

# BMW 2004-07 525i

## PRECAUTIONS

**Warning:** Batteries produce explosive gases that may cause personal injury. Do not expose the battery to flame or sparks. Always provide adequate ventilation. Do not smoke when working near batteries. Do not place tools or any similar object on the battery.

**Warning:** Do not allow any battery acid to come into contact with the eyes, the skin or clothing. Wear protective clothing, gloves and eye protection. Do not tilt the battery, or acid may leak from the vent hole.

**Warning:** If acid is splashed into the eyes, rinse them immediately for several minutes with clear water and consult a doctor immediately. Seek medical attention immediately if battery acid is accidentally swallowed. If acid is splashed onto the skin or clothing, neutralize it immediately with a soap solution and rinse with lots of water.

On vehicles equipped with Intelligent Battery Sensor (IBS), do not under any circumstances release socket-head cap screw of IBS. Do not establish any connection between the IBS and the sensor screw.

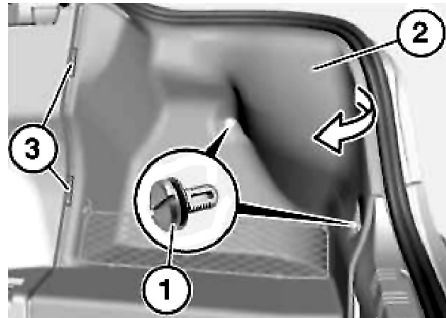
The IBS and wiring can be destroyed by mechanical strain during battery replacement. Do not use force when disconnecting the pole shoe from the battery terminal. Do not pull on the ground cable. Do not place any tools under the IBS to lever off the pole shoe. Do not use IBS connections as levers.

On vehicles with radio code, the radio code must be re-entered after disconnecting the battery. Note stored stations and restore them after connecting the battery. Stored settings of the on-board computer and clock will also be lost. All available central keys must be re-coded for vehicles with first generation infrared transmitter locking systems. DTCs may be set in some control units after battery is connected.

## BATTERY Removal

Disconnect battery ground cable first, followed by battery positive cable. Do not disconnect battery leads while engine is running.

Do not loosen or remove socket-head cap screw of IBS.



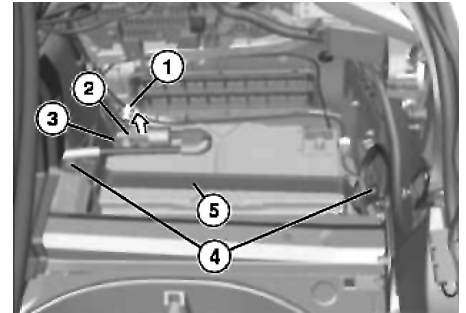
**Fig. 1 Luggage compartment trim removal**

1. Verify that ignition and all other electrical loads are "OFF."
2. Remove luggage compartment floor trim panel if equipped.
3. Remove retaining clips (1), then remove luggage compartment trim (2) on righthand side panel, **Fig. 1**.
4. Disconnect battery ground cable. Do not pull cable or pry off IBS using force.
5. Disconnect IBS electrical connector (1), **Fig. 2**.
6. Loosen nut and disconnect positive battery cable (2), **Fig. 2**.
7. Remove nuts (4) and rollover protection bracket (5), **Fig. 2**.
8. Release threaded pin (1) and remove hold down bracket (2), **Fig. 3**.
9. Disconnect battery vent hose (4), **Fig. 3**.
10. Fold back both clips (3) on battery top, pull battery out of battery tray, and remove battery from vehicle, **Fig. 3**.

## Installation

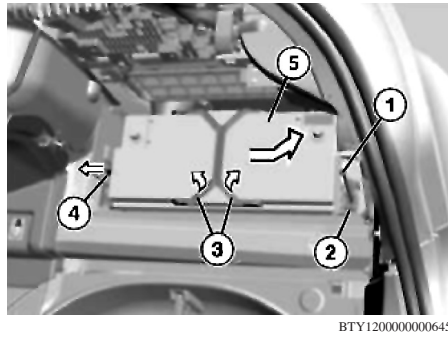
When installing a new battery in vehicles equipped with IBS, replacement battery information may need to be programmed into the vehicle data in accordance with specifications.

1. Position battery in vehicle, and verify that battery is correctly seated.
2. Push down both clips (3) on battery top, **Fig. 3**.
3. Connect battery vent hose (4), **Fig. 3**.
4. Install battery hold down bracket (2) and threaded pin (1), and tighten as required, **Fig. 3**.
5. Install rollover protection bracket (5), and tighten nuts as required, **Fig. 2**.
6. Connect positive battery cable (2), and torque terminal nut to 44 inch lbs., **Fig. 2**.



**Fig. 2 Battery disconnection**

7. Connect IBS electrical connector (1), **Fig. 2**.
8. Connect battery ground cable. Torque battery cable clamp nut to 44 inch lbs.
9. Install luggage compartment trim.
10. After connecting vehicle battery, carry out the following procedure for setting steering angle:
  - a. Start engine.
  - b. Turn steering wheel to driver side until full lock is reached.
  - c. Turn steering wheel to passenger side until full lock is reached.
  - d. Turn steering wheel to center position.
  - e. Turn off engine.
  - f. Turn on ignition, verify that AFS light and "Check Control" message go out.
11. Power window initialization for front door windows must be performed after battery has been connected. Initialize power windows as follows:
  - a. Open door window glass completely.
  - b. Press and hold switch in "Open one-touch operation" (second switch position) for approximately 15 to 25 seconds.
  - c. Release switch, then immediately press into "Close one-touch operation" (second switch stage) and hold down.
  - d. Door window glass should now move to open position and then back to closed position. Initialization is completed once side window has returned to closed position.
  - e. Repeat procedure for opposite window.
12. Install a suitably programmed scan tool, and follow manufacturer instructions to clear DTCs that may have been set when battery was disconnected.



**Fig. 3 Battery removal**

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