

ASAP Jr

A Strap and Pole



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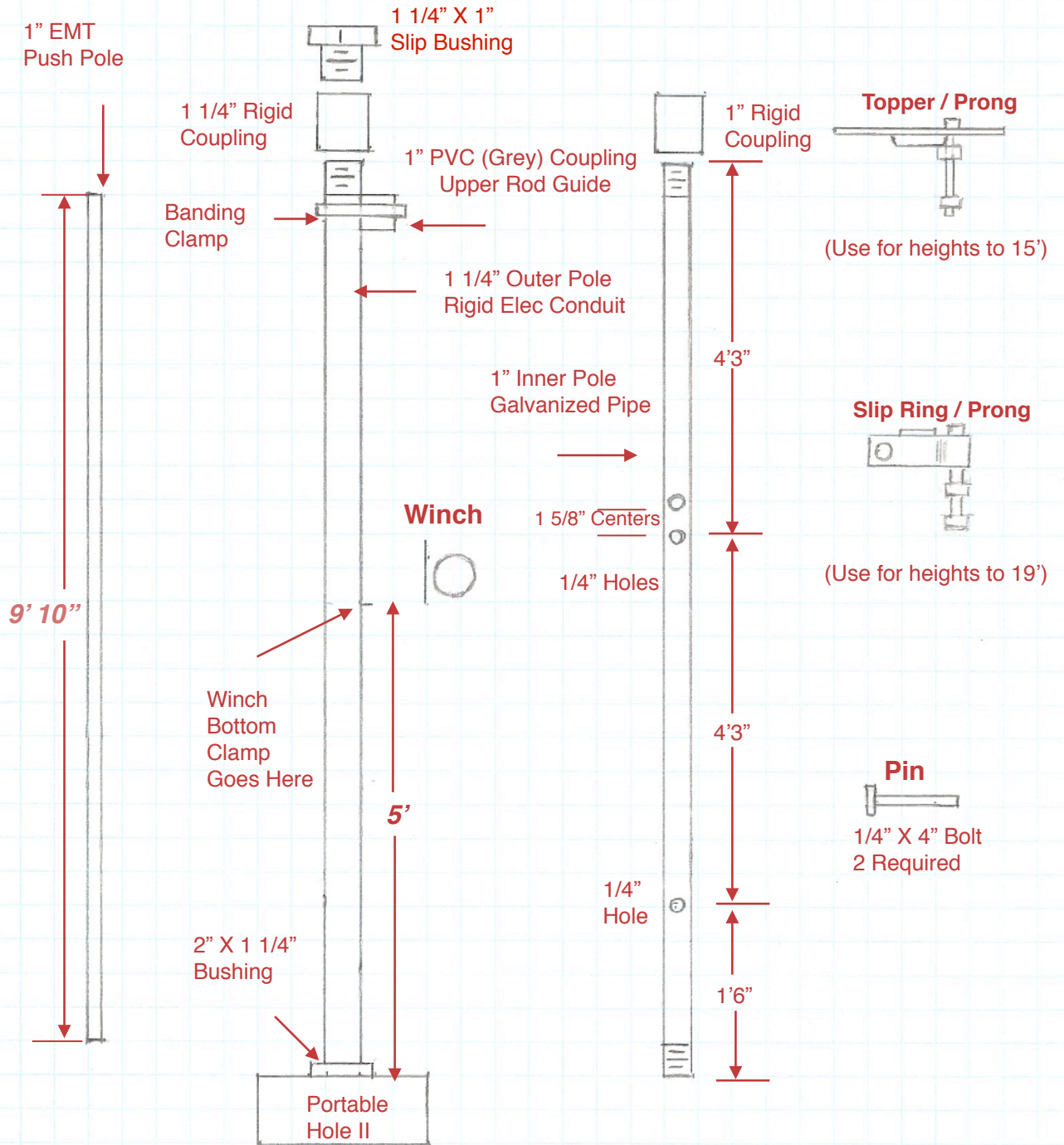
Description

The ASAP is a telescoping pole that mounts on a Portable Hole and can extend up to 19 feet high. A winch with a strap is used to raise the pole and keep pixel strips tensioned.

Guy wires are recommended anytime the 1" inner pole is 5' or more above the outer pole.

ASAP Jr

Diagram and Measurements



Poles Needed:

- 1 - 1 1/4" X 10' (9'11") Rigid Elec Conduit. Comes with a 1 1/4" Rigid Coupling.
- 1 - 1" X 10' Sch 40 Galvanized Pipe.
- 1 - 1" X 10' EMT

NOTE: Rigid Elec Conduit has a smooth Bore. Galvanized pipe has an internal weld protruding on the inside.

Poles and Pipe Needed

1 - 1 1/4" X 10' Rigid Elec Conduit. Should come with a 1 1/4" Rigid Coupling.
(Do Not Substitute Gal Pipe)

1 - 1" X 10' Gal Pipe

1 - 1" X 10' EMT



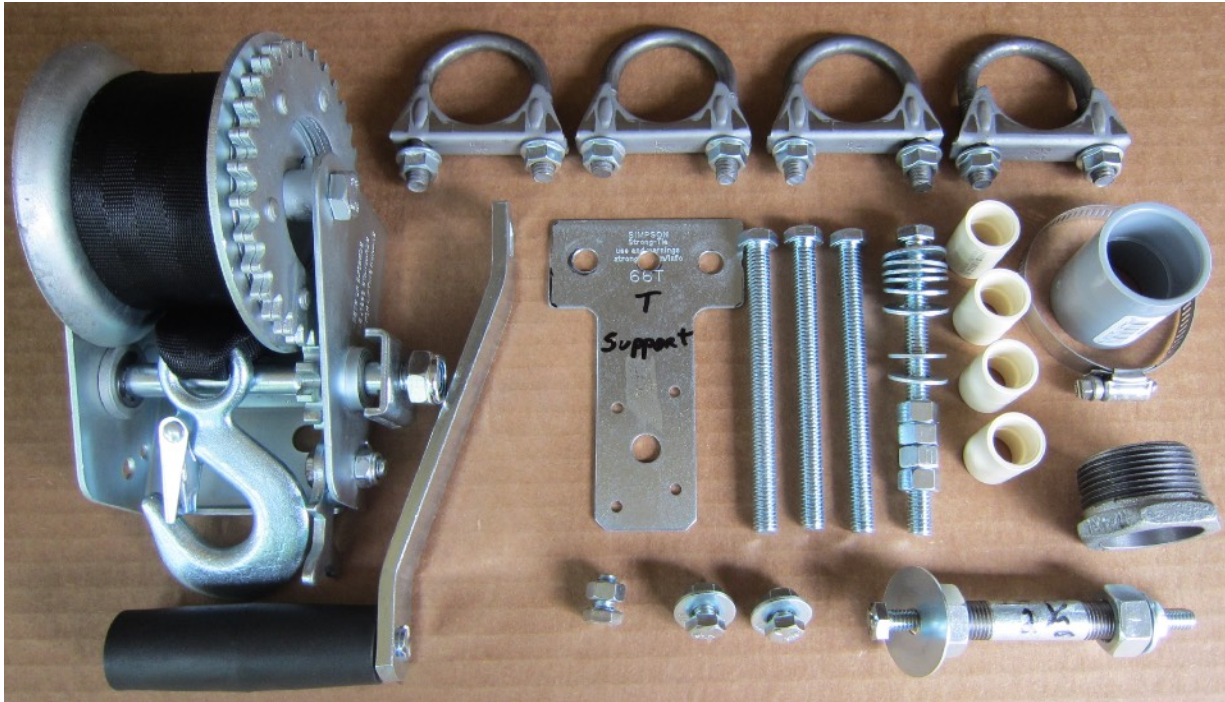
Winch and Clamp Assembly

This information applies to the Marine Raider 600 # Trailer Winch which is available from Academy Sports + Outdoors. For online order go to www.Academy.com . The winch price is \$19.99 plus shipping. Other winches may be substituted if the mounting holes are compatible.

