

2016+ FM SWAY BARS 13-36500



Thanks for purchasing our Flyin' Miata ND sway bars! These make a huge difference to the handling of the car, keeping the car much flatter and making better use of the tires' grip. They're also adjustable, so that you can play with the balance of the car.

If you have any suggestions for improvements to the product or the instructions, please let us know - use the phone number below or email support@flyinmiata.com.

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:

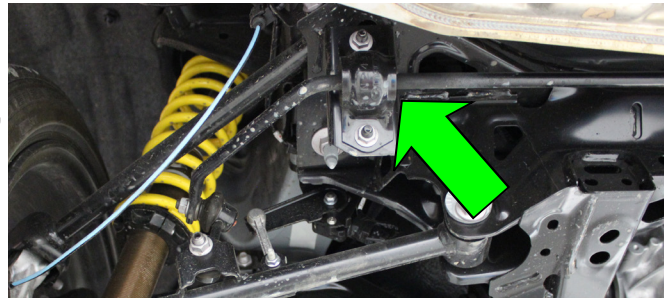
- Ratchet
- Extension
- 8mm socket / box wrench
- 10mm socket / box wrench
- 12mm socket / box wrench
- 14mm socket / box wrench
- Small flat head screwdriver
- Needle nose pliers
- 5mm Allen wrench

Torque specs:

- End link studs: 32-45 lb-ft (both ends, front and rear)
- Rear brackets: 13-20 lb-ft
- Front brackets: 26-37 lb-ft

Rear sway bar installation

1. Get the rear of the car in the air (no need to remove the wheels) and remove the stock bars. It's pretty easy, just two brackets and two end links (one of each on each side). *Note: If the nuts on the endlinks won't come off without spinning the stud, use a 5mm Allen wrench in the end of the stud to hold it while removing the nut.*
2. Install the new rear sway bar. Be sure the orientation is correct, as there's a slight angle to the ends of the bars. The top edge of the flat face on the end should point towards the middle of the car. Slip the bushings on (use the included grease on the inside of each bushing) then put the bar into place, using the brackets to hold it in place. Tighten the brackets (12mm socket) to 13-20 lb-ft and tighten the end links (14mm socket) to 32-45 lb-ft.
3. Center the bar side to side, then add the 5/8" locking collars up against the inboard side of the rear sway bar bushings on each side (1). Tighten until snug. It is normal to have a gap between the two halves of the collars.

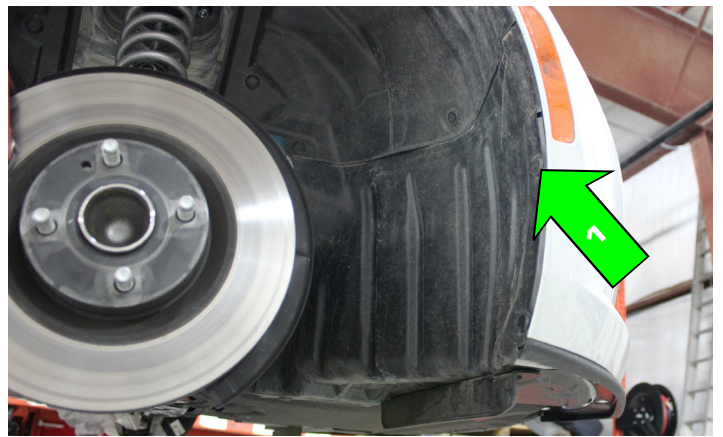


Front sway bar installation

1. Unfortunately, the front is quite a bit more complicated. Start by getting the front in the air, preferably at least two feet in the air.



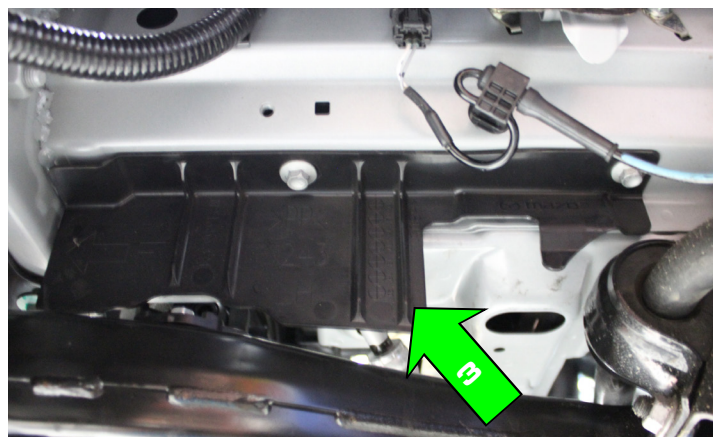
2. Remove the wheels, then remove the forward lower fender liners (1) in both front wheel wells. There are four screws (8mm socket or Phillips head) and eight plastic fasteners - for the plastic fasteners, pry the middle out slightly (roughly a 1/4"), then pull the whole fastener out.



