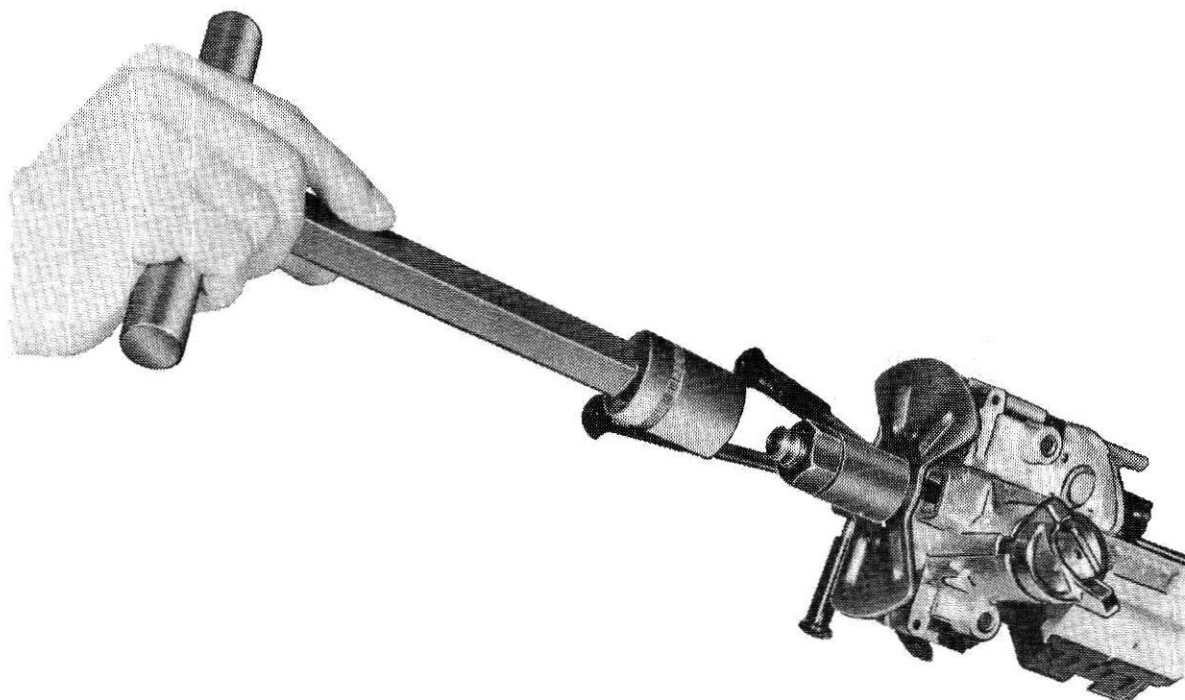




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FIG. 9 Installing Upper Shaft Bearing

and U-joint assembly to the flange on the steering gear input shaft. Torque the nuts to 20-37 ft-lbs. The safety strap must be properly positioned to prevent metal to metal contact after torquing nuts. Pry steering shaft up or down with a suitable pry bar to achieve plus or minus 1/8" (3mm) coupling insulator flatness.

8. Install the trim shroud and tighten the four attaching screws.
9. Install the steering wheel as described earlier in this section.
10. Check the steering column for proper operation.

