## Fastener Tightening Specifications

| Application | Specification | |
|---|---|---|
| | Metric | English |
| Lower Control Arm Bolt | 160 N·m | 118 lb ft |
| Lower Control Arm to Support Assembly Bolt | 110 N·m | 81 lb ft |
| Lower Shock Absorber Bolt | 110 N·m | 81 lb ft |
| Park Brake Routing Bolt | 12 N·m | 106 lb in |
| Rear Brake Hose Bracket Nut/Bolt | 12 N·m | 106 lb in |
| Spring Jounce Bumper | 58 N·m | 43 lb ft |
| Stabilizer Link to Lower Control Arm Nut | 15 N·m | 11 lb ft |
| Stabilizer Link to Stabilizer Shaft Nut | 50 N·m | 37 lb ft |
| Stabilizer Shaft Clamp Bolt | 70 N·m | 52 lb ft |
| Support to Body Bolt | 170 N·m | 125 lb ft |
| Toe Link Bolt | 160 N·m | 118 lb ft |
| Toe Link to Knuckle Bolt | 160 N·m | 118 lb ft |
| Toe Link to Support Bolt | 160 N·m | 118 lb ft |
| Trailing Arm Bolt | 110 N·m | 81 lb ft |
| Trailing Arm Bracket to Body Bolt | 110 N·m | 81 lb ft |
| Trailing Arm Bracket to Knuckle Bolt | 110 N·m | 81 lb ft |
| Trailing Arm Bushing Bolt | 160 N·m | 118 lb ft |
| Upper Control Arm to Knuckle Bolt | 160 N·m | 118 lb ft |
| Upper Control Arm to Support Bolt | 164 N·m | 121 lb ft |
| Upper Shock Bolt | 110 N·m | 81 lb ft |
| Wheel Bearing/Hub Bolt | 75 N·m | 55 lb ft |
| Wheel Drive Shaft Nut - AWD | 205 N·m | 151 lb ft |

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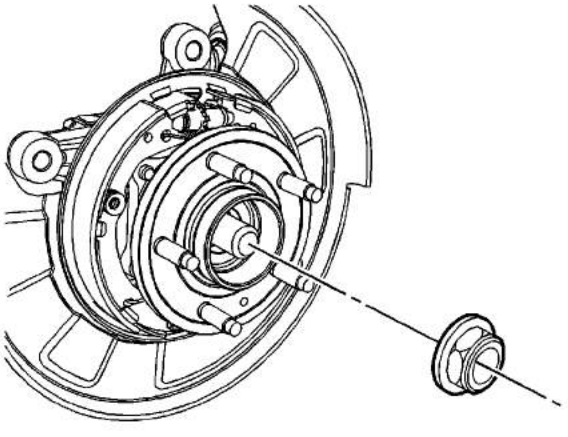
# Rear Wheel Bearing and Hub Replacement

## Removal Procedure

1. Raise and support the vehicle. Refer to Lifting and Jacking the Vehicle.
2. Remove the rear tire and wheel assembly. Refer to Tire and Wheel Removal and Installation.
3. Remove the brake rotor. Refer to Rear Brake Rotor Replacement.
4. Remove the wheel speed sensor. Refer to Rear Wheel Speed Sensor Replacement.



5. If equipped with all wheel drive (AWD), remove the rear wheel driveshaft nut.

**Note:** The splash shield and park brake assembly are supported to the knuckle between the wheel bearing mounting bolts and the wheel bearing. Care should be taken to support these items while the wheel bearing is being replaced.

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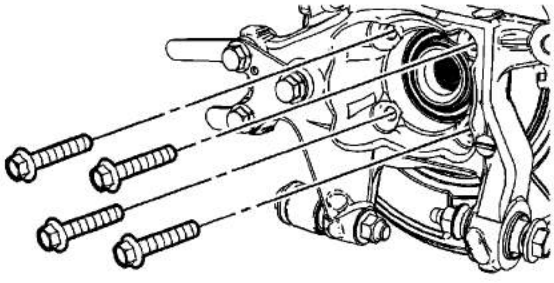
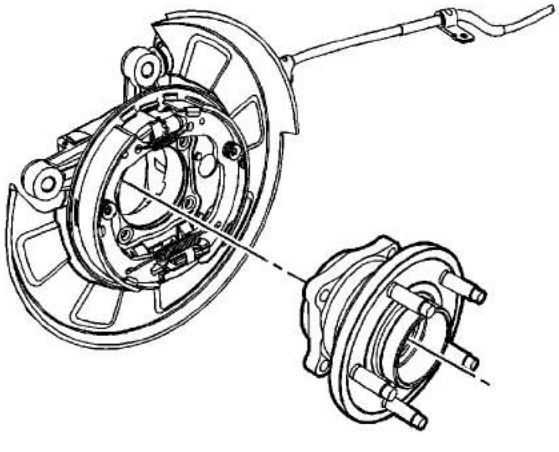


6. Remove the 4 wheel bearing bolts.



7. Remove the wheel bearing from the knuckle.

## Installation Procedure

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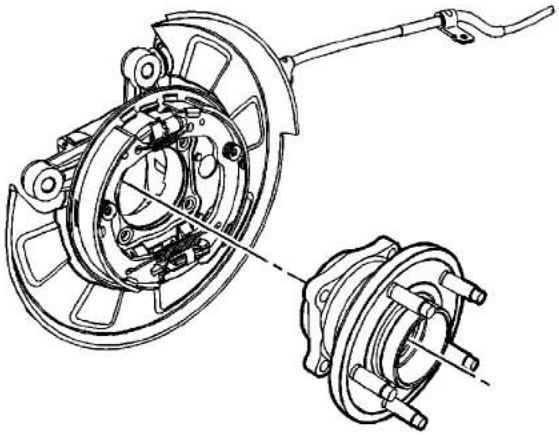
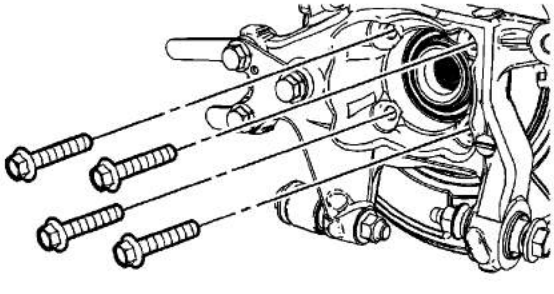


1. Position the wheel bearing to the knuckle.

**Caution:** Refer to Fastener Caution in the Preface section.



2. Install the 4 wheel bearing bolts and tighten to **75 N·m (55 lb ft)**.

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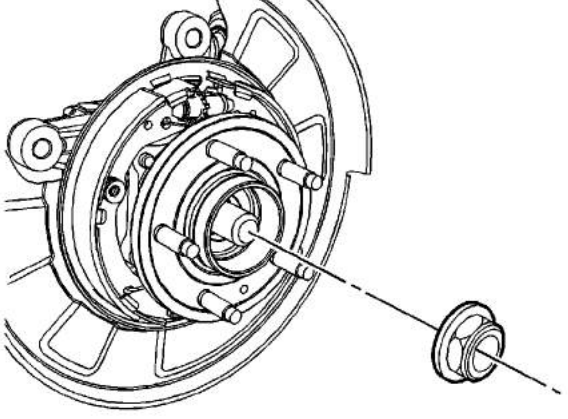

3. If equipped with AWD, install the rear wheel driveshaft nut and tighten to **205 N·m (151 lb ft)**.
4. Install the wheel speed sensor. Refer to Rear Wheel Speed Sensor Replacement.
5. Install the brake rotor. Refer to Rear Brake Rotor Replacement.
6. Install the rear tire and wheel assembly. Refer to Tire and Wheel Removal and Installation.
7. Lower the vehicle.

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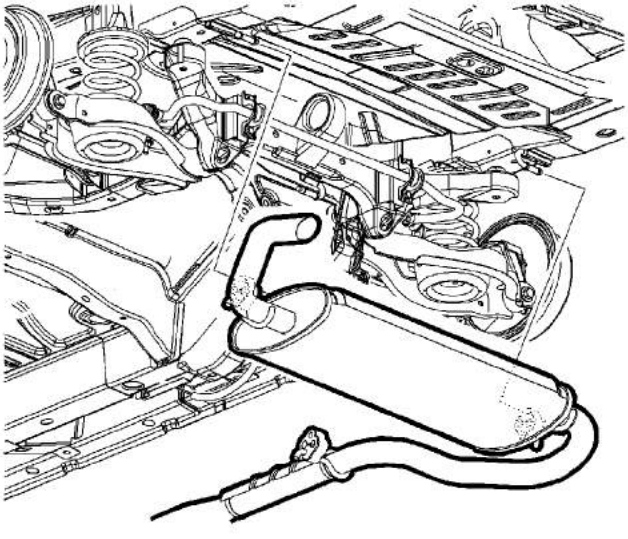
# Support Replacement

## Removal Procedure

1. Raise and support the vehicle. Refer to Lifting and Jacking the Vehicle.
2. Remove the tires and wheels. Refer to Tire and Wheel Removal and Installation.



3. Remove the exhaust muffler and resonator assembly. Refer to Exhaust Muffler Replacement.
4. If equipped with all wheel drive, remove the rear drive axle. Refer to Differential Replacement.
5. Remove the stabilizer shaft. Refer to Stabilizer Shaft Replacement.
6. Remove the stabilizer shaft links from the support. Refer to Stabilizer Shaft Link Replacement

.

7. Remove the lower control arm from the support assembly. Refer to Rear Axle Lower Control Arm Replacement.
8. Disconnect the upper control arm from the support assembly. Refer to Rear Axle Upper Control Arm Replacement.
9. Disconnect the adjustable link from the support assembly. Refer to Adjust Link Replacement.

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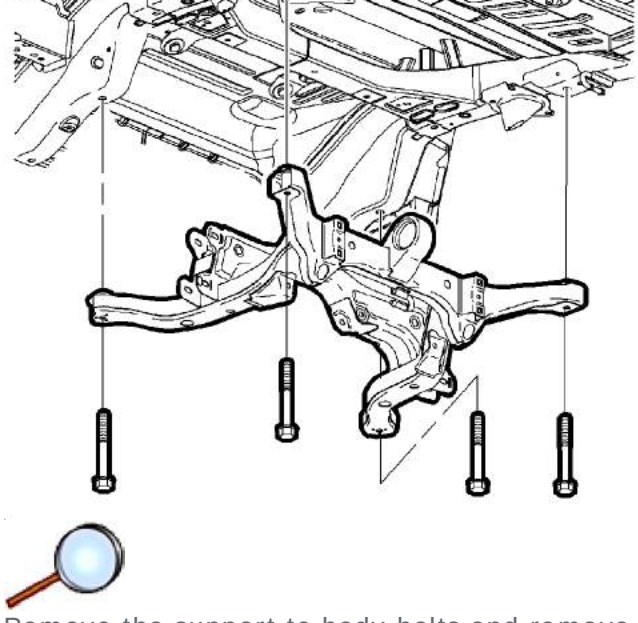
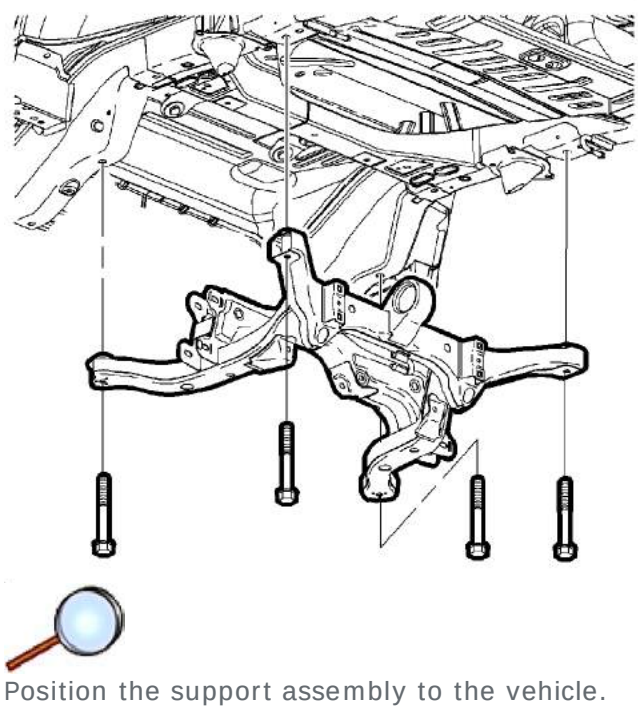


