WEAR CONTAMINATION FLUID CONDITION

NORMAL NORMAL NORMAL

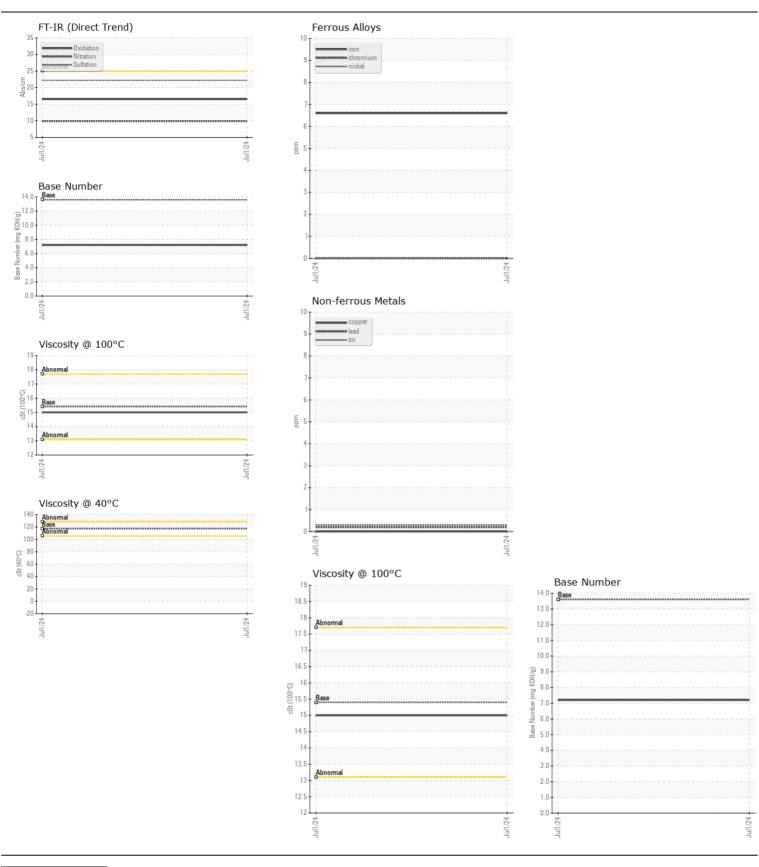
Machine Ic

HITACHI EX1200 C122095 (S/N 001291)

