

steering shaft up or down with a suitable pry bar to achieve plus or minus 1/8 inch coupling insulator flatness.

9. Engage the dust boot at the base of the steering column to the dash panel opening. Install the three screws that attach the dust boot to the dash panel.
10. Connect and adjust the transmission cable on column shift automatics.
11. Connect all electrical connections to the steering column. Connect all vacuum hoses, if equipped.
12. Connect and adjust the PRND21 cable as outlined in Group 33, Part 50 (Thunderbird and Continental Mark V only).
13. Install the trim shrouds that cover the steering column at the instrument panel.
14. Install the screws that attach the instrument cluster trim cover to the instrument cluster.
15. Install the steering wheel as described earlier in this Part.
16. Connect the negative battery cable to the battery terminal.
17. Check the steering column for proper operation.

#### GRANADA, MONARCH AND VERSAILLES

##### Removal

1. Disconnect the negative battery cable (ground) from the battery.
2. Remove the steering wheel using procedures described earlier in this Part.
3. Remove the section of instrument panel below the steering column.
4. Remove the trim shrouds covering the steering column at the instrument panel.
5. Disconnect the PRND21 cable from the steering column (automatic transmission only).
6. Disconnect the turn signal wiring and back-up lamp switch wiring.
7. Disconnect the transmission cable on column shift automatics or the transmission control bellcrank on column shift manual transmission.
8. Disengage the dust boot at the base of the steering column from the dash panel opening.
9. Remove the two nuts attaching the steering shaft to the flex coupling.
10. Remove the four (4) nuts attaching the steering column support brackets to the brake pedal support.
11. Lower the steering column and disconnect the ignition switch wiring.
12. Remove the steering column by withdrawing it from beneath the dash panel. **Be careful not to damage components.**

##### Installation

1. Loosen the bolts attaching the column adjustment brackets to the brake pedal support.
2. Insert the steering column lower shaft through the opening in the dash panel. Place the flange of the shaft against the flex coupling. Insert a 1/4 inch diameter rod between the flexible coupling fabric and the flange. Install the attaching nuts and torque

to 10-22 ft-lb. Do not distort the flex coupling when torquing the nuts or removing the 1/4 inch rod. Pry steering shaft up or down with a suitable pry bar to achieve desired coupling insulator flatness.

3. Connect the ignition switch wiring.
4. Position the steering column over the four (4) studs in the brake pedal support and install the attaching nuts. Torque the nuts to 20-37 ft-lb.
5. Center the shift tube on the steering shaft to prevent grounding.
6. Torque the bolts securing the column adjustment brackets to the brake pedal support 20-37 ft-lbs.
7. Remove the rod from between the flexible coupling and the flange.
8. Connect and adjust the transmission cable on the column shift automatics.
9. Install the column boot at the dash panel. Push lip of boot into column-opening until boot is fully seated.
10. Connect the turn signal switch and back-up lamp switch wiring.
11. Connect and adjust the PRND21 cable (column shift automatics).
12. Install the column trim shrouds at the instrument panel.
13. Install the section of instrument panel beneath the steering column.
14. Install the steering wheel per instruction in this Part.
15. Connect the negative battery cable.
16. Check the steering column for proper operation.

#### MUSTANG II, PINTO AND BOBCAT

##### Removal

1. Disconnect the negative battery cable (ground) from the battery terminal.
2. Remove the steering wheel as described earlier in this Part.
3. Remove the trim shrouds that cover the steering column at the instrument panel.
4. Remove the section of the instrument panel that is located beneath the steering column (Mustang only).
5. Disengage the dust boot at the base of the steering column from the dash panel opening.
6. Remove the two nuts that attach the steering column lower shaft and U-joint assembly to the flange on the steering gear input shaft. Disengage the safety strap and bolt assembly from the flange.
7. Remove the four nuts that attach the steering column support bracket to the brake pedal support.
8. Disconnect all electrical connections (quick-couplers) to the steering column.
9. Remove the steering column by withdrawing it from beneath the dash panel. **Be careful not to damage components.**

##### Installation

1. Install the steering column by inserting it through the dash panel opening. **Be careful not to damage components.**

2. Connect ignition switch to the blade connector.
3. Position the steering column over the four bolts and install the four nuts that attach the steering column support bracket to the brake pedal support bracket. Tighten nuts fingertight.
4. Connect turn signal switch.
5. Install the trim shrouds that cover the steering column (Mustang).
6. Torque the steering column bracket-to-brake pedal support bracket nuts to 20-37 ft-lb. Make sure that the carriage bolts are correctly seated into their square holes.
7. Engage the safety strap and bolt assembly to the flange on the steering gear input shaft. Install the two nuts that attach the steering column lower shaft and U-joint assembly to the flange on the steering gear input shaft. Torque the nuts to 20-37 ft-lb. **The safety strap must be properly positioned to prevent metal to metal contact after torquing nuts. The flexible coupling must not be distorted when the nuts are torqued.** Pry steering shaft up or down with a suitable pry bar to achieve plus or minus 1/8 inch flatness of coupling insulator.
8. Install the dash boot at the base of the steering column into the dash panel opening.
9. Install the section of the instrument panel that locates beneath the steering column (Mustang only).
10. Install the trim shrouds that cover the steering column at the instrument panel (Pinto and Bobcat only).
11. Install the steering wheel as described earlier in this Part.
12. Connect the negative battery cable to the battery terminal.
13. Check the steering column for proper operation.

## UPPER SHAFT BEARING

### FIXED COLUMN

#### Removal

1. Disconnect the negative battery cable (ground) from the battery terminal.
2. Remove the steering wheel as described earlier in this Part.
3. Disconnect all electrical connections (quick-couplers) to the steering column.
4. Remove the turn indicator actuating lever.
5. Remove the turn indicator switch attaching screws. Lift the turn indicator switch over the end of the steering column upper shaft.
6. Remove the turn indicator switch and wiring harness from the steering column.
7. Remove the snap ring from the top of the steering column upper shaft.
8. Loosen the two flange-to-steering column tube retaining nuts. Disengage the two flange-to-steering column tube bolts (T-bolts) from the tube.
9. Raise the flange upward while tapping the steering column upper shaft lightly with a plastic hammer

in order to free the bearing and flange from the steering column upper shaft.

10. Remove the bearing and insulator from the steering column flange.

#### Installation

1. Position the steering column flange on the steering column tube.
2. Engage the two flange-to-steering column tube bolts (T-bolts) in the steering column tube. Torque the retaining nuts to 60-75 in-lb.
3. **Prick punch the steering column upper shaft serration diameter sufficiently to insure an interference fit between the bearing inner race and the steering column upper shaft.** Position the bearing and insulator on the steering column upper shaft. Work the bearing and insulator as far down the steering column upper shaft as possible, then place a piece of pipe (.75 inch inside diameter x 2.125 inch) over the end of the steering column upper shaft and install the steering wheel attaching nut (Fig. 7).

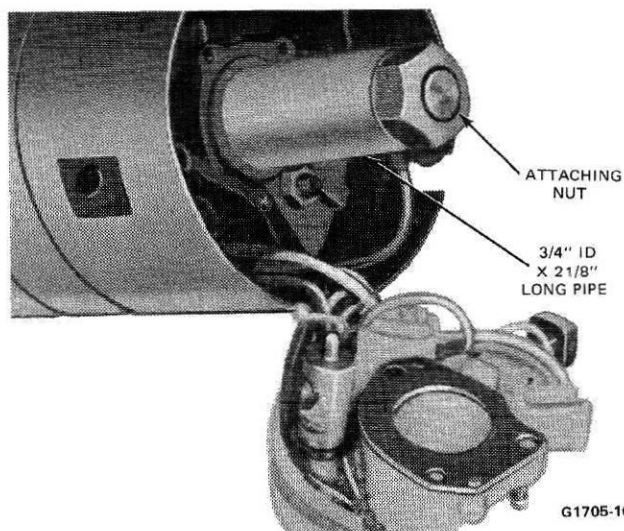


FIG. 7 Installing Upper Bearing—Fixed Columns

4. Tighten the steering wheel attaching nut until the bearing is seated in the flange.
5. Remove the steering wheel attaching nut and the piece of pipe from the steering column upper shaft.
6. Install the snap ring in the groove at the top of the steering column upper shaft above the bearing.
7. Lift the turn indicator switch over the end of the steering column upper shaft and position it in the flange.
8. Install the turn indicator switch and wiring harness to the steering column.
9. Install the turn indicator switch attaching screws. Torque the screws to 15-25 in-lb.
10. Install the turn indicator actuating lever.
11. Connect all electrical connections (quick-couplers) to the steering column.
12. Install the steering wheel as described earlier in this Part.

