

# BMW 2000-13 X5

## 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.

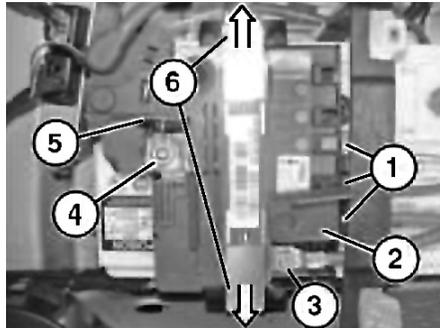
## BATTERY

### Removal

1. Record all vehicle preset radio stations.
2. Turn OFF all lamps and accessories.
3. Ensure ignition switch is in OFF position.
4. Remove battery cover.
5. Disconnect battery ground cable.
6. Disconnect power distribution box electrical connector (1), **Fig. 1**.
7. Open cover (2) and disconnect positive battery cable (3), **Fig. 2**.
8. Disconnect ventilation hose at battery (1).
9. Remove screws (4 & 6) and brackets.
10. Remove battery hold down bolt (5) and hold down.
11. Remove battery.

### Installation

1. Install battery.
2. Install battery hold down and screw. **Torque** hold down screw to 92 inch lbs.

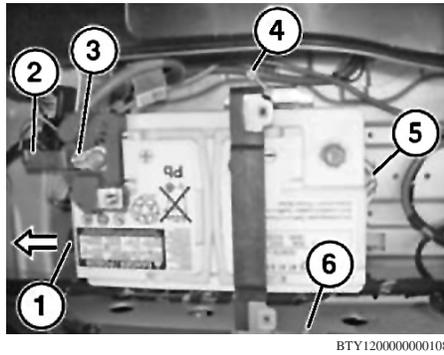


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**Fig. 1 Power distribution box electrical connector**

3. Install battery vent hose.
4. Install power distribution box and nut. **Torque** power distribution box nut to 19 ft. lbs.
5. Connect positive battery cable to battery. **Torque** battery cable to 92 inch lbs.
6. Connect battery ground cable. **Torque** battery cable to 92 inch lbs.
7. Install battery cover.
8. Initialize power windows as follows:
  - a. Close all windows.
  - b. Press and hold each window switch in one touch closed position (2nd switch position) for 15 - 25 seconds.
  - c. Verify proper one touch window operation
9. **On models equipped with sliding/pop-up roof**, synchronize sliding/pop-up roof 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.
    - d. Safely drive vehicle two to three times in a circle at approximately 6 mph. The 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 left to full lock.
    - c. Rotate steering wheel right 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.



**Fig. 2 Battery hold down**

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