STEERING COLUMN

1988 Chrysler LeBaron Convert/Coupe

1988 STEERING
Chrysler Motors Steering Columns - Saginaw

Chrysler; New Yorker, LeBaron
Dodge; Aries, 600, Daytona, Dynasty, Lancer, Shadow
Plymouth; Caravelle, Reliant, Sundance

DESCRIPTION

Steering columns are either floor shift or column shift. Construction and maintenance of both columns is the same except for addition of shift lever, tube and related components on column shift models. Column shift and floor shift steering columns are each available in 3 configurations: fixed column, tilt column and tilt/telescopic column.

Steering column design is basically the same for all columns with the main differences involving the addition of column shifters and tilt or tilt/telescopic mechanisms. Steering columns use an integral ignition lock switch. This lock secures the steering wheel and shift linkage (column shift).

Columns have a 2-piece telescoping gear shift tube (column shift), interconnected by plastic inserts and shear pins, and a 2-piece telescoping steering shaft with upper and lower sections connected by plastic collars and pins.

CAUTION: Columns must be handled with care to avoid stresses. Use only fasteners of the same or equivalent part number if replacement is necessary. Improper fasteners or tightening could result in failure.

TROUBLE SHOOTING

Refer to TROUBLE SHOOTING - BASIC PROCEDURES article in the GENERAL TROUBLE SHOOTING section.

REMOVAL & INSTALLATION

STEERING COLUMN

CAUTION: Applying excessive pressure, or causing impact to mainshaft during service, may cause the column to collapse.

Removal

1) Disconnect battery ground cable. On column shift models, disconnect cable rod by prying rod out of grommet in shift lever. DO NOT remove roll pin.

2) If vehicle is equipped with speed control and manual transmission, use care not to damage clutch pedal speed control switch.

3) Disconnect bezel. Remove indicator set screw and gearshift indicator pointer from shift housing. Unplug electrical connectors at steering column.

4) Using Puller (C-3428B), remove steering wheel. Remove instrument panel steering column cover and lower reinforcement. Remove steering column retaining nuts.

5) Pull column assembly rearward, disconnecting lower stub shaft from steering gear coupling. Remove steering column toward passenger compartment.

Installation

To install, reverse removal procedure. Check for proper operation.

OVERHAUL

STEERING COLUMN

Preparation

Steering column removal is not necessary if the lock plate cover, lockplate, steering shaft snap ring, canceling cam, turn signal switch, upper bearing preload spring or lock cylinder is to be serviced. For the remaining components, steering column must be removed. Disassembly procedure for the tilt/telescopic steering column is similar to the tilt steering column.

Disassembly (Non-Tilt Steering Column)

1) Disconnect battery ground cable. Remove steering column. Remove horn pad, steering wheel and combination switch. See STEERING COLUMN SWITCHES article in the STEERING section.

2) Remove lock plate cover. Remove lock plate snap ring using Spring Compressor (J-23653). See Fig. 1. Remove lock plate, horn cam and spring.

3) Remove combination switch. Remove key buzzer switch. Remove ignition lock retaining screw. Remove ignition lock. Remove housing assembly.

4) Remove ignition switch and dimmer switch. Remove steering shaft retaining ring. Remove steering shaft through lower end of column.

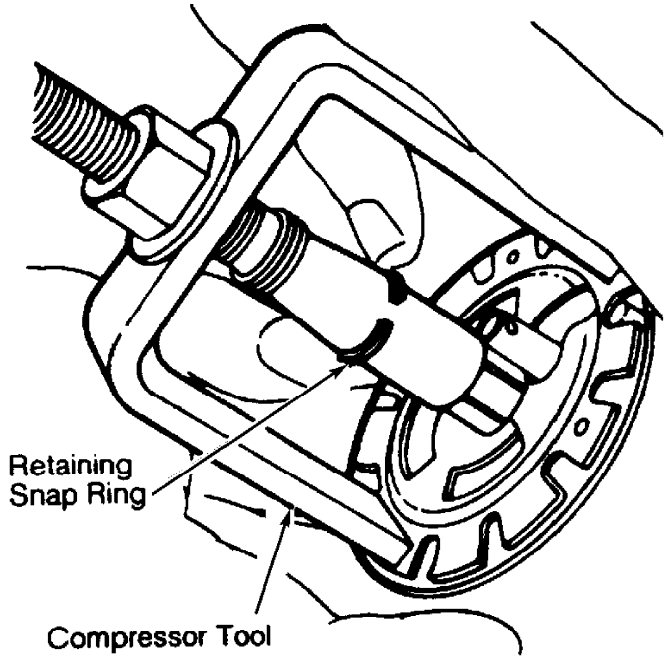


Fig. 1: Removing Retainer Snap Ring

Disassembly (Tilt Steering Column)

1) Disconnect battery ground cable. Remove steering column from vehicle. See STEERING COLUMN SWITCHES in the STEERING section.