13. Connect the negative battery cable (ground) to the battery terminal.
14. Check the steering column for proper operation.

## TILT COLUMN

### Removal

1. Remove the tilt column mechanism as described later in this Part.
2. Place the flange casting on a bench with the smaller bearing facing down.
3. With a small pick, lightly tap on the outer race of the small bearing at each slot. **Never drive or apply pressure of any kind to the inner race of the bearing.**
4. Invert the flange casting and place it on a bench with the large upper bearing facing down.
5. With a small pick, lightly tap on the outer race of the large bearing at each slot. **Never drive or apply pressure of any kind to the inner race of the bearing.**

### Installation

1. Position the flange casting on a bench with the large bearing seat facing upward.
2. Select a socket wrench that is the same diameter as the outer race of the large upper bearing.
3. Position the large upper bearing over its bearing seat with the open side facing inward.
4. Place the socket wrench on the outer race of the bearing and lightly tap on the socket wrench until the bearing is in place. **Be careful not to contact the bearing inner race as damage will result.**
5. Invert the flange casting and place it on a bench with the small bearing seat facing upward.
6. Select a socket wrench that is the same diameter as the outer race of the small bearing.
7. Position the small bearing over its bearing seat with the open side facing inward.
8. Place the socket wrench on the outer race of the bearing and lightly tap on the socket wrench until the bearing is in place. **Be careful not to contact the bearing inner race as damage will result.**
9. Install the tilt column mechanism as described below in this Part.

## TILT COLUMN MECHANISM

LTD II, COUGAR, THUNDERBIRD, CONTINENTAL MARK V, GRANADA, MONARCH AND VERSAILLES

### Removal

(Remove the steering column assembly on Granada/Monarch vehicles as detailed earlier in this Part.)

1. Disconnect the negative battery cable (ground) from the battery terminal.
2. Remove the steering wheel as described earlier in this Part. The steering wheel must be in the full "up" position.
3. Remove the trim shroud that covers the steering column at the instrument panel.
4. Remove the screws that attach the instrument cluster trim cover to the instrument cluster. Remove the instrument cluster trim cover from the vehicle.

Remove the screws that attach the instrument cluster to the instrument panel. Remove the instrument cluster from the vehicle. Separate the instrument cluster from the main instrument panel. Disconnect the speedometer cable, the wire harness connections, the PRND21 cable (as required) and the wire cables to the heat/air panel from the instrument cluster from the vehicle.

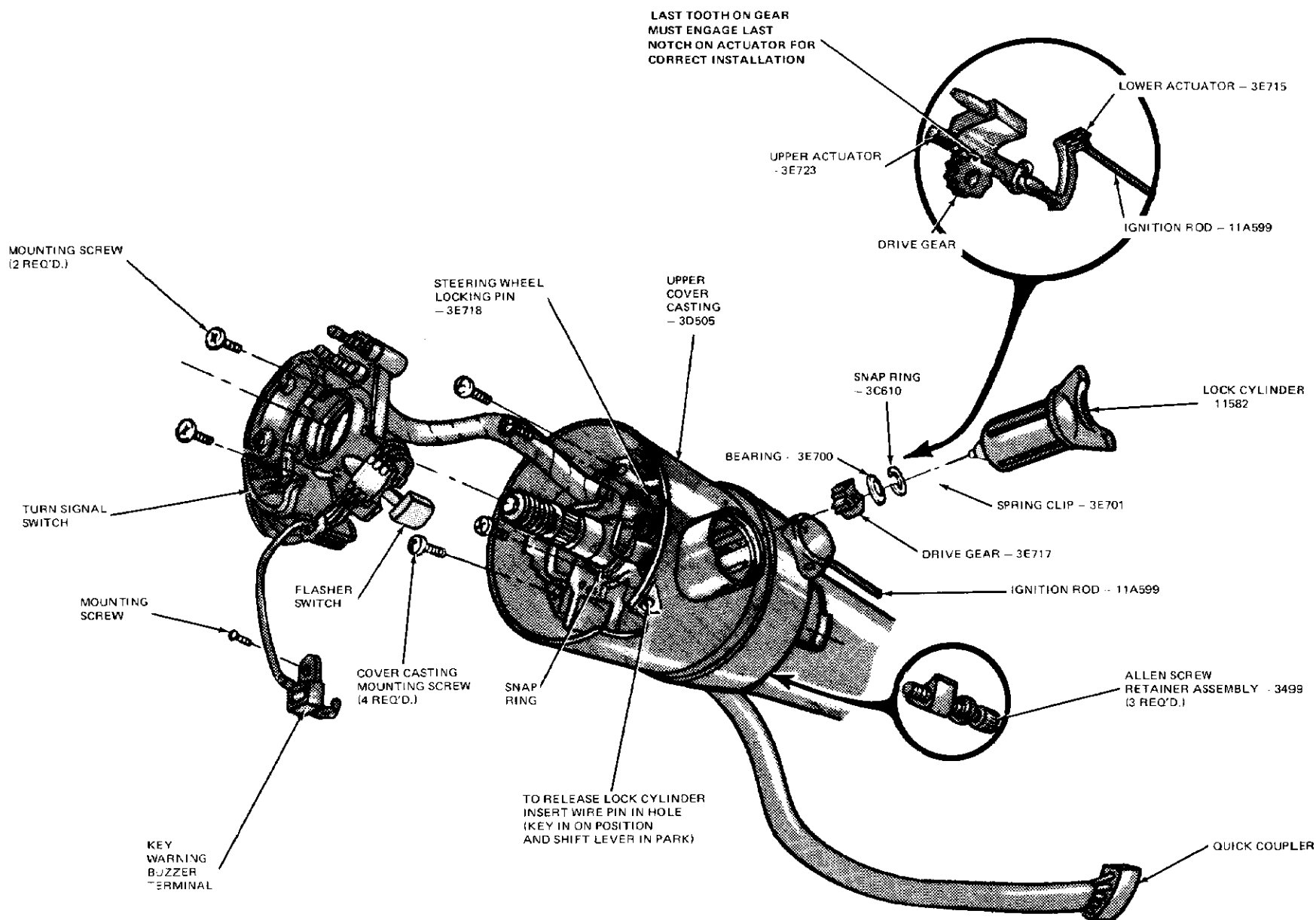
5. Disconnect all electrical connections (quick-couplers) to the steering column (Fig. 8). Remove the wires from the hard-shell plastic coupler. **Carefully note the position and color code of each wire in the coupler.**

The following operations are common to Granada, Monarch, LTD II, Cougar, Thunderbird, Continental Mark V and Versailles.

6. Remove the lock drive gear as described later in this Part.
7. Remove the turn signal actuating lever.
8. Remove the two screws that attach the turn signal switch to the flange casting and the one screw that attaches the warning buzzer terminal. Remove the wiring harness-to-steering column tube clips (if required). Remove the turn signal switch and wiring harness from the steering column.
9. Remove the four screws on the cover casting. Lift the cover casting up and over the steering column upper shaft and remove it from the steering column. The upper actuator will come out at this point. Unhook the upper actuator from the lower actuator.
10. Remove and discard the three screws that attach the lower flange casting to the steering column outer tube. These screws are located under the socket casting near the outer tube. **Do not re-use these screws.**
11. Loosen the ignition switch nut and washer assemblies and remove the ignition switch rod from the switch end only.
12. Remove the two spring clips holding wire bale which act as a release lever for the locking lever. Remove the wire bale (Fig. 9).
13. With a small drift, drive out the pin holding the locking lever. Remove the locking lever and spring. (A C-clamp may be used to relieve the tension on the pin during removal, if necessary.)
14. Remove the steering column upper shaft snap ring (Fig. 8).
15. The upper and lower flange castings can now be separated by removing the two pivot pins located in the side of the casting assembly with either Tool T70P-3D739-A or Tools T70P-3D739-A and T67P-3D739-C (Fig. 10). **Do not re-use the pivot pins if the press fit is loose in the lower flange.**

