WEAR CONTAMINATION FLUID CONDITION

ABNORMAL NORMAL ATTENTION

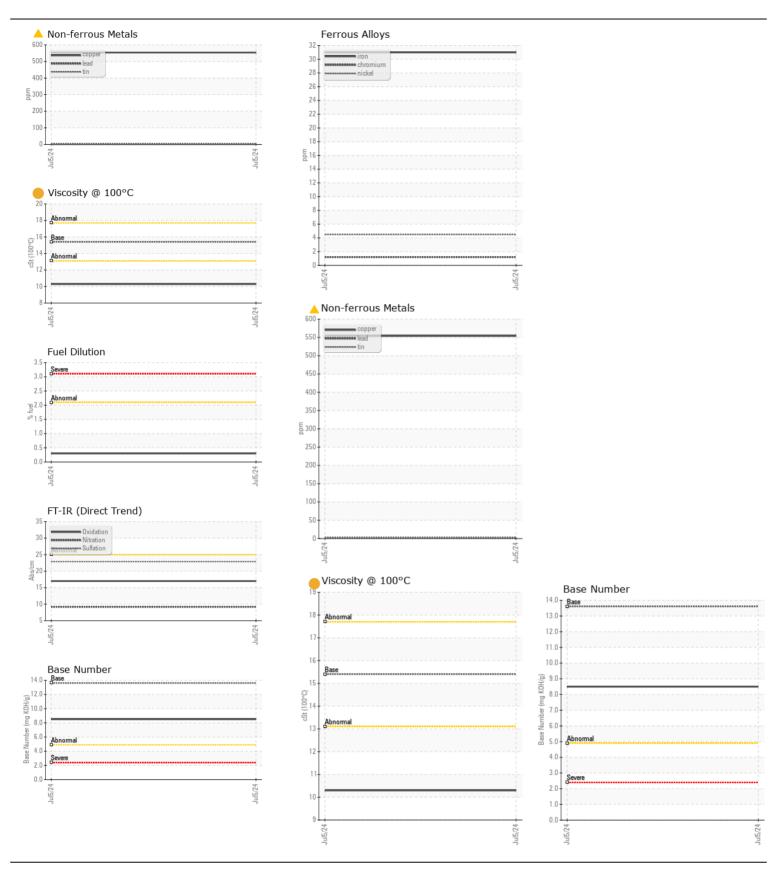
[16W16589]

JOHN DEERE 544 P 1DW544PAPPLX19912

Diesel Engine

JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (5 GAL)

