

Steer Ready Kit Installation Guide

Kit: EDX-SR-JD R Series (Non-ILS), P/N 911-3008-000

Fits John Deere Tractor Models:


8235R	8310R
8260R	8335R
8285R	8360R

NOTE:

This installation kit is specific to the John Deere models listed above that have standard or heavy axles only and that do not have a hydraulic flow meter. If your machine does not meet these criteria or you are unsure of your axle type or if you have a hydraulic flow meter, 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 Steer Ready Kit Installation Guide
 - 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 manual 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 below. 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 kit 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.

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 (Steering) 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	
SD	726-1054	1	Assembly, steering wheel switch/cable	
SE	677-2002	4	Tie strap, 7" - releasable	
Bag S1 of 1 contains SF				
SF	675-2017	1	Bolt - 1/4NC x 3/4" Gr5, ZP	
	678-1053	1	Washer, flat - 1/4 ZP	
	676-1034	1	Nut, locking - 1/4NC ZP	

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	Main cable	
EB	Not used	N/A	Not used/included in kit	N/A
EC	051-0250-000#	1	Steering controller main cable, PVE	
ED	051-0251-000#	1	Valve cable, JD AutoTrac	
EE	051-0230-000#	1	WAS cable	
EF	051-0229-000#	1	SWS cable	

Kit Contents - Electronic Control Unit (continued)

REF	PART NUMBER	QTY	DESCRIPTION	PHOTOGRAPH
EG	054-0117-000#	1	Power switch	
EH	051-0284-000#	1	WAS phantom plug, JD R series, non-ILS	
EI	051-0283-000	1	WAS adapter, JD R series, non-ILS	
EJ	051-0166-000#	1	CAN-PWR cable	
EK	806-1031-000#	1	Controller (ECU)	
EL	750-5003-000	1	Steering controller	
EM	640-0091-000	1	ECU mount bracket	

Kit Contents - Electronic Control Unit (continued)

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

Installation - Steering Wheel Switch (SWS)

1. Prepare the steering wheel switch mounting.

- a. Remove the two screws in the front compartment of the upper steering column cowl and lift the cowl to expose the steering column support (Figure 1a and inset).

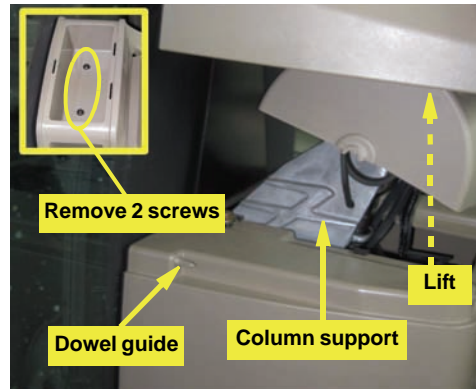


Figure 1a (with inset): Removing steering column cover screws

- b. Drill a 1/4" hole in the column support half way between the top of the lower steering column cowl and the bottom of the rear-pointing cast rib in the column support and 1 1/4" from the rear edge of the support (Figure 1b).

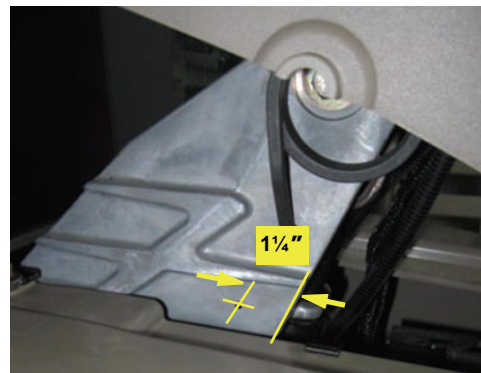


Figure 1b: Drilling the column support

- c. Cut one inch from switch bracket **SC** then drill a 1/4" hole 2 1/4" from the end with the pre-drilled sensor hole. Put an angled bend in the bracket at 1 1/4" and 1 3/4" from the pre-drilled sensor hole end (Figure 1c).

2. Attach the magnets and install the steering wheel switch.

- a. Thoroughly clean two areas of the steering shaft, 180° apart. Set the steering wheel approximately half way between its highest and lowest tilt position.