Lock Cylinder Housing

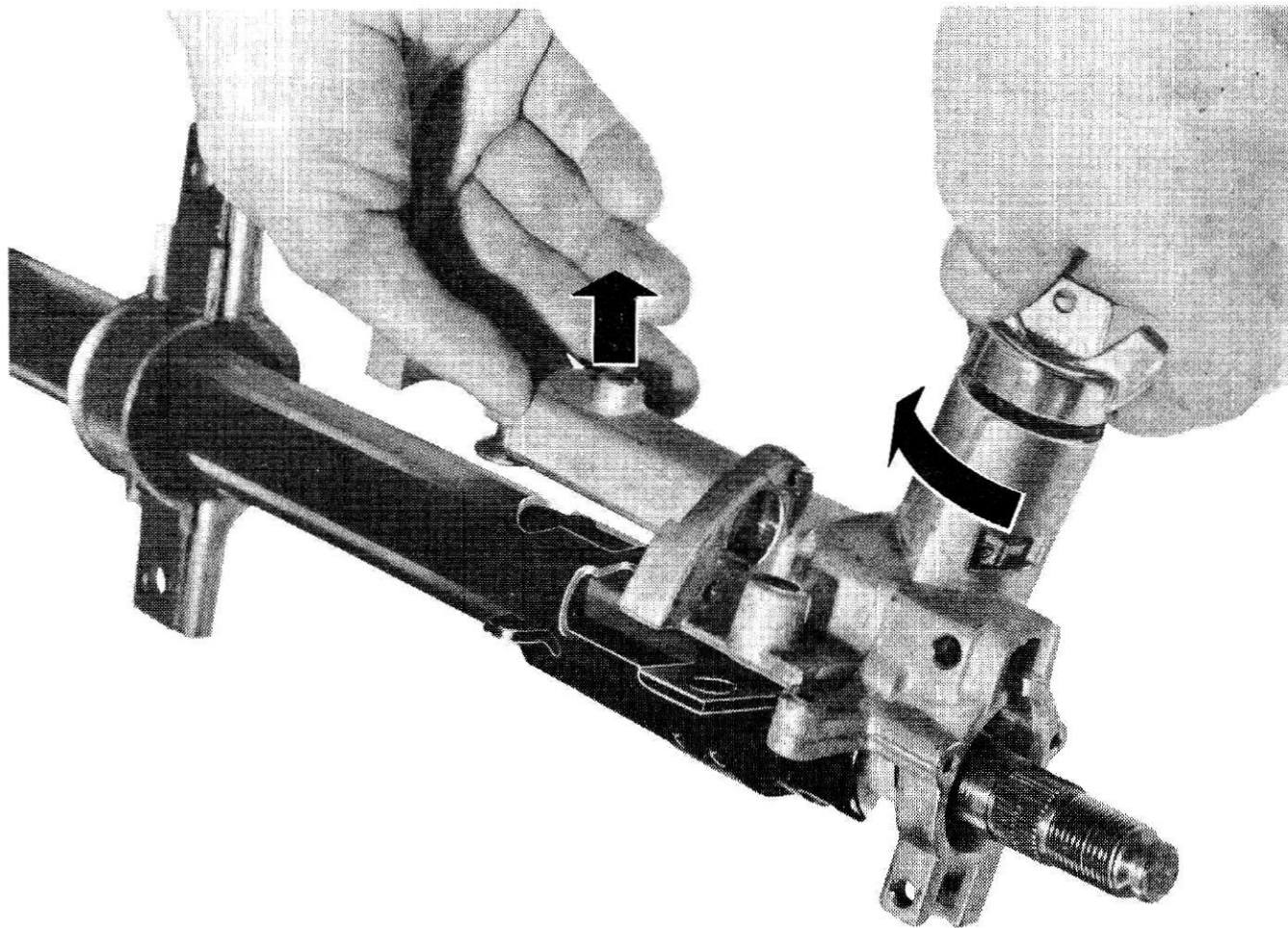
Removal

1. Remove the steering column assembly as described earlier in this section.
2. Remove the shift cane assembly (column shift only) as described earlier in this section.
3. Remove the two screws attaching the turn signal switch to the lock cylinder housing and remove the switch.

4. Remove the wash/wipe switch by removing two screws.
5. Remove the upper steering shaft bearing as described earlier in this section.
6. Remove the two bolts connecting the lock cylinder housing to the outer tube flange bracket. Rotate the ignition key to Start Position and pull the actuator interlock out of the clearance hole in the tube. Lift the casting off the upper steering shaft (Fig. 10).
7. Remove and replace the shift selector detent plate if damaged or excessively worn (column shift only).

