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TracLink Installation Instructions -- TSF-93 and TSF-93A – (aluminum cover)

## Kit Provides:

- 2 Rubber bushings, 1 small, 1 large OD
- 1 Flat 3 hole plate
- 1 Machined aluminum body plate
- 1 Traction beam
- 2 90 angle reinforcement plates
- 1 Hardware pack
- 1 Steel bushing sleeve with attached washer
- 1 forward brace

Although TracLink is considered a bolt on device on a factory stock vehicle, it is reasonable to expect that modifications pertaining to the mufflers and exhaust pipes will be required occasionally on mass production vehicles. This is also the situation with cars that have aftermarket

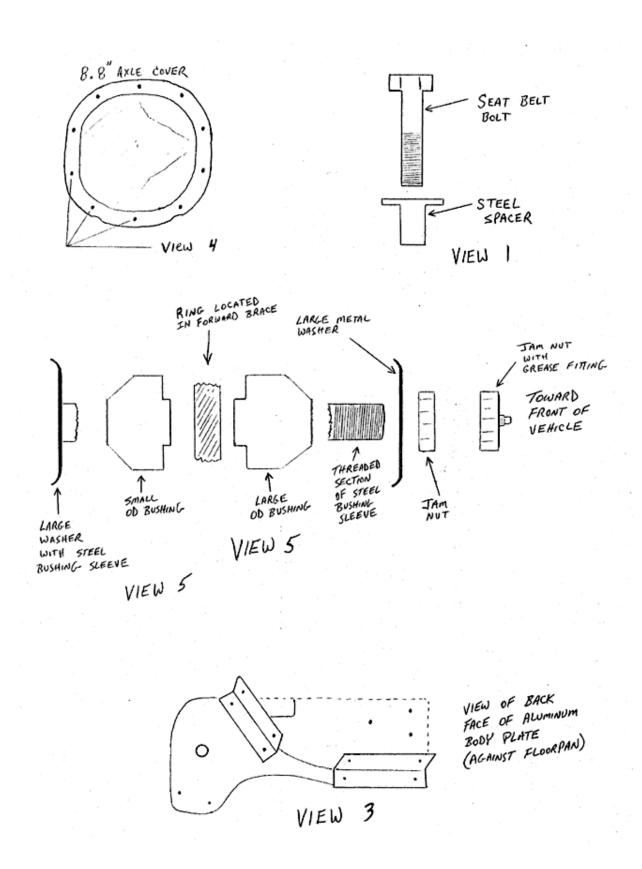


exhaust systems. **NOTE**: TracLink should only be installed using factory upper control arm bushings. Also, TracLink only fits **1979** to **1993** Mustang vehicles equipped with the 8.8" axle.

- 1. Begin installation by pulling back the carpeting on the left rear floor of the passenger compartment. Elevate the vehicle, as you will be required to be underneath it to install the kit. To properly install the kit, the vehicle must be at ride height, with the full weight on the tires.
- 2. Temporarily disconnect the left exhaust pipe at the joint just ahead of the muffler and disconnect the left muffler bracket. This permits the left side exhaust to swing out of the way.
- 3. Next, locate the aluminum plate, hardware pack, forward brace, the two 90-angle reinforcement plates and one flat 3 hole backing plate. Follow the diagram (View 1) and bolt the angle plates to the aluminum plate. They are bolted to the backside of the aluminum body plate; (The backside of the body plate can be identified by a recess machined into it to clear the parking brake bracket, which is welded to the car floor plan). Use four 3/8x1 1/4 "bolts, flat washers and lockouts. Place the flat washer on the bolt first, prior to sliding the bolt through the aluminum plate.
- 4. Following your diagram, bolt the angle plates to the backside of the body plate. Don't run the bolts down tight just yet. Bring the bolts down until the plate is held but may just pivot slightly. The angle plates will mount so that they are flat to the cars floorpan. On the underside of the car, maneuver the body plate onto the area above and immediately in front of the driver's side muffler. The angle plates will butt up nicely to the vehicles floor if the floorpan seams are reasonably flat. If not, take out your hammer and lightly tap the raised or wavy spots.
- 5. The seat belt bolt on the driver's side (next to the center console) must now be replaced. Remove this bolt and install the 7/16" diameter bolt with steel spacer supplied with the kit through the seat belt eye. Tighten the seat belt bolt down tight. (view 2)
- 6. Under the car, install the forward brace, placing the end with the 7/16" hole on the new seat belt bolt. Place the lock nut on the bolt next and run it down do not tighten it yet.
- 7. Pick up the aluminum body plate and 3/8 x 1 1/4 bolts, 2 flat washers and nuts. Slide the flat washers and nuts. Slide the flat washers onto the bolts first, and then push them through the aluminum plate and onto the forward brace. Install the 2 lock nuts and run them down, but do not torque yet.
- 8. You will notice that the brace, when shifted upward toward the floorpan, will now automatically index the body plate on the cars floorpan.
- 9. With the body plate in position, take a 3/8" drill bit and drill the four holes to attach the angle plates to the floorpan. We suggest drilling one hole, placing the bolt through and tightening it down. Remember to place a washer on the bolt first, push the bolt through the floorpan from inside the car. The nuts will be installed