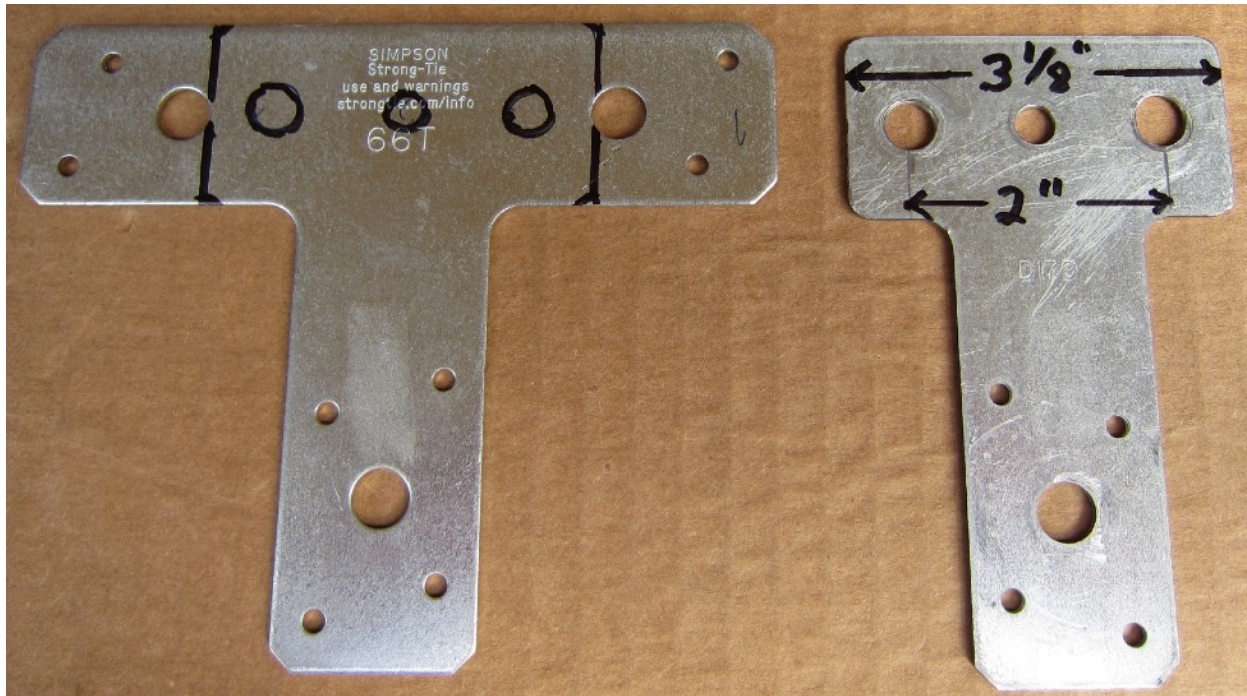


Item	Where Purchased	Price
4 Muffler Clamps 1 1/2" with 3/8" U Bolts and Washer Nuts (U Bolts are not used but you will use 8 - 3/8" Washer Nuts that come with the Muffler Clamps)	Auto Supply Store	\$16.00
4 - 3/8" X 4 1/2 " All Thread Bolts	Home Depot	2.52
4 - 3/8" Hex Head Nuts	Home Depot	0.48
6 - 3/8" Washers	Home Depot	0.84
4- 5/16" Washers	Home Depot	0.44
3 - 5/16" X 1/2" Bolts	Home Depot	0.60
3 - 5/16" Nuts	Home Depot	0.30
4 - 1/2" X 1" CPVC Couplings (Hot Water PVC)	Home Depot	1.08
1 Construction Strong - Tie No. 66T	Home Depot	4.17

Winch Parts



Be sure to use Exhaust Clamp that has 3/8" U Bolts. Some Exhaust Clamps has smaller diameter U Bolts which won't work.

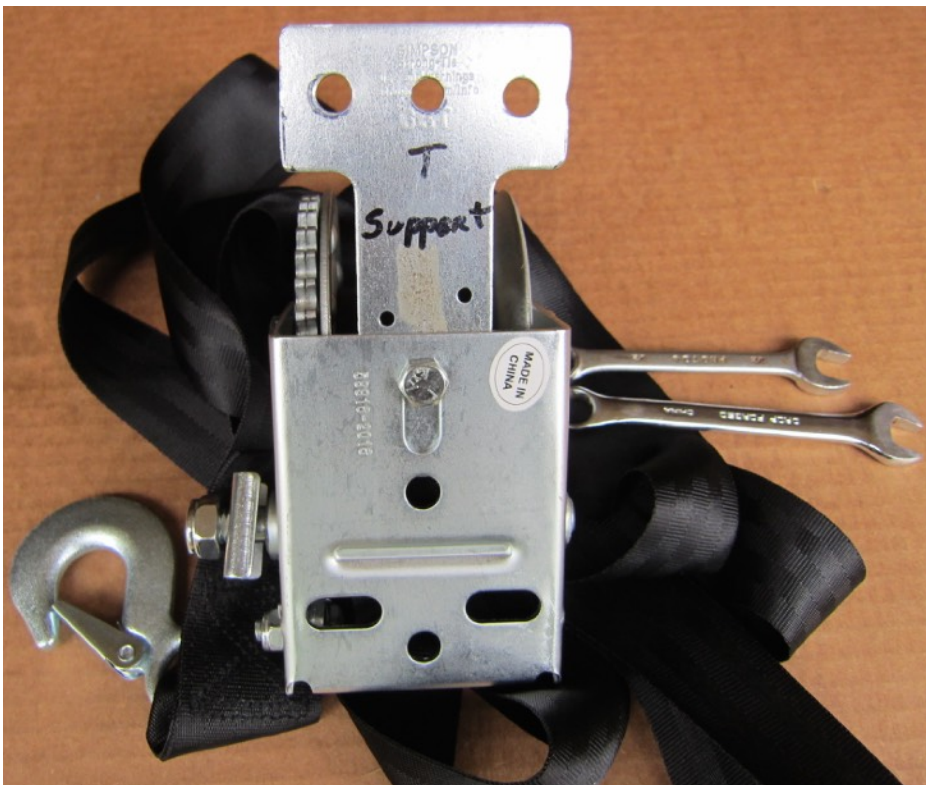


Before starting assembly make the T Support from a Strong-Tie 66T available from Home Depot. After trimming, drill 2 - 3/8" holes and 1- 5/16" hole as shown.

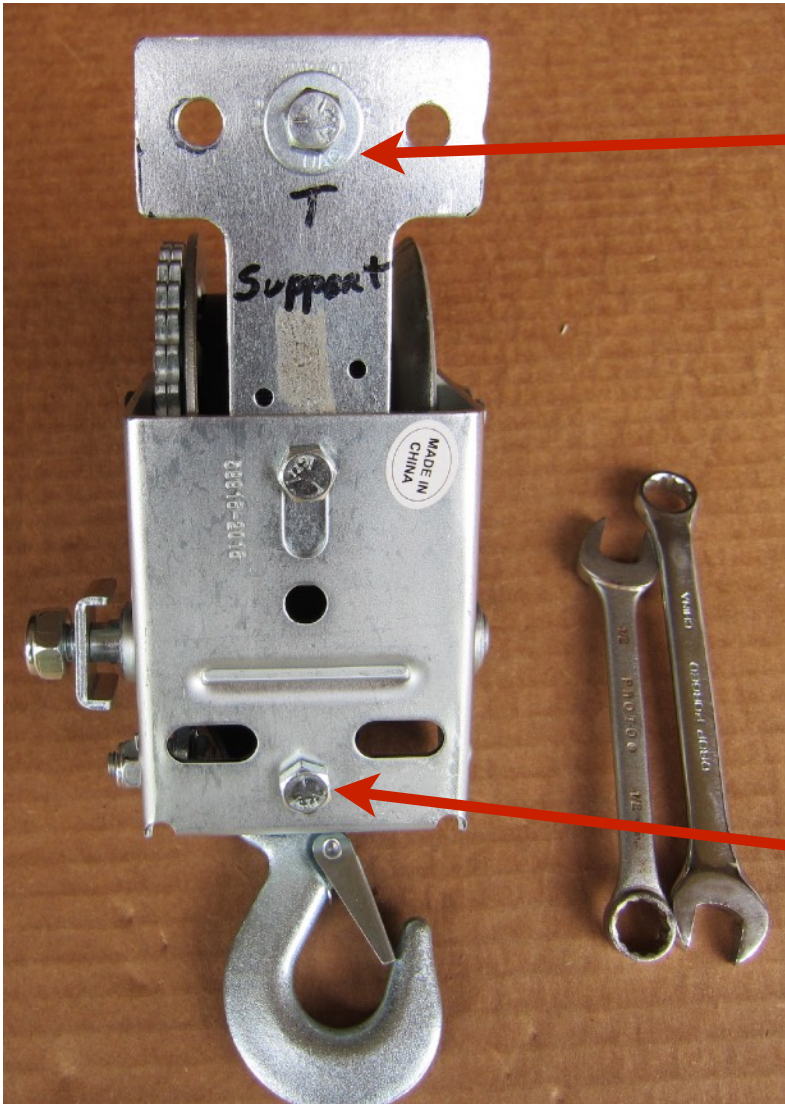
Begin Assembly



Move strap from over the small gear axle (pic on left) to underneath the axle (pic on right). This may require unrolling some of the strap.

