

SmartDepth™

SmartDepth Installation Instructions for Kinze 3000



Step 1:

Begin by removing one gauge wheel and gauge wheel arm using a 3/4" socket.

Step 2:

Next, remove the bolts holding on the cast depth adjustment cover and the bolt holding the depth arm in the shank. (arrows)

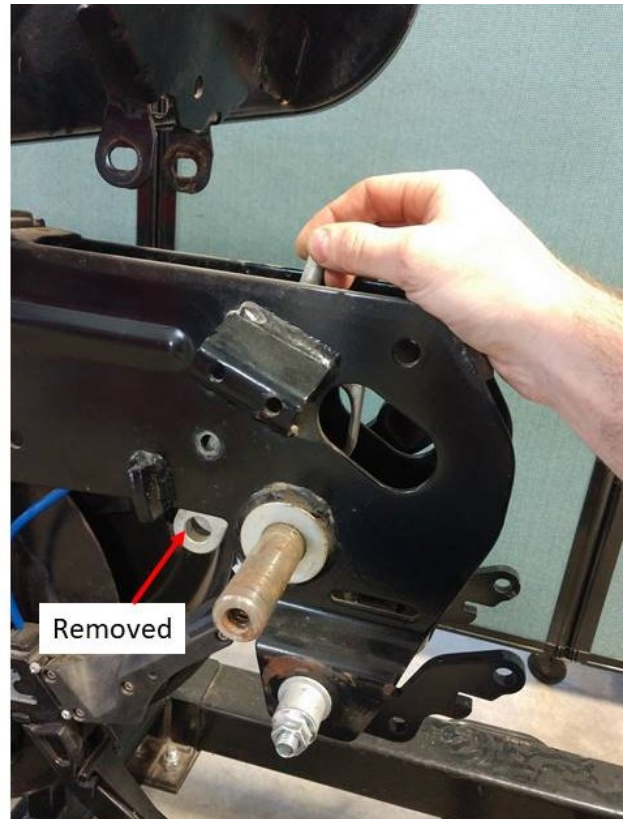
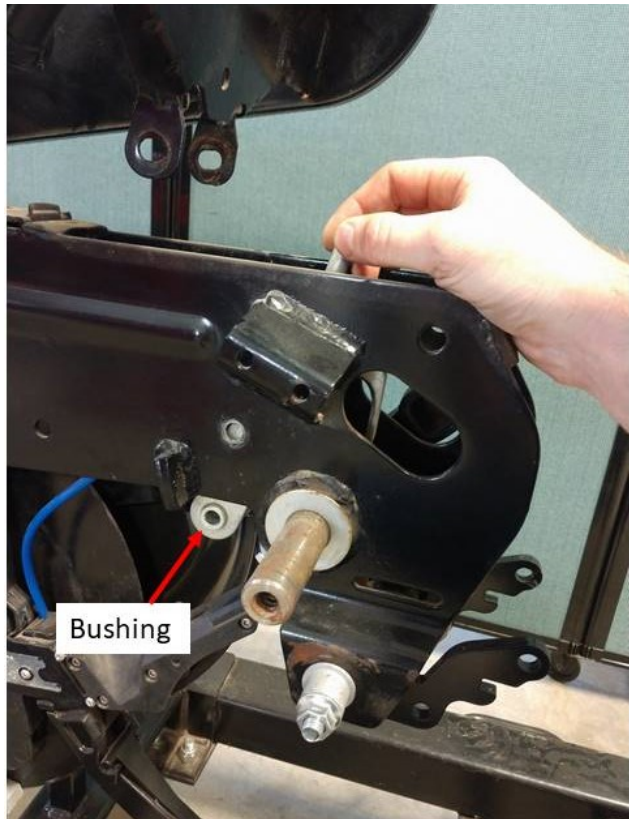
**Step 3:**

When you remove the cast depth adjustment assembly there may have been a washer under the front of the cast piece. If so, the washer will be reused in Step 9.

