

Front Suspension

RENAULT

Le Car

DESCRIPTION

Independent type suspension, consisting of upper and lower control arms with stub axles mounted between upper and lower control arms by ball joints. Upper control arm pivots on shaft attached to frame. Lower arm pivots on shaft secured to crossmember. Shock absorbers mount off body brackets at top and off purchases built into control arm on bottom.

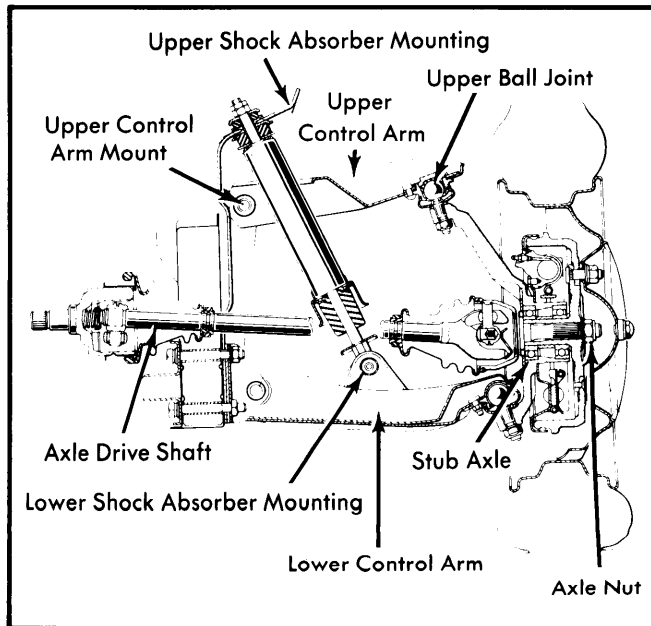


Fig. 1 Cut-Away View of Le Car Front Suspension

ADJUSTMENT

WHEEL ALIGNMENT SPECIFICATIONS & PROCEDURES

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

WHEEL BEARING ADJUSTMENT

See *Wheel Bearing Adjustment* in *WHEEL ALIGNMENT* Section.

BALL JOINT CHECKING

See *Ball Joint Checking* in *WHEEL ALIGNMENT* Section.

RIDING HEIGHT ADJUSTMENT

See *Riding Height Adjustment* in *WHEEL ALIGNMENT* Section.

REMOVAL & INSTALLATION

SHOCK ABSORBERS

Removal — Raise vehicle and suitably support vehicle with safety stands. Remove lock nut, mounting nut, and bushing attaching shock absorber to upper bracket. Remove lower

retaining bolt holding shock absorber to lower control arm. Maneuver shock absorber from vehicle.

Installation — To install, reverse removal procedure.

UPPER CONTROL ARM & BALL JOINT

Removal — Take out overflow tank and remove ignition coil. Using tool T. Av. 476 (or equivalent) disconnect upper ball joint. Remove nut from inboard edge of pivot shaft. Place a lock nut on outer end of pivot shaft and turn mounting nut to remove shaft. Pivot shaft will clear brake lines. Maneuver control arm from vehicle.

Inspection & Replacement — Inspect rubber bushings for cracks or distortion. Use a press and mandrel to remove and replace worn bushings. To replace ball joint, place control arm in a vise and drill out rivet heads. Fit new ball joint with shim placed on top of control arm. Tighten nuts and bolts (those that replaced rivets). Make sure bolt head is installed on dust cover side of joint.

Installation — To install, reverse removal procedure and note following: Apply a light coat of grease to pivot shaft before inserting in control arm. If ball joint has been replaced, check wheel alignment and steering box height.

LOWER CONTROL ARM & BALL JOINT

Removal — 1) Raise front of vehicle and place on safety stands. Remove stub axle nut. Disconnect and remove torsion bars. Disconnect sway bar from brackets and mounting on control arm. Separate bottom of shock absorber from mounting.

2) Remove lower control arm from crossmember. Put tool T. Av. 235 (or equivalent) in brake drum or hub. With a spacer located between thrust screw and axle drive shaft, force shaft inward and free ball joint from stub axle carrier.

NOTE — Make sure axle drive shaft is not removed.

Inspection & Replacement — 1) Inspect rubber bushings and sleeve inserts for cracks, excessive damage or wear. Use a mandrel and press to replace bushings. Make sure each bushing is centered and has adequate protrusion out each side of control arm.

2) Place control arm in suitable holding fixture (vise). Chisel or drill out rivet heads. Remove nuts, if necessary. Separate joint from control arm. Fit new ball joint into control arm. Make sure bolt heads face dust cover side.

Installation — To install, reverse removal procedure and note following: Make sure castor adjusting shims are under bushing. Check wheel alignment after reinstallation.

STUB AXLE

Removal — Raise vehicle and place on safety stands. Remove hub and disc assembly. Using tool T. Av. 476 (or equivalent) disconnect upper and lower ball joints, then separate steering arm ball joint. Use a slide hammer and withdraw drum/hub assembly. Make sure axle drive shaft does not drop.

Installation — Install stub axle into position while guiding ball joints into position. Pull drive shaft into carrier housing. Refit brake components. Tighten stub axle nut.

RENAULT (Cont.)

TORSION BAR

Removal – 1) Slide seat forward and tilt seat. Loosen lock nut and turn cam screw counterclockwise to zero. Raise vehicle and place on safety stands. Remove dust cover from adjusting lever. Fit special tool 545 (or equivalent) in adjusting lever. From inside vehicle, remove lever housing attachment bolts. Remove housing cover cam assembly from adjusting lever, then slowly release pressure on wrench.

