



## MazdaSpeed Protege MY03 Unichip PnP Installation Instructions and Warranty Information

### Tools Required

10mm wrench, ½-inch wrench, 3/8" Ratchet, 10mm socket, razor cutter, medium common screwdriver, medium Phillips screwdriver, spray lubricant

#### 1. Disconnect the car's battery

- a. Using the 10mm wrench, disconnect the car's battery at the negative terminal in the engine compartment.

#### 2. Expose the ECU in the passenger's side foot well.

- a. (Photo 1) Using the medium common screwdriver, carefully remove the plastic plug securing the plastic trim panel on the left side of the foot well near the front.

*Note: Forcing the plugs may break the barbs on the back side; you want to reuse these plugs so be careful.*

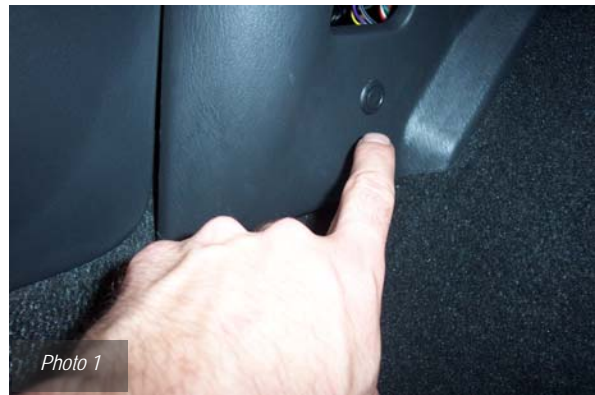


Photo 1

- b. (Photo 2) On the right side of the foot well, use your fingers to remove the door weather seal covering the plastic trim panel section. Locate the plastic plug securing the panel near the forward, upper corner and remove it using the medium common screwdriver.
- c. Remove the mat, and pull back the carpet and sound proofing material from the passenger's foot well.
- d. (Photo 3) Using the 10mm socket, remove the 4 hex nuts securing the steel kick panel from the forward section of the foot well.

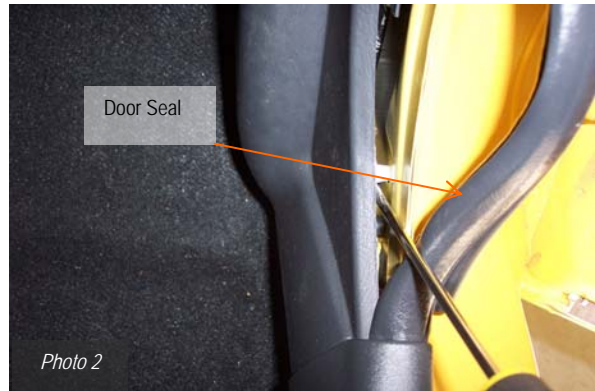


Photo 2



Photo 3

### 3. Remove the ECU

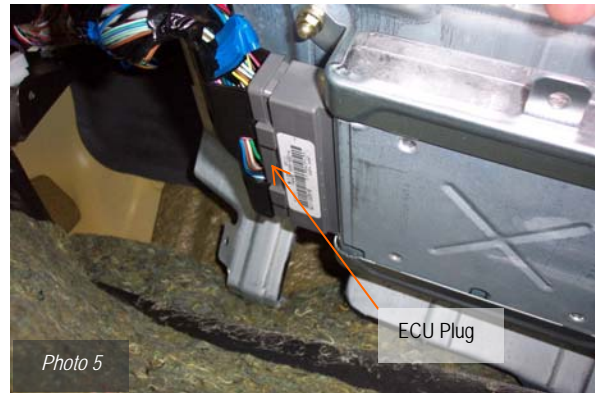
- a. (Photo 4) The ECU is mounted on the kick panel's underside. Carefully pull the kick panel off of the mounting studs and tilt the close edge up to find the ECU.