Remove tilt lever.

2) Remove hazard warning knob and ignition key light. Remove wiper switch knob. Remove wiper switch tube mounting screws. Remove wiper switch tube. Rotate shaft fully clockwise.

3) Remove shaft by pulling straight out on shaft. Carefully remove plastic cover from lock plate. Using Compressor (C-4156 for Chrysler Motors or J-23653 for General Motors), remove lock plate retaining ring from shaft. See Fig. 1.

4) Remove lock plate, canceling cam and upper bearing spring. Remove turn signal switch and actuator arm. Place ignition lock cylinder in "LOCK" position.

5) Using a thin screwdriver, depress ignition lock cylinder tab retainer. See Fig. 2. Remove ignition lock cylinder. Remove housing cover from column.

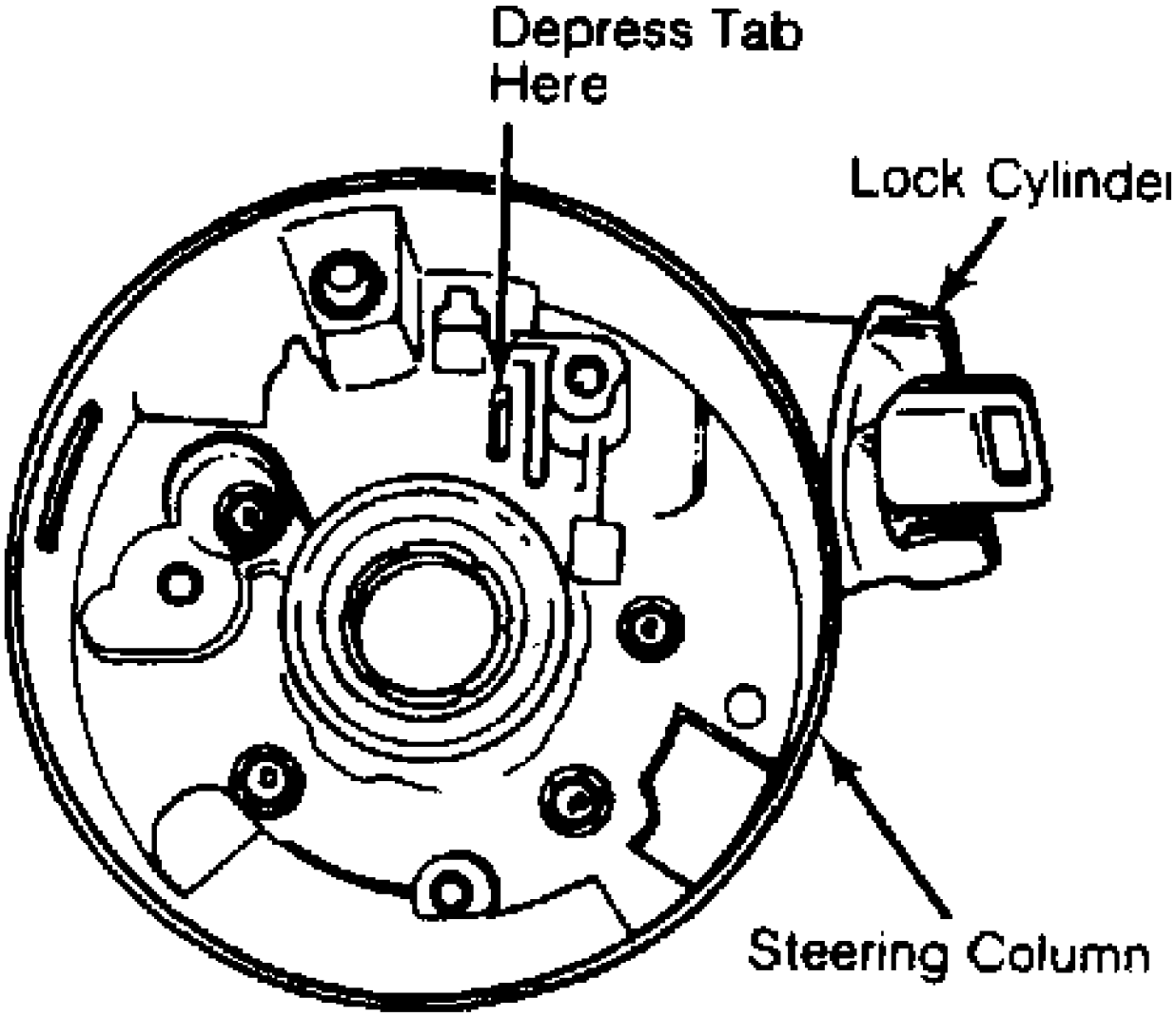


Fig. 2: Removing Lock Cylinder

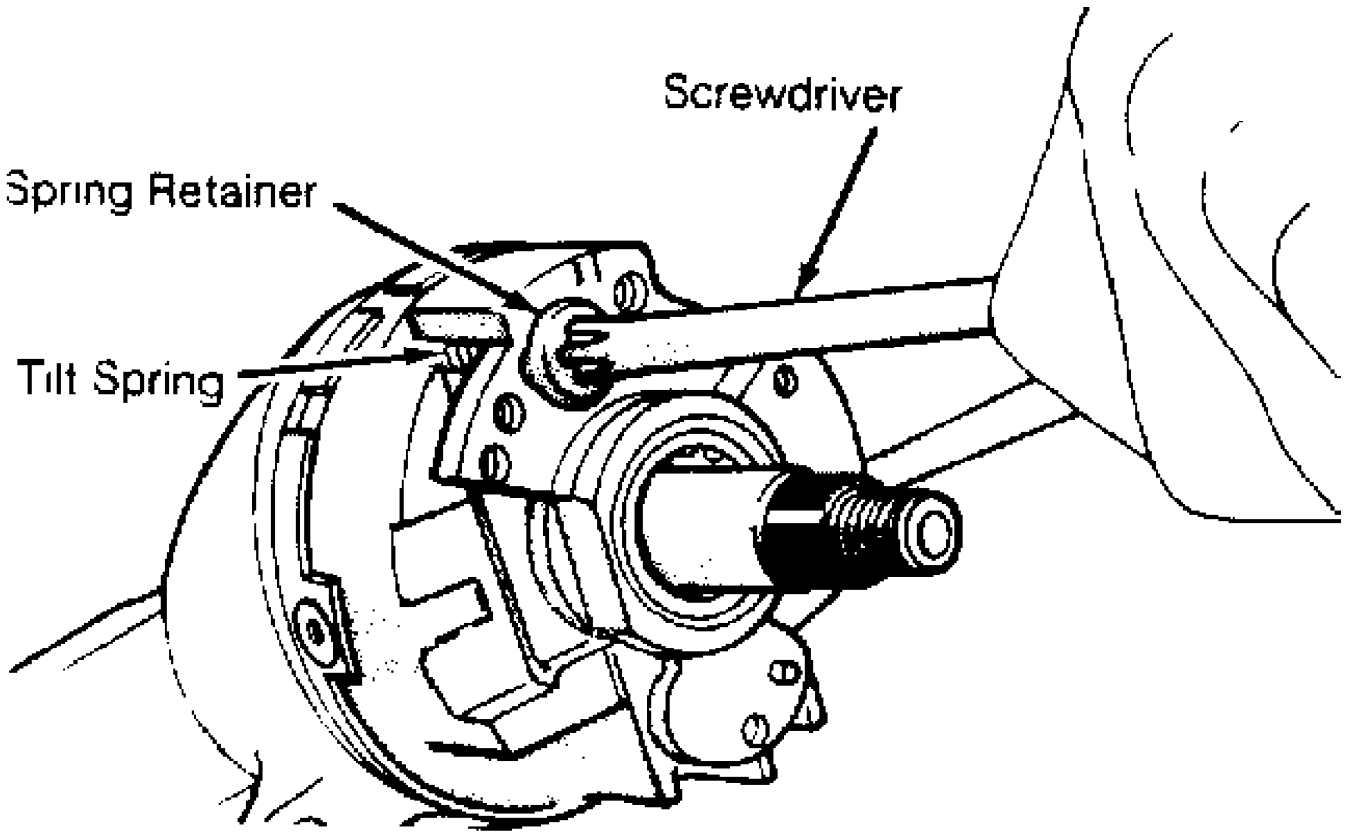


Fig. 3: Removing Tilt Spring

6) Place column in fully up position. Remove tilt spring retainer and spring. See Fig. 3. Remove dimmer switch. Remove steering shaft inner race seat and race. Remove ignition switch and back-up light switch.

7) Using Pivot Pin Remover (C-4016) remove pivot pins. See Fig. 4. Pull tilt lever to unlock shoes. Remove housing. Remove actuator rods.

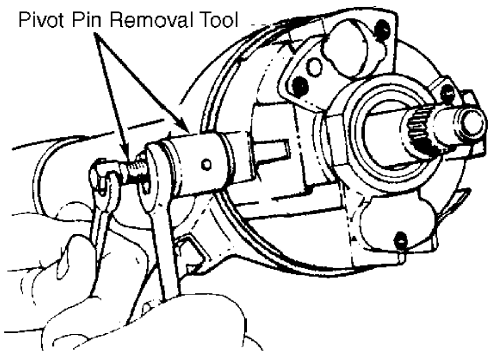


Fig. 4: Removing Pivot Pin

8) Remove lower coupling roll pin. Remove steering shaft assembly from upper end. Remove support from lock plate. Remove shift tube retaining ring.

