

STEERING COLUMN

1988 Jeep Cherokee

1988 STEERING
Jeep Steering Columns

All Models

DESCRIPTION

All models use collapsible steering columns. All columns have integral ignition switch and locking device. Optional tilt wheel is available with both A/T and M/T. Transmission shift linkage is integral on all models except those with floor shift.

TROUBLE SHOOTING

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

REMOVAL & INSTALLATION

NOTE: Steering column removal and installation procedures refer to all manufacturers. Not all procedures, however, apply to all models.

STEERING COLUMN (COLUMN SHIFT)

Removal

1) Disconnect battery negative cable. Disconnect transmission shift cable rod by prying rod from grommet in shift lever. Remove cable clip. Remove cable from lower bracket.

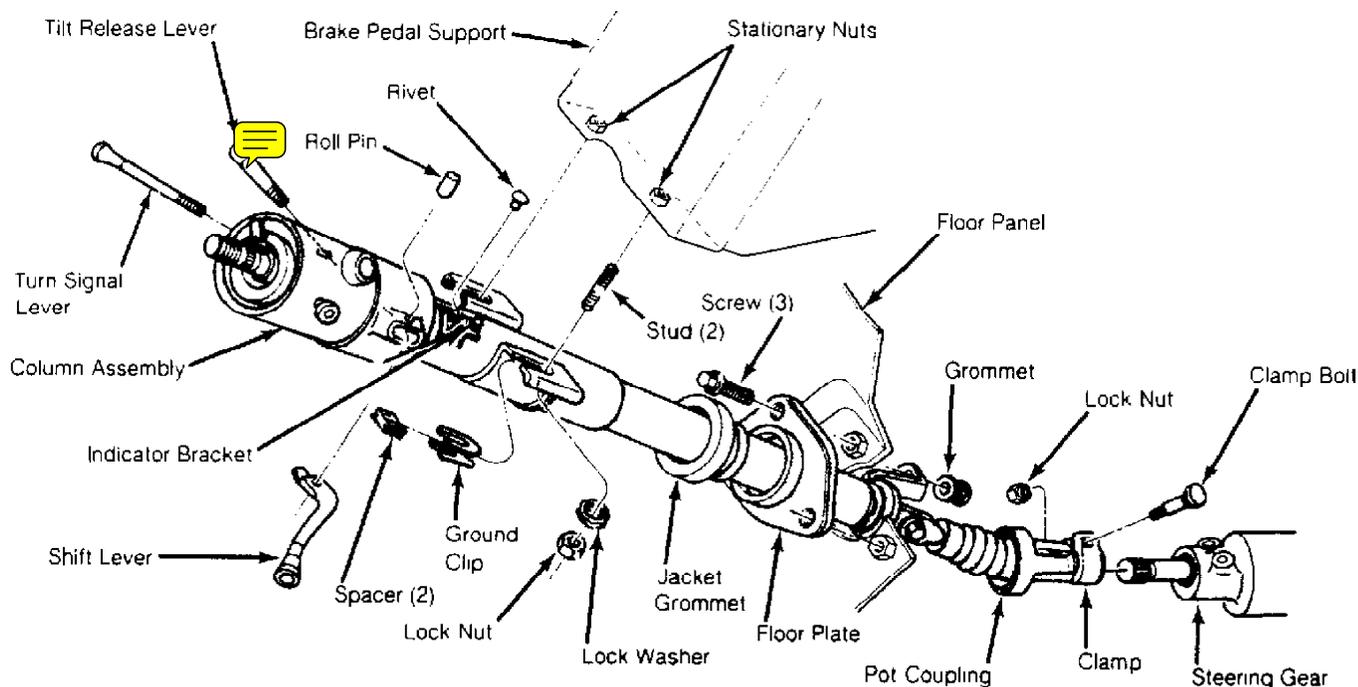
2) Disconnect, as equipped, either the flexible coupling, "Pot" coupling or "U" joint from pinion shaft.

3) Disconnect wiring connectors at column jacket. Remove steering wheel and horn pad. See STEERING WHEEL & HORN REMOVAL article. Remove damper assembly (if equipped). On RWD models, remove turn signal lever.

4) On all models, remove steering column-to-floor pan attaching screws. Expose steering column bracket. Remove instrument panel steering column cover. Lower reinforcement. Disconnect bezel. Remove indicator set screw and gearshift pointer from shift housing.

5) Remove steering column bracket-to-instrument panel attaching nuts. Lower support bracket. Firmly grasp steering column assembly and pull rearward while disconnecting lower stub shaft from pinion shaft coupling.

NOTE: On vehicles equipped with cruise control and M/T, take care not to damage clutch pedal cruise control switch.



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Fig. 1: Exploded View of RWD Steering Column Major Assemblies

Installation

1) On all models, aligning lower shaft with lower coupling and insert shaft. Raise column assembly into position onto studs. Loosely install nuts and washers in breakaway capsules. Pull column rearward. Tighten nuts to specification. See TORQUE SPECIFICATIONS.

2) Install a new shift lever grommet using pliers and back-up washer to snap the grommet into place. Use a multipurpose grease to aid installation.

3) Connect gearshift cable rod to shift lever by snapping rod into grommet with pliers. Adjust linkage. Place steering wheel on shaft with master splines aligned. Place damper assembly inside steering wheel (if equipped). Install steering wheel retaining nut. Tighten to 45 ft. lbs. (61 N.m).

4) Install horn pad assembly. Refer to procedures in the STEERING WHEEL & HORN REMOVAL article. Connect wiring connectors at steering column jacket. Connect battery negative cable. Test operation of lights and horn.

5) On models with A/T, install gearshift indicator pointer. Slowly move gearshift lever from "LOW" position to "PARK" position, pausing briefly at each selector position. Loosen and readjust to align pointer with each position (if necessary). Install instrument panel steering column cover.

STEERING COLUMN (FLOOR SHIFT)

The steering column with a floor mounted gearshift is basically the same as previously described. Standard columns and service procedures are identical except as described below.

- * In place of rotating shift housing, there is a plastic shroud which is fixed to lock housing. Shroud covers jacket and lock inhibitor assembly. It is held in place by a tab that fits under side cover and one screw. Shroud can only be replaced by removing lock housing from jacket.

