

## ARROW, CHALLENGER, COLT, SAPPORO

**Arrow**  
**Challenger**  
**Colt**  
**Sapporo**

### DESCRIPTION

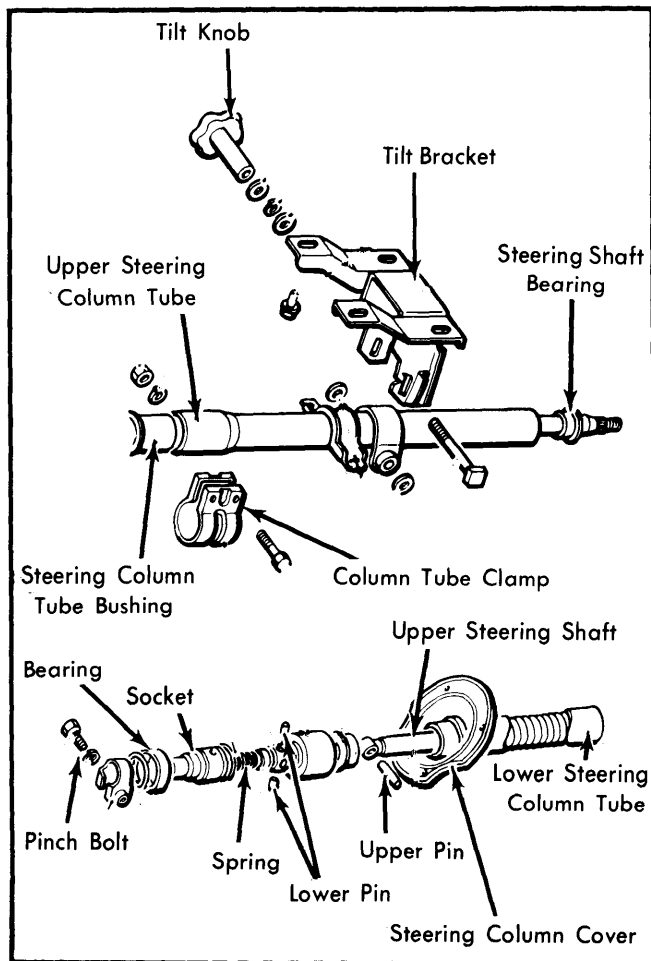
Collapsible steering system is comprised of a two-piece (upper and lower) column shaft, joined by a collapsible section. This section contracts axially under impact without affecting turning motion. Upper column cover incorporates slits, allowing it to collapse under impact.

### REMOVAL & INSTALLATION

#### STEERING COLUMN

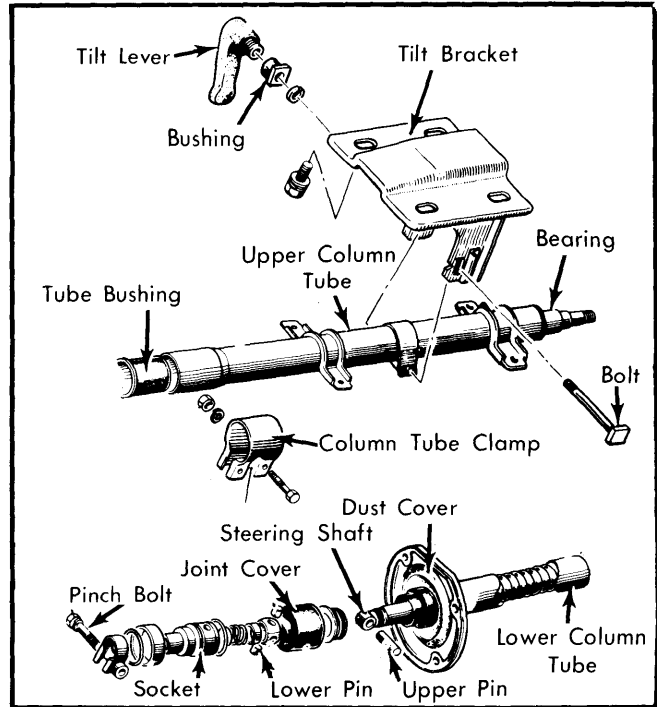
**NOTE**— During any service operations of collapsible columns or components avoid jarring or leaning on any portion of column.

**Removal** — 1) Remove air cleaner and unbolt clamp connecting shaft to gear box. If vehicle is equipped with air conditioning, perform this step from underneath vehicle. Remove horn pad, steering wheel nut, and pull steering wheel off. Loosen tilt lock lever or knob and lower wheel. Remove column cover and floor dust cover.



**Fig. 1 Exploded View of Steering Column Arrow & Colt (Except Station Wagon)**

2) Unplug column switch connectors and pull out switch. Remove tilt bracket bolts and remove column as an assembly. On Colt Station Wagon, Challenger and Sapporo models, remove rubber stopper from tilt bracket and unscrew lock lever and bushing from bolt. Pull out bolt to remove tilt bracket.



