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shows you how

BMW 3-Series 320i & 320xi (12-14), 325i, 325xi, 330i & 330xi (06) & 328i & 328xi (07-14) Haynes Online Manual

8 Battery check, maintenance and charging (every 7500 miles or 6 months)

Warning:

Certain precautions must be followed when checking and servicing the battery. Hydrogen gas, which is highly flammable, is always present in the battery cells, so keep lighted tobacco and all other open flames and sparks away from the battery. The electrolyte inside the battery is actually diluted sulfuric acid, which will cause injury if splashed on your skin or in your eyes. It will also ruin clothes and painted surfaces. When removing the battery cables, always detach the negative cable first and hook it up last!

Note:

The battery on the covered models have a viewable condition indicator on top. A simple check of battery health means checking the color of the indicator. Green is OK, Black indicates a charge is required, and Yellow signifies the battery should be replaced.

1 A routine preventive maintenance program for the battery in your vehicle is the only way to ensure quick and reliable starts. But before performing any battery maintenance, make sure that you have the proper equipment necessary to work safely around the battery (see *illustration*) . The battery is located under a cover in the rear of the trunk (see [Chapter 5](#)). Rotate the cover fasteners counterclockwise to release the cover (see *illustrations*) .

8.1a Tools and materials required for battery maintenance

1 Face shield/safety goggles - When removing corrosion with a brush, the acidic particles can easily fly up into your eyes

2 Rubber gloves - Another safety item to consider when servicing the battery; remember that's acid inside the battery!

3 Battery terminal/ cable cleaner - This wire brush cleaning tool will remove all traces of corrosion from the battery and cable

4 Treated felt washers - Placing one of these on each terminal, directly under the cable end, will help prevent corrosion (be sure to get the correct type for side terminal batteries)

5 Baking soda - A solution of baking soda and water can be used to neutralize corrosion

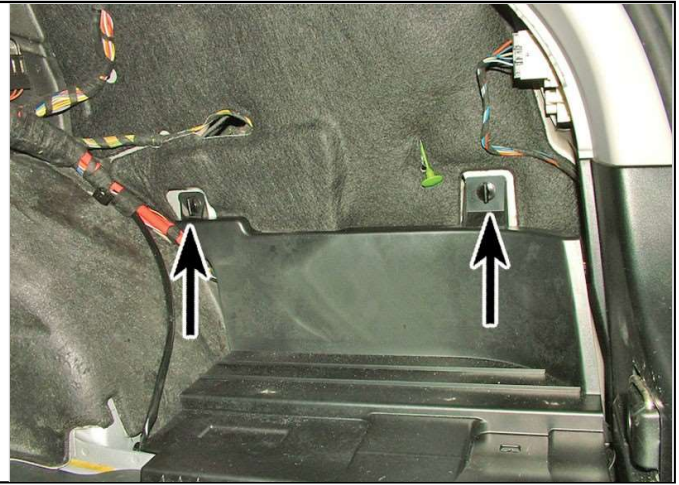
6 Petroleum jelly - A layer of this on the battery terminal bolts will help prevent corrosion



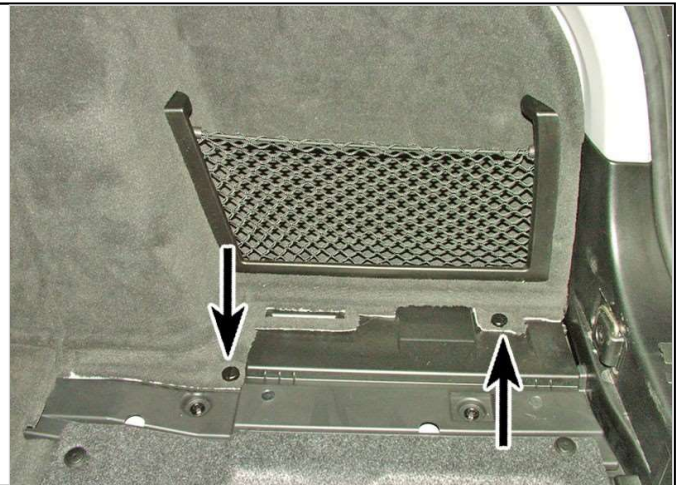
8.1b The battery is located in the right-rear corner of the luggage compartment - remove the padded cover



8.1c On Sedan models, release the clip and open the right-hand storage tray



8.1d On Sports Wagon models, lift out the compartment floor panel, remove the side panel, then lift out the storage tray



2 There are also several precautions that should be taken whenever battery maintenance is performed. Before servicing the battery, always turn the engine and all accessories off and disconnect the cable from the negative terminal of the battery (see [Chapter 5](#)).

