

Steer Ready Kit Installation Guide

Kit: EDX-SR-JD9030, P/N 911-3007-000


Fits John Deere Tractor Models:

9230
9330
9430
9530
9630



NOTE: *This installation kit is specific to the John Deere models listed above that are AutoTrac ready. If your machine is not AutoTrac ready, or you are unsure if it is, contact your local dealer before continuing this installation.*

Read and Follow Safety Messages

- In these instructions, you will see the heading **WARNING** and the safety alert symbol . They indicate a hazardous situation that, if not avoided, could result in death or serious injury. The safety messages provide information to identify a hazard associated with potential injury.
- Before installing, operating, or performing maintenance or service on any part of the system:
 - Read and understand this installation guide and all of the safety information.
 - Read and understand the Steer Ready User Guide.
- Do not allow anyone to operate without instruction.
- Keep these instructions and all related safety information with the manuals for your machine and other implements.

If you have any questions or need assistance, contact your local dealer or distributor.

Overview

A series of equipment specific kits has been developed to work in conjunction with your steer ready system. For the machine models listed above, these kits contain the components for:

- the wheel angle sensor (WAS) - if applicable
- the steering wheel switch (SWS - for steering override) - if applicable
- the electronic control unit (ECU)

The items in each applicable kit are detailed in the tables that follow the safety warnings on the next page. After the kit tables there are step-by-step installation instructions for each of the kits supplied.

Please read this manual thoroughly before beginning the installation.

⚠ WARNING:

To avoid serious injury or death during machine operation, install the appropriate kits for your machine make and model.

Machine Preparation

⚠ WARNING:

Inspect the machine and perform any needed maintenance (for example, contaminated hydraulic fluid) before installing the Steer Ready Installation Kit. This kit cannot perform as intended on a machine that is not maintained properly. Errors in performance increase the risk of operator and bystander injury or death.

Failure to maintain clean hydraulic fluid and operational hydraulic components can cause loss of directional control resulting in serious injury or death.




Turn off the machine and power off all Steer Ready components when installing or performing maintenance.

Before attempting to install any of the components, park the machine on a clean level floor with adequate clearance to work all around.




Before you perform any drilling, cutting or fastening, ensure that no other machine components, such as hydraulic hoses or electrical wiring, will be damaged. Failure to follow this warning may cause physical injury and/or damage to the machine.

Kit Contents - Steering Wheel Switch

Unpack the steering wheel switch kit and identify the required parts as shown. Kit items are A, B, C etc. with an S (Switch) prefix.





REF	PART NUMBER	QTY	DESCRIPTION	PHOTOGRAPH
SA	478-0008	2	Magnet, flex - 1/2"W x 1"L x 1/8"T, plain, 1	
SB	675-0077	1	Epoxy, Hardman 04001 - single double bub	
SC	602-1062	1	Bracket, steering wheel switch mounting	

Kit Contents - Steering Wheel Switch *(continued)*

SD	726-1054	1	Assembly, steering wheel switch/cable	
SE	677-2002	4	Tie strap, 7" releasable	
SF	675-1138-000	1	Screw, self drilling, 8-18 x 3/4" Hex	

Kit Contents - Electronic Control Unit


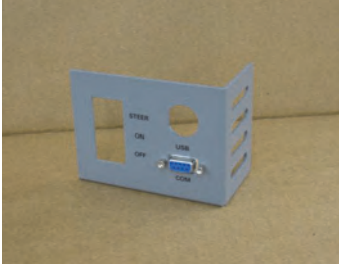




Unpack the electronic control unit kit and identify the required parts as shown. Kit items are A, B, C etc. with an E (Electronic) prefix.

