



JB Stage 1 Installation Guide

135i & 335i

For off-road use only!

JB Performance Tuner

Designed, Manufactured & Distributed by Burger Motorsports, LLC.



Juice Box Stages 1&2 – 135&335 Installation Guide – 5/10/08

Tools Required: 8mm socket or nut driver Small flat head screwdriver Electrical tape, masking tape, or shrink tube

Pep talk: Although the install looks daunting at first, once you get the learning curve down it's extremely simple. You can do it. Just budget yourself extra time so you don't need to rush, and feel free to contact us should any questions arise.

The most common mistake made is inserting a wire in the wrong slot, or connecting the JB to the wrong wires. Always double check your pin count and wire colors, and make sure you are counting from the correct side of the connector!

Reference Picture:



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Remove the left and right plastic covers as shown with green arrows. Pull the rubber tab down, and use your fingers to snap each cover off. Place them out of the way.



Pulling cover away:



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Remove the left and right temperature sensors as shown in purple. The left sensor removes by pushing in a small clip and rotating, while the right sensor lifts off. Pull the tabs holding the wires out by grasping the tabs and pulling towards you. The sensors will stay connected to the wires, just lay the sensors and wires towards the front of the engine out of the way.

Driver side sensor:



Passenger side sensor:



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Remove the six 8mm bolts holding down the hvac air filter (shown in orange) and pull off the filter. Place it on the ground out of the way.

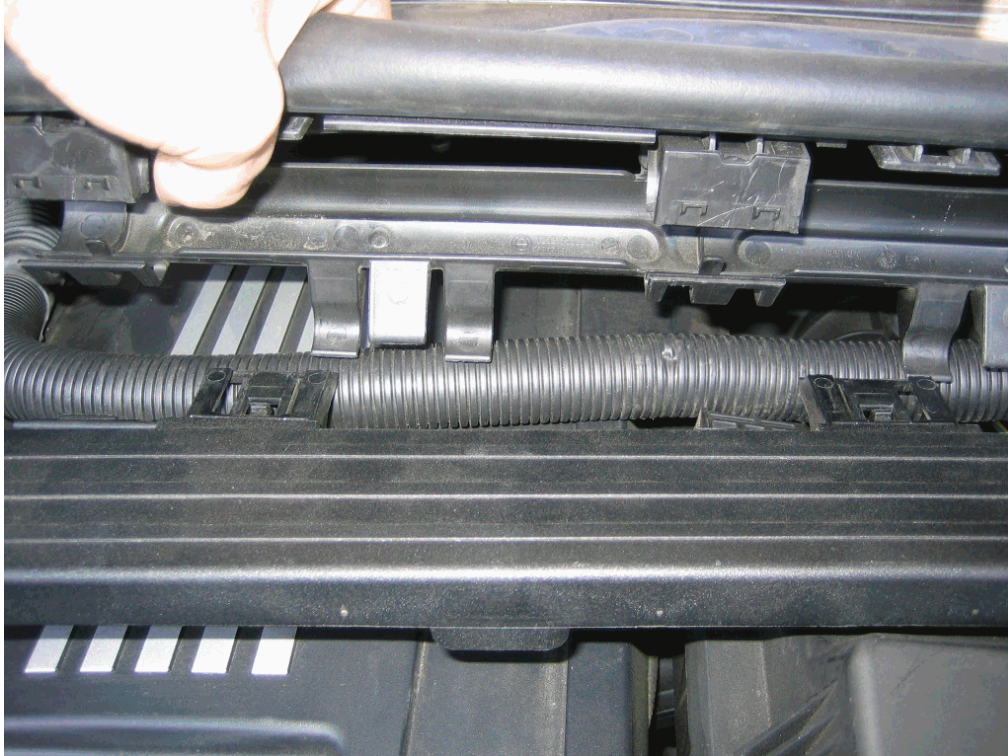
Remove the two 8mm machine bolts shown in blue. These hold down the plastic cowl that we will be removing. There are two rubber tabs on the left and right of the cowl that must be pulled out, as well as a wash fluid line on the left side.

Using a flat head screwdriver, push down the clips and pull forward the plastic rail holding the battery cable as shown. This will remain in the car when the cowl is removed.



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Next use the flat head screwdriver to release the cable bundle running right behind the power strip you just removed. Pull the cable forward while lifting up the cowl to release it. The cowl should now lift out of the engine bay. Place it on the ground out of the way.