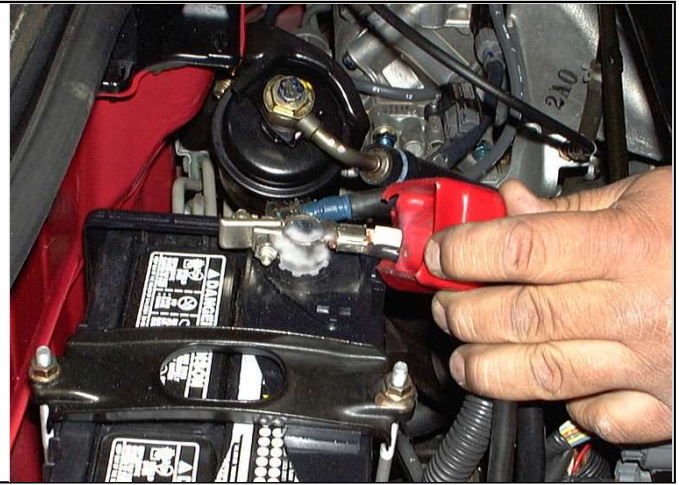
3 The battery produces hydrogen gas, which is both flammable and explosive. Never create a spark, smoke or light a match around the battery. Always charge the battery in a ventilated area.

4 Electrolyte contains poisonous and corrosive sulfuric acid. Do not allow it to get in your eyes, on your skin or on your clothes. Never ingest it. Wear protective safety glasses when working near the battery. Keep children away from the battery.

5 Note the external condition of the battery. If the positive terminal and cable clamp on your vehicle's battery is equipped with a rubber protector, make sure that it's not torn or damaged. It should completely cover the terminal. Look for any corroded or loose connections, cracks in the case or cover or loose hold-down clamps. Also check the entire length of each cable for cracks and frayed conductors.

6 If corrosion, which looks like white, fluffy deposits is evident, particularly around the terminals, the battery should be removed for cleaning (see illustration) . Loosen the cable clamp bolts with a wrench, being careful to remove the ground cable first, and slide them off the terminals. **Caution:** *Remove the negative cable first, then the positive* . To remove the battery, unbolt the metal retaining strap above the battery. Disconnect the hold-down clamp bolt and nut, remove the clamp and lift the battery from the rear of the trunk.

8.6 Battery corrosion usually appears as light, fluffy powder



7 Clean the cable clamps thoroughly with a battery brush or a terminal cleaner and a solution of warm water and baking soda (see illustration) . Wash the terminals and the top of the battery case with the same solution, and make sure that the solution doesn't get into the battery. When cleaning the cables, terminals and battery top, wear safety goggles and rubber gloves to prevent any solution from coming in contact with your eyes or hands. Wear old clothes too - even diluted, sulfuric acid splashed onto clothes will burn holes in them. If the terminals have been extensively corroded, clean them up with a terminal cleaner. Thoroughly wash all cleaned areas with plain water.

8.7 Remove the cable from the battery post and clean both terminal and post with this tool



8 Make sure that the battery tray is in good condition and the hold-down clamp fasteners are tight. If the battery is removed from the tray, make sure no parts remain in the bottom of the tray when the battery is reinstalled. When reinstalling the hold-down clamp bolts, do not overtighten them. You can prevent future corrosion on the terminals/posts by applying some petroleum jelly (see illustration) .

8.8 Protect the cleaned terminals with petroleum jelly



Cleaning

9 Corrosion on the hold-down components, battery case and surrounding areas can be removed with a solution of water and baking soda. Thoroughly rinse all cleaned areas with plain water.

10 Any metal parts of the vehicle damaged by corrosion should be covered with a zinc-based primer, then painted.

Charging

Warning:

When batteries are being charged, hydrogen gas, which is very explosive and flammable, is produced. Do not smoke or allow open flames near a charging or a recently charged battery. Wear eye protection when near the battery during charging. Also, make sure the charger is unplugged before connecting or disconnecting the battery from the charger.

Note:

The vehicle manufacturer recommends that your battery be recharged by a Vehicle Power Supply rather than a conventional transformer-type charger.

11 Slow-rate charging is the best way to restore a battery that's discharged to the point where it will not start the engine. It's also a good way to maintain the battery charge in a vehicle that's only driven a few miles between starts. Maintaining the battery charge is particularly important in the winter when the battery must work harder to start the engine and electrical accessories that drain the battery are in greater use.

12 It's best to use a one or two-amp battery charger (sometimes called a "trickle" charger). They are the safest and put the least strain on the battery. They are also the least expensive. For a faster charge, you can use a higher amperage charger, but don't use one rated more than 1/10th the amp/hour rating of the battery. Rapid boost charges that claim to restore the power of the battery in one to two hours are hardest on the battery and can damage batteries not in good condition. This type of charging should only be used in emergency situations.

13 The average time necessary to charge a battery should be listed in the instructions that come with the charger. As a general rule, a trickle charger will charge a battery in 12 to 16 hours.

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