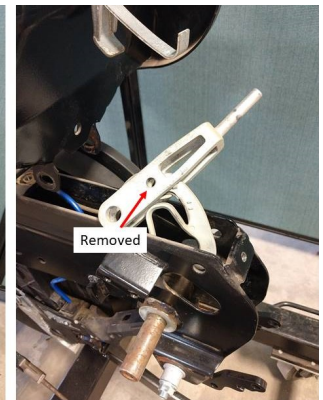
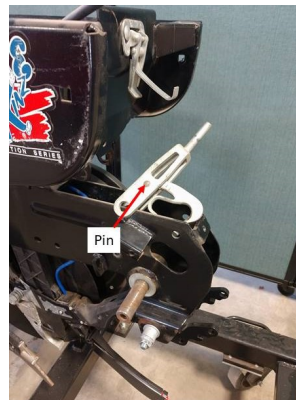


Step 4:

With the depth arm bolt removed, drop the arm down in the shank and remove the bushing. With the bushing removed the arm will come out of the top of the shank easier.

**Step 5:**

Pull out the depth control arm and remove the the pin holding the weight pin. The bushing and pin will get reused in the next step.

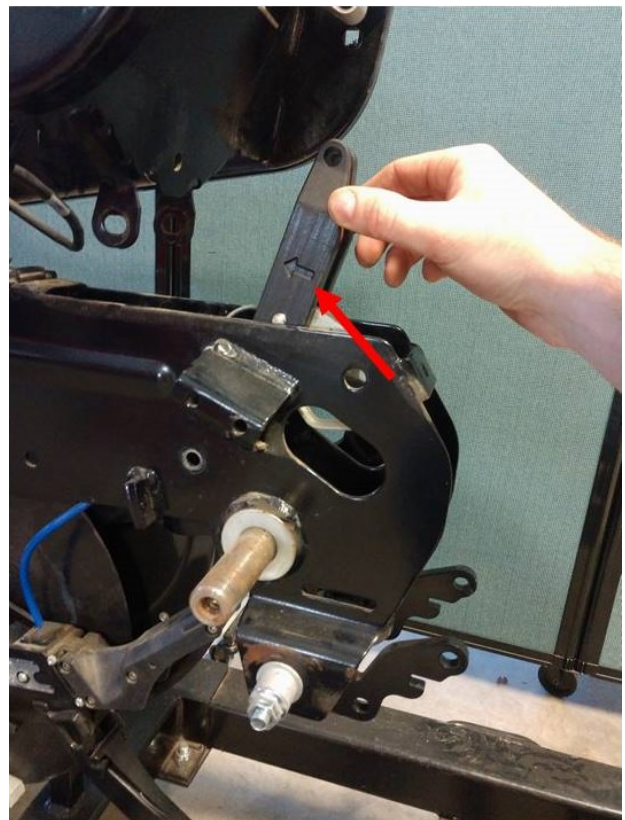


Step 6:

Next, you will need to remove the weigh pin harness so it can be routed through the new depth arm as shown.

