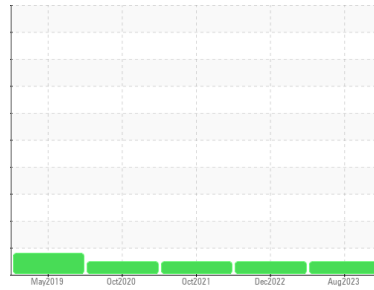


# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**


Area  
**[W46307]**  
 Machine Id  
**JOHN DEERE 160G LC 1FF160GXTJF056941**  
 Component  
**Hydraulic System**  
 Fluid  
**HITACHI HYDRAULIC SUPER EX 46HN (--- GAL)**


**DIAGNOSIS**
**Recommendation**

Resample at the next service interval to monitor.

**Wear**

All component wear rates are normal.

**Contamination**

The amount and size of particulates present in the system are acceptable. There is no indication of any contamination 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		<b>JR0180299</b>	JR0148523	JR0106644
Sample Date	Client Info		<b>29 Aug 2023</b>	01 Dec 2022	14 Oct 2021
Machine Age	hrs	Client Info	<b>2717</b>	1951	1464
Oil Age	hrs	Client Info	<b>0</b>	0	1464
Oil Changed	Client Info		<b>Not Changed</b>	Not Changed	Not Changed
Sample Status			<b>NORMAL</b>	NORMAL	NORMAL

**WEAR METALS**

	method	limit/base	current	history1	history2
PQ	ASTM D8184	>50	<b>13</b>	9	16
Iron	ppm	ASTM D5185m	>32	<b>7</b>	8
Chromium	ppm	ASTM D5185m	>9	<b>0</b>	0
Nickel	ppm	ASTM D5185m	>5	<b>0</b>	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0
Silver	ppm	ASTM D5185m		<b>0</b>	0
Aluminum	ppm	ASTM D5185m	>9	<b>0</b>	1
Lead	ppm	ASTM D5185m	>28	<b>0</b>	0
Copper	ppm	ASTM D5185m	>50	<b>&lt;1</b>	1
Tin	ppm	ASTM D5185m	>5	<b>0</b>	0
Antimony	ppm	ASTM D5185m		<b>---</b>	---
Vanadium	ppm	ASTM D5185m		<b>0</b>	0
Cadmium	ppm	ASTM D5185m		<b>0</b>	0

**ADDITIVES**

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		<b>0</b>	0
Barium	ppm	ASTM D5185m		<b>0</b>	0
Molybdenum	ppm	ASTM D5185m		<b>0</b>	0
Manganese	ppm	ASTM D5185m		<b>0</b>	0
Magnesium	ppm	ASTM D5185m		<b>&lt;1</b>	<1
Calcium	ppm	ASTM D5185m		<b>3</b>	<1
Phosphorus	ppm	ASTM D5185m	827	<b>440</b>	472
Zinc	ppm	ASTM D5185m	0	<b>20</b>	34
Sulfur	ppm	ASTM D5185m	13	<b>146</b>	139

**CONTAMINANTS**

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>11	<b>2</b>	2
Sodium	ppm	ASTM D5185m	>21	<b>0</b>	<1
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	0

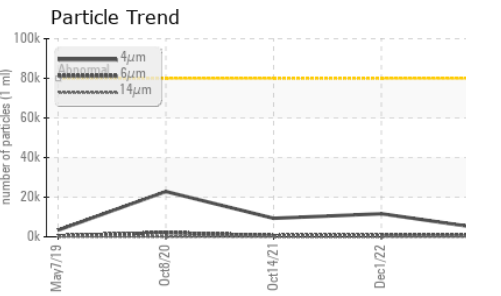
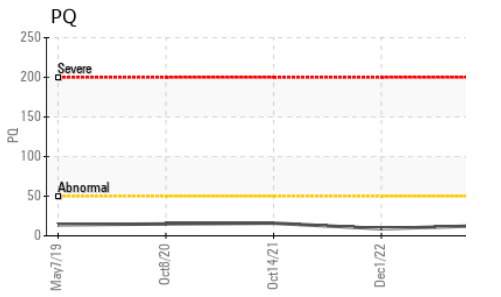
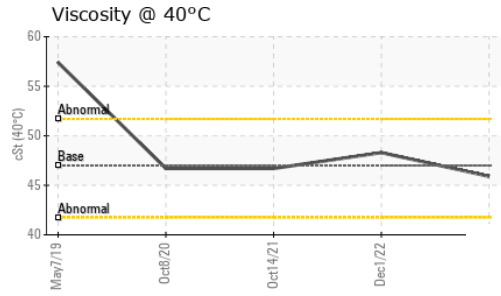
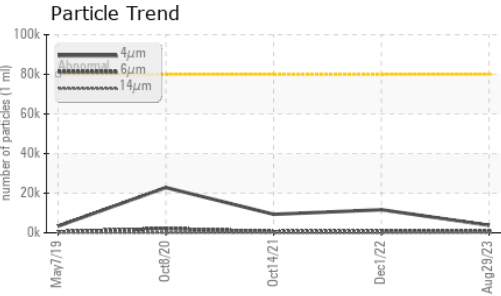
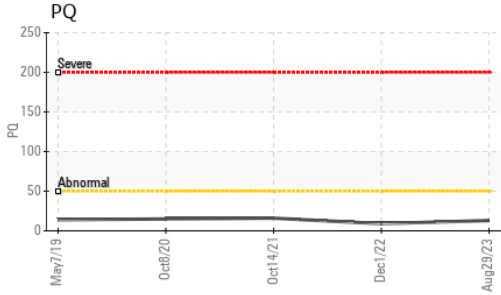
**FLUID CLEANLINESS**

