



Toyota Tundra MY99-06, Land Cruiser MY98-06, Sequoia MY01-06, 4Runner MY03-06, 4.7L, NA Unichip PnP Installation Instructions and Warranty Information

v1.1, 8 Feb 2007

Tools Required

10mm wrench, Medium Phillips head Screwdriver, Small Flashlight

Notes: (1) Although the Unichip kit components are identical, the installation for the 4Runner is different from the Tundra, Land Cruiser, and Sequoia. These instructions are divided into two different sections to accommodate those differences.

(2) There are three different OEM ECU and corresponding PnP harness configurations possible for these vehicles. Some use all five OEM plugs, some use four plugs, and some use three. Please read the notes in the instructions associated with the installation steps.

(3) All plugs in this installation are locking units keyed such that they only fit into the correct connector. Each ECU connector has a small release tab which must be depressed to remove the plug and which should audibly "click" when inserted correctly – both into the ECU and into the PnP harness.

(4) If a plug is difficult to remove, try pushing it back into the receptacle and then pull it back out. DO NOT FORCE THE PLUGS OUT OR BACK IN.

(5) On some PnP harnesses, just to the left of the connectors there is a small red panel containing three DIP switches. The switches must be correctly positioned for the truck to run normally. From left to right, the switches should be 1 – On (up), 2 – Off (down), 3 – On (up).

Tundra, Sequoia, Land Cruiser Installation Instructions

1. Disconnect the truck's battery

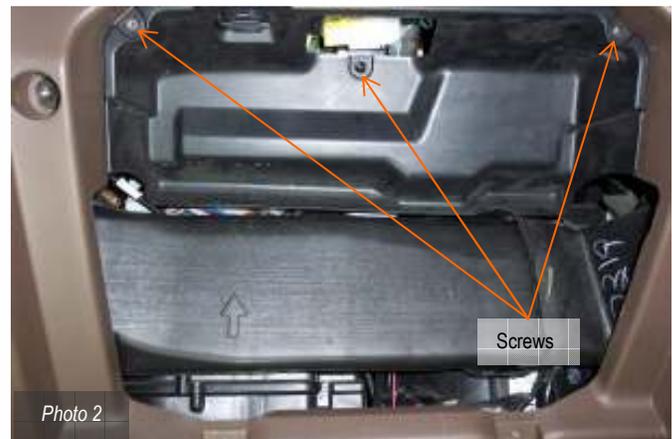
- Using a 10mm wrench, disconnect the car's battery at the negative terminal in the engine compartment.

2. Expose the ECU behind the passenger's seat glove compartment.

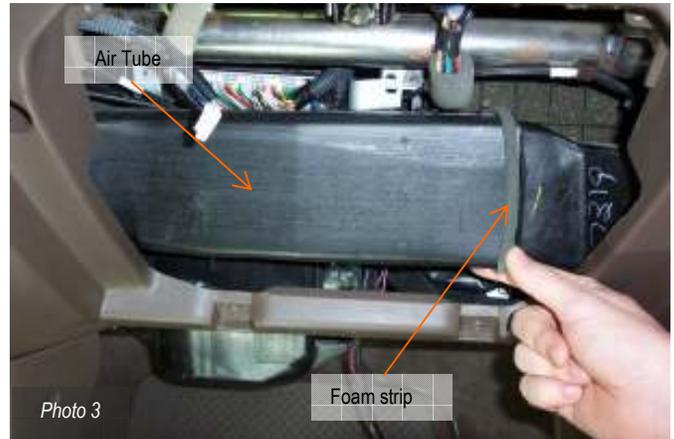
- (Photo 1) Remove the glove box.** Using the Phillips head screwdriver, remove the two screws along the lower edge securing the glove compartment.



- (Photo 2) Remove the panel behind the glove box.** Using the Phillips screwdriver, remove the three screws securing the panel.



- c. **(Photo 3) Remove the air vent tube.**
 - i. Remove the foam tape on the right side of the tube.
 - ii. Slide the tube towards the driver's side to release it; pull the right side of the tube out and remove it.



