REMOVAL

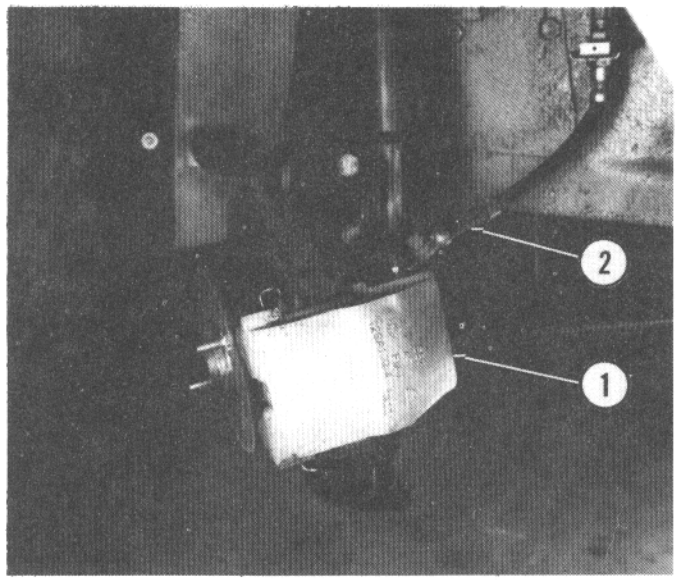
Remove wheel.

If brake caliper (1) needs inspection, leave caliper attached to suspension.

To do this, plug outlet from brake fluid reservoir and disconnect brake fluid hose (2) from caliper.

To remove caliper from suspension, refer to 331.17/.25.

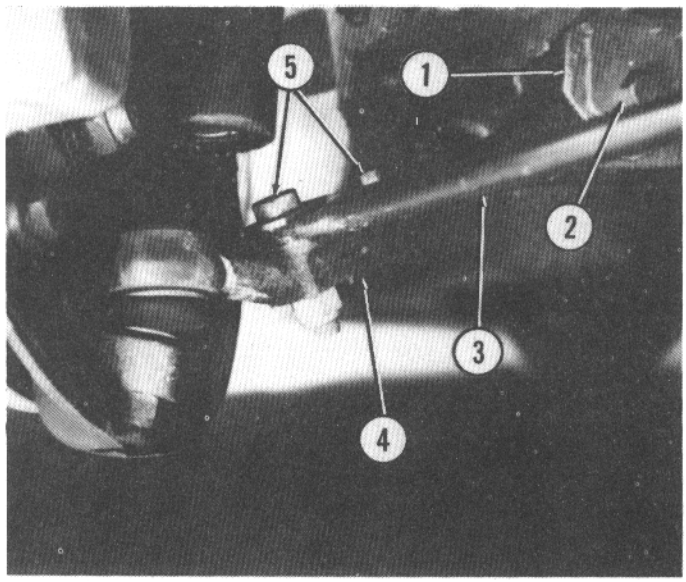
1. Caliper 2. Brake hose



Remove bolts (5) and plate holding strut bar (3) to control arm (4).

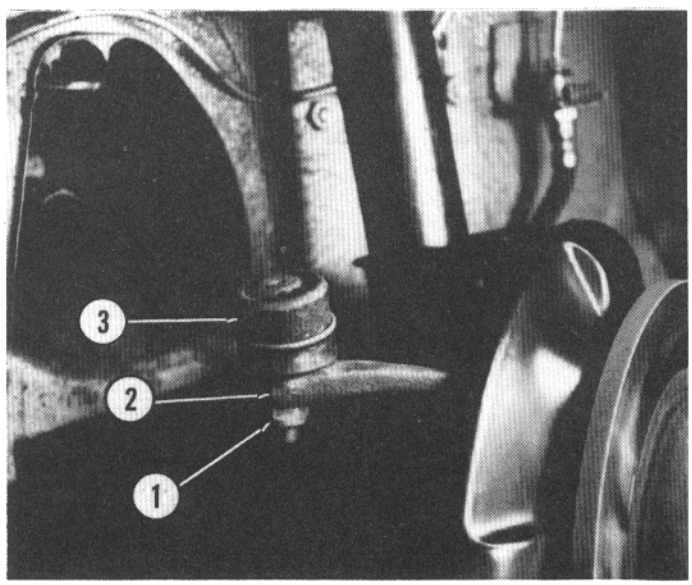
Remove bolt (2) holding control arm to bracket (1).

1. Bracket 2. Bolt 3. Strut bar 4. Control arm 5. Bolts



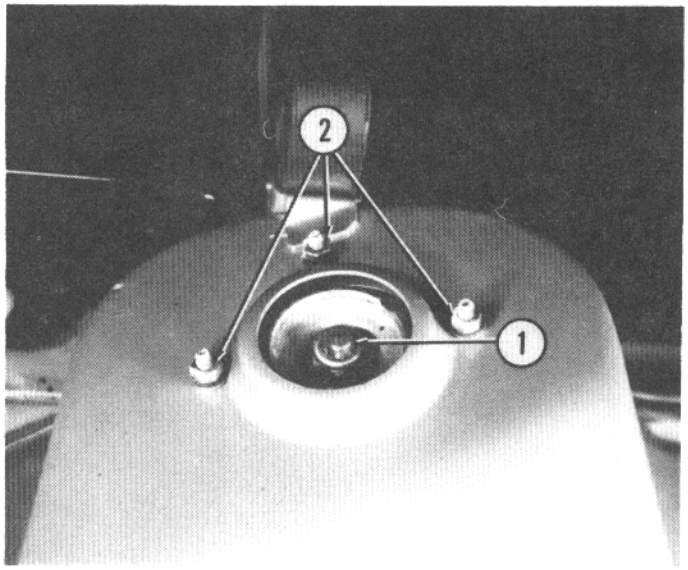
Remove nut (1) holding tie rod ball joint (3) to steering arm (2). Use tool A.47038 to separate ball joint from arm.

