

BMW

2004-05 545i

PRECAUTIONS

Warning: Unless directed otherwise, the ignition and start switch must be in the OFF or LOCK position, and all electrical loads must be OFF before servicing any electrical component. Disconnect the battery ground cable to prevent an electrical spark should a tool or equipment come in contact with an exposed electrical terminal. Failure to follow these precautions may result in personal injury and/or damage to the vehicle or its components.

BATTERY Removal

1. Record all vehicle preset radio stations.
2. Turn OFF all lamps and accessories.
3. Ensure ignition switch is in OFF position.
4. Open righthand rear interior trim panel, **Fig. 1**.
5. Release battery ground cable locking nut (1), and remove battery ground cable, **Fig. 1**.
6. Open battery positive cable cover.
7. Release battery positive cable locking nut (1), and remove battery positive cable, **Fig. 2**.
8. Remove battery hold down screw (1) and battery hold down bracket (2), **Fig. 3**.
9. Slide battery to rear of vehicle, and disconnect ventilation hose (1), **Fig. 4**.
10. Remove battery.

Installation

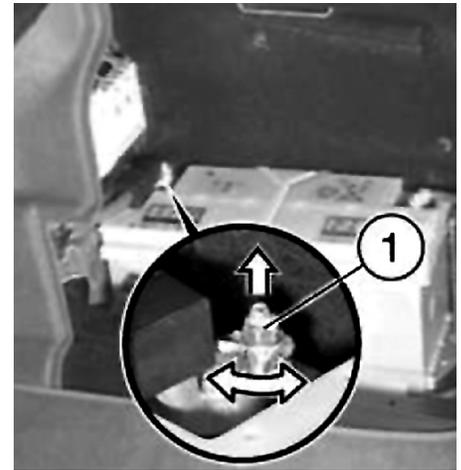
1. Install battery.
2. Slide battery to front of vehicle and connect ventilation hose.
3. Install battery hold down bracket and battery hold down screw. **Torque** screw to 92 inch lbs.
4. Install battery positive cable and retaining nut. **Torque** nut to 92 inch lbs.
5. Close battery positive cable cover.



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Fig. 1 Battery ground cable removal

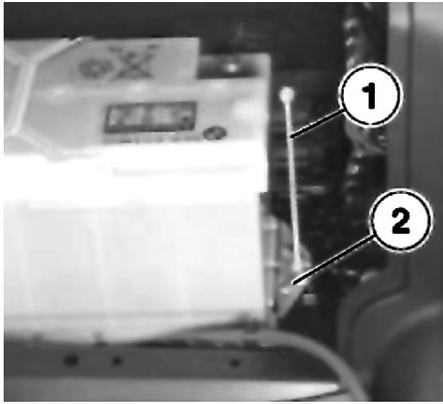
6. Install battery ground cable and locking nut. **Torque** nut to 92 inch lbs.
7. Close righthand rear interior trim panel.
8. Initialize power windows as follows:
 - a. Close all windows.
 - b. Press and hold each window switch in one touch closed position (second switch position) for 15–25 seconds.
 - c. Verify proper one touch window operation.
9. **On models equipped with sunroof**, synchronize sunroof as follows:
 - a. Press and hold sunroof switch in lift direction.
 - b. After reaching full lift position, continue holding switch for an additional 20 seconds.
 - c. Release switch for five seconds.
 - d. Verify correct sunroof operation.
10. **On models equipped with mirror compass**, calibrate compass as follows:
 - a. Refer to vehicle owner's guide for more information.
 - b. Calibrate compass in a large open area away from large metal buildings.
 - c. Press and hold setting button located on bottom of mirror for six to nine seconds. Release button when "C" is indicated in display.



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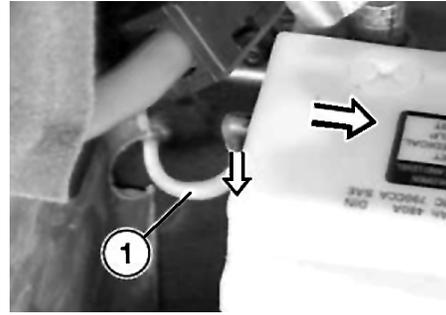
Fig. 2 Battery positive cable removal

- d. Safely drive vehicle two to three times in a circle at approximately 6 mph. Circle should be at least twice vehicle's turning circle.
 - e. Calibration is complete when a valid direction is displayed.
 - f. **On models equipped with convertible top or hardtop**, compass must be calibrated once with soft top or hardtop closed and once with soft top or hardtop open.
11. **On all models**, initialize steering wheel angle as follows:
 - a. Start engine.
 - b. Rotate steering wheel in lefthand direction to full lock.
 - c. Rotate steering wheel in righthand direction to full lock.
 - d. Rotate steering wheel to center position.
 - e. Turn engine OFF.
 - f. Turn engine ON and ensure check engine lamp goes out.
 12. Set clock and program radio stations back into radio as recorded at beginning of procedure.



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Fig. 3 Battery hold down removal



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Fig. 4 Battery ventilation hose removal

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