

5 | ECU Installation & Mounting

Guidelines on installing the COMMAND Electronic Control Unit (ECU) and providing power to the COMMAND ECU and harnessing system.

- [5.1 | Pre-Installation Preparation](#)
- [5.2 | Electronic Control Unit \(ECU\) Installation](#)
- [5.3 | Powering COMMAND](#)
- [5.4 | Connecting COMMAND to the ISOBUS](#)

5.1 | Pre-Installation Preparation

IMPORTANT: Please ensure you have read the safety information in the previous chapter before commencing installation of **COMMAND**.

Machine Preparation

Complete the following steps before beginning installation of the **COMMAND** ECU:

Step	Check
Move the tractor and implement to a level, hard surface suitable for maintenance work.	
Center the steering wheels. For articulated tractors, engage the articulation locks to prevent movement.	
Fully lower any attachments or implements to the ground to ensure stability.	
Turn off the engine and remove the ignition key.	
Block both the front and rear wheels to prevent accidental movement of the machine during installation.	
Allow the engine and hydraulic system to cool completely before working near hot components.	
Disconnect the battery cables. Place a “Do Not Operate” tag in a visible location in the cab, and install a lockout box on the battery terminal to prevent accidental power reconnection.	
Before opening any hydraulic, pneumatic, or coolant lines, relieve system pressure. Use caution when removing fill caps or hose fittings—cover the area with a clean rag to contain any residual pressure or fluid spray.	

Unbox all kit components and verify the contents against the packing list. Lay out the parts on a clean, organized work surface to streamline installation.	
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5.2 | Electronic Control Unit (ECU) Installation