- on the underside of the car. Torque the four bolts to 35 ft/lb.
- 10. Next, tighten the lock nut on the end of the seat belt bolt to 55 ft/lb. At the other end of the forward brace, tighten the two 3/8" bolts to 35 ft/lb.
- 11. Take a 1/2" drill nit and drill the remaining three holes in the body plate. After drilling, mount the three hole backing plate with three 1/2x1 1/4-20 bolts. Place the bolts through the backing plate and slide the assembly from the inside of the car throughout the holes in the floorpan. Underneath the car, place a 12mm flat washer on each bolt, followed by a lock nut. Tighten down and torque to 70 ft/lb. Re-position the carpeting that you moved aside, the interior is now completed.
- 12. Temporarily remove the rear axle cover plate bolts at the 6, 7 and 8 O'clock locations. In your hardware pack there are three longer bolts and lock washers that will replace the original fasteners. You will note that one end of the traction beam has a mounting plate, the holes of which match the cover bolt location on the axle. ( see View 3)
- 13. At this time, remove the differential weight. It is a cast iron weight that hangs off the webbing of the differential case next to the pinion.
- 14. Slip the traction beam stub end into the large hole in the aluminum body plate and use the cover plate bolts to help you position the traction beam on the differential. Slip all three into place and tighten down. This slides the traction beam forward, which will provide you with the correct location for the 1/2" bolt holes you are about to drill.
- 15. At this time you must look at the location of the traction beam in the aluminum plate. Center the stub of the traction beam in the hole **by hand** and note the distance between the rear end & the bosses on the traction beam. Generally, you will find that to fill the space between the bosses of the traction beam and the rear end housing will require two .187" thick washers, which are provided, one on each side. Depending upon ride height and other variables, it is possible that you may not need spacers or you may find that you need the thicker spacers that are also provided. The key point is in the <u>center</u> of the hole in the aluminum body plate where the bolts are torqued.
- 16. With the beam temporarily located, take a scribe and outline the two bosses of the traction beam where they contact the rear end. (i.e.- where the differential weight used to bolt on)
- 17. Remove the traction beam and noting the lines you scribed, locate the center of each circle. You may find that the existing holes are off. You must re-drill for bolt-circle center on the traction beam. If part of the hole interferes, you can use a grinder with a carbide burr or a rat tail file to open up the hole just far enough to position the bolt for the new centerlink. The hole size is 1/2".
- 18. Slide the traction beam assembly back up into position and fasten at three rear end cover bolts and the two 1/2" bolts. If you discovered in **step 15** that you needed spacers between the bosses on the traction beam and the rear end housing, be sure to use them now. We are checking to make sure that when the traction beam is torqued up, the stub locates exactly in the center of the hole in the aluminum plate. (You will find that your hardware pack supplies you with two different lengths of 1/2" bolts. Select the bolt length that goes along best with the combination of spacers that you will be using) **Note:** TracLink is ride height sensitive! If you plan on changing your car's ride height in the future, you will need to re center the stub at that time!
- 19. Remove the traction beam. Locate the steel sleeve with the washer welded onto it. Slide the small OD rubber bushing into it. (View 4) Smear some grease inside the steel sleeve so that the metal bushing inside has lubrication. Use good quality waterproof synthetic grease.
- 20. Slide the assembly onto the traction beam stub, washer side first.
- 21. Slip the traction beam stub up into the large hole in the aluminum body plate. The step in the rubber bushing will index into the large hole in the aluminum body plate. Fasten the traction beam down, making sure to use the two1/2" lock washers and the two flat washers at the traction beam boss mounting points. Once started tighten down the rear cover plate bolts first, to factory torque. After that, tighten the two 1/2" bolts to 70 ft/lb.
- 22. Up forward at the traction beams stub end, slide the remaining (large OD) rubber bushing onto the steel sleeve, with the step in the bushing indexing in the body plate. (View 4) Place the large diameter concave washer onto the sleeve. The concave side goes toward the rubber bushing.
- 23. Install the 1" jam nut and tighten it until it bottoms out. (i.e. tighten it down until it is all the way to the end