- * The lock inhibitor assembly consists of a lever that engages lock levers (preventing locking of steering shaft), a button to operate lever and a return spring. Assembly is attached to lock housing in same location as shift gate is on column shift. Lower steering shaft bearing is mounted in an aluminum support.
- * A spring is attached between shift housing and column jacket. This spring keeps housing rotated counterclockwise against rubber bumper.

OVERHAUL

STANDARD COLUMN

NOTE: All columns are similar except for appearance of covers. Some models use ignition key light, while others do not. Disassembly and reassembly procedures cover all models. Some procedures may not apply to every steering column.

Disassembly

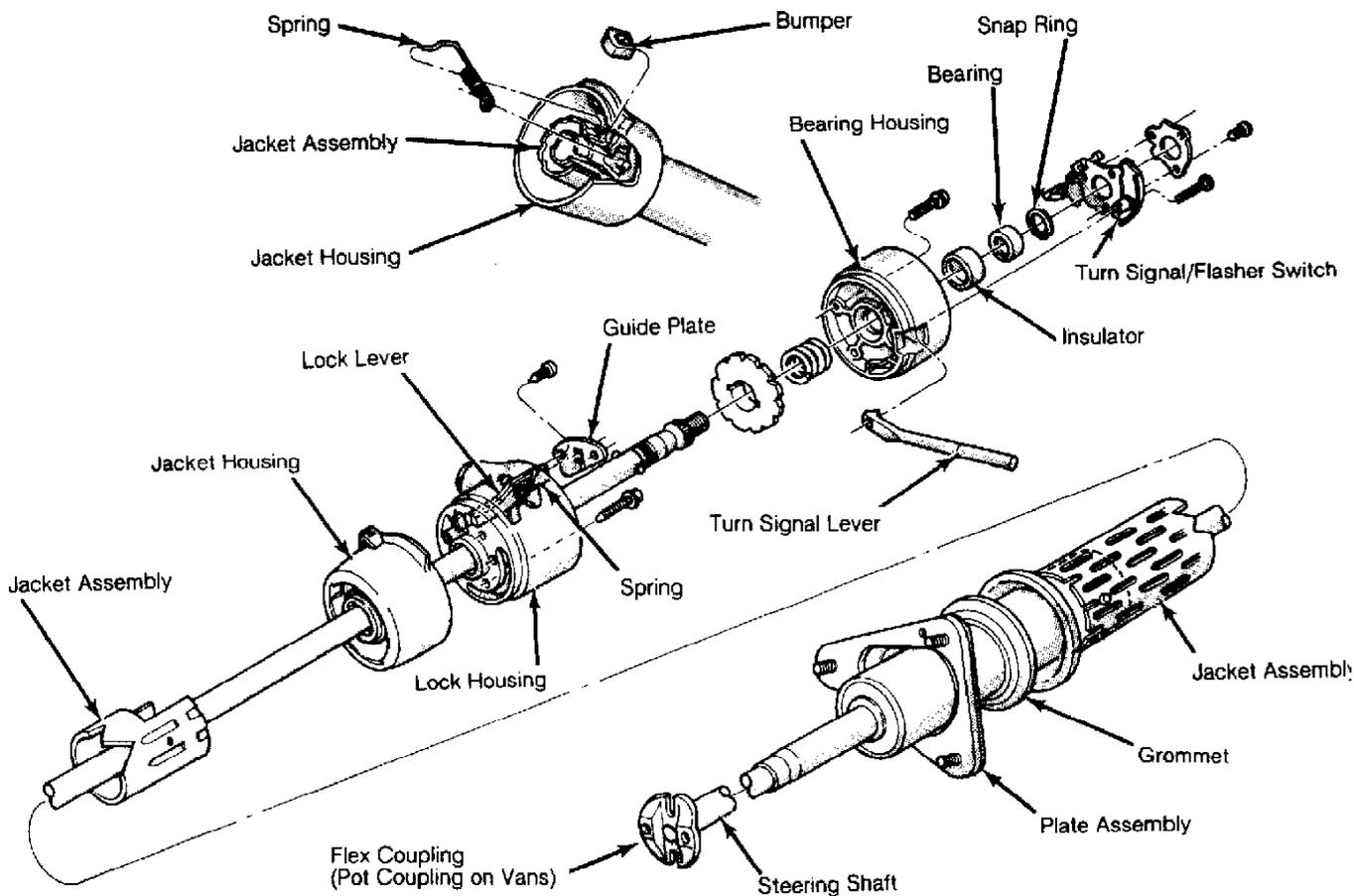
1) Pry out wiring trough retainers. Lift off trough. New retainers may be required for reassembly. Use masking tape to protect paint and a deep socket to back-up housing. Drive retaining roll pin out with a punch to remove shift lever.

2) Remove breakaway capsules. Secure column in vise by clamping at column bracket. DO NOT distort column. Remove turn signal lever cover-to-lock housing attaching screws. Remove cover. Remove wiper/washer switch assembly. Pull switch cover up wiper/washer lever. Remove lever sleeve-to-switch attaching screws.

3) Rotate wiper/washer shaft to full clockwise position. Remove shaft from switch. Remove turn signal switch and upper bearing retaining screws. Remove retainer. Lift switch upward out of way. Unclip horn ground wire. Remove ignition key light retaining screw. Lift ignition key light out of way.

4) Remove bearing housing-to-lock attaching screws. Remove snap ring from upper end of steering shaft. Remove bearing housing from shaft. Remove lock plate spring and lock plate from shaft. Remove shaft through lower end of column.

5) Remove ignition key. Remove warning switch retaining screw. Lift out key warning switch. Remove 2 ignition switch-to-column jacket retaining screws. See Fig. 2. Remove ignition switch by rotating switch 90 degrees on actuator rod. Remove 2 dimmer switch retaining screws. Disengage dimmer switch from rod.