9) Remove thrust washer. Using screwdriver, disengage plastic shift tube from lower end of jacket. Using Puller (C-4120), pull shift tube from bowl.

10) Inserting bushing on end of tool in shift tube, force bowl from shift tube. Remove shift tube through lower end. Remove jacket mounting plate and wave washer. Remove bowl from jacket.

Inspection

1) Check for separation of the 2 break-away capsules. If capsules have moved more than 1/16" (1.6 mm), some column collapse may have occurred. Check for damaged steering shaft components.

2) Inspect jacket section of column for looseness, bends, collapsed mesh or bellows section.

3) On column shift models, check operation of shift lever. If lever can be moved to "PARK" position without raising lever, upper shift tube plastic bearing is broken.

4) Inspect intermediate and steering column shafts for sheared plastic pins. If the shafts rattle when tapped lightly from side pins are sheared. Replace any collapsed or damaged parts.

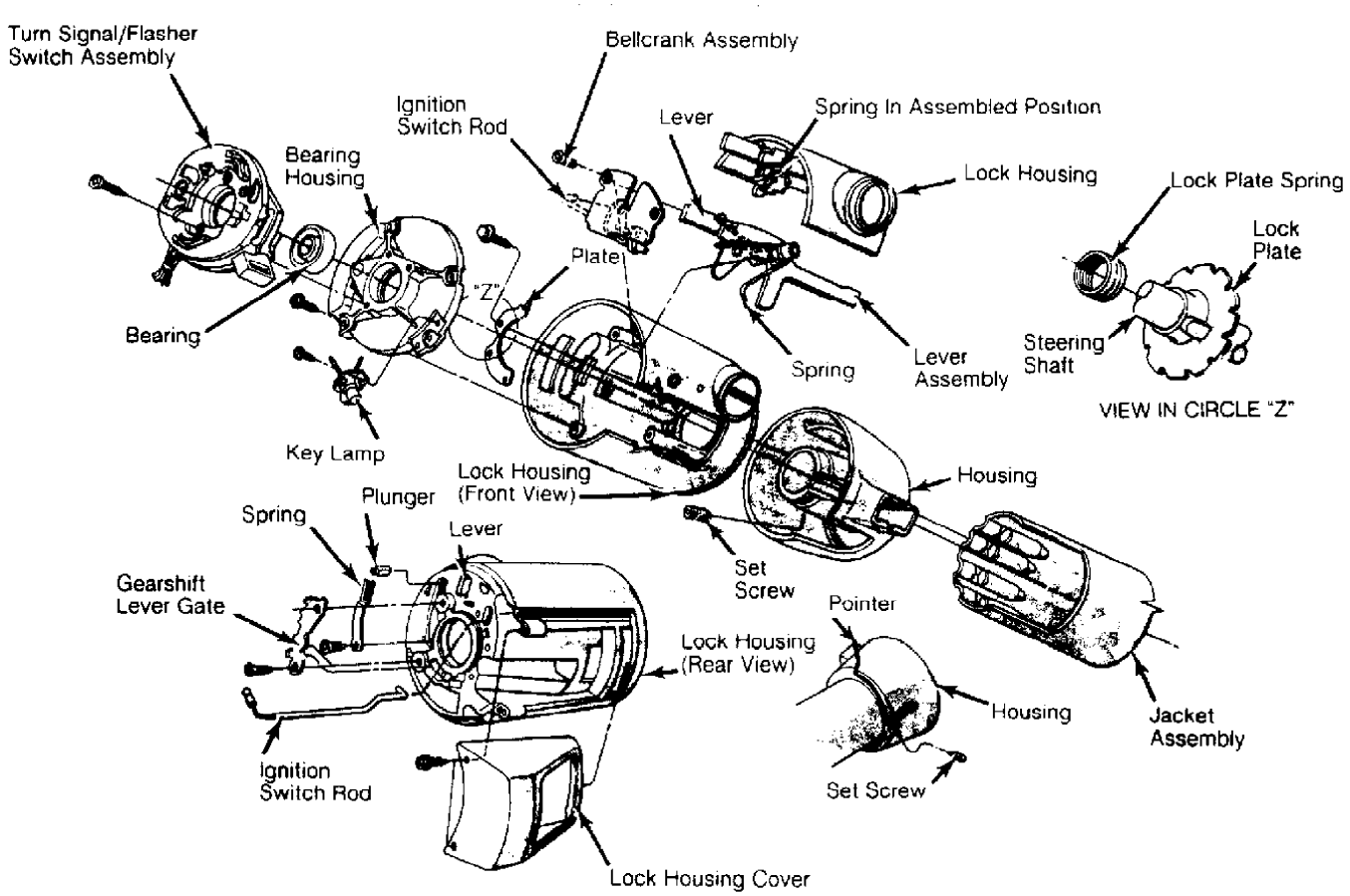


Fig. 5: Exploded View of Column Shift Steering Column Housing

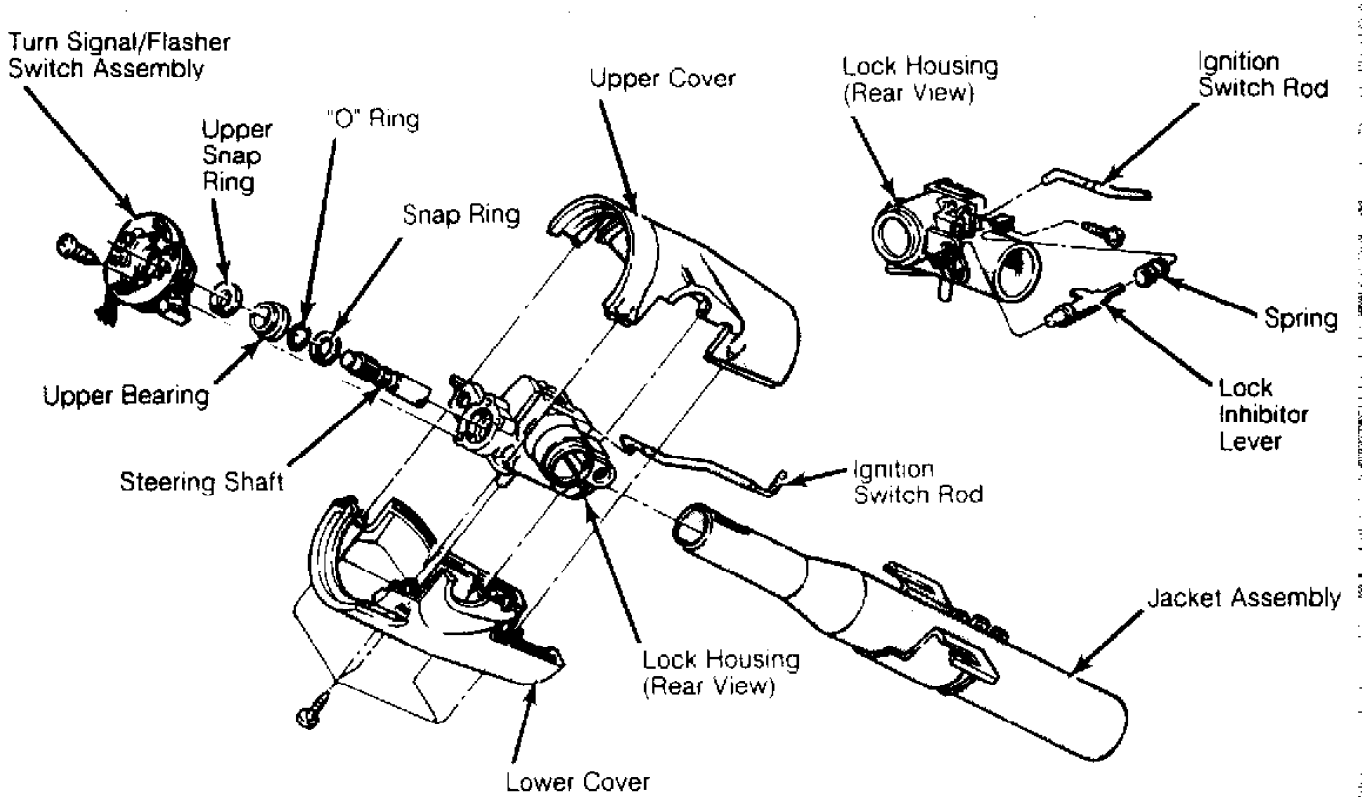
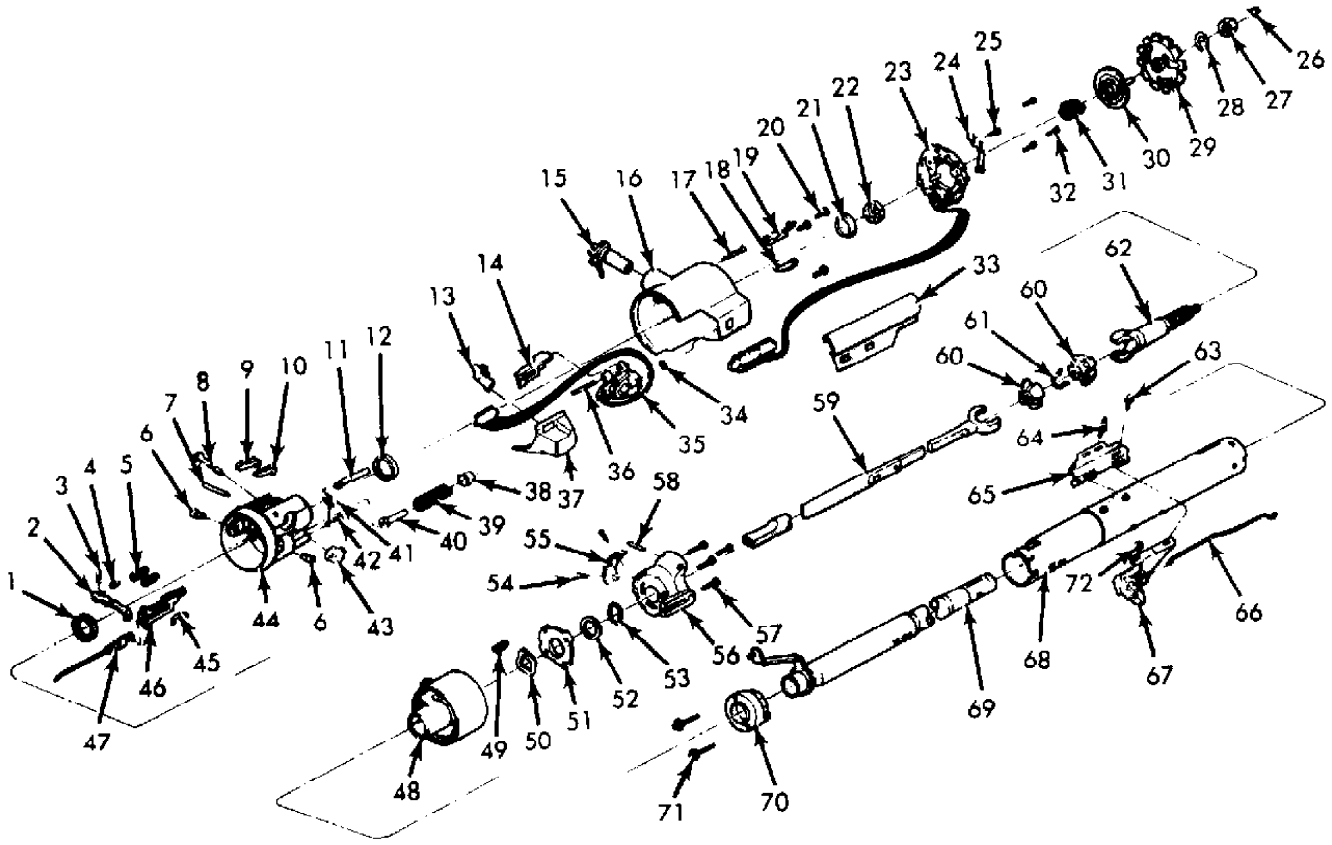


