

SAFE-T-PLUS

Steering Control

INSTALLATION INSTRUCTIONS For C-180K2.5

PARTS NEEDED:

7-2019

41-230	SAFE-T-PLUS unit (Blue)		
C-180K2.5	Mounting Hardware Kit consists of:		
55-180-A	1	Anchor Bracket	
55-180-B	1	Anchor Bracket	
55-206	1	Tie Rod Bracket	
12-38-1625K	1-3/8 X 1-5/8	U-Bolt Kit	
10-3-550	4	7/16-14 X 5 1/2" Bolt	
10-8-450	1	3/4-16 X 4-1/2 Bolt	
14-325	4	7/16-14 Lock Nut	
15-250	8	7/16 Flat Washer	
15-850	1	3/4 Flat Washer	
16-200	1	1-1/2 X 3/4 X 3/4 Spacer	

NOTE: The large diameter of the SAFE-T-PLUS unit must be attached to the Anchor Bracket in order to maintain necessary clearances.

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. Attach the 55-180-A and 55-180-B Anchor Brackets to the front most generator support beam as shown using the bolts provided. Attach the 3/4 X 1-1/2 X 1/4 spacer between bracket and Large end of the SAFE-T-PLUS using the unit bolt provided.

Step 3. Install the Tie Rod Bracket, to the drag link that runs from the gearbox to left front driver wheel as shown, using the U-Bolts provided. **Do not substitute these U-Bolts.**

Step 4. Attach the small end of the SAFE-T-PLUS to the Tie Rod Bracket using the unit bolt provided.

Step 5. A) Tighten the unit bolt on Anchor Bracket to 80-90 foot pounds of torque.

b) Tighten the U-Bolts on the Tie Rod Bracket to 20 foot pounds of torque.

c) Finally, tighten the unit bolts on the Tie Rod Bracket to 80-90 foot pounds of torque.

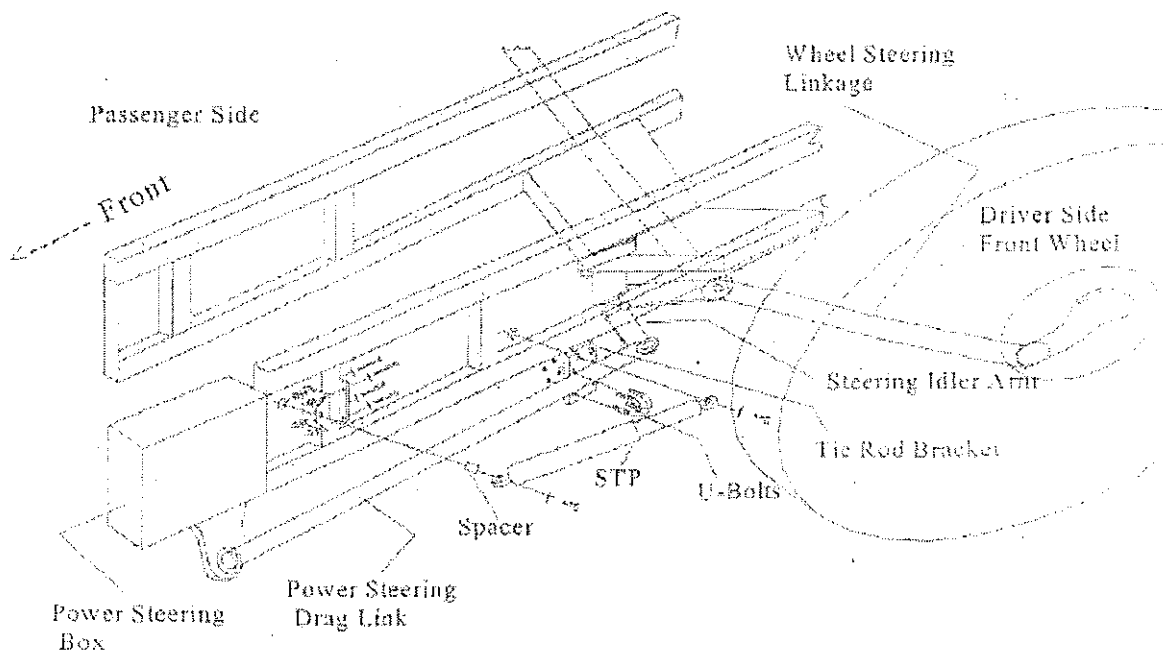
NOTE

IT IS IMPORTANT THAT STEP #6 BE FOLLOWED IN THE ORDER AS LISTED IN THESE INSTRUCTIONS FOR PROPER INSTALLATION TO BE ACHIEVED.

Step 6. Check to be sure installed unit clears all other parts of vehicle by turning steering wheel to both extremes right and left positions. If unit scrapes or binds at any point, review these instructions and make necessary corrections by rotating unit on the drag link to obtain necessary clearance.

Step 7 **ROAD TEST & ADJUSTMENT PROCEDURES** – Step-by-Step instructions are provided herewith separately.

If you need additional technical assistance, please call our technical support team us toll-free at (800) 872-7233 or email us at support@safe-t-plus.com.





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 20 lbs. 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.

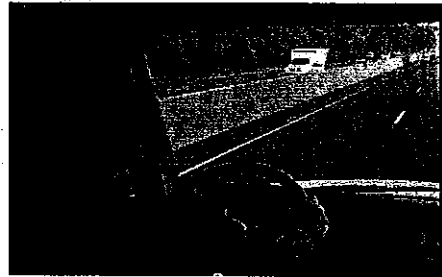
Extra Detail on Final Adjustments (Tips)

- 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.

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