

2017 Suspension

Rear Suspension - Sierra, Silverado

SPECIFICATIONS

FASTENER SPECIFICATIONS

Single Use Non-Threaded Fasteners/Components

NOTE: <i>All fasteners/components listed in this table MUST BE DISCARDED and replaced with NEW after removal.</i>	
Application	
Rear Leaf Spring U-Bolt Washer	

Single Use Threaded Fastener/Component Tightening Specifications

NOTE: <i>All fasteners/components listed in this table MUST BE DISCARDED and replaced with NEW after removal.</i>	
Application	Specification
	Metric (English)
Rear Leaf Spring U-Bolt	
Rear Leaf Spring U-Bolt Nut (1500)	
First Pass:	80 N.m (59 lb ft)
Second Pass:	Loosen 180 degrees
Third Pass:	80 N.m (59 lb ft)
Final Pass:	120-140 degrees
Rear Leaf Spring U-Bolt Nut (2500-3500)	
First Pass:	100 N.m (74 lb ft)
Second Pass:	Loosen 270 degrees
Third Pass:	100 N.m (74 lb ft)
Final Pass:	180 degrees
Wheel Stud	

Reusable Threaded Fastener Tightening Specifications

NOTE:

All fasteners listed in this table can be reused after removal.

Application	Specification
	Metric (English)
Front Rear Spring Mounting Nut (1500)	
First Pass:	170 N.m (125 lb ft)
Final Pass:	48 degrees
Jounce Bumper Bolt	50 N.m (37 lb ft)
Lower Shock Absorber Bolt	115 N.m (85 lb ft)
Rear Spring Front Bolt (2500-3500)	
First Pass:	170 N.m (125 lb ft)
Final Pass:	90 degrees
Rear Spring Front Stop Bolt	100 N.m (74 lb ft)
Rear Spring Rear Stop Bolt	70 N.m (52 lb ft)
Rear Spring Rear Stop Nut	70 N.m (52 lb ft)
Rear Spring Shackle Nut (1500)	
First Pass:	115 N.m (85 lb ft)
Final Pass:	90 degrees
Rear Spring Shackle Nut (2500-3500)	175 N.m (129 lb ft)
Rear Spring Stop Nut	100 N.m (74 lb ft)
Rear Stabilizer Shaft Clamp Nut	32 N.m (24 lb ft)
Rear Stabilizer Shaft Link Nut to Bolt	95 N.m (70 lb ft)
Rear Stabilizer Shaft Link Nut to Stud	145 N.m (107 lb ft)
Upper Shock Absorber Bolt	115 N.m (85 lb ft)

REPAIR INSTRUCTIONS

STABILIZER SHAFT REPLACEMENT (3500)

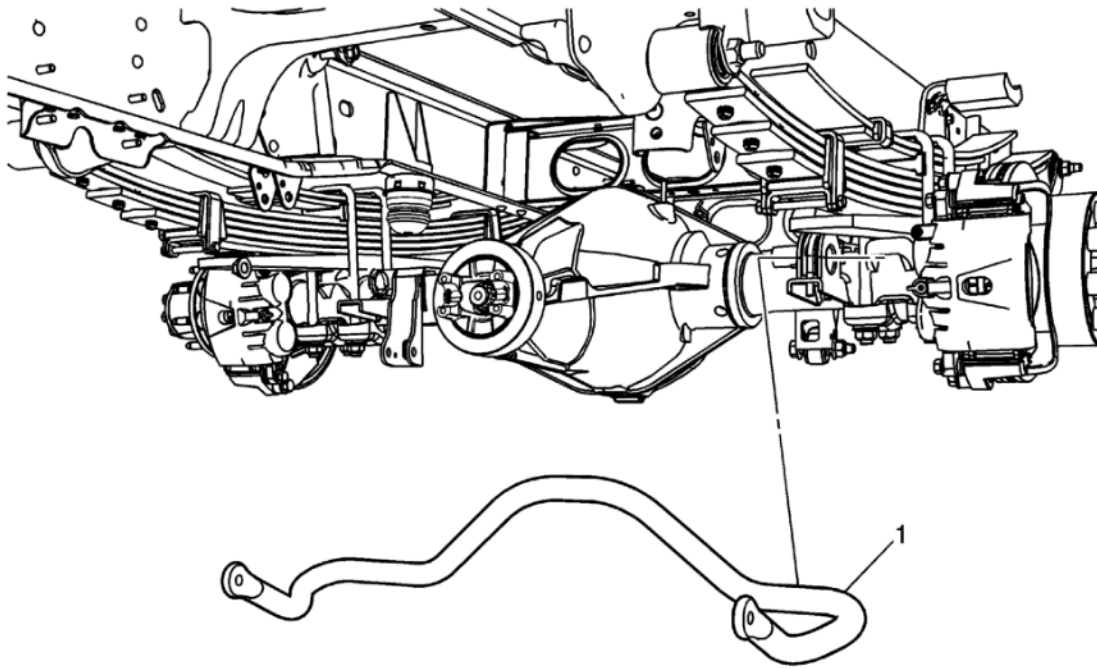


Fig. 1: Stabilizer Shaft (3500)

Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure 1. Raise and support the vehicle. Refer to Lifting and Jacking the Vehicle . 2. Remove the right rear shock absorber. Refer to Shock Absorber Replacement (Z56, Z71)Shock Absorber Replacement (Z95). 3. Remove the stabilizer shaft insulators. Refer to Stabilizer Shaft Insulator Replacement (3500). 4. Remove the lower stabilizer shaft link nuts. Refer to Stabilizer Shaft Link Replacement. 5. Remove the propeller shaft. • For vehicles equipped the one piece propeller shaft, refer to One-Piece Propeller Shaft Replacement . • For vehicles equipped with the two piece propeller shaft, refer to Two-Piece Propeller Shaft Replacement (MYC, M5U, MSX) Two-Piece Propeller Shaft Replacement (MW7) .	
1	Rear Stabilizer Shaft