1. Nut 2. Steering arm 3. Ball joint



Disconnect strut assembly (1) by removing three nuts (2) and washers.

1. Strut assembly 2. Nuts

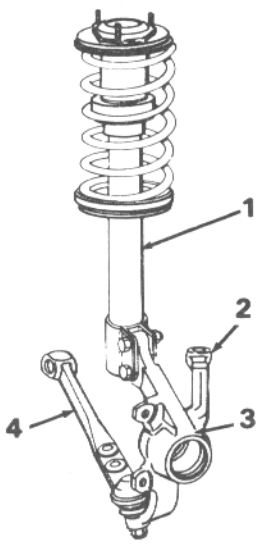


Lower suspension assembly out of vehicle.

To replace coil springs, refer to 443.02/.06.

If hub bearing must be replaced, refer to STEERING KNUCKLE OVERHAUL in this section.

1. Strut assembly 2. Steering arm 3. Steering knuckle
4. Control arm

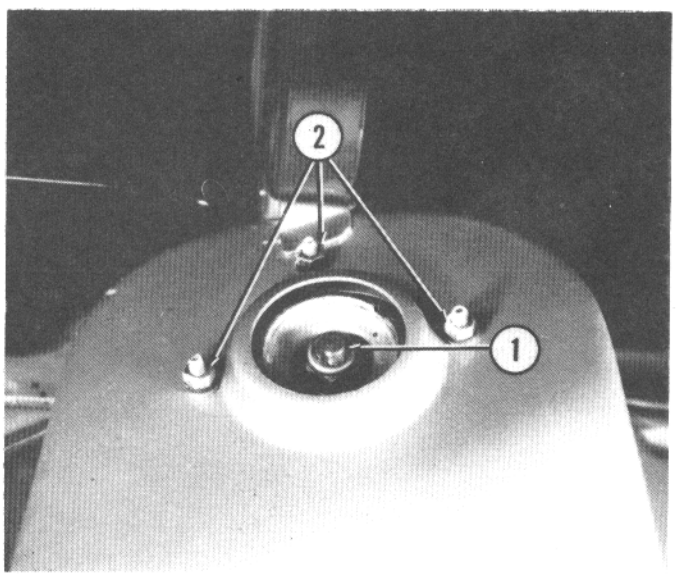


INSTALLATION

Place suspension assembly in vehicle. Install washers and nuts (2) on three bolts on top of strut assembly (1).

Torque nuts to 7 ft. lbs. (1 kgm).

1. Strut assembly 2. Nuts



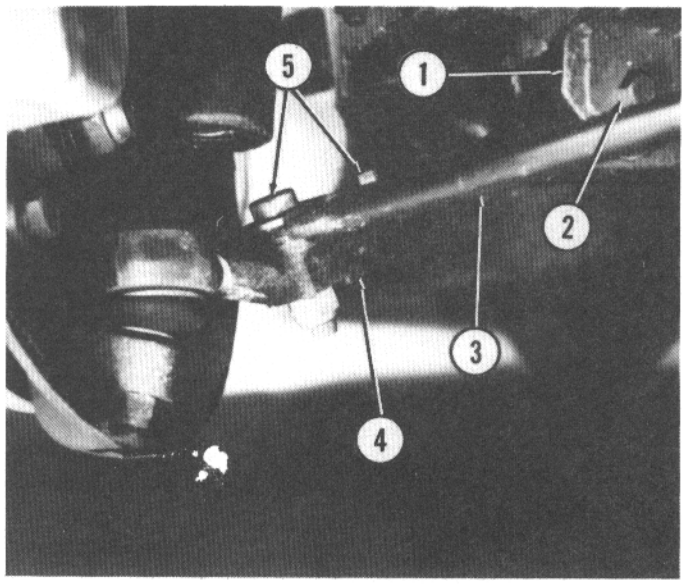
Place control arm (4) in bracket (1).

Install bolt (2), washer and nut.

Place strut bar (3) on control arm. Place plate on strut.

Install bolts (5) through strut bar and control arm and install nut.

1. Bracket 2. Bolt 3. Strut bar 4. Control arm 5. Bolts



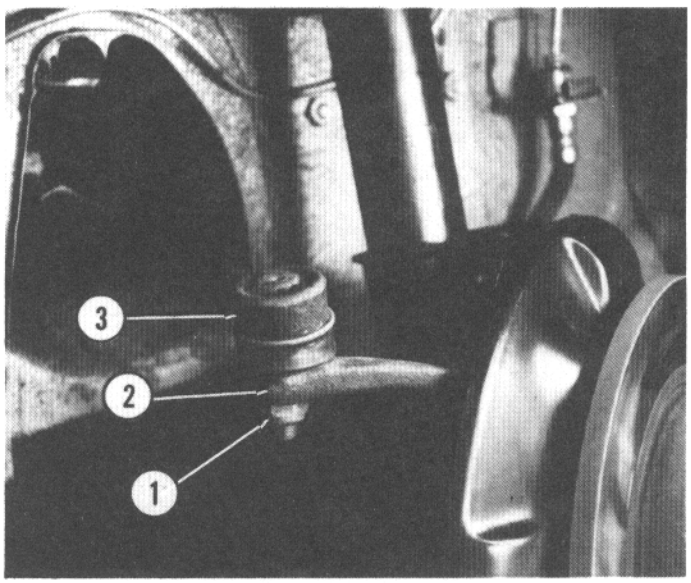
Place tie rod ball joint (3) in steering arm (2).

Install nut (1). Torque nut to 36 ft. lbs. (5 kgm).

Install brake caliper. If caliper was disconnected, attach brake hose and bleed brakes.

