

# Steering Gears & Linkage

## MGB RACK & PINION

### DESCRIPTION

Steering gear is a direct-acting rack and pinion type. Gear consists of rack bar and toothed pinion mounted on front suspension crossmember. No adjustment for bearing wear in gear box is provided. Steering column is attached to pinion by "U" joint coupling.

### REMOVAL & INSTALLATION

**Removal** — Raise and support front of vehicle and remove both front wheels. Detach tie rod ends from steering arms. Turn steering to right lock and remove "U" joint lower pinch bolt. Remove nuts and bolts securing rack assembly to crossmember, noting that front bolts are attached with self-locking nuts and that shims may be found between rack assembly and frame brackets. Withdraw rack assembly downward and remove from vehicle.

**Installation** — To install, reverse removal procedure after first setting steering gear and steering column in straight-ahead position.

**NOTE** — If new rack is being installed, it must be aligned. See Alignment in MGB article under Steering Columns in this section.

### OVERHAUL

**Disassembly** — 1) Clamp rack in padded vise. Remove pinion end cover and joint washer, placing container beneath assembly to catch oil. Remove damper cover and shims. Extract yoke, damper pad, and spring, then withdraw pinion.

2) Unlock tie rod outer lock nuts and remove tie rod ends. Unclamp and remove both rubber bellows. Release bellows seal clips and withdraw seals. Pry up tab on locking rings, slacken rings, and unscrew housing to release tie rod, ball seat, and spring.

3) Pull rack out pinion end of housing. To remove rack housing bushing, unscrew self-tapping screw and carefully drive out bushing.

**Inspection** — Thoroughly clean all parts and examine for wear. Particularly, note condition of rubber bellows; if they show any sign of wear, replace them. Outer ball socket assembly cannot be disassembled; if worn, it must be replaced as assembly.

**Assembly** — 1) Insert rack bushing and carefully drive it in until flush with housing end. Drill outer housing of bushing through screw hole with a  $\frac{1}{64}$ " (2.78 mm) drill to a depth of .20" (5 mm) so that a new retaining screw may be inserted. Coat screw head with sealing compound before tightening.

2) Replace rack from pinion end. Position seat spring, ball seat, tie rod, and ball housings. Coat ball seats liberally with SAE 90 oil. Tighten ball housings until tie rods are held firmly, without free play. This tightening is correct when a force of 32-52 INCH lbs. (37-60 cmkg) is required to move the tie rods. Tighten new locking rings and bend tabs.

3) Insert pinion complete with ball races and locking nut into housing. Replace pinion end cover and seal, using sealing compound on mounting edges. Peen outer edge of ball race lock nut into slot in pinion shaft, if lock nut has been removed.

4) To adjust rack damper, replace plunger in housing and tighten cover, without spring or shims, until it is just possible to rotate pinion shaft by drawing rack through housing. With a feeler gauge, measure clearance between cover and housing. To this measurement add .0005-.003" (.013-.076 mm). This figure will be the correct thickness of shims to place beneath damper cover. Remove cover and plunger, insert spring and shims with plunger and cover. Coat cover with sealing compound and tighten.

5) Replace rubber bellows; before securing bellow clip on tie rod at pinion end, stand assembly on end and pour in  $\frac{1}{3}$  pint (.2 litre) of suitable SAE 90 oil. Replace bellow clip.

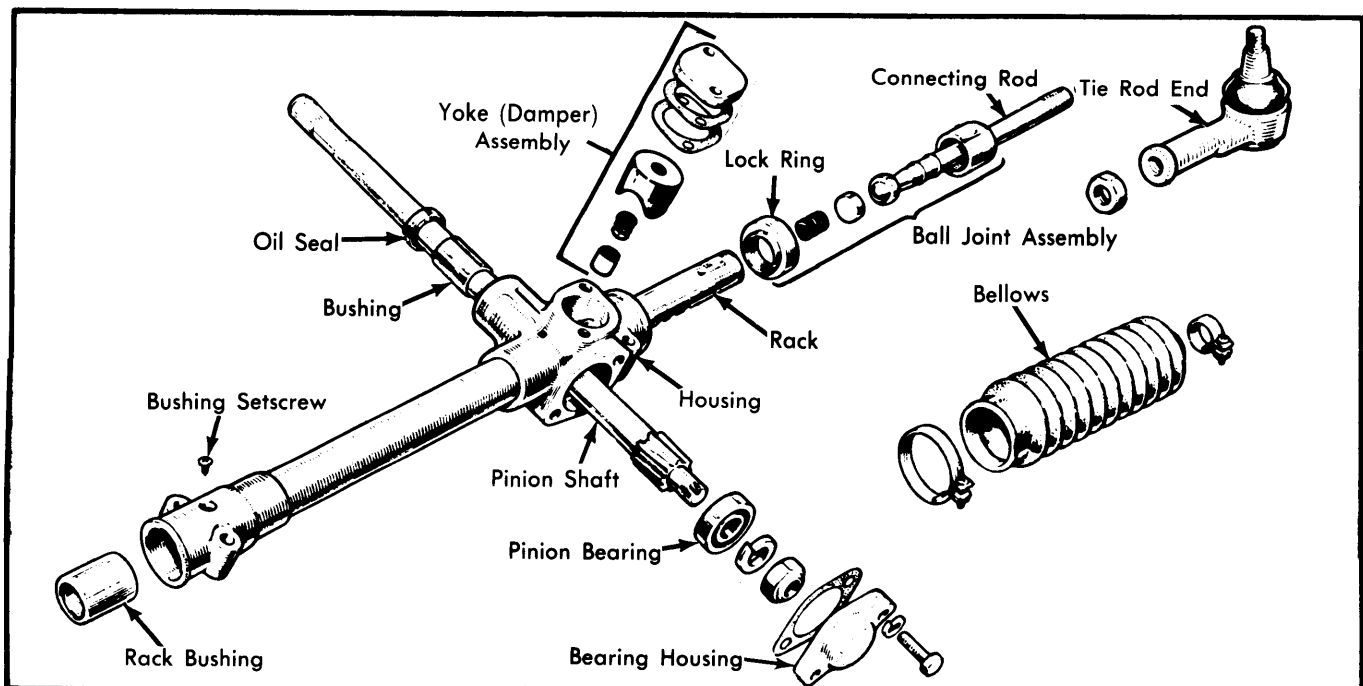


Fig. 1 Exploded View of MGB Rack and Pinion Assembly