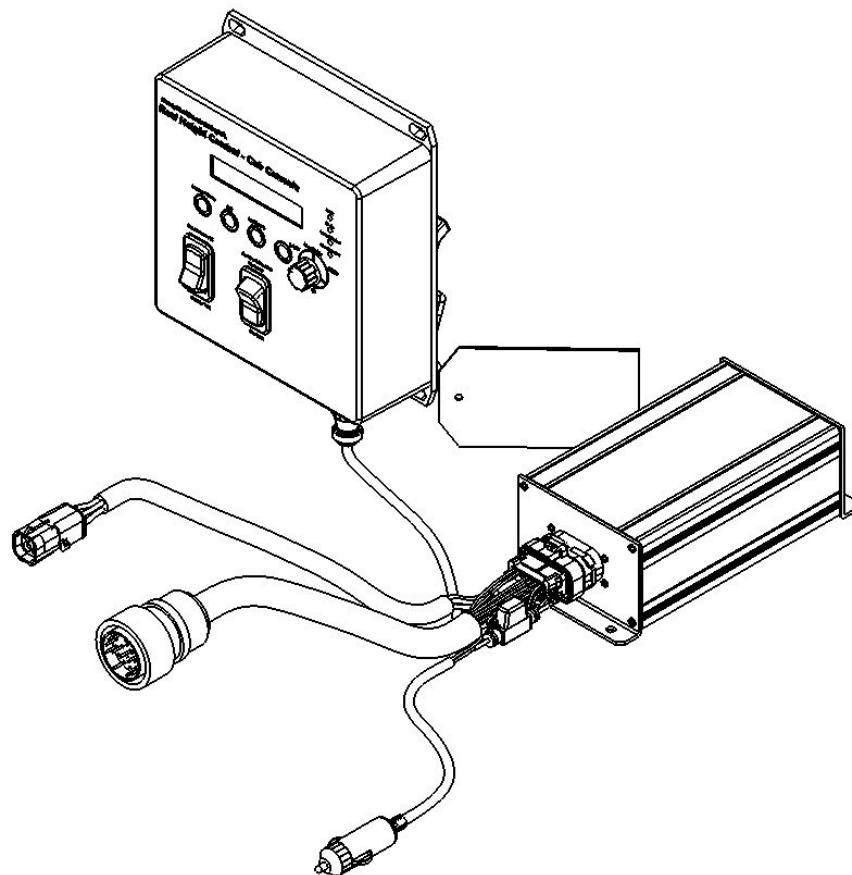




AGCO

Automatic Reel Height Controller Installation

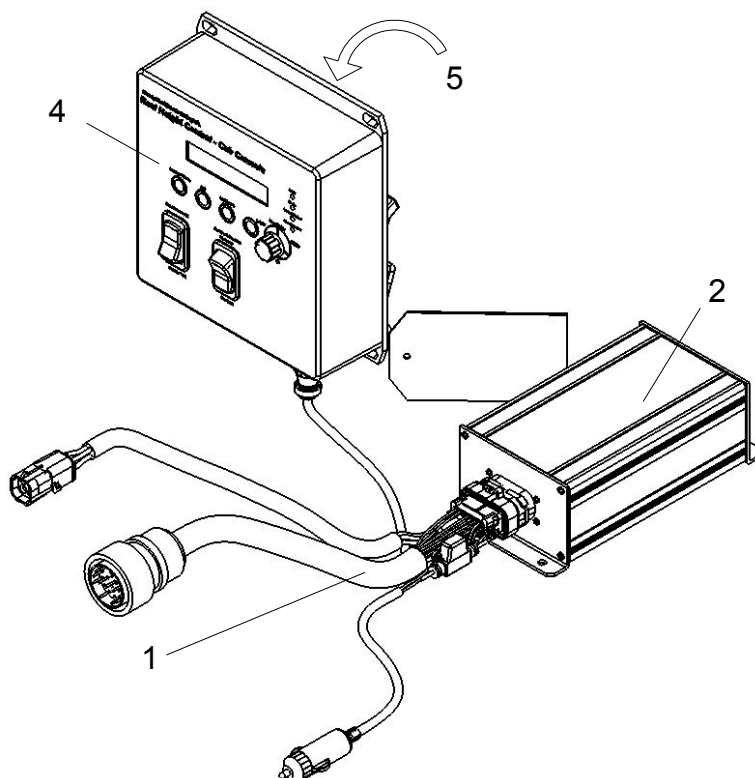


Preparation

Unpack the unit, and check the parts supplied against the packing list enclosed.
Organize the components, and plan the best locations for the readout, and controller.

