

OIL ANALYSIS REPORT



MINING ME-01 JOHN DEERE 824K 1DW824KXCJF692826

Front Differential

JOHN DEERE HY-GARD HYD/TRANS (--- GAL)





Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

There is no indication of any contamination in the

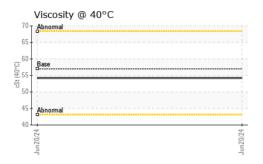
Fluid Condition

The condition of the oil is acceptable for the time in service.

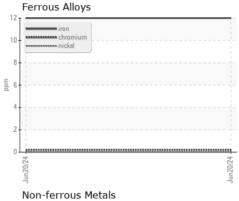
SAMPLE INFORM Sample Number Sample Date Machine Age Oil Age Oil Changed Sample Status CONTAMINATION Water WEAR METALS Iron Chromium Nickel Titanium Silver Aluminum Lead Copper Tin Vanadium Cadmium ADDITIVES Boron Barium Molybdenum Manganese Mannagium	hrs hrs	method Client Info Method WC Method Method ASTM D5185m	>51	current WC0917354 20 Jun 2024 16188 16188 Changed NORMAL current NEG current 12 <1 0 0 0 2 3 2 0 0 0	history1 history1 history1	history2 history2 history2
Sample Date Machine Age Oil Age Oil Changed Sample Status CONTAMINATION Water WEAR METALS Iron Chromium Nickel Titanium Silver Aluminum Lead Copper Tin Vanadium Cadmium ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	Client Info Client Info Client Info Client Info Client Info Client Info Method WC Method Method ASTM D5185m	>0.1 limit/base >1501 >11 >10 >21 >51 >101 >10	20 Jun 2024 16188 16188 Changed NORMAL	history1	history2
Machine Age Oil Age Oil Age Oil Changed Sample Status CONTAMINATION Water WEAR METALS fron Chromium Nickel Titanium Silver Aluminum Lead Copper Tin Vanadium Cadmium ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	Client Info Client Info Client Info Client Info Method WC Method ASTM D5185m	>0.1 limit/base >1501 >11 >10 >21 >51 >101 >10	16188 16188 Changed NORMAL current NEG current 12 <1 0 0 2 3 2 0 0	history1 history1	history2 history2
Dil Age Dil Changed Sample Status CONTAMINATION Water WEAR METALS ron Chromium Nickel Fitanium Silver Aluminum Lead Copper Fin Vanadium Cadmium ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	Client Info Client Info Client Info method WC Method ASTM D5185m	>0.1 limit/base >1501 >11 >10 >21 >51 >101 >10	16188 Changed NORMAL current NEG current 12 <1 0 0 2 3 2 0 0	history1 history1	history2 history2
CONTAMINATION Water WEAR METALS ron Chromium Vickel Titanium Silver Aluminum Lead Copper Tin Vanadium Cadmium ADDITIVES Boron Barium Manganese	ppm ppm ppm ppm ppm ppm ppm ppm	Method WC Method Method ASTM D5185m	>0.1 limit/base >1501 >11 >10 >21 >51 >101 >10	Changed NORMAL current NEG current 12 <1 0 0 2 3 2 0 0	history1 history1	history2 history2
CONTAMINATION Vater WEAR METALS Ton Chromium Jickel Titanium Silver Aluminum Lead Copper Tin Vanadium Cadmium ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm ppm ppm ppm ppm	method WC Method method ASTM D5185m	>0.1 limit/base >1501 >11 >10 >21 >51 >101 >10	NORMAL	history1 history1	history2 history2
CONTAMINATION Water WEAR METALS ron Chromium Nickel Titanium Silver Aluminum Lead Copper Tin Vanadium Cadmium ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm ppm ppm ppm ppm	WC Method method ASTM D5185m	>0.1 limit/base >1501 >11 >10 >21 >51 >101 >10	NORMAL	history1 history1	history2 history2
Wear Metals ron Chromium Nickel Fitanium Silver Aluminum Lead Copper Fin Vanadium Cadmium ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm ppm ppm ppm ppm	WC Method method ASTM D5185m	>0.1 limit/base >1501 >11 >10 >21 >51 >101 >10	NEG current 12 <1 0 0 2 3 2 0 0	history1	history2
WEAR METALS Iron Chromium Nickel Titanium Silver Aluminum Lead Copper Tin Vanadium Cadmium ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base >1501 >11 >10 >21 >51 >101 >10	current 12 <1 0 0 2 3 2 0 0		history2
