

Flyin' Miata

Paco Motorsports Strong Arms 13-7101X



Thanks for purchasing our Strong Arms. These braces reinforce the frame horns that support the engine and transfer all of the cornering and road impact loads into the rest of the chassis. This means that you'll get less flexing and cowl shake, especially when running stiff springs and/or high torque engines. If you have any suggestions or questions on the parts or instructions, please don't hesitate to get in touch.

WARNING: Not everyone can perform every installation. It is critical that you be honest with yourself in regards to your ability. We're more than happy to help, but there are only so many things we can do from the other end of a phone / computer. If in doubt, discuss the install with us before you dive in. Improper installation could cause injury and / or death!

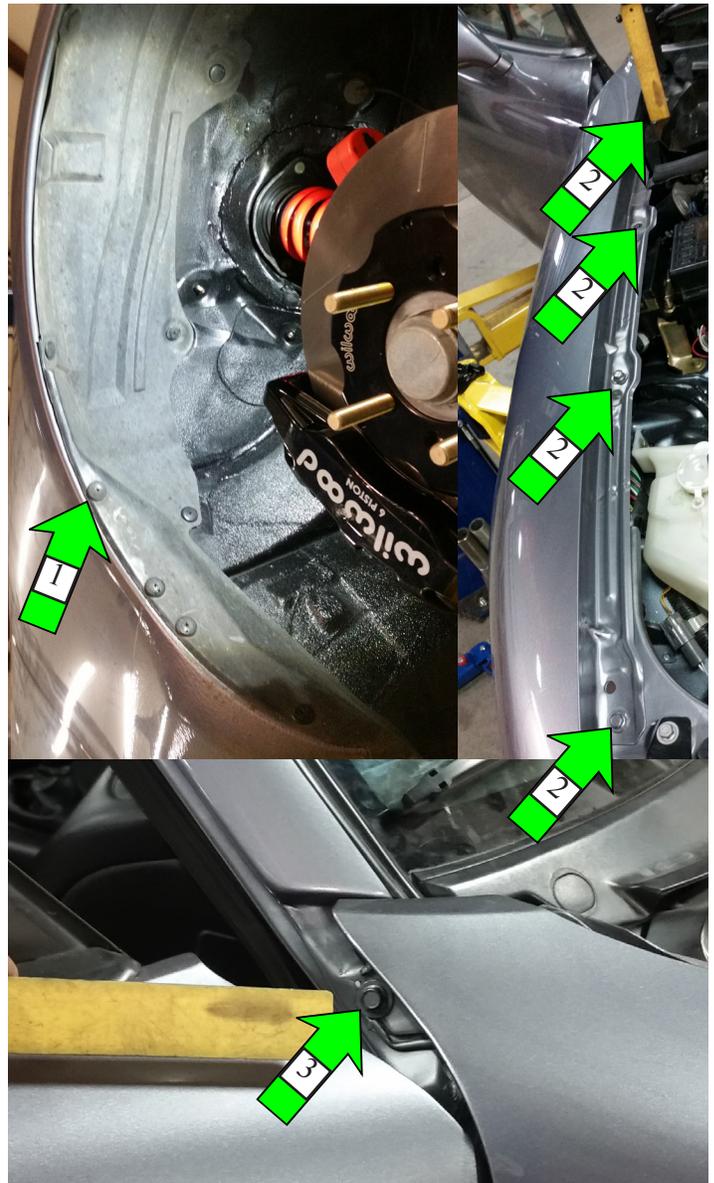
Required tools:

- Metric socket set
- Long extension
- Phillips-head screwdriver

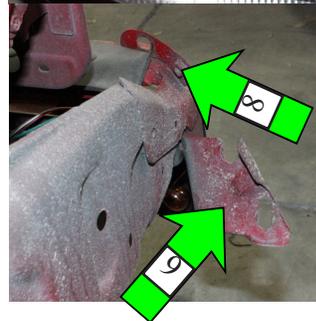
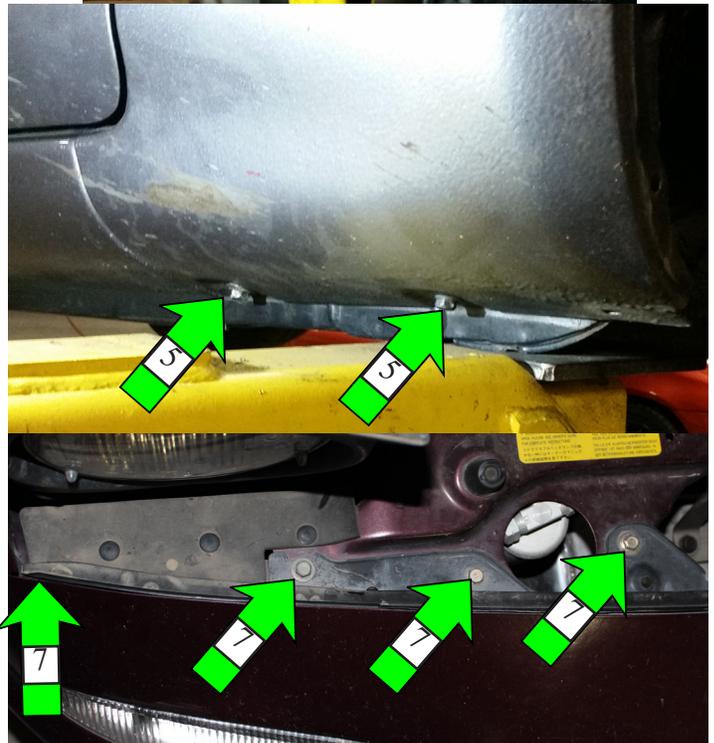
Torque specs

- Door hinge bolts: 14-21 ft-lb

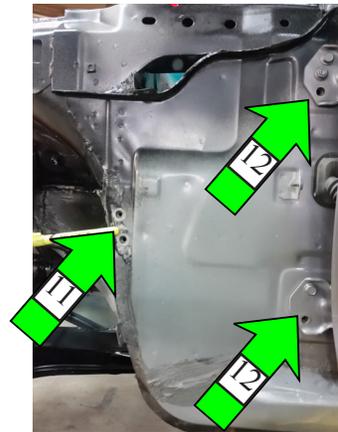
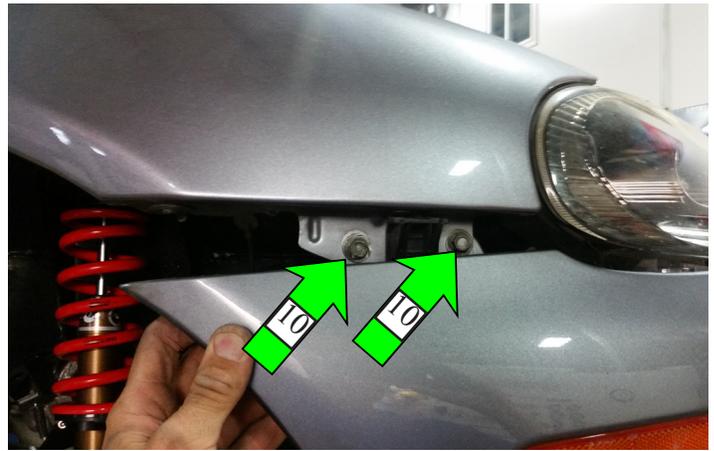
1. Set the parking brake, support the front of car on jack stands and remove the front wheels. Open the hood and pop up the headlights on NA Miatas.
2. Remove plastic fender inner-liner by removing Phillips screws and pulling plastic fasteners (1) from liner and unibody. NA liners are fairly small, NB liners are fairly big - follow the liners around to be sure you get all of the fasteners. NBs also have two liners in each wheelwell - you'll need to remove the upper fasteners on the lower liners, but the entire liner won't need to be removed.
3. Remove the five 10mm hex, M6 screws from top of each fender (2). There is another one hidden at the top rear of the fender, accessible by opening the door slightly (3).



