

## GL1800 Windbender Top Shield Rake Adjustment Kit

### Installation Instructions

You'll need the following tools:

Small Flat Screwdriver  
#2 Phillips Screwdriver  
10mm Wrench  
8mm Wrench  
3mm Hex  
5mm Hex (T-Handle works great, but you will need a L-Hex Key for final adjustments)



You should have these parts in the kit:

- 1 Right Fixed Bracket (attach to male rail)
- 1 Left Fixed Bracket (attach to male rail)
- 1 Right Swing Bracket (attache to top shield)
- 1 Left Swing Bracket (attache to top shield)
- 2 Adjustment Arms
- 6 M6 x 10mm SS cap screws
- 2 M6 SS Nylock nuts
- 4 M6 SS flat washers
- 4 M6 SS lock washers
- 4 M5 x 16mm SS button head screws
- 4 M5 SS Nylock nuts
- 4 #12 x 1/2" SS pan head screws
- 4 Snap-Cap sets



If you have the electric option your kit will also include the following:

- 1 Pivot
- 1 M4 x 30mm Clevis Pin
- 2 R-Type Cotter Pins (one spare)
- 1 M4 x 20mm SS button head screw
- 1 M4 x 16mm button head screw
- 1 M4 Nylock nut

**NOTE:** If you have the electric option, please turn to the last page and complete the lower actuator mount pivot installation before you proceed.



Remove the top shield from your Windbender and place it on a soft surface.

Remove the male rails from the top shield; first carefully remove the snap caps with a small standard screwdriver, then remove the four mounting screws with a Phillips screwdriver. Set the caps, cap bases, screws and trim pieces aside. You may use them again shortly.

(fig 1-3A)

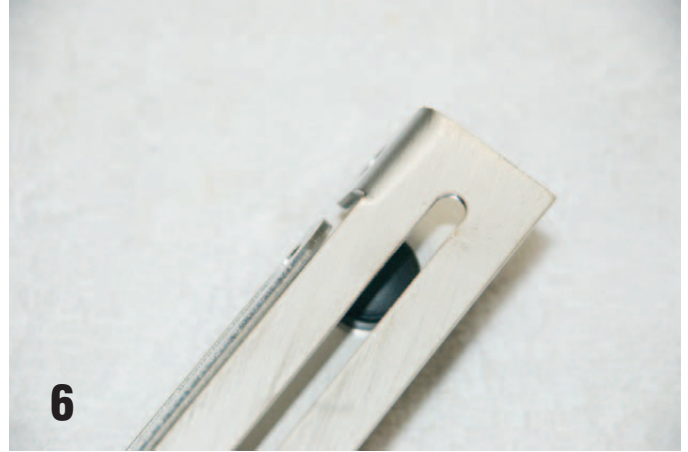
Using the rail mounting hardware you just remove from the top shield, mount the Fixed Brackets to the male rails with the slide and pivot tabs to the outside and the slide tab towards the top (rounded end) of the rail. You must use the snap cap base under the screws to keep the screws from protruding through the rail. If, even with the snap cap base installed, the screws you took out of the top shield protrude through the rail, do not use the snap caps and use the 4 new #12 x 1/3" SS Pan Head screws supplied in the kit instead. (fig 1A & 3A) Center the Fixed Bracket on each rail and try to keep the brackets at equal vertical locations on the rails. Do not over tighten the mounting screws or you might strip the hole in the rails. You may now install the snap caps or wait until all the final alignments are made.