- b. (Photo 5) On the end of the ECU facing the driver's side, locate and loosen the 10mm bolt in the plug's center and remove the plug

*Note: The bolt is not designed to come out of the plug.*

- c. Remove the kick panel and ECU as a unit.

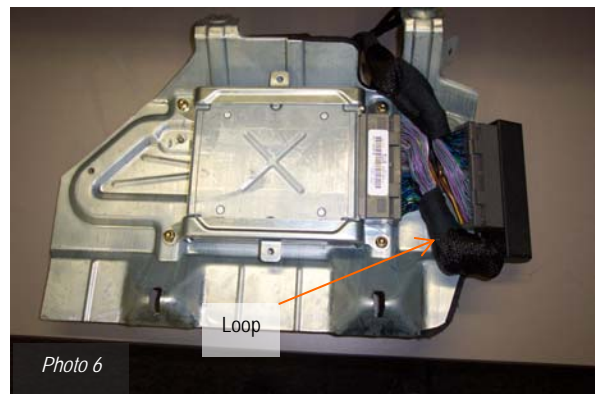


### 4. Install the PnP harness

*Notes: (1) The kick plate and ECU are shown removed for clarity, but do not have to be removed for the installation.*

*(2) Since the picture shows the Kick plate backwards, the PnP case appears on the right in the photo.*

- a. (Photo 6) Position the PnP harness case to the left of the OEM ECU with the beveled edge facing down towards the floor with the connector facing the ECU.



- b. (Photo 7) Use the kit provided zip tie to loop the OEM harness up and out of the way.

- i. Install the OEM harness's plug into the PnP case and tighten the bolt to 10 in-lb (hand tight).
- ii. Follow the OEM harness back to where the ECU harness joins a plastic covered harness enroute to the engine compartment.

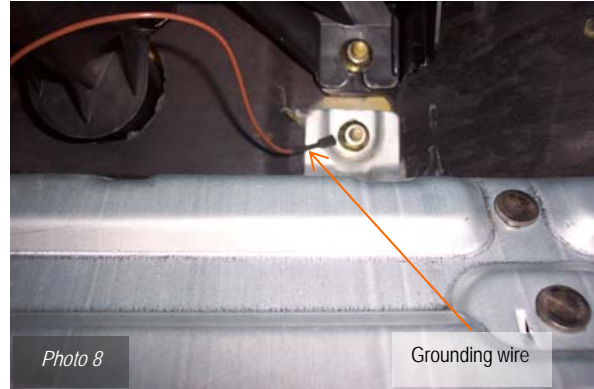


- iii. Loop the multicolored ECU loom up and back against itself and zip tie it to the plastic covered harness running up into the center console area.

- c. Install the PnP harness's plug into the OEM ECU and torque the bolt to 10 in-lb (hand tight) with the 10mm socket. Loop the PnP loom down and out of the way.

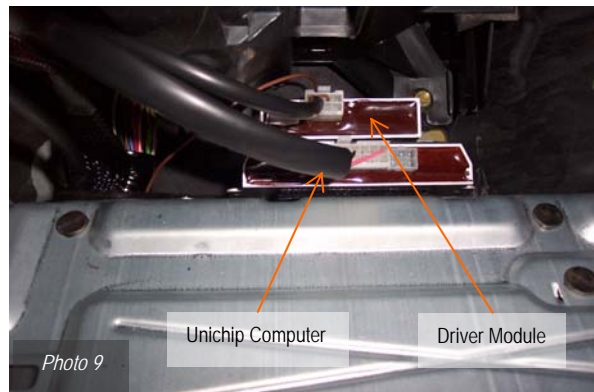
*Note: The PnP harness is held in place by the Kick plate.*

- d. Route the loom labeled **Unichip**, **Driver**, and **Boost Control** out through the same slot as the OEM harness atop the kick plate.
- e. Position the kick plate back over the mounting studs.
- f. (Photo 8) Ground the PnP harness by placing the brown wire's metal grommet over the kick panel's top right mounting stud.
- g. Replace the OEM hex nuts and torque all 4 to 10 lb-ft.



