

2006 Chevrolet Impala LS

2006 SUSPENSION Rear Suspension - Impala

2006 SUSPENSION

Rear Suspension - Impala

SPECIFICATIONS

FASTENER TIGHTENING SPECIFICATIONS

Fastener Tightening Specifications

Application	Specification	
	Metric	English
Brake Hose Bracket Bolt	10 N.m	89 lb in
Rear Strut Mount to Body Nuts	45 N.m	33 lb ft
Rear Strut Rod to Strut Mount Nut	75 N.m	55 lb in
Rear Strut to Knuckle Nuts	120 N.m	89 lb ft
Rear Suspension Support Mounting Bolts	110 N.m	81 lb ft
Rear Wheel Hub/Bearing to Knuckle Bolts	75 N.m	55 lb ft
Spindle Rods to Knuckle Nuts	150 N.m	111 lb ft
Spindle Rod to Rear Support Bolts	135 N.m	100 lb ft
Stabilizer Shaft Bracket Nuts	48 N.m	35 lb ft
Stabilizer Shaft Link Nuts (Lower)	50 N.m	37 lb ft
Stabilizer Shaft Link Nuts (Upper)	52 N.m	38 lb ft
Trailing Arm to Body Bracket Bolt	105 N.m	77 lb ft
Trailing Arm Bracket to Body Bolts	52 N.m	38 lb ft
Trailing Arm to Knuckle Bolt	240 N.m	177 lb ft

REPAIR INSTRUCTIONS

REAR WHEEL BEARING/HUB REPLACEMENT

Removal Procedure

IMPORTANT: The wheel bearing in the rear wheel hub is integrated into one unit. The hub is non-serviceable. If the hub and/or bearing is damaged, replace the complete hub and bearing assembly.

1. Raise and suitably support the vehicle. Refer to **Lifting and Jacking the Vehicle** in General Information.
2. Remove the tires and wheels. Refer to **Tire and Wheel Removal and Installation** in Tires and Wheels.
3. Remove the brake rotor. Refer to **Brake Rotor Replacement - Rear** in Disc Brakes.

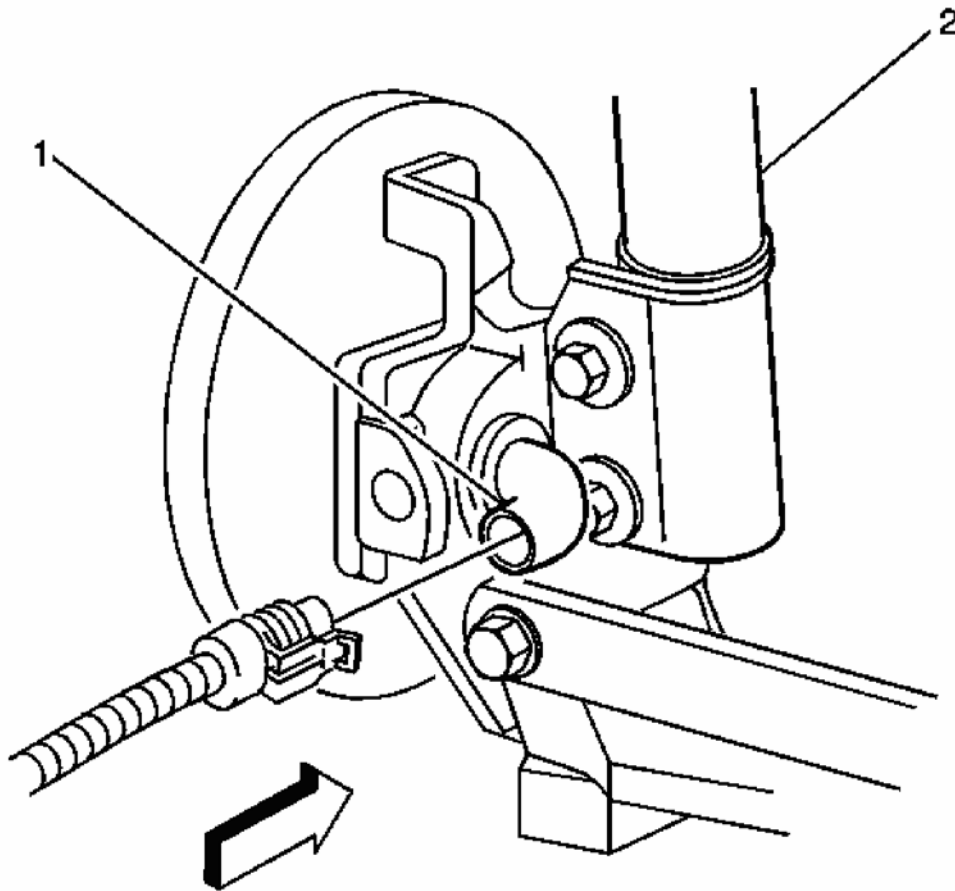


Fig. 1: Rear Wheel Speed Sensors Component View
Courtesy of GENERAL MOTORS CORP.

4. Remove the ABS electrical connector from the wheel speed sensor (1), if equipped.
5. Remove the park brake cable from the park brake actuator. Refer to **Park Brake Cable Replacement - Rear (Z7U)** in Park Brake.
6. Remove the mounting bolts from the rear bearing/hub.

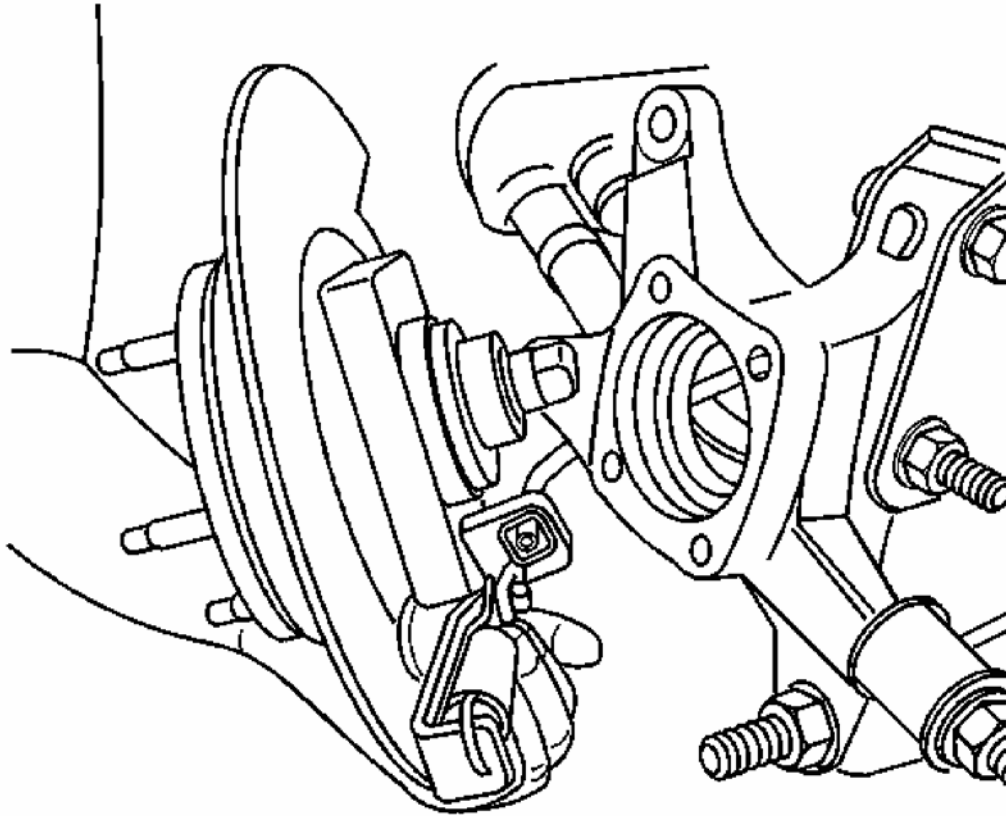


Fig. 2: Removing And Installing Park Brake Actuator
Courtesy of GENERAL MOTORS CORP.

7. Remove the wheel bearing/hub and park brake assembly from the knuckle.
8. Remove the park brake actuator from the rear wheel bearing/hub. Refer to **Park Brake Actuator Replacement** in Park Brake.

Installation Procedure

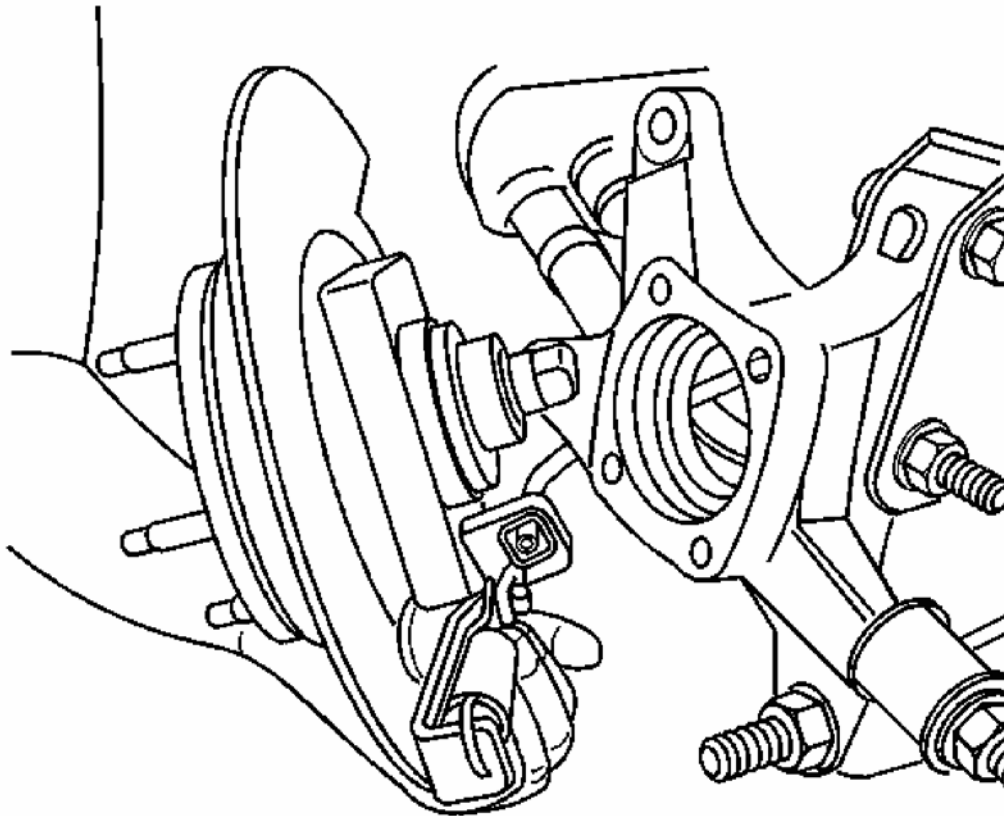


Fig. 3: Removing And Installing Park Brake Actuator
Courtesy of GENERAL MOTORS CORP.

1. Install the park brake actuator to the rear wheel bearing/hub. Refer to **Park Brake Actuator Replacement** in Park Brake.
2. Install the wheel bearing/hub and park brake assembly to the knuckle.

NOTE: Refer to **FASTENER NOTICE** in Cautions and Notices.

3. Install the wheel bearing/hub-to-knuckle bolts.

Tighten: Tighten the bolts to 75 N.m (55 lb ft).

4. Install the park brake cable to the park brake actuator. Refer to **Park Brake Cable Replacement - Rear (Z7U)** in Park Brake.

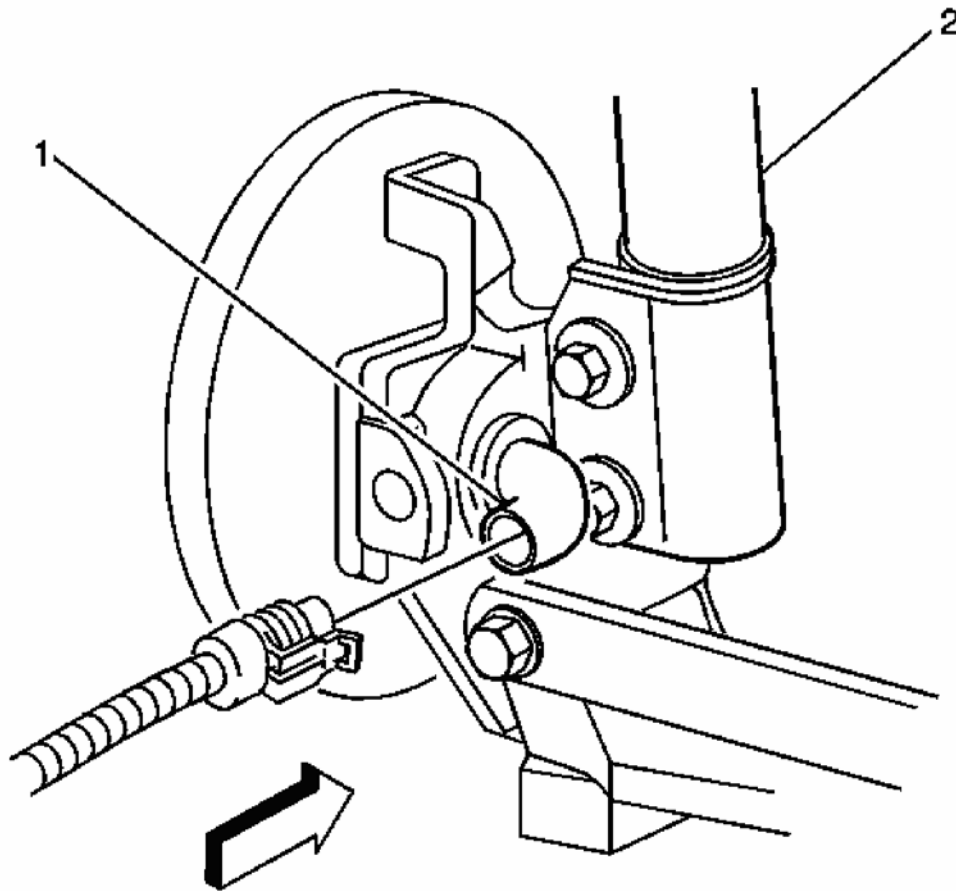


Fig. 4: Rear Wheel Speed Sensors Component View
Courtesy of GENERAL MOTORS CORP.

5. Install the ABS electrical connector to the wheel speed sensor (1), if equipped.
6. Install the brake rotor. Refer to **Brake Rotor Replacement - Rear** in Disc Brakes.
7. Install the tires and wheels. Refer to **Tire and Wheel Removal and Installation** in Tires and Wheels.
8. Lower the vehicle.

SUPPORT REPLACEMENT

Removal Procedure

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

2. Remove the rear tires and wheels. Refer to **Tire and Wheel Removal and Installation** .
3. Remove the exhaust pipe. Refer to **Muffler Replacement (Single Outlet)** or **Muffler Replacement (Dual Outlet)** .
4. Disconnect the brake lines from the rear suspension support. Refer to **Brake Hose Replacement - Rear** .
5. Disconnect the parking brake cables and tensioner from the suspension support. Refer to **Park Brake Cable Replacement - Rear (Z7U)** .
6. Remove the stabilizer shaft from the rear suspension support. Refer to **Stabilizer Shaft Replacement**.

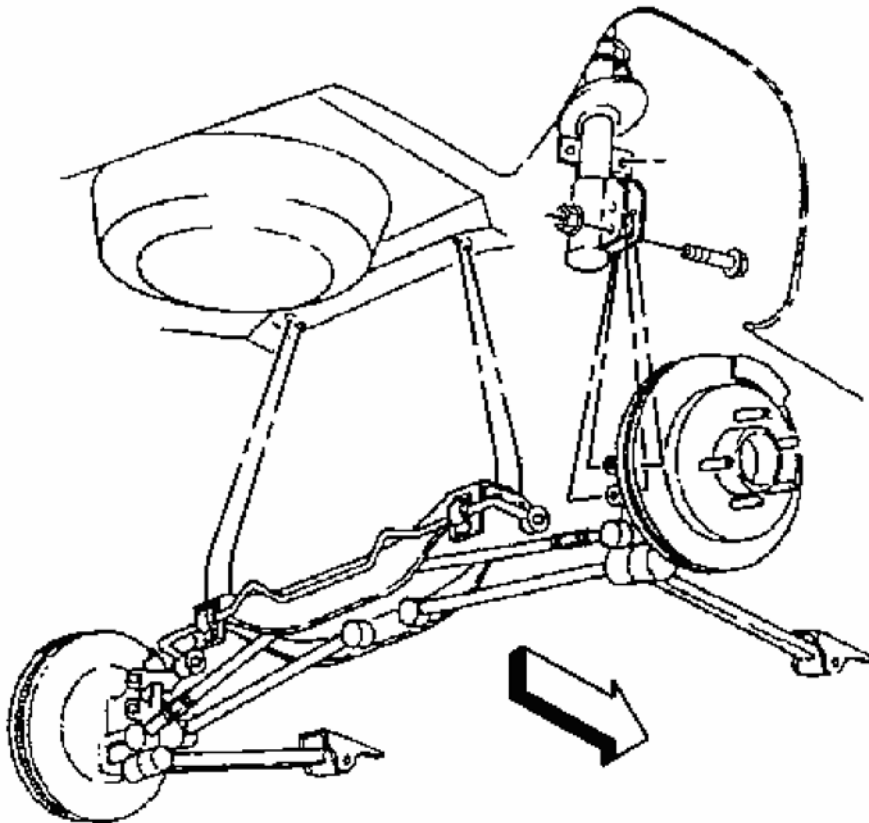


Fig. 5: Rear Suspension Components
Courtesy of GENERAL MOTORS CORP.

IMPORTANT: Support the rear suspension support with jack stands before removing the mounting bolts.

7. Remove the rear suspension support mounting bolts.
8. Remove the rear wheel spindle rods bolts from the knuckle.
9. Lower the rear suspension support in order to gain access to the rear wheel spindle rod bolts.
10. Remove the rear wheel spindle rods bolts from the rear suspension support.
11. Remove the rear suspension support.

