James River Equipment

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	ABNORMAL

Machine Id
JOHN DEERE 470G 1FF470GXLEE471338
Component
Diesel Engine
Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (10 GAL)

RECOMMENDATION

We advise that you check for faulty combustion, plugged air filters, or aftercoolers. We recommend you service the filters on this component. We recommend an early resample to monitor this condition. NOTE: High solids (carbon/soot) in the sample have limited the accuracy of Infra-Red data including Total Base Number (TBN) value.

WEAR

All component wear rates are normal.

CONTAMINATION

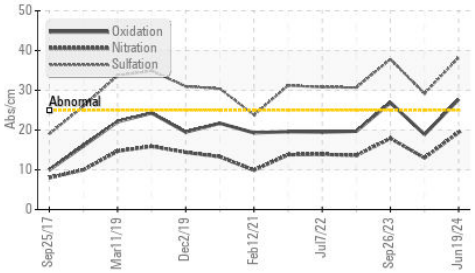
There is an abnormal amount of solids and carbon present in the oil.

FLUID CONDITION

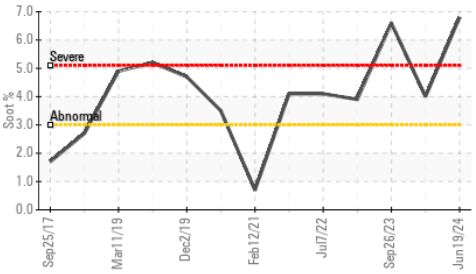
The oil viscosity is higher than normal. The BN level is low.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0213140	JR0194698	JR0186820
Sample Date		Client Info		19 Jun 2024	05 Dec 2023	26 Sep 2023
Machine Age	hrs	Client Info		7308	6668	6259
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	ABNORMAL	SEVERE
Iron	ppm	ASTM D5185m	>51	36	33	47
Chromium	ppm	ASTM D5185m	>11	1	<1	2
Nickel	ppm	ASTM D5185m	>5	<1	0	1
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>31	8	11	17
Lead	ppm	ASTM D5185m	>26	9	3	14
Copper	ppm	ASTM D5185m	>26	3	3	4
Tin	ppm	ASTM D5185m	>4	1	0	1
Vanadium	ppm	ASTM D5185m		<1	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>22	9	12	9
Potassium	ppm	ASTM D5185m	>20	3	3	2
Fuel	%	ASTM D3524	>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	▲ 6.8	▲ 4	▲ 6.6
Nitration	Abs/cm	*ASTM D7624	>20	19.4	13.0	17.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	38.2	29.2	37.8
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	2	3	3
Boron	ppm	ASTM D5185m		86	192	75
Barium	ppm	ASTM D5185m		<1	3	0
Molybdenum	ppm	ASTM D5185m		215	320	242
Manganese	ppm	ASTM D5185m		1	<1	2
Magnesium	ppm	ASTM D5185m		808	1067	838
Calcium	ppm	ASTM D5185m		1698	2058	1555
Phosphorus	ppm	ASTM D5185m		1134	1159	967
Zinc	ppm	ASTM D5185m		1327	1538	1214
Sulfur	ppm	ASTM D5185m		3355	4453	3134
Oxidation	Abs/.1mm	*ASTM D7414	>25	27.7	18.9	26.9
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	▲ 0.0	8.5	▲ 0.0
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 19.5	16.3	▲ 18.9

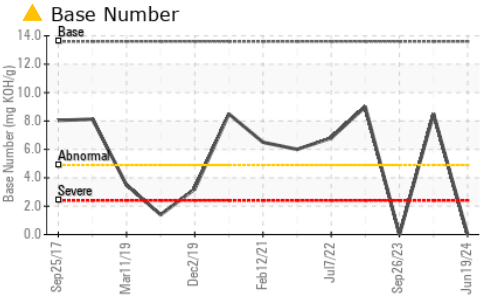
FT-IR (Direct Trend)



