

## J3 Chip Installation Instructions

This guide describes how to install a T.I. Performance J3 Chip into your ECU.

**Please take the time to read this guide completely. Follow all the steps to ensure trouble free operation of your chip. Most problems can be traced to not following the instructions!**

**Required Tools:** Philips Head Screwdriver, Flat Blade Screwdriver, 10mm socket, 7mm socket, 600 grit sandpaper, Methylated Spirits.

### J3 Chip Installation Steps

1. Remove your passenger side kick panel, and unscrew the ECU retaining bracket. In AU vehicles, this bracket is larger than earlier models, and is riveted in. You will need to drill out the rivet, which can be replaced with a screw.
2. Unbolt the electrical connector to remove the ECU from the car using a 10mm socket. Pry off the cap which covers the J3 port on the bottom of the ECU with a screwdriver. Note that on EB-ED V8 ECUs there is a screw and sticker which must be removed.



The photo on the left shows a bare, uncleaned J3 port. Open the ECU case by removing the six bolts.

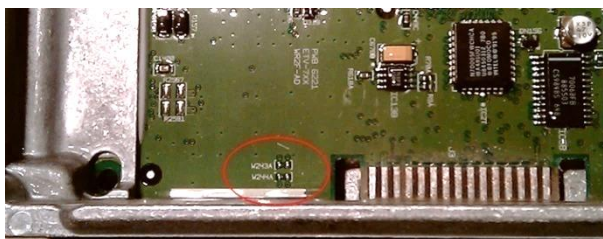
3. Wipe off the white paste with a rag and methylated spirits.
4. **Gently** scrape off the clear protective coating on the J3 terminals by running your 3mm flat bladed screwdriver in the direction of the terminals. Do not press hard, you do not want to damage the board. Keep gently scraping until all the clear coating is removed from and in between the terminals, and you have a smooth, even surface. Repeat this process on the other side of the board.

**Note:** You must do this on both sides of the J3 Port!

5. Once you have removed the clear lacquer, use small piece of 600 grit sandpaper and **lightly** scuff the terminals **no more than 3 or 4 scuffs**. **Do not keep sanding**, this will remove the protective solder. Give the port a clean with a cloth and some methylated sprits.

**Note: This is the most important step of the process! Failure to follow step 4 correctly will lead to issues with the connection!**





6. **AU Series 1 vehicles only.** If your ECU is missing two small black resistors between the pads circled in the picture **on the top side of the board**, you will need to join the J3 Enable links shown in the 2<sup>nd</sup> picture **on the bottom of the board** for the J3 port to work.

This process needs to be done by someone familiar with soldering electronic components on circuit boards, using a temperature-controlled iron and flux core solder.



Carefully clean the solder pads with 600 grit sandpaper, then use two small pieces of single strand wire to join each horizontal pair as in the bottom half of the image. Do not join the vertical pairs. Do not scratch between the terminals or you will permanently damage the ECU.

**Tip: Use the Zoom function to see the photos more clearly.**

7. Hold the ECU with the label and screws facing up and insert the J3 Chip as shown in the picture.

**Note:** EB-ED V8 ECUs will require the tin cover to be cut and a capacitor to be bent over slightly to make room for the J3 Chip.



8. Use a strip of gaffer or duct tape to secure the chip in place and insulate the open terminals on the bottom of the unit, as shown in the photo on the right.

**Note: This step is essential for reliability. Vibration or movement of J3 Chip while the car is running can cause failure of the chip and ECU.**

9. Install the ECU back in the car and replace the retaining bracket and kick panel.

10. Turn the ignition to on, **leaving the engine off**. Listen for the fuel pump. You should hear the regular 2 second priming of the pump. If the pump stays on constantly, the car is in LoS mode. Read the **Extra Tips** section for how to resolve.



11. If you have an AU, read the **Extra Tips** section before you attempt to start the car.

12. Start the car and get it to operating temperature. If you have issues with starting, idle, including rev hang, high idle or hunting, see the **Extra Tips** section.

13. Reset your base ignition timing (distributor models) to 10deg (6 cyl) or 30deg (V8) in timing/diagnostic mode. This is critical if you have previously dialled in any advance on the distributor, as the tune on your chip assumes base timing is factory. Consult a workshop manual for more information on how to reset your base timing.

## **Extra Tips**

- If the car runs rough or blows black smoke with the chip installed, check whether the fuel pump runs continuously with the Key On Engine Off (Step 10). This indicates the ECU is in LoS mode. In most cases this is caused by the J3 port not being properly cleaned. Please ensure that you have followed all installation steps correctly, particularly step 4, 5 and 6, before repeating the test. If you still have trouble, **include as much information as you can**, along with **pictures of the J3 Port** when contacting us.
- If you have issues with idle (including high idle, low idle, rev hang, hunting or stalling), your base idle will need to be adjusted. With the car at operating temperature, your chip installed and the ISC unplugged, the car should idle between 500-550rpm (or as close as possible when a large camshaft is installed). Adjust the throttle stop screw on the throttle body with a flat blade screwdriver to achieve this. You may need to turn this in a couple of screws to get a steady idle with the ISC unplugged. Also check the intake and all hoses thoroughly for vacuum leaks. Modified throttle bodies are a culprit for leaking air around the throttle blade, a main cause of high idle, rev hang and hunting.
- **AU Vehicles:** If you fit the chip and your car does not crank, **do not attempt to start the vehicle more than 3 times consecutively with the chip installed**. Doing so will **immobilise** the car, which will require a Ford dealer WDS or Scan tool with specialist software to unlock. If the Smartshield hand on the dash is flashing fast, and the car won't crank with the chip removed, the car has been immobilised. The chip will still disable Smartshield if installed properly. Remove the chip and run the car to reset the failure count, then revisit steps 4, 5 and 6 to make sure the J3 port is enabled and clean before trying again. If you still have trouble, **include as much information as you can**, along with **pictures of the J3 Port** when contacting us.