

## **INSTRUCTIONS FOR CHAIN REPLACEMENT for the PETERSON MODEL C SWELL SHADE OPERATOR**

Revised 9/07/2007

Following are instructions for replacing the chain that drives the position-sensing potentiometer on Peterson Model C swell shade operators. These instructions explain the use of a new chain that is shorter than the original one. The shorter chain now available is the same as is used on current production model Peterson swell shade operators.

**IMPORTANT SAFETY WARNING:** Be sure to remove power to the swell shade operator as instructed, and ***NEVER*** allow fingers, hands, long hair, jewelry, clothing, etc. to be near moveable parts when power is connected!

Tools/Materials Required: Phillips head screwdriver, small/jeweler's flat blade screwdriver, clip lead (jumper wire), and Allen wrench to tighten sprockets if necessary.

Before beginning, be sure you have received a new, gray colored "roller chain", part number 170594, from Peterson. Your new chain will be packaged in a bag with these instructions as part number 430594.

Turn off the organ rectifier powering the swell shade operator being serviced. Remove the black, perforated cover from the swell shade operator by removing the 6 Phillips-head screws on the surface opposite the mounting surface and pulling the cover straight away from the mounting surface. Unplug the expression shoe contact cable from the shoe input pins on the Position Adjust Board. Remove the Phillips-head screws from three of the four corners of the Position Adjust Board and rotate the Position Adjust Board around the fourth screw as shown in Figure 1 so that it no longer blocks access to the chain.

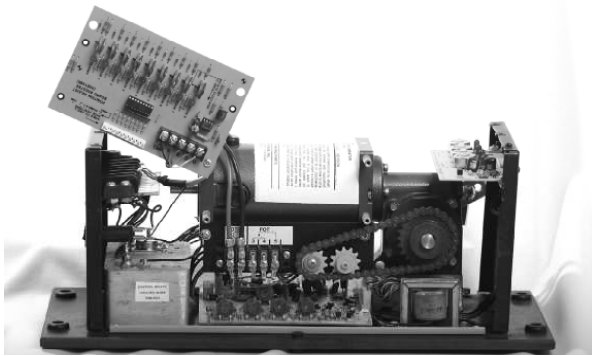
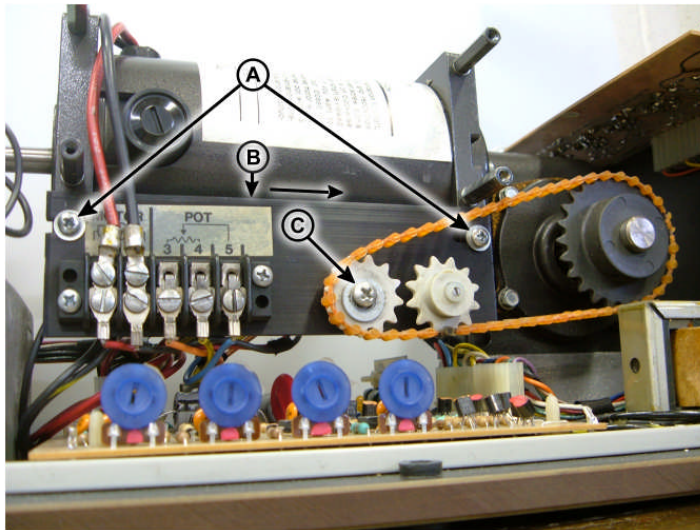


FIGURE 1: Moving Position Adjust Board Out Of The Way

The shorter replacement chain will go around only the large sprocket and the sprocket on the position-sensing potentiometer. The idler sprocket "C" should be removed by unscrewing the Phillips-head screw and taking off the screw, flat washer, and sprocket.



*Before*

Figure 2- Before Chain Replacement

With the black metal plate slid so the two remaining sprockets are closer together, first loop the chain around the potentiometer sprocket and then "walk" the chain around the larger sprocket. Set the tension on the chain by sliding the black metal plate away from the large gray sprocket and tightening the 2 Phillips-head screws "A" attaching it. The chain must be just tight enough for positive engagement with the teeth on the sprockets; do not over tighten. Also check the setscrews to be sure the sprockets are not loose.

It is now time to adjust the potentiometer position. With the power still off, turn the motor shaft, located at the end of the motor, with your fingers. This will move the rotating arm. Continue until the swell shades are in the fully closed position. Carefully note the position of the rotating arm and disconnect the linkage between the swell shade operator and the swell shades to avoid any damage in case the rotating arm moves through a full 360-degree arc when power is applied to the swell shade operator. Now, with your hands clear of all moving parts, apply DC power to the swell shade operator and note the position that the rotating arm moves to, if it moves at all. If the arm moves to a position other than what would be the fully closed position, insert a small blade-type screwdriver into the slot of the potentiometer shaft, which is visible in the center of the potentiometer sprocket. Turn the screwdriver in very small counter-clockwise increments, which will make the swell shade operator arm move. Continue turning the potentiometer shaft as necessary to position the rotating arm properly. Note that if the arm rotates in the wrong "half circle", remove power and rotate the motor shaft by hand until the rotating arm is 180 degrees from where it was when power was removed, then power up once again and continue with fine adjustment.

Once the rotating arm is in the correct position, reinstall the Position Adjust Board, reconnect your shade linkage, and "fine adjust" the closed adjustment potentiometer if necessary by following the instructions in the swell shade operator's main instruction manual. Test for proper operation by jumpering each shoe input pin in turn to the

common pin on the shoe input connector of the Position Adjust Board. The closed LED should always be lit and the LED corresponding to the shoe input pin that is being activated should light as you test each pin. The rotating arm should also move an increasing amount as higher numbered shoe input pins are activated. You are now free to adjust the positions and speeds as if this were a new installation.

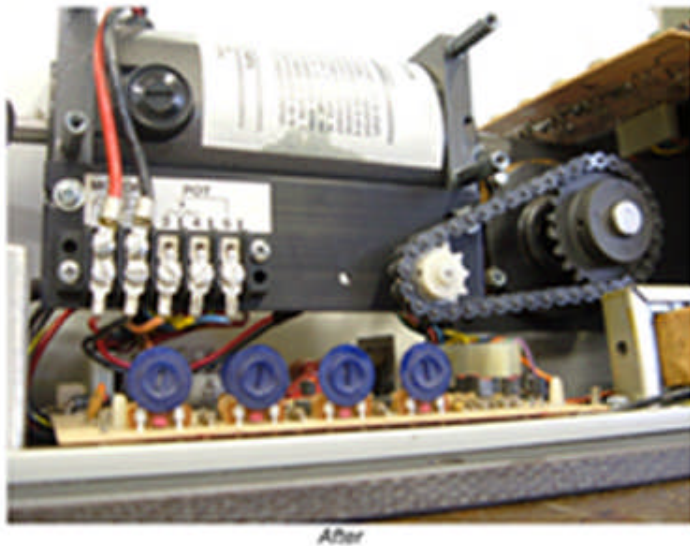


Figure 3- After Chain Replacement

Note: It is not necessary to remove the Position Adjust Board to adjust the chain tension because the screws which loosen the black metal plate are accessible through holes in the Position Adjust Board.

If you have any questions, feel free to contact Peterson customer support at 708-388-3311 or 800-341-3311.