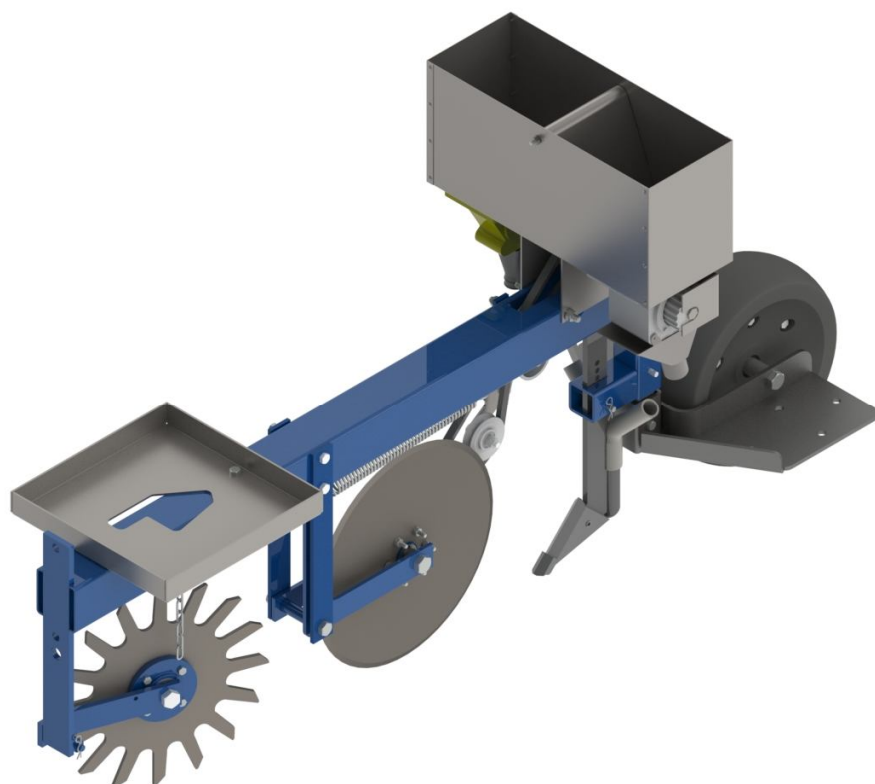


# ASSEMBLY INSTRUCTIONS

*Morrison Seeders*<sup>TM</sup>

*“Conservation Agriculture For Small Farms”*

## CA-Seeder 1000



©Copyright 2014

101002-000 RevB Effective May 2014

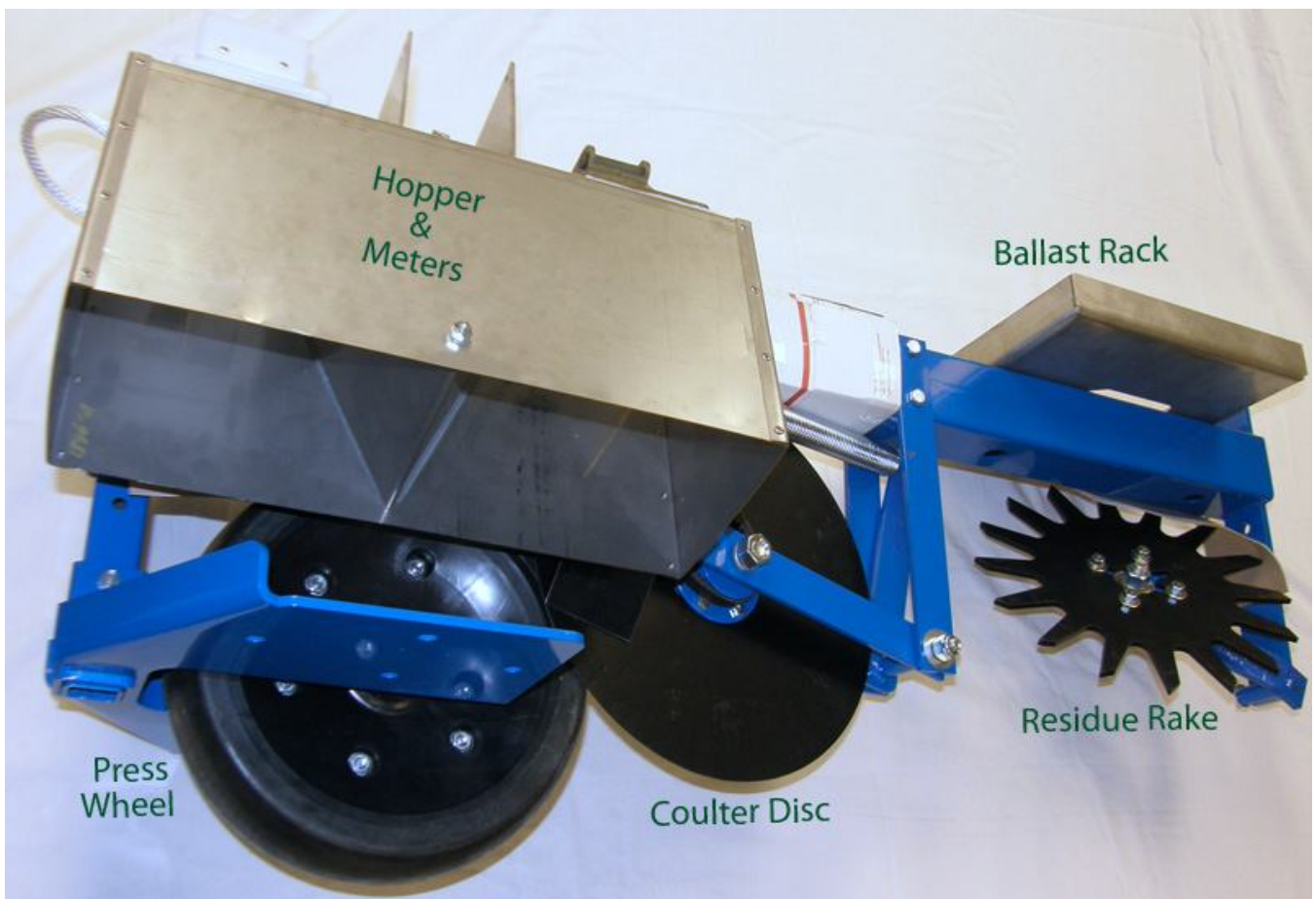
## UNPACKING

Your CA Seeder 1000 was carefully inspected at the factory for quality and workmanship and to make sure that all required parts were present. This section will guide you through the simple seeder assembly process.

Prior to assembly, all seeder parts and sub-assemblies should be removed from the packaging. Do