NOTE:

The steering shaft moves up and down approximately 1/4" through the steering wheel's tilt range. By centering the magnets on the drilled hole with the steering wheel at the middle of its tilt range, you ensure that, whatever the steering wheel tilt position, the magnets remain in line with the switch sensor and always have sufficient clearance under them. Before attaching the magnets, mark the shaft in its lowest position and ensure that, when installed, the bottom of the magnets have clearance above this mark.

Mix epoxy **SB** as directed on the package then attach both magnets **SA** to the cleaned steering shaft 180° apart. Align the center of each magnet with the center of the hole you drilled at step 1c (Figure 2a).

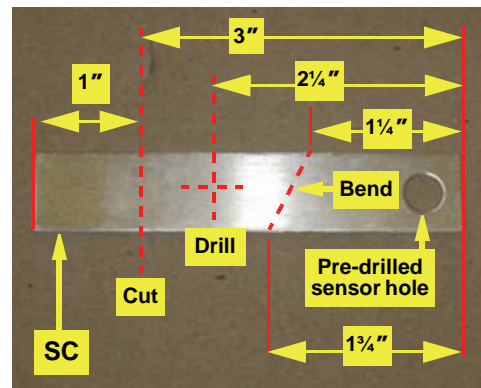


Figure 1c: Switch bracket for cutting, drilling and angle bending

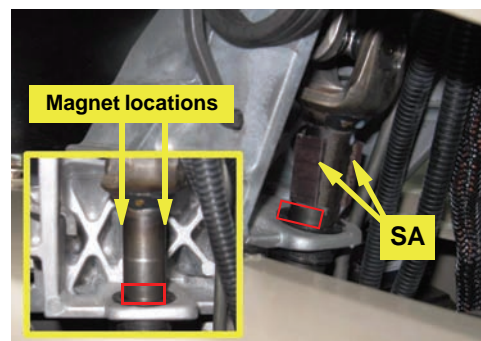


Figure 2a: Magnets - location and installed. Required clearance indicated.

2. **Attach the magnets and install the steering wheel switch (continued).**
- b. Using hardware **SF**, install steering wheel switch bracket **SC** (Figure 2b).

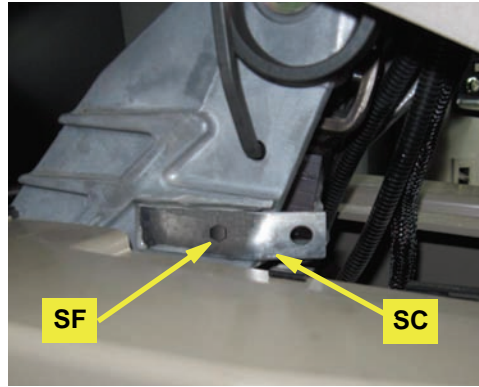


Figure 2b: Installed switch bracket

- c. Install switch **SD** in bracket **SC** and work the bracket to set the sensor tip $1/8''$ to $1/4''$ from the magnets (Figure 2c).
- d. Route **SD**'s cable toward the front of the tractor, out of the column support area. (You will connect **SD** to the ECU in the next section).

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

- e. Refit the steering column cowl.

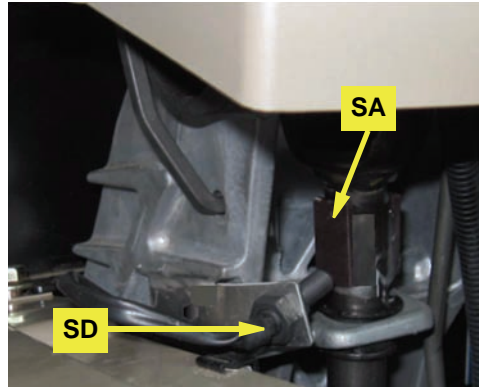


Figure 2c: Installed and adjusted sensor

Installation - Electronic Control Unit (ECU)

1. Install the ECU.

Locate the ECU **EK**, mounting brackets **EM** and **EN**, and hardware **EP**, **EQ**, **ER** and **ES**.

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

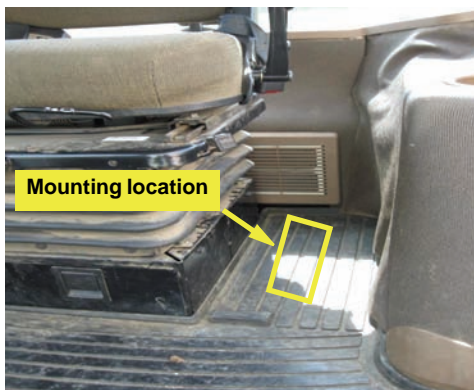


Figure 1a: ECU mounting location

- b. Facing the one inch tabs of bracket **EM** toward 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 **EP** fasten the bracket to the cab floor. Using a small level (not shown), level the bracket as close as possible.