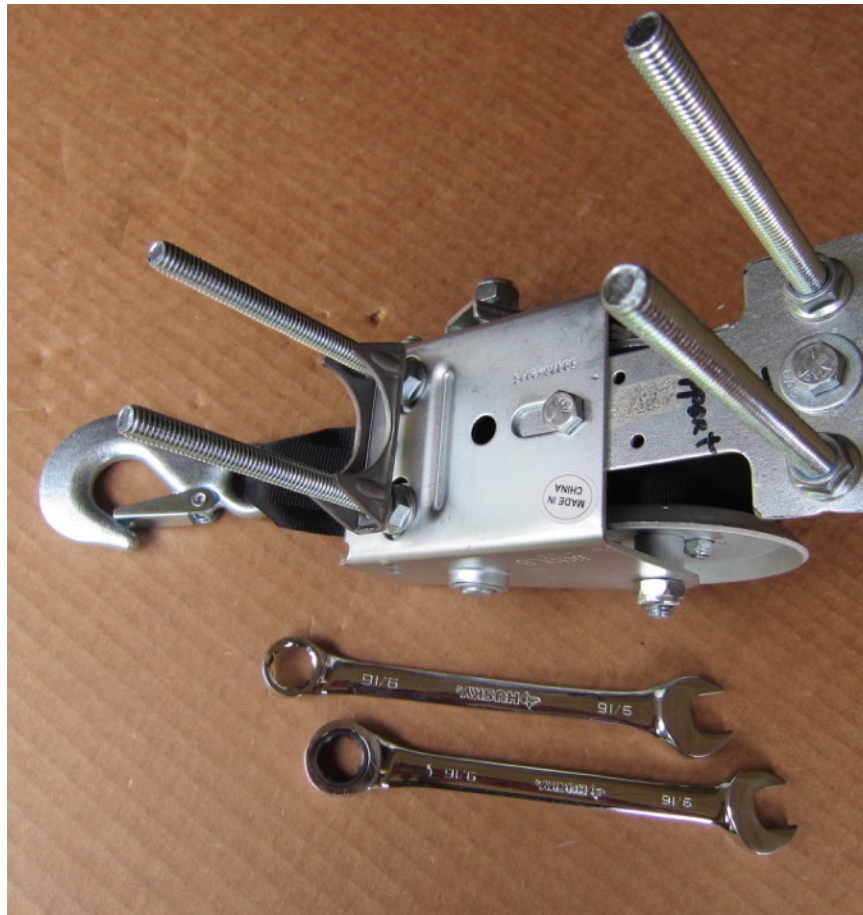


Before rolling strap up, install T Support with one 5/16" X 1/2" bolt and one washer and nut on the strap side and tighten.



Install one 5/16" X 1/2" bolt in center hole of T Support with washer as shown and nut on other side. Tighten.

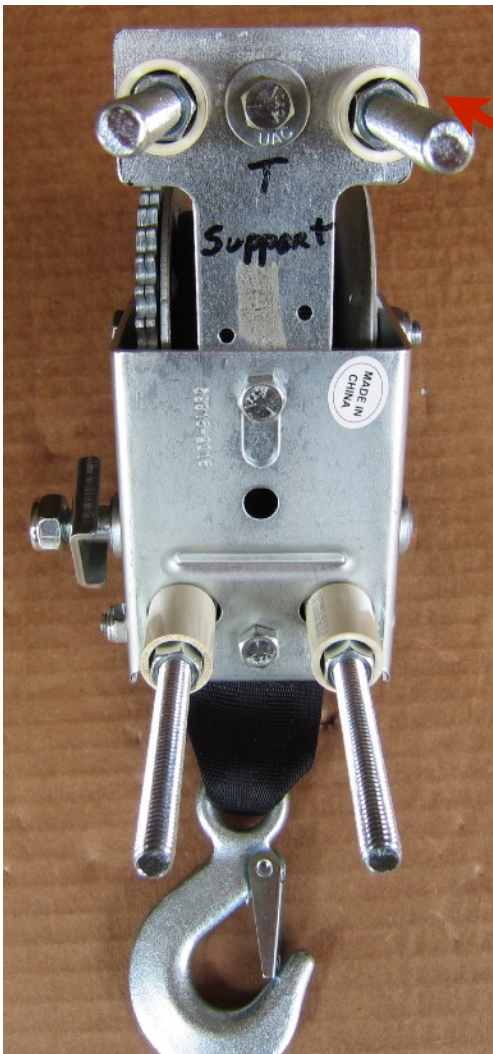
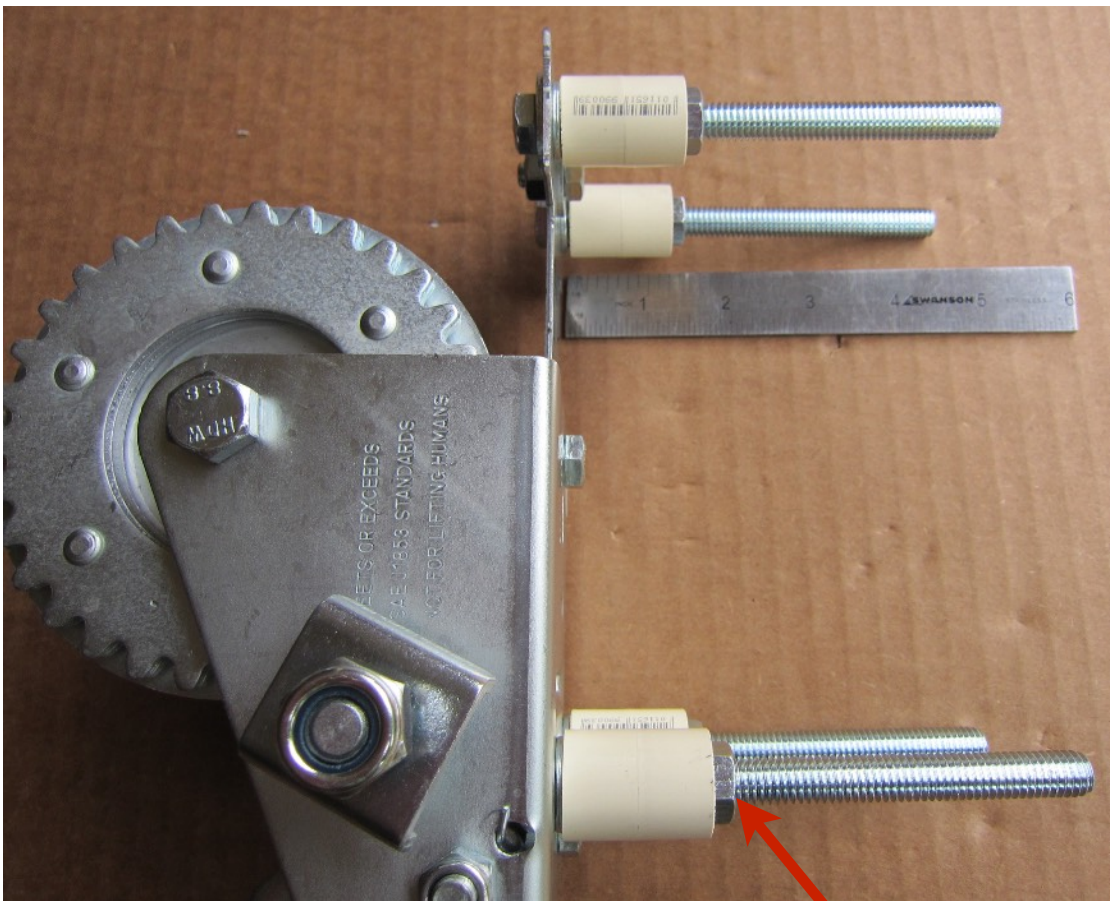
Install one 5/16 X 1/2" bolt in bottom hole with washer and nut on strap side and tighten.