not remove the wrapping around the hopper until later. Inspect the unit to ensure that no shipping damage is present and all parts are accounted for:

### 1) Main frame assembly with attached sub-assemblies

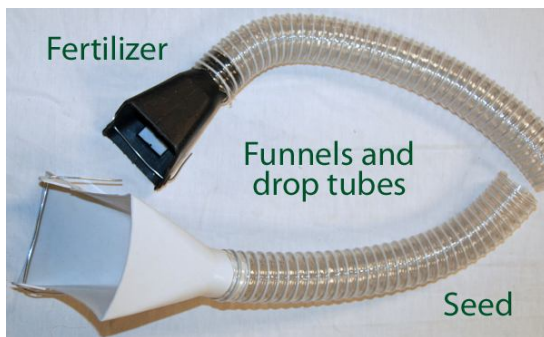
- a) Ballast rack
- b) Residue rake sub-assembly
- c) Coulter disc sub-assembly
- d) Tensioner sub-assembly (above presswheel and behind hopper in picture)
- e) Hopper & meters sub-assembly
- f) Presswheel sub-assembly



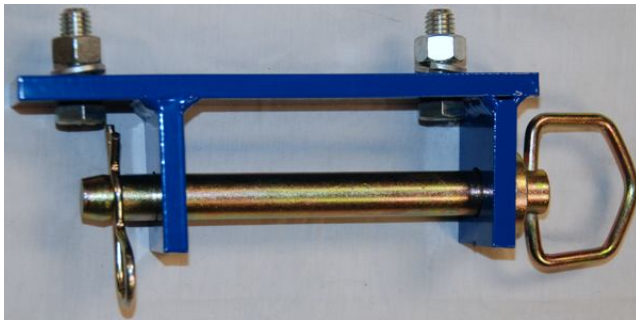
2) Furrow opener shank assembly including shank tip and plastic Y-tube



