

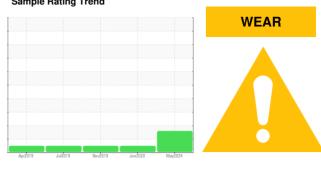
OIL ANALYSIS REPORT

Sample Rating Trend



[LEADING EDGE] JOHN DEERE 300G 1FF300GXCJF730943 Hydraulic System

HITACHI HYDRAULIC SUPER EX 46HN (--- QTS)



DIAGNOSIS

Recommendation

Recommend drain oil if not already done. Reduce drain interval to 2000 hours or drain and flush and use recommended zinc free oil. We recommend you service the filters on this component. We were unable to perform a particle count due to a high concentration of particles present in this sample.

Area

A Wear

The iron level is abnormal. All other component wear rates are normal.

Contamination

Moderate concentration of visible dirt/debris present in the oil.

Fluid Condition

Zinc level above manufacturer's recommendations. The AN level is acceptable for this fluid.

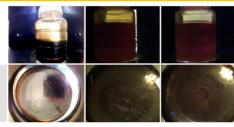
SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		JR0210856	JR0049591	JR0029174
Sample Date		Client Info		17 May 2024	11 Jun 2020	06 Nov 2019
Machine Age	hrs	Client Info		6700	2171	1530
Oil Age	hrs	Client Info		0	2171	1530
Oil Changed		Client Info		N/A	Not Changd	Not Changd
Sample Status				ABNORMAL	NORMAL	NORMAL
CONTAMINATION	N	method	limit/base	current	history1	history2
Water		WC Method	>0.075	NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184	>50	28	20	14
Iron	ppm	ASTM D5185m	>32	<u>40</u>	6	5
Chromium	ppm	ASTM D5185m	>9	3	<1	<1
Nickel	ppm	ASTM D5185m		0	0	0
Titanium	ppm	ASTM D5185m		۰ <1	0	0
Silver	ppm	ASTM D5185m		0	0	<1
Aluminum		ASTM D5185m	<u>_9</u>	3	0	<1
Lead	ppm ppm		>9 >28	ა <1	<1	<1
		ASTM D5185m	>20 >50	19	<1	<1
Copper Tin	ppm	ASTM D5185m ASTM D5185m		<1	<1	< 1
	ppm		>0		0	0
Antimony Vanadium	ppm	ASTM D5185m ASTM D5185m			0	0
	ppm			0		
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	limit/base	0	<1	<1
Boron Barium	ppm ppm		limit/base	0 0	<1 0	<1 0
Boron		ASTM D5185m	limit/base	0	<1 0 0	<1 0 0
Boron Barium Molybdenum Manganese	ppm	ASTM D5185m ASTM D5185m	limit/base	0 0	<1 0	<1 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 2	<1 0 0 <1 0	<1 0 0 <1 <1
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 2 <1	<1 0 0 <1 0 7	<1 0 0 <1 <1 3
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 2 <1 25	<1 0 0 <1 0	<1 0 0 <1 <1
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		0 0 2 <1 25 433	<1 0 0 <1 0 7	<1 0 0 <1 <1 3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	827	0 0 2 <1 25 433 475	<1 0 0 <1 0 7 467	<1 0 0 <1 <1 3 466
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	827 0	0 0 2 <1 25 433 475 ▲ 308	<1 0 0 <1 0 7 467 10	<1 0 0 <1 <1 3 466 29
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	827 0 13	0 0 2 <1 25 433 475 ▲ 308 1307	<1 0 0 <1 0 7 467 10 123	<1 0 0 <1 <1 3 466 29 142
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	827 0 13 limit/base	0 0 2 <1 25 433 475 ▲ 308 1307 current	<1 0 0 <1 0 7 467 10 123 history1	<1 0 0 <1 <1 3 466 29 142 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	827 0 13 limit/base >11 >21	0 0 2 <1 25 433 475 ▲ 308 1307 current 11	<1 0 0 <1 0 7 467 10 123 history1 <1	<1 0 0 <1 <1 3 466 29 142 history2 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	827 0 13 limit/base >11 >21	0 0 2 <1 25 433 475 ▲ 308 1307 <u>current</u> 11 <1	<1 0 0 <1 0 7 467 10 123 history1 <1 0	<1 0 0 <1 <1 3 466 29 142 history2 <1 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	827 0 13 limit/base >11 >21 >20	0 0 2 <1 25 433 475 ▲ 308 1307 <u>current</u> 11 <1 4	<1 0 0 <1 0 7 467 10 123 history1 <1 0 <1	<1 0 0 <1 <1 3 466 29 142 history2 <1 0 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	827 0 13 limit/base >11 >21 >20 limit/base	0 0 2 <1 25 433 475 ▲ 308 1307 Current 11 <1 4 Current	<1 0 0 <1 0 7 467 10 123 history1 <1 0 <1 history1	<1 0 0 <1 <1 3 466 29 142 history2 <1 0 <1 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	827 0 13 limit/base >11 >21 >20 limit/base >80000	0 0 2 <1 25 433 475 ▲ 308 1307 Current 11 <1 4 Current 	<1 0 0 <1 0 7 467 10 123 history1 <1 0 <1 0 <1 history1 32880	<1 0 0 <1 <1 3 466 29 142 history2 <1 0 <1 history2 24273
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	827 0 13 limit/base >11 >21 >20 limit/base >80000 >20000 >640	0 0 2 <1 25 433 475 308 1307 current 11 <11 4 current 	<1 0 0 <1 0 7 467 10 123 history1 <1 0 <1 0 <1 0 <1 1 32880 1651 37	<1 0 0 <1 <1 3 466 29 142 history2 <1 0 <1 0 <1 bistory2 24273 1351 23
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7647 ASTM D7647	827 0 13 13 >11 >21 >20 1imit/base >80000 >20000 >640 >160	0 0 2 <1 25 433 475 308 1307 current 11 <11 4 current 	<1 0 0 <1 0 7 467 10 123 history1 <1 0 <1 history1 32880 1651 37 8	<1 0 0 <1 <1 3 466 29 142 history2 <1 0 <1 *1 history2 24273 1351 23 14
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm Particles >38µm	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5647 ASTM D7647 ASTM D7647 ASTM D7647	827 0 13 limit/base >11 >21 >20 limit/base >80000 >20000 >640 >160 >40	0 0 2 <1 25 433 475 308 1307 <urrent 11 <1 4 <urrent </urrent </urrent 	<1 0 0 <1 0 7 467 10 123 history1 <1 0 <1 0 <1 history1 32880 1651 37 8 0	<1 0 0 <1 <1 3 466 29 142 history2 <1 0 <1 *1 history2 24273 1351 23 14 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647	827 0 13 limit/base >11 >21 >20 limit/base >80000 >20000 >640 >160 >40	0 0 2 <1 25 433 475 ▲ 308 1307 Current 11 <1 4 Current 	<1 0 0 <1 0 7 467 10 123 history1 <1 0 <1 history1 32880 1651 37 8	<1 0 0 <1 <1 3 466 29 142 history2 <1 0 <1 *1 history2 24273 1351 23 14

