

ISUZU RACK & PINION

I-Mark

DESCRIPTION

Steering gear assembly is a rack and pinion type. The steering gear pinion shaft, connected to lower end of steering column, moves the rack to the left or right, thereby transmitting any turning motion of the steering wheel to tie rods and steering knuckles.

ADJUSTMENT

STEERING GEAR ADJUSTMENT

Position front wheels straight ahead with steering wheel centered. Turn adjusting screw into gear housing and tighten to 11 ft. lbs. (15 N·m). Back off adjusting screw $\frac{1}{12}$ of a turn. Tighten lock nut.

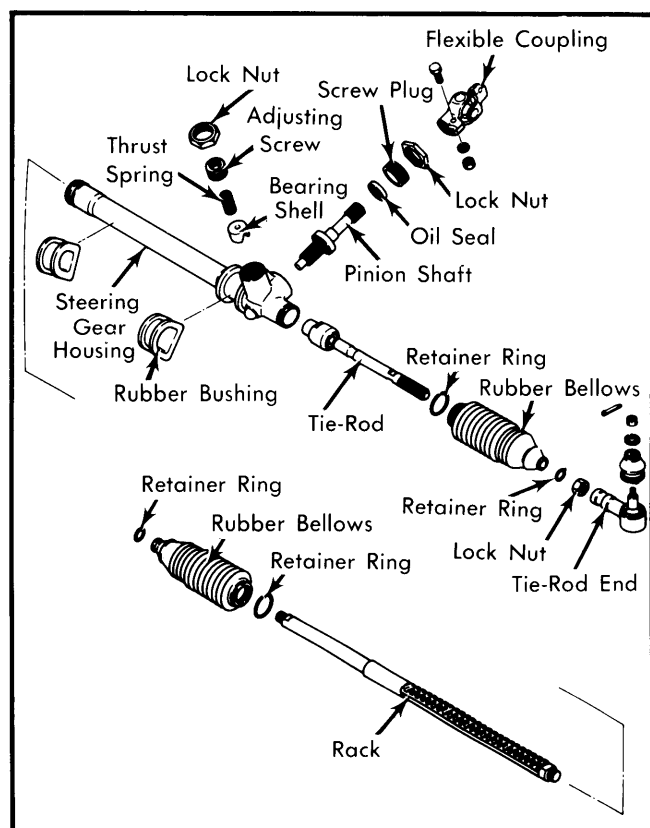


Fig. 1 Exploded View Showing Various Components of Rack & Pinion Steering Gear Assembly

REMOVAL & INSTALLATION

STEERING GEAR

Removal — 1) Raise and support front of vehicle. Remove engine under cover. Remove steering shaft coupling bolt. Remove both tie-rod end cotter keys and castle nuts. Using tie-rod puller tool (J-21687-02) disconnect tie-rod end from steering knuckles.

2) Disconnect steering gear housing from crossmember. Remove steering coupling from steering shaft and remove steering gear assembly from car.

Installation — Position front wheels straight ahead with steering wheel centered. Reverse removal procedure to complete installation.

OVERHAUL

STEERING GEAR

Disassembly — 1) Clamp steering gear assembly in soft jaw vise. Disconnect tie-rod ends from tie-rods. Remove retainer rings from rubber bellows. Remove bellows from steering gear housing and ball joint.

2) Disconnect ball joint from rack. Loosen adjusting screw lock nut, remove adjusting screw, thrust spring and bearing shell from adjusting screw opening.

3) Remove lock nut and screw plug from steering gear housing. Do not turn pinion to end position. Pull pinion and rack out of steering gear housing.

Reassembly — 1) Clamp steering gear assembly in a soft jaw vise. Coat all moving parts with gear lubricant. Insert long (toothless) end of rack into short end of housing until rack is centered in housing.

NOTE — Make sure that gear lubricant does not clog the 3 air channels in metal bushings. If air channels are blocked, a vacuum condition in bellows may result, drawing the bellows inward causing rack teeth to jam.

2) Center pinion on rack. Insert pinion shaft assembly into gear assembly, making sure pinion center tooth meshes with rack center tooth. Position screw plug and lock nut on gear assembly. Tighten screw plug and lock nut.

3) Place bearing shell into steering gear housing. Assemble thrust spring, adjusting screw and lock nut on gear assembly. Turn adjusting screw into gear housing and tighten to 11 ft. lbs. (15 N·m). Back off adjusting screw $\frac{1}{12}$ of a turn. Tighten lock nut.

TIGHTENING SPECIFICATIONS

Application	Ft. Lbs. (N·m)
Adjusting Screw Lock Nut	58 (79)
Flexible Coupling Bolt	19 (26)
Tie Rod Ball Housing	65 (88)
Tie Rod End-to-Knuckle Nut	29 (39)
Tie Rod End Lock Nut	47 (64)
Screw Plug	58 (79)
Screw Plug Lock Nut	72 (98)
Column-to-Instrument Panel Nut	11 (15)
Steering Gear Housing Clamp Bolt	14 (19)