James River Equipment

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
JOHN DEERE 437E 1T0437EDAKF344073
Component
Hydraulic System
Fluid
JOHN DEERE HYDRAU (--- GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

WEAR

The chromium level is abnormal. All other component wear rates are normal.

CONTAMINATION

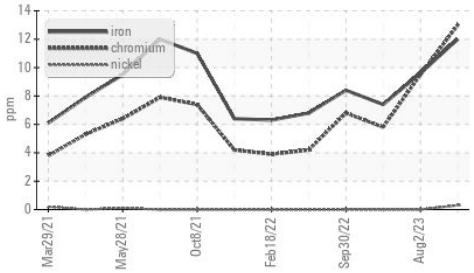
The amount and size of particulates present in the system are acceptable.

FLUID CONDITION

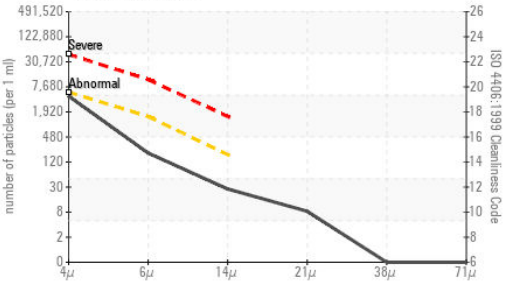
The AN level is acceptable for this fluid. The condition of the oils additive package is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0179904	JR0164238	JR0164366
Sample Date		Client Info		08 Dec 2023	02 Aug 2023	31 Mar 2023
Machine Age	hrs	Client Info		5983	5511	4980
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Not Changd	Not Changd
Filter Changed		Client Info		Changed	Not Changd	Changed
Sample Status				ABNORMAL	NORMAL	ABNORMAL
PQ		ASTM D8184		16	13	7
Iron	ppm	ASTM D5185m	>20	12	10	7
Chromium	ppm	ASTM D5185m	>10	▲ 13	10	6
Nickel	ppm	ASTM D5185m	>10	<1	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>10	<1	<1	<1
Lead	ppm	ASTM D5185m	>10	<1	0	0
Copper	ppm	ASTM D5185m	>75	3	3	2
Tin	ppm	ASTM D5185m	>10	0	0	0
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	>20	1	<1	<1
Potassium	ppm	ASTM D5185m	>20	6	1	<1
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>5000	4019	1594	▲ 32417
Particles >6µm		ASTM D7647	>1300	174	253	▲ 7662
Particles >14µm		ASTM D7647	>160	24	18	▲ 700
Particles >21µm		ASTM D7647	>40	7	5	▲ 230
Particles >38µm		ASTM D7647	>10	0	1	10
Particles >71µm		ASTM D7647	>3	0	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	19/15/12	18/15/11	▲ 22/20/17
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	>0.1	NEG	NEG	NEG
Sodium	ppm	ASTM D5185m		<1	2	<1
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		<1	<1	<1
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m		<1	3	11
Calcium	ppm	ASTM D5185m	87	98	88	97
Phosphorus	ppm	ASTM D5185m	727	742	628	634
Zinc	ppm	ASTM D5185m	900	943	801	835
Sulfur	ppm	ASTM D5185m	1500	1879	1857	1923
Acid Number (AN)	mg KOH/g	ASTM D8045	1.0	0.72	0.82	0.74
Visc @ 40°C	cSt	ASTM D445	65	54.7	54.9	55.1

