

SUSPENSION

	Page		Page
Front Axle Windup Control Device	12-1	Spring Mounted Above Axle	12-3
General	12-1	Spring Mounted Below Axle	12-2
Shock Absorbers	12-1	Stabilizer Bar	12-2
Springs	12-1	Torque Specifications	12-7
Spring Bushing Replacement	12-4		

GENERAL

Jeep vehicles are equipped with semi-elliptical leaf springs and double-action hydraulic shock absorbers at front and rear. A front axle stabilizer bar is standard on the 8400 GVWR Model 46 Truck and CJ models with the molded hard top. A front stabilizer bar is optional on all other Jeep models.

SPRINGS

Springs are mounted parallel to the frame side rails. The forward end of the front springs and the rear end of the rear springs are attached by pivoting shackles to the frame. The opposite ends are attached to fixed pivot points on the frame. All spring ends have silent block-type rubber bushings. These rubber bushings should never be lubricated.

All front springs are mounted below the axle. Cherokee, Wagoneer, and Truck models use multi-leaf or taper-leaf springs (fig. 12-1 through 12-3).

All rear springs, except those on CJ models are mounted above the axle. CJ model springs are multi-leaf springs and are mounted below the axle (fig. 12-4). Rear springs on Cherokee, Wagoneer, and Truck models are multi-leaf springs or tapered-leaf springs (fig. 12-5 and 12-6).

All springs are attached to the axle by U-bolts, spring saddles (welded to the axle tubes), and tie plates. Spring center bolts are used to align and hold the spring leaves in position. The springs should be examined periodically for broken or shifted leaves, loose or missing rebound clips, and broken center bolts.

FRONT AXLE WINDUP CONTROL DEVICE

A front axle windup control device is used on all models. The control device consists of a stamped bracket with a rubber bumper affixed to it (fig. 12-7). The bracket is attached to the inner side of the right frame rail adjacent to and approximately seven inches above the front axle carrier housing. During severe operation when extreme spring deflection and front axle travel

occurs, the rubber bumper on the control contacts a pad on the front axle housing to prevent excessive movement of the housing.

SHOCK ABSORBERS

The hydraulic, double-action shock absorbers used on Jeep vehicles are designed to control suspension spring movement. The upper ends of the shock absorber are attached to the vehicle frame rails with mounting brackets and pins. The lower ends are attached to the springs or axle. Rubber bushings are installed between the mounting pins and shock eyes. Movement at the bushings is absorbed by flexing of the rubber.

Squeaking may occur when movement between the rubber bushings and the metal parts occur. It can be eliminated by placing the bushings under increased compression by tightening the mounting bolts and nuts. Do not use mineral oil-base lubricants on rubber bushings.

The shock absorbers are not refillable or adjustable. If a malfunction occurs, the shock absorber must be replaced. To test a unit, hold it in an upright position and work the plunger up and down four or five times. The action through the full stroke should be smooth and with an equal amount of resistance in each direction.

Replacement

The rubber bushings in the shock absorber mounting eyes are attached to the mounting pins by a flat washer and locknut. To remove a shock absorber, remove the locknuts and washers and pull the shock mounting eyes and rubber bushings off the mounting pins.

To install a shock absorber, install the rubber bushings in the shock absorber mounting eyes and position the eye on the mounting pins. Install the washers and locknuts and tighten the locknuts securely.

STABILIZER BAR

The stabilizer bar extends across the front undersides of the frame, and is attached to the frame rails by bolted clamps and rubber bushings (fig. 12-8). The ends of the

