

How to Cut Down Your Motorcycle Windshield: Resources

What follows is a collection of information gleaned from the Aero750 forum and relating to cutting down a motorcycle windshield.

From the Aero750 Forum

At least two Aero750 forum members have cut down their stock or aftermarket windshield; Smylinacha and Btown9. You can contact either through their forum profile for any personal advice and tips.

Smylinacha posted her procedure in post #9378.7 Here's what she wrote:

Post 9378.7 in reply to Post 9378.1

Hi,

I cut mine down on the Aero. You'll need to take the windshield off and do the following - it was so much better!

1. Put masking tape on the outside and inside top third of the windshield.
2. With a ruler, mark the tape for how much you want to cut off - do the mark in the center of the windshield.
3. Then take a tape measurer with the beginning of it on the line where you marked it and w/ a pencil follow the curvature of the windshield - start from the middle, go to the left and then start from the middle again and go to the right.
4. Get the jigsaw out! Have someone hold the shield down with the edge off a table and cut away.
5. Take a belt sander and sand the edges.
6. Take fine sandpaper on a block of wood and find sand the edges.
7. Remove the tape, wash and you're good to go!

Topanga Jack on the forum found the following instruction on the Slipstreamer website:

"How to Trim Windshield

1. Masking tape off both sides of glass with a good masking tape (2" width preferred)
2. Mark your cut line on the tape with a ballpoint pen. (You want the line thin for cutting)

3. Cut plastic with a fine tooth coping saw or band saw. (10-14 teeth per inch) Try to cut outside the line about an 1/8 to 1/16" of an inch.
4. Sand the edges with an 80 grit white sandpaper.
5. Finish sand with a 150 grit white sandpaper.
6. Remove masking tape and check edge for any chips. If you have some, resand with 150 grit paper until gone.
7. Clean shield with water and/or plastic cleaner or polish.

Enjoy the Shield.....Safe riding!

Slipstreamer, Inc."

SA750 Website

The SA750 guys have a good page with info which can be found here:

<http://www.sa750.com/ncshield/cutting/cutshield.htm>

On The Web...

What follows is a text only copy of a "How To" Article from Motorcycle Cruiser Magazine. It is reprinted here for archival purposes in case the link becomes dead in the future. For the original story with photographs go to

http://www.motorcyclecruiser.com/tech/remove_windshield/ or see that embedded .jpg files below.

How to Cut Down Motorcycle Windshields for Safety

Rain, dirt, bugs, fog, and distortion can make your motorcycle's windshield a dangerous optical barrier between you and the road. Here is how to safely and neatly cut it down so you can see over it.

Story and photos by Peter Fassnacht.

Cutting a motorcycle's windshield for height is more than just a matter of comfort and style, it's essential to good visibility. Being able to see clearly is fundamental to the safe enjoyment of motorcycling. And, getting your bike to fit you just right is a rewarding part of the whole motorcycling experience.

There are generally two schools of thought on what constitutes "the right height." You're either a rider who wants to be comfortably ensconced behind a large enveloping view port, or one who appreciates the protection of a windshield but feels most comfortable being able to see over it. (The Motorcycle Cruiser staff falls entirely into the latter camp. We have even been known to cut down an annoying windshield out on the road, as we did with the Yamaha Royal Star Venture's shield on our ride to Alaska.)

Certain weather conditions make looking through a windshield more than a little dicey. Fog and mist can cling to a windshield, blocking essential forward vision and increasing annoying glare at night. My own beef is the triple whammy of riding in the rain in traffic at night. Road spray produced by other vehicles seems to be especially adhesive. And it sticks not just to the front of the windshield but also to the back, so you have two layers of droplets to try to see through.

In heavy traffic, road speeds are not conducive to the natural sheeting effect of water from windblast; the result is impaired visibility when vision is of the utmost importance. When you combine the water on the windshield with water on your face shield or goggles the situation only gets worse.