Component
Diesel Engine

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

Nickel Spin ASTM 05188m 0	JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (GAL)				.,		
Resample at the next service interval to monitor.	RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Machine Age hrs Client Info 10266		Sample Number		Client Info		JR0223618		
Oil Age hrs Client Info O	Resample at the next service interval to monitor.			Client Info		01 Jul 2024		
Filter Age		Machine Age	hrs	Client Info		16266		
Oil Changed Client Info NA NA NA NA NA NA NA N		Oil Age	hrs	Client Info		0		
Filter Changood Client Info NA NA NA NA NA Sample Status NA NA NA NA NA NA NA N		Filter Age	hrs	Client Info		0		
NORMAL N		Oil Changed		Client Info		N/A		
Iron		Filter Changed		Client Info		N/A		
Chromium ppm ASTM D6185m 34 0		Sample Status				NORMAL		
Chromium ppm ASTM D6185m 34 0	WEAR	Iron	nnm	ΔSTM D5185m	\21	7		
Nickel ppm ASTM 05186m >4 0	WEAT							
Titanium ppm ASTM D5185m 3 0	All component wear rates are normal.							
Silver					>4			
Aluminum ppm ASTM D5185m >4 2					. 0			
Lead								
Copper								
Tin								
Vanadium Vanadium								
White Metal Yellow Metal Scalar *Visual NONE NON					>1			
Yellow Metal Scalar Visual NONE NONE Potassium ppm ASTM D5185m >22 5 Potassium ppm ASTM D5185m >20 2 Water WC Method >5 <1.0 Water WC Method >0.2 NEG Glycol WC Method Scot % % % 'ASTM D7844 >3 1.3 Nitration Abs/rtm ASSTM D7845 >20 9.9 Sulfation Abs/rtm ASSTM D7845 >20 9.9 Sulfation Abs/rtm ASSTM D7845 >20 9.9 Sulfation Abs/rtm ASSTM D7845 >30 22.2 Stit Scalar Visual NONE NONE NONE Sand/Dirt Scalar Visual NONE NONE NONE Appearance Scalar Visual NONE NONE Appearance Scalar Visual NORML					NONE	-		
Silicon ppm ASTM D5185m >22 5 Potassium ppm ASTM D5185m >20 2 Potassium ppm ASTM D5185m >20 2 Fuel WC Method >5 <1.0 Fuel WC Method >5 <1.0 Fuel WC Method >6 NEG Soot % % *ASTM D7844 >3 1.3 Nitration Abs/cm *ASTM D7845 >20 9.9 Sulfation Abs/smm *ASTM D7845 >30 22.2 Sitt scalar *Visual NONE NON								
Potassium ppm ASTM D5185m >20 2		Yellow Metal	scalar	^Visual	NONE	NONE		
Fuel WC Method So.2 NEG So.2 NEG	CONTAMINATION	Silicon	ppm	ASTM D5185m	>22	5		
Water	There is no indication of any contamination in the oil.	Potassium	ppm	ASTM D5185m	>20	2		
Glycol		Fuel		WC Method	>5	<1.0		
Soot %		Water			>0.2	NEG		
Nitration Abs/cm *ASTM D7624 >20 9.9 Sulfation Abs/tmm *ASTM D7415 >30 22.2 Silt Scalar *Visual NONE NONE Sand/Dirt Scalar *Visual NONE NONE NONE Appearance Scalar *Visual NORM NORML NORML NORML NORML Appearance Scalar *Visual NORML NORML NORML Appearance Scalar *Visual NORML NORML NORML Codor Scalar *Visual NORML NORML NORML Emulsified Water Scalar *Visual NORML NORML Emulsified Water Scalar *Visual NORML NORML Emulsified Water Scalar *Visual NORML NORML More NORML NORML NORML NORML More NORML		Glycol		WC Method		NEG		
Sulfation Abs/.time ASTM D7415 >30 22.2		Soot %	%	*ASTM D7844	>3	1.3		
Silt scalar *Visual NONE NORML NORM		Nitration	Abs/cm	*ASTM D7624	>20	9.9		
Debris Scalar *Visual NONE NONE Sand/Dirt Scalar *Visual NONE NONE Sand/Dirt Scalar *Visual NONE NONE Sand/Dirt Scalar *Visual NORML N		Sulfation	Abs/.1mm	*ASTM D7415	>30	22.2		
Sand/Dirt Scalar *Visual NONE NONE Appearance Scalar *Visual NORML NORM		Silt	scalar	*Visual	NONE	NONE		