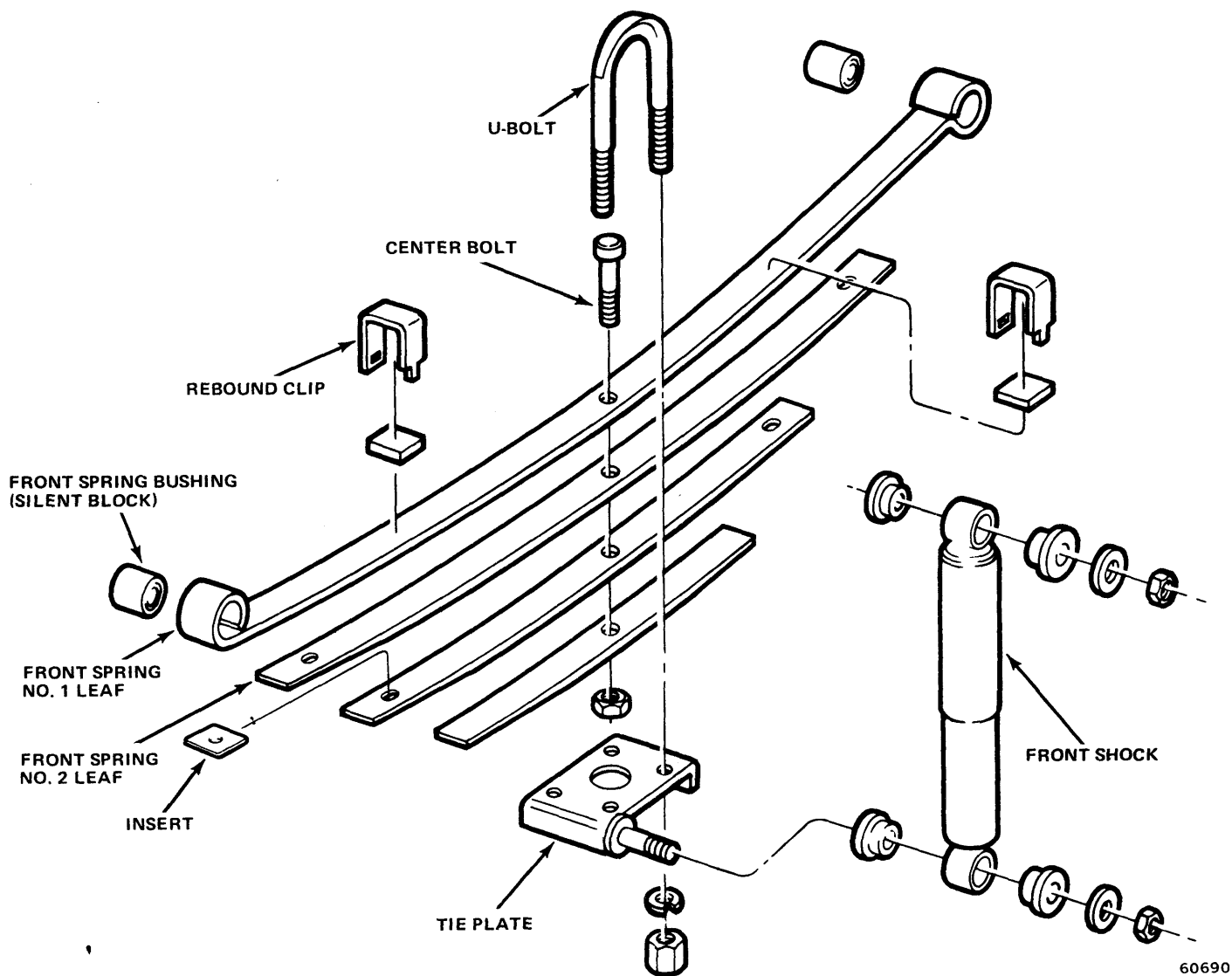


Fig. 12-1 Front Spring—CJ Models

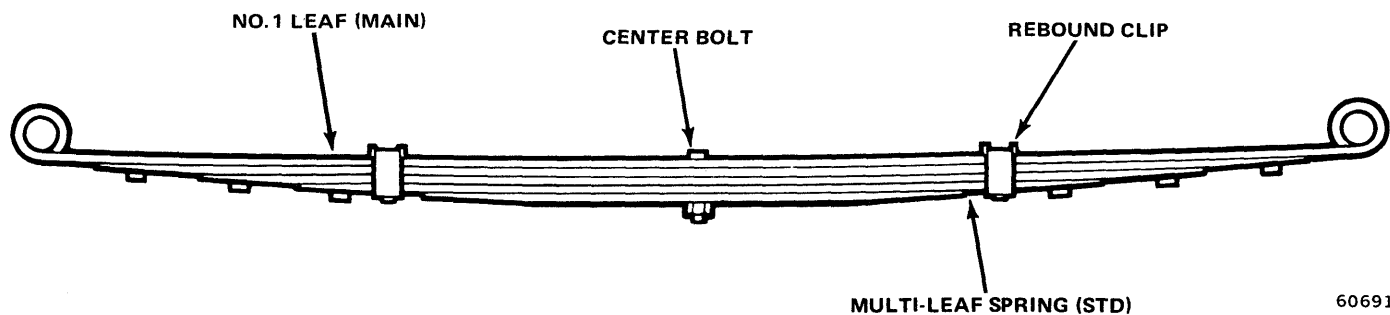


Fig. 12-2 Standard Front Springs—Cherokee-Wagoneer-Truck

bar extend rearward to a position above the front springs and are connected to the axle and springs by two rubber shock-mounted connecting links (fig. 12-9).

SPRING MOUNTED BELOW AXLE

Removal

- (1) Raise vehicle and support axle.

- (2) Disconnect shock absorber and stabilizer bar (if equipped).
- (3) Remove U-bolts and tie plates.
- (4) Disconnect front and rear ends of spring.
- (5) Remove spring.

