



MINI Cooper S MY02-06

Unichip PnP Installation Instructions

and Warranty Information

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Tools Required

10mm combination wrench
Spray lubricant

Medium Phillips-head Screwdriver
Small Flashlight

Medium Awl

Notes: (1) The ECU connectors lock and unlock by pulling the "T-handle" located at the connector's edge. Practice on the locking handles on the PnP harness before trying to remove the OEM plugs.

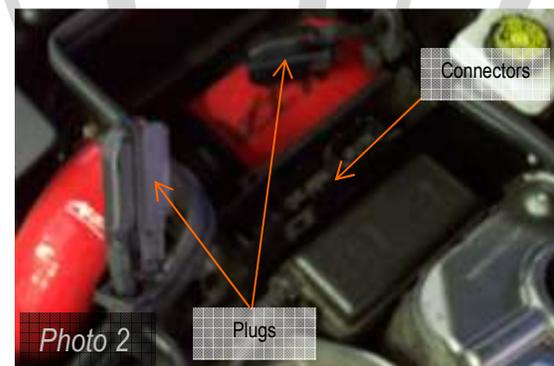
(2) When removing the OEM Plugs from the ECU, getting your fingers into the T-handles can be challenging. Gently prying the T-handles back using a screw driver may help.

(3) Your kit was shipped with a black plastic insertion tool on the PnP's Unichip plug which will be used to slip the connector through the firewall; don't remove the insertion tool until the plug is moved through the fire wall to minimize wear and tear on the connections.

(4) These instructions are for the Non-Flux PnP kit which uses the Map A/B mechanical switch. If you subsequently purchase the Flux system, refer to the instructions included with it for installation procedures

Installation Procedures

1. Using the 10mm wrench, disconnect the car's battery at the negative terminal in the rear storage area underneath the access panel below the jack assembly bag.
2. Expose the ECU
 - a. (Photo 1) Open the engine compartment and locate the ECU Box near the driver's side shock tower.
Note: The vehicle in the photo has an aftermarket CAI
 - b. Remove the OEM ECU case cover and disconnect the two harness plugs.
3. Connect the PnP Harness
 - a. (Photo 2) Install the two PnP harness plugs into the corresponding ECU connectors and slide the locks closed.
 - b. Reinstall the OEM ECU box cover.
4. (Photo 3) Install the PnP Harness.
 - a. Locate the fuse box just outboard of the ECU box. You may either secure the PnP harness case with Velcro or just the plugs. If you want to use Velcro, install a single strip on top of the fuse box cover.



- b. Position the PnP case.
 - i. The case is designed to be installed with the connectors facing the driver's side shock tower. OEM manufacturing tolerances on some vehicles, however, don't allow the rear OEM plug to pull out far enough to connect with the PnP case positioned that way. The only issue with installing the PnP case with the female connectors facing the passenger's side is the case sits "upside down" when installed.
 - ii. Once you've determined which way the case will mount in your vehicle, install one of the Velcro strips on the PnP case's lower surface and press it firmly to the fuse box cover.
- c. Connect the OEM harness plugs removed in Step 2 above into the PnP connectors and slide the locks closed.

Note: Aftermarket "cold air boxes" may have to be notched to neatly route the rear wire looms.
- d. There will be some exposed wires between the OEM Plugs and the rubber seals on the wire looms. Use the kit provided cloth electrical tape to cover the exposed wires on the OEM harness if desired.

5. (Photo 4) Route the **Unichip** and **Comm** leads.

- a. On the rear firewall under the rain gutter, locate the rubber grommet just left of the brake master cylinder.
- b. Using the awl, make a small hole in the center of the grommet.

Note: Use caution to not cut or nick any wires.

- c. Apply a small amount of lubricant around the beveled tip of the black plastic insertion tool placed on the PnP harness's **Unichip** lead.
- d. Gently slide the insertion tool completely into the hole in the grommet.



- e. Working inside the driver's foot well, locate the black plastic insertion tool you slid through the grommet and gently pull the **Unichip** lead into the car.
- f. Gently pull the **Unichip** lead out of the insertion tool.

Note: Use caution when removing the connector from the tool and straightening the wires
- g. Returning to the engine compartment, insert the **Comm** Molex connector into the insertion tool and repeat the procedure to insert it into the car.