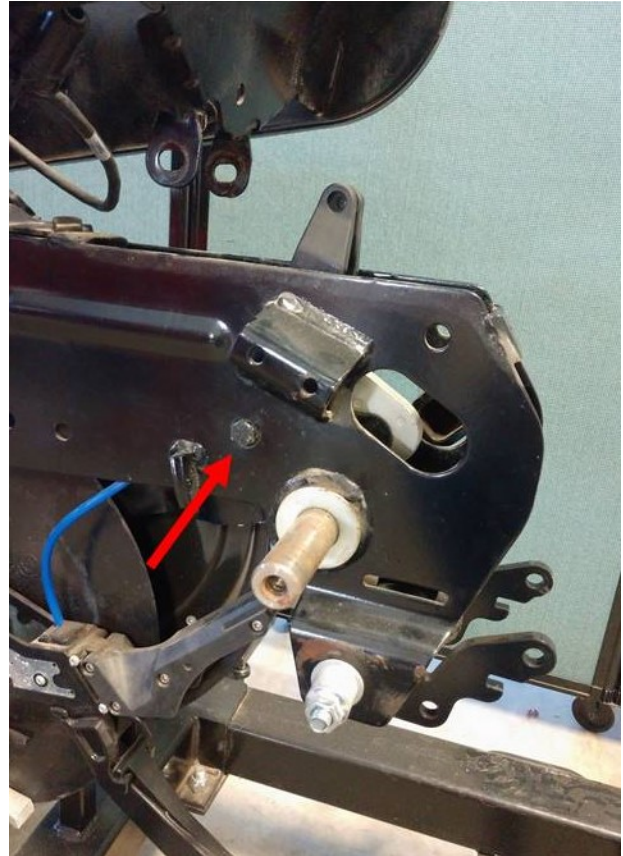
**Step 7:**

Using the new depth arm provided in the kit, install the bushing, pin, and load cell in the orientation shown with the flat side of the depth arm facing forward. Also, note the arrow on the depth arm which should face towards the front of the row unit.



Step 8:

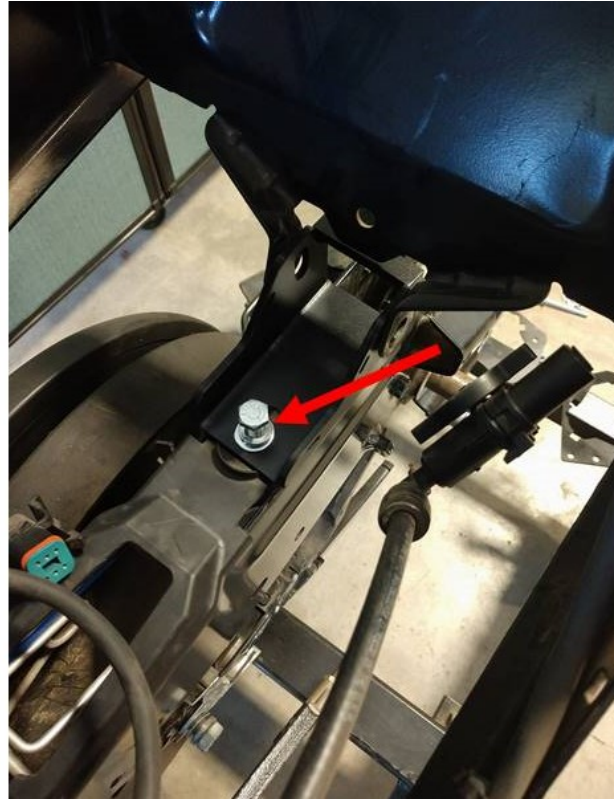
Reinstall the depth arm using the OEM bolt and route the weight pin harness back up to the SRM and plug it in.



Step 9:

Next, install the SmartDepth gear box brackets using hardware kit 734148.

- a: Begin by installing the front bracket using the 3/8 — 1.25” bolt, 3/8” flat washer, and 3/8” lock washer and secure the bracket to the shank. Do not completely tighten the bolt yet.



Note: If there was a washer under the front side of the cast adjustment assembly as noted in Step 3, reuse that washer under the front SmartDepth support bracket.

