REAR SUSPENSION

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DESCRIPTION AND OPERATION

DESCRIPTION AND OPERATION OF REAR SUSPENSION

All Opels utilize the three link rear suspension arrangement. This rear suspension consists of coil springs, track rod, shock absorbers and lower control arms.

The coil springs set between two seats which arc situated ahead of the rear axle housing.

The track rod is utilized on all models to control the lateral stability of the rear axle assembly. It is of tubular design. A stabilizer rod is used on all Wagons as well as Fast Backs and Sedans. The GT is not equipped with a stabilizer rod.

The lower control arms are of tubular design and function as two links of the three link suspension system. They are attached to the underbody through brackets welded to the side rails and to the rear axle assembly through the front portion of the spring seat bracket. The lower control arms control the fore and aft movement of the rear axle assembly.

The third link in this suspension system is the torque tube which is connected to the differential carrier and also to the underbody through rubber bushings in the central joint support bracket.

The torque tube in conjunction with the lower control arms absorb all acceleration and braking torque.

MAJOR REPAIR

REAR SHOCK ABSORBER REMOVAL AND INSTALLATION

Removal

NOTE: The trim panel under the spare tire must be removed on the GT to gain access to attaching nuts.

1. Remove upper attaching nut, retainer and rubber grommet.

2. Remove lower attaching nut and rubber grommet retainer, compress shock absorber and remove from lower mounting pin.

Installation

1. Replace upper and lower rubber grommets, if necessary, before installing shock absorber.

2. Extend shock absorber and position in car. Attach at lower end first, torque nut to 15 lb.ft. on the GT, and torque to 47 lb.ft. on the Opel 1900 - Manta.

3. Install rubber grommet, retainer and self-locking nut at top of shock absorber. Torque to 10 lb. ft. Always use new self-locking nuts.

REAR SPRING REMOVAL AND INSTALLATION

Rear Spring Removal

1. Raise rear of car with floor jack under differential carrier and support with jack stands positioned under side jack brackets. See Figure 3F-2.

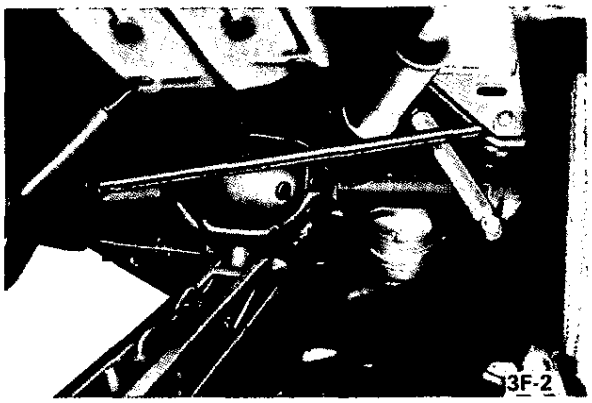

Figure 3F-2 Raising Rear of Car

2. Remove rear wheels.

3. Disconnect shock absorbers from rear axle.

4. Disconnect stabilizer and shackles, if equipped, from frame.

5. Lower rear axle assembly as far as possible without putting the brake hose under stress.

6. If necessary, tilt the rear axle assembly to remove springs. See Figure 3F-3. Note the upper and lower rubber damper rings.

Rear Spring Installation

1. Make certain the lower damper rings are properly positioned in the spring seats and position the springs in their respective position in the damper rings. See Figure 3F-4.

