

FORD MOTOR CO., ENCLOSED SPRING

Bobcat & Pinto
Cougar, LTD II & Thunderbird
Ford & Mercury
Lincoln & Mark V

DESCRIPTION

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

Removal (Bobcat and Pinto) — Remove nut attaching stabilizer bar to link assembly. Remove bushing at top and bottom of stabilizer bar.

Removal (All Others) — Remove nut, washer, and insulator from lower end of stabilizer bar attaching bolt. Remove bolt and remaining washers, insulators, and spacer.

Installation (All) — Install stabilizer bar end bushing by reversing removal procedure. Tighten attaching hardware.

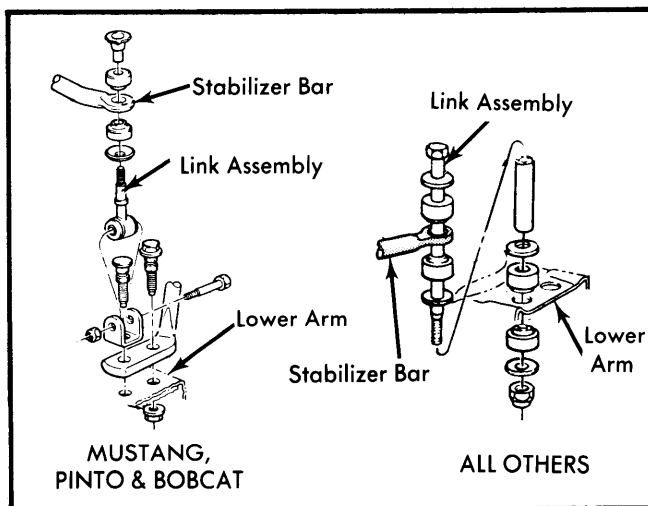


Fig. 1 Exploded View of Stabilizer Bar Bushings

STABILIZER BAR INSULATOR

Removal & Installation — Raise vehicle high enough to provide working space. Place supports under both front wheels. Disconnect stabilizer from each link, disconnect stabilizer attaching brackets, then remove stabilizer. Using a suitable rubber lubricant, replace insulators on stabilizer. To install, reverse removal procedure making sure that stabilizer

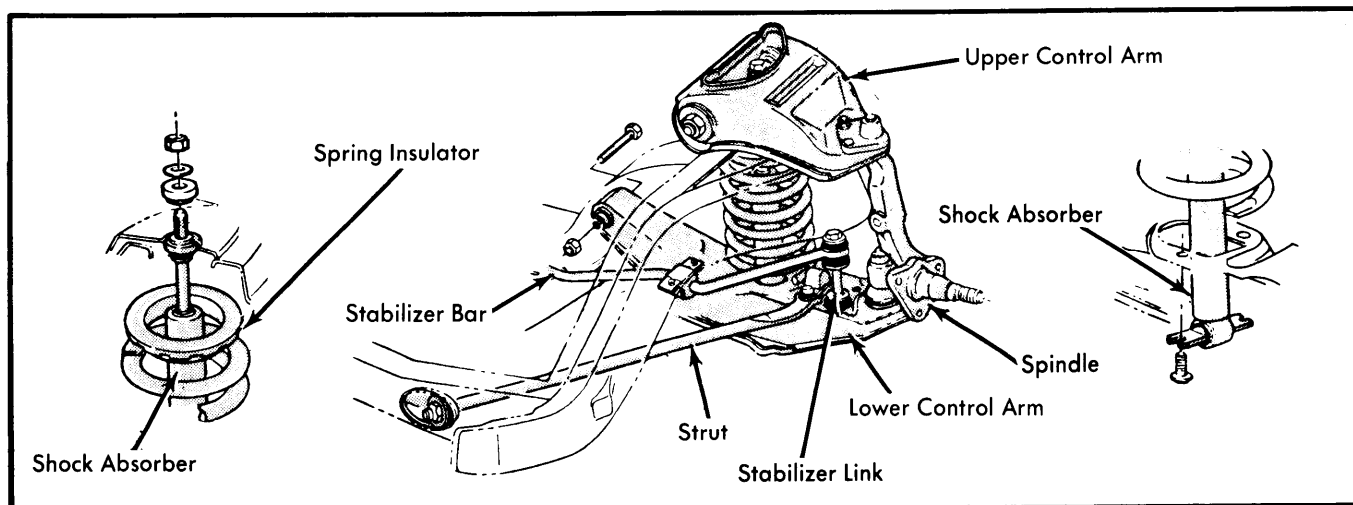


Fig. 2 Exploded View of Ford Enclosed Spring Type Front Suspension

Front Suspension

FORD MOTOR CO., ENCLOSED SPRING (Cont.)

link does not interfere with brake hoses. **NOTE** — New stabilizer bar-to-lower control arm nuts and bolts should be installed each time bar is removed.