10. Remove the support to body bolts and remove the support assembly from the vehicle.

## Installation Procedure



1. Position the support assembly to the vehicle.

   **Caution:** Refer to Fastener Caution in the Preface section.

2. Install the support to body bolts and tighten to **170 N·m (125 lb ft)**.
3. Install the adjustable link on the support assembly. Refer to Adjust Link Replacement.
4. Connect the upper control arm to the support assembly. Refer to Rear Axle Upper Control

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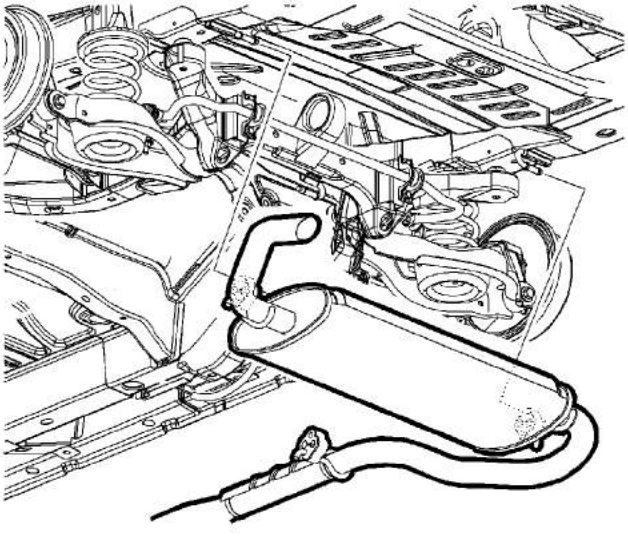
Replacement.

6. Install the stabilizer shaft. Refer to Stabilizer Shaft Replacement.
7. Install the stabilizer shaft links to the support. Refer to Stabilizer Shaft Link Replacement

.

8. If equipped with all wheel drive, install the rear drive axle. Refer to Differential Replacement.



9. Install the exhaust muffler and resonator assembly. Refer to Exhaust Muffler Replacement.
10. Install the tires and wheels. Refer to Tire and Wheel Removal and Installation.
11. Lower the vehicle.
12. Check the rear alignment. Refer to Wheel Alignment Measurement.

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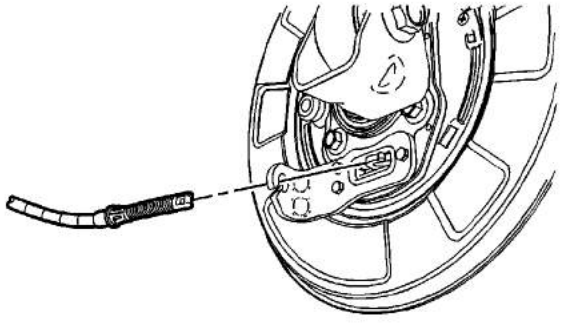
# Knuckle Replacement

## Special Tools

J 37043 Park Brake Cable Release Tool

## Removal Procedure

1. Raise and support the vehicle. Refer to Lifting and Jacking the Vehicle.
2. Remove the tire and wheel. Refer to Tire and Wheel Removal and Installation.



3. Disconnect the rear park brake cable from the park brake actuator.
4. Using the J 37043 , remove the park brake cable from the mounting bracket

**Caution:** Support the brake caliper with heavy mechanic wire, or equivalent, whenever it is separated from its mount and the hydraulic flexible brake hose is still connected. Failure to support the caliper in this manner will cause the flexible brake hose to bear the weight of the caliper, which may cause damage to the brake hose and in turn may cause a brake fluid leak.

5. Remove the brake caliper and bracket as an assembly and support it with heavy mechanics wire or equivalent. Refer to Rear Brake Caliper Bracket Replacement.
6. Remove the wheel bearing/hub assembly. Refer to Rear Wheel Bearing and Hub Replacement.

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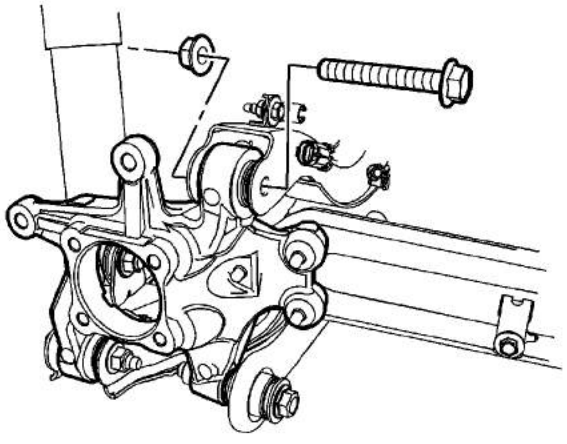
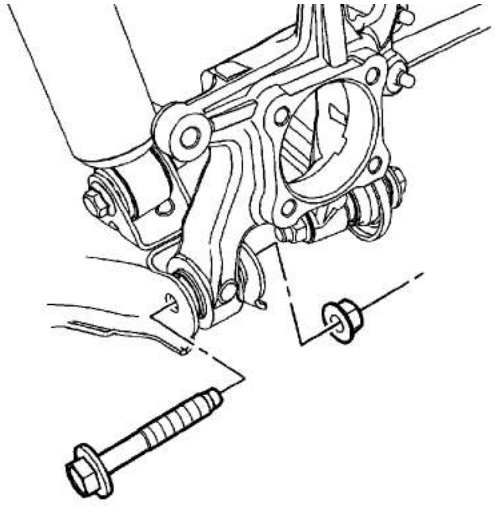


7. Remove the upper control arm to knuckle bolt and nut.



8. Remove the lower control arm to knuckle bolt and nut.

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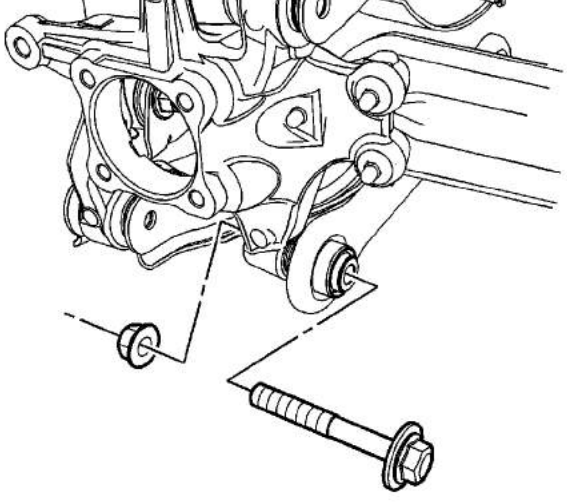
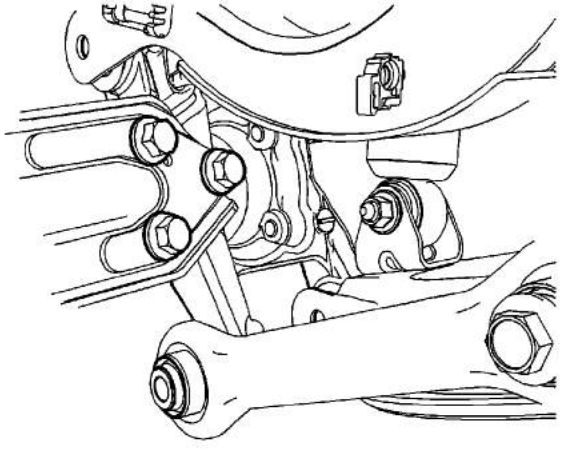


9. Remove the toe link to knuckle bolt and nut.



10. Remove the 3 trailing arm to knuckle bolts.
11. Remove the knuckle from the vehicle.

## Installation Procedure

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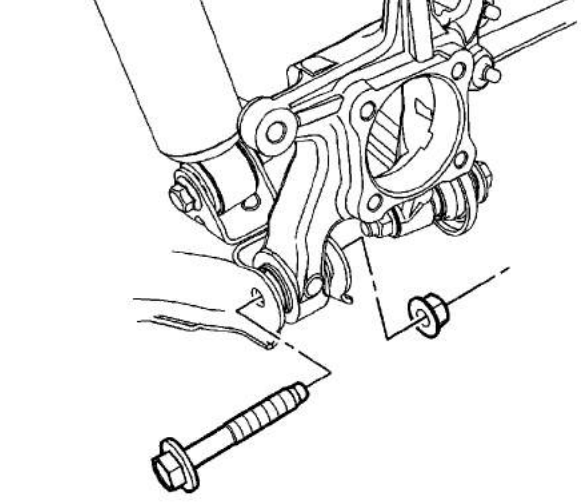
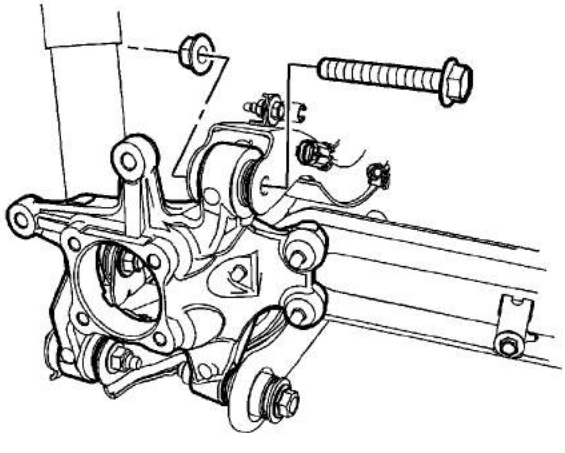


1. Install the knuckle to the lower control arm. Loosely install the bolt and nut.



2. Install the knuckle to the upper control arm. Loosely install the bolt and nut.

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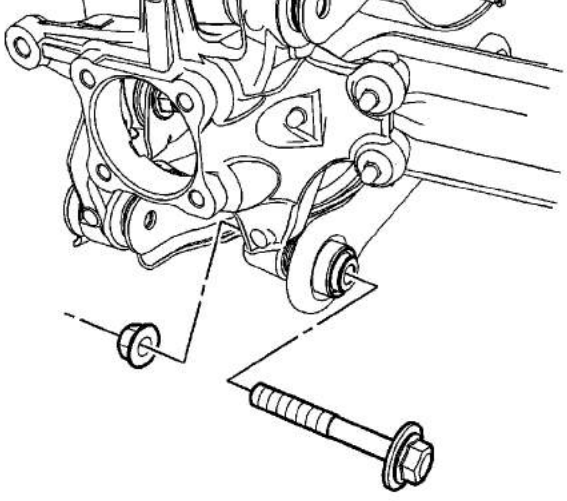
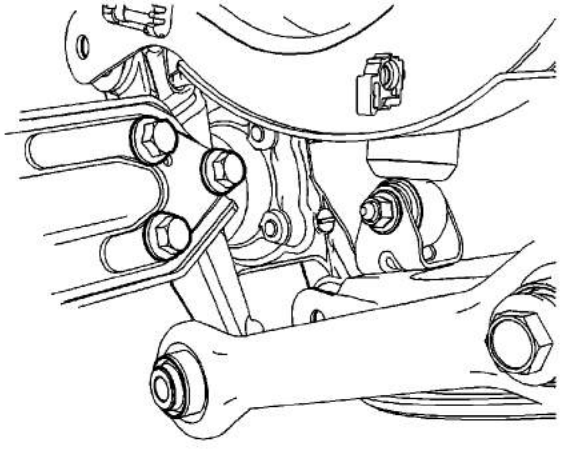


3. Install the knuckle to the toe link. Loosely install the bolt and nut.



4. Install the 3 trailing arm to knuckle bolts. Loosely install the bolt and nut.

   **Caution:** Refer to Fastener Caution in the Preface section.

5. Tighten the bolts and nuts in the following sequence:
   - Tighten the knuckle to lower control arm bolt and nut to **160 N·m (118 lb ft)**.
   - Tighten the knuckle to upper control arm bolt and nut to **160 N·m (118 lb ft)**.
   - Tighten the knuckle to toe link bolt and nut to **160 N·m (118 lb ft)**.
   - Tighten the 3 trailing arm to knuckle bolts to **110 N·m (81 lb ft)**.
6. Install the wheel bearing/hub assembly. Refer to Rear Wheel Bearing and Hub Replacement.