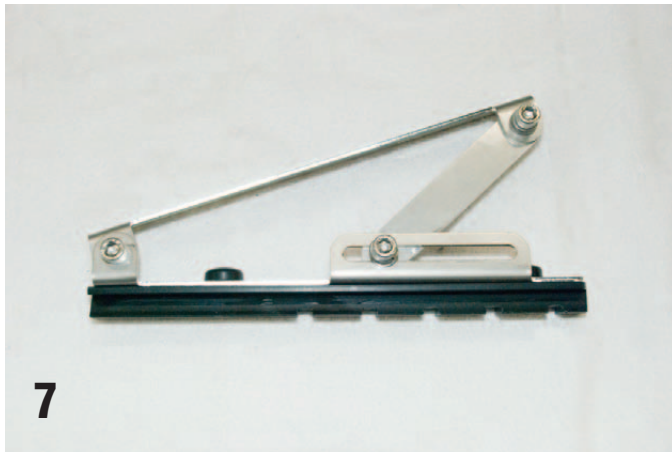
(fig 4-6)

Now, attach each Swing Bracket to the Fixed Brackets at the pivot tabs with one M6x10mm cap screw and one Nylock nut. The slot closest to the end of the Swing Bracket is the pivot end. Locate the Swing Bracket tab inside the Fixed Bracket tab. The mounting surfaces of each bracket set should be parallel or you will need to switch the Swing Bracket to the other side. This attachment should only be snug: allow the Swing Bracket to pivot on the Fixed Bracket with minimal resistance. You may need to slightly bend the pivot tabs so that the top tab on the Swing Bracket and the slide tab on the Fixed Bracket are flush as shown.



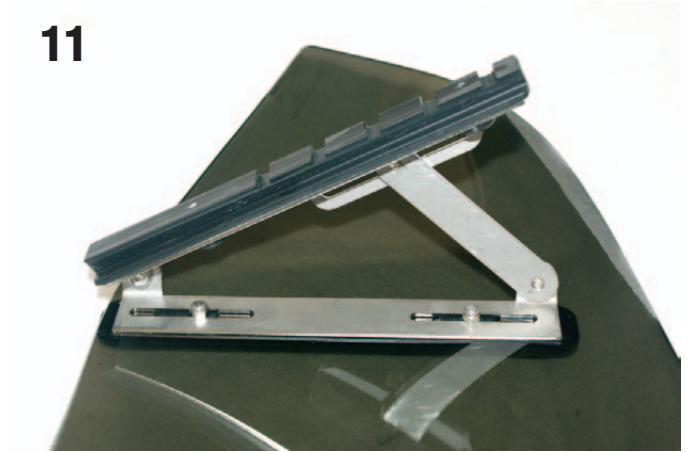
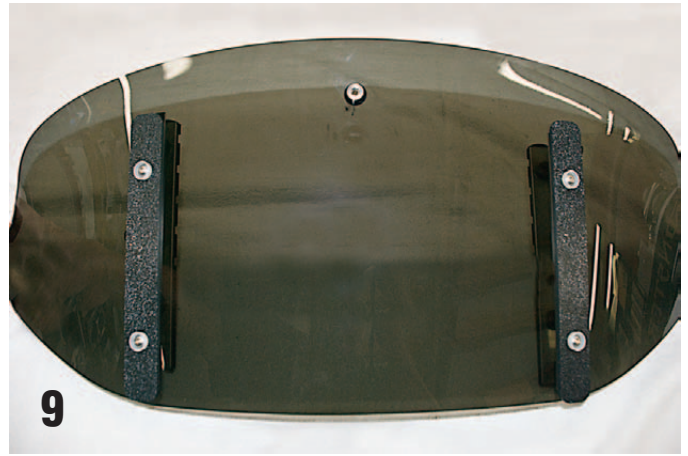
(fig 7-8)

Attach the Adjustment Arm inside the top tab on the Swing Bracket and the slide tab on the Fixed Bracket by threading one M6x10mm cap screw, lock washer and flat washer into each tapped hole in the Arm. Do not tighten these at this time.



(fig 9-11)

Mount the Swing Brackets to the Top Shield with four M5x16mm button head screws, new snap cap bases, and M5 Nylock nuts. Insert the screws through the snap cap bases, then through the trim pieces you removed earlier, through the Top Shield, then through the Swing Bracket. Attach the nuts and leave them loose enough that the brackets can slide easily on the Top Shield. Additional vertical adjustment is available in the Swing Bracket for raising or lowering the top shield if desired. If you wish lower the Top shield in the Swing Bracket far enough you may have to cut or sand off the bottom of the Top Shield for it to clear the windshield garnish on your bike.



