James River Equipment

OIL ANALYSIS REPORT

WEAR	ATTENTION
CONTAMINATION	SEVERE
FLUID CONDITION	ABNORMAL

Machine Id
JOHN DEERE 850K 1T0850KXHJF339507
Component
Diesel Engine
Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- GAL)

RECOMMENDATION

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. We advise that you check the fuel injection system. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

WEAR

All component wear rates are normal.

CONTAMINATION

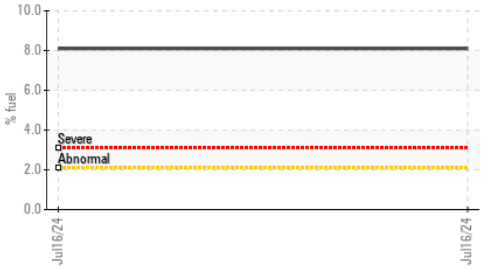
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. There is a high amount of fuel present in the oil.

FLUID CONDITION

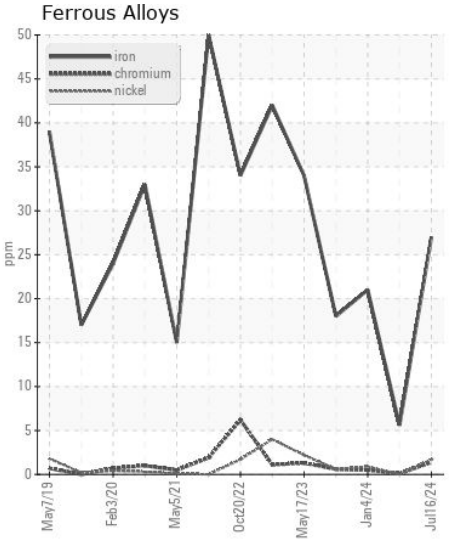
Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0223366	JR0204565	JR0194577
Sample Date		Client Info		16 Jul 2024	06 Feb 2024	04 Jan 2024
Machine Age	hrs	Client Info		8255	0	7545
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				SEVERE	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>51	27	6	21
Chromium	ppm	ASTM D5185m	>11	1	<1	<1
Nickel	ppm	ASTM D5185m	>5	2	0	<1
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>31	6	3	5
Lead	ppm	ASTM D5185m	>26	1	0	<1
Copper	ppm	ASTM D5185m	>26	2	0	1
Tin	ppm	ASTM D5185m	>4	<1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>22	▲ 22	7	21
Potassium	ppm	ASTM D5185m	>20	3	<1	3
Fuel	%	ASTM D3524	>2.1	▲ 8.1	<1.0	<1.0
Water		WC Method	>0.21	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	1	0.4	1.4
Nitration	Abs/cm	*ASTM D7624	>20	9.9	7.2	9.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	24.6	20.6	25.9
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	<1	3	0
Boron	ppm	ASTM D5185m		83	150	76
Barium	ppm	ASTM D5185m		2	0	11
Molybdenum	ppm	ASTM D5185m		231	171	224
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		736	767	753
Calcium	ppm	ASTM D5185m		1311	1225	1392
Phosphorus	ppm	ASTM D5185m		830	897	943
Zinc	ppm	ASTM D5185m		1012	1064	1028
Sulfur	ppm	ASTM D5185m		2601	2831	3102
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.3	14.6	18.6
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	7.3	8.4	7.2
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 11.9	13.3	13.5

