



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
[W44834]

Machine Id
WIRTGEN W2101 1520-1187

Component
Front 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		JR0164909	JR0125739	JR0105900
Sample Date		Client Info		21 Jun 2023	14 Sep 2022	13 Apr 2022
Machine Age	hrs	Client Info		6733	5919	5300
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	ABNORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	33	65	37
Chromium	ppm	ASTM D5185m	>20	1	2	2
Nickel	ppm	ASTM D5185m	>4	<1	<1	<1
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	0	<1	0
Aluminum	ppm	ASTM D5185m	>20	3	6	3
Lead	ppm	ASTM D5185m	>40	<1	1	1
Copper	ppm	ASTM D5185m	>330	2	2	2
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	<1	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.

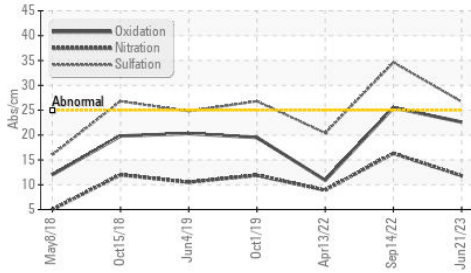
Silicon	ppm	ASTM D5185m	>25	9	11	7
Potassium	ppm	ASTM D5185m	>20	<1	2	<1
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	1	▲ 4.1	0.2
Nitration	Abs/cm	*ASTM D7624	>20	11.8	16.3	8.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	26.7	34.6	20.4
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	>0.2	NEG	NEG	NEG

FLUID CONDITION

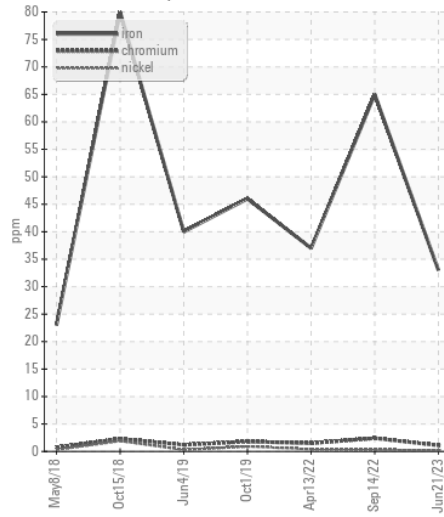
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		2	2	1
Boron	ppm	ASTM D5185m		125	104	5
Barium	ppm	ASTM D5185m		0	1	0
Molybdenum	ppm	ASTM D5185m		233	211	60
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		895	838	998
Calcium	ppm	ASTM D5185m		1551	1446	1415
Phosphorus	ppm	ASTM D5185m		950	886	1171
Zinc	ppm	ASTM D5185m		1150	1126	1323
Sulfur	ppm	ASTM D5185m		3433	2937	3125
Oxidation	Abs/.1mm	*ASTM D7414	>25	22.6	25.5	10.9
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	8.6	9.2	6.7
Visc @ 100°C	cSt	ASTM D445	15.4	14.9	16.3	13.6

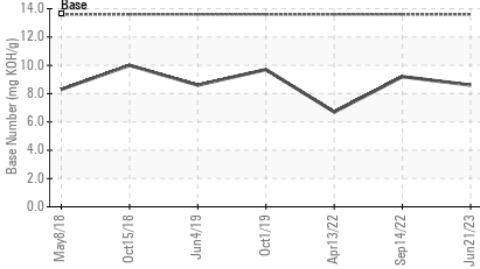
FT-IR (Direct Trend)



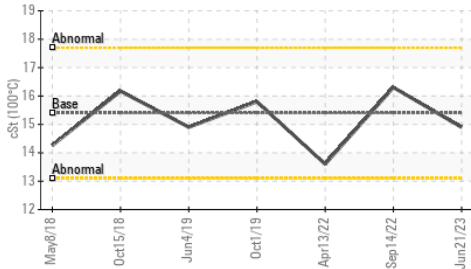
Ferrous Alloys



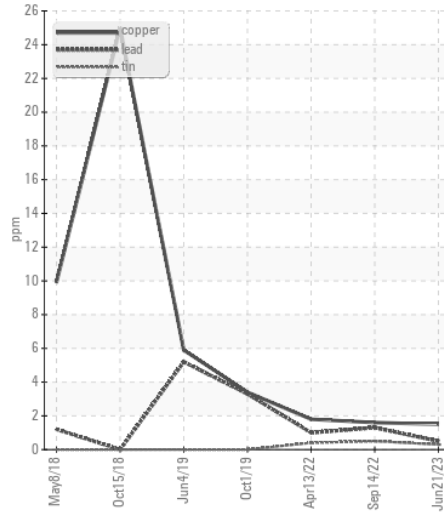
Base Number



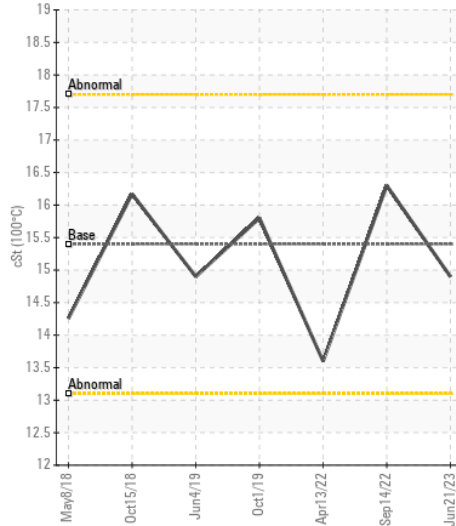
Viscosity @ 100°C



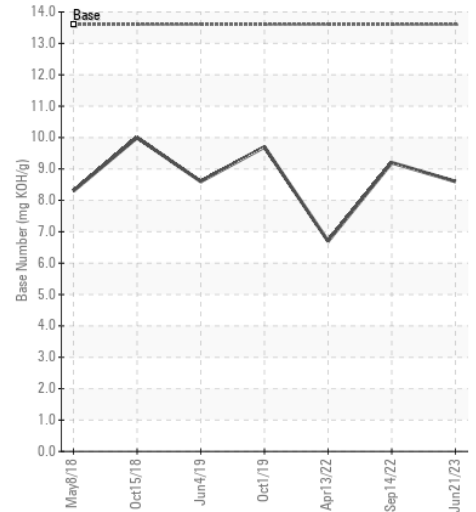
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0164909 **Received** : 23 Jun 2023
Lab Number : 05881780 **Tested** : 23 Jun 2023
Unique Number : 10532263 **Diagnosed** : 27 Jun 2023 - Angela Borella
Test Package : CONST (Additional Tests: 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)