



Service Invoice

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Benco Machinery, LLC
7600 N Bryant Ave.
Oklahoma City, OK 73121
P.405.486.7789

Customer Number:
10019

Customer PO #:

Work Order #: 18000384
Date Opened: 5/24/2018
Date Closed: 7/1/2018
Tech: MH

Customer Info:

Benco Machinery, LLC
7600 N. Bryant Ave
Oklahoma City, OK 73121

Location of Repair:

Watonga

Make	Model	Serial Number	Hours In	Hours Out
J Deere	872G	PEF658277	5772	5776

Service requested:

Unit has multiple code. Drive to job site, and diagnose codes.

Work Order Summary per segment:	Travel Labor	Parts	Repair Labor	Mileage	Segment Total
01] Travel and diagnose codes. Replace turbo.	\$969.80	\$3,459.70	\$1,104.15	\$872.60	\$6,406.25
02] Further issues found bad DEF pump.	\$0.00	\$1,386.20	\$1,535.66	\$0.00	\$2,921.86
				Total	\$9,328.11

Work Performed 1]		Part #	Description	Quantity	Price
Travel to job site to diagnose trouble codes. Order parts, and return to replace turbo on machine.		RE550231	Turbocharger	1	\$3,145.19
		R56466	O-ring	3	\$5.40
		R529141	Gasket	1	\$3.00
		R534121	Cap screw	4	\$14.60
		R535094	Gasket	1	\$7.88
		AT311066	Element	1	\$155.22
		AT311067	Element	1	\$96.97
		DZ101884	Filter kit	1	\$31.44
		Hours/Mileage	Rate	Total	
Travel Labor		14.92	\$65.00	\$969.80	Parts Total \$3,459.70
Mileage		436.3	\$2.00	\$872.60	Travel Labor \$969.80
Repair Labor		12.99	\$85.00	\$1,104.15	Mileage \$872.60
					Repair Labor \$1,104.15

Work Performed 2]		Part #	Description	Quantity	Price
Travel to job site to diagnose more trouble codes. order parts, then return to job site to replace DEF pump. Clear codes, and test machine.		RE553796	DEF injection pump	1	\$1,373.30
		SWDEF025	DEF injection pump	2.5	\$12.90
		Hours/Mileage	Rate	Total	
Travel Labor				\$0.00	Parts Total \$1,386.20
Mileage				\$0.00	Travel Labor \$0.00
Outside Labor		1	\$1,535.66	\$1,535.66	Mileage \$0.00
					Repair Labor \$1,535.66

Thank you for your business!

Please remit payment to: 1125 40th St., Ste. D, Woodward, OK 73801

Explanation of work performed:

Traveled to Watonga, OK job site. Machine has multiple codes stored. I found twenty-nine in memory. Five codes are related for turbo actuator issue. Code 641'5 has occurred fifty-eight times starting at 5,757 hours. Code became inactive after opening, and inspecting turbo. Only remaining code is engine derate code 1569.31 occurred seventy-two times. Rustin informed me that the fuel filter, water/fuel separator are the only components that he has worked on. I will order turbo, and parts to replace turbocharger'. I returned to the job site to remove the turbo, and replace it with new parts, o-rings, gaskets, hardware, elements, and filter kit. I cleaned all parts that would be reused. Made all connections with sensors, and wiring harness. Checked to make sure all bolts were tight. Double checked fluids, and allowed system to recalibrate, and learn new turbo with sensors. The system did NOT acknowledge sensors, and three of the stored codes returned. I attempted to clear codes, then restart. A new code for DEF fluid pump failure is now showing. I consulted the management team for next process. Contacted C.L. Boyd to travel to job site and perform diagnostic testing with John Deere program.

