

# Front Suspension

## FORD MOTOR CO., SPRING TOWER

Comet & Maverick  
Granada & Monarch

### DESCRIPTION

The front suspension is a ball joint type with a coil spring located between the upper control arm and the spring tower. The upper control arm pivots on bushings located on a shaft assembly which is bolted to the frame. The lower control arm pivots on a bolt attached to the number 2 crossmember. The shock absorber is attached to the pivot seat and the top of the spring tower. This suspension is similar to the enclosed spring suspension used on other models except for the location of the coil. On the enclosed spring models, the coil is located between the upper and lower control arms. See *Ford Motor Co. Enclosed Spring* in this Section.

### ADJUSTMENT

#### CASTER & CAMBER

See *Caster and Camber Adjustments and Specifications* in *WHEEL ALIGNMENT* Section.

#### RIDING HEIGHT

See *Riding Height Adjustments and Specifications* in *WHEEL ALIGNMENT* Section.

#### FRONT WHEEL BEARINGS

See *Wheel Bearing Adjustment* in *WHEEL ALIGNMENT* Section.

#### BALL JOINT CHECKING

See *Ball Joint Checking* in *WHEEL ALIGNMENT* Section.

### REMOVAL & INSTALLATION

#### BALL JOINTS

**NOTE** — Upper and lower control arms must always be replaced as an assembly. Do not install ball joints or other components in used control arm.

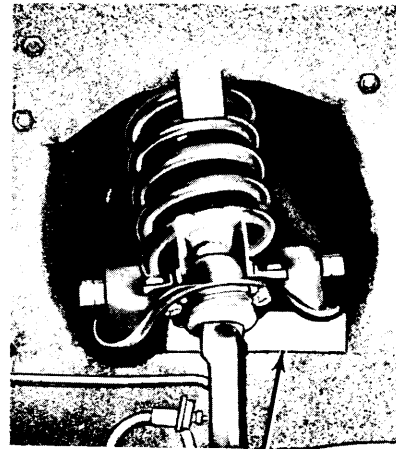
#### STABILIZER BAR BUSHING & INSULATOR

**Removal** — Raise vehicle on hoist. Remove nut, washer, and insulator from lower end of stabilizer bar attaching bolt. Remove bolt and remaining washers, insulators, and spacer.

**Installation** — Reverse removal procedure, noting the following: Stabilizer bar-to-lower arm bolt must be installed with head at top.

#### LOWER ARM STRUT AND/OR BUSHING

**Removal** — Position wood blocks under upper arm as shown in illustration. Raise vehicle, position safety stands, and remove wheel and tire. Remove adjustment nut from front of strut, then remove the two nuts attaching strut to lower arm. Tap strut upward to loosen, then remove strut. With two pry bars approximately 18" long, pry front washer forward to separate inner sleeve from outer sleeve. Remove front insulator from strut.



Wood Block

Fig. 2 View Showing Positioning of Wooden Block for Upper Control Arm Support

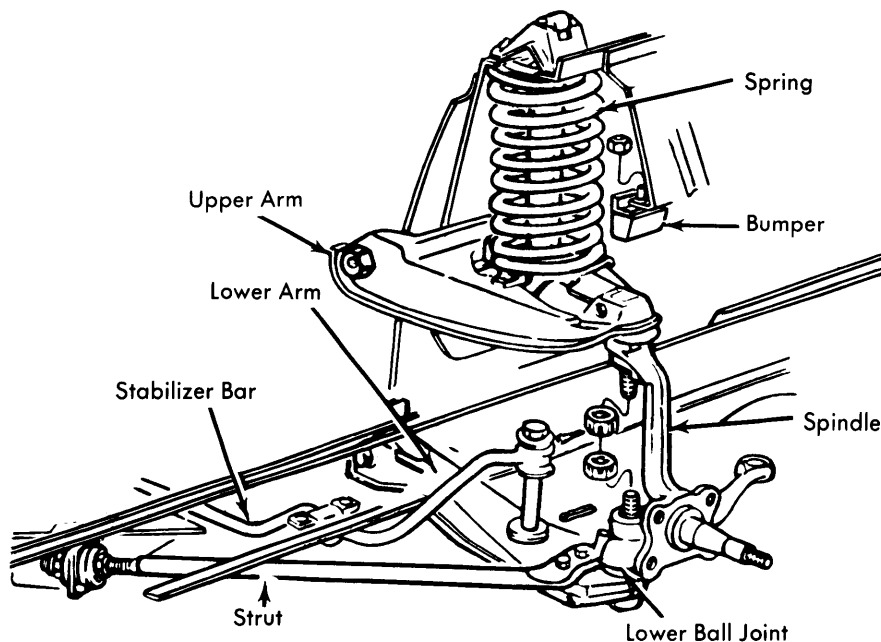


Fig. 1 Exploded View of Ford Spring Tower Type Front Suspension Assembly

## FORD MOTOR CO., SPRING TOWER (Cont.)

**Installation** — Install new rear washer (large I.D.), outer sleeve, and insulator bushing on forward end of strut rod. Position strut into crossmember and to lower control arm. Install and torque attaching bolts and nuts.

### COIL SPRING

**Removal** — 1) Remove shock absorber and upper mounting bracket as an assembly. Position wooden block as shown in Fig. 2. Raise vehicle on a hoist, install safety stands, then remove wheel, brake caliper and rotor. Install coil spring compressor tool as shown in Fig. 3.

2) Remove the two upper arm-to-spring tower attaching nuts and swing upper arm outboard from spring tower. Release spring compressor tool and remove tool from spring. Remove spring from vehicle.

