James River Equipment

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL

Area
[W52467 ADVANSIX]
Machine Id
JOHN DEERE 824K 1DW824KXPKF694323
Component
Diesel Engine
Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- QTS)

RECOMMENDATION

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

WEAR

All component wear rates are normal.

CONTAMINATION

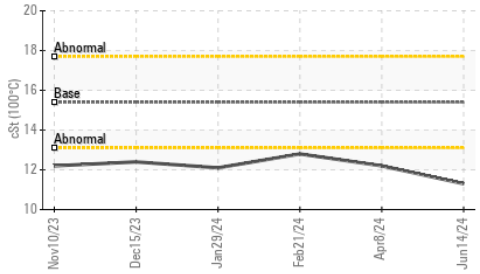
Fuel content negligible. There is no indication of any contamination in the oil.

FLUID CONDITION

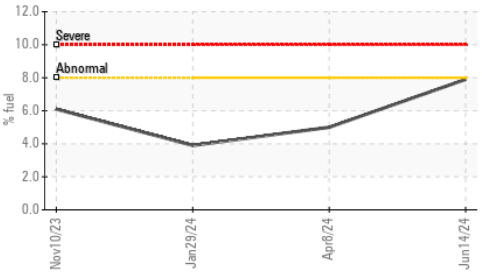
Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0212059	JR0199619	JR0200307
Sample Date		Client Info		14 Jun 2024	08 Apr 2024	21 Feb 2024
Machine Age	hrs	Client Info		5975	5487	5029
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				ABNORMAL	ABNORMAL	NORMAL
Iron	ppm	ASTM D5185m	>51	10	8	8
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	<1	0	0
Aluminum	ppm	ASTM D5185m	>31	4	4	4
Lead	ppm	ASTM D5185m	>26	8	4	2
Copper	ppm	ASTM D5185m	>26	10	9	5
Tin	ppm	ASTM D5185m	>4	2	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
Silicon	ppm	ASTM D5185m	>22	8	6	9
Potassium	ppm	ASTM D5185m	>20	3	2	3
Fuel	%	ASTM D3524	>8.0	7.9	5.0	<1.0
Water		WC Method	>0.21	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.2	0.3	0.1
Nitration	Abs/cm	*ASTM D7624	>20	8.6	8.5	7.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.6	22.2	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	>0.21	NEG	NEG	NEG
Sodium	ppm	ASTM D5185m	>31	3	4	3
Boron	ppm	ASTM D5185m		142	186	252
Barium	ppm	ASTM D5185m		1	<1	2
Molybdenum	ppm	ASTM D5185m		212	222	243
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		596	762	755
Calcium	ppm	ASTM D5185m		1368	1418	1270
Phosphorus	ppm	ASTM D5185m		687	850	866
Zinc	ppm	ASTM D5185m		875	1010	1022
Sulfur	ppm	ASTM D5185m		2841	3410	3312
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.0	16.9	14.5
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	7.2	7.9	9.0
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 11.3	▲ 12.2	12.8

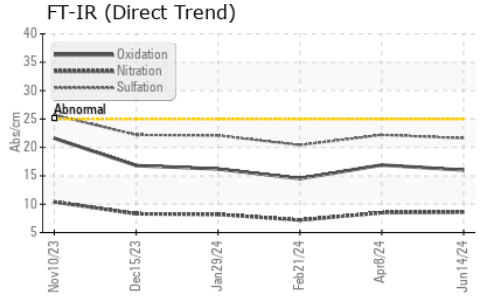
Viscosity @ 100°C



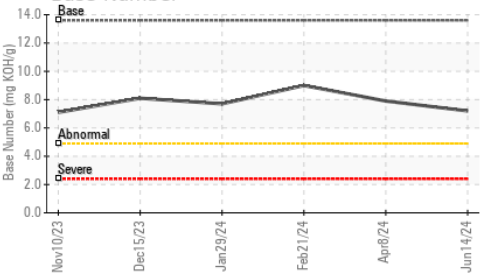
Fuel Dilution



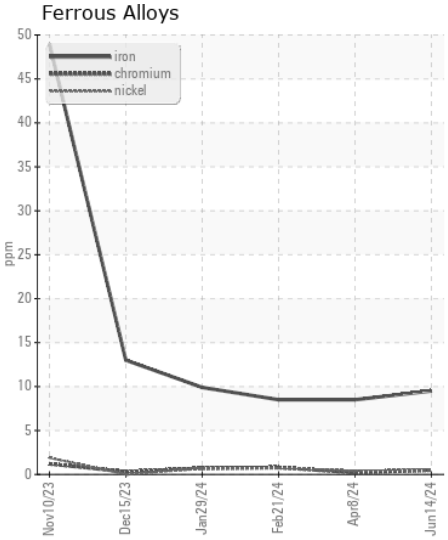
FT-IR (Direct Trend)



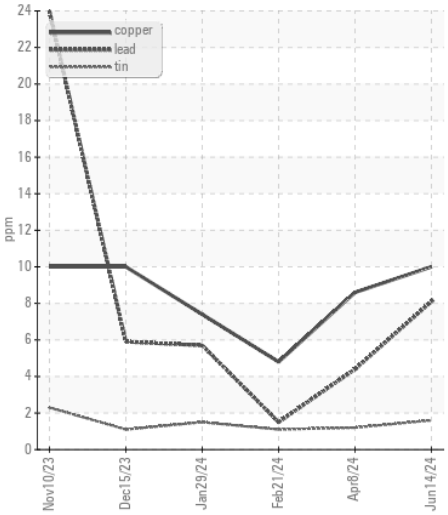
Base Number



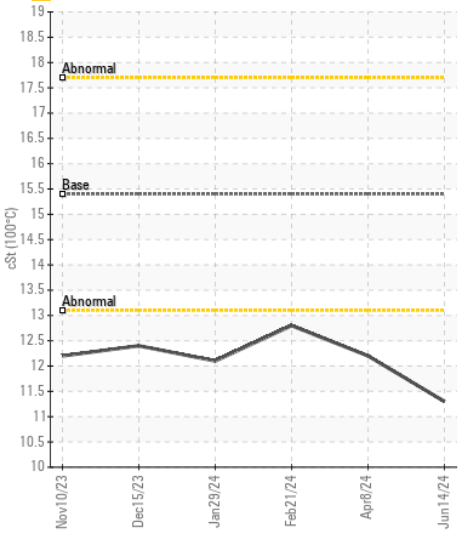
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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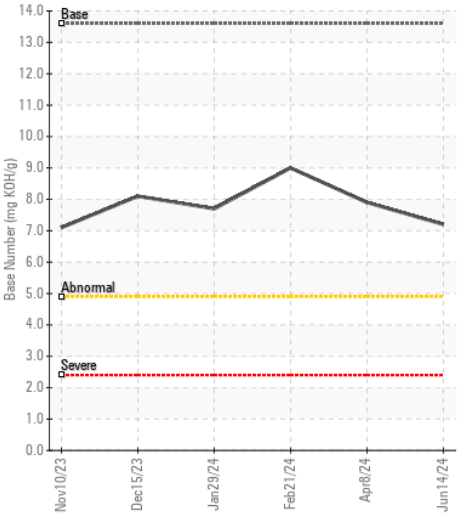

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0212059
Lab Number : 06213129
Unique Number : 11085993
Test Package : CONST (Additional Tests: FuelDilution, PercentFuel, TBN)

Received : 18 Jun 2024
Tested : 20 Jun 2024
Diagnosed : 20 Jun 2024 - Jonathan Hester

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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