Work performed #2- From C.L. Boyd. Arrived at machine due to customer's concern of turbo codes coming active with machine running. Customer has previously consulted with Richie B. and he informed them that replacing the turbo would likely resolve the issue. Confirmed that new turbo had been installed. Started unit and drove around the yard. No codes are showing at this time. Customer returned unit to work, and codes appeared. Codes- 641.5, 641.06, 641.07, 1569.31, and 5435.11 are now active. Removed engine compartment doors, and cover. Inspected harness from ECU to VGT turbo area. Found a spot where the harness goes over the top of the valve cover that has been rubbing, and rubbed two wires. One was for turbo actuator. I repaired wiring, and tested. Reinstalled harness, and performed a VGT valve learn. Started unit and ran for about ten minutes with no issues. Code 5435.11 was active the entire time. Performed a DEF pump diagnostic test, and the pressure would never build above 0.3 psi. Visually inspected pump connections, and DEF tank header connections and all looked good. Informed customer that machine would need a new DEF pump. Will return to install new pump. Arrived with new pump, and fluid. Opened compartment door and removed bad DEF pump. Removed filter from pump, and checked for debris/dirt. Filter was clean, and will be reused. Installed new pump and reconnected hoses, and wiring harness. Filled tank with 2.5 gallons of DEF fluid which brought tank to 89.4% full. Performed DEF pump diagnostic test with Service Advisor. After 15 seconds of priming, the pressure went from 2.0 psi to 150 then leveled off and held at 130 psi. Shut off unit and check for leaks. No issues found. Restarted machine and let it run for 10 minutes at varying RPM's while monitoring VGT van position actual and desired as well as DEF pump outlet pressure. Repaired drivewire 5007PUR, and new DEF pump resolved issues of VGT codes, and DEF pump pressure low codes on machine. Replaced all engine

Due Date	NA
Please Pay This Amount	\$9,328.11

Thank you for your business!

Please remit payment to: 1125 40th St., Ste. D, Woodward, OK 73801

SERVICE INVOICE

Invoice Number: 485451
 Invoice Date: 11/22/2019
 Location: 03
 Work Order Number: 84139
 Payment Type: Account

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JOHN DEERE 872GP

Meter

Serial Number:

EQ Id:

Fleet No:

Service Reminders:

6593

1DW872GXPEF658277

EF658277

TRAVEL -F-0000011 Retail

COMPLAINT:



CORRECTION:

Traveled 38 miles
 Traveled 38 miles

Miscellaneous	Description	Quantity	Net Price	Extended Price	Taxed Ind
MIL SVC 4	MILEAGE #4 GM488208 NF	76.00			Y
Labor:					
Gen1- Retail					

COMPLAINT:

Check the machine emission system
 The DPF/DOC is stopped up

CORRECTION:

Check the machine emission system
 Hooked up the machine to Service Advisor
 Checked for any codes on the machine
 There was 27 different codes on the machine
 All of the codes were stored though
 The unit was low on coolant
 The operator said they had to add coolant weekly
 Disconnected the batteries
 Removed all four panels on both sides
 Removed the hood
 Removed the after treatment structure
 Removed the DPF/DOC assembly
 Disassembled the DPF/DOC
 Removed one brace and drained the coolant
 Removed the EGR cooler
 Sent the cooler and DPF/DOC to be cleaned and tested
 Removed and replaced the fuel dosing pressure regulator
 Removed and replaced the fuel dosing valve

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Make/Model: JOHN DEERE 872GP Meter: 6593 Serial Number: 1DW872GXPEF658277 EQ Id: EF658277 Fleet No:
 Prv Phone:

Service Reminders:

The DPF/DOC was good, just needed to be cleaned
 Reinstalled the DPF/DOC with new gaskets
 Reinstalled the after treatment structure
 The EGR test came back and it failed the test
 Ordered a new EGR cooler
 Installed the new EGR cooler with new gaskets
 Filled the unit with new coolant
 Calibrated the DPF/DOC
 Bled air from the fuel dosing system
 Checked the dosing pressure and it was good
 Reinstalled all of the panels
 Operation check the machine, it was good for DPF/DOC
 But during the checks, the machine threw a code of 523680.05
 Looked up the code on Service Advisor
 Removed the cover for 6WD controller
 Removed cover for X41 plug between the cab and rear
 Found an open wire W041 to the solenoid (blue wire)
 Ran a 9' length of new wire from solenoid connector to X41 connector behind cab
 Now there is continuity
 Ran the machine for one hour to check the operation of the machine, no issues were noted
 Taped off the wire and zip tied along large harness as needed.
 Installed a small side shield
 Ran the machine for 1 hour to make sure there were no problems
 The machine ran great

