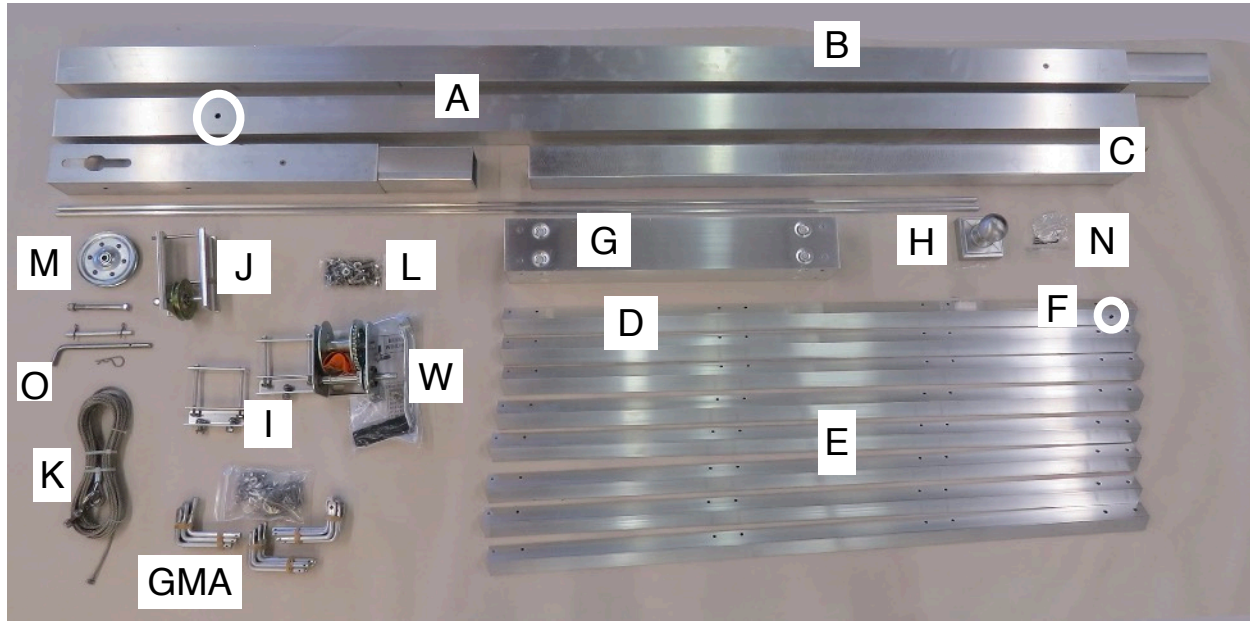


Troyer's Super System 24

Updated: 09/23



Parts List

Pole Box

- A (1) Bottom of pole (has a pre drilled hole 6 feet up from the bottom (see circle).
- B (1) Center pole (has the square cut end and aluminum splice at opposite end).
- T (1) Top of pole (has the slot for pulley at top, shown, and an aluminum splice at opposite en
- C (1) 48" heavy duty ground stake (aluminum) with removable stop, (see circle).
- D (2) Aluminum top perch rods 72".

Hub Box

- E (7) Aluminum angle arms.
- F (1) Aluminum angle arm that has eye bolt hole (see circle).
- G (1) Hub (aluminum) with inserted nylon glide buttons.
- H (1) Aluminum ball cap
- I (2) Winch mounting brackets (pre assembled with bolts and nuts).
- J (1) 3 inch cable guide (pre assembled bracket, pulley and bolts with nuts)
- K (1) 7 x 19 x 3/16" stainless steel cable and stop nut with attached eyebolt and nut.
- W (1) Brake Winch
- GMA's (24) 8 each of Horizontal 90, 45 and straight + nuts, bolts and hitch pins

Hardware Bag

- L (16) 5/16 x 3/4" hex cap stainless bolts, and (16) 5/16 whiz flange nuts, stainless.
- M (1) 4 inch pulley with 3/8" x 3-3/4" bolt and 3/8" lock nut.
- N (4) 10-24 x 3/8" SS set screws
- O (1) Stop pin with 2 attached hitch pins.
- P (1) Safety bolt with stainless steel hitch pin.