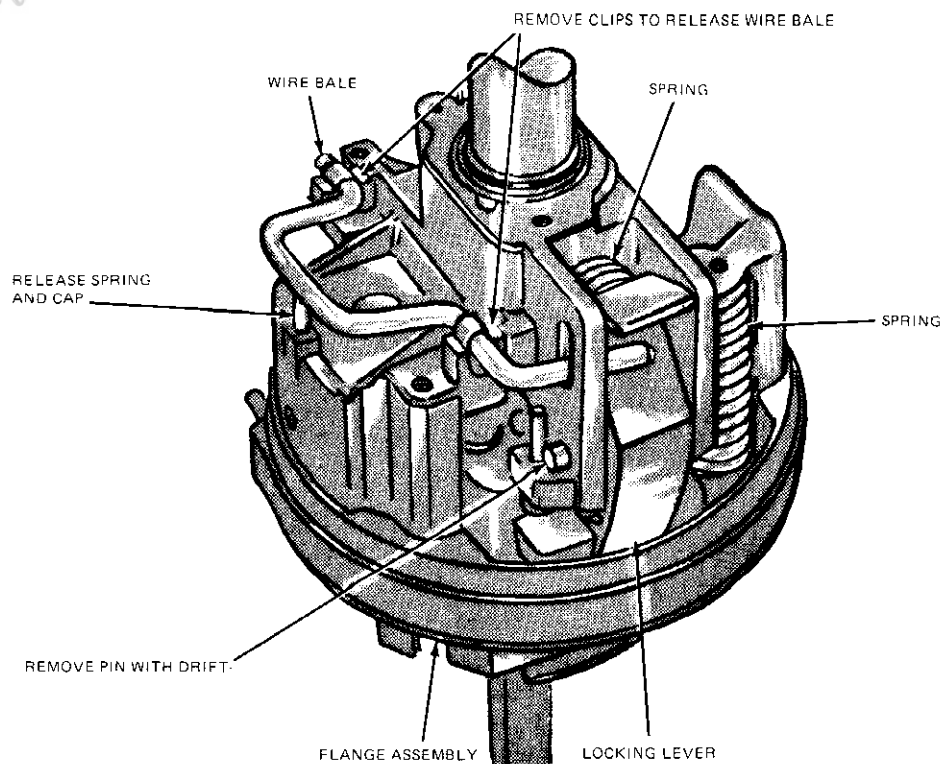
### Installation

1. Install the lower actuator with the ignition switch rod attached.
2. Assemble the upper and lower flange castings by installing the two pivot pins located in the side of the casting assembly. Be sure that the steering column position spring is properly seated between the upper and lower flange casting. Be sure that the wavy thrust washer is located properly between



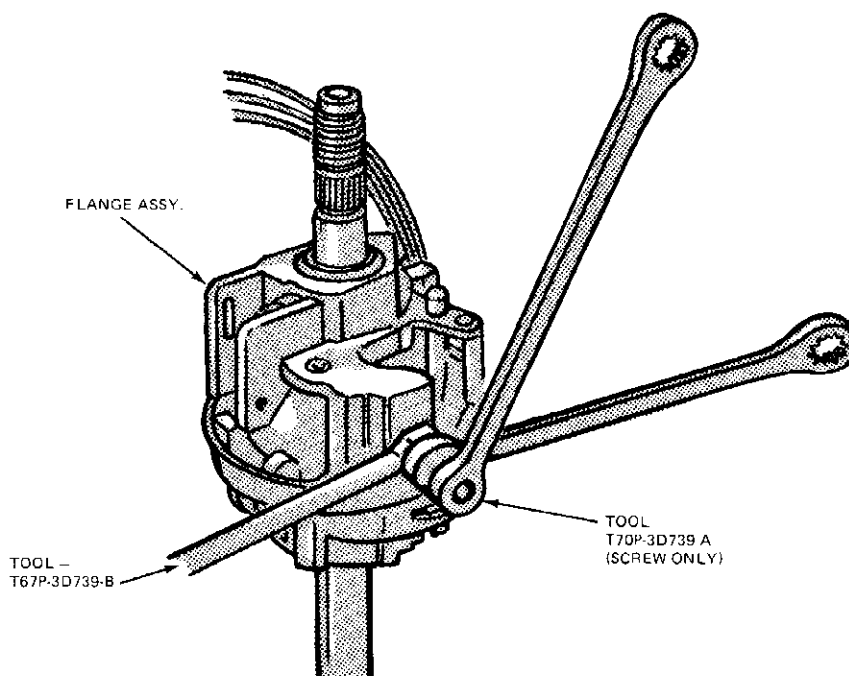
G1687-2G

FIG. 8 Tilt Column Mechanism



G1689-2A

FIG. 9 Removing Wire Bale and Tilt Locking Lever



G1691-2C

FIG. 10 Removing Pivot Pin

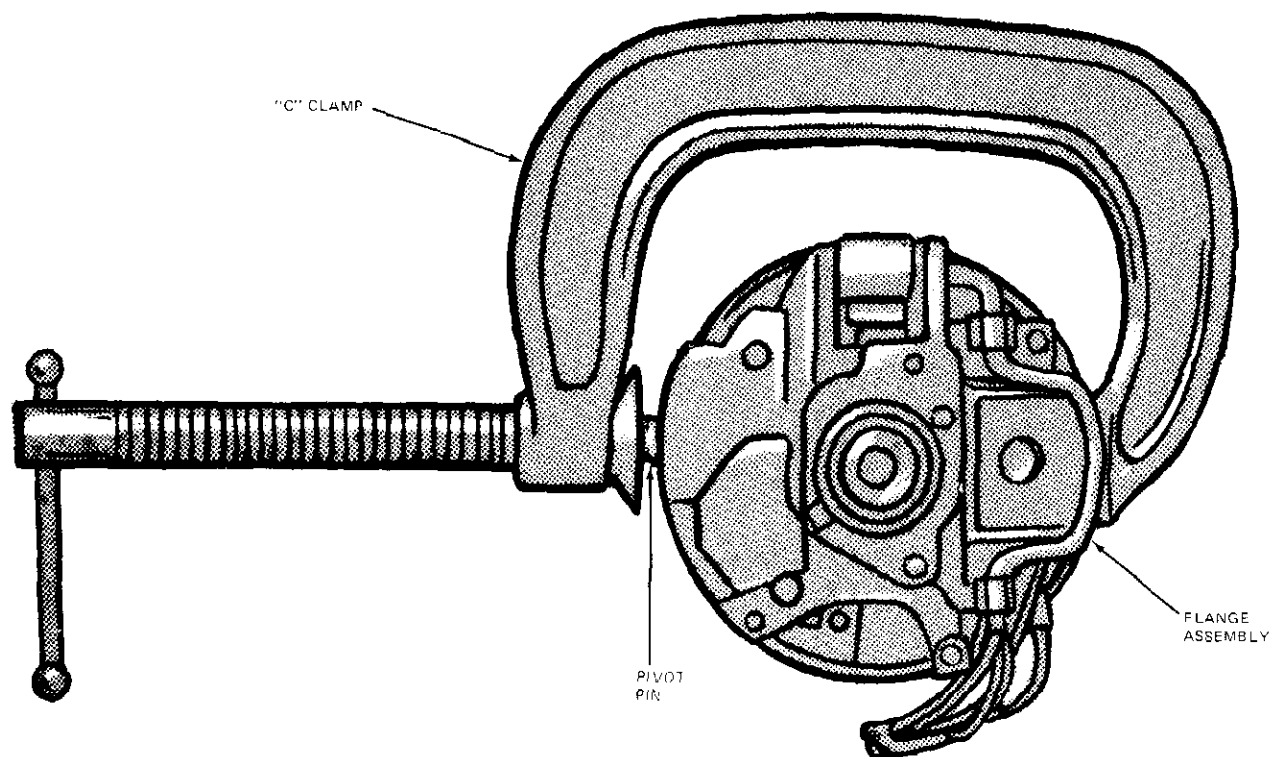
the lower flange casting and the socket casting. **Do not re-use the pivot pins if the press fit is loose in the lower flange.**

3. Install the steering column upper shaft snap ring.
4. Assemble the locking lever and spring. Insert the pin that holds the locking lever. A C-clamp may be used