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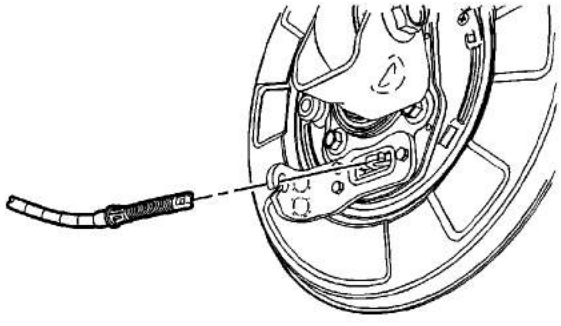
support the caliper in this manner will cause the flexible brake hose to bear the weight of the caliper, which may cause damage to the brake hose and in turn may cause a brake fluid leak.

7. Remove the supporting wire and position the brake caliper and bracket assemblies back onto the knuckles. Refer to Rear Brake Caliper Bracket Replacement.



8. Connect the rear park brake cable through the mounting bracket and onto the park brake actuator.
9. Install the tire and wheel. Refer to Tire and Wheel Removal and Installation.
10. Lower the vehicle.
11. Perform a vehicle wheel alignment. Refer to Wheel Alignment Measurement.

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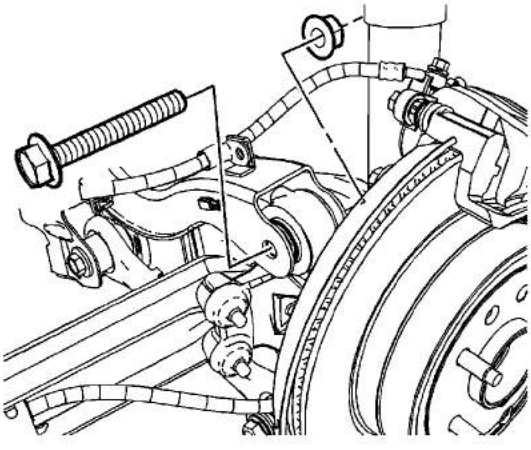
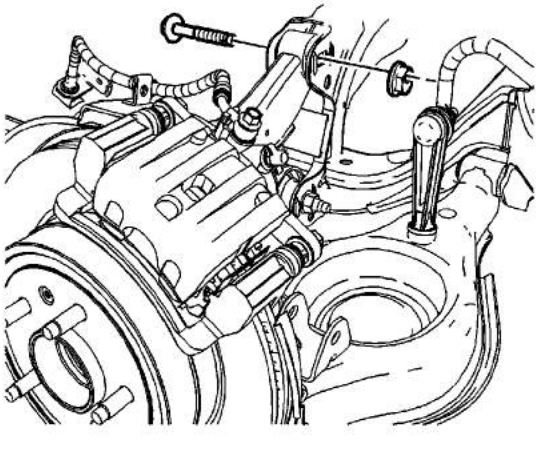
# Rear Axle Upper Control Arm Replacement

## Removal Procedure

1. Raise and support the vehicle. Refer to Lifting and Jacking the Vehicle.
2. Remove the rear tire and wheel assembly. Refer to Tire and Wheel Removal and Installation.
3. Disconnect the antilock brake system (ABS) brake wiring harness from the upper control arm.
4. Remove the rear brake hose routing nut and bolt.



5. Remove the upper control arm to knuckle nut and bolt.



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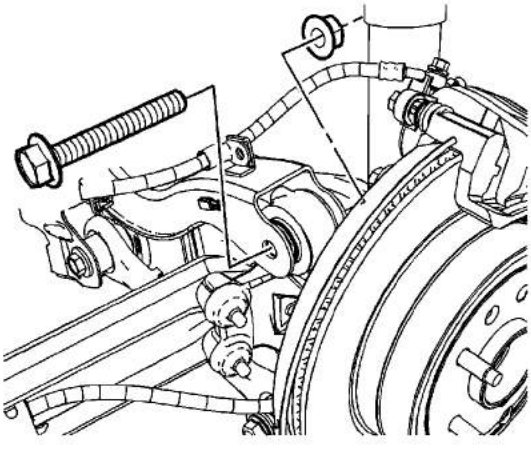
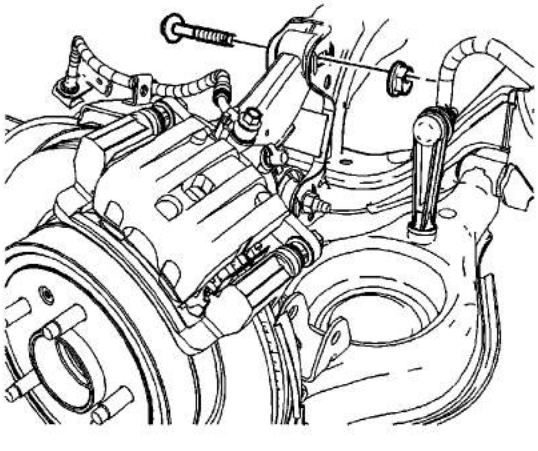
# Installation Procedure



1. Install the upper control arm to the knuckle.
2. Loosely install the upper control arm to knuckle nut and bolt.



3. Install the upper control to support bolt and cam nut.

**Caution:** Refer to Fastener Caution in the Preface section.

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6. Install the rear brake hose routing nut and bolt and tighten to **12 N·m (106 lb in)**.
7. Connect the ABS brake wiring harness to the upper control arm.
8. Install the rear tire and wheel assembly. Refer to Tire and Wheel Removal and Installation.
9. Lower the vehicle.
10. Check the rear alignment. Refer to Wheel Alignment Measurement.

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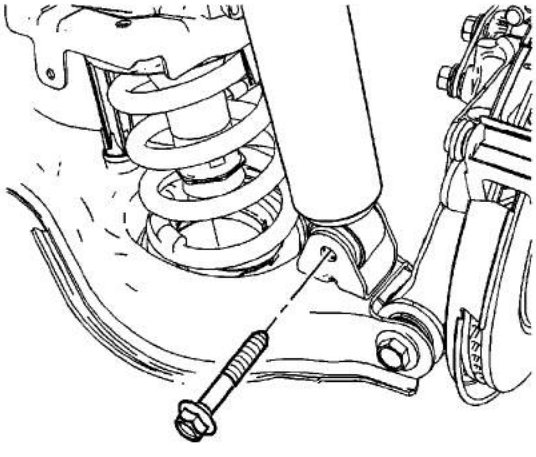
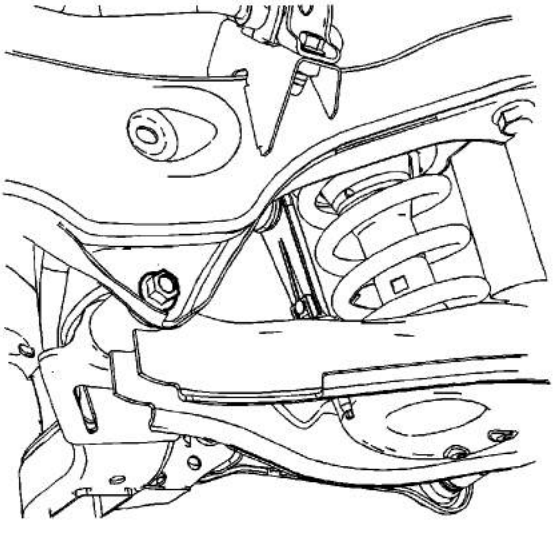
# Rear Axle Lower Control Arm Replacement

## Removal Procedure

1. Raise and support the vehicle. Refer to Lifting and Jacking the Vehicle.
2. Remove the rear tire and wheel assembly. Refer to Tire and Wheel Removal and Installation.
3. Remove the stabilizer shaft link. Refer to Stabilizer Shaft Link Replacement.
4. Position a jackstand underneath the lower control arm.
5. Raise the jackstand slightly to compress the coil spring.



6. Remove the lower shock bolt and nut.



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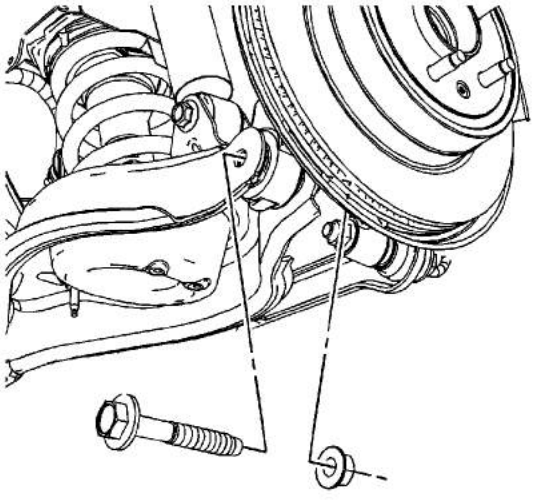
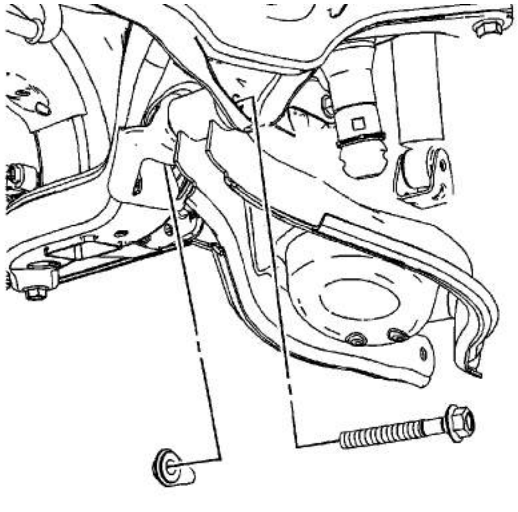


8. Remove the lower control arm to knuckle nut and bolt.
9. Slowly lower the control arm in order to unload the coil spring.
10. Remove the coil spring.
11. Remove the jackstand.



12. Remove the lower control arm to support frame nut and bolt.
13. Remove the lower control arm.

## Installation Procedure

1. Inspect the coil spring upper and lower insulators, if damage exists replace the insulators. Refer to Rear Spring Insulator Replacement.

