

# MADSTAD

E N G I N E E R I N G

## Adjustable Windshield System Triumph Tiger 800

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

### What is in the box:

- (1) MadStad adjustable brackets set
- (1) Aluminum mounting plate
- (1) Front support bracket
- (2) Side support bars
- (6) M6 x 12 mounting screws
- (3) M6 x 16 mounting screws
- (7) M6 flat washers
- (7) M6 lock nuts
- (2) 1/4" split-ring lock washers
- (4) M5 x 25 T-Screws
- (4) 3/8L rubber washers (for T-screws)
- (4) soft rubber washers (for T-screws)
- (1) Off-road rear brace



(Actual brackets may be slightly different than shown here.)

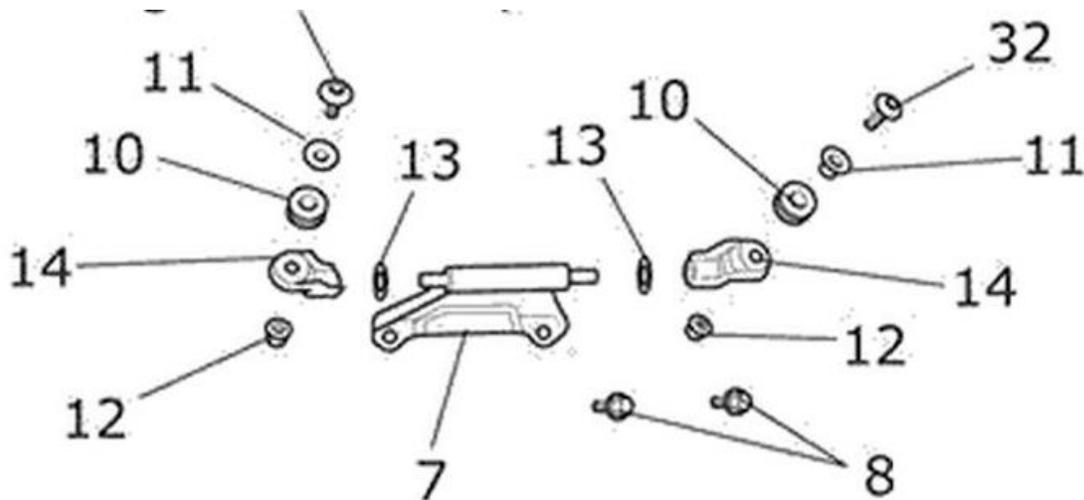
### Side Deflectors:

- (2) Side deflectors
- (4) M5 x 16 T-Screws
- (4) M5 plastic flat washers
- (4) M5 lock washers

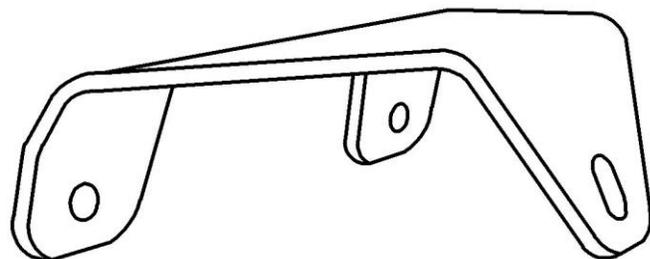
MadStad RoboKnob brackets are designed to bolt to a curved surface like the metal adapter plate included in this kit. The new windshield attaches to the top of the brackets with quick-removal T-screws. Loosening the two adjustment knobs allow you to change the windshield height and tilt without getting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

**You will need to remove your factory windshield, the windshield side supports and the front support bracket.** This kit contains MadStad replacements for all of these items. You will not be able to use your factory windshield with these brackets.

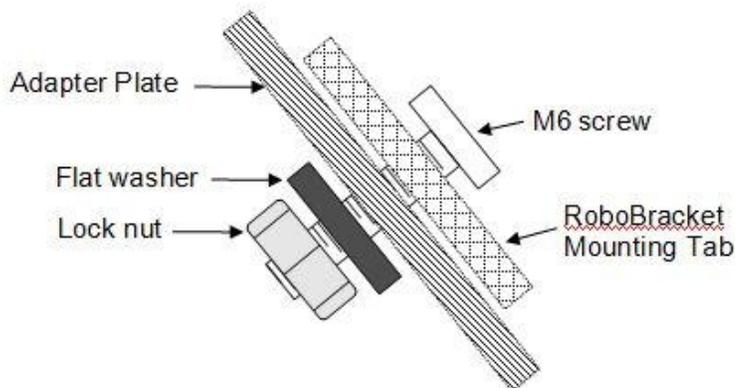
**Step 1:** Install the front support bracket (shown at bottom). It replaces the front factory screen mount which is bolted right in front of the instrument cluster. This is a black metal part with a horizontal tube in the very front, and it holds up the front of the factory shield. (Part #7 in the diagram below.) It is held on by two silver bolts underneath the bracket. (Part #8 in the diagram below.)



