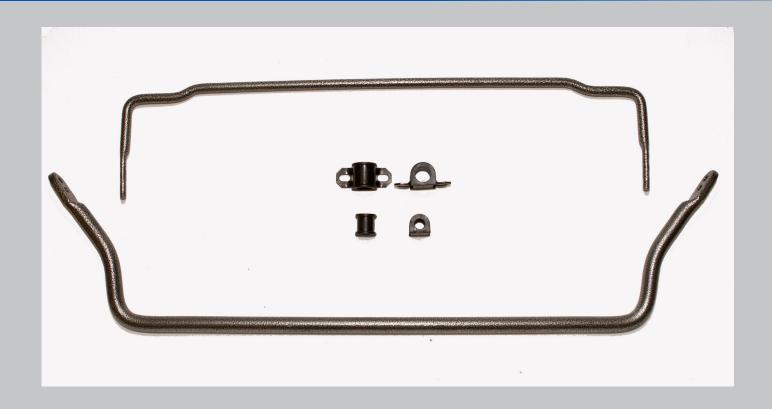
# Flyin' Miata Installations



## FLYIN' MIATA SWAY BARS FOR NA/NB 13-365XX



Thanks for purchasing our sway bars. Follow these directions and you should have a better handling car with a minimum of effort. We recommend that you use a set of ramps if you don't have access to a lift. If you have any questions during installation or suggestions for improvement to the product or the instructions - please don't hesitate to call or email.



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 & wrench set
- Small flat head screwdriver
- 5mm Allen wrench

#### **Torque specs**

- End link to sway bar: 30 lb-ft
- Sway bar brackets (all): 20 lb-ft

**Front installation:** Start with the front wheels set-up on ramps, remove the plastic splash pan. If you have ABS on your car, you will find it easier to remove the "S" shaped sheet metal covers that cover the wires coming from the ABS sensors on the wheels. They are held on with two 6mm (10 mm wrench) bolts. NOTE: the "S" shaped sheet metal cover does not exist on the 1999+ cars with ABS.

Remove the bolts on each end of the original sway bar holding the sway bar to the end links. On '99-'05 cars, there's an Allen head in the end of the stud that comes through the sway bar (from the end link). Use this if the stud starts spinning. Keep the bolts and/or nuts, they'll be reused. Remove the brackets holding the original sway bar to the car. Save the bolts, but you will not be re-using the front brackets. Pull the old bar out, I usually pull them out toward the driver's side. Install the new bar, with new bushings and brackets. Do not put the bushings or brackets on until you have the new bar in place. Use some lubricant on the inside of the bushings. Before tightening the brackets, install the end link bolts. Loosen the lower end link bolts to ease installation and ensure the bar isn't pushed sideways. Torque '99 – '05 end links now (30 ft-lbs), '90 – '97 end links should be torqued (30 ft-lbs) after the next paragraph. Longer bolts are included for the end links if necessary, but the stock bolts typically work well.

IMPORTANT—('90-'97 only) Weight of the vehicle must be on the wheels when torquing the end links. If you're on ramps, you're set. If you're working on a lift or jack-stands, wait until the car is back on the ground to torque these bolts. '99-'05 cars don't need to have the weight of the car on the wheels. The sway bar brackets get torqued to 20 ft/lbs, and it doesn't matter whether the wheels are on the ground or not for these bolts. Reinstall the ABS plates and plastic splash pan and you're ready for the rears.

**Rear bar installation** is identical to front bar, but easier with less stuff in the way. The rear bar re-uses the stock brackets, just replace the bushings. Again, loosen the lower end link bolts also. Be sure to match the angle of the sway bar ends - the tops angle towards the middle of

the car, as shown in the picture. Some cars may need to have the muffler heat shield (bolted to the bottom of the trunk) bent slightly for clearance. Remember to have the weight of the car on the wheels when torquing the end links (90 - 97 only).

We would suggest starting with the end links in the outermost holes on the front bar and the middle hole on the rear bar. As you move the end link inward on the bar, it stiffens the bar. If you stiffen the front bar, it will tend to make the car understeer or "plow" more. If you stiffen the rear bar, it will make the car want to oversteer or "come around" on you. Most drivers are more comfortable with a slightly understeering car for street use.



### Flyin' Miata

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 (1) 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, (2)), the front of the car will be more likely to slide (understeer). The opposite (rear in the rearmost hole (3), front in the rearmost hole (4)) 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, we recommend using the farthest hole on the front bar (4) and the middle hole for the rear bar.