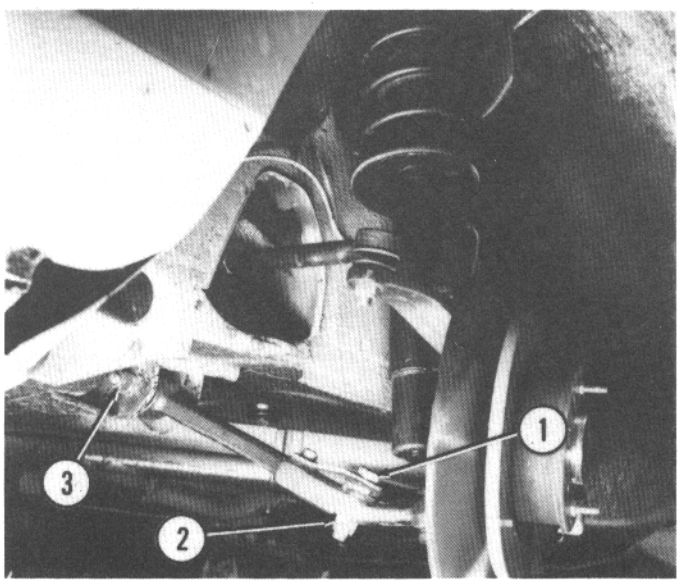
Install wheel.

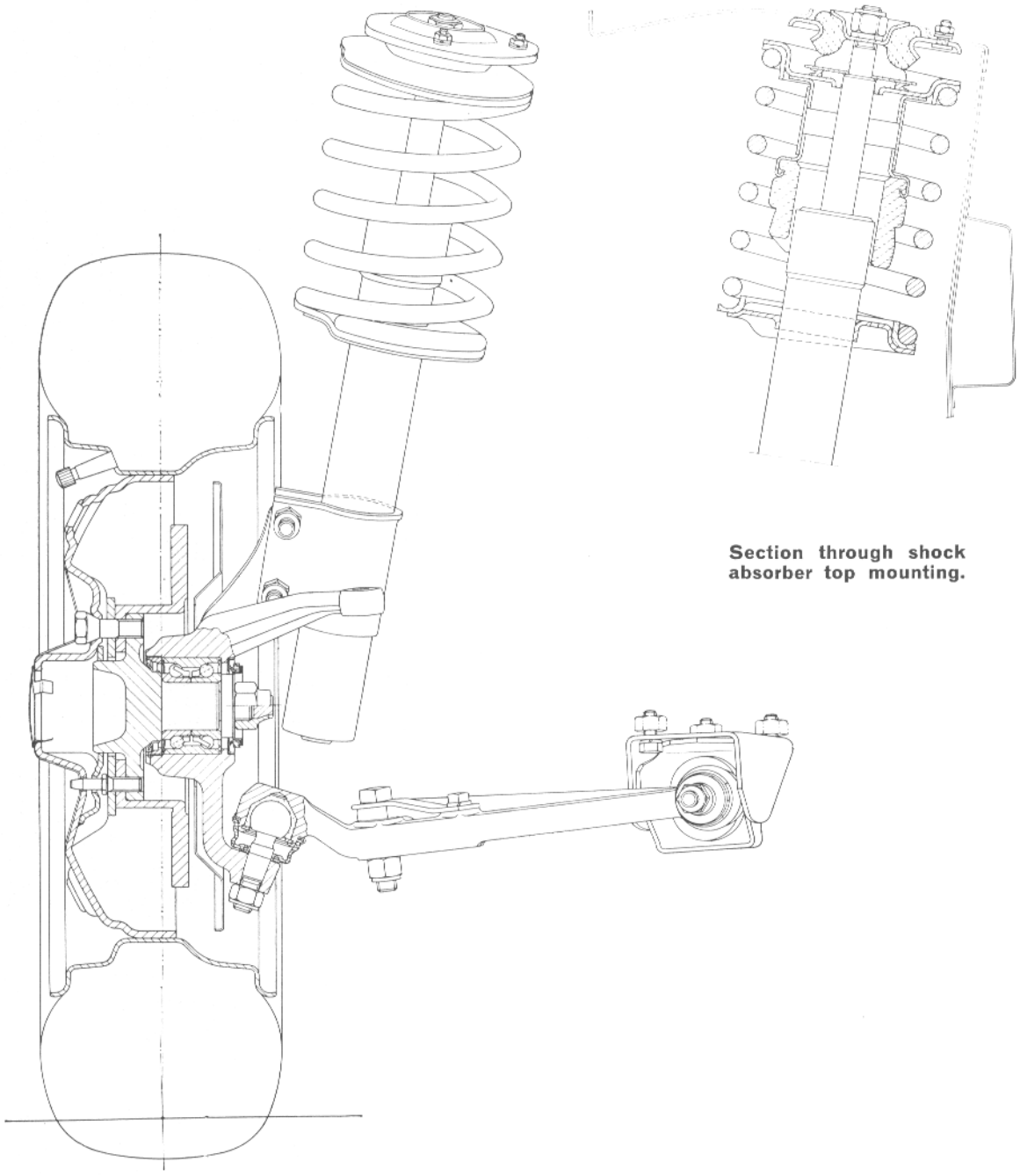
1. Nut 2. Steering arm 3. Ball joint



Lower vehicle. With vehicle on ground, torque bolt (1) and nuts (2 and 3) to specifications.

1. Bolt 2. Nut 3. Nut





Section through shock absorber top mounting.