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Fig. 2: Removing Ignition Switch

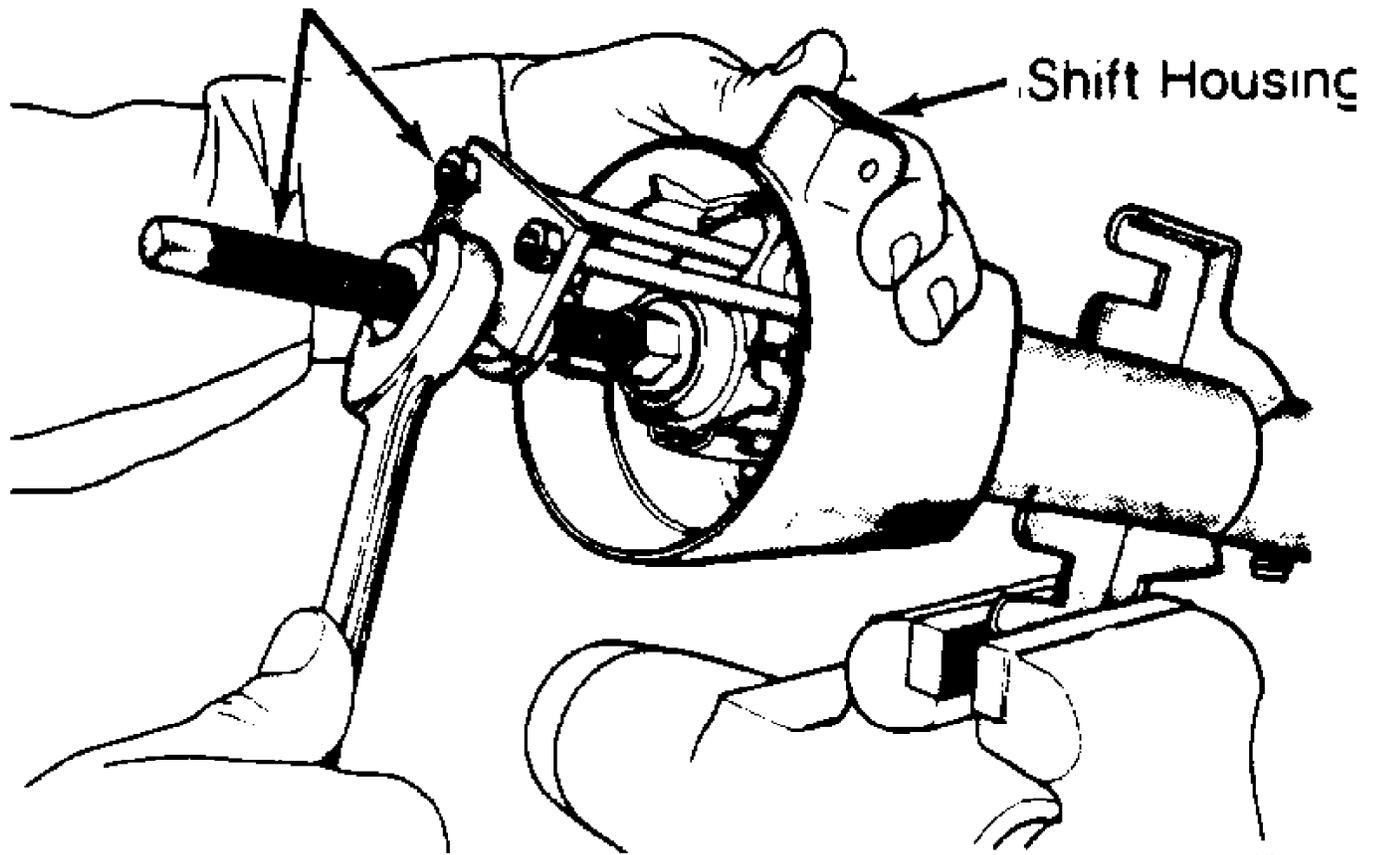
6) Remove bellcrank mounting screws. Slide bellcrank up in housing until it can be disconnected from ignition switch rod. Using key, place cylinder in "LOCK" position. Remove key.

7) Using a small diameter screwdriver or similar tool, push inward to release spring-loaded lock retainer while pulling lock cylinder from housing bore. Pull lock lever and spring assembly out of housing as an assembly.

8) Remove 4 lock housing-to-column jacket retaining screws. Remove housing from jacket. On A/T models, loosen shift tube set screw in shaft housing. On all models, using Shift Tube Remover (J-23072 for Jeep), remove tube through lower end of jacket. See Fig. 3.

9) To disassemble flexible coupling, remove 4 bolts and 2 cross straps. Remove flexible coupling. "Pot" coupling is removed by prying cover tangs from coupling body and lifting seal and cover from body. Drive dowel pin down into coupling. Discard "Pot" coupling. Pull body off shaft and shoe assembly.

Shift Tube Remover (C-4120 for Chrysler Motors, J-23072 for General Motors & Jeep)



