

# eDrive VSi Installation Guide

**Kit: EDVSi-AGCO SWATHER, P/N 911-1001-000**


## Fits Challenger, Hesston and Massey Ferguson Swather Models:

<b>SP115B</b>	<b>8250</b>	<b>9260 * (see serial #)</b>	<b>9330</b>
<b>SP185B</b>	<b>8450</b>	<b>8250S</b>	<b>9340</b>
	<b>9225</b>	<b>8550S</b>	<b>9345</b>
	<b>9230</b>	<b>9225 Export</b>	<b>9435</b>
	<b>9240</b>		

\* **Serial numbers HM46388-HP4610**



## 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.
- 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 questions or need assistance, contact your local dealer or distributor.

## Overview

This is a general guideline for the installation of the eDrive VSi electric steering wheel. Every effort has been made to verify the following installation procedure. However, due to the manufacturing process outside of Hemisphere GPS' control, the installer may have to adapt this kit to your distinct situation.

With the AGCO Corporation's line of self-propelled swathers listed above, two types of steering columns exist. The basic configuration includes a steering pedestal clad in metal. The upgrade adds a plastic covering with display. This kit will work on both models, but the installation process differs between the two configurations.

The items in the kit are detailed in the table that follows the safety warnings on the next page. After the kit table there are step-by-step installation instructions.

Please read this manual thoroughly before beginning the installation.

**⚠ WARNING:**

The VSi Electric Steering Wheel is designed as a driver aid for precision agriculture applications. At all times the driver is fully responsible for the safe operation of the vehicle. It is not intended for and must not be enabled for use on roadways.

**⚠ WARNING:**

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

## Machine Preparation

**⚠ WARNING:**

Inspect the machine and perform any needed maintenance before installing the VSi kit (for example, adjust the steering linkage so that the machine drives straight ahead without manual steering). 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 properly adjusted steering linkage can cause loss of directional control resulting in serious injury or death.

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



Before attempting to install any of the components:

- Park the machine on a clean level floor
- Ensure adequate clearance to work all around
- Lower all implements and headers to the ground
- Apply the park brake and chock the wheels


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

## Kit Contents

Unpack the supplied kit and identify the required parts as shown. Kit items are A, B, C etc. and those references are used in the step-by-step installation section of this guide.

REF	PART NUMBER	QTY	DESCRIPTION	PHOTOGRAPH
A		1	Splined shaft adapter (coupler)	
B		4	Screw, M5 x 10M flat head socket cap screws (Splined shaft adapter to VSi steering wheel)	

REF	PART NUMBER	QTY	DESCRIPTION	PHOTOGRAPH
C	750-8001-000	1	VSi steering wheel	
D		1	Special nut, 3/4NC (Steering wheel to steering shaft)	
E	750-8007-000	1	Steering wheel center logo cap	
F		1	Upper anti-rotational bracket (Attaches to steering wheel)	
G		1	Lower anti-rotational bracket (Attaches to F and steering column)	
H		2	Bolts, M6 x 14, socket head cap screws	
		2	Washer, flat (plain)	
		2	Washer, spring	
			(Bracket F to VSi steering wheel)	
I		2	Nut, M6 nylock (Bracket G to bracket F)	
J		2	Spacer (may be black or white)  (Anti-rotational bracket to plastic ('instrument') steering column. Use with K)	

REF	PART NUMBER	QTY	DESCRIPTION	PHOTOGRAPH
K		2	Bolt, 1/4NC x 1/4"	
		2	Washer, flat (plain) (G to plastic steering column. Use with J)	
L	750-8003-000	1	VSi power cable	
M	750-8002-000	1	VSi junction box	
N		1	Junction box mounting bracket	
O	051-0259-000#	1	CAN bus harness	
P	750-8005-000	1	CAN bus terminator	
Q		1	Junction box comms cable clip	

# eDrive VSi Installation Procedure

**NOTE:**

On a clean surface lay out all the components and check them against the packing list (see “Kit Contents” on page 2). Become familiar with the components and where they are to be installed before proceeding with the installation (see “Appendix A - eDriveVSi Connections” on page 11).

**1. Remove the machine’s steering wheel.**

- a. Remove the steering wheel center cap (attached by hook and loop material) by moving it from side to side and pulling it away from the steering wheel (Figures 1a and 1b).

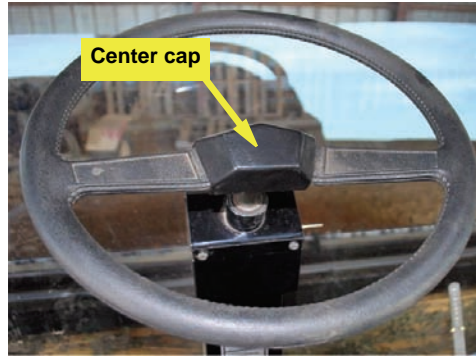


Figure 1a: Center cap



Figure 1b: Center cap - removed

- b. Remove the nut holding the steering wheel on the splined steering shaft (Figure 1c).



