

# Front Suspension

## RENAULT 18i & FUEGO

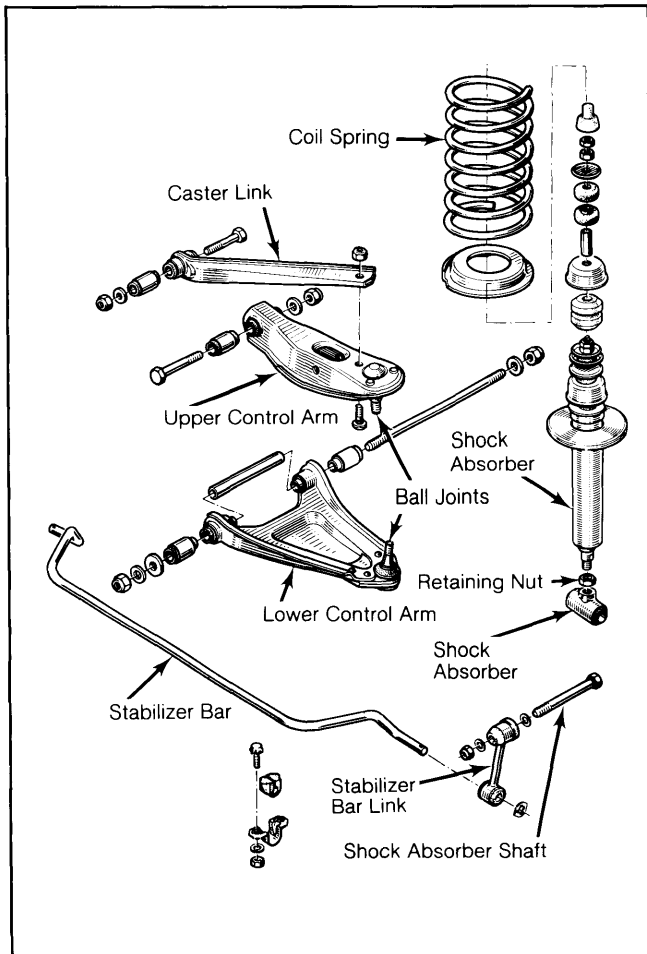
### DESCRIPTION

An independent front suspension system is used. Coil springs surround shock absorbers. Front suspension utilizes upper and lower control arms.

Shock absorbers are mounted to inner fender panels at top and to upper controls arm at the bottom.

Wheel hub and rotor are supported by a steering knuckle which is mounted between the control arms with ball joints. A stabilizer bar is used to aid vehicle control and stability.

**Fig.1: Exploded View of Front Suspension**



### ADJUSTMENTS

#### WHEEL ALIGNMENT SPECIFICATIONS & PROCEDURES

See *Wheel Alignment Specifications and Procedures* in **WHEEL ALIGNMENT** section.

#### WHEEL BEARING

Wheel bearings are not adjustable.

#### BALL JOINT CHECKING

Inspect ball joints for excessive wear or play. Check rubber grease cup for cracks or other damaged, (replace if necessary).

### REMOVAL & INSTALLATION

#### WHEEL BEARING

##### Removal

1) With vehicle resting on floor and parking brake engaged. Remove dust cap and loosen axle shaft nut (do not remove nut).

2) Raise vehicle and support with safety stands. Remove wheel assembly. Remove caliper and support out of the way. Remove hub-to-rotor retaining bolts with Torx type wrench. Remove brake rotor.

3) Remove axle shaft nut. Place 2 metal blocks between wheel hub and steering knuckle so that 2 wheel bolts can be used to press off hub. Install wheel bolts in hub and tighten gradually and alternately, pressing hub out of knuckle.

4) Remove bearing-to-knuckle retaining bolts and remove bearing. Remove inner race from axle shaft. Remove outer bearing from wheel hub with puller.

##### Installation

1) Install bearing inner race on axle shaft. Install bearing to steering knuckle. Press outer race into wheel hub. Pack bearings with grease and install bearings, races, and grease seals.

2) Position wheel hub on axle shaft and tap on with soft mallet, until axle shaft nut can be installed a few turns. Attach leverage holding tool (Rou. 604) to keep hub from turning and tighten axle shaft nut to final specifications. Reverse removal procedure to complete installation.

#### UPPER CONTROL ARM & BALL JOINT

##### Removal

1) Raise vehicle and support with safety stands. Remove wheel assemblies. Loosen shock absorber lower retaining nut. Disconnect caster link from control arm.

2) Separate ball joint from steering knuckle. Remove control arm-to-frame pivot bolt. Raise control arm and unscrew shock absorber. Remove control arm.

3) Remove ball joint-to-control arm retaining bolts. Remove ball joint.