Installation

1. Install the upper steering shaft bearing and sleeve in the lock cylinder housing and install the upper bearing retainer plate.
2. Prick punch the steering column upper shaft serration diameter sufficiently to insure an interference fit between the bearing inner race and steering column upper shaft. Place the lock cylinder housing onto the steering column flange bracket with the upper steering shaft protruding through the upper bearing. Turn the ignition key to the Start



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FIG. 10 Removing Lock Cylinder Housing

position to locate the actuator interlock through the clearance hole in the outer tube. Install and torque the two bolts holding the lock cylinder housing to the bracket to 12-21 ft-lb.

3. Place a piece of pipe (.75" inside diameter x 1.5") over the end of the steering column upper shaft and install the steering wheel attaching nut (Fig. 9).
4. Tighten the steering wheel attaching nut until the steering shaft is drawn up into the bearing enough to allow the installation of the snap ring in the groove on the shaft. Remove the steering wheel attaching bolt and piece of pipe.
5. Install the snap ring in the groove on the upper shaft.
6. Install the turn signal switch with two self-tapping screws.
7. Install the wash/wipe switch with two self-tapping screws.
8. Install the shift cane as described earlier in this Part (column shift only).
9. Install the steering column as described earlier in this Part.

Turn Signal Switch

Removal

1. Remove the steering column trim shroud by removing four self-tapping screws.
2. Remove the turn signal switch lever by grasping the lever and by using a pulling and twisting motion of the hand while pulling the lever straight out from the switch.
3. Peel back the foam sight shield from the turn signal switch.
4. Disconnect the two turn signal switch electrical connectors.
5. Remove the two self-tapping screws that attach the turn signal switch to the lock cylinder housing, and disengage the switch from the housing.

Installation

1. Align the turn signal switch mounting holes with the corresponding holes in the lock cylinder housing and install two self-tapping screws until tight.
2. Stick the foam sight shield to the turn signal switch.

3. Install the turn signal switch lever into the switch manually by aligning the key on the lever with the keyway in the switch and pushing the lever toward the switch to full engagement.
4. Install the two turn signal switch electrical connectors to full engagement.
5. Install the steering column trim shrouds.

IGNITION SWITCH

Removal

1. Disconnect the negative battery cable (ground) from the battery terminal. Remove the steering column trim shroud by removing four self-tapping screws.
2. Disconnect the ignition switch electrical connector.
3. Drill out the break-off head bolts that connect the switch to the lock cylinder housing using a 1/8" drill.
4. Remove the two bolts using an Ex-3 easy-out tool or equivalent.
5. Disengage the ignition switch from the actuator pin.

Installation

1. Adjust the ignition switch by sliding the carrier to the switch Lock position. Insert a 7/16" drill bit or similar tool through the switch housing and into the carrier thereby preventing movement of the carrier with respect to the switch housing. It may be necessary to move the carrier slightly back and forth to align the carrier and housing adjustment holes.

NOTE: A new replacement switch assembly includes an adjusting pin already installed.

2. Rotate the ignition key to the "Lock" position.
3. Install the ignition switch on the actuator pin.
4. Install the new "break-off head" bolts and torque until the heads break off.
5. Remove the adjustment drill bit or adjusting pin.
6. Connect the electrical connector to the ignition switch.
7. Connect the negative battery cable to the battery terminal. Check the ignition switch for proper start in Park or Neutral. Also, make certain that the start circuit cannot be actuated in the Drive or Reverse positions and that the column is locked in the lock position.
8. Install the steering column trim shrouds.

Ignition Lock Cylinder Assembly

The following procedure pertains to vehicles that have functional lock cylinders. Ignition keys are available for these vehicles, or the ignition key numbers are known and the proper key can be made.

Removal

1. Remove the trim shroud by removing four self-tapping screws. Remove the electrical connector from the key warning switch.
2. Place the gear shift lever in Park (column shift only) and turn the ignition key to the Run position.

3. Place 1/8" (3.175mm) diameter wire pin or small drift punch in the hole in the casting surrounding the lock cylinder and depress the retaining pin while pulling out on the lock cylinder to remove it from the column housing (Fig. 11).