- to relieve the tension on the pin during assembly, if necessary (Fig. 11).
5. Position the wire bale on the upper casting and install the two spring clips that hold the wire bale in place.
  6. Connect the ignition switch rod to the ignition switch, leave the ignition switch attaching nuts loose.
  7. Install the three screws, washers and retainers that attach the flange assembly to the steering column outer tube. Torque the screws to 50-68 in-lb. **New screws, washers and retainers must be used to insure that the epoxy cement on the screws will bond properly.**
  8. Connect the upper and lower actuators. Position the cover casting on the steering column and install the four attaching Phillips head screws. Torque the screws to 40-50 in-lb.
  9. Install the turn signal switch and wiring harness in the steering column. Attach the wiring harness-to-steering column tube clips (if required). Install the two screws that attach the turn signal switch to the flange casting and the one screw that attaches the warning buzzer terminal. Torque the screws to 20-30 in-lb for the turn signal switch and 15-25 in-lbs for the buzzer terminal.
  10. Install the turn signal actuating lever.
  11. Install the lock drive gear as described later in this Part.
  12. Install the lock cylinder assembly as described later in this Part.
  13. Adjust the ignition switch.
  14. Attach all vacuum lines (if equipped). Reassemble the wires in the hard-shell plastic coupler. **Carefully locate the correct color-coded wire in the correct position in the plastic coupler.**
  15. Connect all electrical connections (quick-couplers) to the steering column.
  16. Install the steering column assembly as described earlier in this Part.
  17. Connect the speedometer cable, the wire harness connections, the PRND21 cable (as required), and the wire cables to the heat/air panel to the instrument cluster. Position the instrument cluster in the instrument panel and install the screws that attach it to the instrument panel. Position the instrument cluster trim cover on the instrument cluster and install the screws that attach it to the instrument cluster.
  18. Install the trim shroud that covers the steering column at the instrument panel.
  19. Install the steering wheel as described earlier in this Part.
  20. Connect the negative battery cable (ground) to the battery terminal.
  21. Check the steering column for proper operation.

### IGNITION LOCK CYLINDER ASSEMBLY

Common instructions for replacing all ignition lock cylinders are contained in Part 13-01.



G1692-2A

FIG. 11 Installing Flange Assembly Pivot Pins

## IGNITION LOCK DRIVE GEAR

### FIXED AND TILT COLUMNS

#### Removal

1. Remove the lock cylinder assembly as described earlier in Part 13-01.
2. Using a flat bladed screwdriver inserted into the recess of the drive gear at the bottom of the lock cylinder housing, turn the lock drive gear three notches counterclockwise.
3. Remove the snap ring, washer and lock drive gear from the lock cylinder housing. **Carefully note the relationship of the lock drive gear to the position of the rack teeth.**

#### Installation

1. Position the lock drive gear in the base of the lock cylinder housing in the same position as that noted during the removal procedure. **The position of the lock drive gear is correct if the last tooth on the drive gear is meshed with the last tooth on the rack (Fig. 8).**

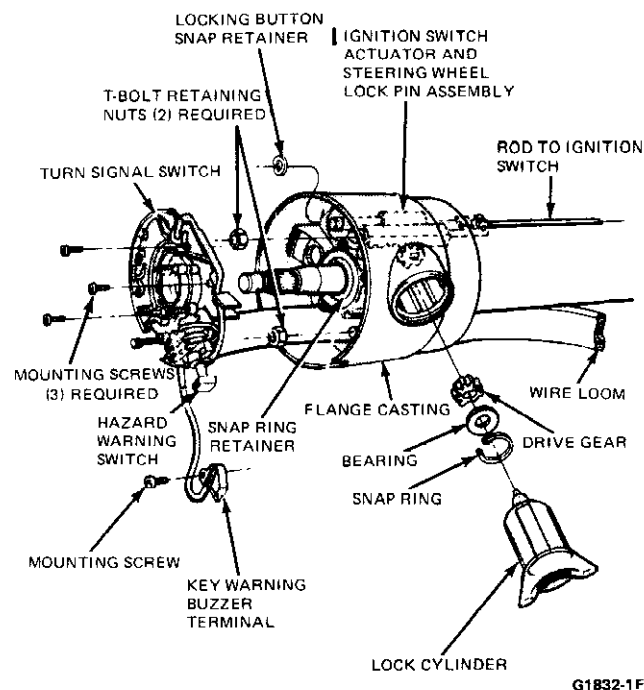


FIG. 12 Fixed Column Mechanism

2. Install the washer and the snap ring.
3. Using a flat bladed screwdriver inserted into the recess of the lock drive gear at the bottom of the lock cylinder housing, turn the drive gear three notches in a clockwise direction.
4. Install the lock cylinder assembly as described earlier in this Part.

## IGNITION LOCK ACTUATOR AND STEERING WHEEL LOCK PIN ASSEMBLY

### FIXED COLUMN

#### Removal

1. Remove the trim shroud that covers the steering column at the instrument panel.
2. Remove the lock drive gear as described earlier in this Part.
3. **Continental Mark V**  
Disconnect the PRND21 cable from the steering column.
4. **Mustang/Pinto/Bobcat**

Remove the section of instrument panel that is located beneath the steering column.

**LTD II/Cougar, Thunderbird**

#### Continental Mark V

Remove the screws that attach the instrument cluster trim cover to the instrument cluster. Remove the instrument cluster trim cover from the vehicle. Remove the screws that attach the instrument cluster to the instrument panel. Remove the instrument cluster from the vehicle. Separate the instrument cluster from the main instrument panel. Disconnect the speedometer cable, the wire harness connections, the PRND21 cable (as required), and the wire cables to the heat/air panel from the instrument cluster. Remove the instrument cluster from the vehicle.

5. **Mustang/Pinto/Bobcat**

Remove the attaching nuts that hold the steering column brackets to the brake support bracket. Lower the steering column to expose the ignition switch.

**LTD II/Cougar,**

**Thunderbird/Continental Mark V**

This step is not required.

6. Loosen the ignition switch attaching nuts and remove the ignition rod from the switch end.
7. Remove the upper shaft bearing as described earlier in this Part.
8. Remove the ignition lock actuator rod and steering wheel lock pin assembly from the steering column.
9. Remove the retaining clip at the lower end of the steering wheel lock pin and discard. Remove the steering wheel lock pin and lock pin spring from the ignition switch actuator. **A new lock pin and retaining clip must be used each time the steering wheel lock pin is removed from the ignition switch actuator.**

#### Installation

1. Insert the new steering wheel lock pin and lock pin spring into the ignition lock actuator. Install a new retaining clip on the lower end of the steering wheel lock pin. **A new lock pin and retaining clip must be used each time the steering wheel lock pin is removed from the ignition lock actuator (Fig. 12).**
2. Position the ignition lock actuator rod and steering wheel lock pin assembly in the steering column.

3. Engage the actuator rod into the ignition switch. Do not tighten the ignition switch retaining nuts.
4. Install the lock drive gear, bearing and snap ring.
5. Install the lock cylinder with the key in the ON position. Install with the retaining pin flush with the lock cylinder. Turn the key to the OFF position.
6. Install the upper shaft bearing, as described earlier in this Part.
7. Adjust the ignition switch as described in Part 33-70.
8. **Mustang/Pinto/Bobcat**  
Raise the steering column into position and attach the nuts that hold the steering column brackets to the brake support bracket. Torque the nuts to 20-37 ft-lb.

**LTD II/Cougar,****Thunderbird/Continental Mark V**

This step is not required.

9. **LTD II/Cougar,****Thunderbird/Continental Mark V**

Connect the speedometer cable, the wire harness connections and the wire cables to the heat/air panel to the instrument cluster. Position the instrument cluster in the instrument panel. Install the screws that attach the instrument cluster to the instrument panel. Position the instrument cluster trim cover on the instrument cluster and install the screws that attach it to the instrument cluster.

10. **Thunderbird/Continental Mark V**

Connect the PRND21 cable to the steering column.

11. Install the trim shroud that covers the steering column at the instrument panel.

**TILT COLUMN****Removal**

1. Remove the Tilt Column Mechanism (as required) as described earlier in this Part.

**Installation**

1. Install the Tilt Column Mechanism (as required) as described earlier in this Part.

**FLANGE AND/OR SOCKET CASTING****FIXED AND TILT COLUMNS****Removal**1. **Fixed Column**

Remove the actuator assembly as described earlier in this Part.

**Tilt Column**

Remove the tilt column mechanism as described earlier in this Part.

2. Disconnect the transmission control rods.
3. Remove the flexible coupling as described in this Part (Tilt Only).
4. Remove the steering column shaft assembly from the top of the steering column (tilt only).
5. Rotate the steering column inner tube and socket casting to expose the socket casting retaining bolt.

6. Remove the socket casting retaining bolt and lift the socket casting off of the steering column inner tube.

**Installation**

1. Position the socket casting (install the gear shift lever if removed) on the steering column inner tube. Align the retaining bolt hole and install the retaining bolt.
2. Install the steering column shaft assembly in the steering column from the top (tilt only).
3. Install the flexible coupling as described in this Part (Tilt Only).
4. Connect the transmission control rods.