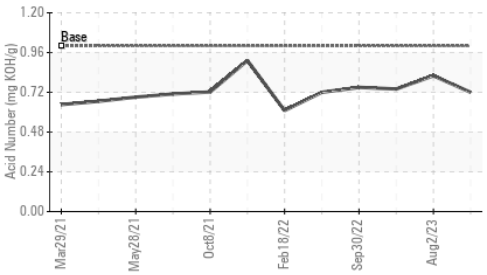
Ferrous Alloys



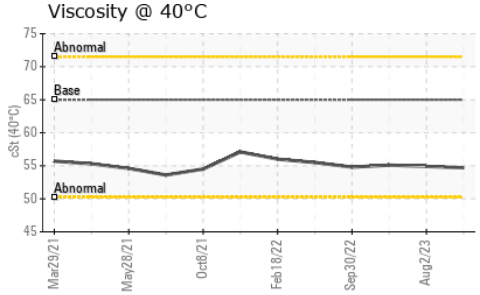
Particle Count



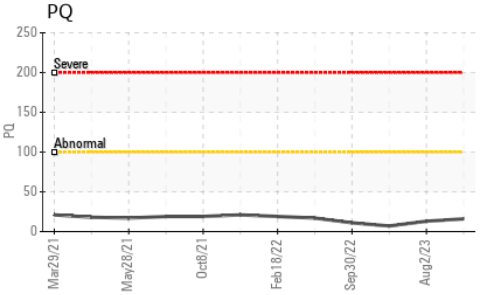
Acid Number



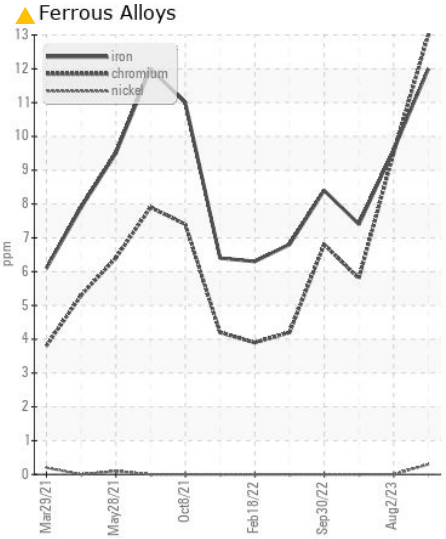
Viscosity @ 40°C



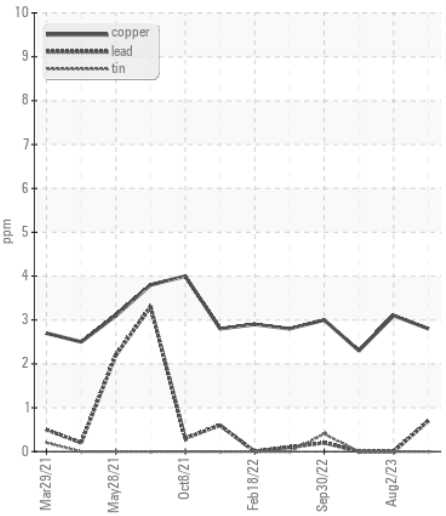
PQ



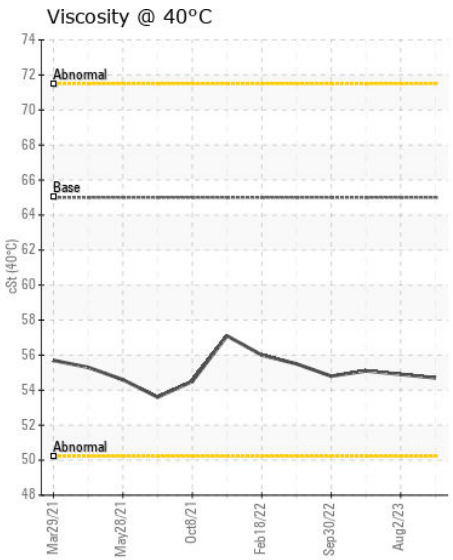
Ferrous Alloys



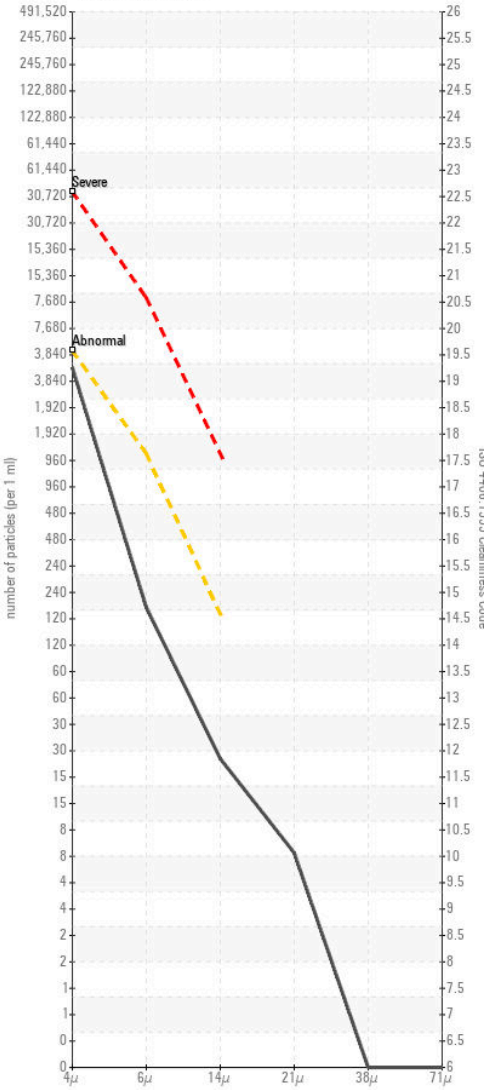
Non-ferrous Metals



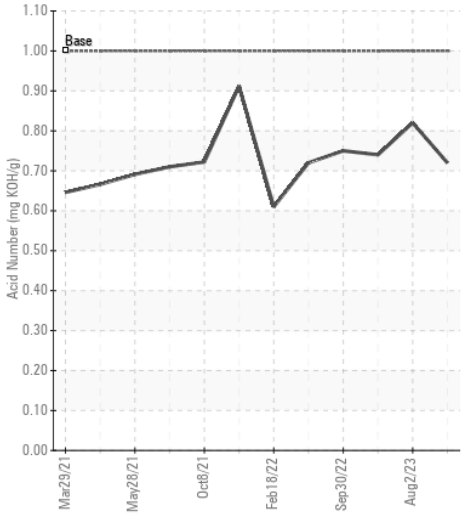
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory	: WearCheck USA - 501 Madison Ave., Cary, NC 27513		
Sample No.	: JR0179904	**Received**	: 12 Dec 2023
Lab Number	: 06032301	**Tested**	: 13 Dec 2023
Unique Number	: 10782092	**Diagnosed**	: 15 Dec 2023 - Don Baldridge
Test Package	: CONST (Additional Tests: PQ)		

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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