

Installation Guide

Installation Kit: 911-8105-10



John Deere

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Introduction

WARNING!!!

Unexpected machine movement may occur when creating a new machine profile, switching machine profiles, changing valve type setting, or connecting a terminal with a different machine profile active.

Ensure the 3 position power switch is in the center (roading) position before performing any of the above operations until the proper machine profile and valve type is selected.

The procedures outlined in this guide provide the basic installation procedure for the eDriveM1 on the machines specified on the front cover of this guide. If you do not see your machine listed, contact customer support for further instruction. The kit components and corresponding install instructions are designated for each applicable machine make and model and may not be used on undesignated machine models.

Review Installation Kit Contents

Kit contents are outlined in the following pages of this installation guide. Read all applicable installation instructions for your machine's model and ensure that all required kit components are present before beginning the installation.

Read and Follow All Safety Messages

- Refer to the safety manual for the machine that the eDriveM1 is being installed on for operating age and precautions.
- Prior to installing and operating the eDriveM1, read and understand all safety precautions as outlined in this guide.
- Store this guide and all related safety information with related machine manuals for future reference.

Introduction

Safety Information and Warnings*

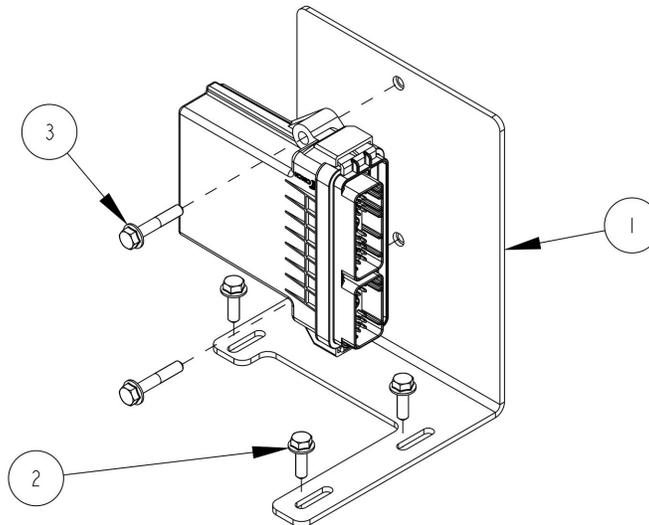
- eDriveM1 is NOT designed to replace the machine's operator and is designed as a driving aid for use in precision agriculture applications.
- eDriveM1 is NOT intended for use on roadways and should remain disengaged at all times when traveling on roadways.
- eDriveM1 does NOT control the speed of the machine and a human operator is required to manually maintain a safe operating speed.
- eDriveM1 does NOT avoid obstacles. To prevent human, machine and property injury a human operator is required to operate the machine at all times.
- Do NOT allow anyone to operate without instructions.
- At all times the driver is fully responsible for the safe operation of the vehicle.

* The safety warnings contained in this installation guide are not meant to be an exhaustive list of potential hazards.

- To ensure peak performance, eDriveM1 should only be installed after a thorough machine inspection has been conducted. The contents of this kit and eDriveM1 are not intended to replace preventative and or needed maintenance. To avoid bodily and machine injury, follow the machine preparation checklist below:
 - ⇒ Inspect steering linkage: Machine should drive in a straight line without manual correction
 - ⇒ Turn off machine and power-off all electronic gauges, monitors and external devices when installing or performing maintenance on the eDriveM1
 - ⇒ Park machine on a clean and level surface
 - ⇒ Lower all implements and headers to the ground
 - ⇒ Apply the parking break and chock wheels
 - ⇒ Inspect any drilling and/or cutting sites to ensure no electrical wiring damage will be incurred

ECU installation

Required items for ECU install listed below



ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	640-0208-10	BRACKET, ECU, EDM1, DEERE
2	3	675-1352-10	SCREW, FLANGE, HEX, M6-1.0x20
3	2	675-1362-10	SCREW, FLANGE, HEX, M6-1.0x35

Figure 2

Pull up the floor mat to the left of the operators seat to gain access to the ecu bracket mounting location. Remove the 3 bolts circled in red.



