

Movable Steering Columns

CHRYSLER CORP. TILT-WHEEL & TILT-A-SCOPE

DESCRIPTION

Tilt-Wheel option allows steering wheel to be tilted to a comfortable angle and locked into position. This option is available on all models except Chrysler. Tilt-A-Scope is available on Chrysler only and allows the steering wheel to be depressed or extended as well as tilted.

CAUTION — Components and fasteners used in steering column design are important in that they can affect vehicle safety and the performance of vital systems if not serviced properly. All replacement parts must be of equal part number or equivalent quality. DO NOT use a part of lesser quality or substitute design.

REMOVAL & INSTALLATION

The removal and installation of the Tilt-Wheel and Tilt-A-Scope steering columns are the same procedure as used to remove and install the Collapsible Steering Column. See *Chrysler Corp. Collapsible Steering Column* in this section.

DISASSEMBLY

STEERING COLUMN

NOTE — On models equipped with floorshift, service procedures are basically the same, except as follows: After support is removed from jacket it will be seen that there is no shift tube. The lower bearing is pressed into lower end of jacket. The lock inhibitor system can be lifted from top end of jacket.

1) On all models except Fury, Monaco, Cordoba and Charger, remove four bolts attaching bracket assembly to column jacket. On all models, remove wiring protector from column jacket. Attach suitable column holding fixture (C-4132 or equivalent) to jacket and mount in vise. Remove double coupling assembly from lower end of steering shaft. Remove tilt lever and turn signal lever or speed control lever. Push hazard warning knob in and unscrew to remove. Remove ignition key light assembly.

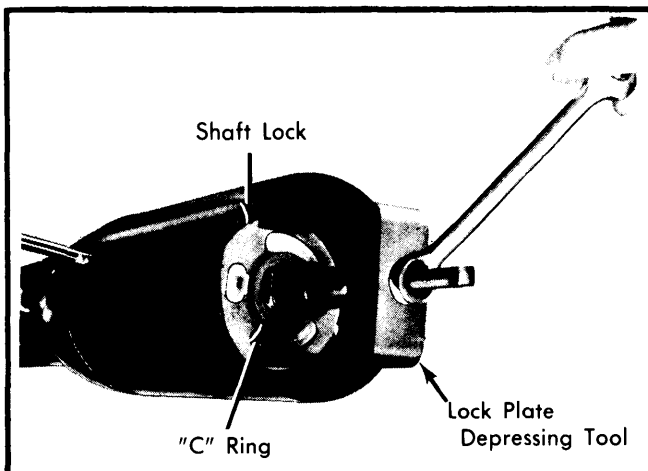


Fig. 1 Removing or Installing Lock Plate "C" Ring (Tilt-A-Scope Columns Only)

2) To remove column mounted shift indicator, move tilt mechanism to full down tilt. Remove spring clip from rear of housing and remove indicator housing. Withdraw pointer from shift housing. With Tilt-Wheel only, carefully remove plastic cover, depress lock plate with finger and pry retaining ring out of groove with screw driver. Remove lock plate, cancelling cam and upper bearing spring.

3) With Tilt-A-Scope only, carefully remove plastic retainer with screwdriver and fully compress telescoping shaft, then withdraw about $\frac{1}{8}$ ". Place suitable tool (C-4118) over end of shaft and lock telescoping shaft by screwing center bolt of tool into shaft. Depress lock plate and carrier far enough to remove retaining ring by tightening tool nut. Remove tool, lock plate, carrier and spring.

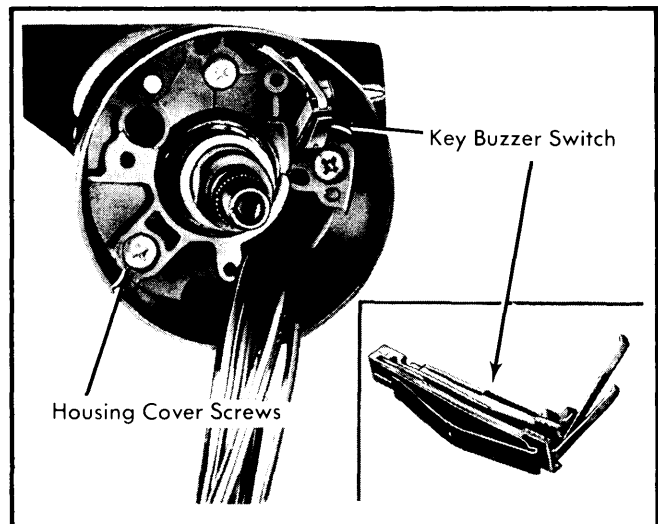


Fig. 2 Key Buzzer Switch

4) Remove three turn signal switch screws, place shift bowl in low (1) position. Wrap tape around connector and wires and remove switch and wiring. If removing lock cylinder, place in "LOCK" position. Insert a thin tool into slot next to switch mounting screw boss (right hand slot) and depress spring latch at bottom of slot to remove lock. To remove buzzer switch, bend a stiff piece of wire into a hook and insert tool into exposed loop of wedge spring. A straight pull on wire will remove both spring and switch. **CAUTION** — If lock cylinder is not removed before switch, it must be in "ON" position. Also, if wedge spring is dropped on removal, it could fall into column, requiring complete disassembly to retrieve spring.