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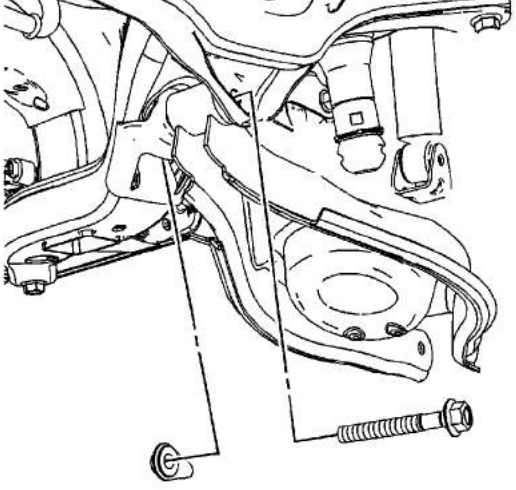
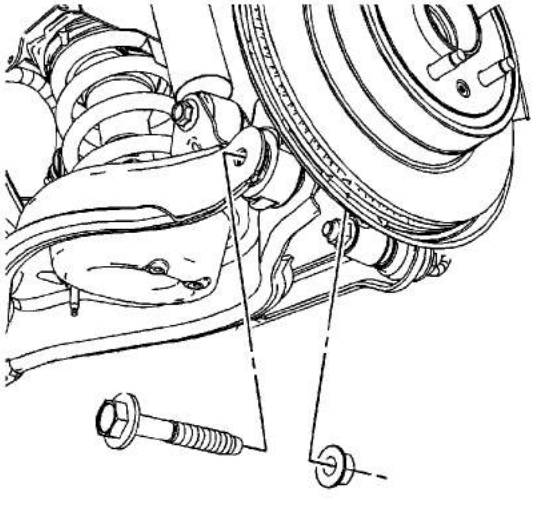


2. Position the lower control arm to the support frame and loosely install the nut and bolt.
3. Position the jackstand under the lower control arm.
4. Position the spring with the rubber insulators into the vehicle.
5. Raise the jackstand to compress the spring.

**Caution:** Refer to Fastener Caution in the Preface section.



6. Position the lower control arm to the knuckle and install the nut and bolt. Tighten the nut/bolt to **160 N·m (118 lb ft)**

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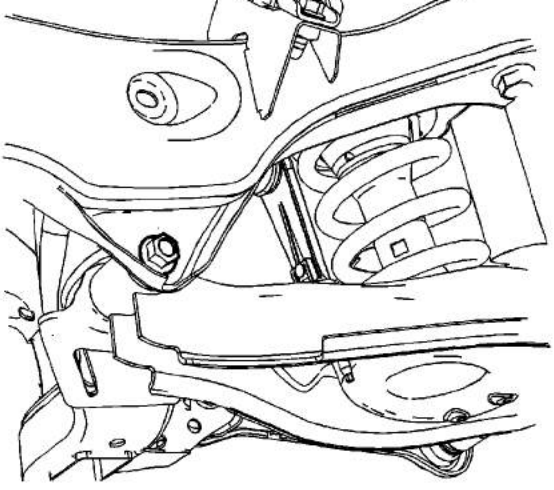
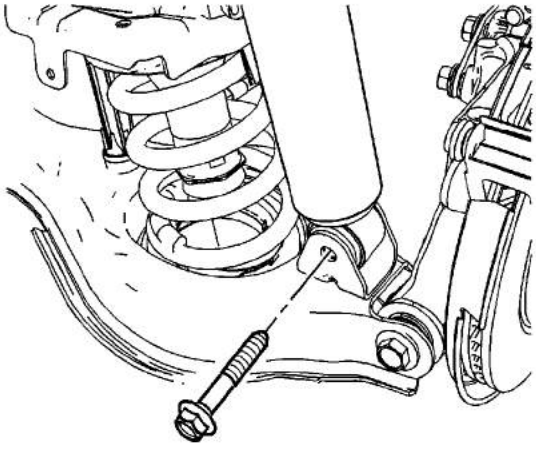


7. Tighten the lower control arm to support nut and bolt to **110 N·m (81 lb ft)**.



8. Install the shock to the lower control arm nut and bolt and tighten to **110 N·m (81 lb ft)**.
9. Remove the jackstand from under the vehicle.
10. Install the stabilizer shaft link. Refer to Stabilizer Shaft Link Replacement.
11. Install the rear tire and wheel assembly. Refer to Tire and Wheel Removal and Installation.
12. Lower the vehicle.
13. Check the rear alignment. Refer to Wheel Alignment Measurement.

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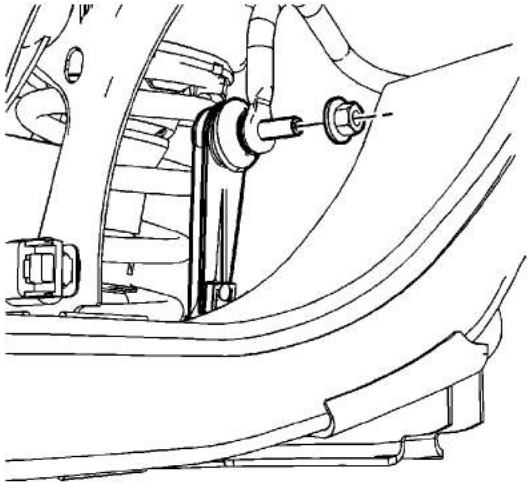
# Stabilizer Shaft Replacement

## Removal Procedure

1. Raise and support the vehicle. Refer to Lifting and Jacking the Vehicle.

   **Note:** In the following service procedure, it is not necessary to remove the rear suspension support. Lower the support enough to remove the stabilizer bar.

2. Lower the rear suspension support. Refer to Support Replacement.



   **Note:** Hold the ball shaft secure with a 90° bend style TORX® bit, when removing the nut.

3. Remove the stabilizer link to stabilizer shaft nut.

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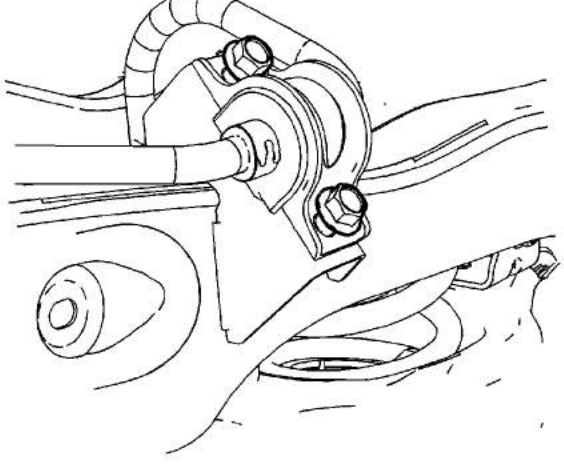
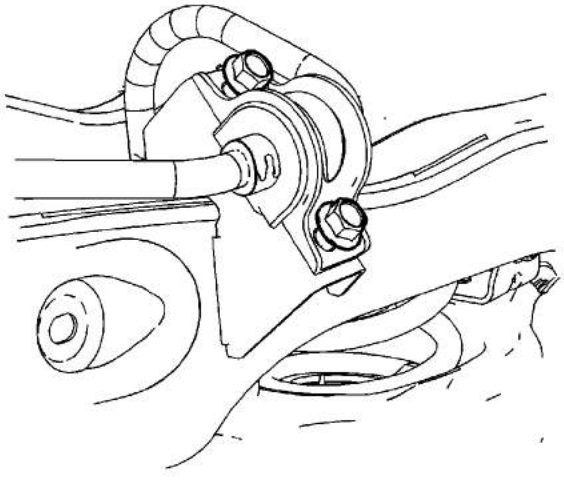


4. Remove the stabilizer shaft clamp bolts.
5. Remove the stabilizer shaft clamps and bushings from the stabilizer shaft.
6. Disengage the stabilizer shaft from the stabilizer link ball studs, while removing the stabilizer shaft from the vehicle.

## Installation Procedure

1. Position the stabilizer shaft in the vehicle, while positioning the links to the stabilizer bar.
2. Install the stabilizer shaft clamps and bushings to the stabilizer shaft.

**Caution:** Refer to Fastener Caution in the Preface section.



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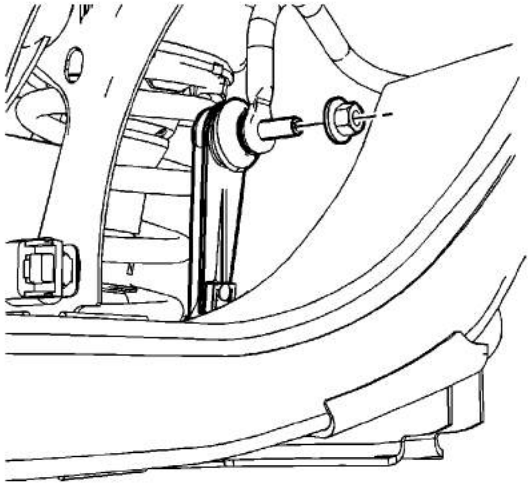
3. Install the stabilizer shaft clamp bolts and tighten to **70 N·m (52 lb ft)**.



**Note:** Hold the ball shaft secure with a TORX® bit, when installing the nut.

4. Install the stabilizer link to stabilizer shaft nut and tighten to **50 N·m (37 lb ft)**.
5. Install the rear suspension support. Refer to Support Replacement.
6. Lower the vehicle.

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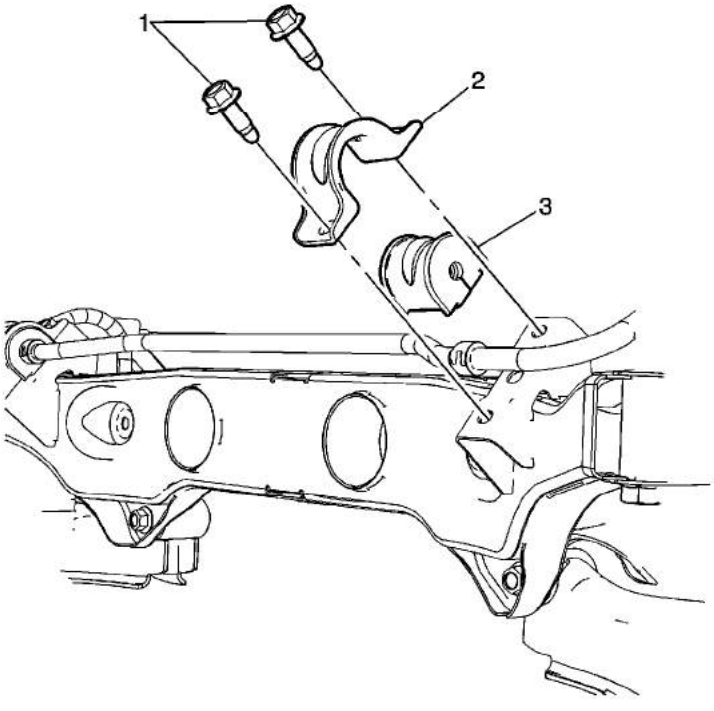
# Stabilizer Shaft Insulator Replacement




| Callout | Component Name |
|---|---|
| **Preliminary Procedure**<br><br>Raise and support the vehicle. Refer to Lifting and Jacking the Vehicle. | |
| 1 | Stabilizer Shaft Insulator Bolt (Qty: 4)<br><br>**Caution:** Refer to Fastener Caution in the Preface section.<br><br>**Procedure**<br><br>Lower the rear suspension support. Refer to Support Replacement.<br><br>**Tip**<br>Lower the rear suspension support enough to remove the stabilizer shaft clamp bolt.<br><br>**Tighten**<br>70 N·m (52 lb ft) |
| 2 | Stabilizer Shaft Insulator Clamp (Qty: 2) |
| 3 | Stabilizer Shaft Insulator (Qty: 2) |