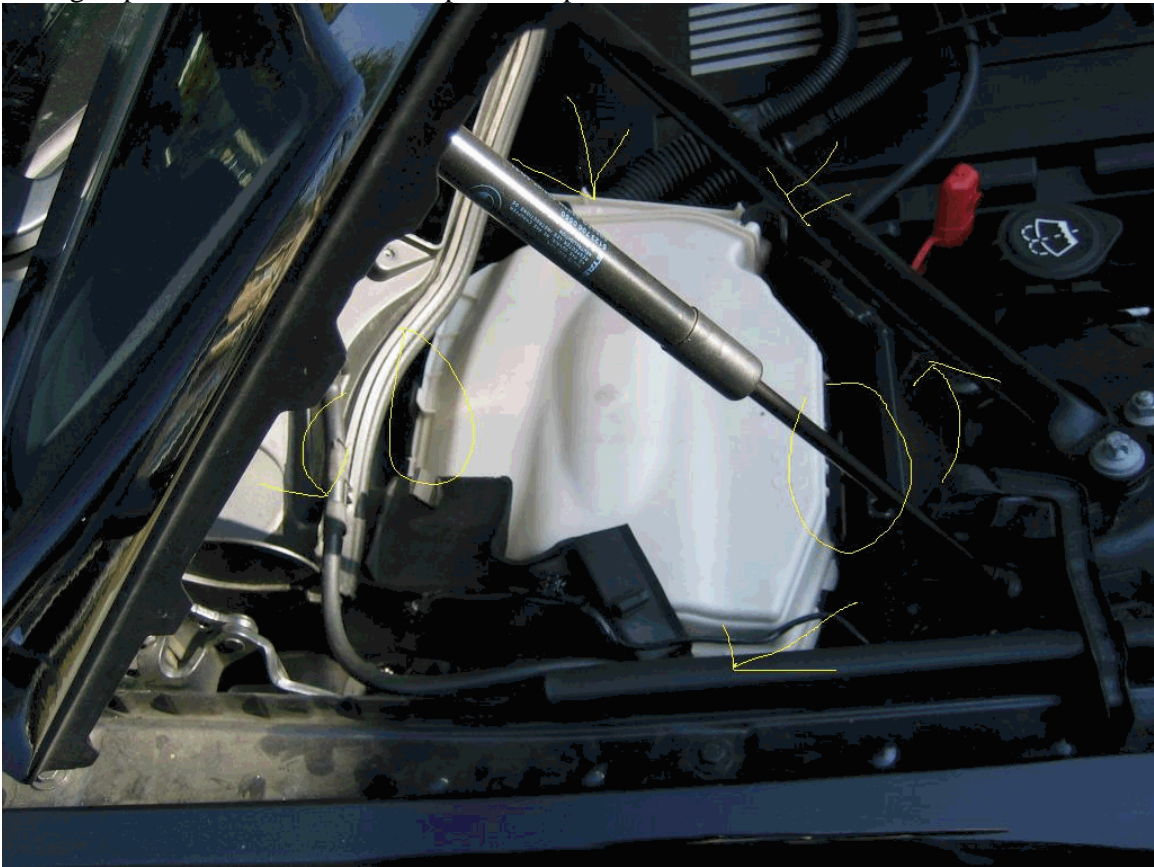


Once the cowl is removed your engine bay should look like this:



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Finally remove the left yellow plastic cover to expose the ECU. It is held down by two sliding clips on the sides, and small plastic clips on the front and back.