4. There is a 10mm hex nut on the inside of the fender near the door hinges on each side (4). This will require a long socket extension to reach from inside the wheel well. Loosen this nut, as it doesn't need to be completely removed. The fender is slotted to allow easier removal and installation.
5. There are two 10mm hex screws to remove on the bottom of each fender behind the front wheel under the rocker panel (5).
6. Remove the vertical screw holding the forward-most edge of the wheel opening to the bumper (6).
7. **NA ONLY:** The last three fasteners are a bit difficult to remove, you will need to remove a few screws along the front nose where the hood closes and around where the headlight lids close on the NA Miatas (7). One is positioned horizontally and is hidden under the rubber flap (indicated by outboard-most arrow). There is a hidden 10mm hex nut at the extreme top front of the NA Miatas that will be accessible once you loosen and pull away the front nose (8). The bolt head is on the side opposite the camera.
8. **NA ONLY:** There are two M6 fasteners (10mm hex) inside the front of the fender that need to be removed (9).



9. **NB ONLY:** Pull the rear corner of the bumper down enough to expose the two bolts (10). Remove these bolts
10. Carefully pull the fender skin from the car and set aside. There will likely be road debris to clean out at the rear of the fender in the rocker panel area.
11. Remove the two 10mm hex M6 screws from the rear of the wheel arch in the unibody (11). They will be covered with paint and fairly thick undercoating.
12. With the door fully closed, remove the four door hinge bolts from the car (12). **DO NOT OPEN THE DOOR AGAIN UNTIL STEP #18!!**



Refer to the picture on the cover page and the next page for the following steps

13. If removing the fender exposes a black wiring loom, your car has an airbag sensor in the fender. Trace the loom under the hood to the orange and blue connector. Disconnect this and pull the loom out of the chassis to allow installation of the braces. The connector comes apart in a specific sequence (orange is first off and last back on), but it's pretty straightforward.
14. Place the new brace on top of the door hinges, and replace the original bolts with the longer M8x30mm flange bolts and flat washers included with the kit. Snug these bolts but do not fully tighten ANY screws until ALL screws are in place.
15. Install the two supplied M6 x 30mm screws with fender washers into the unibody in the holes where you removed the screws in step 11. Tighten screws one at a time until brace is fully pulled into unibody. **DO NOT OVERTIGHTEN!**
16. Install the M10x30mm flange bolt in the top rear hole of the brace, and use the supplied "tab nut" on the backside of the factory sheet metal in the cowl area.
17. There are two M8 screws, washers, and locking nuts that need to be installed on each side toward the front of the brace and car. Using the most accessible and EXISTING holes, open up the existing holes in the factory sheet metal using a 3/8" drill bit, or drill NEW holes in those areas as necessary. This should be an obvious, relatively minor modification required before you re-install the fender skin. **BE CAREFUL DRILLING IN THIS AREA!!!** There are wires and cables behind the sheet metal that could be damaged!! Paint the raw edges to ensure nothing rusts.

18. With the help of an assistant, position the door with a small amount of “lift” at the latch side when you tighten the topmost and bottom-most door hinge bolts. Adjust the door position until satisfactory. When it’s decided that the door shuts easily and smoothly on its latch without an excessive amount of force, proceed to fully tighten all four of the hinge screws to 14-21 ft-lbs.
19. Tighten the remaining bolts and use the supplied plastic acorn nuts on the two M8 bolts under the hood on each side. These will help protect nearby wiring and/or cables.
20. Slip the airbag wiring back into place. Squeeze it through the hole it came out of, reinstall the grommet, and plug it back in.
21. Fender skin and liner installation is the reverse of removal.
22. Complete the same steps for the opposite side.
23. Go enjoy your newly stiffened car!

