Installation Manual v1.0:
Code Blocker Electronics Kit
2006-07 GM LBZ Duramax

Please read all instructions before installation.

1. Mount the electronics package on the grill support as shown. Use the self-tapping screws provided to mount the bracket to the grill support. In most GM vehicles only two screws need to be used to mount the electronics to the grill support. Be sure to position the gold resistor where it will receive plenty of air. These electronics will be very warm during operation and require airflow to prevent over heating.

![Mounting Location](image)

**Figure 1: Mounting Location**

2. **Turbo Vane Control Solenoid:** Find the two-pin connector on the engine harness that connects to the top of the factory turbo. The correct two-pin connector will have a blue and a white wire leading to it on the engine harness. Cut off the connector and splice the wires to the blue and white wires of the ATS Vane Position Box, color for color as shown in the schematic on page 5.

3. **Turbo Vane Position Sensor:** The vane position sensor can also be found on the top of the factory turbo. Follow the sensor wires down to the driver side of the engine. Find the three-pin connector that connects the ECM to sensor. The correct connector will have three wires, tan, orange...
with a black stripe, and a yellow wire. Cut off the connector and splice in the three remaining wires that lead out of the ATS Vane Position Box. Connect the ATS gray wire to the tan wire and confirm 5V key-on power from the tan wire. Connect the ATS black wire to the orange with black stripe wire. Connect the ATS yellow wire to the remaining yellow wire of the vane position sensor yellow wire.

Figure 2: Vane Control Solenoid Connector Location

Figure 3: Vane Position Sensor Connector Location
4. **MAP Sensor**: Find the MAP Sensor fastened on the front of the cast aluminum factory intake tube with one bolt. The correct 3-wire sensor should have a light green wire, an orange wire, and a gray wire leading from the connector to the ECM. **Cut the light green** wire approximately 3-4 inches away from the sensor to leave enough wire to splice into both ends. The MAP Sensor location is shown in Figure 4.

Splice in the **blue** wire of the ATS Multifunction Box to the side of the **light green** wire that leads to the **sensor**.

Splice in the **yellow** wire of the ATS Multifunction Box to the side of the **light green** wire that leads back to the **ECM**.

![Figure 4: MAP Sensor Location](image)

5. **MAF Sensor**: Find the MAF Sensor located on the plastic factory intake tube. If the ATS turbo kit has been installed then the sensor should be located in the molded ATS intake tube. The correct 5-wire sensor will have the following colors leading from the connector to the ECM: gray, tan, pink, black, and yellow. **Cut the yellow wire** approximately 3-4 inches away from the connector, leaving plenty of wire to splice into both the ECM side and the connector side of the yellow wire. The MAF Sensor location is shown in Figure 5.

Splice the **red** wire of the ATS Multifunction box into the side of the **yellow** wire that leads back to the MAF sensor.

Splice the **green** wire of the ATS Multifunction Box into the side of the **yellow** wire that leads to the ECM.
6. **EGR Position Sensor**: Find the 5-wire sensor located on the passenger side of the vehicle under the factory cast aluminum intake. The correct 5-wire connector will have the following colored wires leading from the connector to the ECM: gray, orange, green, black, and brown. Using a T style connection, *tap; do not cut* the purple wire of the ATS Multifunction Box into the brown wire leading from the sensor to the ECM. The MAF Sensor location is shown in Figure 6.

7. **Pink Wire**: The pink wire of the ATS Multifunction Box is taped back into the harness; *do not connect* the pink wire. The Multifunction Box is used in other kits that require the pink wire; the LBZ does not require this wire.
Have Any Questions?

Please check our website at http://www.atsdiesel.com for technical support and other performance products such as the 5-Star™ torque converter, ATS High Performance Valve Body and ATS High Performance Transmission along with our full line of power enhancers. Please call or e-mail our Technical Service Department, 8:00am to 5:30pm Mountain Standard Time, Monday through Friday.

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Bill of Materials

1. Code Blocker Electronics Harness
   a. Multifunction Box 4308-202-016
   b. Vane Position Box 4290-202-014
   c. Mounting Bracket 1000-202-020

2. (10) 7.5" Zip-Ties

3. (10) Non-Insulated 18-22 Awg Butt Connectors

4. (10) Sections of 3/16 Heat Shrink

5. 18-22 Awg T-Tap Wire Connection

6. Insulated Male Spade Connector

7. (4) Self-Taping Mounting Screws