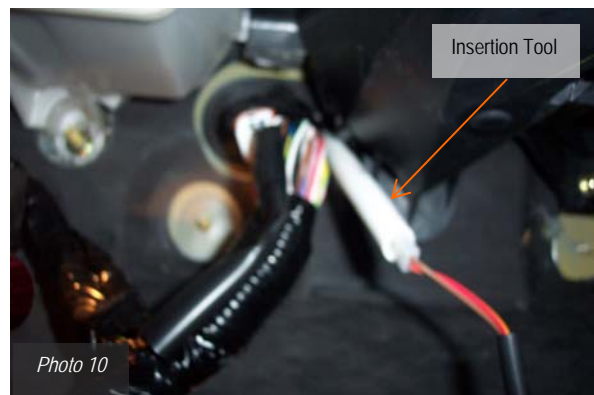
5. **(Photo 9) Install the Unichip computer and Driver Module.**

- a. Using one piece of the kit provided Velcro, secure the Unichip computer to the horizontal surface at the top of the Kick panel with the Molex connector facing the back of the car.
- b. Using the other kit provided Velcro, secure the Driver Module to the top of the Unichip computer with the Molex connector facing the same as the Unichip's connector.
- c. Connect the 18-Pin connector labeled **Unichip** into the large connector.
- d. Connect the 8-Pin connector labeled **Driver** into the Driver module.



6. **(Photo 10) Route the Engine Compartment Loom**

- a. Trace the OEM ECU wire loom all the way to the firewall and locate the oval rubber grommet sealing the hole it passes through.
- b. Using the razor cutter, slice a small (1/4-inch) slit on the right side of the grommet.



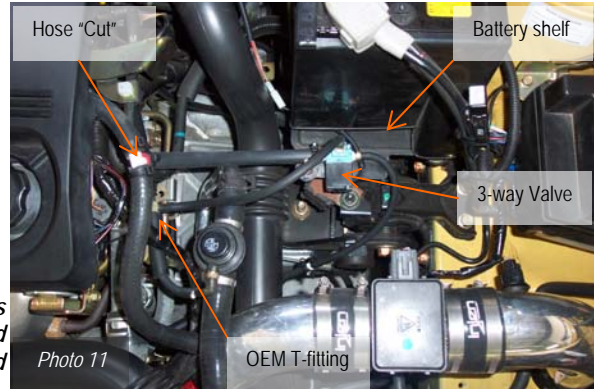
*Note: Keep this slice small so the grommet seals around the PnP loom when the procedure is complete.*

- c. Spray a little lubricant onto the kit supplied insertion tool and slide it half way through the slit.
- d. Insert the PnP loom labeled **Boost Control** into the insertion tool until the plug lip stops it.
- e. Using the **Boost Control** loom, push the insertion tool and **Boost Control** loom through the firewall and into the engine compartment.

7. **Position the Accessory cable Loom.** The accessory cable can be placed as desired. If you aren't permanently installing the switches, they can be conveniently placed into the glove compartment by sliding them up behind the glove box and dropping them inside.
8. **Replace the sound proofing material and carpet.**
9. **Using the OEM plastic plug, replace the plastic trim panel on the passenger foot well's left side.**
10. **Using the OEM plastic plug, replace the plastic trim panel on the passenger foot well's right side and reattach the rubber door seal.**

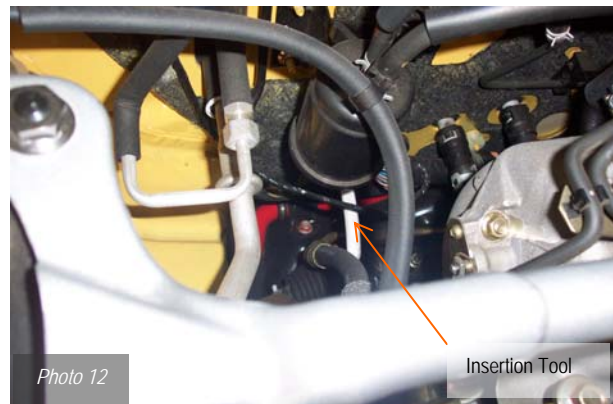
**11. (Photo 11) Install the 3-way valve and vacuum connections.**