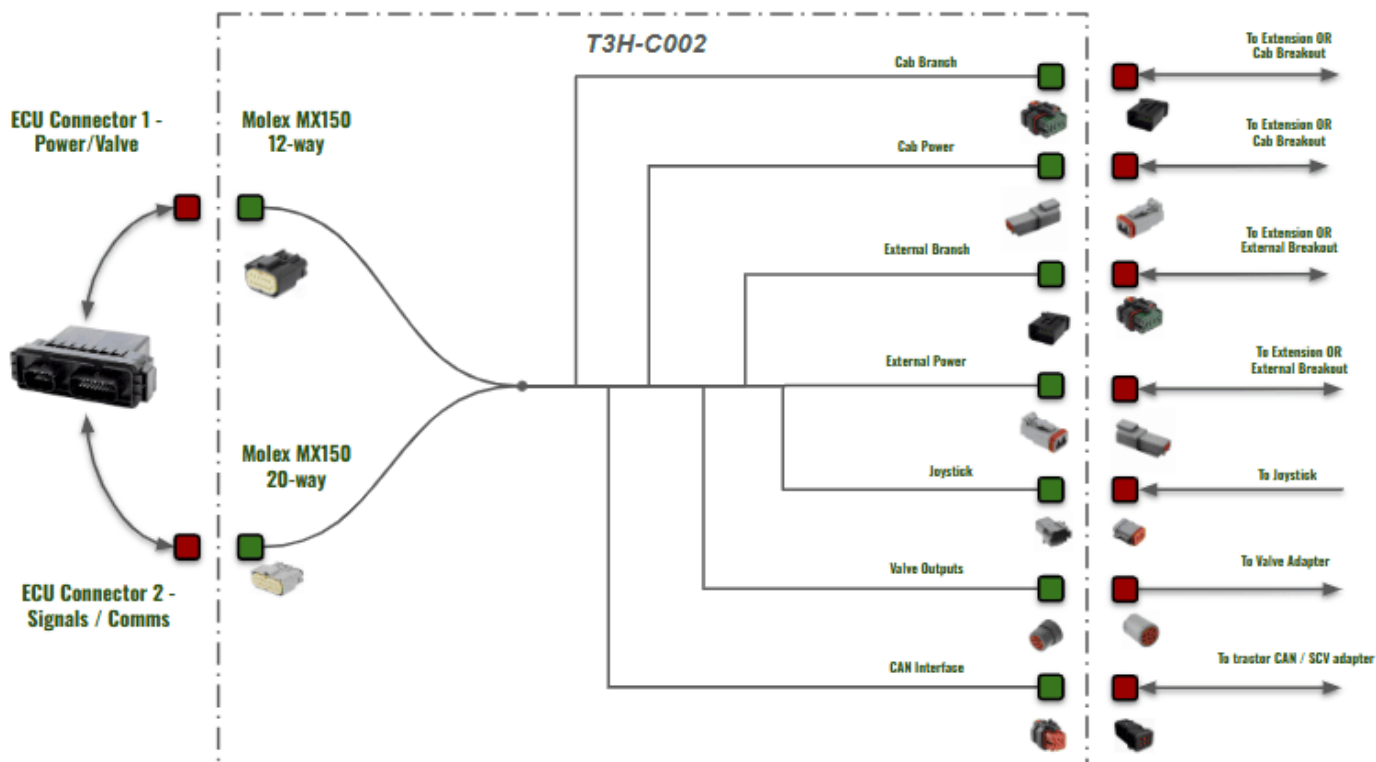
ECU Mounting Overview

The **COMMAND** ECU can be installed in one of three locations depending on the tractor and application:

1. In-cab (preferred)
2. Behind rear cab panel
3. Rear of tractor near ISOBUS connection

The selected mounting location will determine harness routing and connection layout. Please follow the relevant installation instructions based on the selected mounting location.

Connections Overview



Mounting Locations

Select the mounting location based on available space, environmental exposure, and ease of harness routing.



In-Cab (Preferred)

Mounting in the cab of the tractor is the preferred option, as it best protects the ECU and harnessing from the elements. Mounting the ECU in-cab is best suited to tractors with paneling, compartments or normally covered cab walls with enough room to mount the ECU.

Being mounted in cab will provide access to the following for the **T3H-C002** ECU breakout harness:

- Power via convenience plug or power strip
- Arm/Engage Switch
- Tablet
- 4-way ISOBUS connection from Greenstar ISO harness
- Diagnostic ports for tractor CAN access
- Joystick
- Valve output connections to JD legacy inputs or Case EHR inputs

Cabling will need to be run outside of the cab if:

- Proportional solenoid or Danfoss PVE valve cabling must be run out to an external valve block

The photos above show some suitable mounting locations found in older Case tractor models, where an ECU can either be magnet mounted or Rivnut mounted depending on preference.

Rear Panel Mounting

In situations where the cab doesn't have enough suitable space for mounting the ECU and neatening the harnessing, the ECU can be mounted at the back of the tractor behind rear paneling if enough space is available.

The ECU should be mounted with enough space for connection and disconnection of the breakout harness, which will also require some space itself when tying up and neatening the **T3H-C002** harness.

The ECU can be mounted in much the same way as in-cab - see following pages for information on ECU dimensions and mounting methods.



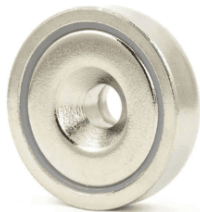
Rear Breakaway Mounting

If there isn't enough space present in the cab or behind the rear paneling of the cab, then there is generally plenty of space to be able to mount the controller at the rear of the tractor near or next to the ISOBUS implement breakaway connector.

If mounting here, magnets are not recommended as there is a lot of potential for dirt and rocks to knock the ECU. Custom bracketing is recommended when installing the controller at the rear of the tractor to help shield the ECU from dirt and rocks, and to also provide a reliably secure mounting connection through the use of bolts and nylon-lock nuts.



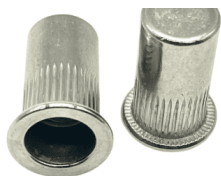
Mounting Methods



Magnets

Mounting with strong neodymium magnets can provide a quick and robust method of mounting the COMMAND ECU.

Neodymium magnets with a countersunk centre hole of 7mm diameter along with 7mm fasteners should be used.