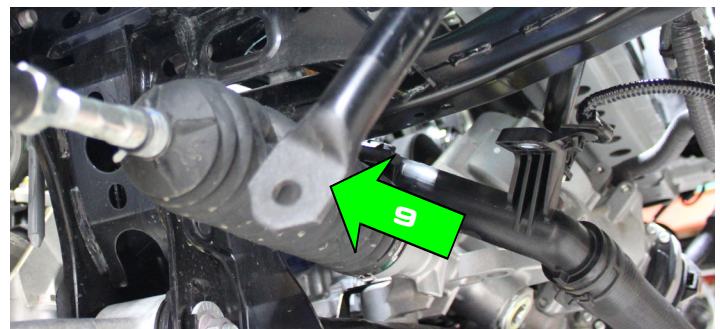
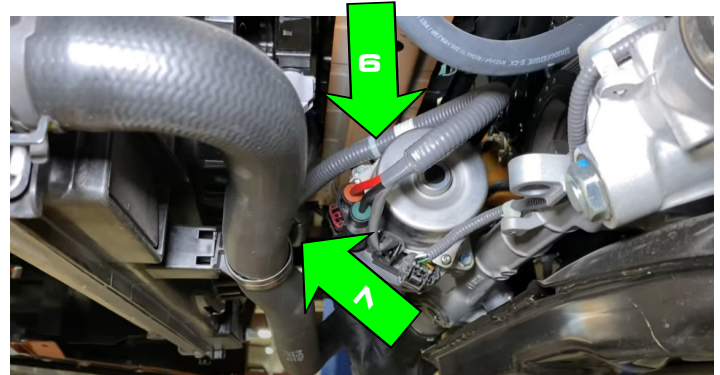
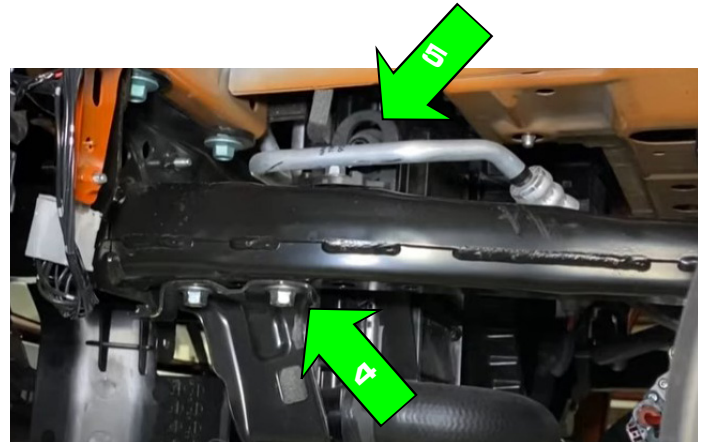
3. Remove the central splash pan (2). The two rear plastic fasteners are a larger diameter than the rest, so keep them separate. There are eight M6 (10mm socket) bolts, two plastic fasteners, and two screws (8mm socket or Phillips head).



4. Remove the two bolts (10mm socket) holding the small plastic pieces in above the sway bar (3), then pull the plastic pieces out. There's one on each side, the driver's side is shown.



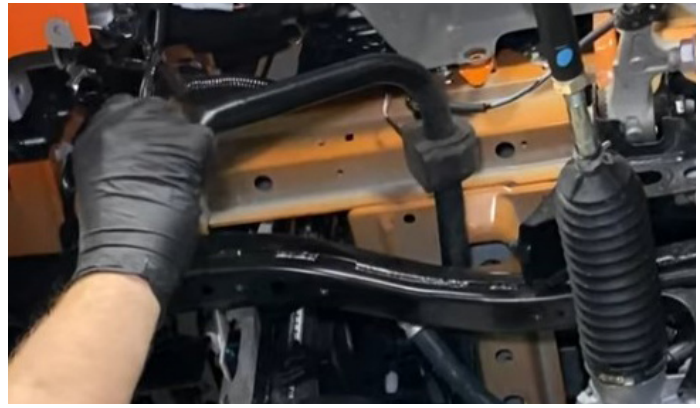
5. Remove both lower radiator mounting brackets (4) (12mm socket). Remove the radiator side brackets (5) (10mm wrench). The side bracket on the driver's side requires the radiator to be moved around a little to allow the bracket to be fished out from under the AC line. The radiator will now be held up by one of the AC lines (among other things), so be careful. As long as nothing is forced, this will be fine.
6. Locate the steering rack wiring harness. Unclip the harness from the top of the rack (6) and from the fan shroud (7).
7. **ND1s only:** Unplug the coolant temperature sensor in the lower coolant hose pipe.
8. Remove the two bolts holding the lower coolant pipe to the subframe using a 10mm wrench or socket. Lower the pipe so that it is out of the way as shown (8).
9. Unbolt the sway bar bushing brackets (14mm socket) and end links (14mm socket). The bushings are not removable, so don't try to take them off. Try to work the bar in front of the tie rod on the passenger side (8) - turning the steering wheel all the way to the right will help. Move it in front of the left tie rod as well. Again, turning the steering wheel all the left will help. Leave the bar with its ends pointed straight down.