3) Seed and fertilizer funnels and attached drop-tubes



4) Hitch assembly for specific 2WT to be used (as ordered)

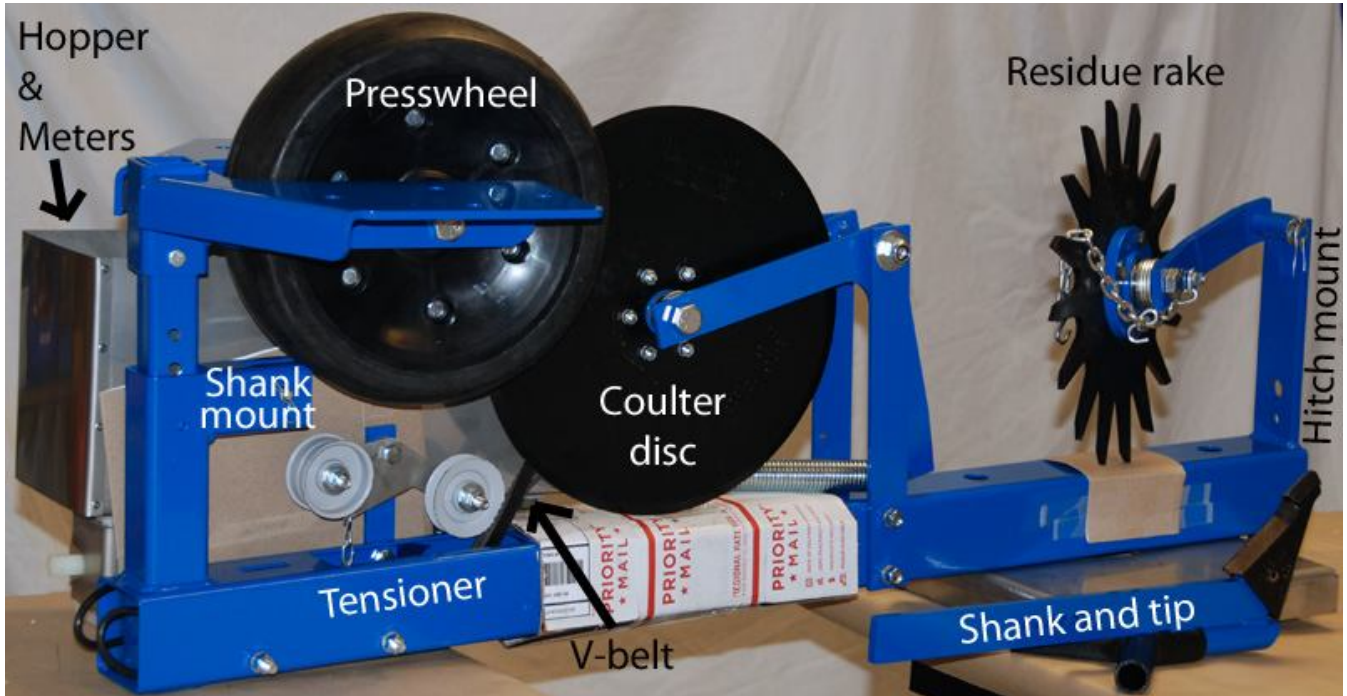


**Required Tools:**

- 1) 2 each adjustable or sized wrenches/spanners for English-sizes 7/16", 1/2", 9/16", 3/4", & 15/16"
- 2) 1 pair adjustable pliers
- 3) 5/32" Allen-wrench
- 4) Long bar for spring tensioning

## ASSEMBLY

**STEP 1:** Lay the unit upside down with the presswheel on top.



**STEP 2:** Reverse the presswheel assembly.

- Remove the clevis pin
- Lift the presswheel assembly out of the frame
- Install the presswheel assembly with the wheel and footpads extending behind the mainframe.
- Insert the clevis pin into the first hole to extend the wheel height as far as possible.
- Secure the pin by clamping the loop in place.

