VOLKSWAGEN RABBIT & SCIROCCO

Rabbit
Scirocco

DESCRIPTION

Vehicles are equipped with front wheel drive and independent strut type front suspension. Axles are supported by lower control arms, and vertically mounted strut assemblies. Strut assemblies consist of double action shock absorbers with coil springs mounted over the outside. The top portion of strut is attached to inner fender panel and lower portion is attached directly to steering knuckle. Tie rods are connected to steering knuckle.

ADJUSTMENT

WHEEL ALIGNMENT SPECIFICATIONS & PROCEDURES

See Wheel Alignment Specifications & Procedures in WHEEL ALIGNMENT Section.

WHEEL BEARING ADJUSTMENT

See Wheel Bearing Adjustment in WHEEL ALIGNMENT Section.

BALL JOINT CHECKING

See Ball Joint Checking in WHEEL ALIGNMENT Section.

REMOVAL & INSTALLATION

STRUT ASSEMBLY

NOTE – *Suspension strut does not need to be removed to replace end collar. Only requirement is to leave vehicle on ground.*

Removal – 1) Raise vehicle so front suspension and front wheels are not supported.

2) Remove bolts mounting suspension strut to steering knuckle. Note that top bolt is one used to adjust front wheel camber.

3) Remove brake caliper assembly and suspend out of way. Pry or force suspension strut out of steering knuckle.

4) Support front suspension by hand. Also, support lower control arm and related components. Work inside engine compartment and remove upper strut mounting nuts. Guide out assembly.

Disassembly – 1) Fit strut to spring compressor. Slightly collapse coil spring. Remove shock absorber piston rod nut. Slowly release spring pressure. Take off upper mounting hardware and coil spring.

2) Hold shock absorber cartridge center shaft with suitable tool. Loosen and remove threaded cap nut. If shock absorber cartridge will not easily pull from strut housing, thread a piston rod nut onto shaft and tap until corrosion breaks free.

Reassembly – 1) Fit protective sleeve and buffer over piston rod. Insert shock absorber cartridge to strut housing and tighten cap nut.

NOTE – *Both coil springs must be of same class. If set cannot be matched, both springs will have to be replaced. Springs are color coded.*

2) Position coil spring into lower spring seat. Install the upper spring retainer. Fit entire assembly into spring compressor and collapse coil gradually until whole threaded portion of piston rod is exposed.

3) Put on bearing, rubber bumper and remaining upper mounting components. Hold piston rod and tighten piston rod lock nut.

Installation – Reverse removal procedure and check front wheel alignment.

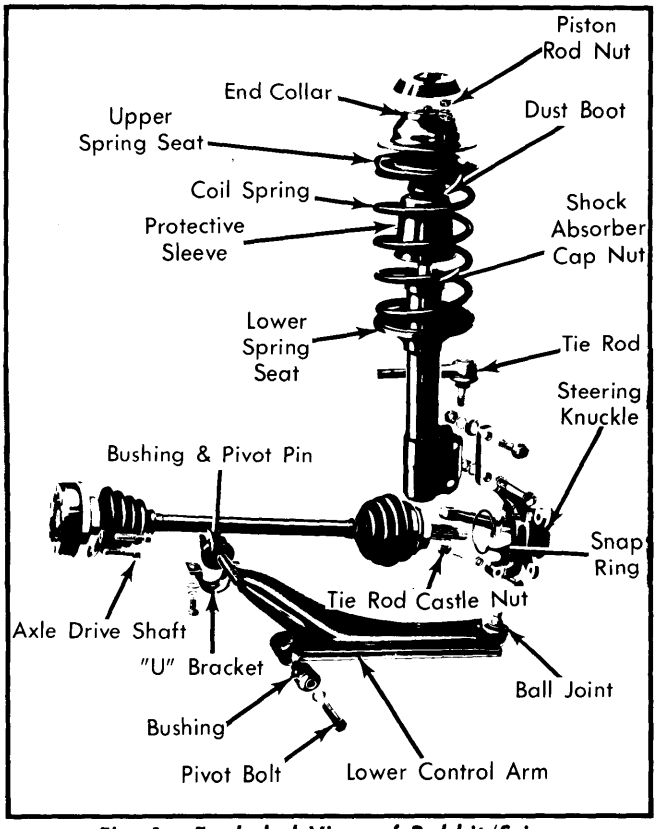

Fig. 1 Exploded View of Rabbit/Scirocco Front Suspension

FRONT SUSPENSION ASSEMBLY

Removal – 1) Raise vehicle so front suspension and wheels are not supported. Disconnect brake line, leave flex line in place, and plug openings.

