



Global West Suspension  
655 South Lincoln Avenue / San Bernardino Ca. 92408  
PHONE 909-890-0759 FAX 909-890-0703

## CAMARO / FIREBIRD TRAC-LINK

TSC - 24 six speed  
INSTRUCTIONS



### KIT PROVIDES

- (2) - rubber bushings
- (1) - steel sliding sleeve with attached washer
- (1) - steel concave washer
- (1) - 1 inch x 14 jam nut
- (1) - end cap 1 inch x 14 jam with grease fitting
- (1) - torque arm assembled with
  - (2) - 5/8 rod ends,
  - (1) - rear end bracket,
  - (1) - adjuster,
  - (2) - 5/8 x 18 bolts,
  - (2) - 5/8 lock washers,
  - (2) -right hand jam nuts,
  - (1) - left hand jam nut
- (1) - main support beam
- (8) - ½ x 20 lock nuts
- (7) - ½ x 20 x 1 grade 5 bolts
- (1) - ½ x 20 x 1-1/4 grade 5 bolt
- (7) - ½ uss flat washers
- (2) - 3/8 x 24 x 2 ½ grade 5 bolts
- (4) - 3/8 flat washers
- (2) - 3/8 x 24 lock nuts



TRACLINK will require approximately 3 to four hours for installation.

Although TRACLINK is considered a bolt-on device for factory stock vehicles, it is reasonable to assume additional time may be required for proper installation, depending on other after market modifications already present on the car

One of the performance features of TRACLINK is that the pinion angle is fully adjustable. Here at the factory we preset the angle, which will work for most applications however different ride heights, various motor/transmission combinations may require adjustments. Zero degrees measured at the rear end pinion to drive shaft is recommended.

1. Installation can be done on a drive on rack or on the ground.  
Drive on lift--Note: The drive on lift must have capability to raise the rear of the car separating the body from the rear end during installation of Traclink. With the car on the lift, chalk the front tires on both side of the tire so the car cannot roll fore or aft. Place the air lift jack to the rear of the rear end and raise the body up slightly.

On the ground – no lift: Begin installation by elevating the vehicle. It is recommended that you support the unibody with jack stands both front and rear. Leave the floor jack under the axle so you can raise or lower the rear end during installation.

2. Remove the factory torque arm assembly. To accomplish this, take the bolts out of the factory torque arm mount located at the back of the trans. Remove the entire bracket assembly. The exhaust bracket will also come loose. Move to the rear of the torque arm and remove the two long bolts that attach it to the rear axle. The arm should come off.



3. Once the torque arm is removed unbolt the little clamps that hold the brake lines and fuel lines. These lines run down the center of the drive shaft tunnel. The fuel filter must also be unbolted from the frame. **DO NOT UNDO THE FITTINGS ON THE FUEL LINES OR BRAKE LINES.**



4. Once the lines are loose, remove the rear seat cushion behind the driver seat. Next remove the rear seat belt and bolt which screws into the drive shaft tunnel. This allows you to obtain clearance to get underneath the carpet in that area.

5. Install the main support beam, at this point you will need a 1/2 inch drill bite and drill motor. The drill bit should be at least 6 inches long. Slide the main beam into position. To do this, lightly pull the fuel/brake lines away from the floor. You only need to move the lines a little, just enough to get the main beam OVER the top of the lines. The front of the beam should be on top of the transmission crossmember.

**PROPER POSITION FOR THE MAIN BEAM IS AS FOLLOWS. THE V AT THE BACK OF THE BEAM MUST FIT UP IN THE FLOOR AREA UNDER THE REAR SET SO THE EDGE OF THE TOP PLATE IS LAYING FLAT AGAINST THE FLOOR AND IS ABOUT 1/4 OF AN INCH AWAY FROM THE UNIBODY SEAM. THE FRONT OF THE BEAM WILL ALSO BE RESTING ON TOP OF THE TRANSMISSION CROSSMEMBER.** The front of the beam, when positioned properly will be parallel with the drive shaft and will allow just enough clearance for the brake lines.



6. Hold the beam up against the floor concentrating on the top plate indexing flat and 1/4 of an inch away from the seam. The first hole you will drill will be the one inside the tube. Have an assistant help support the beam while you drill this hole. Place a 1/2 - inch bolt with a washer through the hole from the passenger compartment side down. Install the nut through the tube using an extension and tighten the bolt down just enough to pull the beam up and contact the floor. You should still be able to slightly move or pivot the beam. Note: Photo shows the second hole being drilled.



7. Next move forward to the transmission crossmember and position the beam so it is as close to parallel to the drive shaft as you can. Make sure the brake lines and fuel lines still slide back up into their stock location. It will be tight. The back portion of the Traclink beam must also fit up into the V portion of the unibody as well. Take a pencil or marker and mark the hole location of the main beam to the transmission crossmember. You are going to drill a 1/2 inch hole in your crossmember and bolt the front of the Traclink beam to it.

8. Once you have marked the transmission crossmember you will have to remove it from the car. At this point simply support the transmission and unbolt the cross member.



9. Drill your have inch hole and reinstall the cross member.

10. Take a 1/2 inch bolt with nut and attach the Traclink beam to the crossmember. Tighten to 70 foot pounds.



11. Move to the back of the Traclink beam and drill the remaining two holes in the top plate against the floor. Do the one closest to the outside of the car first. Again with a 1/2 inch bolt with flat washer installed, drop it down from the passenger compartment through the Traclink plate and tighten 70 foot pounds. Next drill the center hole and bolt accordingly. Torque the remaining two bolts to 70 foot pounds. Drill the two side holes facing the front of the car next. Make sure the carpet is pulled away before drilling. Again install the bolt with washer from the passenger compartment down. Torque to 70 foot pounds. Drill the remaining two holes following the same procedure.

