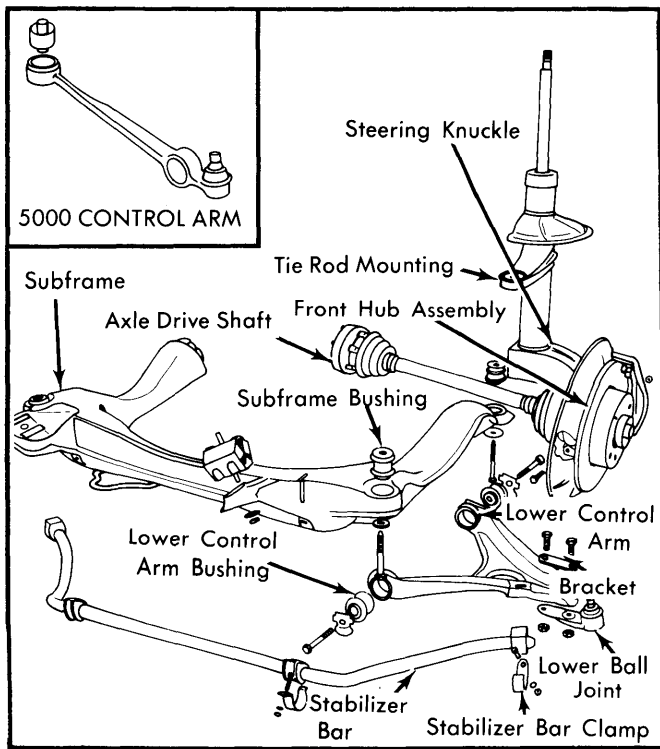


## AUDI

Fox  
5000

### DESCRIPTION

Suspension is independent type, having strut assembly, control arm and stabilizer bar. Strut assembly consists of shock absorber surrounded by a coil spring. It is attached to inner fender panel at top and is integral with steering knuckle at bottom. Lower control arm is connected by ball joint to steering knuckle and by bushing connection to frame (note configuration differences in Fig. 1). Stabilizer bar is connected by brackets to subframe and by bracket to control arm on Fox and by bushing and bolt on 5000.



**Fig. 1 Exploded View of Audi Front Suspension.**  
Note Inset of 5000 Control Arm. Other Components Similar on Both Models.

### ADJUSTMENTS

#### WHEEL ALIGNMENT SPECIFICATIONS & PROCEDURES

See Wheel Alignment Specifications and 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

**NOTE** — During any removal and installation procedure, if axle nut is removed or installed, do so with vehicle resting on ground at full curb weight.

#### STRUT ASSEMBLY

**Removal** — 1) Remove axle nut. Raise and support vehicle and remove wheel. Without detaching brake hose or line, unbolt brake caliper and suspend out of way. Remove rotor.

2) On Fox, index mark ball joint bracket on control arm and remove. On 5000, remove ball joint retaining bolt holding joint to hub assembly and remove. Using suitable tool, separate tie rod ball joint from strut arm. Remove stabilizer-to-frame brackets.

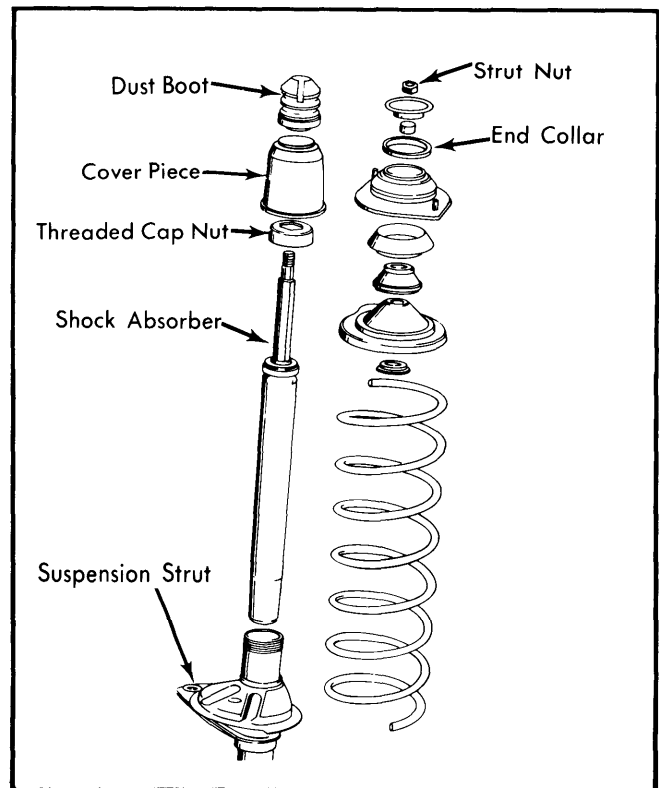
3) Using suitable puller attached to hub studs, apply pressure to drive axle shaft to separate strut assembly from drive axle.

