

Mazda MX-5 Miata RF (ND) Carbon Fiber Top Finish Plate



Thank you for purchasing DFWcomposites' real carbon fiber Top Finish Plate for the MX-5 Miata RF, which are hand made in Dallas, Texas, USA. This panel is meant to be a direct replacement for Mazda part number N248-R1-9E0. The panel is made using the vacuum infusion process to create a strong and light carbon fiber and epoxy composite that exhibits the impressive structural and cosmetic qualities that you'd expect to find on a supercar, and also feature a 'core material' to create a cored composite, a particularly complex form of a composite part.

Installation Summary: The original top finish plate is attached to the car using 2 bolt/nut attachments, a seam of industrial double sided tape along the front edge, and then three locating clips that are used for factory alignment. Our replacement carbon fiber top finish plate (henceforth "plate" or "panel") will be attached with a similar bolt/nut combination and double sided tape seam, with alignment handled by included, disposable spacers. The original panel will be unbolted and removed, the bond line cleaned, and then the new bonding hardware attached along with the spacers; the carbon panel will then be bonded to the car.

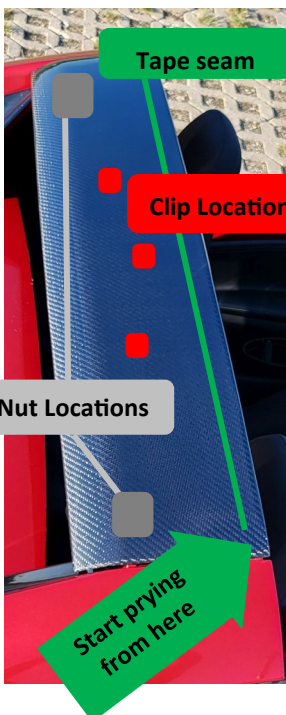
*(Note: the industrial foam tape used as part of the mounting process must be applied in temperatures of above 50F/10C to properly adhere. Additionally, this tape builds strength over time and this period is lengthened the colder it is. For instance, if it is 100F, the tape will reach full strength in a few hours; if it is 50F it may take days. Once full strength is achieved, the tape can operate in any temperature. **Do not perform this installation in lower than 50F/10C environments**, and please allow for at least 24hrs for the tape to build suitable strength before driving your Miata if you are in a lower temperature (50F-70F/10C-21C) environment.)*

In the box, you'll find:

- A carbon fiber top finish plate
- 2x plastic brackets with a bolt, washer, and nut each (these are universal and can work on either side of the car)
- 4x double sided foam tape strips
- 4x plastic spacers/shims (the tetris-piece looking items.)
- 2x felt pads with adhesive backing

You'll also need:

- A stiff plastic card, like a credit card
- Box Cutter or Razor Blade or Blade Scraper
- Soapy water & rubbing (isopropyl) alcohol
- Towels
- Masking Tape
- 4x Spring Clamps ([Harbor Freight](#) and [Amazon](#))
- 10mm socket and ratchet



Step 1: Retract the RF roof. Remove the two vinyl caps in the interior of the car hiding the nuts that fasten the top panel to the car. Remove both nuts using a 10mm socket. Take extra care not to drop these as they risk falling back into the folding roof housing.

Next, use a credit card or similar to pry into the tape line and break it across its length. The tape is quite strong and you should expect this to take 5 minutes of reasonable effort. Drag/force the credit card through the tape to break it open. 3 locating clips will also need to be popped loose as you pry the panel up, but these will generally release themselves in the process of prying the panel off from the tape seam.

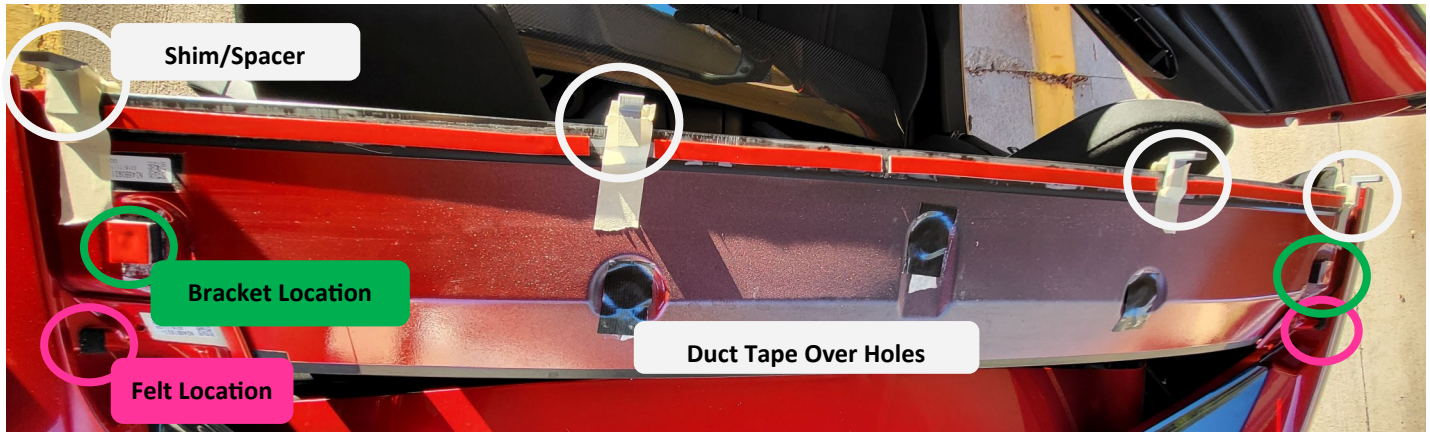
Once the tape seam has been fully released, remove the panel. Begin cleaning the tape bond line by using a razor blade to remove any remaining bulk tape and residue. Place a blade at a shallow angle to remove the bulk tape, and once all of it has been removed, place the blade perpendicular to the body and scrape along it to remove any residue. It is OK to scrape off any paint here with your blade; the body structure is plastic and it will not corrode.

