

Front Suspension

FORD 4-WD COIL SPRING TYPE

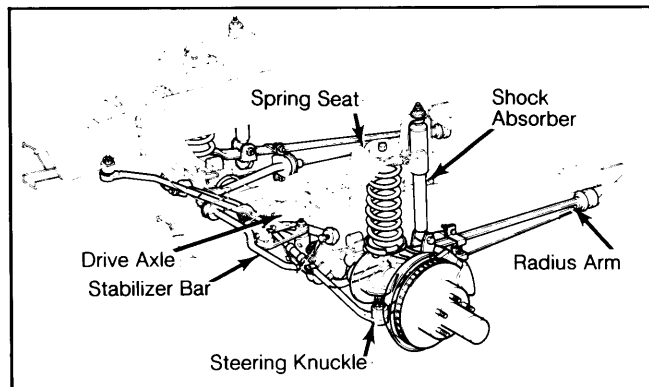
Bronco, F150 Pickup

DESCRIPTION

Front suspension consists of a driving axle, two coil springs, two radius arms, a side strut bar and two hydraulic shock absorbers (some models may be equipped with four shock absorbers). Radius arms attach to frame side rails and are clamped around axle housing. If vehicle is equipped with optional shock absorbers, the front clamp portion of the radius arm is also the lower shock mount.

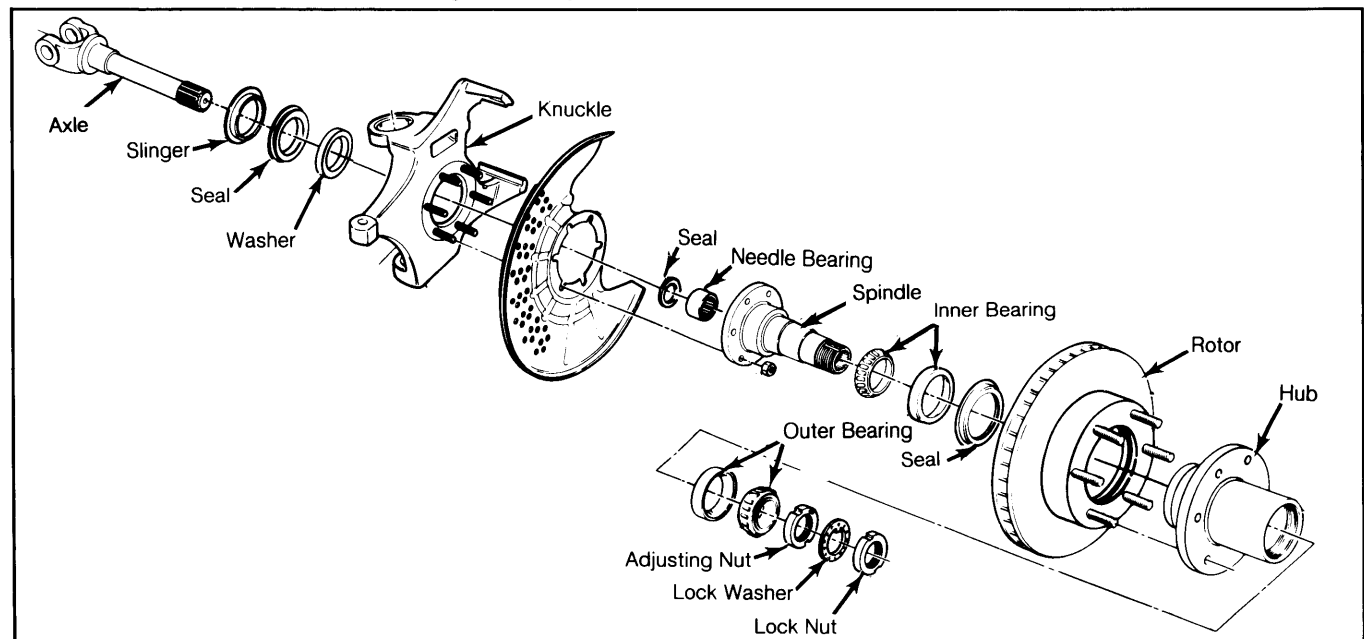
Coil springs are mounted to radius arms directly over axle housing and to brackets attached to frame side rails. Standard equipment shock absorbers attach to frame side rails and radius arms behind coil spring. Optional shock absorbers mount in front of spring. The side strut bar, used to eliminate axle side movement, is attached to left frame rail and at right side of axle housing.

Fig. 1: Identification of Front Suspension Components



Bronco & F150 4-WD Models.

Fig. 2: Exploded View of Wheel Bearing Assembly



Clean all parts and use new grease for reassembly.

ADJUSTMENT & CHECKING

WHEEL ALIGNMENT SPECIFICATIONS & PROCEDURES

See *Wheel Alignment Specifications & Procedures* in *WHEEL ALIGNMENT* Section.

