Mazda MX-5 Miata RF (ND)
Carbon Fiber Outer Panel Garnish

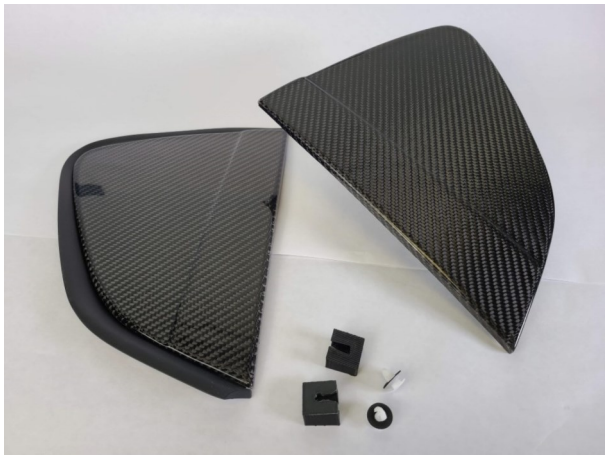
Thank you for purchasing DFWcomposites' real carbon fiber outer panels for the MX-5 Miata RF, which were hand made in Dallas, Texas, USA. The panels are meant to be a direct replacement for the plastic pieces in Mazda part number NA2E-R1-9E0 (right/passenger) & NA5J-R1-9E0 (left/driver.) The panels are 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 replace the easily scratched and often cracked plastic panels that come on the stock ND RF.

Installation Summary: This will be one of the easier upgrades that you've done to your MX-5 and should take less than an hour. Each individual original plastic panel and gasket set (each set falls under a single Mazda part number) is attached to the car via two plastic clips and an industrial double sided tape. The plastic panel + gasket combination will be removed from the car, and then the gasket will be transferred from the original part to the new carbon fiber panel and adhered to it using the included double sided tape. A new clip set will then be mounted to the car, and the new carbon fiber panel + gasket will then be attached to the car.

(Note: the industrial 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.)*

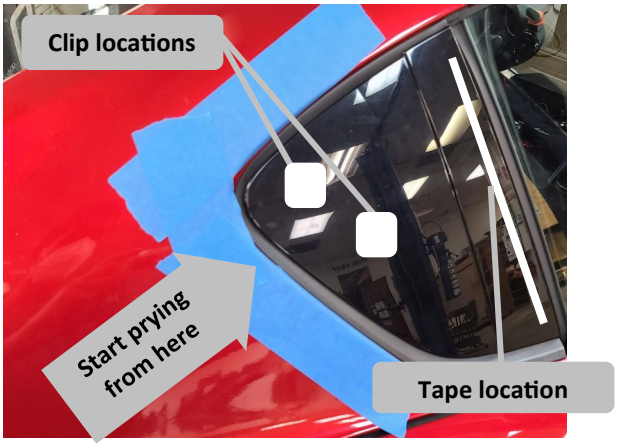
In the box, you'll find:

- A pair of carbon fiber panels.
- 4 unique plastic brackets with tape, labeled RT, RB, LT, LB
- (Right Top, Right Bottom, Left Top, Left Bottom. Left indicates the LHD USA driving side of the car.)
- Tape strips (to re-attach the gasket to the car body.)



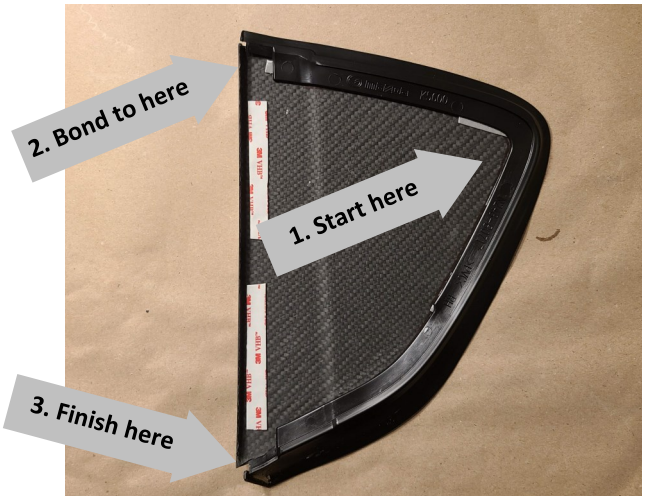
You'll also need:

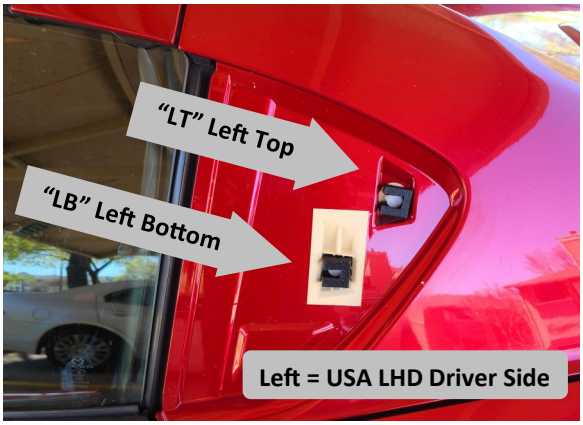
- A plastic pry tool (or a flathead screwdriver that is wrapped in paper towels and masking tape.)
- Soapy water
- Rubbing (isopropyl) alcohol
- Towels
- Masking Tape
- The original gaskets from your Miata.



Step 1: Apply masking tape as shown to protect your car's paint. Remove the original plastic panel and gasket by inserting a pry tool between the gasket and the plastic panel to release two clips. Once the two clips have released, gently continue to ease the plastic panel from the top front then working downwards to release the semi-permanent tape. *Exercise caution when removing the plastic panel, as the panel may be brittle and is prone to cracking or shattering if too much or uneven force is applied.*

The gasket is attached to both the plastic panel and the car and should be removed along with the panel. If the gasket releases from the panel and stays adhered to the car, this is fine, simply remove it from the car after removing the panel.





Note that the open side of the clip is facing forward.
(Adhesive tape removed from brackets for demonstration.)

Step 2: The original gasket material will now need to be transferred to the new carbon panel. Remove it from the original panel and clean it of any tape. Wash the gasket with dish soap and water to clean the surface and then dry it. Apply the loose tape length to the gasket in the same position as the gasket-to-body tape.

Step 3: Test fit the gasket before removing the release liner from the industrial tape. The original gasket may have shrunk over time and may need to be stretched when re-applying it. Working indoors for optimal temperature and starting at the rear corner/apex section, fit the carbon panel into the gasket's groove. Next, work the shorter top section by continuing to fit the panel into the gasket's groove. Repeat on the bottom. When ready, remove the liner from the tape near the apex, and repeat the process for real. Remember to stretch the gasket if necessary while progressing down the length and bonding it to the tape, which will act as an anchor as you stretch the gasket. Once fully applied, firmly press and massage the gasket into the tape to promote adhesion.

Step 4: Remove any of the original tape that might remain off of the car. Wash the surface of the body with soapy water, dry it, and then additionally wipe over the bond areas (where the tape will adhere to the car) with alcohol. Remove the clips from the original panel and insert them into the new brackets. Pop the brackets into the mounting locations, with the "open" side of the bracket facing towards the front of the car. The brackets are labeled as e.g. "LT" = "Left Top".

(If the clips are broken, new ones can be purchased from a Mazda dealer using part # N248-R1-997.)

Step 5: Now for the fun part! Test fit/align the panel over the car with the tape's release liner in place. When ready, remove the tape liner from the panel and brackets and then press the part in. Press firmly on the tape bond lines to promote adhesion. The gasket tape liner can now be removed and that section adhered too.

That's it! We hope you enjoy the extreme cosmetic upgrade that these carbon panels offer. The MX-5, and especially the RF, is a beautiful car, but we felt that the original plastic panels were definitely a weak point and were begging to be made in carbon.

How to care for your part: the panel is finished with an automotive clear coat, similar to what covers the rest of your car's body. The same treatment that you do to your car can be done to the surface of these carbon parts. Feel free to wash, wax, polish, or seal these carbon beauties as you do the rest of your Miata.

If you're interested, here's a bit more about how the panels were made. These composite parts were made using the "VARTM-Lite" (vacuum assisted resin transfer molding, lite) process, commonly referred to as vacuum infusion. It involves laying raw carbon fiber fabric into a mold along with resin transfer consumables, and then applying a vacuum. Next, resin (liquid plastic) is introduced into the part and "sucked in" via the vacuum inside of the mold (technically, atmospheric pressure pushes the resin into the part so that the resin occupies the void left by the vacuum) which leads to a perfectly wetted out and proportioned carbon fiber reinforced plastic part. The part is then trimmed, sanded, and finished with a high quality clearcoat.

Hopefully you're impressed by the OEM fit, too: we 3D-scanned the original part into a CAD environment, which results in a point cloud, from which a surface is generated. A composites-production optimized body was then created off of this surface, and then that body was CNC routed into a male positive "plug". A mold was then made off of this plug, and then the process above could begin. Now you know why fighter jets and Koenigseggs take so long to make!

Have any questions? Shoot a message to us at *support@dfwcomposites.com* or follow up in our forum.miata.net thread.