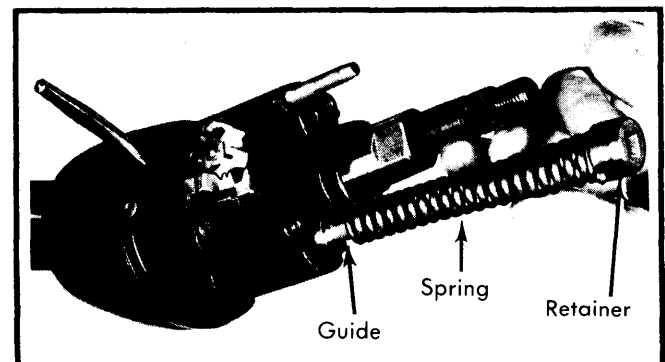


Fig. 3 Tilt Spring, Retainer and Guide

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5) Remove housing cover. Reinstall tilt release lever and plate column in full "UP" position. Remove tilt spring retainer using a large Phillips screwdriver. Insert screwdriver in opening, press in about $\frac{3}{16}$ " and turn about $\frac{1}{8}$ turn counterclockwise until ears align with grooves in housing and remove spring and guide. Push upper steering shaft in sufficiently to remove steering shaft inner race seat and inner race. With ignition switch in "ACCESSORY" position, remove ignition switch.

6) Place suitable pivot pin remover (C-4016) over pivot pin and thread small portion of screw firmly into pin. Hold screw from turning with one wrench, turn nut clockwise with second wrench to remove pivot pin from support. Remove other pivot pin. Use tilt release lever to disengage lock shoes. Remove bearing housing assembly by pulling upward to extend rack full down and, moving housing assembly to the left, disengage rack from actuator. Remove activator assembly.

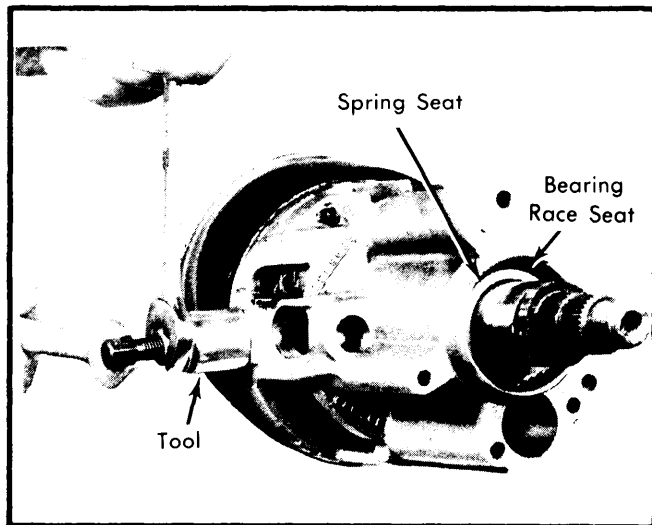


Fig. 5 Removing Pivot Pin

7) Remove roll pin and coupling assembly from lower end of steering shaft. Remove shaft assembly from upper end of column. Disassemble steering shaft assembly by removing centering spheres and anti-lash spring. On Tilt-A-Scope columns only, disassemble upper steering shaft, locking wedge, and locking rod from upper yoke.

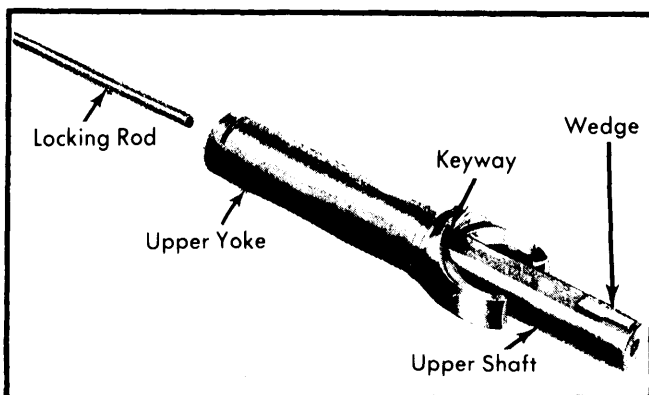


Fig. 6 Upper Shaft & Yoke

8) Remove bolts securing support to lock plate and remove support from end of column jacket. If necessary, remove attaching screws and shift gate from support. Remove shift tube retaining ring and thrust washer. To remove the shift tube from Tilt-A-Scope columns only, the two metal rivets holding the gearshift pointer bracket to the shift tube must be drilled out. Plastic repair rivets will be required for reassembly.