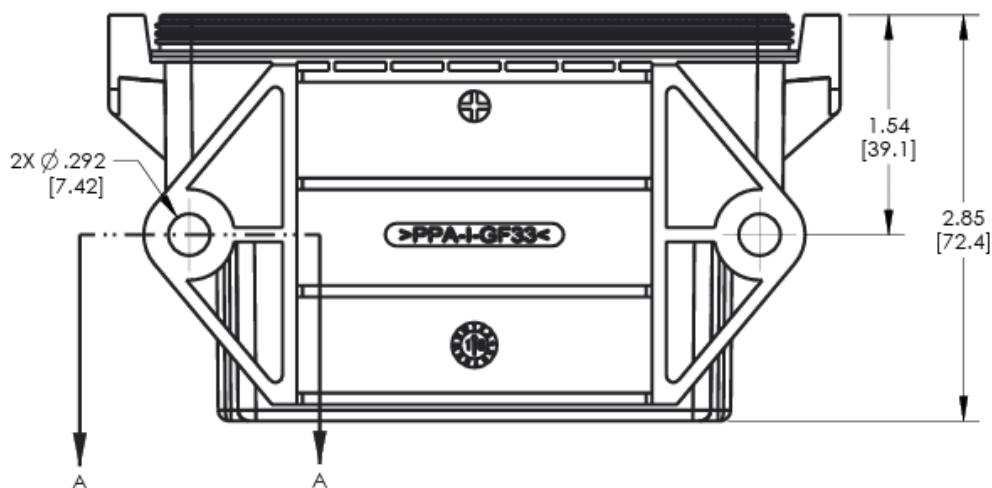


Rivnuts

Mounting with Rivnuts is another effective way of securing the ECU to the inner or outer wall of the tractor.

Care should be taken to drill an appropriately sized hole of the Rivnut, then use the expansion tool and fasten the ECU securely.

Dimensions Drawing



Mounting orientation

The ECU must be mounted with electrical connectors facing downward to prevent moisture and dirt ingress. Do not mount the ECU with the connectors facing upward or to the side as moisture or dirt

may accumulate and cause corrosion and/or connection issues.

Connecting the ECU Breakout Harness

Once the ECU is mounted securely in place:

1. Connect the **T3H-C002** to the ECU with the black and beige paired ECU plugs shown below.
2. Push each plug in until a click is felt.
3. Gently pull on the plug to ensure that it has mated correctly.

To unplug the ECU connection later, press down on the tab at the top of the connectors (facing toward you with the ECU mounted in the direction specified above) and pull the plug downward away from the ECU.



Once the **T3H-C002** ECU breakout harness has been connected to the ECU, connections to the external and cab breakout harnesses need to be made. The **T3H-C005** exterior breakout harness is designed to be positioned at the rear of the tractor, while the **T3H-C006** cab breakout harness is designed to be positioned inside the tractor cab.

T3H-C002 - ECU Breakout Harness



T3H-C005 - Exterior Breakout Harness



T3H-C006 - Cab Breakout Harness



Connecting the Exterior and Cab Breakout Harnesses

The **T3H-C002** breakout harness provides 2m branches for cab and exterior breakout connections. Use **T3H-C008** extension harness if additional length is required (up to 6m total).

Cab-Mounted ECU

Avoid routing the cabling out of the cab through windows/doors if possible as these may pinch and damage the wires in the harness.

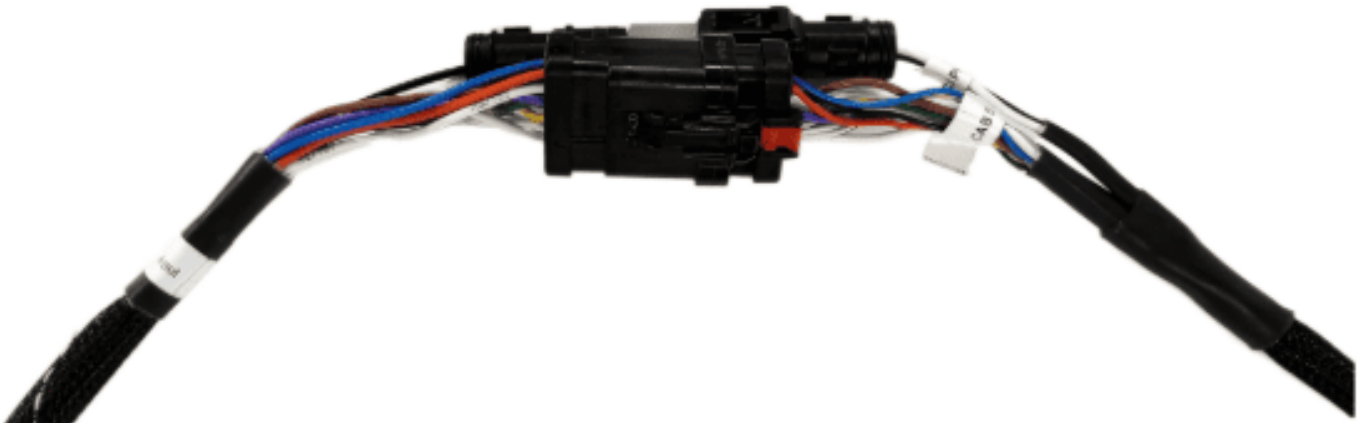
If the **COMMAND** ECU has been mounted inside the tractor cab, then the exterior branch will need to be routed outside of the cab through a hole/cable gland to the rear of the tractor next to the ISOBUS implement breakaway connector.