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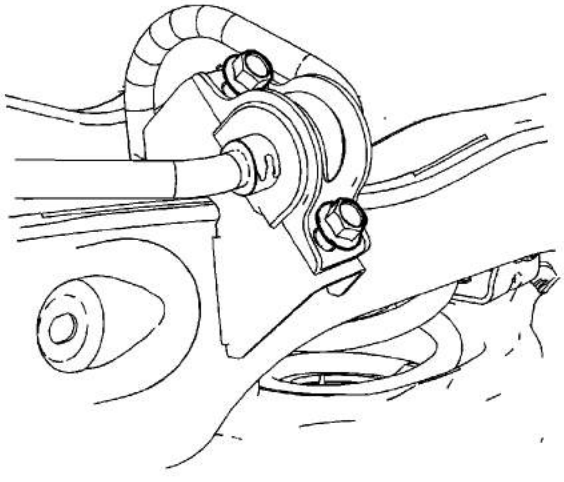
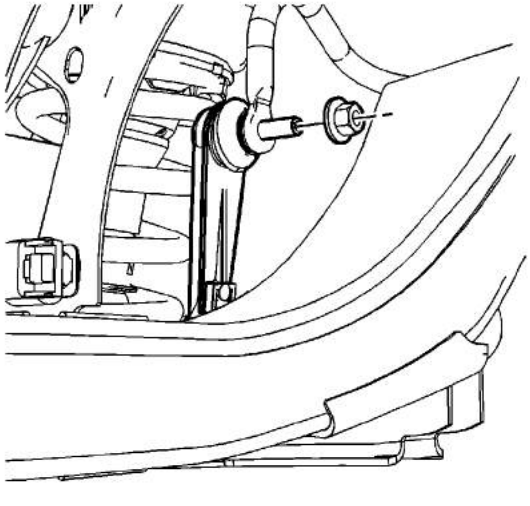
# Stabilizer Shaft Link Replacement

## Removal Procedure

1. Raise and support the vehicle. Refer to Lifting and Jacking the Vehicle.
2. Remove the rear tire and wheel assembly. Refer to Tire and Wheel Removal and Installation.



3. Loosen the stabilizer shaft clamp bolts.



**Note:** Use a 90 degree bend TORX® bit to hold the ball stud when loosening or tightening the nut.

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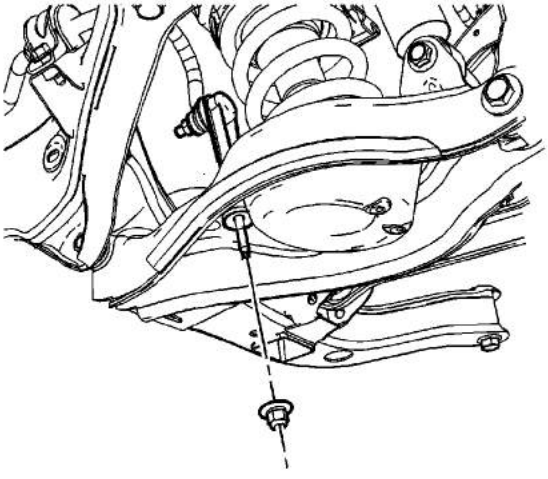


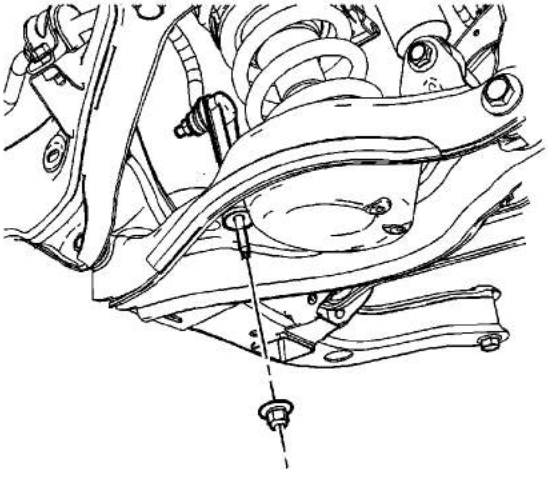
**Note:** When disconnecting the stabilizer link, hold the link with a wrench to prevent turning.

5. Remove the stabilizer link to lower control arm nut.
6. Remove the stabilizer link from the vehicle.

## Installation Procedure

1. Position the stabilizer link through the lower control arm.

**Caution:** Refer to Fastener Caution in the Preface section.



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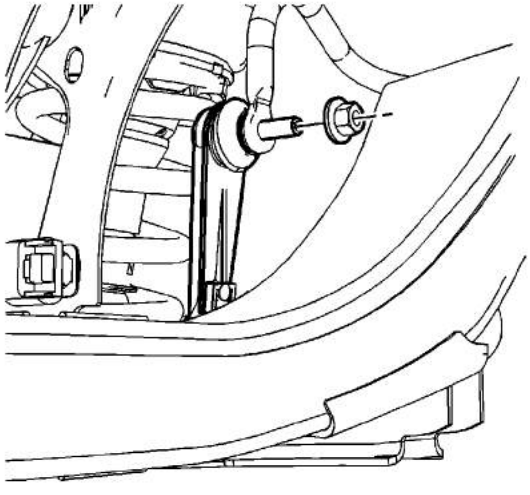
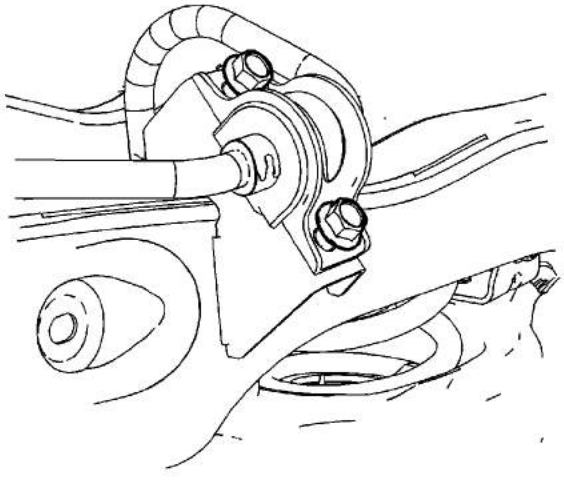
**Note:** When connecting the stabilizer link, hold the link with a wrench to prevent turning.

2. Install the stabilizer link to lower control arm nut and tighten to **15 N·m (11 lb ft)**.



**Note:** Use a 90 degree bend TORX® bit to hold the ball stud when tightening the nut.

3. Install the stabilizer link to stabilizer shaft nut and tighten to **50 N·m (37 lb ft)**.



4. Tighten the loose stabilizer shaft clamp bolts to **70 N·m (52 lb ft)**.
5. Install the rear tire and wheel assembly. Refer to Tire and Wheel Removal and Installation.

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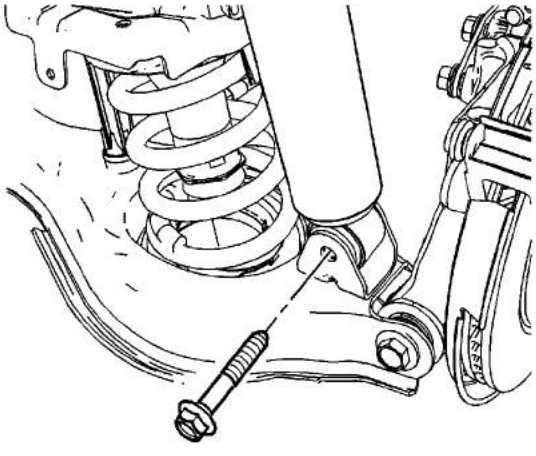
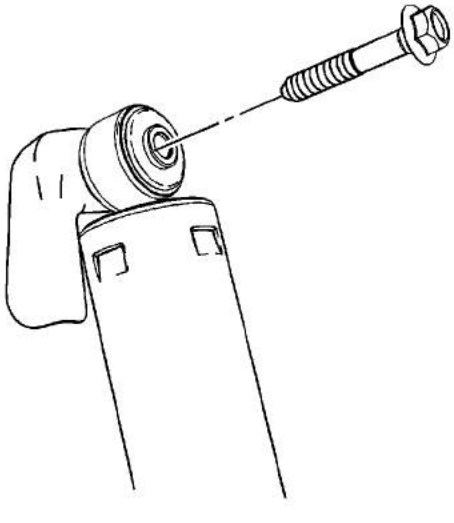
# Shock Absorber Replacement

## Removal Procedure

1. Raise and support the vehicle. Refer to Lifting and Jacking the Vehicle.
2. Remove the rear tire and wheel assembly. Refer to Tire and Wheel Removal and Installation.



3. Remove the lower shock bolt.



4. Remove the upper shock bolt.
5. Remove the shock from the vehicle.

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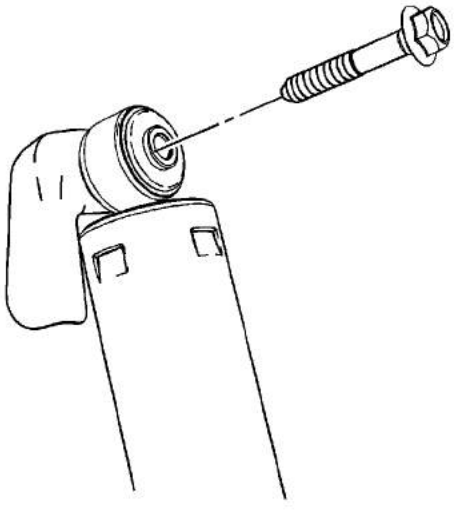
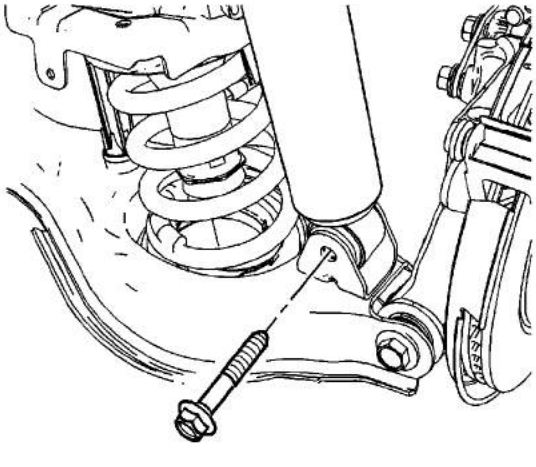
1. Position the shock to the vehicle.

**Caution:** Refer to Fastener Caution in the Preface section.



2. Install the upper shock bolt and tighten to **110 N·m (81 lb ft)**.



3. Install the lower shock bolt and nut and tighten to **110 N·m (81 lb ft)**.
4. Install the rear tire and wheel assembly. Refer to Tire and Wheel Removal and Installation.
5. Lower the vehicle.

