

Front Tie Rod Ends Installation Instructions SPL TRE E9X/F8X

Tools Needed:

1/2" allen wrench
21mm wrench

15/16" socket

Torx heads for stock tie rod pinch bolt, size varies

crescent wrench or 7/8" open ended wrench



Make sure the conical spacer is in proper position.



When tight, the conical spacer should be flush.

Mark your current tie rod positions to make realignment easier. After securely jacking your car up and removing your old tie rod ends, install the silver colored jam nut on the inner tie rod. The blue titanium one is for the rod end.

Next, install the SPL turnbuckle and rod end. Once the turnbuckle and rod end are in approximate position, insert the shank through the rod end. There are three spacers shown: 1/8in, 1/4in, and 1/2in. Use any number or combination of them to achieve the proper bumpsteer setting for your car. Verify there are no clearance issues with the knuckle, subframe, or other suspension arms before putting the car back on the ground. If used with tubular/straight trailing/tension rod, use 1/2" and 1/4" spacer to ensure clearance.

The shank is a 1/2 inch Allen head. Make sure to lubricate the threads (motor oil is acceptable), then tighten the nut at the top to **110 ft-lbs. DO NOT OVERTORQUE!** Otherwise, the strength of the tie rod end will be severely severely compromised. *SPL Parts is not liable for any issues due to overtorque.*

Once tight, check for binding or any problems by rotating steering wheel lock to lock. Ensure that the spherical bearing does not bind (the edge of the ball bearing hitting or close to hitting the housing) under any situation as shown in the picture below. After installing, run the suspension through its travel and the steering rack from lock to lock to make sure there is no contact between the arms.



Note that the inner tie rod end can rotate freely, so the picture on left is not binding even though the edge of the ball is touching the housing. If uncertain, try rotating the inner tie rod by using a wrench on the hex part of the inner tie rod:

Tighten down the jam nuts on each end of the hex buckle of the outer tie rod end.

When getting the car aligned, please adjust toe by turning the inner tie rod. Do not turn the tie rod end buckle, as this will not adjust toe.

Length adjustment of outer tie rod ends

Our tie rod ends are preset to a specific length, but in certain cases it may be necessary to make the outer tie rod ends longer or shorter. The outer tie rod ends can be lengthened or shortened on the car using the following procedure:

1. Loosen the jam nuts on both sides of the hex buckle.
2. Hold the inner tie rod fixed and turn the hex buckle so as to thread in/out the rod end (spherical bearing side). Note that since both the rod end and the inner tie rods are right hand thread, threading in/out the rod end will in turn thread out/in the buckle on the inner tie rod side.
3. Once the outer tie rod end is long/short enough, tighten down jam nut on the rod end side. Note that for safe thread engagement, the maximum amount of exposed thread on the rod end should not exceed 0.7".
4. Follow the normal procedure of turning the inner tie rod to adjust the toe.

Alignment by a professional is *highly* advised once the car is back together.

ONE-YEAR LIMITED WARRANTY AND DISCLAIMER

*All SPL brand products are intended for **Off Road Use Only** and carry a one year limited warranty. See below for details. All other branded products carry their respective manufacturer warranty.*

SPL PRO suspension products warranted to be free of defects in material and workmanship for one (1) year from the date of purchase.

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If the purchaser of the product shall fail to pay when due any portion of the purchase price, or fail to meet any terms required under contract agreed on at time of purchase, all warranties and remedies granted may be terminated.

Using any SPL arm as a tie/strap down point for a dyno session or transport will void the warranty.