



INSTALLATION INSTRUCTIONS
For
1996 DODGE RAM PICK UP
2500 SERIES DIESEL 4X2

PARTS NEEDED:

31-140

SAFE-T-PLUS unit (White)

D-333K14

Mounting Hardware Kit consists of:

25-333

Anchor Bracket

25-417

Tie Rod Bracket

12-516-1250K

5/16 X 1 1/4" U-Bolt Kit

TOOLS NEEDED:

15mm Socket and/or wrench for the sway bar bolts. 9/16 socket and/or wrench for the nuts on the end of the unit and the U-bolt nuts.

- Step 1.** Set front wheels of vehicle to a straight-ahead position. This is **IMPORTANT**. Later adjustment of the tie rod bracket may be avoided if front wheels are set perfectly straight.
- Step 2.** Thoroughly clean the section of the tie rod that the 25-417 Tie Rod Bracket mounts to.
- Step 3.** Remove driver's (left) side sway bar bracket bolts and loosen bolts on passenger right side sway mount bracket. Using pry bar pull driver's side bracket down enough to insert Anchor Bracket 25-333 between frame and sway bar bracket. Make sure SAFE-T-PLUS mounting hole is toward the rear and to the inside of the sway bar bracket. (See sketch). Use the 1st & 4th hole on the long leg, counting from the end of that leg.
- Step 4.** Reinstall and tighten bolts on both sway bar brackets.
- Step 5.** Install Tie Rod Bracket 25-417 onto large end of Safe-T-Plus unit using grommets and washers provided. (See sketch)

NOTE: It is very important to insert the lip of the grommet into the mounting hole on the tie rod bracket.



Step 6. Tighten tie rod bracket on SAFE-T-PLUS unit with nut provided until rubber grommets slightly bulge over the steel washers or until they are approximately 1/4" thick.

Step 7. Install small end of SAFE-T-PLUS unit into anchor bracket mounting hole with remaining grommets and washers. Follow procedures of Step 6 for proper tightness.

Step 8. Attach tie rod bracket to the tie rod using the 5/16" x 1 1/4" U-bolts provided.

NOTE: Rotate tie rod bracket on tie rod up or down in order that the large end of SAFE-T-PLUS is slightly higher than small end, when positioned, tighten the four (4) self-locking U-bolt nuts to 20-25 foot pounds of torque while maintaining an even amount of threads extending past each nut.

Step 9. Check to be sure SAFE-T-PLUS unit clears all other components of the vehicle by turning wheels to full left and full right positions. If SAFE-T-PLUS unit scrapes or binds at any point, review these instructions and make necessary corrections by rotating tie rod bracket on the tie rod to obtain necessary clearance.

Step 10. **ROAD TEST & ADJUSTMENT PROCEDURES** – See attached documents.

"After your first road trip with Safe T Plus Steering Control installed, please let us know how Safe T Plus performed. We enjoy hearing from our clients. You may contact us at support@safe-t-plus.com or (800) 872-7233. Ask for Customer Support. Safe Travels from the Safe T Plus Team."





Road Test & Centering/Adjustment Procedures

To ensure proper alignment and installation of the SAFE-T-PLUS unit, the vehicle should be road tested. Take along a 9/16" deep well socket wrench to fit the U-bolts on the tie rod. While driving on a straight stretch of road, vehicle should easily follow a straight course, if not, adjustment is necessary.

To adjust Safe-T-Plus Steering Control follow the below instructions:

1. After installation, test drive the vehicle
2. Try to test with the most perfect conditions: straight road, no crown, limited wind (if possible), freeways seem to work best or large parking lots.
3. Hold steering wheel in a straightforward position to determine if the vehicle is tracking straight or pulling to the left or the right.
4. Stop vehicle, and set brakes.
5. Take note of where the steering wheel *must be held* to track straight down the road, and mark it accordingly. Pull in somewhere, and with the motor, steering pumps, all running. Have someone hold that steering wheel firmly in exactly the proper position.*
6. Underneath the vehicle, slightly loosen nuts on tie rod U-bolts and allow unit to self-center. tap the Safe-T-Plus unit a few times with your fist, or a rubber mallet, and let the internal spring push / pull the tie rod bracket into a neutral position. (Frequently this slight movement is not noticeable)
7. At this point, take a moment to square-up the U-bolts as they lay up and across the tie rod. If you've left them askew, they may pull the bracket out of position as they tighten.
8. **Retighten the U-bolt nuts (only 25-30lbs. of torque)**
9. Now test drive again.
10. Repeat this step if necessary until vehicle will hold a straight line**

Note:

*Be mindful that if you are holding 2 to 3 inches of steering wheel against the spring to track straight, it's only 1/16 to 1/8 of an inch down below on the tie rod bracket.

**Repeat if necessary, until you're satisfied. Once completed you should be able to achieve holding your lane position for a 1/2 mile or so at freeway speeds, with hand gently resting on the steering wheel without correcting.

Extra Detail on Final Adjustments (Tips)

- Using tape, you can stick a ruler or pencil to the dash to act like a centering indicator for more accuracy.
- Another trick is marking the left and right limits of any inherent slop in the center of the steering wheel operation. At the shop, line up the center marks, and do the install.
- Be patient, be precise when moving the tie rod bracket, as just a 1/16 of an inch will make the difference in drifting off half a lane in 100 yards or less.

When making very small adjustments, (1 ½ inches of steering wheel displacement or less) it may be necessary to hold the steering wheel in the direction of correction just a little beyond the required (¼ to ½ inch more) in order to "load up" the internal spring just a little and let the unit help with the relocation of the tie rod bracket. There really isn't any other way to move the tie rod bracket without having some assistance holding the steering wheel while adjustments are being made down below.

If overshooting the desired results, mark a line a set distance from the tie rod bracket so that they can measure in what direction, and how far each adjustment was made.

A "how-to" properly center/adjust Safe-T-Plus Steering Control video is available on our website to help guide you through the adjustment procedures. Feel free to check out video at www.safe-t-plus.com (bottom right).



If you need additional assistance, please call us toll-free (800) 872-7233 or email us at support@safe-t-plus.com and technical support will be happy to assist.