STABILIZER SHAFT INSULATOR REPLACEMENT (3500)

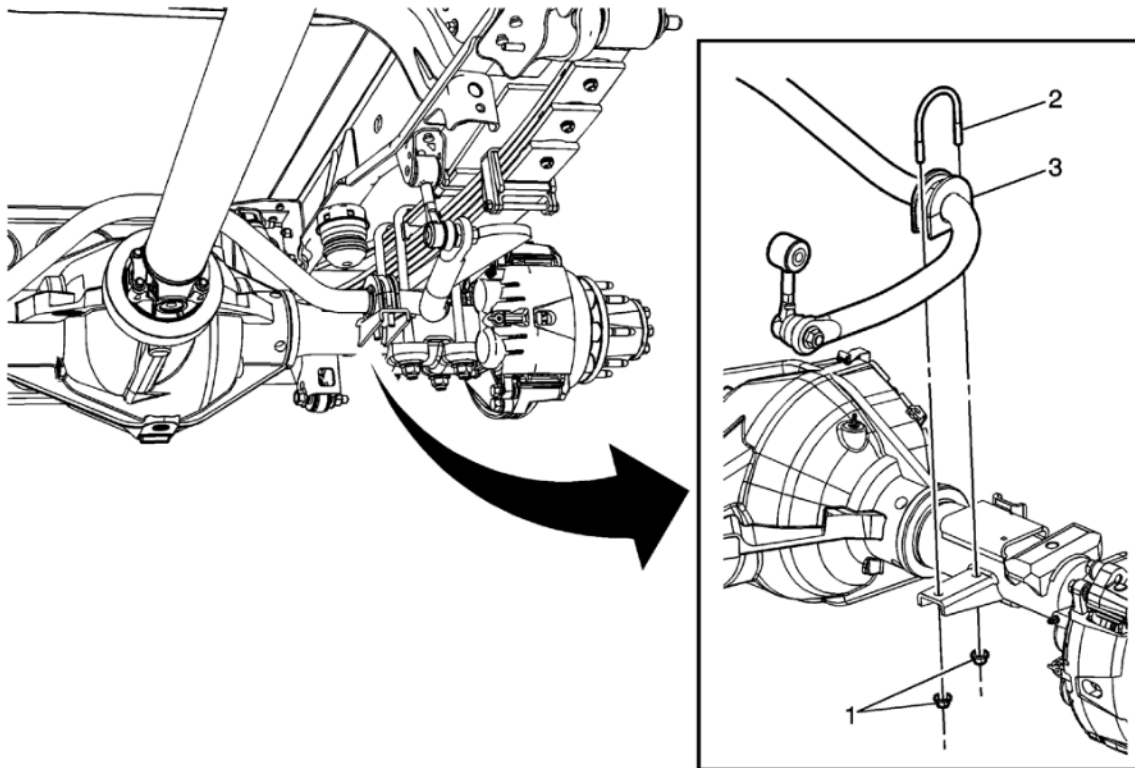


Fig. 2: Stabilizer Shaft Insulator (3500)

Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure 1. Raise and support the vehicle. Refer to Lifting and Jacking the Vehicle . 2. Remove the lower stabilizer shaft link nuts. Refer to Stabilizer Shaft Link Replacement.	
1	Rear Stabilizer Shaft Clamp Nut (Qty: 2) CAUTION: Refer to Fastener Caution . Tighten 32 N.m (24 lb ft)
2	Rear Stabilizer Shaft Insulator Clamp
3	Rear Stabilizer Shaft Insulator TIP: Ensure that the slit in the insulator is facing the front of the vehicle when installed.