CROSS SECTION OF FRONT SUSPENSION

STEERING KNUCKLE

REMOVAL AND INSTALLATION

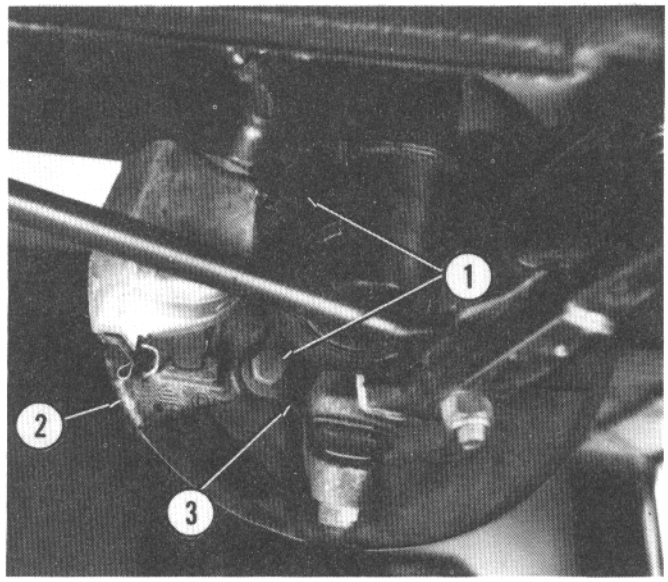
Raise vehicle and remove wheel.

Remove bolts (1) holding caliper support (2) to knuckle (3).

Remove caliper support with caliper attached without disconnecting brake hose. Wire assembly out of way.

Remove disc and backing plate. Refer to 331.17/.25.

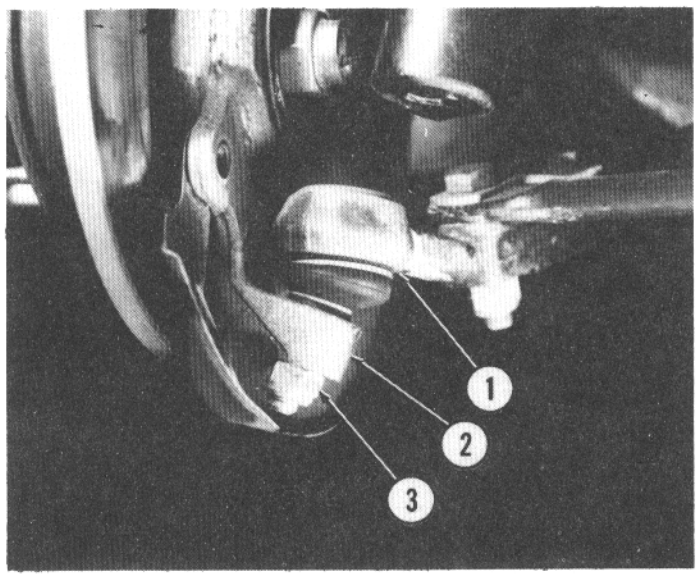
1. Bolts 2. Caliper support 3. Knuckle



Remove nut (3) holding lower ball joint (1) to knuckle (2).

Separate ball joint from knuckle.

1. Ball joint 2. Knuckle 3. Nut



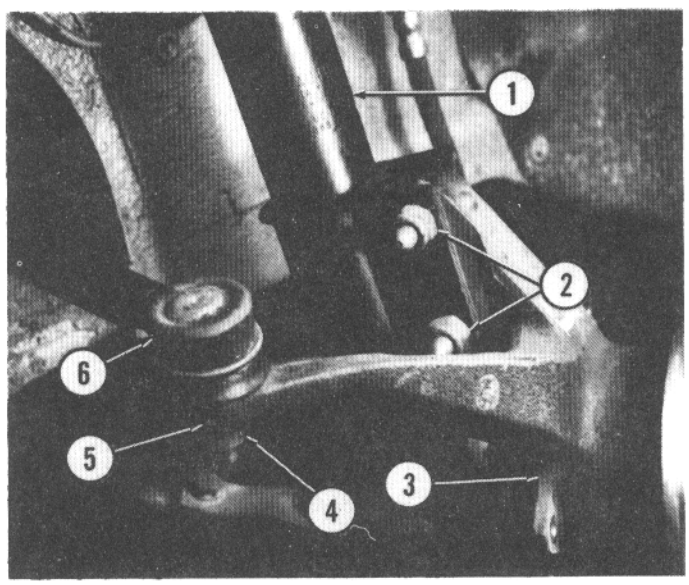
Remove nut (4) holding tie rod ball joint (6) to steering arm (5). Separate ball joint from arm.

Remove two nuts (2) and bolts attaching strut assembly (1) to knuckle (3).

Remove steering knuckle from vehicle.

Installation is reverse of removal. Torque bolts and nuts to specifications.

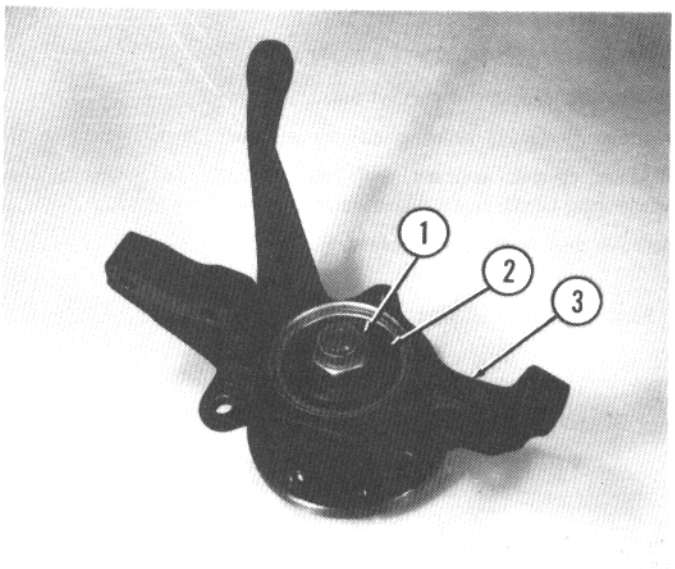
1. Strut assembly 2. Nuts 3. Knuckle 4. Nut 5. Steering arm 6. Ball joint