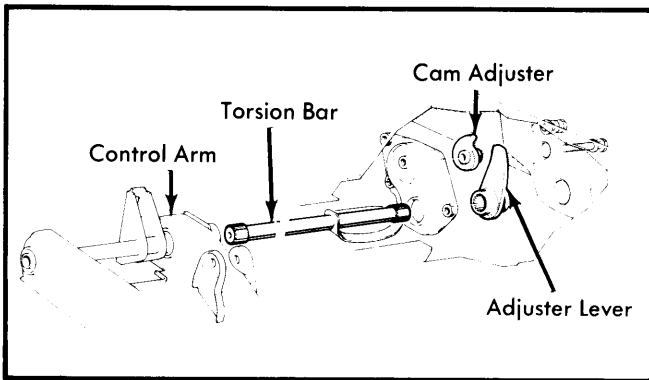


Fig. 2 Exploded View of Torsion Bar Assembly

2) Index mark position of adjusting lever with floor crossmember. Mark position of torsion bar on lower arm anchor sleeve. Disconnect stabilizer bar brackets. Remove bar from arm and check that mark made on lower arm anchor sleeve is aligned with punch mark on torsion bar. If punch marks do not align, count number of revolutions and spines displaced to align marks.

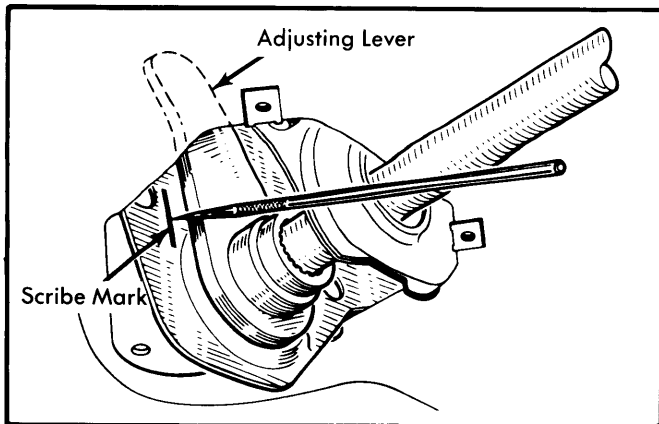


Fig. 3 Scribing Marks on Floor Crossmember

Installation – 1) Lightly grease torsion bar ends with grease. Reassemble cover seal, cam housing, and adjusting lever over torsion bar. Insert bar into lower control arm, aligning index mark made during removal. Fit adjusting lever on splines, aligning with mark on floor crossmember.

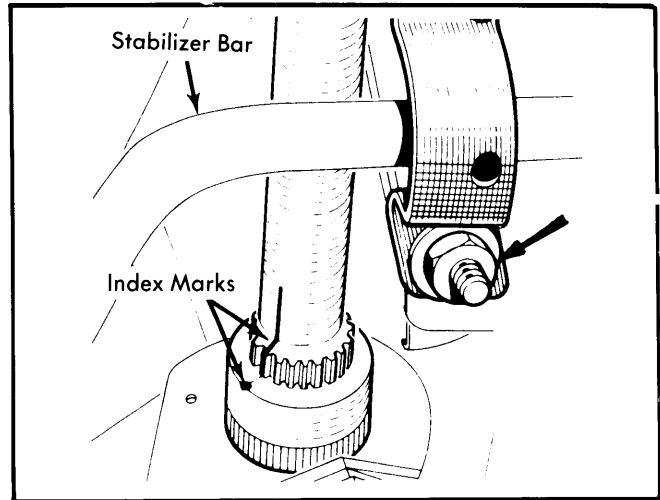


Fig. 4 Lower Arm Anchor Sleeve Scribe Mark

2) Place adjusting lever $\frac{3}{8}$ - $\frac{3}{4}$ " (10-20 mm) as shown in Fig. 5. Insert wrench 545 (or equivalent) and take up tension on bar. Center the cover by resetting cam. Hold assembly with vise grips and insert mounting bolts. Adjust under body height by turning adjusting cams.

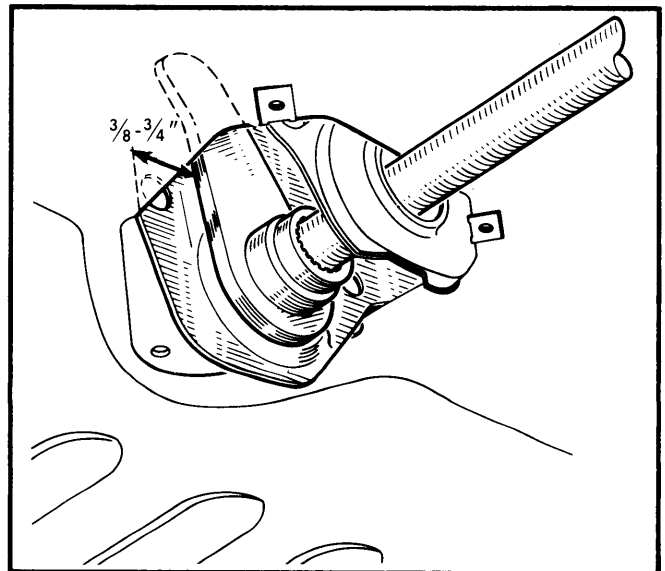


Fig. 5 Position of Adjusting Lever

TIGHTENING SPECIFICATIONS

Application	Ft. Lbs. (mkg)
Lower Shock Absorber Bolt	30 (4.2)
Lower Ball Joint	40 (5.5)
Upper Ball Joint	25 (3.5)
Lower Control Arm Nuts	75 (10.4)
Axle Nut	90 (12.4)