Troyer's Super System 24

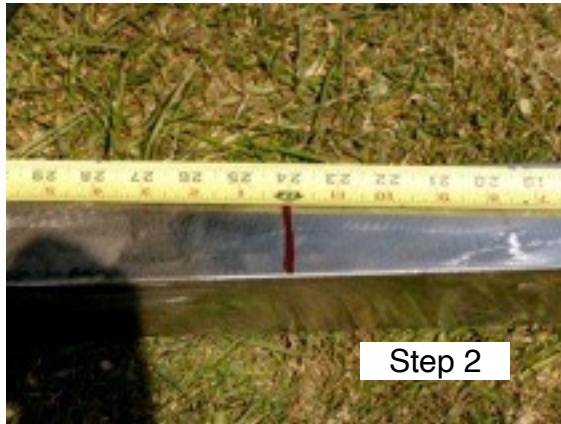
The installation of a ground stake is as vital as the foundation of your home. Both need to be done correctly in order to support the housing.

Step 1) Installing the Ground Stake (C). Using a post hole digger, dig a hole with a minimum depth of 32-36" by 12" in diameter. *Poor soil conditions may warrant a larger hole and more concrete.*



Step 1

Step 2) Measure and mark your ground stake at 24" from either end. This will help keep your ground stake at the proper installed above ground height.



Step 2

Step 3) You will need at least 4 bags of Ready to Use Concrete Mix, 80 pounds each.

Step 4) Empty contents of the Ready Mix into a wheelbarrow. *Mix and handle the concrete according to the directions on the bag.*

Step 5) Place about 4 inches of gravel into the hole.

Step 6) Fill your newly dug hole with concrete, right up to the top of your hole.



Step 5



Step 6

Step 7) Holding your ground stake vertically over the cement insert your aluminum ground stake into the concrete by pushing downward and pulling upward in a firm and steady motion. It does not matter which end. Stop inserting the stake when your ground stake's 24 inch mark is level with the cement. Next fill the hollow (stake) tube with your left over cement. Compact the cement by using a piece of rebar inside the tube and bring it up and down, compacting the cement. Wipe off any cement from the exterior of the stake. Finish by sloping the concrete away from the base of the stake. Check for level on two sides of the stake. Let your cement harden at least 2 days before you continue with the installation.



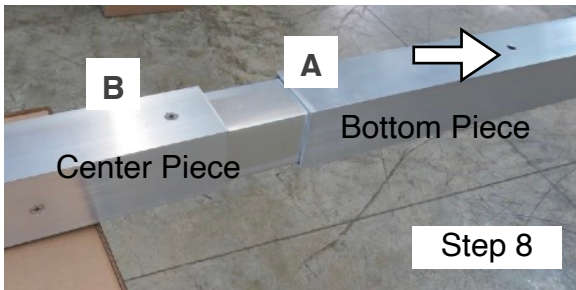
Step 7

Troyer's Super System 24

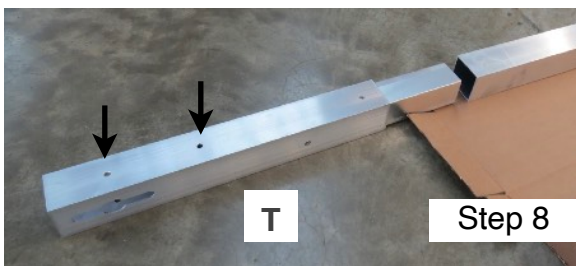


Step 7

Step 8) Assembly of the 3-piece pole. Start by getting your bottom section (A). It is 84" overall and has 2 square cut ends. Then get your center section (B). You are inserting the center piece into the bottom piece. Make sure your safety bolt hole, which is 6' up from the bottom, is the end to which you will insert the splice from the center pole section. Now you will insert your top pole section (T). You need to insert the top section oriented with the 2 holes facing upwards and that it will align on the same side as the safety pin hole (arrow) found in the bottom section, see photos step 8. When your pole is completely assembled all the holes, safety pin in bottom section and the 2 holes in the top piece are all on the same side. If not, rotate the top section until they are.



Step 8



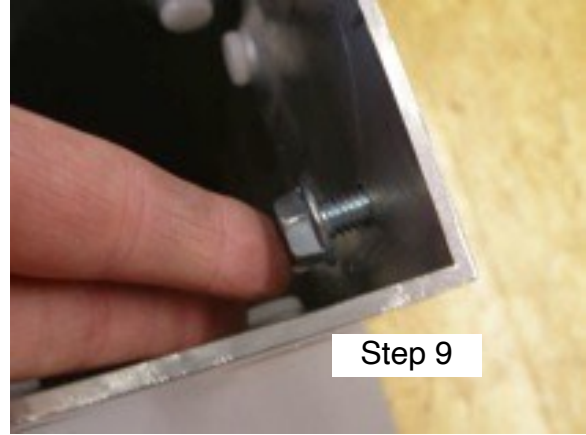
Step 8



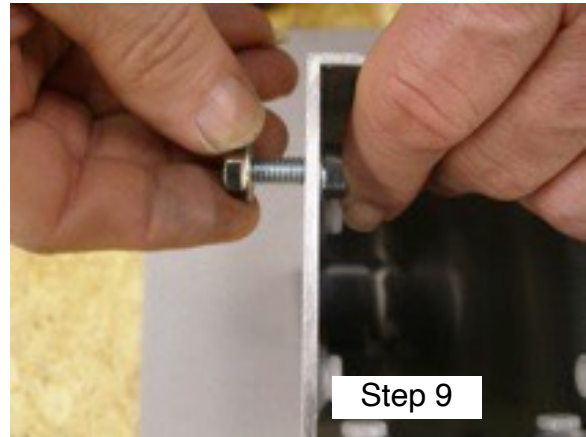
Step 8

Step 9) You need to insert all the bolts into the hub (G). You will need from your hardware bag (L)

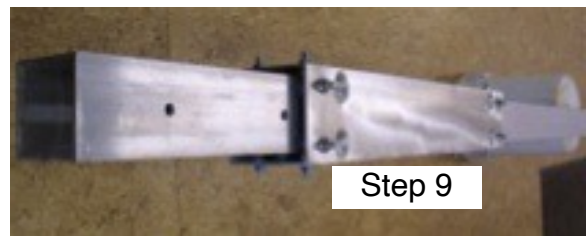
(16) 5/16 x 3/4" bolts and 16 stainless steel whiz nuts. Insert the bolt from the inside of the hub and thread the whiz nut on. Do not tighten. Do this to all 16 of the holes. When done slide the hub over the pole. **Note**, it does not matter which end of the hub faces the top of the pole.



Step 9



Step 9

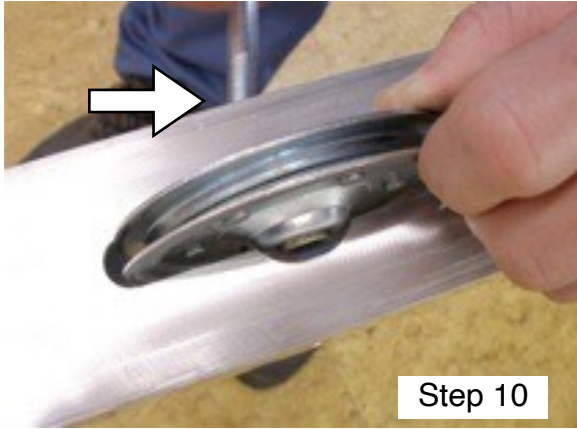


Step 9

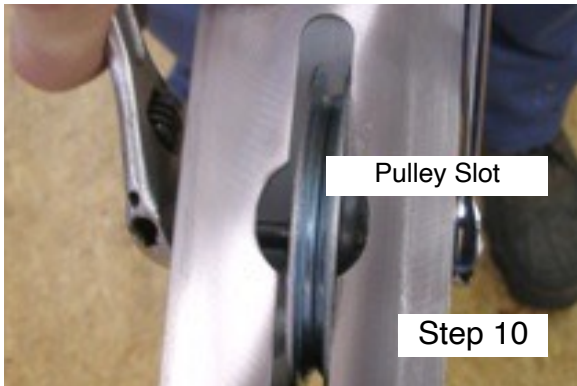
Step 10) Rotate the pole with hub on till you see a wide notch with a half circle to each side near the top of pole. This is the pulley slot. You will need your 4 inch pulley, bolt and lock nut from your hardware bag (L). Insert the pulley into the slot and hold it there while you take the bolt and insert the bolt into a hole on the pole thru the pulley and out the opposite side of the pole. Place lock nut on and tighten using two, 9/16" wrenches (one to hold bolt the other to tighten).

Step 11) Arm/eyebolt attachment. Find your arm that has the eyebolt hole (F) and get your cable that

Troyer's Super System 24



Step 10



Pulley Slot

Step 10



Step 11



IT HELPS TO USE ANY KIND OF TOOL TO KEEP THE EYE-BOLT FROM ROTATING WHILE TIGHTENING THE LOCK NUT

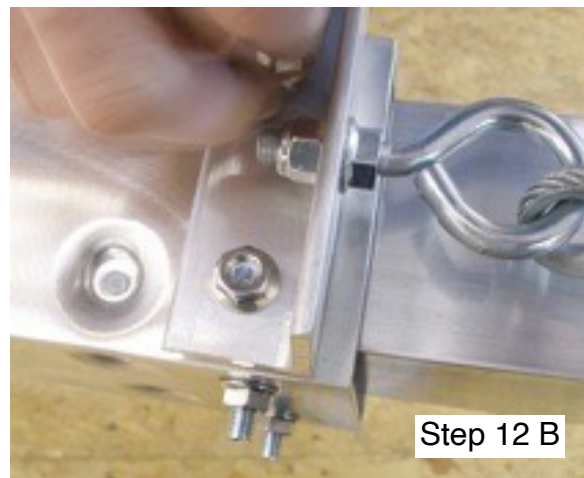
Step 11

has the eyebolt attached to it (K). Remove the lock nut from the end of the eyebolt. Insert eyebolt into the hole of the angle arm, thread lock nut back on and tighten using your 9/16" socket wrench. Orient the eyebolt so that it is parallel to the arm.

Step 12) Your pole with pulley and hub are laying over your bucket with the pulley slot visible. Remove the whiz nuts on the upper tier of the hub directly under the pulley assembly you just did in Step 10. This is where you will mount the arm you just attached your eyebolt with cable on. Do this by using a 1/2" open end wrench and placing it inside the hub to the the back side of the bolt while you remove the whiz nuts. Do this for both whiz nuts. (Due to the sheer size of this unit it would be very helpful to have a pair of extra hands to hold the arm while you assemble the unit.) Take the arm with the attached eyebolt and cable and place the arm over the protruding bolts. (Photo Step 12 B). Thread the whiz nuts back on. Using a speed square you will square the arm to the hub, (Photo Step 12 C page 5) then using your 1/2" socket wrench tighten the whiz nuts. You will need the 1/2" wrench to hold the bolt from inside the hub (see photo step 12 A) while tightening the whiz nut.



Step 12 A



Step 12 B

Troyer's Super System 24



Step 12 C

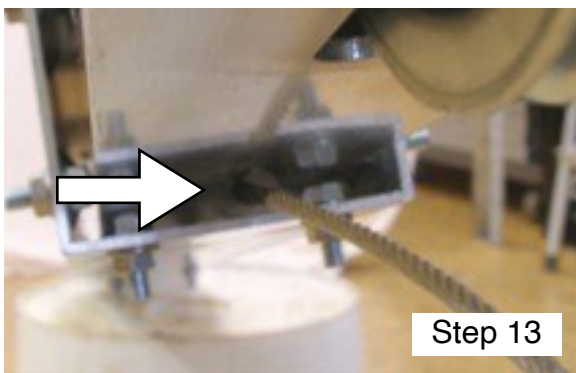


CABLE WILL HAVE THE STOP NUT ON IT

Step 13

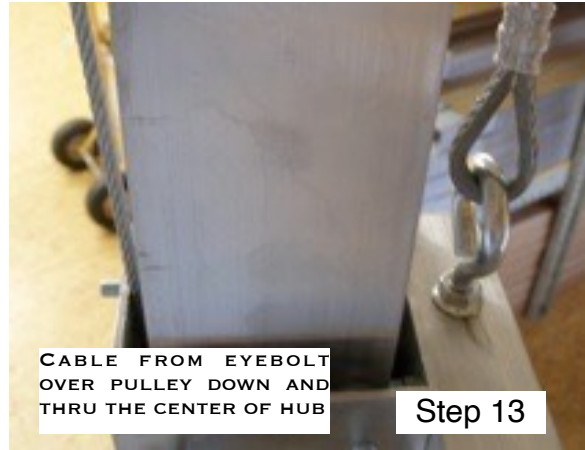


Step 13



Step 13

Step 13) Find the end of the cable and running the cable upward towards the pulley slot insert the cable at the top and pull all the cable thru. Have your helper hold the pole up a few feet off of the upturned 5 gallon bucket. Retrieve the end of the



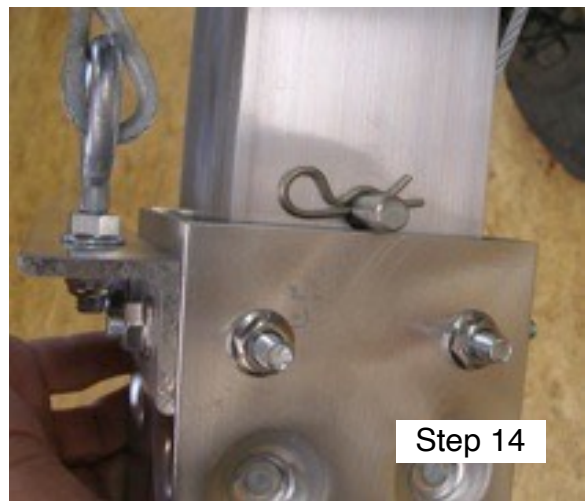
CABLE FROM EYEBOLT OVER PULLEY DOWN AND THRU THE CENTER OF HUB

Step 13

cable and insert the cable **THRU THE CENTER OF THE HUB BETWEEN THE HUB AND THE POLE.**

If the cable does not come out the bottom of the hub in the center, between the bolts pull it out and do it again.

Step 14) Insert the stop pin found in your hardware bag (L). Remove 1 of the hitch pins from the pre assembled stop pin, insert into the hole below the pulley, replace the hitch pin.

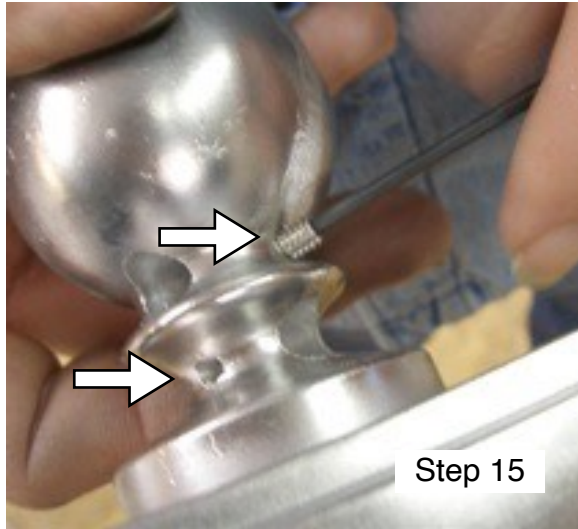


Step 14

Step 15) Ball top (H) and top perch rods(D). Get your 4 set screws (H) from the hardware bag (L). Use 2 of the set screws to hold the top perches and the other 2 will be used to hold the ball top onto the pole. Insert the lower top perch rod (D) first into the ball top. Find the center at 36" and tighten set screw. Repeat for the upper top perch.

Step 16) Place the ball top on the top of your pole. Tighten the 2 set screws using the provided Allen wrench.

Troyer's Super System 24

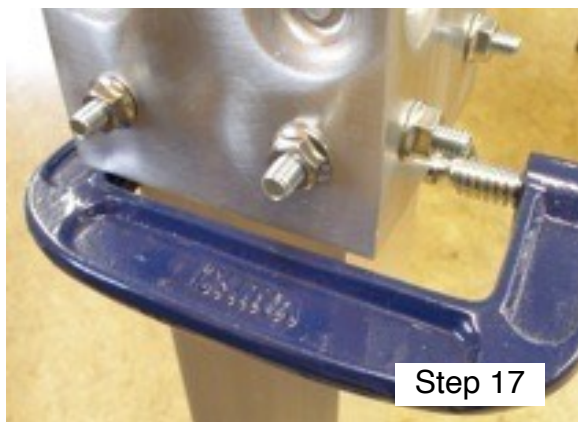


Step 15



Step 16

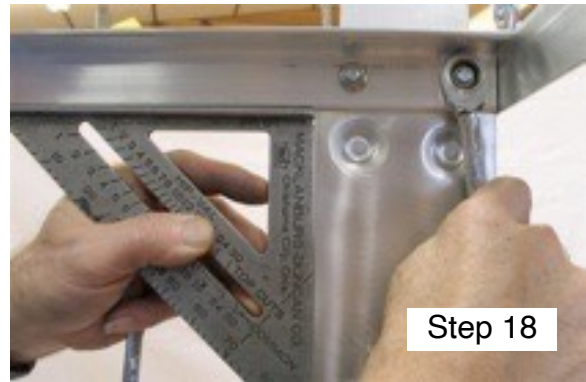
Step 17) With the assistance of a helper, you should slide the hub down the pole until it is about 3-1/2 to 4 feet from the ground up. Place a c clamp under the hub. Stand your pole up and with the assistance of your helper you will place the entire pole, with hub and 1 attached arm over the ground stake. (**TIP!** Spray your aluminum ground stake with WD40 before sliding the pole over the stake). The c clamp will hold the hub in place while you attach the remainder of the arms.



Step 17

Step 18) Working in a clock wise fashion from the first angle arm, remove the next pair of whiz nuts. Remember to use your your 1/2" open end wrench on the inside of the hub holding the bolt while you remove the whiz nuts. Have your helper place the

end of the arm that has the larger diameter holes, over the bolts, while you thread the whiz nuts back on, and tighten. Remember to check for square!



Step 18

Step 19) Repeat till you have all the upper tier arms attached, and then proceed to the lower tier. You will assemble the arms in the same manner.

Step 20) You will need your winch and the pre-assembled winch mounting brackets (I). Remove the single bolt on the bracket (I) that is in the center hole and align the bracket to the inner hole on the winch. Insert the bolt from the inside of the winch and attach the nut. Tighten the nut. Get your other bracket, align the 2 outer holes of the winch bracket to the winch, insert bolts from the inside of the winch, and tighten nuts using your 1/2" wrench. (See photos Step 20 A, B, and C). You want your brackets to have the open side face towards the ground as seen in photo 20D.

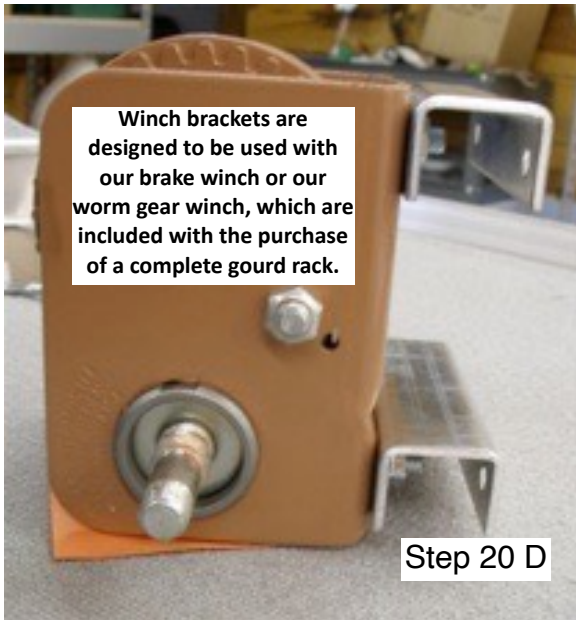
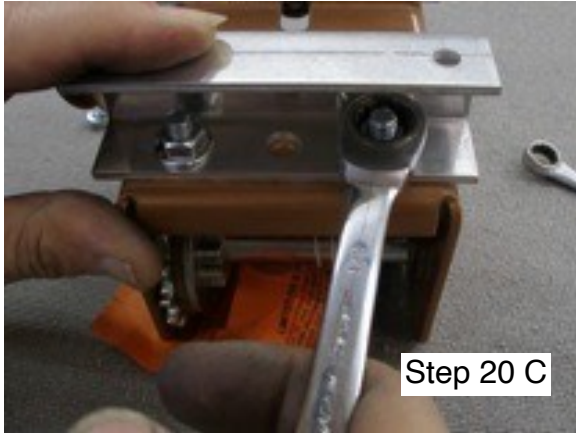


Step 20 A

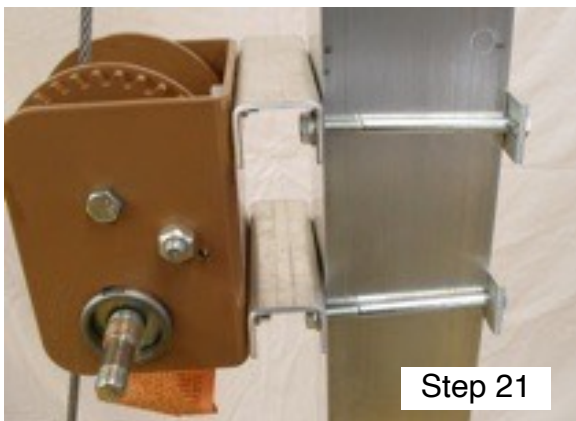


Step 20 B

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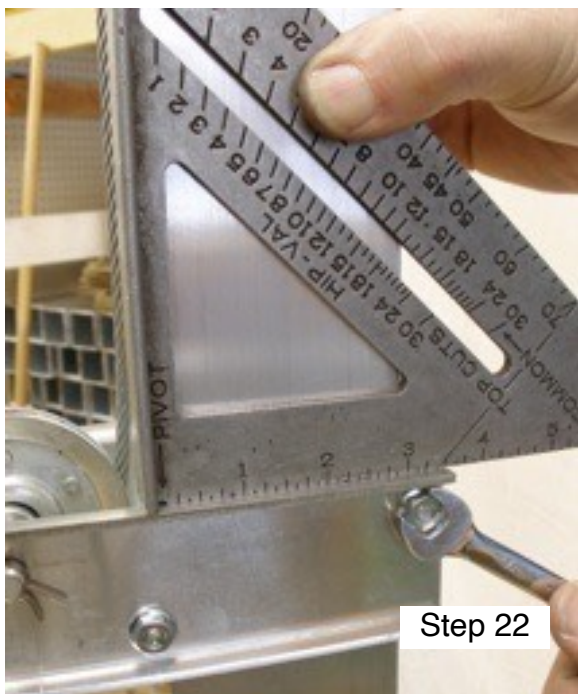
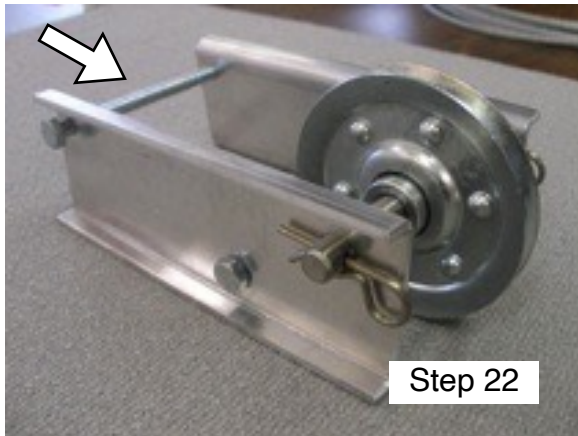
Step 21) Assembling the winch to the pole. Your winch bracket kit has a back plate pre assembled. Remove one whiz nut and bolt from the upper



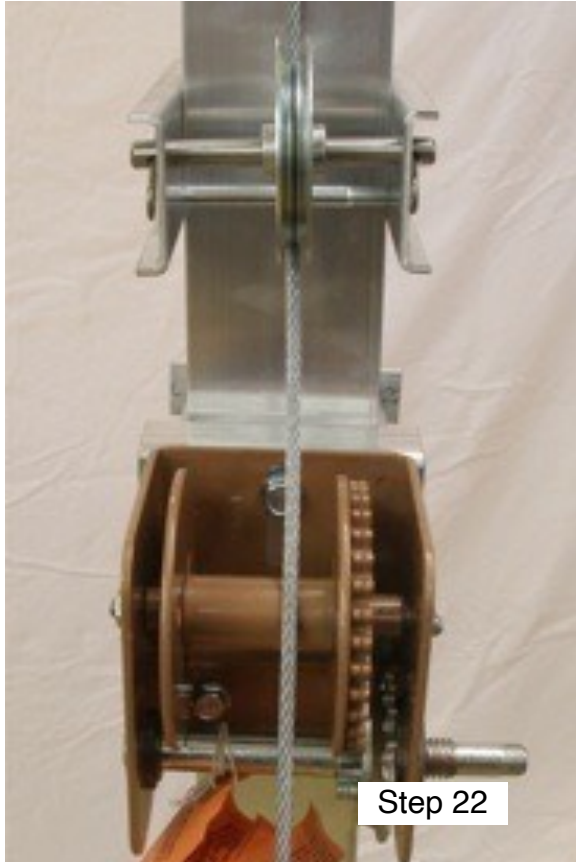
bracket and one from the lower bracket, same side. Have your helper hold the winch at your de

sired height (about 19") while you attach the back plates on the back side of the pole and tighten whiz nuts. (See photo Step 21).