Installation Procedure

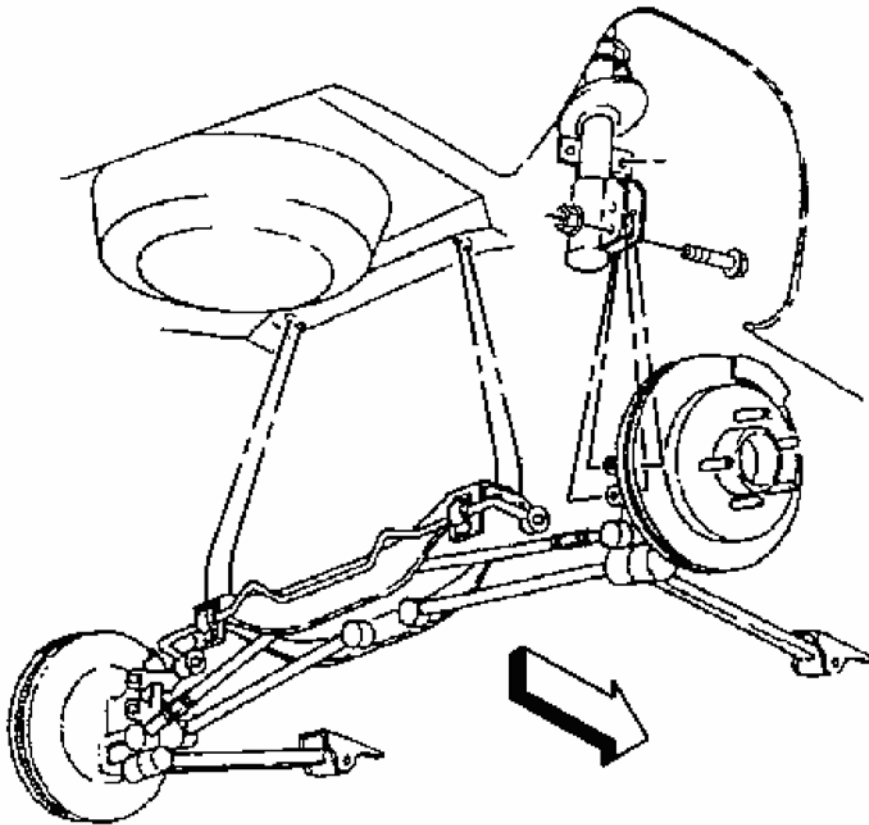


Fig. 6: Rear Suspension Components
Courtesy of GENERAL MOTORS CORP.

1. Position the rear suspension support in place.

NOTE: **Refer to Fastener**
 Notice .

2. Install the rear wheel spindle rod-to-rear suspension support bolts and nuts.

Tighten: Tighten the nuts to 135 N.m (100 lb ft).

3. Install the rear suspension support mounting bolts.

Tighten: Tighten the bolts to 110 N.m (81 lb ft).

4. Position the rear wheel spindle rod to the knuckle.
5. Install the retaining bolts and nuts to the knuckle.

Tighten: Tighten the nut to 150 N.m (111 lb ft).

6. Install the stabilizer shaft to the rear suspension support. Refer to **Stabilizer Shaft Replacement**.
7. Connect the brake lines to the rear suspension support. Refer to **Brake Hose Replacement - Rear**.
8. Install the parking brake cables and the tensioner. Refer to **Park Brake Cable Replacement - Rear (Z7U)**.
9. Install the exhaust pipe. Refer to **Muffler Replacement (Single Outlet)** or **Muffler Replacement (Dual Outlet)**.
10. Install the tires and wheels. Refer to **Tire and Wheel Removal and Installation**.
11. Lower the vehicle.
12. Adjust the rear wheel alignment. Refer to **Measuring Wheel Alignment**.

KNUCKLE REPLACEMENT

Removal Procedure

1. Raise and suitably support the vehicle. Refer to **Lifting and Jacking the Vehicle** in General Information.
2. Remove the tire and wheel assembly. Refer to **Tire and Wheel Removal and Installation** in Tires and Wheels.

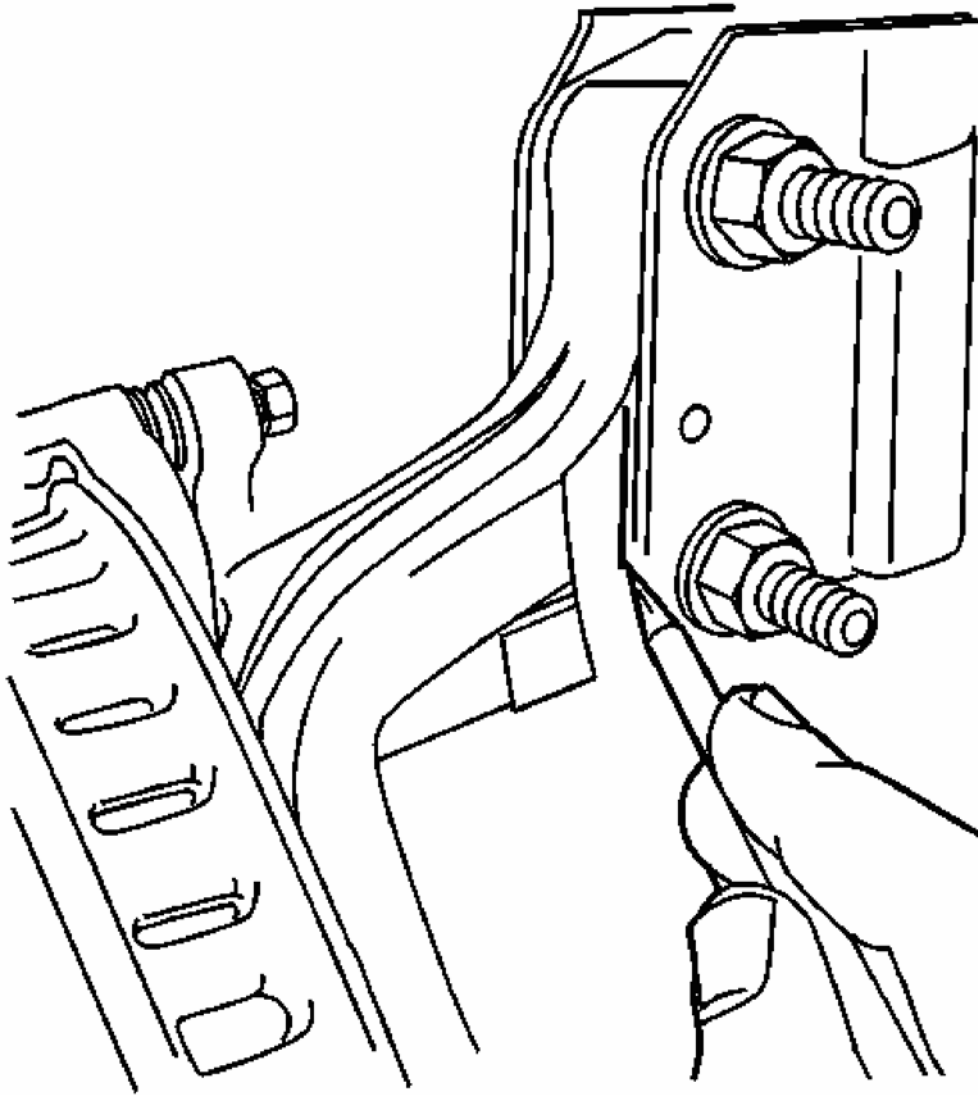


Fig. 7: Scribing Strut To Knuckle
Courtesy of GENERAL MOTORS CORP.

3. Scribe the strut to the knuckle.
4. Remove the bearing/hub assembly. Refer to **Wheel Bearing/Hub Replacement - Rear**.
5. Remove the rear wheel spindle rods from the knuckle. Refer to **Spindle Rod Replacement**.

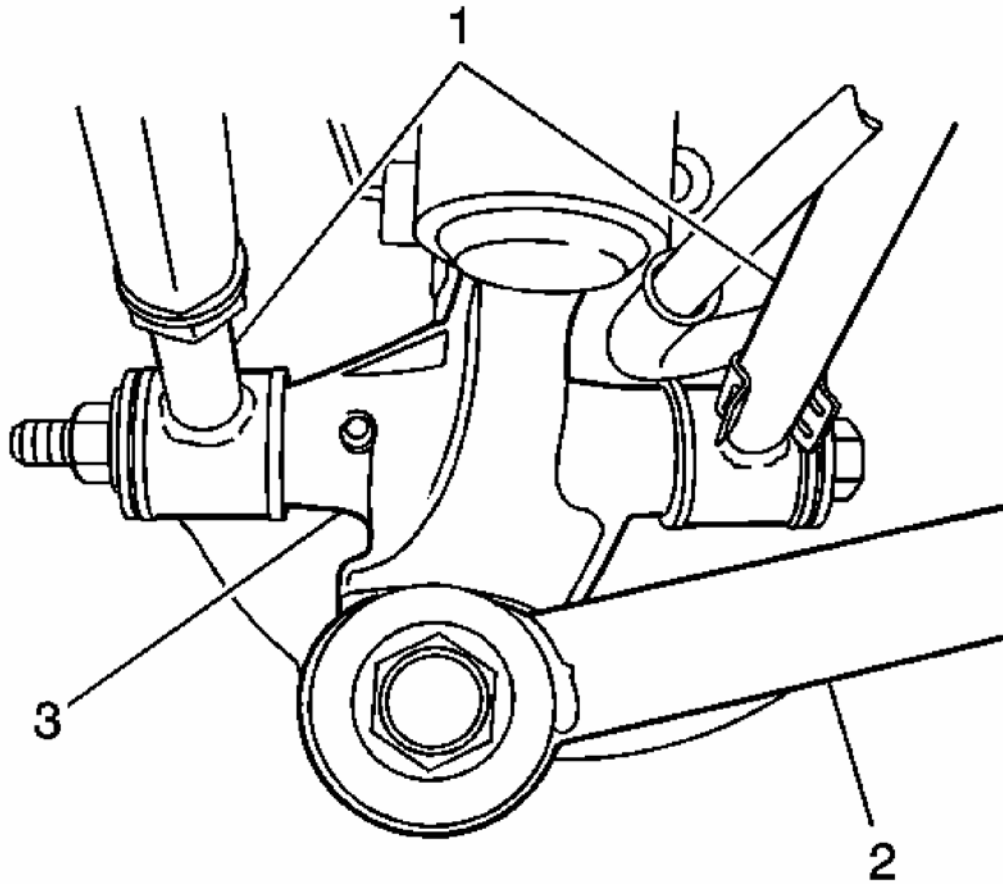


Fig. 8: View Of Trailing Arm & Knuckle
Courtesy of GENERAL MOTORS CORP.

6. Remove the trailing arm (2) from the knuckle (3). Refer to **Trailing Arm Replacement**.

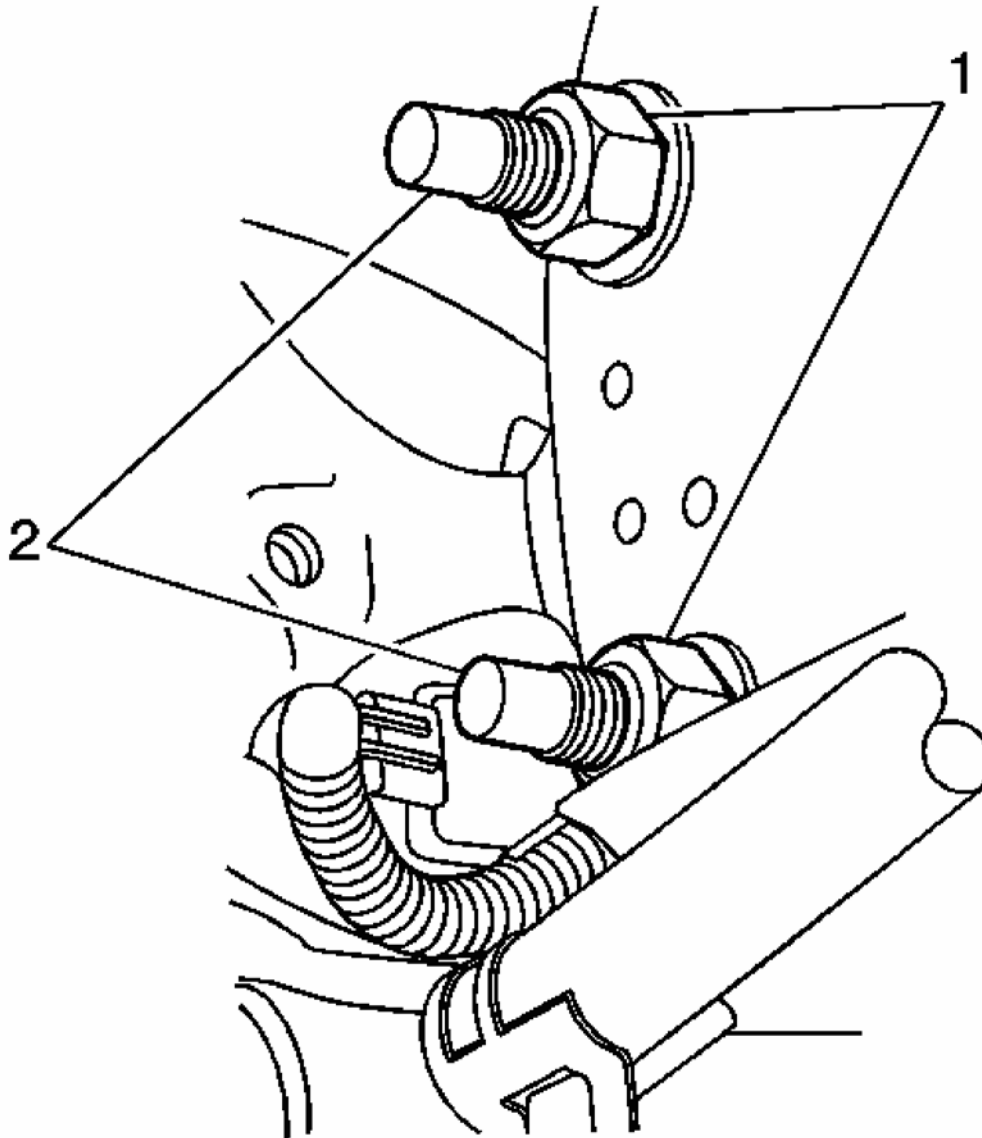


Fig. 9: Rear Strut To Knuckle
Courtesy of GENERAL MOTORS CORP.

7. Remove the rear strut to knuckle bolts (2) and the nuts (1). Refer to **Strut Assembly Replacement**.
8. Remove the knuckle (5) from the vehicle.

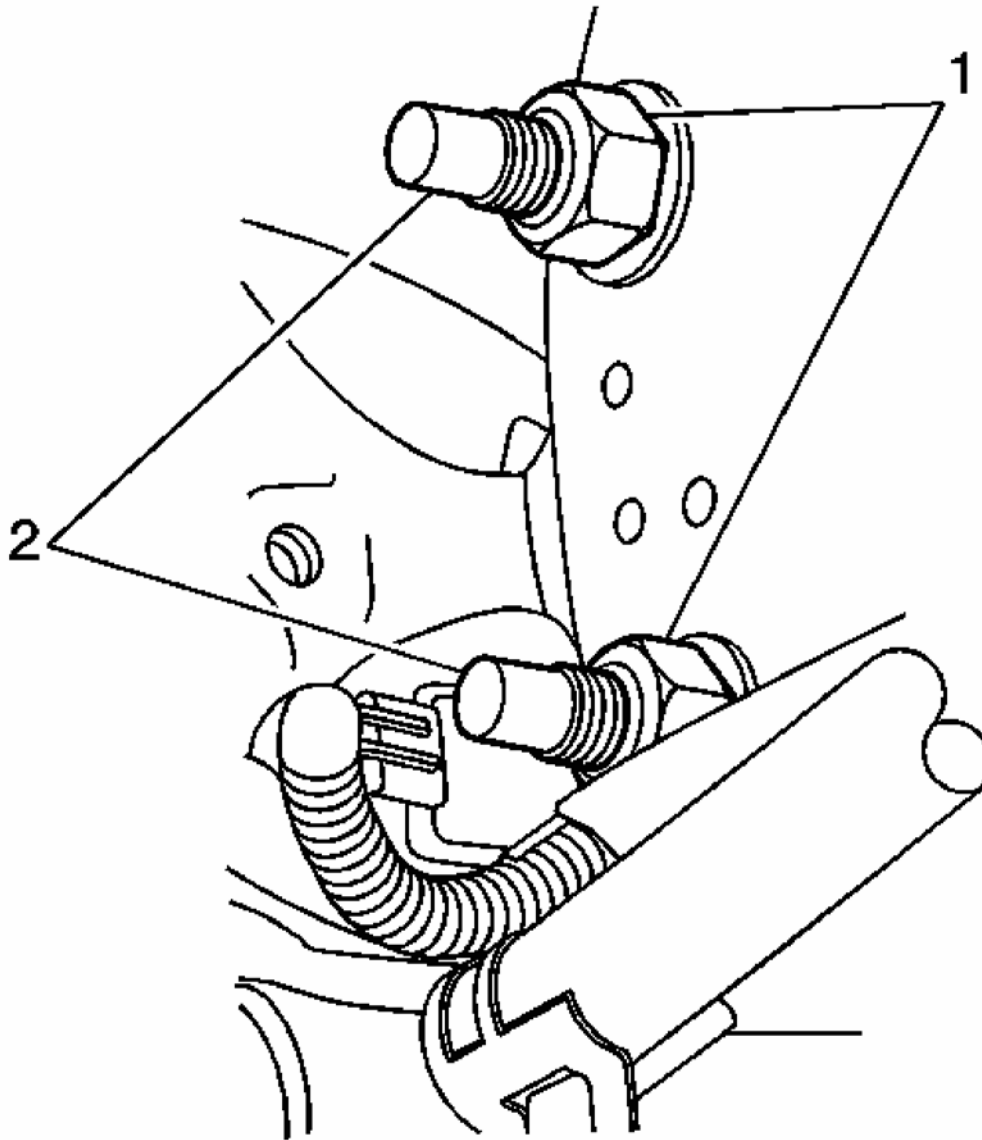


Fig. 10: Rear Strut To Knuckle
Courtesy of GENERAL MOTORS CORP.