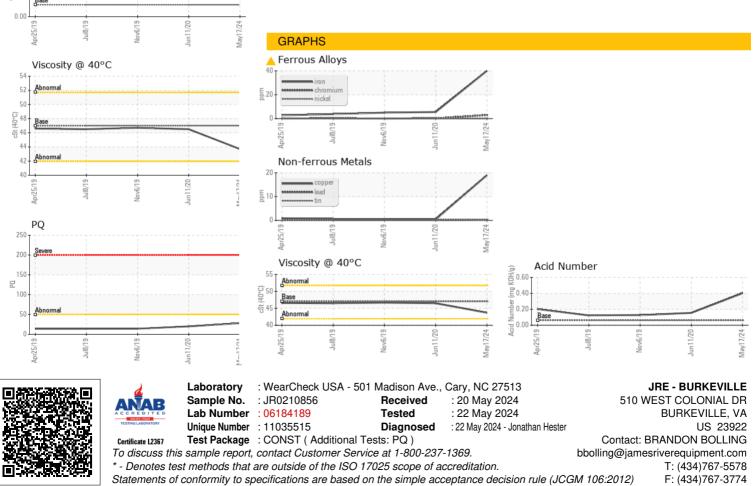


OIL ANALYSIS REPORT

	es				FLUID DEG
500-	calcium phosphorus	******			Acid Number (
400 -				/	VISUAL
툍 300				/	White Metal
100					Yellow Metal
0	and the distant land				Precipitate
	Jul8/19 -	Vav6/19 -	1/20	7/24	Silt
Apr25/19	Jul	Nové	Jun11/20	May17/24	Debris
					Sand/Dirt
PQ					Appearance
200 Severe					Odor
200 + 0		1	1		Emulsified Wa
150- 문					Free Water
100-					FLUID PRO
50 - Abnormal		1			Visc @ 40°C
04 <u>––</u> –0	- 61/8luf	- 61/	/20	/24	SAMPLE IN
Apr25/19	Jul	Nov6/19	Jun11/20	May17/24	
Acid Nu	ımber				Color
ĝ 20.30					
un and a constant of the second secon					Bottom
0.40 HOX mg 0.20 Dog 0.10 Base Base	<u> </u>				
Base				_	
Apr25/19	Jul8/19 -	Vov6/19 -	1/20	7/24	
Apr2	Jul	Nov	Jun11/20	May17/24	GRAPHS
Viscosit	y @ 40°C	:			Ferrous Allo
54 T					10

FLUID DEGRADA	TION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.06	0.402	0.155	0.127
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	🔺 MODER	NONE	NONE
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	>0.075	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	47	43.7	46.5	46.7
SAMPLE IMAGES	6	method	limit/base	current	history1	history2





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Contact/Location: BRANDON BOLLING - JAMBUR