OVERHAUL

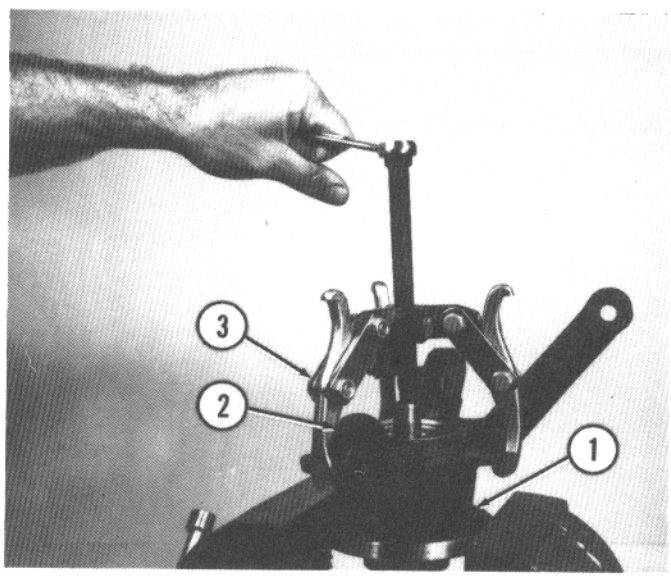
Unstake and remove hub nut (1). Remove washer (2) with gasket attached.

1. Nut 2. Washer 3. Steering knuckle



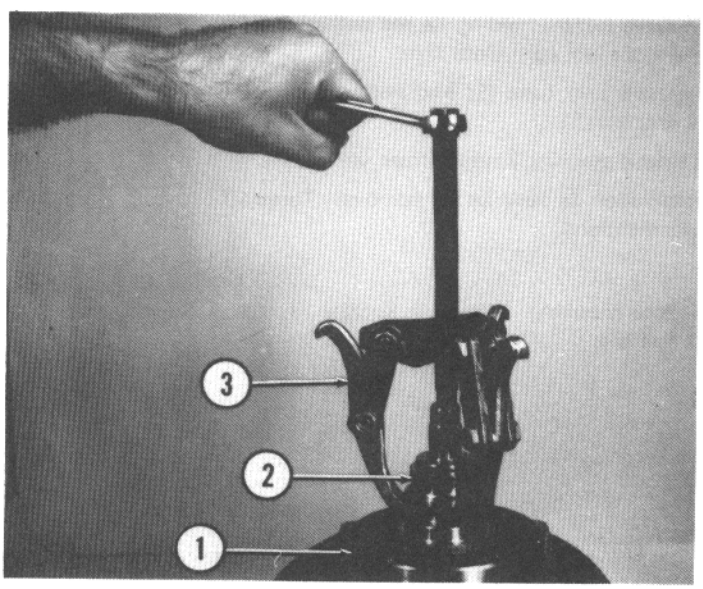
Use a puller (3) or press to remove hub (1) from knuckle (2).

1. Hub 2. Knuckle 3. Puller



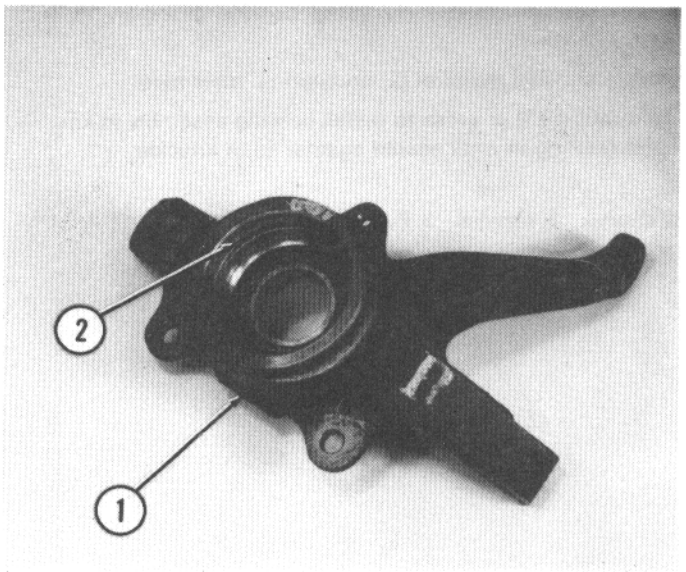
If bearing inner race (2) remains on hub (1), drive race off hub far enough to attach a puller (3), and remove race from hub. A press may also be used.

1. Hub 2. Inner race 3. Puller



Remove internal lock ring (2) from knuckle (1).

1. Knuckle 2. Lock ring

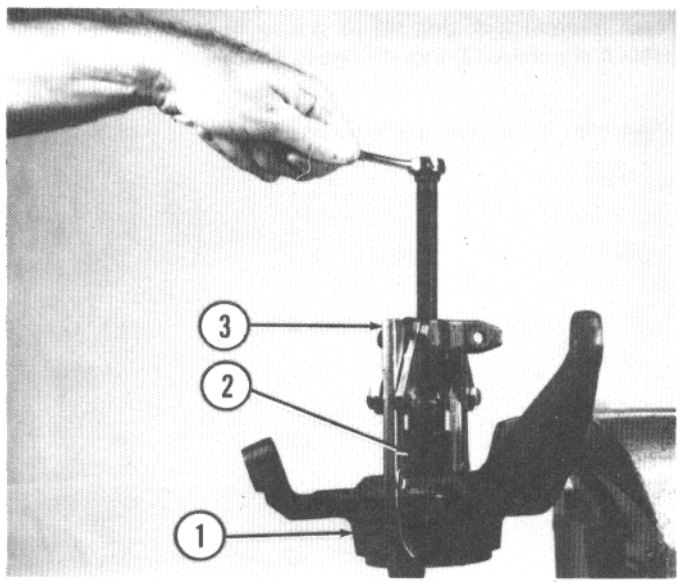


Remove thrust ring from inner side of knuckle.