Installation

1. To install the lock cylinder, turn it to the Run position and depress the retaining pin. Insert the lock cylinder into its housing in the lock cylinder casting. Assure that the cylinder is fully seated and aligned in the interlocking washer before turning the key to the Off position. This action will permit the cylinder retaining pin to extend into the cylinder cast housing hole.
2. Using the ignition key, rotate the lock cylinder to insure correct mechanical operation in all positions. Install the electrical connector onto the key warning switch.
3. Check for proper start in Park or Neutral. Also make certain that the start circuit cannot be actuated in the Drive and Reverse positions and that the column is locked in the Lock position.
4. Install the trim shroud onto the steering column.

The following procedure applies to vehicles in which the ignition lock is inoperative and the lock cylinder cannot be rotated due to a lost or broken ignition key; the key number not known; or the lock cylinder cap is damaged and/or broken to the extent that the lock cylinder cannot be rotated.

Removal

1. Remove the steering column as described earlier in this Part.
2. Remove the shift cane (column shift only) and lock cylinder housing as described earlier in this Part.
3. From the lock cylinder housing with the damaged lock cylinder, remove the ignition switch as described earlier in this section. Remove the washer from the top of the shift cane seat and the shift lever detent plate (column shift only). Retain these components for use on the new lock cylinder housing assembly.
4. Replace the following components:
 - a. 1) lock cylinder housing 3F643
 - b. 1) gear, steering column lock 3E717
 - c. 1) retaining ring N800205
 - d. 1) actuator assembly—steering column lock 3E723
 - e. 1) pawl panel—steering column lock 3E691
 - f. 1) spring—steering column lock 3E696
 - g. 1) bearing—shift cane 7225 (column shift only)
 - h. 1) lock cylinder and key assembly
 - i. 2) break-off head bolts M6-1.0 x 10 N800207
 - j. 1) bearing, steering column lock housing 3E700

Installation

1. To the new lock cylinder housing, install the actuator assembly, lock pawl and spring as described in the Ignition Lock Actuator and Steering Wheel Lock Pawl section of this Part.
2. Install the new gear, bearing, retaining ring and lock cylinder assembly as described in the Ignition Lock Drive Gear section of this Part.
3. Install the new shift cane bearing into the detent plate retained from the damaged lock cylinder housing.



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FIG. 11 Removing Lock Cylinder Assembly

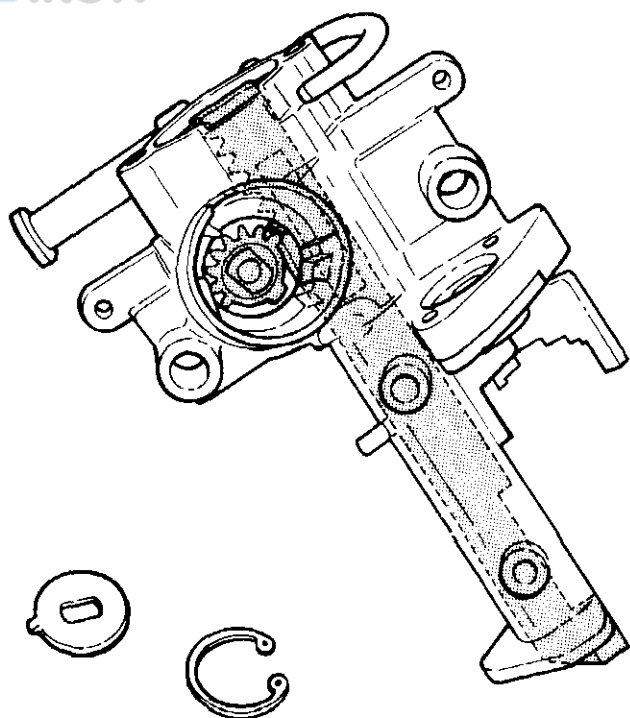
4. On vehicles with column shift, install the shift lever detent plate which was retained from the housing with the damaged lock cylinder and install the new lock cylinder housing.
 5. Adjust the ignition switch retained from the housing with the damaged lock cylinder and install onto the new lock cylinder housing as described earlier in the Ignition Switch section of this Part.
 6. Install the new lock cylinder housing assembly as described earlier in this Part.
 7. Install the shift cane assembly (column shift only) and upper bearing as described earlier in this Part.
 8. Install the steering column as described earlier in this section.
 9. Check for proper start in Park or Neutral. Also check to make certain that the start circuit cannot be actuated in the Drive and Reverse positions and that the column is locked in the Lock position.
2. Insert a flat bladed screwdriver into the recess of the drive gear at the bottom of the lock cylinder housing, and turn the lock drive gear three notches counter-clockwise.
 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 (Fig. 12).**

