

## E41 Upgrade Kit Procedure and Cable Installation Instructions

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The upgrade cable is used to upgrade the E41 ECM in the vehicle. Once the upgrade is completed, VCM Editor will instruct you to uninstall the cable. **Do not** drive the vehicle with the cable installed.

Step 1) Download and install the latest VCM Suite BETA from [www.hptuners.com/downloads](http://www.hptuners.com/downloads).

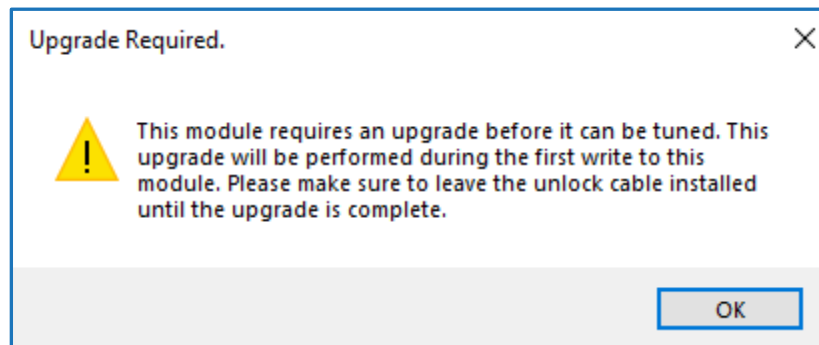
Step 2) Install the E41 Upgrade Kit.

1. Connect the **HPTNet cable** (this is the gray cable with M8 connectors) to your MPVI2+/MPVI3 device and the **Upgrade Box**.
2. Open the hood of the vehicle and disconnect the vehicle's battery.
3. Locate the under-hood fuse box and remove the lid to access the fuses.
4. Find and remove the **ECM power fuse**. Please reference the [fuse location section](#).
  - a. For model years 2017-2019, this is a shared 15A ECM/TCM fuse (fuse #57).
  - b. For 2020+ models, this a 15A ECM-only fuse (fuse #78). **NOTE:** For 2020+, there is an additional 30A ECM-only fuse (fuse #86), this is **not** the fuse you need to remove.)
5. Install the upgrade cable fuse plug into the fuse slot where you removed the original fuse in the previous step (#4). Please make sure to install the cable with the proper polarity as described below:
  - a. **For 2017-2019 models**, the fuse you removed is a 3-blade fuse that powers both the Engine Control Module (ECM) and Transmission Control Module (TCM). The upgrade cable fuse plug from the kit is only a 2-blade plug. When installing the upgrade cable fuse plug, install the cable so that the blade with the **RED** wire is in the middle slot of the fuse cavity and the **WHITE** wire is in the slot closest to the engine-bay firewall. The 3<sup>rd</sup> fuse slot (furthest from the engine-bay firewall) should be empty.
  - b. **For 2020-2022 models**, when installing the upgrade cable fuse plug, the blade with the **RED** wire should be inserted in the slot closest to the engine. The blade with the **WHITE** wire should be installed in the slot nearest the driver-side front tire (furthest from the engine).
6. Reconnect the vehicle's battery.
7. Feed the wire attached to the upgrade cable fuse plug through the driver-side window and connect it to the **Upgrade Box**.

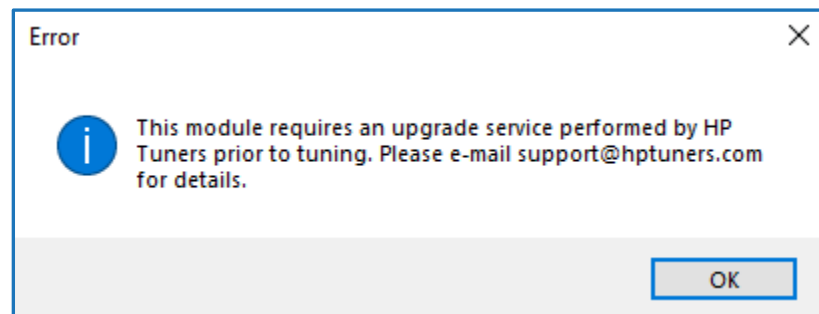
8. Plug your MPVI2+/MPVI3 device into the vehicle's OBDII port.

### Step 3) Read your vehicle in VCM Editor.

1. Open VCM Editor BETA.
2. Read the vehicle by going to the "Flash" menu and selecting **READ VEHICLE**. If the cable is installed and the module has not been upgraded yet, you will receive a window with the following message *"This module requires an upgrade before it can be tuned. This upgrade will be performed during the first write to this module. Please make sure to leave the unlock cable installed until the upgrade is complete."*
  - i. **Note:** If you do not receive this message and you **are not** provided with a stock file to tune the vehicle, check the cable installation. If you do not receive this message and **are** provided with a stock file to tune the vehicle, then the ECM is already upgraded. Please uninstall the cable and tune the vehicle as normal.