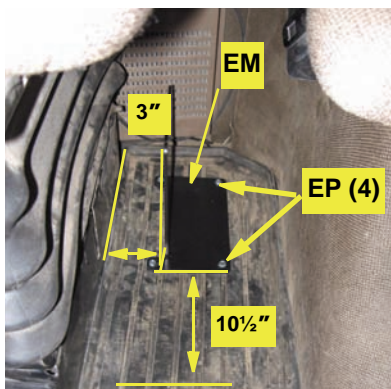


Figure 1b: ECU bracket installation

NOTE:

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

NOTE:

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

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

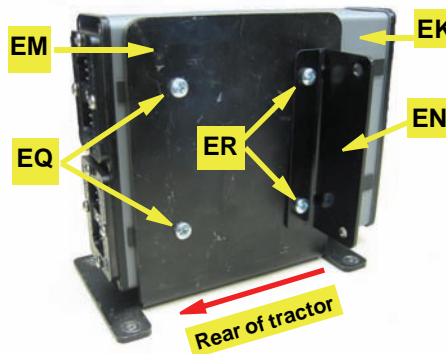


Figure 1c: Installed ECU and controller bracket (viewed from driver's seat side)

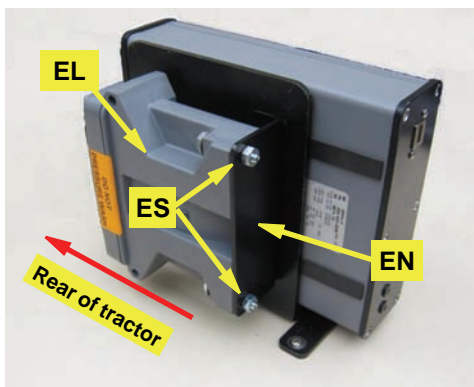


Figure 1d: Installed steering controller

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 **EK** using an Allen wrench to secure the cable. The **EA** connector only connects with the **EK** socket that is in line with the power and communications indicators at the opposite end of the ECU - the lower socket in this install (Figure 2a).

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

- b. Connect **EC**'s connector labeled ECU to **EA**'s connector labeled 'STEERING CONTROLLER' (not shown).

- c. Connect cables **EE** and **ED** to their respective connectors on controller cable **EC** (WAS and PVE). Route the cables, with the power cable from **EA**, out the back window and down to the left side of the tractor. Route the cables along the frame with existing cables and hoses and use tie straps **ET** as required (Figure 2b).

- d. Locate the factory installed WAS wire and connector on the left side of the tractor near the air filter housing. Disconnect the wire connectors being careful not to damage them (Figure 2c with inset).

- e. Install the male phantom plug **EH** in the tractor's disconnected female WAS wire connector (Figure 2d - upper connection).

Install WAS adapter **EI** between the tractor's disconnected male WAS connector and routed WAS cable **EE** (Figure 2d - lower connection).

Secure the routed cables with tie straps **ET**.

