

GR-40 Mustang Torque Arm Installation

(Models MTA-1000F and MTA 1000R

Revises March 2001

Congratulations on purchasing the heart of the GR40 suspension system. The TorqueArm system you are installing will give you years of trouble free driving pleasure if you follow the instructions here carefully.

1. Raise car to comfortable work height. Rear axle must be kept at ride height relative to the body during installation. A lift that raises vehicle by the wheels, like those commonly found in muffler shops, is an excellent way to maintain this dimension.
2. If subframe connectors have already been installed you will have to remove the central part of exhaust system.
3. Remove balancer from differential pinion ears and discard.
4. If subframe connectors are already installed, go to Step 6.
5. Thoroughly clean and sand to bare metal areas where subframe connectors attach to body of car.
6. Position subframe connectors; weld securely perimeter of plates.
7. Remove the five lower differential cover bolts and discard
8. Position TorqueArm under rear axle and attach it to rear axle with hardware provided. Socket head screws should be installed through tubes in forward legs pointing upward through holes where balancer was previously. Flat washer and nut should be on top of pinion ears.

Note: If holes in legs do not line up with balance holes in pinion housing, use a die grinder and elongate accordingly. **DO NOT MODIFY TORQUE ARM!** The balancer holes vary in location from one housing to another.

9. It is important that the TorqueArm be installed tightly to rear axle housing before proceeding further. Torque the five 5/16" differential cover bolts to 24-28 ft-lbs. Torque the two 3/8 inch socket head screws to 42-48 ft-lbs. Pinion angle will be adjusted after installation is complete.

CAUTION

There are inconsistencies with bolt hole depth in Ford differential housings. **Check that attaching TorqueArm bolts do not reach bottom.**

10. Attach mounting brackets to cross member with preformed gussets away from cross member. Snug bolts so that brackets can be moved, but will stay where put. This will ease installation during subsequent steps
11. Attach cross member to end of TorqueArm, being sure to consider offset of snubber flange to passenger side
12. Position cross member attaching brackets against subframe connectors. Cross member should at this time up against

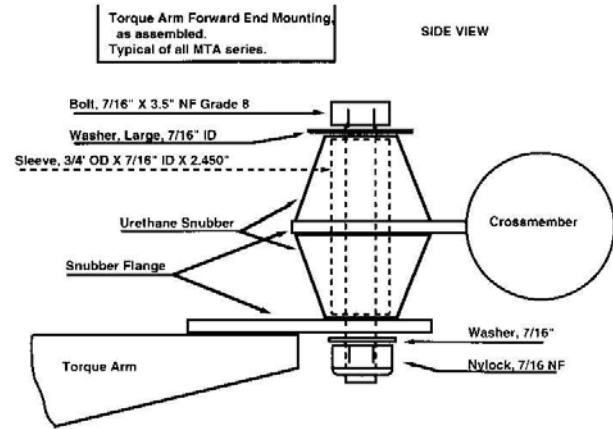


Figure 1

floor in recessed area. The 7/16-inch bolt and upper snubber should be within 3/4 inch of drive shaft.

13. Tack weld brackets to subframe connectors.
14. Remove cross member and weld brackets securely. Have an experienced, qualified welder do this.
15. Paint brackets and weld-area to prevent rust.
16. Install cross member and attach to TorqueArm as shown in Diagram A.
17. If central part of exhaust system has been removed, reinstall now. Clearancing may be required depending on year and make of system. Most can be modified easily by deleting the exhaust hangers on the transmission mount and/or flattening the pipe slightly just behind the crossover or H-pipe. In some systems the crossover may have to be cut out and moved 2 to 4 inches forward.
18. Aftermarket systems are available for most years and engine combinations that accommodate the GR-40 TorqueArm system. There are too many combinations of models and systems to list all remedied here. If you have trouble fitting your exhaust, call our technical hotline and we will be happy to assist you.
19. If a Griggs Racing Panhard bar or Watts link kit has been installed; you may now remove upper rear control arms.

WARNING

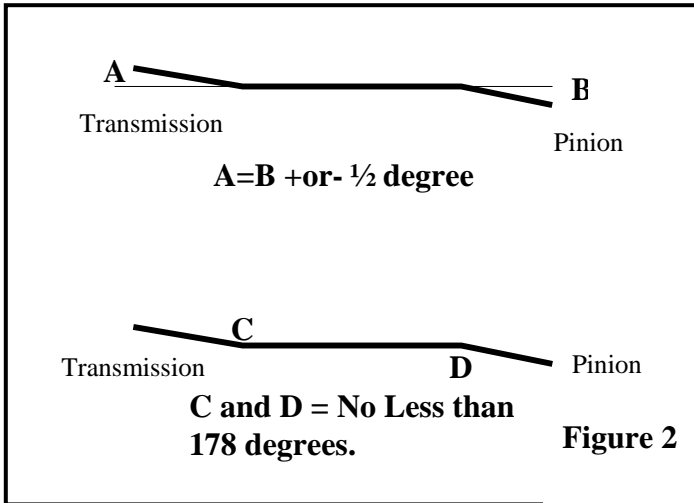
There are several Panhard bar kits on the market, and most are designed to retain the stock upper control arms. Removal of upper arms increases loading of the Panhard bar substantially. **Use only Panhard bar units manufactured by Griggs Racing with this TorqueArm.** Use of non Griggs Panhard may result in failure of the Panhard bar under cornering loads resulting in loss of control, causing damage to the car and injury to its occupants.

Setting Pinion Angle:

When properly installed, the proper pinion angle is normally set correctly. However, with after market transmissions, mounts and wear and tear, some installations require adjustment of this angle. This is usually done by adding shims between the transmission and the mount to raise the back of the transmission, and/or adding shims between the legs of the TorqueArm and the pinion housing.

To measure the pinion angle you will need an accurate angle finder and a straight edge. You will need to measure the angles as per figure 2. The rear axle must be held at the operating ride height while measuring.

Ideal driveline angles at ride height are as follows:



Driveshaft vibrations:

Normally when a vibration occurs after installation of the TorqueArm, it is most always the poor quality OEM driveshaft that is the culprit. Griggs Racing products offers a variety of precision billet aluminum drive shafts for all applications, and usually installation of one of these drive shafts solves all the problems.

But if you do experience a vibration, check the following.

1. All hardware and fasteners are tight.
2. The Center bolt and spacer inside the snubber that attaches the front end of the TorqueArm to the cross member is not contacting the cross member at ride height.
3. The exhaust is not contacting the TorqueArm, cross member, or any part of the body, except at its rubber mounts and the exhaust manifolds (headers).
4. The drive line angles are within the specified limits listed in figure 2.



MTA 1000 F Cross Member Mounting



MTA 1000 R Cross Member Mounting