



# Firmer Replacement Guide

## Keep the Six Bushel Boost

Don't overlook your Keeton Seed Firmers when you do your annual planter inspection and maintenance. To get the full "six bushel" boost from your Firmers, they must retain the correct shape and right amount of tension. Conduct these simple tests to determine when it's time to replace your Firmers.

### #1 Replace Firmers when Replacing Opening Disks

Your disk openers are a great indicator of Firmer wear life. They operate in the same soil conditions and Firmers will actually wear to take on the shape of the "V" created by the disk openers. So it is a great rule of thumb, "Replace Firmers when you replace opening disks." Keep in mind that most of us don't replace disk openers as often as needed. If opening disk diameter measures less than 14 1/2" across, or if you can slide a business card between them, the disk openers need replacing.

### #2 Visual Test

Because Firmers conform to the shape of the seed trench, some Firmers develop a sharp or pointed bottom after a period of time. That changes the way the seed is firmed. Carefully examine the bottom of the Firmer, if you see a change in the shape of the bottom, it's time to replace them. Also, look at the side of the Firmer. The Firmer should have a long curve along the bottom side. If the Firmer looks flat – or has lost height – then the firming angle has changed and it is time to replace it.

### #3 Tension Test

Adequate Firmer tension is critical to properly firming seed to the bottom of the seed trench. The tension screw can be adjusted to increase or decrease the amount of down pressure. Too little tension can result in seeds not being properly firmed to the bottom of the trench. And too much tension, especially in sandy soils can result in accelerated wear. For new Firmers, always follow the installation instructions.

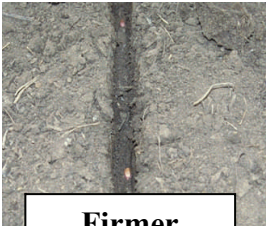
To test the tension of your Keeton Seed Firmers, place the planter units on a level surface. (1) Attach a small hanging scale to the firmer near the end. (2) Lift until the Firmer just comes off of the ground. (3) Tighten the tension screw until it takes 20 ounces (1 1/4 lbs) to raise the firmer.

A quick check is to lift the Firmer tail about two inches and release. (2) You should hear a solid whack as the Firmer snaps back to the ground. (3) If the whack seems lackluster, tighten the tension screw and try again.

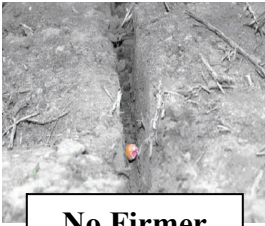
If the adjustment isn't sufficient, it is time to replace the Firmers. As a rule of thumb, adjust the tension screw at least one full revolution after each year of use.



**Keep the Six Bushel Advantage** that comes from even depth control and uniform germination – keep your Keeton Seed Firmers in shape.



Firmer



No Firmer

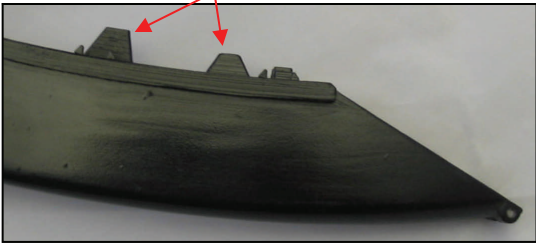
**YIELD IS IN THE DETAILS.**

**Precision**<sup>TM</sup>  
PLANTING

[www.precisionplanting.com](http://www.precisionplanting.com)

# Seed Tube Removal Guide

If needed, these ribs can be removed to aid in seed tube removal/installation.



Seed Tube Removal Guide			
	Deere Gold Discontinued	Kinze Gold	Universal Gold
<b>John Deere 7000</b>	-Update to Universal Brkt or grind sides of shank cover back	Bracket Not Compatible	-Brkt allows removal of seed tube
<b>John Deere 7200,1700</b>	-Seed tube pulls straight out	Bracket Not Compatible	-Seed tube pulls straight out
<b>John Deere XP</b>	Bracket Not Compatible	Bracket Not Compatible	-Seed tube pulls straight out
<b>Kinze 2000</b>	-Update to Universal Brkt or grind sides of shank cover back	-Update to Universal Brkt or grind sides of shank cover back	-Brkt allows removal of seed tube
<b>Kinze 3000</b>	Bracket Not Compatible	-Update to Universal Brkt or grind sides of shank cover back	-Brkt allows removal of seed tube
<b>Great Plains YieldPro</b>	Bracket Not Compatible	Bracket Not Compatible	Bracket Not Compatible
<b>White</b>	Bracket Not Compatible	Bracket Not Compatible	-Seed tube pulls straight out

With Deere Gold and Kinze Gold firmer brackets it may be necessary to widen the shank cover to remove the seed tube.

