



## Adjustable Windshield System

Harley-Davidson Road Glide (1998-2013)

*Please read this entire manual before proceeding with installation.*

### What is in the box:

- (1) Set of preassembled Robo Knob adjustable windshield mounts
- (1) Black acrylic adapter plate
- (4) M6 x 16mm mounting screws
- (4) M6 flat washers
- (4) M6 lock nuts
- (4) M5 x 25 Phillips truss screws
- (4) M5 black plastic washers
- (4) 1/8" thick rubber washers  
(for truss screws)



### **Tools Needed:**

- 4 mm Allen wrench (hex key)
- 10 mm wrench (open-end, box, or adjustable crescent)
- #2 Phillips screwdriver

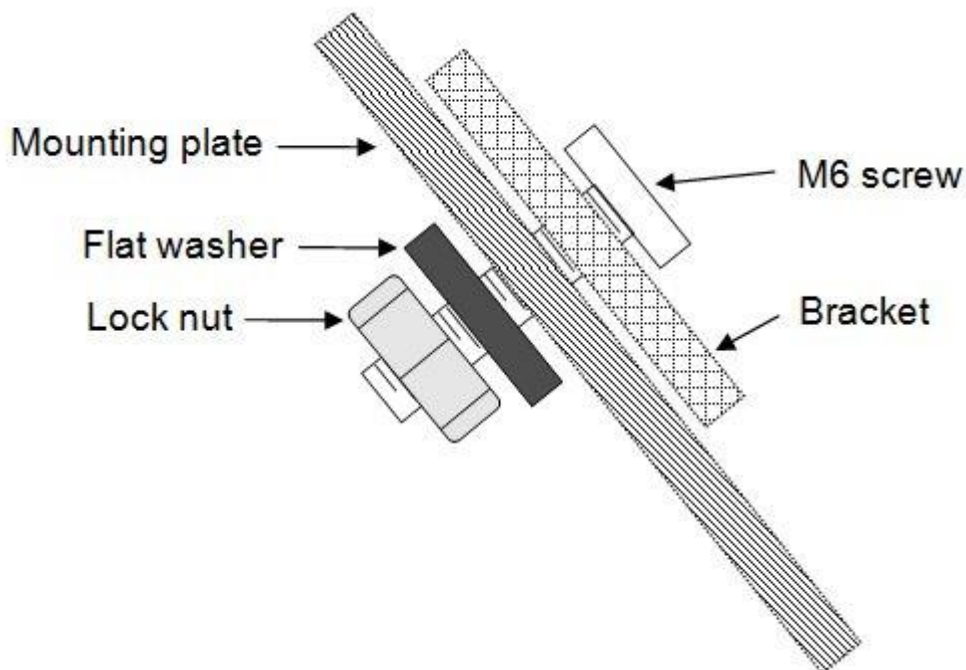
MadStad RoboKnob brackets are designed to bolt to a curved surface like the black adapter plate included in this kit. The new windshield attaches to the top (front) of the brackets with Phillips screws. Loosening the two adjustment knobs allow you to change the windshield height and tilt without getting off of the bike, and without any tools.

You will need to remove your factory windshield; it is not adaptable for use with these brackets. However you will be using the factory windshield screws to bolt on our black adapter plate.

