James River Equipment

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	ABNORMAL

Machine Id
JOHN DEERE 1FF075GXHFJ015781
Component
Diesel Engine
Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (12 QTS)

RECOMMENDATION

We advise that you check the fuel injection system. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

WEAR

All component wear rates are normal.

CONTAMINATION

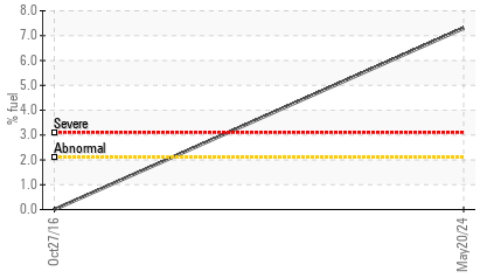
There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

FLUID CONDITION

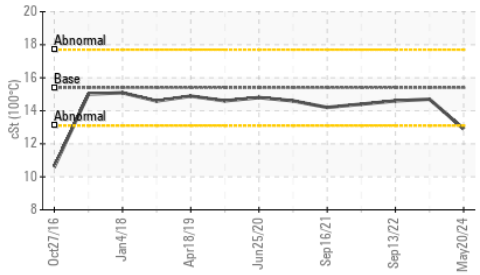
The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		**JR0218050**	JR0166507	JR0144103
Sample Date		Client Info		**20 May 2024**	07 Apr 2023	13 Sep 2022
Machine Age	hrs	Client Info		**4257**	3774	3488
Oil Age	hrs	Client Info		**483**	286	0
Filter Age	hrs	Client Info		**0**	286	0
Oil Changed		Client Info		**Changed**	Changed	Changed
Filter Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**SEVERE**	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>51	**28**	8	4
Chromium	ppm	ASTM D5185m	>11	**1**	0	<1
Nickel	ppm	ASTM D5185m	>5	**<1**	0	1
Titanium	ppm	ASTM D5185m		**<1**	0	0
Silver	ppm	ASTM D5185m	>3	**<1**	0	0
Aluminum	ppm	ASTM D5185m	>31	**6**	2	3
Lead	ppm	ASTM D5185m	>26	**<1**	0	<1
Copper	ppm	ASTM D5185m	>26	**2**	0	<1
Tin	ppm	ASTM D5185m	>4	**2**	0	2
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	**13**	10	10
Potassium	ppm	ASTM D5185m	>20	**2**	<1	0
Fuel	%	ASTM D3524	>2.1	▲ **7.3**	<1.0	<1.0
Water		WC Method	>0.21	**NEG**	NEG	NEG
Glycol		WC Method		**NEG**	NEG	NEG
Soot %	%	*ASTM D7844	>3	**1.4**	0.4	0.3
Nitration	Abs/cm	*ASTM D7624	>20	**11.6**	8.9	9.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	**25.7**	21.4	22.2
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**	<1	0
Boron	ppm	ASTM D5185m		**238**	254	285
Barium	ppm	ASTM D5185m		**0**	0	<1
Molybdenum	ppm	ASTM D5185m		**255**	242	243
Manganese	ppm	ASTM D5185m		**<1**	<1	<1
Magnesium	ppm	ASTM D5185m		**786**	792	782
Calcium	ppm	ASTM D5185m		**1433**	1404	1376
Phosphorus	ppm	ASTM D5185m		**847**	852	839
Zinc	ppm	ASTM D5185m		**1066**	1031	1024
Sulfur	ppm	ASTM D5185m		**3291**	3101	2849
Oxidation	Abs/.1mm	*ASTM D7414	>25	**21.7**	16.2	17.1
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	**8.7**	9.2	10.7
Visc @ 100°C	cSt	ASTM D445	15.4	▲ **12.9**	14.7	14.6

