

Electric Power Steering Installation

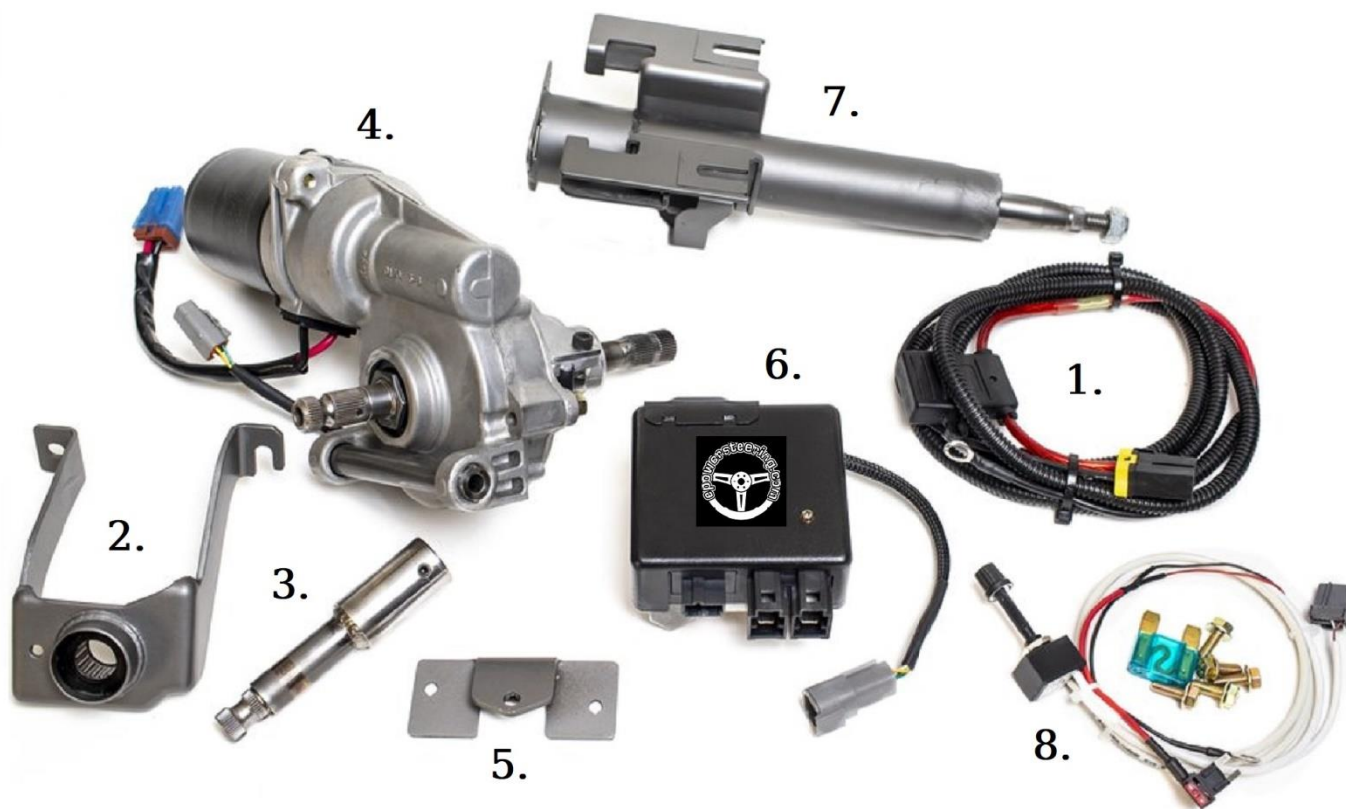
Mazda Miata NA/NB

2002-07 Saturn Vue / 2005-06 Chevrolet Equinox



Please read before you begin:

- Review the [BestPractices.PDF](#) at www.ePowerSteering.com under Installation. It is regularly updated. You can also find other parts at our online store at www.ePowerSteering.com/purchase.
- These instructions assume that one already has a basic mechanical understanding of the steering column assembly in an NA and/or NB Miata and knows how to remove the column, including the combination switch assembly, covers and air bag.



- The picture above shows what is included and how the entire Miata EPS System will arrive.
 - 1. Power Harness
 - 2. Firewall Mounting Bracket
 - 3. Lower Steering Shaft
 - 4. Motor Assembly
 - 5. ECU Mounting Bracket
 - 6. Steering ECU
 - 7. Upper Column Assembly
 - 8. EPS Controller
- When returning the steering column core, indicate your order number and name, and please ship to:

ePowerSteering
23860 Gymkhana Road
Ramona, CA 92065



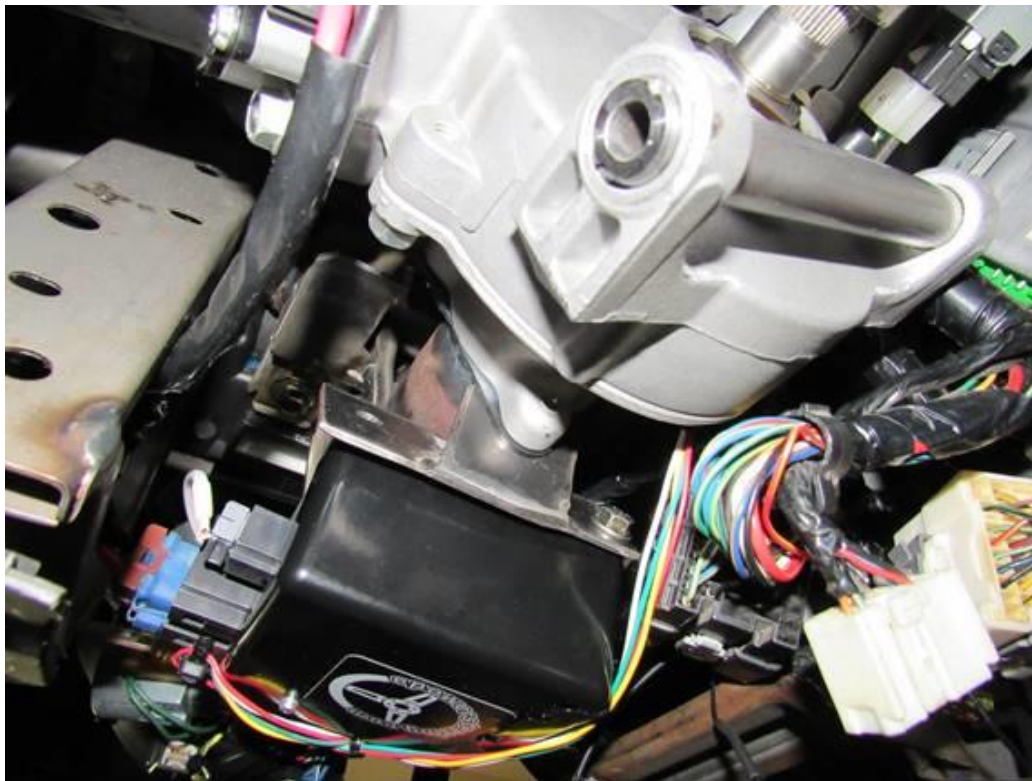
- This kit is designed to use the main positive terminal post on the Alternator for main power (not the battery). The picture above is a good spot to push the main power wire of the (**Power Harness**) through the firewall. Run the wire along the firewall and by the passenger side intake manifold, following the path of the main alternator wire, then bolt on to the alternator. The rest of the wire just sits on the floor board until the column is installed.



- Mount the **Firewall Mounting Bracket**. Attach the ground (black) wire from the **Power Harness** to the left side bolt. Do not tighten down all the way. The above picture shows the ground wire attached.



- Loosen the set screw on the **Lower Steering Shaft**. Insert the **Lower Steering Shaft** through the **Firewall Mounting Bracket**. Insert the **Lower Steering Shaft** into the u-joint. Put the bolt through the u-joint. The above picture shows it assembled.



- Connect the **Upper Column Assembly** to the **Motor Assembly**. The Electric motor will be facing to the right. Attach the **ECU Mounting Bracket** on the bottom bolt. See above picture. Do not install the ECU. This will be done later.



- Before you mount the rest of the **Upper Column and Motor Assemblies**, you will need to make room for it. There is a group of relays mounted on a small plate with 1 bolt to hold it in place. Remove the nut and detach the plate from the bolt. Zip-tie it out of the way towards the firewall to make room for the rest of the column. See the above picture for a general idea.
- Mount the **Upper Column and Motor Assemblies** under the dash. Insert the output shaft of the **Motor Assembly** to the **Lower Steering Shaft**. Raise the **Upper Column and Motor Assemblies** up to the dash and put the 2 mounting bolts back in like it was originally installed. Don't tighten down until the lower shaft is connected.
- Tighten down the **Firewall Mounting Bracket**. Tighten down the set screw on the lower steering shaft (Note: Use a dab of Blue Loctite on the set screw). Tighten down all associated column bolts and double check everything to make sure everything is tight.
- Mount the ECU onto the **ECU Mounting Bracket** like previous picture.



- Connect the 3 plugs to the **Steering ECU**. See above. Power (black plug) in the middle, electric motor (blue plug) on the left end and the controller plug on the right.
- Connect the **EPS Controller**. Select a fuse to pull out that is controlled by accessory on. Insert the pulled fuse to the fuse tap attached to the **EPS Controller**. Connect the ground to the fuse box mount. Mount the Adjustment Knob anywhere you can reach it.
- Reattach the removed covers, steering wheel and airbag.

Basic System Verification:

- Turn Adjustment Knob fully counterclockwise (left).
- Turn Ignition ON. You should hear the relay click on once.
- Wait about 10 seconds. You should hear the relay click off. You will have no steering assistance.
- Start turning the Adjustment Knob slowly clockwise (right) until you hear the relay click on again. This is the point where you start having steering assistance, but at the minimum. Test to verify.
- Then turn the Adjustment Knob further to the right. This will increase the assistance. Test to verify.

Adjusting Steering Assistance:

- If you turn the Adjustment Knob fully counterclockwise (left) you will have no steering assistance.
- If you turn the Adjustment Knob fully clockwise (right) you will have the maximum steering assistance.
- Between these two points you have various intermediate steering assistance levels.

Additional Information:

- When you turn the ignition ON, you will hear the relay on the **Steering ECU** click on. One single click. If you hear it double click, there is something incorrectly installed or not functioning properly.
- While you turn the Adjustment Knob you must wait for the **Steering ECU** to adjust the steering assistance level. The amount of assistance is not immediately felt. There is a very slight delay.
- The steering can feel slightly softer to turn left than right (or the opposite). There is a potentiometer on the **Steering ECU** to adjust this. It is accessible under the round hole in the **Steering ECU** cover. You may need to peel back the cover sticker to gain access. It is EXTREMELY sensitive. Make very small adjustments if you feel that the calibration is off.