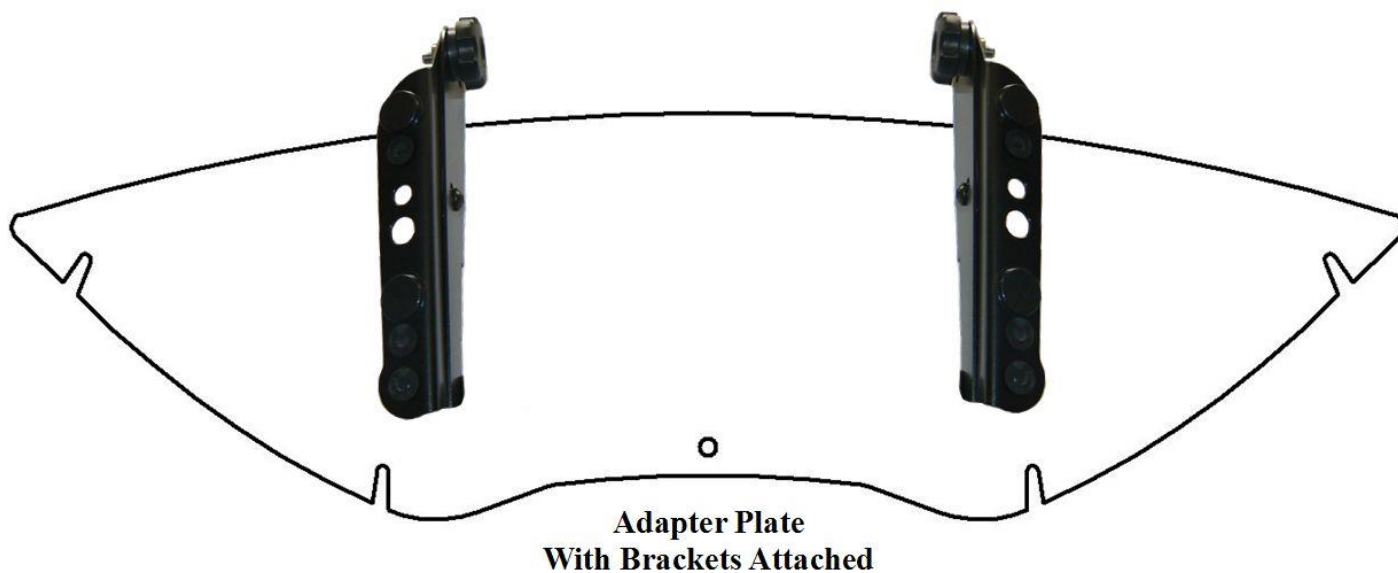
### **STEP 1: Bracket Installation**

Your Robo Knob brackets attach to the black acrylic adapter plate, and you will need to bolt them on before installing the plate to the bike. Use the four M6 x 16 screws with flat washers and lock nuts as shown in the diagram below. **DO NOT OVERTIGHTEN!**

Go to Page 3 to see what the brackets should look like once attached to the adapter plate.



The knobs on the brackets go to the insides (facing each other) with the knob sides up. When both brackets are installed it should look like the diagram below:



(your brackets may vary from sample photos)

## **STEP 2: Install the Adapter Plate**

The adapter plate attaches to the fairing in place of the stock shield using the original factory windshield screws and washers. It's basically a shorty shield, only with our brackets attached.

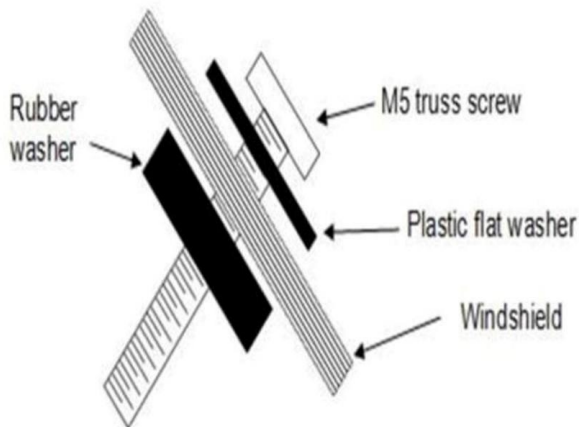
**NOTE: Be careful not to push too hard on the windshield screws or you will lose your factory rubber well nuts down inside the fairing!** You may want to pull all of the well nuts out of the fairing and get them started on the screws (hanging through the back of the plate). That way you know they have started to thread and won't accidentally fall in. Then insert the whole thing into the fairing and go around and tighten up all five screws.

You can also order replacement oversized rubber well nuts from MadStad Engineering. These are not included in this kit but if you want nuts guaranteed not to fall into your fairing, then we have these available.

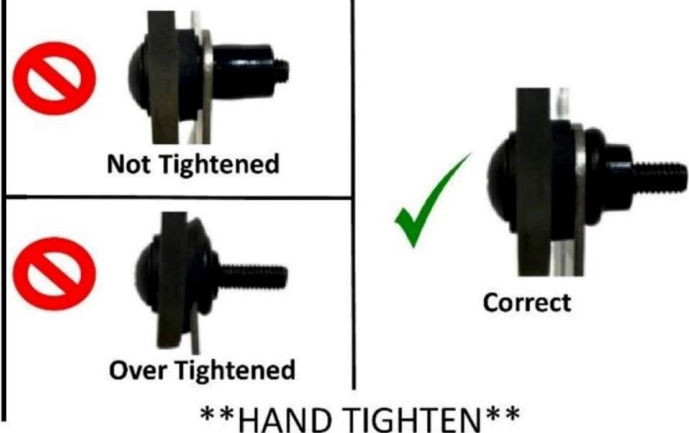
# Windshield Installation

1. Pre-install the Truss screws & washers into the windshield holes as shown in the image below.
2. Once all four of the screws are in place, gently guide the screws into the Well Nuts in the brackets until all four are set.
3. Hand tighten the Truss screws until they swell up behind the bracket and are firmly holding the windshield.