Once the tape residue has been removed, clean the bond line with soapy water to remove any soiling, and then with isopropyl alcohol.

(Image left: diagram of the various attachment points on the original top panel; image right: nut hole location example.)



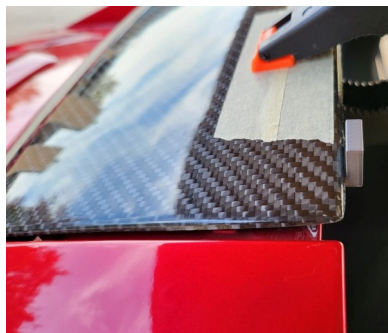
Step 2: Wrap the small standoff/nub protrusions with the adhesive backed felt (see photo.) Install the included brackets (that look like wedges) into the holes vacated by the bolts from the original part. *Do not remove the tape release liner yet.* The two parts are identical, but each side should be oriented so that the shallow/short side of the wedge faces the outside/doors of the car. From the inside, secure these two brackets with the washer and nut. Take care not to drop these as before since they may be hard to recover! You can hold the nut/washer stable and use the bracket the “screw” into them for the initial threading. *Only torque to just a touch more than finger tight!* After torquing, ensure that the alignment has been maintained and that the shallow side faces outwards. Replace the nut hole covers in the interior.



Step 3: We'll now install the spacers and tape. Starting just outside of the black tape bond section of the roof, place a spacer and use a piece of masking tape to loosely hold it in place. It is important to place the tape similarly to what is shown in the photo, as these spacers will need to be pulled out later. Next, take a double sided tape segment and place it on the black bond area, aligning it roughly in the middle. After the first tape segment is placed, insert another spacer (not on top of the double sided tape) using masking tape. Next repeat this procedure on the other side of the car. All four spacers and two foam tape segments should now be in place.

Use the last two foam tape strips to fill in the center span of the bonding area; you will have a small remaining amount of tape (do not overlap the tape.) Use a short strip of duct tape to cover the 3 locating clip holes.

Step 4: Without removing any of the foam tape release liner, practice positioning the carbon fiber panel onto the roof, and use the spacers as the 'front stop'. Use 1 spring clamp at either end of the panel for positioning (be sure to apply masking tape to the panel to protect it from scratches!) and try to practice drop the part into place and aligning it. Once comfortable, remove the panel, and then remove the release liner from the 4x tape strips and 2x brackets. Place the carbon panel into position and use the spring clamps to align it—the spacers should prevent contact at the front bond line, but you'll need to remember to 'lift' the rear of the panel during initial positioning so that the foam tape on the brackets doesn't take hold until the final position is achieved. Once satisfied with the position, begin pulling the shims out and clamping the part to the foam tape line.



Left: Detail of the carbon panel sitting on the shims while aligning. The front edge of the panel and the car body should be co-linear.



Right: Detail of the shim placement and orientation, install bracket (with shallow side facing the camera/ outside of car), and felt pad.

Step 5: The panel should now be installed. With your hands, firmly press the panel into the tape seam to promote adhesion. Apply as many clamps as possible across the front edge. Using body weight, press the panel into the 2 bracket locations to promote adhesion. Let the clamps remain for at least 30 minutes, and ideally longer if possible (see note at the beginning regarding temperature and tape adhesion.) Once you've allowed for dwell time for the tape bonding, test adhesion by attempting to pry the panel up. You should not be able to move the panel easily.

That's it! The panel is now installed. You can care for the panel as you would a normal painted car body panel—wash it as your normally would the rest of your car, and feel free to apply any normal waxes or perform polishes on it as you would any other automotive clear coat.