Parts

1. Wire Harness
2. Controller
3. Interrupt Harness (Shown on Pages 3 and 5)
4. Readout
5. Suction Arm





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For Combines Manufactured Prior to 2007

1. Examine the Interrupt harness, and identify the components shown here. For simplicity, the lead lengths shown here do not represent the actual harness lengths, but the appearance of the plugs is accurate.

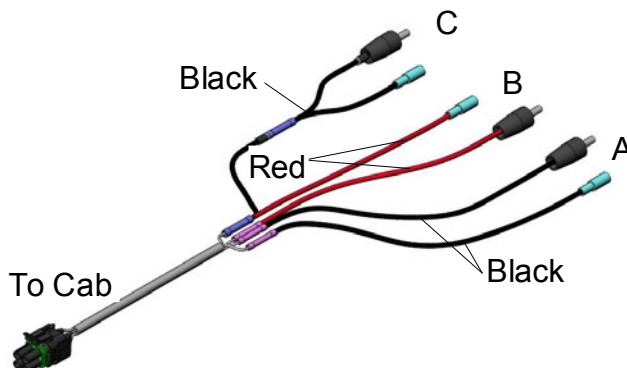


Illustration 1: Interrupt Harness

For Descriptive purposes, each set of male and female wires on the interrupt harness are labeled A, B and C.

2. Open the safety panels on the right side of the combine to expose the main hydraulic control block.



Illustration 2: Main Hydraulic Block Access

3. The hydraulic control block is located just behind the front wheel on the right side.

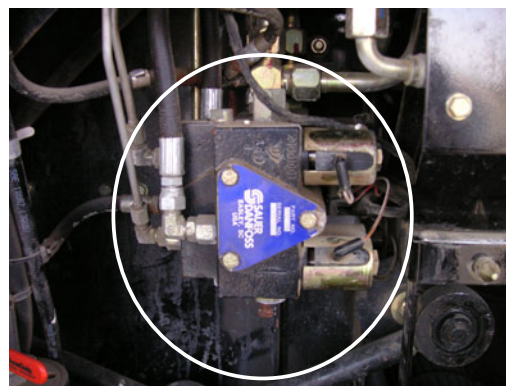


Illustration 3: Hydraulic Control Block

4. Interrupt the White/Pink wire coming from the Reel Lift Lower Solenoid with wire set A (the shorter black pair) from the interrupt harness.

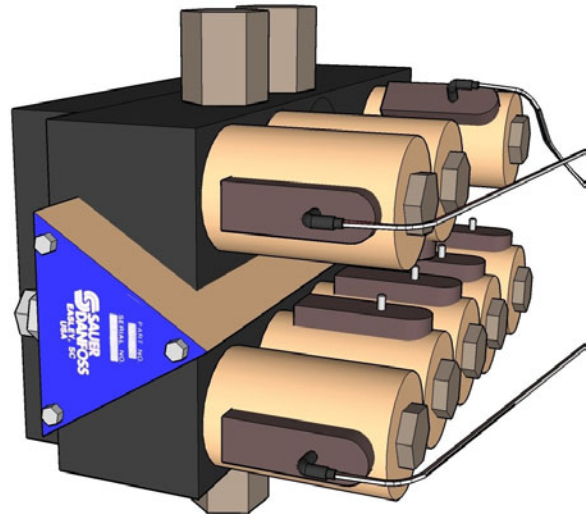
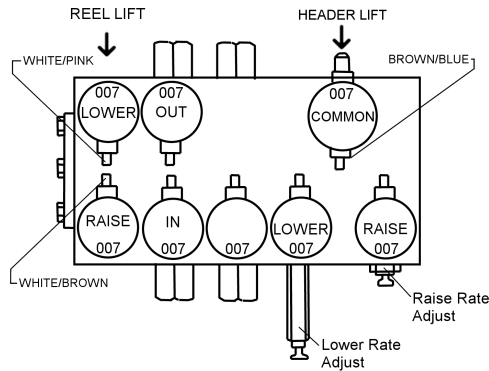


Illustration 4: Before Modification

5. Interrupt the White/Brown wire coming from the Reel Lift Raise Solenoid with wire set B (the short red pair) from the interrupt harness.
6. Interrupt the brown/blue wire coming from the Header Lift/Common Solenoid with wire set C (the long black pair) from the interrupt Harness.