1. Install the knuckle to the vehicle.
2. Hand start the strut to knuckle bolts (2) and nuts (1). Do not tighten the nuts at this time.

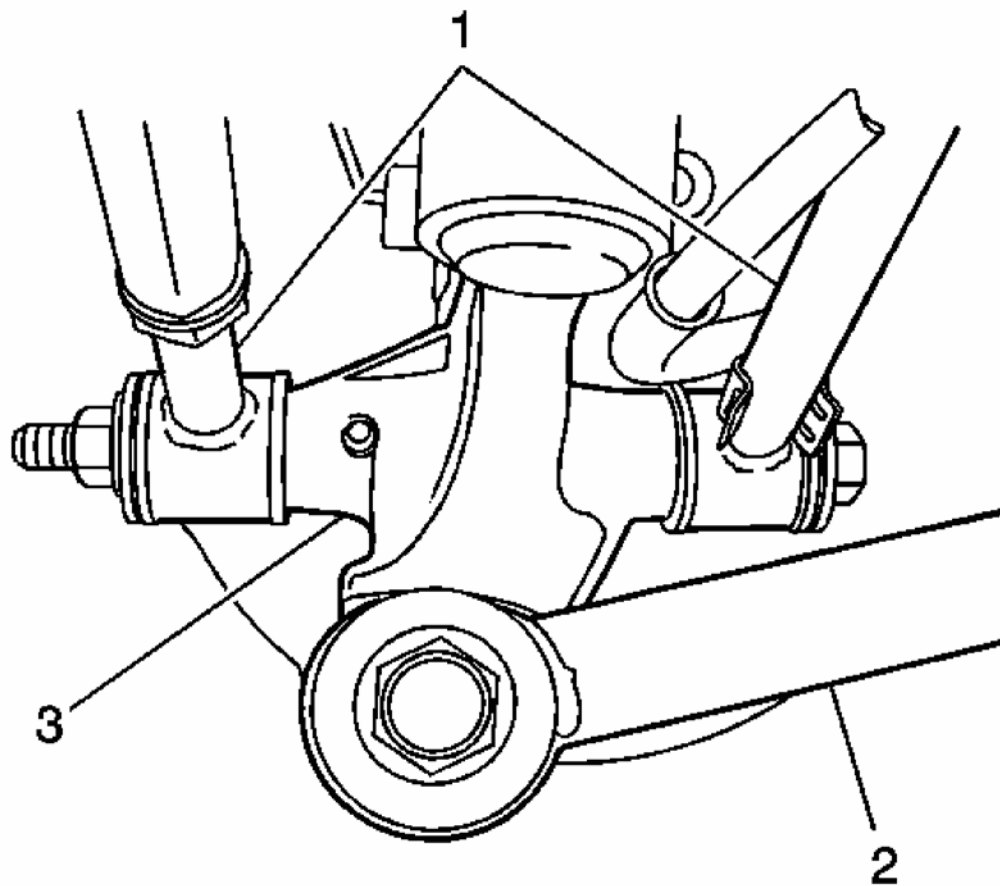


Fig. 11: View Of Trailing Arm & Knuckle
Courtesy of GENERAL MOTORS CORP.

3. Connect the rear suspension trailing arm (2) to the knuckle (3). Refer to **Trailing Arm Replacement**.

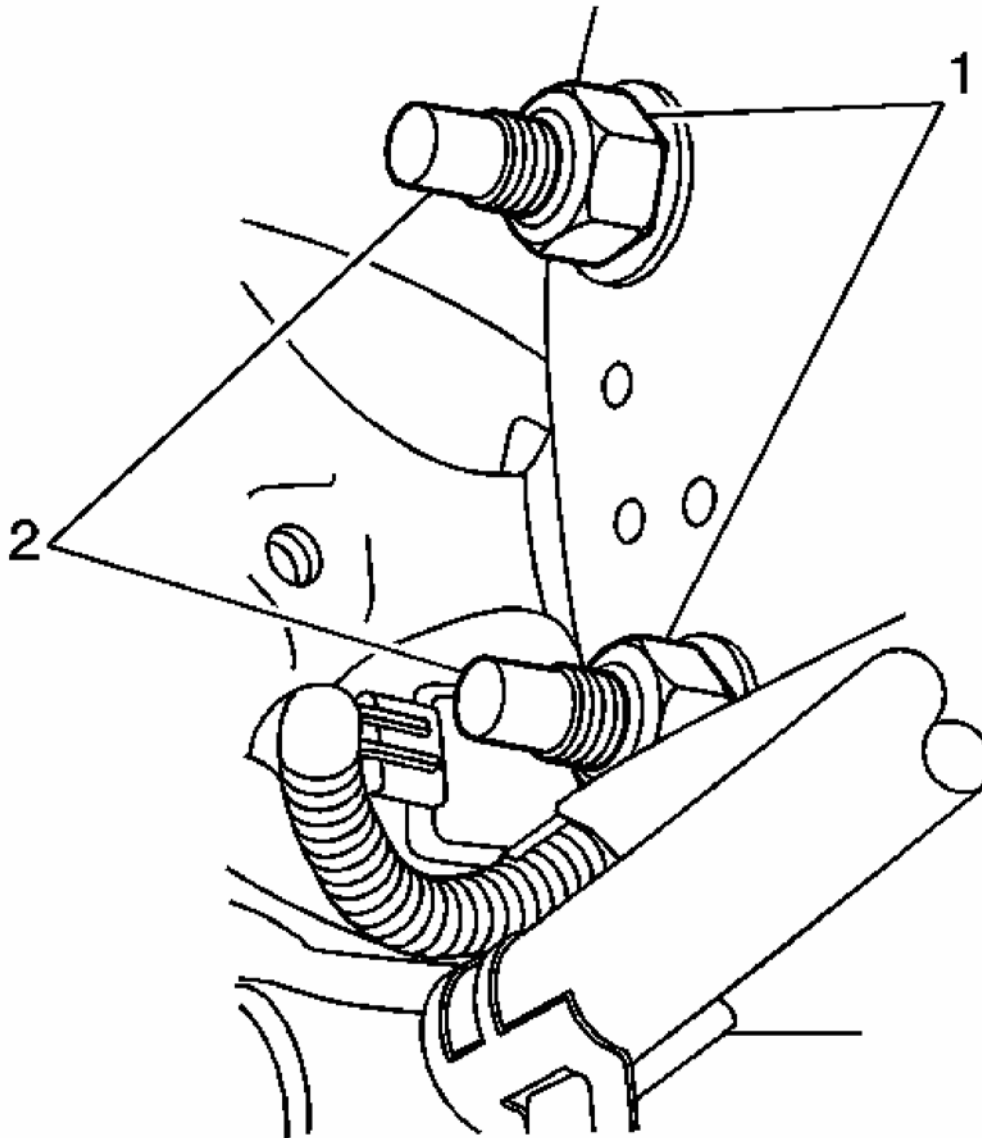


Fig. 12: Rear Strut To Knuckle
Courtesy of GENERAL MOTORS CORP.

4. Connect the rear wheel spindle rods to the knuckle. Refer to **Spindle Rod Replacement**.
5. Install the bearing/hub assembly. Refer to **Wheel Bearing/Hub Replacement - Rear**.

NOTE: Refer to **Fastener Notice** in Cautions and Notices.

6. Tighten the strut to knuckle bolts (2) and nuts (1).

Tighten: Tighten bolts to 120 N.m (89 lb ft).

7. Install the tire and wheel assembly. Refer to **Tire and Wheel Removal and Installation** in Tires and Wheels.
8. Lower the vehicle.
9. Inspect the rear wheel alignment, adjust if necessary. Refer to **Measuring Wheel Alignment** in Wheel Alignment.

STABILIZER SHAFT REPLACEMENT

Removal Procedure

1. Raise and support the vehicle. Refer to **Lifting and Jacking the Vehicle** in General Information.
2. Remove the tires and wheels. Refer to **Tire and Wheel Removal and Installation** in Tires and Wheels.

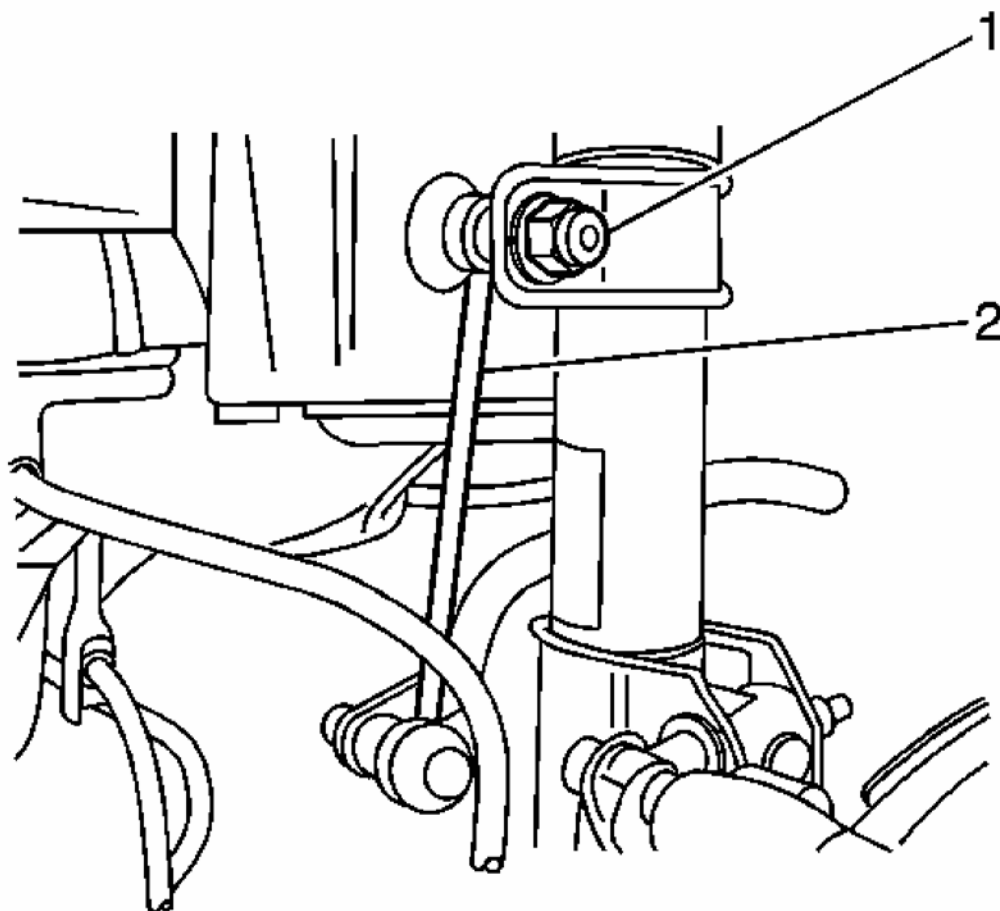


Fig. 13: View Of Stabilizer Shaft Link
Courtesy of GENERAL MOTORS CORP.

3. Remove the left and right stabilizer shaft link nuts from the stabilizer shaft links (1).

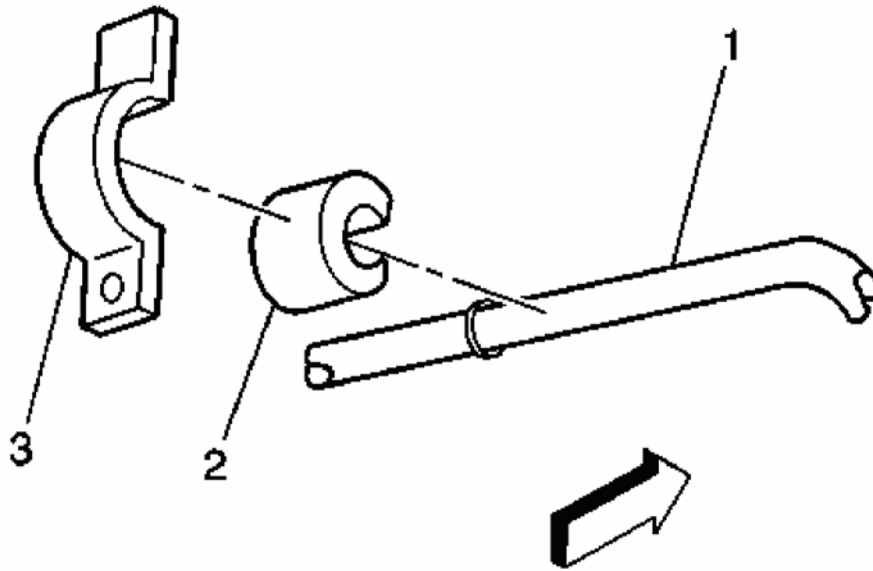


Fig. 14: Stabilizer Shaft, Insulator, & Insulator Bracket
Courtesy of GENERAL MOTORS CORP.

4. Remove the insulator brackets (3) and the bolts from the stabilizer shaft (1).
5. Remove the stabilizer shaft (1) from the rear suspension support.

Installation Procedure

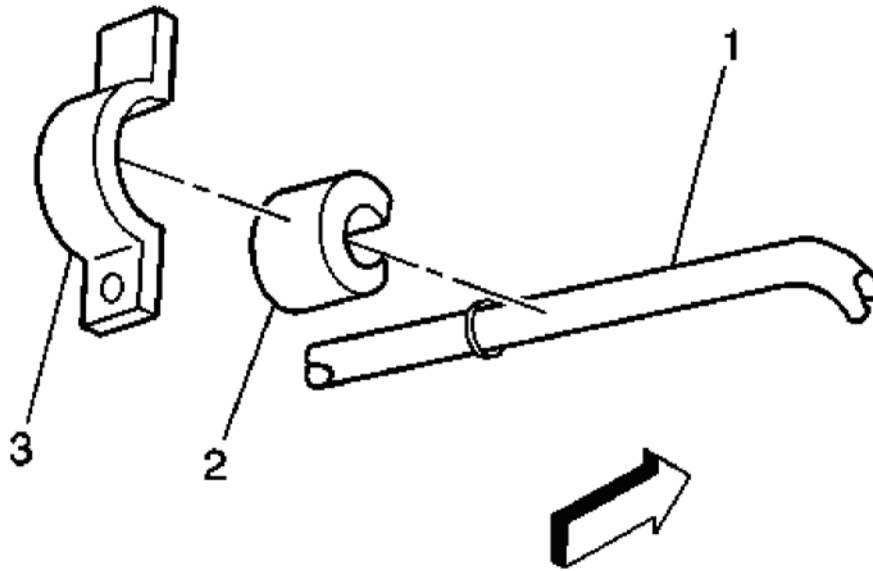


Fig. 15: Stabilizer Shaft, Insulator, & Insulator Bracket
Courtesy of GENERAL MOTORS CORP.

1. Install the stabilizer shaft (1) to the rear suspension support.
2. Install the stabilizer shaft insulator brackets (3) and hand tighten the bolts. Do not tighten the bolts at this time.

NOTE: Refer to Fastener Notice in Cautions and Notices.

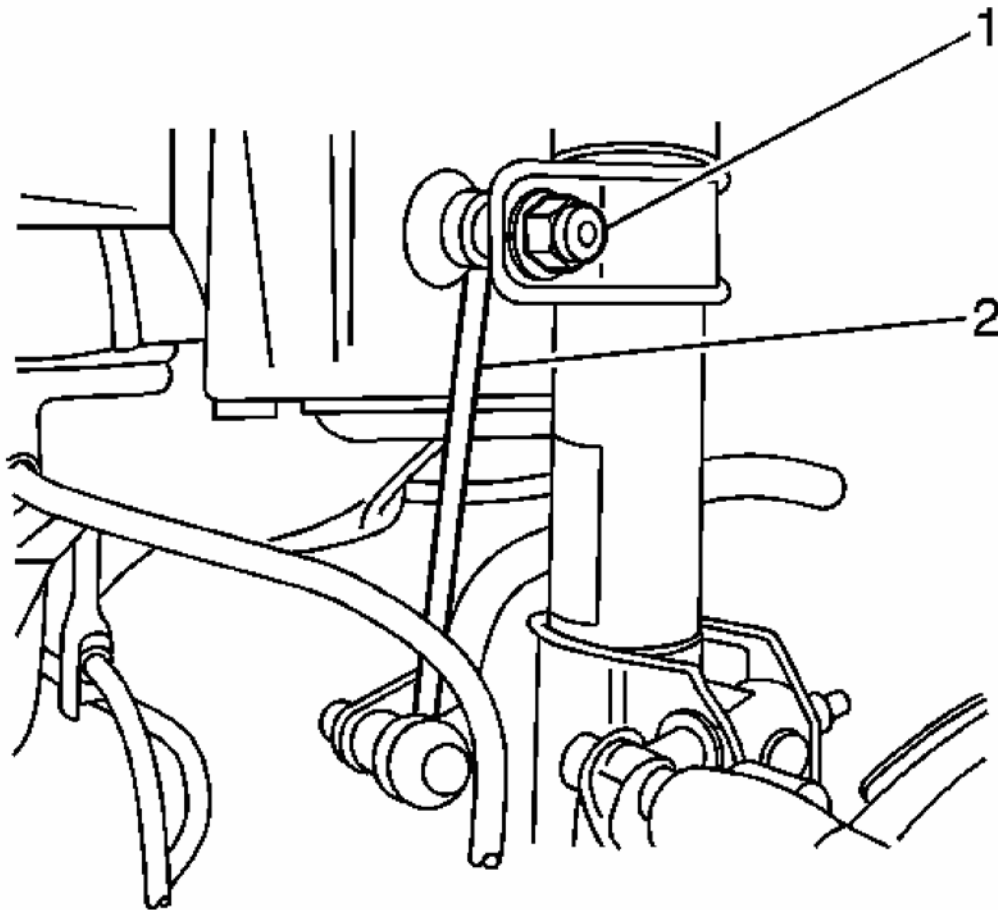


Fig. 16: View Of Stabilizer Shaft Link
Courtesy of GENERAL MOTORS CORP.