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Fig. 3: Removing Shift Tube

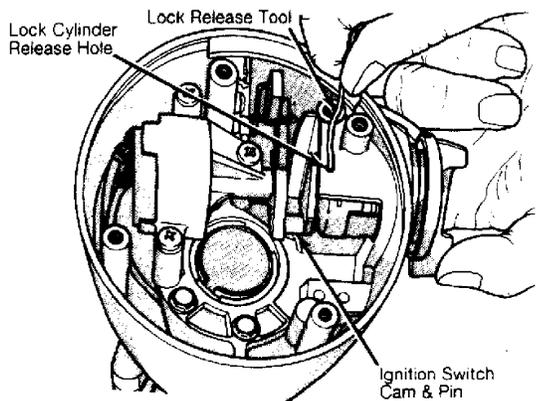


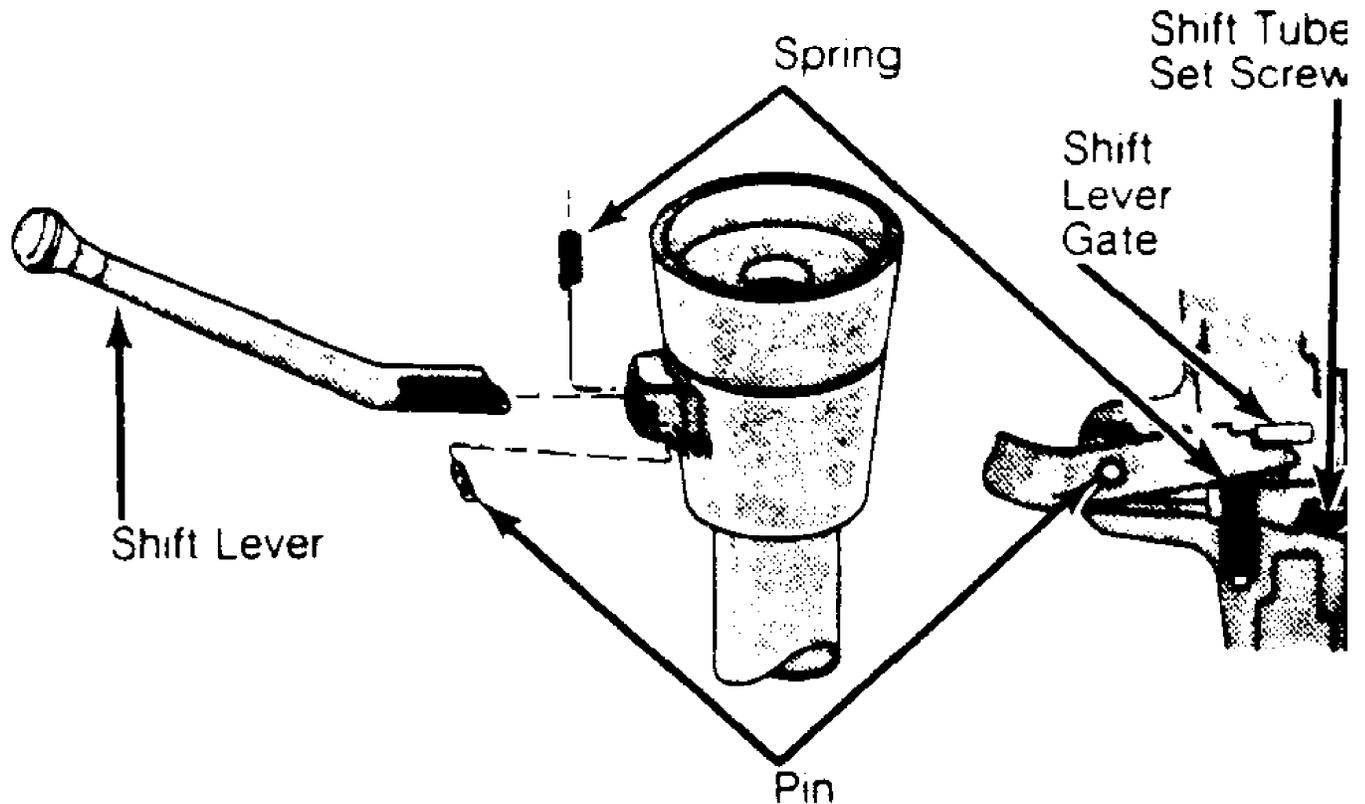
Fig. 4: Removing Lock Cylinder

Reassembly

1) Coat all friction surfaces with grease. Clamp column in vise so that both ends of column are accessible. Check column tube-to-

mandrel rivets for tightness.

2) Use new 1/8" diameter by 1/4" long (1/8" grip) aluminum blind rivets (if necessary). DO NOT use steel rivets as rivets must shear upon impact. Position crossover load spring and shift lever in in gearshift housing. Tap pivot pin into place. See Fig. 5.



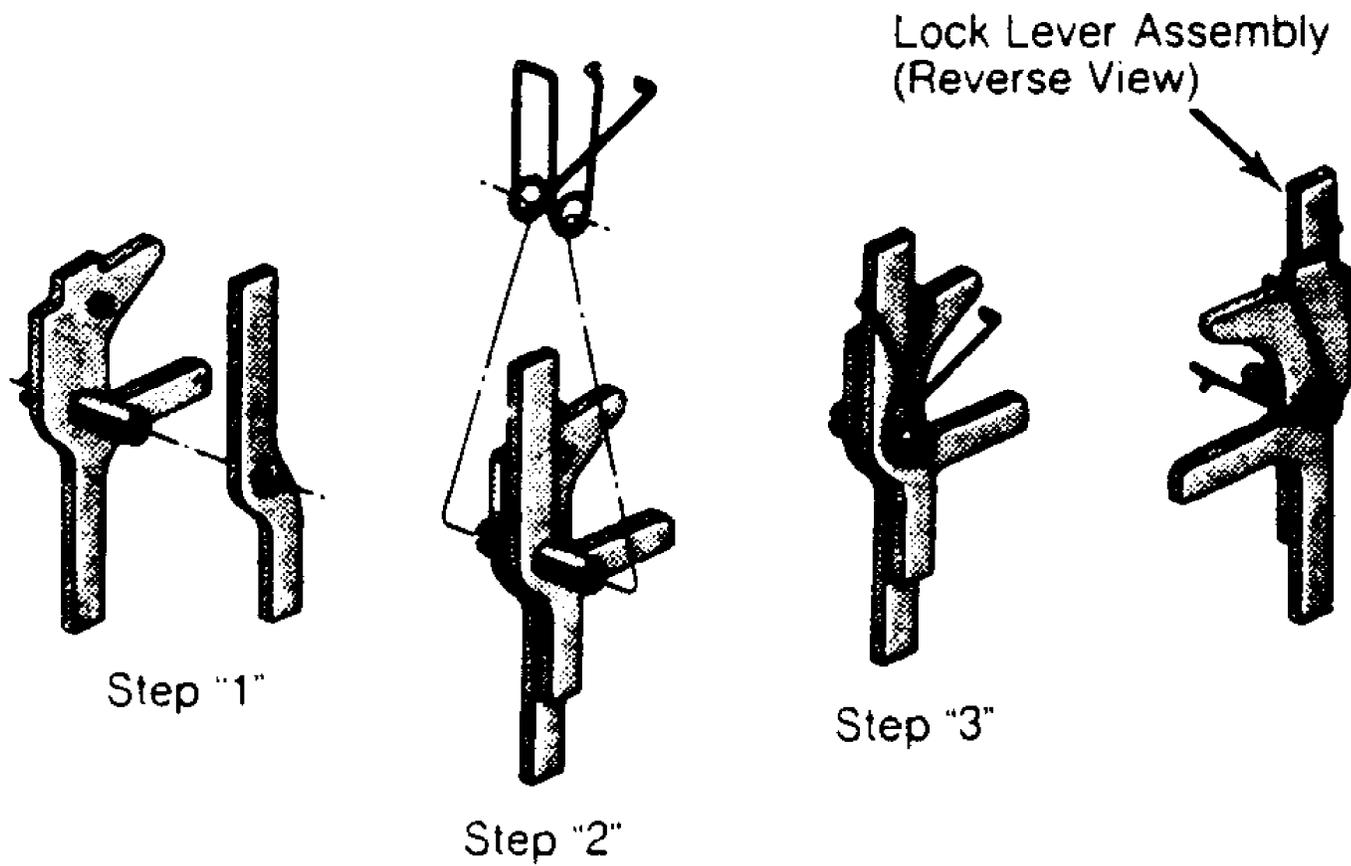
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Fig. 5: Installing Column Shift Lever
Courtesy of Chrysler Motors