(fig 12)

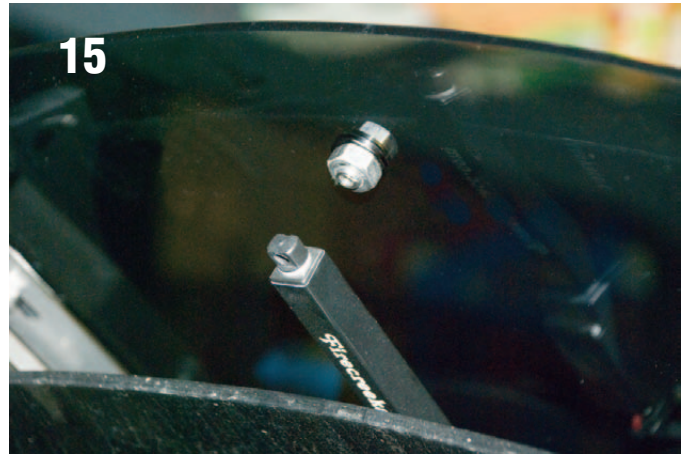
Before you put your Top Shield back on the bike, you may want to protect the windshield garnish with tape as the shield will be loose and could slide into the paint.





(fig 13-15)

Reinstall your Top Shield in the base rails on your bike. Put the manual adjust clevis pins in the top slots (shield in lowest position). Set the top shield height in the Swing Brackets to the desired height. If you have the electric option, align the top actuator mount in the shield (actuator in lowest position) by sliding the Top Shield on the Swing Brackets and insert either the new or old clevis pin (this will be the height of your top shield unless you wish to drill a new hole for the hollow bolt).



(fig 16)

At this point, raise the arms in the slide tabs in the rake bracket so the top shield is in it's most vertical position and tighten one M6 cap screw in each bracket. Square up everything up to make the rails equal height on the top shield. Give the Top Shield a little giggle to make sure all the pieces are lined up and can move freely. You may want to measure from the top of the Swing Bracket to the mounting nut to check for even height on each side. Tighten the four M5 mounting screws and nuts.



(fig 17)

The Top Shield should now adjust smoothly and you can start playing with your Top Shield rake angle by loosening the four M6 x 10mm cap screws in the adjustment arms. We like it at about 19° from vertical (the top of the recurve on our HPS is nearly vertical).



**Enjoy your new smooth ride!!!**



## GL1800 Windbender Top Shield Rake Adjustment Kit Electric Option Supplement

You'll need a 7mm wrench and a 2.5mm Hex Wrench.

Remove the lower actuator mount. Replace the M4 x 30mm button head screw with M4 x 16mm button head screw and new pivot using the existing washers and nut in the same location. The pivot should be snug on the Base Shield but not overly tight. It needs to move slightly without too much friction.

### **Before you mount the actuator in the pivot:**

While firmly holding the actuator motor and piston shroud, grasp the black part of the top clevis mount on the actuator with your thumb and forefinger and turn it 90° counterclockwise (unscrew it) so it will line up with the top shield mounting pin (the whole piston shaft will rotate).

Mount the actuator in the pivot with the M4 x 30mm button head screw and Nylock nut. Mount the strain relief under the screw head on the outside of the pivot. The actuator will be rotated 90° from its previous position. The pivot mount should not be tight, the actuator must be allowed to move freely in the pivot.

**Do not attempt to use the original detent ball clevis-pin on the top actuator mount with the Rake Kit.** The actuator clevis will eventually fall off that pin and your windshield may fly off the bike at speed and cause injury or worse!! **Use ONLY the holed clevis-pin and R-type cotter-pin supplied in the Rake Kit.** Keep the spare cotter pin in a safe location on the bike in case you lose the first one :-)

**NOTE:** If your Top Shield touches the actuator with the rake kit installed, you can remove the black nylon flat washer from the lower pivot mount and reverse the black collared washer so that the pivot fits flush against the Base Shield.