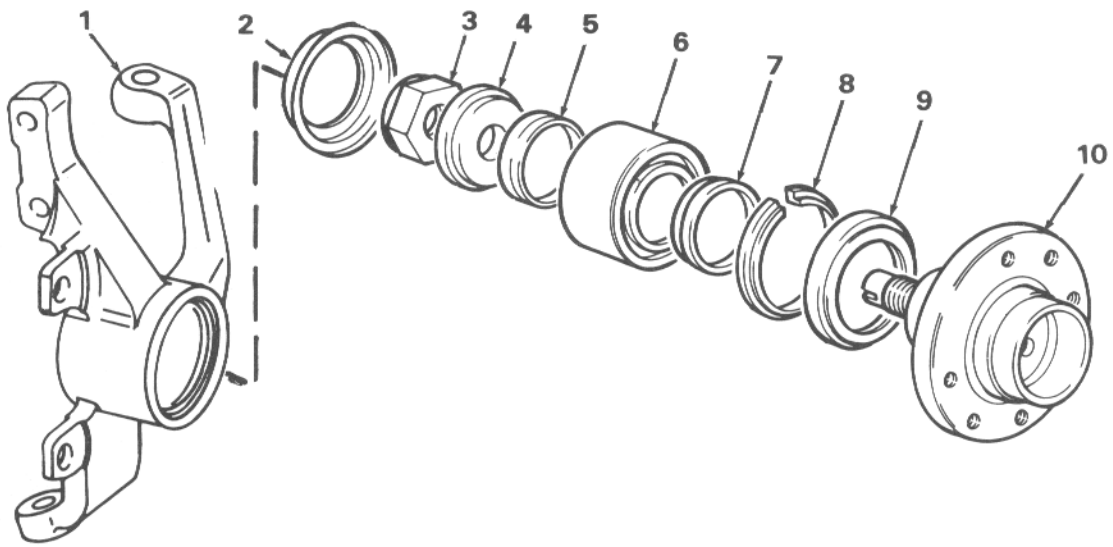
Place a suitable mandrel (2) on bearing inner race.

Use a puller (3) or press to remove bearing assembly from knuckle (1).

1. Knuckle 2. Mandrel 3. Puller



1. Steering knuckle
2. Thrust ring
3. Nut
4. Washer
5. Gasket
6. Bearing
7. Gasket
8. Lock ring
9. Thrust ring
10. Hub



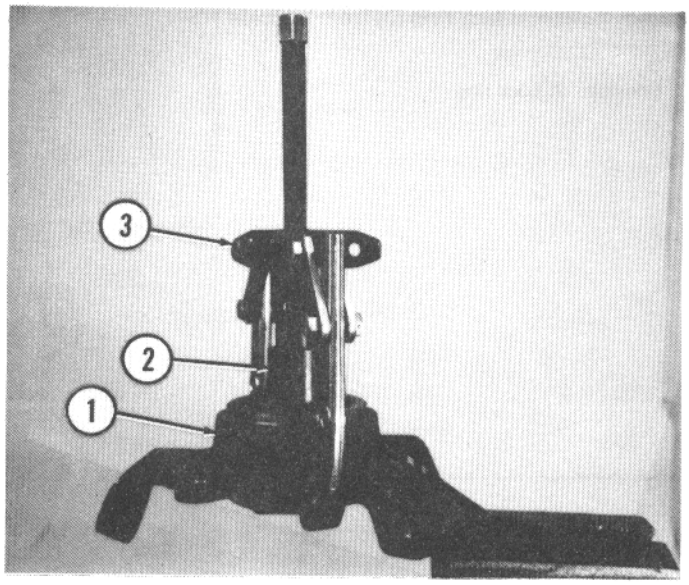
EXPLODED VIEW OF STEERING KNUCKLE

To reassemble knuckle (1), place bearing assembly in outer side of knuckle.

Place a suitable mandrel (2) on bearing inner race.

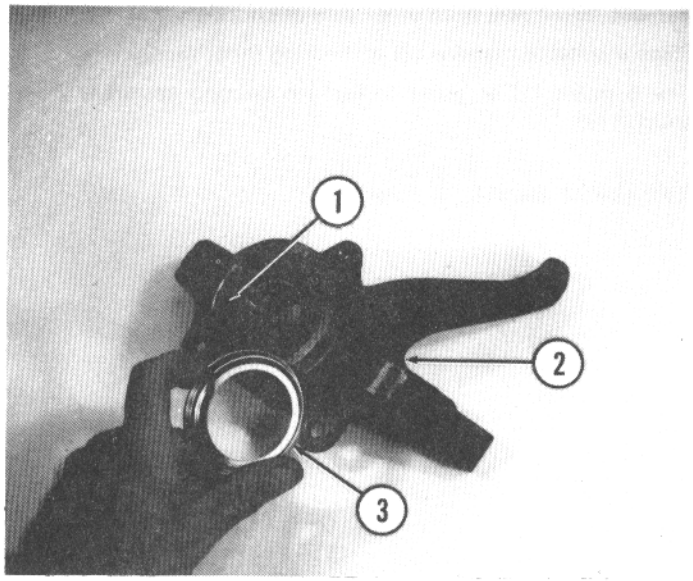
Use a puller (3) or press to install bearing assembly in knuckle. Press bearing in until seated against lip in knuckle.