- a. Attach the kit provided brass bung into Port 3 on the 3-way valve. Torque the bung to 30 in-lbs (180° past finger tight).
- b. Working inside the engine compartment, locate the horizontal section of the battery shelf sticking forward from under the battery.



*Note: The 3-way valve positioning described here assumes the car has a CAI installed. The valve can be mounted wherever desired if you choose to not use the recommended spot.*

- c. Position the 3-way valve on the shelf with the valve's black end facing the car's front with Port 3 facing up.
- d. Using the kit provided self-drilling screws, mount the valve to the shelf.
- e. Attach the empty end of kit supplied vacuum line labeled **Port 2** onto Port 2.
- f. Locate the vacuum T-fitting next to the engine case and disconnect the boost line going down under the engine. Disconnect the 90° line and attach it to the coupler on the end of the line from Port 2.
- g. Attach the kit supplied vacuum line labeled **Port 3** to the 90° T-fitting and to Port 3.
- h. Locate the thick crank case ventilation vacuum line near the top of the engine and cut it in two approximately 4-inches from where it goes under the engine cover's edge. Apply a little spray lubricant to the open nipples of kit supplied vacuum line labeled **Port 1** and install them into the separated OEM tubing.
- i. Attach the other end of kit supplied vacuum line labeled **Port 1** on Port 1.
- j. Connect the 3-way valve electrical connector.
- i. (Photo 12) Locate the Boost Control loom you pushed into the engine compartment and plug the connector into the 3-way valve's electrical pigtail.



**12. Reconnect the battery.**

**13. Accessory Cable Functionality**

- a. **General functionality.** The normal position for ECU Power is on ( I ), for the Map A/B switch is off (LED off), and for the Boost switch is on (LED on) and unless you are either resetting the ECU,

desire to run Map B, or want to revert to stock boost, these switches should remain in these positions. To change the switches, turn off the ignition key before actuating the switch.

- b. *Map Select Switch functionality.* Selecting the **Map A/B** switch's on position selects timing Map B, verified by illumination of the *Red LED* when the vehicle is started. Using Map B may result in a CEL on approximately thirty percent of vehicles; the CEL results from that particular vehicle's increased sensitivity to detonation. If Map B produces a CEL in your vehicle, select reselect Map A and use the ECU power cut switch to clear the CEL as outlined below.

*Notes: (1) More is not always better... adding more timing can actually reduce power in a particular vehicle if that vehicle is sensitive to detonation. If the stock ECU detects detonation, it reduces timing to protect the engine; if you're car doesn't make more power than stock and you're running Map B, switch back to Map A and you will feel the power increase. This condition can and does occur even without a CEL.*

*(2) Unless you specifically requested some other settings, Map A and Map B are designed for premium-grade fuel; Map B is a slightly more aggressive map intended for vehicle which will accept that timing.*

- c. *ECU Power Switch functionality.* To reset the ECU long and short term fuel corrections or to clear a CEL, with the ignition key off and removed, select the off ( 0 ) position on the **ECU Pwr** Switch and leave it there for a minimum of ten minutes. After ten minutes, turn the **ECU Pwr** switch to the on position ( 1 ) then start the car and the CEL should be gone. Additionally, the same procedure resets any ECU fuel learning.