5. **Fixed Column**

Install the actuator assembly and steering wheel lock pin assembly as described earlier in this Part.

**Tilt Column**

Install the tilt column mechanism as described earlier in this Part.

**STEERING COLUMN SHIFT TUBE****FIXED COLUMN—LTD II, COUGAR, THUNDERBIRD, CONTINENTAL MARK V, GRANADA, MONARCH AND VERSAILLES****Removal**

1. Remove the steering column assembly as described earlier in this Part.
2. Place the steering column assembly in a vise and secure it in place.
3. Remove the back-up lamp switch.
4. Remove the upper shaft bearing as described earlier in this Part.
5. Remove the steering shaft assembly from the bottom end of the column.
6. Remove the bolt retaining shift tube to the socket casting (automatic transmission).
7. Remove the lower bearing retainer screws (3) from the outer tube (all except Granada and Monarch manual transmission).
8. Remove the retainer and tube assembly from the column (all except Granada and Monarch manual transmission).
9. Remove the three (3) screws attaching the bearing to the retainer and remove the bearing and shift tube from the retainer (all except Granada and Monarch manual transmission).
10. Remove the lower bearing housing and shift tube from the outer tube (Granada, Monarch and Versailles).

**Installation**

1. Insert the shift tube into the bearing retainer. Insert the bearing into the retainer and attach with (3) screws (all except Granada and Monarch).
2. Insert the retainer and tube assembly into the column. Install the (3) screws attaching the bearing retainer to the outer tube (all except Granada and Monarch).
3. Insert the shift tube into the socket casting. Align the retaining bolt holes and install the retaining bolt. Torque the bolt to 35-50 in-lbs.

4. Insert the steering column shaft assembly into the column from the bottom.
5. Install the upper shaft bearing as described earlier in this Part.
6. Install the back-up lamp switch.
7. Install the steering column assembly as described earlier in this Part.

## TILT COLUMN

### Removal

1. Remove the steering column assembly as described earlier in this Part.
2. Place the steering column assembly in a vise and secure it in place.
3. Remove the back-up lamp switch. **It is not necessary to remove the turn indicator switch and wiring harness from the steering column.**
4. Remove the three screws that attach the lower bearing casting to the outer tube. Remove the lower bearing casting from the outer tube.
5. Remove the bolt retaining the shift tube to the socket casting and remove the shift tube from the housing.

### Installation

1. Insert the shift tube into the socket casting. Align the retaining bolt holes and install the retaining bolt. Torque the retaining bolt to 35-50 in-lb.
2. Position the lower bearing casting in the outer tube. Install the three screws that attach the lower bearing casting to the outer tube. Torque the screws to 20-25 in-lb. **ESA-M4G129-A (Loctite) or equivalent must be applied to the threads before installation.**
3. Install the back-up lamp switch.
4. Install the steering column assembly as described earlier in this Part.

## U-JOINT ASSEMBLY

### Removal

1. Remove the nut from the U-joint assembly bolt.
2. Push the bolt outward, disengaging the groove in the steering column lower shaft. **The bolt will not come completely out of the U-joint assembly because it is pinned in.**
3. Remove the two nuts that attach the flexible coupling to the flange (forging) on the steering gear input shaft. Disengage the safety strap and bolt assembly from the flexible coupling.
4. Slide the U-joint assembly off of the steering column lower shaft.

### Installation

1. Hold the bolt back and slide the U-joint assembly onto the end of the steering column lower shaft until the bolt can be pushed inward engaging the groove in the steering column lower shaft. (A gap of at least .040 inch must exist under the head of the bolt. If a gap is less than .040 inch, the steering column lower shaft must be replaced.)
2. Engage the safety strap and bolt assembly to the flexible coupling. Install the two nuts that attach the flexible coupling to the flange (forging) on the

steering gear input shaft. **The safety strap must be properly positioned to prevent metal-to-metal contact after the final torquing of attaching nuts to 20-37 ft-lbs. The flexible coupling must not be distorted when the attaching nuts are torqued.**

3. Install one nut to the U-joint assembly bolt. Torque to 25-35 ft-lbs.

## STEERING WHEEL LOCKING BUTTON

LTD II, COUGAR, GRANADA, MONARCH, MUSTANG, PINTO, AND BOBCAT WITH FLOOR SHIFT

### Removal

1. Remove the flange casting as described earlier in this Part.
2. From inside the flange casting, remove the snap ring from the locking button pivot shaft. **Discard the snap ring.**
3. Remove the locking button assembly from the flange casting.
4. Remove the return spring from the lock button pivot shaft.

### Installation

1. Assemble the return spring to the lock button pivot shaft.
2. Place the lock button assembly in position with the pivot shaft through the hole in the flange casting. **Be sure the spring is retained in the lever and against the flange casting to provide for the automatic return of the lever (Fig. 13).**

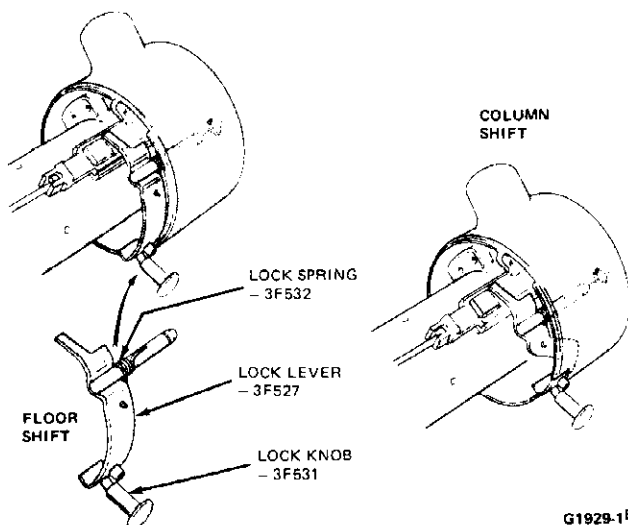


FIG. 13 Locking Button Installation

3. Install a new snap ring to the end of the pivot shaft.
4. Install the flange casting as described earlier in this Part.

## LOWER SHAFT BEARING

### FIXED AND TILT COLUMNS

#### Removal

1. Remove the steering column assembly as described earlier in this Part.

2. Remove the back-up lamp switch.
3. Remove the three screws that secure the lower bearing retainer assembly to the end of the steering column lower flange casting and remove the bearing assembly.
4. The steering column lower shaft bearing may now be snapped out of the plastic retainer.

#### Installation

1. Position a new bearing assembly, installed in the plastic retainer, in the lower end of the steering column lower flange casting.
2. Install the three screws that secure the lower bearing retainer to the steering column lower flange casting. Torque the screws to 12-20 in.-lb.
3. Install the back-up lamp switch.
4. Install the steering column assembly as described earlier in this Part.

## STEERING SHAFT AND ANTI-RATTLE CLIPS

### FIXED COLUMN

#### Removal

1. Remove the steering column assembly as described earlier in this Part.
2. Place the steering column assembly in a vise and secure it in place.
3. Remove the back-up lamp switch.
4. Remove the upper shaft bearing as described earlier in this Part.
5. Remove the steering shaft assembly from the bottom end of the column.
6. Scribe a mark where the upper and lower steering shaft sections form a joint line.
7. Separate the upper and lower steering shaft sections.
8. Remove the two steel anti-rattle clips and discard.

#### Installation

1. Install two new steel anti-rattle clips in the grooves on the steering column upper shaft; **both clips must be installed in the same direction.**
2. Lubricate the lower six inches of the steering column upper shaft with a liberal amount of chassis lubricant.
3. Place the steering column lower shaft in a vise and install the steering column upper shaft to the scribed mark on the steering column lower shaft.
4. Insert the steering shaft assembly into the column from the bottom.
5. Install the upper shaft bearing as described earlier in this Part.
6. Install the back-up lamp switch.
7. Install the steering column assembly as described earlier in this Part.

### TILT COLUMN

#### Removal

1. Remove the steering column assembly as described earlier in this Part.
2. Place the steering column assembly in a vise and secure it in place.
3. Remove the back-up lamp switch. **It is not necessary to remove the turn indicator switch and wiring harness from the steering column.**
4. Remove the steering shaft assembly and tilt mechanism, as described earlier in this Part, into the column from the top.
5. Scribe a mark where the upper and lower steering shaft sections form a joint line.
6. Separate the upper and lower steering shaft sections.
7. Remove the two steel anti-rattle clips and discard.