NOTE: The spring can be disassembled by removing

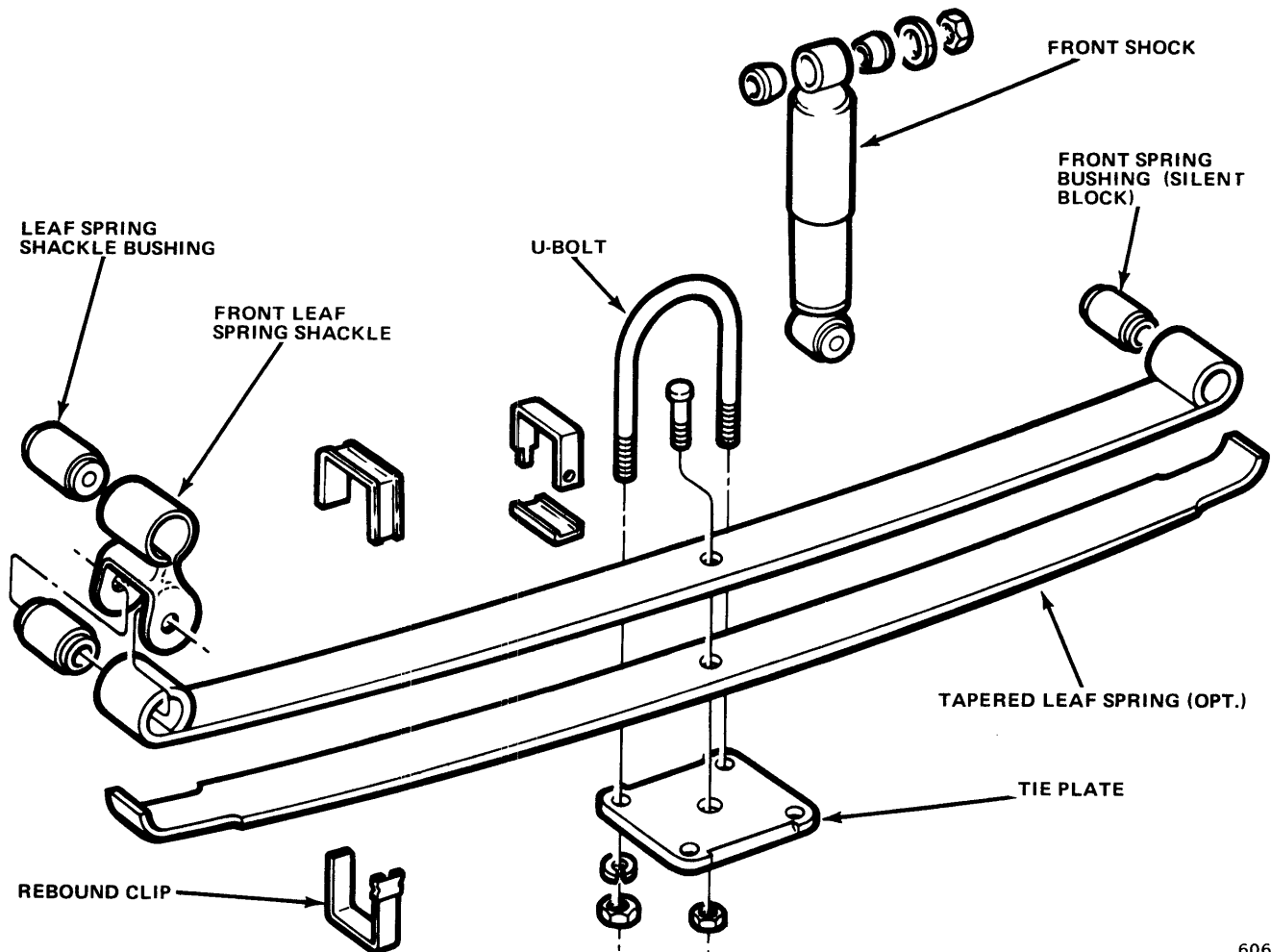


Fig. 12-3 Optional Heavy-Duty Front Spring—Cherokee-Wagoneer-Truck

60692

the spring rebound clips and center bolt. If the spring bushings are to be removed, refer to *Spring Bushing Replacement*.

Installation

- (1) Mount spring in vehicle but do not tighten pivot bolts.
- (2) Align spring center bolt and install tie plate and U-bolts (refer to Torque Specifications).
- (3) Connect shock absorber and stabilizer bar (if equipped).
- (4) Remove axle support and lower vehicle.
- (5) Tighten pivot bolts with vehicle weight on springs.

SPRING MOUNTED ABOVE AXLE

Removal

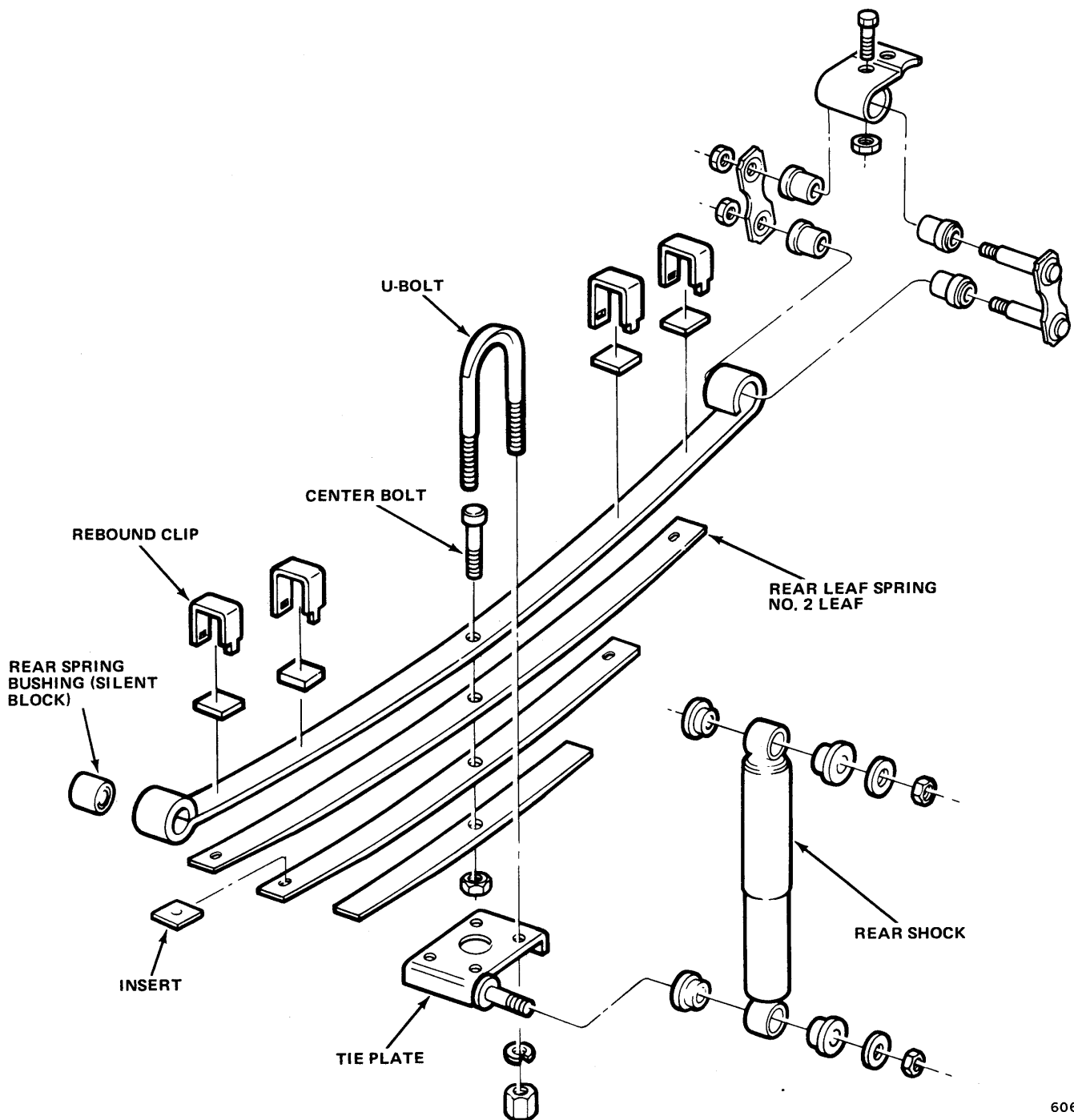
- (1) Raise vehicle and support frame at point just ahead of axle.
- (2) Remove U-bolts.

