

## Steering Shaft Assembly, Power Steering Rack, 1994-04 Mustang(MMST-14) Instructions



Read all instructions before beginning work. Following instructions in the proper sequence will ensure the best and easiest installation.

The MM Engineering Team designed a new steering shaft that does not use setscrews. That's right, *no setscrews!* Instead, the U-joints are attached by welding them to the shafts. The steering shaft assembly is attached to the steering rack with a pinch-bolt, just like Ford did with the stock steering shaft assembly. And like the stock steering shaft, the MM Steering Shaft also has two telescoping sections.

### Preparation

The MM Steering Shaft is manufactured with a bare steel finish. If desired, it can be painted before installation. Please follow these guidelines to avoid damage to the steering shaft:

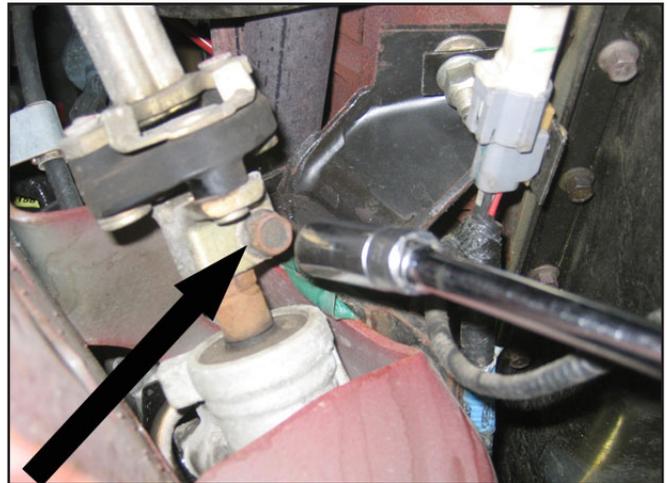
- Collapse each section of the shaft approximately half-way, without removing the plastic dust boots.
- Wipe off any grease or oil.
- Mask off the end of the lower u-joint and the last inch of the upper shaft so they do not get painted.
- Paint the steering shaft and allow it to fully dry before installation.



**WARNING:** If the steering wheel is rotated too many revolutions in either direction the electrical wires (known as the clock spring) that connect to the airbag, horn, and other electrical controls will be severed. From the factory, the steering wheel is centered within it's rotational range. It is important not to lose this position while the steering wheel is disconnected from the steering rack.

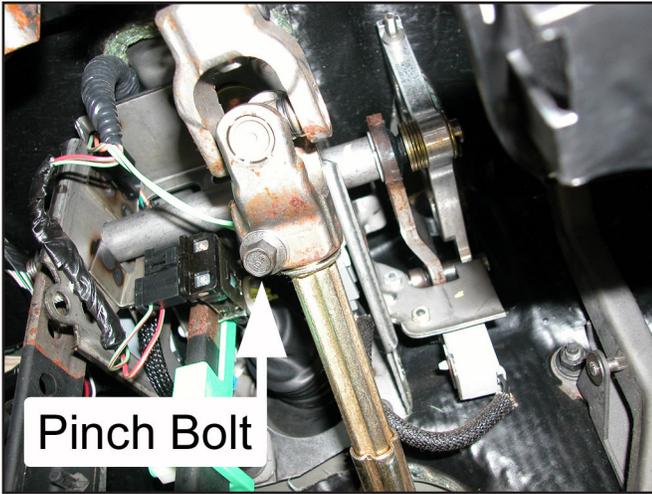
**NOTE:** You must consult a factory manual on the procedure for centering the clock spring should the steering wheel's center position be lost.

1. Raise the front of the car and place it safely on jack stands.
2. Remove the stock steering shaft lower pinch bolt where it attaches to the steering rack input shaft.



3. Remove the stock steering shaft upper pinch bolt, located underneath the dash, where the steering shaft connects to the stock upper U-joint.

**NOTE:** There is a pinch bolt located on each end of the stock upper U-joint. Remove only the pinch bolt located nearest the firewall so that the stock upper U-joint remains in the vehicle.

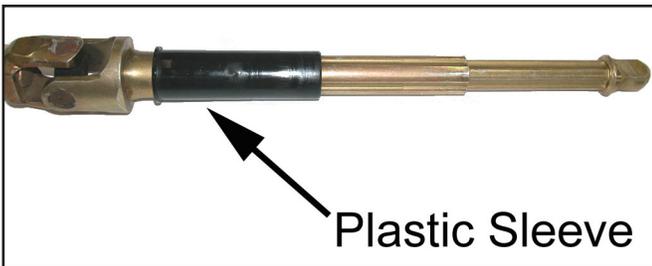


4. Collapse the steering shaft as far as necessary and remove it from the vehicle.

*NOTE: If necessary, loosen the bolts retaining the stock steering rack and pull the rack forward to remove the steering shaft.*

5. Carefully remove the plastic sleeve located on the upper portion of the stock steering shaft. If removal is difficult, heat the plastic sleeve with a heat gun or similar heat source until it expands enough for removal.

*NOTE: Do not damage this sleeve. New replacements are not available.*



6. Remove the rubber dust boot from the upper telescoping joint of the MM Solid Steering Shaft.

*NOTE: It should slide off with just a little bit of effort.*



7. Wipe off any grease or oil located on the inside diameter of the plastic sleeve.

8. Wipe off any grease or oil located on the outside diameter of the upper half of the MM Solid Steering Shaft, specifically along the first 3" where the shaft is welded to the U-joint.
9. Apply RTV silicone sealant to the first 1"-2" of the upper half of the MM Solid Steering Shaft. Start at the weld bead and work outwards from there.

*NOTE: A majority of the silicone should be placed on the flat faces of the shaft.*



10. Slowly slide the plastic sleeve removed in Step 5 over the upper half of the MM Solid Steering Shaft, until the flanged portion of the sleeve is touching the weld bead.
11. Evenly spread the excess silicone over the plastic flange, until there is no gap between the plastic sleeve and the flats of the shaft. The goal is to prevent fumes and noise from the engine bay entering the passenger compartment through the gap between the steering shaft and the plastic sleeve.



12. Allow the steering shaft to sit for an hour to ensure that the silicone is dry before continuing with the rest of the installation.

*NOTE: Visually check that the rack is roughly centered in its travel range before installing it. One of the dust boots extended further than the other is a good indication that the rack is not centered. Rotate the input shaft by hand to center the rack if necessary.*

13. Reinstall the rubber dust boot over the upper telescoping joint.

14. Remove the pinch bolt from the lower U-joint of the steering shaft.
15. Install the upper half of the steering shaft through the hole in the firewall.
16. Install the pinch bolt removed in Step 14 into the lower U-joint and torque to 24 ft-lbs. Because of the groove in the rack input shaft, the pinch bolt can only be inserted when the lower U-joint is properly positioned on the rack input shaft.
19. Insert the pinch-bolt into the upper U-joint. Because of the groove in the shaft, the pinch-bolt can only be inserted when the upper U-joint is properly positioned on the upper stub shaft.
20. Torque the upper pinch-bolt to 24 ft-lbs.
21. Safely lower the car to the ground.



**This kit includes:**

- 1 Solid Steering Shaft

17. Make sure that the steering wheel is still pointed in the “straight-ahead” position.
18. Extend the MM Solid Steering Shaft’s upper telescoping section enough to allow the upper half of the shaft to attach to the upper U-joint, located underneath the dash.

*NOTE: The steering shaft can only be attached to the U-joint in one orientation.*