**NOTE** — If work is being done on right side, it may be necessary to remove exhaust pipe from manifold and bracket on transmission.

4) While holding strut assembly from below, remove upper retaining nuts at fender panel (not strut plate nuts). Remove strut assembly.

**Disassembly** — 1) With strut assembly on bench, attach suitable spring compressor to coil spring and compress enough to remove upper piston rod retaining nut. Remove strut top plate.

2) Slowly release tension from coil spring and remove spring.



**Fig. 2 Disassembled View of Strut Assembly**  
(Fox Shown; 5000 Similar)

# Front Suspension

## AUDI (Cont.)

**3)** Use suitable tool (40-201, Fox; 2069, 5000) to remove threaded cap from top of shock absorber. Remove shock absorber.

**NOTE** — Manufacturer suggests that a  $\frac{3}{8}$ " diameter hole be drilled in bottom center of strut housing and into shock absorber to drain oil before shock absorber removal. Have container ready to catch oil. Do this only if shocks are being replaced. For 5000, replacement shock absorber kit (431 498 091) has been modified to include a cover over threaded cap and rubber boot above that. If replacing with this type, manufacturer notes that rubber bump stop should not be reinstalled.

**Reassembly & Installation** — To reassemble and install, do so in reverse of disassembly and removal procedure, noting the following:

- On 5000 models, be sure damping ring locating tabs are mated with indentations on upper spring retainers.
- If nuts or bolts are covered with undercoat or grease, clean threads thoroughly before installation.
- Drive axle splines must be grease-free. Also, apply a narrow ring of suitable locking compound (D6) around outer end of drive shaft splines and allow 1 minute to dry before installing.
- Tighten drive axle nut with vehicle resting on ground.

### SHOCK ABSORBER (ON-CAR)

**Removal (5000 Only)** — **1)** Leave vehicle sitting on ground at full curb weight. Remove top shock absorber nut.

**2)** Mark position of top retaining plate (camber adjustment) and remove 3 retaining nuts from plate and lift off plate.

**3)** Turn steering wheel so shock absorber rod can be aligned in center of upper spring retainer (insert piece of wood between spring and wheel housing to hold this position).

**4)** Remove washer, rubber bump stop, cover and threaded cap from shock absorber. Remove shock absorber.

**NOTE** — Threaded cap removal may require use of special wrench 2069.

**Installation (5000 Only)** — To install, reverse removal procedure, noting the following:

- If installing replacement shock absorber kit 431 498 091, do not reinstall rubber bump stop.
- When installing rubber cover over threaded nut, be sure marking on cover faces outward.
- After installation is complete, check camber and toe settings.

### LOWER CONTROL ARM

**Removal** — **1)** Raise and support front of vehicle. Place additional support under strut assembly.

**2)** Detach stabilizer bar from control arm. It may be necessary to remove stabilizer bar clamps from frame to gain movement.

**3)** Loosen control arm mounting bolts. Remove axle drive shaft if necessary.

**4)** On Fox, index mark ball joint nuts and bracket. Remove ball joint mounting nuts, bolts and bracket (Fox) and separate ball joint from strut. Remove control arm.

**Bushing Replacement** — Using suitable support (40-21, Fox; VW415a, 5000), driver (VW409, Fox; 2040, 5000) and press, remove old bushings from control arm. Using same tools, lubricate and press in new bushings.

**Installation** — To install lower control arm, reverse removal procedure, noting the following:

- On Fox, if ball joint is not replaced at this time, be sure index marks made during removal are aligned.
- Tighten all nuts and bolts to specifications.
- Check alignment.

### TIGHTENING SPECIFICATIONS

Application	Ft. Lbs. (mkg)
Stabilizer or Bracket	
Fox	
6 mm Bolt .....	7 (1)
8 mm Bolt .....	14 (2)
5000 .....	76 (10.5)
Stabilizer Bar-to-Control Arm (5000) .....	80 (11)
Control Arm-to-Subframe	
Fox .....	50 (7)
5000 .....	80 (11)
Ball Joint-to-Strut Nut	
Fox .....	25 (3.5)
5000 .....	47 (6.5)
Ball Joint Bracket Nuts (Fox) .....	47 (6.5)
Axle Nut	
Fox	
M18x1.5 .....	145 (20)
M20x1.5 .....	175 (24)
5000 .....	203 (28)
Strut Upper Retaining Nuts .....	18 (2.5)
Shock Absorber Threaded Cap	
Fox .....	108 (15)
5000 .....	130 (18)
Shock Piston Rod Nut .....	43 (6)
Strut Upper Plate (5000) .....	18 (2.5)