Torque Braces Installation Instructions

Version: .6

For: ION REDLINE/Cobalt

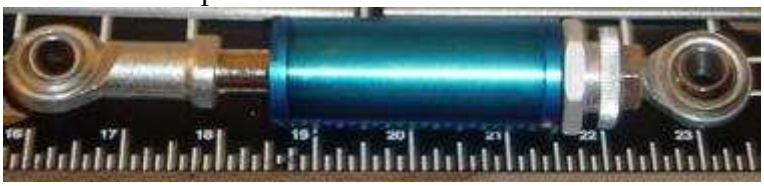
Tools & Parts

Tools required:

(1) 15mm socket, (1) 17mm socket, (1) 19mm socket, (1) 19mm deep socket
(1) Tension wrench or Ratchet
(1) 17mm box wrench
(1) Jack
(1) 2x4 or 2x6 1-2 feet long (make sure it is sturdy and can be placed on the jack.)

Parts:

Brace aka Damper:



Brackets from left to right: front bracket, center bracket and rear bracket.

Bolts with washer, beveled washer and locknut (you will not use the beveled washer)

Front Torque Brace Installation

1. Put a support under the engine so that your engine does not move during installation. Use a Jack with the (2x4 or 2x6) on top to put equal pressure over the oil pan instead of just one spot so it doesn't hurt the oil pan while supporting the engine.

2. Remove the two left 15mm bolts holding the mount to the engine. Bolts already removed in photo below

3. Install the center bracket as pictured below. Make sure to torque the bracket bolts to 50 N·m (37 lb ft) When tightening these, it is recommended to start with the center bolt.

4. Remove the front nut that attaches the mount to the frame 19mm deep socket (the nut located in the bottom right corner of the picture in step 2.)

5. Install the front bracket it can only go in one way and torque it down tight.

6. Attach brace with non-adjustable end to center bracket and other end to the front bracket. Bolt pattern: Bolt/brace/bracket/washer/Locknut (17mm both sides)

7. The main way that you want to adjust the brace is IE: if you look at the brace you will see that there is a nut, you want to loosen that and rotate the brace counter clockwise (loosen) until it is stiff (make sure the bottom eye bolt does not become loose) then tighten the nut.

Your front torque brace is now installed.

Manufacturer will not be liable for any problems occurring during installation. Only fitment of product is guaranteed.

Rear Toque Brace Installation

It attaches to your front and rear transmission mounts. The front mount is the one that takes the bracket and the other one bolts right on to the rear (easy to tell you've got the right bolts on the rear one as it's 3 in a triangle shape right by one another.) Go by the photo.

Note: The engine does not need to be supported for installation of this Rear Brace.

1. Take out the 15mm bolt closest to the passenger side tire. Put the end of the brace with the adjustments there.
2. Then put the bracket on the 19mm transmission bolt.
3. When you hook up the brace to the bracket make sure the bolt is at an angle, this will pretension it a little. (17mm on both sides)

Q. In this lower rear position, is the damper resisting compression or extension? So I know which way to preload it.
A. Extension.

Manufacturer will not be liable for any problems occurring during installation. Only fitment of product is guaranteed.

Modification (for daily driver not race track driving)

Warning: Manufacturer did not come up with this mod. Use at own risk

If your torque brace is driving you mental with, extra noise from cabin vibration and you have tried adjusting it to no avail. This mod may be for you.

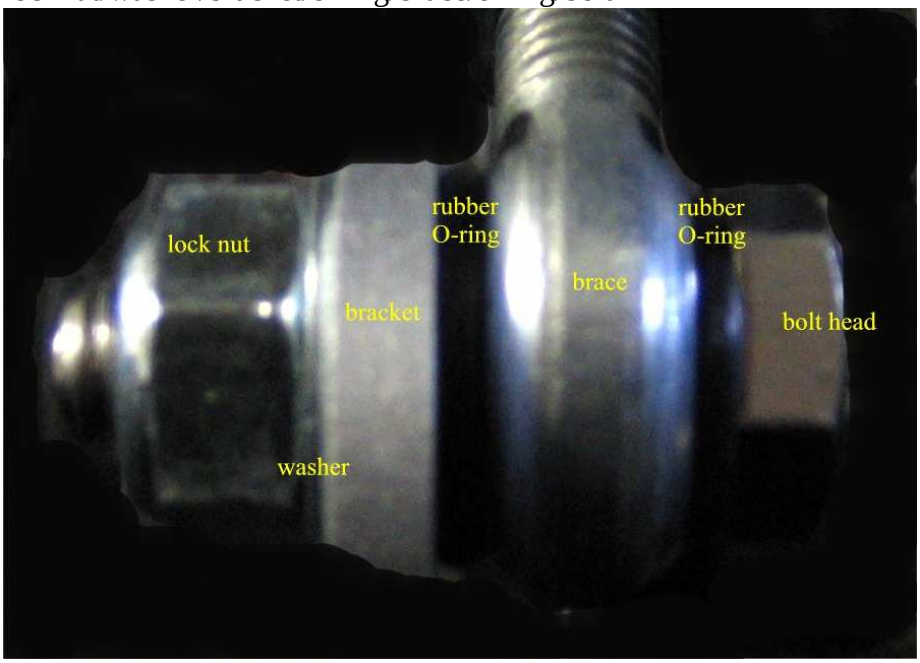
Things you will need:
(4) O-rings that are 27/64" i.d. x 45/64" o.d.
Vaseline or something rubber-safe.
Blue loctite or a new locknut. (Only if you are removing the locknut already in use to do this mod)

1. Pickup some rubber O-rings (4) that are 27/64" i.d. x 45/64" o.d. and placed one on each side of the swivelly heim joint that the mounting bolts pass thru. (Pick a fat chubby o-ring with some meat to it that fits the bolt well, don't use a skinny o-ring.)
2. I recommend lubricating the o-rings with some Vaseline or something rubber-safe.
3. Then I used the blue loctite (or new locknut) on the brace bolts so none of the bolts/nuts work themselves loose.