Fig. 6: Exploded View of Floor Shift Steering Column Assembly



1. Bearing Assembly
2. Shoe Release Lever
3. Release Lever Pin
4. Release Lever Spring
5. Shoe Spring
6. Pivot Pin
7. Dowel Pin
8. Drive Shaft
9. Steering Lock Shoe
10. Steering Lock Shoe
11. Lock Bolt
12. Bearing Assembly
13. Tilt Lever Opening Shield
14. Dimmer Switch Actuating Rod
15. Lock Cylinder Set
16. Lock Housing Cover
17. Lock Retaining Screw
18. Buzzer Switch Retaining Clip
19. Buzzer Switch
20. Screw
21. Inner Race
22. Upper Bearing Inner Race Seat
23. Turn Signal/Flasher Switch
24. Turn Signal Arm
25. Screw
26. Retainer
27. Lock Nut
28. Retaining Ring
29. Lock Plate
30. Turn Signal Cancelling Cam
31. Upper Bearing Spring
32. Screw
33. Wiring Protective Cover
34. Pin Preload Spring
35. Ignition Switch Pivot Assembly
36. Ignition Switch Actuator Rod
37. Column Housing Cover End
38. Spring Retainer
39. Wheel Tilt Spring
40. Spring Guide
41. Lock Bolt Spring
42. Screw
43. Switch Actuator Sector
44. Steering Column Housing
45. Rack Preload Spring
46. Ignition Switch Actuator Rack
47. Ignition Switch Actuator
48. Gearshift Lever Bowl
49. Shift Lever Spring
50. Wave Washer
51. Jacket Mounting Plate
52. Thrust Washer
53. Shift Tube Retaining Ring
54. Screw
55. Shift Lever Gate
56. Steering Column Housing Support
57. Support Screw
58. Dowel Pin
59. Lower Steering Shaft Assembly
60. Centering Sphere
61. Joint Preload Spring
62. Race & Upper Shaft Assembly
63. Screw
64. Ignition Switch Mounting Stud
65. Ignition Switch Assembly
66. Dimmer Switch Rod
67. Dimmer Switch Assembly
68. Steering Column Jacket
69. Shift Tube Assembly
70. Adapter & Bearing Assembly
71. Screw
72. Nut