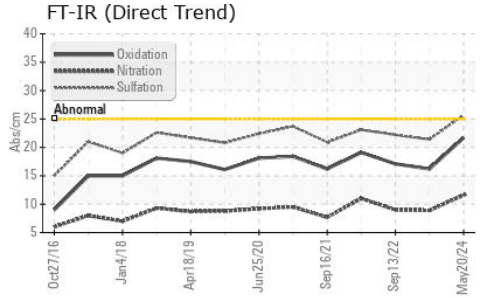
Fuel Dilution



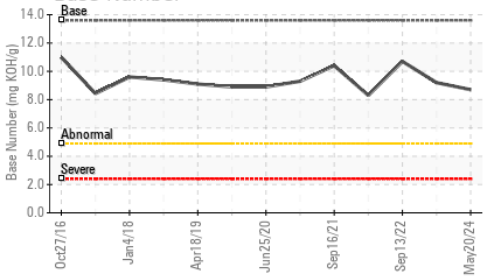
Viscosity @ 100°C



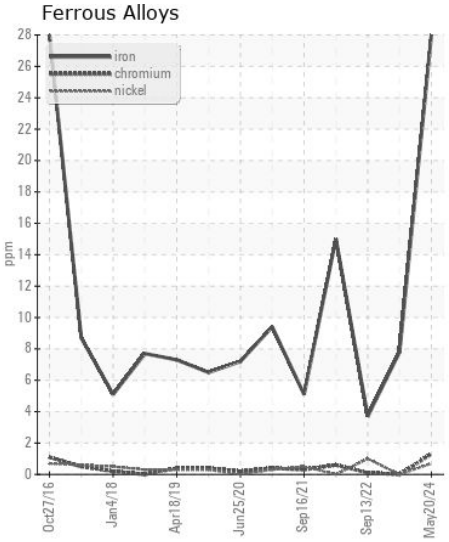
FT-IR (Direct Trend)



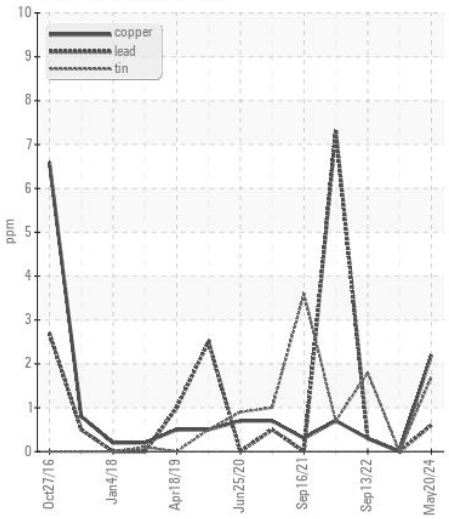
Base Number



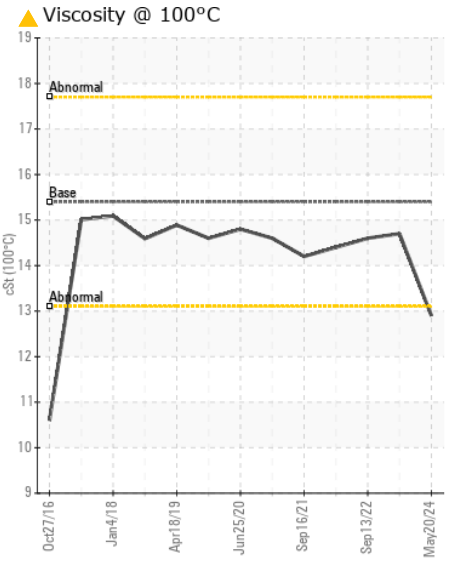
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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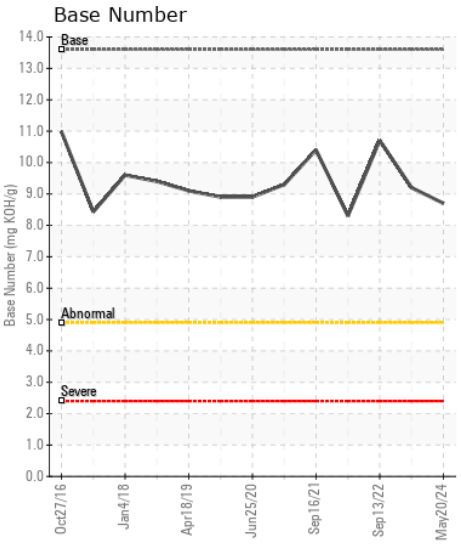

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0218050
Lab Number : 06189959
Unique Number : 11046711
Test Package : CONST (Additional Tests: FuelDilution, PercentFuel, TBN)

Received : 23 May 2024
Tested : 29 May 2024
Diagnosed : 29 May 2024 - Wes Davis

NPL CONSTRUCTION
7611 COPPERMINE DR
MANASSAS, VA
US 20109-2668
Contact: BRANDON

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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