3. Install the right and left stabilizer shaft link nuts to the stabilizer shaft links (1).

Tighten:

- Tighten the stabilizer shaft link nuts to 52 N.m (38 lb ft).
 - Tighten the stabilizer shaft insulator bracket nuts to 48 N.m (35 lb ft).
4. Install the tires and wheels. Refer to **Tire and Wheel Removal and Installation** in Tires and Wheels.
 5. Lower the vehicle.

STABILIZER SHAFT INSULATOR REPLACEMENT

Removal Procedure

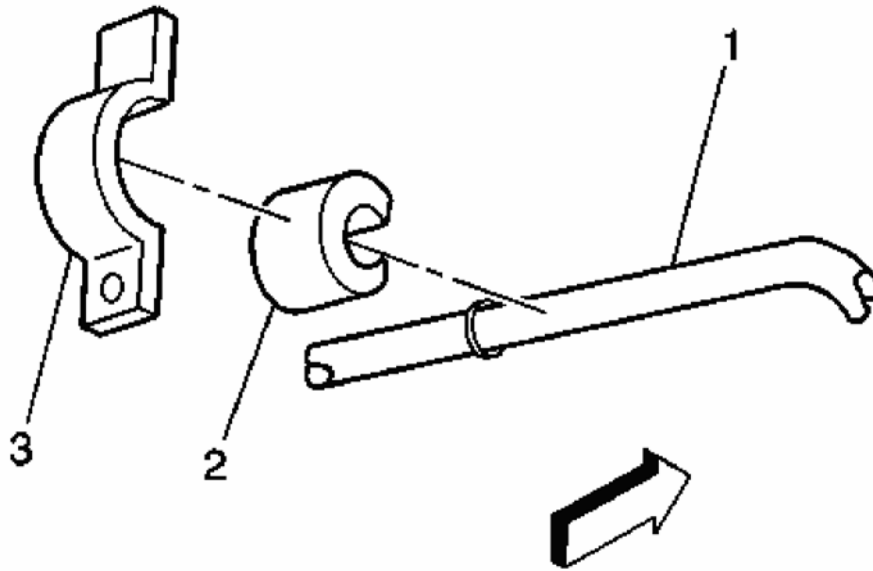


Fig. 17: Stabilizer Shaft, Insulator, & Insulator Bracket
Courtesy of GENERAL MOTORS CORP.

1. Raise and suitably support the vehicle. Refer to **Lifting and Jacking the Vehicle** in General Information.
2. Remove the bolt from the stabilizer shaft insulator bracket (3).
3. Remove the stabilizer shaft insulator bracket.
4. Remove the stabilizer shaft insulator (2) from the stabilizer shaft.

Installation Procedure

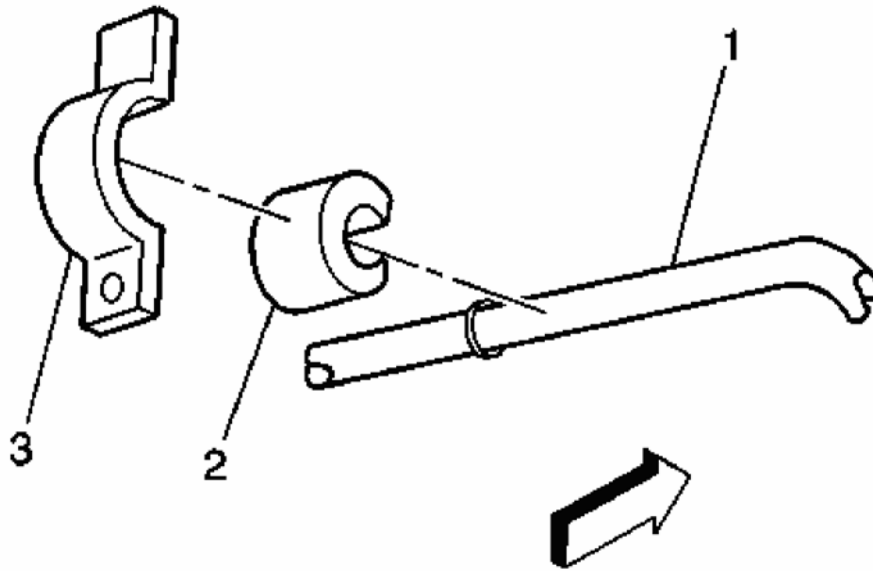


Fig. 18: Stabilizer Shaft, Insulator, & Insulator Bracket
Courtesy of GENERAL MOTORS CORP.

1. Install the stabilizer shaft insulator (2) to the stabilizer shaft.
2. Install the stabilizer shaft insulator bracket (3).

NOTE: Refer to Fastener Notice in Cautions and Notices.

3. Install the stabilizer shaft bracket nuts.

Tighten: Tighten the bolts to 48 N.m (35 lb ft).

4. Lower the vehicle.

STABILIZER SHAFT LINK REPLACEMENT

Removal Procedure

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

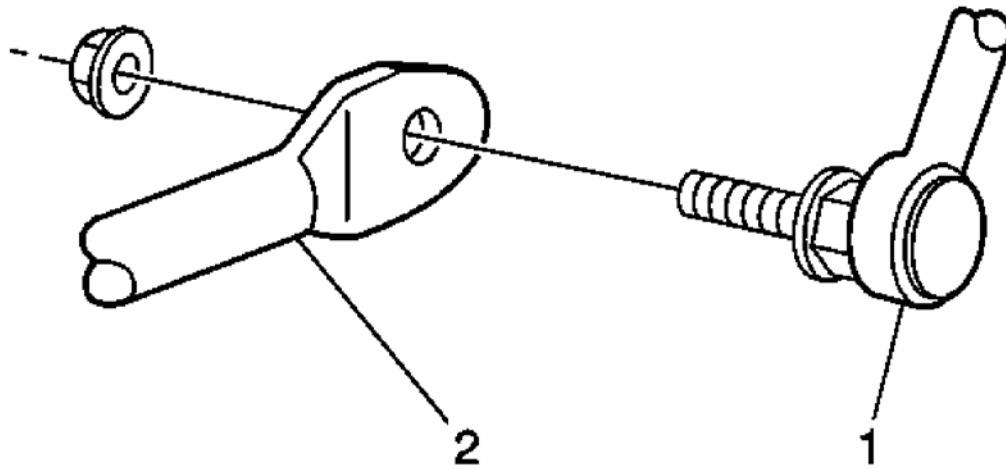


Fig. 19: View Of Stabilizer Shaft And Link
Courtesy of GENERAL MOTORS CORP.

2. Remove the stabilizer shaft link nut from the stabilizer shaft link (1) and the stabilizer shaft (2).

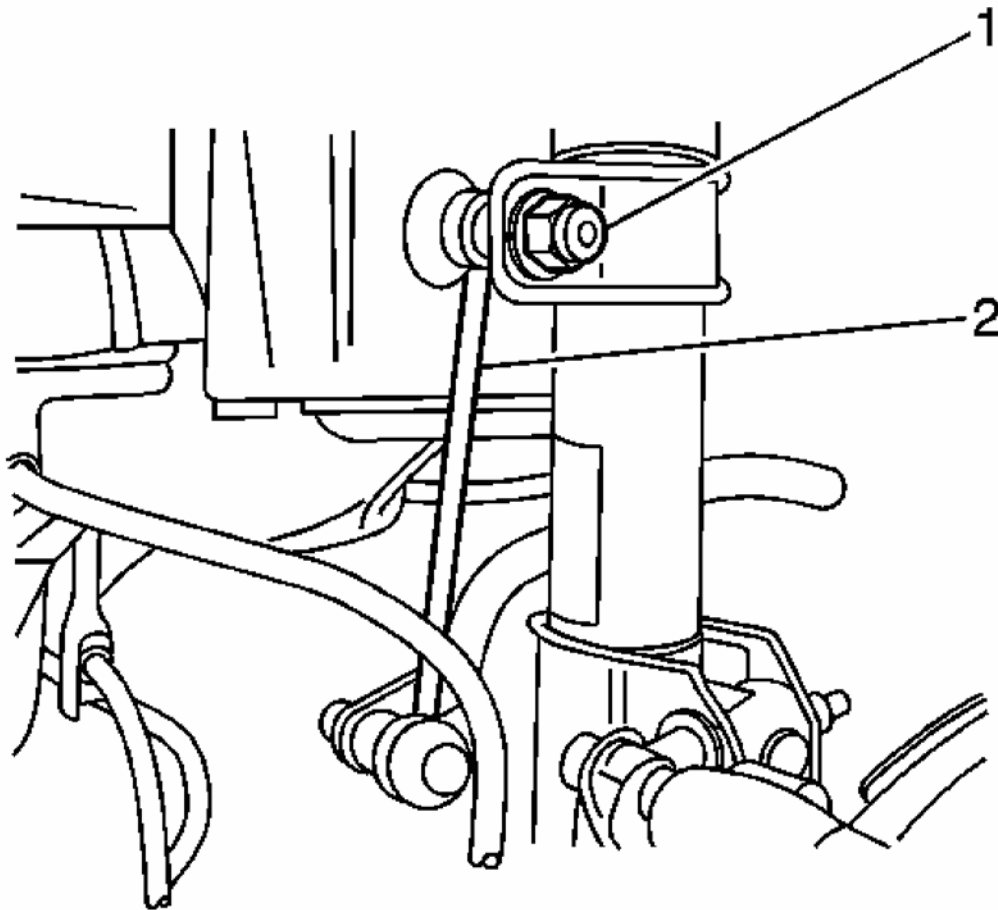


Fig. 20: View Of Stabilizer Shaft Link
Courtesy of GENERAL MOTORS CORP.

3. Remove the stabilizer shaft link nut from the stabilizer shaft link (1) and the strut.
4. Remove the stabilizer shaft link (1) from the vehicle.

Installation Procedure

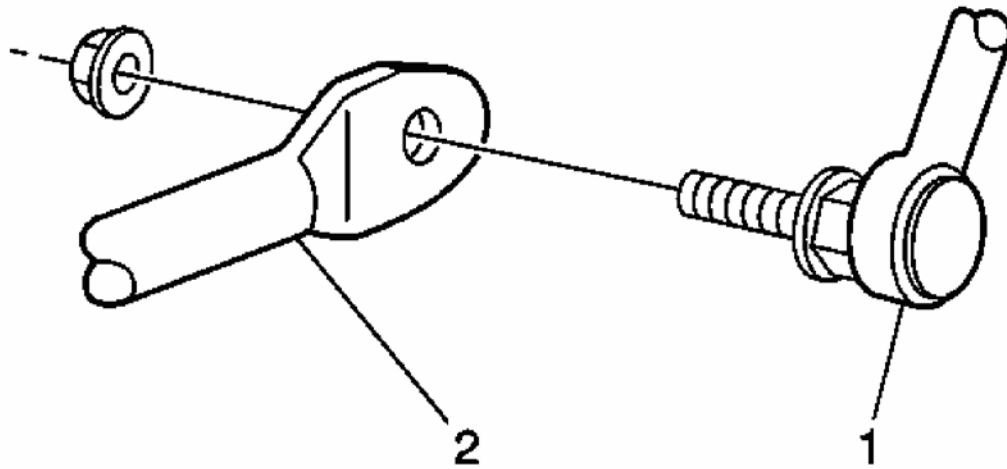


Fig. 21: View Of Stabilizer Shaft And Link
Courtesy of GENERAL MOTORS CORP.

1. Install the stabilizer shaft link (1) to the vehicle.
2. Connect the stabilizer shaft link (1) to the stabilizer shaft (2).

NOTE: Refer to Fastener Notice .

3. Install the lower stabilizer shaft link nut to the stabilizer shaft link (1) and the stabilizer shaft (2).

Tighten: Tighten the nut to 50 N.m (37 lb ft).

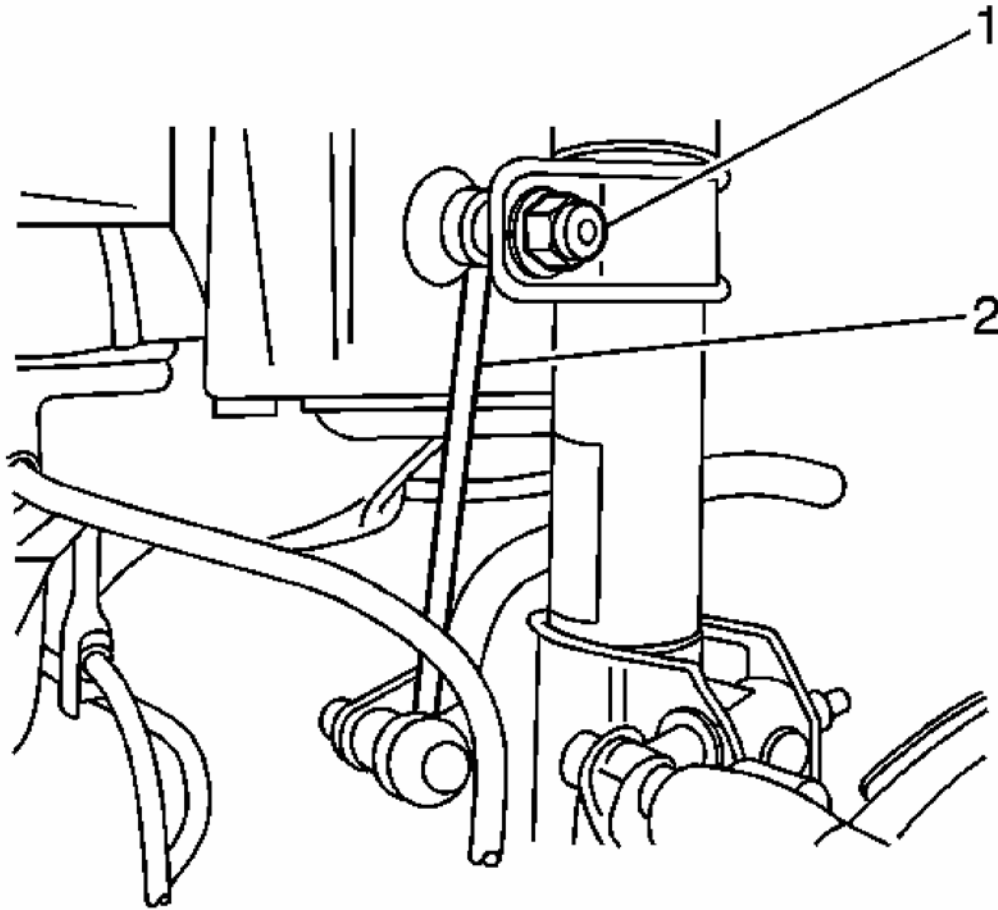


Fig. 22: View Of Stabilizer Shaft Link
Courtesy of GENERAL MOTORS CORP.

4. Connect the stabilizer shaft link (1) to the strut.
5. Install the upper stabilizer shaft link nut to the stabilizer shaft link (1) and the strut.

Tighten: Tighten the nut to 52 N.m (38 lb ft).