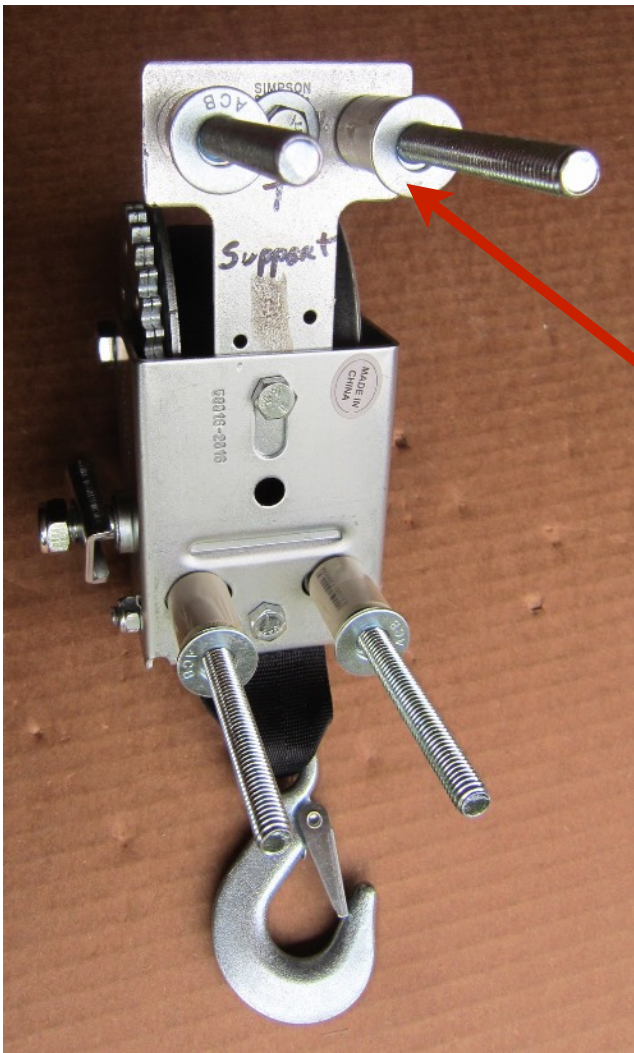
Install 4 - 3/8" X 4 1/2" bolts on T Support and winch body using 3/8" washer nuts that come with the Muffler Clamps. On the T Support use 3/8" washers under the bolt heads. (Not shown) On the winch body use the smaller 5/16" washer under the bolt heads. (Not shown) Use a Muffler Clamp to space and center the 4 1/2" bolts in the slotted holes of the winch body. Remove Muffler Clamp and tighten.



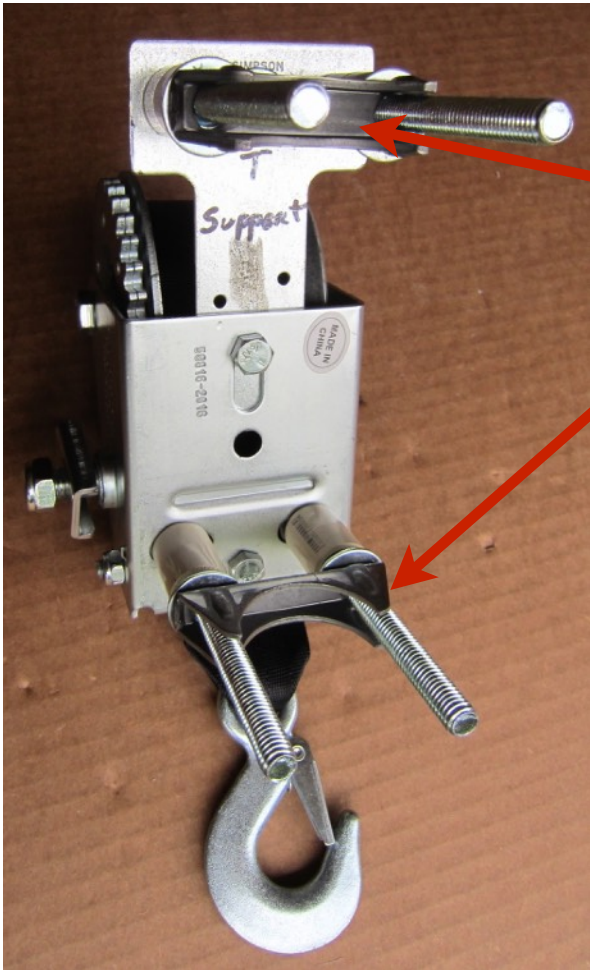
Push 1/2" X 1" PVC couplings over the washer nuts of the 4 1/2" bolts.



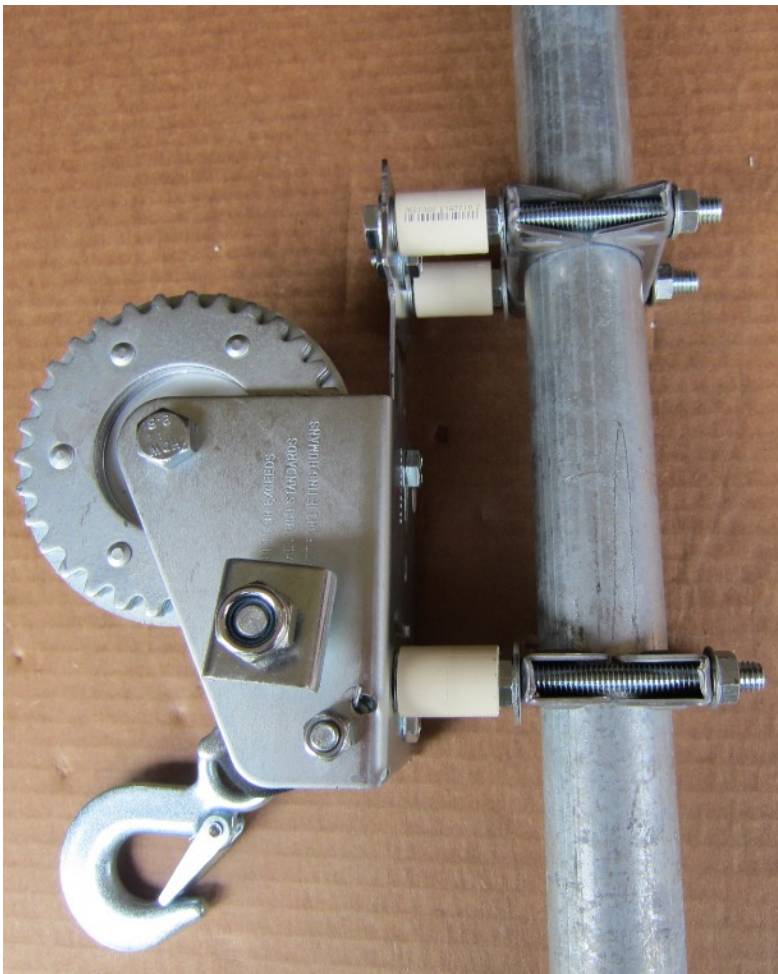
Screw 4 - 3/8" hex nuts onto 4 1/2" bolts and down into PVC couplings. Distance from winch base to top of 3/8" hex nut should be 1 3/8".



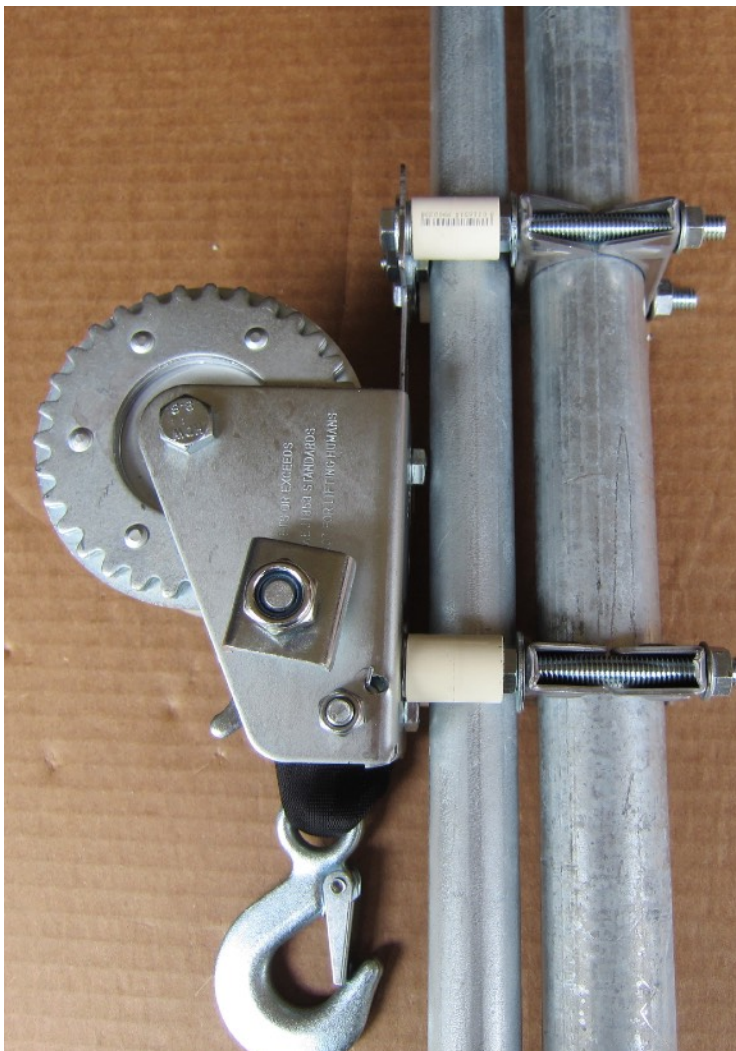
Add 3/8" washers to each of the 4 1/2" bolts.