REF	PART NUMBER	QTY	DESCRIPTION	PHOTOGRAPH
EA	051-0226-000#	1	ECU main cable	
EB	Not used	N/A	Not used/included in kit	N/A
EC	051-0250-000#	1	Steering controller main cable, PVED	
ED	051-0270-000#	1	Valve cable, JD AutoTrac, long	
EE	051-0230-000#	1	WAS cable	

Kit Contents - Electronic Control Unit (continued)

REF	PART NUMBER	QTY	DESCRIPTION	PHOTOGRAPH
EF	051-0229-000#	1	SWS cable	
EG	054-0117-000#	1	Power switch	
EH	051-0272-000#	1	WAS phantom plug, JD9030	
EI	051-0166-000#	1	CAN-PWR cable	
EJ	806-1031-000#	1	Controller (ECU)	
EK	750-5003-000	1	Steering controller	
EL	640-0091-000	1	ECU mount bracket	

Kit Contents - Electronic Control Unit (continued)

REF	PART NUMBER	QTY	DESCRIPTION	PHOTOGRAPH
EM	640-0102-000	1	Steering controller mount bracket, steer ready	
EN	726-1093-000	1	Switch bracket	
Bag E1 of 1 contains EO, EP, EQ and ER				
EO	675-1190-000	4	Screw, self drilling, #10 x 1-1/2", Hex ZP	
EP	675-1188-000	2	Screw, mach, M6 x 12mm, PPH ZP	
EQ	675-1210-000	2	Screw, mach, M6-1.0 x 16mm, PPH ZP	
ER	675-2048-000	2	Bolt, 1/4" - 20 x 1-1/2", Gr5 ZP	
	678-1073-000	2	Washer, flat - 1/4"ID x 5/8"OD x 1/16" thk	
	676-1040	2	Nut, 1/4NC Gr5 ZP	
ES	677-2002	20	Tie strap, 7" releasable	

Installation - Steering Wheel Switch (SWS)

1. Prepare the aluminum bracket.

- a. Drill a 3/16" hole in the opposite end from the already drilled hole in the aluminum bracket **SC** (Figure 1a).

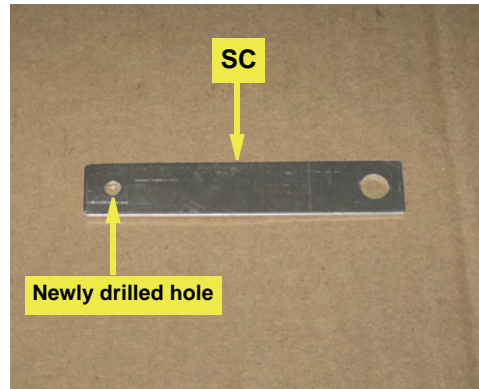


Figure 1a: Newly drilled sensor bracket

- b. Put a 90° bend at the center of bracket **SC** (Figure 1b).

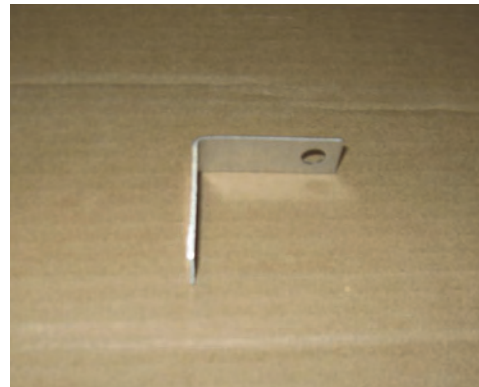


Figure 1b: Newly bent sensor bracket

- c. Connect sensor **SD** to bracket **SC** (Figure 1c).

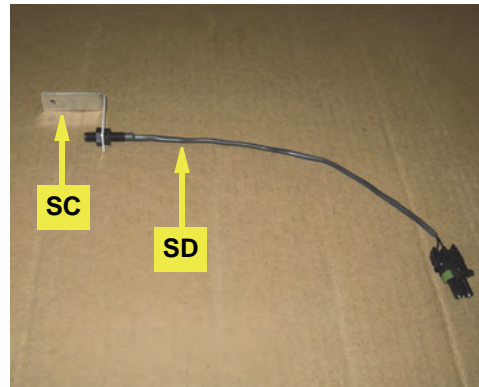


Figure 1c: Installed sensor in sensor bracket

2. Attach the magnets to steering shaft.

You will install the magnets on the steering shaft with the top of the magnet 1 3/4" from the top of the mat border. Clean this area thoroughly.

Mix epoxy **SB** as directed on the package and use it to attach both magnets **SA** on the steering shaft 180° from each other (Figure 2).