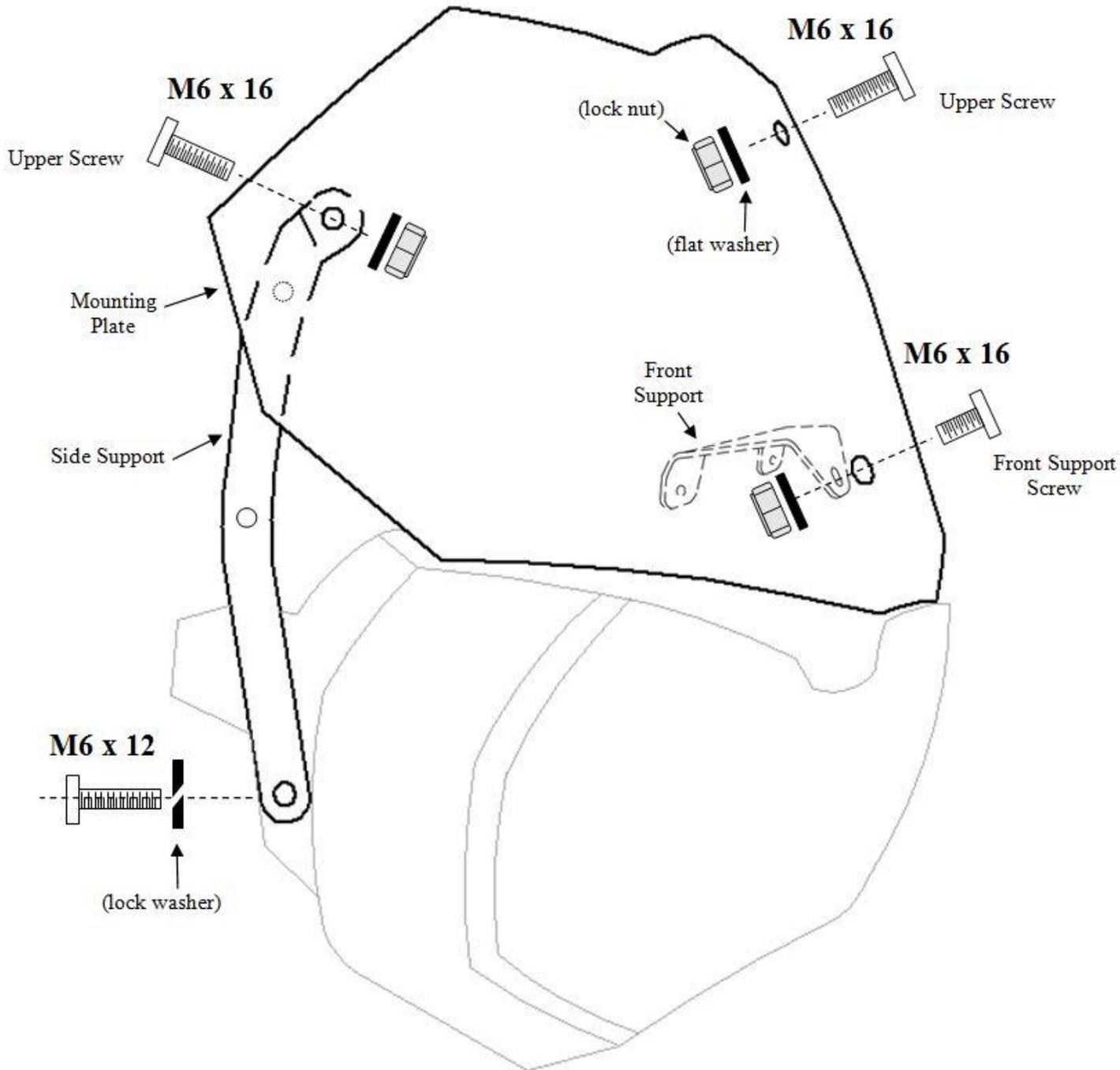
Using an 8mm socket, remove those two bolts and attach this new MadStad replacement bracket in its place using the same factory screws.