It's Easy

So, how do you go about cutting a windshield to fit you? It's actually quite simple and can usually be done without removing the windshield from the bike. It's easily accomplished in a small amount of time -- an hour or so -- with tools many do-it-yourselfers already have. As with any modification you make to a motorcycle you should proceed with caution. Since a windshield is an integral part of a motorcycle's aerodynamic package, you may make changes that could influence overall performance. Keep this in mind any time you're making modifications to original equipment or when installing and modifying accessories.

How Much is Enough?

In this case, less is more. There's no need to remove too much material on the first cut. It's easier to try a smaller amount and test it out. Then, if needed, cut some more. Generally, you should be able to see over the upper edge of the shield when seated comfortably. Since there are no hard-and-fast rules, you can try one of the following methods as a guide to determine just how high you want the shield to be.

Immediate path of travel method: Being able to see the roadway in your immediate path of travel means seeing two to four seconds ahead. At 30 mph that translates to 88–176 feet. You can pace this out on the street; pinpoint accuracy is not essential here. We're simply trying to find a comfortable position.

Headlight aiming method: This method can probably be done in your driveway. Find a point that is the same height as the center of your motorcycle's headlight, 25 feet ahead. You can make a mark with tape on any wall and measure out where the motorcycle should be positioned. Where the front tire touches the pavement is a good reference point for your measurement.

Marking method: While riding, note approximately where you are looking through the windshield. Place a piece of tape or draw a line with a grease pencil just below that. The next time you ride, determine whether you are looking comfortably above that line.

Once you've selected a method, sit on the motorcycle in as comfortable a position as possible and carefully mark the new upper edge with something nonpermanent such as a crayon, grease pencil or a piece of masking tape. You're now almost ready for surgery, but we still have to figure out the right shape.

Be the Designer

Unless you have something extraordinary in mind (in which case you're on your own) copying the original shape or curvature of the existing windshield is probably the best way to go. You can do this by making a pattern. To copy the existing shape, place the card stock or art board behind the windshield and carefully trace the upper edge. Cut the card along the line you have traced, and you've got your pattern.

Marking the Windshield

You could just mark the plastic to make your cut, but you'll need to protect it from the inevitable scratches the tools will make. Masking the area that will be cut provides the protection you'll need and an ideal surface to mark the cut line. Mask a large enough area to cover where the new cut will be plus a little beyond, this will keep the jigsaw base from scratching the plastic. Avoid using something like duct tape because some tapes use solvent-based glues that could damage the surface of the plastic. Mask both the front and the back of the shield.

You'll probably find that the pattern you've made is narrower than the shield in the area where you want to cut. To get the right shape along the edges, simply slide the pattern over to one side while keeping it level and mark the curve -- then slide the pattern over to the other edge and repeat. There should be plenty of overlap in the center to complete the top edge. When you're happy with the line you've marked, you're ready for surgery. If not, retape and mark again.

No Looking Back!

You have reached the point of no return -- it's time to make the cut. The usual advisories about using power tools apply here. Start with the manufacturer's instructions, they usually include valuable information beyond the legalese. Eye protection is a must, and try to come out of this with your fingers intact!

The instructions will also provide helpful hints about the type of blade to use and, if your saw has variable speeds, the right choice for plastic. Now's the time to drape the sheet over your motorcycle; it will make clean-up a breeze. Begin making your cut at one edge. Right-handed people will find it easier to cut from right to left. Make a smooth cut by applying steady pressure but don't try to go too fast. You're trying to cut the plastic, not burn through it.

Care at this stage will reduce the amount of work necessary to finish the edge later. Keep the saw base flat against the taped surface and hold the plastic with your free hand to minimize vibration.

File the Edge

When your cut is complete, it's time to finish the edge. Resist the urge to remove the tape at this stage because it will continue to help prevent scratches from misplaced filing and sanding. The first stage of finishing the shield's new top edge is to remove any saw marks and smooth out undulations in the cut. You can do this using the flat file and making long strokes along the edge. When you are satisfied that your newly cut edge is smooth, round it slightly. Use the existing edge from the section that you've cut from the windshield as a guide for the shape. After the filing is complete it's time for sanding and polishing.

