# SUSP-07, Control Arm Replacement

## Introduction

Since the 1985 ½ model year, 944s have used aluminum control arms which use ball joints that can not be replaced, as least not by the home mechanic. Early 944s are equipped with steel control arms which use replaceable ball joints.

The big question that most owners have about control arm ball joints is "how do I know when my ball joints need replacing?" Most often you'll hear it said that if the boot is torn or cracked, the control arm needs to be replaced. While this isn't a great indicator, it should raise suspicion as to the condition of the ball joint. Other indicators are knocking sounds in the front suspension or noticeable play in the control arm. The play can be checked by pushing up on the control arm (toward the spindle) near the ball joint. Noticeable play between the control arm and the ball joint indicates that the control arm needs to be replaced.

Another question that often comes up is "do I have to replace the control arm if I accidentally tear the boot on the ball joint?" No. If you're convinced that the ball joint is still good and you've simply torn the boot on the ball joint, there is a solution. You can replace the boot with the boot from an early 944 ball joint. It's not a perfect solution but, $20 USD for an early ball joint beats having to buy a new control arm or having it rebuilt.

Now for the big question. "Do I use a new control arm or a rebuilt control arm?" The answer to this question is not quite as clear as it used to be. Several years ago, the price of a new control arm from Porsche was completely outrageous. So, most folks were using rebuilt arms. In recent years, Porsche has reduced the prices on many of their parts, including control arms, to be more competitive with after market suppliers. Porsche has also increased the warranty on most of their parts from one year to two years. However, the price of rebuilt control arms is still generally less than new control arms and at least one rebuilder offers a three year warranty. Rebuilt control arms can be purchased from Dynamic European Technologies, Zims, and Tweeks among others.

## Tools

- Metric Socket Set
- Metric Wrench Set
- Torque Wrench
- Rubber Hammer

## Removal

1. Place the vehicle on jack stands.
2. Remove the front wheels.
3. Remove the skid pans.
4. Disconnect the front sway bar from the body and the control arm and remove the sway bar from the car.
5. Mark the orientation of the eccentric bolt to the control arm for proper alignment during reassembly. I normally use brightly colored finger nail polish. The eccentric bolt attaches the rear of the control arm to the body of the car.
6. Remove the nut and bolt that attaches the spindle to the ball joint.
7. If the rear eccentric bolt bushing is to be replaced, remove the lock nut at the rear that attaches the eccentric to the bushing.
8. Remove the lock nut at the front of the eccentric bolt.
9. Remove the two bolts that attach the eccentric bolt bushing to the body.
10. Remove the bolt and nut that attaches the front of the control arm to the cross member.
11. Using the rubber hammer, tap on the top of the control arm to free the ball joint from the spindle and remove the control arm from the car.

## Installation

1. If the eccentric bolt assembly was removed from the car perform the following:
    a. Transfer the eccentric bolt orientation mark from the old control to the new control arm.
    b. Attach the eccentric bolt to the control arm making sure it is aligned with the scribe mark transferred from the old control arm.
    c. Torque the eccentric bolt lock nut to 100 Nm (74 ft-lb).

**NOTE**

All lock nuts should be replaced with new hardware.

2. Position the control arm in the car and install the control arm to cross-member bolt.
3. Slide the eccentric bushing onto the eccentric bolt. Bolt the bushing to the body with two bolts and loosely install the rear eccentric lock nut.
4. Fit the ball joint shaft into the spindle assembly. Ensure the ball joint shaft is fully inserted into the spindle.
5. Install the ball joint to spindle bolt and lock nut. Torque to 50 Nm (37 ft-lb.).
6. Place jack under ball joint with a block of wood on the jack pad. Raise the jack until it just supports the weight of the car.
7. Torque control arm bolts as follows:

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| Control Arm to Cross-member | 65 Nm (48 ft-lb.) |
| Control Arm Eccentric Bolt Assembly to Body | 46 Nm (34 ft-lb.) |

8. Remove the jack and attach front sway bar to body and to control arm. Torque sway bar to body bolts (M8) to 23 Nm (17 ft-lb). Torque the sway bar to control arm bolts (aluminum control arms) to 25 Nm (18 ft-lb). If this procedure is used for work on cars with steel control arms (i.e. replaceable ball joints), torque the sway bar to control arm bolt to 23 Nm (17 ft-lb).
9. Install the front wheels.

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