



## COBB 3-Port Electronic Boost Control Solenoid



### MazdaSpeed3/Mazdaspeed6

Congratulations on your purchase of the COBB Tuning 3-Port Electronic Boost Control Solenoid. The following instructions will assist you through your installation process. Please read them first BEFORE beginning the install and familiarize yourself with the steps and tools needed. If you feel that you cannot properly perform this installation, we HIGHLY recommend you take the vehicle to a qualified and experienced automotive technician.

**Warning!** The installation of this 3-port solenoid requires proper tuning. The use of a COBB OTS map with a 3-port solenoid installed in interrupt mode will result in overboosting situations!

#### Part List

- 1 x COBB EBCS
- 1 x COBB 90 Degree Bracket
- 2 x M3 SS Socket Head Screw
- 1 x M6 SS Hex Bolt
- 1 x M6 SS Flat Washer
- 72" 1/8" Silicone Vacuum Line
- 9 x 4" Zip/Cable Ties
- 1 x Plastic 'T' Adapter
- 2 x Vacuum Caps

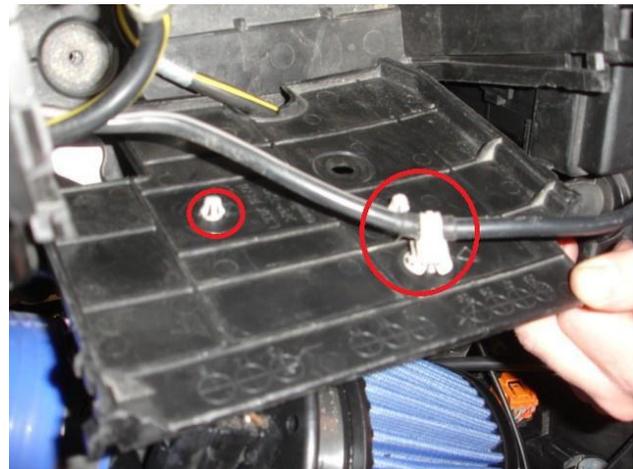
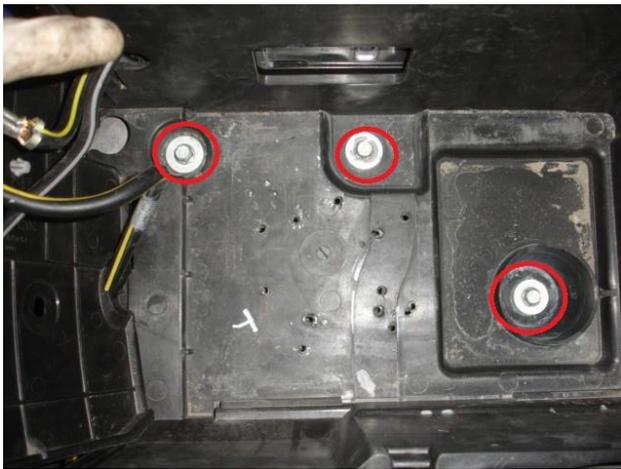
#### Tools Needed

- 10mm Deep Socket
- Flat Head Screwdriver
- Ratchet
- Ratchet Extensions, Various Lengths
- Needle Nose Pliers
- Scissors



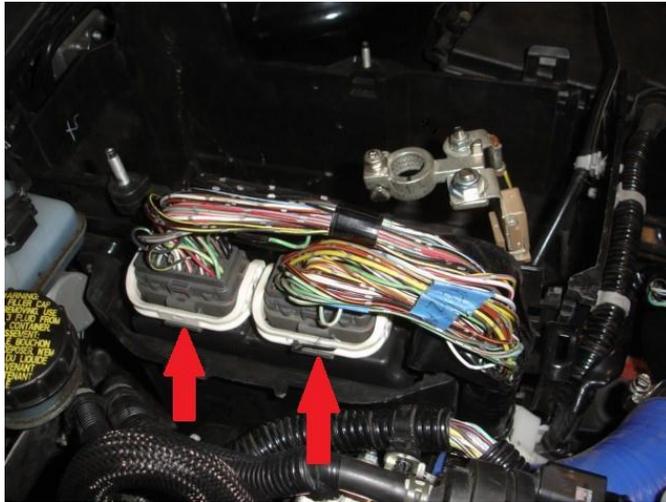
**Important!** Before beginning work, make sure the engine is cool to the touch! You will be working very near/touching the turbocharger!

1. Depending on your current intake configuration, remove the factory airbox or aftermarket intake.
2. Remove the battery and ECU covers by using a 10mm socket to remove the battery tie down and loosen and remove the positive and negative battery terminals away from the battery. Remove the battery. Now remove the three 10mm bolts that hold the battery box to the car.
3. Use the needle nose pliers to remove the plastic pieces away from the front of the battery box and set the front of the box aside.





4. Disconnect the ECU terminal connectors by depressing the tab in the center of the gray portion of the connector and then lifting up on the white portion of the connector to release them from the ECU. You should now be able to remove the ECU and Battery Box from the vehicle.