- (3) Unclip axle vent hose from frame.
- (4) Disconnect shock absorber.
- (5) Remove spring pivot bolts.
- (6) Lower axle enough for spring to be turned over and remove spring.

NOTE: The spring can be disassembled by removing the spring rebound clips and center bolt. If the spring bushings are to be removed, refer to *Spring Bushing Replacement*.

Installation

- (1) Mount spring in vehicle and install pivot bolts and nuts.
- (2) Raise axle, align spring center bolt, and install U-bolts.
- (3) Connect shock absorber.
- (4) Connect axle vent hose.
- (5) Remove supports and lower vehicle.
- (6) Tighten pivot bolts.



60693

Fig. 12-4 Rear Spring—CJ Models

SPRING BUSHING REPLACEMENT

Small Bushing

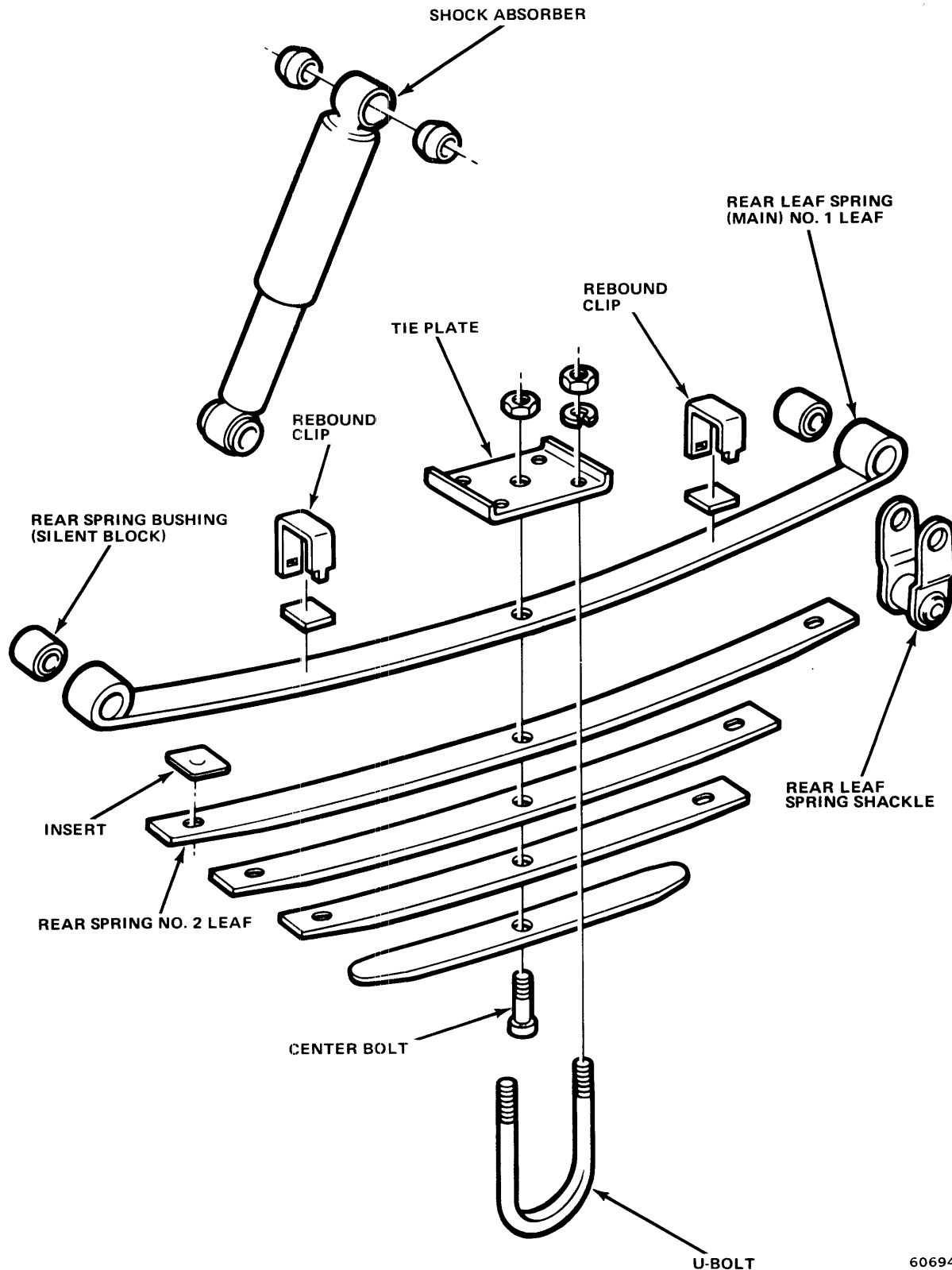
(1) Place 8-inch length of threaded rod halfway through bushing and place a 1-1/8-inch socket (open end toward bushing), one 1/2-inch flat washer and one 3/8-inch hex nut on one end of rod (fig. 12-10).