**Step 2:** Install the MadStad brackets onto the front of the mounting plate using the M6 x 12 screws with flat washers and lock nuts as shown below. The knobs should be facing inward toward each other and up at the top side of the mounting plate.



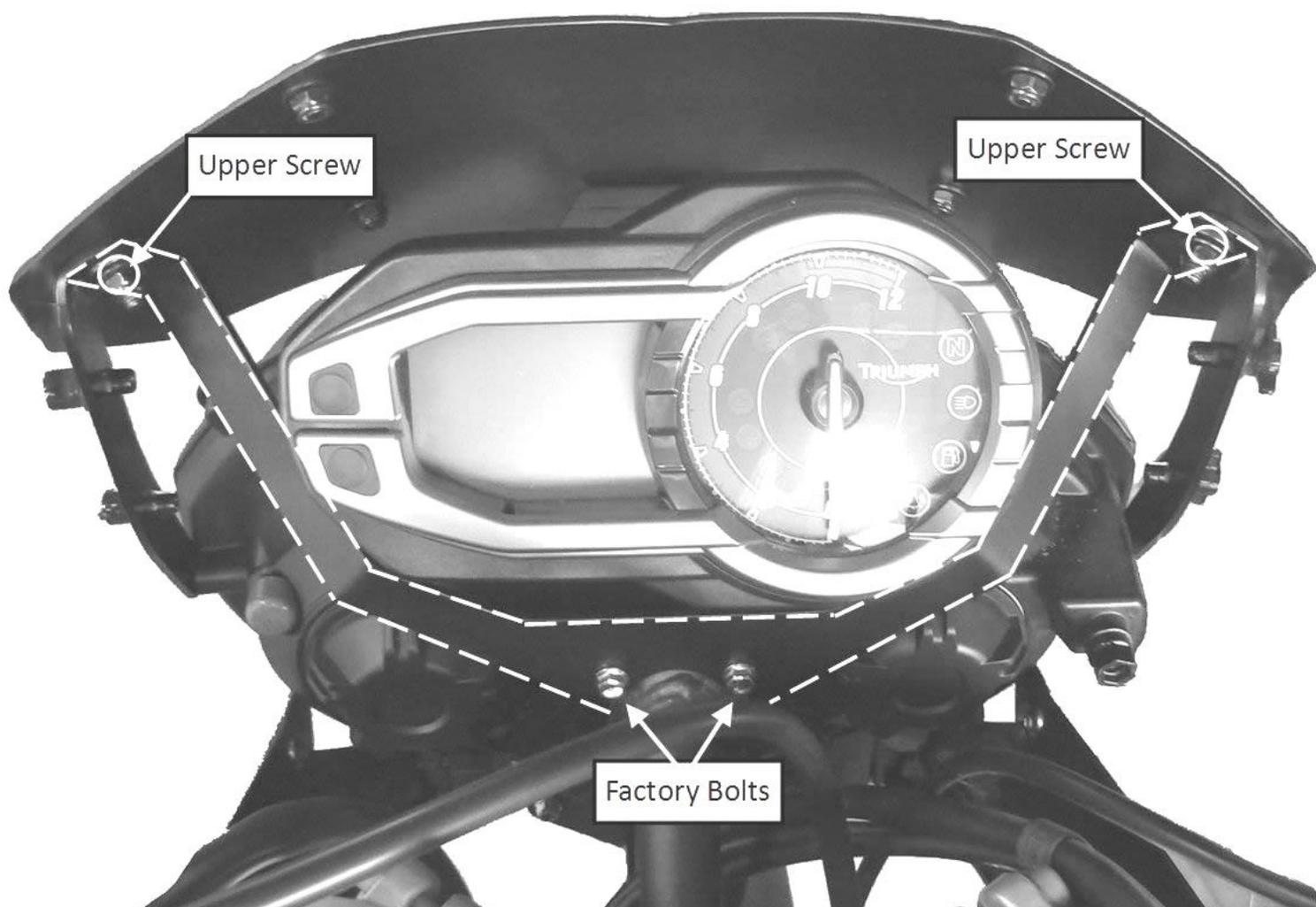
Take a look at the diagram below and refer back to it for Step 3. This shows how the mounting plate (with brackets now attached) will mount to the front of the Tiger 800.