WHEEL BEARING ADJUSTMENT

Remove locking hubs. See *appropriate article* in *DRIVE AXLE* Section. Using special wrench (T59T-1197-B), tighten inner adjusting nut to 50 ft. lbs. (68 N.m) while turning rotor. Back off nut 45°. Install lock washer. Install outer lock nut and tighten to 150 ft. lbs. (203 N.m). Final end play should be .001-.006" (.03-.15 mm).

KING PIN CHECKING

Adjust wheel bearings. Raise vehicle with weight off wheels. Shake wheel while watching movement of spindle. If spindle moves more than $\frac{1}{32}$ " (.8 mm), spindle bushings should be replaced.

REMOVAL & INSTALLATION

WHEEL BEARINGS

Removal

1) Remove locking hubs. See *appropriate article* in *DRIVE AXLE* Section. Remove wheel bearing lock nut, lock ring and adjusting nut. Remove hub/disc assembly. Outer wheel bearing will slide out.

2) Remove spindle nuts, then remove spindle from knuckle studs and axle shaft. Clean all parts, then remove spindle bore seal, V-block seal and thrust washer from outer axle shaft. Replace any worn parts.

3) Remove inner bearing cone and grease seal from hub with slide puller. Check bearing cups and drive out with punch if worn.

FORD 4-WD COIL SPRING TYPE (Cont.)

Installation

1) Lubricate needle bearing and spindle face. Assemble V-block seal next to needle bearing. Place spindle bore seal and thrust washer on axle shaft. Place spindle on knuckle studs and tighten nuts.

2) Place inner bearing cone and roller in cup, then install grease seal. Place hub/disc assembly on spindle. Install outer bearing cone and roller with adjusting nut. Adjust wheel bearings and install locking hubs.

COIL SPRING

Removal

Raise vehicle. Remove shock absorber-to-lower bracket bolt and nut. Remove lower spring retainer nuts. Remove upper spring attaching screw and upper retainer. Place safety stands under frame rails and lower axle enough to relieve tension on spring. Remove spring and lower retainer from vehicle.

Installation

To install, reverse removal procedure.

RADIUS ARM

Removal

Raise vehicle and place safety stands under frame side rails. Remove shock absorber attaching bolts and remove shock absorber from radius arm. Remove lower spring attaching bolt. Remove radius arm rear insulator. Lower axle and allow axle to move forward. Remove bolt and stud attaching radius arm to axle. Move axle forward and remove radius arm from axle. Pull radius arm from frame brackets.

Installation

Position washer and insulator on rear of radius arm and place radius arm into the frame bracket. Install attaching nut. Position radius arm to axle. Install new bolts and stud, using locking compound. Attach radius arm to axle. Attach lower spring seat, insulator and retainer to spring and axle. Tighten rear radius rod attaching nut. Install shock absorber and tighten nuts.

STEERING KNUCKLE

Removal & Installation

See *Steering Knuckles in DRIVE AXLE Section* for removal and installation.

QUAD SHOCK ABSORBERS

Removal

Remove self-locking nut, steel washer and rubber bushings from upper end of shock absorbers. Remove self-locking nut from lower end of shocks. Remove shock absorbers.

Installation

Replace rubber bushings when replacing shock absorbers. Place shock absorbers on mounting brackets with large diameter on top. Install bushings, steel washers and self-locking nuts and tighten.

STABILIZER BAR

Removal

1) Remove nuts, bolts and washers connecting stabilizer bar to links. Remove nuts and bolts of stabilizer bar retainer. Remove stabilizer bar insulator assembly.

2) Remove coil spring and lower spring seat. Remove stabilizer bar mounting bracket attaching stud and bracket. Remove stabilizer bar.

Installation

1) Locate brackets so locating tang is positioned in the radius arm notch (or quad shock bracket notch if vehicle has quad shocks).

2) Reposition the spring lower seat and reinstall the spring and retainer. To reinstall the stabilizer bar insulator assembly, loosely assemble all nuts, bolts and washers to the bar, brackets, retainers and links.

3) Position bar correctly. Torque retainer nuts with retainer around the insulator. Tighten all remaining nuts at the link assemblies.

TIGHTENING SPECIFICATIONS

Application	Ft. Lbs. (N.m)
Upper Spring Retainer	13-18 (18-24)
Lower Spring Retainer	30-70 (41-95)
Radius Arm-to-Bracket	80-120 (108-163)
Shock Absorber Mounting Bolt	
Lower	40-60 (54-81)
Upper	15-25 (20-34)
Radius Arm-to-Axle	
Upper Stud	140-260 (190-352)
Lower Bolt	320-340 (434-461)
Radius Arm Bracket-to-Axle Screws	20-26 (27-35)
Stabilizer Bar-to-Frame	48-65 (65-88)
Stabilizer Bar Retaining Nuts	27-37 (37-50)