STABILIZER SHAFT LINK REPLACEMENT

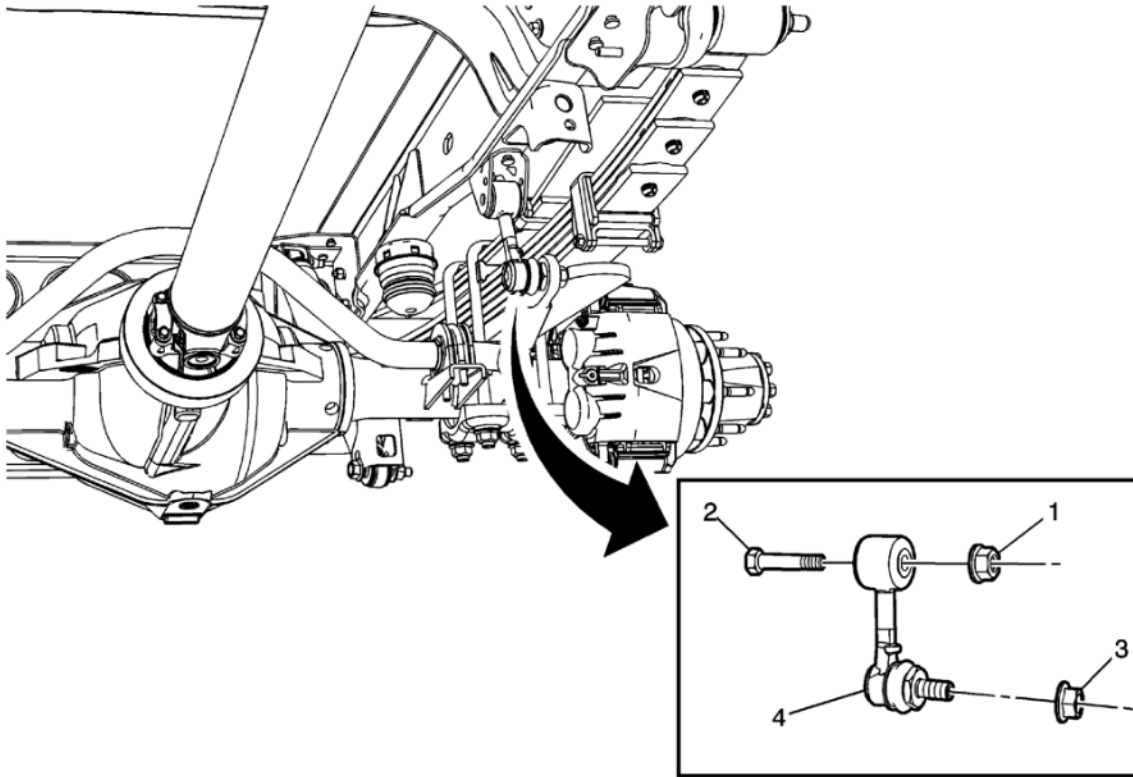


Fig. 3: Stabilizer Shaft Link

Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedures 1. Raise and support the vehicle. Refer to Lifting and Jacking the Vehicle . 2. Remove the rear tire and wheel. Refer to Tire and Wheel Removal and Installation (6-Lug Wheel) Tire and Wheel Removal and Installation (8-Lug Wheel) Tire and Wheel Removal and Installation (Dual Rear Wheels) .	
1	Rear Stabilizer Shaft Link Nut CAUTION: Refer to Fastener Caution . Tighten 95 N.m (70 lb ft)
2	Rear Stabilizer Shaft Bolt
3	Rear Stabilizer Shaft Link Nut Procedure Using the proper size wrench, hold the stud while torquing to specifications. Tighten 145 N.m (107 lb ft)

Callout	Component Name
4	Stabilizer Shaft Link

STRUT AND SHOCK ABSORBER INSPECTION

NOTE: The shock absorber assembly **DOES NOT** have to be removed from the vehicle to perform the following inspection procedure.

NOTE: A light film of oil on the top portion of the lower shock absorber tube is normal. **DO NOT** replace the shock absorber for this condition.

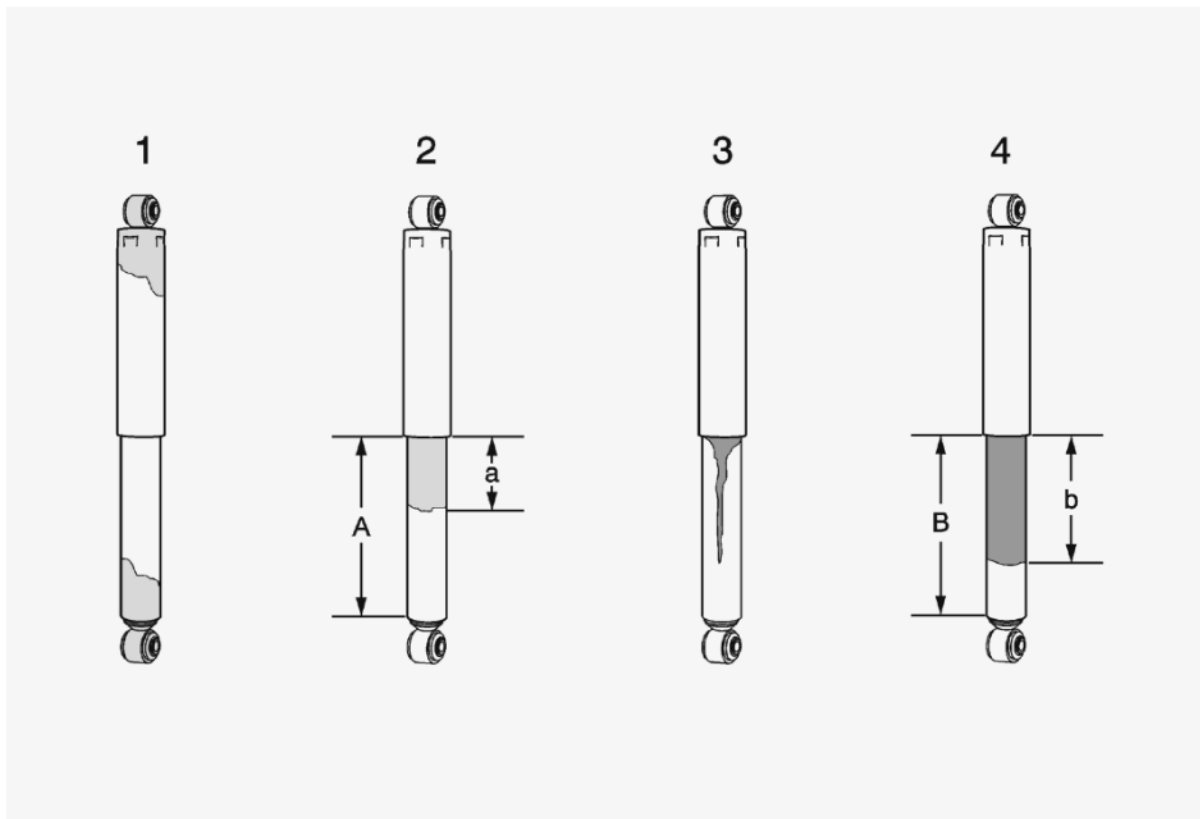


Fig. 4: Identifying Shock Absorber Conditions

Courtesy of GENERAL MOTORS COMPANY

Condition 1

Oil or fluid residue only on the bottom or top of the shock absorber and not originating from the shaft seal, is not a shock absorber related problem. **DO NOT** replace the shock absorber, look for other external leaks.

Condition 2

Light film/residue on approximately 1/3 (a) or less of the lower shock tube (A) and originating from the shaft seal, is a **NORMAL** condition. **DO NOT** replace the shock absorber.

Condition 3

Oil drip or trail down the lower shock tube and originating from the shaft seal, is an **ABNORMAL** condition. Replace the shock absorber.

Condition 4

An extreme wet film of oil covering more than 1/3 (b) of the lower shock tube and originating from the shaft seal (B), is an ABNORMAL condition. Replace the shock absorber.

