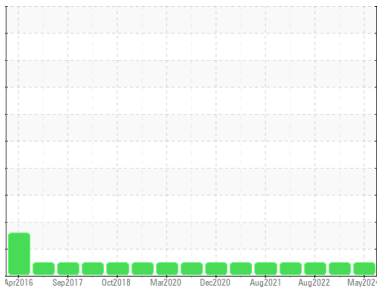
OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Machine Id
JOHN DEERE 644K 1DW644KAVDE654303
Component
Hydraulic System
Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (10 GAL)

DIAGNOSIS

Recommendation
Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

Contamination
There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

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		**JR0212331**	JR0179325	JR0123995
Sample Date		Client Info		**08 May 2024**	06 Oct 2023	09 Aug 2022
Machine Age	hrs	Client Info		**11950**	11447	10917
Oil Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**Changed**	Not Changd	Not Changd
Sample Status				**NORMAL**	NORMAL	NORMAL

CONTAMINATION		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	**19**	21	22
Iron	ppm	ASTM D5185m	>71	**19**	13	14
Chromium	ppm	ASTM D5185m	>11	**8**	6	4
Nickel	ppm	ASTM D5185m	>6	**0**	0	0
Titanium	ppm	ASTM D5185m		**<1**	<1	<1
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>11	**6**	5	6
Lead	ppm	ASTM D5185m	>13	**0**	0	0
Copper	ppm	ASTM D5185m	>21	**1**	2	3
Tin	ppm	ASTM D5185m	>5	**<1**	<1	0
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

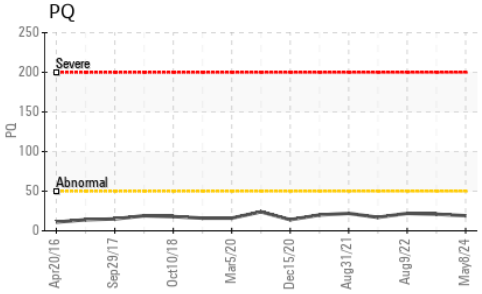
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**187**	183	310
Barium	ppm	ASTM D5185m		**1**	0	0
Molybdenum	ppm	ASTM D5185m		**148**	149	213
Manganese	ppm	ASTM D5185m		**<1**	<1	<1
Magnesium	ppm	ASTM D5185m		**490**	482	600
Calcium	ppm	ASTM D5185m		**884**	903	1189
Phosphorus	ppm	ASTM D5185m		**842**	832	826
Zinc	ppm	ASTM D5185m		**964**	1001	973
Sulfur	ppm	ASTM D5185m		**2850**	2532	2631

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>24	**12**	10	12
Sodium	ppm	ASTM D5185m	>21	**3**	2	0
Potassium	ppm	ASTM D5185m	>20	**<1**	0	3

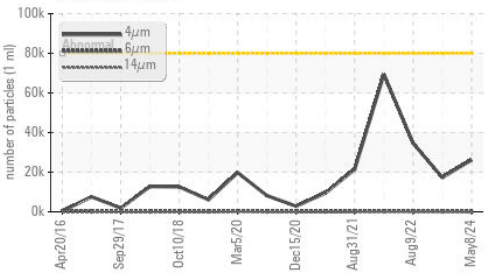
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>80000	**26223**	17236	34587
Particles >6µm		ASTM D7647	>5000	**78**	223	240
Particles >14µm		ASTM D7647	>640	**8**	20	8
Particles >21µm		ASTM D7647	>160	**3**	7	0
Particles >38µm		ASTM D7647	>40	**0**	0	0
Particles >71µm		ASTM D7647	>10	**0**	0	0
Oil Cleanliness		ISO 4406 (c)	>23/19/16	**22/13/10**	21/15/11	22/15/10