#### Installation

1. Install two new steel anti-rattle clips in the grooves on the steering column upper shaft, **both clips must be installed in the same direction.**
2. Lubricate the lower six inches of the steering column upper shaft with a liberal amount of chassis lubricant.
3. Place the steering column lower shaft in a vise and install the steering column upper shaft to the scribed mark on the steering column lower shaft.
4. Install the steering shaft assembly and the tilt mechanism, as described later in this Part, into the column from the top.
5. Install the back-up lamp switch.
6. Install the steering column assembly as described earlier in this Part.

## FLEXIBLE COUPLING

### ALL EXCEPT GRANADA, MONARCH AND VERSAILLES

#### Removal

1. Remove the U-joint assembly as described earlier in this Part. **The flexible coupling is riveted to the U-joint assembly. The U-joint assembly must be replaced when flexible coupling replacement is necessary.**

#### Installation

1. Install a new U-joint assembly as described earlier in this Part.

### GRANADA, MONARCH AND VERSAILLES

#### Removal

1. Remove the steering column as detailed previously in this Part.
2. Remove the bolt attaching the coupling to the steering gear.
3. Remove the coupling.

**Installation**

1. Position the stub shaft of the steering gear by locating the notch on the lower flange of the coupling to the missing spline on the shaft.
2. Install the bolt by hand starting 3 threads. Torque the bolts to 20-30 ft-lbs.

3. Install the steering column as outlined previously in this Part.

**SPECIAL SERVICE TOOLS**

| Tool No.     | Description              |
|--------------|--------------------------|
| T67L-3600-A  | Steering Wheel Remover   |
| T67P-3D739-B | Pivot Pin Remover        |
| T67P-3D739-A | Pivot Pin Remover Kit    |
| T67P-3D739-C | Pivot Pin Remover Handle |

**CG1716-1C**

# Steering Columns — Modular I (Extruded Absorber Type)

**PART**  
**13-06**

Applies To Fairmont/Zephyr

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CG2657-2A

## DESCRIPTION

### STEERING COLUMN—COLUMN SHIFT

#### Fairmont/Zephyr

This steering column has been designed to maximize safety and reliability, reduce weight and improve and simplify service. The column is the fixed type (Fig. 1).

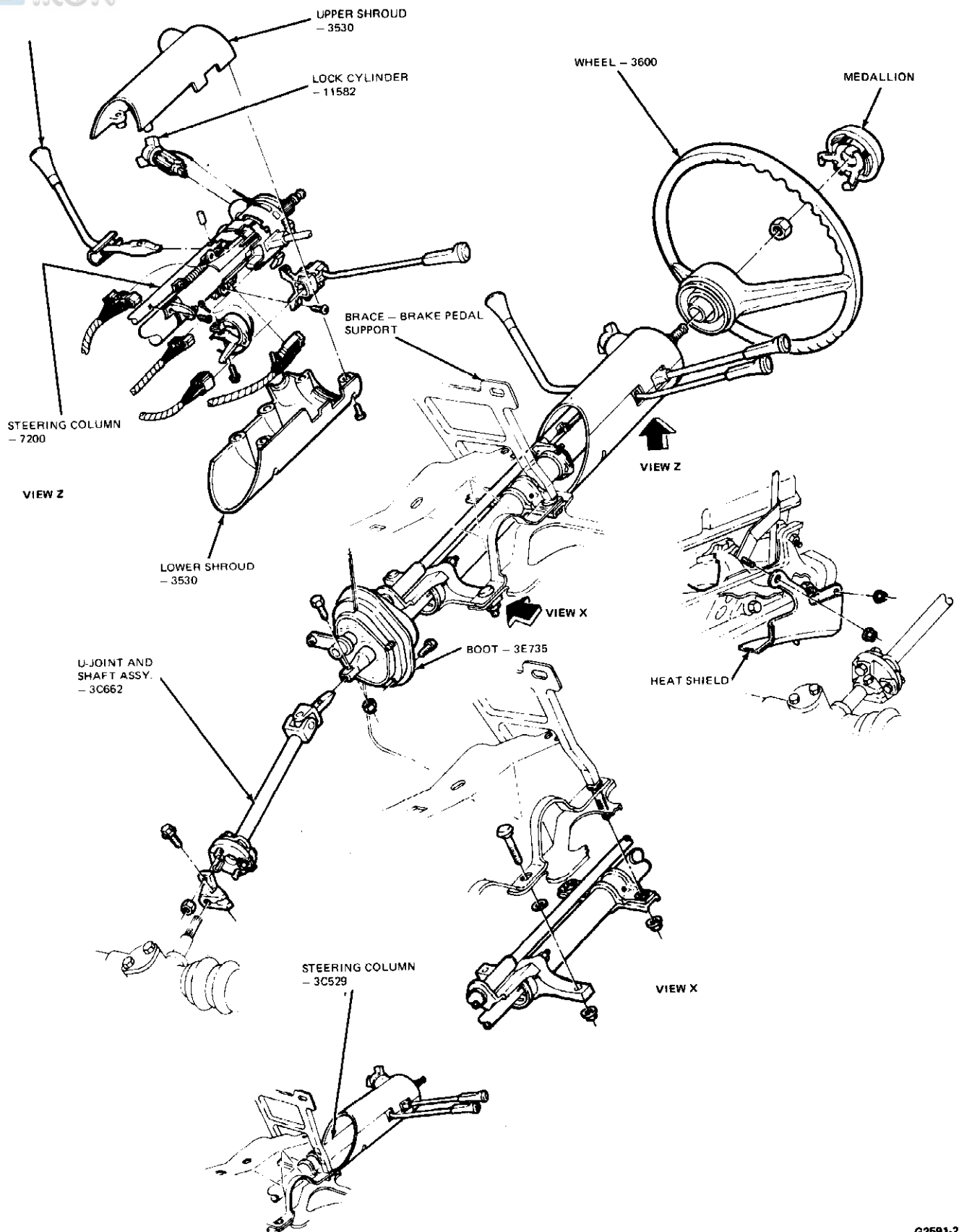
The column is of a modular construction and features easy to service electrical switches and shift systems. The switches contained on the column are the wash/wipe switch, and the turn signal/hazard/horn/dimmer switch, attached with self tapping screws, and the ignition switch attached with break-off head bolts which must be removed with an "Easy Out" or other means. The service of the switches can be performed by removing the four screws holding the color keyed shroud in place.

The column tube terminates just below the attachment to the brake pedal support bracket. Energy absorption is accomplished by the lower column mounting bracket. The shift system is attached external to the column tube by a "C" clip at the upper end and two nuts and bolts at the lower column mounting bracket.