Figure 1c: Steering wheel nut

- c. Following the manufacturer’s recommended procedure, remove the steering wheel (Figure 1d).

**NOTE:**

Consult your equipment dealer if you are unsure of the correct procedure for removing the steering wheel.



Figure 1d: Steering shaft - wheel removed

2. Prepare the eDrive VSi electric steering wheel.

- a. Apply anti-seize (not supplied) to the splines of the splined shaft adapter (coupler) **A** to facilitate later removal (Figure 2a).

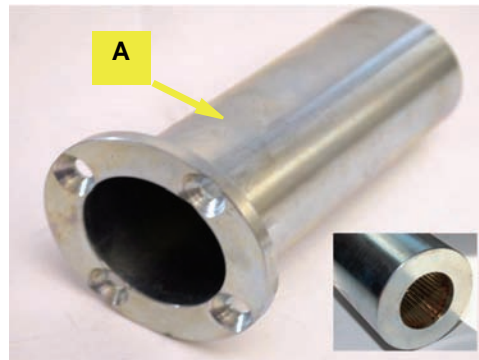


Figure 2a: Splined shaft adapter (coupler)

- b. Place the VSi steering wheel **C** on a clean surface with the wheel facing up. Insert splined shaft adapter **A** into steering wheel **C** (Figure 2b).

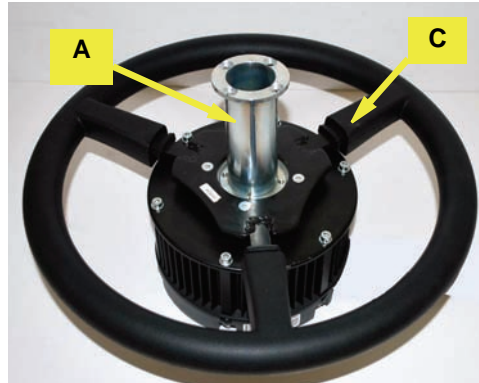


Figure 2b: Inserting splined shaft adapter into steering wheel



At step 2c following, tighten the screws to the specified torque only: **DO NOT OVERTIGHTEN - DAMAGE WILL OCCUR.**

- c. Using the four countersunk screws **B**, secure the splined shaft adapter **A** in the steering wheel tightening the screws to **6 N·m (53 in-lb)** (Figure 2c).

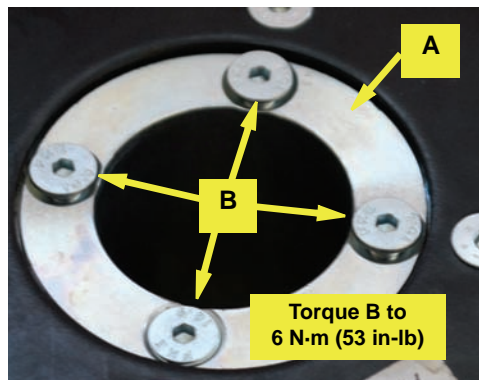


Figure 2c: Securing the splined shaft adapter. See Warning.



At step 2d following ensure you use the flat and lock washers provided. **DO NOT OMIT WASHERS OR OVERTIGHTEN - DAMAGE WILL OCCUR.**

- d. Using hardware **H**, loosely attach upper anti-rotational (a/r) bracket **F** to the base of the steering unit. The screws thread into the inserts in the bottom of the unit. Leave the screws loose. Mount the bracket so that with the steering wheel assembly installed and the a/r brackets secured, the comms port is on the right (Figure 2d).

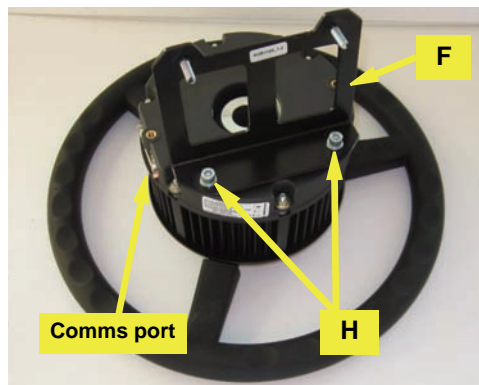


Figure 2d: Installing the upper anti-rotational bracket. See Warning.

3. **Install the VSi steering wheel assembly.**

- a. Carefully align the splines of the spline adapter with those on the steering shaft and slide the steering wheel assembly onto the shaft (Figure 3a).