PartNumber	Description	Quantity	Net Price	Extended Price	Taxed Ind
14M7718	LOCK NUT	2.00			
24M7544	WASHER	2.00			
51M7041	O-RING	1.00			
51M7045	O-RING	3.00			
57M7542	ELEC. CONN	1.00			
AT366435	Strap	1.00			
DZ102534	HEAT EXCHA	1.00			
H77698	TIE BAND	12.00			
PM38657	SEALANT	1.00			
R104848	ELEC. CONN	2.00			
R44302	TIE BAND	20.00			
R528237	SEALING RI	1.00			
R529640	GASKET	2.00			
R537859	GASKET	2.00			
R566072	O-Ring	8.00			
R56905	O-RING	3.00			

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JOHN DEERE 872GP

Meter

Serial Number:

EQ Id:

Fleet No:

6593

1DW872GXPEF658277

EF658277

Service Reminders:

R78059	ELECTRICAL	1.00
RE526831	LINE	2.00
RE533910	FUEL FILTER	1.00
RE539465	FILTER ELE	1.00
RE542998	Flow Control Hyd. Valve	1.00
RE550177	VALVE	1.00
RE554363	CLAMP	2.00
RE568261	CLAMP	1.00
T77932	O-RING	4.00
TY5020	TAPE	2.00
TY5021	TAPE	1.00
W14	wire	9.00
Miscellaneous	Description	Quantity
FREIGHT	FREIGHT	1.00

OL&M Charges:

Description

Clean and inspect DPF & EGR

Miscellaneous Charges:

Environmental Fees

Labor:
 Parts:
 OL&M:
 Misc:
 Sales Tax:
 Total: \$12,649.46

PARTS INVOICE

Invoice No: 489651
 Date: 12/11/2019
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Supplied Quantity	Back Order Quantity	Part Number	Part Description	Bin Loc	List Price	Net Price	Extended Price	Tax Ind
1.00	0.00	T77613	O-RING					
4.00	0.00	14M7666	Nut	3401C				
12.00	0.00	19M7572	CAP SCREW					
12.00	0.00	19M7572	CAP SCREW	2305C				
12.00	0.00	19M7662	CAP SCREW	2305C				
6.00	0.00	19M9145	Cap Screw	2309C				
12.00	0.00	24M7239	WASHER					
6.00	0.00	24M7559	WASHER	2001E				
12.00	0.00	24M7618	WASHER					
1.00	0.00	38H5012	ADAPTER FI	2001C				
1.00	0.00	38H5026	Elbow Fitting					
1.00	0.00	51M7043	O-RING					
24.00	0.00	T129981	SHIM	3403B				
12.00	0.00	T129982	SHIM					
4.00	0.00	T221053	Plate					
4.00	0.00	T239757	INSERT					
13.00	0.00	T240964	SHIM	7307B				
12.00	0.00	T240965	SHIM	5201C				
2.00	0.00	T299148	Retainer	7908				
2.00	0.00	T299164	INSERT					
15.00	0.00	T418899	INSERT	7208A				
6.00	0.00	T418904	INSERT	7306C				
4.00	0.00	19M10207	Cap Screw	7307A				
1.00	0.00	AHC16797	Hydraulic Cylinder					
1.00	0.00	AT219733	TEMPERATUR					
1.00	0.00	AT398271	COMPRESSOR	4205A				

PARTS INVOICE

Invoice No: 489651
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Supplied Quantity	Back Order Quantity	Part Number	Part Description	Bin Loc	List Price	Net Price	Extended Price	Tax Ind
1.00	0.00	AT471493	Switch	4204C				

Invoice Notes:
 405-492-2619,

Parts:

Misc:

Sales Tax:

Deposit:

Total: \$9,100.44