**Note:** If the upgrade cable is not installed, you will receive the following window and the read will exit.

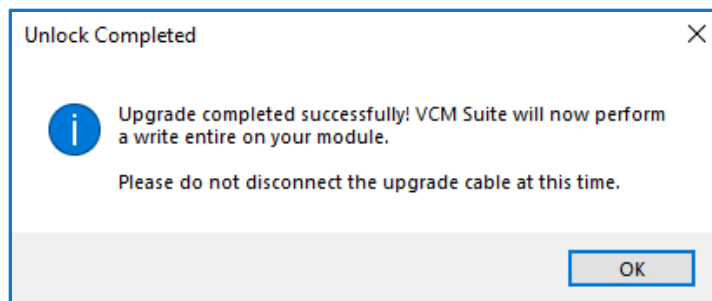


## Step 4) Modify the stock file (optional).

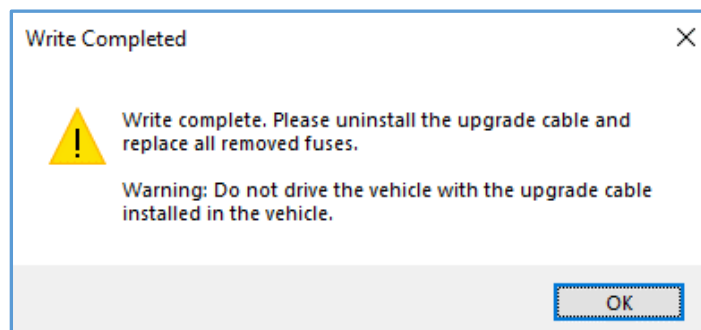
- The upgrade will take place during the first write of the module. You can make your initial changes prior to this write, or you can perform the upgrade using the supplied stock file without any changes.

## Step 5) Write the control module and perform the upgrade.

- 1) With the **upgrade cable** still installed, license your vehicle (confirm credit costs on our vehicle page at <https://www.hptuners.com/vehicles>) and prepare to write the ECM by going to the "Flash" menu and selecting **WRITE VEHICLE**.
- 2) Once the write begins, VCM Editor will perform the upgrade to the ECM first. This process takes roughly 9 minutes. Once the upgrade is complete, you will receive a window with the following message: *"Upgrade completed successfully! VCM Suite will now perform a write entire on your module. Please do not disconnect the upgrade cable at this time."* Click "OK" and the write will begin.



- 3) After clicking OK on the previous window, VCM Editor will now perform a "Write Entire" of the currently loaded tune file to the ECM. Once this write finishes, you will receive the message: *"Write complete. Please uninstall the upgrade cable and replace all removed fuses. Warning: Do not drive the vehicle with the upgrade cable installed in the vehicle."* At this time, please uninstall the upgrade cable.



## Step 6) Uninstall the E41 Upgrade Kit

- 1) To uninstall the upgrade kit:
  - a. Turn the key to the *off* position and disconnect the vehicle's battery.
  - b. Disconnect the **HPTNet cable** from your MPVI2+/MPVI3 device.
  - c. Remove the upgrade cable's fuse plug from the fuse box and reinstall the fuse removed in **step 2, #5**.
  - d. Reconnect the vehicle's battery.
  
- 2) Once the upgrade cable is uninstalled, plug your MPVI2+/MPVI3 device directly into the vehicle's OBDII port and you are ready to tune the vehicle as you normally would.

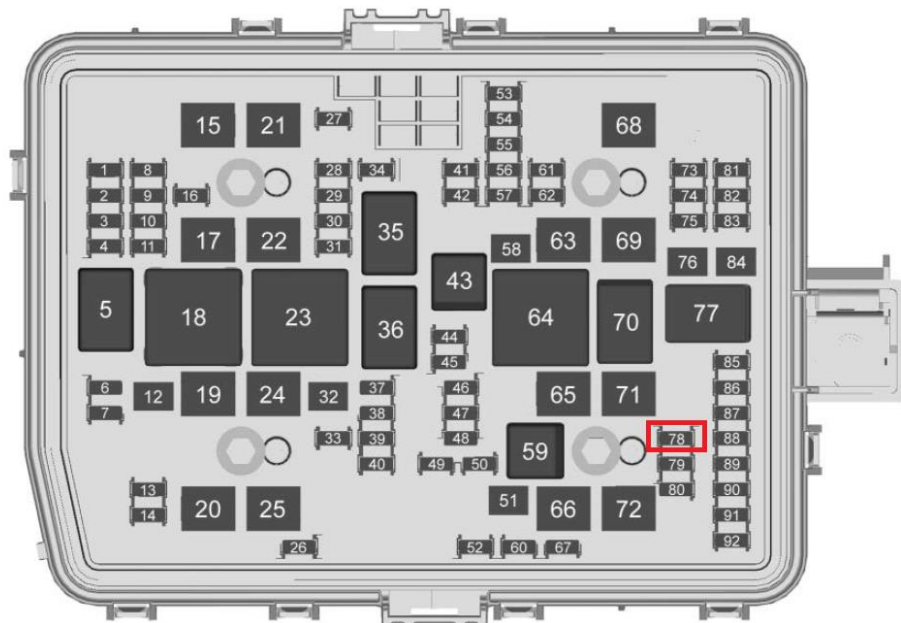
## Fuse Locations

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All fuses referenced in the instructions are in the **under-hood fuse box**. Please follow the upgrade cable fuse plug installation instructions carefully. If installed incorrectly, you will not be able to perform the ECM upgrade.

### 2020-2022:

- ⇒ **Fuse Info:** Fuse #78 - "ECM (15A)"
- ⇒ **Fuse Type:** Two-Blade Micro
- ⇒ **Upgrade Cable Fuse Plug Installation:** When installing the upgrade cable fuse plug, the blade with the **RED** wire should be inserted in the slot closest to the engine. The blade with the **WHITE** wire should be installed in the slot nearest the driver side front tire (furthest from the engine).



## 2017-2019:

- ⇒ Fuse Info: Fuse #57 - "TCM/ECM (15A)"
- ⇒ Fuse Type: Three-Blade Micro
- ⇒ Upgrade Cable Fuse Plug Installation: This is a 3-blade fuse that powers both the Transmission Control Module and Engine Control Module. The upgrade cable fuse plug is only a 2-blade plug. When installing the upgrade cable fuse plug, install the cable so that the blade with the RED wire is in the middle slot of the fuse cavity and the WHITE wire is in the slot closest to the engine-bay firewall. The 3rd fuse slot (furthest from the engine-bay firewall) should be empty.

