

19-42 STEERING—COLUMNS

plate on jacket with the three mounting screws, and rotate switch to seat switch arm against operating lever.

(5) With switch held in this position, tighten the single mounting screw on one side first, and then tighten the two mounting screws on the other side.

(6) Remove gauge pin from switch.

Installation

(1) Position bracket assembly on steering column (Fig. 2), install and tighten the four **short** retaining screws to 200 inch-pounds. Insert column assembly through floor pan opening, being careful not to damage paint or trim.

(2) With front wheels in straight ahead position and master splines on wormshaft and coupling aligned, engage coupling with wormshaft and install the roll pin.

(3) Hold column assembly with bracket against the instrument panel support. Install but **do not tighten** the two upper bracket nuts.

(4) **Center steering shaft coupling at midpoint of its travel.** This is accomplished by moving column and bracket assembly fore and aft in the instrument panel support so dimension between top of coupling and center of gauge hole is 13/16 inch (Fig. 6). Tighten the two upper bracket nuts to **95** inch-pounds. **Valiant and Barracuda models with power steering** have no gauge hole in the steering shaft. Measure from top of coupling to weld on steering shaft. Adjust to 3/8 inch.

(5) Position floor plate over floor pan opening, centering it around the column, then install and tighten retaining bolts. Slide "O" ring down the jacket and into recess in floor plate, position retaining plate over "O" ring and secure with the two bolts.

Do not pry to align plates and attaching bolts or column misalignment will occur.

(6) Place shim pack between column bracket forward leg and instrument panel support. **Maximum shim pack thickness error must not exceed .060 inch before tightening the bolt.** Add shims, if necessary, then tighten bolt to 95 inch-pounds. **Fury Models:** loosen bolt attaching the forward adjustable extension leg to the instrument panel support. Attach column bracket forward leg to the extension with bolt, and tighten to 95 inch-pounds. **Then tighten the extension leg to instrument panel support bolt securely.**

(7) **Fury Models:** Connect gearshift indicator link (slotted end) to operating lever on column with bolt in its approximate original location. Slowly move gearshift lever from "1" (low) to "P" (park) pausing briefly at each selector position. The indicator pointer must align with each selector position. If necessary, loosen the bolt and readjust link to align pointer correctly.

(8) Attach finish plate to bottom of instrument panel.

(9) Install turn signal lever.

(10) Place steering wheel on steering shaft with master splines aligned. Install retaining nut and washer, tighten nut to 24 foot-pounds. **Do not drive wheel on shaft, draw wheel down with retaining nut.**

(11) Install horn switch parts previously removed from steering wheel. Connect horn switch wire. Install horn ring ornament and lock by turning clockwise.

(12) Connect wiring connectors at steering column jacket. Connect battery ground cable, test operation of lights and horns.

(13) Connect and adjust gearshift linkage, refer to "Transmission Group".

STEERING COLUMN (MANUAL TRANSMISSION)

INDEX

Assembly	Page 43
Disassembly	43
Inspection	43

Installation	Page 45
Removal	42

Removal

(1) Disconnect negative (ground) cable from battery.

(2) Disconnect shift linkage rods from levers at lower end of steering column.

(3) Remove steering shaft lower coupling to wormshaft roll pin.

(4) Disconnect wiring connectors at steering column jacket.

(5) Remove horn ring ornament assembly by turning counterclockwise.

(6) Disconnect wire at horn switch. Remove three screws attaching horn ring and switch to steering wheel, then remove horn ring and switch.

(7) Remove steering wheel retaining nut and washer. Remove steering wheel with Tool C-3428A. **Do not bump or hammer on steering shaft to remove wheel.** Remove turn signal lever.

(8) Remove floor plate to floor pan attaching screws. Remove finish plate from under instrument panel to expose steering column bracket.

(9) Remove two nuts and one bolt attaching steer-

ing column bracket to instrument panel support. Save shim pack from between bracket forward leg and support for reuse during installation.

(10) Carefully pry lower coupling from steering gear wormshaft, then remove column assembly out through passenger compartment being careful not to damage paint or trim.

Disassembly

(1) Remove four bolts attaching bracket assembly to column jacket (Fig. 1). **Set bracket aside to protect breakaway capsules.**

(2) Remove two screws and lift off wiring trough. Attach Column Holding Fixture C-4048 to column jacket and clamp the assembly in a vise.

(3) Drive out gearshift lever pivot pin, then remove lever from housing.

