

This documents the upgrade of the 04-06 TSX with an 07-08 TSX ECU for FlashPro use.

Overview.

The 07-08 TSX FlashPro can be used with an 04-06 TSX after it is fitted with an 07-08 TSX ECU and the enclosed CAN programming adapter. Prerequisites:

07-08 TSX Manual transmission ECU	37820-RBB-A21
07-08 TSX Auto transmission ECU	37820-RBB-A71

The Hondata FlashPro uses the CAN programming protocol for speedy ECU programming. Although the entire TSX model range from 2004-2008 uses CAN for dashboard communications, the CAN wiring does not extend to the OBD2 diagnostic connector for the 04-06 TSX nor is the 04-06 ECU able to program this way. When the 04-06 TSX is upgraded with an 07-08 TSX ECU and the CAN wiring is extended into the OBD 2 connector the Hondata FlashPro for TSX can then be used to custom tune your engine.

Overview

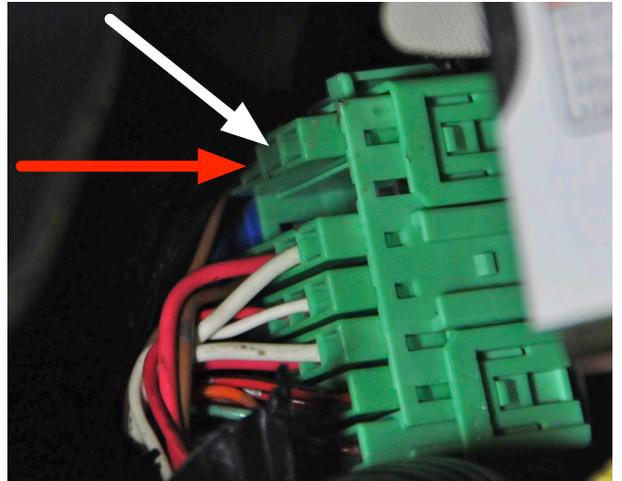
1. Install the supplied harness from the CAN connector to the DLC connector.
2. Drive your TSX to an Acura or Honda dealer. Be sure to book in advance.
3. Install your 07-08 TSX ECU while at the dealer.
4. Instruct your Acura or Honda dealer to enter your TSX VIN number into the ECU. Then match the new ECU to your immobilizer using “replace ECU” function.
5. Register your Hondata FlashPro and lock it to your ECU. Now you are ready to begin tuning.

Hondata CAN adapter harness installation

1. Remove your Glove Box. The CAN connector is green and located in the upper centre of the dashboard behind the audio controls. You will need to carefully remove the black insulation tape surrounding the connector.



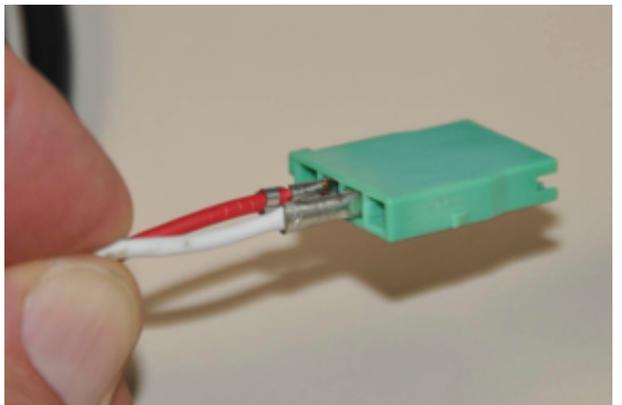
2. There are two types of CAN connectors. The most common type has an upper green plug with a single brown wire to the far left. Insert the red wire next to the brown, then insert the white. They will only go in one way and require little force to insert. The red and white wires line up with the other solid red and white wires in the upper green plugs.



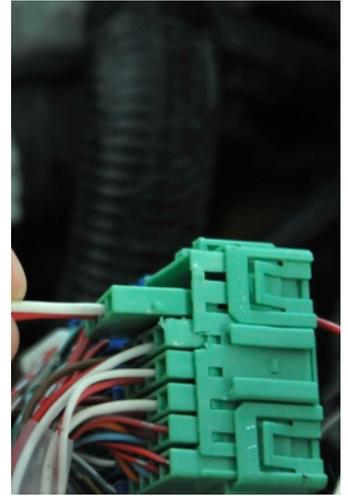
3. The second kind of connector has two upper empty slots. If you have this kind of connector you will need to first connect the supplied adaptor cable and green plug.



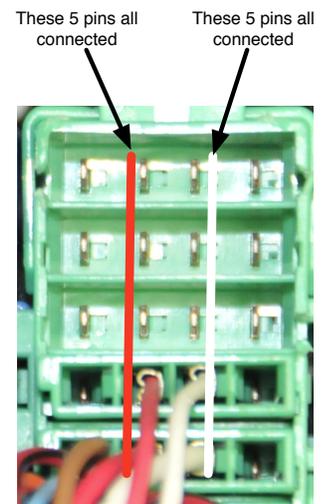
4. Take the end of the supplied Hondata adaptor cable labelled green dash connector. Insert the red and white wires. Double check they are in the correct location, because once the green plug is inserted into the CAN connector it is almost impossible to remove without disassembling the dashboard.