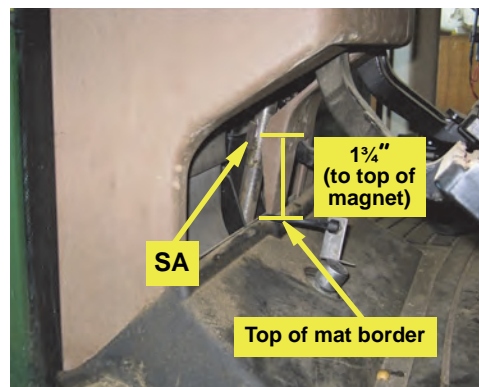


Figure 2: Installed magnets

3. **Attach the aluminum bracket and sensor.**
- a. Measure 1½" up the plastic steering shaft cover from the top of the mat border.
 - b. Using self-drilling screw **SF**, attach the aluminum bracket/sensor assembly **SC/SD** to the plastic cover at the point you measured (Figure 3).
 - c. Using the two plastic nuts on the sensor position the sensor tip 1/8" to 1/4" from magnets.

NOTE:

After installation, turn the steering wheel to check for clearance between magnets and sensor.

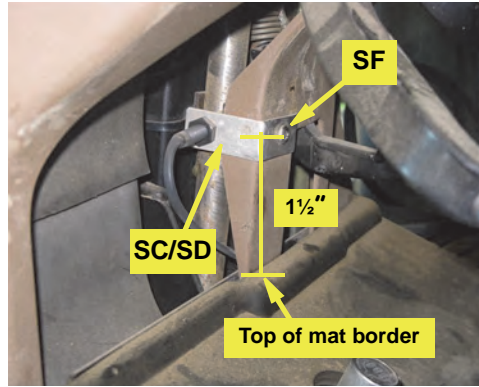


Figure 3: Installed sensor/bracket

Installation - Electronic Control Unit (ECU)

1. Install the ECU.

Locate the ECU **EJ**, mounting brackets **EL** and **EM**, and hardware **EO**, **EP**, **EQ** and **ER**.

- a. Locate the ECU mounting location to the left of the driver's seat on the cab floor (Figure 1a).

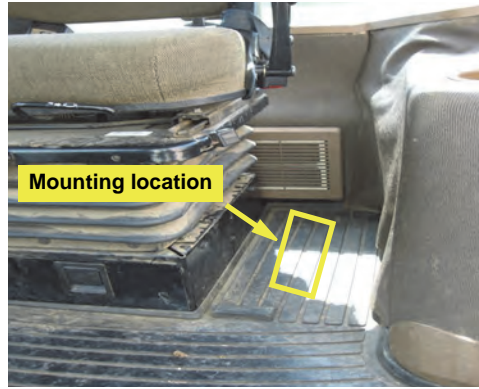


Figure 1a: Mounting location

- b. Facing the one inch tabs of bracket **EL** towards the driver's seat, align the bracket parallel to the tractor seat frame. The bracket should be 3" from side of the seat frame and 10½" from the front edge of the seat frame (Figure 1b).

Using the provided hardware **EO** fasten the bracket to the cab floor. Using a small level (not shown), level the bracket as close as possible.

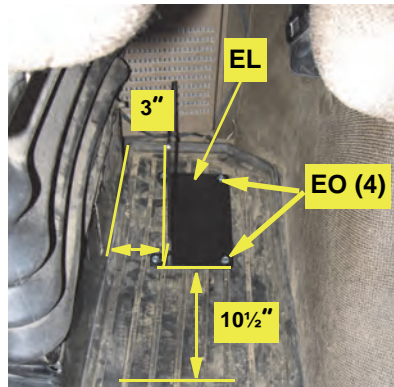


Figure 1b: ECU bracket installation

NOTE:

In steps c, d and e following, you will mount the ECU (**EJ**) directly against the inside face of bracket **EL** (the inside face being the face away from the driver's seat). You will mount the steering controller **EK** indirectly against the outside face of bracket **EL** using a second bracket, **EM**. Mount both **EJ** and **EK** with their cable connectors towards the rear of the tractor.