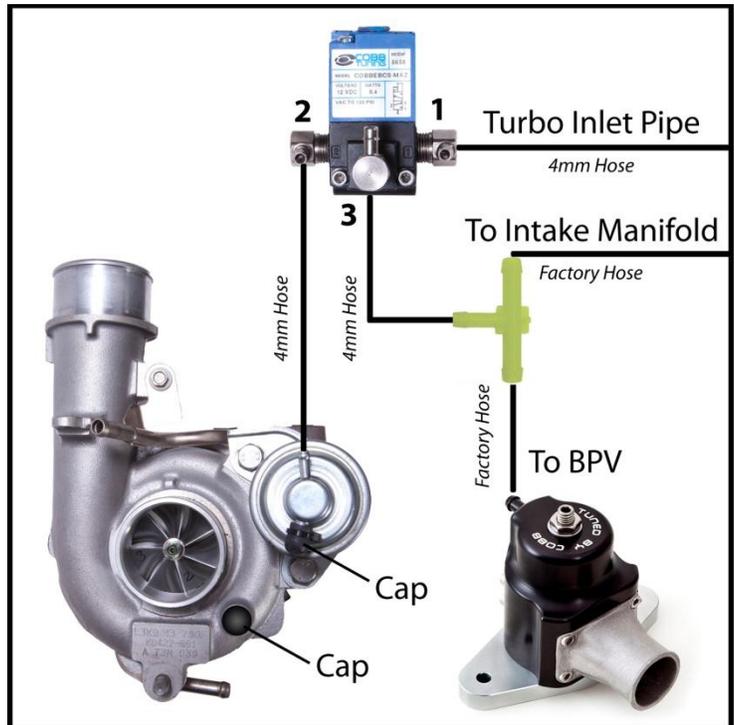
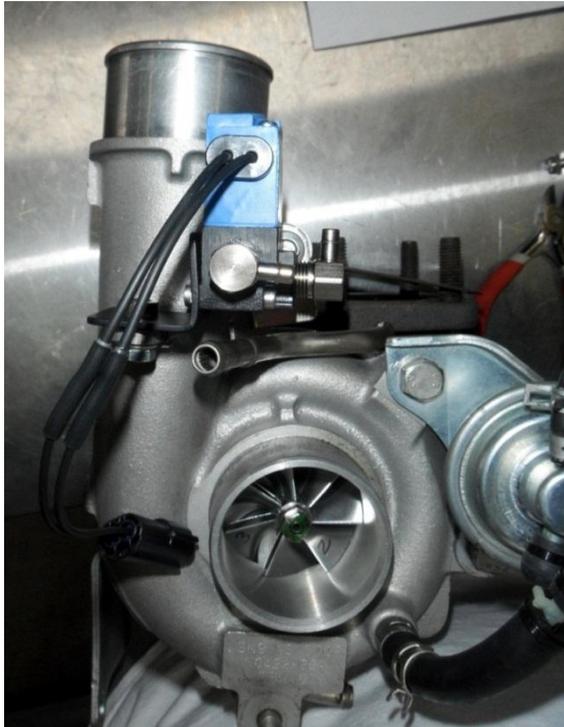


5. Locate the factory boost control solenoid that is bolted to the turbo. Unplug the factory harness and remove the single screw that holds the solenoid from the turbo using a 10mm socket. From here, you should be able to pull the solenoid towards you and disconnect the air lines.





6. Plug in the COBB EBCS into the factory harness and install it onto the factory turbo using the supplied 6mm hardware.



7. Using the supplied vacuum tubing, begin connecting the EBCS in the configuration shown above.
  - a. Remove 6mm vacuum hose from lower port on the wastegate. Install the supplied vacuum cap over the exposed nipple and zip tie it in place.
  - b. Remove the 6mm vacuum hose coming from the compressor housing of the turbo and install the supplied vacuum cap over the exposed nipple and zip tie it in place.
  - c. Locate and cut the factory vacuum line between the BPV and the intake manifold about halfway. Using the plastic 'T' adapter, connect the free ends of the factory line to the 'T' and zip tie it in place. Using the supplied vacuum line connect the free end of the plastic 'T' to **Port 3** on the COBB EBCS and zip tie it in place.
  - d. Using the supplied or factory 4mm vacuum hose, connect and zip-tie the top wastegate port to **Port 2** on the COBB EBCS.
  
8. Finally, using the supplied or factory 4mm vacuum hose, connect **Port 1** on the COBB EBCS to the turbo inlet pipe and use the factory clamp or zip-ties to secure the hose. With the plug



and all vacuum hoses hooked up, using the supplied M6 screw and flat washer to install the EBCS onto the turbo where factory solenoid was installed, in the orientation shown below.

9. Reinstall the battery and intake system in reverse order, ensuring all hose clamps and plugs are secure and tight.
10. Enjoy the reduced response time and greater precision of your new COBB EBCS!

**Remember!** You MUST properly tune for the installation of a 3-port EBCS. Using an off-the-shelf tune will result in overboosting!

### **External Wastegate Installation**

1. Hook up vacuum lines as outlined below.
  - a. Port 1 is T-ed to the bottom port on the external wastegate and an unrestricted boost source. If running an external wastegate with the stock turbo, the compressor housing is restricted and not a suitable source.
  - b. Port 2 is routed to the top port on the external wastegate.
  - c. Port 3 is routed to the intake.

