ASTM D3524	>2.1	0.5	<1.0	<1.0
Water		WC Method	>0.21	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.5	0.7	0.5
Nitration	Abs/cm	*ASTM D7624	>20	8.4	10.4	9.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.0	25.1	22.9
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

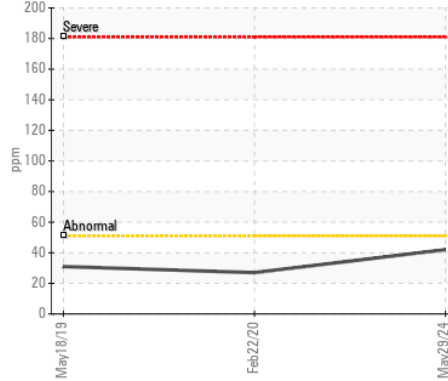
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil.

Sodium	ppm	ASTM D5185m	>31	2	4	10
Boron	ppm	ASTM D5185m		202	159	160
Barium	ppm	ASTM D5185m		<1	0	1
Molybdenum	ppm	ASTM D5185m		194	239	228
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		642	806	696
Calcium	ppm	ASTM D5185m		1697	1429	1682
Phosphorus	ppm	ASTM D5185m		964	783	874
Zinc	ppm	ASTM D5185m		1109	944	1059
Sulfur	ppm	ASTM D5185m		3433	2116	2558
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.1	20.5	17.5
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	7.8	8	8.7
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 12.3	13.9	11.7

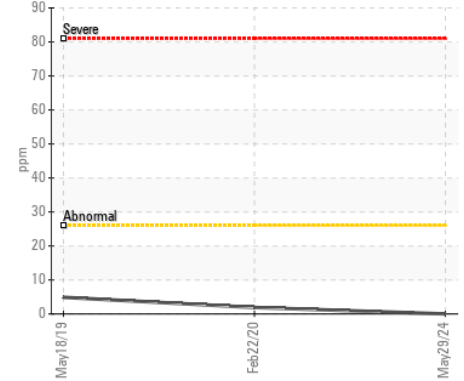
▲ Aluminum (ppm)



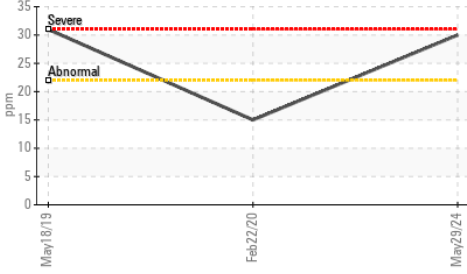
Iron (ppm)



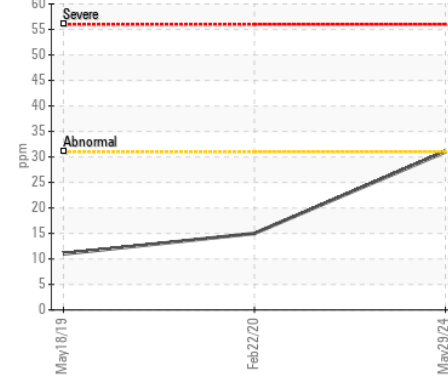
Lead (ppm)



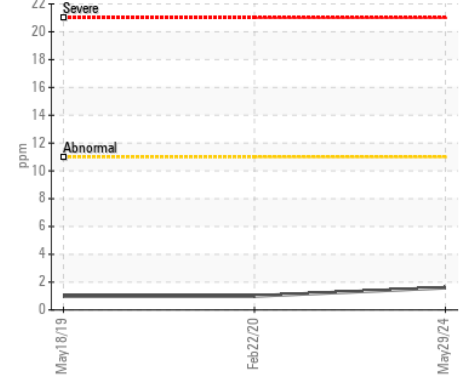
▲ Silicon (ppm)