LOWER ARM STRUT AND/OR BUSHING

Removal and Installation — Remove nut from lower arm strut at frame, then remove washer and bushing from the strut. Remove nuts, washers and bolts attaching strut and rubber bumper (if present) to lower arm. Pull strut from frame. Remove rear side bushing and washer from strut. Install strut by reversing removal procedure. Check wheel alignment and adjust as necessary.

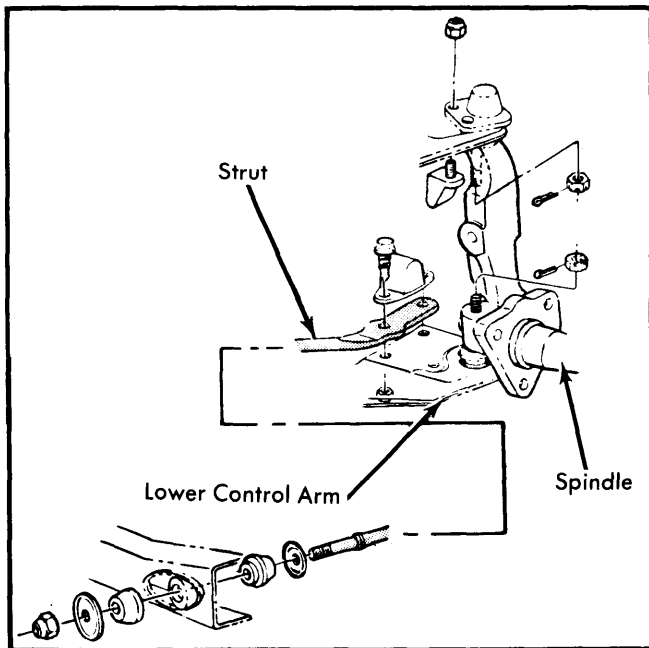


Fig. 3 Exploded View of Ford and Mercury Strut and Bushing Assembly

COIL SPRING

Removal — Raise vehicle and support on safety stands. Disconnect lower end of shock absorber. It may be necessary to use a pry bar to loosen lower end. On Bobcat and Pinto, remove shock absorber. Place a jack under lower arm then remove bolts that attach strut and rubber bumper to lower arm. If equipped with sway bar, disconnect lower end of sway bar or link from lower control arm. Disconnect inner end of lower control arm from crossmember. Carefully and slowly lower the control arm to release spring tension. Remove spring.

Installation — To install, reverse removal procedure while noting the following: Coil spring must be positioned on lower arm so that end of spring is no more than $\frac{1}{2}$ " from end of depression in arm. Do not torque lower arm-to-crossmember bolt until car is resting at curb height.

LOWER CONTROL ARM

Removal — 1) Raise front of vehicle and position safety stands under both sides of frame just back of lower arms, then

remove wheel and tire. Disconnect lower end of shock absorber, and push it up to retracted position. If equipped with sway bar, disconnect lower end of link from lower control arm. Remove cotter pins from upper and lower ball joint stud nuts. Remove bolts and nuts attaching strut to lower arm.

2) Loosen lower ball joint stud nut one or two turns. DO NOT remove nut from stud at this time. Install suitable tool (T74P-3006A for Bobcat and Pinto, T57P-3006B for all others) between upper and lower ball joint studs. Tool must be firmly seated against ends of both studs and NOT against stud nuts.

3) Turn tool with a wrench until stud is under tension. Tap spindle near lower stud with a hammer to loosen stud in spindle. DO NOT loosen stud from spindle using tool pressure only. Position floor jack under lower arm. Remove ball joint nut and use jack to lower arm from spindle. Remove spring and insulator. Remove nut and bolt attaching lower arm to crossmember and remove arm.

Installation — To install, reverse removal procedure noting the following: Do not torque lower arm-to-crossmember bolt until vehicle is resting at curb height. Coil spring must be positioned on lower arm so that end of spring is no more than $\frac{1}{2}$ " from end of depression in arm.

UPPER CONTROL ARM

Removal — 1) Raise front of vehicle and position safety stands under both sides of frame just back of lower arms. Remove wheel and tire from hub, then loosen stud nut on upper ball joint one or two turns. DO NOT remove nut from stud at this time. Install suitable tool (T74P-3006A for Bobcat and Pinto, T57-3006B for all others) between upper and lower ball joint studs with adapter screw on top. Tool must be firmly seated against ends of both studs and NOT against stud nuts.