5. Insert the green plug into one of the two empty slots. The plug is keyed for insertion in only one orientation.



6. General information: The solid red and white wires in the upper green plugs access the vehicle's CAN bus providing communications between the ECU, dashboard, VSA, navigation and DLC.

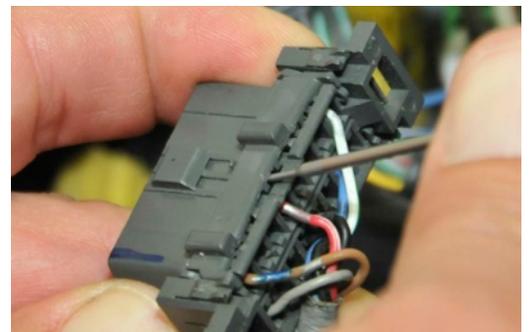


7. Run the other end of the adapter to the DLC. (to the left of driver's knee)

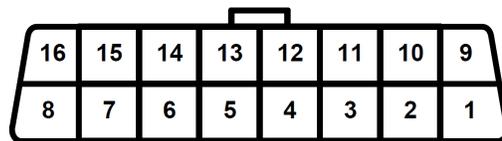
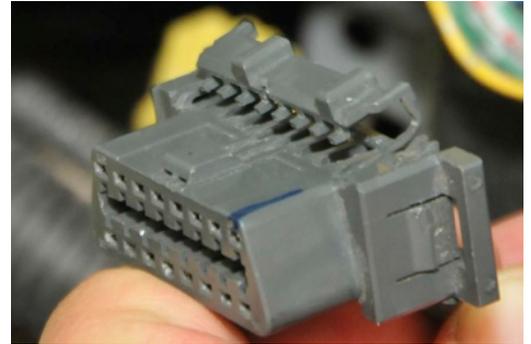
8. Unmount the DLC connector by using a wide flat-head screwdriver to press in the clips either side.



9. Open DLC connector. Use the supplied screwdriver to open the pin release. Slide in the screwdriver and lever upwards. There is a second pin release on the other side of the connector.



10. Upper clip release fully open.



DLC (OBD2 connector) terminal side

04/05/06TSX DLC connector

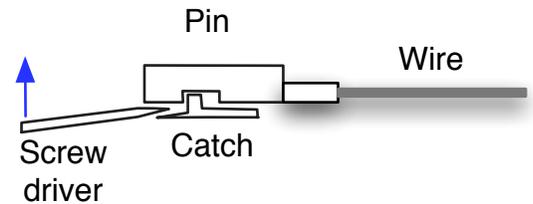
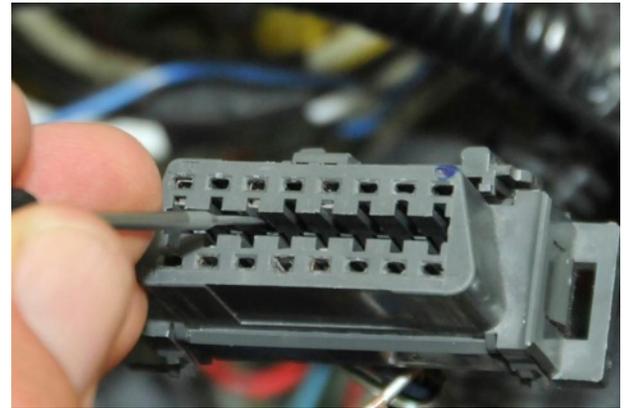
- 1 —
- 2 —
- 3 —
- 4 BLK Ground for FlashPro
- 5 BLK Signal ground for communication
- 6 —
- 7 BLU K Line Diagnostics
- 8 —
- 9 BRN Service Check Input
- 10 —
- 11 —
- 12 RED/WHT (06 TSX WHT) WEN
- 13 —
- 14 GRY Immobilizer programming**
- 15 —
- 16 WHT/GRN +12V Power for FlashPro

07/08 TSX DLC connector

- 1 GRY Immobilizer programming**
- 2 —
- 3 —
- 4 BLK Ground for FlashPro
- 5 BLK Signal ground for communication
- 6 WHT CAN program high**
- 7 BLU K Line Diagnostics
- 8 —
- 9 BRN Service Check Input
- 10 —
- 11 —
- 12 RED/WHT WEN
- 13 —
- 14 RED CAN Program low**
- 15 —
- 16 WHT/GRN +12V Power for FlashPro

11. Remove the grey wire from position 14.

Slide the screwdriver into the centre of the DLC connector between the catch and pin and lever off the plastic catch holding pin 14 into place. Then apply a gentle pulling pressure on the wire from behind the connector to remove the wire.



12. Insert the grey wire into position 1. It will only insert in one position. If you are unsure check the orientation of the pins in the same row. Your immobilizer system will still work and the car can still be driven normally. This programming wire is used only to make changes to the immobilizer system.