**STEP 3:** Install the furrow opener shank assembly

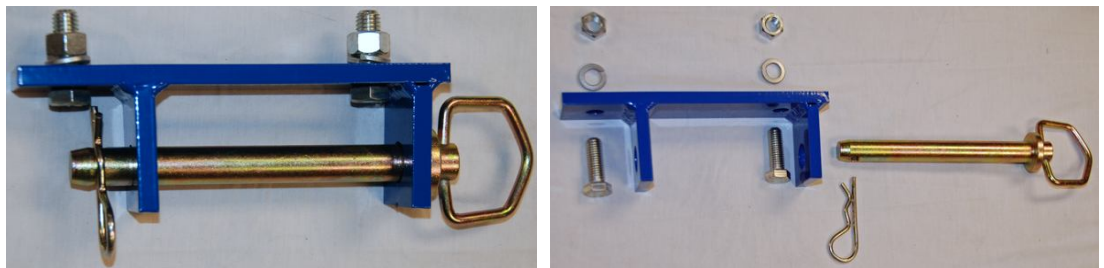
- Remove the 5/16" diameter clevis pin from the shank mount.
- Slide the shank through the 2 slots in the shank mount with the tip of the furrow opener facing the front of the seeder.
- Insert the clevis pin through the hole in the shank mount and the 2<sup>nd</sup> hole from the bottom of the shank.

NOTE: We recommend this as the initial starting point for shank depth to seed approximately 1 1/2" (3.8 cm) deep.



**STEP 4:** Attach the hitch assembly to the front of the Seeder

- i) Disassemble the hitch assembly
- ii) Align bolt holes on the hitch assembly with the holes in the mounting plate at the front of the Seeder (be sure to use the top hole of the mounting plate).
- iii) Insert the 2 bolts through the holes of the hitch and mount. Secure them with the lock washers and nuts.
- iv) Insert the hitch pin and secure it with the hair-pin clip.