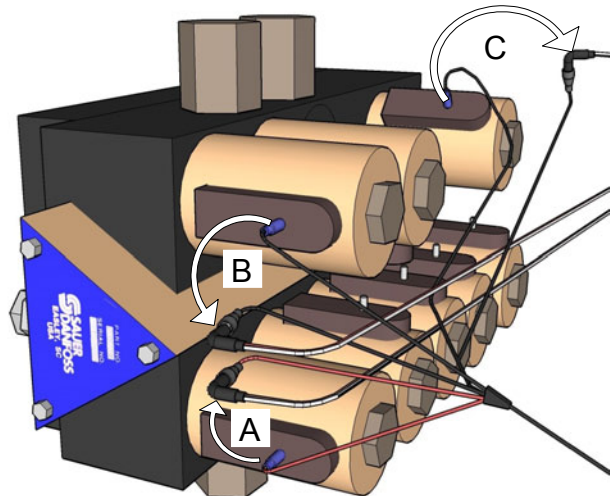


Illustration 5: After Modification

7. Run the remaining interrupt harness wire up into the cab, following a route that keeps it away from any moving parts that may damage the wire. Use zip ties to secure.

For Combines Manufactured In 2007 and After

1. Examine the Interrupt harness, and identify the components shown here. For simplicity, the lead lengths shown here do not represent the actual harness lengths, but the appearance of the plugs is accurate.

For Descriptive purposes, each set of male and female wires on the interrupt harness are labeled A, B and C.

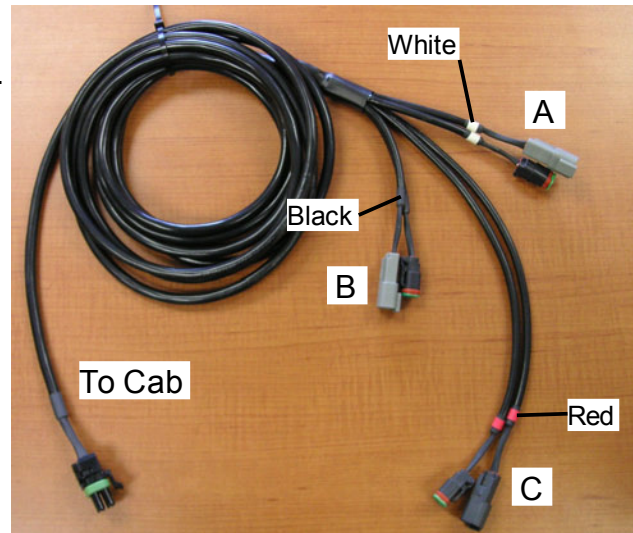


Illustration 6: Interrupt Harness

2. Open the safety panels on the right side of the combine to expose the main hydraulic control block.



Illustration 7: Main Hydraulic Block Access

3. The hydraulic control block is located just behind the front wheel on the right side.

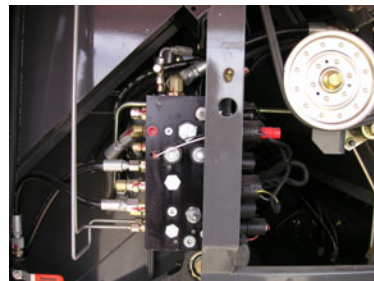


Illustration 8: Main Hydraulic Block

4. Interrupt the White/Pink wire coming from the Reel Lift Lower Solenoid with the wire set B (Black Marking) from the interrupt harness.

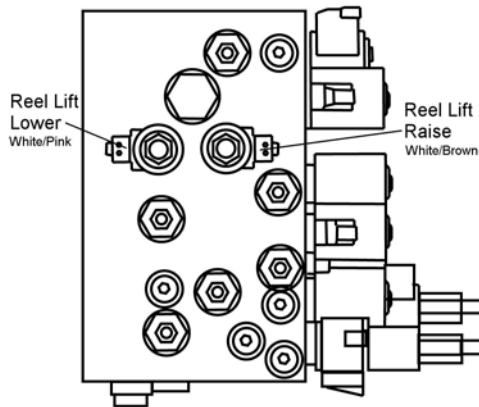


Illustration 9: Hydraulic Block Front View



Illustration 10: Before Modification

5. Interrupt the White/Brown wire coming from the Reel Lift Raise Solenoid with wire set A (White Marking) from the Interrupt Harness.