(2) On opposite end of threaded rod, place 2-inch section of 1-5/8-inch or 1-3/8-inch ID pipe, one 3/4-inch

flat washer, one 1/2-inch flat washer, and one 3/8-inch hex nut.

(3) Tighten both 3/8-inch hex nuts finger-tight and align all components.

NOTE: Be sure socket is positioned in the spring eye and aligns with the bushing. The pipe section must butt against the spring eye so the bushing can pass through it. The socket will act as a press ram and press the bushing out of the spring eye.



60694

Fig. 12-5 Multi-Leaf Rear Spring—Cherokee-Wagoneer-Truck

(4) Tighten nut at socket end of rod until bushing is pressed out of spring eye.

(5) Tighten nut at socket to press bushing out of spring eye. Remove tools and bushing.

(6) Install replacement bushing on threaded rod and assemble bushing tools as outlined in steps (1) and (2) and press bushing into spring eye. Be sure bushing is centered in spring eye.

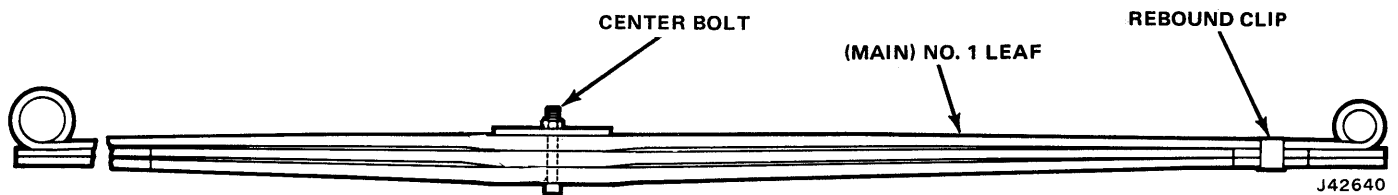


Fig. 12-6 Rear Tapered Leaf Spring—Typical

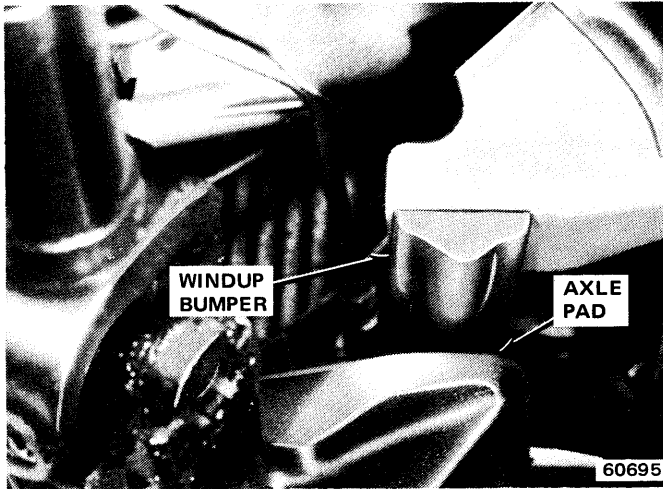


Fig. 12-7 Axle Windup Bumper