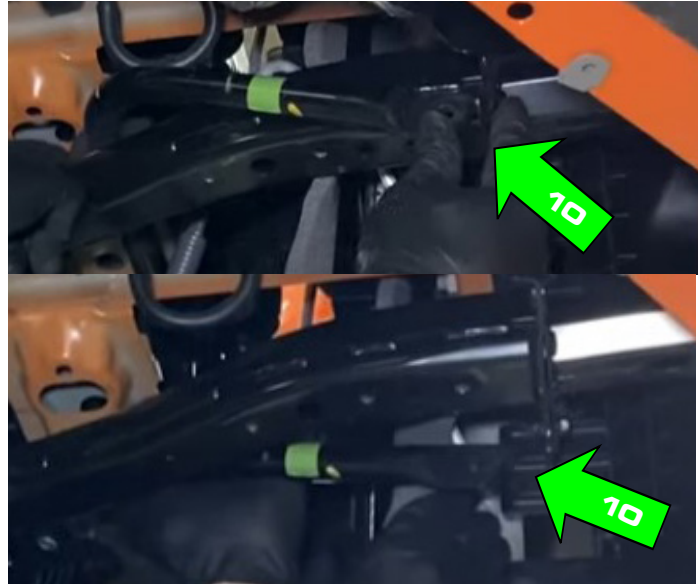
NOTE: If the nuts on the endlinks won't come off without spinning the stud, use a 5mm Allen wrench in the end of the stud to hold it while removing the nut.

IMPORTANT NOTE: During the bars removal and installation be very aware of the position of each end of the bar. Lack of attention while moving the bar could result in damage to various components.

10. Swing the ends of the bar so they point toward the front of the car and push the sway bar toward the rear of the car as much as possible.



11. On the passenger side, get the end of the bar up and over the subframe rail (10). Moving the radiator around slightly can help make room for the bar. The ends of the bar can now be lowered and the bar can now be maneuvered the rest of the way out of the driver-side wheel well.



12. The installation of the new bar is the reverse of the original bar's removal. Be sure that the center hump will point straight up once the bar is installed. Don't install the bushings until the bar is in place, but be sure to use the included grease. Get the sway bar roughly even side-to-side then install the bushings and start the bolts for the brackets. Once certain that the bar is centered, torque the brackets to 26-37 lb-ft and the end links to 32-45 lb-ft.
13. Install the collars with the bolt heads facing up. Don't fully tighten the collars yet.

14. With the wheels at full droop (no weight on the front suspension), rotate the collar so that the large diameter portion at the top is within about 3mm / 1/8" of the subframe (11). It must be the top portion that's close so that the flat portion of the collar will get more parallel to the surface that the U-plate bolts to as the sway bar rotates during suspension compression. The idea is that the flat portion of the collar will be parallel to the subframe at the static ride height. If the bottom of the collar is set up close at full droop, the collar will interfere with the subframe as the suspension compresses. Repeat for the other side.



15. Check the front brake lines to be sure they won't interfere with the ends of the sway bars. If they do, gently bend the side closer to the car up. Be certain that you haven't cracked anything! If in doubt, upgrade to our brakes lines - they don't have the interference problem.
16. By now, you've noticed that there are multiple holes in the end of each of our sway bars. The short explanation is that mounting the end link farther from the *end* of the bar (not the transverse portion) will increase the likelihood of that end of the car sliding first. Therefore, if the rear end links are mounted in the forward holes of the rear bar (12) and the front end links are also mounted in the forward holes of the front bar (which will be farthest from the end of the bar because of the orientation of the bar in the car, (13)), the front of the car will be more likely to slide (understeer). The opposite (rear in the rearmost hole (14), front in the rearmost hole (15)) is also true, as that will make the rear of the car more likely to slide (oversteer). Basically, the different holes in the sway bars allow you to fine-tune the balance of the car's handling. Most people are more comfortable (and safer) with a car that understeers slightly. As a starting point, use the middle hole for both bars. As a starting point, we recommend using the middle hole of each bar.