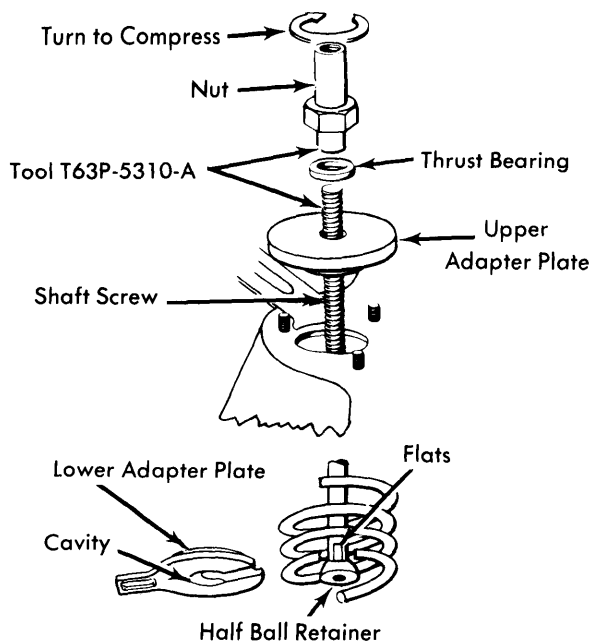


Fig. 3 Installation of Coil Spring Compressor Tool

**Installation** — Reverse removal procedures and tighten nuts and bolts. End of coil spring must be no more than  $\frac{1}{2}$ " from tab on spring seat.

### UPPER CONTROL ARM

**Removal** — Raise and support vehicle, then remove wheel and tire assembly and shock absorber. Install spring compressor and compress spring. **NOTE** — On all V8 vehicles, remove air cleaner to obtain access for spring compressor. Remove cotter pin from upper ball joint stud and loosen (do not remove) nut one or two turns. Position ball joint remover tool between upper and lower ball joint studs. Tool should seat firmly against ends of both studs (not against stud nuts). Turn tool to put tension on studs, then hit spindle near upper stud to break stud loose in spindle. Remove nut from upper stud and lift stud out of spindle. Remove upper arm inner shaft attaching nuts and remove upper arm.

**Installation** — Reverse removal procedure while noting the following: Specified Keystone-type lock washers must be used when installing upper control arm on underbody mounting bracket.

### LOWER CONTROL ARM

**Removal** — Place a wood block between upper arm and side rail. Raise vehicle, position safety stands, and remove wheel and tire. Detach stabilizer bar and link. Remove strut-to-lower arm attaching nuts and bolts. Loosen lower ball joint nut one or two turns (do not remove). Install suitable removal tool between upper and lower ball joint studs. Apply pressure to studs with tool, strike spindle near lower stud until ball joint breaks loose, and remove ball joint nut. Lower the control arm. Remove lower arm-to-underbody cam bolt, nut, and washer. Remove arm.

**Installation** — Reverse removal procedure and tighten nuts and bolts. Check caster, camber and toe-in.

### UPPER CONTROL ARM BUSHING SERVICE

**NOTE** — Following procedure pretains to Maverick and Comet models only. Upper control arm shaft bushings may not be replaced on Granada and Monarch models. If bushing requires replacement, complete control arm must be replaced as an assembly.

**Removal (Maverick & Comet)** — Remove upper control arm as previously described. Rotate control arm inner shaft so that studs may be removed, then remove studs. Unscrew bushings from shaft and control arm.

**Installation (Maverick & Comet)** — Apply grease to new bushings and install them on inner shaft and arm. Rotate bushings so shaft is exactly centered in arm. Place a  $\frac{3}{4}$ " by  $8\frac{3}{16}$ " spacer parallel with inner shaft and tighten bushings to seat them up against the outside of control arm. **NOTE** — With bushings installed, move control arm on shaft to ensure no binding exists. Remove spacer from control arm and install studs. Install control arm in vehicle.

### FRONT WHEEL SPINDLE

**Removal** — 1) Position wooden block between upper control arm and frame as shown in Fig. 2. Raise and support front of vehicle. Remove disc brake caliper and support out of way with wire. Remove hub and rotor assembly, then remove disc brake shield.

2) Disconnect tie rod end from spindle arm. Loosen but do not remove upper and lower ball joint stud nuts. Using ball joint removal tools, loosen ball joint studs in spindle. Position floor jack under control arm, remove ball joint stud nuts, then lower jack and remove spindle.

**Installation** — To install wheel spindle, reverse removal procedure and tighten all nuts and bolts to specified torque value. **NOTE** — If spindle is being replaced due to accident damage, check front wheel alignment and adjust as necessary.

# Front Suspension

## FORD MOTOR CO., SPRING TOWER (Cont.)

### TIGHTENING SPECIFICATIONS

Application	Ft. Lbs.
Ball Joint-to-Spindle.....	①75-90
Brake Shield-to-Spindle .....	9-14
Caliper-to-Spindle .....	90-120
Rubber Bumper.....	12-20
Strut-to-Lower Control Arm.....	90-115
Lower Control Arm-to-Underbody.....	85-100
Shock Absorber	
Lower Mounting.....	8-12
Upper Mounting .....	10-16
Stabilizer Bar-to-Body .....	6-12
Stabilizer-to-Lower Control Arm .....	6-12
Upper Control Arm Inner Shaft.....	85-100
Upper Spring Seat-to-Arm Shaft.....	25-40

① — Tighten to minimum torque, then tighten castellated nut to align next slot with cotter pin hole; insert cotter pin.