3. Disconnect the ECU.

- a. The ECU can either be removed or just disconnected to affect the install.
- b. **(Photo 4)** Working from left to right, disconnect the first two and last two OEM Plugs from the ECU; leave the center OEM Plug installed. **Do not force the Plugs;** see the notes for hints on removing stubborn plugs.
- c. Remove the 2 machine screws located on the bracket securing the ECU.
- d. Gently lower the ECU being careful not to pull on the plugs or wiring harness.



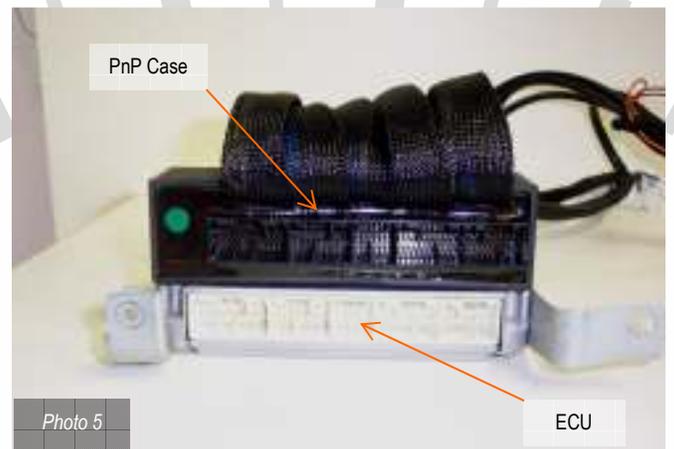
4. (Photo 5) Install the PnP harness.

Note (1): The ECU is shown removed for clarity but does not have to remove the ECU to install the PnP kit.

(2) A 5-plug PnP harness is shown in Photo 5; it is functionally identical to the 4-Plug and 3-Plug versions. The PnP looms are labeled to indicate the appropriate connector it should be installed into.

- a. Separate the supplied Velcro strip and place one piece of it onto the bottom (larger, non-beveled surface) of the PnP case.
- b. Place the other Velcro piece on the center of the ECU near the connector side.

Note: If you remove the ECU, there is insufficient room to mount the PnP to it and slide the entire assembly into the opening. After positioning the PnP harness, pull it back off; put the ECU back into place, slide the PnP into the opening sideways then position it into its final position.



- c. Position the PnP case immediately above the empty ECU connectors aligned with the forward edge of the ECU as you look at it. Firmly press the PnP onto the ECU to secure the Velcro strips.

- d. Counting from Left – to – Right,

- i. With a **5-Plug PnP** harness, disconnect all OEM plugs from the ECU and insert them in order into the PnP Harness's connectors. **Do not force the Plugs**
- ii. With a **4-Plug PnP** harness, disconnect OEM plugs 1, 3, 4, and 5 from the ECU and insert them in order into the PnP Harness's connectors. **Do not force the Plugs.**
- iii. With a **3-Plug PnP** harness, disconnect OEM plugs 1, 3, and 5 from the ECU and insert them in order into the PnP Harness's connectors. **Do not force the Plugs.**

e. Starting with PnP **Plug 1** in the left most OEM ECU connector, install the PnP Plugs into the corresponding OEM ECU connectors. **Do not force the Plugs.**

5. Remount the ECU.

a. Using OEM machine screws, reinstall the ECU.

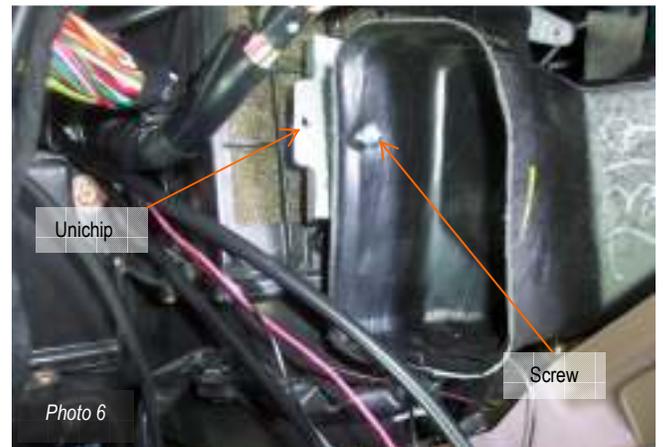
6. (Photo 6) Install the Unichip computer.

a. Locate the section of the vent tube on the right side of the glove box opening.

b. Install the provided sheet metal screw into the rear wall of the tube approximately one-third of the way from the top.

c. Place the Unichip computer, with the Molex connector facing up, behind the vent tube with the rear of the computer against the tube. Line up the hole on the left most mounting tab with the screw and tighten it gently.

d. Place the plug labeled **To Unichip** into the connector on the Unichip computer.



