James River Equipment

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
HITACHI 470 HCMJAA70C00030815
Component
Diesel Engine
Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- GAL)

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

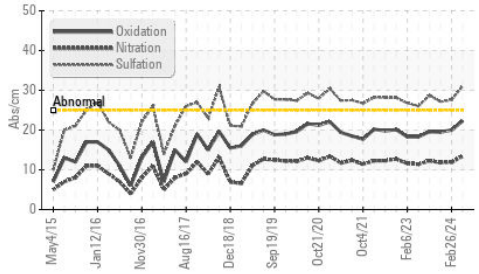
There is an abnormal amount of solids and carbon present in the oil.

FLUID CONDITION

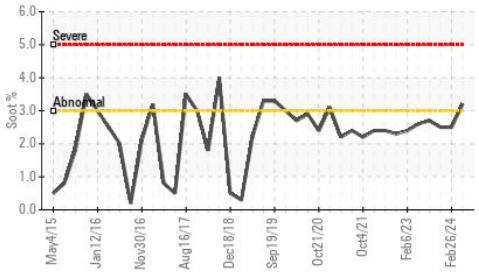
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0211832	JR0200501	JR0179623
Sample Date		Client Info		20 Jun 2024	26 Feb 2024	27 Nov 2023
Machine Age	hrs	Client Info		17963	17465	17018
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	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>100	37	28	22
Chromium	ppm	ASTM D5185m	>20	1	1	<1
Nickel	ppm	ASTM D5185m	>4	<1	<1	<1
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	6	6	5
Lead	ppm	ASTM D5185m	>40	6	3	2
Copper	ppm	ASTM D5185m	>330	5	2	4
Tin	ppm	ASTM D5185m	>15	<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	>25	12	10	8
Potassium	ppm	ASTM D5185m	>20	24	13	6
Fuel	%	ASTM D3524	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	*ASTM D2982		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	▲ 3.2	2.5	2.5
Nitration	Abs/cm	*ASTM D7624	>20	13.4	11.9	11.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	31.1	27.6	27.1
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	>0.2	NEG	NEG	NEG
Sodium	ppm	ASTM D5185m		75	36	39
Boron	ppm	ASTM D5185m		112	154	120
Barium	ppm	ASTM D5185m		3	0	3
Molybdenum	ppm	ASTM D5185m		263	271	271
Manganese	ppm	ASTM D5185m		1	<1	<1
Magnesium	ppm	ASTM D5185m		811	875	819
Calcium	ppm	ASTM D5185m		1480	1479	1404
Phosphorus	ppm	ASTM D5185m		910	970	877
Zinc	ppm	ASTM D5185m		1178	1187	1115
Sulfur	ppm	ASTM D5185m		2977	3233	3984
Oxidation	Abs/.1mm	*ASTM D7414	>25	22.3	20.0	19.5
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	8.2	8.8	9.1
Visc @ 100°C	cSt	ASTM D445	15.4	14.5	13.2	14.2

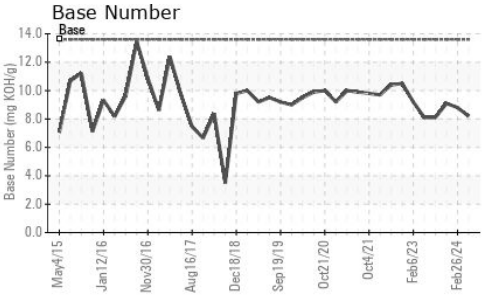
FT-IR (Direct Trend)



