IMPACT ECU · HOW-TO GUIDE

Moving Your Impact ECU to a New Bike

Your Impact ECU is married to the bike it's on. It knows that bike's VIN, its tune and its throttle settings. This guide unmarries it from the old bike and marries it to the new one, in two short sessions: one at your computer and one at the bike.

BOUGHT IT USED? You don't need a password, a file, or anything else from the previous owner. Just follow the steps.

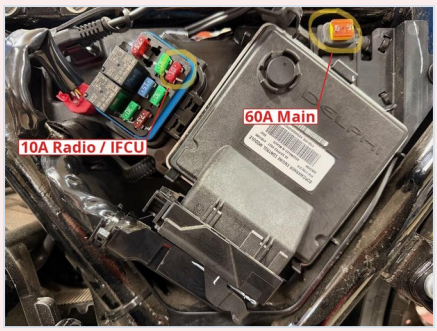
WHAT YOU NEED

Windows computer	Windows 8 or newer, with internet. Macs, Chromebooks and tablets won't work.
USB printer cable	Type A to Type B: one flat end, one square end.
TunerStudio	Installed. Don't have it? Type go.impactwiringsolutions.com/iws-tuner into your web browser.
The new bike's details	The VIN from your title (all 17 characters), the engine size (114, 117, 121…) and any upgrades, so you can pick the right tune.
Battery tender	5 amps or more, on the bike for Part 2.

WARNING **Pull two fuses before the factory ECU comes out.** If the Impact ECU isn't on the new bike yet, turn the ignition ON, then pull the **60A Main** and **10A Radio / IFCU** fuses before you unplug the new bike's factory ECU.

Skip this and the bike can lose Wireless CarPlay and navigation, and may need a dealer visit to get them back.

Leave both fuses out until Part 1 is done. Step 6 tells you when to put them back.



PART 1 · STEPS 1-5

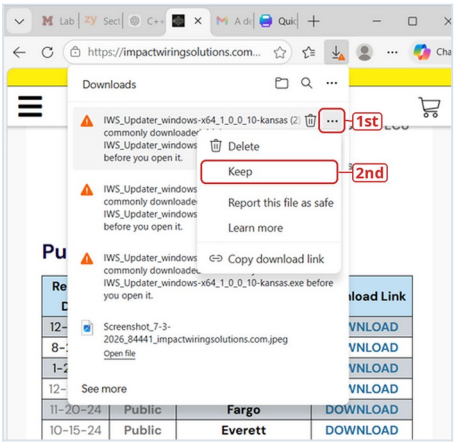
At Your Computer

The ECU runs on USB power, so it can sit on your table (or stay on the bike with the fuses out). Red numbers in the pictures match the numbered instructions.

1 Get the newest IWS Updater

Each release is a new download, so get the newest one even if you have an older one.

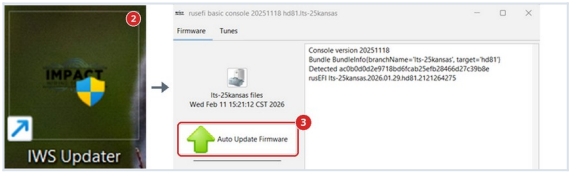
1. Go to impactwiringsolutions.com. Click **Impact ECU Info**, then **Firmware Download**.
2. Click **DOWNLOAD** on the top row of the table, the one marked **(Latest)**.
3. Windows warns that the file isn't commonly downloaded. That's expected; we're a small company. Click the **three dots (...)**, then **Keep**, then **Keep anyway**.
4. Click **Open file**, then **Yes**. Follow the prompts and click **Finish**. You now have an **IWS Updater** icon on your desktop.



Number 3: the three dots, then Keep.

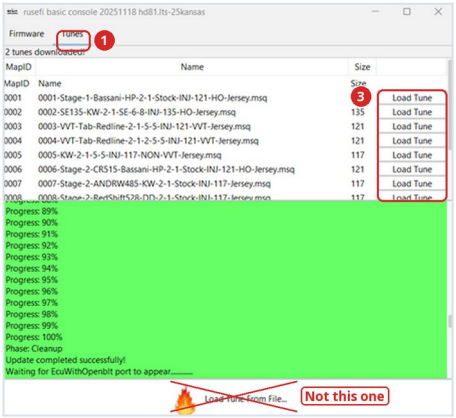
2 Update the ECU firmware

1. Plug the USB cable into the ECU and your computer. Keep TunerStudio closed.
2. Double-click **IWS Updater** on your desktop.
3. Click **Auto Update Firmware**.
4. Wait for the box to turn **green**. If it turns red, unplug the USB cable, close and reopen the IWS Updater, plug the cable back in and try again.



3 Load a tune for the new bike

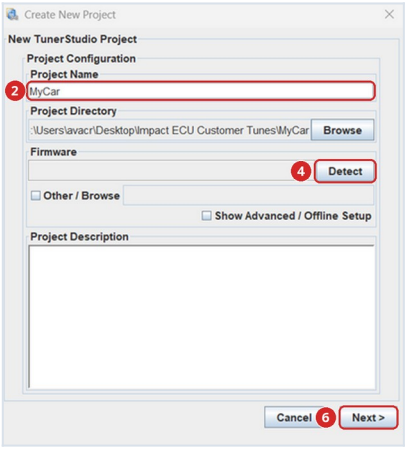
The ECU still has the old bike's tune. This replaces it with a starting tune for the new one.