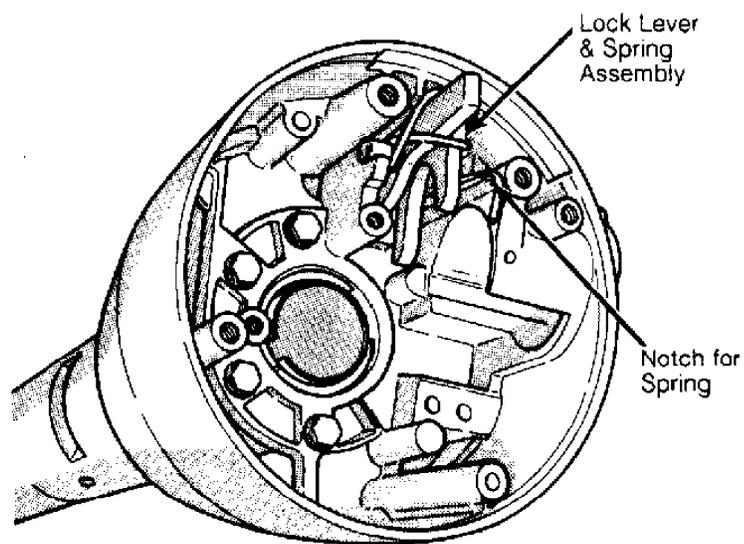
3) Assemble key cylinder plunger spring. Install assembly on lock housing. Install shift lever gate on lock housing. Place shift lever in mid position (if equipped). Seat lock housing on top of jacket by aligning keyway in housing with slot in jacket. Install housing-to-jacket screws. Tighten alternately to 90 INCH lbs. (10 N. m).

4) Install dimmer switch rod by firmly pushing rod into switch. Compress switch until 2 (.093") drill bit shanks can be inserted into alignment holes. Reposition upper end of push rod in pocket of wiper/washer switch. Remove lower column cover (if necessary). Remove drill bits.

5) Switch should click when lever is lifted and again as lever returns, just before it reaches stop in down position. Grease and assemble 2 lock levers, lock lever spring and pin. See Fig. 6. Install assembly into lock housing. Seat pin firmly in bottom of slots. Ensure that lock lever spring leg is firmly in place in lock casting notch. See Fig. 7.



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Fig. 6: Assembling Lock Lever & Spring Assembly



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Fig. 7: Installing Lock Lever & Spring Assembly

6) Install ignition switch actuator rod from bottom through oblong hole in lock housing. Attach rod to bellcrank. Position bellcrank assembly into lock housing while pulling ignition switch and

rod down column. Install bellcrank onto its mounting surface. Gearshift lever should be in "PARK" position.

7) Place ignition switch on actuator rod. Rotate switch 90 degrees to lock rod into position. Install ignition lock by turning key to "LOCK" position. Remove key. Insert cylinder into housing far enough to contact switch actuator. Insert key. Press inward. Rotate cylinder.

8) When parts align, cylinder will move inward and spring loaded retainers will snap into place, locking cylinder in housing. With cylinder and ignition switch in "LOCK" position, tighten ignition switch mounting screws.

9) Feed key warning switch wires behind wiring post and down through space between housing and jacket. Remove ignition key. Position cylinder in housing. Tighten mounting screws. Install lower bearing support (floor shift), bearing and spring on steering shaft.

10) Install and lubricate rubber "O" ring in lower groove on upper end of steering shaft. Insert steering shaft assembly into column assembly. Press upper bearing into upper bearing housing. Bearing must be fully seated.

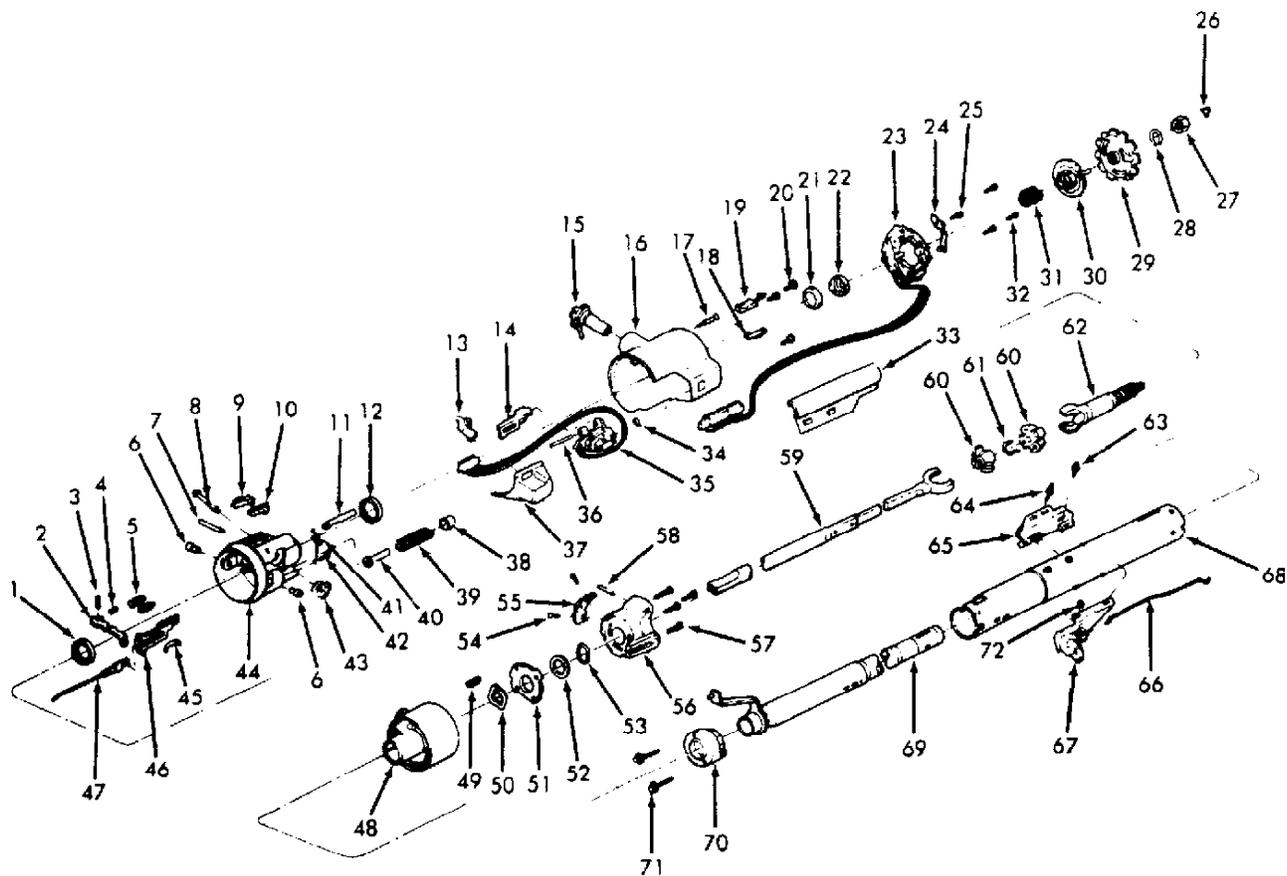
11) Push up on steering shaft to compress bearing and spring. Hold shaft in this position until snap ring is installed. Install lock plate on steering shaft. Install upper bearing spring. Install upper bearing housing with bearing previously installed. Tighten bearing housing retaining screws to 35 INCH lbs (4 N.m).