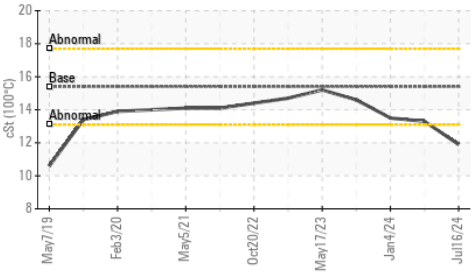
Fuel Dilution



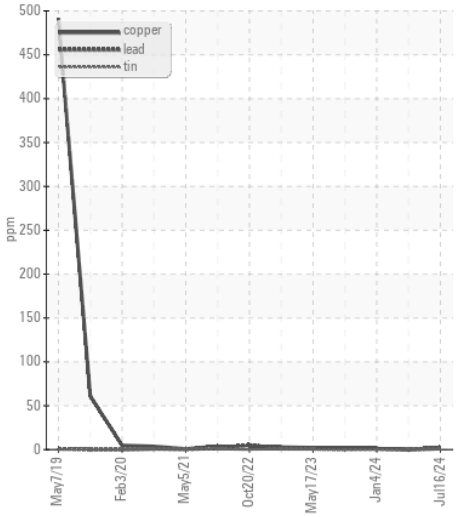
Ferrous Alloys



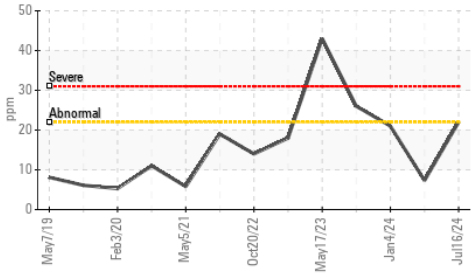
Viscosity @ 100°C



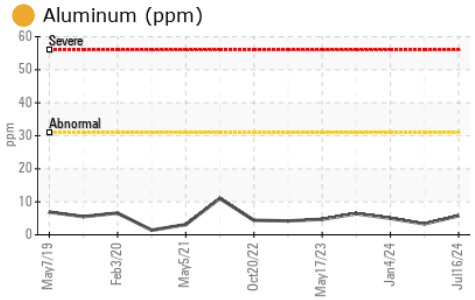
Non-ferrous Metals



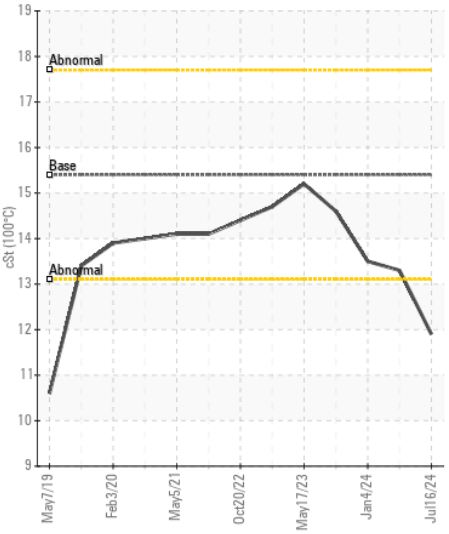
Silicon (ppm)



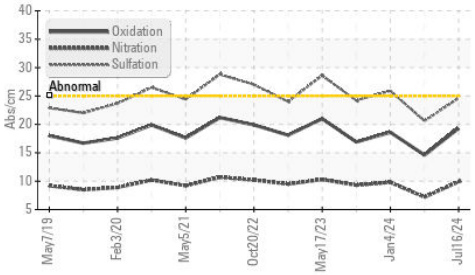
Aluminum (ppm)



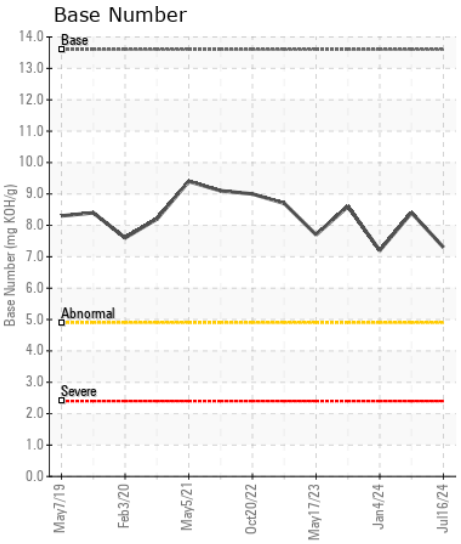
Viscosity @ 100°C



FT-IR (Direct Trend)



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0223366
Lab Number : 06238993
Unique Number : 11127827
Test Package : CONST (Additional Tests: FuelDilution, PercentFuel, TBN)

Received : 17 Jul 2024
Tested : 19 Jul 2024
Diagnosed : 19 Jul 2024 - Sean Felton

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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