2) Remove tie rod castle nut. Press tie rod from steering knuckle. Remove bolts mounting inner portion of constant velocity joint to transaxle drive flange.

3) Remove lower control arm front pivot bolt. Remove 2 bolts mounting "U" shaped bracket holding control arm rear pivot.

NOTE – *On vehicles equipped with automatic transmissions, engine may have to be slightly raised to gain access to pivot bolts.*

VOLKSWAGEN RABBIT & SCIROCCO (Cont.)

4) Support suspension assembly. Remove upper strut mounting nuts located in engine compartment. Guide assembly from vehicle.

Installation – Reverse removal procedure and note: Make sure convex side of thrust washer faces pivot bolt head.

LOWER CONTROL ARM & BALL JOINT

NOTE – *Ball Joint can be replaced while control arm is in vehicle.*

Removal – 1) Raise vehicle and suitably support with front suspension free. Remove nut and clamp bolt mounting ball joint in bottom of steering knuckle. Force ball joint out of steering knuckle. Leave control arm hanging in mounts at subframe.

2) If control arm is not being removed, drill out 3 ball joint rivets with a 9/32" (7 mm) drill. After drilling it still may be necessary to chisel off rivet heads. Remove ball joint.

3) If control arm is being removed, take out pivot bolt and "U" bracket housing inner pivot pin. Slide out control arm.

NOTE – *On vehicles equipped with automatic transmissions, engine may have to be slightly raised to gain access to pivot bolts.*

Inspection – Check lower control arm bushings. If bushings are bad they can be replaced. Press out worn bushing. Select new bushing and press into position. Make sure bushing does not twist when seating into place.

Installation – Slide new ball joint into slot in control arm. Tighten ball joint mounting bolts. Refit lower control arm to subframe (chassis). Install ball joint into lower section of suspension strut.

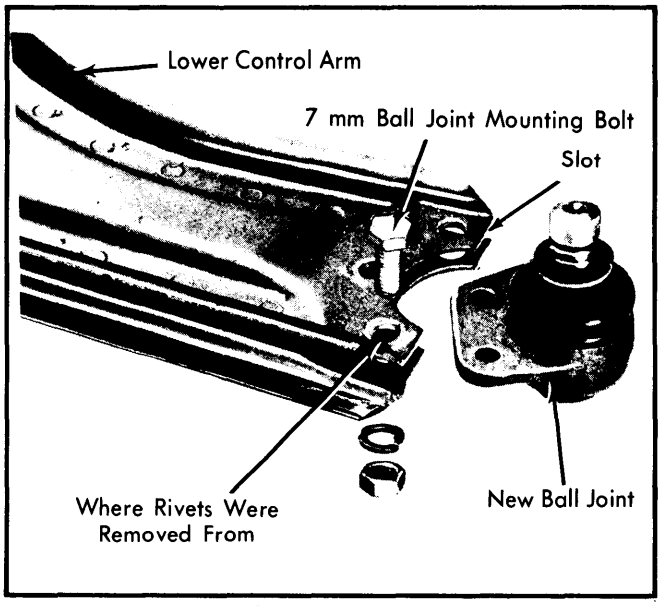

Fig. 2 New Ball Joint Installation Location in Lower Control Arm

TIGHTENING SPECIFICATIONS

Application	Ft. Lbs. (mkg)
Ball Joint Clamp Bolt-to Suspension Strut	22 (3.0)
Tie Rod Castle Nut	22 (3.0)
New Ball Joint-to-Control Arm	18 (2.5)
Suspension Strut-to-Inner Fender	14 (2.0)
Control Arm-to-Subframe (Chassis)	43 (6.0)
Pivot Pin "U" Bracket	22 (3.0)
Axle Drive Shaft-to-Transaxle	32 (4.5)
Suspension Strut-to-Steering Knuckle	58 (8.0)
Piston Rod Nut	58 (8.0)
Axle Shaft Nut	173 (24.0)