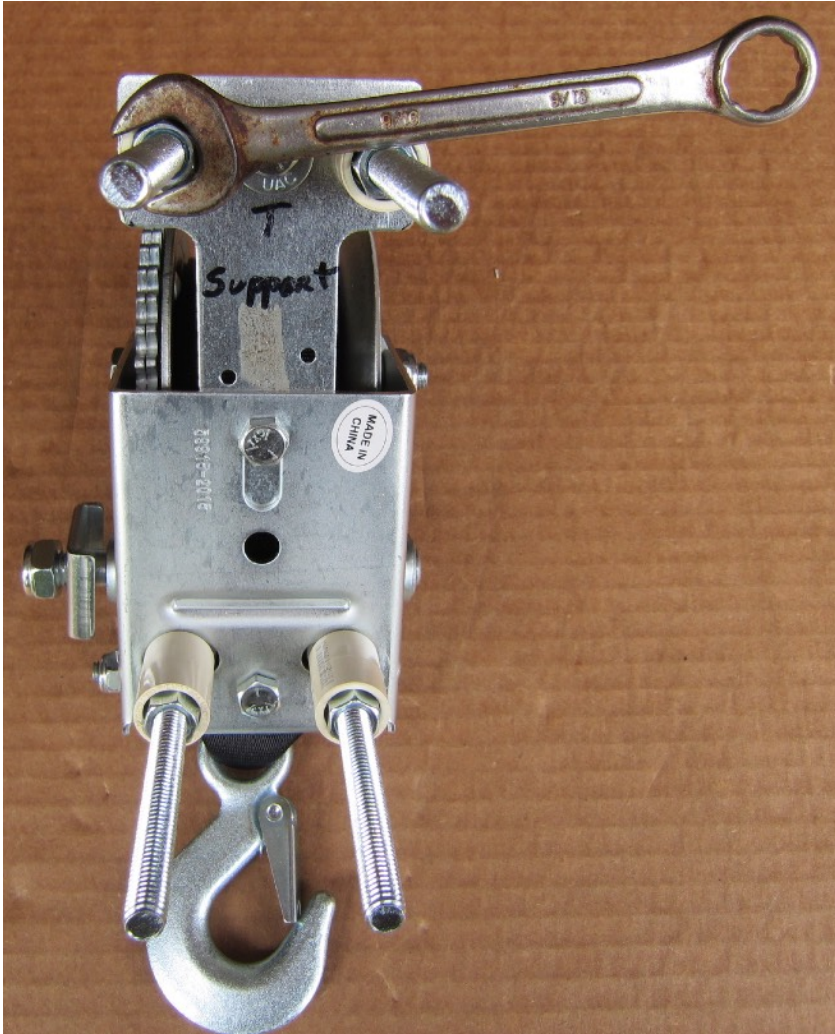
Add 1 1/2" Muffer Clamps.



Winch can now be clamped to a 1 1/4" pole by adding a second set of Muffer Clamps and tightened with 3/8" washer nuts that come with the clamps.



A 1" EMT Push Pole can be added in the space between the winch and the 1 1/4" pole and should slide freely.

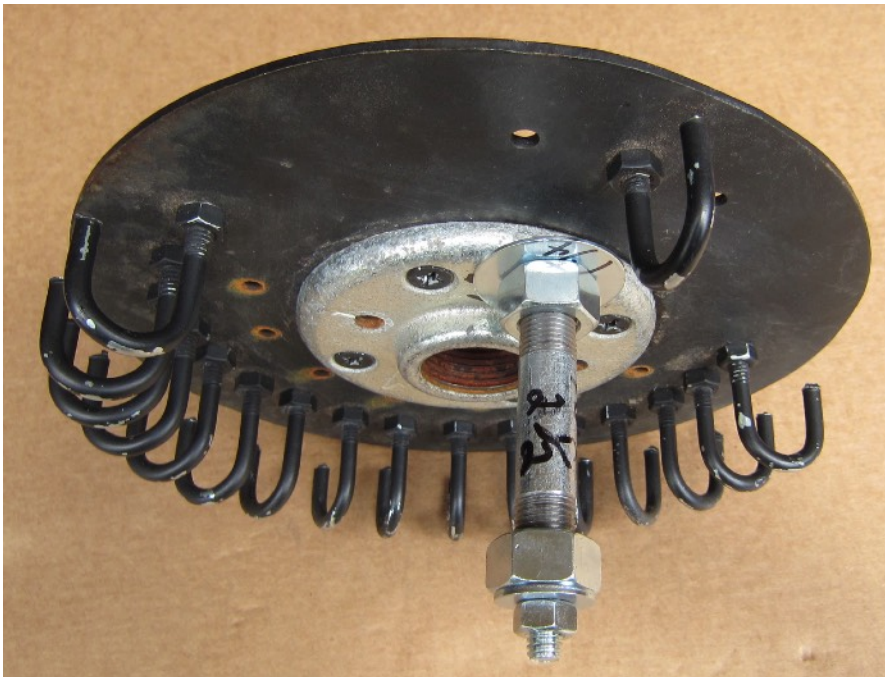


If the 1" EMT Push Pole does not slide freely, adjust the spacing by turning the 3/8" hex nuts that are in the PVC couplings.

Topper Prong

To raise an ASAP Topper to 14' or 15' high the topper is linked to the 1" EMT Push Pole. A "Prong" that is attached to the topper fits down inside the 1" EMT push pole.

A 5/16" hole is drilled in the Topper and a 5/16" bolt is used to make a prong.



The 5/16" hole is drilled 1 5/8" from Topper center for the ASAP Jr.

Topper Prong Parts



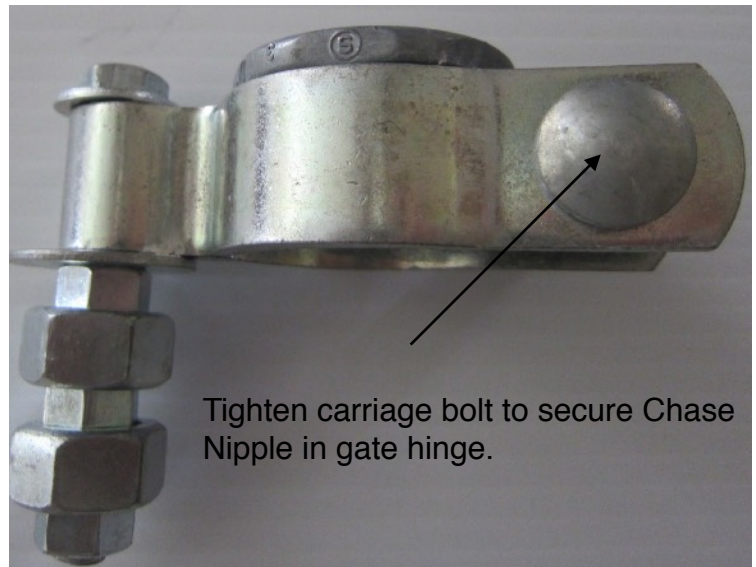
- 1 - 5/16" X 4 1/2" All Thread Bolt
- 1 - 5/16" Nut
- 1 - 5/16" Washer
- 1 - 1/4" X 2 1/2" Pipe Nipple
- 2 - 9/16" Nuts
- 1 - 1 1/4" Washer

Note: The 9/16" nut threads do not match the pipe nipple threads. "Gall" the nuts onto the nipple.

Slip Ring / Prong

The Slip Ring / Prong slides over the 1" inner pole and allows the push pole to raise the inner telescoping pole up in 2 steps of 4'3" each. The prong fits down inside of the 1" EMT push pole. Two 1" Slip Ring / Prongs are shown here based on regional parts availability.

Slip Ring / Prong #1

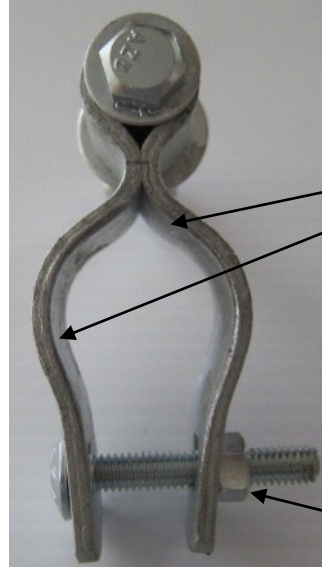


- * Tractor Supply 1 5/8" pipe Gate Hinge. Zinc plated. Comes with carriage bolt and nut.
- * 3" X 3/8" All Thread Bolt
- * 3/8" Washer
- * 1 1/4" Washer
- * 3 - 3/8" Nuts
- * 2 - 9/16" Nuts
- * 1 1/4" Chase Nipple

Click Link to see Video:

<https://youtu.be/M3FiHubUMXY>

Slip Ring / Prong #2



Must file taper on inner edges to prevent hang up on the 1" pipe.

Tighten carriage bolt until a 1" pipe slips through the hinge easily.