**Fig. 2 Exploded View of Steering Column Challenger, Sapporo & Colt Station Wagon**

**Disassembly** — 1) Pull the lower shaft bushing out of column and remove shaft. Remove cover from the steering shaft joint socket; remove stopper and joint pin retainer. With steering shaft held upright, press down on shaft and remove joint retaining pin with a magnet. Do not drive pin out. Remove joint socket.

2) Loosen column tube clamp, draw out column tube, and remove the column bushing. When removing the tilt bracket, cut a slot in head of retaining studs, then unscrew studs, and remove steering lock. Lightly tap the tilt bracket with a wooden hammer to drive the bracket assembly from the upper end of column tube.

**Inspection and Replacement** — Make following checks before beginning reassembly of components:

1) Check clearance between upper coupling joint pin and bearing. Also, check clearance between upper coupling joint pin and socket. Clearance should be .0006-.002" (.016-.056 mm) for both measurements.

2) Check interference fit between lower coupling joint pin and shaft. Fit should be .0001-.0013" (.003-.034 mm). Check free play of lower joint pin and bearing. Free play should be .0006-.002" (.016-.056 mm).

3) Check steering shaft bend. Distortion must not exceed .020" (.5 mm).

# Steering Columns

## ARROW, CHALLENGER, COLT, SAPPORO (Cont.)

4) Hold lower end of steering shaft and move upper shaft. Note any excessive movement. Replace components as necessary.

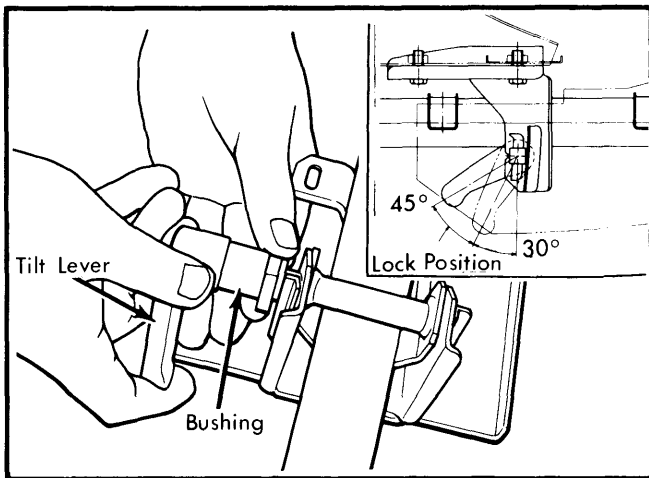
5) Check column tube bushing stop. Replace bushing if wear is excessive.

6) Inspect upper and lower steering column bearings. Replace if excessively worn. Clearance between shaft and bearings is .0001-.0045" (.003-.115 mm).

7) Check tilt bracket. Slots give and break through when driver impact hits steering wheel. Make sure slots are not damaged.

**Reassembly** — 1) Install bearing on steering shaft lower end with flange facing upward, then insert pin. Make sure pin does not interfere with bearing operation.

2) Grease socket, dust cover and seat. Insert spring seat and spring into socket. Place steering shaft vertically and hold other portion of steering shaft down, fit lock pin. Make sure shaft and socket rotate freely.



**Fig. 3 Tilt Lever Installation**  
Challenger, Sapporo & Colt Station Wagon

3) Fit spacer on shaft and install in steering column. Wipe grease off lower bearing retainer and inside of column. Apply a thin coat of adhesive to end of column.

4) On Arrow and Colt models (except station wagon), place tilt bracket on column, insert spacers, bolt, washers and tilt knob.

5) On Challenger, Sapporo, and Colt wagon, align tilt bracket with column tube and insert bolt. Tighten bushing on tilt lever until it stops, then back off 1/2 turn. Install tilt lever on bolt and adjust bushing until tilt lever locks column without hitting bracket. See Fig. 3.

6) Install shaft assembly in car. Fit column tube bushings onto upper and lower column tubes until stop touches column tube end. Tighten clamp bolt. Align column tube hole with steering wheel lock guide dowel. Insert ignition key and check operation. Tighten bolts after installing tilt bracket.

**Installation** — 1) Be sure shaft can easily be turned within the column, insert column assembly, and position against instrument panel. Connect shaft to steering gear housing mainshaft with clamp bolt head upward. Position tilt bracket so upper end of steering shaft to upper column end measurement is 3.60-3.64" (91.5-92.5 mm). Tighten tilt bracket bolts and install dust cover, applying sealant to the bolt.

2) Install column switch, routing harness along center of column tube, then replace cover. With front wheels in straight ahead position, install steering wheel. On Challenger, Sapporo, and Colt wagon, fit the three cancel pins on the column switch into the bottom of the steering wheel with a screwdriver. Tighten retaining nut to specification and make sure free play at wheel rim does not exceed .04" (1.0 mm).

### TIGHTENING SPECIFICATIONS

Application	Ft. Lbs. (mkg)
Column Tube Clamp .....	4-6 (.55-.83)
Steering Shaft Clamp .....	15-18 (2.0-2.5)
Steering Wheel Nut .....	25-33 (3.5-4.6)
Steering Wheel Lock .....	①5 (.70)

① Minimum.