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor. (Customer Sample Comment: 16W16589) Machine Age hrs Client Info 529 Filter Age hrs Client Info 529 Oil Changed Client Info 529 Sample Status Sample Status ABNORMAL	JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (GAL)						
Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resemple at the next service interval to monitor. (Customer Sample Comment: 16W16589) Sample Date Machine Age hrs Client Info 529	RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Part Sample Commended at this time, Resample at the next service interval to monitor. (Customer Sample Comment: 16W16S89) Oil Age hrs Client Info S29	Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next	Sample Number		Client Info		JR0217398		
Machine Ago In Collect Info Sep Machine Ago In Collect Info Sep Machine Ago In Sep Machine Ago		Sample Date		Client Info		05 Jul 2024		
Contamination Contaminatio		Machine Age	hrs	Client Info		529		
Coll Changed Cilent Info Changed Changed Cilent Info Changed Cilent Info Changed Cilent Info Changed Cilent Info Changed Changed Cilent Info Changed Cilent Info Changed Chang		Oil Age	hrs	Client Info		529		
Filter Changed Sample Status Client Info Changed ABNORMAL		Filter Age	hrs	Client Info				
Filter Changed Sample Status Sample Stat		Oil Changed		Client Info		Changed		
MEAR Properties Sample Status Sample		Filter Changed		Client Info				
Chromium Chromium		-				_		
Chromium Chromium								
	metals, suspect copper due to sources other than wear (i.e. cooling core). All other metal levels are typical for a new component breaking							
MICKET STATE STA			ppm					
Intanum ppm ASTMUBBISM 31 6					>5	4		
Silver ppm ASIM D5185m 31 6		Titanium	ppm			<1		
Lead		Silver	ppm	ASTM D5185m	>3	0		
Copper		Aluminum	ppm	ASTM D5185m	>31	6		
Tin Vanadium teal Vanadi		Lead	ppm	ASTM D5185m	>26	11		
Vanadium ppm ASTM D5185m <1		Copper	ppm			<u>▲</u> 554		
White Metal Scalar *Visual NONE NO		Tin	ppm	ASTM D5185m	>4	3		
Vellow Metal Scalar Visual NONE NONE Potassium ppm ASTM D5185m >22 12 Potassium ppm ASTM D5185m >20 4 Potassium ppm ASTM D5185m >20 4 Valuer WC Method 0-21 NEG Glycol % 'ASTM D2892 NEG Solt % 'ASTM D2892 NEG Solt % 'ASTM D7244 >3 0.3 Sulfation Abs/.mm 'ASTM D7345 >30 0.3 Sulfation Abs/.mm 'ASTM D7455 >30 0.3 Sulfation Abs/.mm 'ASTM D7455 >30 22.9 Sulfation Abs/.mm ASTM D5185m NONE NONE NONE Sulfation Abs/.mm ASTM D5185m >0 Sulfation Abs/.mm ASTM D5185m 318 Sulfation Abs/.mm ASTM D5185m 318 Sulfation Abs/.mm ASTM D5185m 926 ASTM D5185m 926 Sulfation Abs/.mm ASTM D5185m		Vanadium	ppm	ASTM D5185m		<1		
Silicon ppm ASTM D5185m >22 12		White Metal	scalar	*Visual	NONE	NONE		
Potassium ppm ASTM D5185m ≥20 4		Yellow Metal	scalar	*Visual	NONE	NONE		
Potassium ppm ASTM D5185m ≥20 4	CONTANDIATION							
Fuel content negligible. No other contaminants were detected in the oil. Fuel	CONTAMINATION							
Valer	Fuel content negligible. No other contaminants were detected in the oil.							
Glycol			%					
Soot % % *ASTM D7844 >3 0.3 Nitration Abs/cm *ASTM D7824 >20 9.2 Sulfation Abs/.fmm *ASTM D7815 >30 22.9 Silt scalar *Visual NONE NONE NONE Debris scalar *Visual NONE NONE NONE Debris scalar *Visual NONE NONE NONE Appearance scalar *Visual NORML NO					>0.21			
Nitration Abs/.mm								
Sulfation Abs./imm *ASTM D7415 >30 22.9			%		>3			
