



OIL ANALYSIS REPORT

WEAR	SEVERE
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
JOHN DEERE 644K LDR009
Component
Diesel Engine
Fluid
MOBIL 15W40 (--- GAL)

RECOMMENDATION

The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0925818	WC0920178	WC0904238
Sample Date		Client Info		01 Jul 2024	11 Apr 2024	10 Feb 2024
Machine Age	hrs	Client Info		13081	12657	12116
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				SEVERE	NORMAL	NORMAL

WEAR

Nickel ppm levels are severe. A sharp increase in the nickel level is noted. Exhaust valve wear is indicated.

Iron	ppm	ASTM D5185(m)	>51	40	34	33
Chromium	ppm	ASTM D5185(m)	>11	2	<1	<1
Nickel	ppm	ASTM D5185(m)	>5	▲ 17	2	2
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)	>3	0	0	0
Aluminum	ppm	ASTM D5185(m)	>31	3	2	2
Lead	ppm	ASTM D5185(m)	>26	0	0	<1
Copper	ppm	ASTM D5185(m)	>26	1	<1	<1
Tin	ppm	ASTM D5185(m)	>4	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

There is no indication of any contamination in the oil.

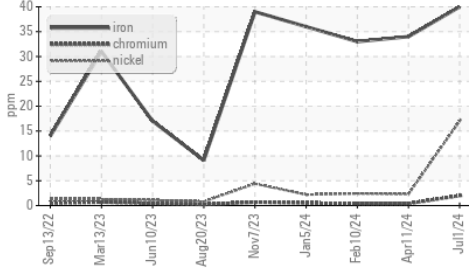
Silicon	ppm	ASTM D5185(m)	>22	7	4	5
Potassium	ppm	ASTM D5185(m)	>20	<1	0	1
Fuel		WC Method	>2.1	<1.0	<1.0	<1.0
Water		WC Method	>0.21	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>3	0.3	0.3	0.2
Nitration	Abs/cm	ASTM D7624*	>20	6.6	6.9	6.7
Sulfation	Abs/.1mm	ASTM D7415*	>30	21.7	22.1	21.6
Emulsified Water	scalar	Visual*	>0.21	NEG	NEG	NEG

FLUID CONDITION

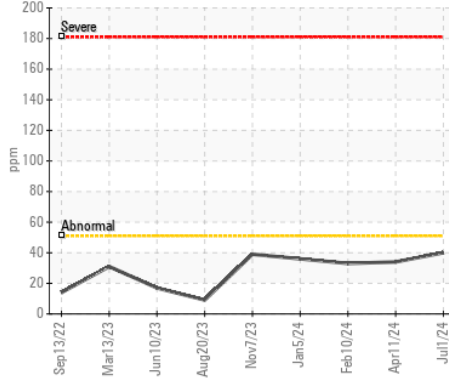
The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Sodium	ppm	ASTM D5185(m)	>118	3	2	2
Boron	ppm	ASTM D5185(m)		45	41	35
Barium	ppm	ASTM D5185(m)		0	0	0
Molybdenum	ppm	ASTM D5185(m)		39	39	40
Manganese	ppm	ASTM D5185(m)		<1	<1	0
Magnesium	ppm	ASTM D5185(m)		494	524	529
Calcium	ppm	ASTM D5185(m)		1696	1733	1691
Phosphorus	ppm	ASTM D5185(m)		728	743	767
Zinc	ppm	ASTM D5185(m)		852	869	878
Sulfur	ppm	ASTM D5185(m)		2111	2118	2264
Oxidation	Abs/.1mm	ASTM D7414*	>25	20.0	20.3	20.2
Visc @ 100°C	cSt	ASTM D7279(m)		13.1	13.5	13.3

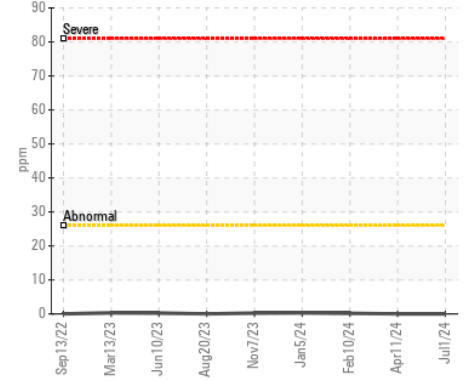
▲ Ferrous Alloys



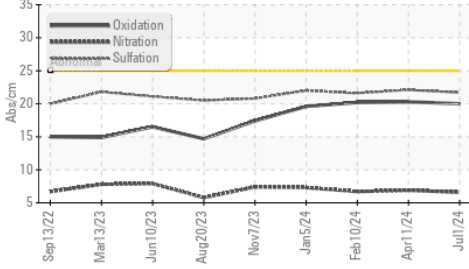
Iron (ppm)