9) Using a small screwdriver, carefully disengage plastic shift tube support from lower end of jacket. Remove shift tube from bowl using suitable tool (C-4120). Insert bushing on end of tool in shift tube and force tube out of bowl.

CAUTION — Do not hammer or pull on lower or upper shift tube as plastic joint may be sheared.

10) Remove shift tube from jacket at lower end. Remove lock plate by sliding out of jacket notches and tipping down toward hub at 12 o'clock position and under jacket opening. Remove wave washer, remove bowl from jacket. Remove shift lever spring from bowl by winding spring up with pliers and pulling out.

BEARING HOUSING

Disassembly — 1) Remove tilt lever opening shield and remove turn signal lever opening shield from housing. Remove lock bolt spring by removing spring retaining screw and moving spring clockwise. Remove snap ring from sector drive shaft. Use a small punch to tap drive shaft from sector. Remove drive shaft, sector and bolt. Remove rack and rack spring. Also remove shim if one is used.

2) Remove tilt release lever pin with a punch. Remove lever and release lever spring (to relieve load on release lever, hold shoes inward and wedge block between top of shoes and bearing housing). Remove lock shoe pin, remove lock shoes and springs (with tilt lever opening on left side, shoes facing up, the four-slot shoe is on the left). Remove bearings from housing only if they are to be replaced. Remove separator and balls from bearing. With a pointed punch against back surface of race, carefully hammer race from housing until bearing puller can be used. Repeat for other race. Do not re-use bearings.

Reassembly — 1) Install bearings in housing if removed. Install lock shoe springs, lock shoes and shoe pin (use a rod about .180" diameter to line up shoes). Install spring, release lever and pin. Relieve load on release lever as outlined in disassembly.

NOTE — With tilt lever opening on left side, shoes facing up, the four slot shoe is on the left.

2) Install drive shaft. Tap sector on shaft far enough to install snap ring. Install lock bolt and engage with sector cam surface. Install rack and spring. Block tooth on rack must engage block tooth on sector. Install external tilt release lever. Install bolt spring and retaining screw, tighten screw as required.

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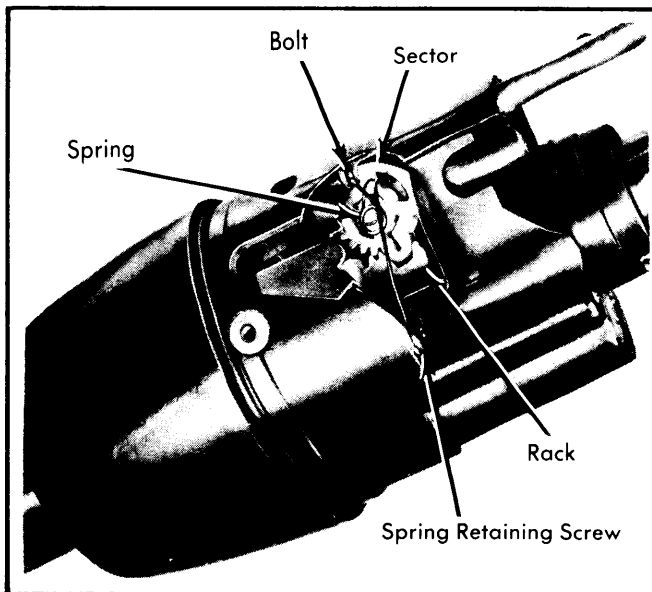


Fig. 7 Sector & Bolt Spring

REASSEMBLY

STEERING COLUMN

1) Install shift lever spring in bowl by winding up with pliers and pushing in. Slide bowl into jacket. Install wave washer and lock plate. Work lock plate into notches in jacket by tipping lock plate toward bowl hub at 12 o'clock position and under jacket opening. Slide lock plate into notches in jacket. Carefully install shift tube in lower end of jacket. Align key in tube with keyway in bowl and use suitable tool (C-4119) to pull tube into bowl. **CAUTION**— Do not push or tap on end of tube. Install thrust washer and retaining ring by pulling bowl up to compress wave washer.

