

# INSTALLATION MANUAL

## Agra-GPS CNH-JD Bridge for a Quadtrac (2009-2011, no canbus steering)



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Contact information  
Agra-GPS Ltd.  
Box 2585  
Stony Plain, AB  
T7Z 1X9  
CANADA  
001 780 990 4052 Phone  
www.agra-gps.com

#### Release Notice

This is the March 2025 release (Revision A) of the CNH-JD Bridge for CNH Quadtrac with canbus steering installation manual.

### **Disclaimer**

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**DO NOT USE THE CNH-JD Bridge IF YOU DISAGREE WITH THE DISCLAIMER.**

## Important Safety Information

Read this manual and the operation and safety instructions carefully before installing the CNH-JD Bridge.

- Follow all safety information presented within this manual.
- If you require assistance with any portion of the installation or service of your equipment, contact your Agra-GPS for support.
- Follow all safety labels affixed to the system components. Be sure to keep safety labels in good condition and replace any missing or damaged labels. To obtain replacements for missing or damaged safety labels, contact Agra-GPS.

When operating the machine after installing the CNH-JD Bridge, observe the following safety measures:

- Be alert and away of surroundings.
- Do not operate the CNH-JD Bridge system while under the influence of alcohol or an illegal substance.
- Remain in the operator's position in the machine at all times while the CNH-JD Bridge system is engaged.
- Determine and remain a safe working distance from other individuals. The operator is responsible for disabling the CNH-JD Bridge system when a safe working distance has been diminished.
- Ensure the CNH-JD Bridge is disabled prior to starting any maintenance work on the machine or parts of the CNH-JD Bridge system.
- Follow all safety instructions from the CNH system as well as the JD system!
- The CNH-JD Bridge must only be used in the field, never on the street!

## Electrical Safety

- Always verify that the power leads are connected to the correct polarity as marked. Reversing the power leads could cause severe damage to the equipment.
- Verify that all cables and connectors are not going over sharp edges and are not pinned, as this could cause power shortages and/or malfunctions.

## **Introduction**

Congratulations on your purchase of the CNH-JD Bridge. The CNH-JD Bridge is designed to bridge the communication between a Case or New Holland Quadtrac (canbus autosteer ready) and a John Deere display (1800, 2600, 2630 or 4640). This allows a JD display to create maps in the John Deere format and also provides straight AB-Line autosteer.

The operator uses the JD display to create AB-lines. The current position is determined by a John Deere receiver and all this information is used by the CNH-JD Bridge to create steering instructions for the tractor. All conditions for autosteer such as minimum speed, steering enabled etc. must be met by the CNH system before the autosteer engage option in the tractor can be activated.

### **NOTICE**

This manual is not intended to replace the manuals for the tractor or the John Deere system. The operator must read and understand the manuals and instructions of these systems, before using the AgraGPS CNH-JD Bridge.

## Installation of the CNH-JD Bridge

### Step 1: Mounting the CNH-JD Bridge

The CNH-JD Bridge can be placed in the fuse panel area to the right of the seat.

Connect the 9 Pin diagnostic connector to the circular connector that is mounted to the metal plate.



Route the 8-pin and 40-pin cable behind the seat into the area underneath the buddy seat.

Connect the 8-pin connector to the bridge harness.

If there is a Nav 2 controller, disconnect the 40 and 24 pin connectors.



Use the red Deutsch removal tool to remove the wire in pin 3 from of the 24-pin connector, then insert it into pin 7 on the 40-pin connector.

Then connect the 40-pin connector to the bridge harness.



## Step 2: Mounting the JD receiver

The mounts for the JD display and receiver are NOT part of the CNH-JD Bridge.

The JD mount can be bolted to the metal bracket provided on the roof of the CNH Quadtrac.

There are 3 connectors on the roof adapter. The full-sized Deutsch 12 pin with 7 wires connects to the StarFire receiver. The Deutsch Mini connector with 2 wires connects to “Port B”, the connector with 5 wires connects to “Port A”



### Step 3: Wheel angle sensor installation

The machine requires the installation of a wheel angle sensor.

The wheel angle sensor is mounted at the articulation point. For an easier install, turn the tractor steering all the way left. Turn the tractor OFF!

Access the articulation area from the right. Use 3/8" bolts to mount the bracket to the top part of the frame (see picture).

Note: Some models have a hyd. hose holder on the top, others do not.