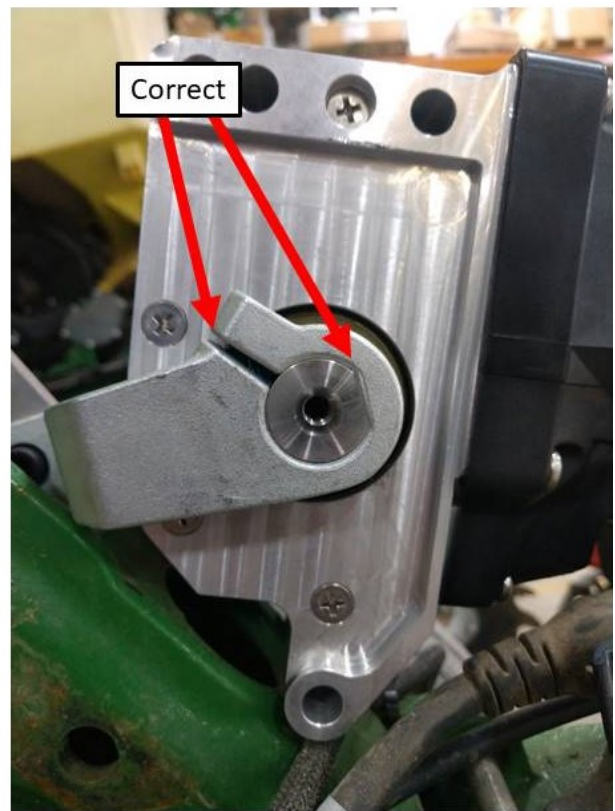
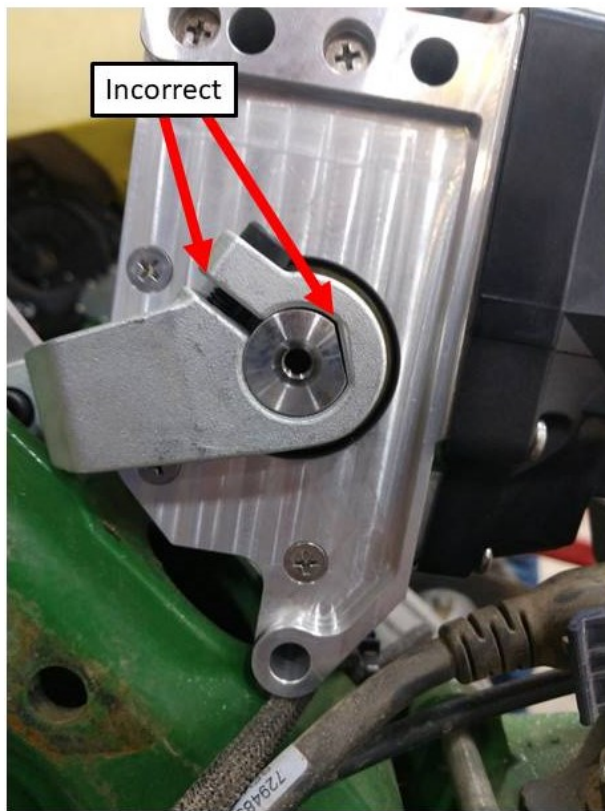
Step 10:

Assemble the arms and wishbone link to the SmartDepth gear box assembly.

- a: Start by installing the drive arm with link bushing, the wishbone link and finally the right side drive arm. The drive arms can be install on either side of the actuator but its recommended to instal them with the clamping bolt towards the rear as shown. Use a 5 mm allen wrench to tighten all three joints.



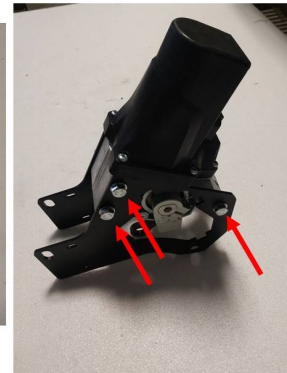
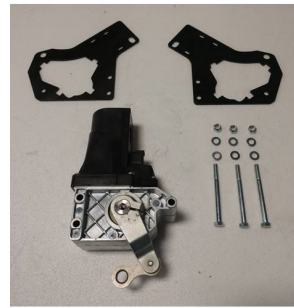
- b: Ensure the drive arms are clamped tight enough as shown and the arm is flush with the gear box output shaft. If the arm is not flush you can gently tap on it with a hammer before its completely tight.



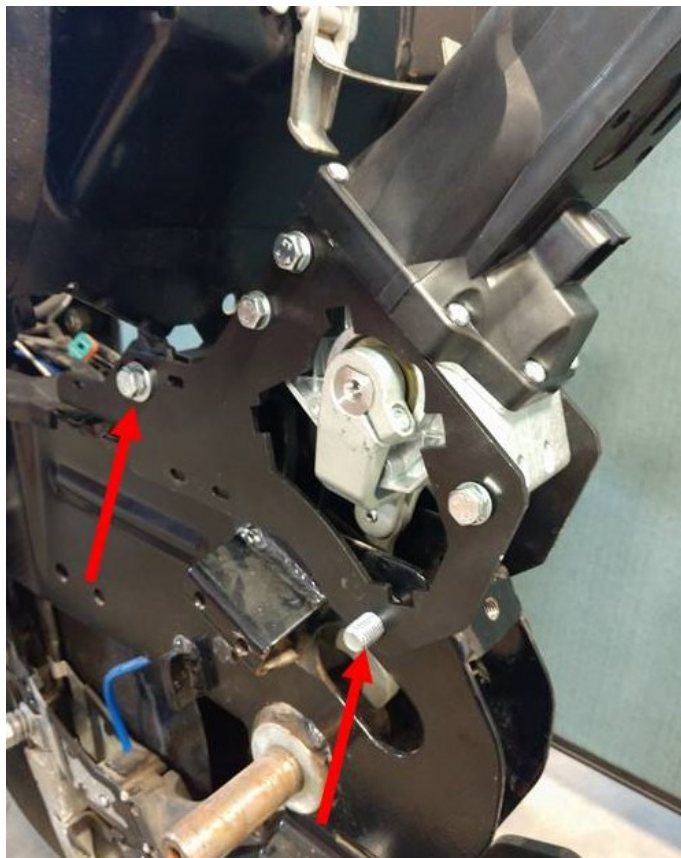
Step 11:

Mount the SmartDepth module and gear box assembly to the row unit.

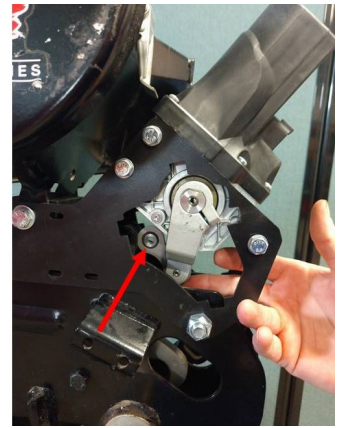
- a: Bolt the support brackets to the actuator gear box using the three M8 x 90 mm bolts, six M8 flat washers, and three M8 lock nuts. Both support brackets are identical and can be installed on either the left or right hand side.



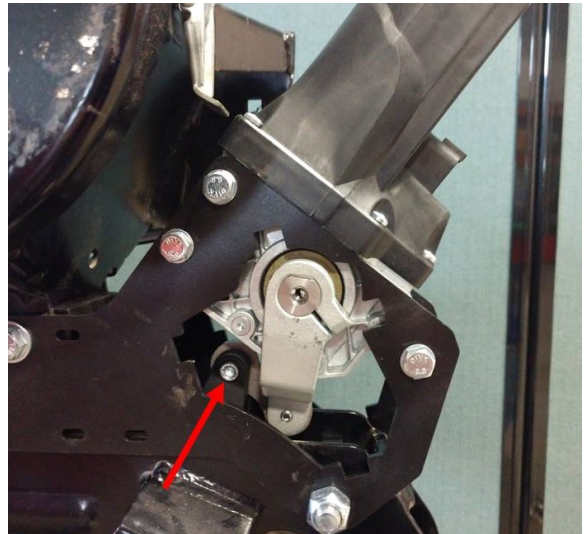
- b: Install the **front support** bolt using the 3/8" x 3.75" bolt, two 3/8" flat washers, 3/8" lock washer, and 3/8" nut. The support brackets will go on the outside of the rear panel support holes. The **rear support** uses the bushing, M12 x 1.75 bolt and M12 nut on each side. Place the bushing between the shank and the support bracket as shown. Also, install the bolt so the head of the bolt is on the inside of the shank. Once all of the bolts have been started you can tighten all of the support bracket bolts.



c: Next, install the bushing in the wishbone link and slide the depth arm over the wishbone.



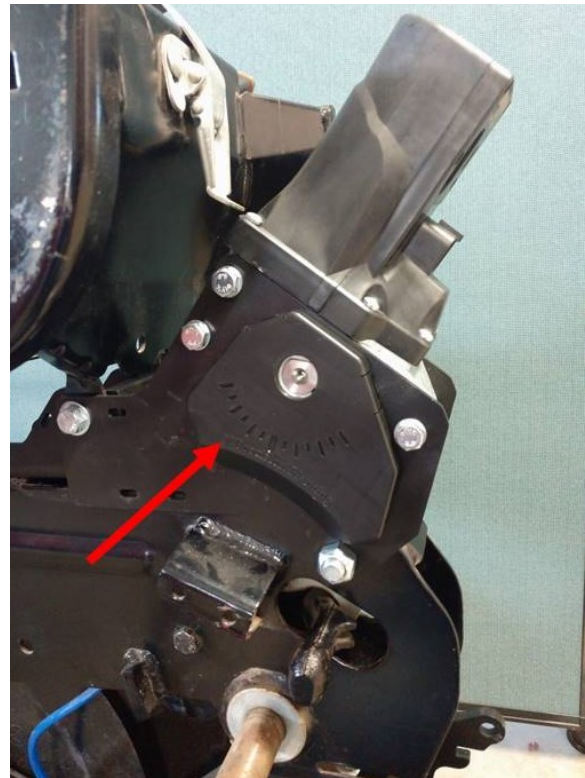
d: Use a M6 allen head bolt to secure the depth arm to the link.



