

## MX-5 Miata ND- Front Sway Bar Installation Instructions

### Installation Notes:

The sway bar shown in some of the following instructions is a prototype bar (painted white), the actual Racing Beat sway bar is painted red.

Before you start the installation process, please read through ALL the following steps thoroughly.

1. Jack up the front of the car and place on safety stands. DO NOT work under a car supported only by a jack! Remove the front wheels.
2. Remove the forward plastic panel within each wheel well. (4 screws, 8 plastic fasteners per side)
3. Remove the central plastic splash pan.
4. Remove the end links from the sway bar ends. Swing the end links out of the way. If the end link stud rotates with the nut, insert a 5mm hex wrench into the end of the end link stud and hold to prevent the link from rotating, and then loosen the nut with an open end wrench.

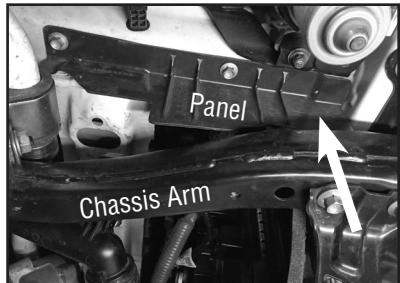


Photo 1

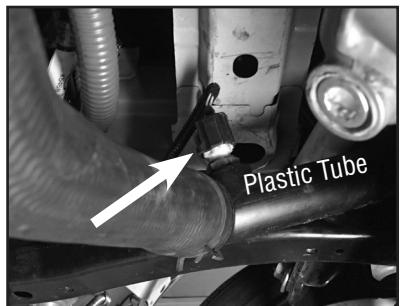


Photo 2

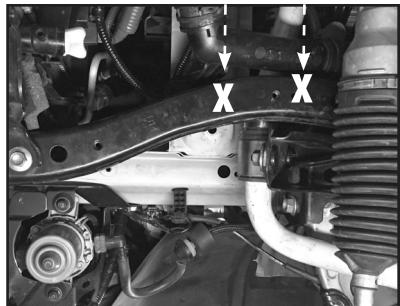


Photo 3

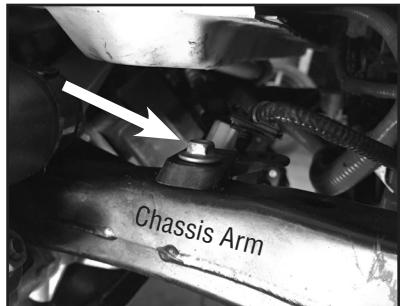


Photo 4

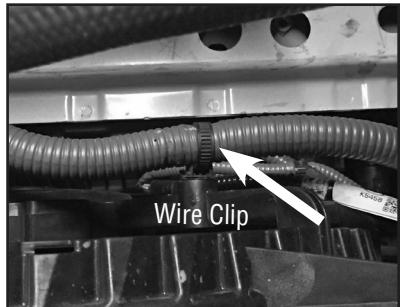


Photo 5

### Preparation

The following steps are intended to improve access within the immediate area of the sway bar to facilitate the remove/installation process.

5. Locate the plastic splash panels (1 on each side) positioned just forward of the sway bar mounting brackets. Remove the retaining bolts (2) from each panel. Photo 1
6. Unplug the electrical connector from the water temperature sensor located in the plastic hose unit attached to the chassis. Photo 2 (This plastic hose connects the flexible lower and upper radiator hoses together.)
7. Using a 10mm open end wrench, remove the two (2) bolts that secure the plastic hose unit to the chassis. Photo 3 (Locations marked with X as seen from directly below.) The forward bolt can be easily accessed and removed, the rearward bolt is more difficult to reach but can be accessed by reaching UP from the inboard side of the chassis - Photo 4.
8. Open the wire loom retaining clip on fan shroud; allow the wire loom to hang freely - Photo 5. Open the large plastic retaining clamp around the lower radiator hose and allow the hose to hang freely of the clamp.
9. Remove the passenger side LOWER radiator metal retaining bracket - 2 bolts. Photo 6
10. Remove the passenger side CENTER radiator plastic retaining bracket - 1 bolt. Photo 7

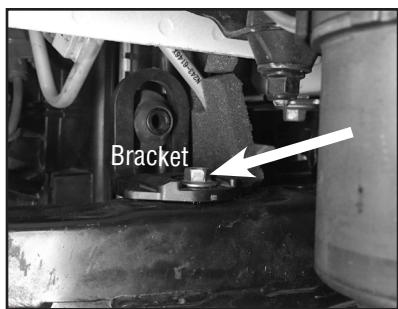


Photo 7

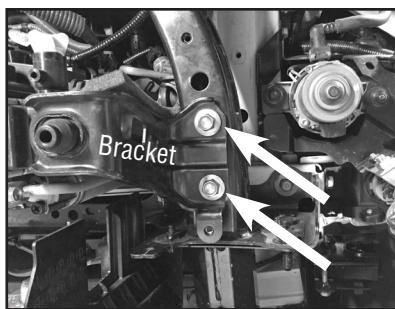


Photo 6

## Sway Bar Removal

During these steps it is important to pay attention to BOTH ends of the sway bar during the removal process. Take care to make certain both ends are not contacting wires, hoses, chassis, painted surfaces, etc... during the removal process! If possible, enlist the help of an assistant as a second pair of eyes and hands.