2. Properly install upper damper rings on springs.

CAUTION: *Fasteners are important attaching parts in that they could affect the performance of vital components and systems, and/or could result in major repair expense. They must be replaced with one of the same part number or with an equivalent part if replacement becomes necessary. Do not use a replacement part of lesser quality or substitute design*

Figure 3F-3 Removing Coil Spring

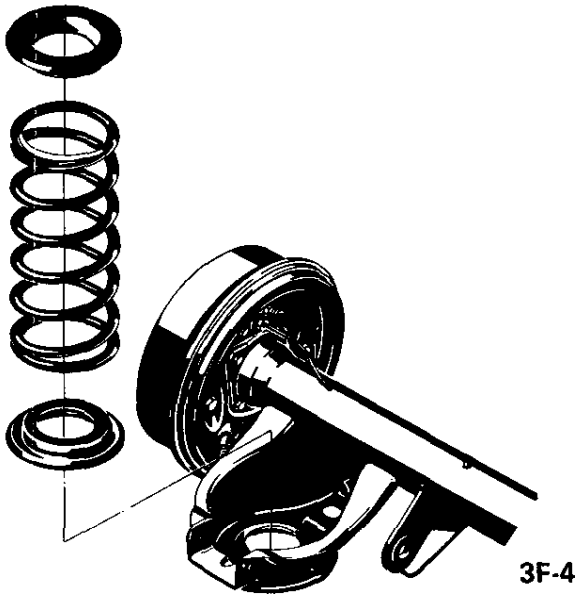

Figure 3F-4 Installing Coil Spring

Torque values must be used as specified during reassembly to assure proper retention of these parts.

3. Raise rear axle assembly to compress springs in their seats.

4. Attach shock absorbers and tighten retaining nuts to 15 lb.ft. For the GT and 47 lb.ft. for the Opel 1900 Manta.

5. Attach stabilizer shackles, if equipped, to axle brackets and tighten bolts to 25 lb. ft. with vehicle at curb weight.

6. Install rear wheels torquing lug nuts to 65 lb.ft.

7. Remove jack stands.

LOWER CONTROL ARM REPLACEMENT

Removal

This operation can be performed with the vehicle standing at curb height or elevated.

1. Disconnect parking brake cable from support bracket on control arm.

2. Loosen and remove front and rear control arm attaching bolts and remove control arm.

installation

1. On 1900's and Manta's place a load of approximately 350 lbs. in luggage compartment or on the GT, place a load of approximately 150 lbs. on driver's seat. Torque control arm attaching nut and bolts to 18 lb.ft on GT's and 23 lb.ft. on the 1900 - Manta.

2. Connect parking brake cable to support bracket on control arm.

STABILIZER ROD REPLACEMENT

Removal

1. Raise and support rear of vehicle.

2. Disconnect stabilizer rod to shackle bolts.

3. Disconnect stabilizer rod to underbody retainers and work stabilizer rod out from under vehicle.

Installation

1. Work stabilizer rod into position and loosely attach stabilizer to underbody retainers.

2. Connect stabilizer rod to shackles.

3. With the vehicle standing on its wheels or the rear axle assembly lifted, tighten stabilizer rod to underbody bracket bolts to 15 lb. ft.

4. Remove jack stands and lower vehicle.

TRACK ROD REPLACEMENT

Removal

1. Lift rear of car and suitably support.

2. Disconnect track rod from rear axle and frame side member.

Installation

1. Loosely connect track rod first to side member and then to the rear axle.

2. On the 1900 - Manta, load luggage compartment of vehicle with approximately 350 lbs. or on the GT, place a load of approximately 150 lbs. on driver's seat and tighten track rod attaching bolts to specified torque.

3. Remove supports (jack stands) and lower vehicle.

SPECIFICATIONS

REAR SUSPENSION SPECIFICATIONS

Tightening Specifications

Use a reliable torque wrench. Specifications are for clean and lightly-oiled threads.