Appearance Scalar *Visual NORML NORML NORML Emulsified Water Scalar *Visual NORML NORML NORML NORML Emulsified Water Scalar *Visual >0.2 NEG		Debris	scalar	*Visual	NONE	NONE		
Calcium Calc		Sand/Dirt	scalar	*Visual	NONE	NONE		
Emulsified Water scalar *Visual >0.2 NEG		Appearance	scalar	*Visual	NORML	NORML		
Sodium ppm ASTM D5185m 2		Odor	scalar	*Visual	NORML	NORML		
Boron ppm ASTM D5185m 0		Emulsified Water	scalar	*Visual	>0.2	NEG		
Boron ppm ASTM D5185m 0	ELLUD CONDITION							
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service. Barium ppm ASTM D5185m 79 Molybdenum ppm ASTM D5185m 79 Manganese ppm ASTM D5185m 138 Magnesium ppm ASTM D5185m 2190 Phosphorus ppm ASTM D5185m 2190 Zinc ppm ASTM D5185m 1106 Sulfur ppm ASTM D5185m 1288 Sulfur ppm ASTM D5185m 4192 Oxidation Abs/.1mm *ASTM D7414 >25 16.5 Base Number (BN) mg KOH/g ASTM D2896 13.6 7.2	FLUID CONDITION							
Molybdenum ppm ASTM D5185m 79 Magnesium ppm ASTM D5185m 41 Magnesium ppm ASTM D5185m 2190 Phosphorus ppm ASTM D5185m 1106 Zinc ppm ASTM D5185m 1288 Sulfur ppm ASTM D5185m 4192 Oxidation Abs/.1mm *ASTM D7414 >25 16.5 Base Number (BN) mg KOH/g ASTM D2896 13.6 7.2	The BN result indicates that there is suitable alkalinity remaining in the							
Molybdenum ppm ASIM D5185m 79 Manganese ppm ASTM D5185m <1 Magnesium ppm ASTM D5185m 138 Calcium ppm ASTM D5185m 2190 Phosphorus ppm ASTM D5185m 1106 Zinc ppm ASTM D5185m 1288 Sulfur ppm ASTM D5185m 4192 Oxidation Abs/.1mm *ASTM D7414 >25 16.5 Base Number (BN) mg KOH/g ASTM D2896 13.6 7.2	oil. The condition of the oil is suitable for further service.							
Magnesium ppm ASTM D5185m 138 Calcium ppm ASTM D5185m 2190 Phosphorus ppm ASTM D5185m 1106 Zinc ppm ASTM D5185m 1288 Sulfur ppm ASTM D5185m 4192 Oxidation Abs/.1mm *ASTM D7414 >25 16.5 Base Number (BN) mg KOH/g ASTM D2896 13.6 7.2		-						
Calcium ppm ASTM D5185m 2190 Phosphorus ppm ASTM D5185m 1106 Zinc ppm ASTM D5185m 1288 Sulfur ppm ASTM D5185m 4192 Oxidation Abs/.1mm *ASTM D7414 >25 16.5 Base Number (BN) mg KOH/g ASTM D2896 13.6 7.2		_						
Phosphorus ppm ASTM D5185m 1106 Zinc ppm ASTM D5185m 1288 Sulfur ppm ASTM D5185m 4192 Oxidation Abs/.1mm *ASTM D7414 >25 16.5 Base Number (BN) mg KOH/g ASTM D2896 13.6 7.2		•						
Zinc ppm ASTM D5185m 1288 Sulfur ppm ASTM D5185m 4192 Oxidation Abs/.1mm *ASTM D7414 >25 16.5 Base Number (BN) mg KOH/g ASTM D2896 13.6 7.2								
Sulfur ppm ASTM D5185m 4192 Oxidation Abs/.1mm *ASTM D7414 >25 16.5 Base Number (BN) mg KOH/g ASTM D2896 13.6 7.2								
Oxidation Abs/.1mm *ASTM D7414 >25 16.5 Base Number (BN) mg KOH/g ASTM D2896 13.6 7.2								
Base Number (BN) mg KOH/g ASTM D2896 13.6 7.2								
Visc @ 100°C cSt ASTM D445 15.4 15.0								
		Visc @ 100°C	cSt	ASTM D445	15.4	15.0	J	







Certificate L2367

Laboratory Sample No.

: JR0223618 Lab Number : 06227194 Unique Number : 11110687

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

Tested Diagnosed Test Package: CONST (Additional Tests: TBN, KV40)

: 03 Jul 2024 : 05 Jul 2024

: 05 Jul 2024 - Angela Borella

JRE - GREENSBORO 411 SOUTH REGIONAL ROAD GREENSBORO, NC US 27409

Contact: CHRIS FRAZIER

F: (336)665-9556

cfrazier@jamesriverequipment.com 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)

T: