

Installing and setting up the Windbender Electric Option

Thank you for purchasing the Firecreek Accessories Electric Adjustment Option for your Windbender. You should probably sit down with a cup of coffee, or a cold drink, and read through these instructions completely before you start. Refer to them often as you install your new electric option. You may need an adult beverage for the courage to drill holes in your windshield, but not so many that you miss your mark!

Pre-Installation Settings

Windbender shields allow for a wide range of vertical adjustment that will allow you to find a variety of comfort zones for low and high speed riding. We **highly** recommend that you first mount your Windbender on your motorcycle and use the manual adjustment during a few rides. This will allow you to find your sweet spots in vertical adjustment before you drill the hole in your top shield. You don't want to drill more than one hole in your windshield! Especially important is the lowest setting you will wish to use. Remember: the adjustment rails in the top shield are mounted in slots which allow for an additional inch of range.



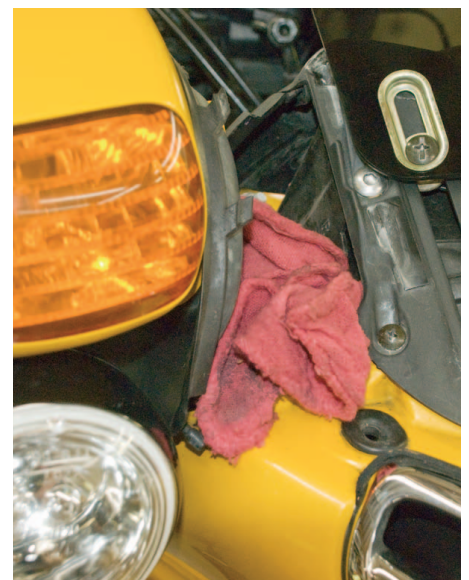
Cautions

DO NOT forget to stuff those rags in the black holes around the mirrors before removing the mounting hardware for the windshield garnish. You may find the following procedures easier to complete if your motorcycle is on its center stand or on a motorcycle lift. **DO NOT** apply excess tension to the bonded-pair of wires coming from the actuator or try to lift the base shield with insufficient slack in the wires: It is possible to destroy the actuator by pulling the wires out of the case. They are relatively fragile.

Windbender - Installation

Follow the instructions that came with your Windbender and mount your new shield on your motorcycle. Stop when you are ready to put the windshield garnish (painted fairing piece below the windshield) back on. If you already have your Windbender mounted:

1. Remove the windshield garnish by pushing the mirrors forward to expose the two 6mm garnish mounting bolts, washer and rubber grommets.
2. Stuff some rags in the openings around the mirrors (black holes) below the bolts. Shop towels or old wash cloths are the perfect size. If you don't stuff those rags in place gravity will suck the bolts, washers and grommets down into the black hole and you may never see them again.



3. Remove the garnish mounting hardware with a 10mm end-wrench and remove the garnish from the motorcycle: After removing the two bolts and spreading the painted mounting tabs off of the windshield clamp bosses, the garnish is only held on with four plastic tabs in rubber grommets; simply pull it off, carefully.

4. Raise the Windbender base to its highest position using the stock adjustment and lock it in place.



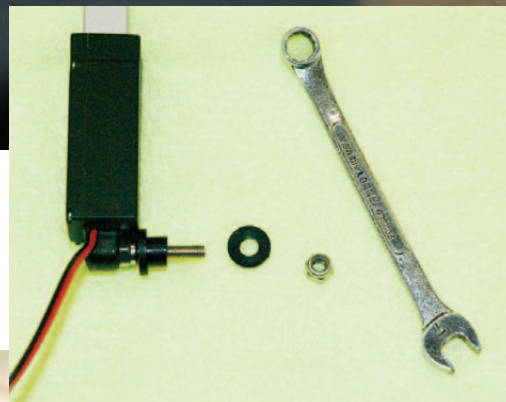
Actuator Mounting – Base Shield

5. Make a mark on the base shield exactly centered between and $5/32$ " below the bottom edge the female adjustment rails. You may want to cover the area with masking tape and use a straight edge across the rail bottoms to find this spot. Your mark will be approximately $5-3/16$ " from the top of the base shield. Using the supplied spade bit, drill a $5/16$ " hole in the base shield on your mark.

6. Slip the black nylon 4mm shoulder washer onto the 4mm button head bolt which is pre-attached to the actuator with the shoulder against the motor housing. Collect the large 4mm black nylon washer and 4mm lock nut. Take them with the actuator, a 7mm wrench and a 2.5mm Hex wrench (if you bought the handlebar switch housing with your kit, you can use the Hex wrench included) to the front of the motorcycle.

7. Slip the 4mm actuator mounting bolt and shoulder washer through the hole you drilled in the base shield while holding the actuator vertical. You may want to put a rag between the actuator and base shield to keep from scuffing the shield. From the back of the base shield, put the large 4mm nylon washer and lock nut on the 4mm bolt. Hold the bolt with the Hex wrench and snug down the lock nut.

Do not over tighten the actuator mounting bolt! It only needs to be tight enough to not rattle; allow the actuator to move with light pressure.

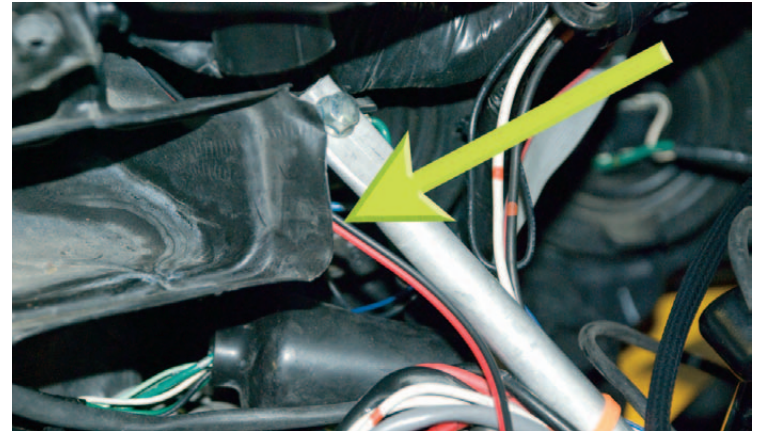
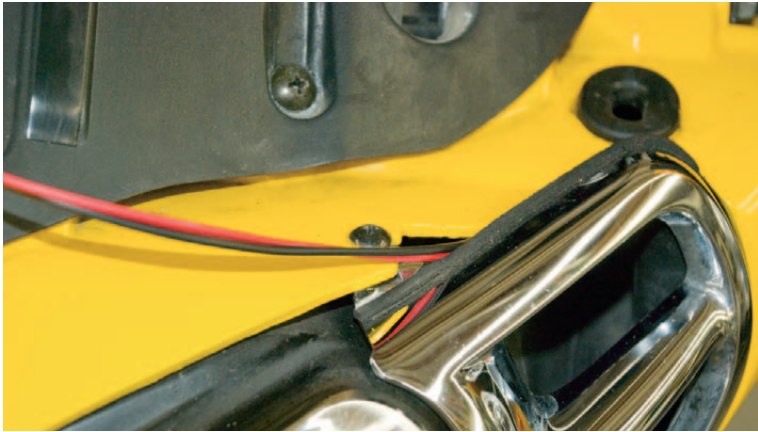
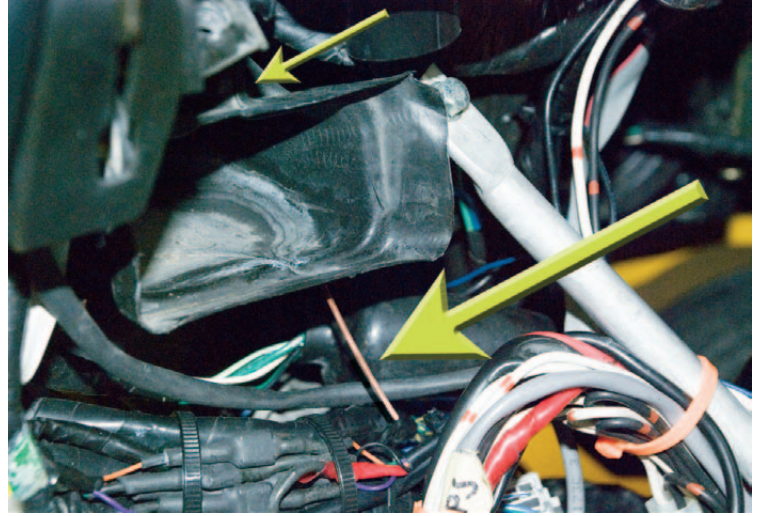


Wiring Harnesses Routing

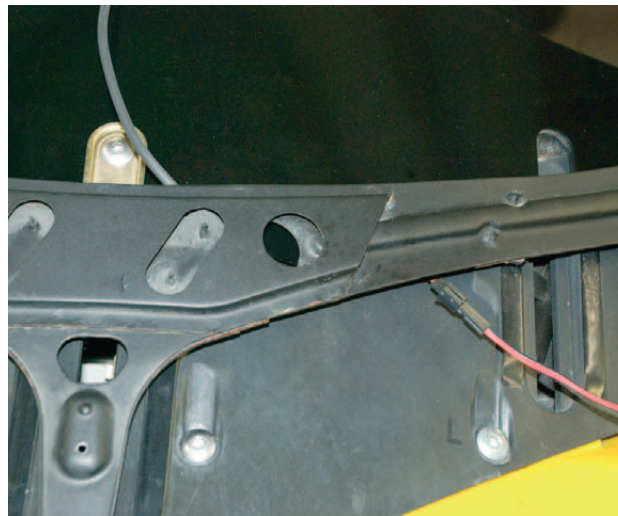
Wire routing will be slightly easier and can be done more neatly if you remove the top shelter, but it is absolutely not necessary to do so. The following photographs are shown with the top shelter removed so you can better see what you will be doing in the following steps:

8. First, remove the left fairing pocket from the top shelter. Four plastic push pins hold the pocket in place. Use a small Phillips screwdriver, or similar tool, to push down the button in the center of each pin to unlock them. Lift the pins out with a fingernail. Set the fairing pocket and push pins aside.

9. Locate the hole next to the intake grill mounting screw above the left headlight. Push a piece of welding wire, coat hanger, or other stiff fishing device (**a long zip-tie works extremely well when the pointy end is pushed through from the front**) through the hole slightly towards the center of the motorcycle and inside of the dash vent tube until you can find it in the fairing pocket hole. Pick the 24" red/black bonded wire extension harness from your kit and tape the white female socket (with male pins) and wire to the end of the fish wire in the pocket hole. Carefully pull the fish wire back out of the fairing to pull the harness into place. Remove the tape and set the fishing device aside.



10. Route the bonded wire pair from the actuator behind the windshield clamp as shown. Be sure not to get the wire behind one of the windshield clamp rubber pads or you may damage the wire. If one of your Windbender vertical sweet spots requires the base shield to be raised, be sure to have the base raised while you route the actuator wire so you will have enough slack in the wire to raise the base when installation is complete. **Raising the base without this slack will pull the wires out of the actuator.** Slip the 2" piece of large heat-shrink tubing over the extension harness.



Plug the actuator into the extension harness.

You may locate the connector from the actuator to the extension harness above or below the windshield clamp according to your preference.

NOTE: The connector on your actuator has been changed from the black socket connector shown in the photo to a white 2 pole AMP connector.

11. If you purchased the handle bar switch housing with your kit, you will need to slide the left grip out 3/8" to make space for the housing. There are several ways to do this:

A: Compressed air and a couple extra hands to seal the grip ends will make this job relatively easy.

B: You also may be able to stand behind the handlebar with both hands around the grip: give it a real quick tug and twist.

C: If you have heated grips; turn the grips on for 10 minutes or until they are warm. The glue will soften and the grip should move easily.

Mount the switch housing on the grip bar next to the horn control housing and tighten the Hex head screws. If you did not get the switch housing; find a suitable location for the switch, drill a 1/4" hole and mount the switch.

12. From the switch housing, route the wire along the handle bar, around the steering head, and back along the frame following the existing clutch hose route. Ensure that the wires will not pinch or tear when the handlebars are turned full lock in either direction. Using your fish wire again, carefully pull the wiring harness under the top shelter black-inner-cover to the fairing pocket hole.

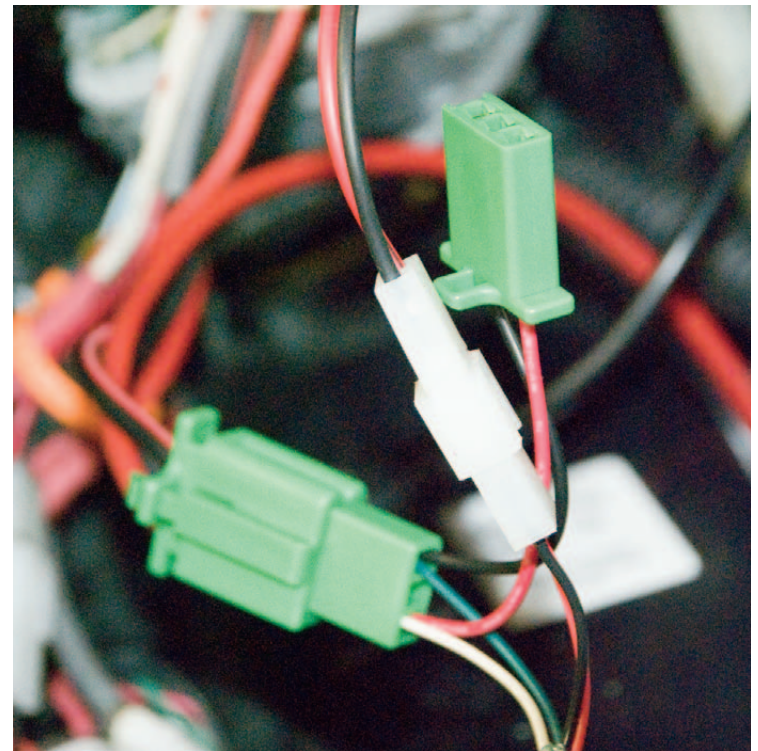
13. Find the green Hitachi accessory plug buried in the large black wiring boot in the left fairing pocket hole. Connect the white 3-pole Hitachi (photos show a green connector so you can see it better) from the switch harness to the green plug and the 2-pole AMP connector to the extension-harness you routed earlier from the actuator. Our wiring harness has one open Hitachi connector available so you can add another low amperage accessory to the circuit if desired.

14. Turn the ignition switch to Accessory and test the actuator system. If the piston goes up when you push the switch up, all is well. Our actuator has built in limit switches and will not move if it is at the end of its travel (from full up it can only go down and vice-versa).

15. Move the heat shrink tubing on the bonded wire harness to completely cover the White connector and shrink it in place.

16. Secure the wiring harness in place with any number of the provided zip-ties.

17. Replace the fairing pocket and windshield garnish.



Actuator Mounting – Top Shield

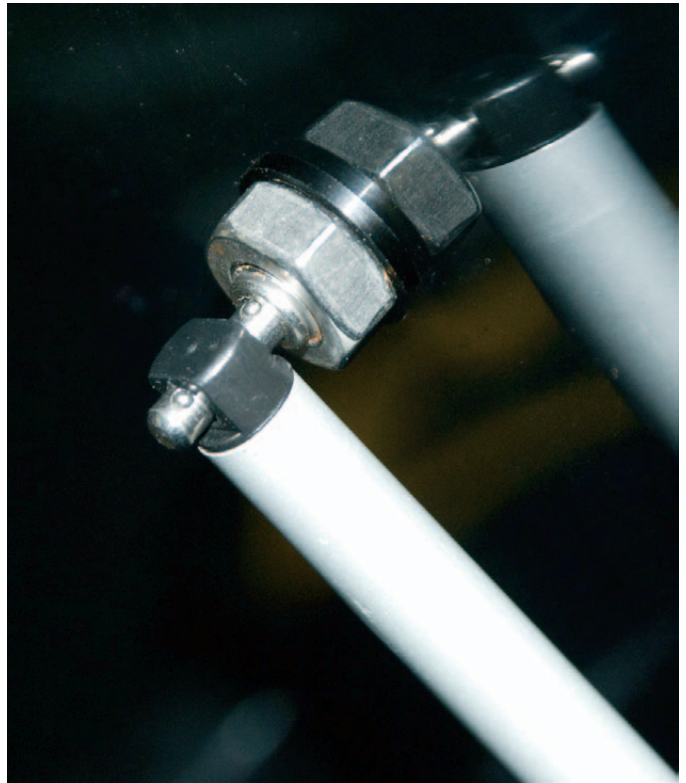
18. Install your Windbender top shield in its lowest position (the lowest sweet spot you found during your test rides) and put the quick release pins in the adjustment rails (the tops of the male and female adjustment rails should align within a 1/4”).

19. With the actuator in its lowest position, mark a spot on the top shield, horizontally centered, where the top clevis of the actuator meets. This will be best done by marking through the actuator clevis hole to the shield, but can also be done carefully from the front of the motorcycle.

20. Rotate the actuator out of the way and drill a 5/16” hole at your mark with the provided spade bit. Go slow so as to not crack or chip the acrylic.

21. Slide the 8mm hollow bolt through the hole without a washer. With a 6mm hex wrench and a 13mm end-wrench tighten the hollow bolt in place with the black 8mm nylon washer and nut from the inside of the top shield. The washer will act as a lock washer to keep the hollow bolt tight. DO NOT over tighten the nut - there is no need to squash-out the washer.

22. Slip the 4mm clevis pin through the hollow bolt and actuator clevis so the two spring balls are fully through the hollow bolt and actuator clevis respectively. You can remove the clevis pin without tools at any time to clean the top shield or adjustment rails, or to change top shields. You may order additional hollow bolts if you have additional top shields.



Final Adjustments and Normal Operation

If the actuator strains while moving the shield you will need to loosen the top shield mounting rails (and sometimes the lower rails also) and re-center the rails per the instructions provided with your Windbender. The windshield may chatter in the adjustment rails slightly during movement when the motorcycle is at rest if the rails are adjusted properly. This is normal. When you are riding, air pressure on the top shield will keep the shield from chattering.

If you are using a **CB radio**, you may hear the DC induction motor (static noise) start-up and/or run through your headset. This is normal. You can control the amount of noise you hear by adjusting the squelch level on your CB.

The Windbender Actuator is waterproof to spray (rain and gentle washing) from all angles, but DO NOT pressure-wash the actuator (or use it underwater :-).

Your complete Electric Option Kit is guaranteed for one full year from date of purchase.

We want you to enjoy your new electrically adjustable Windbender, so please let us know if you have any difficulty with installation or experience any problems with your kit.

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