Installation

Ignition Lock Drive Gear

Removal

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



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FIG. 12 Removing or Installing Ignition Lock Drive Gear

Ignition Lock Actuator and Steering Wheel Lock Pawl

Removal

1. Remove the lock cylinder housing from the steering column as described earlier in this Part.
2. Remove the ignition switch, lock cylinder assembly and ignition lock drive gear as described earlier in this Part.
3. Slide the actuator assembly out the rear of the track in the lock cylinder housing.
4. Remove the lock pawl and spring.

Installation

1. Install the lock pawl and spring on the actuator assembly.
2. Install the actuator assembly into the track on the lock cylinder housing and install the lock drive gear and lock cylinder assembly as described earlier in this Part.
3. Install the ignition switch as described earlier in this Part.
4. Install the lock cylinder housing onto the steering column as described earlier in this Part.

U-Joint Assembly

Removal

1. Remove the nut from the U-joint assembly bolt.
2. Push the bolt completely out of the assembly.
3. Remove the two nuts that attach the flexible coupling to the flange on the steering gear input

shaft. Disengage the safety strap and bolt assembly from the flexible coupling.

4. Slide the U-joint assembly off the steering column lower steering shaft (Fig. 3).

Installation

1. Slide the U-joint assembly into the lower steering shaft until the bolt can be passed through both the steering shaft and U-joint assembly. Torque the nut on the bolt to 30-45 ft-lb.
2. Engage the safety strap and bolt assembly to the flexible coupling. Install the two nuts that attach the flexible coupling to the flange on the steering gear input shaft. **The safety strap must be properly positioned to prevent metal to metal contact after the final torquing of the attaching nuts to 20-37 ft-lbs. The flexible coupling must not be distorted when the attaching nuts are torqued.**

Steering Shaft

Removal

1. Remove the steering column assembly as described earlier in this Part.
2. Remove the shift cane, (column shift only) turn signal and wash/wipe switches, upper steering shaft bearing and lock cylinder housing as described earlier in this Part.
3. Remove the U-joint assembly as described earlier in this Part and pull the steering shaft assembly out of the outer tube from the top of the tube. Remove the lower bearing and lower bearing retaining ring.
4. Scribe a mark on the upper steering shaft where the upper and lower steering shaft sections form a joint line.
5. Separate the upper and lower steering shaft sections.
6. Remove and discard the two insulator clips (Fig. 13).

Installation

1. Install two new steel insulator clips in the grooves on the steering column upper shaft. **Both clips must be installed facing 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 upper shaft into the lower shaft to the scribed mark on the steering column lower shaft.
4. Install the upper steering column bearing and retainer plate in the lock cylinder housing as described earlier in this section and fasten the lock cylinder housing on the outer tube flange bracket loosely.
5. Insert the steering shaft into the outer tube from the bottom of the tube so that the upper end of the shaft protrudes through the lock cylinder housing.
6. Install the steering shaft to the lock cylinder housing as described earlier in this Part, and tighten the two bolts to secure the housing to the outer tube.
7. Install the lower bearing by sliding the bearing and sleeve onto the lower steering shaft and seat into the outer tube. Install the lower bearing retaining ring.