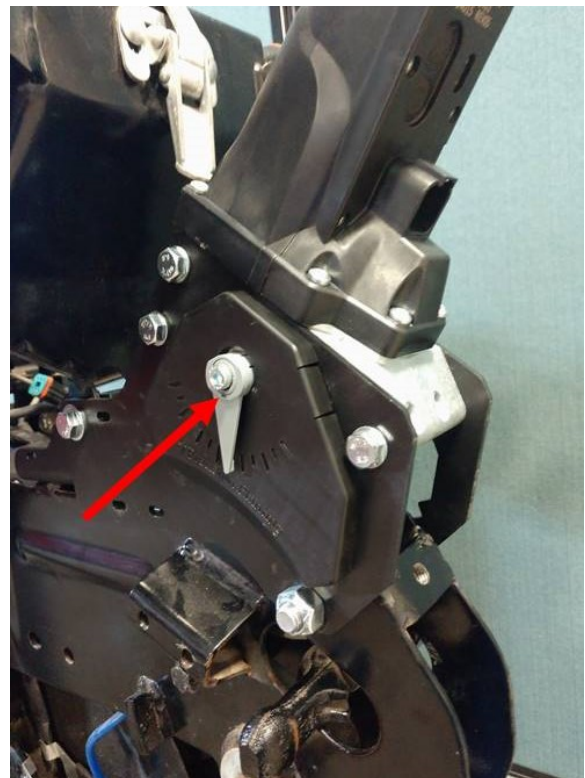
Step 12:

Finally, install the guard and depth flag indicator.

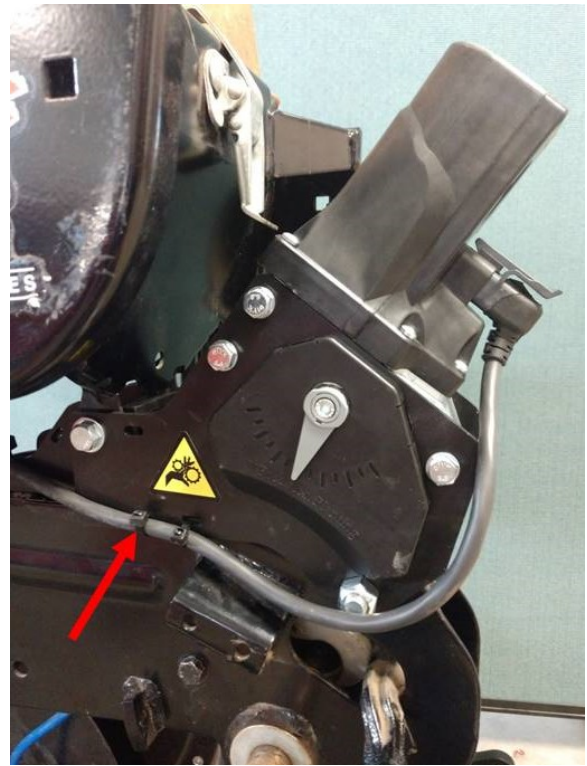
- a: There is a left hand and right hand guard. Snap the guard into the respective support bracket.



- b: Next, install the flag indicator on both sides using the M6 allen head bolt. Wait until the install is complete to set the depth indicator final location. Once the installation is complete, the 2020 is setup, and the depth calibration is completed, command the depth to 2" as an example (any depth can be chosen). With all of the SmartDepth modules at their commanded depth align the depth indicator with the center notch on the guard and tighten the M6 allen head bolt. Notice that you can depress the flag into the center notch to help hold it in place as you tighten the bolt.