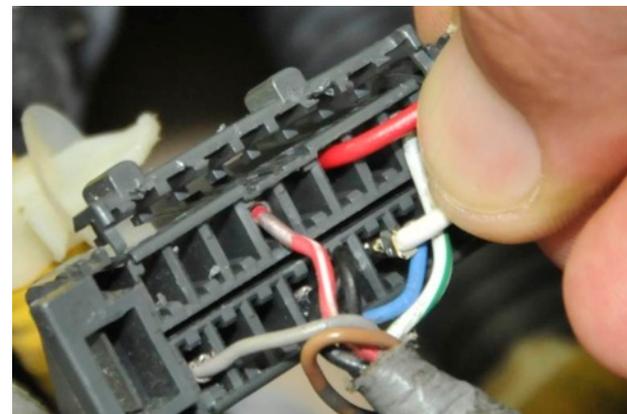


13. Insert the white wire into position 6

14. Insert the red wire to position 14

15. Close the pin releases and re-mount the DLC connector.

Your vehicle is now ready to be driven to a Honda/Acura dealer to match the immobilizer to your replacement ECU. Instruct them to perform a replace ECM function.



ECU replacement and installation

Tools needed: Philips Screwdriver, ratchet and 10 mm socket.

1. The ECU is located in the centre forward section of the vehicle between the driver's and passenger's footwell.



2. By the drivers foot there is a triangular plastic panel. Hold the outer plastic ring with one hand and turn the center plastic Philips screw 1/8th of a turn counterclockwise with the other. The plastic Philips screw should then be easily pulled straight out.



3. From the top section of the triangular panel, remove the metal Philips screw.

4. The panel is secured by three spring clip fittings located as shown here.



5. Pull the plastic panel out.



6. Pull back the carpet and undo the left 10mm bolt holding in the ECU.



7. Repeat for the right hand triangular kick panel. It is secured by only one plastic Philips screw.



8. Remove the plastic AC duct (red spot) for easier access. Unclip the ECU connectors. There are 4 for the manual transmission and 5 for the auto transmission. The clip to depress is located on the top middle of each of the connectors.



9. Unbolt the second of the two 10mm bolts securing the ECU.



10. Slide the ECU out. It is quite a tight fit.

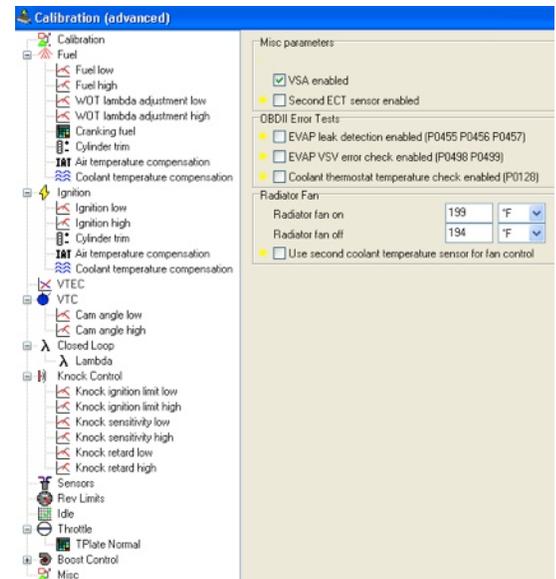
11. Replace with 07/08 TSX ECU. Your vehicle will not start until the immobilizer has been reprogrammed. If you are installing a used ECU the dealer will first need to program in the VIN number from your car. Instruct your Honda/Acura dealer to perform an immobilizer reprogram with ECU replacement. Your vehicle can be driven gently on the 07 ECU until the FlashPro is locked and base calibration uploaded.



12. Calibrations. The 06 TSX engine is identical to the 07-08 TSX. Use the calibration from the FlashPro manager that most closely matches your car for the 07/08. For 04-05 TSX use the supplied 04-05 base calibration, or if your car is already heavily modified and you intend to tune immediately, you can choose an 07-08 calibration.

If you are using an 07 base calibration, go to Calibration - Misc;

- Switch off the secondary coolant temp sensor
- Switch off the Evap leak error P0455
- Switch off the Evap VSV error P0498
- Switch off the coolant thermostat test P0128
- Switch off Use secondary coolant temp sensor for fan control



06-08 TSX improvements over the 04-05:

Increased intake flow:

- Intake valve + 1 mm oversize
- Intake cam High lift lobe with 0.9 mm more lift and 12 degrees more duration
- Throttle body increased from 60-64mm
- Radius on some intake pipes increased from 70-80mm

Increased exhaust flow

- Exhaust Head pipe increased from 60-65mm
- Higher flow catalytic converter
- Main (single) exhaust pipe increased from 54-57mm
- Rear (twin) pipes increased in diameter from 42.5 to 45mm

Block improvements:

- Additional air passages in crankcase for reduced pumping losses

So, if you have upgraded your 04-05 TSX with an intake camshaft, intake, header, throttle body, and catback, you will be close in performance to a similarly equipped 07-08 TSX.