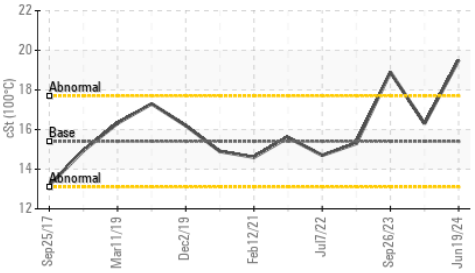
Soot %



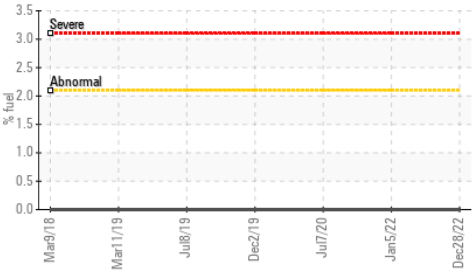
Base Number



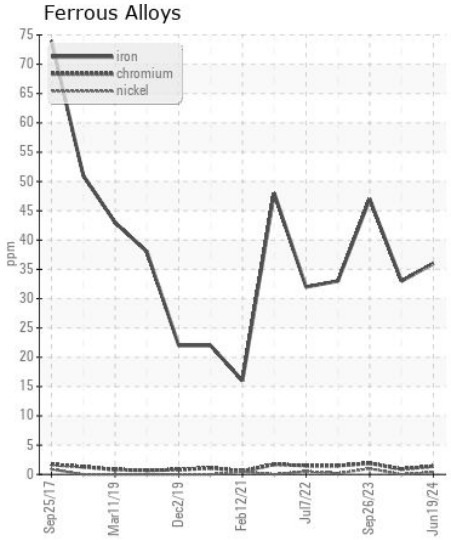
Viscosity @ 100°C



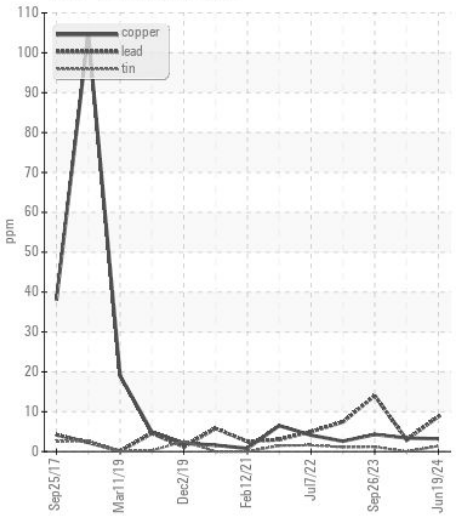
Fuel Dilution



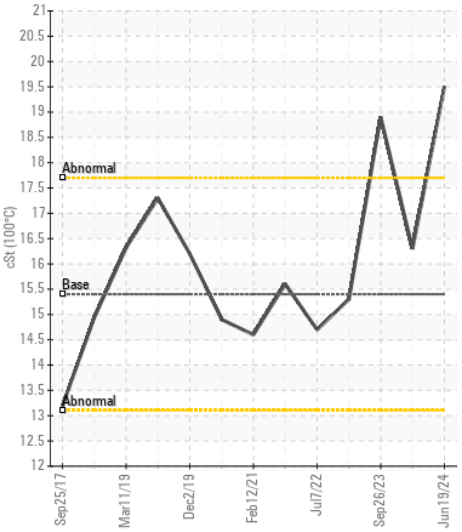
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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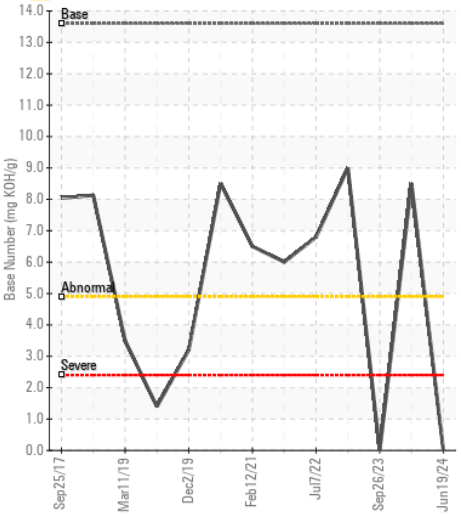

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0213140
Lab Number : 06215475
Unique Number : 11088339
Test Package : CONST (Additional Tests: FuelDilution, TBN)

Received : 20 Jun 2024
Tested : 21 Jun 2024
Diagnosed : 21 Jun 2024 - Don Baldridge

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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