Inspection

1. Verify the customer's concern is present. If the concern is present, continue to the next step. If the concern is not present, then the vehicle is operating normally.

NOTE: **The shock absorber assembly DOES NOT have to be removed from the vehicle to perform the following inspection procedure.**

2. Raise and support the vehicle. Refer to [Lifting and Jacking the Vehicle](#) .
3. Visually inspect each of the shock absorbers for external fluid leaks. Refer to the following conditions 1, 2 , 3 , and 4 for visual inspection.
 - If conditions 1 or 2 are found, continue to step 4.
 - If conditions 3 or 4 are found, replace shock absorber.
4. If equipped with electronic suspension control system, ensure that the system is working properly. Refer to [ELECTRONIC SUSPENSION CONTROL OPERATION](#) .
5. Use your hands in order to lift up and push down on each corner of the vehicle 3 times. Remove your hands from the vehicle. If the corner motion exceeds 2 cycles, replace the shock absorber. If the shock absorber does not exceed 2 cycles, NO repair is necessary.

SHOCK ABSORBER REPLACEMENT (Z56, Z71)

Removal Procedure

1. Raise and support the vehicle. Refer to [Lifting and Jacking the Vehicle](#) .
2. Support the rear axle assembly with the proper jack stand.

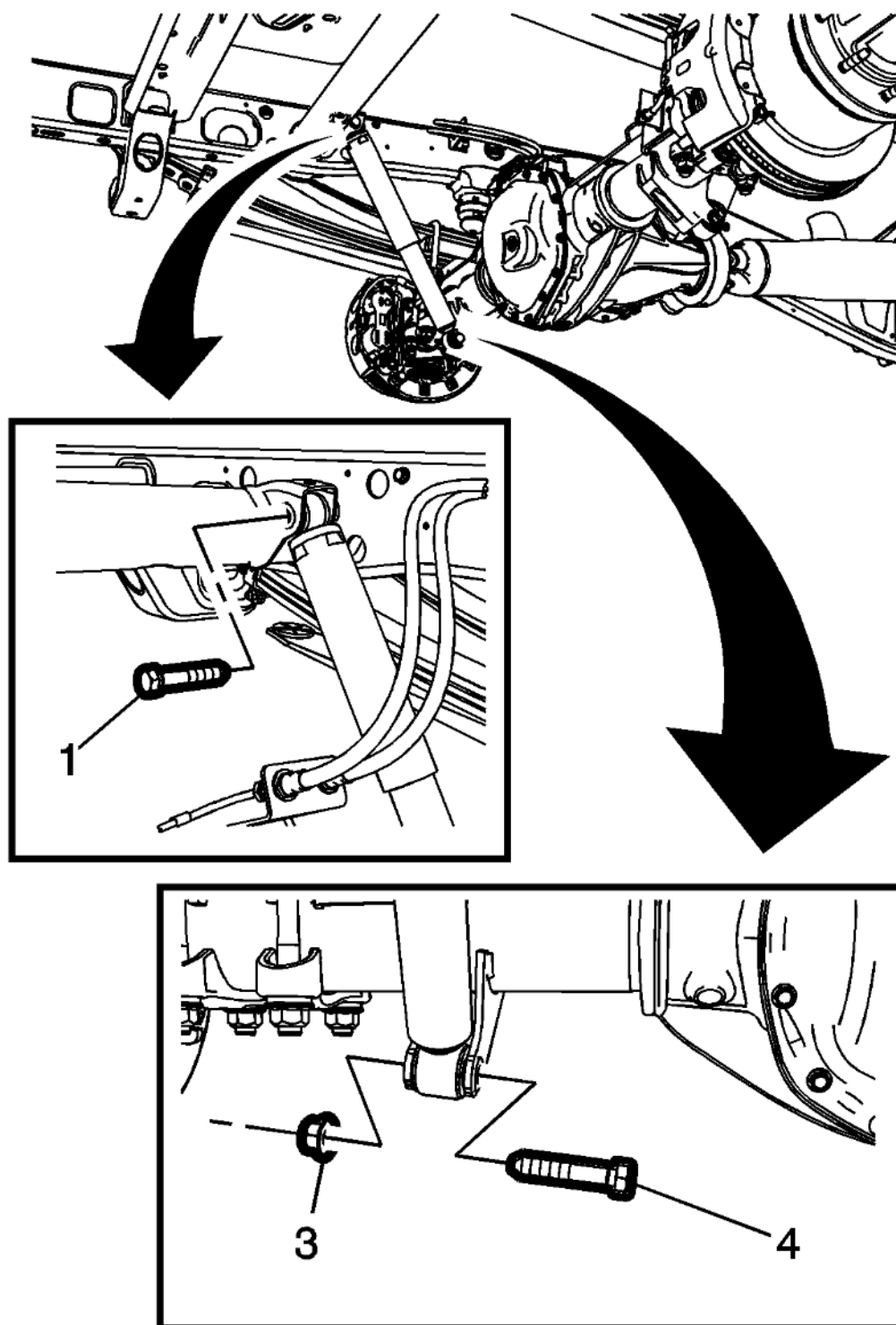


Fig. 5: Shock Absorber Nuts And Bolts

Courtesy of GENERAL MOTORS COMPANY

3. Remove the upper shock absorber bolt (1).
4. Remove the lower shock absorber nut (2) and bolt (3).

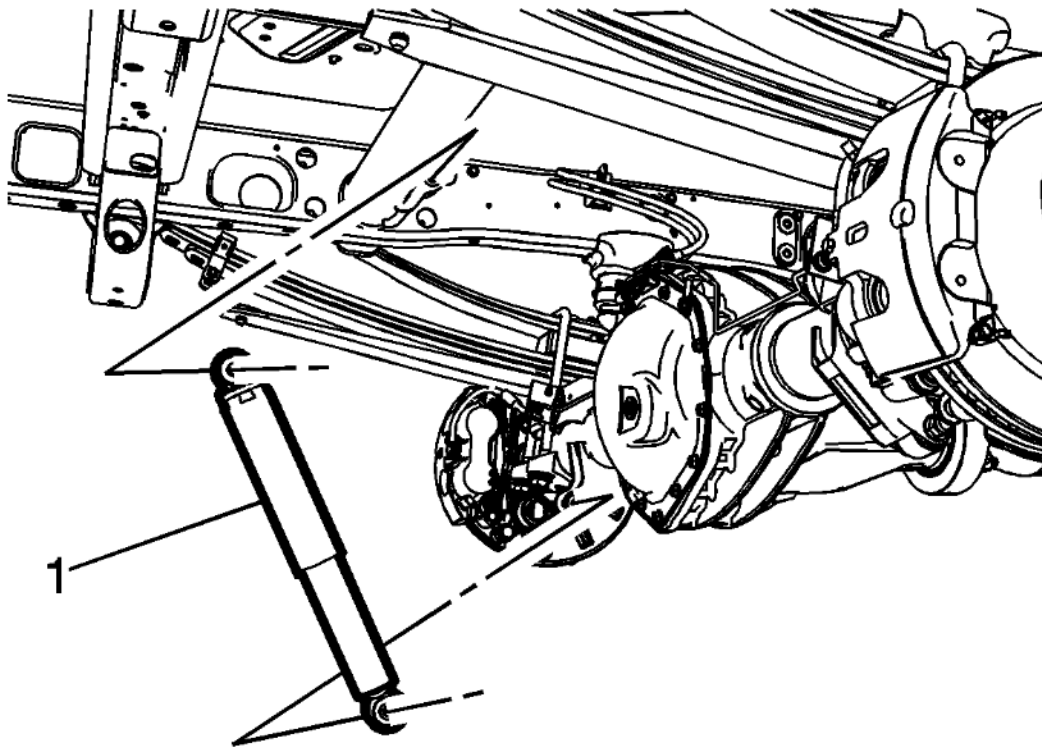


Fig. 6: Shock Absorber

Courtesy of GENERAL MOTORS COMPANY

5. Remove the shock absorber (1) from the vehicle.

Installation Procedure

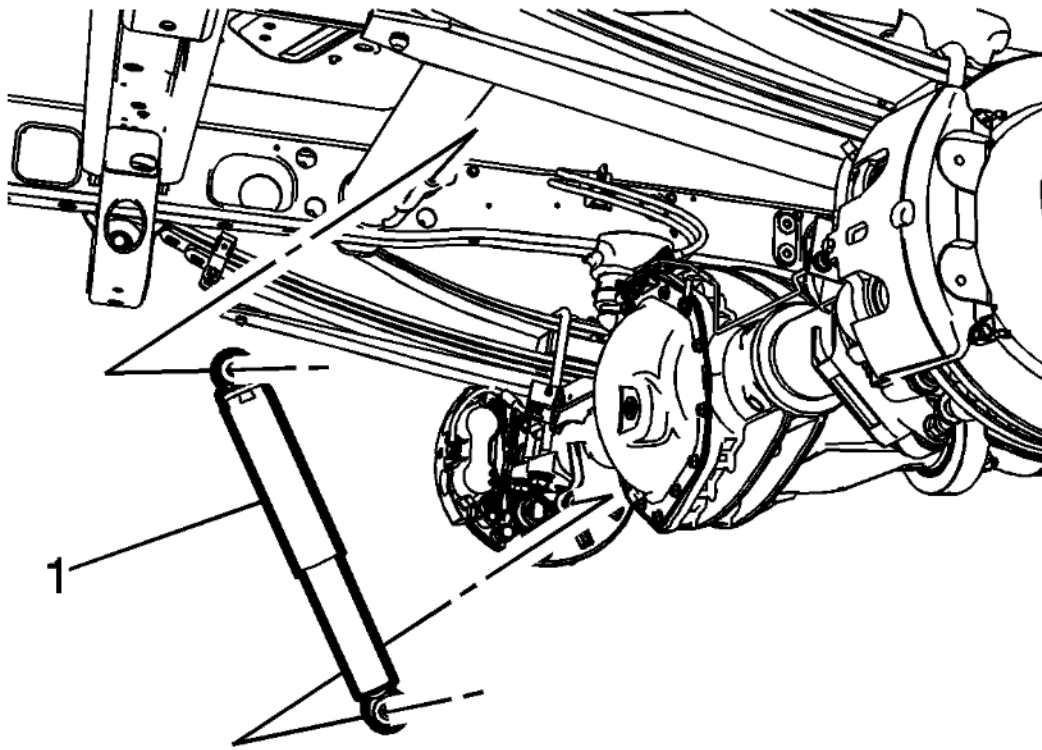


Fig. 7: Shock Absorber

Courtesy of GENERAL MOTORS COMPANY

1. Position the shock absorber (1) in the vehicle.

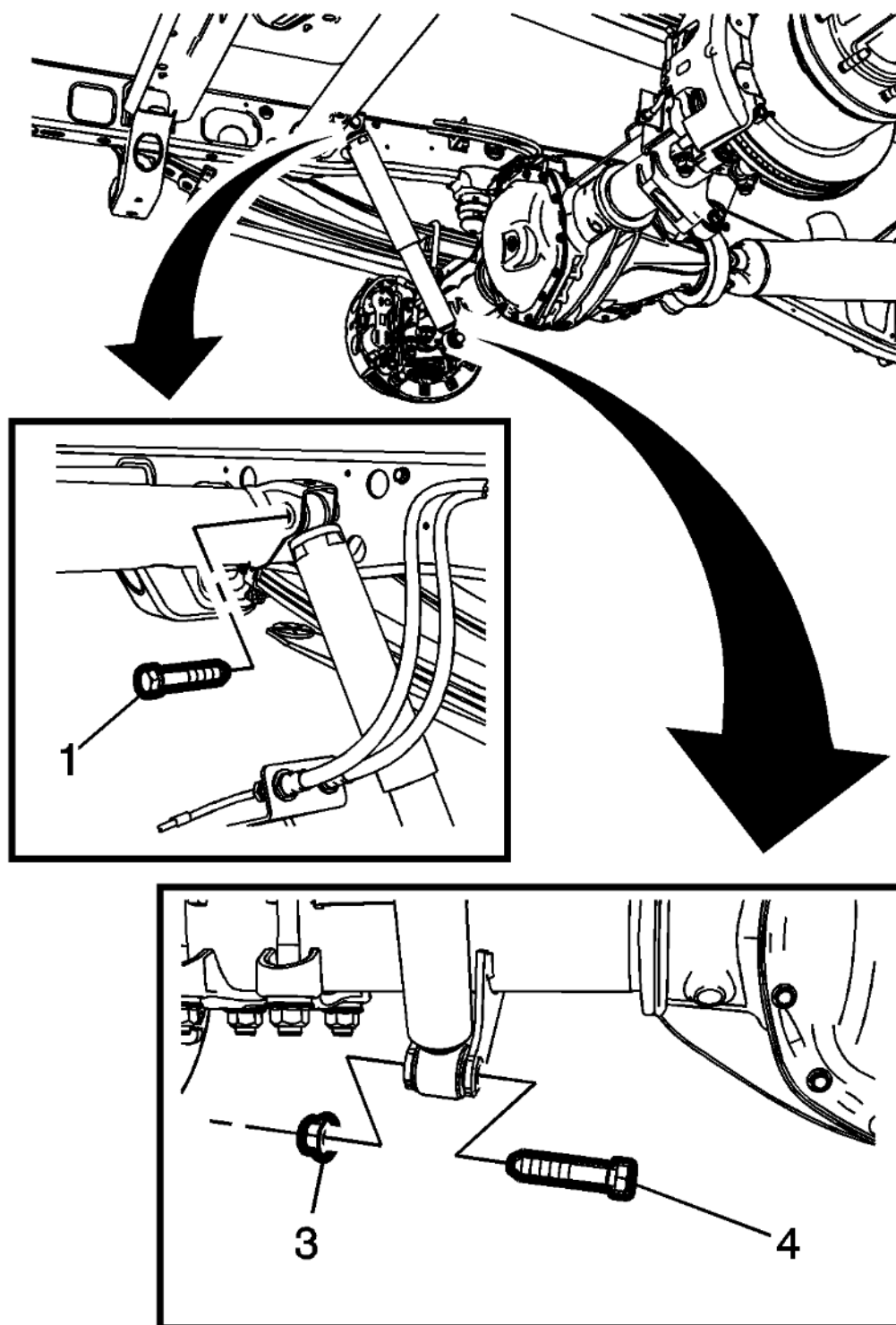


Fig. 8: Shock Absorber Nuts And Bolts

Courtesy of GENERAL MOTORS COMPANY

CAUTION: Refer to **Fastener Caution** .

2. Install the upper shock absorber bolt (1) and tighten to 115 N.m (85 lb ft).
3. Install the lower shock absorber nut (2) and bolt (3), then tighten the bolt to 115 N.m (85 lb ft)

4. Remove the jack stand from the rear axle assembly.
5. Remove the support and lower the vehicle.

SHOCK ABSORBER REPLACEMENT (Z95)

Removal Procedure

NOTE: The production rear shocks on trucks equipped with MagnaRide (RPO Z95) are not interchangeable left to right. When performing any service that requires the rear shocks to be removed, their location needs to be noted so that they can be reinstalled in their original locations. The service replacement shocks can be installed on either the left or right sides.

1. Raise and support the vehicle. Refer to [Lifting and Jacking the Vehicle](#) .
2. Support the rear axle assembly with the proper jack stand.

