



1992-2017 Gen I-V Viper Outer Tie Rod/Bump Steer Correction

Overview:

The outer tie rod allows for easy and precise toe adjustment and helps reduce the effects of bump steer. The outer tie rod is compatible with the OEM or DSE inner tie rod.

High strength steel stud and nuts and precision PTFE lined bearing. Includes stainless steel heat shield for protection from brake heat during track use and aluminum rack spacers to replace the OEM plastic versions. Lighter weight than the OEM tie rod; saves ~0.3 lbs per side.

Compatibility:

Compatibility with all 1992-2017 Vipers.

Construction:

Cadmium plated 4340 steel stud, 6061 hard anodized aluminum spacers, coupler and nut locks, aerospace grade rod end / bearing with PTFE liner, stainless steel heat shields.



Outer Adjustable Tie Rod Kit

Ordering Information:

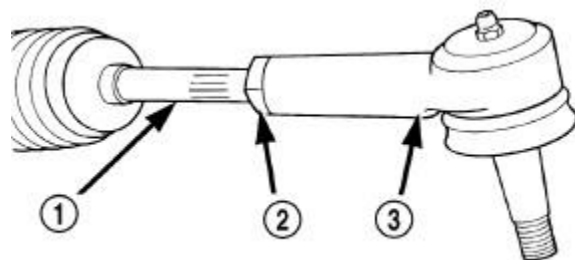
<http://dougshelbyengineering.com/>

Installation Guide:

Outer Tie Rod Removal (excerpt from Gen V Service Manual – Consult Specific Manual for Details:

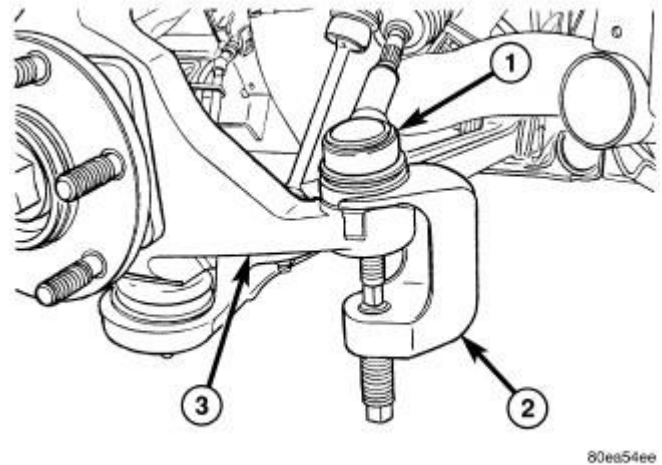
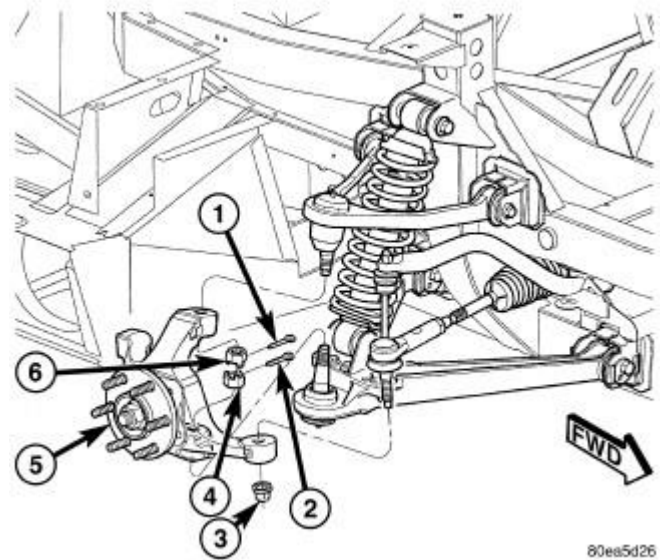
1. Raise and support vehicle.
2. Remove front wheel and tire assembly.

3. Loosen inner-to-outer tie rod adjuster jam nut (2).



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4. Remove nut (3) from outer tie rod.



CAUTION: When releasing outer tie rod (1) from knuckle (3) using Puller (2), Special Tool C-4150A, use care not to pinch and damage tie rod grease seal.

5. Release outer tie rod (1) from knuckle (3) using Puller (2), Special Tool [C-4150A](#) .
6. Remove outer tie rod by unthreading it from inner tie rod.

Rack Spacers:

Remove and replace steering rack spacers with the included aluminum spacers. Loosen the rack bolts enough to lift them and slide the spacers out on each side. Tighten the bolts to 150 ft-lbs for Gen V (check manual for other Gen Vipers).

Outer Tie Rod:

The outer tie rod comes assembled except for the nut locks. Take note of the stack up before disassembling for installation on the vehicle.

Ensure the jam nut is already installed on the inner tie rod and thread the outer tie rod completely onto the inner tie rod. With the rod end already tightened fully, this represents the minimum length of the system.

Remove the lower stud bolt and install stud onto steering knuckle. The split lock washer should be on the underside of the knuckle.

Check the stack up on the top side of the knuckle. It should be (bottom to top) rod end, aluminum spacer, heat shield, split lock washer, and nut.

Tighten both the top and bottom nuts while holding the heat shield in place so that it will protect the rod end from the rotor heat. Tighten until the lock washers are almost fully compressed.

Check the hole alignment on the top and bottom nut locks for reference. Continue to tighten top and bottom nuts until the split lock washers are fully compressed.

Install the nut locks with the wavy washer between the nut and nut lock. If the holes do not align with the holes in the stud, tighten or loosen slightly to adjust for alignment. Use Loctite on the nut lock flat head screw before final installation.

Double check alignment of everything including the heat shield. When happy with the shield placement bend the locking tab into place so it holds the shield location relative to the top side nut. The shield may be bent to close in the gaps between sides.



Steering Setup

Outer Adjustable Tie Rod Installed

The outer tie rod is now used to make toe adjustments and the steering rack spacers are no longer used to adjust for bump steer. Bump steer will be reduced with the installation of the kit.

Inspection and Maintenance:

Periodically inspect all parts to ensure there is no damage and everything is sufficiently tightened.

Thank you for your purchase!

Your business is appreciated and customer satisfaction is our top priority! Don't hesitate to contact us via email with any questions or feedback. Word of mouth is the best form of advertising so if you are satisfied please spread the word!

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