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**Camaro / Firebird *TracLink***  
**TSC series (TSC-27)**  
**Installation 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) - 1/2 x 20 lock nuts
- (7) - 1/2 x 20 x 1 grade 5 bolts
- (1) - 1/2 x 20 x 1-1/4 grade 5 bolt
- (7) - 1/2 uss flat washers
- (2) - 3/8 x 24 x 2 1/2 grade 5 bolts
- (4) - 3/8 flat washers
- (2) - 3/8 x 24 lock nuts



The *TracLink* kit requires approximately 3 hours to install. Although *TracLink* is considered a bolt-on device on a factory stock vehicle, it is reasonable to expect that additional time and effort may be necessary for proper installation, depending upon the nature and extent of other after market modifications already present on the car. Although pinion angle is adjustable on the *TracLink*, it is preset from the factory and will work for applications where ride height is factory stock or all the way down to 1" below stock.

1. Begin installation by elevating the vehicle. We recommend supporting the unibody with jack stands both front and rear. Leave the axle supported with the floor jack, this will be required for proper *TracLink* installation.

2. Remove the factory torque arm assembly. To accomplish this, take the bolts out of the forward bracket (where the nose of the torque arm is mounted). Remove the nose of the torque arm from the bracket assembly. Moving to the rear of the torque arm, remove the two long factory bolts that attach it to the rear axle. You should be able to remove the torque arm completely now. A mallet may be of some assistance at the rear axle. Refasten the exhaust where the front torque arm bracket was located, using the 3/8 inch bolts and nuts supplied in the hardware kit.
3. Inside the vehicle, remove the left rear seat bottom. This can be accomplished with a socket, extension and ratchet. Next remove the right seat belt for the left rear passenger's seat. This will allow you to obtain clearance to get underneath the vehicle's carpeting in that area.
4. Locate the forward main beam. This is the large tube with a (V) plate welded to it. In the rear most portion of the beam you will find seven 1/2" holes. This section fits up underneath the vehicle, on the floorpan directly under the left rear seat. You will note that there is a canister type fuel filter in the same general area. You will have to unclasp the fuel filter from the car. You do not need to remove the filter off the fuel lines. The plate section of the forward brace fits flat up against the floorpan. On the outboard side of this area, there is a floorpan body seam which the forward brace's plate will fit up flush against. The front of the main beam rests on top of the transmission crossmember. When the beam is laid into position, the beam should run next to the fuel lines going down the drive shaft tunnel. In some cases the plastic or metal clips may have to be temporarily removed in order to get the beam as close to the lines as possible. When this is accomplished the beam will look straight down the tunnel and the forward locating mount will clear the transmission.
5. Have a helper hold the forward brace in it's proper position, use a 1/2" bit and drill one of the mounting holes. You should drill the inboard hole first located inside the tube. Install a flat washer on the bolt first and install from inside the passenger compartment down through the hole. Run the nut down but do not tighten. Next drill the outer hole by the fuel filter. Make sure the front portion of the beam is still located correctly at the transmission cross member. Drill the 2<sup>nd</sup> hole and install the washer and bolt in the same manor. Again run the nut down, but do not tighten. **Note:** For obvious reasons, be sure that you have the carpet out of the way when drilling your holes.
6. Move to the transmission crossmember and mark the bolt hole location at the end of the forward beam. In order to drill this hole you will most likely need to drop the crossmember. Unbolt the transmission mount. With a floor jack support the transmission and lift it off of the crossmember slightly. Next unbolt the crossmember and drill a 1/2 inch hole located at your mark. The hole must go through the top and bottom plates of the crossmember. Next on the bottom side of the crossmember the 1/2 inch hole will need to be opened up in order to install a 1/2 inch nut and get a 3/4 inch socket on it. A 1-inch hole should do the trick.
7. Reinstall the transmission crossmember and torque into position. Acquire a 1/2 inch bolt (no flat washer needed) and a 1/2 inch nut, drop the bolt down from the top and torque to 70 foot-pounds.
8. Returning to the rear, tighten down the first 2 bolts and nuts. Drill the remaining five 1/2" holes through the floorpan. **Note: After each hole drilled, install the washer/bolt through the hole and torque to 70 foot-pounds before drilling the next hole.**
9. Locate the traction beam and rear bracket in your kit. The rear bracket has a gold finish and the torque arm is the powder-coated unit attached to it. Assemble the steel-bushing sleeve now by taking the small rubber bushing and sliding it onto the sleeve. The flat side of the bushing with the steel round lip goes towards the threaded side of the collar. Slide the bushing all the way down until it rests against the washer.
10. Using good quality grease, pre-grease the stub end of the traction beam. Slide the steel-bushing sleeve onto the stub. The threads will face away from the traction beam.