Step 22) Approximately 6 inches above the winch assembly you will want to place the 3 inch pulley guide (J). The 3 inch pulley guide has been completely pre-assembled. Pull the entire assembly apart. It should look like the photo below. Remove the bolt and nut that's furthest from the pulley. Stand directly to the front of your mounted brake winch and slide this entire unit so that the brackets encase the pole. Replace the bolt and nut, making sure the bracket is square to the pole by using your square, and tighten the nuts. Find the end of your cable and run it so that it



Troyer's Super System 24



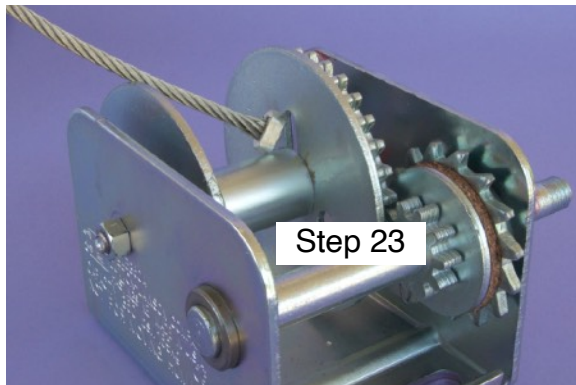
falls behind the 3" pulley and then drape the cable to the front of the brake winch.

Step 23) Its now time to attach the cable to the brake winch. We have installed a stop nut on to the end of the cable. Insert the end of the cable with the stop nut into the OVAL hole on the gear side of the brake winch. Insert the stop nut from the inside of the winch so that it goes thru the oval hole and out. Turn the cable so that stop nut is horizontal to the hole and when you pull on it it wont come back out thru the oval hole. Attach the handle of the winch following the instructions provided with the brake winch. Once you have attached the cable to the winch you can remove the c clamp.

How to Hang Gourds:

Gourd Mounting Arms are included with the purchase of this gourd rack. Please see the accompanying instruction sheet on how to hang your gourds.

DO NOT raise your rack without the gourds on. (Sufficient load must be applied to overcome internal resistance and operate the brake winch properly. Please read all the safety and installation instructions that came with your brake winch. Once you have raised the hub above the safety bolt hole insert the safety pin into the hole about 6' up. When raising the hub, stop when the hub touches the stop pin at the top of the pole. Do Not over tighten the winch. This will place undue stress on the pole and cable. Periodically check that all bolts and nuts holding the arms on to the hub, and the bolts and nuts holding your winch are nice and snug.

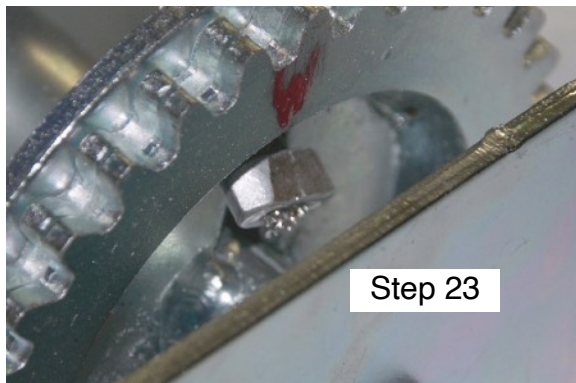


How to care for your rack.

Due to the sheer size and design of this unit, you may wish to leave it up year round. It is recommended that you wax your pole prior to installation, using your favorite quality car wax.

Wire cable can fray over time. Check your cable periodically for signs of fraying or damage. Should you need a replacement cable, simply get in touch with us, we will get you a new cable at a reasonable cost.

Keep your purple martins safe from climbing predators and install an optional EZ Off pole guard. Pole Guards help to deter snakes, raccoons or feral cats from raiding your gourds.



Severe weather forecasted? Lower your hub section a minimum of 2 feet. Best part, the martins won't mind a bit.