James River Equipment

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
HAMM H2840111
Component
Hydraulic System
Fluid
JOHN DEERE ZINC-FREE HYDRAULIC OIL 46 (--- QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

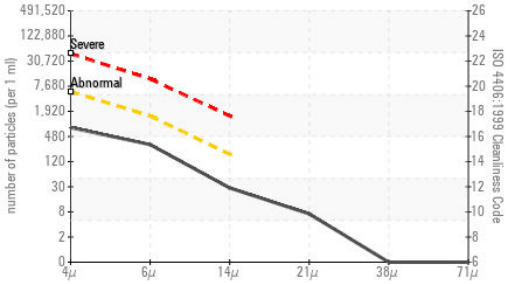
There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

FLUID CONDITION

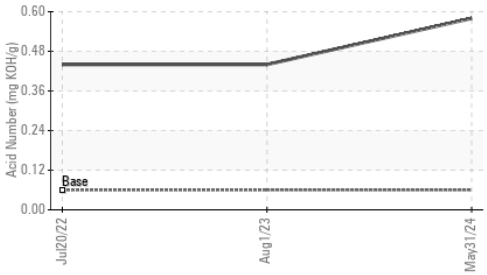
The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0217615	JR0182041	JR0137127
Sample Date		Client Info		31 May 2024	01 Aug 2023	20 Jul 2022
Machine Age	hrs	Client Info		2073	436	436
Oil Age	hrs	Client Info		0	436	0
Filter Age	hrs	Client Info		0	436	0
Oil Changed		Client Info		Changed	Not Changd	Not Changd
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	SEVERE	ABNORMAL
PQ		ASTM D8184		19	20	11
Iron	ppm	ASTM D5185m	>20	15	12	5
Chromium	ppm	ASTM D5185m	>10	0	0	0
Nickel	ppm	ASTM D5185m	>10	0	0	<1
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>10	<1	2	1
Lead	ppm	ASTM D5185m	>10	0	0	<1
Copper	ppm	ASTM D5185m	>75	4	5	4
Tin	ppm	ASTM D5185m	>10	0	0	<1
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	▲ LIGHT
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>20	6	8	6
Potassium	ppm	ASTM D5185m	>20	1	0	<1
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>5000	689	▲ 143804	▲ 97986
Particles >6µm		ASTM D7647	>1300	270	▲ 61235	▲ 15799
Particles >14µm		ASTM D7647	>160	25	▲ 5787	▲ 1227
Particles >21µm		ASTM D7647	>40	6	▲ 1204	▲ 248
Particles >38µm		ASTM D7647	>10	0	▲ 22	● 17
Particles >71µm		ASTM D7647	>3	0	1	1
Oil Cleanliness		ISO 4406 (c)	>19/17/14	17/15/12	▲ 24/23/20	▲ 24/21/17
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	LIGHT	LIGHT
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	3
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		<1	0	0
Manganese	ppm	ASTM D5185m		0	<1	0
Magnesium	ppm	ASTM D5185m		45	49	46
Calcium	ppm	ASTM D5185m		362	130	17
Phosphorus	ppm	ASTM D5185m		353	324	272
Zinc	ppm	ASTM D5185m		468	415	336
Sulfur	ppm	ASTM D5185m		1364	1231	1010
Acid Number (AN)	mg KOH/g	ASTM D8045	0.06	0.58	0.44	0.44
Visc @ 40°C	cSt	ASTM D445	47	44.2	44.2	44.3

