



Bump Steer Adjustable Tie Rod Kit - Installation Instructions

Part #2180008

Cars applicable:

996, 997, Boxster, Cayman

Parts list:

Qty	Description
2	Front bump steer adjustable tie rod assemblies
2	0.125 in spacers
2	0.250 in spacers
2	0.375 in spacers
2	Conical Spacers

Introduction –

Bump steer is change in toe due to the vertical displacement of the wheel, such as happens when going over a bump. The change in toe causes the car to turn, and the driver needs to correct for this to maintain a steady trajectory. Bump steer becomes more profound when the car is lowered.

Elephant Racing bump steer adjustable tie rods have provision to adjust bump steer, such that bump steer can be minimized reducing the need for driver corrections and making it easier to go fast.

Elephant Racing tie rods have an angled head to partly compensate for the changed angle of the tie rod when the car is lowered. This keeps the stud near the center of range of motion, preventing bottoming out.



Bumpsteer Adjustable Front Tie Rod Assemblies

Step-by-Step Installation -

1 – Install tie rods links

Installation is performed the same as stock tie rods. Refer to a shop manual for specifics.

Re-use the stock mounting hardware and torque to factory recommended values.

2 – Bump steer adjustment - 1

Bump steer is adjusted by spacing down the tie rod at the wheel-side of the tie rod assembly.

There are 3 flat spacers on each tie rod assembly. Always use all 3.

Adjustment is made by placing spacers above or below steering knuckle on the wheel carrier.

Minimum bump steer correction (comparable to a stock tie rod) is achieved by placing all flat spacers above the steering knuckle as shown in Figure 1.

Maximum bump steer correction is achieved by placing all flat spacers below the steering knuckle as shown in figure 2.

Intermediate bump steer values are achieved by splitting the spacer placement, some above and some below the steering knuckle. Adjustment can be made in .125 inch increments by proper placement of the spacers.

Note the steel washer always remains below the flat spacers and steering knuckle.

Note the conical spacer always fits inside the steering knuckle.

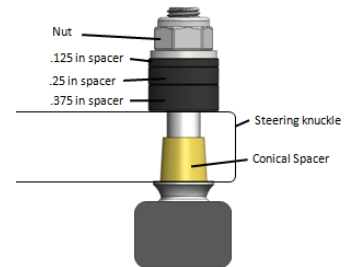


Figure 1
Minimum bump steer correction

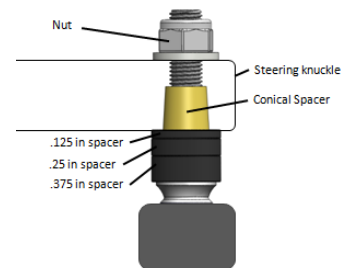


Figure 2
Maximum bump steer correction

3 – Bump steer adjustment - 2

The goal of bump steer adjustment is to achieve minimal toe change with vertical suspension movement.

This is best measure with a bump steer gauge.

Basic procedure

- 1 - measure the toe position at static ride height
- 2 - compress suspension 1 inch, measure change in toe position
- 3 - droop suspension 1 inch, measure change in toe position
- 4 - adjust flat spacers
- 5 - repeat 1-4 until toe change is minimized

4 – Align Toe

Following Installation, the vehicle toe should be aligned by a trained professional