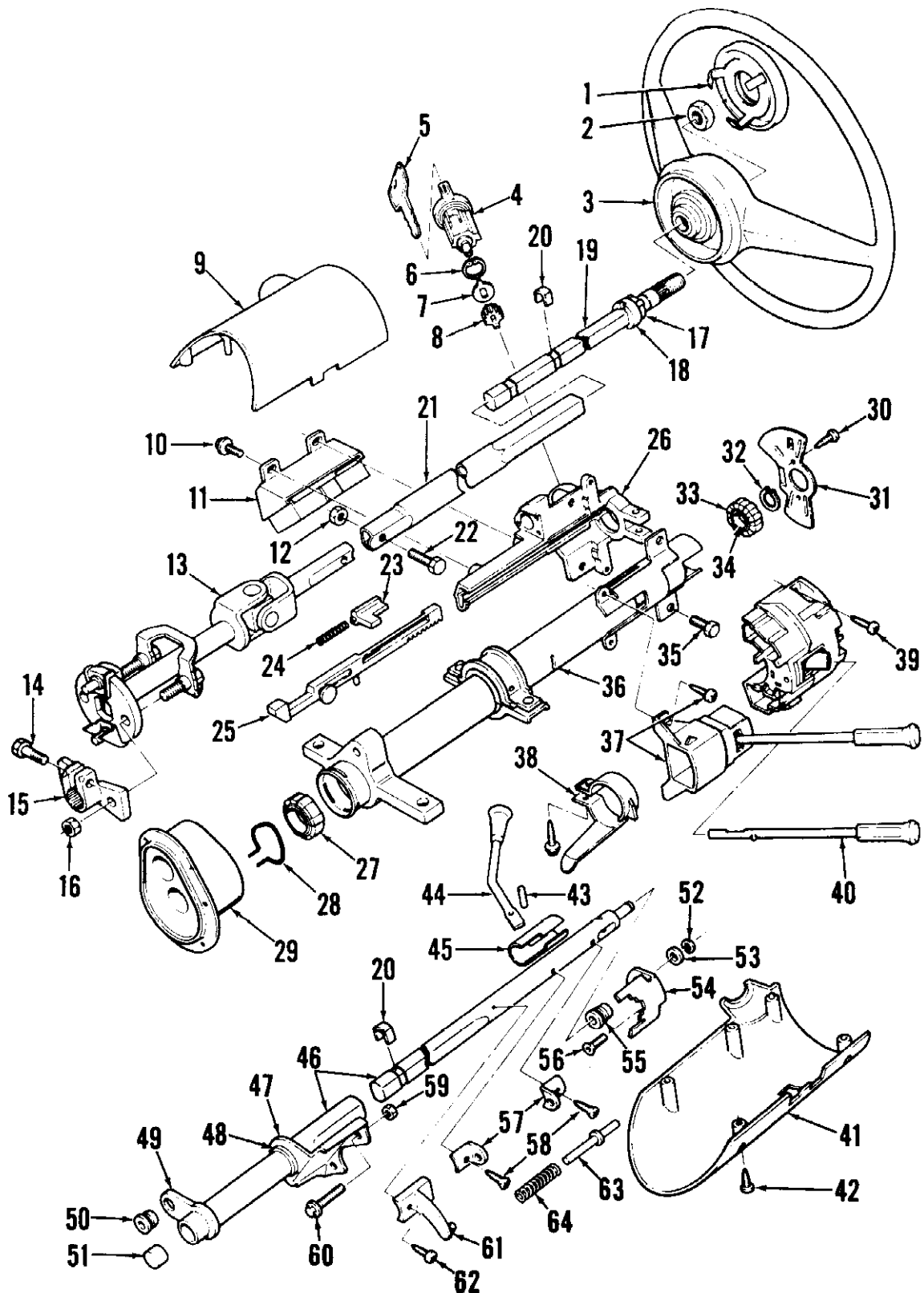
The column locking mechanism is actuated by placing the column shift control in the park position and turning the key lock cylinder to Lock.

The upper steering shaft is a machined rod with a turn signal cancel cam and lock ring pressed and staked on and two steel insulator clips. The lower shaft is a formed tube which fits over the upper shaft and insulator clips. An intermediate shaft and U-joint assembly attaches to the lower steering shaft and to the steering gear at the other end.

The column is attached to the brake pedal support bracket by two collar type brackets bolted to flanges on the brake support. The lower column attaching collar is a sintered iron ring with protrusions within the ring. The protrusions act as a die which deforms the outer tube as the column collapses. Any extension of the iron ring die requires that the outer tube and mounting brackets be replaced as a unit. Refer to Figs. 2 and 2A for part numbers and nomenclature.



**FIG. 1 Steering Column—Modular I—Column and Floor Shift (Extruded Absorber Type)**



**FIG. 2 Steering Columns—Modular I—Column Automatic (Extruded Absorber Type)**

1. 3A515 - EMBLEM ASSY.
2. 33850-S2 - NUT 5/8 - 18 HEX
3. 3600 - WHEEL ASSY - STNG
4. LOCK CYL - (BODY)
5. KEY - (BODY)
6. N800205-S100 - RING
7. 3E700 - BEARING
8. 3E717 - GEAR - STNG COL LOCK
9. 3530 - SHROUD - UPPER
10. N800207-S100 - BOLT (BREAK OFF HEAD) (2 REQ'D)
11. 11572 - SWITCH ASSY. - IGNITION
12. 34977-S2 - NUT 3/8-16 HEX LOCK
13. 3C662 - SHAFT ASSY - STNG COL LOWER
14. 385970-S100 - BOLT - 3/8 - 24 x 1.22
15. 3459 - FLANGE - STNG SHAFT LOWER
16. 34977-S2 - NUT 3/8-16 HEX LOCK
17. 13318 CAM - TURN SIG TURN OFF
18. 3B767 - LOCK - STNG COL POSITION
19. 3A527 - SHAFT - STNG GEAR UPPER
20. 3E629 ANTI-RATTLE CLIPS
21. 3E628 - SHAFT - STNG GEAR LOWER
22. 304741-S2 - BOLT 3/8-16 x 1 3/8 HEX
23. 3E691 - PAWL - STNG COL LOCK
24. 3E696 - SPRING - STNG COL LOCK
25. 3E723 - ACTUATOR ASSY - STNG COL LOCK
26. 3E643 - HOUSING - STNG COL LOCK CYL
27. 3E733 - BEARING ASSY - STNG GEAR SHAFT LOWER
28. 3F543 - RING - STNG GEAR SHAFT LOWER BEARING RETAINER
29. 3E735 - BOOT ASSY - STNG COL
30. 52794-S2 - SCREW NO. 8-18 x .62 PAN HD. TAP (2 REQ'D)
31. 3610 - RETAINER - STNG COL UPPER BEARING
32. 3C610 - RETAINER - STNG COL UPPER BEARING
33. 3518 - SLEEVE - STNG COL UPPER BEARING
34. 3517 - BEARING ASSY - STNG COL UPPER
35. N605531-S2 - BOLT - M8 x 1.25 HEX HD (2 REQ'D)
36. 3A617 - TUBE ASSY COL OUTER
37. WASH/WIPE SWITCH & SCREWS (BODY)
38. 3E363 - BRACKET & CABLE ASSY - TRANS CONT SEL (BODY)
39. 52794-S2 - SCREW NO. 8-18 x .62 PAN HD TAP (2 REQ'D)
40. 13305 - HANDLE & SHANK ASSY - TURN SIG SWITCH
41. 3530 - SHROUD - STNG COL LOWER
42. 55928-S2 - SCREW NO. 8-18 x .75 PAN HD TAP (4 REQ'D)
43. N100198 - PIN 5 MM SPRING COILED
44. 7202 - LEVER ASSY - TRANS CONT SELECTOR
45. 7C369 - COVER - TRANS CONT SEL LEVER OPENING
46. 7212 - TUBE ASSY - TRANS CONT SELECTOR
47. 7K738 - BRACKET - TRANS GEAR SHIFT SUPPORT
48. 7K189 - BUSHING - TRANS GEAR SHIFT SHAFT
49. 7346 - ARM - TRANS CONT SELECTOR
50. 3E629 - INSULATOR - STNG GEAR SHAFT
51. 3B361 - SEAL - STNG GEAR SHAFT
52. 388021-S2 - RING - 5/16 RETAINER (EXTERNAL)
53. N800178-S2 - WASHER - 8.23 FLAT
54. 7A216 - INSERT - TRANS CONTROL SELECTOR POSITION
55. 7225 - BEARING - TRANS GEAR SHIFT LEVER SOCKET
56. N800164-S100 - SCREW - M5 - 0.8 x 12.5 FLAT HEAD (3 REQ'D)
57. 3E543 - RETAINER - STNG COL LEVER (2 REQ'D)
58. N800210-S2 - SCREW 4 MM - 0.7 x 12.7 TYPE "D" OVAL (2 REQ'D)
59. 34976-S2 - NUT 5/16 - 18 HEX PREVAIL TORQUE (2 REQ'D)
60. 56724-S2 - BOLT 5/16-18 x 1.50 FLG PILOT (2 REQ'D)
61. 7449 - LEVER - TRANS GEAR SHIFT SELECTOR
62. 382002-S2 - SCREW NO.8 - 32 x .50 HX WSHR HD
63. 7361 - PLUNGER - TRANS CONTROL SELECTOR LEVER
64. 7B071 - SPRING - TRANS CONTROL SELECTOR LEVER RETURN

