

**INSTALLATION**

- Refer to the diagram below to see the install locations of the tip and other hardware.
- Install the tip as per its orientation on the diagram and with the writing upright.
- Use an impact if possible to tighten the shank bolts during the initial install and torque them to 100 ft-lb. After 4 hours of use it is recommended that you ensure all bolts are still tight and re-torque to 100 ft-lb. This should prepare you for the season.
- Dutch lock nuts have been provided which have a stainless steel insert as opposed to the synthetic insert found in common lock nuts. This will help keep your hardware in place through any condition longer and better than a standard lock nut.
- When running sideband openers, you will require an equal number of left and right openers, unless your machine is equipped with an odd number of shanks. Left openers should be installed on the right side of the drill and right openers should be installed on the left side of the drill. This will ensure your drill runs true and prevent plugging while the drill is turning.

**\*\* HELPFUL HINT \*\***

It is recommended to assemble the tip onto the body before installing on the shank. This will make assembly quicker and easier.

**USING SHIMS**

**Why is the operating angle important?**

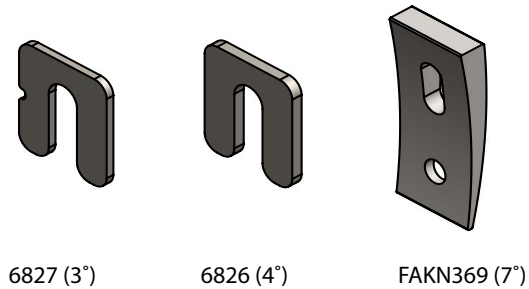
If your equipment is not running at the designed operating angle of 50°, complications may arise such as plugging, excessive breakage, premature wear, or poor seed placement.

**How do I know if my shank is 50°?**

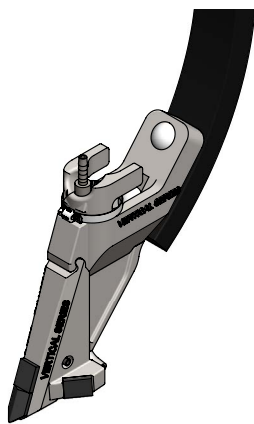
Ensure that the drill is level and place a piece of flat bar between the two holes at the bottom of the shank. Place a simple angle finder across the piece of flat bar. This angle is the operating angle of your shank.

**What do I do if my shank is not 50°?**

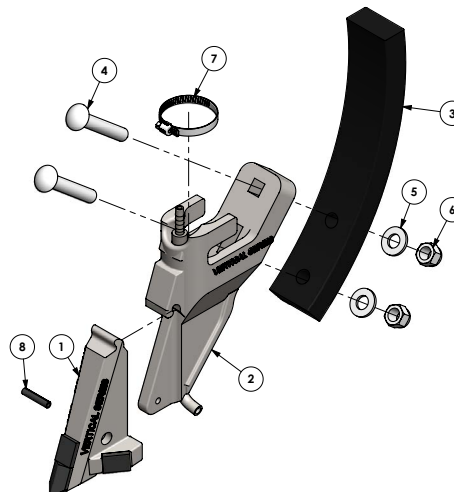
Shims are available and can be used to alter the operating angle of your equipment. These shims are available in 3°, 4° and 7°. If you are running too steep, place the shim in the bottom bolt hole to raise the tip of the opener. If you are running too flat, place the shim in the top bolt hole to lower the tip of the opener.



**ASSEMBLED VIEW**



**EXPLODED VIEW**



**PART LIST**

ITEM	QTY	PART #	PRODUCT
1	1		Liquid SB Tip / Point
2	1		Liquid SB C-Shank Body
3	1		50° C-Shank / Tyne
4	2	CB12314PLC8	Carriage Bolt, 1/2 X 3 1/4 GR8
5	2	111015	Sae Flat Washer, 1/2
6	2	111014	Dutch Lock Nut, 1/2
7	1	HC2	#32 Hose Clamp, 1 1/2 -2 1/2
8	1	RP14114	Roll Pin

This information is made available to the public by Dutch Openers solely as a guide for the installation of openers. Dutch Openers Ltd. assumes no legal liability or responsibility for the accuracy, completeness, or usefulness of any information contained in this document and as a result holds no legal liability or responsibility for damages or losses resulting from the use of this information. Dutch Openers reserves the right to change and improve its products as seen fit. This information describes the condition of this product at the time of its printing and may not reflect the product at all times in the future.