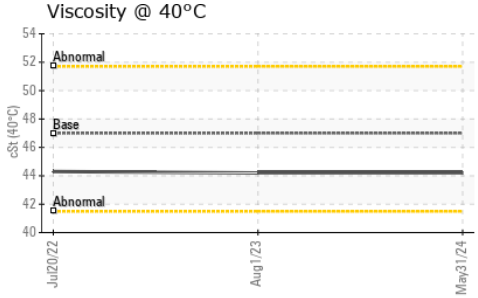
Particle Count



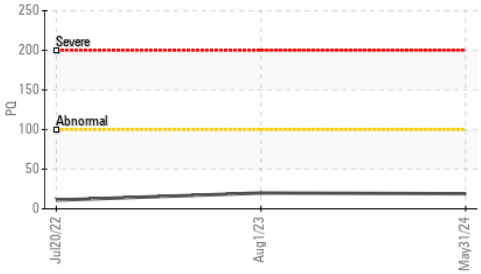
Acid Number



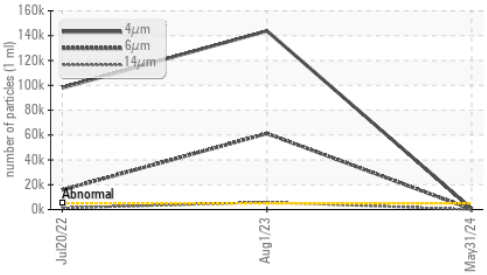
Viscosity @ 40°C



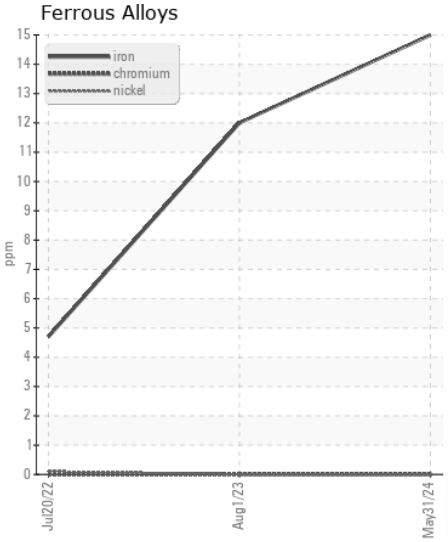
PQ



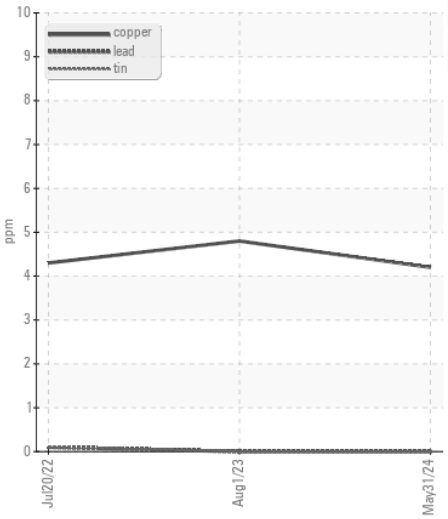
Particle Trend



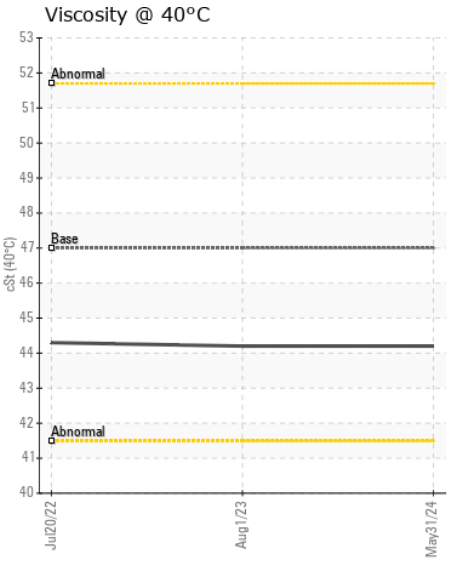
Ferrous Alloys



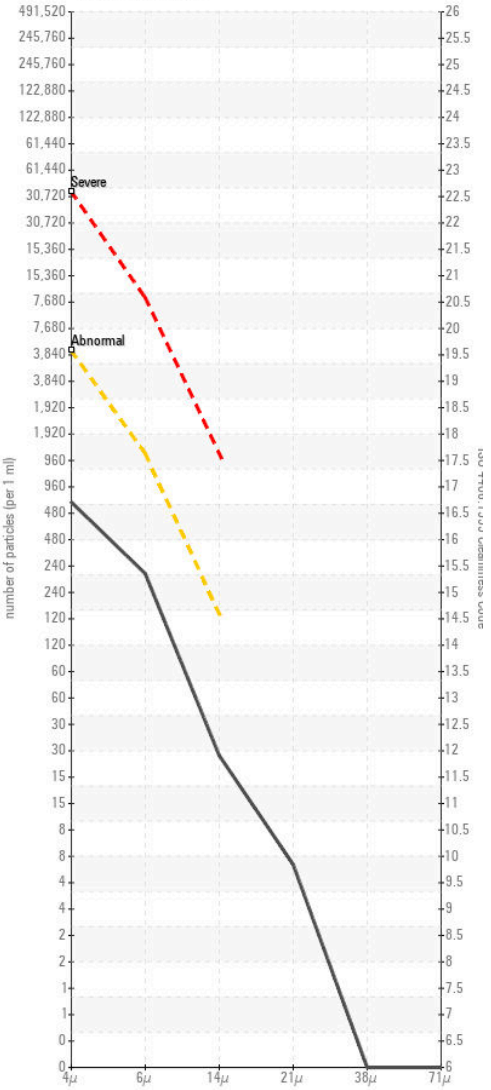
Non-ferrous Metals



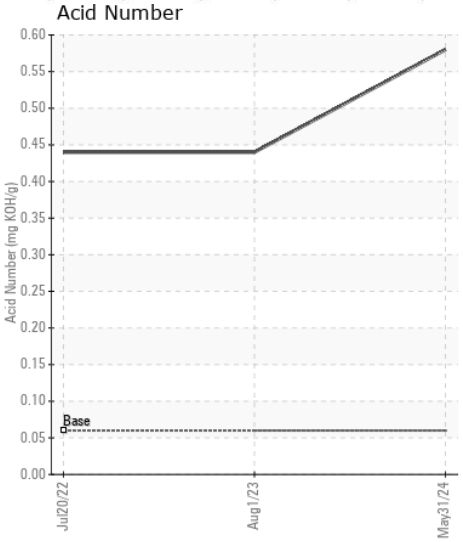
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0217615
Lab Number : 06196596
Unique Number : 11058719
Test Package : CONST (Additional Tests: PQ)

Received : 31 May 2024
Tested : 03 Jun 2024
Diagnosed : 03 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)

B & S SITE DEVLEOPMENT
7800 PINEY BRANCH LANE
BRISTOW, VA
US 20136
Contact: DANNY HUFF
dhuff@bandssite.com
T: (540)270-3203
F: (703)753-0605