**Step 3:** Install the side supports to the side of the headlight housing using the M6 x 12 mm screws and split-ring lock washers. Don't tighten completely, just enough to hold them place. **NOTE:** The upper part of each side support, the bent mounting tab, should be facing inward toward the center of the bike. (See diagram above).

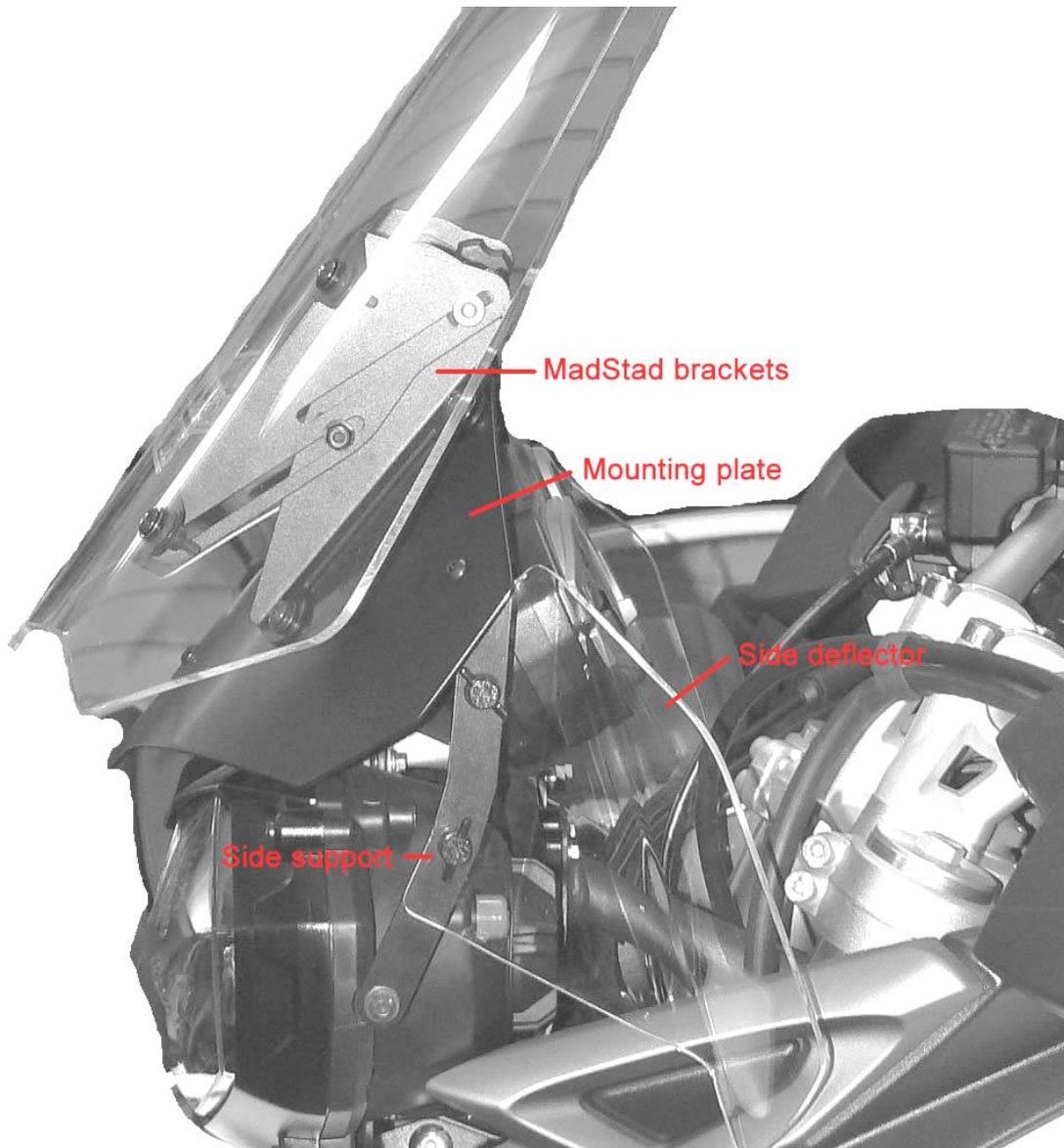
Place the mounting plate (with brackets attached) onto the front support using an M6 x 16mm screw with a flat washer and nut on the back. You don't have to tighten the nut fully just yet, but get it snug so that the bottom of the plate doesn't flop around or slip off. Then, while holding onto the mounting plate, maneuver each side support to match up bent tab hole with the upper holes in the mounting plate. Fasten the two together using the other M6 x 16 mm screws with flat washers and lock nuts. (See diagram on Page 4). **DO NOT TIGHTEN THE TWO UPPER SCREWS YET!**

