



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
[W52633 ADVANSIX]
 Machine Id
JOHN DEERE 824K 1DW824KXPDE655823
 Component
Diesel Engine
 Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0224942	JR0199541	JR0165985
Sample Date		Client Info		19 Jun 2024	05 Apr 2024	17 Jan 2024
Machine Age	hrs	Client Info		15680	15291	14800
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	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>51	13	15	19
Chromium	ppm	ASTM D5185m	>11	<1	<1	1
Nickel	ppm	ASTM D5185m	>5	<1	1	1
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>31	8	8	14
Lead	ppm	ASTM D5185m	>26	3	5	3
Copper	ppm	ASTM D5185m	>26	9	8	6
Tin	ppm	ASTM D5185m	>4	1	<1	1
Vanadium	ppm	ASTM D5185m		<1	<1	<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.

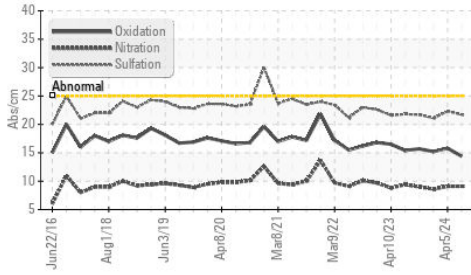
Silicon	ppm	ASTM D5185m	>22	7	6	10
Potassium	ppm	ASTM D5185m	>20	4	2	4
Fuel		WC Method	>2.1	<1.0	<1.0	<1.0
Water		WC Method	>0.21	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	1.1	1	0.6
Nitration	Abs/cm	*ASTM D7624	>20	9.1	9.1	8.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.7	22.3	21.1
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

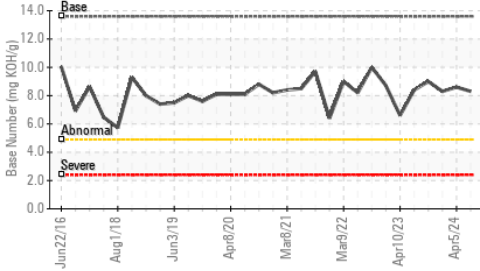
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>31	7	4	7
Boron	ppm	ASTM D5185m		144	156	191
Barium	ppm	ASTM D5185m		<1	<1	0
Molybdenum	ppm	ASTM D5185m		201	206	244
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		697	805	1015
Calcium	ppm	ASTM D5185m		1487	1404	1485
Phosphorus	ppm	ASTM D5185m		982	938	1118
Zinc	ppm	ASTM D5185m		1135	1085	1322
Sulfur	ppm	ASTM D5185m		3598	3534	4084
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.4	15.8	15.2
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	8.3	8.6	8.3
Visc @ 100°C	cSt	ASTM D445	15.4	12.3	12.4	12.5

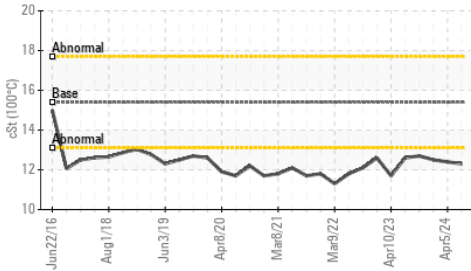
FT-IR (Direct Trend)



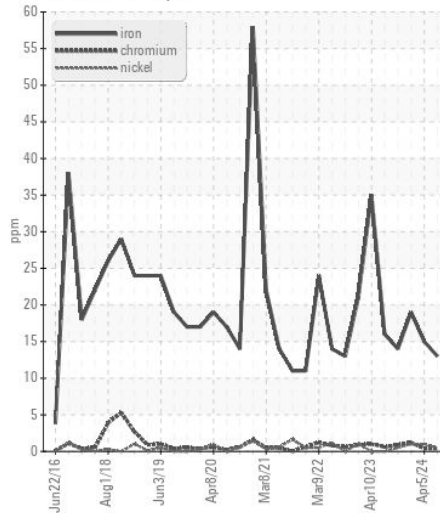
Base Number



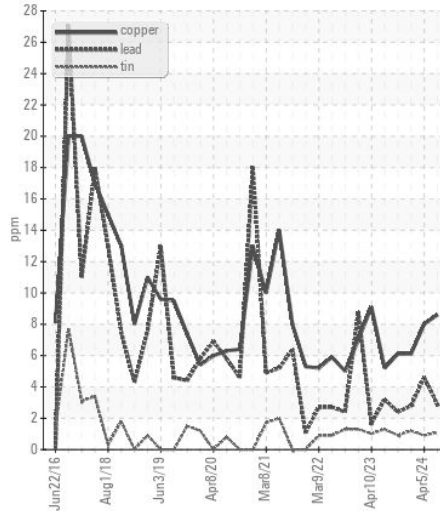
Viscosity @ 100°C



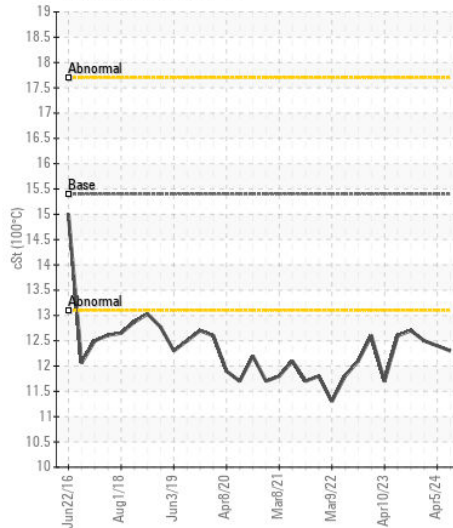
Ferrous Alloys



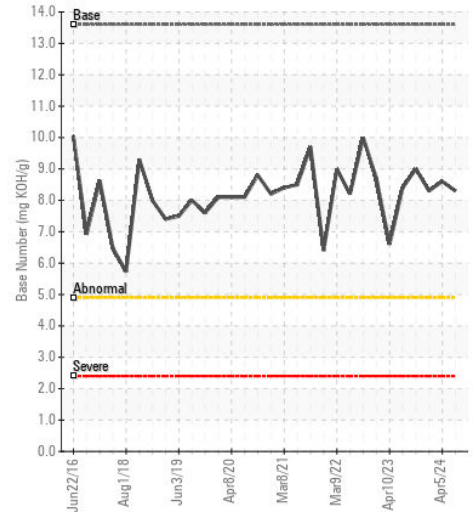
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0224942
Lab Number : 06222191
Unique Number : 11100388
Test Package : CONST (Additional Tests: TBN)

Received : 27 Jun 2024
Tested : 28 Jun 2024
Diagnosed : 28 Jun 2024 - Wes Davis

JRE - ASHLAND
 11047 LEADBETTER RD
 ASHLAND, VA
 US 23005

Contact: DAVID ZIEG
 dzieg@jamesriverequipment.com

T: (804)798-6001
 F: (804)798-0292

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)