

**Affected GMB Part Numbers: 115-2260, 115-2270 Electric Water Pumps**  
**Applications: BMW 2006-2013 (E90-93)**  
**Issue: 2E82/2E84/2E85 Engine Codes**

### Problem Summary:

These engine codes indicate electric water pump failure and/or loss of communication with the ECU. Aside from water pump failure, these engine codes may also be caused by blown fuses in the Power Distribution Block.

### Preliminary Troubleshooting:

1. Check that the battery is properly charged.
2. Check that the water pump harness is properly connected with no corrosion on the terminals.
3. Check for blown fuses behind the glove box compartment.
4. Check for corrosion on the electronics ground strap. It is connected to the engine block with an aluminum bolt which will corrode over time.
5. If no problems found, the issue may be caused by a blown fuse in the power distribution block.

### Power Distribution Block Troubleshooting:

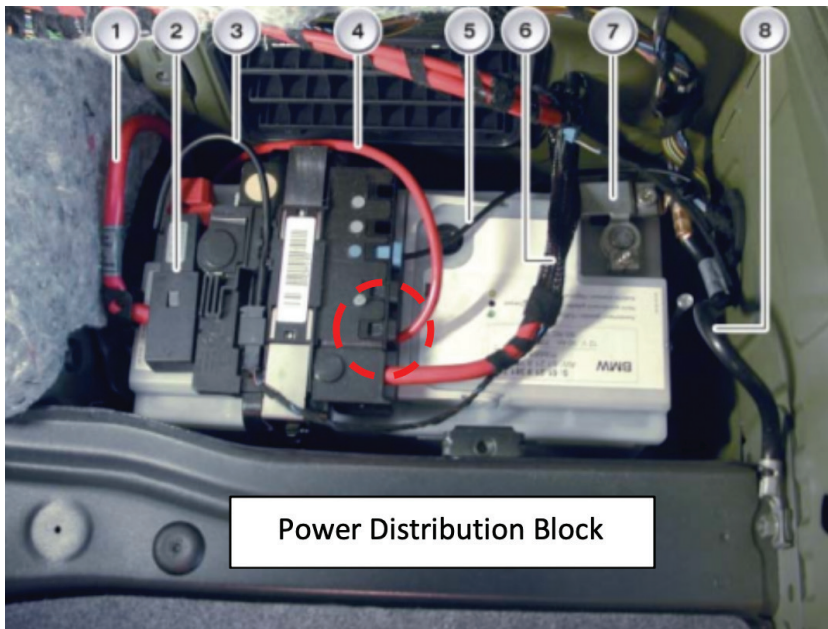
1. Gain access to the Power Distribution Block in the rear compartment.



Power Distribution Block Location

2. Once the distribution block cover is removed, first check that the wire harnesses are properly connected with no corrosion present on the terminals.
3. To check for blown fuses in this unit, remove the wire harnesses #4 and #5, referring to the diagram on the next page
4. Referring to the same diagram, using a multimeter check the voltage on the BST, and the leads for #4, #5, and #6. All of them should read around 12V. #4 is the power lead for the electric water pump

5. If the BST is not returning voltage, charge or replace the battery.
6. If the BST is reading 12V but any of the leads are returning no voltage, it means the power distribution block has blow fuses.
7. If blow fuses are found, replace the Power Distribution Block. These fuses are non-serviceable, so full unit replacement is required.



Index	Explanation
1	B+ to Starter & Alternator
2	Battery Safety Terminal (BST)
3	Connection from MRS to BST
4	B+ to Engine Electronics
5	B+ for IBS Electronics
6	B+ to Junction Box
7	Intelligent Battery Sensor (IBS)
8	Battery Ground

8. After the power distribution block is replaced, clear engine codes and run the engine again. If water pump failure codes are still present, replace the electric water pump.
9. After water pump replacement, make sure to follow the proper bleed procedures:
  - Begin with the vehicle off
  - Turn off all electronics in the car (headlights, radio)
  - Turn heat on highest setting, with the fan on lowest setting
  - Put key into ignition
  - Without pressing on brake pedal, Push start button one time.
  - Press gas pedal down for 15 seconds
  - The electric water pump should turn on shortly after
  - The pump should run for around 12 minutes. Do not remove the expansion tank cap during this period.
  - After the pump turns off, remove the coolant expansion tank cap and add coolant as needed.
  - It may be necessary to repeat this bleeding process a second time to remove any additional air in the coolant system.