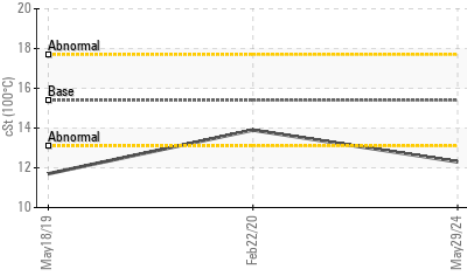
▲ Aluminum (ppm)



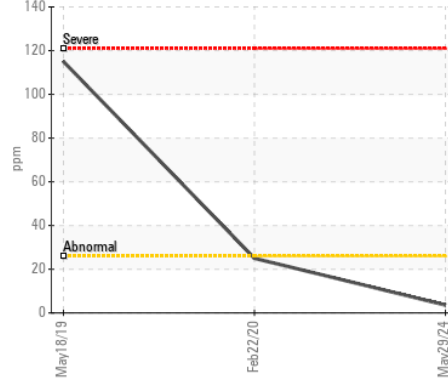
Chromium (ppm)



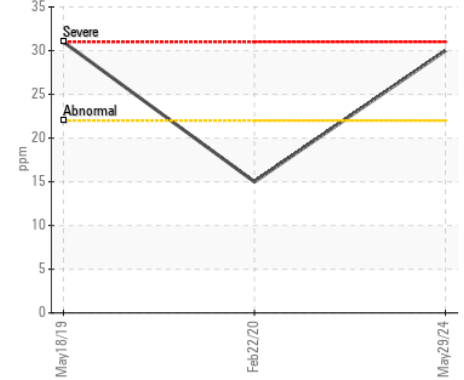
▲ Viscosity @ 100°C



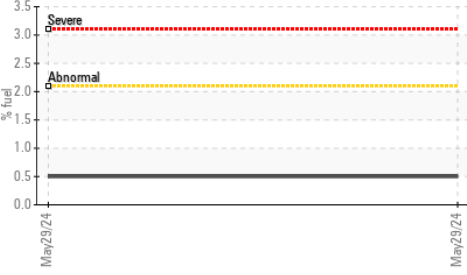
Copper (ppm)



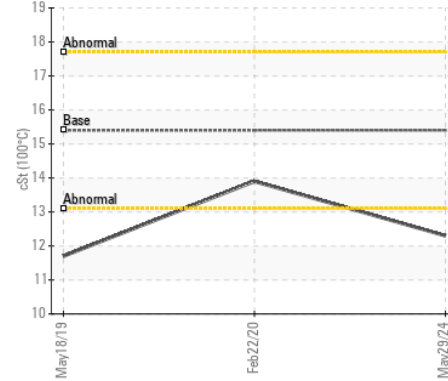
▲ Silicon (ppm)



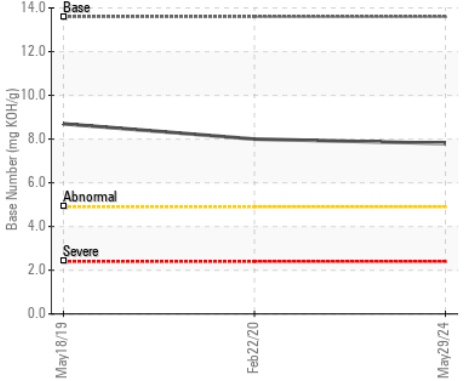
Fuel Dilution



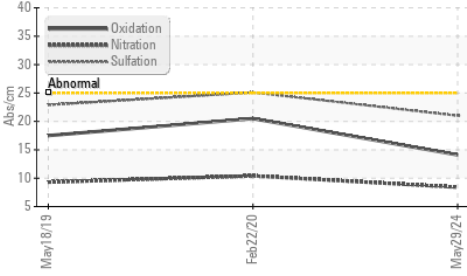
▲ Viscosity @ 100°C



Base Number



FT-IR (Direct Trend)



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0216693 **Received** : 30 May 2024
Lab Number : 06195297 **Tested** : 04 Jun 2024
Unique Number : 11057420 **Diagnosed** : 05 Jun 2024 - Jonathan Hester
Test Package : MOBCE (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)