(4) Remove snap ring from upper end of steering shaft (Fig. 2). Remove turn signal switch and upper bearing retainer screws. Remove retainer and lift switch upward out of the way.

(5) Install steering shaft remover C-4044 (Fig. 3), and press shaft out of upper bearing. Slide steering shaft assembly out of column. **Do not bump or hammer on steering shaft to remove.**

(6) While pulling slightly on wire (Fig. 4), insert a small screwdriver (with thin blade) above and below terminal to release tangs, then pull wire from connector. Remove all wires in same manner.

(7) Remove three screws securing lower support in the column jacket (Fig. 5), slide support and bearing assembly out of jacket. Remove low-reverse lever and spacer from shift tube.

(8) Remove two lower shift tube bushing retaining screws at slotted holes in jacket (Fig. 5). Slide shift tube with 2nd and direct lever, bushing, spring and spring retainer out of jacket (Fig. 6).

(9) Remove nuts from the two bearing housing retaining bolts (Fig. 7). Remove bearing housing and carefully pull wiring through gearshift housing. Remove bearing and insulator from bearing housing.

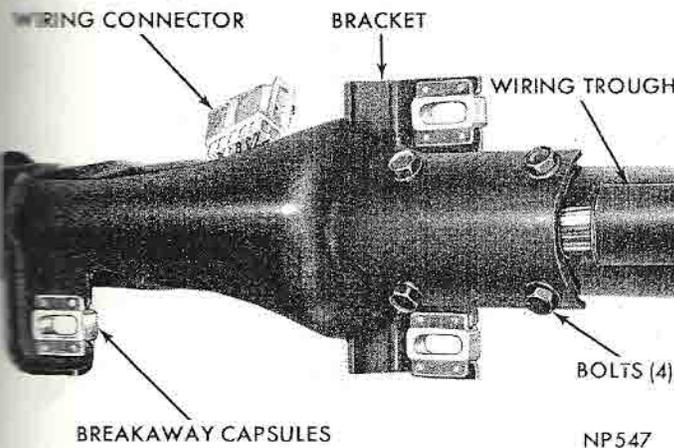


Fig. 1—Steering Column Bracket Assembly

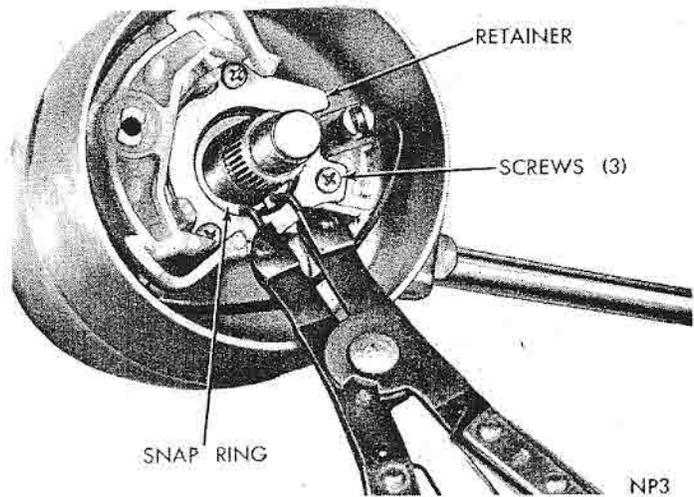


Fig. 2—Removing or Installing Steering Shaft Snap Ring

(10) Remove gearshift housing and spring washer from end of jacket.

Inspection

After cleaning, inspect all parts for wear or damage. Note condition of pins in two lower shift levers, shift lever socket at top end of shift tube, and inner end of shift lever.

Inspect steering shaft upper bearing for smooth operation, and lubricate with Multi-Purpose Chassis Lubricant or similar lubricant. If bearing has any signs of roughness or wear, it should be replaced. Replacement bearings are pre-lubricated.

Assembly

Apply a thin coating of Multi-Purpose grease to all friction surfaces.

(1) Install column holding fixture and clamp column in a vise with both ends of column accessible.