Figure 3

ECU installation

Use the 3 shorter M6x20 bolts (item 2) to secure the ecu bracket (item 1) to the floor of the cab.



Figure 4

Lay the floormat back down over the bracket.

Attach the eDriveM1 steering ECU to the bracket using included hardware (item 3)

ECU shown in Figure 5 is installed with logo facing right and connector pointing rear. This orientation will need entered into the display for the first calibration step.



Figure 5

Wheel Angle Sensor Connection

Depending on what tractor model you have will dictate where you will connect to the factory wheel angle sensor. Figure 6 and 7 show a 9030 series tractor WAS connections

Locate the factory wheel angle sensor near the top of the articulation point on the left side.



Figure 6

Disconnect the harness and connect the 051-0444-10 harness to the factory sensor. Take the 051-0272-000 phantom plug and connect it to the factory harness that was connected to the wheel angle sensor.

For the 9020 series tractor the factory wheel angle sensor will be in the same location as the 9030 series but the sensor connector is different. Connect the 051-0468-10 adapter harness to the 051-0444-10 WAS harness. Plug the end of the 051-0468-10 harness into the factory sensor. Take the 051-0467-10 phantom plug and plug it into the factory harness that was connected to the wheel angle sensor.

Refer to figure 1 page 4 for a cabling diagram that shows the different WAS connections.



Figure 7

Steering Encoder Terminating Plugs Installation

Next, install the steering wheel encoder termination plugs 051-0463-10 and 051-0464-10. These termination plugs are used to keep the tractor from displaying fault codes when turning the steering wheel.

Remove the 6 screws that hold the steering column shroud in place. There are 2 screws down each side. You will have to lift the floor mat up and out of the way to get to the bottom screws



Figure 8

The last 2 screws are on the front of the shroud.

On certain models, the air flow control knob may need to be removed to remove the bottom piece of the shroud.



Figure 9

Steering Encoder Terminating Plugs Installation

Once all the plastic shroud pieces are removed, you will need to locate the steering wheel encoder connections. They are down below on the right side of the steering column.



Figure 10

The steering wheel encoder connections are pictured right.

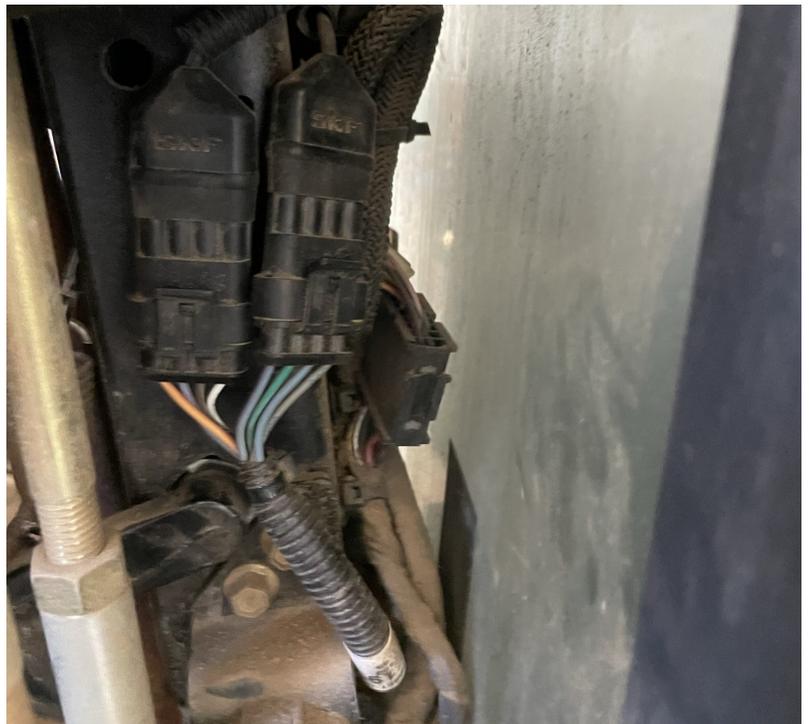


Figure 11

Steering Encoder Terminating Plugs Installation

Plug the 051 0463-10 and the 051-0464-10 termination plugs into the steering column encoder harness. It doesn't matter which terminator plug goes to which connector.