*Note: (1) Whenever battery power is removed from the vehicle like when installing the PnP kit, "learning" maintained in the ECU's volatile memory is erased. This may manifest itself as a fuel smell during start, rough idle, stalls at idle, or minor surges/hesitations during light throttle driving. Vehicles, especially modified vehicles, may take several trips to again run smoothly. This is normal and results not from anything in the Unichip PnP kit, but rather because the battery was disconnected.*

*(2) Always keep the ECU Power switch in the on position during normal operations. If you leave the ECU Power Cut switch in the off ( 0 ) position, the ECU's volatile memory is erased every time you turn off the vehicle which and may never learn to run smoothly.*

- d. *Boost switch functionality.* In the on position, the *Green LED* light illuminates and the engine runs on an elevated boost level (10 PSI with a 13 PSI transitory spike). To switch from Unichip controlled high boost back to a stock boost setting, select the off (no LED) position.

## Unichip Warranty Information

For 90 days following the original owner's purchase of a Unichip, Unichip of North America (UNA) warrants no other ECU product generates more power from a specific gasoline engine than a properly functioning, custom tuned Unichip in the specific vehicle for which it is tuned. If another ECU product generates more power from that engine within 90 days of the original owner's purchase of the Unichip, then UNA will refund original owner the cost of all UNA parts, UNA installation, and UNA tuning. Shipping, testing, dynamometer costs and the cost of removing any UNA parts are specifically not covered by this warranty and will not be refunded to the owner.

To claim a refund, owners must provide dynamometer proof another ECU product produced more power when installed on the specific vehicle and that vehicle and all of its parts were in an identical condition other than the ECU enhancement. Three dynamometer tests must be performed using the Unichip and three tests using the other ECU product. The average of the three tests performed on each product shall constitute that product's score for determining power. The same technician, using the same dynamometer in an identical condition with the same settings, must perform all test runs. All environmental conditions including temperature and pressure altitude and the vehicle's cooling system temperatures and drive train temperatures must also be identical for all six runs. The vehicle must also use the same fuel for all six tests. UNA reserves the rights to, at UNA's exclusive discretion, re-tune the Unichip involved in a performance warranty claim at no cost to the customer making the claim or to provide a warranty refund; if after a retune, the Unichip still makes less power than another product, UNA will provide a refund IAW this warranty statement.

All UNA parts, including Unichip piggyback computers, driver modules, and harnesses also carry a limited warranty against manufacturer's defect. This warranty is valid for the original owner only, for two years from the date of purchase regardless of the installation date. UNA only warrants Unichip products sold directly from UNA or from an authorized UNA reseller. If a UNA product is found defective, UNA will provide a replacement component at no cost to the owner. Shipping to UNA, testing, dynamometer costs and the cost of removing any UNA parts are specifically not covered by this warranty and will not be refunded to the owner.

The above warranties are expressly made in lieu of any and all other warranties, express or implied, including any warranty on the engineering or design of the goods as well as the implied warranties of merchantability and fitness for a particular purpose.

Any and all warranties on the Unichip are void if: 1) the installation or custom tuning of the Unichip was performed by anyone other than a UNA qualified dealer or tuner, 2) anyone other than a qualified UNA tuner or dealer alters or modifies or attempts to alter or modify any of the electronic data within the Unichip or 3) the UNA product is used for anything other than its intended purpose or is physically or electrically damaged.

For all warranty claims, the product return shipping date stamp must be within the appropriate time limitation from the time of purchase. Additionally, proof of purchase in the form of either a properly completed warranty card or a sales receipt indicating both the date of sale and owners name is required and is the owner's responsibility. Customers with hard-wire installations are responsible for providing proof of when and where the installation was performed. UNA will deny any warranty claim if the customer cannot provide proof of purchase.

UNA is not liable for incidental, consequential or punitive damages attributable directly or indirectly to the Unichip or UNA's actions or inactions with respect to the Unichip. UNA is also specifically not responsible or liable for damage of any kind: 1) to a vehicle into which UNA products are installed or 2) resulting from the use of a vehicle equipped with any UNA products.

UNA believes high performance driving should be confined to appropriate venues such as racetracks or organized closed course events such as Autocross competitions, and does not sanction or participate in any street racing or other illicit driving activity.