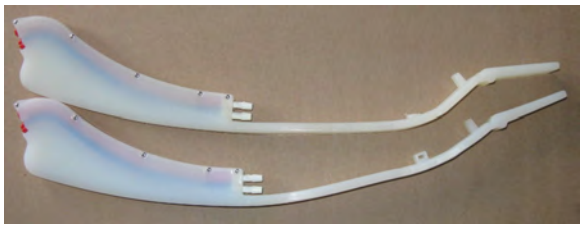
INSTALLATION & ADJUSTMENT
of

# Exapta®s K.200 Mojo Wire™

## for *pre-Wave* dual-tube Keeton® seed firmer tails

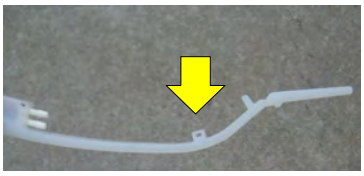
**Assembly for Liquid-ready (dual-tube) *pre-Wave* planter Keeton tails for Universal (wrap-around) brackets or Scraper-Mount ('Kinze') brackets. Also fits the (older yet) single-tube (full height) tails.**
***Mojo Wire is not intended for Low-Profile tails****



Upper tail is pre-Wave, lower is Wave-ready. Different curvature below 'thumb.'

▸*Before starting, make sure the Mojo Wires you have match the Keeton tail*s, since our K.200 Mojo fits the curvature of the pre-Wave precisely (for newer Wave-ready tails, see our K.211 Mojo kit).

**1)** Start with Keeton bracket installed on row unit and tail removed. **If routing the liquid tubing thru Ktn bracket,*** grind off the loop (see photo: yellow arrow points to loop) until smooth to allow a passageway for liquid tubing (**for older Keeton Liquid tails**, also grind off the 2 opposing hooks molded into tail below the loop). Then route tubing thru Keeton bracket, thru the plastic Mojo block(s)* & hose clamp(s),* and then onto barbed fittings of dual-tube tail. *Avoid kinking the tubing*. Using dish soap helps slide the tubing onto barbed fittings (don't use petroleum-based lubricants); heating the end slightly also helps. Note: For a leak-free system, don't do any splicing of 1/4" tubing – instead, run a continuous piece from the manifold all the way thru to the tail. (Or use a good auto-lock union connector.) Black 1/4" tubing is more durable than blue or red. Protect pinch points on the row unit with oversize tubing.



***If using Exapta's external routing for liquid tubing, grinding the loop off is somewhat optional, and tubing should not go thru upper Mojo block & clamp. See attached sheet.**

**2)** Slide Mojo Wire into place (see photos). Push Mojo Wire's upper/forward L-bends down over 'thumb' (retaining prong) of tail.

**3)** Next, position the *upper* Mojo block just below the scar from grinding off the loop in Step 1 (or up against the lower edge of loop if doing the external routing for the tubing). *Tighten hose clamp so the worm screw is on top of the Mojo block, making sure the Wire is in the notches on sides of block and on upper surface of tail.* **After tightening clamp, gently tap the clamp on underside of tail to flatten the clamp and conform it to the edges. Tighten clamps again (use a nut-driver, not a ratchet, since *the clamps can't handle a lot of torque*).** Flex the tail a couple times, then retighten clamps.

**4)** Install the lower Mojo block so that there's ~1.5" gap between it & the upper block. ***Preferably snip off the ends of hose clamps* to prevent mud & residue accumulation.**

**5)** Insert tail into bracket, *making sure it pops completely into place* (so that the molded thumb / prong is above the tensioning screw; the Wire's lower L-bend should also be above where the screw will hit the tail – ***individual tails may fit so tightly as to require a violent jabbing action to get them to fully pop into position***). Tighten the screw enough to retain the tail, being careful not to pinch the fertilizer tubing if using the internal routing. **Do not fully tighten screw!** There should be a slight 'rattle' remaining between the tail and bracket (the screw not yet engaged with the tail – **for pre-Wave tails, start with 0.5" of threads exposed**). ***Pressure changes dramatically in this range of the tensioning screw: 3/4-turn may cause a 1 lb change in pressure.*** **In the field, you should adjust (tighten) this screw further, but starting with too much pressure can damage the Keeton bracket.**

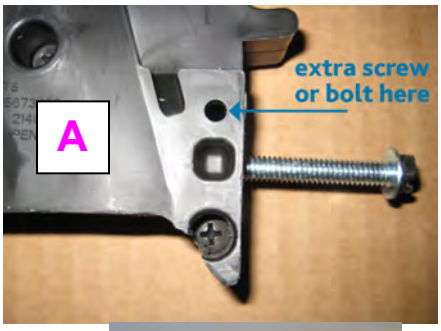
**Adjustment:**

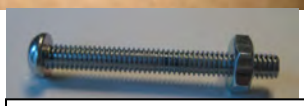
Tighten the tensioning screw on Keeton bracket until satisfactory pressure is achieved in the furrow. For firm no-till seedbeds, it's generally optimum to thoroughly embed the seed in the bottom of the furrow.

 Revised 22 Nov 2014.