2) Turn adapter screw with wrench until tool places stud under tension. Tap spindle near upper stud with hammer to loosen stud in spindle. DO NOT loosen stud from spindle using tool pressure only. Remove tool from between ball joint studs and place floor jack under lower arm. Raise floor jack to relieve pressure from upper ball joint stud nut and remove nut. Remove upper arm inner shaft attaching bolts. Remove upper arm and inner shaft as an assembly. Remove bumper from upper arm.

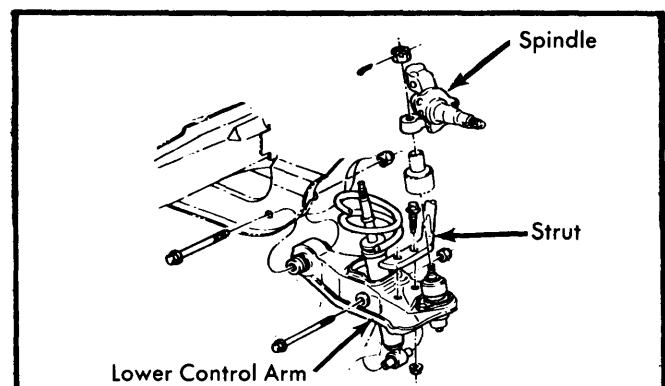


Fig. 4 Exploded View of Pinto & Bobcat Lower Control Arm Assembly

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Installation — To install, reverse removal procedure noting the following: Be sure wheel bearings are properly adjusted, and wheels properly aligned before operating vehicle.

UPPER CONTROL ARM BUSHINGS

Removal (Bobcat and Pinto) — With control arm removed from vehicle, use suitable tool (T74P-3044-A) to install shaft locator on inner shaft to prevent it from rotating. Position a suitable remover adapter, remover receiver, and "C" frame assembly on end of shaft and remove bushing. Repeat procedure on other end of shaft to remove second bushing and remove shaft from arm.

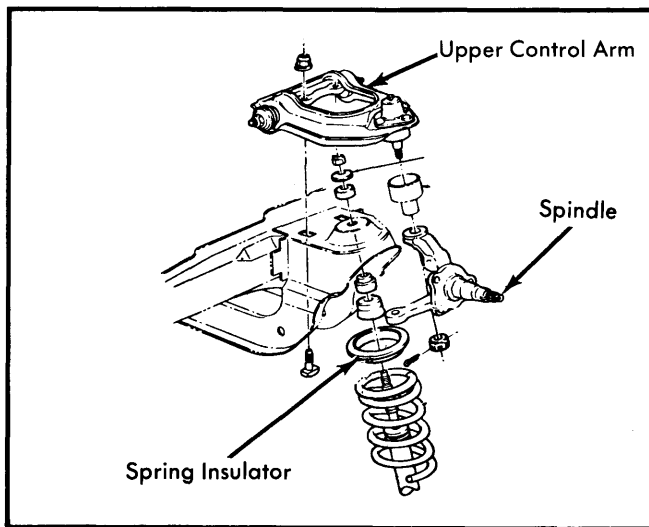


Fig. 5 Exploded View of Pinto & Bobcat Upper Control Arm Assembly

Installation (Bobcat and Pinto) — Slide shaft into upper control arm. Install shaft locator on shaft to keep shaft from turning. Position replacer adapter, "C" frame assembly, and bushing on end of shaft and install the bushing. Repeat procedure for other bushing.

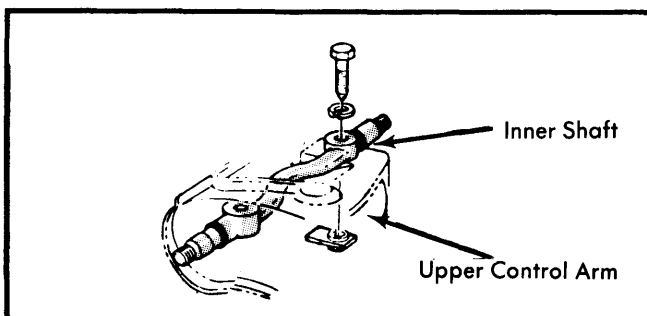


Fig. 6 Exploded View of Upper Control Arm Inner Shaft

Removal (All Other Vehicles) — Remove nuts and washers from both ends of upper control arm inner shaft. Install suitable tool (T65P-3044-A1) on inner shaft and place suitable tool (T65P-3044-A3) inside upper arm around inner shaft. Position assembly in press and remove lower bushing. Remove bushing from inner shaft. Repeat procedure to remove other two bushings.