**Step 4:** The Offroad Rear Brace that came with this kit goes on next. Remove the two factory bolts that are directly below the instrument cluster as shown in the diagram below. Set the brace over these two holes and re-fasten with the same two bolts. Note that the upper arms of the rear brace attach to the back of the mounting plate through the two upper screws that hold the side supports on. If the nuts and flat washers are still on from Step 3, remove them and set the side supports onto the screws, *then* put the flat washers and lock nuts back on and tighten.



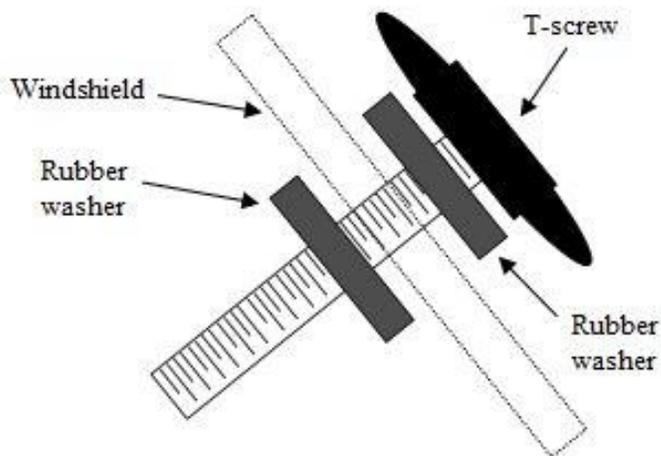
After all of the M6 x 16 screws, nuts and washers are installed and tightened (front support screw and upper screws), make sure the side screws (on the sides of the headlight housing) are snug as well. The final result should look like the image below (rear brace not shown here).

The side deflectors (seen in the photo at right) can be attached to the side supports if desired. They simply screw into the threaded inserts with the T-screws that come pre-installed onto the side deflectors. Make sure they are not touching the bodywork along their bottom edge.



## Windshield Installation

Once is complete, the windshield attaches to the brackets with T-screws and rubber washers as shown at right. Insert all four T-screws and washers into the four windshield holes as shown at right before attempting to attach the windshield onto the RoboBrackets. We recommend that you first install the upper and lower screws on one side, then install the upper and lower screws on the other side. The rubber well nuts are flexible and shield holes are oversized so you can nudge the shield around to align the T-screws with the holes properly.



**DO NOT OVERTIGHTEN THE T-SCREWS!** The rubber well nuts cannot be pulled up out of the brackets, even if they are not tight, so tighten only until the well nuts begin to swell up and the shield is snug against the brackets. Over tightening can damage the rubber well nuts.

## Adjusting the Brackets

The knob screws release the brackets allowing the windshield to slide and tilt. These knob screws must always be tightened securely before riding.

The basic starting position of the windshield should be to angle it about the same angle as your forks (maybe back slightly more), and set the top edge of the shield to be at about your chin level as you look straight ahead. Tighten the knobs and go for a ride to see if the air flows smoothly over 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!

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. Please make sure that you do not set the windshield in such a way as to cause your handlebars or hand guards (if installed) to hit the windshield when turning.

## **Windshield Angle**

Most windshields work best when set near a 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, the 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 somewhere between 55 and 60 degrees. Anywhere in this range is fine for your initial test ride. On some bikes a more vertical angle works better (by deflecting the airflow a little higher) so don't be afraid to experiment later if tilting the shield back doesn't seem to be ideal.

With the proper angle, the airflow should smoothly clear the top of your helmet while you are still be able to see over the top of the shield comfortably.

## **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.

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