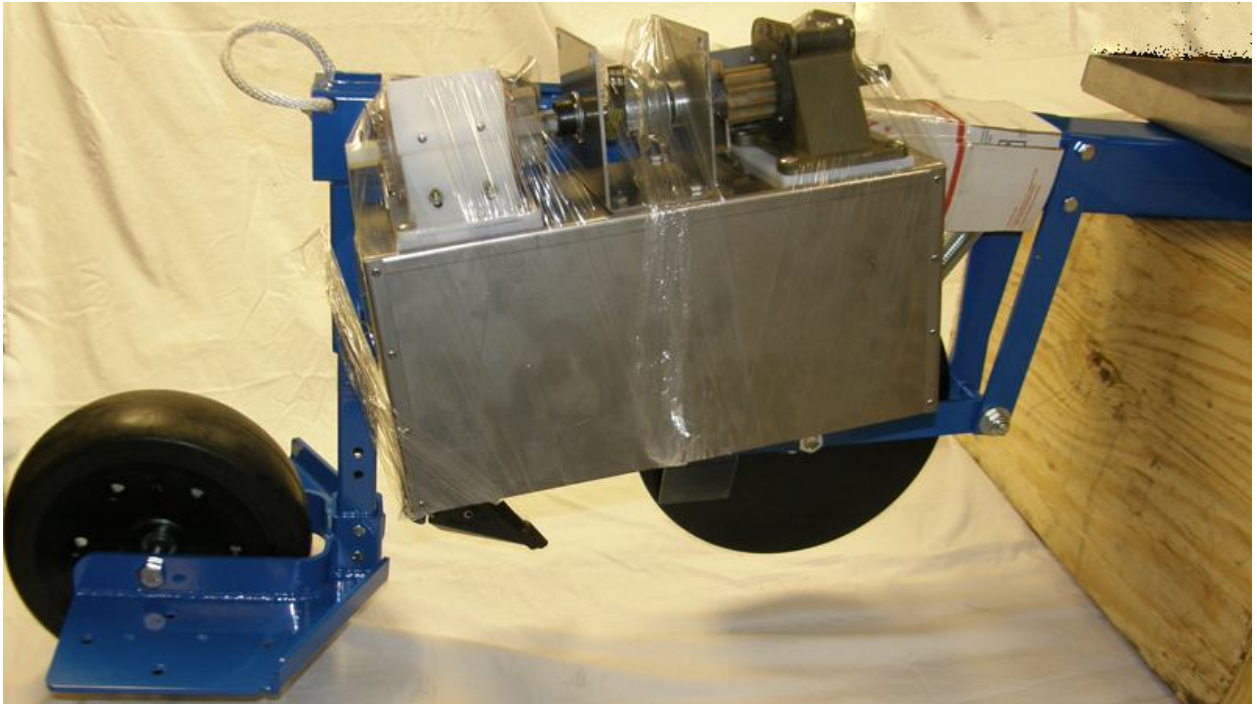


**Note:** For **Italian 2WTs**, use Hitch Adapter Assembly (Italian) 2WT (PN 601053-000). Mount the adapter assembly onto the Italian 2WT (per instructions included with the Adapter Assembly). The hitch assembly provided with the CA-Seeder 1000 will easily connect to the Adapter Assembly.



**STEP 5:** Turn the unit over.

- a) You will need a 2WT or a support that mimics a 2WT mounting bracket capable of holding the front end of the unit up and keep it from tipping sideways.
- b) The unit will rest on the presswheel and the 2WT or support.

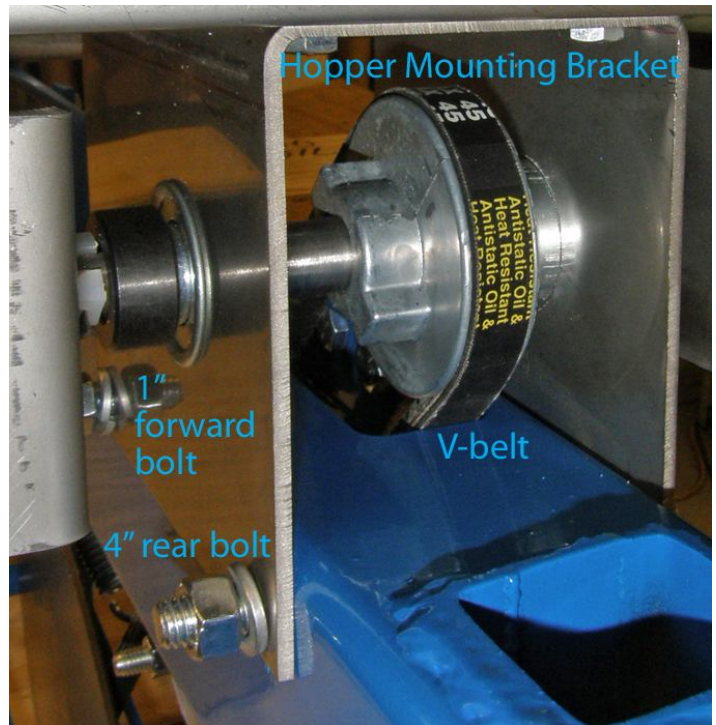


**Step 6:** Install Hopper sub-assembly

- a) Remove wrapping and/or strapping from around the hopper subassembly.
- b) Remove the 3 hopper mounting bolts from the backbone.
  - i) The rear bolt is 4"
  - ii) The forward bolts are each 1" long.
- c) Set the hopper on top of the backbone.
  - i) Align the holes in the hopper mounting bracket with the holes on the backbone.

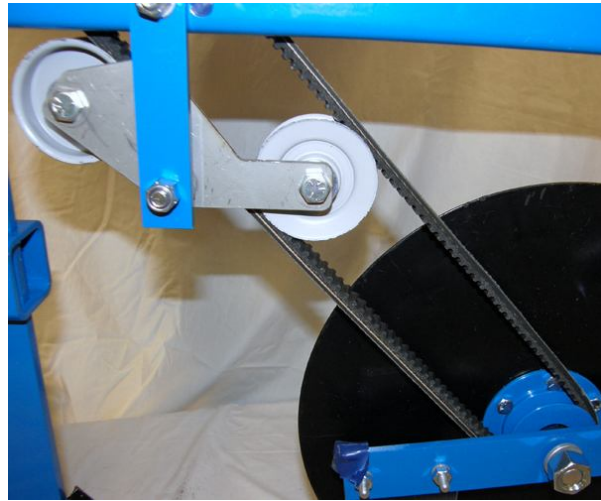
**NOTE:** Make sure the V-belt is not twisted as it feeds down to the Coulter disc.