Silt Scalar *Visual NONE NONE Debris Scalar *Visual NONE NONE NONE Sand/Dirt Scalar *Visual NONE NONE NONE Sand/Dirt Scalar *Visual NONE NORML			Abs/cm					
Debris Scalar *Visual NONE NONE NONE Sand/Dirt Scalar *Visual NONE NONE			Abs/.1mm		>30			
Sand/Dirt scalar *Visual NONE NONE NORML		Silt	scalar		NONE			
Appearance Scalar *Visual NORML NORML NORML COdor Scalar *Visual NORML N		Debris	scalar	*Visual	NONE	NONE		
Color Scalar *Visual NORML N		Sand/Dirt	scalar	*Visual	NONE	NONE		
Emulsified Water scalar *Visual >0.21 NEG		Appearance	scalar	*Visual	NORML	NORML		
Sodium ppm ASTM D5185m >31 6		Odor	scalar		NORML	NORML		
Boron ppm ASTM D5185m D		Emulsified Water	scalar	*Visual	>0.21	NEG		
Boron ppm ASTM D5185m D	ELUID CONDITION	Sodium	nnm	ASTM DE195~	√21	6		
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type. Barium ppm ASTM D5185m 255 Manganese ppm ASTM D5185m 5 Magnesium ppm ASTM D5185m 812 Calcium ppm ASTM D5185m 1381 Phosphorus ppm ASTM D5185m 926 Zinc ppm ASTM D5185m 1092 Sulfur ppm ASTM D5185m 3039 ASTM D5185m 3039 Sulfur ppm ASTM D5185m 3039 ASTM D5185m 303	T LOID CONDITION				201	-		
there is suitable alkalinity remaining in the oil. Confirm oil type. Molybdenum ppm ASTM D5185m 255 Magnesium ppm ASTM D5185m 5 Magnesium ppm ASTM D5185m 812 Calcium ppm ASTM D5185m 1381 Phosphorus ppm ASTM D5185m 926 Zinc ppm ASTM D5185m 1092 Sulfur ppm ASTM D5185m 3039 Sulfur ppm ASTM D5185m 3039 Sulfur ppm ASTM D7414 >25 17.0 Base Number (BN) mg KOH/g ASTM D2896 13.6 8.5	•							
Manganese ppm ASTM D5185m 5 Magnesium ppm ASTM D5185m 812 Calcium ppm ASTM D5185m 1381 Phosphorus ppm ASTM D5185m 926 Zinc ppm ASTM D5185m 1092 Sulfur ppm ASTM D5185m 3039 Oxidation Abs/.1mm *ASTM D7414 >25 17.0 Base Number (BN) mg KOH/g ASTM D2896 13.6 8.5								
Magnesium ppm ASTM D5185m 812 Calcium ppm ASTM D5185m 1381 Phosphorus ppm ASTM D5185m 926 Zinc ppm ASTM D5185m 1092 Sulfur ppm ASTM D5185m 3039 Oxidation Abs/.1mm *ASTM D7414 >25 17.0 Base Number (BN) mg KOH/g ASTM D2896 13.6 8.5		•						
Calcium ppm ASTM D5185m 1381 Phosphorus ppm ASTM D5185m 926 Zinc ppm ASTM D5185m 1092 Sulfur ppm ASTM D5185m 3039 Oxidation Abs/.1mm *ASTM D7414 >25 17.0 Base Number (BN) mg KOH/g ASTM D2896 13.6 8.5								
Phosphorus ppm ASTM D5185m 926 Zinc ppm ASTM D5185m 1092 Sulfur ppm ASTM D5185m 3039 Oxidation Abs/.1mm *ASTM D7414 >25 17.0 Base Number (BN) mg KOH/g ASTM D2896 13.6 8.5		-						
Zinc ppm ASTM D5185m 1092 Sulfur ppm ASTM D5185m 3039 Oxidation Abs/.1mm *ASTM D7414 >25 17.0 Base Number (BN) mg KOH/g ASTM D2896 13.6 8.5								
Sulfur ppm ASTM D5185m 3039 Oxidation Abs/.1mm *ASTM D7414 >25 17.0 Base Number (BN) mg KOH/g ASTM D2896 13.6 8.5								
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Base Number (BN) mg KOH/g ASTM D2896 13.6 8.5								
Visc @ 100°C cSt ASTM D445 15.4 10.3		(/				_		
		Visc @ 100°C	cSt	ASTM D445	15.4	10.3		







Laboratory Sample No.

Lab Number : 06232038 Unique Number : 11115531

: JR0217398

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received

Tested Diagnosed

: 10 Jul 2024 : 12 Jul 2024

: 12 Jul 2024 - Sean Felton

JRE - GARNER 4161 AUBURN CHURCH RD GARNER, NC

US 27529 Contact: RALEIGH SHOP

Test Package : CONST (Additional Tests: FuelDilution, Glycol, PercentFuel, TBN) Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369.

sean.betts@jamesriverequipment.com;catherine.anastasio@wearcheck.com T: (919)614-2260

* - 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)

F: (919)779-5432