Fig. 7: Exploded View of Tilt Steering Column Assembly

Reassembly

1) Install key release lever and spring into shroud. Install retainer plate. Using an arbor press, install bearings into housing (if removed). Using a .180" (4.5 mm) pin to align shoes, install lock shoe springs, lock shoes and shoe pin into housing. Relieve tension on release lever.

2) Install spring, release lever, and pin into bearing housing. Install drive shaft into housing. Lightly tap sector onto shaft, far enough to bottom on drive shaft. Install lock bolt.

3) Engage lock bolt with sector cam surface. Install rack and spring. Block tooth on rack should engage block tooth on sector. Install tilt release lever. Install lock bolt spring, and spring retaining screw. Tighten screw to 35 INCH lbs. (4 N.m).

4) Install shift lever spring in bowl by winding up with pliers and pushing in. Slide bowl onto jacket. Position wave washer and mounting plate in place.

5) Work jacket mounting plate into notches in jacket by tipping jacket mounting plate toward bowl hub at 12 o'clock position and under jacket opening. Slide jacket mounting plate into notches in jacket.

6) Install shift tube into lower end of jacket. Align key in tube with keyway in bowl. Using Installer (C-4119), pull shift tube into bowl. See Fig. 8. DO NOT tap on end of shift tube.

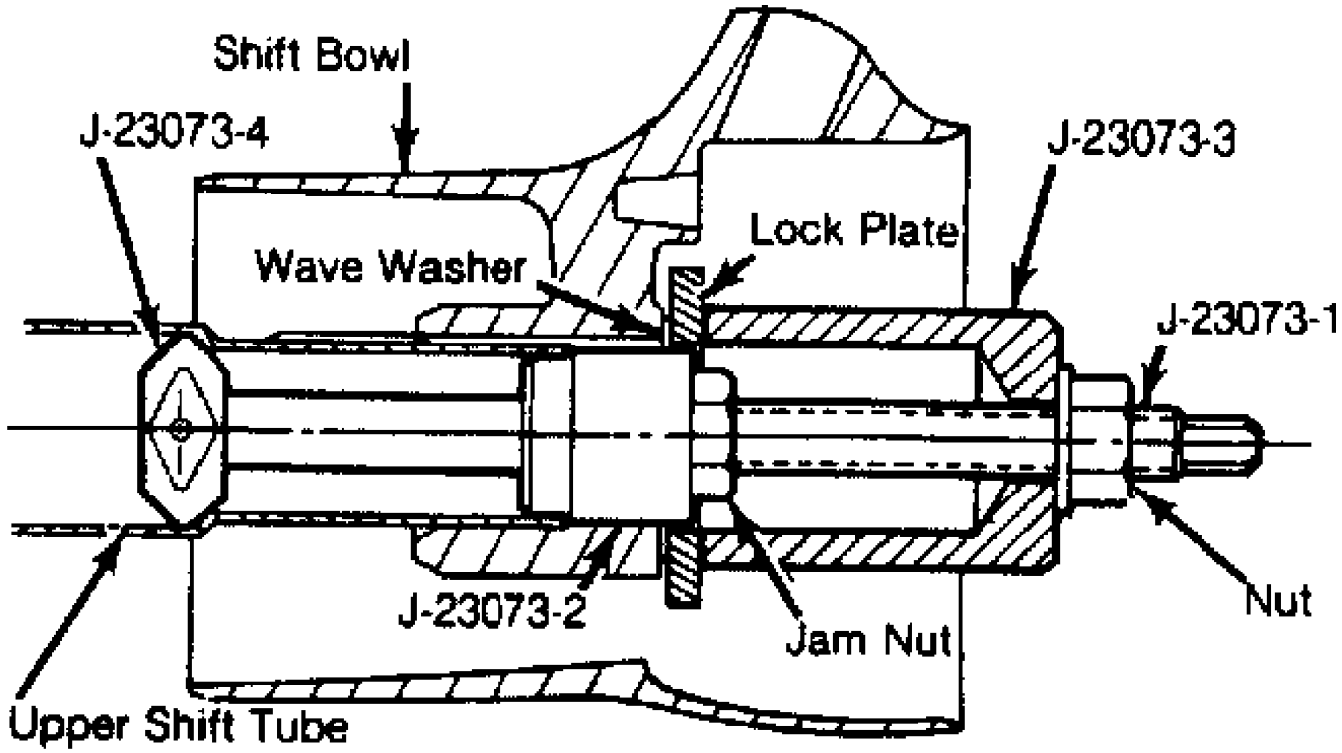


Fig. 8: Installing Shift Tube

7) Pulling up bowl to compress wave washer, install thrust washer and retaining ring. Slide dimmer switch actuator rod through hole in support. Aligning "U" in support with "U" notch in jacket, install support.

8) Insert 4 screws through support into lock plate. Tighten screws to 60 INCH lbs. (7 N.m). Drive lower bearing approximately 3/16" into tube. Slide ignition actuator rod between bowl and jacket.

9) Install centering spheres and anti-lash spring into upper steering shaft. Install lower steering shaft from same side of spheres that ends protrude. Ensure that master serration of upper shaft aligns with master serration of lower shaft.

10) Place shift bowl in "PARK" position. Holding lock shoes

in disengaged position, install bearing housing over steering shaft until pivot pin holes align with holes in support. Ensure rack has engaged ignition switch actuator rod.

11) Install Pivot Pins. Use hand pressure to prevent damaging support pivot holes. Using small hammer and drift, tap in pins to complete installation. Place housing in the fully up position.