Connect the 12-pin and 2-pin connectors on the **T3H-C005** exterior breakout to the **T3H-C002** ECU breakout connectors, extended with **T3H-C008** if necessary and run the cable out of the cab and to the rear of the tractor.



Once the exterior breakout has been connected and routed, connect the **T3H-C006** cab breakout harness to the CAB 12-pin AMPSEAL and 2-pin Deutsch DT connectors on the **T3H-C002** ECU breakout inside the cab.

An extension should not be needed for the cab breakout harness, and the cab breakout harness should be positioned somewhere out of the way behind covers wherever space is available.

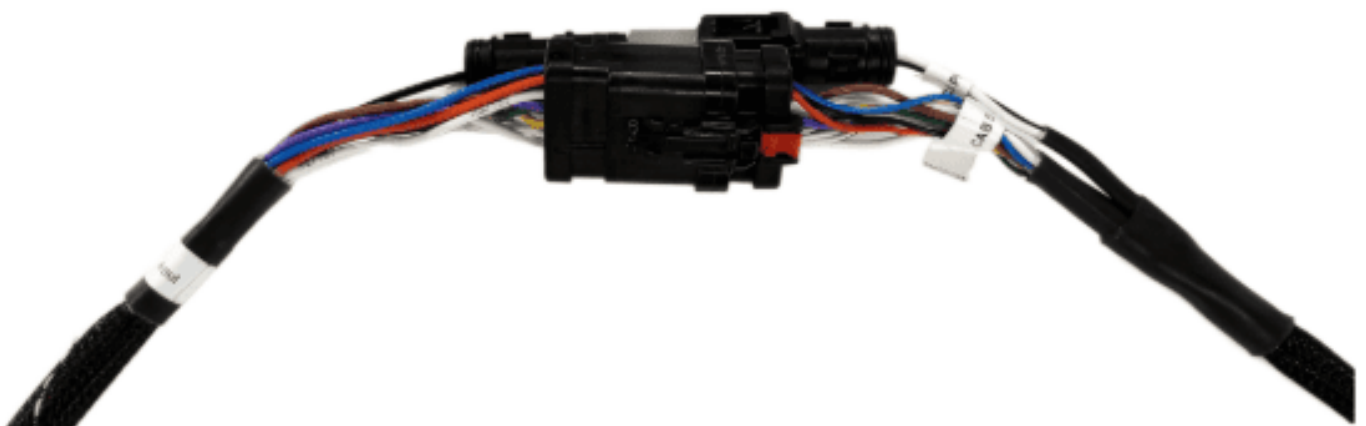


Exterior-Mounted ECU

Avoid routing the cabling into the cab through windows/doors if possible as these may pinch and damage the wires in the harness.

