

## JAGUAR

XJ6  
XJ12  
XJS

### DESCRIPTION

The upper and lower steering columns are the collapsible type, designed to comply with safety regulations. The collapse points are retained by nylon plugs which will shear on impact, allowing steering wheel and columns to move forward. The upper column is composed of two separate sliding shafts, with the column tube on later models being formed with an expanded metal section. The column shaft is supported on two prelubricated roller bearings. The lower column section is also comprised of two sliding portions, which are retained in a fixed length by nylon plugs.

### REMOVAL & INSTALLATION

#### UPPER STEERING COLUMN

**Removal, Except XJS – 1)** Disconnect battery. Remove steering wheel, see *Jaguar* under **STEERING WHEEL & COLUMN SWITCHES** in this Section. Remove speedometer as follows: Remove instrument panel casing. Behind speedometer, unscrew knurled nut from right-angle bracket to gear box and disconnect speedometer drive cable. Disconnect trip record reset control cable by unscrewing knurled nut. Apply pressure to instrument panel bezel, rotate speedometer clockwise until it releases, and withdraw from panel. Withdraw headlight warning light and illuminator lights. Disconnect ground lead.

**2)** Remove tachometer as follows: Apply pressure to instrument bezel and rotate counterclockwise until tachometer releases. Disconnect electrical plug and socket. Remove ground lead. Withdraw illumination light holder.

**3)** Remove trim panel below the upper steering column. Disconnect electrical switch connections (three socket and plug connections). Detach horn contact at upper column. Unscrew self-locking nut and remove pinch bolt securing upper universal joint to lower steering column.

**4)** Loosen two set screws attaching lower end of upper column to its mounting strut. Working through speedometer and tachometer openings, remove two nuts securing top mounting of upper column, and support upper end of column with hand (or by other suitable means). Collect bolts, rubber washers, and any packing washers which may be at upper end of column.

**5)** Still supporting column, detach two set screws already loosened at lower mounting; collect packing washers. Remove upper steering column assembly from vehicle (with universal joint and switch assembly attached). **CAUTION** – Do not use excessive force to separate upper column from lower column when removing.

**Installation** – If universal joint and/or adjusting clamp have been removed, refit, then reverse removal procedure and note the following: Check that  $\frac{3}{8}$ " (9.5 mm) clearance exists axially in lower universal joint; if necessary, move upper universal joint further along lower column to increase clearance. Ensure self-cancelling operation of turn signals functions properly and that steering wheel spokes are horizontal when straight-ahead position is set; if not adjust as necessary.

**Removal, XJS – 1)** Disconnect battery. Remove cover panel from under instrument panel. Remove trim from around instrument cluster. Remove screws mounting instrument panel to fascia. Disconnect speedometer cable. Lay cluster forward and disconnect wires from behind cluster. Lift off entire cluster.

**2)** Remove steering column lower shroud. Lock steering wheel in straight-ahead position. Remove column adjusting mount bolt, then loosen set screw and take out adjusting assembly.

**3)** Disconnect ignition switch from main harness. Disconnect main harness from auxiliary controls. Remove upper "U" joint bolt. Remove bolts mounting column at lower mounting.

**4)** Disconnect horn. Remove upper column mounting bolts. Maneuver column free of "U" joint and vehicle. Remove other shroud half. Unscrew auxiliary switches from column, slide assemblies out of column.

**5)** Remove bolts securing ignition switch and lock assembly to column. Remove bolt securing horn feed and take off from column.

**NOTE** – Remaining components can not be individually replaced.

**Installation** – Reverse removal procedure and note: Loosely fit upper and lower mounting bolts and spacers. Adjust column so groove on inner splined shaft aligns with bolt hole in "U" joint. Make sure upper section of column fits in center of housing fascia. Tighten mounting bolts. Reverse removal procedure for remaining components.

#### LOWER STEERING COLUMN

**Removal, Except XJS – 1)** Raise vehicle on hoist and remove pinch bolt securing lower "U" joint to pinion shaft. Lower vehicle. Detach lower parcel shelf. Remove both pinch bolts from upper-to-lower "U" joint.

**2)** Unscrew lower mounting screws of upper column. Pull lower steering column from upper "U" joint. Raise vehicle. Remove "U" joint from pinion shaft and withdraw lower steering column.

**Installation** – To install, reverse removal procedure and ensure gap of  $\frac{3}{8}$ " (9.5 mm) exists in universal joint. **NOTE** – Front wheels should be kept in straight-ahead position during this operation.