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>80000	<b>3797</b>	11653	9352
Particles >6µm	ASTM D7647	>20000	<b>676</b>	718	582
Particles >14µm	ASTM D7647	>640	<b>77</b>	11	11
Particles >21µm	ASTM D7647	>160	<b>17</b>	2	1
Particles >38µm	ASTM D7647	>40	<b>1</b>	0	0
Particles >71µm	ASTM D7647	>10	<b>0</b>	0	0
Oil Cleanliness	ISO 4406 (c)	>23/21/16	<b>19/17/13</b>	21/17/11	20/16/11

**FLUID DEGRADATION**

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.06	<b>0.25</b>	0.29

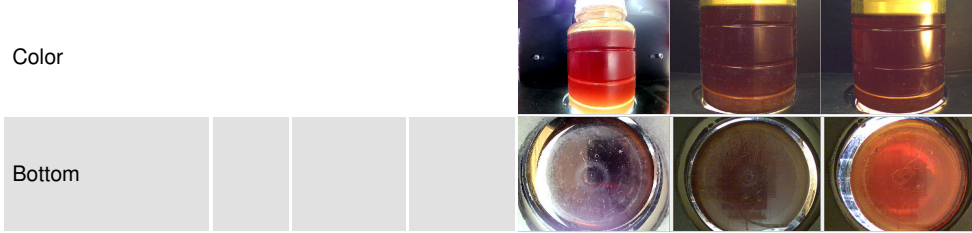
# OIL ANALYSIS REPORT



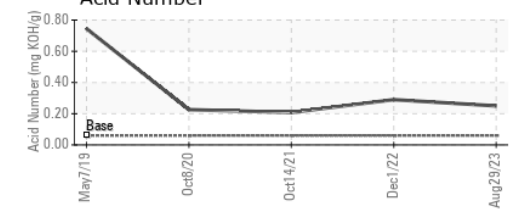
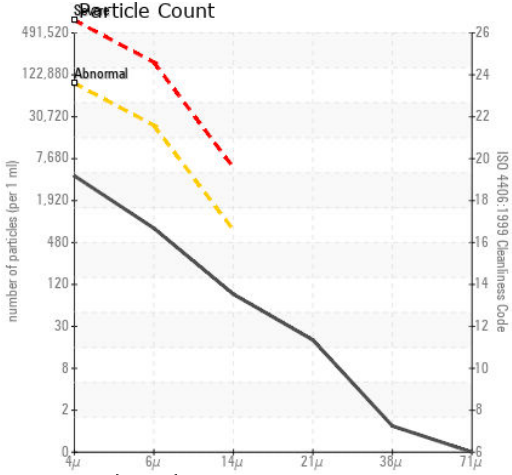
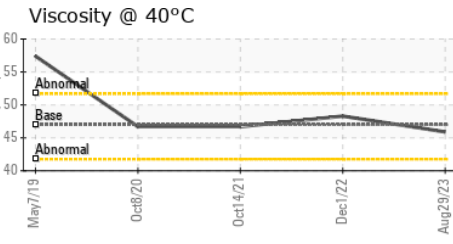
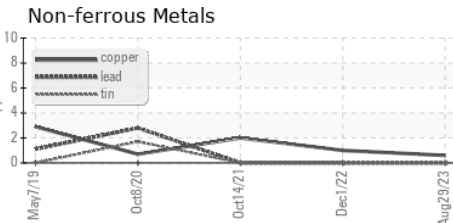
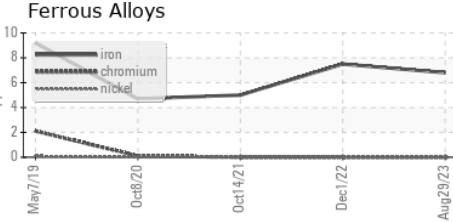
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	VLITE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.075	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445 47	<b>45.9</b>	48.3	46.7

SAMPLE IMAGES	method	limit/base	current	history1	history2
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## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : JR0180299 **Received** : 03 Oct 2023  
**Lab Number** : 05967699 **Diagnosed** : 05 Oct 2023  
**Unique Number** : 10674250 **Diagnostician** : Don Baldrige  
**Test Package** : CONST ( Additional Tests: PQ )

**JRE - ASHLAND**  
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 ASHLAND, VA  
 US 23005  
 Contact: DAVID ZIEG  
 dzieg@jamesriverequipment.com  
 T: (804)798-6001  
 F: (804)798-0292

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)