Installation (All Other Vehicles) — Using tool as shown in illustration, position shaft and bushings to upper arm, then install bushings and shaft in upper arm. Install a washer and new nut on each end of inner shaft. Ensure that serrated side of shaft will contact frame.

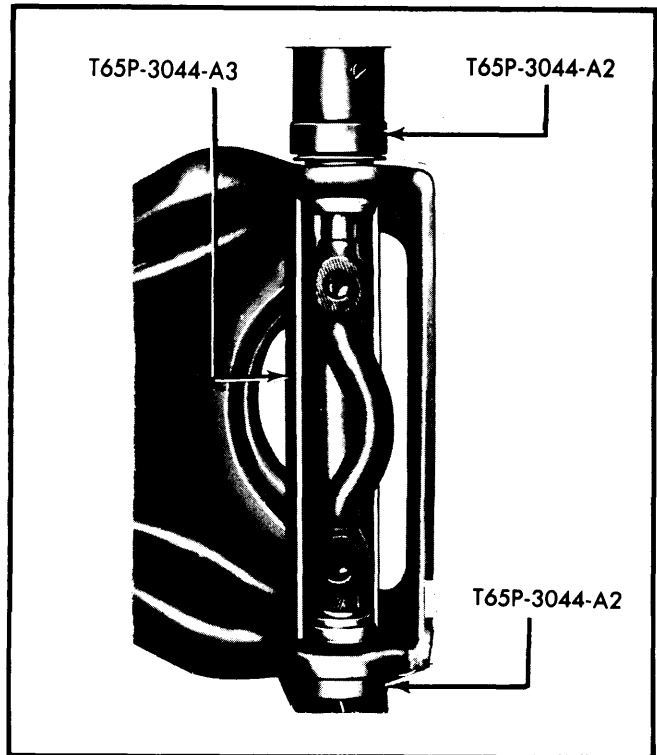


Fig. 7 Installing Upper Control Arm Bushing (All Exc. Pinto & Bobcat)

FRONT WHEEL SPINDLE

Removal — 1) Raise vehicle and position on safety stands. Remove wheel, brake assembly and hub. Remove caliper shield and disconnect spindle connecting rod end from spindle arm using a suitable tool (3290-C).

2) Remove cotter pins from both ball joint stud nuts. Loosen nuts one or two turns, but DO NOT remove nuts at this time. Position ball joint remover tool between upper and lower ball joint studs. Tool should seat firmly on ball joint studs and NOT on stud nuts.

3) Turn tool with a wrench until tool places studs under considerable pressure. With a hammer hit the spindle near studs to break them loose in spindle. DO NOT attempt to loosen studs with tool pressure only. Position a floor jack under the lower arm. Remove upper and lower ball joint stud nuts, lower jack and remove spindle.

Installation — To install, reverse removal procedure. If spindle is being replaced because of accident damage, check wheel alignment.

Front Suspension

FORD MOTOR CO. ENCLOSED SPRING (Cont.)

TIGHTENING SPECIFICATIONS

Pinto & Bobcat

Application	Ft. Lbs.
Lower Arm-to-Crossmember	95-120
Upper Arm-to-Frame	95-120
Stabilizer Bar-to-Lower Arm	10-18
Ball Joint-to-Spindle	⓪75-90
Strut-to-Lower Arm	40-60
Stabilizer Bar-to-Frame	14-21
Shock Absorber	
Upper	22-30
Lower	60-80
Backing Plate-to-Spindle	20-35
Strut-to-Frame	70-80

All Other Models

Application	Ft. Lbs.
Lower Arm-to-Crossmember	95-110
Upper Arm-to-Frame	120-140
Upper Arm Bumper	15-18
Stabilizer Bar-to-Lower Arm	6-12
Ball Joint-to-Spindle	
Lincoln	
Upper	⓪75-90
Lower	⓪105-120
All Other Models	⓪80-120
Strut-to-Lower Arm	80-115
Stabilizer Bar-to-Frame	14-26
Shock Absorber	
Upper	22-30
Lower	12-18
Caliper-to-Spindle	
LTD II, Thunderbird & Cougar	90-120
All Other Models	
Upper	110-140
Lower	90-120
Disc Brake Splash Shield	9-14
Strut-to-Frame	95-105

⓪ — Torque to minimum specification, then tighten nut to align cotter pin slot.