Sand and Polish the Edge

A block sander is ideal for this next step because it's easy to handle and change sanding papers. Begin with a coarse or medium paper. A general-purpose or wood sanding paper is all you'll need. As the edge gets smoother, switch to finer grades of paper until you've polished the edge to a finish that is similar in smoothness to the original. You should be able to reach this level of smoothness with extra-fine grade or 220-grit paper. Again, use the original part as a guide for shape and final finish. Wipe the edge clean and use a plastic cleaner/polish to complete the job.

Sure you can use power sanders for finishing the edge. But remember, these tools were made to remove materials easier and faster. They can help you make mistakes more quickly too!

Remove the sheet and dust from the motorcycle, and you're ready for a post-operative test ride.

Cutting a windshield is a relatively easy modification that can help you see properly in all conditions. In the end you will have the satisfaction of customizing a bike to your personal specifications while making it safer, too.

Plastic Surgery

A simple procedure that can make your bike safer and more comfortable—especially on a rainy night

STORY AND PHOTOS BY JOHN BINGHAM

CUTTING A WINDSHIELD FOR HEIGHT is more than just a matter of comfort and style; it's essential to good visibility. Being able to see clearly is fundamental to the safe enjoyment of motorcycling. And, getting your bike to fit you just right is a rewarding part of the whole motorcycling experience.

There are generally two schools of thought on what constitutes "the right height." You either ride who want to be comfortably enclosed behind a large enveloping view port, or one who appreciates the protection of a windshield but feels more comfortable being able to see it.

Certain weather conditions aggravate windshield use. Fog and rain are being in a windshield, blocking essential forward vision and increasing annoying glare at night. Fog also has the unpleasant whyness of riding in the rain in traffic or night. Road spray produced by other vehicles seems to be especially adhesive. In heavy traffic and speeds are not conducive to the natural shattering effect of water from windshields, the result is impaired visibility when vision is of the utmost importance. When you combine the water on your face shield or goggles, the situation only gets worse.

So, how do you go about cutting a windshield to fit? It's actually quite simple and can usually be done without removing the windshield from the bike. It's easily accomplished in a small amount of time—an hour or so—with tools many do-it-yourselfers already have. As with any modification you make in a motorcycle, you should proceed with caution. Since a

windshield is an integral part of a motorcycle's aerodynamic package, you may make changes that could influence overall performance. Keep this in mind any time you're making modifications to original equipment or when installing and modifying accessories.

WHAT YOU'LL NEED
This photo shows the basic tools needed for windshield surgery.

- Masking tape to protect the plastic surface from unwanted scratching during the procedure.
- A piece of card stock to improvise a guide to correct the upper portion of the windshield; a marker and a pair of compasses.
- An electric scribe and a general-purpose blade (or one made for cutting plastic).
- A flat file and selection of sandpaper up to at least 220-grit (extra-fine).
- Plastic cleaner/polish.
- A sheet of soft cloth to cover the motorcycle.



HOW MUCH IS ENOUGH? In this case, less is more. There's no need to remove too much material on the fine cut. It's easier to try a smaller amount and cut it out. Then, if needed, cut some more. Generally, you should be able to see over the upper edge of the shield when seated comfortably. Since there are no hind and-for-tens, you can try one of the following methods as a guide to determine just how high you want the shield to be.

Immediate path of travel method: Being able to see the roadway in your immediate path of travel means seeing two to four seconds ahead. At 30 mph that translates to 88-176 feet. You can pace this out on the street; pinpoint accuracy is not essential here. We're simply trying to find a comfortable position.

Headlight aiming method: This method can probably be done in your driveway. Find a point that is the same height as the center of your motorcycle's headlight, 25 feet ahead. You can make a mark with tape on any wall and measure out where the motorcycle should be positioned. Where the front size touches the pavement is a good reference point for your measurement.

Marking method: While riding, note approximately where you are looking through the windshield. Place a piece of tape or draw a line with a grease pencil just below that. The next time you ride, determine whether you are looking comfortably about that line.