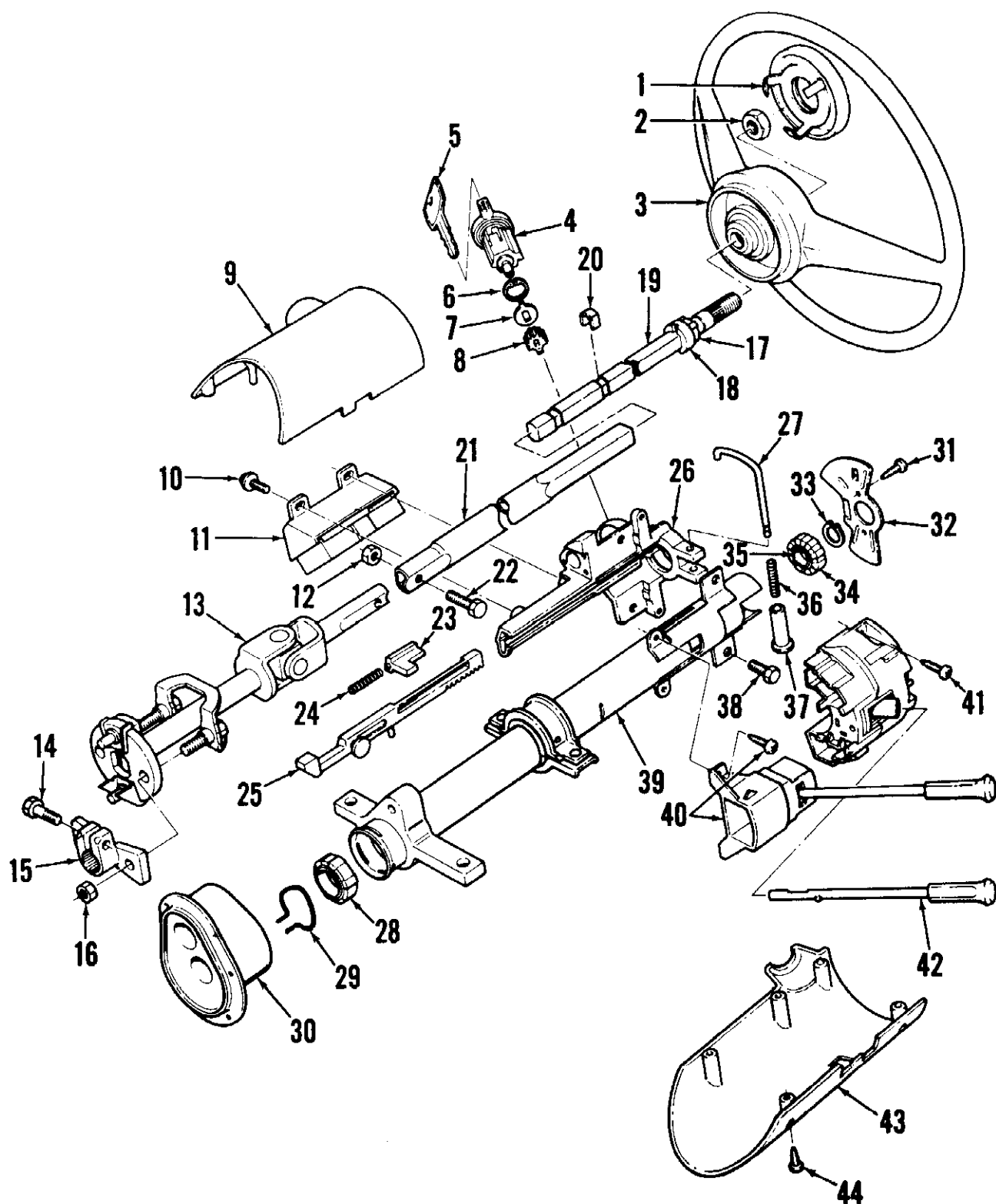
CG2593-2A

**FIG. 2A Component Parts—Column Automatic****STEERING COLUMN—FLOOR SHIFT****Fairmont/Zephyr**

The floor shift columns are identical to the column shift columns except for the lack of the external shift cane unit, a different dash panel boot, shroud and the addition of the key release button (Fig. 1).

The locking mechanism is actuated by depressing the push button located on the lower left side of the column

below the turn signal lever and rotate the key lock cylinder to the "Lock" position. This prevents inadvertent locking of the steering shaft by blocking the lock actuator out of the lock position unless the button is intentionally depressed. Refer to Figs. 3 and 3A for part numbers and nomenclature.



**FIG. 3 Steering Columns—Modular I—Floor Shift (Extruded Absorber Type)**

1. 3A515 - EMBLEM ASSY.
2. 33850-S2 - NUT 5/8 - 18 HEX
3. 3600 - WHEEL ASSY - STNG
4. LOCK CYL - (BODY)
5. KEY - (BODY)
6. N800205-S100 - RING
7. 3E700 - BEARING
8. 3E717 - GEAR - STNG COL LOCK
9. 3530 - SHROUD - UPPER
10. N800207-S100 - BOLT (BREAK OFF HEAD) (2 REQ'D)
11. 11572 - SWITCH ASSY. - IGNITION
12. 34977-S2 - NUT 3/8-16 HEX LOCK
13. 3C662 - SHAFT ASSY - STNG COL LOWER
14. 385970-S100 - BOLT - 3/8 - 24 x 1.22
15. 3459 - FLANGE - STNG SHAFT LOWER
16. 34977-S2 - NUT 3/8-16 HEX LOCK
17. 13318 CAM - TURN SIG TURN OFF
18. 3B767 - LOCK - STNG COL POSITION
19. 3A527 - SHAFT - STNG GEAR UPPER
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21. 3E628 - SHAFT - STNG GEAR LOWER
22. 304741-S2 - BOLT 3/8-16 x 1 3/8 HEX
23. 3E691 - PAWL - STNG COL LOCK
24. 3E696 - SPRING - STNG COL LOCK
25. 3E723 - ACTUATOR ASSY - STNG COL LOCK
26. 3E643 - HOUSING - STNG COL LOCK CYL
27. 3F528 - LEVER - STNG COL LOCK ACTUATOR
28. 3E733 - BEARING ASSY - STNG GEAR SHAFT LOWER
29. 3F543 - RING - STNG GEAR SHAFT LOWER BEARING RETAINER
30. 3E735 - BOOT ASSY - STNG COL
31. 52794-S2 - SCREW NO. 8-18 x .62 PAN HD. TAP (2 REQ'D)
32. 3610 - RETAINER - STNG COL UPPER BEARING
33. 3C610 - RETAINER - STNG COL UPPER BEARING
34. 3518 - SLEEVE - STNG COL UPPER BEARING
35. 3517 - BEARING ASSY - STNG COL UPPER
36. 3E696 - SPRING - STNG COL LOCK
37. KNOB - STNG COL LOCK ACTUATOR
38. N605531-S2 - BOLT - M8 x 1.25 HEX HD (2 REQ'D)
39. 3A617 - TUBE ASSY COL OUTER
40. WASH/WIPE SWITCH & SCREWS (BODY)
41. 52794-S2 - SCREW NO. 8-18 x .62 PAN HD TAP (2 REQ'D)
42. 13305 - HANDLE & SHANK ASSY - TURN SIG SWITCH
43. 3530 - SHROUD - STNG COL LOWER
44. 55928-S2 - SCREW NO. 8-18 x .75 PAN HD TAP (4 REQ'D)

CG2595-2A

**FIG. 3A Component Parts—Floor Shift Column**

## ADJUSTMENTS

### STEERING WHEEL SPOKE

#### POSITION ADJUSTMENT

When the blocked tooth on the steering gear input shaft is in the 12 o'clock position, the front wheels should be in the straight-ahead position and the steering wheel spokes should be in their normal position. If the spokes are not in their normal position, they can be adjusted by changing the toe adjustment (Part 14-01). This adjustment may be made only when the steering wheel 12 o'clock mark is aligned with the

steering shaft 12 o'clock mark. Adjusting the wheel so that the marks do not align will result in improper turn signal switch cancel function.

### PRND21 ADJUSTMENT (SEE STEERING COLUMN INSTALLATION)

### IGNITION SWITCH ADJUSTMENT (SEE IGNITION SWITCH INSTALLATION)

## REMOVAL AND INSTALLATION

### STEERING WHEEL

#### Removal

1. Remove the steering wheel hub cover by pulling outwards to overcome the force of the retention springs.
2. Remove and discard the steering wheel attaching nut.
3. Using Tool T67L-3600-A, remove the steering wheel from the upper steering shaft. Do not use a knock-off type steering wheel puller or strike the end of the steering column upper shaft with a hammer or damage will occur to the bearing of the collapsible steering column (Fig. 4).

#### Installation

1. Position the steering wheel on the end of the steering wheel shaft. Align the mark on the steering wheel with the marks on the shaft to assure that the straight ahead steering wheel position corresponds to the straight ahead position of the front wheels.
2. Install a new service wheel nut. Torque the nut to 30-40 ft-lbs.
3. Position the steering wheel hub cover so that the three retainer springs align with the three slots in the center of the steering wheel and push downward until the hub cover snaps into position.
4. Check the steering column for proper operation.