7. Test start the Engine

a. Temporarily reconnect the battery to test start the truck and verify all connections are correct before reassembling the heater duct and glove box.

b. Disconnect the battery again before reassembling the truck.

8. Replace the vent tube.

9. Replace the glove box.

10. Reconnect the battery.

4Runner Installation Instructions

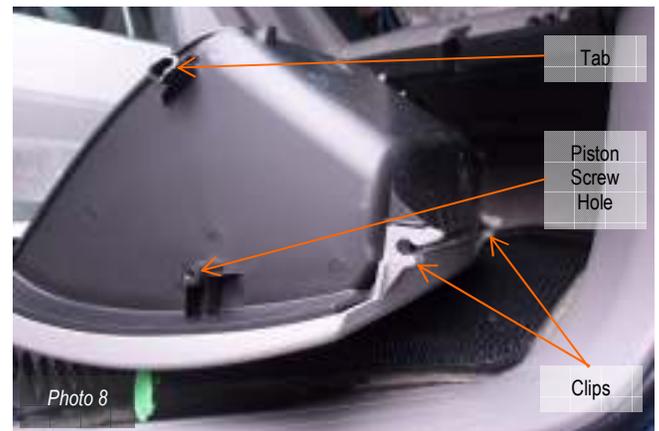
1. Disconnect the battery's negative terminal as described in the Tundra instructions above.

2. Expose the ECU

a. (Photo 7) Open the glove box and remove the screw securing the piston holding it in place.



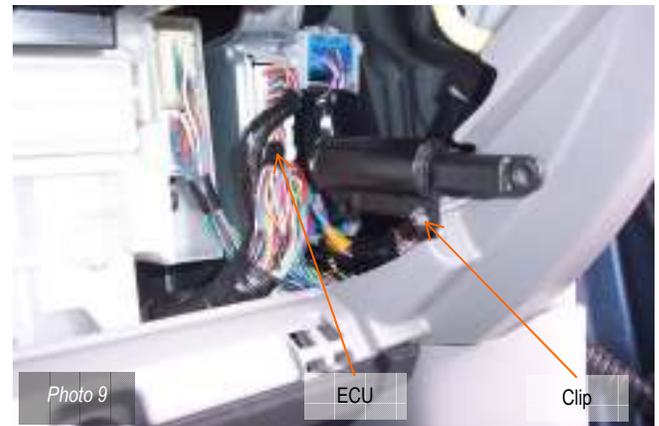
- b. (Photo 8) Holding the glove box by each side, firmly pull it up and towards you to release the lower clips.
- c. Twist the glove box in the opening to clear one of the upper restraining tabs and then pull the glove box out.
- d. Note the location of the OEM ECU mounted vertically at the far right of the glove box opening.



3. Install the PnP Harness

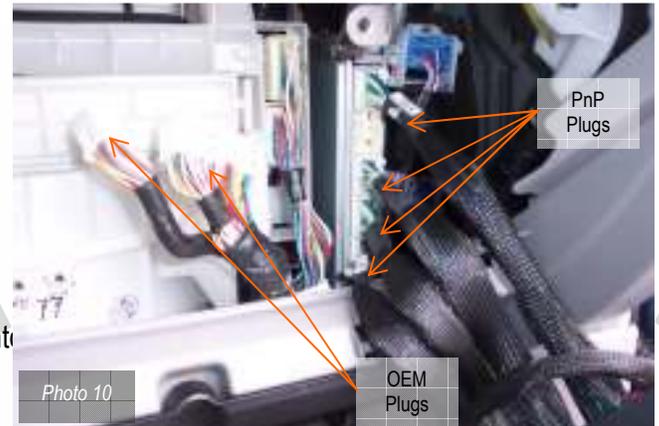
Note: Toyota uses two different ECU configurations on this application. If your PnP has three connectors, the second plug from the top and the second plug from the bottom stay connected to the OEM ECU. If your PnP has four connectors, only the second plug from the top stays connected to the OEM ECU.

