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Installing the Bump Steer Kit

Tools: You will need a 15mm, 19mm, and 22mm wrench, and a needle-nose pliers to remove the cotter pin. A hammer and a large punch to knock out the old tie rod end will also be required.

Preparation: the bump steer kit can be installed with the brake calipers in place. However, there is more room to work if you remove the calipers and hang them on the side (It is not necessary to remove the brake line, so you will not have to re-bleed the brakes). Bend up a wire coat hanger and hang the calipers from the spring, do not let the calipers hang by the brake lines.

Alignment:

We will be removing the current tie rod ends and replacing them with new ones. The toe-in will have to be checked and adjusted when finished.

Begin: Set your ride height first. What we mean here is changes at the ride-height adjustment screws or the springs at each corner of the car. If you change to a different size of wheel or tire, that may affect ride height too, but it will not change the suspension geometry where bump-steer is concerned. In any event, get your ride-height set the way you like it before proceeding.



With the car on the ground, turn the steering wheel all the way to one side or the other so you can get a good view of the back of the front suspension.

Note the tie-rod angularity you have now, while the vehicle is at rest. The tie rod in this picture to the right should be level when the car is at rest (parked). It is angled because the car has been lowered.

Our goal is to return it closer to level again by installing the bump steer spacers out on the outside (tie rod) end.

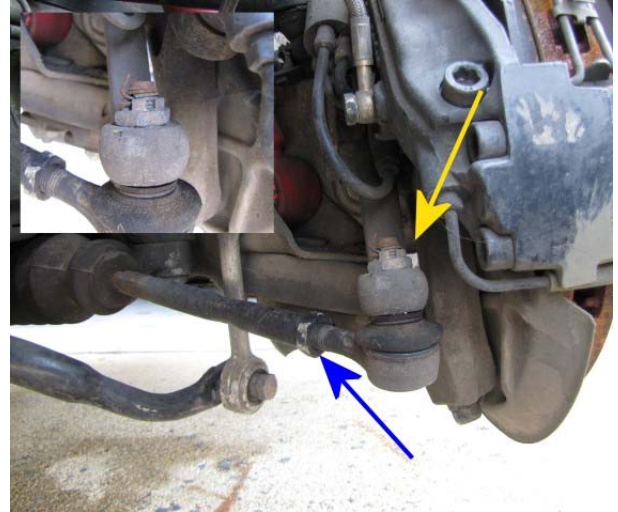




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Remove the cotter pin from the top of the castellated nut as shown with the yellow arrow. We will be installing a distorted-thread style locknut, so the cotter pin will not be needed again.

Loosen the jam nut on the tie rod end (shown by the blue arrow) with your 22mm wrench.



Remove the castellated nut.

Place the large drift or punch on the threaded post and hit down sharply with a hammer to dislodge the tie rod end.

It will look like this when it is removed.

Note the yellow arrow in the picture at the right >>

It points at a flat spot stamped in to your tie rod barrel. Hold the barrel with the 15mm wrench placed over that flat spot, and unscrew the tie rod end from the tie rod barrel.



Remove the jam nut from the old tie rod end and thread it on to the new tie rod end.



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Thread the new tie rod end with the jam nut on it into the tie rod barrel.



Tapered End

Note the tapered end of the tie rod pintle.

Install the pintle up from the bottom into the steering arm and add the nut on top.

Tighten with two wrenches in opposition, the 22mm holding the pintle still (on the hex machined into the pintle) and the 19mm turning the nut on top.





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Now slide the spacers on to the straight section of the pintle as needed to get your tie rod end near level when the vehicle is at rest. This is why we looked at the tie rod angularity you have before we started, on page 1 of these instructions. You can stack one or more of the spacers on to the pintle between the rod end and the steering arm as shown by the yellow arrows below.

Remember the tie rod barrel will not be near level until the tire is on the car and the car is on the ground.

No matter how many spacers you add *above* the tie rod end, you must install the 1/8" (smallest) spacers *below* the tie rod end before installing the nut.

This is shown by the green arrows in the pictures below.



Suggestion: put the lower nut on loosely until you know how many spacers your set-up is happiest with. *Then* tighten the lower 19mm nut completely.

Check and adjust the toe-in on your car, then tighten the jam nuts that lock the barrel in place.

Enjoy your 928!