* Home Depot Chain Link 1 5/8" X 5/8" Frame Hinge. Galvanized. Carriage Bolt and Nut comes separate.

* 3 1/2" X 3/8" All Thread Bolt

* 3/8" Washer

* 1 1/4" Washer

* 4 - 3/8" Nuts

* 2 - 9/16" Nuts

* 2" X 5/16" Carriage Bolt

* 5/16" Nut

Click Link to see Video:

<https://youtu.be/M3FiHubUMXY>

Other Parts

Slip Bushing



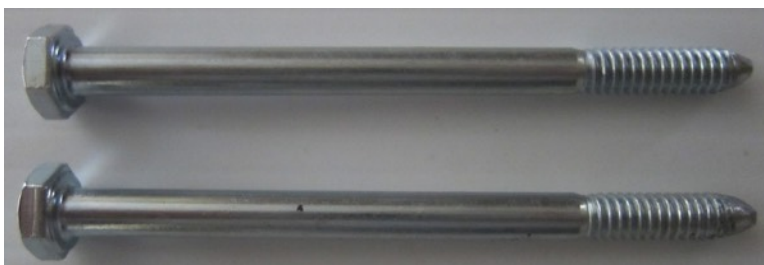
Slip Bushing for 1 1/4" Pole is made from a 1 1/4" X 1" gal bushing or 1 1/4" PVC male adapter. Grind out the threads or some of the PVC so that a 1" gal pipe slips through.

1" EMT Guide



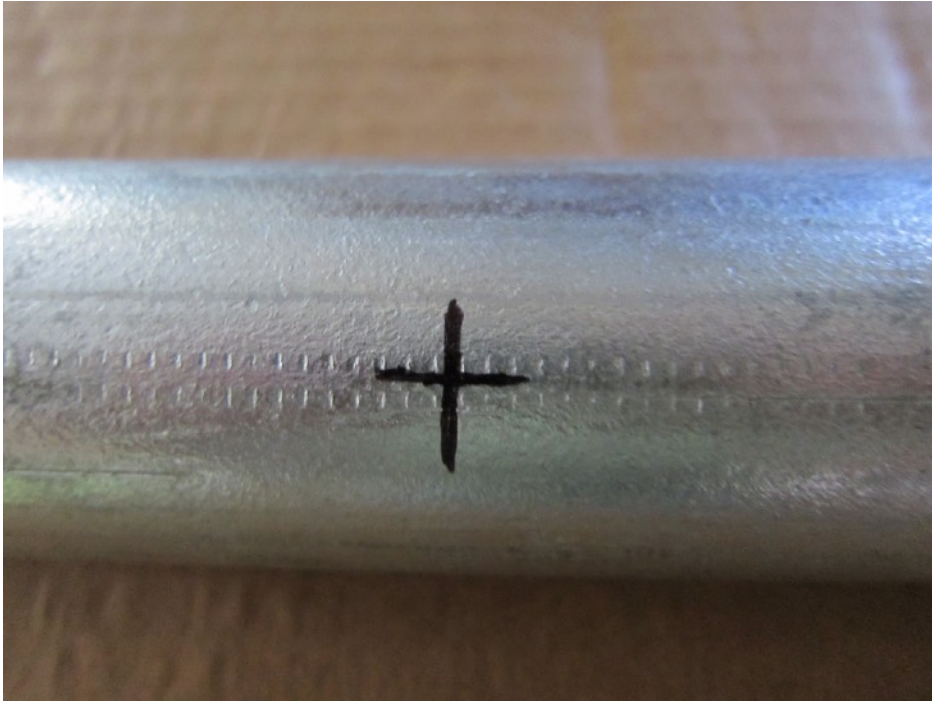
1 - 1" Elec PVC coupling (Grey)
1 - 2 3/4" dia Hose Clamp
(@ Home Depot)

Pins



2 Pins required for 19' high operation.
Use 1/4" X 4" or 4 1/2" Bolts.
File the tips to a point for ease of insertion into pipe holes.

Hand Drilling Accurate Holes in Pipe



Look for seam marks along the length of the pipe for longitudinal alignment.

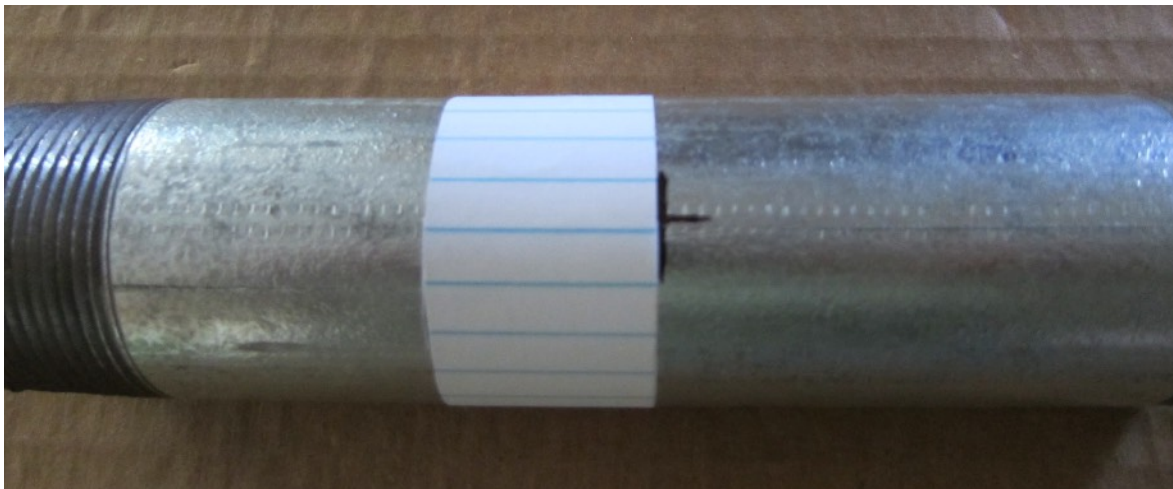


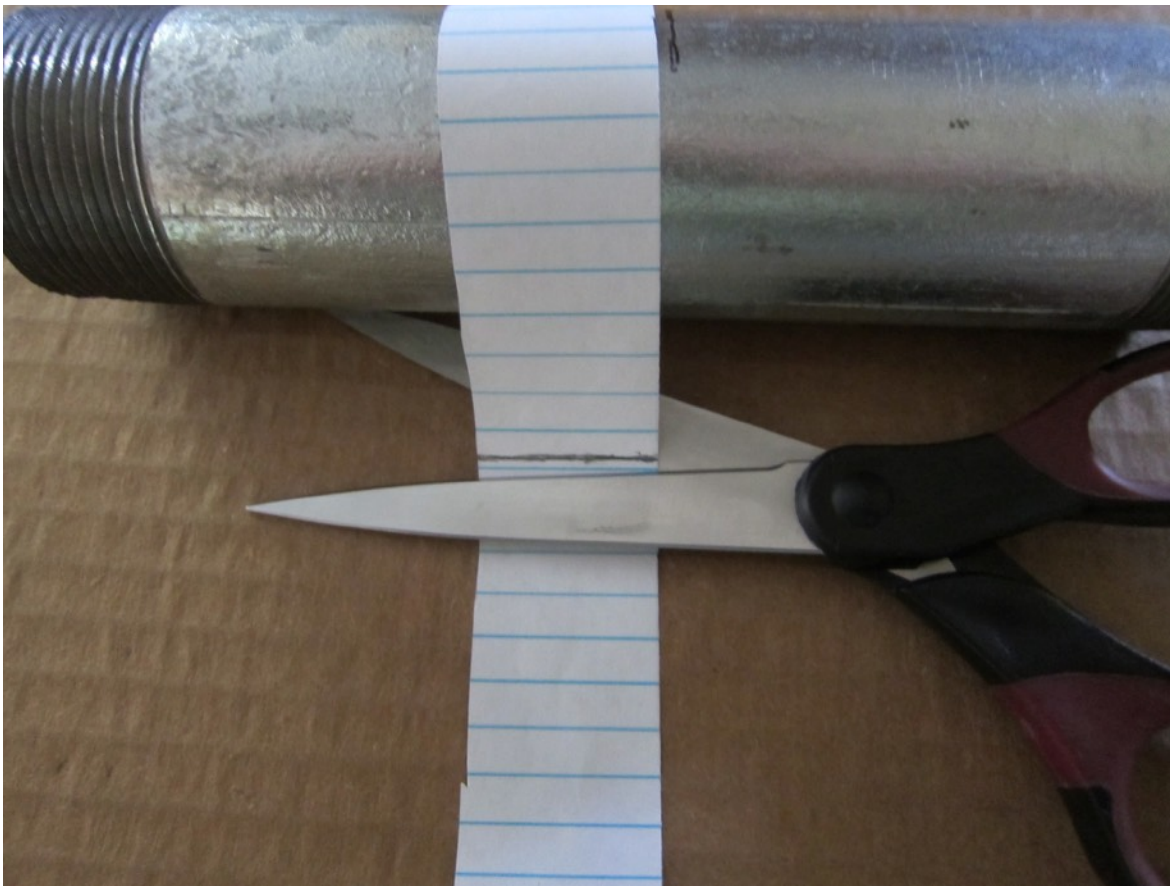
Measure and mark hole locations on one side of the pipe.



