Rear Suspension

JAGUAR

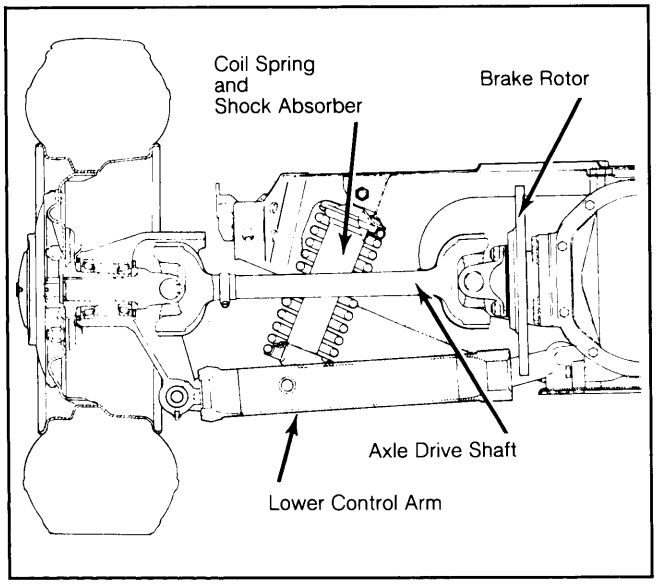
XJ6, XJS

DESCRIPTION

Jaguar uses independent coil spring type rear suspension. Outer bearing carrier and hub assembly is supported by control arms at bottom and utilizes drive axles as upper support.

Suspension is controlled by 2 coil spring/shock absorber assemblies, one mounted at each rear wheel. Movement of lower control arms is controlled by radius arms connected to control arms at rear and to chassis members at front.

Fig. 1: Jaguar Rear Suspension Assembly



ADJUSTMENTS

WHEEL ALIGNMENT SPECIFICATIONS & PROCEDURES

See Wheel Alignment Specifications and Procedures in WHEEL ALIGNMENT section.

WHEEL BEARING/END FLOAT

Wheel bearing and end float adjustment is controlled by a spacer located next to the universal joint on the hub shaft. Spacers are available in thicknesses from .109 to .151" (2.77 to 3.84 mm) in .003" (.076 mm) steps. End float is normally .001-.003" (.026-.076 mm) and must be corrected if it exceeds .005" (.127 mm) by changing the spacer for a thicker one.

Checking

1) Raise vehicle and support with safety stands. Remove wheel assembly. Tap hub towards vehicle. Clamp dial indicator mount to hub carrier web. Stylus of dial indicator must contact hub flange. Note reading of dial indicator.

2) Using 2 levers between hub and hub carrier boss, press hub outwards. Take care not to damage water thrower. Note altered reading on dial indicator.

3) The difference between dial indicator readings represents end float of hub bearings. If this exceeds .005" (.127 mm) install thicker spacer.

Adjustment

1) Remove cotter pin. Remove hub nut and washer from end of axle shaft. Remove fulcrum shaft grease nipple from hub carrier. Place thread protector (JD.1C/7) on end of drive shaft.

2) Mount hub puller (JD.1D) on rear hub. Withdraw hub and carrier from drive shaft and remove hub puller and thread protector. Remove spacer from drive shaft and measure thickness. Using a spacer .006" (.152 mm) thicker will reduce end float by .001" (.026 mm).

3) Clean drive shaft splines. Place selected spacer on drive shaft. Apply Loctite to outer two thirds of drive shaft splines. To complete installation, reverse removal procedures.

REMOVAL & INSTALLATION

WHEEL BEARING

Removal

1) Remove as previously described in Adjustments, steps **1)** & **2).** Pry out oil seal retainers from fulcrum shaft housing and remove seals, bearings, distance tubes, and shims.

2) Mount hub carrier in vice and drift out bearing cups from fulcrum shaft housing. Using press, remove hub assembly from carrier. Drift out inner hub bearing cup with seal and bearing, from hub carrier.

3) Drift out bearing cup. Using hand press, remove outer bearing from hub. Remove oil seal track from hub shaft and clean and inspect all parts

Installation

To install, reverse removal procedures.

COIL SPRING & SHOCK ABSORBER

Removal

1) Raise vehicle and support at lift points with safety stands. Position floor jack under control arm. Remove bolt retaining top of shock absorbers to suspension assembly crossmember.

2) Remove nuts retaining shock absorbers to lower mount. Using a drift, remove mounting piece. Withdraw shock absorber and coil spring assembly.

3) Using a spring compressor, collapse spring until collets and spring seat can be removed. Release pressure and separate shock absorber from spring.

Installation

To install, reverse removal procedures.

RADIUS ROD

Removal

1) Raise vehicle and support with safety stands, forward of radius rods. Remove wheel assembly. Remove bolt and spring washer securing safety strap to body. Remove lock wire and bolt securing radius rod to body, remove safety strap.

2) Remove forward lower shock absorber retaining pin. Using a punch, remove pin rearward. Bend tab washer and remove bolt retaining radius rod to control arm.