12) Install guide and peg onto support. Install tilt spring and spring retainer. Using a screwdriver turn retainer counterclockwise to engage. Install inner bearing race and seat. Install tilt lever opening shield in housing.

13) Remove tilt release lever. Install housing cover. Seat screw at 12 o'clock position. Install and tighten 3 screws to 100 INCH lbs. (11 N.m). Install buzzer/chime switch to spring clip with spring bowed away from switch on side opposite contact.

14) Push switch and spring into hole in cover with contacts toward lock cylinder. Install key light (if equipped). Install turn signal switch. Feed wires and connector through cover, bearing housing and shift bowl.

15) Install hazard warning knob. Install canceling cam, cam spring and shaft lock plate. Using Compressor (C-4156) to depress lock plate, install new retaining ring.

16) Reinstall tilt release lever and turn signal switch lever. Install upper shift lever. Drive in pivot pin. Position shaft lock cover over lock. Snap shaft lock cover into position by pressing on outer edges.

17) To install ignition lock, turn key to "LOCK" position. Remove key. Buzzer operating lever should retract into cylinder. Slide ignition switch to "LOCK" position (second detent from bottom).

18) Insert cylinder into housing far enough to contact drive shaft. Press inward while moving ignition switch actuator rod up and down to align parts. When properly aligned, cylinder will move in and spring loaded retainer will snap into place locking the cylinder into housing.

19) Push ignition switch lightly up column, toward lock housing, to remove lash in actuator rod. Tighten mounting screws to 35 INCH lbs. (4 N.m). Install wire protector. Seat actuator rod on dimmer switch.

20) Depress dimmer switch until 2 3/32" drill bits can be inserted into alignment holes. See Fig. 9.

21) Reposition upper end of actuator rod in pocket of washer/wiper switch. With light upward pressure on switch to remove lash, install and tighten 2 screws on switch. Remove drill bit(s).

22) Ensure that switch clicks as lever is lifted. Check for proper operation of ignition lock, wiper/washer switch, dimmer switch and steering mechanism.

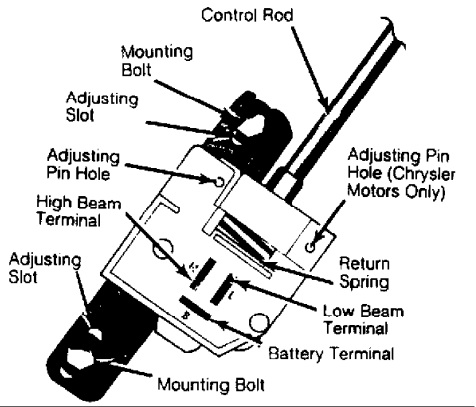


Fig. 9: Aligning Dimmer Switch

TORQUE SPECIFICATIONS

TORQUE SPECIFICATIONS TABLE

Application	Ft. Lbs. (N.m)
Column Clamp Stud Nut	17 (23)
Flexible Coupling Nuts	17 (23)
Steering Wheel Nut	45 (61)
	INCH Lbs. (N.m)
Bracket-to-Column Nuts	20 (2)
Column Clamp Stud	110 (20)
Support Plate Bolts	60 (7)