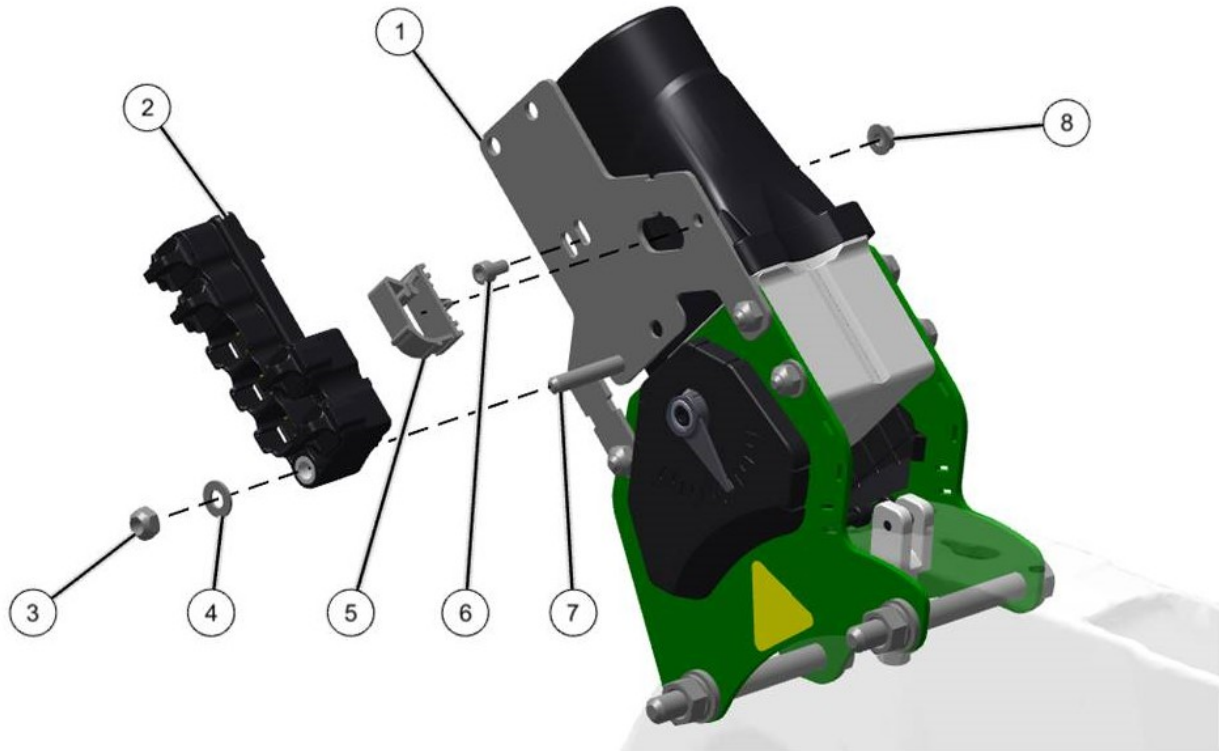


- c: Finally, route the CAN extension up to the CAN expansion hub using zip ties to secure it and reinstall the gauge wheels.



Step 13:

Install the SmartDepth CAN expansion Hub bracket (optional).

**Typical example**

The CAN expansion hub bracket is designed to be flexible in its mounting location and orientation. It allows for the CAN hub to be installed on either the right or left hand side of the SmartDepth assembly and provides zip tie points as well as clips to help secure the harnessing in place.

- a: Use M8 bolt (7), M8 nut (3), and flat washer (4) to bolt the CAN expansion hub to bracket (1). The CAN hub can be mounted with the bolt on the bottom (as shown) or on top depending on preference.
- b: Use M6 bolt (6) and M6 flange nut (8) in one of the center slotted holes. The purpose on Bolt (6) is to help keep the CAN expansion hub located in the correct spot and prevent it from rotating.
- c: Next, mount bracket (1) to the top two bolts of the SmartDepth support bracket as shown.
- d: Finally, snap clip (5) in the bracket which can be used to help secure harnesses as desired.