Part	Name	Torque Lb.Ft.
Nut	Wheel Nuts	65
Nut	Control Arm Attaching (GT)	16
Nut	Control Arm Attaching (1 900 - Manta)	23
Bolt	Stabilizer Rod to Underbody Retainers	15
Nut	Shock Absorber Lower Attachment (GT)	15
Nut	Shock Absorber Lower Attachment (1900 Manta)	47
Nut	Shock Absorber Upper Attachment	10
Bolt	Stabilizer Shackle to Axle Bracket	25

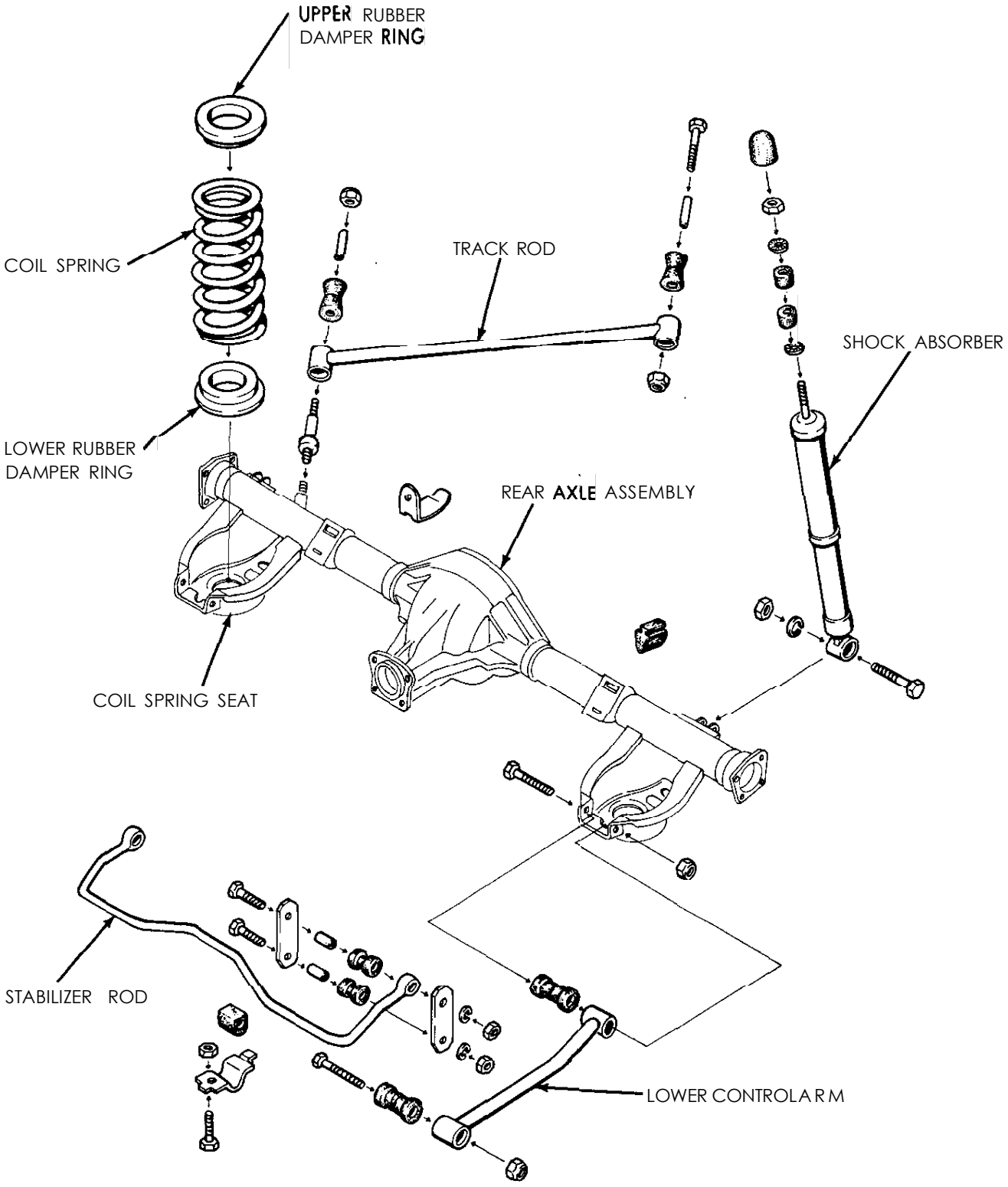

Figure 3F.5 Exploded View Rear Suspension