- a. (Photo 10) Starting with OEM ECU Plug 1 at the top, disconnect plugs 1, 3, 4, and 5 or plugs 1, 3, and 5 (see note above) and position them off to the center of the truck.



Note: OEM Plug 2 is shown removed, but does not have to be removed for the installation

- b. Hold the PnP Harness with the connectors facing the OEM ECU and the case's larger, flat side facing the passenger's door.
- c. Again starting at the top, insert PnP Plug 1 into the top OEM ECU connector and then insert PnP the remaining Plugs in order into the remaining connectors.
- d. Insert the disconnected OEM plugs in order into



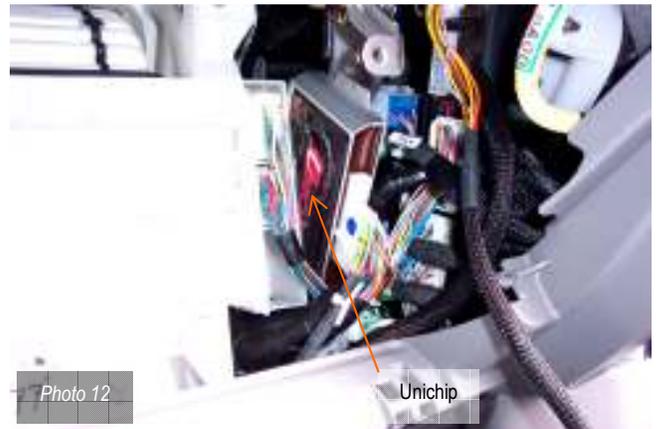
Note: The plugs are keyed such that they will only fit into the correct connector. Do not force the plugs.

- e. (Photo 11) Hold the PnP harness case vertically and rotate it 90° so the PnP connectors face the center of the truck and slide the case into the opening to the right of the OEM ECU.



4. Install the Unichip

- a. (Photo 12) Slide the Unichip Computer into the space immediately to the left of the OEM ECU.
- b. Connect the PnP Harness's 18-Pin Molex connector labeled Unichip into the Unichip's Molex connector.



5. Replace the Glove Box support piston.

Note: Use the center hole for mounting the piston to the kick panel clip – see Photo 9

6. Test start the Engine

- a. Temporarily reconnect the battery to test start the truck and verify all connections are correct before reassembling the heater duct and glove box.
- b. Disconnect the battery again before reassembling the truck.

7. Replace the glove box.

8. Reconnect the battery.

All Applications

Accessory Cable Functionality

Switch	Mode	Function	Notes
ECU Pwr	1	ECU backup power enabled	Normal operational setting
	0	ECU backup power disabled	To clear CEL's or dump ECU fuel trims
Map A/B	1 (LED on)	More aggressive ignition timing	Unless otherwise specified, for higher octane fuel
	0 (LED off)	Less aggressive ignition timing	Unless otherwise specified Default operational setting

Note: Some applications have only a Map A/B switch.

- a. The normal position for **ECU Power** switch is *On* (1) and for the **Map A/B** switch is *Off* (0) and unless you are either resetting the ECU or running Map B, these switches should remain in these positions. To change either switch, turn off the ignition key before actuating the switch.
- b. With the ignition key off and removed, selecting the **Map A/B** switch *On* (1) position selects timing Map B, which can be 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, reselect Map A and use the **ECU Power** switch to clear the CEL as outlined below.

Note: (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 truck doesn't seem to be making more power than stock and you're running Map B, switch back to Map A and you should feel the power increase. This condition can and does occur even without a CEL.

- c. To reset the ECU long and short term fuel corrections or to clear a CEL, with the ignition key off and removed, select the **ECU Power** switch *Off* (0) position and leave it in that position for a minimum of ten minutes. After ten minutes, turn the **ECU Power** switch to the *On* position (1) then start the car and the CEL should be gone. The same procedure resets all previous ECU fuel learning.

Note: (1) When you removed battery power from the vehicle like you did when installed the PnP kit, the "learning" maintained in the ECU's volatile memory is erased. All vehicles, but especially modified vehicles, will 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 (I) position during normal operations. If you leave the ECU Power switch in the Off (0) position, the ECU's volatile memory is erased every time you turn off the vehicle which means it never learns to run smoothly.

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.