6. Lower the vehicle.

TRAILING ARM REPLACEMENT

Removal Procedure

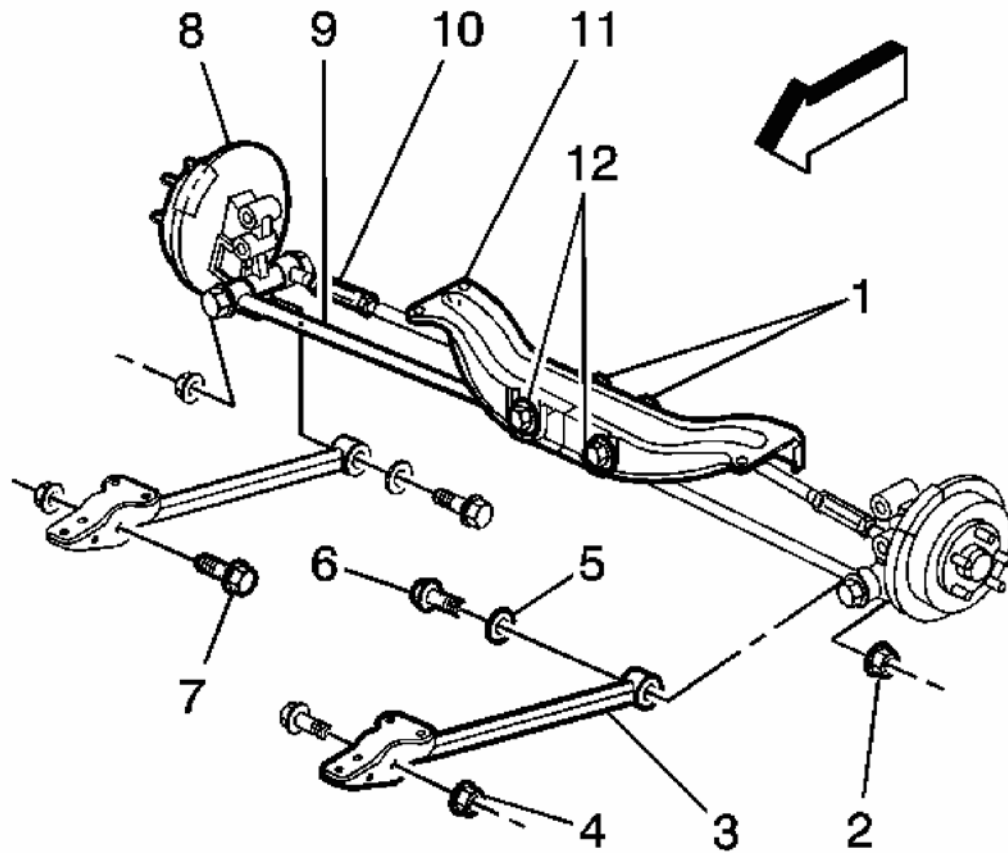
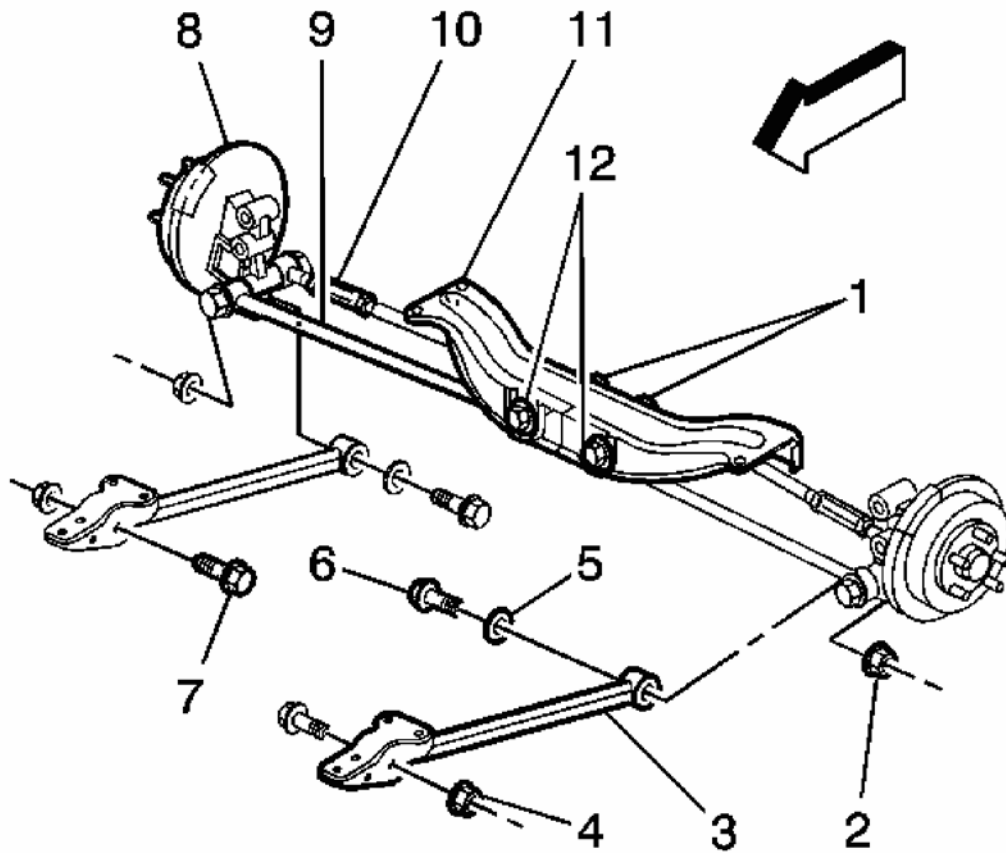


Fig. 23: Exploded View Of Rear Suspension
 Courtesy of GENERAL MOTORS CORP.

1. Raise and support the vehicle. Refer to **Lifting and Jacking the Vehicle** .
2. Remove the bolt (6) and nut (2) from the trailing arm (3) and the knuckle (8).
3. Remove the nut (4) and bolt (7) from the trailing arm (3) and the trailing arm bracket.
4. Remove the trailing arm (3) from the vehicle.

Installation Procedure



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- NOTE:** Refer to Fastener Notice .

- Tighten:** Tighten the bolt and nut to 105 N.m (77 lb ft).

- Tighten:** Tighten the nut to 240 N.m (177 lb ft).

5. Lower the vehicle.

SPINDLE ROD REPLACEMENT

Removal Procedure

1. Raise and support the vehicle. Refer to Lifting and Jacking the Vehicle in General Information.
2. Remove the tire and wheel assembly. Refer to Tire and Wheel Removal and Installation in Tires and Wheels.

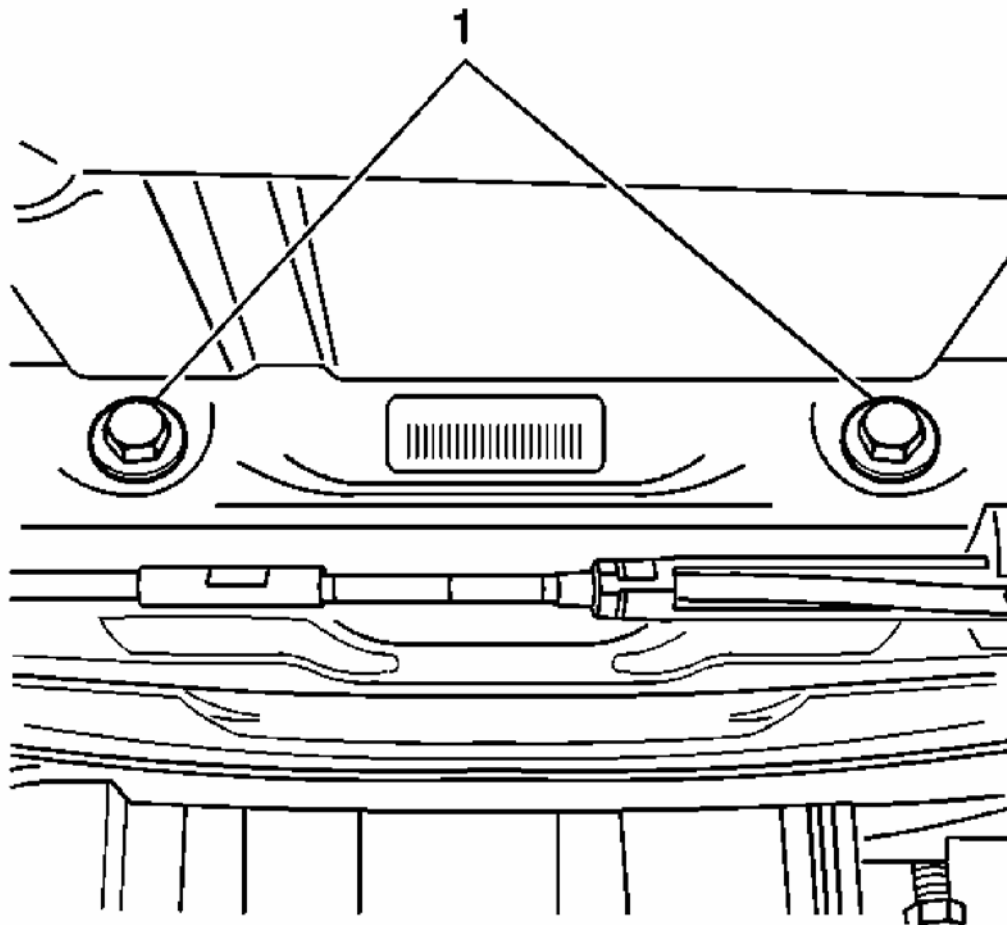


Fig. 25: View Of Spindle Rod And Rear Suspension Support Bolt
Courtesy of GENERAL MOTORS CORP.

IMPORTANT: Use a transmission jack or suitable hoist stands to prop the rear suspension support.

3. Lower the rear suspension support to gain clearance to the spindle rod to knuckle bolt.

Refer to **Support Replacement**.

4. Remove the bolt (1) and nut from the spindle rod and the rear suspension support.

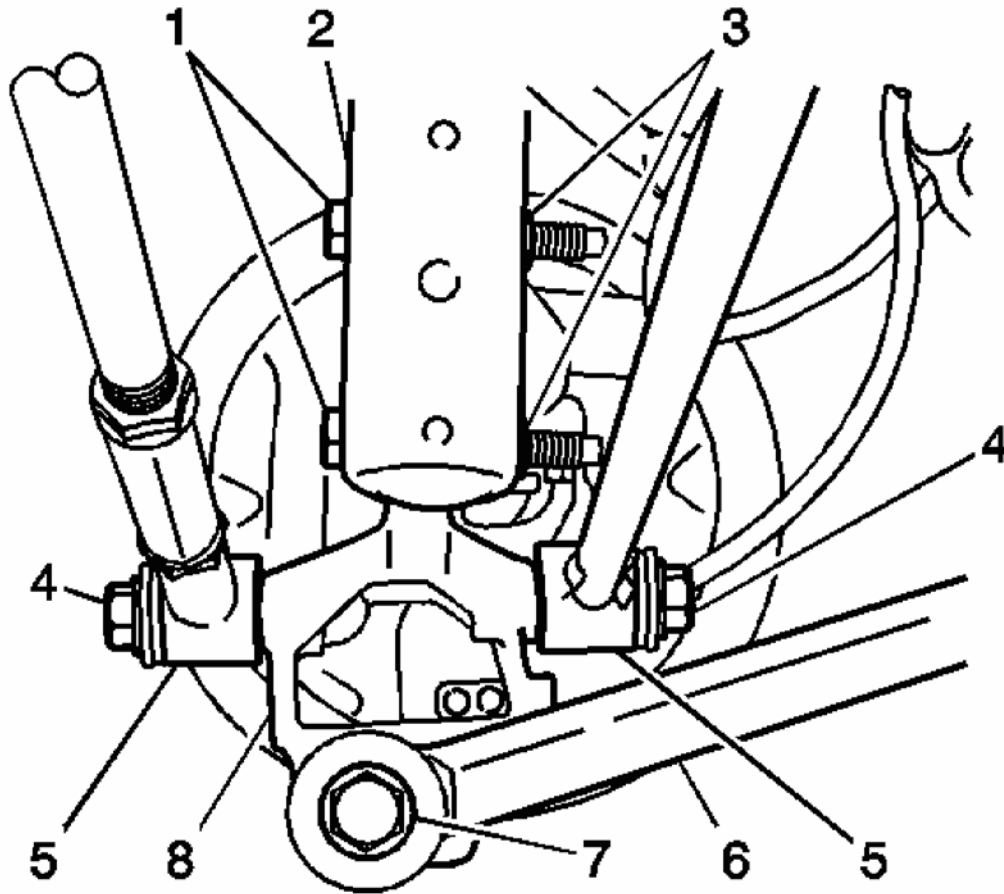


Fig. 26: View Of Spindle Rod, Knuckle, And Bolt
Courtesy of GENERAL MOTORS CORP.

5. Remove the spindle rod to knuckle bolt (4) and nut.
6. Push the spindle rod to knuckle bolt (4) forward enough to provide clearance for the spindle rod (5) removal.
7. Remove the spindle rod (5) from the vehicle.

Installation Procedure

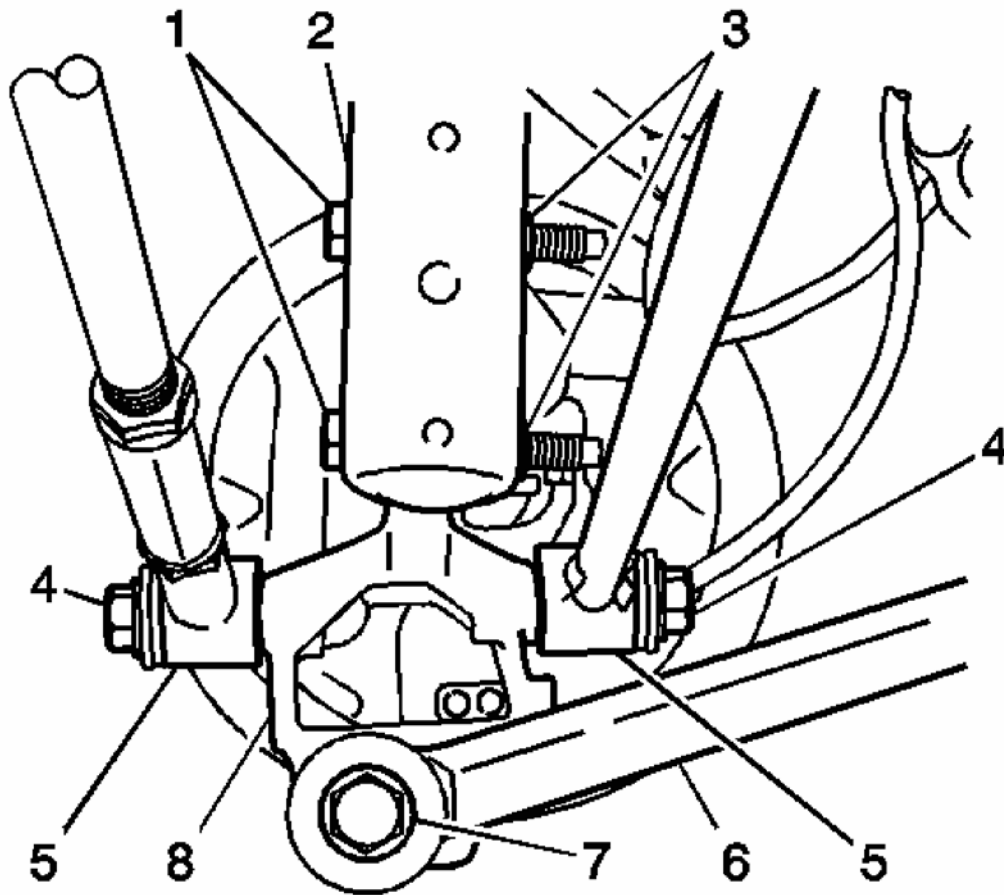


Fig. 27: View Of Spindle Rod, Knuckle, And Bolt
Courtesy of GENERAL MOTORS CORP.

1. Install the spindle rod (5) to the vehicle.
2. Install the spindle rod (5) to the knuckle (8).

NOTE: **Refer to Fastener**
Notice .

3. Install the spindle rod to knuckle bolt (4) and nut.

Tighten: Tighten the nut to 150 N.m (110 lb ft).

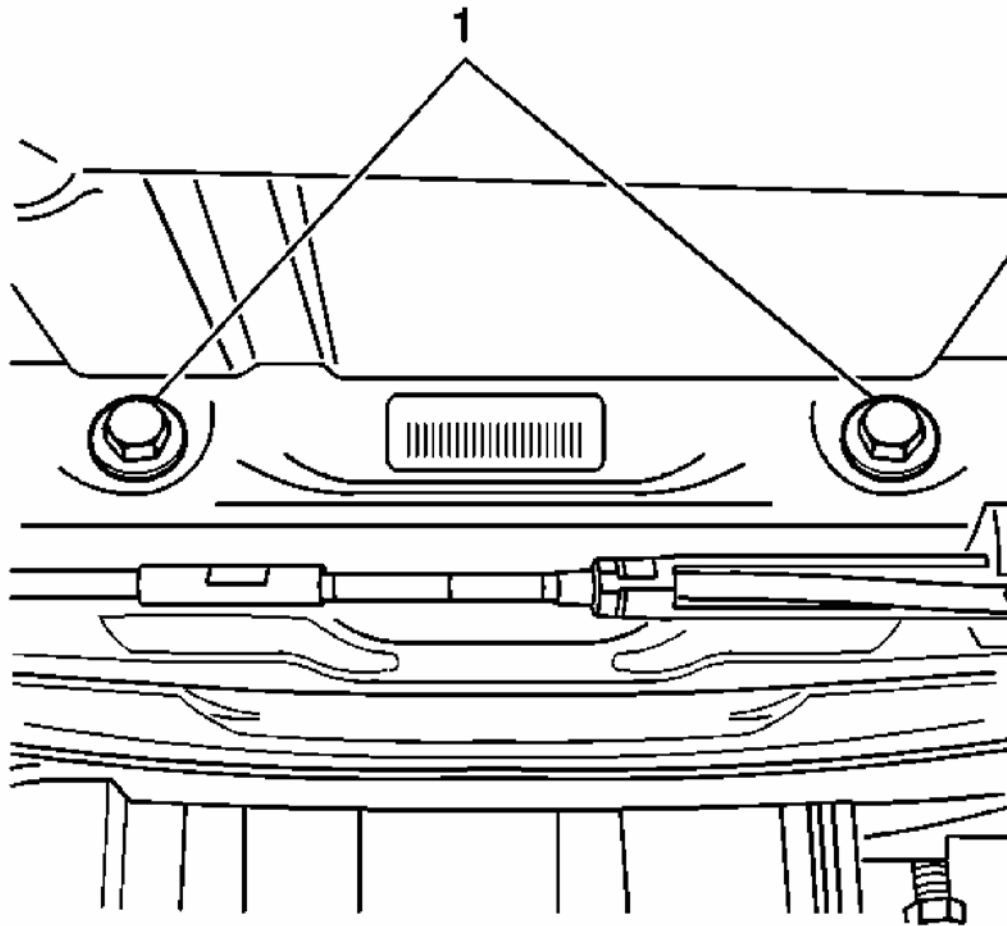


Fig. 28: View Of Spindle Rod And Rear Suspension Support Bolt
Courtesy of GENERAL MOTORS CORP.

4. Install the spindle rod to the rear suspension support.
5. Install the bolt (1) and nut to the rear suspension support.

Tighten: Tighten the bolt to 135 N.m (100 lb ft).

6. Install the rear suspension support. Refer to **Support Replacement**.
7. Install the tire and wheel assembly. Refer to **Tire and Wheel Removal and Installation** in Tires and Wheels.
8. Lower the vehicle.
9. Adjust the wheel toe angle. Refer to **Wheel Alignment Specifications** in Wheel Alignment.

STRUT ASSEMBLY REPLACEMENT**Removal Procedure**

NOTE: Care should be taken to avoid chipping or scratching the coating when handling the suspension coil spring. Damage to the coating can cause premature failure.