Figure 3a: Installed steering wheel assembly

- b. Using special nut **D** (not visible), tighten the steering wheel assembly to the manufacturer's recommended torque (Figure 3b).

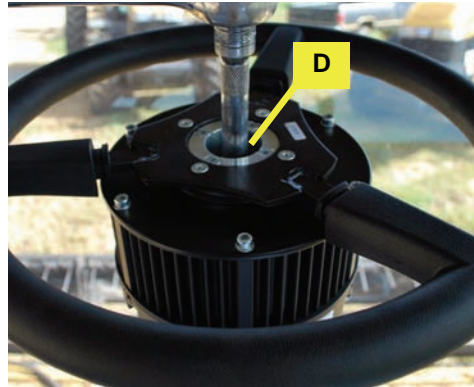


Figure 3b: Securing steering wheel assembly at correct torque setting

- c. Install Outback center cap **E** (Figure 3c).



Figure 3c: Installed center cap

**NOTE:** *AGCO Corporation self-propelled swathers are fitted with one of two types of steering column. One is plastic with an instrument console (Figure 3d - left), the other is plain metal (Figure 3d - right).*

- d. Identify the column type you are working with (Figure 3d).

**NOTE:** *The installation of the lower anti-rotational bracket is slightly different for each of the steering columns. This section describes installation for the plain metal column but the installation for the plastic column is the same after the insertion of plastic spacers **J** (see Figures 3e-i and 3e-ii).*



Figure 3d (left and right): Plastic, instrument console - left. Plain metal column - right.

3. **Install the VSi steering wheel assembly**  
(continued).

- e. **For the plastic column** with the instrument console, remove the two screws (not shown - you can discard the screws) at the top rear of the console and insert the two spacers **J** (inserts may be white or black) (Figure 3e-i).

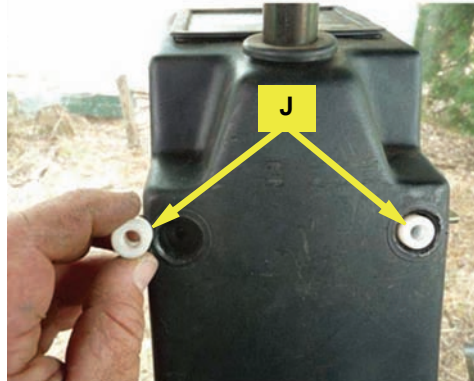


Figure 3e-i: Inserting spacers - plastic column

**For the plain metal column**, remove the self-tapping screws at the top rear of the column (retain these screws) (Figure 3e-ii).



Figure 3e-ii: Plain metal steering column screws

- f. Loosely install the lower anti-rotational bracket **G** between the upper a/r bracket **F** and the steering column. Use hardware **I** to attach **G** to **F**. Attach **G** to the steering column using either the original screws (metal column) or hardware **K** (plastic column - not shown) (Figure 3f).

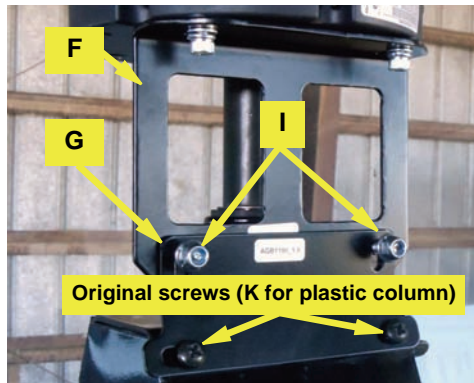


Figure 3f: Lower anti-rotational bracket installed

- g. Using the slotted holes in the brackets, arrange and align the brackets as required then tighten/torque the fasteners in the order self-tapping screws (or **K**) then **I**, then **H**. Torque **K** (not shown) to **8 N·m (70 in-lb)** and **I** and **H** to **5 N·m (44 in-lb)** (Figure 3g).

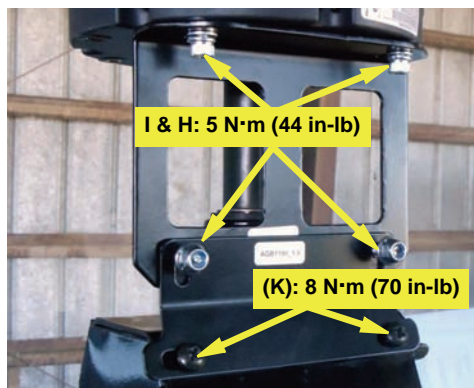



Figure 3g: Brackets tightened to correct torque



4. **Install and connect the electric steer junction box.**


**NOTE:** Before continuing, refer again to “Appendix A - eDriveVSi Connections” on page 11.

- a. Route the power supply cable **L** from the battery into the cab to where you will install the junction box **M**. Ensure the cable will not be a trip hazard. Connect the ring terminals to the battery.