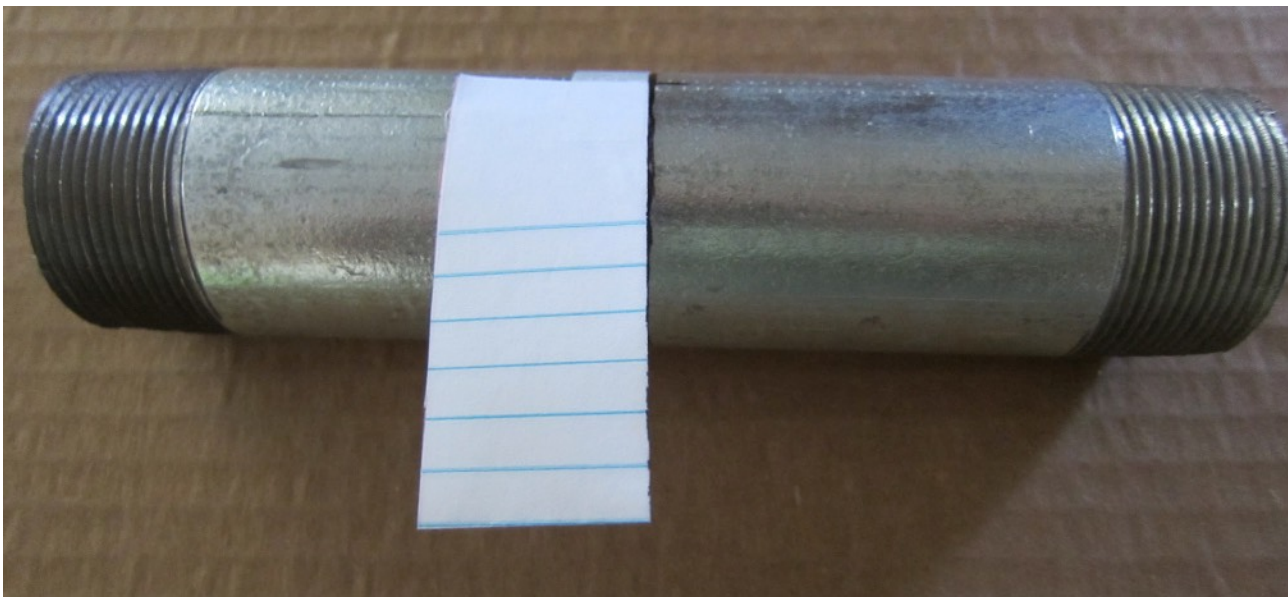
Cut a piece of notebook paper about 1 “ wide and longer than the pipe circumference.

Tape one end of the paper at a marked hole location and overlap the paper around the pipe as shown below.

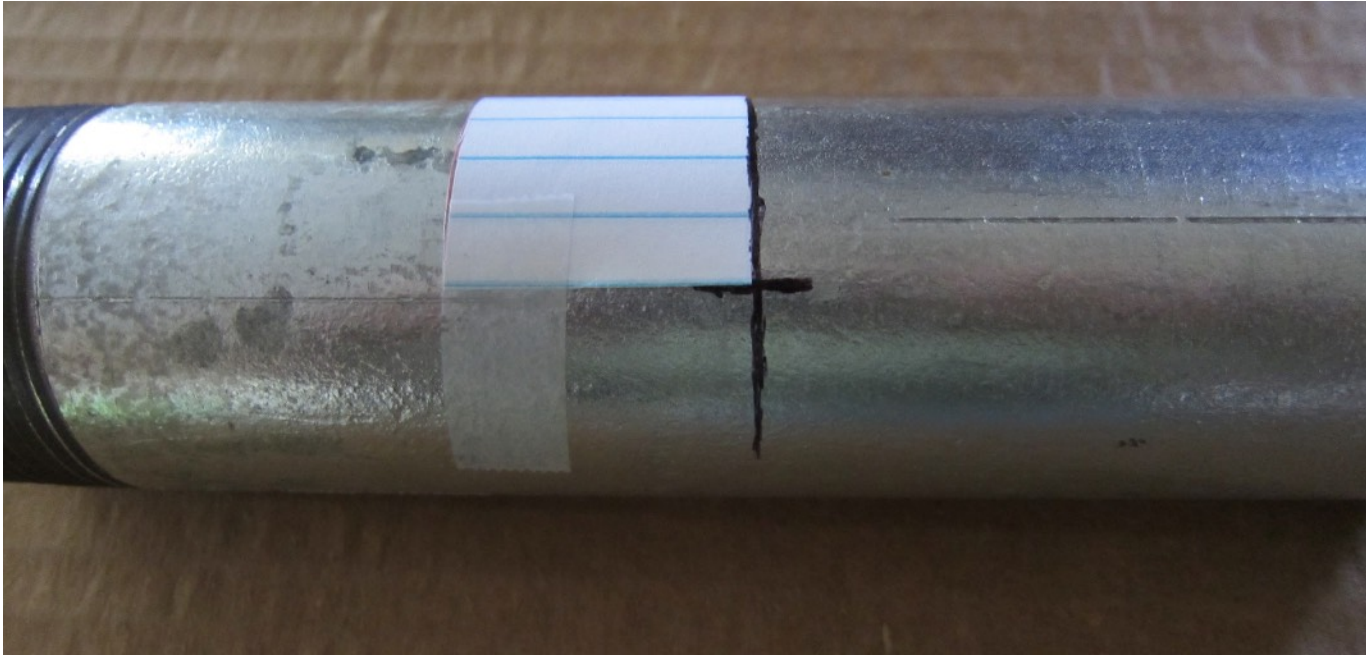




Cut off the overlapped paper at pipes's circumference.



Fold the paper in half either over or under taped end.



The doubled paper is the distance around 1/2 of the pipe.

After the hole locations are marked:

1. Punch indentation at hole mark.
2. Drill small 1/8" pilot hole.
3. Drill larger hole.
4. Remove drill burrs and remove cuttings on inside of pipe by standing pipe up and tapping on side.

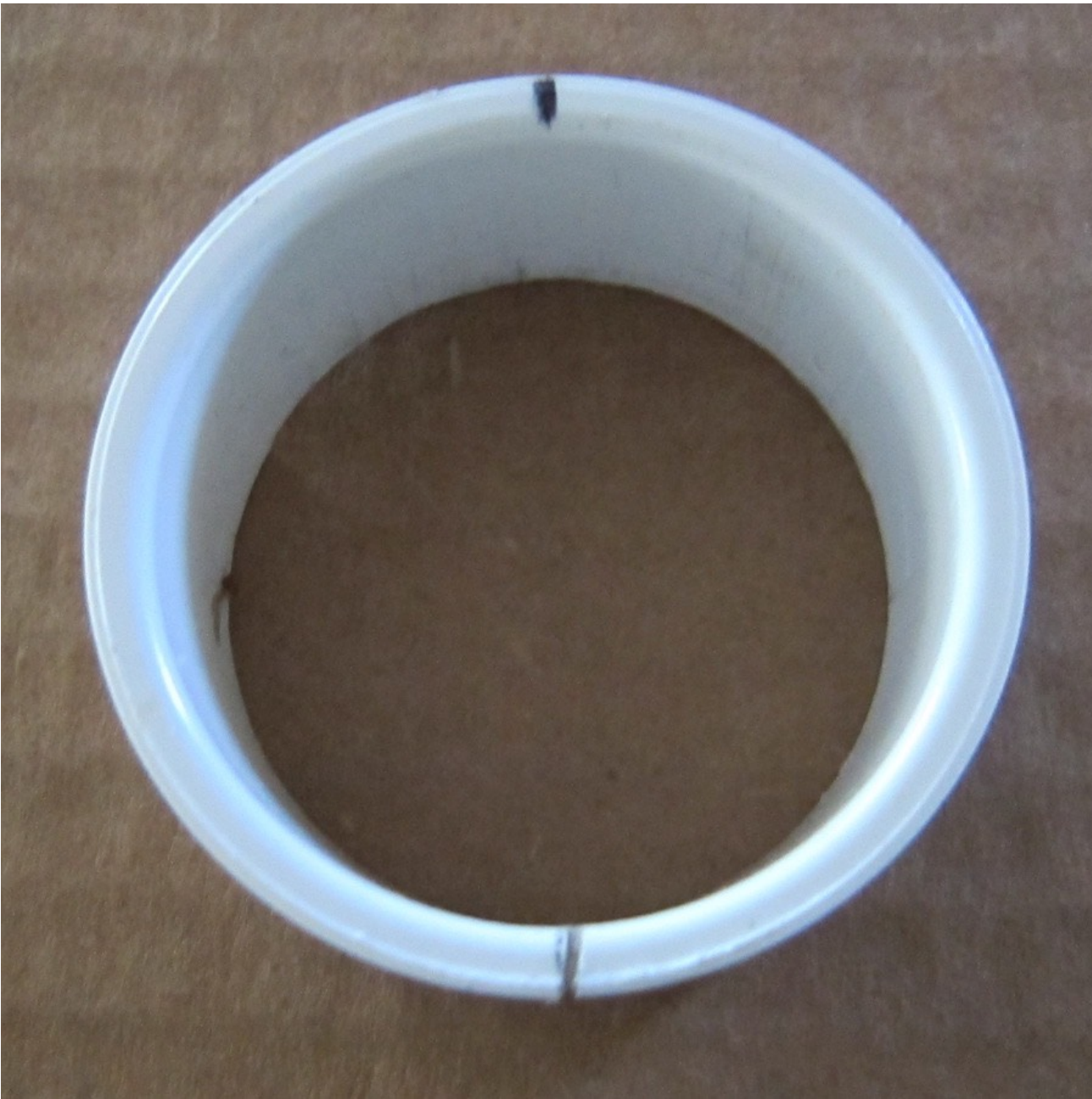
How to Make a Hole Marking Jig Out of PVC