OIL ANALYSIS REPORT

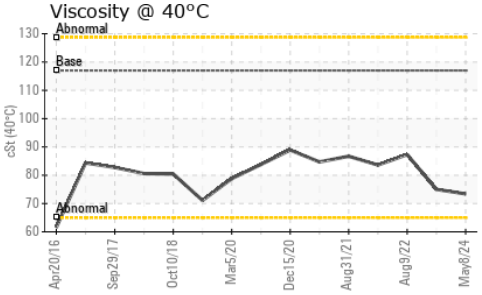
PQ



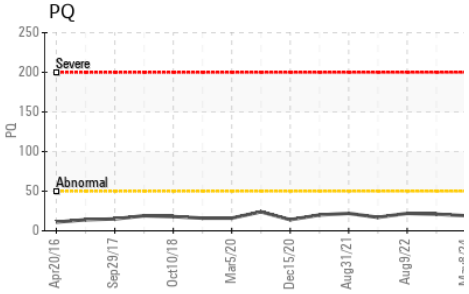
Particle Trend



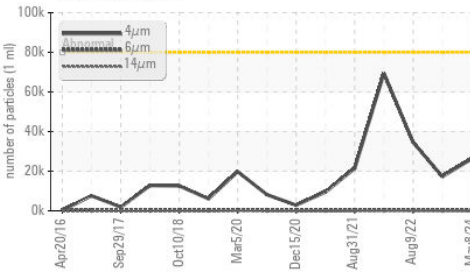
Viscosity @ 40°C



PQ



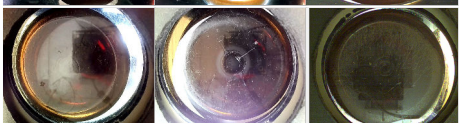
Particle Trend



FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**1.12**	1.17	1.54

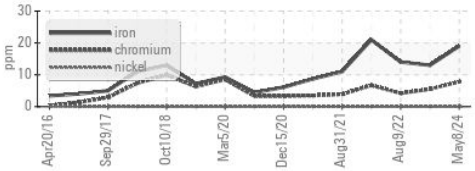
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	LIGHT	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	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 PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	117	**73.4**	75.0	87.3

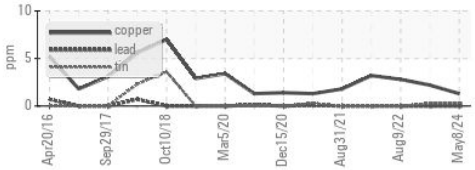
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

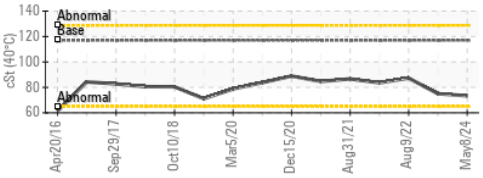
Ferrous Alloys



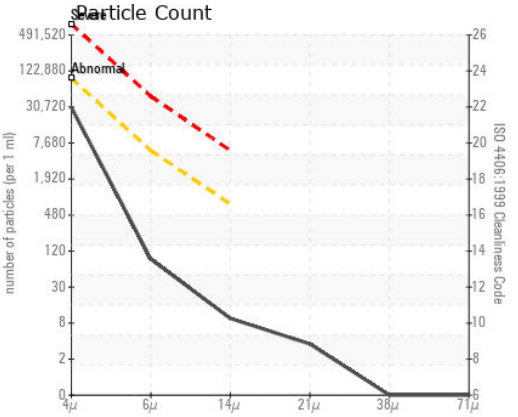
Non-ferrous Metals



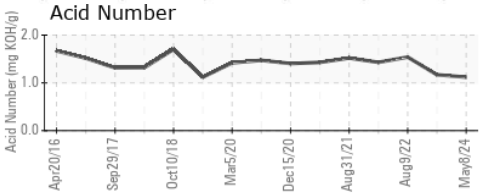
Viscosity @ 40°C



Particle Count



Acid Number



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0212331
Lab Number : 06178607
Unique Number : 11029933
Test Package : CONST (Additional Tests: PQ)

Received : 14 May 2024
Tested : 15 May 2024
Diagnosed : 16 May 2024 - Don Baldridge

Certificate L2367

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)

JRE - ASHLAND
11047 LEADBETTER RD
ASHLAND, VA
US 23005
Contact: DAVID ZIEG
dzieg@jamesriverequipment.com
T: (804)798-6001
F: (804)798-0292