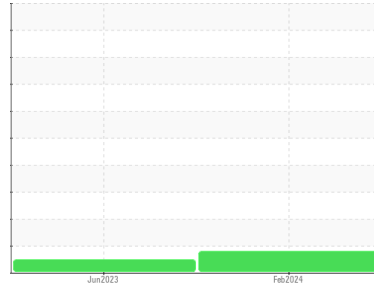




Machine Id
JOHN DEERE 38-20
Component
Hydraulic System
Fluid
JOHN DEERE HYDRAU (80 LTR)



DIAGNOSIS

Recommendation

The 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 a light amount of silt (particulates < 14 microns in size) present in the oil.

Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	PC0052719	PC0061422	---
Sample Date	Client Info	05 Feb 2024	20 Jun 2023	---
Machine Age	hrs	5265	4343	---
Oil Age	hrs	0	0	---
Oil Changed	Client Info	Not Changed	Not Changed	---
Sample Status		ATTENTION	NORMAL	---

CONTAMINATION

method	limit/base	current	history1	history2
Water	WC Method >0.1	NEG	NEG	---

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185(m) >20	14	9	---
Chromium	ppm ASTM D5185(m) >10	7	5	---
Nickel	ppm ASTM D5185(m) >10	<1	0	---
Titanium	ppm ASTM D5185(m)	0	0	---
Silver	ppm ASTM D5185(m)	0	0	---
Aluminum	ppm ASTM D5185(m) >10	1	<1	---
Lead	ppm ASTM D5185(m) >10	<1	<1	---
Copper	ppm ASTM D5185(m) >75	1	1	---
Tin	ppm ASTM D5185(m) >10	0	0	---
Antimony	ppm ASTM D5185(m)	0	0	---
Vanadium	ppm ASTM D5185(m)	0	0	---
Beryllium	ppm ASTM D5185(m)	0	0	---
Cadmium	ppm ASTM D5185(m)	0	0	---

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185(m)	<1	<1	---
Barium	ppm ASTM D5185(m)	0	0	---
Molybdenum	ppm ASTM D5185(m)	<1	1	---
Manganese	ppm ASTM D5185(m)	0	0	---
Magnesium	ppm ASTM D5185(m)	12	13	---
Calcium	ppm ASTM D5185(m) 87	420	127	---
Phosphorus	ppm ASTM D5185(m) 727	671	690	---
Zinc	ppm ASTM D5185(m) 900	808	820	---
Sulfur	ppm ASTM D5185(m) 1500	1810	1497	---
Lithium	ppm ASTM D5185(m)	<1	<1	---

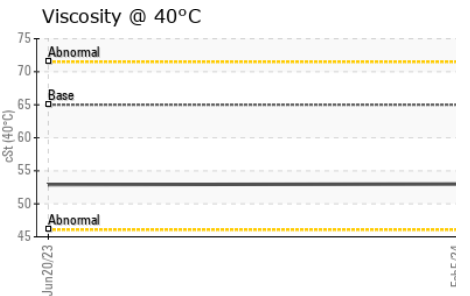
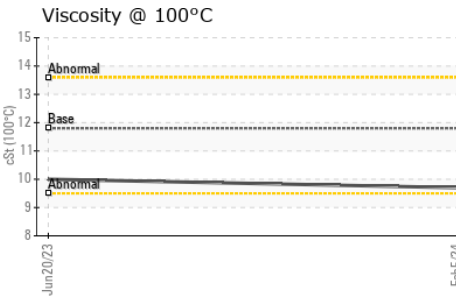
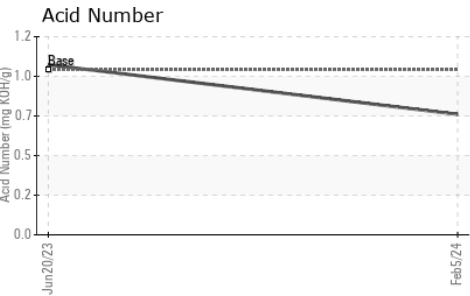
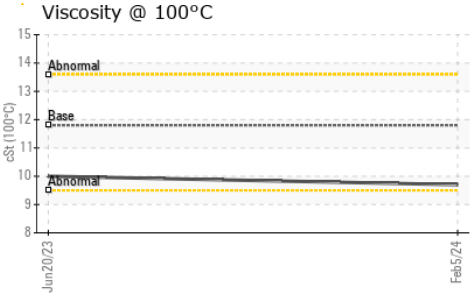
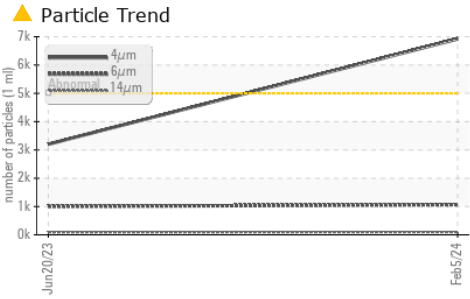
CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185(m) >20	1	<1	---
Sodium	ppm ASTM D5185(m)	2	2	---
Potassium	ppm ASTM D5185(m) >20	2	1	---