- c. Using the shorter hardware **EP** through the rear-most holes in bracket **EL**, attach **EJ** (cable connectors rearward) loosely to the inside face of bracket **EL** (Figure 1c - viewed from driver's seat side).
- d. Using the longer hardware **EQ** through the narrow side of bracket **EM** (wider side forward) and the remaining holes in bracket **EL**, secure **EJ** and **EM** to **EL** (Figure 1c). Tighten **EP** and **EQ**.

NOTE:

It may be necessary to attach cable **EA** to the ECU before attaching the ECU to its bracket **EL**. See step 2a on page 9 for connection details.

- e. Using hardware **ER**, attach steering controller **EK**, connectors rearward, to its bracket **EM** (Figure 1d).

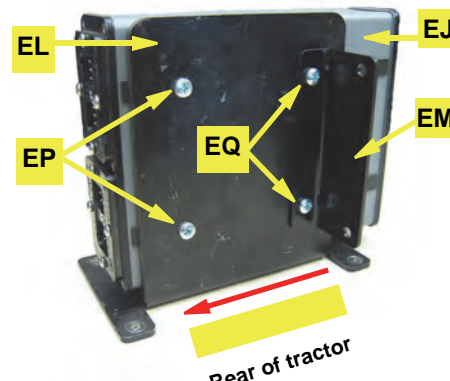


Figure 1c: Installed ECU and controller bracket (viewed from driver's seat side)

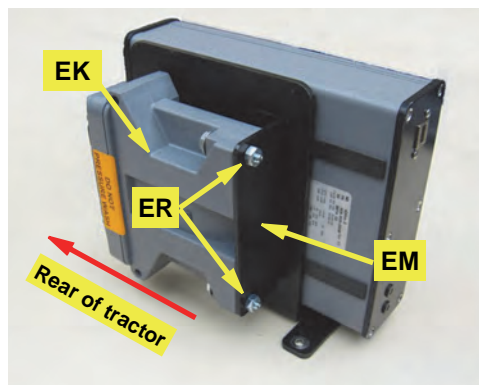


Figure 1d: Installed steering controller

2. **Assemble and install the cables.**

On a clean surface lay out all the cables and become familiar with the connections and where they are to be placed. See Appendix A.

- a. If not already attached, attach main cable **EA** to **EJ** using an Allen wrench to secure the cable. The **EA** connector only connects with the **EJ** socket that is in line with the power and communications indicators at the opposite end of the ECU - the lower socket in this installation (Figure 2a).

Attach steering controller cable **EC**'s two 12-pin plugs to the corresponding gray and black connectors on the steering controller **EK** (Figure 2a).

- b. Connect **EC**'s connector labeled 'ECU' to **EA**'s connector labeled 'STEERING CONTROLLER' (not shown).
- c. Connect cables **EE** (WAS) and **ED** (valve) to their respective connectors on controller cable **EC** then route them, with the power cable from **EA**, out the back window and down to the right side of the tractor. Route the cables along the frame with existing cables and hoses (Figure 2b).

- d. Locate the factory-installed WAS on the top left hand side of the articulation point (Figure 2c).
Route WAS cable **EE** to the factory WAS.

- e. Disconnect the cable from the factory WAS.
Install phantom WAS plug **EH** in the disconnected cable and connect the routed cable **EE** to the factory WAS (Figure 2d).