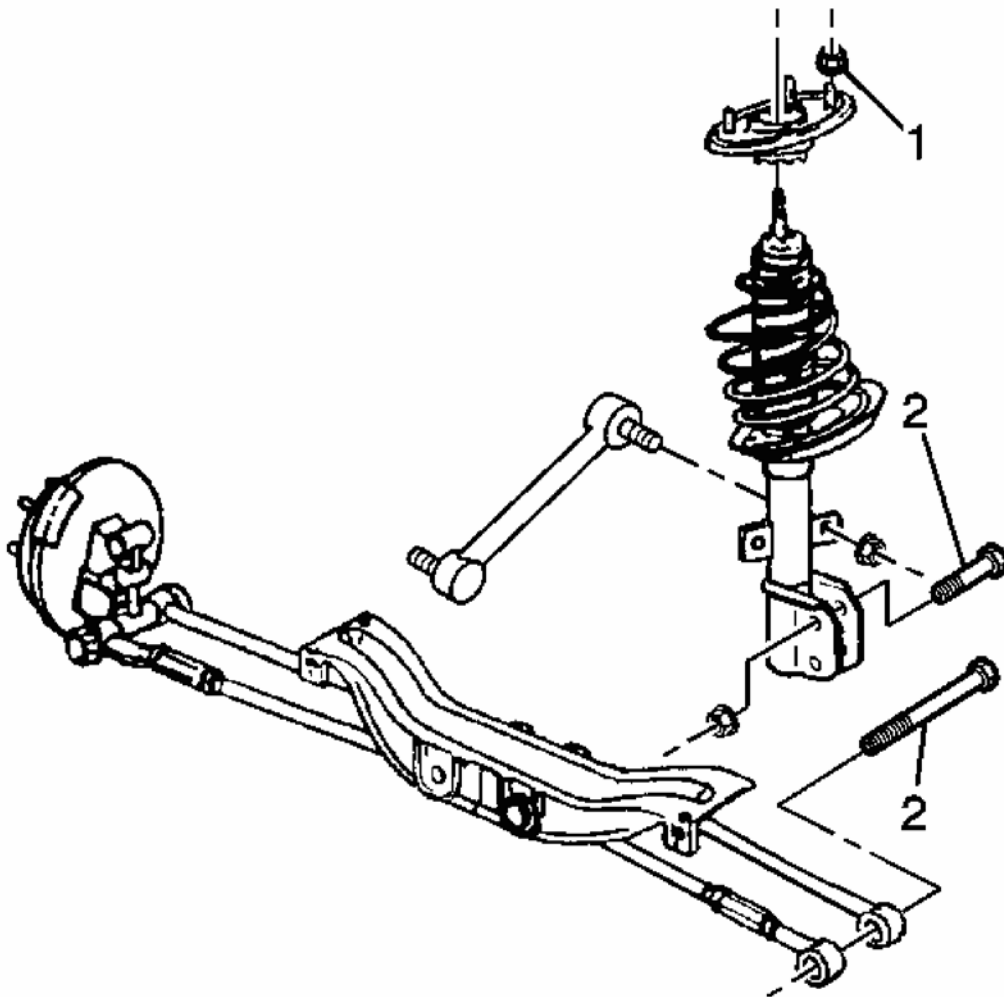


Fig. 29: View Of Strut-To-Body Mount Nuts And Brake Hose Bracket Bolt
Courtesy of GENERAL MOTORS CORP.

1. Remove the strut-to-body mount nuts (1).
2. Raise and support the vehicle. Refer to **Lifting and Jacking the Vehicle**.
3. Remove the tire and wheel assembly. Refer to **Tire and Wheel Removal and**

Installation .

4. Remove the stabilizer shaft link from the strut. Refer to **Stabilizer Shaft Link Replacement.**
5. Remove the bolt (2) from the brake hose bracket (3) and the strut assembly.

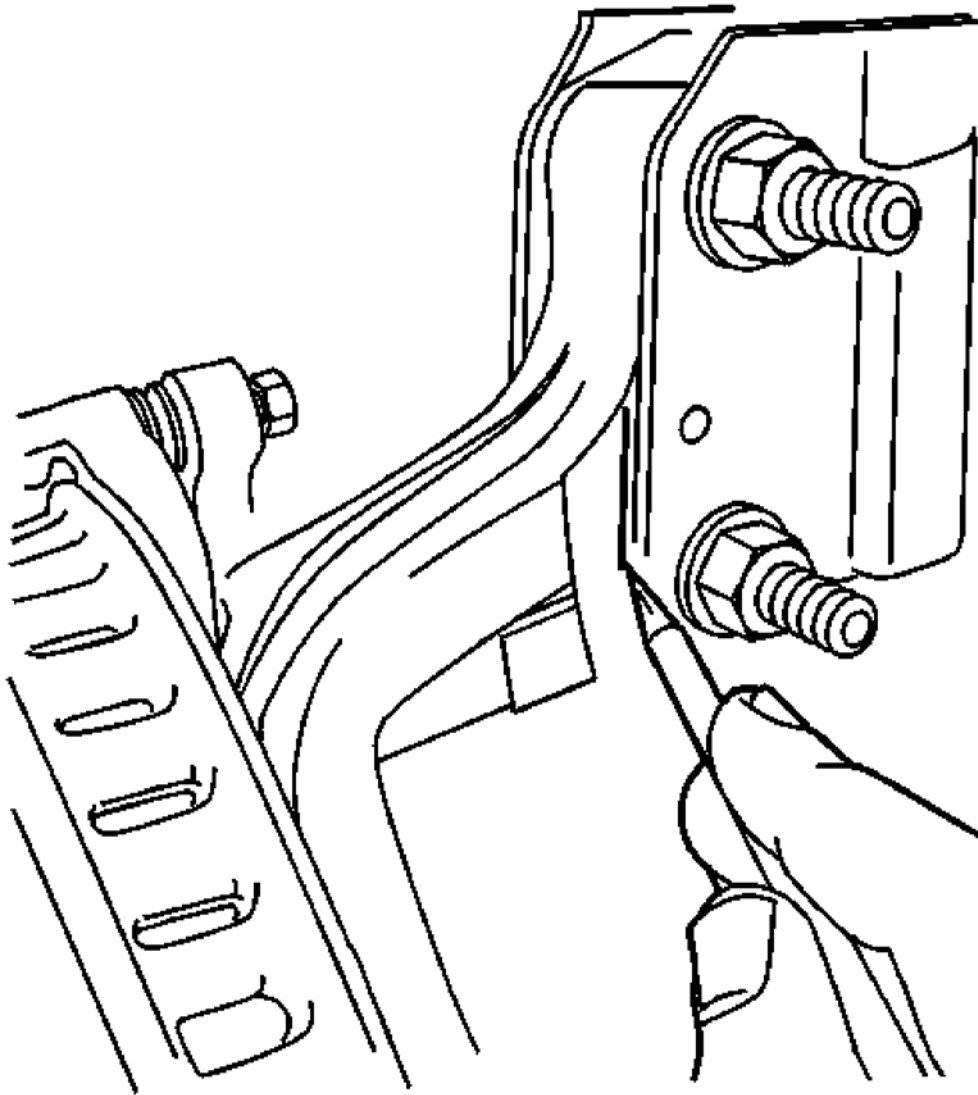


Fig. 30: Scribing Strut To Knuckle
Courtesy of GENERAL MOTORS CORP.

6. Scribe the strut to the knuckle.

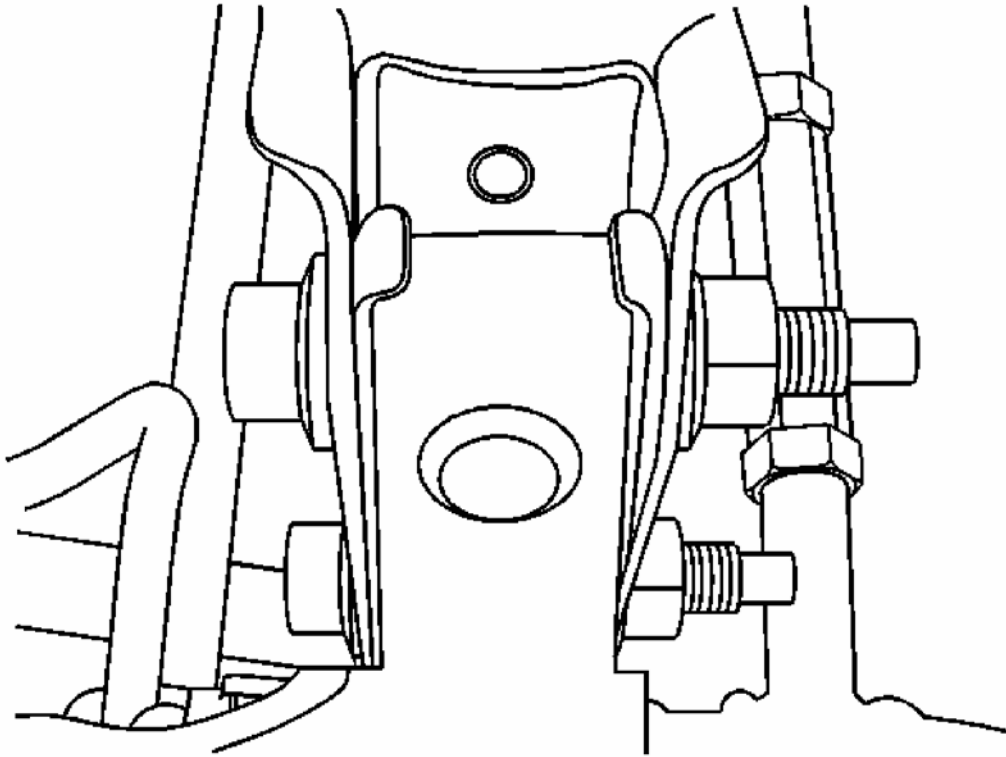


Fig. 31: View Of Strut
Courtesy of GENERAL MOTORS CORP.

NOTE: The knuckle must be retained after the strut-to-knuckle bolts have been removed. Failure to observe this may cause ball joint and/or wheel drive shaft damage.

7. Remove the strut to knuckle bolts.
8. Remove the strut from the vehicle.

Installation Procedure

NOTE: Care should be taken to avoid chipping or scratching the coating when handling the suspension coil spring. Damage to the coating can cause premature failure.

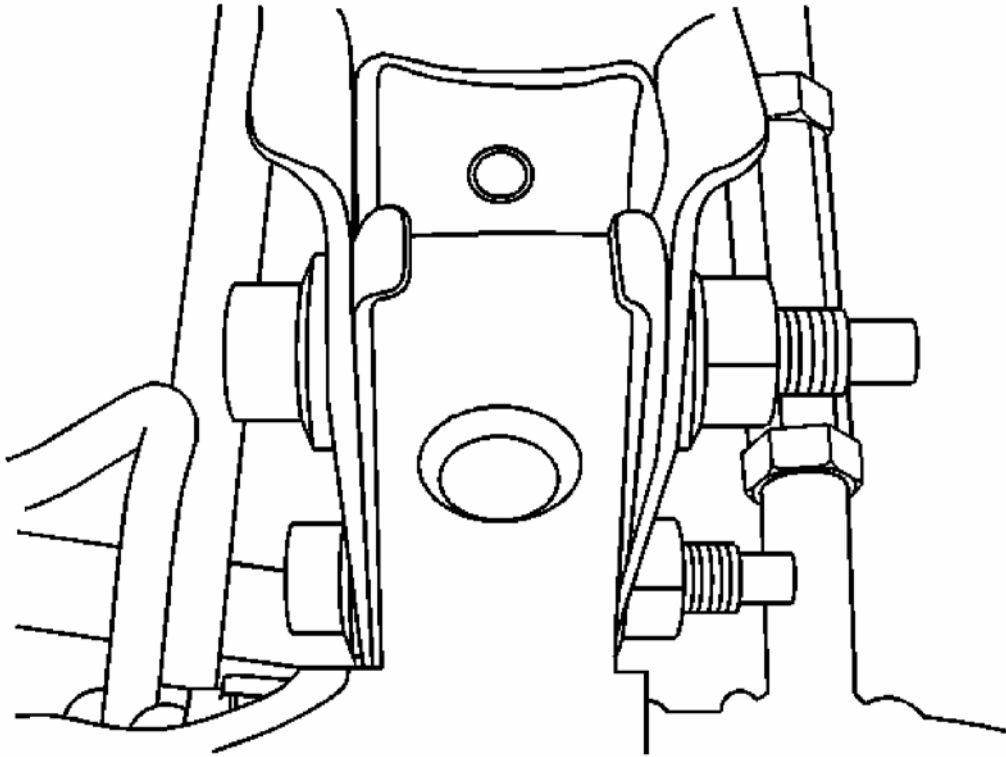


Fig. 32: View Of Strut
Courtesy of GENERAL MOTORS CORP.

1. Install the strut into place.

NOTE: Refer to Fastener Notice .

2. Install the strut to knuckle bolts.

Tighten: Tighten the strut to knuckle bolts and nuts to 120 N.m (89 lb ft).

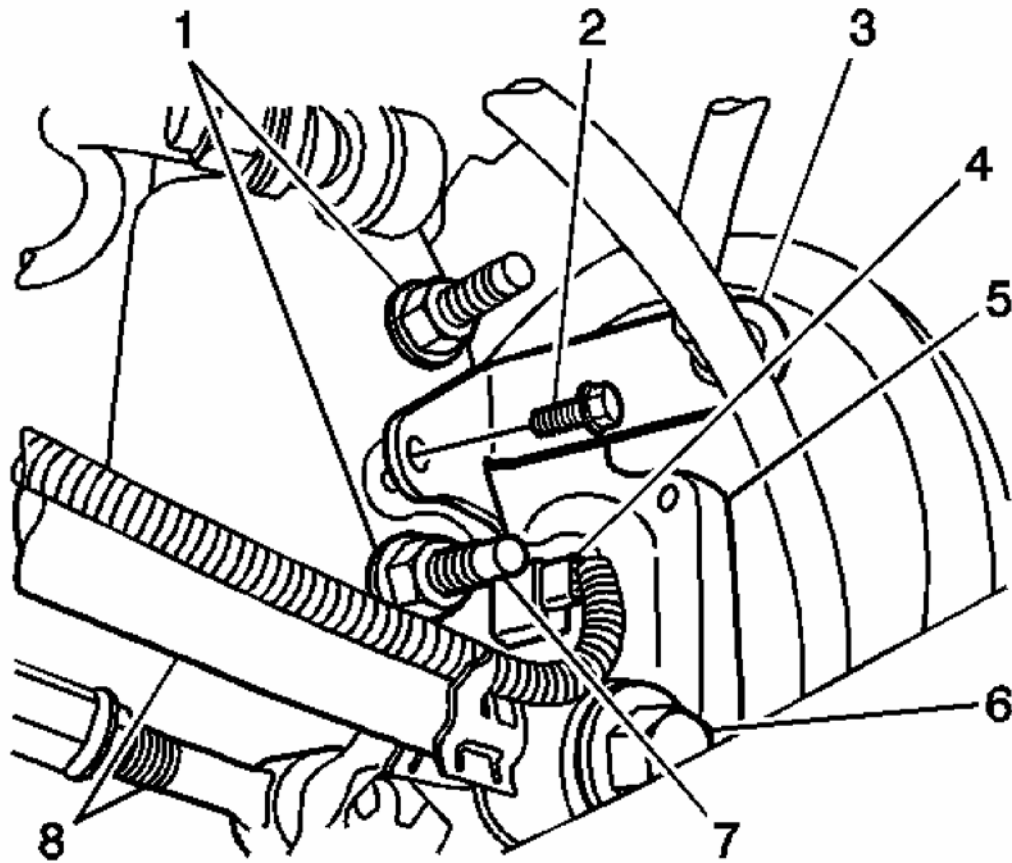


Fig. 33: View Of Brake Hose Bracket And Bolt And Strut Assembly
Courtesy of GENERAL MOTORS CORP.

3. Install the bolt (2) to the brake hose bracket (3) and the strut assembly.

Tighten: Tighten the bolt to 10 N.m (89 lb in).

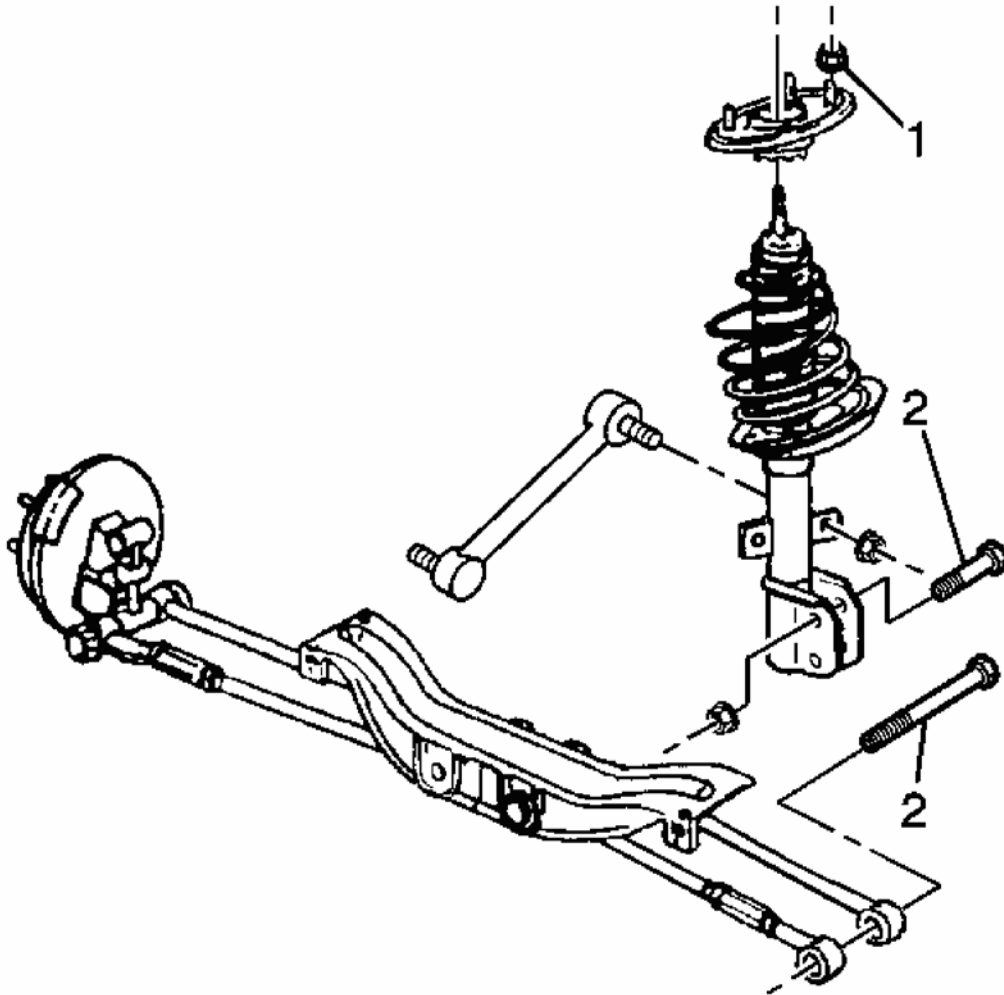


Fig. 34: View Of Strut-To-Body Mount Nuts And Brake Hose Bracket Bolt
Courtesy of GENERAL MOTORS CORP.

