

ELECT-01, Alternator Replacement

Introduction

Replacing the alternator in a 944 is not extremely difficult. However, it is somewhat time consuming since a large number of parts have to be removed to actually get to the alternator.

The cost of a new alternator is pretty steep. However, there are an increasing number of shops which do fine rebuilds on Bosch alternators. So, I recommend checking around in your area to see if there are any reputable rebuild shops before spending the money on a new alternator.

If you can't keep your car off the road long enough to wait for a rebuild, purchasing a new or rebuilt alternator is really your only option. However, if your alternator supplier doesn't require a core, have your old alternator rebuilt anyway. At worst you'll have a spare alternator. You may even be able to sell your rebuilt alternator to another owner to recoup some of the money you spent on the new alternator.

Tools

- Metric Socket Set
- Metric Wrenches
- Screwdriver Set
- Jack Stands and Floor Jack or Ramps
- Catch Pan
- Pry bar

Other Procedures Needed

[COOL-02](#), Coolant System Draining, Filling, and Venting (Turbocharged Cars)

Removal

1. Disconnect the battery. It's a good idea to disconnect both terminals. However, it is imperative that you disconnect the positive lead as a minimum.
2. Place the car on jack stands or ramps. While ramps are more convenient I find I have more room to work with the car on jack stands.
3. Remove the skid pan from under the engine compartment (M6 bolts - 10 mm socket)

4. Remove the Alternator/AC compressor belt as follows:
 - a. The normal method of removing the alternator belt is to loosen the lock nuts on either end of the AC Compressor turnbuckle tensioner and rotating the turnbuckle until the tension is eased from the Alternator / AC Compressor belt. Then the turnbuckle retaining bolt on the alternator can be removed and the alternator rotated toward the engine to allow removal of the belt.
 - b. The alternate method, which I prefer, is to loosen the turnbuckle retaining bolt on the compressor a few turns, then relieve the tension on the turnbuckle using the pry bar between the compressor and the block. While holding the pry bar in position, remove the turnbuckle retaining bolt on the compressor, rotate the compressor toward the engine, and remove the belt. The reason I prefer this method is that, assuming the belt was properly tensioned before removal, the belt can be reinstalled by reversing this procedure and little or no belt adjustment is required.
 - c. If the car is equipped with power steering the Alternator / AC Compressor belt can not be completely removed without first removing the power steering belt. However, the belt does not have to be completely removed unless it needs to be replaced.
5. Loosen and remove the lower alternator retaining bolt at the back of the compressor.

NOTE

Some 944s have an air cooling supply via a flexible duct from the left front fender well to a black plastic shroud attached to the back of the alternator. These must be disconnected to remove the alternator from the car.

6. If equipped, remove the flexible hose which goes from the front left fender to the black plastic shroud on the back of the alternator. This may be done using a stubby flat tip screwdriver or, if the clamp is oriented correctly by using a long thin blade flat tip screwdriver. Yes, it is important that this hose be reinstalled as it supplies cooling air to the alternator.
7. Remove the air box and air flow meter from the vehicle.
8. On turbocharged cars perform the following:
 - . Remove the intercooler outlet pipe to the intake manifold. Also, remove the rubber inlet plenum boot (to turbocharger).
 - a. Drain as much coolant as possible from the coolant expansion tank using a hand vacuum pump or siphon pump.
 - b. Disconnect the coolant hose from the coolant expansion tank to the crossover pipe and to the turbocharger cooling pump. Have some rags ready to catch the remaining coolant left in the hoses.
9. Remove the remaining alternator retaining bolts.
10. If equipped, lift the alternator sufficiently to remove the black plastic cover on the back of the alternator.

11. Disconnect the wires from the back of the alternator and remove the alternator from the vehicle.

Installation

1. Place the new alternator into the vehicle. Ensure the rear alternator cover is in position before installing the alternator.
2. Connect the wires to the alternator and attach the cover to the back of the alternator.
3. Install the alternator retaining bolts. However, do not tighten yet.
4. Install the alternator belt.
5. If not already done, install the bottom nut for the rear alternator cover.
6. Install the AC compressor turnbuckle to tension the AC Compressor / Alternator belt.
7. Tighten the alternator retaining bolts.
8. Install the cooling duct for the alternator.
9. For turbocharged cars performed the following:
 - a. Install the coolant hose from the coolant reservoir to the crossover pipe and turbo cooling pump.
 - b. Install the rubber inlet plenum boot on the turbocharger suction.
 - c. Install the intercooler discharge pipe to the intake manifold.
10. Install the air flow meter and air box.
11. On turbocharged cars, fill and vent the coolant system using [COOL-02](#).
12. Install the skid pan.

Clark's Garage © 1998