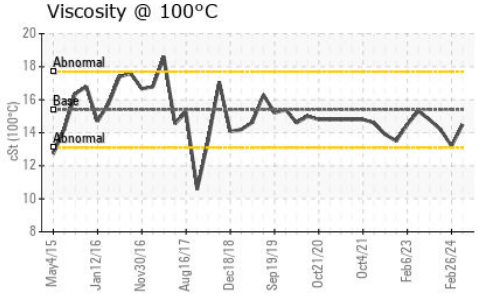
Soot %



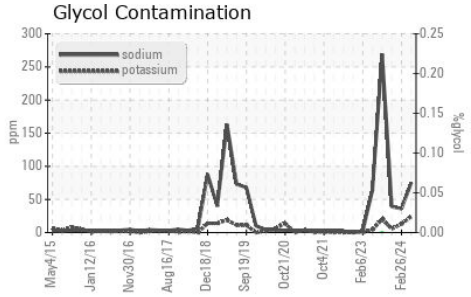
Base Number



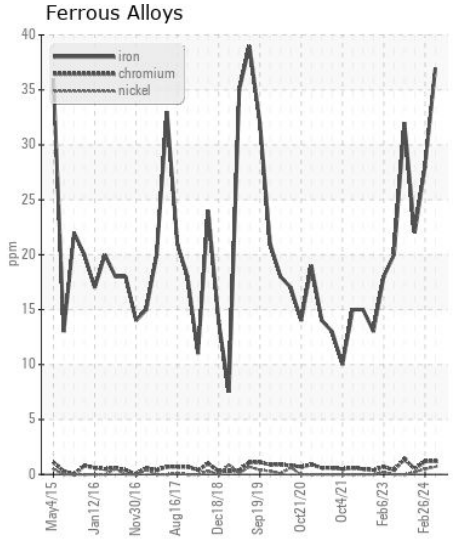
Viscosity @ 100°C



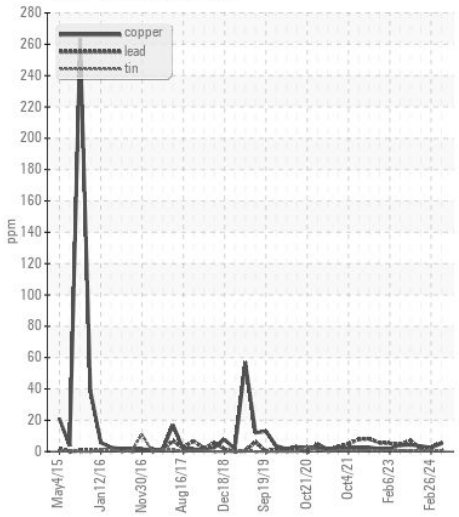
Glycol Contamination



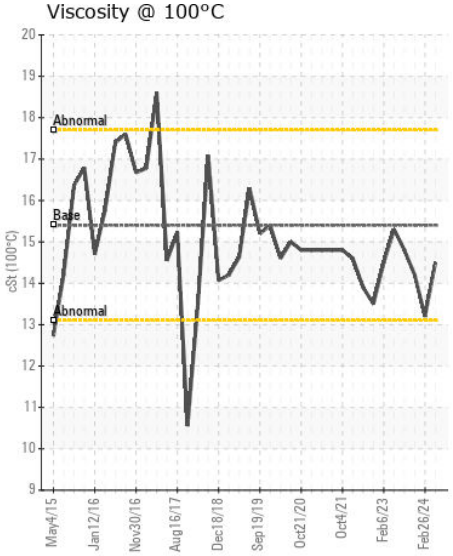
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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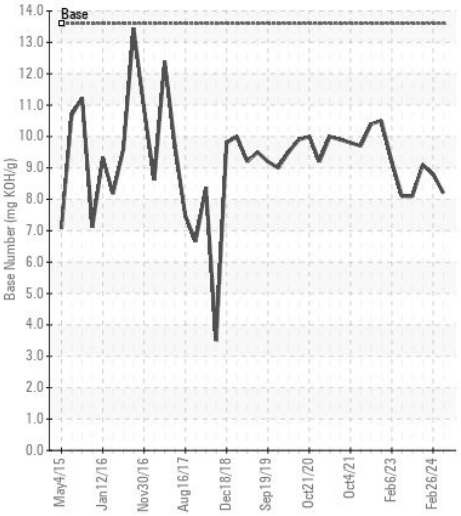

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0211832 **Received** : 25 Jun 2024
Lab Number : 06219521 **Tested** : 26 Jun 2024
Unique Number : 11097718 **Diagnosed** : 26 Jun 2024 - Jonathan Hester
Test Package : CONST (Additional Tests: FuelDilution, GLYCOL, TBN)

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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