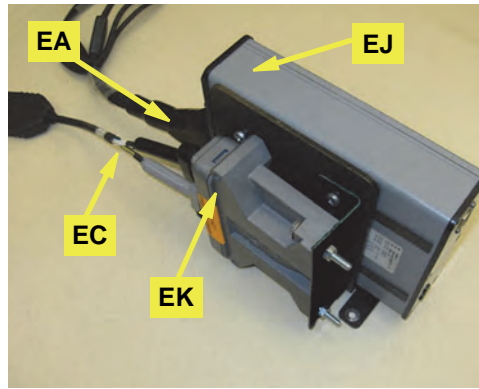


Figure 2a: Installed ECU and steering controller cables

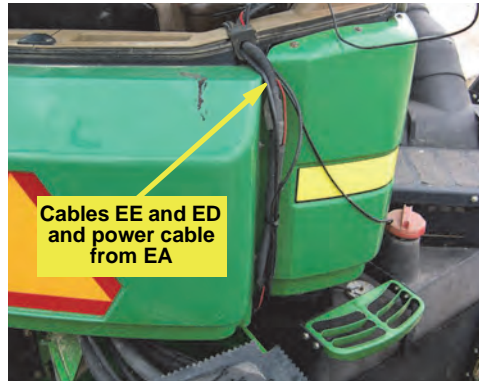


Figure 2b: Cables out from cab

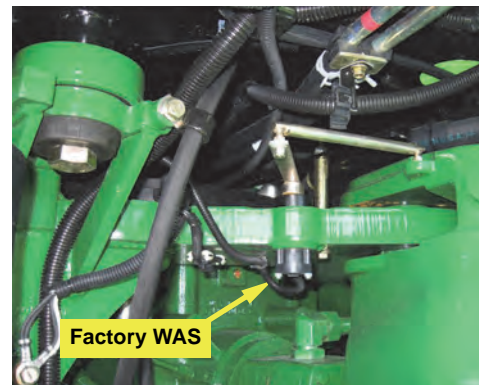


Figure 2c: Factory-installed WAS

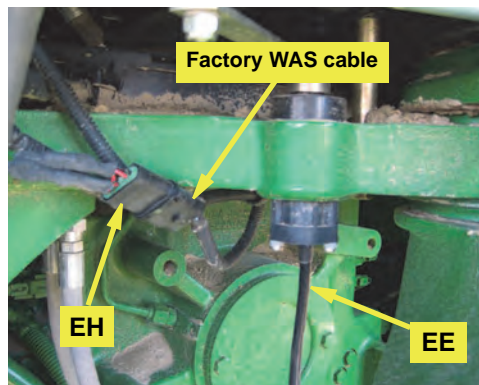


Figure 2d: Installed phantom WAS plug and connected cable EE

2. **Assemble and install the cables (continued).**

- f. Locate the PVED valve on the front right inside frame slightly behind the front axle (Figure 2e).
- g. Locate and disconnect the 4-pin wire connector from the PVED valve. Seal (weatherproof) the disconnected cable connector with plastic wrap. Connect cable **ED** (not shown) to the open wire connector on the PVED valve (Figure 2e).

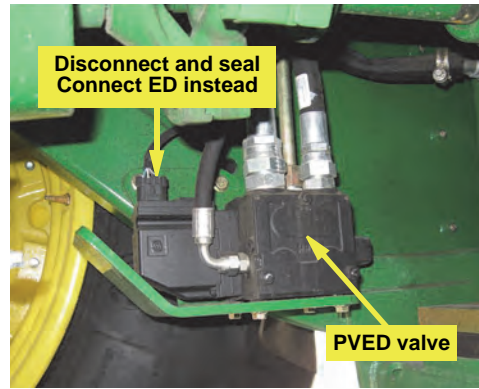


Figure 2e: PVED location and factory cabling

- h. Using tie straps **ES**, fasten cables **EE**, **ED** and the disconnected PVED cables to existing cables and hoses so that they are free from moving parts.
- i. Install SWS cable **EF** between **EC**'s connector labeled 'SWS' and SWS switch **SD**'s cable installed at step 3b of the SWS installation section.
- j. Attach power switch **EG** to cable **EA**'s connector labeled 'SWITCH'. Some machines are equipped with pop out tabs that you can remove and replace with switch **EG**. If no tab is available, you can use bracket **EN** mounting it in the cab at the operator's preferred location. Route the cable in the cab so it is clear from any machine operation controls.

NOTE:

*Set the switch to **OFF** before connecting **EA** to the battery at step 1 below.*

- k. Connect CAN-PWR cable **EI** to **EA**'s open connection labeled 'TERMINAL/RECEIVER'. Route the cable in the cab so that it is clear of any machine operation controls. Connect the opposite end of cable **EI** to the guidance terminal.
- l. Route the power cable part of cable **EA** (routed from the cab at step 2c) to the tractor's battery and connect it.

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Appendix A - ECU Cables and Connections

ECU CABLES AND CONNECTIONS