Note:

Use a 1 1/2" PVC coupling for 1 1/2" pipe and 1" PVC coupling for 1" pipe.



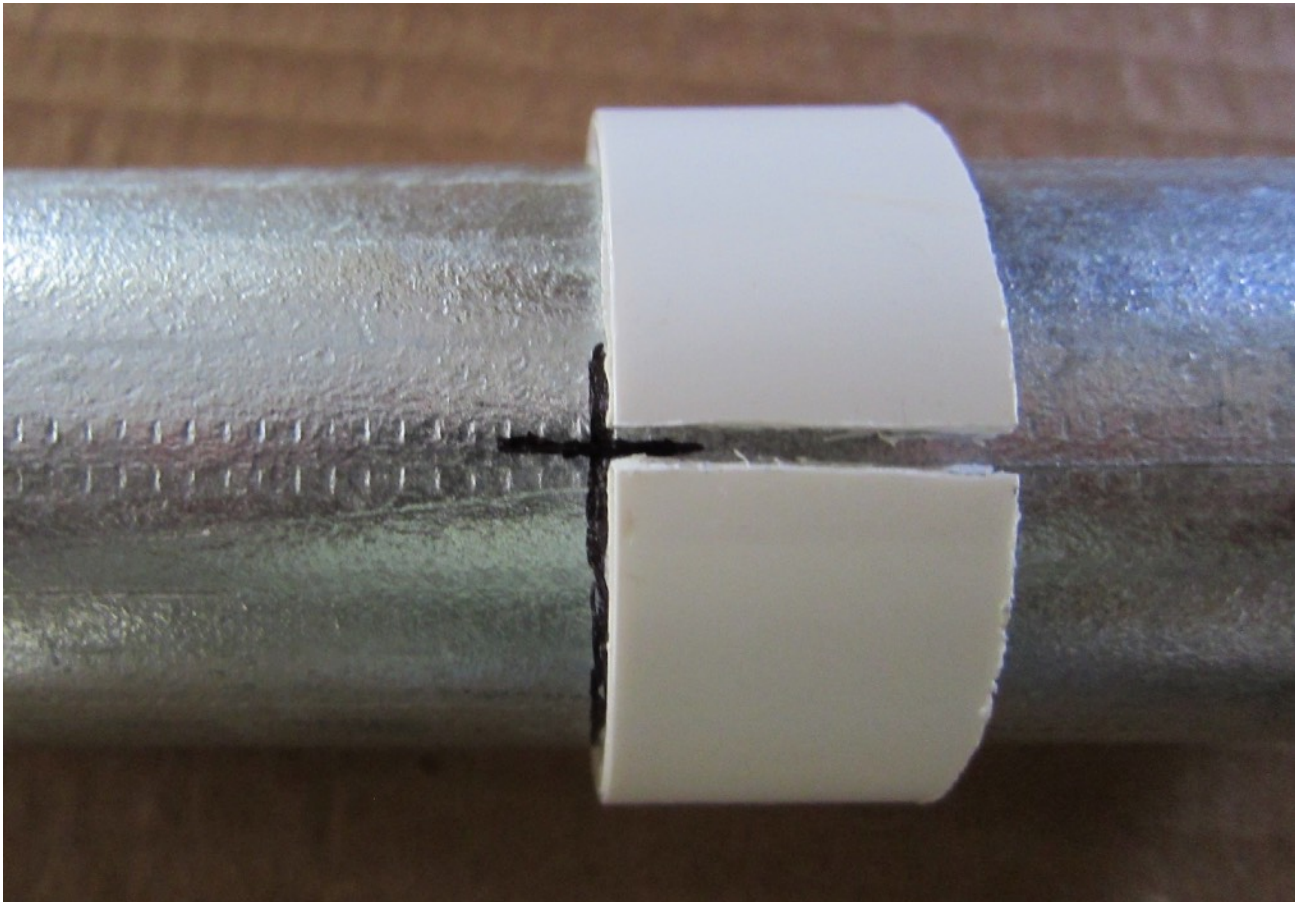
Cut a 3/4" piece off of the coupling with a hack saw.



Use the paper method as shown previously to mark hole locations on each side of the PVC slice.

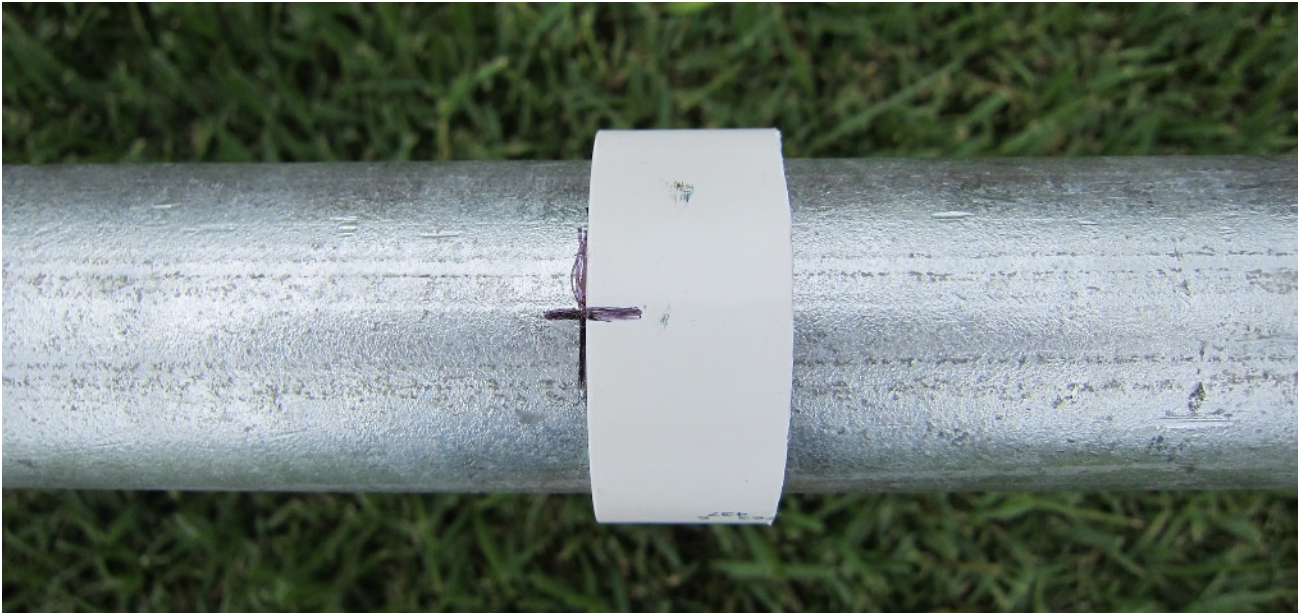


Cut across the PVC slice at one of the markings so it will open up enough to slide onto the pipe.



Slide PVC slice onto pipe to desired location.

The marking on the other side of the PVC slice is the correct spot for the hole on the other side. If done carefully, accuracy is $\pm 1/32''$.





Chairs can be used to hold pipe while marking and drilling.

Testing ASAP Jr



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ASAP Video: <https://www.youtube.com/watch?v=P8XRpqi3dvU>

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Walter B. Monkhouse

July 2, 2017