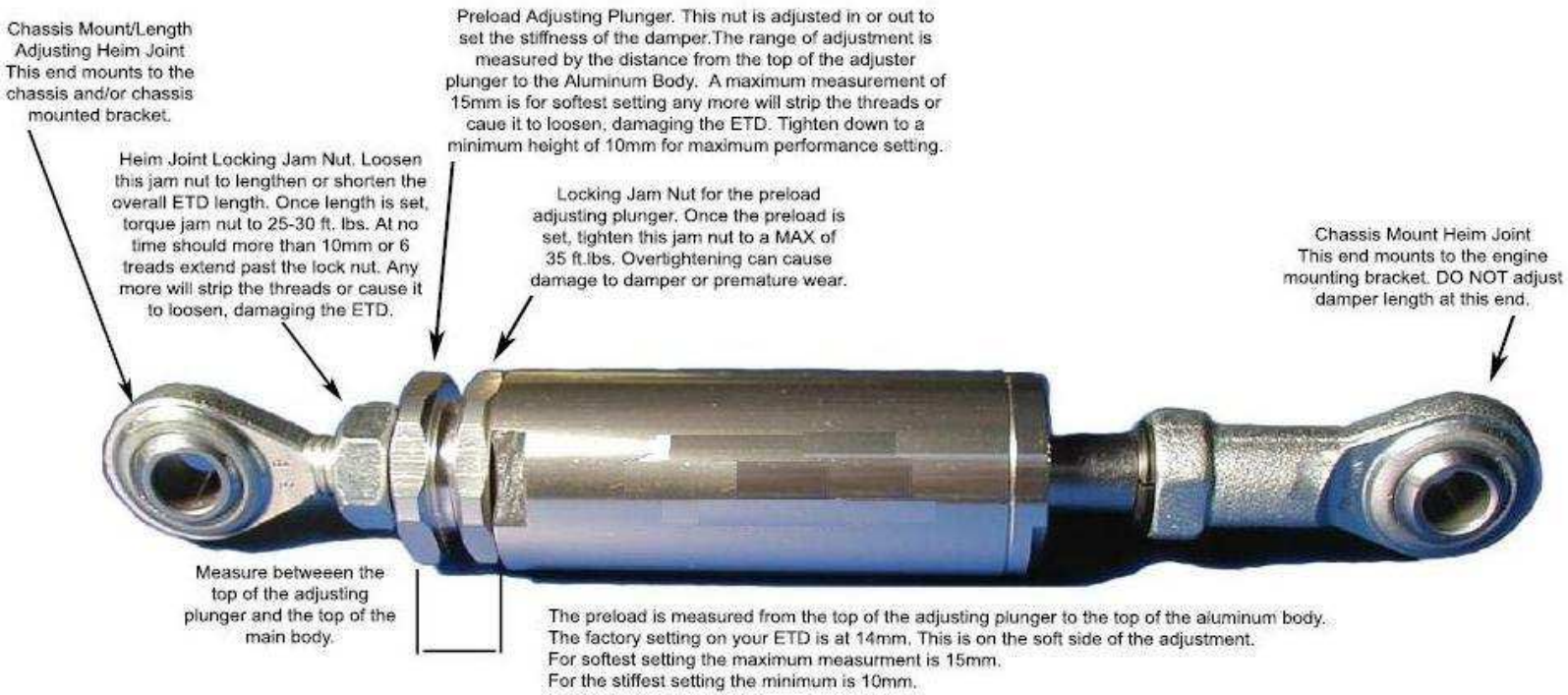
This accomplishes two things:
1. The brace mounting arms now stay perfectly straight up & down.
2. A very significant amount of noise and vibration is completely dampened from transferring into the mounting brackets and thru the car.

Now there's no more rattles or clunks!

Just assemble it like this:
locknut/washer/bracket/o-ring/brace/o-ring/bolt



Warning: Torque forward did not come up with this mod. Use at own risk



1. Install the mounting brackets following the instructions enclosed with your kit for your specific vehicle.
2. Set the Stiffy™ preload. The preload is measured from the top of the adjusting plunger to the top of the aluminum body.The factory setting on your ETD is at 14mm. This is on the soft side of the adjustment.
3. To adjust the preload loosen the Adjusting Plunger Jam Nut. For the softest setting turn the plunger outward to the maximum of 15mm, do not lengthen beyond 15mm or the damper will not work properly and possibly damage the ETD when used. To tighten the ETD shorten the distance between the top of the plunger and the aluminum body. Do not tighten beyond 10mm. 10mm is the stiffest setting. Going beyond 10mm can damage or cause premature wear to the ETD.
4. When the preload is set be sure to tighten the locking jam nut to 35 ft. lbs. DO NOT exceed 35 ft. lbs or the ETD may be damaged.
5. Measure the distance between the two mounting holes of the chassis and the engine mounting brackets. It should be very close to 7" center to center.
6. Measure the distance from center to center of the heim joints on the ETD.
7. Loosen the heim joint locking jam nut. By turning the heim joint only inward or outward lengthen or shorten the overall length of the ETD so that it matches the distance of the mounting holes on the brackets. The ETD should mount to the brackets without any force applied to unit.
8. Once the length is correct, tighten the heim joint locking jam nut to 25-30 ft-lb.
9. Mount the ETD to the brackets, following the installation instructions for you vehicle.