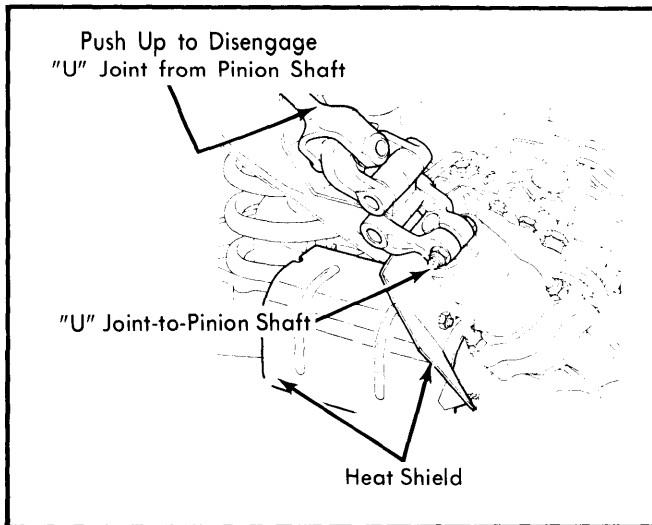
**Removal, XJS – 1)** Place front wheels in straight-ahead position. Remove exhaust heat shields near head pipe. Remove right side heat shield near steering rack.

**2)** Remove nut and bolt mounting lower "U" joint to pinion shaft. Work inside passenger compartment and separate "U" joint from upper and lower column. Pull "U" joint free from upper column.

**3)** Remove "U" joint from lower shaft. From under vehicle, push lower column through firewall until "U" joint separates from pinion shaft. Pull "U" joint clear of pinion shaft and withdraw lower column assembly.

# Steering Columns

## JAGUAR (Cont.)



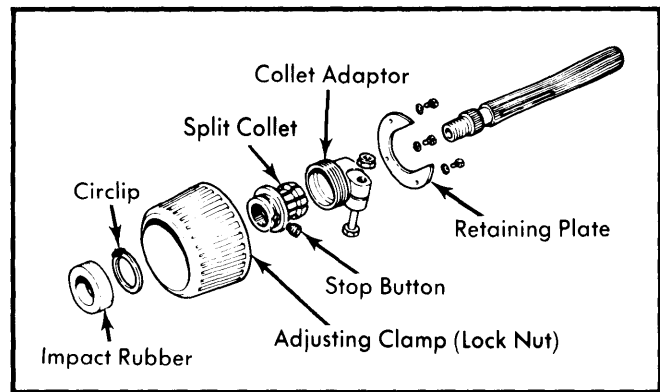
**Fig. 1** Disconnecting Lower Steering Column from Pinion Shaft

**Installation** — Reverse removal procedure and note: Make sure steering wheel is in center position before installing lower column. Also, Do not use excessive force to fit lower column to upper column; nylon shear plug may be damaged.

### STEERING COLUMN ADJUSTING CLAMP

**Removal** — Remove steering wheel. Pull impact rubber from steering wheel shaft. Unscrew three small cheese-head screws from beneath adjusting clamp (lock nut) and withdraw retaining plate. Unscrew collet adaptor completely and remove from shaft. Remove circlip from within upper side of adjuster. Withdraw adjuster (lock nut) collecting stop button. Slide split collet off shaft.

**Installation** — Clean parts thoroughly and remove any burrs with a file. Lightly lubricate all enclosed metal components. Install by reversing removal procedure.



**Fig. 2** Exploded View of Steering Column Adjusting Clamp

### STEERING COLUMN LOWER SEAL

**Removal, Except XJS** — Remove upper steering column, as previously outlined. Loosen hose clip attaching upper sealing sleeve to lower column; remove clip and sleeve. Remove 3 screws securing seal retainer to instrument panel. Slide seal, retainer, and sealing sleeve up and off lower column.

**Installation** — Fit assembly of sealing sleeve, seal, and retainer over end of lower column carefully. Insert and tighten three retaining set screws. Carefully slide second sealing sleeve, flanged end first, over lower column as far as first sealing sleeve; position hose clip, but do not tighten. Move second sealing sleeve approximately  $\frac{1}{4}$ " (6 mm) toward dash, to preload it against first sealing sleeve. Secure this position with hose clip. Replace upper column assembly.

## OVERHAUL

### UPPER & LOWER STEERING COLUMNS

**NOTE** — No repairs, adjustments, or overhaul procedures are given by the manufacturer. If damage is evident or suspected, replacement of assemblies is necessary.