



WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Area
[SPARTAN RENTAL]
 Machine Id
HAMM H12iP H284.0289 (S/N WGH0H284VAA00289)
 Component
Hydraulic System
 Fluid
JOHN DEERE ZINC-FREE HYDRAULIC OIL 46 (--- PNT)

RECOMMENDATION

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

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0214596	JR0181853	---
Sample Date		Client Info		30 May 2024	12 Jun 2023	---
Machine Age	hrs	Client Info		1473	805	---
Oil Age	hrs	Client Info		1473	805	---
Filter Age	hrs	Client Info		1473	805	---
Oil Changed		Client Info		Not Changed	Not Changed	---
Filter Changed		Client Info		Changed	Changed	---
Sample Status				ABNORMAL	ABNORMAL	---

WEAR

All component wear rates are normal.

PQ	UOM	Method	Limit/Abn	Current	History1	History2
Iron	ppm	ASTM D5185m	>20	12	3	---
Chromium	ppm	ASTM D5185m	>10	0	<1	---
Nickel	ppm	ASTM D5185m	>10	0	0	---
Titanium	ppm	ASTM D5185m		0	0	---
Silver	ppm	ASTM D5185m		0	0	---
Aluminum	ppm	ASTM D5185m	>10	6	0	---
Lead	ppm	ASTM D5185m	>10	<1	0	---
Copper	ppm	ASTM D5185m	>75	9	8	---
Tin	ppm	ASTM D5185m	>10	0	0	---
Vanadium	ppm	ASTM D5185m		<1	<1	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

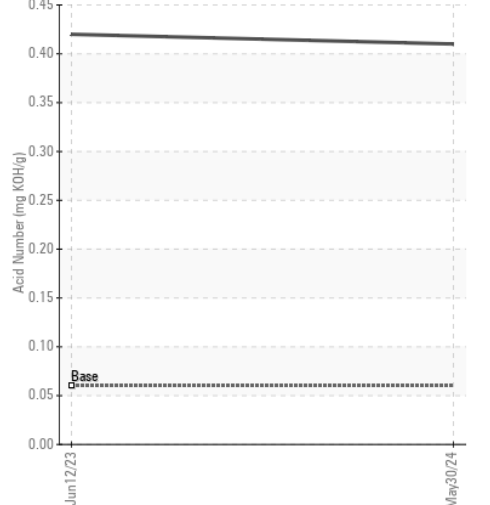
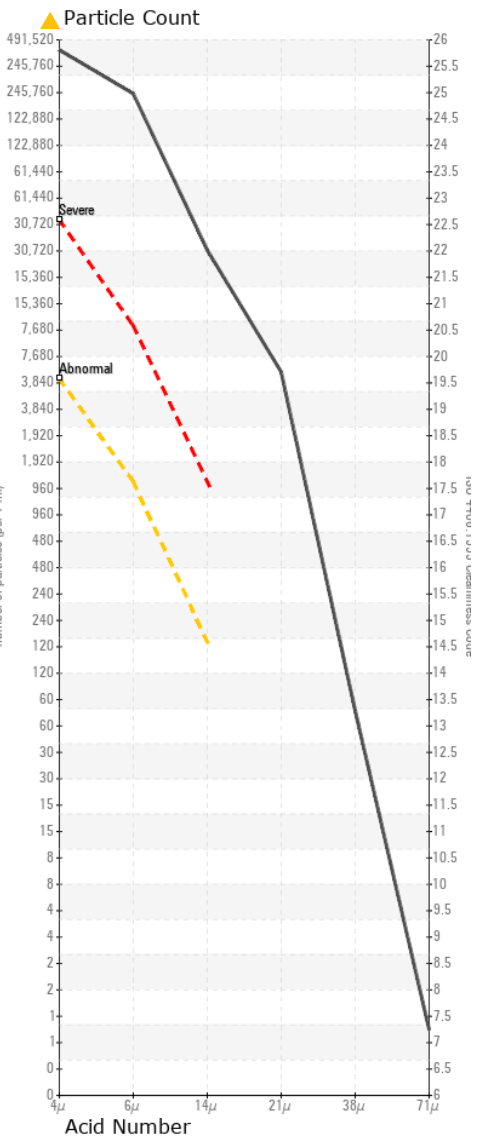
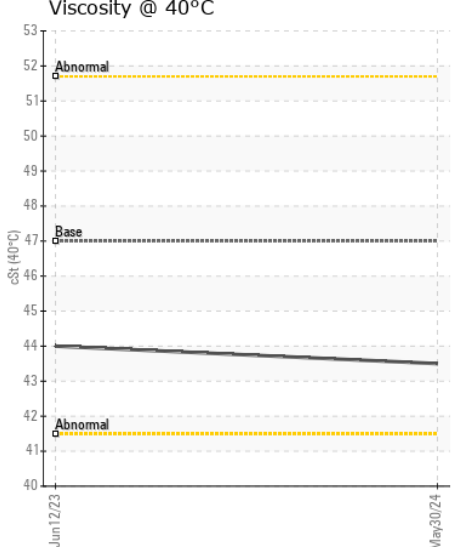
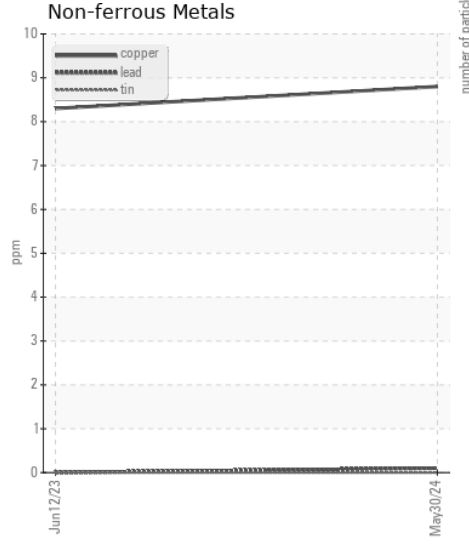
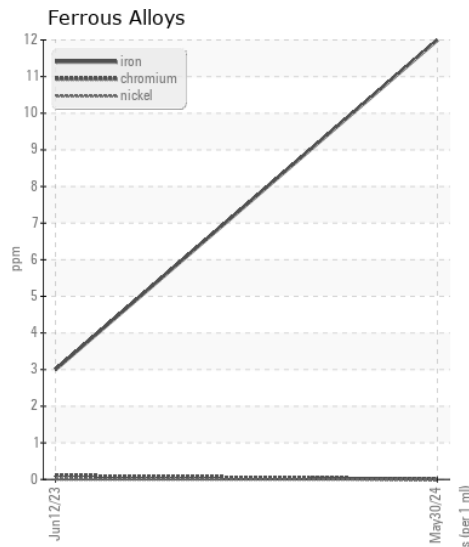
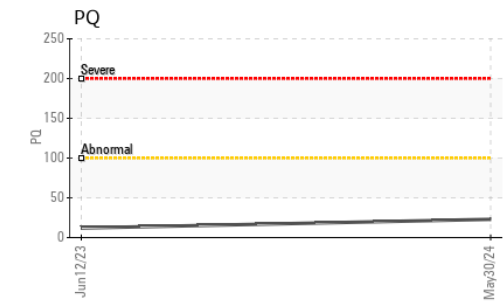
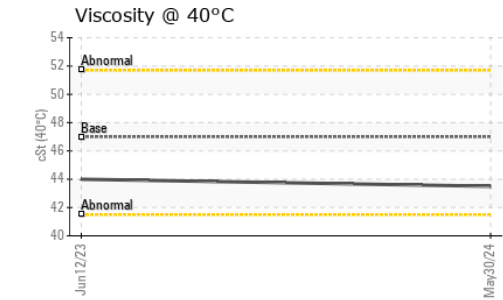
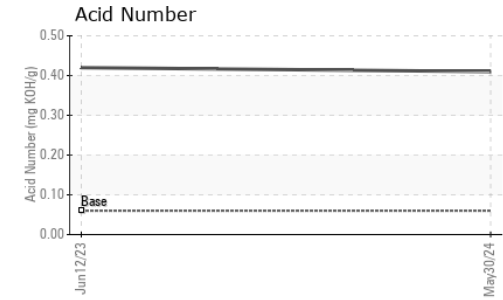
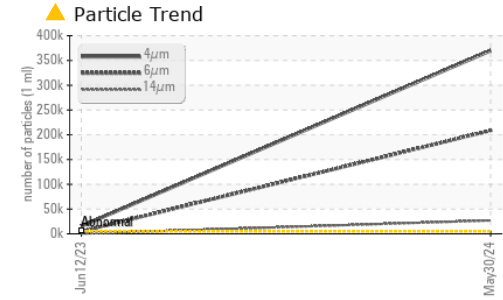
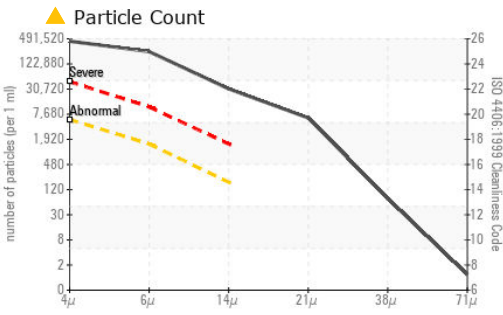
There is a high amount of particulates present in the oil. There is a moderate amount of visible silt present in the sample.