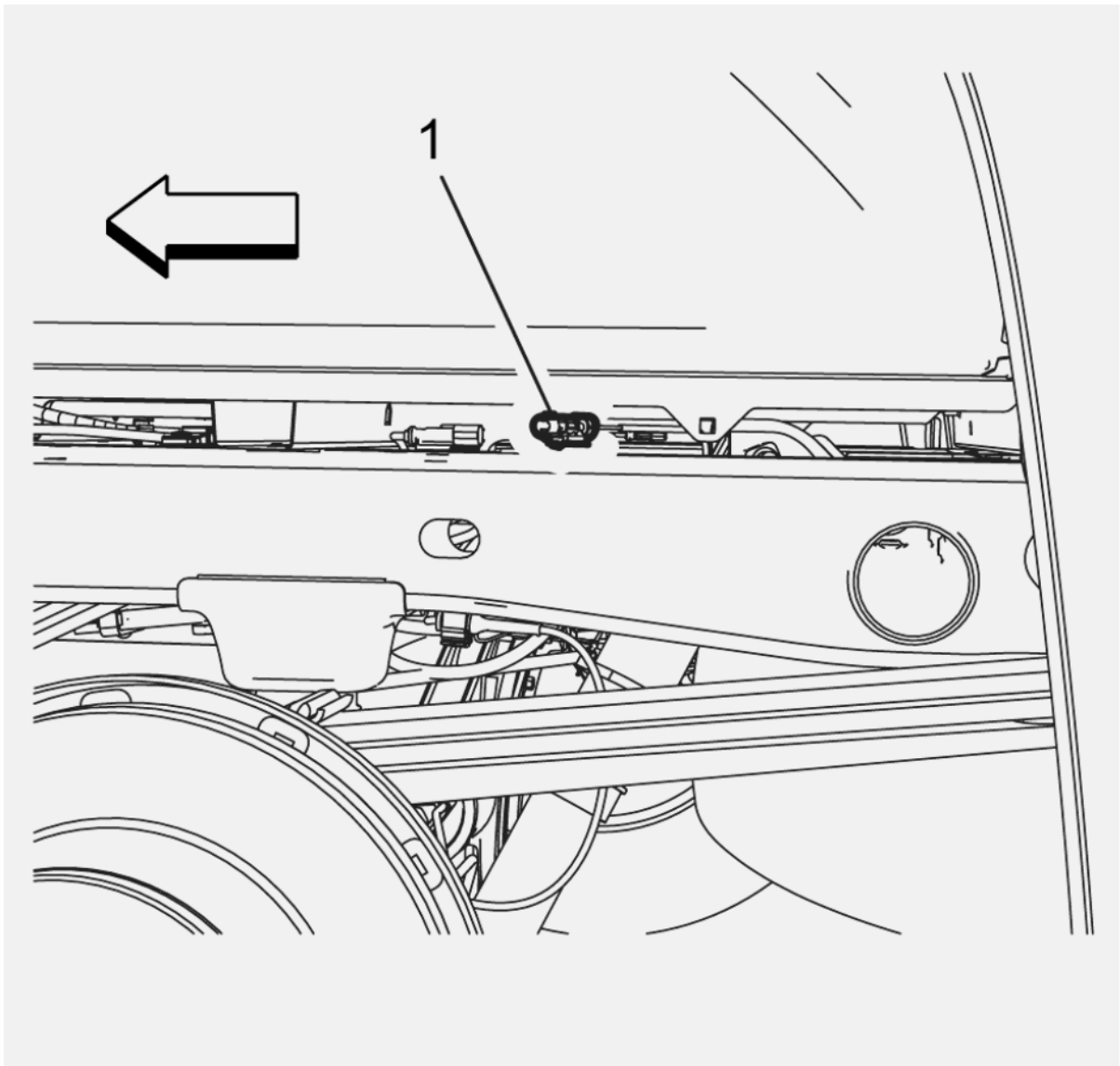


Fig. 9: Electronic Suspension Control Connector
Courtesy of GENERAL MOTORS COMPANY