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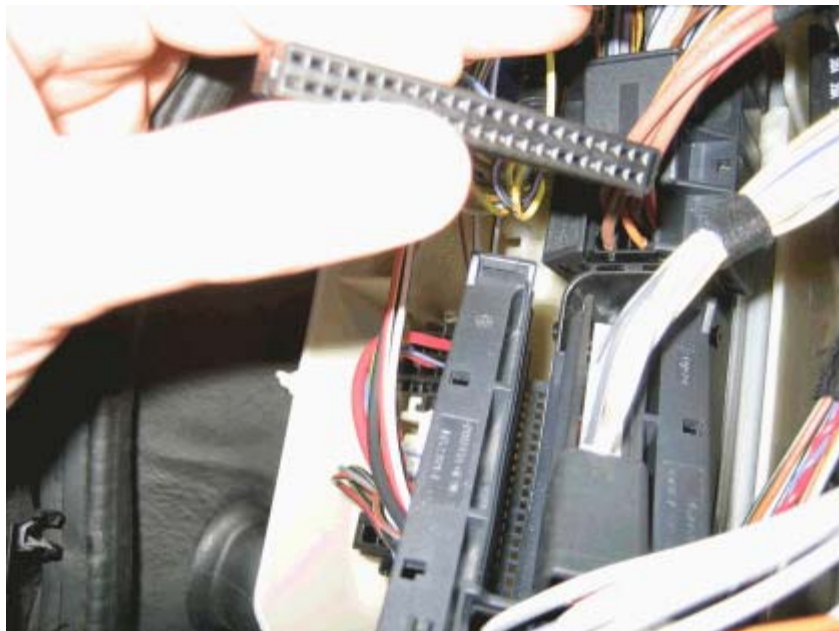
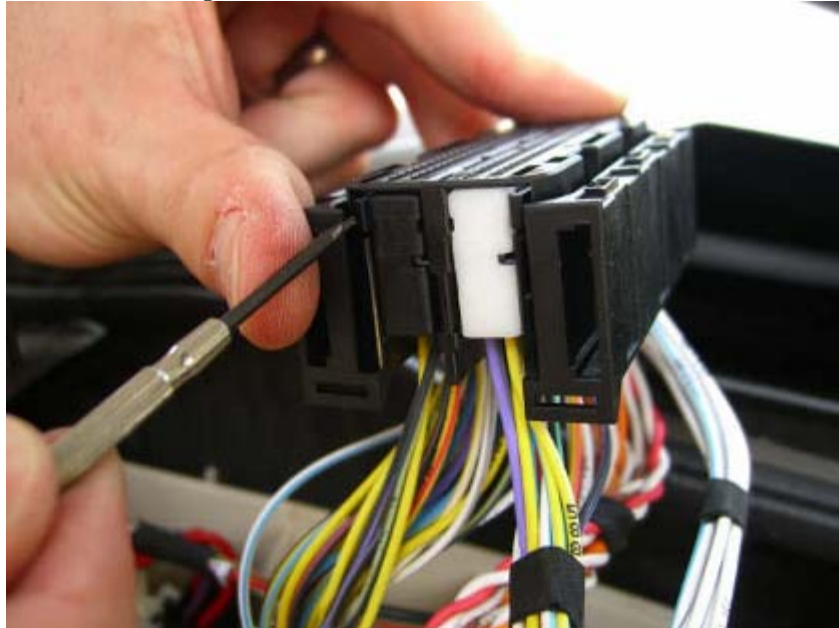
*** Before starting this step ensure the key is out of the ignition, all doors are closed, and that the car has been off for at least 15 minutes. If you have the comfort access package, place the keys inside the house as to not accidentally trigger the ignition. Alternatively you may also disconnect the battery in the trunk. ***

Once you have access to the DME you'll remove the left (larger) connector. To do this you pull the slider to the left, and lift the connector up and away from the DME. When done properly it should be effortless, so don't pull too hard.



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Slide out the black sub connector as shown. This aspect is tricky the first time as you need to locate small clip holding it in. Take your time to inspect the connector to understand how it comes apart. Never force it apart.



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Each side of the connector is labeled in the corners; ensure you are working from the side labeled 1-22.

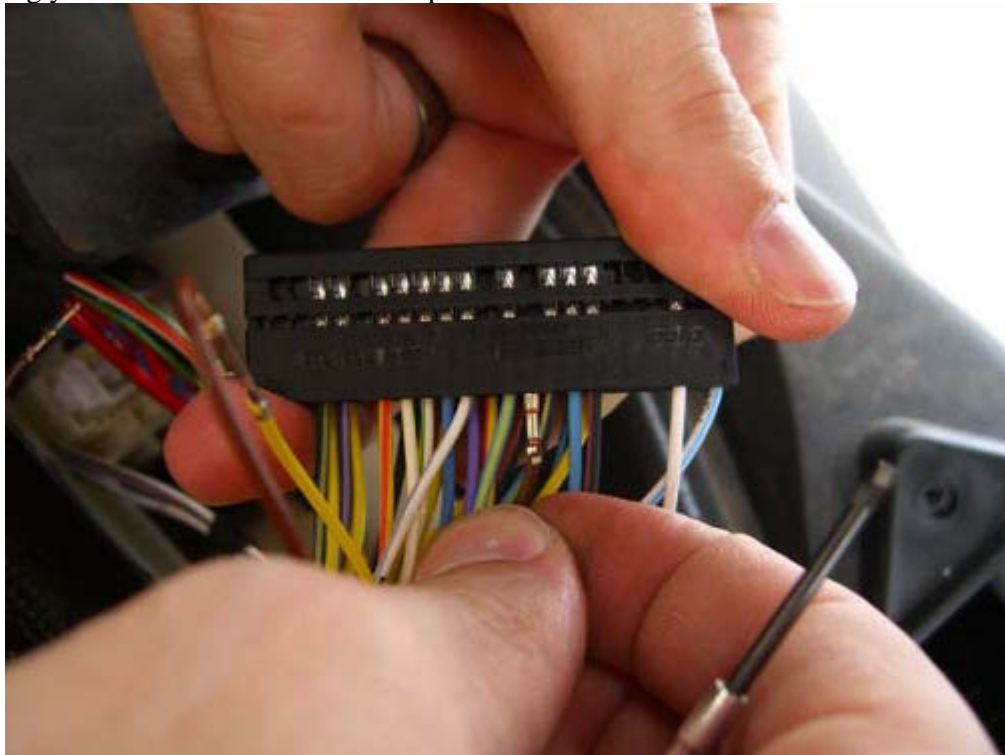
Locate the #10 pin from the left on the black sub connector, which will be a solid yellow wire. Use a very small screwdriver to gently push the retaining clip in and tug the yellow wire out of the sub connector. If the connector snags on the 2nd row push the retaining clip again to fully release it. Do not force the connectors as they are delicate.