Mount the 2 flat bars as close as possible to the turning point.

The closest point without risking damage to the wheel angle assembly is about 40 mm measured from the turning bolt (see picture).

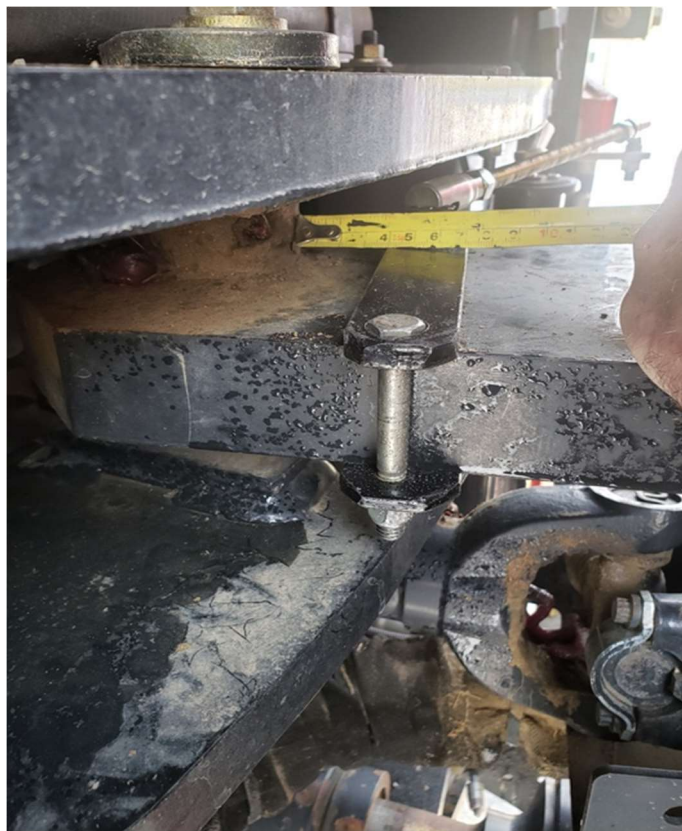
**Test that the wheel angle assembly is not touching when the tractor moves to its full left or full right position!!**

**Mount the bolt into the sensor assembly part AFTER checking the travel of the threaded rod!**

**Check for full left that the threaded rod is not too short and fits nicely into the sensor assembly. Sensor assembly arm should have a slight angle towards the back of the tractor, so to not sit perfectly straight.**

**Do a full right and once again check that the threaded rod fit into the sensor assembly without overextending the arm. The tractor only does about 70 degrees, the sensor can handle 180 degrees, so lots of freedom on the sensor itself, just make sure the mechanical arms are not pulled or pushed beyond the limits!**

**Normal length of threaded in rod from ball point to ball point is about 12" or 30 cm.**





Route the wheel angle sensor cable from the potentiometer to the 4-pin DTM which is normally used for the CNH sensor. (see picture)

Open the 4pin DTM and connect to the AgraGPS wheel angle sensor cable. Make sure you secure the cabling so that the cable does not get pinched during articulation.

Once completed you can see the range of the wheel angle sensor in the AgraGPS ISO app in the JD display. You must calibrate the left and right values.

Should you see no significant changes when you move the wheel or values below 500, your connection to the wheel angle sensor is incorrect.

Make sure you select "Articulated 2009-2011" in the machinetype section.

To calibrate the wheel angle sensor, follow the procedure below:

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***For AgraGPS ISO app version V2.00+***

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- 1) Move the wheels of the machine fully to the left, then press the "Set Left" button to save the current position.
- 2) Move the wheels of the machine fully to the right, then press the "Set Right" button to save the current position
- 3) Ensure that the recorded "Right" value is higher than the "Left" value, and that the two values are in the thousands. If the values are reversed, the setting "Wheel Angle Reversal" can be toggled within the AgraGPS ISOApp settings page.

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***For AgraGPS ISO app version V2.00+For AgraGPS ISO app version V1.00-V1.99***

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- 1) Move the wheels of the machine fully to



the left, then press the "Set Left" button to save the current position.

2) Move the wheels of the machine fully to the right, then press the "Set Right" button to save the current position

3) Ensure that the recorded "Left" value is higher than the "Right" value, and that the two values are in the thousands.

The dead band calibration can be typed in manually, but the automatic is recommended. Simply start it and do not touch the steering wheel. It can take a few minutes, but in the end you should see values in the deadband calibration.