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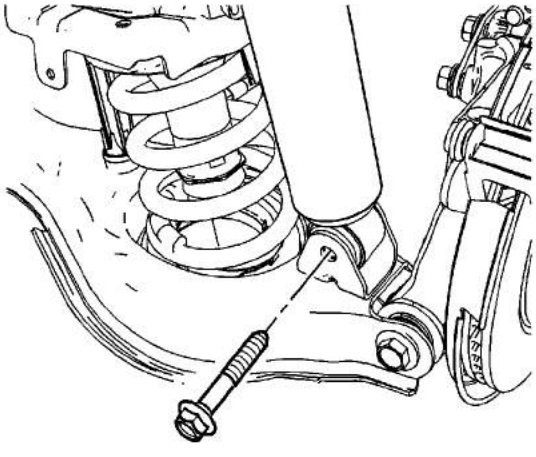
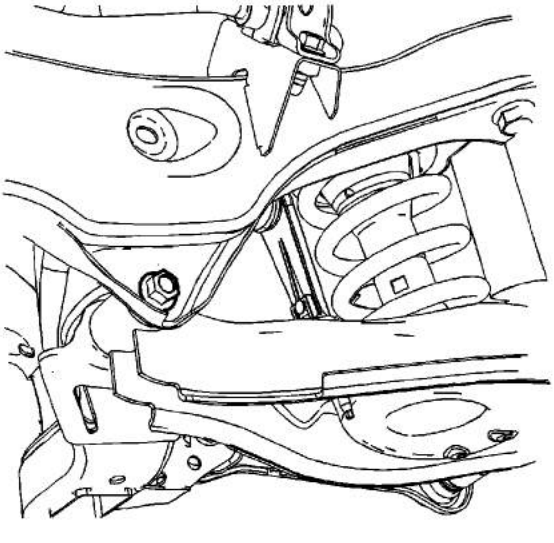
# Coil Spring Replacement

## Removal Procedure

1. Raise and support the vehicle. Refer to Lifting and Jacking the Vehicle.
2. Remove the rear tire and wheel assembly. Refer to Tire and Wheel Removal and Installation.
3. Remove the stabilizer shaft link. Refer to Stabilizer Shaft Link Replacement.
4. Position a jackstand underneath the lower control arm.
5. Raise the jackstand slightly to compress the coil spring.



6. Remove the lower shock bolt and nut.



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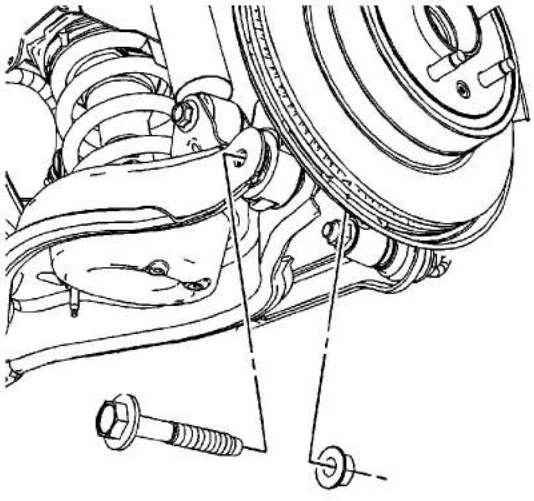
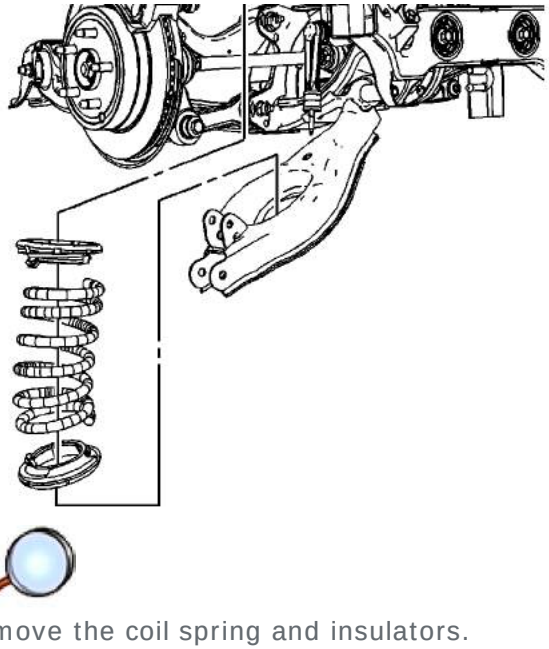


8. Remove the lower control arm to knuckle nut and bolt.
9. Slowly lower the control arm in order to unload the coil spring.



10. Remove the coil spring and insulators.

## Installation Procedure

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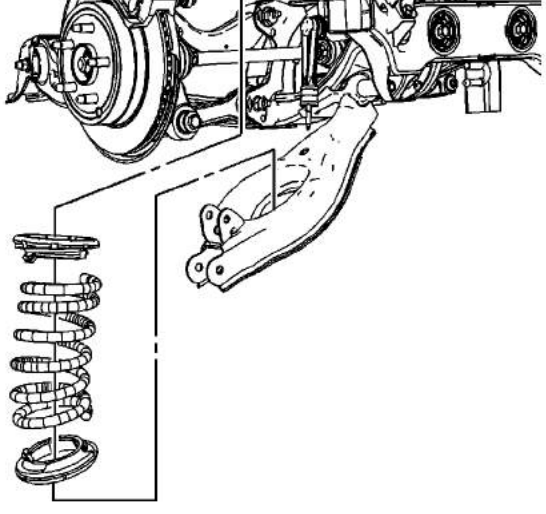
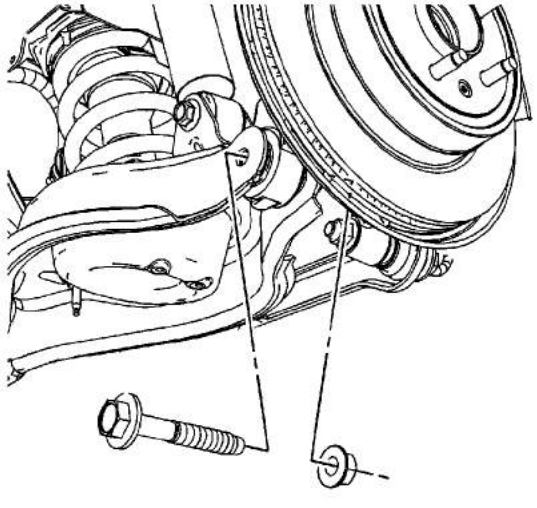


1. Inspect the coil spring upper and lower insulators, if damage exists replace the insulators.

   If no damage exists, transfer the existing components. Refer to Rear Spring Insulator Replacement.

2. Position the spring with the rubber insulators into the vehicle.
3. Raise the jackstand to compress the spring.

   **Caution:** Refer to Fastener Caution in the Preface section.



4. Position the lower control arm to the knuckle and install the nut and bolt and tighten the bolt/nut to **160 N·m (118 lb ft)**.

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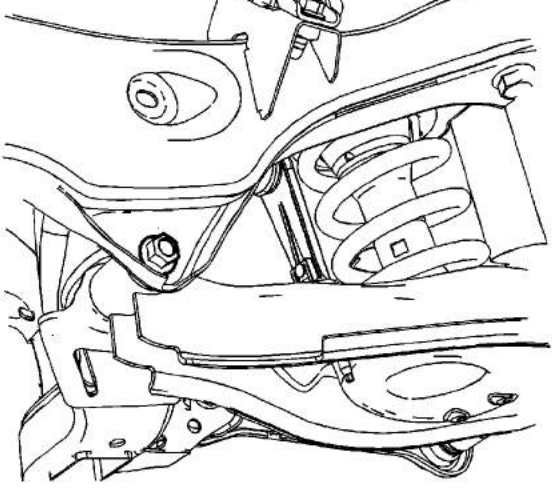
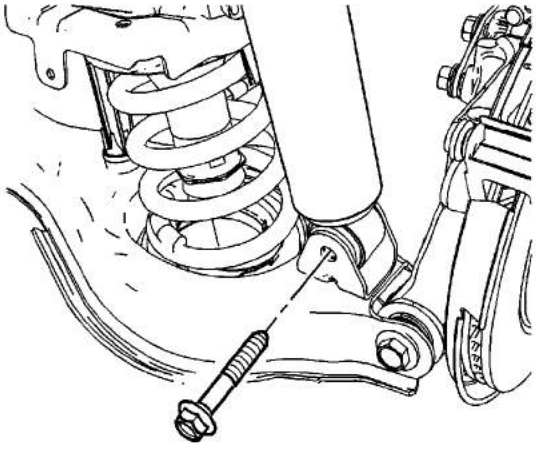


5. Tighten the lower control arm to support nut and bolt to **110 N·m (81 lb ft)**.



6. Install the shock to the lower control arm nut and bolt and tighten to **110 N·m (81 lb ft)**.
7. Remove the jackstand from under the vehicle.
8. Install the stabilizer shaft link. Refer to Stabilizer Shaft Link Replacement.
9. Install the rear tire and wheel assembly. Refer to Tire and Wheel Removal and Installation.
10. Lower the vehicle.

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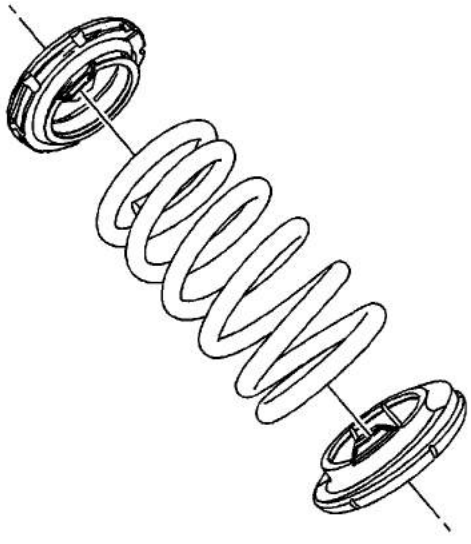
# Rear Spring Insulator Replacement

## Removal Procedure

1. Remove the coil spring. Refer to Coil Spring Replacement .



2. Remove the upper and lower rubber insulators from the coil spring.

## Installation Procedure

**Important:**

- Spray silicon lubricant on the insulators to aid in installation.
- Make sure that part number identification tape located on the coil spring is oriented outboard of the vehicle and at the top of the spring.
- Make sure to fully seat the top and bottom coil spring insulators to the spring.

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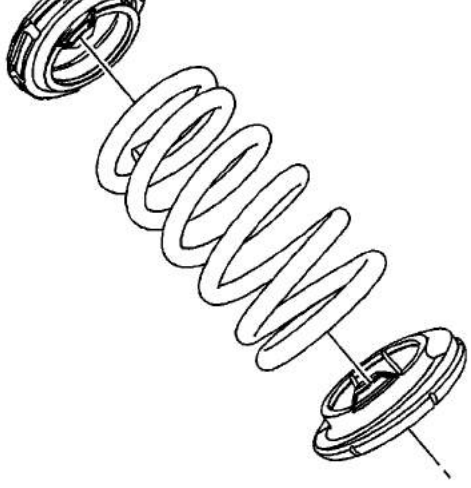

1. Install the upper and lower rubber insulators to the coil spring.
2. Install the coil spring. Refer to Coil Spring Replacement .