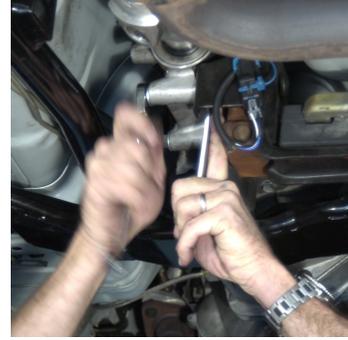


12. The Traclink main beam is now installed; you may put back the fuel lines and brake lines. The lines may require slight bending to get them back into position. This does not need tools, just bend them with your hands. **MAKE SURE THE LINES ARE NOT RESTING ON THE BOLTS, NUTS, BRACES, OR PLATES.** Why? Overtime chassis vibrations may wear a hole in the lines if they are left to rub against another steel surface. (Solutions: If you feel the line will contact something then simply slice a rubber hose and slide it over the line. Secure hose with tie wraps or clamps). Most likely you will not have to do this because the lines move out of the way easily.

13. Next install the exhaust bracket. Using the 3/8 bolts, flat washers and lock nuts, re install



the exhaust bracket.



14. Installing the new torque arm on the differential will require lowering the rear end away from the unibody. You do not have to remove it. The torque arm pivot on the main beam (already installed) requires a collar with rubber bushings on each side of it. Before you install the torque arm, slide the collar (with the large washer welded on one end) over the end of the torque arm. Place one large diameter rubber bushing on the collar with the tapered side going towards the washer.

Lubricate the insides of the collar with synthetic water resistant grease and slide it onto the end of the torque arm. Slide the assembly up into the center mount on the main support beam.



15. Swing the back of the torque arm up onto the rear end and slide the factory bolts through the assembly. You may have to raise or lower the body in order to get the torque arm bracket onto the rear end. Tighten the bracket to the rear end to 90 foot pounds. Torque the two bolts holding the torque arm to the bracket to 65 foot pounds. They are located on the side of the bracket.



16. At the front of the torque arm you need to finish installing the collar. Locate the other rubber bushing and slide it onto the collar. The flat portion goes on first with the tapered part of the rubber bushings towards the front of the car. Install the concave flat washer next. The curve of the washer goes towards the rubber bushing. Install the 1 inch jam nut and tighten down the nut until there is about 3/8 of an inch on threads showing.

17. If you are on a drive on lift, lower the car back down so it is resting on the tires. Check to make sure that you have 3/8 of an inch of clearance



between the collar (rubber bushing location) and the taper at the end of the torque arm shaft. If you look at the end of the torque arm you will see the shaft tapers down so it will fit in the collar. Where the taper ends and the shaft goes straight, that distance needs to be about 3/8 of an inch clearance before the collar contacts the tapered portion of the shaft. If this is too close, during operation it can cause a thumping sound over bumps. The adjustment to fix the problem if this is the case is to thread the rod ends into the torque arm pulling the taper back towards the rear end. Note: We have preset the length and generally you will not have to adjust this.

If you have the car on jack stands, lift the rear end up till it just takes the load off the jack stands to see if the clearance is OK.

18. The end cap has the grease fitting at the end of it. Run the cap down till it bottoms on the collar.

19. Back the first 1 inch jam nut up against the end cap and tighten.



20. Re-install the interior. Make sure to retighten the seat belt bolt. The carpet and seat will go back to their original position without modifications.



21. With the vehicle back on the ground recheck pinion angle. (You must check the pinion angle with the car on the ground or at least the suspension loaded as if it was on the ground.)

**22. To adjust the pinion angle, simply loosen the jam nuts on the adjuster (bottom of the torque arm) and by rotating the adjuster you can set the pinion angle. Don't forget to retighten the jam nuts.**

23. Test drive.

#### SUBJECT: VIBRATIONS

1. If you notice a vibration during your test drive through the whole vehicle, this condition is caused by the drive line or pinion angle being nose down or over center and nose up. Both of these conditions will cause a chassis vibration. Solution is to re-adjust the pinion angle.

2. Metal to metal sound over bumps --- generally intermittent.

This condition is from the length of the torque arm being too long and the taper at the end of the torque arm is hitting the steel collar over bumps (look where the rubber bushings are located). The torque arm will move  $\frac{1}{4}$  to  $\frac{3}{8}$  of an inch in during bumps. This movement is required for proper suspension operation. **If this distance is less than  $\frac{1}{4}$ " to  $\frac{3}{8}$ " of an inch you may experience a thumping sound over hard bumps.** This is the torque arm bottoming out on the collar.

**Solution: Shorten the length of the torque arm by screwing in the rod ends at the end of the torque arm. You will have to remove the torque arm from the bracket that attaches it to the rear end. Adjust the upper and lower rod end in the same amount and reinstall.**

3. Occasional thumping sound going over drive ways and speed bumps.

This is caused by over greasing the pivot at the end of the torque arm. Simply remove the grease fitting located at the torque arm end cap. Drive around the block and reinstall the grease fitting. The excess grease will have purged out and the condition will have gone away.

Installed properly this unit will be quiet during normal operations. However during hard acceleration like drag racing off the line you may experience a small thump. This is the traclink activating, forcing the tire into the pavement, it is normal, it's working. ENJOY!

Other components offered by Global West are:

- Tubular rear lower control arms
- Adjustable panhard rods
- Springs
- Shocks
- Subframe connectors
- Del-a-lum control arm bushings
- Tubular tie rod adjusting sleeves

- Lower steering frame supports
- Fast ratio steering boxes
- Racing and High Performance disc brake kits