(2) Coat spring washer with grease and install on

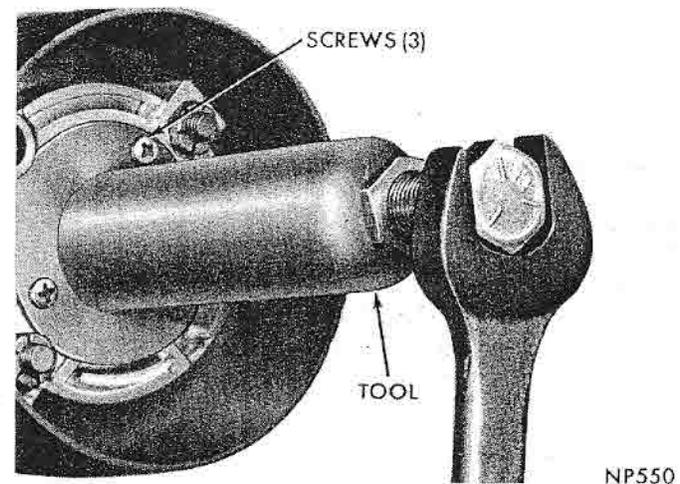


Fig. 3—Removing Steering Shaft from Upper Bearing

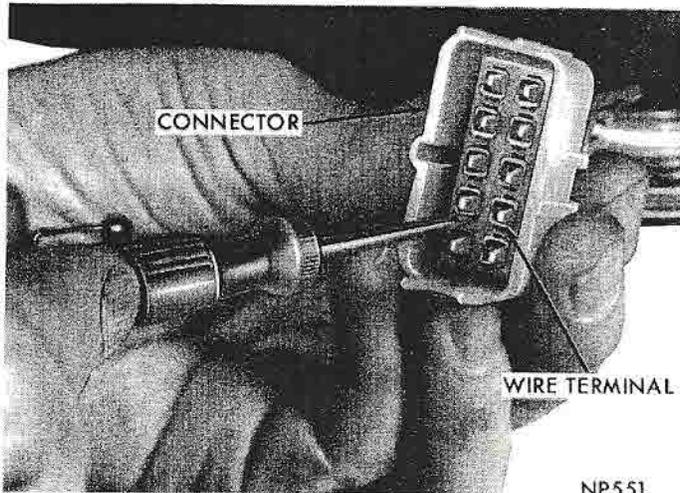


Fig. 4—Removing Wires from Connector

lower hub of gearshift housing. Position gearshift housing on the jacket.

(3) Place two bearing housing retaining bolts in position in housing and just start retaining nuts (Fig. 7), then thread turn signal wiring through the housing.

(4) Install bearing housing while guiding wiring through gearshift housing. Position housing so bolt heads engage in slots in column jacket. Tighten bolt nuts alternately and evenly in steps to prevent unseating bolt heads from the slots.

(5) Lubricate floor plate O-ring with a soap solution or rubber lubricant and slide floor plate assembly on steering column. **The floor plate assembly must be installed before installing shift tube and lever.**

(6) Turn bushing on shift tube (Fig. 6) so the two holes in bushing are aligned with centerline of 2nd and direct shift lever. Slide shift tube and lever assembly through jacket and into gearshift housing, start the two bushing retaining screws through slots in jacket but do not tighten.