##### Installation

To install, reverse removal procedures. Do not tighten control arm-to-crossmember bolt, caster link or shock absorber shaft nut until vehicle is resting on floor with full weight of vehicle on suspension.

#### LOWER CONTROL ARM & BALL JOINT

##### Removal

1) Raise vehicle and support with safety stands. Remove wheel assemblies. Loosen ball joint-to-knuckle nut until it contacts axle shaft constant velocity joint.

2) Press ball joint from knuckle by continuing to remove ball joint nut. Remove control arm pivot shaft bolts and pivot shaft. Remove arm from vehicle

3) Drill and punch out ball joint retaining rivets with cold chisel. Remove ball joint from control arm.

##### Installation

1) Install new ball joint with bolts supplied. Bolts must be installed with heads on top side of control arm.

2) To install, reverse removal procedures. Do not torque pivot shaft bolt to final specification until vehicle is resting on floor.

## RENAULT 18i & FUEGO (Cont.)

**NOTE:** Since the ball joint-to-control arm nut is used to press out ball joint, a new nut must be used upon reassembly.

### SHOCK ABSORBER & COIL SPRING

#### Removal

1) Raise vehicle and support under control arms with floor jack. Remove wheel assemblies.

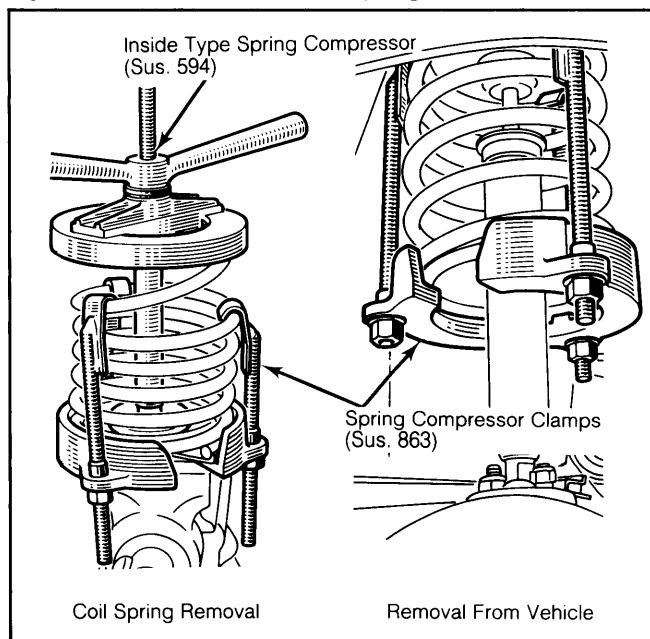
2) Install spring compressor with clamps over next-to-last upper coil of spring. Lubricate threaded ends of clamps. Install nuts hand tight only.

3) Lower jack until coil spring separates from upper spring mounting cup. Spring should now turn by hand. Loosen shock absorber shaft nut but do not remove bolt.

4) Remove upper shock retaining nut. Loosen lower shock retaining nut. Remove shock absorber, coil spring and tool.

5) Install inside type coil spring compressor and tighten to release spring compressor clamps. Loosen compressor and remove spring.

**Fig. 2: Shock Absorber & Coil Spring Removal**



#### Installation

1) Compress spring with inside compressor and install compressor clamps. Remove inside compressor. Install shock absorber with coil spring and compressor.

2) Raise floor jack and tighten shock absorber. Back off nut 1 turn. Install upper shock absorber bushings and cups in same position as before removal. Install upper nut hand tight.

3) Lower vehicle completely and jounce up and down a few times to settle suspension. Tighten upper nut, lower retaining nut and shaft nut to final specifications. Remove spring compressor.

### STABILIZER BAR

#### Removal

1) Raise vehicle and support with safety stands. Remove engine undercover. Remove stabilizer bar clamp-to-frame bushing bolts.

2) Remove shock absorber shaft nut and stabilizer bar link retainer. Remove stabilizer bar with links and bushings.

#### Installation

To install, reverse removal procedures. Tighten bolts to specification only after vehicle is resting on floor.

### TIGHTENING SPECIFICATIONS

Application	Ft. Lbs. (N.m)
Axle Shaft Nut .....	185 (252)
Shock Absorber Retaining Nut .....	30 (41)
Shock Absorber Shaft Nut .....	59 (80)
Shaft-to-Shock Absorber .....	44 (60)
Caster Link-to-Upper Control Arm .....	59 (80)
Upper Control Arm-to-Frame .....	65 (88)
Lower Control Arm-to-Frame .....	65 (88)
Upper Ball Joint-to-Steering Knuckle .....	48 (65)
Lower Ball Joint-to-Steering Knuckle .....	48 (65)
Stabilizer Bar Clamp-to-Frame .....	11 (15)