4. Connect the stabilizer shaft link to the strut. Refer to **Stabilizer Shaft Link Replacement**.
5. Install the tire and wheel. Refer to **Tire and Wheel Removal and Installation**.
6. Install strut to body mount nuts (1).

Tighten: Tighten the strut to body mount nuts to 45 N.m (33 lb ft).

7. Lower the vehicle.
8. Adjust the rear wheel alignment. Refer to **Wheel Alignment Specifications**.

CAUTION: 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.

CAUTION: 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.

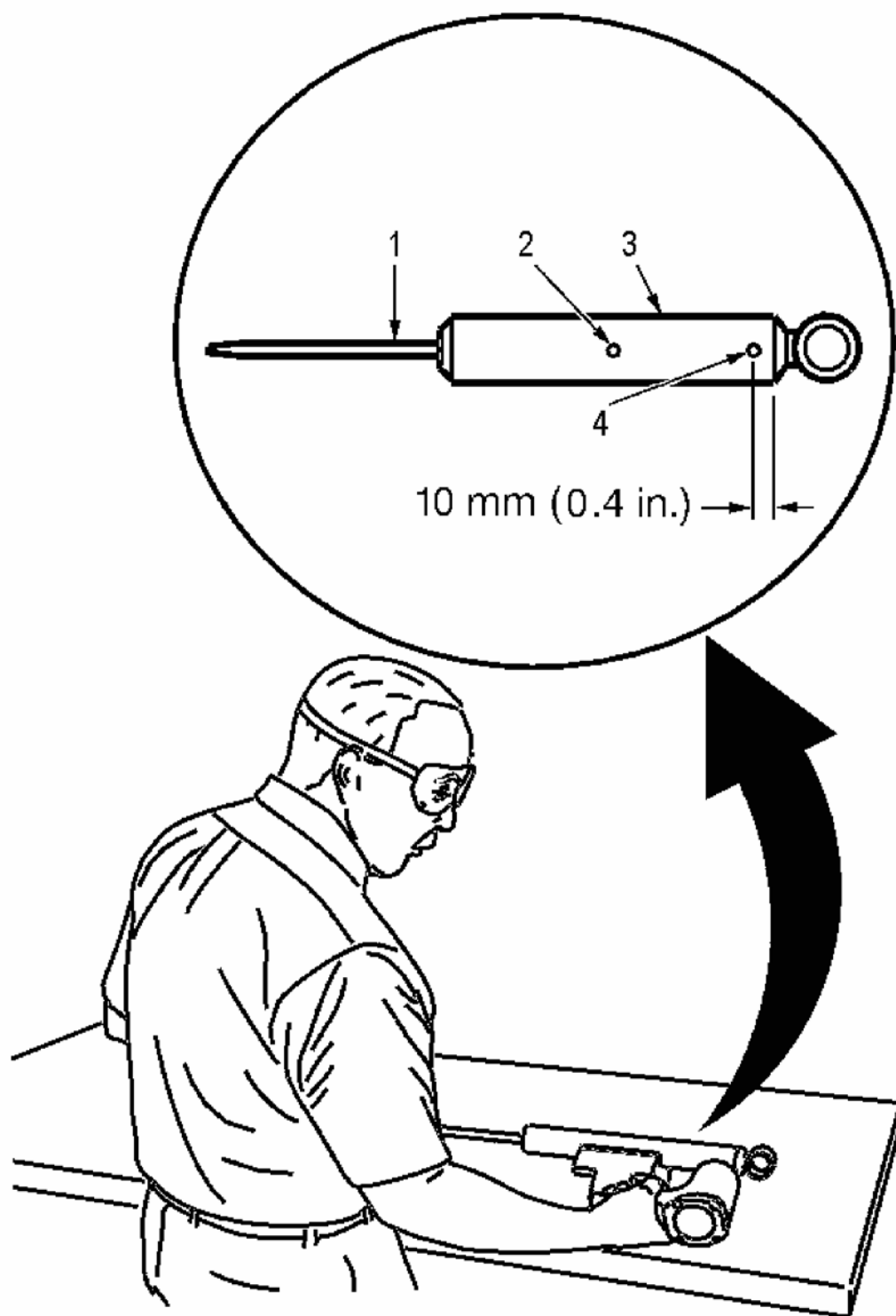


Fig. 35: Drilling Hole In Shock Absorber At Centerpunched Locations
Courtesy of GENERAL MOTORS CORP.

2006 Chevrolet Impala LS

2006 SUSPENSION Rear Suspension - Impala

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.
6. Remove the shock absorber from the vise. Hold the shock absorber over a drain pan horizontally with the holes down. Move the rod (1) in and out of the tube (3) to completely drain the oil from the shock absorber.

STRUT, STRUT COMPONENT AND/OR SPRING REPLACEMENT

Tools Required

- **J 42991** Strut Rod Nut Socket
- **J 45400** Strut Spring Compressor

Disassembly Procedure

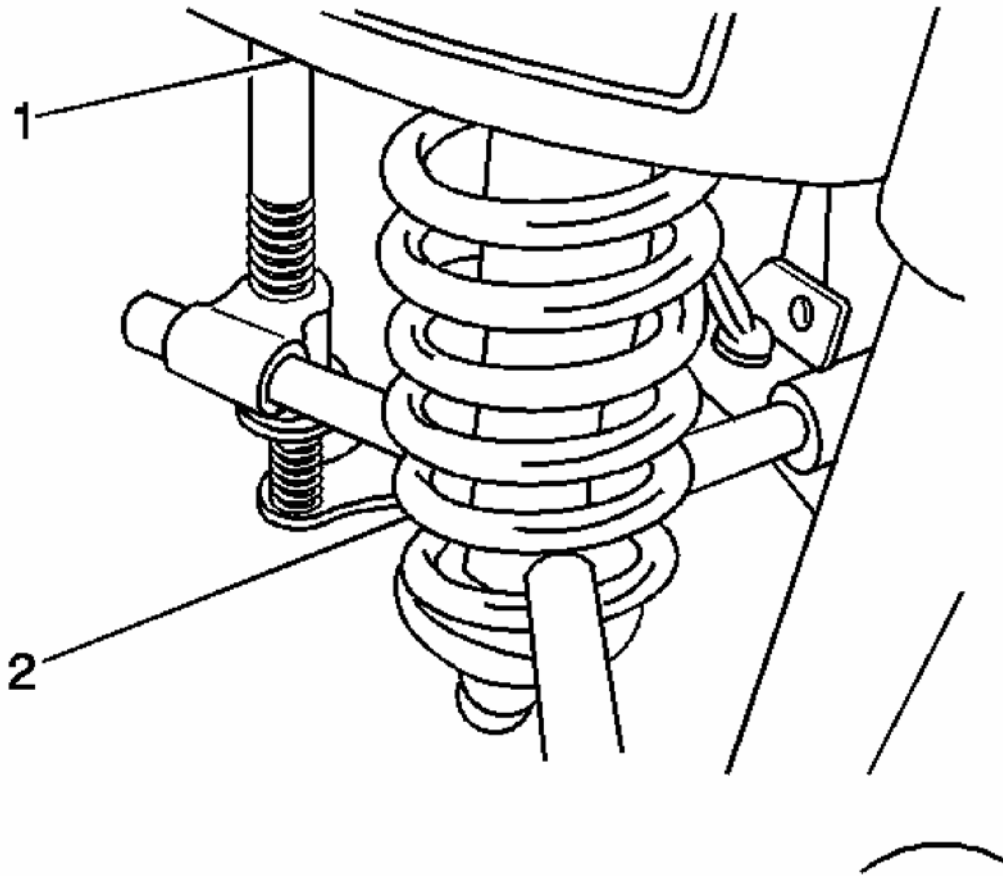


Fig. 36: Compressing/Releasing Lower Part Of Shock Spring
Courtesy of GENERAL MOTORS CORP.

1. Remove the strut from the vehicle. Refer to **Strut Assembly Replacement**.
2. Install the strut (2) in the **J 45400** (1).

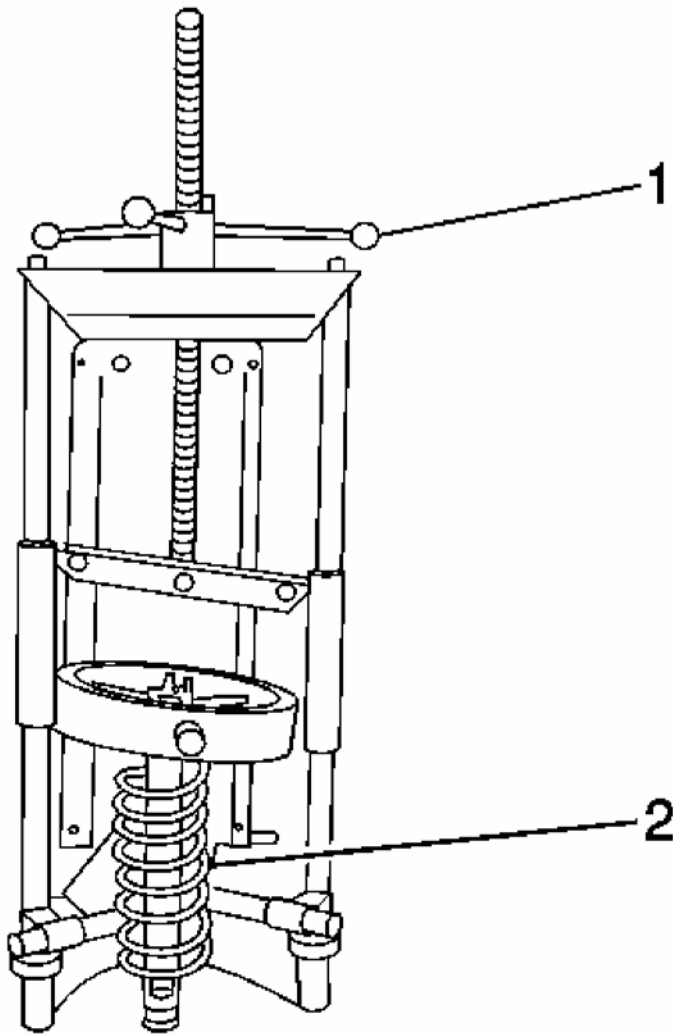


Fig. 37: View Of Compressor Forcing Screw & Coil Spring
Courtesy of GENERAL MOTORS CORP.

IMPORTANT: The spring is compressed when the strut moves freely.

3. Turn the spring compressor forcing screw (1) until the coil spring (2) is compressed.

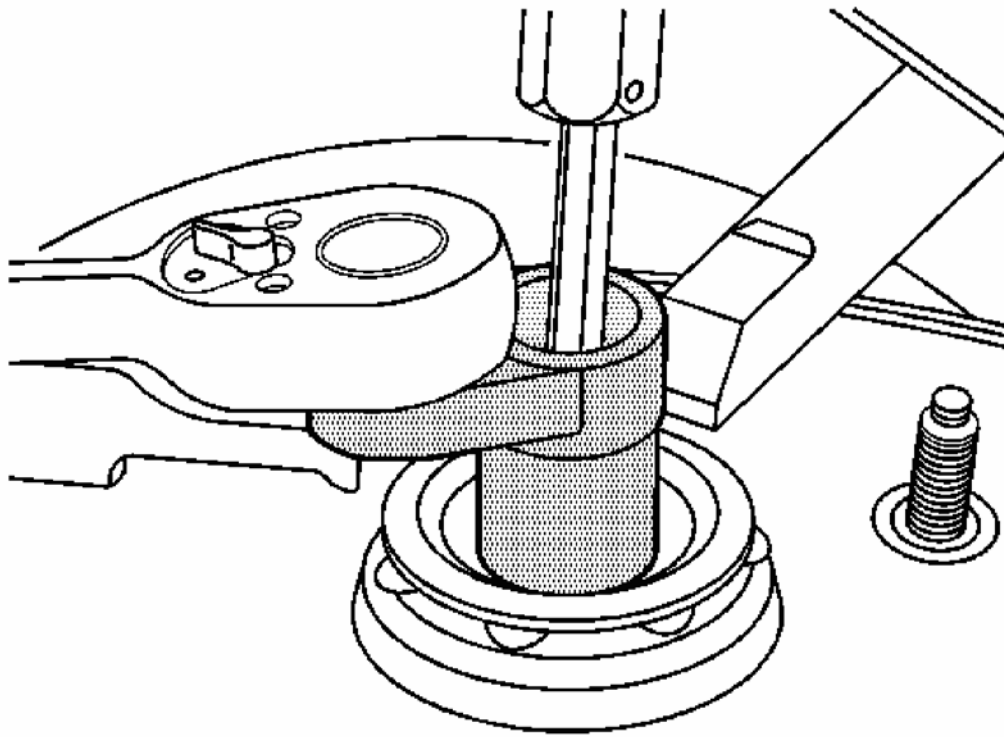


Fig. 38: Removing/Installing Strut Retaining Nut
Courtesy of GENERAL MOTORS CORP.

4. Use a 45 TORX® socket in order to hold the strut shaft. Remove the upper strut mount nut by turning with **J 42991** .
5. Remove the strut from the **J 45400** .

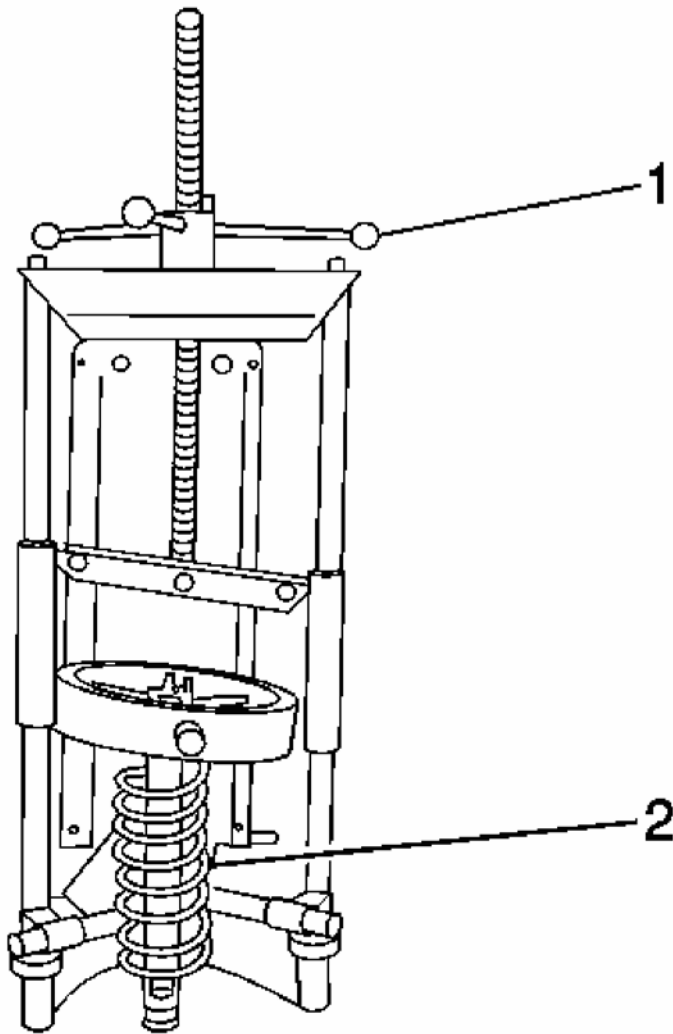


Fig. 39: View Of Compressor Forcing Screw & Coil Spring
Courtesy of GENERAL MOTORS CORP.

6. Loosen the compressor forcing screw (1) until the upper strut mount and coil spring (2) may be removed.
7. Remove the upper strut mount and the coil spring from the **J 45400** .