## Windshield Layout:



## Well Nut Tips:



## Adjusting the RoboKnob Brackets

The knob screws release the brackets allowing the windshield to slide and tilt. These knob screws must always be tightened securely before riding. **DO NOT** attempt to adjust the brackets while riding! You must come to a complete stop before making adjustments. Also make sure that you do not set the windshield in such a way that causes your handlebars or hand guards (if installed) to hit the windshield when turning, or before reaching full lock.

To make adjustments, loosen the knobs 1-2 turns and set the windshield so the top edge is at about your chin level as you look straight ahead while seated on the bike. Set the angle at approximately 60 degrees. (Use the angle guide on the back page of this manual as a guide.) Tighten the knobs and go for a ride to see if you now have smooth airflow over and around your helmet. Do this on a calm day if at all possible; windy days make it hard to judge the airflow. Don't ever try to adjust the mount while in motion!

**WARNING:** If you tilt the shield fully backward, it may make contact with the top edge of the brackets. This could scratch the back of your shield, so please check to make sure there is no contact.

To try a different windshield position, bring the motorcycle to a complete stop and out of traffic. Loosen the two knob screws and tilt the windshield forward or back 2-3 degrees or so, and/or adjust it up or down if necessary. Re-tighten the knobs and go for another ride.

Continue experimenting with different positions at different speeds until you find a combination of height and rake angle that eliminates buffeting and gives a smoother ride. You may have more than one favorite position, for example shield tilted forward on cooler days, and shield tilted back for hot days to let more air to your body. Or, if you normally ride with a low-slung solo seat but switch to a taller 2-up saddle with a passenger, you can simply raise the shield an inch or two without changing the angle.

## PIVOT SCREWS

The MadStad mount has a pivot screw on each set of brackets, located near the center of the bottom bracket. A nylon lock nut keeps the screw snugly in place, yet allows the brackets to slide back and forth. It is adjusted at the factory to have a minimum of play yet still allow the brackets to move. Over time it may loosen up a bit so to adjust the tightness of this pivot screw, use the 4mm Allen wrench provided along with a 10mm socket or crescent wrench to make the adjustment. If you tighten the lock nut completely you will not be able to slide the brackets up and down.

## Notes on Windshield Angle

Most windshields work best when set at a 55-60 degree angle. We have provided an angle guide **on the back page of this manual** so that you can check and see if your shield is set somewhere in this range.

To check your shield angle, your bike should be in an upright position either on a center stand or held up by a helper. Set the spine (folded edge) of the manual against the front of the shield. If the large arrow marked 60° is pointing straight up, then your shield is at a 60 degree angle. (See diagram on Page 5.) A little farther back and your angle would be somewhere between 55 and 60 degrees. Anywhere in this range is fine for your initial test ride. You may want the shield at 57-59 degrees when riding solo, but push it to a more vertical angle with a passenger. (A 63-64 degree angle can bump the air up a little higher to clear your passenger's head.)

There are free smartphone apps that turn your phone into an angle finder (inclinometer) so you can see exactly where you're at. You can also purchase mechanical dial angle finders at your local hardware store, but these things are not a requirement. Most riders can find their sweet spot through simple trial and error.

## **Disclaimer**

Neither MadStad Engineering nor its owners shall be liable for any damages, consequential or inconsequential, resulting from the use of our products. Installation of any of our products constitutes acceptance of these terms.

It is the responsibility of the user to make sure all fasteners are tightened securely, the windshield is mounted properly and the adjustment knobs are tightened snugly before putting the motorcycle in motion. MadStad systems ARE NOT intended to be adjusted while the vehicle is in motion; you must pull over out of the way of traffic and come to a complete stop before making any changes. The user must never place the windshield in such a position as to interfere with the safe and complete movement of the handlebars and controls.

## **Returns and Warranty**

MadStad adjustable brackets carry a lifetime warranty against manufacturing defects. This does not include cosmetic issues nor any parts that inherently wear out or degrade over time such as rubber and plastic parts. Windshields, deflectors, and other similar plastic parts are warrantied for 1 year against manufacturing defects, not against cosmetic issues or issues related to normal wear and tear. Please visit our website for further details.

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*Thank you for your support, and ride safely!*