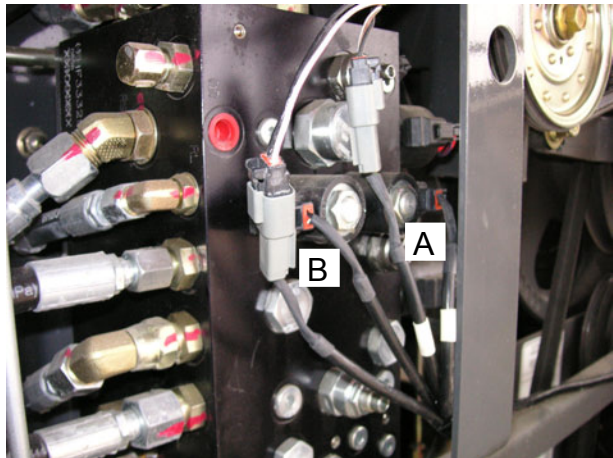
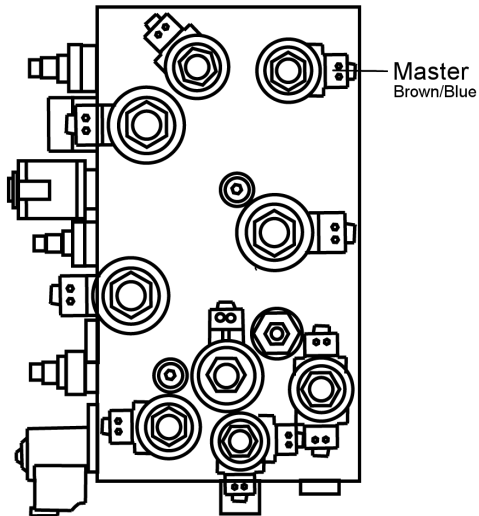
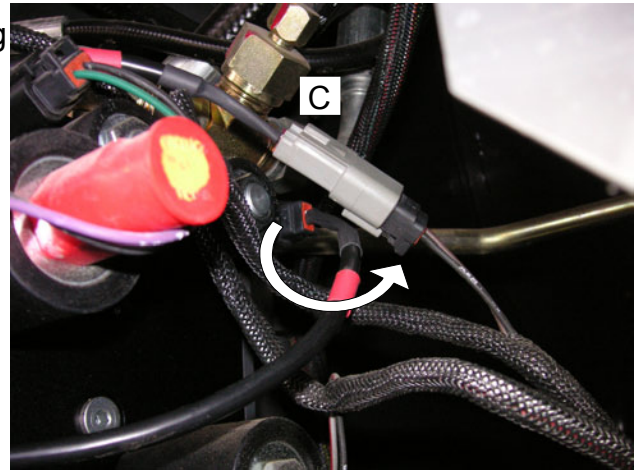


Illustration 11: After Modification

6. Interrupt the Brown/Blue wire coming from the Master Solenoid with wire set C (Red Marking) from the Interrupt Harness.



*Illustration 12: Hydraulic Block
Side View*



7. Run the remaining interrupt harness wire up to the cab, follow a route that keeps it away from any moving parts that may damage the wire. Use zip ties to secure.

Completing the Installation

1. Mount the Readout and Controller in safe and clean locations. The readout comes with a suction cup mount for attaching to the windshield. Moisten the cup for proper suction.
2. Connect the interrupt plug to the Wire Harness. Connect the wire harness to the controller, readout, 12v power plug, and to the multi coupler on the header.
3. The plugs are designed to fit in only one way, with some care in aligning them, they should connect easily, and snap, or lock into position with a slight turn. Take care to align the plugs correctly.