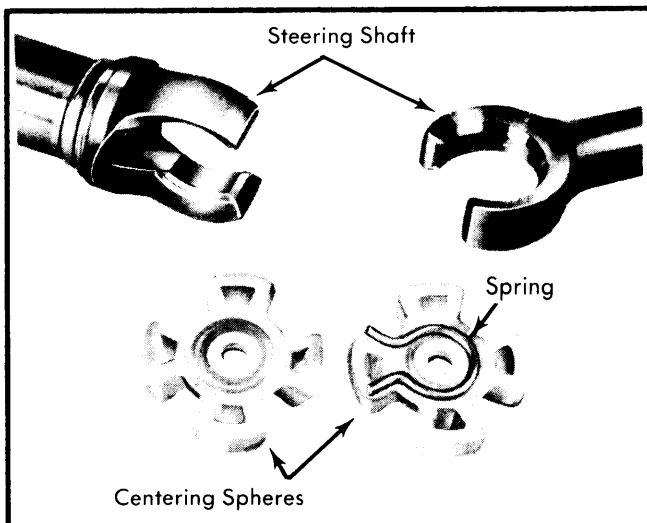


Fig. 8 Shaft Centering Spheres

2) Install support by aligning "V" in support with notch in jacket. Install retaining screws. Install lower bearing, if removed, in lower end of shift tube. Locate about $\frac{3}{16}$ " inside tube (use suitable lubricant to ease installation). On Tilt-A-Scope columns only, install upper steering shaft, locking wedge, and locking rod in yoke. See Fig. 6. On all columns, install centering spheres and anti-lash spring in upper steering shaft. Install lower steering shaft from same side of spheres that spring ends protrude.

3) Make a trial installation of double coupling assembly to assure that master serration of upper shaft and pot coupling will align. With housing in full "up" position, install guide, tilt spring and tilt spring retainer using screw driver in retainer slot. Turn retainer clockwise to engage. Install steering shaft assembly in shift tube from upper end. Install ignition switch actuator rod through bowl from bottom and insert in slot in support. Extend rack downward from bearing housing. Assemble bearing housing over steering shaft and engage rack over end of actuator rod.

4) Install external tilt release lever and, holding lock shoes in disengaged position, assemble bearing housing over steering shaft until pivot pin holes line up. Install pivot pins. Place housing in full "UP" position, install guide after making sure there is grease between guide and peg on support, tilt spring and spring retainer. Install bearing inner race and seat and install tilt lever opening shield. Remove tilt release lever, install housing cover and screws.

5) Assemble buzzer switch to spring clip with formed end of clip under end of switch and spring bowed away from switch on side opposite contact. Push switch and spring into hole in cover to step with contacts toward lock cylinder bore. Install signal switch wires and connector through cover, bearing housing and bowl. Push hazard warning plunger in, install switch and screws. Install hazard warning knob and pull knob out. Install canceling cam spring, cam and shift lock plate. On Tilt-Wheel columns only, depress shift lock plate using suitable tool (C-4156) and install new retaining ring.

6) On Tilt-A-Scope columns only, fully compress telescoping shaft, then withdraw about $\frac{1}{8}$ ". Place suitable tool (C-4118) over end of shaft and lock telescoping shaft by screwing in center bolt of tool into shaft. Depress lockplate and carrier ring by tightening tool running nut and install "C" ring. On all columns, install tilt release lever, turn signal lever and speed control lever (if equipped). To install ignition lock, turn key to "LOCK" position and remove key. Insert cylinder into housing far enough to contact switch actuator. Press inward and move switch actuator rod to align parts. When parts align, cylinder will snap into place, locking cylinder in housing.

7) When replacing ignition switch, position key cylinder in "ACCESSORY" detent, then place switch in "ACCESSORY" as follows: Spring loaded position at one end is "START". Move slider to extreme other end, this is "ACCESSORY". Fit actuator rod into slider hole and assemble loosely to column. Push switch lightly down column to remove lash in actuator rod, tighten mounting screws. Caution should be exercised to prevent moving switch out of detent.

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8) Install wire protector on column jacket using care not to pinch any wires. To install shift indicator, move tilt mechanism to full down tilt and insert pointer into position. Place indicator housing and lens assembly into position. Insert notch on pointer into its slot in back of indicator and install spring clip. Install bracket assembly (if equipped), align master splines and install coupling assembly on steering shaft. Drive in retaining roll pin.

NOTE — *Tilt-A-Scope requires pointer bracket replacement using plastic rivets.*

TIGHTENING SPECIFICATIONS

Application	INCH Lbs.
Sector & Lock Bolt Retaining Spring Screw	35
Lock Plate Screws	60
Housing Cover Screws	100
Signal Switch Screws	25
Lock Cylinder Screws	35
Column Bracket Screws	120
Column Clamp Stud	20
Column Clamp Nut	110
Flexible Coupling Bolts	200
Support Plate Bolts	200
Steering Wheel Nut	60 Ft. Lbs.