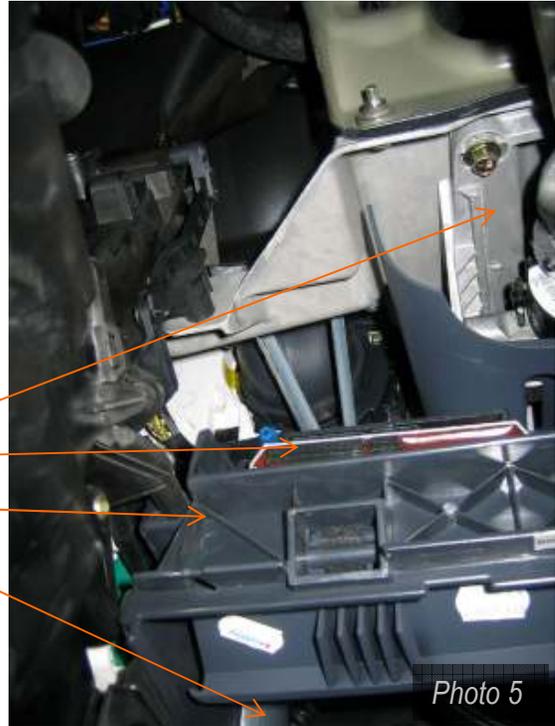
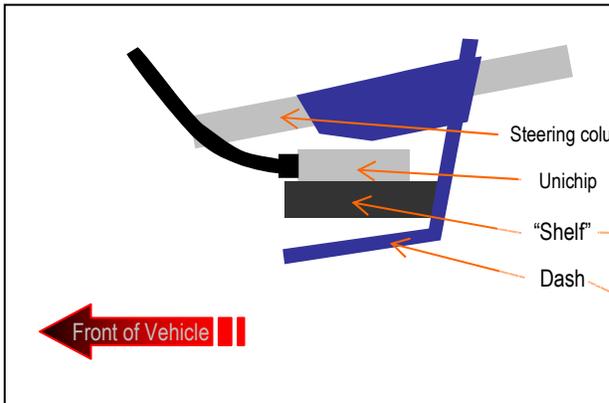
Note: The Comm connector and Map A/B switch loom can be left in the engine compartment if desired.

6. (Photo 5) Install the Unichip Computer.

- a. Remove one side of the protective plastic from remaining Velcro strip and press the strip on the back of the Unichip computer.
- b. Working inside the driver's foot well, locate the steering column underneath the dash.

- c. Following the steering column toward the rear of the car, locate the “shelf” formed by the lower edge of the dash pad.
- d. Remove the remaining plastic protective strip from the Velcro on the back of the Unichip and firmly press it into place on the shelf just left of the steering rack as when looking to the rear of the car.

Note: Ensure the Unichip's Molex connectors face the front of the vehicle.



- e. Connect the **Unichip** 24-pin Molex plug to the Unichip Computer's 24-pin connector.

Notes (1) The Molex plug has a locking tab on one side which should align with a corresponding tab on the connector. (2) The plug's locking tab should audibly “click” when the plug connects; if you don't hear or feel a click, depress the locking tab to remove the plug and reconnect it. (3) Ensure the routed wires remain clear of the foot pedals; failure to do so may result in an unsafe driving condition.

7. Position the accessory cable.

- a. Connect the **Map A/B** accessory switch to the **COMM** Molex connector.

Notes (1) The Molex plug has a locking tab on one side which should align with a corresponding tab on the connector. (2) The plug's locking tab should audibly “click” when the plug connects; if you don't hear or feel a click, depress the locking tab to remove the plug and reconnect it. (3) Ensure the routed wires remain clear of the foot pedals; failure to do so may result in an unsafe driving condition.

- b. Position the **Map A/B** switch and loom as desired.

8. Reconnect the battery negative terminal and replace the jack assembly bag and mat.

Accessory Cable Functionality

Switch	Mode	Function	Notes
Map A/B	1	More aggressive ignition timing	Unless otherwise specified, for higher octane fuel
	0	Less aggressive ignition timing	Unless otherwise specified Default operational setting

- i. The normal position for the **Map A/B** switch is off (0), and unless you desire to run Map B it should remain there. To change the switch, turn off the ignition key before actuating the switch.
- ii. With the ignition key off and removed, **Map A/B** switch's on (1) position selects timing Map B. Using Map B may result in a CEL (Check Engine Light) on some vehicles; the CEL results from that particular vehicle's increased sensitivity to detonation. If Map B produces a CEL in your vehicle, reselect Map A and start the engine five times as outlined below.

Note: (1) More is not always better... adding additional timing can actually reduce power if your particular vehicle is sensitive to detonation. Whenever the stock ECU detects detonation, it reduces timing to protect the engine. If you're vehicle 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.

- iii. CEL's illuminate for literally hundreds of causes some of which require immediate correction but some of which are "nuisance" codes. Unfortunately, without reading the code triggering the code, you can't tell one from another. Until you know its cause, do not ignore a CEL.
 - a. The MINI ECU automatically clears "old" faults which are no longer present. If the code triggering the CEL is absent after five engine starts, the CEL extinguishes; if you trigger a CEL, turn the car off and back on five times. If the light remains on, take the car to an auto parts store with a scan tool and verify the code causing the CEL.
 - b. The only "normal" Unichip CEL results from selecting Map B with insufficient octane or in a car sensitive to detonation. If you get a CEL with the Unichip installed, verify Map A is selected and/or you have the requisite octane fuel and restart the engine five times to extinguish the CEL. If the CEL remains illuminated, remove the Unichip PnP and start the engine five times; if the CEL remains, it's a vehicle problem and you should contact your MINI dealer or shop. If the CEL extinguishes with the Unichip PnP removed, contact your Unichip dealer.

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, the original owner can contact their Unichip dealer for a refund of all Unichip parts, Unichip installation charges, and Unichip custom 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 repeatable dynamometer tests must be performed using the Unichip and three repeatable 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 ambient and IAT temperature and pressure altitude and the vehicle's cooling system temperatures and drive train temperatures must also be identical for all six runs. IAT and Coolant temperature data logged information for each run is required. 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, the owner will receive 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 one year from the date of purchase regardless of the installation date. UNA only warrants Unichip products sold by an authorized UNA reseller. If a UNA product is found defective, the original purchaser may contact the reseller from whom they purchased the product for a replacement component at no cost. 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.

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 custom 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. Warranty claims will be denied 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.