

Steering Gears & Linkage

VOLKSWAGEN VANAGON RACK & PINION

DESCRIPTION

Volkswagen Vanagon models use a rack and pinion steering gear. A transfer gear is used to connect steering shaft to steering gear. Tie rods are connected to rack and directly to steering knuckle, with ball joints. Both tie rods are adjustable for toe-in.

ADJUSTMENT

STEERING GEAR

NOTE — Steering gear is not adjustable on these models. If gear is damaged or does not operate properly, complete unit must be replaced.

REMOVAL & INSTALLATION

STEERING GEAR

Removal — Remove clamp bolt attaching connecting shaft coupling to steering gear pinion shaft. Disconnect tie rod ball joint from steering knuckles. Remove steering gear housing mounting bolts and remove steering gear from vehicle.

Installation — To install steering gear assembly, reverse removal procedure.

TRANSFER GEAR

Removal — Remove clamp bolt attaching connecting shaft coupling to transfer gear shaft. Remove clamp bolt attaching lower steering shaft flange to transfer gear shaft. Remove transfer gear attaching bolts and remove transfer gear.

Installation — To install transfer gear assembly, reverse removal procedure.

NOTE — During installation of steering gear and/or transfer gear, always replace rubber couplings in connecting shaft and steering shaft lower flange.

OVERHAUL

NOTE — Steering gear and transfer gear cannot be repaired. Replace components if damaged. Steering gear rubber boots and tie rods can be replaced.

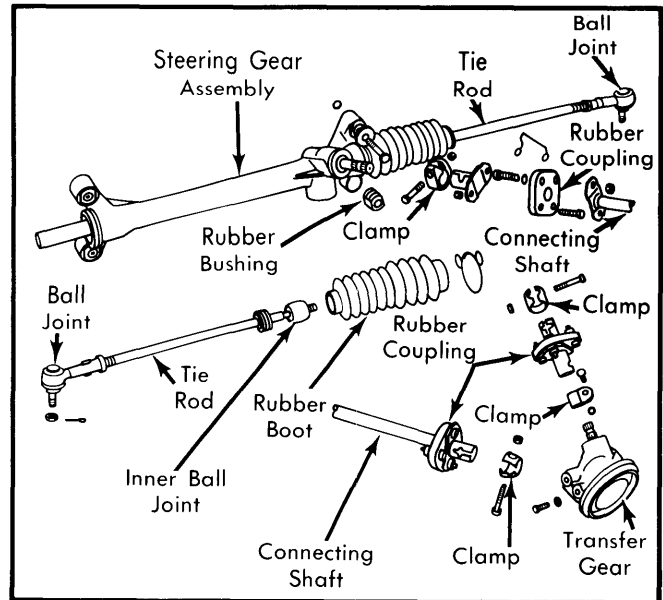


Fig. 1 Exploded View of Volkswagen Vanagon Steering Gear and Transfer Gear Assembly

TIE RODS AND RUBBER BOOTS

Disassembly — With steering gear assembly removed, remove clamps holding rubber boot to tie rod and steering gear housing. Using a punch, remove staking of tie rod inner ball joint washer to rack. Remove tie rods and rubber boots from steering gear assembly. Loosen tie rod ball joint lock nut and remove ball joints from tie rods. Press rubber bushing out of gear housing mounting.

Reassembly — To assemble tie rods and rubber boots, reverse disassembly procedure and note the following: After tightening tie rod inner ball joints, stake washer to groove in rack.

TIGHTENING SPECIFICATIONS

Application	Ft.Lbs. (mkg)
Clamp Bolts	14 (1.9)
Housing Mounting Bolts	18 (2.5)
Tie Rod Inner Ball Joint Lock Nut	51 (7.0)
Tie Rod Outer Ball Joint Lock Nut	58 (8.0)