James River Equipment

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	NORMAL

Machine Id
JOHN DEERE 644G DW644GD553733
Component
Hydraulic System
Fluid
JOHN DEERE HY-GARD HYD/TRANS (--- GAL)

RECOMMENDATION

Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. The filter change at the time of sampling has been noted. Resample in 30-45 days to monitor this situation.

WEAR

All component wear rates are normal.

CONTAMINATION

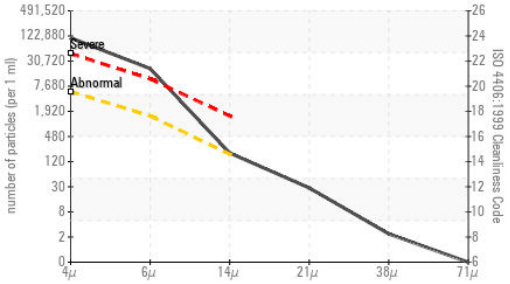
There is a high amount of silt (particulates < 14 microns in size) present in the oil.

FLUID CONDITION

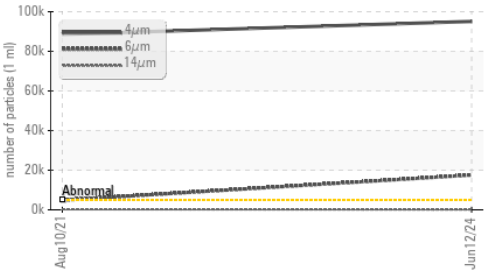
The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		**JR0212083**	JR0088595	---
Sample Date		Client Info		**12 Jun 2024**	10 Aug 2021	---
Machine Age	hrs	Client Info		**16034**	15711	---
Oil Age	hrs	Client Info		**0**	0	---
Filter Age	hrs	Client Info		**0**	0	---
Oil Changed		Client Info		**Not Changd**	Not Changd	---
Filter Changed		Client Info		**Changed**	Not Changd	---
Sample Status				**SEVERE**	ABNORMAL	---
PQ		ASTM D8184		**20**	19	---
Iron	ppm	ASTM D5185m	>20	**19**	22	---
Chromium	ppm	ASTM D5185m	>10	**1**	1	---
Nickel	ppm	ASTM D5185m	>10	**<1**	0	---
Titanium	ppm	ASTM D5185m		**<1**	<1	---
Silver	ppm	ASTM D5185m		**<1**	<1	---
Aluminum	ppm	ASTM D5185m	>10	**2**	0	---
Lead	ppm	ASTM D5185m	>10	**2**	2	---
Copper	ppm	ASTM D5185m	>75	**4**	4	---
Tin	ppm	ASTM D5185m	>10	**<1**	<1	---
Vanadium	ppm	ASTM D5185m		**<1**	<1	---
White Metal	scalar	*Visual	NONE	**NONE**	NONE	---
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	---
Silicon	ppm	ASTM D5185m	>20	**11**	12	---
Potassium	ppm	ASTM D5185m	>20	**4**	2	---
Water		WC Method	>0.1	**NEG**	NEG	---
Particles >4µm		ASTM D7647	>5000	▲ **95106**	▲ 88540	---
Particles >6µm		ASTM D7647	>1300	▲ **17552**	▲ 4869	---
Particles >14µm		ASTM D7647	>160	● **170**	▲ 290	---
Particles >21µm		ASTM D7647	>40	**25**	▲ 63	---
Particles >38µm		ASTM D7647	>10	**2**	0	---
Particles >71µm		ASTM D7647	>3	**0**	0	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ **24/21/15**	▲ 24/19/15	---
Silt	scalar	*Visual	NONE	**NONE**	NONE	---
Debris	scalar	*Visual	NONE	**NONE**	NONE	---
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	---
Appearance	scalar	*Visual	NORML	**NORML**	NORML	---
Odor	scalar	*Visual	NORML	**NORML**	NORML	---
Emulsified Water	scalar	*Visual	>0.1	**NEG**	NEG	---
Sodium	ppm	ASTM D5185m		**0**	2	---
Boron	ppm	ASTM D5185m	6	**24**	22	---
Barium	ppm	ASTM D5185m	0	**<1**	0	---
Molybdenum	ppm	ASTM D5185m	0	**6**	<1	---
Manganese	ppm	ASTM D5185m		**<1**	<1	---
Magnesium	ppm	ASTM D5185m	145	**63**	83	---
Calcium	ppm	ASTM D5185m	3570	**2814**	3320	---
Phosphorus	ppm	ASTM D5185m	1290	**871**	968	---
Zinc	ppm	ASTM D5185m	1640	**1098**	1153	---
Sulfur	ppm	ASTM D5185m		**3943**	2927	---
Acid Number (AN)	mg KOH/g	ASTM D8045	1.8	**1.11**	1.105	---
Visc @ 40°C	cSt	ASTM D445	57.0	**47.5**	48.2	---