12. Remove the nuts that retain the sway bar clamp mounting brackets.
13. Remove the brackets from the studs, do not attempt to remove the bushings as they are not removable.
14. Laying in the center of the vehicle, place each hand on each radius bend of the bar. Pull the bar as far forward towards the radiator. Photo 8
15. Turn the steering wheel one (1) turn towards the passenger side. With the bar in this forward position, maneuver the bar ends over the steering tie rods. This process may take a bit of finesse, work slowly and carefully to clear each arm. You'll discover this process will likely required a bit of twisting, pack-and-forth maneuvering, etc... to complete this step. When finished with this step the bar will be resting on the black chassis arms with both arms pointed down and ahead of the steering tie rods.
16. This next step is intended to allow the passenger side sway bar arm to pass OVER the chassis arm. Rotate the bar arms FORWARD and parallel to the ground - Photo 9. Push the bar REARWARD towards the power steering rack as far as possible. Maneuver the bar towards the driver's side wheel well, allowing the passenger's side bar end to pass over the chassis arm. This process will also take some finesse as you slowly and carefully work the bar laterally over the chassis arm. Once the you've passed the bar arm over the chassis arm, the passenger's side arm should now be positioned between the chassis arm and radiator hose.
17. After passing the arm over the passenger side chassis arm you'll discover you have more room to maneuver the bar during the remaining removal process. Next, continue to maneuver the out the driver's side wheel well while rotating and coaxing the bar over the driver's side chassis arm. Continue until the bar is free from the chassis.



Photo 8

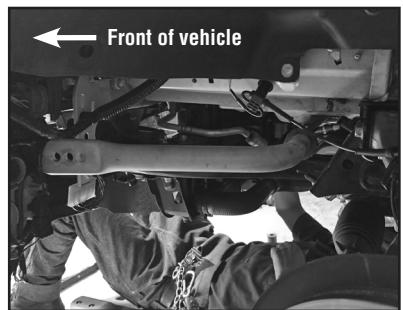


Photo 9



Photo 10

## Racing Beat Sway Bar Installation.

Again, during these steps it is important to pay attention to BOTH ends of the sway bar during the installation process. Take care to make certain both ends are not contacting wires, hoses, chassis, painted surfaces, etc... during the removal process! Do NOT install the bar bushings prior to installation!

18. Orient the bar as shown in Photo 10. Once installed the "hump" faces upwards.
19. Installation is the reverse of the removal process. Maneuver the RB bar end over the driver's side chassis arm (Photo 11), and then after rotating the arms FORWARD (Photo 9), laterally move the bar across the chassis. Again, using finesse to coax the bar across the passenger's side chassis arm. Work slowly and carefully to avoid damaging the powder coat paint on the bar.
20. Once the bar is positioned over both chassis arms, maneuver each bar arm over the steering tie rods.
21. Install the bar bushings on the bar to the outside of the stopper bushings. Use 1/2 package of supplied grease in each bar bushing - trapping grease with the grooves. Install the sway bar mounting brackets over the bushings and tighten each nut to 26-37 ft/lbs.
22. Re-attach both sway bar endlinks to the bar, using the CENTER hole position. Tighten to 32-45 ft/lbs. If you are installing the Racing Beat Sway Bar End Links, follow the instructions provided with the kit.



Photo 11

**Final Installation Steps**

23. Replace and reassemble all brackets, wiring, etc... that were removed in Steps 5-10.
24. Replace the center splash pan and inner wheel well panels.
25. Lower the vehicle to the ground. Check for adequate clearance between the sway bar ends and brake lines.
26. Road test the car. Listen/feel for any unusual sounds or vibrations. After allowing adequate time for the suspension to settle, recheck all fasteners and brake line clearance.

**Suspension Tuning**

The Racing Beat sway bars have been provided with three (3) end link mounting holes to allow the experienced tuner the ability to fine-tune the MX-5's handling characteristics. In general, selecting the forward-most mounting hole is a "stiffer bar setting" and will produce understeer, the middle hole a more neutral feel, and outward-most hole is a "softer bar setting" and may produce oversteer. Much depends on the selection of an appropriate rear sway bar and the selected end link hole position. We recommend the use of a "matched set" of sway bars that have been designed by a manufacture to work together as a set. We strongly suggest that you become familiar with the handling of your vehicle before experimenting with alternate sway bar link position settings and make changes or adjustments only in a closed course controlled environment.

**Customer Support**

If during the removal or installation of this sway bar you encountered clearance issues with a component not mentioned in the instructions, please contact us with your concerns, suggestions and photos. It is not uncommon for Mazda to introduce changes to model packages, mid-cycle changes, new components, etc...that we might not be aware of. We look forward to your input!

Contact us at:  
[techsupport@racingbeat.com](mailto:techsupport@racingbeat.com) or 714-779-8677

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