ron Chromium Nickel Fitanium Silver Aluminum Lead Copper Fin Vanadium Cadmium ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	>1501 >11 >10 >21 >51 >101 >10	12 <1 0 0 0 2 3 2 0		
Chromium Nickel Fitanium Silver Aluminum Lead Copper Fin Vanadium Cadmium ADDITIVES Boron Barium Molybdenum Manganese	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 ASTM D5185m	>11 >10 >21 >51 >101 >10	<1 0 0 0 2 3 2 0		
Nickel Fitanium Silver Aluminum Lead Copper Fin Vanadium Cadmium ADDITIVES Boron Barium Molybdenum Manganese	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	>10 >21 >51 >101 >10	0 0 0 2 3 2 0		
Titanium Silver Aluminum Lead Copper Tin Vanadium Cadmium ADDITIVES Boron Barium Malum Manganese	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	>10 >21 >51 >101 >10	0 0 2 3 2 0		
Silver Aluminum Lead Copper Tin Vanadium Cadmium ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>51 >101 >10	0 0 2 3 2 0		
Silver Aluminum Lead Copper Tin Vanadium Cadmium ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>51 >101 >10	0 2 3 2 0		
Aluminum Lead Copper Tin /anadium Cadmium ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>51 >101 >10	2 3 2 0		
Lead Copper Tin Vanadium Cadmium ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>51 >101 >10	3 2 0		
Copper Tin /anadium Cadmium ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>101 >10	2 0 0		
Tin /anadium Cadmium ADDITIVES Boron Barium Molybdenum Manganese	ppm	ASTM D5185m ASTM D5185m ASTM D5185m	>10	0	 	
Vanadium Cadmium ADDITIVES Boron Barium Molybdenum Manganese	ppm	ASTM D5185m ASTM D5185m		0		
ADDITIVES Boron Barium Molybdenum Manganese		ASTM D5185m	limit/booo			
ADDITIVES Boron Barium Molybdenum Manganese	ppm		limit/bass	0		
Boron Barium Molybdenum Manganese		method				
Barium Molybdenum Manganese			IIIIII/Dase	current	history1	history2
Molybdenum Manganese	ppm	ASTM D5185m	6	2		
/langanese	ppm	ASTM D5185m	0	0		
•	ppm	ASTM D5185m	0	0		
Acanopium	ppm	ASTM D5185m		0		
<i>M</i> agnesium	ppm	ASTM D5185m	145	113		
Calcium	ppm	ASTM D5185m	3570	4071		
Phosphorus	ppm	ASTM D5185m	1290	1276		
Zinc	ppm	ASTM D5185m	1640	1514		
Sulfur	ppm	ASTM D5185m		4307		
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	nnm	ASTM D5185m	- 21	3		
	ppm	ASTM D5185m				
Sodium Potassium	ppm	ASTM D5185m		<1 2		
VISUAL		method	limit/base	current	history1	history2
Vhite Metal	scalar	*Visual	NONE	NONE		
ellow Metal	scalar	*Visual	NONE	NONE		
Precipitate	scalar	*Visual	NONE	NONE		
Silt	scalar	*Visual	NONE	NONE		
Debris	scalar	*Visual	NONE	NONE		
Sand/Dirt	scalar	*Visual	NONE	NONE		
Appearance	scalar	*Visual	NORML	NORML		
Odor	scalar	*Visual	NORML	NORML		
Emulsified Water	scalar	*Visual	>0.1	NEG		
Free Water 20:09) Rev: 1	scalar	*Visual		NEG		

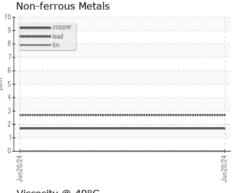


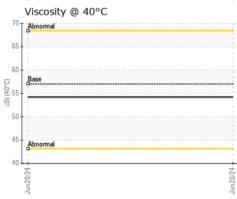
OIL ANALYSIS REPORT



Color no image no image no image	FLUID PROPERTIES		method	limit/base	current	history1	history2
Color no image no image no image	Visc @ 40°C	cSt	ASTM D445	57.0	54.2		
	SAMPLE IMAGE	S	method	limit/base	current	history1	history2
Bottom no image no image no image	Color				no image	no image	no image
	Bottom				no image	no image	no image









Certificate 12367

Laboratory

Sample No. : WC0917354 Lab Number : 06220113

Unique Number : 11098310 Test Package : CONST

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 25 Jun 2024 Tested : 26 Jun 2024

Diagnosed

: 26 Jun 2024 - Wes Davis

COVIA - ROFF - 038 6725 CHICKASAW TURNPIKE ROFF, OK

US 74865-0159 Contact: Jim Bonsall

jim.bonsall@coviacorp.com T: (580)421-5350

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)