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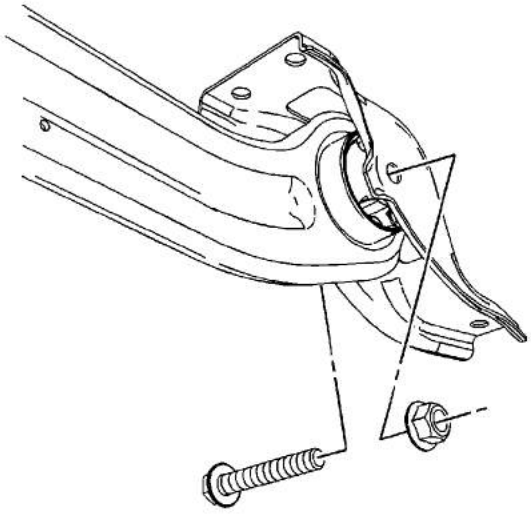
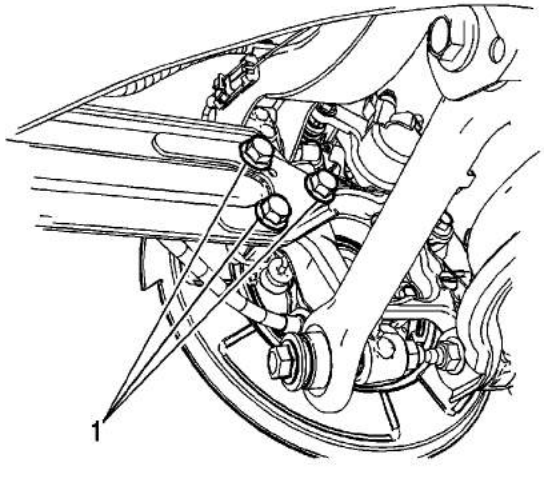
# Trailing Arm Replacement

## Removal Procedure

1. Raise and support the vehicle. Refer to Lifting and Jacking the Vehicle.
2. Remove the tire and wheel. Refer to Tire and Wheel Removal and Installation.
3. Remove the park brake cable bolt from the trailing arm and from the frame. Refer to Parking Brake Rear Cable Replacement.
4. Remove the trailing arm bracket to body bolts. Refer to Trailing Arm Bracket Replacement.



5. Remove the trailing arm bushing to bracket nut and bolt.

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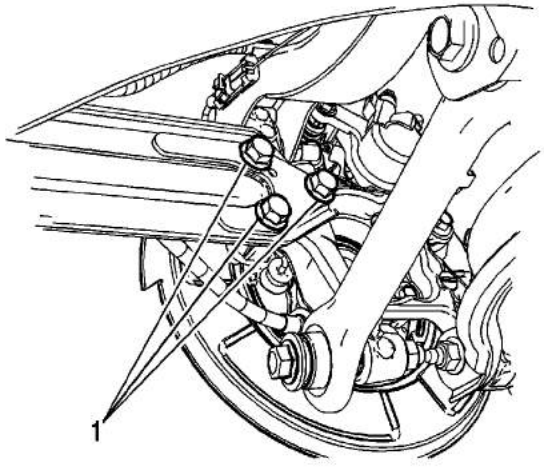
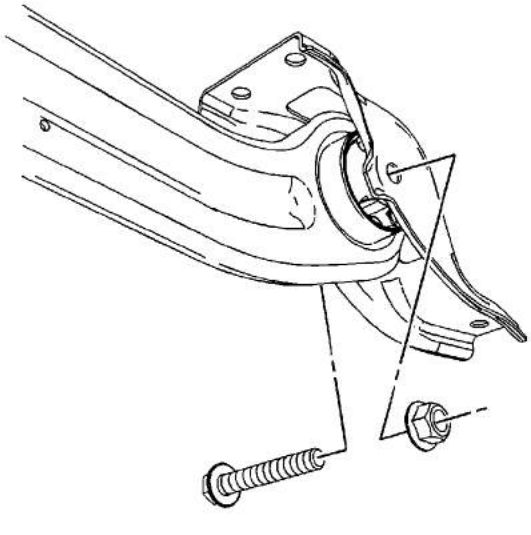
# Installation Procedure

1. Position the trailing arm to the vehicle.

   **Caution:** Refer to Fastener Caution in the Preface section.




2. Install the trailing arm to knuckle bolts (1) and tighten to **110 N·m (81 lb ft)**.
3. Position the trailing arm bracket to the trailing arm.



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6. Tighten the trailing arm bushing to bracket nut and bolt to **160 N·m (118 lb ft)**.
7. Install the park brake cable bolt to trailing arm and to the frame. Refer to Parking Brake Rear Cable Replacement.
8. Install the tire and wheel. Refer to Tire and Wheel Removal and Installation.
9. Lower the vehicle.

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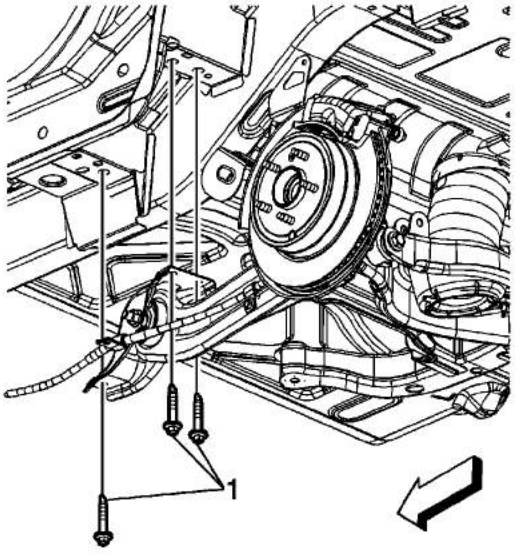
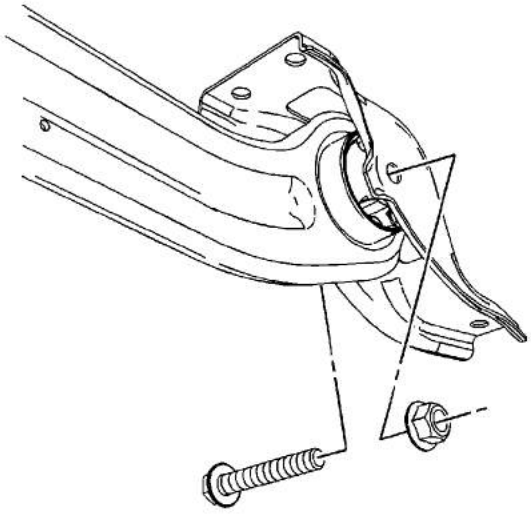
# Trailing Arm Bracket Replacement

## Removal Procedure

1. Raise and support the vehicle. Refer to Lifting and Jacking the Vehicle.
2. Remove the park brake cable from the trailing arm and from the frame. Refer to Parking Brake Rear Cable Replacement.



3. Remove the trailing arm bracket to body bolts (1).



4. Remove the trailing arm bushing to bracket nut and bolt.
5. Remove the trailing arm bracket.

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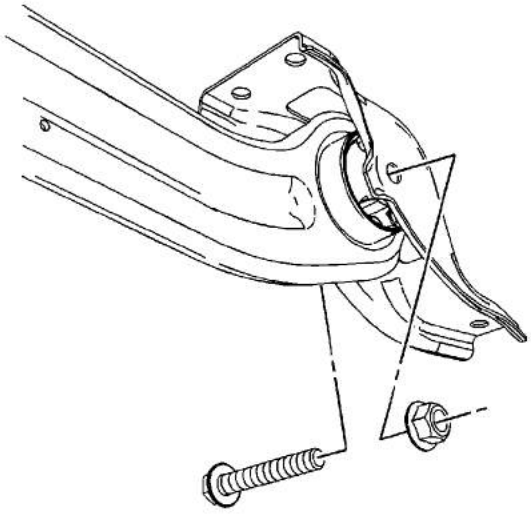
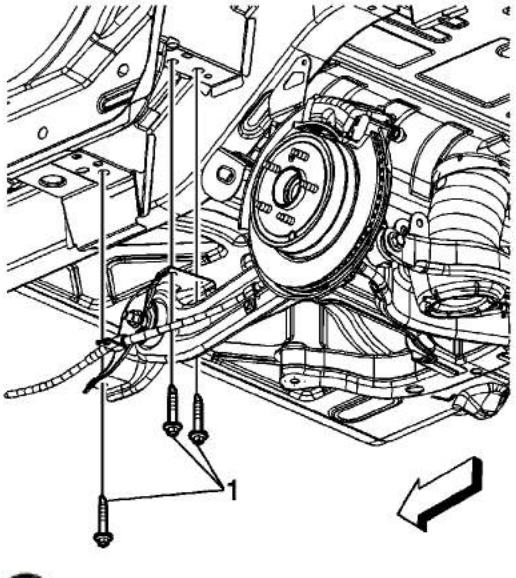
1. Position the trailing arm bracket to the trailing arm.



2. Loosely install the trailing arm bushing to bracket nut and bolt.




3. Push upward on the trailing arm bracket and loosely install the front bolt (1).

**Caution:** Refer to Fastener Caution in the Preface section.

4. Use a drift to align the remaining trailing arm bracket bolts (1). Tighten the bolts to **110 N·m (81 lb ft)**.
5. Tighten the trailing arm bushing to bracket nut and bolt to **160 N·m (118 lb ft)**.
6. Install the park brake cable on the trailing arm and on the frame. Refer to Parking Brake Rear Cable Replacement.

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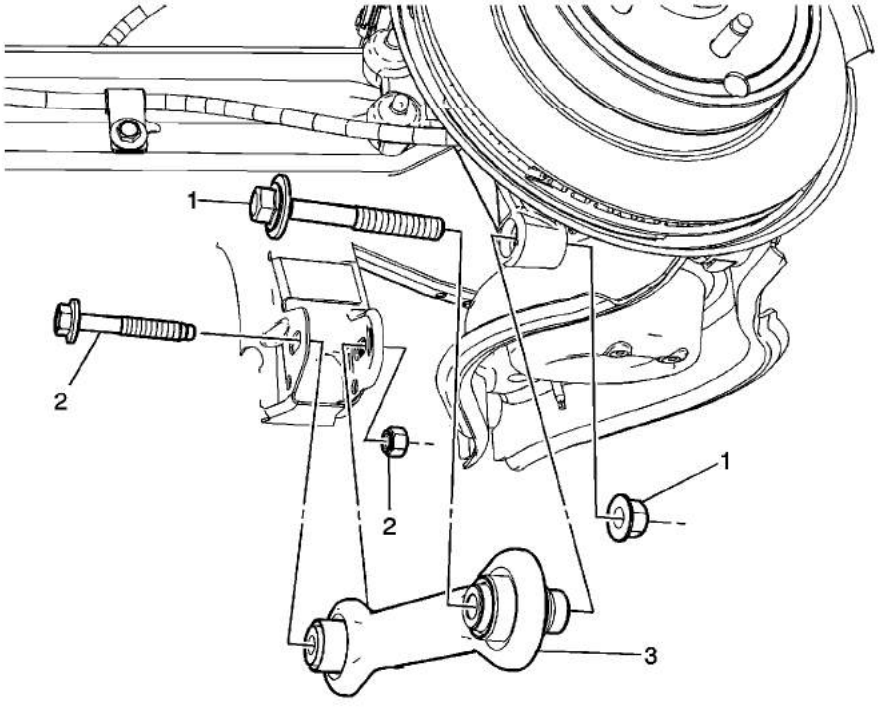
# Adjust Link Replacement




| Callout | Component Name |
|---|---|
| **Preliminary Procedures**<br>1. Raise the vehicle. Refer to Lifting and Jacking the Vehicle.<br>2. Remove the rear wheel and tire assembly. Refer to Tire and Wheel Removal and Installation. | |
| 1 | Adjustment Link to Knuckle Bolt and Nut<br>**Caution:** Refer to Fastener Caution in the Preface section.<br>**Tighten**<br>160 N·m (118 lb ft). |
| 2 | Adjustment Link to Support Bolt and Nut<br>**Torque**<br>160 N·m (118 lb ft). |
| 3 | Adjustment Link<br>**Procedure** |

