

Adjustable Swaybar Endlinks Install Instructions

Tools Needed

1. Jack
2. Jack stands
3. A ratchet/Impact Wrench
4. Sockets/wrench sizes 14-18mm
5. 5mm Allen Wrench for NB
6. Wheel Chocks or Bricks to prevent rolling
7. Wood Blocks

Torque Specs

1. Wheel Torque Spec: 65-87 ft/lbs
2. Endlink Bolts: 27-40 ft/lbs
3. Jam Nut Torque Spec: 30

Installation Steps

- 1) Jack up the vehicle. If you are replacing the front endlinks, jack up the front of the vehicle so both front wheels are off the ground. If you are replacing the rear, jack up the rear so both rear wheels are off the ground. This is because you don't want any load on the sway bar prior to installation. Please make sure the vehicle is supported by jack stands and not solely a hydraulic jack as you will be working under the vehicle. Add some wheel chocks to the wheels on the ground to prevent the vehicle from rolling.
- 2) Start with one side. Remove the wheel.
- 3) Remove the OEM endlink. The endlink mounts to two locations on each side; the control arm and the swaybar. For an NA Miata (90-97), the OEM endlink is a through bolt design similar to the R Theory endlinks. Use two sockets or wrenches on the nut and bolt to remove it. For an NB Miata (99-05), the OEM endlinks have a stud through the joints. Remove the nuts that secure the OEM endlink. Use a 5mm allen key to hold the stud in place to prevent it from spinning. It is not necessary to keep the nuts and bolts as new hardware is provided.
- 4) Once the OEM endlink is out, it is time to prepare the R Theory endlinks for installation. If you live or drive the vehicle in harsh environments, it is recommended to apply some anti-seize on the threads to prevent seizing of the jam nut and threads of the bearing joint. Also apply some to the endlink bolts. It will make your life a lot easier when it comes time to adjust them later down the road.
- 5) Loosen the jam nuts on either side. Set the length of the endlinks similar to the OEM ones. Use the OEM endlinks as reference if you have them. If you do not have the OEM endlinks, the length is around 105-108mm. This measurement is taken center to center of the joints. Adjusting the endlink is done by twisting the rod ends in or out. Set the lengths of the rods to be equal on both sides of the body as well as the orientation of them to be the same as the OEM ones. Fine tuning the length will come in **Step 9**.



- 6) Fasten the two cone washers and bearing to their mounting position. The cone washers should be mounted in such a way where the smaller diameter portion should be facing the endlink bearing. Slide the bolt through and torque the nut on the other side. Look to see if the bearing can move and pivot the same amount in each direction. Adjust the rod ends as necessary. Keep the jam nuts loose at this time but tighten the nut and bolt combo that secure the endlink to the vehicle.



- 7) Reinstall the wheel.

- 8) Repeat **steps 2 – 7** for the opposite side of the axle. Adjust the length of the endlink to be able to slide the bolts through.

- 9) Now the suspension needs to be loaded with the vehicle sitting at ride height. Lower the vehicle with some wood blocks under the tires giving you enough access to the endlink from the wheel well area or from underneath. It is best to do this step two wheels at a time to prevent accidental slipping of the vehicle. Chock the wheels that are on the ground and not the ones you will not be working on.

- 10) Set the correct length of the endlinks. With the vehicle's weight on the ground, twist the body of one endlink until the sway bar is parallel to the ground or as close as you can get without the sway bar interfering with the control arms.

- 11) Adjust the length of the second endlink. Reach for the endlink and twist the body to the left to find the point where you feel resistance. Now twist the body to the right and find the point where you feel some resistance. Now rotate the body to the middle of those two points where you don't feel any resistance on the endlink.

Note: This step gets rid of any preload on the sway bar. Preload places a twisting force on the sway bar. If the sway bar is preloaded, it means the bar is already twisted with the vehicle at rest and is trying to roll the vehicle to one side because of it. This means you will not get symmetrical behavior when turning. The vehicle will exhibit different characteristics when turning left or right with a preloaded swaybar.

- 12) Jack up the vehicle again and take off the wheels to give more room to work. This step may not be necessary if you have enough space to tighten the jam nuts on the ground.
- 13) Use an open ended wrench to hold the endlink body and tighten the two jam nuts. Make sure the body of the endlink does not rotate.



- 14) Drive the vehicle. Listen for any odd sounds such as clunking. It could indicate something was left loose.
- 15) Now your endlinks are installed.