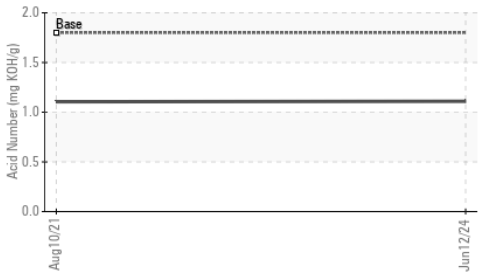
Particle Count



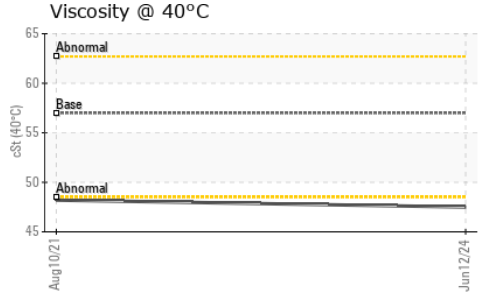
Particle Trend



Acid Number

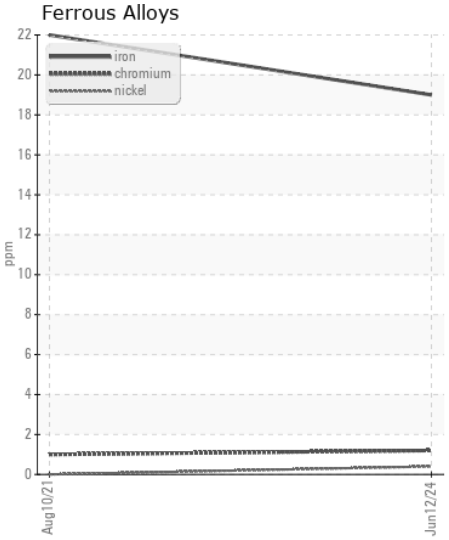


Viscosity @ 40°C

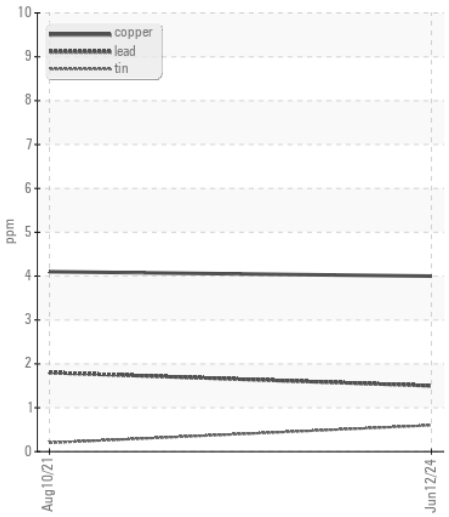


PQ

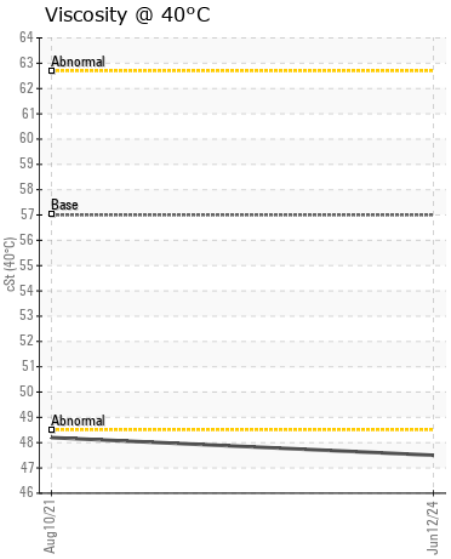
Ferrous Alloys



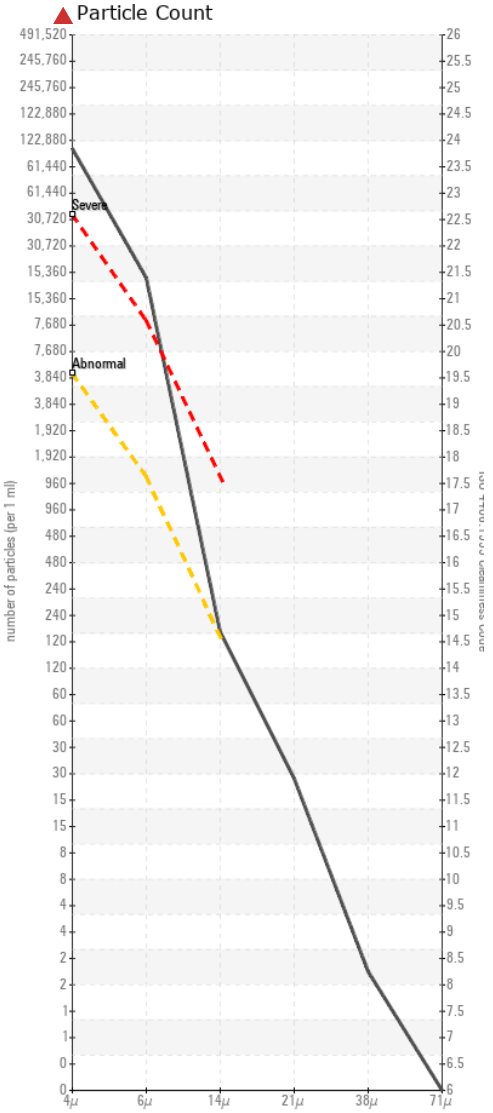
Non-ferrous Metals



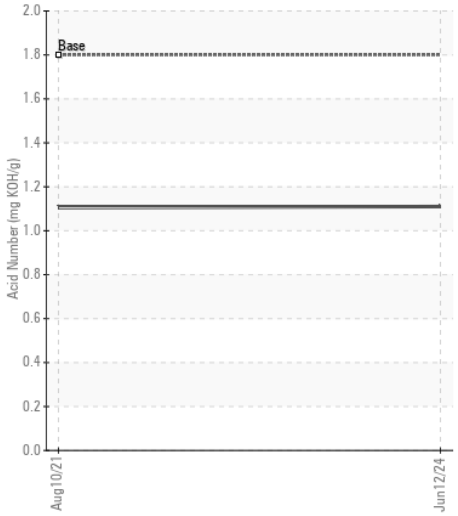
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0212083 **Received** : 18 Jun 2024
Lab Number : 06213342 **Tested** : 19 Jun 2024
Unique Number : 11086206 **Diagnosed** : 19 Jun 2024 - Wes Davis
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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