# External routing of liquid tubing
## for Universal or Scraper-Mount Keeton brackets:

**If using a reinforcement screw* in bracket (see photo A) and Exapta's holster for the liquid tubing:**
(if not using these items, see opposite side)



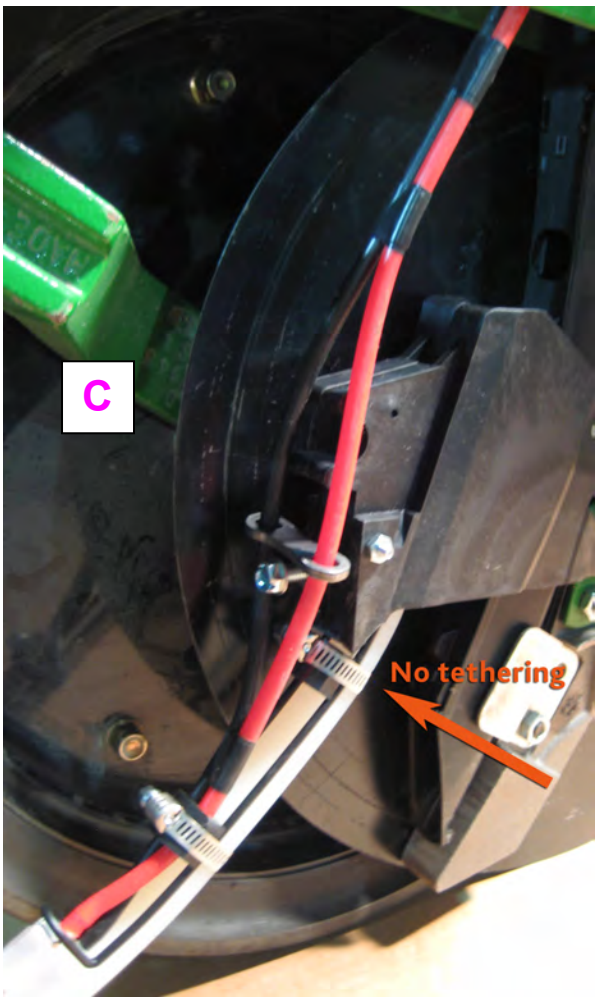



*All brackets shipped by Exapta now have this screw included.

**1)** Install plastic tubing onto barbed fittings of Keeton dual-tube tail—warming the tubing slightly helps. Even if you are using only a single ¼" tube for liquids, install a 3-ft piece of 'dummy' tubing onto the other barbed fitting. In our photos, the red tubing is the dummy.

**2)** Install Mojo Wire per those instructions. *Don't route tubing thru upper plastic Mojo block on Keeton tail.* Route tubing *behind* Univ or Scraper-Mount bracket, rather than inside it, and thru the holes in Exapta's holster (see Photo B).

**3)** Use electrical tape to fasten the two strands of tubing together, *but only in the places shown*. See Photo C. Important: tubing should be secured or constrained in these locations but not any additional spots. *Tubing should slide freely up & down in holster as tail is flexed to the max.* (No tethering to upper Mojo block / hose clamp; see Photos B & C.)



Instr. revised 22 Nov 2014.

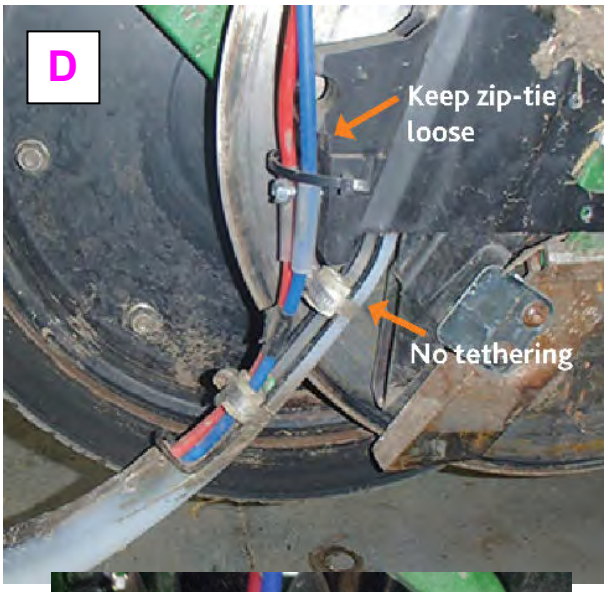
**If <u>not</u> using a reinforcement screw in bracket (Photo A, opposite side) & Exapta's holster for the liquid tubing:**

**1)** Install plastic tubing onto barbed fittings of Keeton dual-tube tail—warming the tubing slightly helps. Even if you are using only a single ¼" tube for liquids, install a 3-ft piece of 'dummy' tubing onto the other barbed fitting.

**2)** Install Mojo Wire per those instructions. *Don't route tubing thru the upper plastic Mojo block on Keeton tail.* Route tubing *behind* Univ or Scraper-Mount bracket, rather than inside it.

**3)** Use zip-tie to keep tubing away from blades (see Photos D & E)—**Keep zip-tie loose!**
Use electrical tape to fasten the two strands of tubing together, but only in the places shown (~ 1" above the *lower* Mojo block, and not again until several inches above the Keeton bracket). *See Photo E.* Important: tubing should be secured or constrained in approximately these locations but not any additional spots. **Tubing should slide freely up & down inside zip-tie as tail is flexed to the max.** (No tethering to upper Mojo block / hose clamp; see photos.) This method has been working flawlessly.

Note: The pieces of clear, oversize tubing alongside tension screw in photos are for protecting the 1/4" line from abrading on screw threads (we're not sure if this is necessary or not—have never tried running without); they aren't being used as connectors. (Don't use those pieces for connectors unless you want leaks; instead, use a good auto-lock union connector, such as a Mur-lok.) Also, the photos happen to show the crappy, thin-wall red & blue tubing; we suggest using the thick-wall black tubing instead for the tube(s) actually conducting liquid (dummy tube can use the red or blue).



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