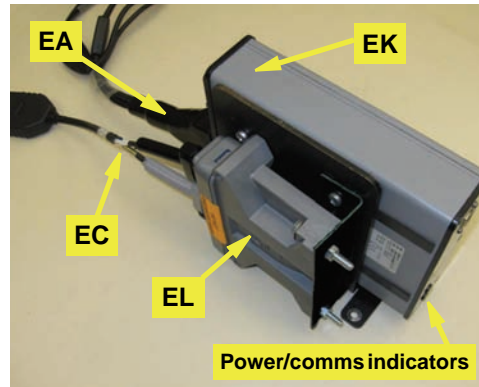


Figure 2a: Installed ECU and steering controller cables

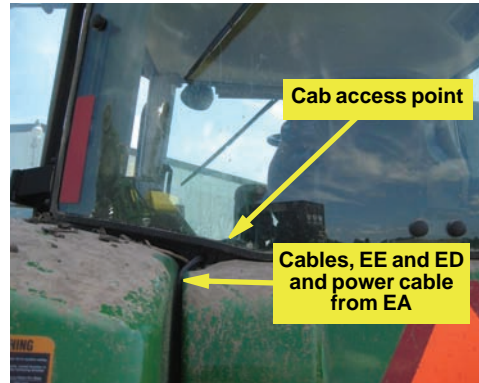


Figure 2b: Cables out from cab

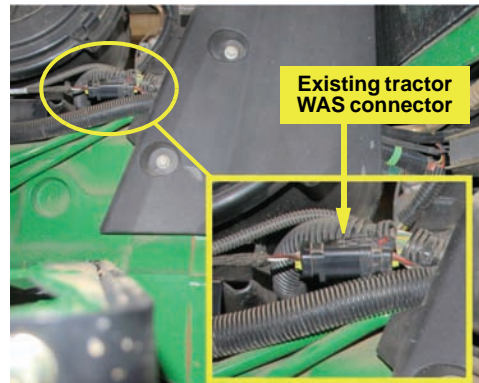


Figure 2c: Existing WAS connector - see inset

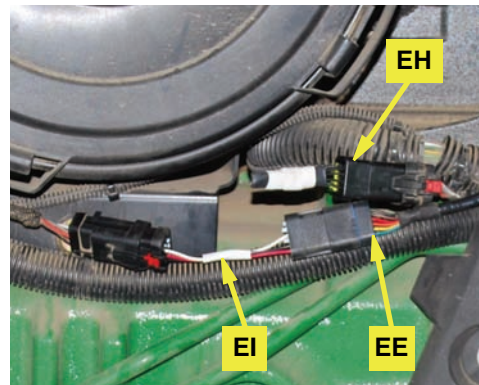


Figure 2d: Installed phantom plug and connected WAS adapter and WAS cable

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

- f. Locate the PVE controller on the PVE valve in front of the cab near the bottom right edge of the plastic shield (Figure 2f-i).

Locate and disconnect the 4-pin wire connector from the PVE controller (Figure 2f-ii). Seal the disconnected cable connector with plastic wrap (weatherproof it).

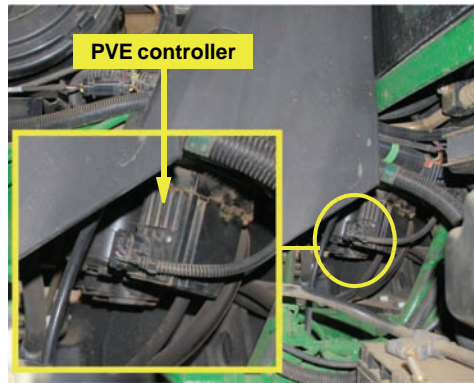


Figure 2f-i: PVE controller location

Connect routed valve cable **ED** to the open wire connector on the PVE controller (Figure 2f-iii).

