



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
JOHN DEERE 524 P 1DW524PAPRLX21751

Component
Diesel Engine

Fluid
{not provided} (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0213594	JR0204710	JR0194823
Sample Date		Client Info		25 Jun 2024	08 May 2024	10 Mar 2024
Machine Age	hrs	Client Info		1484	1026	521
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	ABNORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>51	14	21	34
Chromium	ppm	ASTM D5185m	>11	0	<1	1
Nickel	ppm	ASTM D5185m	>5	1	0	2
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	<1
Aluminum	ppm	ASTM D5185m	>31	4	3	6
Lead	ppm	ASTM D5185m	>26	0	1	1
Copper	ppm	ASTM D5185m	>26	8	▲ 72	▲ 507
Tin	ppm	ASTM D5185m	>4	<1	2	2
Vanadium	ppm	ASTM D5185m		0	0	<1
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.

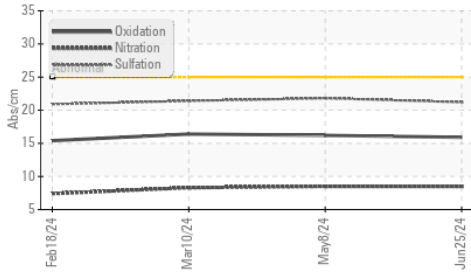
Silicon	ppm	ASTM D5185m	>22	7	7	13
Potassium	ppm	ASTM D5185m	>20	2	0	4
Fuel		WC Method	>2.1	<1.0	<1.0	<1.0
Water		WC Method	>0.21	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.3	0.3	0.2
Nitration	Abs/cm	*ASTM D7624	>20	8.5	8.5	8.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.2	21.8	21.4
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

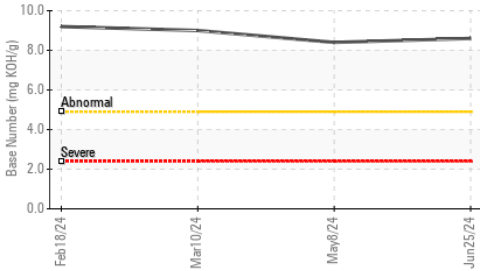
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>31	3	2	4
Boron	ppm	ASTM D5185m		219	249	285
Barium	ppm	ASTM D5185m		<1	<1	0
Molybdenum	ppm	ASTM D5185m		242	254	284
Manganese	ppm	ASTM D5185m		1	1	5
Magnesium	ppm	ASTM D5185m		834	832	872
Calcium	ppm	ASTM D5185m		1447	1478	1508
Phosphorus	ppm	ASTM D5185m		921	931	1031
Zinc	ppm	ASTM D5185m		1093	1097	1131
Sulfur	ppm	ASTM D5185m		3453	3501	3423
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.9	16.2	16.4
Base Number (BN)	mg KOH/g	ASTM D2896		8.6	8.4	9.0
Visc @ 100°C	cSt	ASTM D445		13.0	12.7	10.4

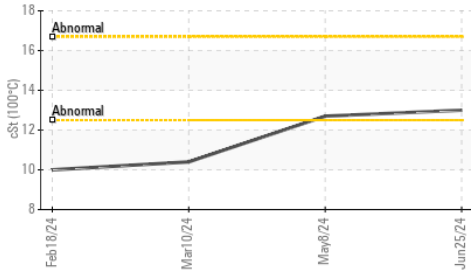
FT-IR (Direct Trend)



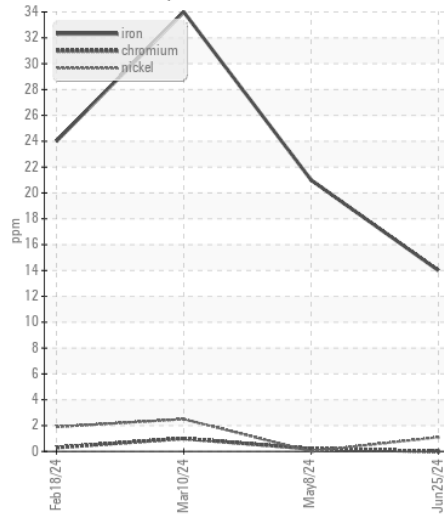
Base Number



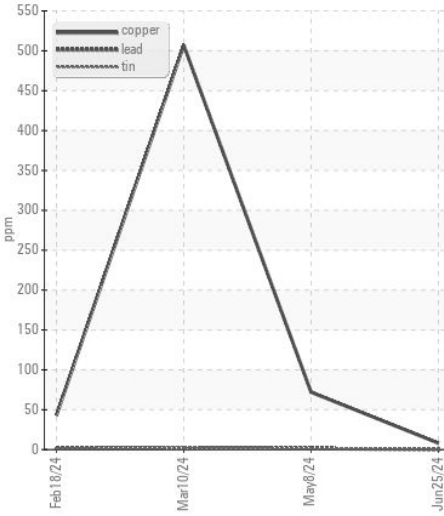
Viscosity @ 100°C



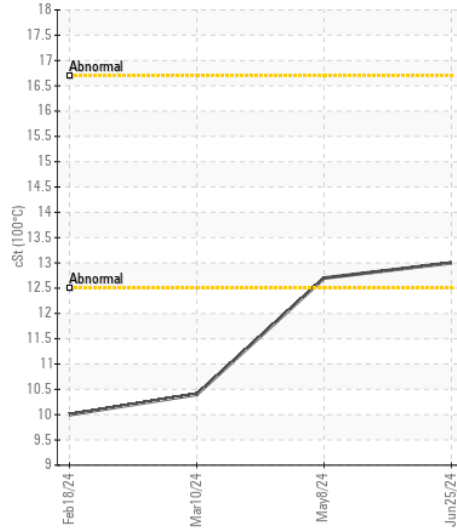
Ferrous Alloys



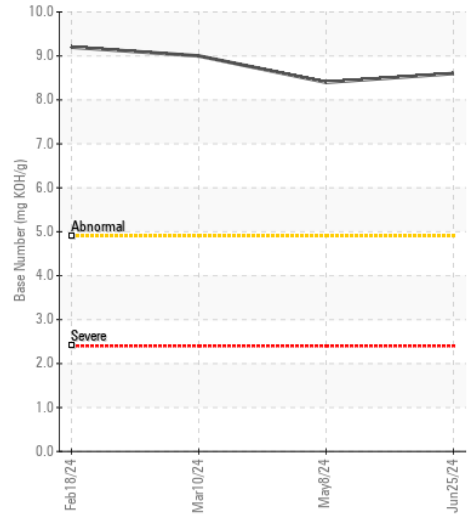
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : JR0213594

Lab Number : 06220814

Unique Number : 11099011

Test Package : CONST (Additional Tests: TBN)

Received : 26 Jun 2024

Tested : 27 Jun 2024

Diagnosed : 27 Jun 2024 - Wes Davis

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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