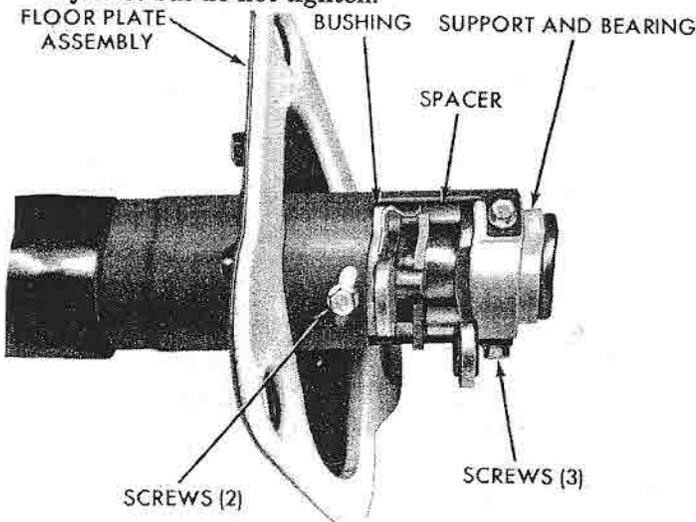


Fig. 5—Shift Tube and Levers—Assembled

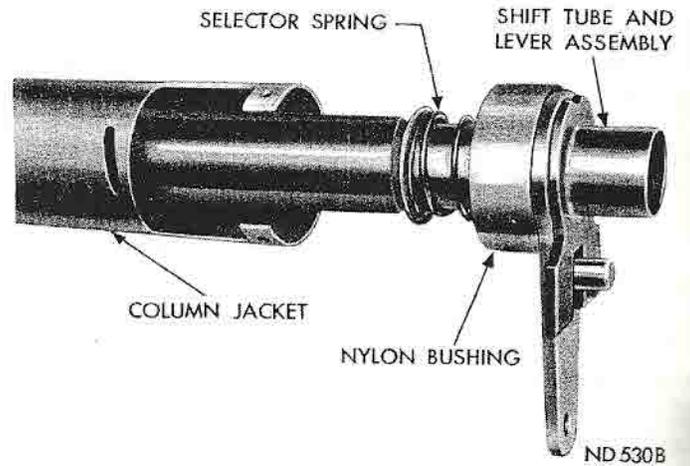


Fig. 6—Removing Shift Tube Assembly

(7) Install spacer (Fig. 5) around selector lever so it rests against 2nd and direct shift lever. Install low and reverse lever. Then install support and bearing assembly, install and tighten the three retaining screws to 30 inch-pounds.

(8) Rotate bushing (Fig. 5) to where all play at shift levers and spacers is eliminated, but no binding occurs. With bushing in this position, tighten the two bushing to jacket screws to 30 inch-pounds.

(9) Place a screw driver blade between 2nd and direct shift lever and cross-over blade so it will be held in neutral position half way between the two shift levers (Fig. 8).

(10) Position gearshift lever in housing so ball end with insulator ring engages hole in shift tube key. Align and install retaining roll pin.

(11) Place insulator over column upper bearing and install assembly into bearing housing bore (Fig. 7). Use a soap solution or rubber lubricant to ease installation.

(12) Install snap ring in lower groove on upper end of steering shaft. Slide shaft into column and through upper bearing **by hand**. Install Tool C-3879, washer and steering wheel nut (Fig. 9), pull shaft through bearing, then install upper snap ring.

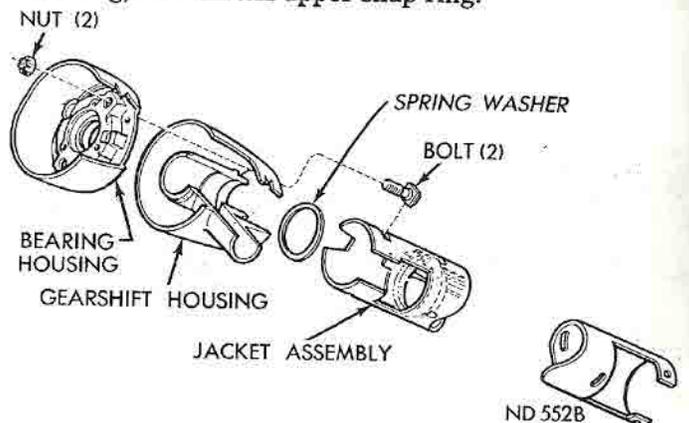


Fig. 7—Upper End of Column—Disassembled

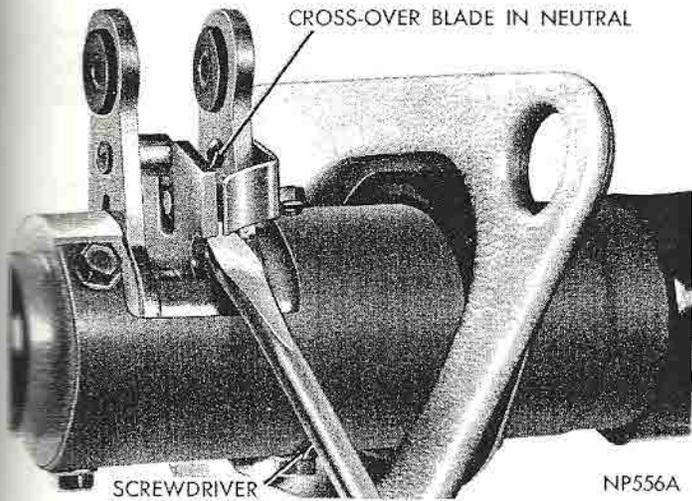


Fig. 8—Holding Cross-Over Blade in Neutral Position

(13) Position turn signal switch in bearing housing, install switch retainer plate and secure with the three screws.

(14) Bend turn signal wiring terminal tangs outward slightly (Fig. 10). Then install wires in their proper location in the connector (Fig. 11). Install wiring trough and secure with the two screws.

(15) Position bracket assembly on steering column (Fig. 1), install and tighten the four **short** retaining screws to 200 inch-pounds.

Installation

(1) Insert column assembly through floor pan opening, being careful not to damage paint or trim.