- d) Install the 3 hopper mounting bolts. Secure them with their lock washers and nuts.
  - i) Install the 4" bolt through the rear holes.
  - ii) Install the two 1" bolts in the forward holes. Feed the bolts from the inside and attach the lock washer and nut on the outside.



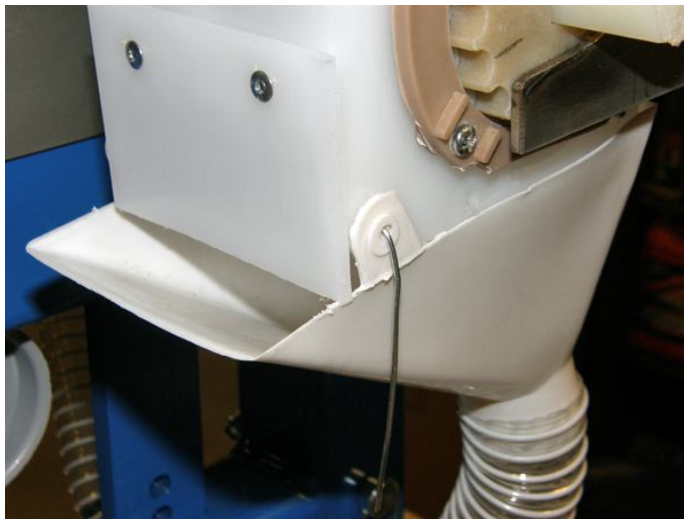
**Step 7:** Route the V-Belt.

- a) Around the hopper pulley
- b) Above the flat idler
- c) Below the V-belt sheave
- d) Around the Coulter disc pulley



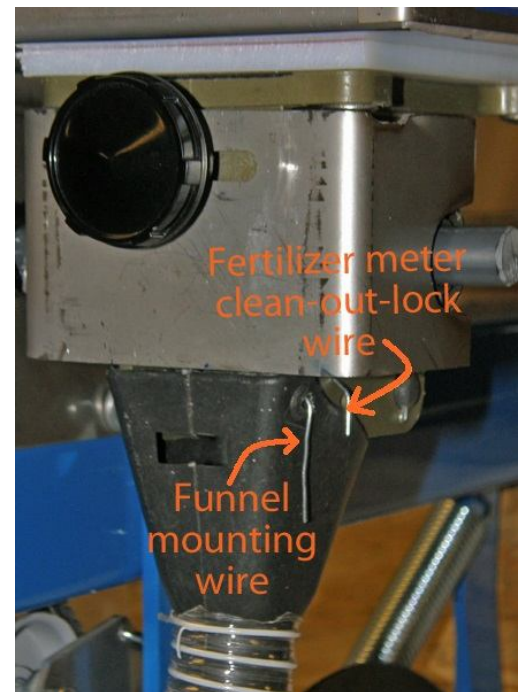
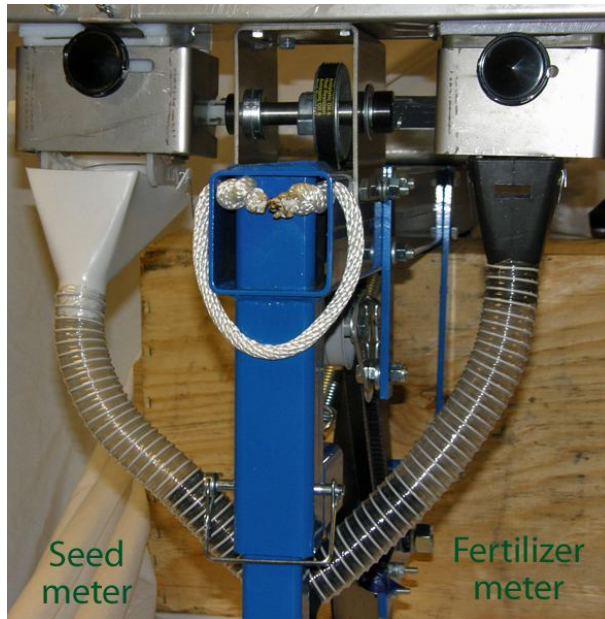
**STEP 8:** Install the seed meter funnel.