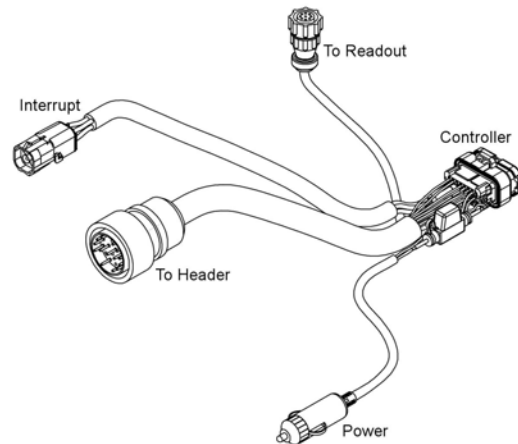


Illustration 13: Wire Harness



Illustration 14: Readout Connection



Illustration 15: Controller Connection



Illustration 16: Power Connection

4. Ensure that when you run the connector to the header, that you secure the wire in such a way that it does not come into contact with any moving parts.

Configuring Reel Height Control

After the interrupt harness, readout and controller are properly installed:

1. Start the combine and turn on the reel height controller.
2. The display on the readout should say "HoldAuto". Press the "Control Mode" button so the display reads "Manual".
3. Lift/Lower the table to regular cutting height, and lift the reel to your safety point (operating height).
4. Press and hold "Set" until "Set Point Stored" is displayed on the readout.
5. Press "Control Mode" once more so the display reverts back to "HoldAuto"
6. The light labeled "block" should be on at this time, raise the reel slightly and it will turn off. Calibration is now complete.
7. Test the system before cutting/harvesting to ensure the working height and system is working properly.

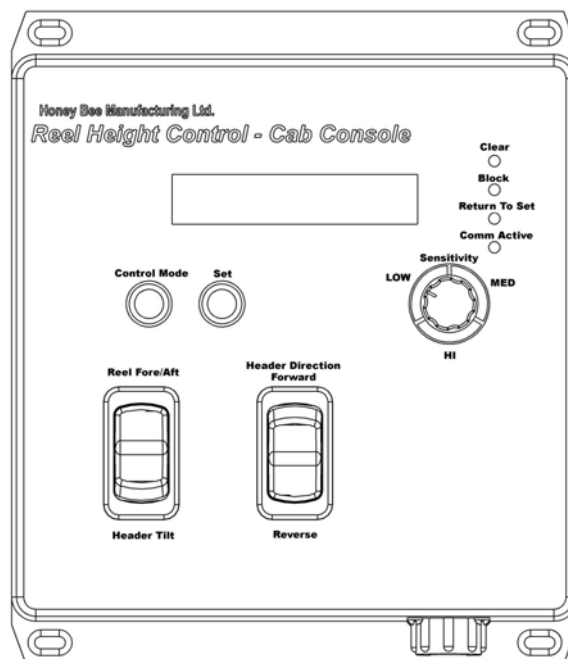


Illustration 17: Automatic Reel Height Control Readout



The "block" light indicates that the auto reel height sensors are tripped.

Operation

If the cutter bar lifts above the set height, the reel should automatically raise up to avoid touching the cutting system. **For this reason, the cutter bar must not be locked in a stationary position and must be 'floating' for the automatic reel height control to function.** The closer the reel is to the cutter bar, the higher the sensitivity should be set on the readout.

Note:

Always turn off the controller when the combine is not in use, as it will be using power from the battery even if the combine is turned off.

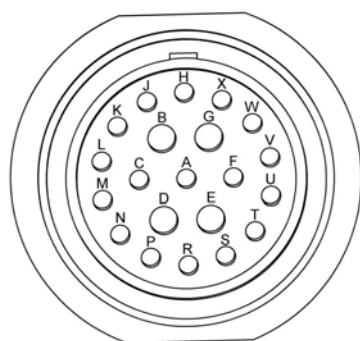
The Automatic Reel Height Control will not function until the knife drive is running at a minimum of 20 rpm. This is to ensure that it does not trigger when someone is working on the unit.

Testing

Start the unit, and calibrate the sensor as detailed in the Combine Operator's Manual. Test, and accustom yourself to, the operation of the controls.

Diagnostics

Refer to the following pin-out diagram for testing of specific circuits:



Electrical Plug Pin Layout
(Female End)

- A - Signal From LH Sensor (LH Green)
- C - Signal From RH Sensor (RH Green)
- P - Positive (White LH & RH)
- S - Negative (Black LH & RH)

NOTE: The Pin layout on the male plug is a mirror image of the female plug.

Illustration 18: Main Connector Pin Usage

Troubleshooting

Reel Not Moving Far Enough and/or Moving Too Far

If the reel is not moving far enough when the sensors are activated, loosen the adjuster bolt and slide the link arm along the central arm towards the front of the header. Then re-tighten the bolt. This will increase the motion of the reel.