 When mounting the junction box in the following steps, ensure the ON/OFF switch on the junction box is within easy reach of the operator. The switch must be in the OFF position when the vehicle is not under field guidance or is on a road. See Figure 4a.

Also ensure the mounted junction box cannot interfere with movement of the steering column or visibility to the work area.

- b. Mount the electric steer junction box bracket **N** (not shown) on the right side of the steering column using your preferred method, for example, fasteners, double-sided tape, nylon ties (not provided).

 If drilling the steering column, ensure nothing inside the column can be damaged.

- c. Clip the junction box **M** into place on its bracket **N** (not shown) then connect its 15-pin connector cable to the communications port on the steering wheel assembly (Figure 4b). Use clip **Q** suitably (not shown).

- d. Connect the gray connector of the power cable **L**, routed to the cab at step 4a, to the gray cable from the junction box **M** (Figure 4c).

- e. Connect the threaded 5-pin connector on the CAN bus harness **O** to either of the threaded connectors on the junction box **M**. Connect the CAN bus terminator **P** to the other threaded connector on the junction box (Figure 4d).

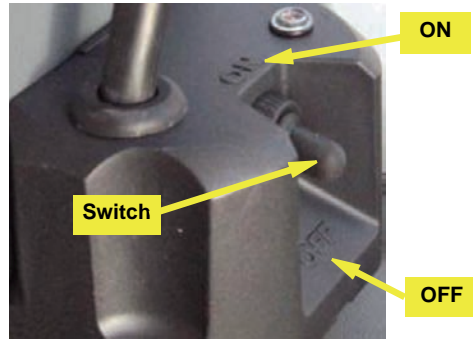


Figure 4a: Junction box ON/OFF switch

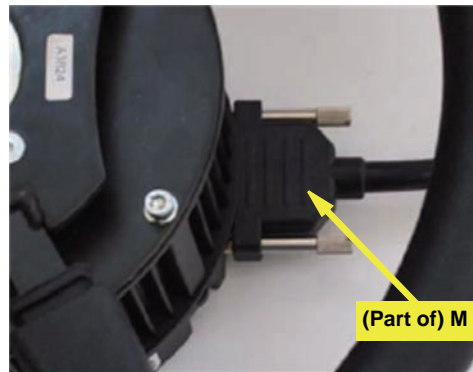


Figure 4b: Junction box commo cable connected to steering wheel assembly

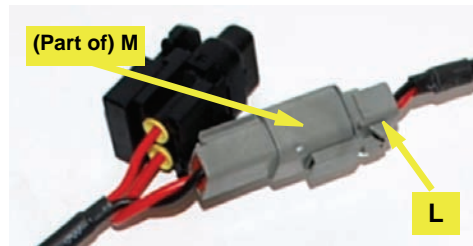


Figure 4c: Power cable to junction box cable

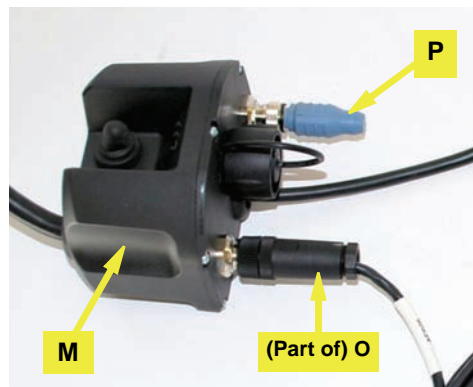


Figure 4d: CAN harness and terminator connected to junction box

4. **Install and connect the electric steer junction box** (*continued*).
- f. Connect, according to the cable labeling, the two other connectors on CAN cable **O** to the EDRIVETC and the TERMINAL/RECEIVER (Figure 4e).

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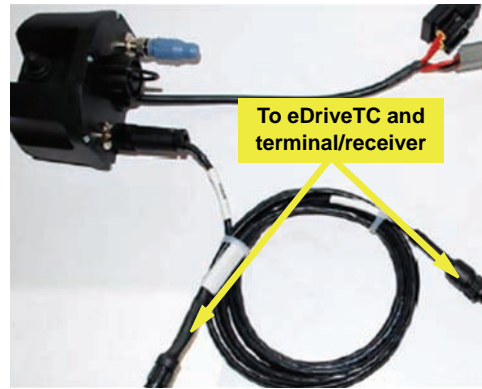


Figure 4e: CAN cables to eDriveTC and terminal/receiver

# Appendix A - eDriveVSi Connections

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