11. Allow the rear end to drop down out of the car enough so that you can slide the new torque arm with the collar up into position. You will note that this has the effect of tilting the rear axle. The steel-bushing sleeve on the end of the traction beam will slide into the large ring located on the forward brace. At this time, line up the rear bracket with the axle. You may have to tilt the rear end in order to get the bracket on the differential. A mallet may simplify this task. As soon as the bracket is properly located on the axle, line up the boltholes and slide the original factory bolts into place from the bottom, placing the nuts on top. Run the nuts on by hand. You may have to drop the beam again to reset the pinion angle.
12. With the arm in place, raise the rear end up. Place the other rubber bushing on the collar. Again place the rubber bushing on, so the steel ring indexes in the forward beam. Locate the large flat washer and place on the collar, concave side facing towards the rubber bushing. Install the 1-inch jam nut and tighten until it bottoms out. Install the 1-inch end cap nut with the grease fitting installed. Tighten the end cap until it bottoms then back off the jam nut until it contacts the end cap. Put a wrench on the end cap and the 1-inch jam nut. Tighten them against each other.
13. Via the grease fitting lubricate the collar. A couple of pumps from a grease gun will be all you need. We recommend using synthetic grease. Synthetic grease is generally waterproof and will provide quiet operation and long life.
14. Check the pinion angle at the drive shaft to rear end location. This must be done with the vehicles full weight on the tires. A special driveline angle-measuring tool may be required to be accurate. **(When we ship our torque arm, both rod ends are adjusted with 2 threads on the rod ends showing. This works for 90% of most installations. What you are looking for is 0 degrees. If you raise or lower the car the pinion angle will probably need to be reset or at least checked.)**
15. If the pinion angle checks out OK, torque the remaining two bolts holding the torque arm bracket to the rear end. If not, adjust accordingly until correct before tightening.
16. Reinstall the seat belt and interior.
17. Installation is complete. ENJOY!!!!

## TECHNICAL INFORMATION

### **SUBJECT: VIBRATIONS**

If you experience a vibration during your test drive, this condition is generally caused by incorrect pinion angle. Either the pinion is nose down too much or nose up (over center). Both of these conditions will cause a chassis or driveline vibration. The cure is simple. Reset the rear end angle by screwing the rod ends on the torque arm in or out depending on whether you need more pinion angle or less.

EXAMPLE: To increase rear end pinion angle, lengthen the upper rod by turning it out of the arm. To decrease the pinion angle lengthen the lower rod end.

NOTE: Whenever you lengthen the torque arm more than 2 threads showing at the rod ends, it is always good to check the distance between the torque arm and collar. The torque arm will move 1/4 to 3/8 of an inch in during bumps. This movement is required for proper suspension operation. If this distance is less than 1/4 to 3/8 of an inch you may experience a thumping sound over hard bumps. This is the torque arm bottoming out on the collar. To correct this problem turn both top and bottom rod ends in the same amount on the torque arm. Your pinion angle will not change and the extra clearance for proper operation will be achieved.

### **Thumping noise only when I go over bumps.**

This is a condition that can happen after lubricating the collar. Depending on the viscosity of the grease, you can cause the torque arm to hydraulic. Hydraulic conditions occur when the grease packs inside the collar and doesn't flow past the stub of the beam. This locks the beam up from moving over bumps and

causes a thumping sound from the rubber loading and unloading. The fix is simple, remove the grease fitting on the end of the collar and drive around the block over bumps. The excess grease will push out of the hole. Wipe off the grease and reinstall the grease fitting.