

# A U T O T E C H

*sport tuning*

## Installation Instructions

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**PART NUMBER:** 10.435.001K, 10.435.002K;

**DESCRIPTION:** Sport steering rack kit for manual steering

### TOOLS REQUIRED:

1. Bently repair manual
2. metric wrenches, 4 to 22mm
3. large adjustable wrench
4. pliers
5. external puller for tie rods
6. two jackstands
7. bench top vise
8. soft face mallet

### PARTS LIST:

1. (1) pinion gear w/bearng
2. (1) rack gear
3. (1) pinion seal
4. (1) left rack boot
5. (1) right rack boot
6. (1) tube moly grease

**NOTES:** This sport steering rack kit is designed as a direct replacement for the original rack and pinion set found on VW Rabbit, Scirocco, Golf, and Jetta models with manual steering. The "external puller" listed as a required tool for this installation is used to remove the tie rod ends from the steering knuckles. Pullers of this type are generally available for around \$15-\$20 at most auto parts stores. They can also be rented for less than \$5 a day at tool rental shops. The Bently repair manual is a mandatory part of this installation. It covers the removal and installation of the rack and pinion gearbox itself in great detail, therefore, these steps will not be covered here.

1. Place the front of the car on jackstands, making sure that it will not roll.
2. Following the procedure Bently's manual, remove the steering gearbox from the vehicle.
3. With the gearbox removed, remove the rubber seal from the pinion shaft.
4. Remove the adjusting mechanism's cover plate and the mechanism itself from the gearbox, retaining all parts.
5. Next, unbolt the pinion bearing cover from the gearbox.
6. If the original pinion gear and its bearing will not pull out easily by hand, use a bench vise to suspend the gearbox by the pinion shaft. Using a rubber mallet or a block of wood, gently tap downwards on the gearbox until it falls free of the pinion gear.
7. Pull the rack straight out from the gearbox housing. Clean any remaining grease from inside the housing.

8. Install the new rack in the housing using the moly grease supplied, making sure that its teeth face the pinion opening.
9. Push the new pinion gear and its bearing into the housing so that it engages the rack. Be sure to grease the bearing before reinstalling the bearing cover.
10. Reinstall the adjustment components into the housing and fasten the cover plate to the housing with the original bolts. Be sure to lubricate the "friction plunger" where it contacts the rack along its bore.
11. Adjust the lash between the rack and pinion with the adjusting screw. This is done by loosening the locknut, then hand turn the adjusting screw until it just makes contact with the "thrust washer." Retighten the locknut afterwards, making sure that the screw does not turn while doing so.
12. Install the new pinion seal onto the pinion shaft.
13. Following the procedure in the Bently repair manual, reinstall the rack and pinion gearbox into the vehicle.
14. After installation is complete, **the vehicle must be realigned.**