(2) With front wheels in straight ahead position and master splines on wormshaft and coupling aligned, engage coupling with wormshaft and install the roll pin.

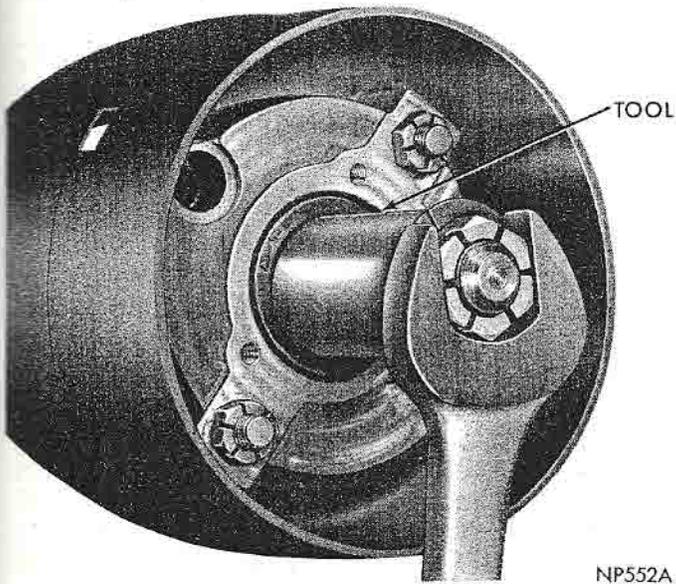


Fig. 9—Pulling Shaft Through Bearing

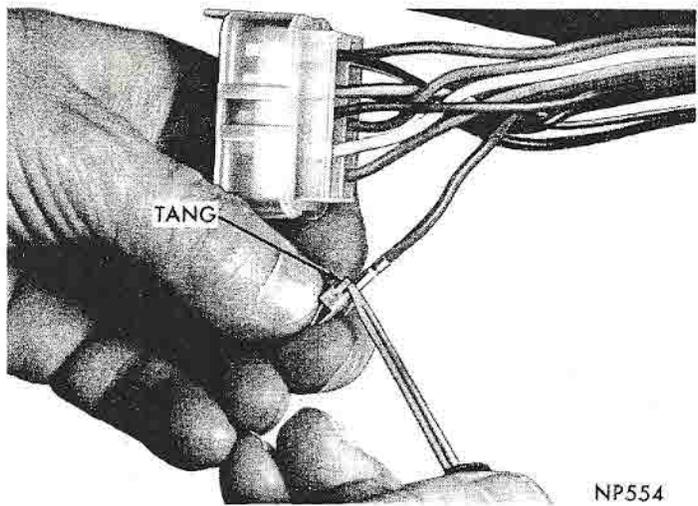


Fig. 10—Spreading Tang on Wire Terminal

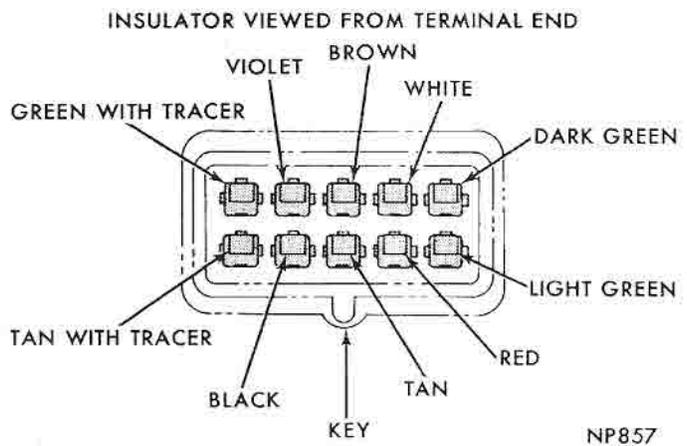


Fig. 11—Turn Signal Color Code

(3) Hold column assembly with bracket against the instrument panel support. Install but **do not tighten** the two upper bracket nuts.