1. Knuckle 2. Mandrel 3. Puller



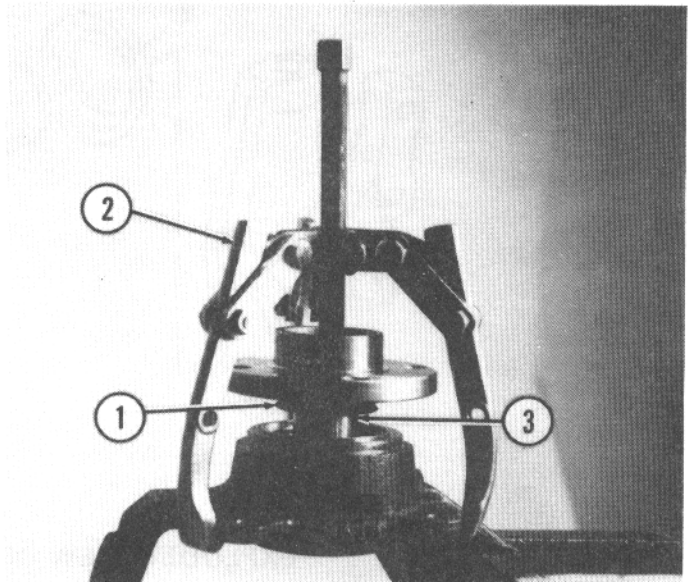
Install internal lock ring (1) in groove in knuckle (2). Install inside and outside (3) thrust rings in knuckle.

1. Lock ring 2. Knuckle 3. Thrust ring



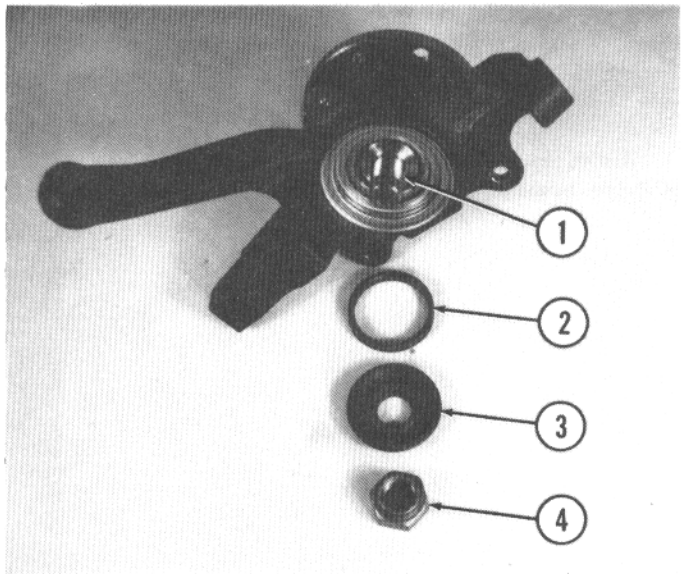
Install gasket (1) on hub shaft (3). Use a puller (2) or press to press hub into place.

1. Gasket 2. Puller 3. Hub shaft



Install gasket (2), washer (3) and nut (4) on hub shaft (1). Torque nut to 159 ft. lbs. (22 kgm). Stake nut.

1. Hub shaft 2. Gasket 3. Washer 4. Nut



CONTROL ARM

INSPECTION

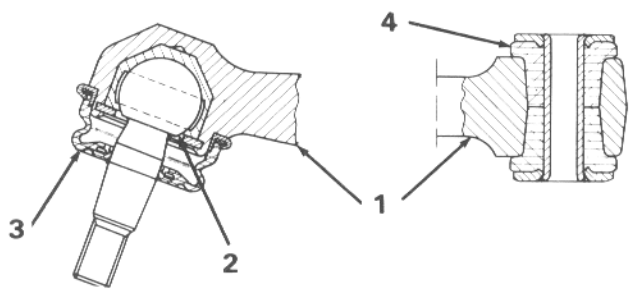
If control arm ball joint is worn, replace entire control arm.

Check control arm (1) for cracks or signs of distortion. Replace if damaged.

Check swivel joint (2) and protective boot (3) for cracks or breaks that might permit mositure or dirt entry. Replace entire control arm if damaged.

Check rubber bushings (4) for wear or deterioration. Overhaul control arm if damaged.

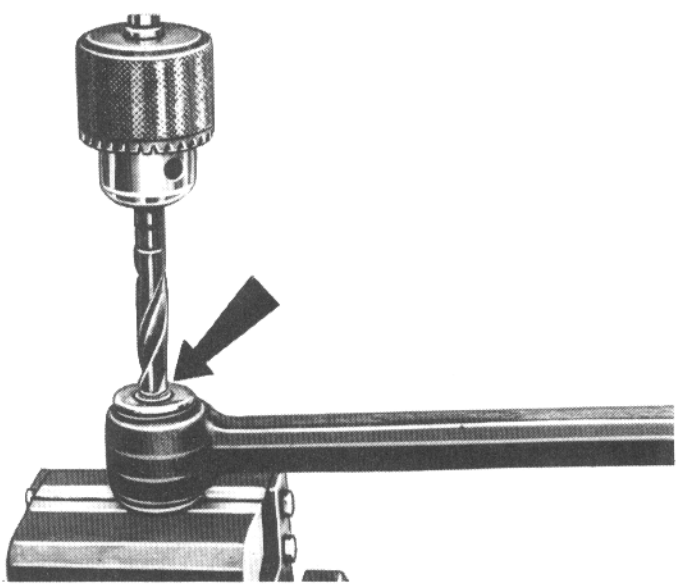
1. Control arm 2. Swivel joint 3. Boot 4. Bushing



OVERHAUL

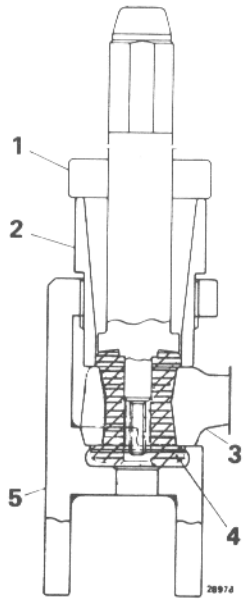
Using a drill press, machine off peened area of spacer (either end) as shown.

