

OIL ANALYSIS REPORT





JOHN DEERE 644P 1DW644PAANLZ15485 Front Differential Fluid JOHN DEERE HY-GARD HYD/TRANS (6 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

🔺 Wear

Bearing and/or bushing wear is indicated.

Contamination

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 acceptable for the time in service.

SAMPLE INFORM		method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0118284	PCA0105137	PCA0096409
Sample Date		Client Info		23 Apr 2024	12 Mar 2024	04 Oct 2023
Machine Age	hrs	Client Info		4061	3855	2000
Oil Age	hrs	Client Info		206	1855	2000
Oil Changed		Client Info		N/A	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
CONTAMINATI	ON	method	limit/base	current	history1	history2
Water		WC Method	>.2	NEG	NEG	NEG
WEAR METALS	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>500	49	43	35
Chromium	ppm	ASTM D5185m	>10	<1	<1	0
Nickel	ppm	ASTM D5185m	>10	<1	<1	0
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m		0	<1	<1
Aluminum	ppm	ASTM D5185m	>25	2	<1	<1
Lead	ppm	ASTM D5185m	>25	4 6	4 5	<u> </u>
Copper	ppm	ASTM D5185m	>100	<u> </u>	1 60	1 07
Tin	ppm	ASTM D5185m	>10	3	4	5
Vanadium	ppm	ASTM D5185m		<1	<1	0
Cadmium	ppm	ASTM D5185m		<1	<1	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	6	19	15	5
Barium	ppm	ASTM D5185m	0	0	<1	<1
Molybdenum	ppm	ASTM D5185m	0	<1	<1	0
Manganese	ppm	ASTM D5185m		1	1	<1
Magnesium	ppm	ASTM D5185m	145	78	87	94
Calcium	ppm	ASTM D5185m	3570	3094	3155	3245
Phosphorus	ppm	ASTM D5185m	1290	1016	1167	1076
Zinc	ppm	ASTM D5185m	1640	1168	1220	1231
Sulfur	ppm	ASTM D5185m		3814	4270	3549
CONTAMINAN	TS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>75	7	6	5
Sodium	ppm	ASTM D5185m		0	4	<1
Potassium	ppm	ASTM D5185m	>20	3	4	<1
FLUID DEGRAD	ATION	method	limit/base	current	history1	history2
Acid Number (AN)	ma KOH/a	ASTM D8045	1.8	0.99	1.01	



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-	VISUAL		method	limit/base	e 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	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	>.2	NEG	NEG	NEG
	Free Water	scalar	*Visual		NEG	NEG	NEG
	FLUID PROP	ERTIES	method	limit/base	e current	history1	history2
	Visc @ 40°C	cSt	ASTM D445	57.0	51.4	51.6	52.8
	SAMPLE IMA	GES	method	limit/base	e current	history1	history2
	Color				no image	no image	no image
	Bottom				no image	no image	no image
	GRAPHS						
	Iron (ppm)				Lead (ppm)		
_	Severe				Severe		
ррп	Abnormal			bbu	50 - Abnormal		
		+		4			+++++++++++++++++++++++++++++++++++++++
	0ct4/2	/ar12/2		4pr23/2	0ct4/2	/lar12/2	4pr23/2
	Aluminum (ppm)) _			Chromium (opm)	
	Severe				20 Severe		
	50 Abnormal			a d	Abnormal		
	0ct4/2	lar12/24		kpr23/24	0ct4/2:	lar12/24	pr23/24
	Copper (ppm)	2		4	Silicon (ppm	2	4
	300 Severe			3	300 T Severe		
	200 - 0 Abnormal			ud d	200 - O		
	0ct4/23	ar12/24		pr23/24	0ct4/23	ar12/24	or23/24
	Viscosity @ 40°C	2		A (p/H)	Acid Number	Z	4
	Base	1		Q Z	.00 - Base	****	
	€ °° 6			1	.00		
				- Ind Nur	.00		
	0ct4/2	lar12/24		kpr23/24 Aci	0ct4/2:	lar12/24	tor23/24
/). er per	: WearCheck USA - 5 : PCA0118284 : 06177830 : 11029156 : MOR 2	CENTRA 5707	CENTRAL VALLEY AG 5707 LANGWORTH OAKDALE, CA US 95361 Contact: LAB TECH m-labtech@outlook.com				

To discuss this sample report, con * - 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)

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Certificate L2367

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