12) Install upper bearing snap ring on steering shaft, locking assembly into position. Install 4 screws attaching bearing housing to lock housing. Install ignition key lamp assembly in bearing housing. Install turn signal switch in bearing housing.

13) Feed turn signal switch and ignition key lamp wires through opening between bearing housing and lock housing and down along bottom of jacket. Install bearing retainer plate. Tighten screws. Ensure that ground wires from turn signal switch are positioned toward ground clips before tightening.

14) Assemble wiper switch, shaft, cover or speed control switch, switch cover and knob. Place wiper/washer switch assembly into lock housing, feeding wires through lock housing. Fasten wires to turn signal switch. Install dimmer switch rod and dimmer switch.

15) Install turn signal lever cover. Install breakaway capsules. Install wiring trough in place, being careful not to pinch wires. Install new retainers (if necessary).



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

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Fig. 8: Exploded View of Tilt Steering Column

TILT WHEEL COLUMN

Disassembly

1) Remove lower bracket assembly-to-lower bearing support bolts. On column shift models, remove shift housing cover. On floor shift models, unsnap and remove shroud extensions. Remove wiring protector from column jacket.

2) Mount column in vise at capsule bracket. Mount Holding Fixture (C-4132) onto column. Mount holding fixture and column in vise.

3) Remove tilt lever. To remove hazard warning knob, push in knob while unscrewing. Remove ignition key light assembly. Pull knob off wiper/washer switch assembly. Pull hider up switch lever. Remove 2 sleeve-to-wiper/washer switch retaining screws. Remove sleeve.

4) Rotate shaft in wiper switch fully clockwise. Remove shaft by pulling straight out of wiper/washer switch. Carefully remove plastic cover from lock plate. Using Lock Plate Depressor (J-23653-A for Jeep), depress lock plate. Pry retaining ring from groove.

5) Remove lock plate, canceling cam and upper bearing plate. Remove switch actuator screw and arm. Remove 3 turn signal switch attaching screws. Place shift bowl in "LOW" position. Wrap a piece of tape around wires to prevent snagging when removing switch. Remove switch and wiring.

6) Remove key light. Place lock cylinder in "LOCK" position. Insert a small screwdriver into slot next to switch mounting screw boss. Depress spring latch at bottom of slot. Remove lock.

7) Using a paper clip, remove key warning switch. Bend one end of clip into a hook. Insert hook into exposed loop of wedge spring. Pull clip. Remove spring and switch. DO NOT allow spring to fall into steering column.

8) Remove 3 housing cover screws. Remove housing cover. Remove wiper/washer switch. Using a punch, press out wiper switch pivot pin (if necessary). Tilt lever opening shield and dimmer switch actuator rod may be removed from cap (if necessary).

9) Place column in fully upright position. Using a large Phillips screwdriver, remove tilt spring retainer. Insert screwdriver in opening. Push in approximately 3/16". Turn approximately 1/8 turn clockwise until ears align with grooves in housing. Remove spring and guide.

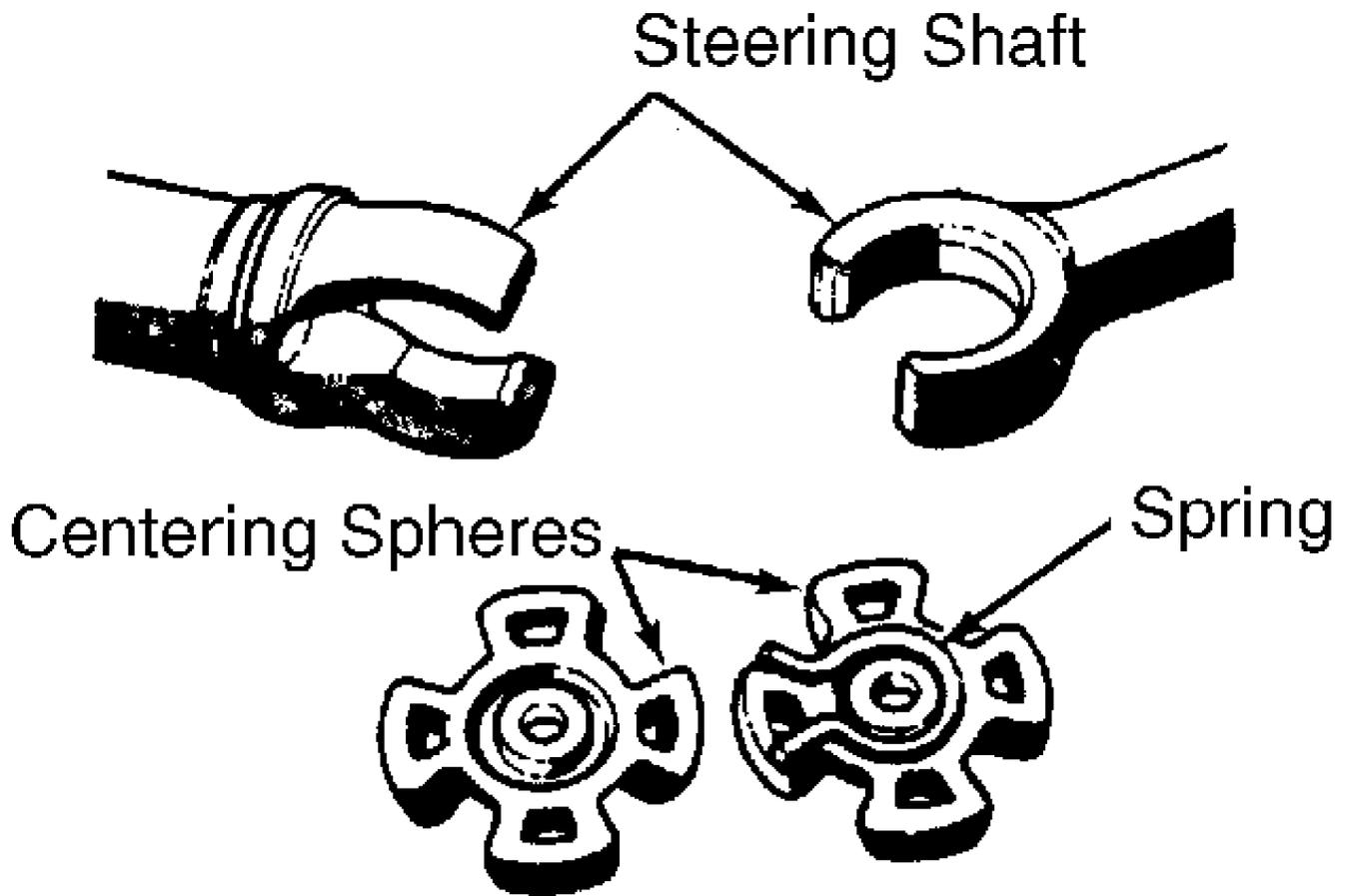
10) Remove dimmer switch mounting screws. Remove dimmer switch. Separate dimmer switch from rod by pulling on rod. Push upper steering shaft in far enough to remove steering shaft inner race seat and inner race. With ignition switch in "ACC" position, remove ignition switch mounting screws and switch. Place Pivot Pin Remover (J-21854-01 for Jeep) over pivot pin. Thread small portion of screw firmly into pin.