- of the threads on the steel sleeve) Compression on the bushing is preset by the tolerances by the steel sleeve.
- 24. Install the 1" fine thread end cap. It is easily recognized because it has a grease fitting attached. Tighten the end cap down until it bottoms out on the steel-bushing sleeve. Going back to the 1" jam nut, loosen it until it contacts the end cap. Putting a wrench on both the end cap and the 1" jam nut, tighten them against each other.
- 25. Re-install the exhaust. As stated earlier, this may or may not be clear-cut. Generally, if clearance is at a premium, a slight rotation of the exhaust pipe immediately ahead of the muffler and/or the muffler itself is all that's required.
- 26. No realignment of the front end is necessary.
- 27. Remove the pinion snubber, as it is no longer used.
- 28. Quad shock setup and brackets may also be removed. If you don't wish to do this, skip this step.
- 29. Lubricate Traclink bushing via its grease fitting. When filled, lube will come out the back, where the traction beam slides into place. Use waterproof synthetic grease, as this will preserve the operational integrity of the bushing, providing <u>quiet operation</u> and <u>long life</u>.
- 30. Installation is now completed.



## TracLink kit

- (1) 7/16 x 2 fine grade 5 bolt
- (1) 7/16 fine stove lock nut
- (1) Forward brace spacer (for seat belt bolt)
- (4) 1/2" USS flat washer
- (2) 1/2" split lock washer
- (2)  $1/2 \times 1-3/4$  fine grade 5 bolt
- (2)  $1/2x^2 1/4$  fine grade 5 bolt
- (1) 1" fine jam nut
- (3) 1/2x1-1/4 fine grade 5 bolt
- (3) 1/2" fine thread stover lock nut
- (3) 12mm flat washer
- (6) 3/8x1 1/4 fine grade 5 bolt
- (4) 3/8x1 fine grade 5 bolt
- (10) 5/16 USS flat washer
- (10) 3/8 fine thread stove lock nut
- (3) 5/16x1 1/4 coarse grade 8 bolt
- (3) 5/16" split lock washer
- (1) 1" fine thread end cap with grease fitting
- (2) 0.187" thick flat spacer
- (2) 0.312" thick flat spacer

## **Special note on TracLink UPGRADES**

It is imperative that the pieces of the TracLink not be "mixed & matched". The stub at the end of the track beam and the gold iridescent bushing sleeve are considered a matched pair because each bushing sleeve is precision honed to fit that particular traction beam stub.

Also, when reinstalling the kit, be sure to use the new hardware kit provided with the TracLink upgrade. This new hardware is critical to insure proper location of the updated track beam.

The installer should note that failure to observe these guidelines can result in unacceptable TracLink performance.