If the reel is moving too far, then loosen the adjuster bolt, slide the link arm back towards the rear of the header and re-tighten the bolt. This will decrease the motion of the reel.

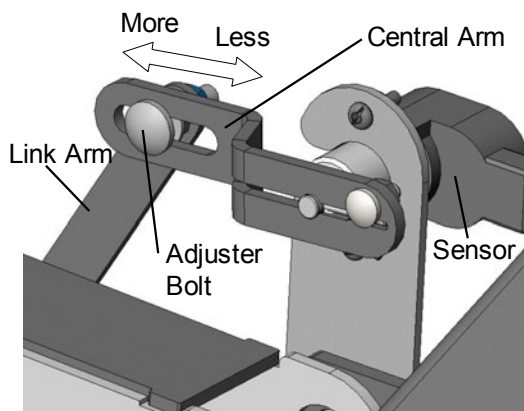


Illustration 19: Reel Arm Sensor

Reel Will Not Raise and/or Lower

Examining the Readout & Electrical Connections

The first thing you should troubleshoot is the electrical connections. The easiest way to do this is to monitor the Reel Height Control Readout.

When the **Reel Raise** controls are activated you should see the **up arrow** (▲) displayed for both the input and the output.

When the **Reel Lower** controls are activated you should see the **down arrow** (▼) displayed for both the input and the output.

If the arrows do not match, or if only one arrow is shown then there is a problem with the electrical connections. Inspect all electrical connections to ensure they are properly installed. Refer to *Illustration 13: Wire Harness* if necessary.

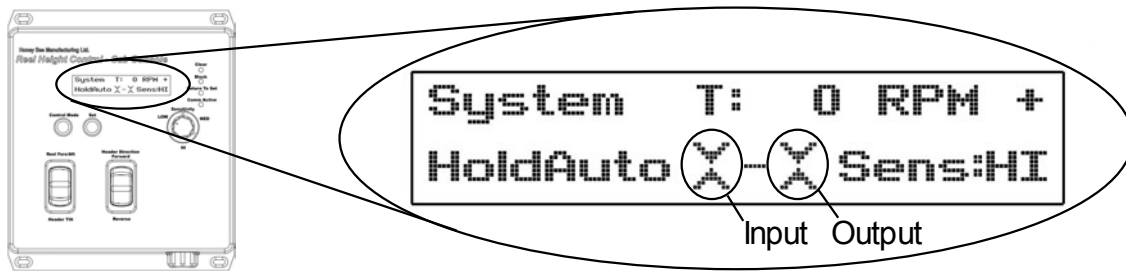


Illustration 20: Readout Input and Output Locations

Adjusting the Springs and Sensor Rollers

1. Ensure that the automatic reel height control sensor rollers are lightly pressing down on the cover plates on the cutter bar.
2. If the rollers are not touching the cover plates, remove the feather plates, keeping track of the nuts, bolts and washers.
3. Check and make sure that the springs on the Sensor Roller Assembly are properly oriented, so that they are causing the sensor rollers to press down on the cutter bar.

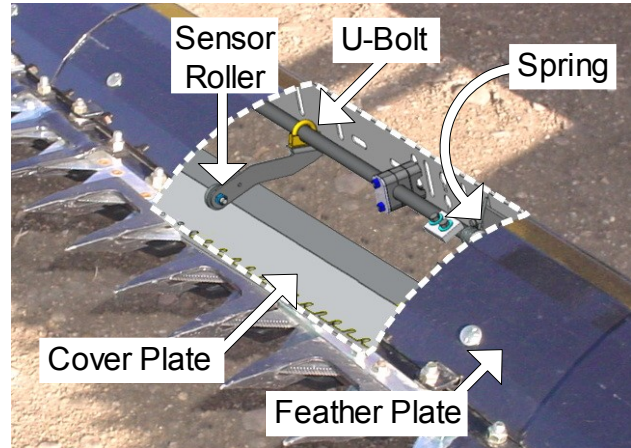


Illustration 21: Auto Reel Height Sensor Roller

4. If the spring is properly oriented, but the rollers are still not in the correct position, loosen the U-bolt holding each roller in place and reposition so they are touching the cover plates. Re-tighten the the U-bolt.