Assembly Procedure

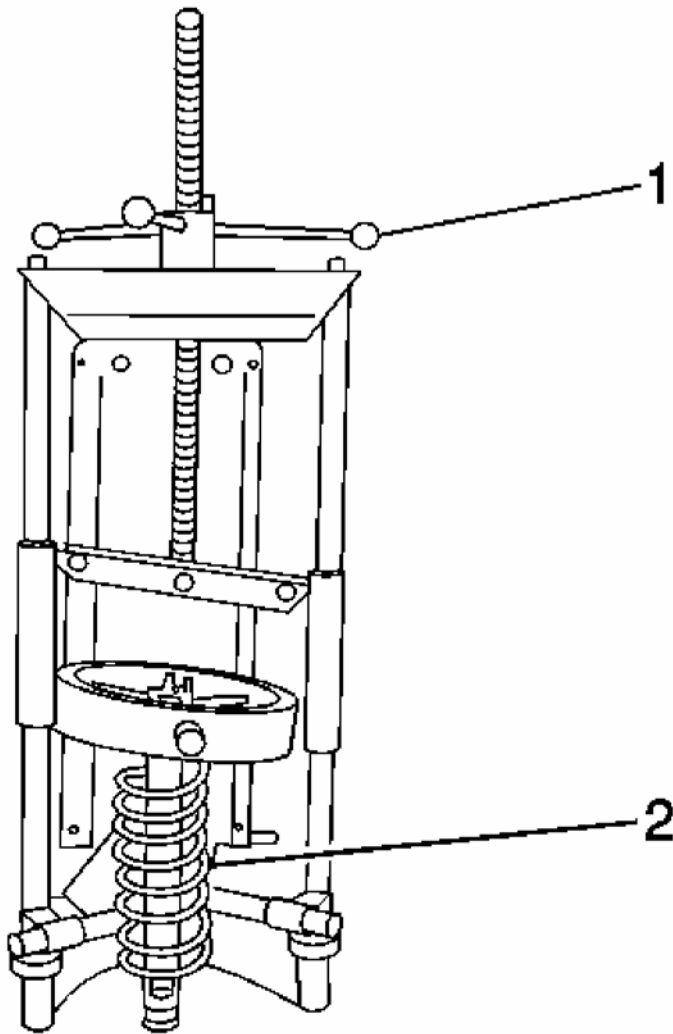


Fig. 40: View Of Compressor Forcing Screw & Coil Spring
Courtesy of GENERAL MOTORS CORP.

1. Install the coil spring and upper strut mount to the **J 45400** .
2. Turn the spring compressor forcing screw (1) until the coil spring is compressed.
3. Install the strut to the coil spring and upper strut mount.

NOTE: **Refer to Fastener**
 Notice .

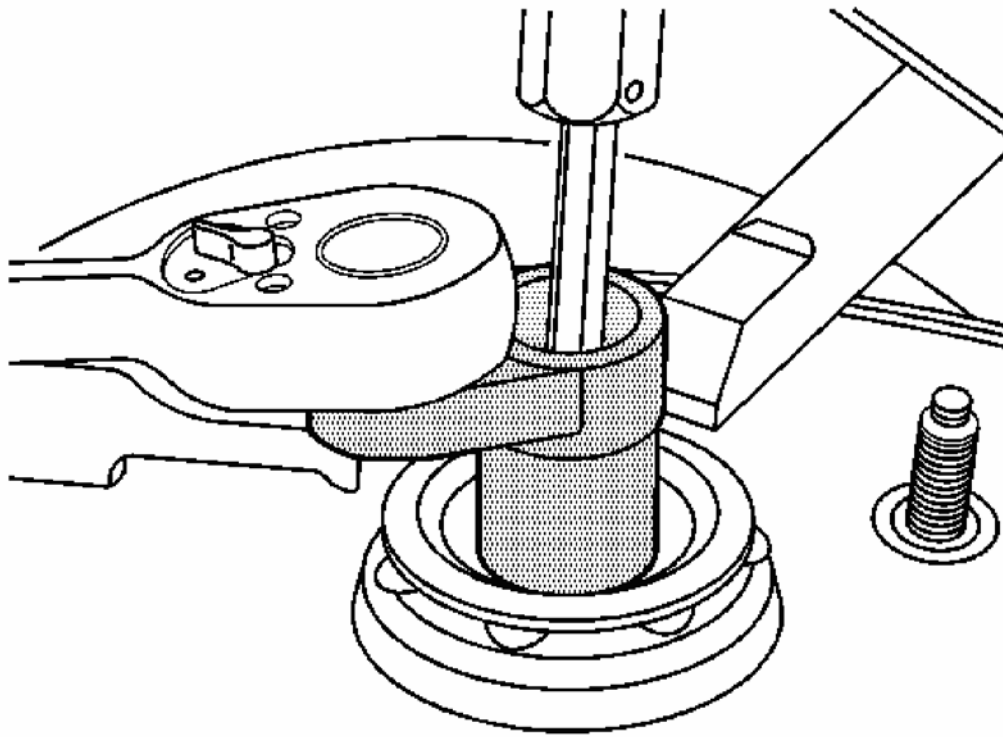


Fig. 41: Removing/Installing Strut Retaining Nut
Courtesy of GENERAL MOTORS CORP.

4. Install the strut rod to mount nut.

Using the **J 42991** and a 45 TORX® socket, tighten the strut mount nut.

Tighten: Tighten the strut mount nut to 75 N.m (55 lb ft).

5. Remove the strut from the **J 45400**.
6. Install the strut to the vehicle. Refer to **Strut Assembly Replacement**.

WHEEL STUD REPLACEMENT

Tools Required

J 6627-A Tie Rod Puller

Removal Procedure

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

Information.

2. Remove the tire and wheel assembly. Refer to **Tire and Wheel Removal and Installation** in Tires and Wheels.
3. Remove the rear wheel bearing/hub assembly. Refer to **Wheel Bearing/Hub Replacement - Rear**.
4. Separate the backing plate from the rear hub. Refer to **Disc Brake Backing Plate Replacement - Rear** in Disc Brakes.

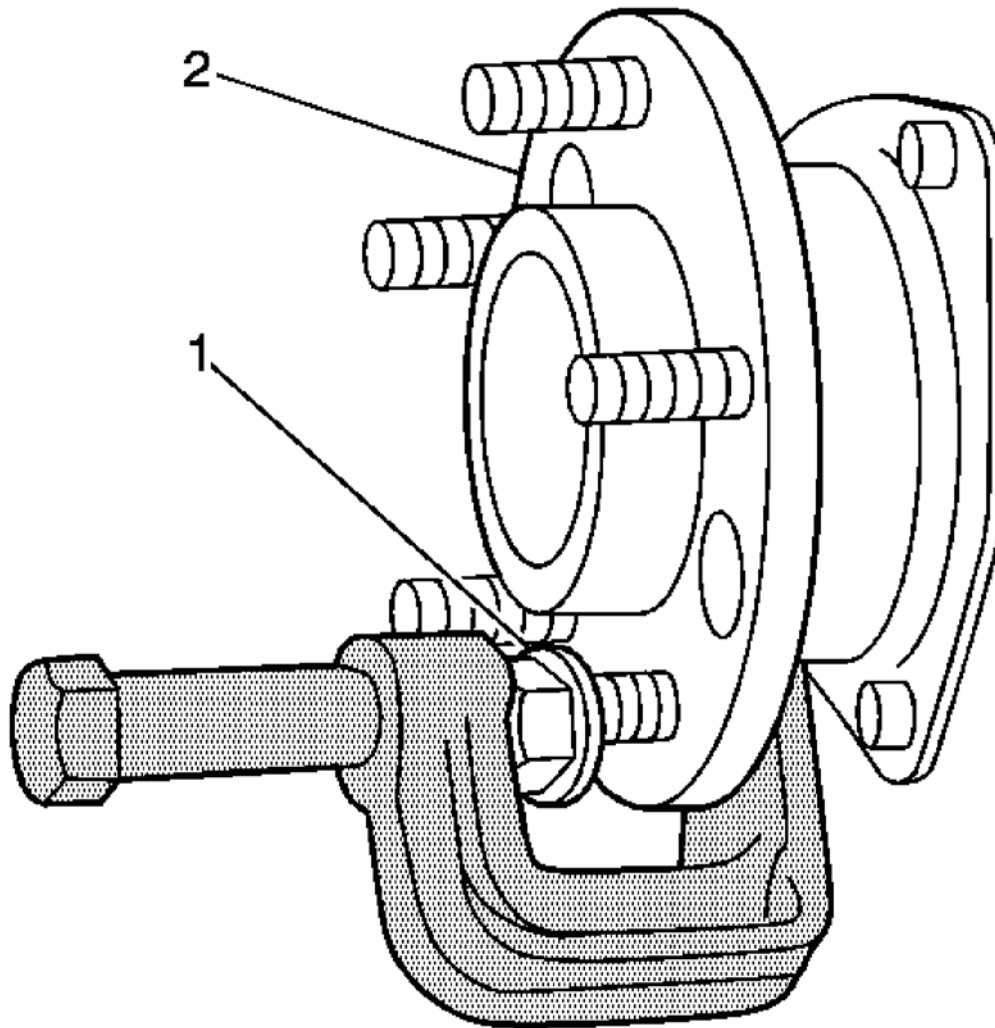


Fig. 42: View Of Stud And Hub
Courtesy of GENERAL MOTORS CORP.

5. Use the **J 6627-A** in order to extract the stud (1) from the hub (2).

Installation Procedure

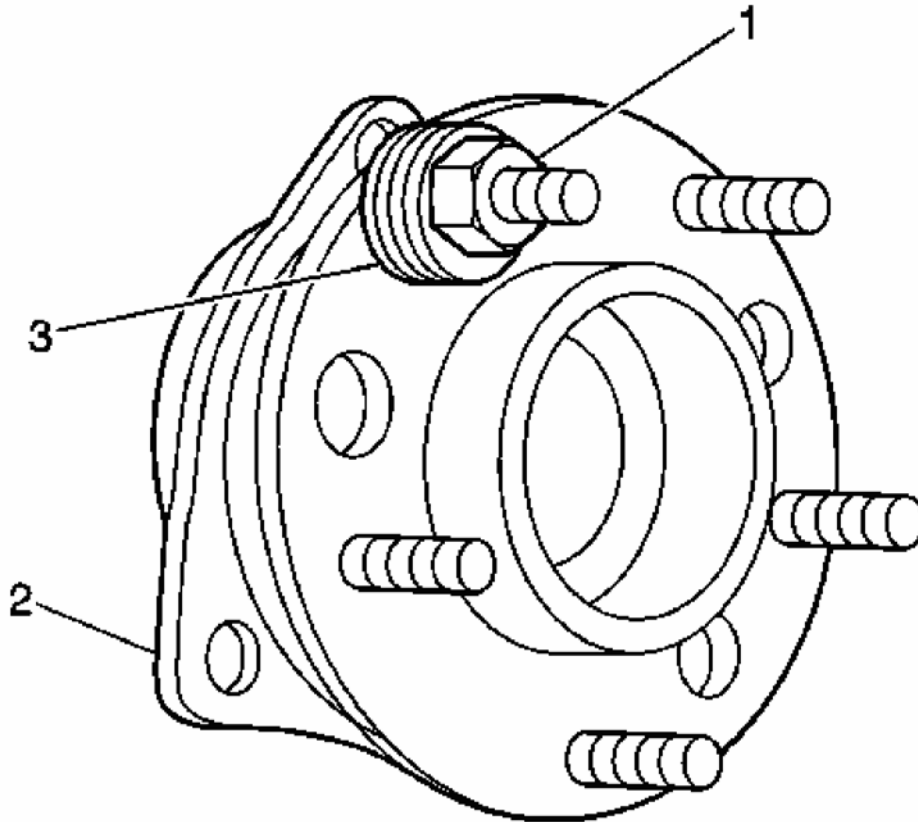


Fig. 43: Installing Wheel Stud
Courtesy of GENERAL MOTORS CORP.

1. Install a replacement stud in the wheel hub.
2. Add enough washers (3) in order to draw the stud into the hub (2).
3. Install the wheel nut (1) with the flat side against the washers (3).

IMPORTANT: Fully seat the wheel stud against the hub flange (2).

4. Tighten the wheel nut (1) until the wheel stud is fully seated against the hub flange.
5. Back off the wheel nut (1) and remove the washers (3).
6. Install the backing plate. Refer to **Disc Brake Backing Plate Replacement - Rear** in Disc Brakes.

7. Install the rear wheel bearing/hub assembly. Refer to **Wheel Bearing/Hub Replacement - Rear**.
8. Install the tire and wheel assembly. Refer to **Tire and Wheel Removal and Installation** in Tires and Wheels.
9. Lower the vehicle.

DESCRIPTION AND OPERATION

REAR SUSPENSION DESCRIPTION AND OPERATION

The rear suspension utilizes coil springs over struts and light weight aluminum knuckles. Each wheel is mounted to a tri-link independent suspension system. The 3 links are identified as the inverted U-channel trailing arm and the tubular front and rear rods.

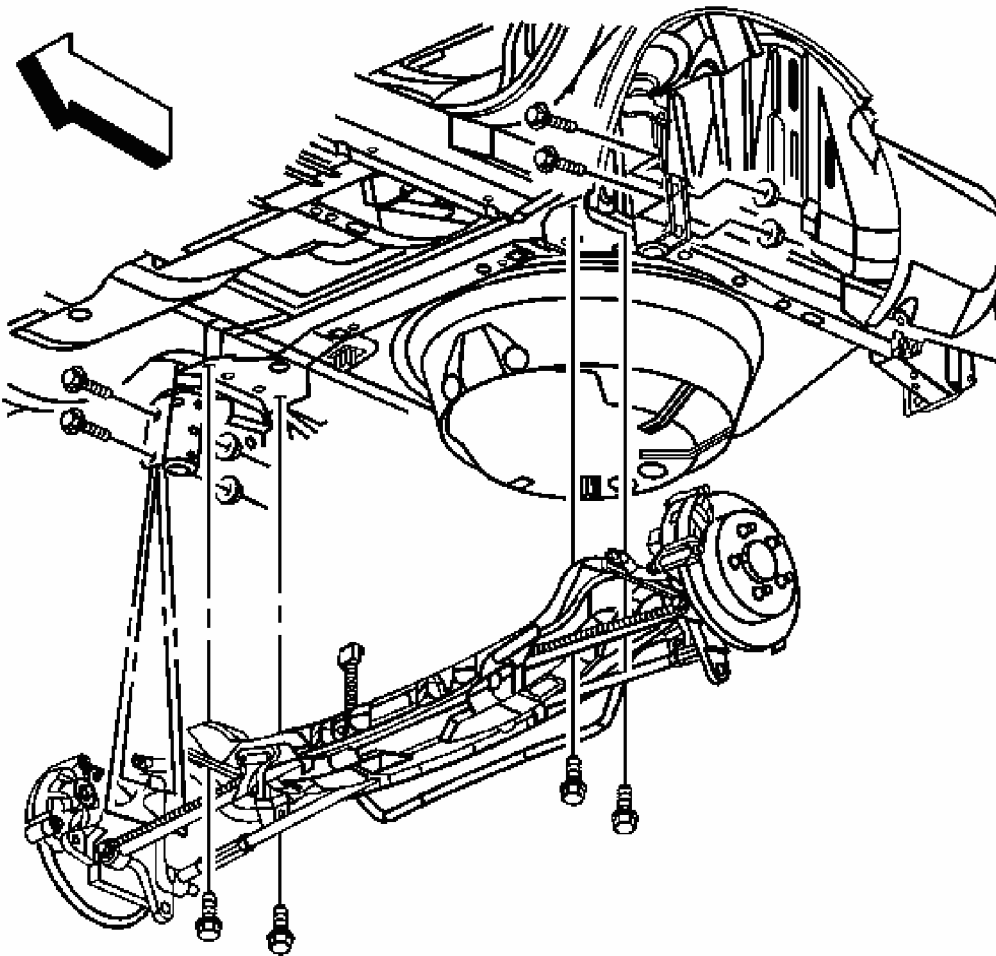


Fig. 44: View Of Rear Suspension
Courtesy of GENERAL MOTORS CORP.

Parallel links allow the rear wheels to deflect upward when the rear wheels hit a road hazard, without moving the toe angle in a positive direction. An advantage of this suspension system is the reduction of unsprung and overall weight. Handling is improved with the independent action of each rear wheel. The rods control the lateral wheel deflection.

Several techniques are employed to achieve this independent wheel movement. The tri-link design may be compared to a right angle. The wheel is located at the right angle formed by the rods and the trailing arm. The ends of the tri-links hinge in order to provide vertical wheel travel. The solid links force the wheel to travel through a controlled arc whose fore-aft position is determined by the trailing arm, and whose lateral position is determined by the rods.

Aside from maintaining geometric wheel location, each portion of the suspension has additional functions. The knuckle supports the brake caliper. All brake torque and braking forces are transmitted through the tri-links and the strut. The final duty of the rods is to maintain the camber angle of the wheel throughout the wheel's travel, and to allow for setting the toe. The overall result of this rear suspension geometry is to maintain the rear wheels in a near vertical position at all times.

The stabilizer shaft attaches to the stabilizer bar drop link and extends rearward, where the stabilizer connects to the rear suspension support by 2 rubber bushings and mounting brackets.

A non-serviceable unit hub and bearing bolts to the knuckle. This hub and bearing is a sealed, maintenance-free unit.

Check the suspension system periodically for the following conditions:

- Shock absorbency
- Bushing durability
- Tightness of attaching bolts
- Visible damage
- Misalignment
- Excessive wear

SPECIAL TOOLS AND EQUIPMENT

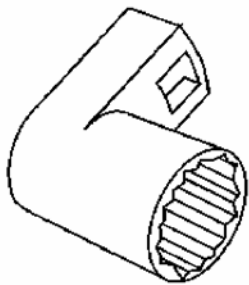
SPECIAL TOOLS

Special Tools

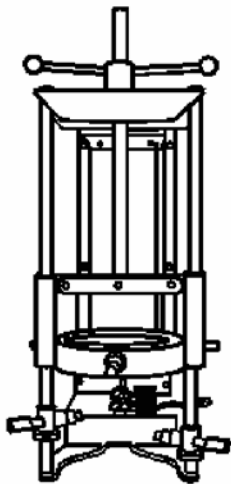
Illustration	Tool Number/Description
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2006 Chevrolet Impala LS

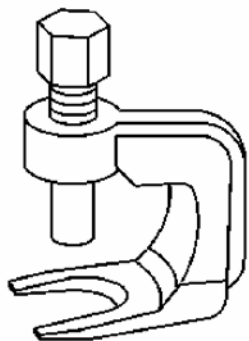
2006 SUSPENSION Rear Suspension - Impala



J 42991
Strut Rod Nut Socket



J 45400
Strut Spring Compressor



J 6627-A
Tie Rod Puller