

# BMW

## 2012-14 650i

### 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 objects on the battery.

**Warning:** Do not allow any battery acid to come into contact with 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.

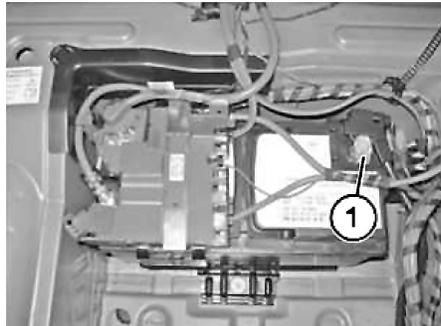
**Caution:** The IBS and wiring can be destroyed by mechanical strain during battery replacement. Do not use force when disconnecting the pole shoe from the battery terminal. Do not pull on the ground cable. Do not place any tools under the IBS to lever off the pole shoe. Do not use IBS connections as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

On vehicles with radio code, the radio code must be 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 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.



**Fig. 1 Battery ground cable removal**

Do not under any circumstances use force to pull off ground cable.

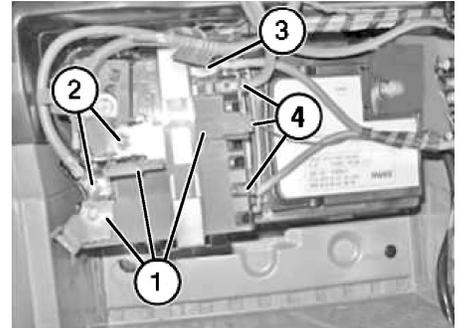
Do not under any circumstances pull or lever safety battery terminal off by force.

1. Remove luggage compartment floor trim panel.
2. Loosen nut (1) and pull off battery ground cable with IBS toward top; place to one side and secure, **Fig. 1**.
3. Fold up covers (1) and remove nuts (2), **Fig. 2**.
4. Remove nut (3) and disconnect plug connection (4), **Fig. 2**.
5. Press locking brackets (1) downward and remove in direction of arrow. Expand locking bracket (1) at lower end and clip out, using a screwdriver, as required, **Fig. 3**.
6. Remove power distribution box (2) toward top, **Fig. 3**.
7. Loosen screws (1) and remove retaining brackets (2), **Fig. 4**.
8. Disconnect vent hose (3), **Fig. 4**.
9. Loosen nut (1) and detach safety battery terminal (2) toward top; lay to one side and secure, **Fig. 5**.
10. Loosen screw (1) and remove holder (2), **Fig. 6**.
11. Remove battery from vehicle.

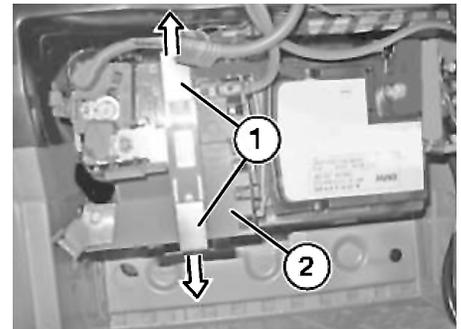
#### Installation

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. Install battery into vehicle. Ensure battery is correctly seated in mounting.
2. Install holder (2) and screw (1), **Fig. 6**.

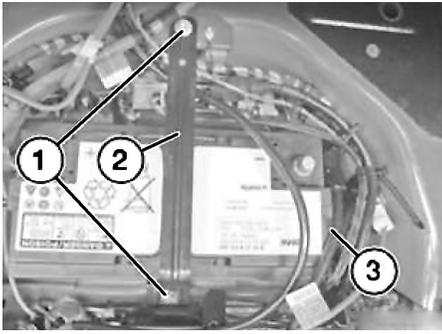


**Fig. 2 Power distribution box nut removal**



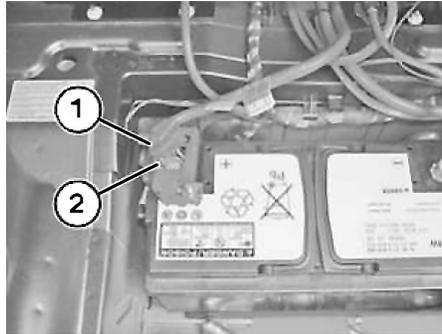
**Fig. 3 Power distribution box removal**

- Torque** screw to 89 inch lbs.
3. Connect safety battery terminal (2) and **torque** nut (1) to 44 inch lbs., **Fig. 5**.
  4. Connect vent hose (3), **Fig. 4**.
  5. Install retaining brackets (2) and screws (1), **Fig. 4**. **Torque** screws to 89 inch lbs.
  6. Install power distribution box (2), **Fig. 3**.
  7. Connect plug connection (4) and install nut (3), **Fig. 2**. **Torque** nut to 71 inch lbs.
  8. Install nuts (2) and fold down covers (1), **Fig. 2**. **Torque** nuts to 11 ft. lbs.
  9. Connect battery ground cable with IBS and **torque** nut (1) to 44 inch lbs., **Fig. 1**.
  10. Install luggage compartment floor trim panel.



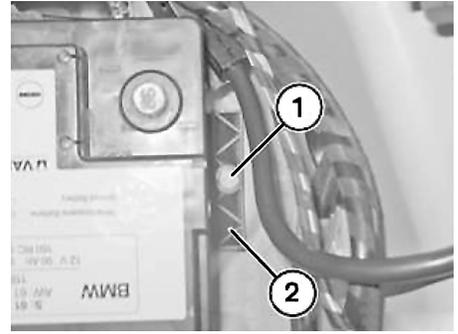
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**Fig. 4 Retaining bracket removal**



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**Fig. 5 Battery positive cable removal**



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**Fig. 6 Battery holder removal**

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