Using a press, drive out spacer first, then remove rubber bushing.



Coat new bushing (4) with silicone grease. Using assembly tool A.74225 (items 1, 2 and 5), install new bushing (4) into control arm (3).

1. Installer, tool A.74225 2. Pilot, tool A.74225 3. Control arm
4. Rubber bushing 5. Base, tool, A.74225



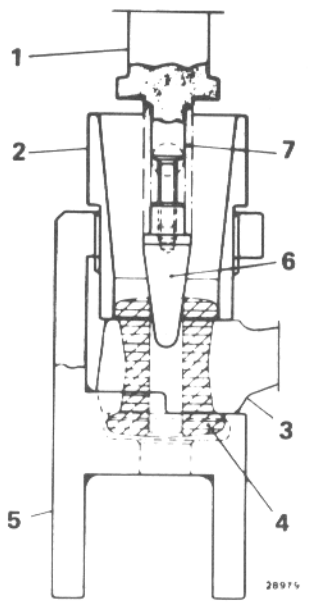
Assemble spacer (7) on installer (1), then screw on tip (6).

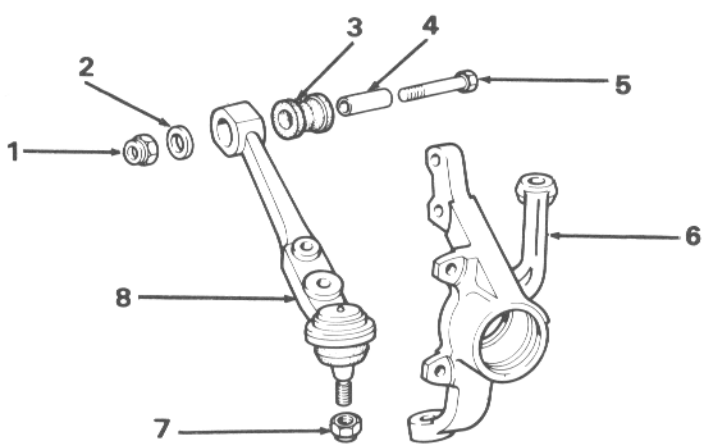
Coat new spacer (7) with silicone grease.

Using assembly tool A.74255 (items 1, 2, 5, 6 and 7), install new spacer (7) into bushing (4).

Position washers on both ends of spacer, then peen over spacer to lock washers in place.

1. Installer, tool A.74255 2. Pilot, tool A.74255 3. Control arm
4. Rubber bushing 5. Base, tool A.74255 6. Tip, tool A.74255
7. Spacer





1. Nut
2. Washer
3. Bushing
4. Spacer
5. Bolt
6. Steering knuckle
7. Nut
8. Control arm

EXPLODED VIEW OF CONTROL ARM COMPONENTS

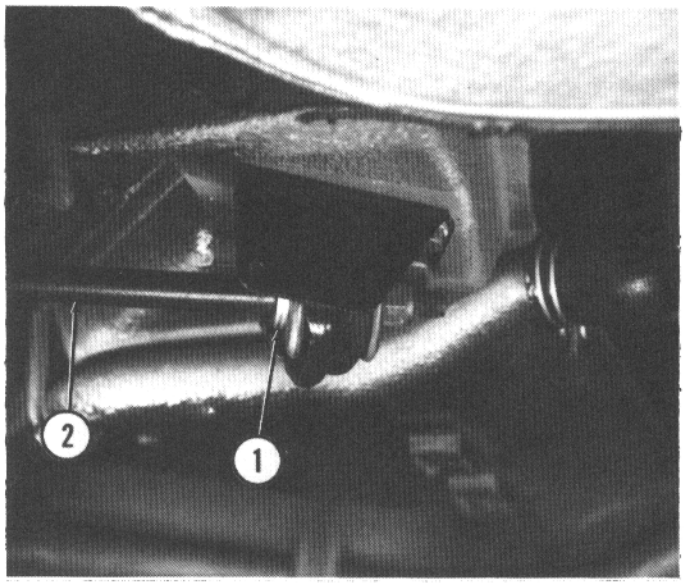
FRONT SUSPENSION ALIGNMENT

Before aligning the front suspension, it must be checked for possible worn or misadjusted components. Check the following:

— Tire pressure (29 psi front, 32 rear).
— Tire radial and lateral runout. Runout should be less than 0.118 in. (3 mm).
— Wheel bolt tightness.
— Wheel bearing end play (if perceptible), bearing may be worn. or bearing may need tightening).
— Lower ball joint (may be worn). Also check ball joint nut tightness. Torque should be 58 ft. lbs. (8 kgm).
— Control arm to chassis mounting nut tightness. Torque should be 29 ft. lbs. (4 kgm).
— Control arm rubber bushings for deterioration (overhaul or replace control arm).
— Strut assembly to knuckle nut tightness. Torque should be 43 ft. lbs. (6 kgm).
— Steering box tie rod ball joints (replace if worn).

Caster (Unladen)	+6°10′ to +7°20′ (+6°45′ preferred) To adjust, vary thickness of shims (1) at front of strut bar (2).
Camber (Unladen)	0° to -1° (-½° preferred) Non-adjustable

1. Shims 2. Strut bar



Toe-in (Unladen)	+3/32 to +15/64 in. (+2.5 to +6.0 mm) (+5/32 in., +4.0 mm preferred) To adjust, make sure steering box and steering wheel are centered, then loosen nut (1). Turn steering box ball joint (2) in or out to obtain adjustment. Tighten nut. Repeat for other side.

1. Nut. 2. Ball joint