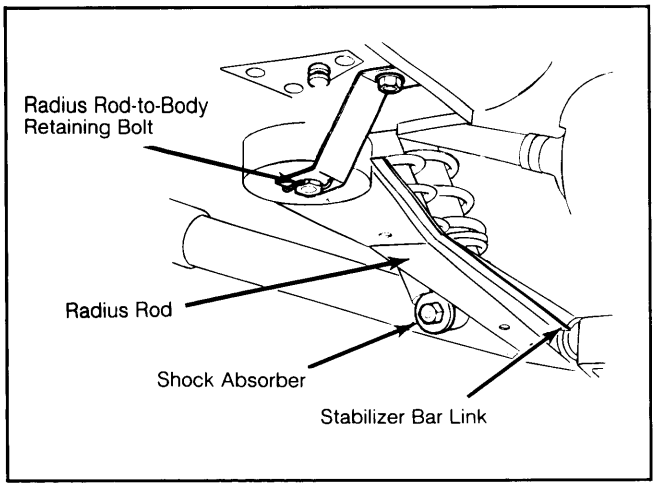
Installation

Replace any damaged radius rod bushings. When pressing bushings into radius rod, bushing should protrude from each side equal amounts. To complete installation, reverse removal procedure.

Rear Suspension

JAGUAR (Cont.)

Fig. 2: Installed Position of Radius Rod



REAR SUSPENSION ASSEMBLY

Removal

1) Raise vehicle and support with safety stands, forward of radius rods. Remove wheel assemblies. Place floor jack (with adaptor to hold suspension assembly) under rear suspension.

2) Disconnect intermediate exhaust pipes at both ends and remove from vehicle. Support rear mufflers out of the way. Disconnect radius rod-to-body mounting hardware.

3) Separate brake line union from body bracket. Disconnect brake lines at flexible hoses and plug openings. Disconnect propeller shaft at differential and lower out of the way.

4) Release parking brake. Disconnect parking brake cable from junction at rear suspension assembly. Remove suspension bracket nuts. Lower suspension assembly to floor and slide from vehicle.

Installation

To install, reverse removal procedures. Bleed brake system and check wheel alignment.

LOWER CONTROL ARM

Removal

1) Raise vehicle and support with safety stands, placed ahead of radius rods. Remove wheel assembly.

2) Remove lock nut and drift out bearing carrier fulcrum shaft. Fit dummy shaft for support. Collect shims and all seal retainers.

3) Lift bearing carrier up, clear of control arm. Keep carrier in position with heavy wire attached to crossmember. Separate radius rod from body.

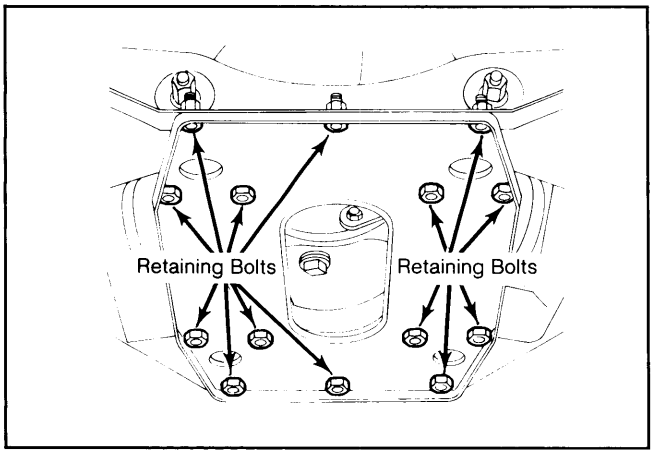
4) Remove bolts retaining support plate to crossmember and inner fulcrum brackets. Separate shock absorber at upper mount. Drift out pivot pin.

5) Separate inner fulcrum from control arm. Remove control arm and radius rod.

Installation

1) Apply grease to bearing cage and force bearing into lower control arm. Casting mark on bearing must face outward. Insert bearing tube from other end and force in opposite end bearing. Repeat procedure for other boss.

Fig. 3: Bolts & Setscrews Retaining Support Plate to Crossmember & Inner Fulcrum Brackets

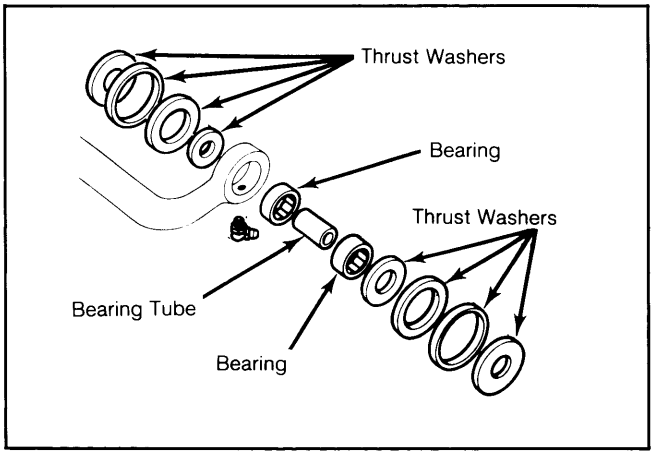


2) Assemble radius rod to control arm. Lightly coat thrust washers, new oil seals and seal retainers with grease. Fit assemblies into place on control arm.

3) Insert control arm to inner fulcrum bracket. Make sure radius rod bracket faces toward front of suspension.

4) Insert dummy shaft from each end to keep bearings positioned and locate control arm in bracket. Slip in fulcrum shaft while pushing out dummy shaft. Install lock nut.

Fig. 4: Fulcrum Boss Assembly



5) To complete installation, reverse removal procedure.

TIGHTENING SPECIFICATIONS

Application	Ft. Lbs. (N.m)
Inner Fulcrum Shaft	45-50 (61-68)
Radius Rod-to-Body	40-45 (54-61)
Radius Rod-to-Control Arm	60-70 (81-95)
Shock Absorbers	32-36 (44-49)
Stabilizer Bar Bracket-to-Body	14-18 (19-24)
Support Plate-to-Crossmember & Inner Fulcrum	14-18 (19-24)
Axle Shaft Nut	100-120 (136-163)