IGN-01, Distributor Cap and Rotor Replacement

Introduction

Removing and installing the distributor cap on a 944 can be extremely frustrating. Why? Probably because it seems like such a simple job and often isn't. Once you realize exactly how the distributor cap is attached and employ a simple tip, the job becomes a lot easier.

Tools

- 1/8" or 3mm Hex Key
- Distributor Cap Tool *

*The Porsche Manual has you make a distributor cap tool by bending a flat tip screwdriver into a 90° angle. This allows you to access the bottom locking screw on the distributor cap. I've always had better success with a long thin blade flat tip screwdriver. It must be inserted at angle with the blade resting against the lip of the nose panel (use a towel to protect the paint). However, it allows you more leverage when pushing the locking screw in against its spring pressure. The best screwdriver I've found for this is a Snap-On SDD1416. It has a 16 inch blade with a .028 x 7/32" tip. This screwdriver is also great for hard to reach hose clamps. The MATCO equivalent is an SCM818P2. I have not been able to find a Craftsman equivalent.

Procedure

The 944 distributor cap is held in place by 90° locking screws. The 90° tip on the screws lock into raised tabs on the inside of the front distributor housing cover. Here's the problem. The elongated openings in the housing cover are offset to one side. That means that both tips on the screws must be pointed in the same direction to clear the openings.

The second problem is with the locking tabs. The tabs are shaped like a "U" . The locking screws are pushed in an turned until they come to rest in the bend of the "U". However, one leg of the "U" is longer than the other to act as a mechanical stop. This means that the screw can only be turned in one direction to unlock and can only be inserted into the locking tabs when the screw is turned in the opposite direction. Now that you're thoroughly confused, I'll try and simplify it.

Removing the Distributor Cap

1. Using paint or fingernail polish, mark the bottom half of the top locking screw and the top half of the bottom screw.
2. Using a flat tip screwdriver, push in on the bottom locking screw and turn in the clockwise direction 270°. When you're done, the painted half of the screw head will be pointed to the exhaust manifold side of the car.
3. Then push in the top locking screw and turn in the clockwise direction 90°. Again, the painted half of the screw head will be pointed toward the exhaust manifold side of the car.
4. The cap should slide off easily.

Installing the Distributor Cap

1. Holding the distributor cap in the orientation that it is normally installed (i.e. one locking screw on top, one on bottom).
2. Turn the screws until the 90° tips are pointed to the left (looking at the front of the cap).
3. Using paint or fingernail polish, paint the left half of the screw head (side closest to the tip of the screw).
4. Install the distributor cap. The screw tips should slide easily into the elongated holes in the housing with the cap centered over the rotor.
5. Using a flat tip screwdriver, turn the bottom locking screw 270° counter-clockwise. The painted half of the screw head will be point up or toward the center of the cap.
6. Turn the top locking screw 90° counter-clockwise. The painted half of the screw will be pointed down or toward the center of the cap.
7. Connect the spark plug wires to the distributor cap.

Removing the Rotor

1. To remove the rotor, you'll need a 1/8" or 3 mm hex key. Try the 1/8" first and if that's too big, next try the 3 mm. If it's the original screw and you try the 3 mm first, you'll likely strip the head on the screw. The original screws are slightly larger than 3 mm and they are loctited from the factory. I can't begin to tell you how many of those I've seen stripped using a 3 mm hex key. Anyway, if the 1/8" doesn't fit and the 3 mm does, it's probably been replaced in the past (because it was stripped).
2. Once you've removed the retaining screw, the rotor may be extremely difficult to remove. It sometimes bonds itself to extension on the end of the camshaft. Try twisting it off. However, be aware that you may have to break the rotor to get it off. The rotor material is made of Bakelite and is very brittle. The rotor has a metal sleeve inside which can be twisted off the end of the camshaft extension with a pair of channel lock pliers if you break the rotor.

Installing the Rotor

1. Slide the rotor onto the end of the camshaft extension.
2. Insert the Allen head retaining screw into the rotor and tighten (1/8" or 3 mm hex key). Be careful not to drop the screw into the distributor housing cover while installing.