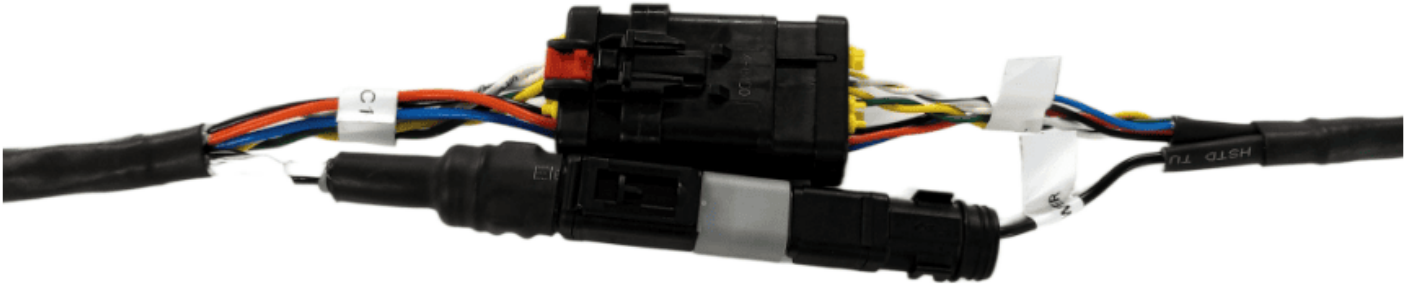
If the **COMMAND** ECU has been mounted outside the tractor cab, then the cab branch will need to be routed inside of the cab through a hole/cable gland from the rear of the tractor where the ECU is mounted.

Connect the 12-pin and 2-pin connectors on the **T3H-C006** cab breakout to the **T3H-C002** ECU breakout connectors and route to the cab, extended with **T3H-C008** if necessary.



Once the cab breakout has been connected and routed, connect the **T3H-C005** exterior breakout to the EXT 12-pin AMPSEAL and 2-pin Deutsch DT connectors at the rear of the tractor.

An extension should not be needed for the exterior breakout harness, and the exterior breakout harness should be positioned somewhere that doesn't block access to other components at the rear of the tractor.



5.3 | Powering COMMAND

Select the appropriate power supply method based on ECU mounting location.

Cab-Mounted ECU

COMMAND can be powered using an available cab convenience power socket along with the **T3H-F001** Power Adaptor provided by T3RRA. When mounted in-cab this is the preferred option. If no convenience power outlets are available, consider using a adapter instead of **T3H-F001** if power strip connections are available.



Convenience Power and Power Strip Outlets



T3H-F001



T3H-C002 / T3H-C006 2-pin Power Input

Rear-Panel / ISOBUS Mounted ECU

If the **COMMAND** ECU is mounted under the rear panel of the tractor, we recommend powering using a John Deere constant power harness kit (Rowcrop - **BPF10403**, Articulated - **BPF10404**).

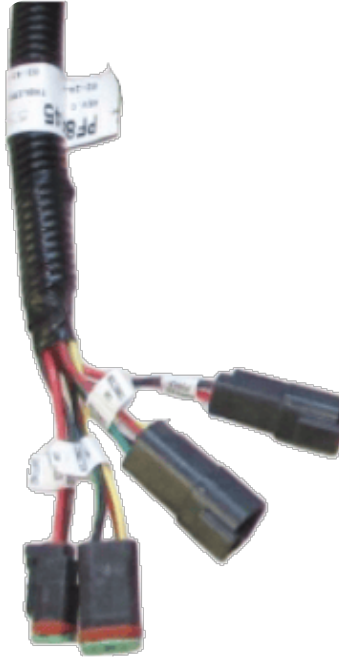


Alternative Power Connection

Alternatively, connecting to any available switched power studs underneath the cab, making sure to use a **T3H-F003** inline fuse adapter and creating a 2-core cable of appropriate length.

Do **NOT** connect unswitched/battery power to **COMMAND's** power input as this will drain battery while the tractor is switched off.

5.4 | Connecting COMMAND to the ISOBUS



ECU Mounted In-cab

With the **COMMAND** ECU mounted in-cab:

1. Locate the in-cab 4-way ISOBUS connector.
2. Connect the 4-way ISOBUS connection on the **T3H-C006** cab breakout to the connector.
3. Use an additional adapter if connecting to 9-way cab ISO receptacle.

ECU Mounted at Rear of Tractor

With the **COMMAND** ECU mounted at the rear panel or near the ISOBUS breakaway plug:

1. Disconnect the existing 4-way plug from the ISOBUS implement breakaway connector.
2. Connect the disconnected plug to the receptacle on the ISOBUS "T" connection on the T3H-C005 external breakout.

3. Connect the 4-way ISOBUS "T" plug into the ISOBUS implement breakaway connector.