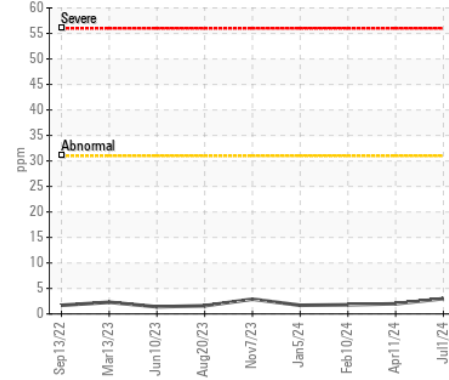
Lead (ppm)



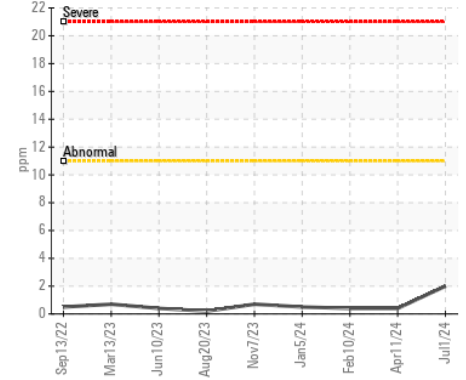
FT-IR (Direct Trend)



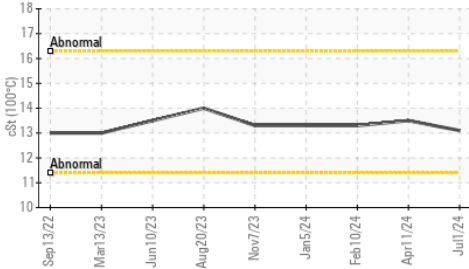
Aluminum (ppm)



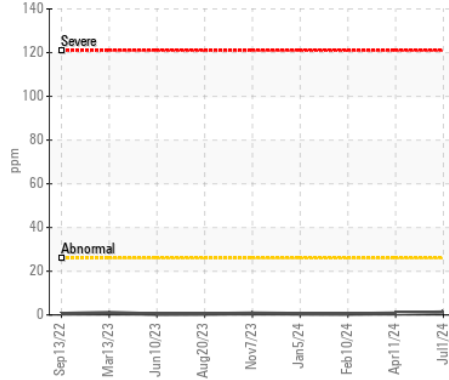
Chromium (ppm)



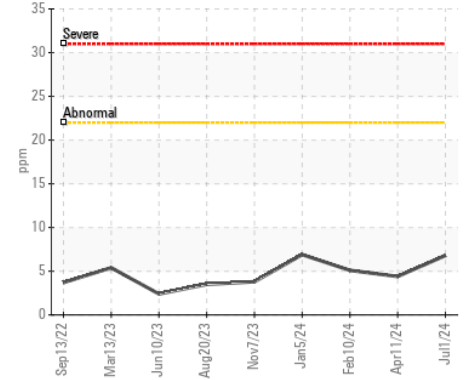
Viscosity @ 100°C



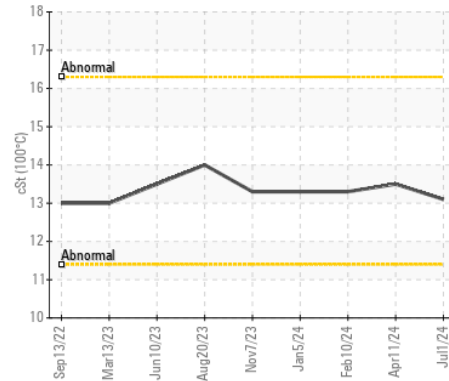
Copper (ppm)



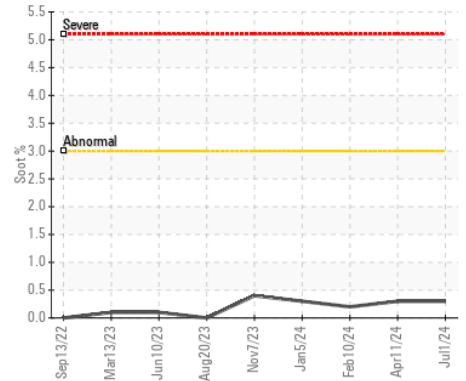
Silicon (ppm)



Viscosity @ 100°C



Soot %



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0925818
Lab Number : 02645397
Unique Number : 5802936
Test Package : MOB 1

Received : 04 Jul 2024
Tested : 04 Jul 2024
Diagnosed : 04 Jul 2024 - Kevin Marson

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To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.