11) Hold screw from turning with one wrench while turning nut clockwise with a second wrench to withdraw pivot pin from support. Remove opposite pivot pin in same manner. Use tilt release lever to disengage lock shoes. Remove bearing housing assembly by pulling upward to extend rack fully.

12) Move housing assembly left to disengage rack from actuator. Rotate housing clockwise to free dimmer switch actuator rod. Remove activator assembly. Remove coupling from lower end of steering shaft. Double coupling is retained to shaft with a roll pin. Remove shaft assembly from upper end.

CAUTION: DO NOT drop or bump steering shaft as plastic pins may shear.

13) Disassemble steering shaft assembly by removing center spheres and anti-lash springs. See Fig. 9. Remove 4 bolts securing support to lock plate. Remove support from end of column jacket. Remove 2 attaching screws and shift gate from support (if necessary). Dimmer switch is removed with support.



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Fig. 9: Shaft Centering Spheres

14) Using a screwdriver, remove shift tube retaining ring. Remove thrust washer. Remove 2 screws from lower bearing. Remove lower bearing from jacket. Using Puller (J-23073-01 for Jeep), remove shift tube from bowl. Insert bushing on end of puller in shift tube to force tube from bowl. DO NOT hammer shift tube as plastic joints may shear.

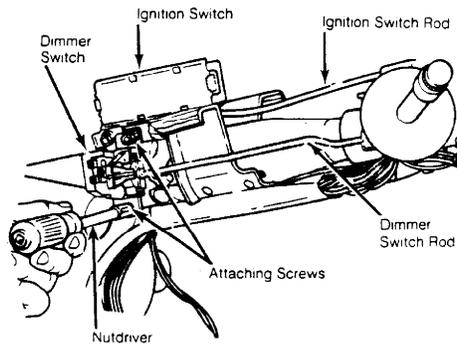


Fig. 10: Removing Shift Tube from Bowl on Models With Tilt Wheel

15) From lower end of jacket, remove shift tube from jacket. Remove jacket mounting plate by sliding from jacket notches and tipping down toward bowl hub at 12 o'clock position 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.

16) By removing spring retaining screw and moving spring clockwise, remove lock bolt spring. Using a hammer and punch, lightly tap drive shaft from sector. Remove drive shaft, sector and bolt. Remove rack, spring and shim (if used). Remove tilt release lever pin.

17) Relieve load on lever release by holding shoes inward. Wedge a block between top of shoes and bearing housing. Remove release lever and release lever spring. Using punch and hammer, remove lock shoe pin. Remove lock shoes and lock shoe springs.

18) Remove bearings from bearing housing only if they are to be replaced. Remove separator and ball from bearing. Place housing on work bench. Using a punch against back surface of race, hammer race from housing. DO NOT reuse bearings.

Reassembly

1) During reassembly, coat all friction surfaces with multipurpose grease. Clamp column in vise so that both ends of column are accessible. Install bearings in bearing housing (if removed).

2) Install lock shoe springs, lock shoes and shoe pin in bearing housing. Use a .180" rod to line up shoes for pin installation. With tilt lever opening on left side and with the shoes facing up, the 4 slot shoe should also face up.

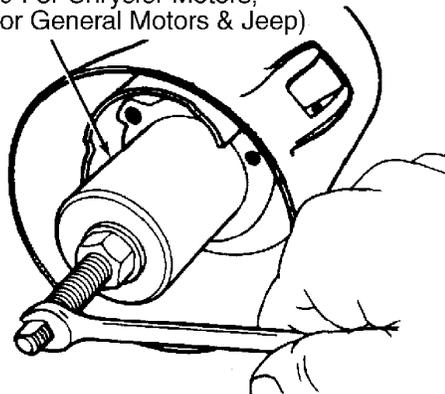
3) Install spring, release lever and pin in bearing housing. Install drive shaft in housing. Lightly tap sector onto drive shaft far enough to bottom on shaft. Install lock bolt. Engage lock bolt with sector cam surface. Install rack and spring. Block tooth on rack should engage block tooth on sector.

4) Install external tilt release lever. Install bolt spring and spring retaining screw. Tighten to 35 INCH lbs. (4 N.m). Install shift lever spring in bowl by winding up with pliers and pushing in. Slide bowl into jacket. Install wave washer and jacket mounting plate.