- a) Remove the wire from the mounting holes of the seed funnel.
- b) Press the funnel around the base of the seed meter until the mounting holes of the funnel and the meter align.
- c) Run wire through the holes from one side of the meter to the other.
- d) Secure the ends by bending them 90 degrees.
- e) Slide the drop tube over the Y on the shank.



**STEP 9:** Install the fertilizer meter funnel.

- a) Remove the wire from the mounting holes of the fertilizer funnel.
- b) Remove the feed rate adjuster bracket.  
**NOTE:** Make note of how many flat washers are on the inside of the bracket.
- c) Press the funnel around the base of the fertilizer meter until the mounting holes of the funnel and meter align.
- d) Run wire through the holes from one side of the meter to the other.
- e) Secure the ends by bending them 90 degrees.
- f) Install the feed rate adjuster bracket.  
**NOTE:** Be sure to re-install the same number of flat washers as you removed.
- g) Slide the drop tube over the Y on the shank.



**STEP 10:** Attach residue rake chain

- c) Locate the S-hook on the loose end of the chain attached to the residue rake mounting arm.
- d) Locate the small hole near the very front end of the backbone just behind the hitch mount.
- e) Insert the S-hook into that small hole.





**STEP 11:** Tighten all bolts. Some bolts were left loose to allow clearance for packing and others may have worked loose in shipping. Check all bolts on the seeder for proper tightness.

- a) **Hitch – 2 bolts**
- b) **Ballast box – 2 bolts**
- c) **Residue rake – 6 bolts** (Axle – 1, Hub – 4, Chain – 1)
- d) **Coulter disc assembly – 12 bolts** (Mounting arms – 2, Arm pivot – 1, Disc axle – 1, Disc hub – 6, Scraper – 2)

**NOTE:** Tighten the arm pivot bolt until snug then back off part of a turn just enough to allow the arm to pivot freely.

- e) **Tensioner – 5 bolts** (Mounting arms–2, Flat idler–1, V-Belt sheave–1, Tensioner plate–1).

**NOTE:** The belt tensioner plate mounting bolt should be tightened until snug then back off part of a turn to allow the plate to pivot freely.

- f) **Hopper – 20 bolts** (Seed meter mounting–4, Seed rate adjuster bracket–1, Seed meter slide–2, Fertilizer meter mounting–4, Fertilizer rate adjuster bracket–1, Hopper mounting bracket into hopper–4, Hopper mounting bracket unto backbone–3, Hopper divider–1)
- g) **Presswheel – 3 bolts** (Axle–1 bolt, Mount–2)

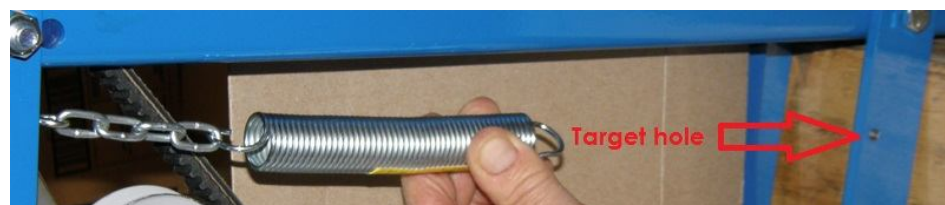
**STEP 12:** Secure the springs.

- a) Attach the loose end of the Coulter disc tensioner spring to the notch on the bottom side of the back bone where the V-belt feeds through.

**Note:** Use a long bar through the spring loop as a handle to stretch the spring.  
**USE CAUTION, spring is high tension when extended.**



- b) Attach the loose end of the belt tensioner spring to Coulter disc support arm.
  - i) Locate the small hole on the closest Coulter disc support arm a little below the backbone.
  - ii) Install the spring in the target hole.
  - iii) Stretch the spring until it hooks into the chain.



## CA-SEEDER 1000 - CONTACT INFORMATION

### ***For All Areas Outside the United States & Canada***

World Help Through Technology Foundation  
1821 Hillandale Road  
Ste1B-343  
Durham, NC 27705  
(855)948-3686  
[www.whtfound.org](http://www.whtfound.org)

### ***Within The United States & Canada***

TBD

Manufactured Under License by *Stone Mountain Technologies, Inc.* Erwin, TN USA  
©Copyright 2014