1. In the IWS Updater, click the **Tunes** tab.
2. Find the tune that matches the new bike. Each name lists the stage, exhaust, injectors and engine size. **Not sure which one?** Call us before you load it.
3. Click **Load Tune** on that row. Not **Load Tune From File** at the bottom.
4. Wait for **Update completed successfully**, then close the IWS Updater.

4 Start a new TunerStudio project

A project is TunerStudio's file for one bike.



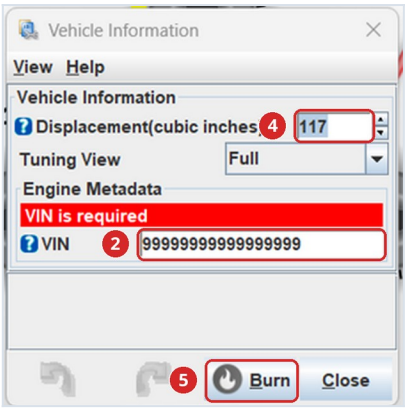
1. Open TunerStudio and click **Create New Project**.
2. **Project Name:** replace "MyCar" with the last 5 digits of the new VIN and your name, like 55555, John Doe.
3. Leave **Project Directory** as it is.
4. Click **Detect**. If nothing is found, check the USB cable and make sure the IWS Updater is closed.
5. When your ECU shows up, click **Accept**.
6. Click **Next >** through each page, then **Finish**.

5 Marry the ECU to the new bike

The VIN is what marries the ECU to a bike. If a **Settings Error** box says the VIN is required, click **Close**. That's normal.

Burn means save. Always click **Burn** before **Close**, or the change is lost.

1. Click **Setup** at the top left, then **Vehicle Information**.
2. In the **VIN** box, delete what's there and type the new VIN in **CAPITAL letters**.
3. Check it against your title, one character at a time. VINs never use I, O or Q, so anything that looks like an O is a zero.
4. Check that **Displacement** matches the new engine: 114, 117, 121…
5. Click **Burn**, then **Close**.



PART 1 IS DONE The ECU is married to the new bike. Close TunerStudio and unplug the USB cable.

PART 2 · STEPS 6-9

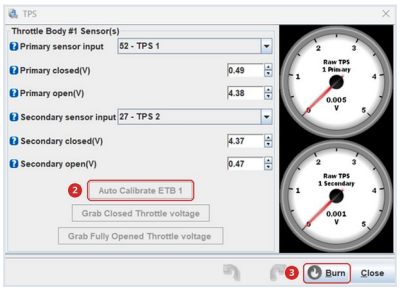
At the Bike

The ECU on the new bike, plugged into your computer, ignition on.

6 Get the bike ready

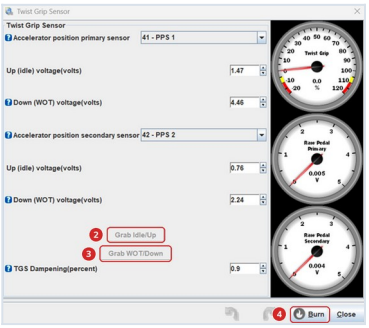
1. If the Impact ECU isn't on the new bike yet, install it and its wideband O2 sensor harness with both fuses still out. Follow Steps 1–10 of the Impact ECU Instructions at help.impactwiringsolutions.com.
2. Hook up the battery tender. Put both fuses back in: the **60A Main** and the **10A Radio / IFCU**.
3. Plug in the USB cable and open TunerStudio. If you see the start screen, click **Open Last Project**.
4. Turn the ignition **ON**. Don't start the engine. The buttons in Steps 7 and 8 stay gray until the ignition is on.

7 Calibrate the throttle body (TPS)



1. Click **Sensors** at the top, then **TPS**.
2. Hands off the throttle. Click **Auto Calibrate ETB 1**. You'll hear the throttle body move on its own. That's normal.
3. Click **Burn**, then **Close**.

8 Calibrate the twist grip (TGS)



1. Click **Sensors**, then **Twist Grip Sensor**.
2. Hands completely off the grip. Click **Grab Idle/Up**.
3. Twist the grip wide open and hold it. While holding it, click **Grab WOT/Down**. A helper makes this easier.
4. Let go. Click **Burn**, then **Close**.

9 Restart and start the engine

1. Turn the ignition **OFF**, then back **ON**. The ECU needs this to use the new calibrations.
2. **Tap** the start button and let go. Don't hold it down.

Make Sure It Worked

- **No VIN ERR on the dash.** If you see it, redo Step 5, then turn the key off and on.
- **Twist grip reads near 0% at rest** in Sensors → Twist Grip Sensor. If not, redo Step 8.
- **Warm idle around 960 to 1,100 RPM.** A cold engine idles higher, and that's normal.
- **Won't start?** Usually a skipped or rushed calibration. Redo Steps 7, 8 and 9.

STOP AND CALL US Engine backfires while cranking, you smell raw fuel, or idle stays above 2,200 RPM? Shut it off and call before you crank or ride it again.

NEED HELP? **Call (464) 250-9894**
Mon–Fri 8 AM–7 PM · Sat 9 AM–4 PM · Central Time · Tell us which step you got to.