5) Work jacket mounting plate into jacket notches by tipping jacket mounting plate toward bowl hub at 12 o'clock position and under jacket opening. Slide jacket mounting plate in jacket notches. Carefully install shift tube in lower end of jacket.

6) Align key in tube with keyway in bowl. Using Puller (J-23073-01 for Jeep), pull shift tube into bowl. See Fig. 11. DO NOT push or tap on end of shift tube. By pulling bowl up and compressing wave washer, install thrust washer and retaining pin.

Puller (C-4119 For Chrysler Motors,
J-23073-01 For General Motors & Jeep)



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Fig. 11: Installing Shift Tube on Models With Tilt Wheel

7) Slide dimmer switch actuator rod through hole in support. Feed rod between bowl and jacket. Install support by aligning notch in support with notch in jacket. Insert 4 screws through support into

jacket mounting plate. Tighten screws to 60 INCH lbs. (7 N.m). Install lower bearing on lower end of jacket (if removed).

8) Install centering spheres and anti-lash spring in upper steering shaft. Install lower steering shaft from same side of spheres that spring ends protrude. Perform a trial fit of assembly to ensure that master serration of upper shaft is on same side as master serration of lower shaft assembly.

9) Position shift bowl fully counterclockwise. Install ignition switch actuator rod between bowl and jacket from bottom. Guide back of coupling into support slot. Assemble bearing housing over steering shaft. Engage rack over end of ignition switch actuator rod.

10) Position access hole of bearing housing over end of dimmer switch actuator rod. Rotate housing counterclockwise to assemble. Holding lock shoes in disengaged position, assemble bearing housing over steering shaft until pivot holes line up with holes in support.

11) Install pivot pins. Assemble as far as possible, using palm pressure of hand to prevent enlarging support pivot hole. Using a small hammer and punch, tap pins into place. Replace wiper/washer pivot assembly. Press pivot pin in cover (if removed). Check pivot assembly for ease of movement.

12) If movement is restricted, tap other end of pin for clearance. Install wiper/washer switch. Replace tilt lever opening shield in cover (if removed). Position cap over dimmer switch actuator rod. Guide end of actuator rod into pivot slot during cover assembly. Hold cap so that cover will slide over it.

13) Place housing in full upward position. Ensure there is grease between guide and peg on support, tilt spring and tilt spring retainer. Install guide. Using a screwdriver in retaining slot, turn retainer clockwise to engage. Install bearing inner race and seat.

14) Install lock housing cover. Tighten 3 screws to 100 INCH lbs. (11 N.m). Assemble key warning switch to spring clip with formed end of clip under end of switch and with spring bowed away from switch on side opposite contact. Push switch and spring into hole in lock housing cover with contacts facing lock cylinder bore.

15) Install key light (if equipped). Install turn signal switch wires and connector through cover, bearing housing and shift bowl. Push in hazard plunger. Install turn signal switch. Tighten screws to 25 INCH lbs. (3 N.m). Install hazard warning knob and screw. Pull knob out.

16) Install canceling cam spring, canceling cam (carrier assembly) and lock plate. Using Lock Plate Depressor (J-23653-A for Jeep), depress lock plate. See Fig. 12. Install a new retaining ring. Install tilt release lever (if removed). Install turn signal switch lever.

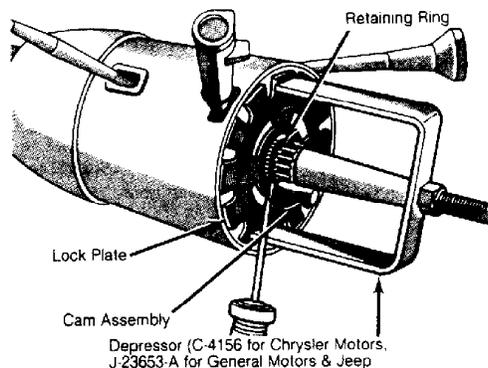


Fig. 12: Installing Lock Plate Retaining Ring

17) Install ignition lock. Turn key to "LOCK" position. Remove key. Insert cylinder into housing far enough to contact shaft. Press inward while moving ignition switch actuator rod up and down to align parts.

18) When parts align, cylinder will move inward and a spring loaded retainer will snap into place locking cylinder in housing. To replace ignition switch, position key cylinder in "LOCK" position. Remove key. Place ignition switch in "LOCK" position (second detent from bottom).

19) Fit ignition switch actuator rod into slider hole. Loosely install on column with 2 screws. Push switch lightly toward lock housing to take out slack in actuator rod. Tighten screws to 34 INCH lbs. (4 N.m). DO NOT move switch out of detent position.

20) Install dimmer switch by firmly seating push rod into switch. Compress switch until 2 (.093") drill bit shanks can be inserted into alignment holes. Reposition upper end of push rod in pocket of wiper/washer switch. Remove lower column cover (if necessary).

21) With a light upward pressure on switch, install 2 screws. Remove drill bits. Switch should click when lever is lifted and again as lever returns, just before it reaches lower stop. Install wire protector over wires on column jacket, being careful not to pinch wires.

22) Remove column from vise. Position lower bracket assembly on steering column. Install 2 bolts. Tighten to 105 INCH lbs. (12 N.m). Aligning master splines, install coupling assembly on steering shaft. Support coupling under joint. Drive in roll pin.

NOTE: DO NOT remove bearings from housing unless they are to be replaced. Install new bearings if bearings are removed from housing. Never reuse old bearings.

TORQUE SPECIFICATIONS

TORQUE SPECIFICATIONS TABLE

| Application | Ft. Lbs. (N.m) |
|--|-----------------|
| Flexible Coupling Bolts | 17 (23) |
| Steering Wheel Retaining Nut | 45 (61) |
| Support Plate Bolts | 17 (23) |
| | INCH Lbs. (N.m) |
| Bearing Housing-to-Lock Housing Screws | 35 (4) |
| Bracket-to-Column Bolt | 124 (14) |
| Column Clamp Stud | 20 (2) |
| Column Clamp Stud Nut | 106 (12) |
| Hazard Switch | 27 (3) |
| Housing Cover Screws | 100 (11) |
| Ignition Switch Screws | 35 (4) |
| Lock Housing-to-Jacket | 90 (10) |
| Shift Tube Support Screws | 60 (7) |
| Steering Column Lower Bracket Bolts | 106 (12) |
| Tilt Release Spring Retaining Screw | 35 (4) |
| Turn Signal Retaining Plate | 27 (3) |
| Upper Bracket Nuts | 106 (12) |