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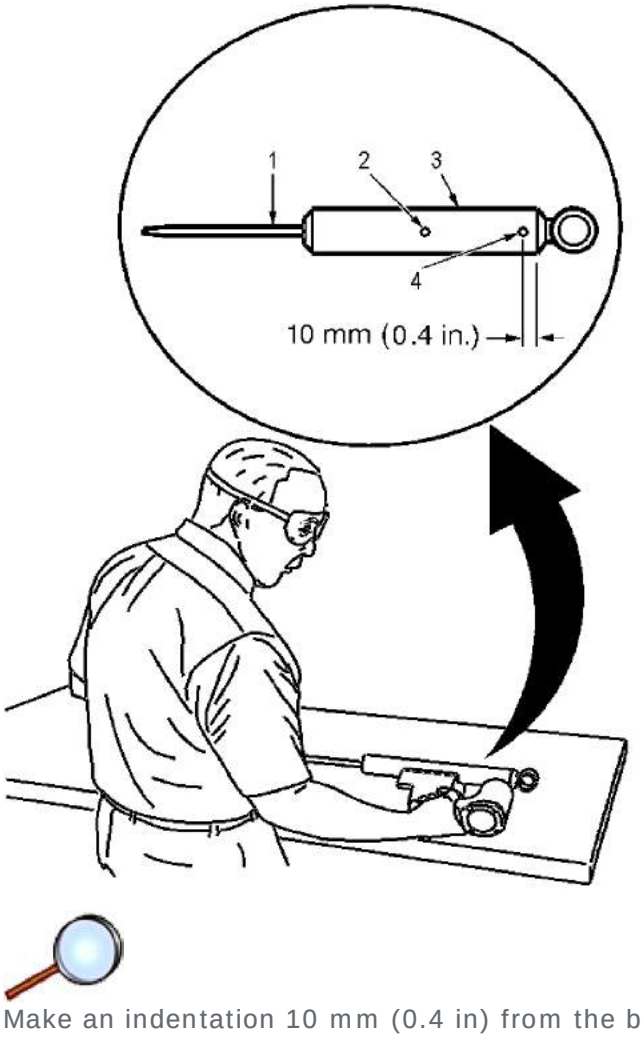
# Suspension Shock / Strut Disposal

**Warning:** Gas charged shock absorbers contain high pressure gas. Do not remove the snap ring from inside the top of the tube. If the snap ring is removed, the contents of the shock absorber will come out with extreme force which may result in personal injury.

**Warning:** To prevent personal injury, wear safety glasses when centerpunching and drilling the shock absorber. Use care not to puncture the shock absorber tube with the centerpunch.




1. Make an indentation 10 mm (0.4 in) from the bottom (4) of the tube (3) using a centerpunch.
2. Clamp the shock absorber in a vise horizontally with the shock absorber rod (1) completely extended.
3. Drill a hole in the shock absorber at the centerpunch (4) using a 5 mm (3/16 in) drill bit. Gas or a gas/oil mixture will exhaust when the drill bit penetrates the shock absorber. Use shop towels in order to contain the escaping oil.
4. Make an indentation in the middle (2) of the tube (3) with a centerpunch.
5. Drill a second hole in the shock absorber at the centerpunch (2) using a 5 mm (3/16 in) drill bit. Oil will exhaust when the drill bit penetrates the shock absorber. Use shop towels in order to contain the escaping oil.

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drain the oil from the shock absorber.

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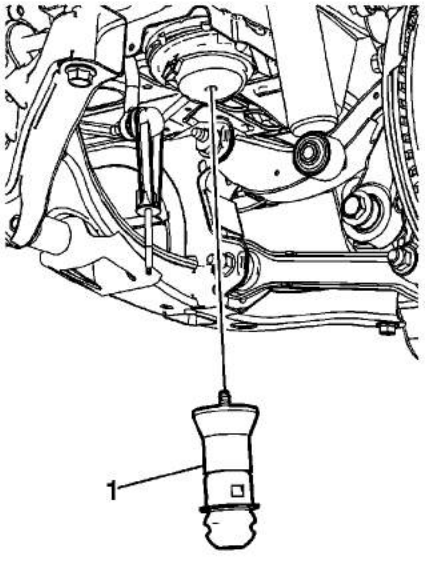
# Spring Jounce Bumper Replacement

## Removal Procedure

1. Raise and support the vehicle. Refer to Lifting and Jacking the Vehicle.
2. Remove the tire and wheel assembly. Refer to Tire and Wheel Removal and Installation.
3. Remove the lower control arm assembly. Refer to Rear Axle Lower Control Arm Replacement.



4. Remove the rear suspension jounce bumper (1).

## Installation Procedure

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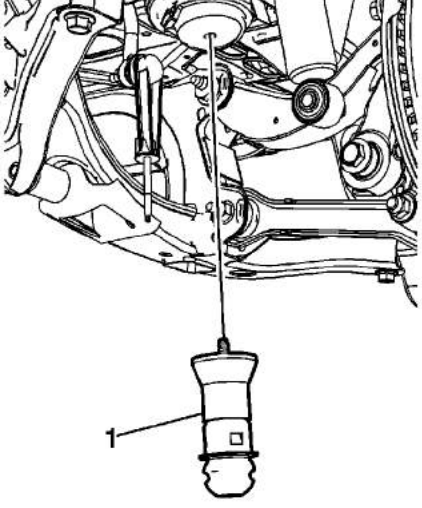
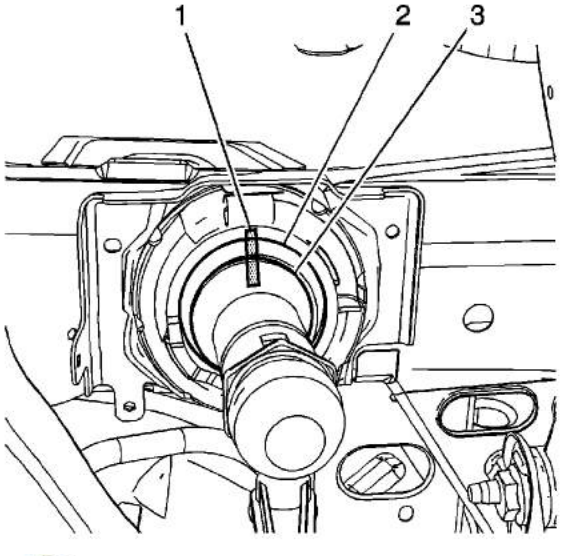



1. Install the rear suspension jounce bumper (1) and tighten until the jounce bumper just makes contact with the mounting bracket.




2. Using a grease pencil or equivalent, create a reference mark (1) from the jounce bumper (3) to the mounting bracket (2).
3. Tighten the jounce bumper (3) by rotating it 360° or one full turn.

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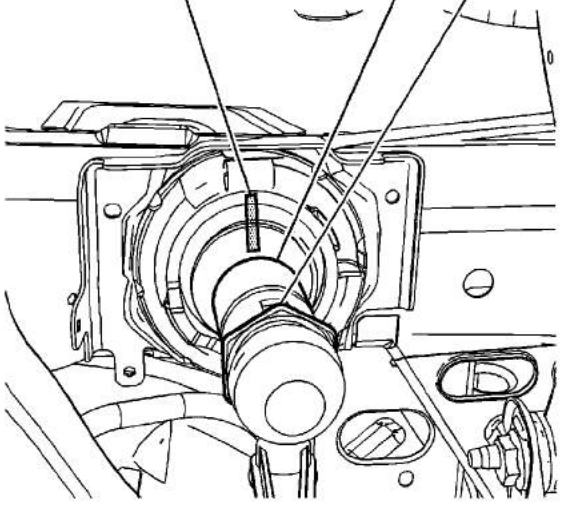

4. Using the reference mark (1) as a starting point, rotate the jounce bumper (2) an additional 120° or two points of the hex nut (3) on the jounce bumper.
5. Install the lower control arm assembly. Refer to Rear Axle Lower Control Arm Replacement.
6. Install the tire and wheel assembly. Refer to Tire and Wheel Removal and Installation.
7. Remove the support and lower the vehicle.

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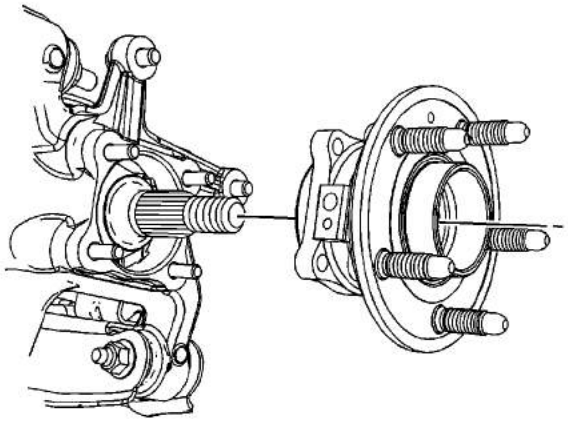
# Wheel Stud Replacement

## Tools Required

J 43631 Ball Joint Remover

## Removal Procedure



1. Raise and support the vehicle. Refer to Lifting and Jacking the Vehicle .
2. Remove the tire and wheel assembly. Refer to Tire and Wheel Removal and Installation .
3. Remove the wheel bearing/hub replacement. Refer to Rear Wheel Bearing and Hub Replacement .

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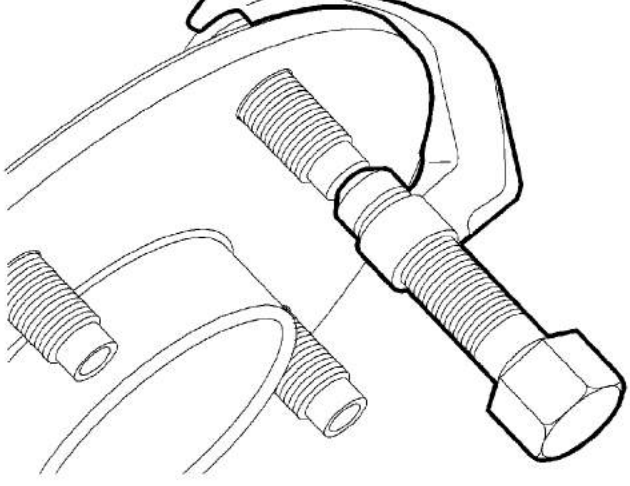
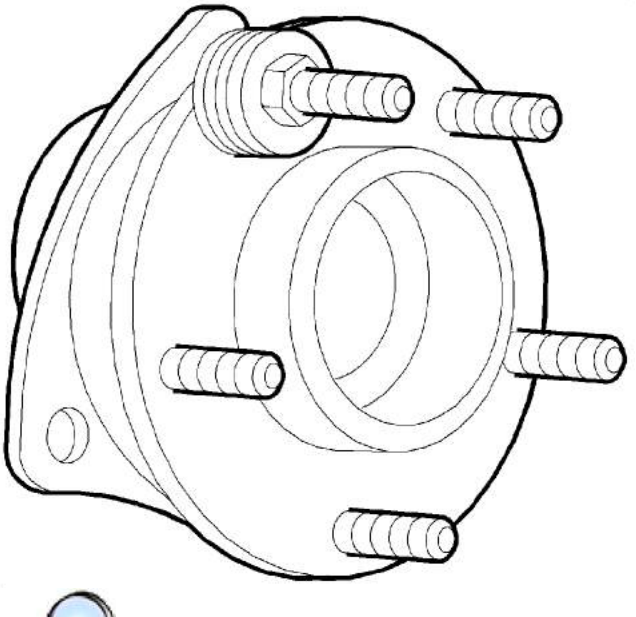


4. Using the J 43631 , press out the wheel stud from the wheel bearing/hub assembly.

## Installation Procedure



1. Install the wheel stud to the wheel bearing/hub assembly from the bearing side of the hub flange.
2. Place flat washers over the wheel stud being installed.
3. Install the wheel nut or a hex head nut to the wheel stud.
4. Gradually tighten the nut in order to draw the stud into the hub flange until the head of the wheel stud is fully seated against the hub flange.
5. Remove the nut and flat washers.
6. Install the tire and wheel assembly. Refer to Tire and Wheel Removal and Installation .

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