(4) **Center steering shaft coupling at midpoint of its travel.** This is accomplished by moving column and bracket assembly fore and aft in the instrument panel support so dimension between top of coupling and center of gauge hole is 13/16 inch (Fig. 12). Tight-

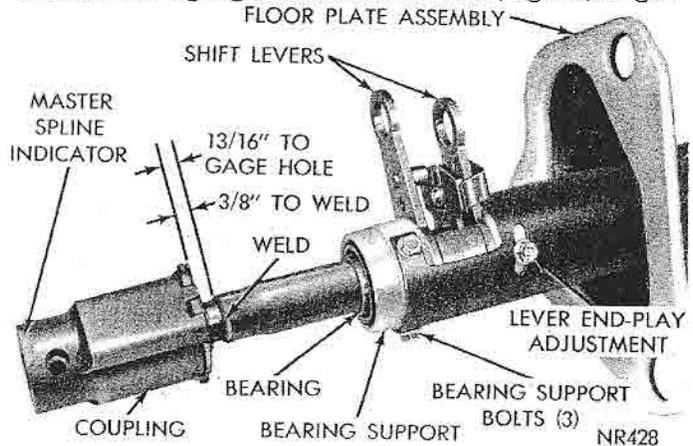


Fig. 12—Steering Column—Lower End

en the two bracket nuts to 95 inch-pounds. **Valiant and Barracuda models with power steering** have no gauge hole in the steering shaft. Measure from top of coupling to weld on steering shaft. Adjust to 3/8 inch.

(5) Position floor plate over floor pan opening, centering it around the column, then install and tighten retaining bolts. Slide "O" ring down the jacket and into recess in floor plate, position retaining plate over "O" ring and secure with the two bolts. **Do not pry to align plates and attaching bolts or column misalignment will occur.**

(6) Place shim pack between column bracket forward leg and instrument panel support. **Maximum shim pack thickness error must not exceed .060 inch before tightening the bolt.** Add shims, if necessary, then tighten bolt to 95 inch-pounds. **Fury Models:** Loosen bolt attaching the forward adjustable extension leg to the instrument panel support. Attach column bracket forward leg to the extension with bolt,

and tighten to 95 inch-pounds. **Then tighten the extension leg to instrument panel support bolt securely.**

(7) Attach finish plate to bottom of instrument panel.

(8) Install turn signal lever.

(9) Place steering wheel on steering shaft with master splines aligned. Install retaining nut and washer, tighten nut to 24 foot-pounds. **Do not drive wheel on shaft, draw wheel down with retaining nut.**

(10) Install horn switch parts previously removed from steering wheel. Connect horn switch wire. Install horn ring ornament and lock by turning clockwise.

(11) Connect wiring connectors at steering column jacket. Connect battery ground cable, test operation of lights and horns.

(12) Connect and adjust gearshift linkage, refer to "Transmission Group".

STEERING COLUMN (TILT-A-SCOPE)

INDEX

General Information	Page 46
Steering Column	
Assembly	53
Disassembly	49
Inspection	53
Installation	55

Removal	Page 48
Steering Wheel	
Assembly	48
Disassembly	48
Installation	48
Removal	48

GENERAL INFORMATION

The Tilt-A-Scope column has safety features which permit the column to telescope from impact at a controlled rate under head-on collision conditions. The telescoping action reduces the likelihood of the steering wheel being driven rearward toward the driver. If the driver is thrown forward into the wheel, the column can telescope further at the same controlled rate; thereby, reducing force of the impact.

The center section of the column jacket has diamond-shaped perforations and is formed with accordion pleats (Fig. 1). These pleats allow it to compress like a bellows from impact forces.

The gearshift tube is made up of three short sections, each designed to telescope into the adjoining section. These sections are interconnected and held together by injections of plastic that form the interconnecting inserts and shear pins. Under impact, the pins shear first, followed by a gradual paring away of the inserts by the knife-like edge in the adjoining tube section.

The steering shaft is a two-piece assembly. The upper piece is solid and has a double-flatted lower section. The lower piece is hollow and formed to fit over the double-flatted section of the upper piece. The

purpose of the flatted section is to provide continued steering action even though completely telescoped. Plastic is injected through two small holes in the hollow piece into a pair of annular grooves on the solid portion of the shaft. The four small holes filled with plastic form the shear pins. Upon impact, the shear pins break off and the shaft gradually telescopes against a resistance provided by the plastic collars in the annular grooves.

The mounting bracket is designed to restrain the column from being shifted toward the driver during impact. It incorporates three "breakaway capsules" that allow the mounting bracket to slip off the attaching points in the instrument panel, permitting the steering column to compress or yield in a forward direction under a severe impact from the driver's side.

When the column is installed in a car it is no more susceptible to damage through ordinary usage than previous columns; however, when it is removed, special care must be taken in handling this assembly. When the column is removed from the car such actions as a sharp blow on the end of the steering shaft or shift levers, leaning on the column assembly, or dropping of the assembly could shear or loosen the