FLUID CLEANLINESS

method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >5000	▲ 6921	3202	---
Particles >6µm	ASTM D7647 >1300	1064	1001	---
Particles >14µm	ASTM D7647 >160	97	90	---
Particles >21µm	ASTM D7647 >40	29	27	---
Particles >38µm	ASTM D7647 >10	2	1	---
Particles >71µm	ASTM D7647 >3	1	0	---
Oil Cleanliness	ISO 4406 (c) >19/17/14	▲ 20/17/14	19/17/14	---

OIL ANALYSIS REPORT



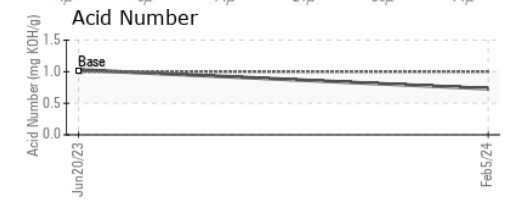
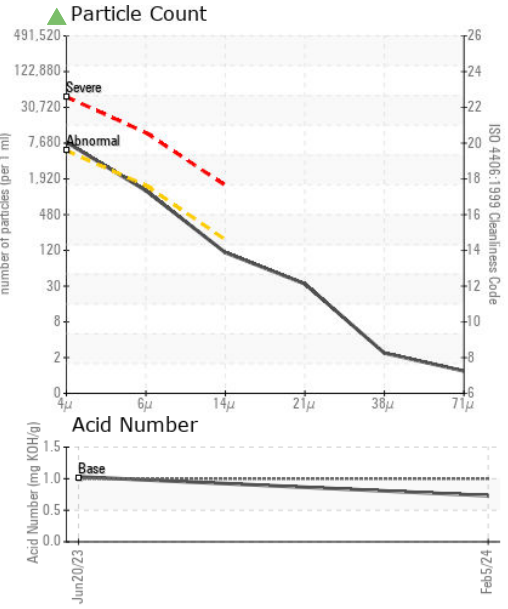
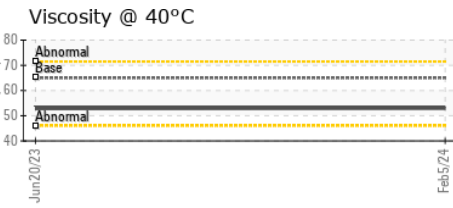
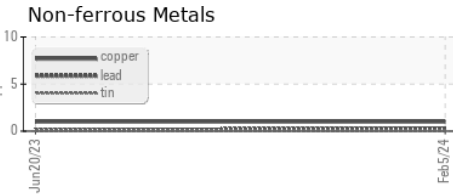
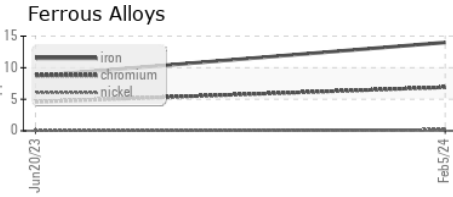
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	1.0	0.73	1.03	---

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	NONE	---
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	---
Precipitate	scalar	Visual*	NONE	NONE	NONE	---
Silt	scalar	Visual*	NONE	NONE	NONE	---
Debris	scalar	Visual*	NONE	NONE	VLITE	---
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	---
Free Water	scalar	Visual*		NEG	NEG	---

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	65	53.0	52.9	---
Visc @ 100°C	cSt	ASTM D7279(m)	11.8	9.7	10.0	---
Viscosity Index (VI)	Scale	ASTM D2270*	178	170	179	---

SAMPLE IMAGES		method	limit/base	current	history1	history2
Color						no image
Bottom						no image

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0052719
Lab Number : **02616641**
Unique Number : 5733751
Test Package : IND 2 (Additional Tests: KV100, VI)
Received : 20 Feb 2024
Tested : 21 Feb 2024
Diagnosed : 21 Feb 2024 - Wes Davis

TRUCK AND EQUIPMENT SOLUTION
 2 BERTRAM INDUSTRIAL PKWY.
 MIDHURST, ON
 CA L9X 1L2
 Contact: John Irwin
 jirwin@arnottgroup.com
 T: (705)792-7620
 F: (705)725-5425

To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.