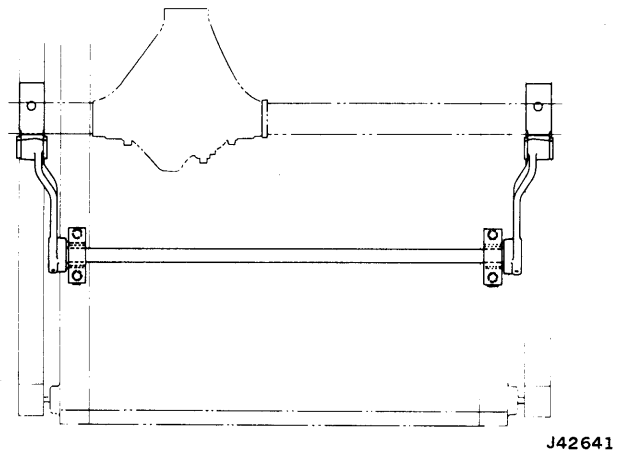


Fig. 12-8 Front Stabilizer Bar Mounting

Large Bushing

(1) Place 1/2 x 11-inch length of threaded rod half-way through bushing and install 1-1/16-inch deep socket (open end toward bushing), one 1/2-inch flat washer, and one 1/2-inch nut on end of rod (fig. 12-11).

(2) On opposite end of threaded rod, install 3-inch length of 1-1/2-inch ID pipe, one 1/2-inch flat washer and one 1/2-inch nut.

(3) Tighten both nuts finger-tight and align all parts.

NOTE: Be sure socket is positioned in the spring eye and aligns with the bushing. The pipe section must butt against the spring eye so that bushing can pass through it. The socket will act as a press ram and press the bushing out of the spring eye.

(4) Tighten nut at socket to press bushing out of spring eye.

(5) Install replacement bushing on threaded rod and assemble bushing tools as outlined in steps (1) and (2) and press bushing into spring eye. Be sure bushing is centered in spring eye.

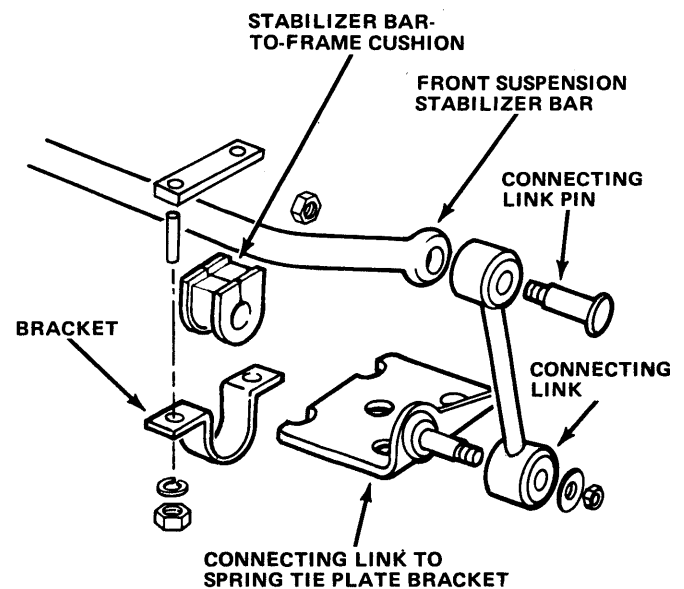


Fig. 12-9 Front Stabilizer Bar Mounting

