

Tool and Equipment First-Round Winner

Innovations Challenge

April 2019

Prepared by Transportation Planning
Missouri Department of Transportation

Auger Quick Connect



Description

The pivot action with the auger is a dangerous operation in the field. Employee safety is compromised while releasing the bit from its stationary position. When the auger is swinging while hanging from a moving backhoe, there is a risk of injury from being struck by the bit. It also is potentially dangerous to connect the auger to the backhoe. Using scrap steel we had on hand at the shop, we welded together a connector collar to restrict the movement of the auger. (See design plans on the back of this page)

Benefit

The connector helps stabilize the auger, preventing it from swinging dangerously. This innovation significantly reduces risk of injury and the cost of lost work and medical attention. The Auger Quick Connect innovation has replaced the method that included an old hook, strap and hand winch method which took more time to unravel the auger bit and begin work. With the Auger Quick Connect, all that is needed to add or remove the connector is a simple pin.

Materials and Labor

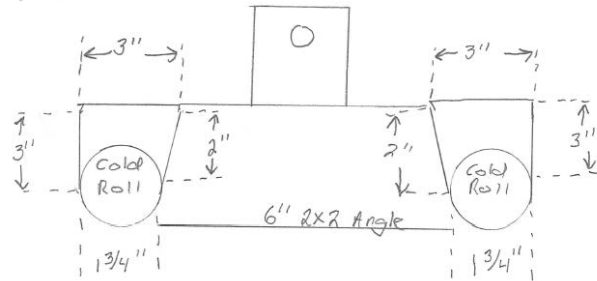
The cost of materials is \$30 if built new and total amount of labor hours was 8 hours. (See back of this page for list of materials)

For More Information Contact:

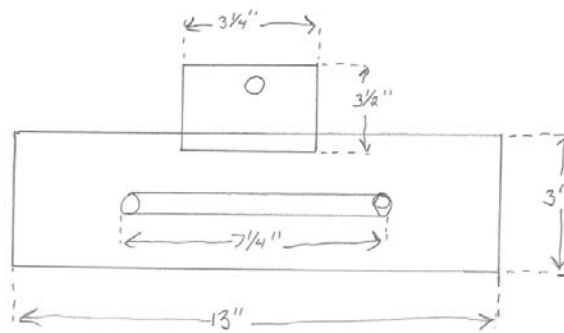
Stephen Bradley at stephen.bradley@modot.mo.gov or (417) 451-7007. Additional contacts: Steve Cooper, Richard Shippers and Jerod Lewis.

Additional information, photos or videos can be seen by accessing Innovations Challenge SharePoint page at: <http://sharepoint/systemdelivery/TP/Documents/InnovationsChallenge.aspx>

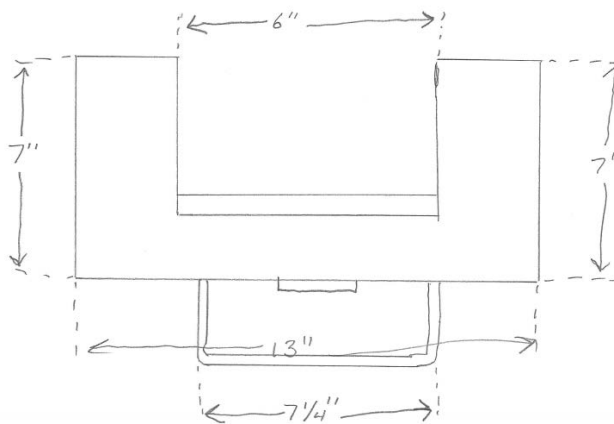
Open End



Closed End



Top



- 1' of 1 3/4" solid rod - \$9.00
- 2' of 1/4" x 2" w flat steel plate - \$2.28
- 2' of 1/4" x 3" w flat steel plate - \$3.26
- 1' of 1/4" x 2" x 3" Angle Iron - \$2.74
- 6" of 1/4" x 2" Angle Iron - \$1.03
- 1' of 1/2" solid rod - \$0.43
- 1 can of spray paint - \$3.55
- 5" x 1/2" Pin, with Lynch pin - \$5.98