Figure 12

Take the other end of the steering encoder harness connection and connect 1 of the 2 ends to the 051-0496-10 harness. It doesn't matter which connector you plug into.

Secure the steering encoder connections up and out of the way to prevent damage to harnesses.

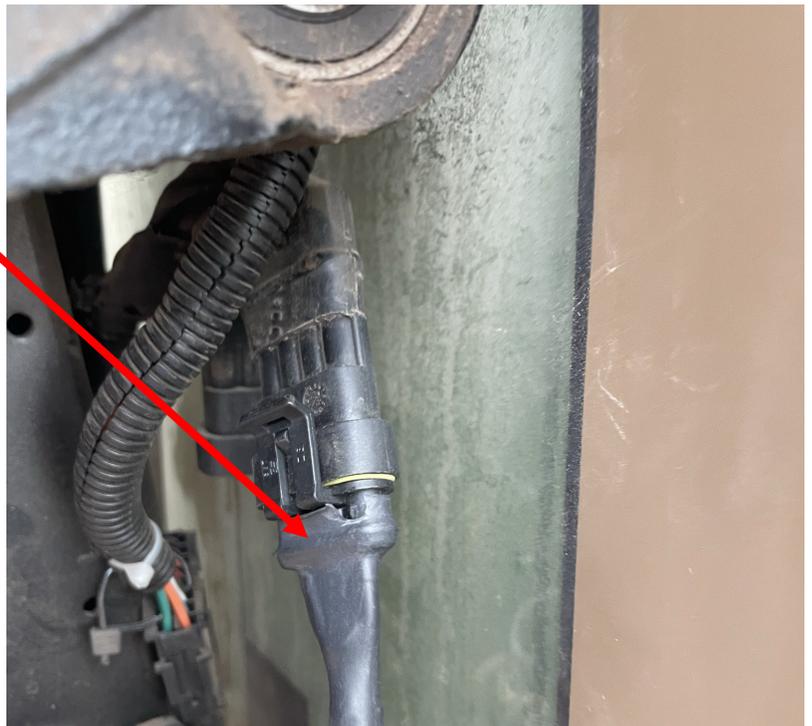


Figure 13

Connecting to Autotrac PVE VALVE

Locate the PVE steering valve under the tractor behind the front axle on the right side.



Figure 14

Disconnect the machine's harness from the PVE valve and connect the 051-0462-10 harness to the PVE valve.

Connect all remaining harness ends per diagram figure 1 page 4.

This concludes the cable connections for this install.



Figure 15

Initial Setup

When creating a new machine in your Maverix terminal, you will need to select “Hyd. Ratiometric” for your machines valve type. To setup the disengage sensor you will use the “Automatic Detection” feature. This will calibrate the disengage sensor and select “Digital (Freq.)” as the correct disengage sensor for your machine.

Troubleshooting & Diagnostics

To read the voltage values coming from the factory wheel angle sensor and or disengage steering encoder, refer to the terminal user guide to see where to read sensor diagnostic information.

Wheel Angle Sensor

The wheel angle sensor has a voltage output range of 0-5 volts. You should be able to see the wheel angle voltage change as you turn the tractor from full left lock to full right lock. If the voltage doesn't go up or down when turning the steering wheel then there may be a problem with the wheel angle sensor.

Steering Encoder Sensor

The factory Steering Encoder Sensor emits pulses used to disengage the machine. You should be able to see a number of pluses in the diagnostics screen increase when turning the steering wheel then the pulses should go to zero after the steering wheel is no longer turned.