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Once you've selected a method, sit on the motorcycle in a comfortable position as possible and carefully mark the new upper edge with something nonpermanent such as a crayon, grease pencil or a piece of masking tape. You're now almost ready for surgery, but we still have to figure out the right shape.



YOUR TURN TO BE THE DESIGNER

Unless you have something extraordinary in mind in which case you're on your own copying the original shape or curvature of the existing windshield is probably the best way to go. You can do this by making a pattern.

To copy the existing shape, place the card stock or art board behind the windshield and carefully trace the upper edge. Now cut the card and you've got your pattern.



MARKING THE NEW LINE

You could just mark the plastic to make your cut, but you'll need to press it from the interior scratch that the tool will make. Marking the area that will be cut provides the protection you'll need and an ideal surface to mark the cut line. Mark a large enough area to cover what this new cut will be plus a little beyond, this will keep the scribe from scratching the plastic. Avoid using something like duct tape because some tapes use glass-bead glass that could damage the surface of the plastic. Mark both the front and the back of the shield.



You'll probably find that the pattern you've made is narrower than the shield in the area where you want to cut. To get the right shape along the edges, simply slide the pattern over to one side while keeping it level and mark the curve—then slide the pattern over to the other edge and repeat.

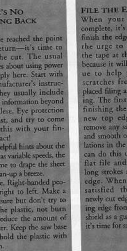
There should be plenty of overlap in the center to complete the top edge. When you're happy with the line you've marked, you're ready for surgery. If not, reshape and mark again.

THERE'S NO LOOKING BACK NOW!

You have reached the point of no return—it's time to make the cut. The critical advice about using power tools apply here. Start with the manufacturer's instructions; they usually include valuable information beyond the legend. Eye protection is a must, and try to control this with your fingers!

The instructions will also provide helpful hints about the type of blade to use and, if you can't find suitable words, the right choice for plastic. Now's the time to shape the sheet over your motorcycle; it will make shaping a breeze.

Begin making your cut at an edge. Right-handed people will find it easier to cut from right to left. Make it smooth as by applying steady pressure but don't try to go too fast. You're trying to cut the plastic, not burn through it. Care at this stage will reduce the amount of work necessary to finish the edge later. Keep the saw base flat against the taped surface and hold the plastic with your free hand to minimize vibration.

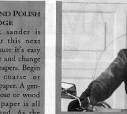


FILE THE EDGE

When your cut is complete, it's time to finish the edge. Resist the urge to remove the tape at this stage because it will continue to help prevent scratches! From this point, filing and sanding. The first stage of finishing the shield's new top edge is to remove any saw marks and smooth out any irregularities in the cut. You can do this using the flat file and making long strokes along the edge. When you are satisfied that your newly cut edge is smooth, round or slightly. Use the remaining file from the second side; you're not cutting from the shield as a guide for the shape. After the filing is complete it's time for sanding and polishing.

SAND AND POLISH THE EDGE

A block sander is ideal for this next step because it's easy to handle and change grinding papers. Begin with a coarse or medium paper. A general-purpose or wood sanding paper is all you'll need. As the edge gets smoother, switch to finer grades of paper until you've polished the edge as a finish that is similar in smoothness to the original. You should be able to reach this level of smoothness with extra-fine grade or 220-grit paper. Again, use the original part as a guide for shape and final finish. Wipe the edge clean and use a plastic cleaner/polish to complete the job.



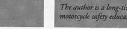
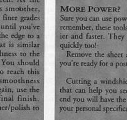
MOBE POWER

See how easy power sanders for finishing the edge. But remember, these tools were made to remove materials, not to sand. They can help you make mistakes more quickly too.

Remove the sheet and dust from the motorcycle, and you're ready for a post-operative test ride.

Cutting a windshield is a relatively easy modification that can help you see properly in all conditions. In the end you will have the satisfaction of maintaining a bike in your personal specifications while making it safer, too.

The author is a long-time motorcyclist with a background in motorcycle safety education.



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