Insert the yellow female connector from the Juice Box Performance Tuner in to the same #10 location you just pulled the yellow wire from. Slide the yellow male connector from the Juice Box Performance Tuner in the yellow DME female connector you just removed. Cover the exposed male/female pair with a small piece of masking or electrical tape. Double check your count!

Locate #32 pin on the opposite side of the same connector (labeled 23-43), which will be a red/black wire. Again use your small screwdriver to gently push the retaining clip in and tug the red/black wire out of the sub connector.

Insert the black female connector from the Juice Box Performance Tuner in to the same #32 location you just pulled the red/black wire from. Slide the black male connector from the Juice Box Performance Tuner in the red/black DME female connector you just removed. Cover the exposed male/female pair with a small piece of masking or electrical tape.

Inserting yellow band female in to #10 spot on sub connector:



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The best method for covering the exposed male/female pairs is folding a small piece of electrical tape in half:



Once the wires are in place you'll slide the sub connector back in to place, and put back the slider.

Gently reinstall the left DME connector to the DME. The DME will only receive the connector when the slider is out, but the slider will hit the side of the plastic DME box if out too far. Work slowly and move the slider in and out until the DME connector slides all but 1/4" in. Then push the slider all the way in to push the DME connector in the final 1/4".

***** STAGE 2 ONLY *** Stage 1 install skip to page 14**

If your Stage 2 tuner has blue and green wiring looms, simply wrap a piece of tape around them and tuck them out of the way. They are no longer used. Newer Stage 2 tuners do not have these looms.

Stage two has a more aggressive boost curve that requires the left boost solenoid vacuum lines to be modified. No additional hardware or fittings are required for this.

Remove the left longer vacuum line by pulling straight up. Do not pull at an angle as you can break the nipple off the solenoid. It will require some force to get the line off.

Remove the right short vacuum line from the tee by gently probing between the line and tee with a fine screwdriver to break the seal. Then use both hands to hold each side of the tee and lift straight up. If the small line comes off the solenoid with the tee, simply continue using your screwdriver until you can twist the line off.

Connect the longer line to the vacuum tee where you just removed the short line from, closing the loop. Ensure the line is properly affixed in its aluminum retaining clip and not touching the engine. Also ensure there are no kinks or sharp bends in the vacuum line, as this could prevent the waste gates from opening and result in a check engine light.

Finally fold this short line you removed in half and reconnect it to each side of the boost solenoid to keep out dust and debris.

In the unlikely event that you break the vacuum tee or rip a rubber vacuum line, you may pickup a replacement at Autozone or your local BMW dealer.

Picture of stock solenoid arrangement, pre-bypass:



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Short line removed, long line plugged in to vacuum tee, closing the loop:



Short line placed on solenoid to keep out dust and debris:



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Tuck the Juice Box Performance Tuner in to the left upper corner of the DME box:



Alternatively if available you may slide the JB in this empty relay holder:



At this time start the car to ensure you don't have any engine codes or other issues. Assuming everything is fine continue on to reassembly. If there is an engine code or if the engine idles rough, double check to ensure the wires were installed in the proper location, and that the ECU connector is properly seated. If everything is fine and you still have a code, its possible the doors were open or the ignition not off long enough before you removed the ECU connector. Worry not; you can borrow a scan tool at AutoZone to delete the resulting status check codes.

Now it's time to button it back up! Just work backwards through the above directions.

First reinstall the ECU cover. It's a little tricky, the front and back clips should align before attempting to slide the locking clips.

Next you'll reinstall the cowl. To do this you put it back on at an angle and then push it back and down until it seats. Be sure to pull the rubber tabs on the left and right out of the way until you have it seated. There is a small white mark on the windshield you can use as a reference for making sure the cowl is centered.

Reconnect the wire bundle and power strip under the cowl, slide the left and right rubber connectors in, and install the two 8mm machine bolts holding the cowl assembly down.

Reconnect the hvac air filter using the 8mm screws you removed.

Snap down the left and right plastic covers, ensuring the rubber tabs are properly reinserted.

Finally put the left and right temperature sensors back in place.

Congratulations, installation is now complete! The ECU will quickly adapt to your new tune over the next day or two, so simply drive as you normally would and responsibly enjoy the power increase!

Use subject to full terms and conditions posted at <http://www.burgertuning.com/terms>

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