Silicon	ppm	ASTM D5185m	>20	17	9	---
Potassium	ppm	ASTM D5185m	>20	2	<1	---
Water		WC Method	>0.1	NEG	NEG	---
Particles >4µm		ASTM D7647	>5000	▲ 369775	▲ 15105	---
Particles >6µm		ASTM D7647	>1300	▲ 208588	▲ 4818	---
Particles >14µm		ASTM D7647	>160	▲ 26941	▲ 333	---
Particles >21µm		ASTM D7647	>40	▲ 5453	● 69	---
Particles >38µm		ASTM D7647	>10	▲ 65	3	---
Particles >71µm		ASTM D7647	>3	1	0	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ 26/25/22	▲ 21/19/16	---
Silt	scalar	*Visual	NONE	▲ MODER	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	---

FLUID CONDITION

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

Sodium	ppm	ASTM D5185m		2	<1	---
Boron	ppm	ASTM D5185m		0	0	---
Barium	ppm	ASTM D5185m		0	0	---
Molybdenum	ppm	ASTM D5185m		0	<1	---
Manganese	ppm	ASTM D5185m		0	<1	---
Magnesium	ppm	ASTM D5185m		1	2	---
Calcium	ppm	ASTM D5185m		107	107	---
Phosphorus	ppm	ASTM D5185m		272	281	---
Zinc	ppm	ASTM D5185m		357	358	---
Sulfur	ppm	ASTM D5185m		1039	1101	---
Acid Number (AN)	mg KOH/g	ASTM D8045	0.06	0.41	0.42	---
Visc @ 40°C	cSt	ASTM D445	47	43.5	44.0	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0214596 **Received** : 31 May 2024
Lab Number : 06196590 **Tested** : 03 Jun 2024
Unique Number : 11058713 **Diagnosed** : 03 Jun 2024 - Don Baldrige
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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