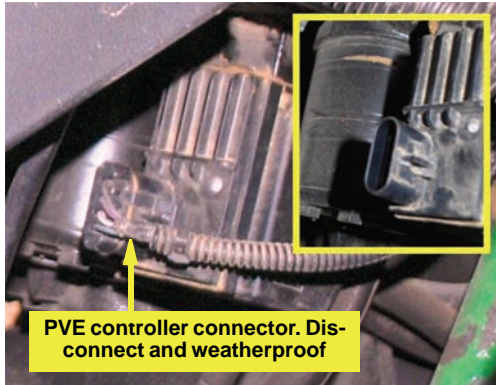


Figure 2f-ii: PVE controller connector and (inset) removed

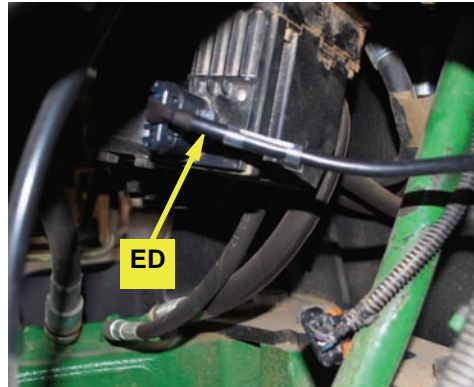


Figure 2f-iii: PVE cable replacing PVE controller connector

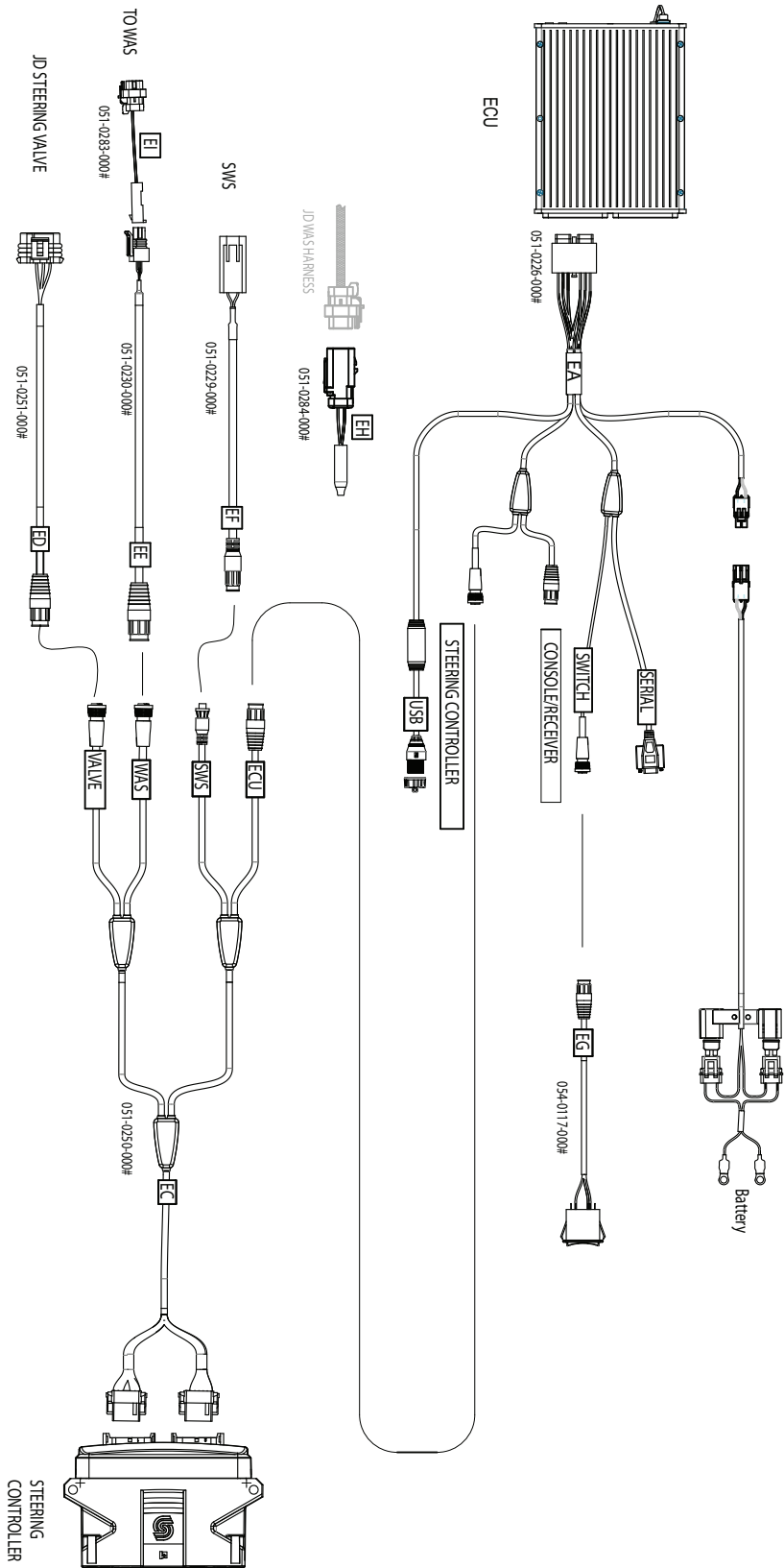
- g. Using tie straps **ET**, fasten cables **EE**, **ED** and the disconnected PVE cable to existing cables and hoses so that they are free from moving parts.
- h. Install SWS cable **EF** between **EC**'s connector labeled 'SWS' and SWS switch **SD**'s cable installed at step 2b of the SWS installation section.
- i. 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 **EO** mounting it in the cab at the operator's preferred location.

NOTE: Set the switch to **OFF** before connecting **EA** to the battery at step **k** below.

- j. Connect CAN-PWR cable **EJ** 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 **EJ** to the guidance terminal.
- k. 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



Appendix A - ECU CABLES AND CONNECTIONS JD R-SERIES