3. Disconnect the electronic suspension control connector (1).

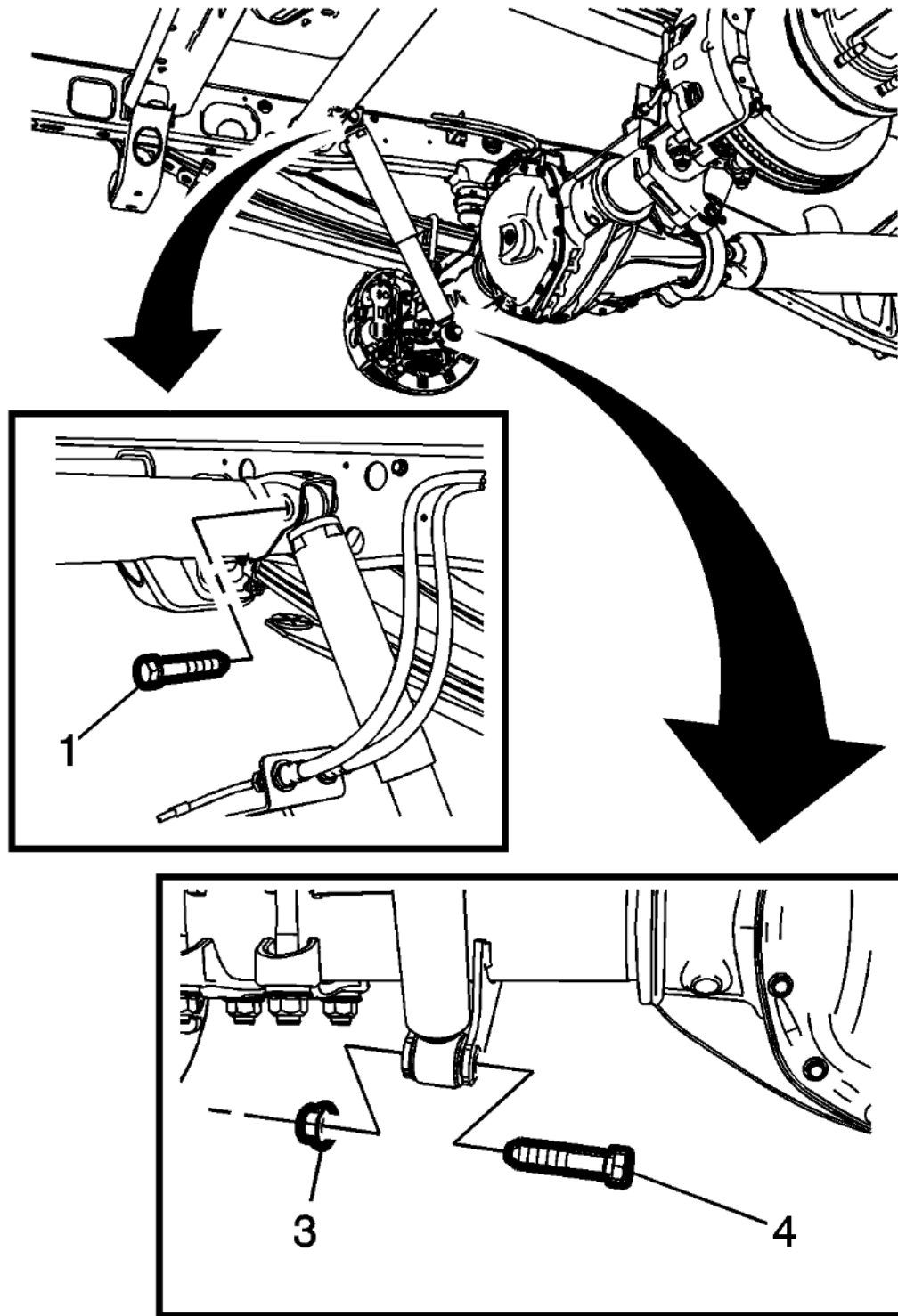


Fig. 10: Shock Absorber Nuts And Bolts

Courtesy of GENERAL MOTORS COMPANY

4. Remove the upper shock absorber bolt (1).
5. Remove the lower shock absorber nut (2) and bolt (3).

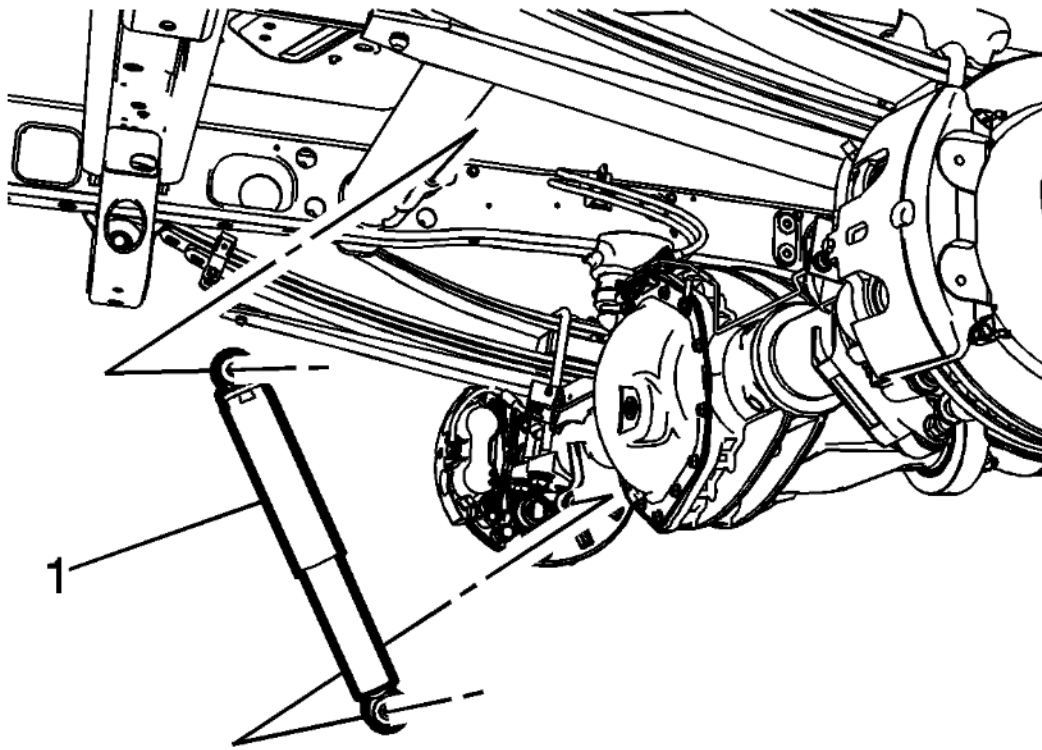


Fig. 11: Shock Absorber

Courtesy of GENERAL MOTORS COMPANY

6. Remove the shock absorber (1) from the vehicle.

Installation Procedure

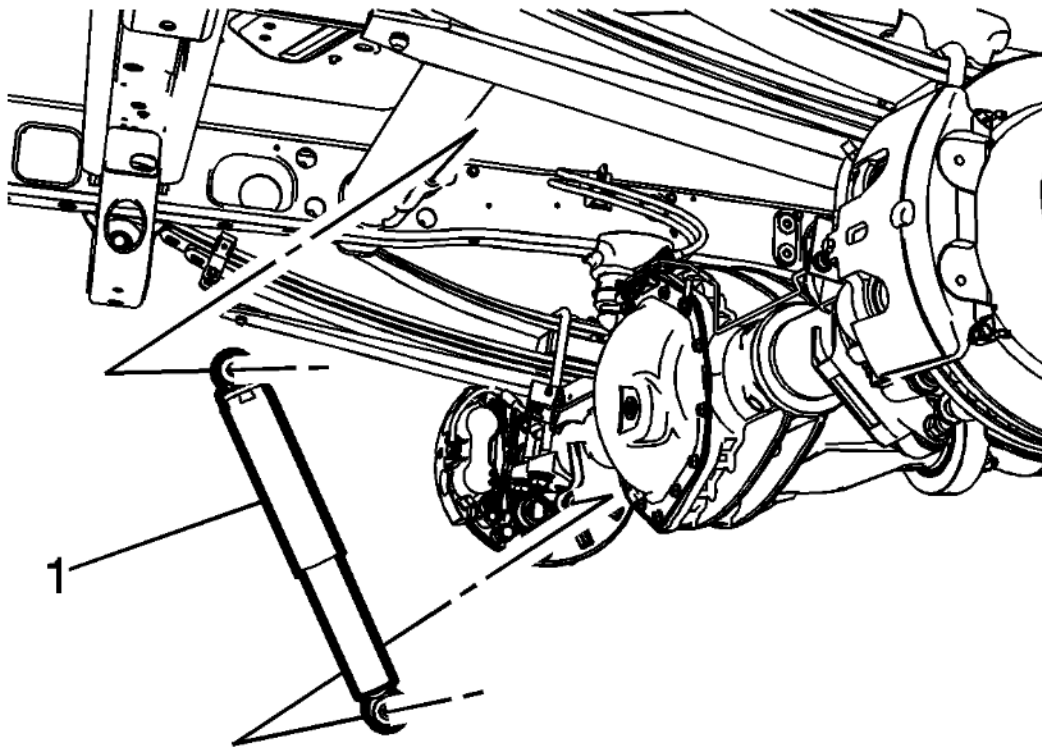


Fig. 12: Shock Absorber

Courtesy of GENERAL MOTORS COMPANY

1. Position the shock absorber (1) in the vehicle.

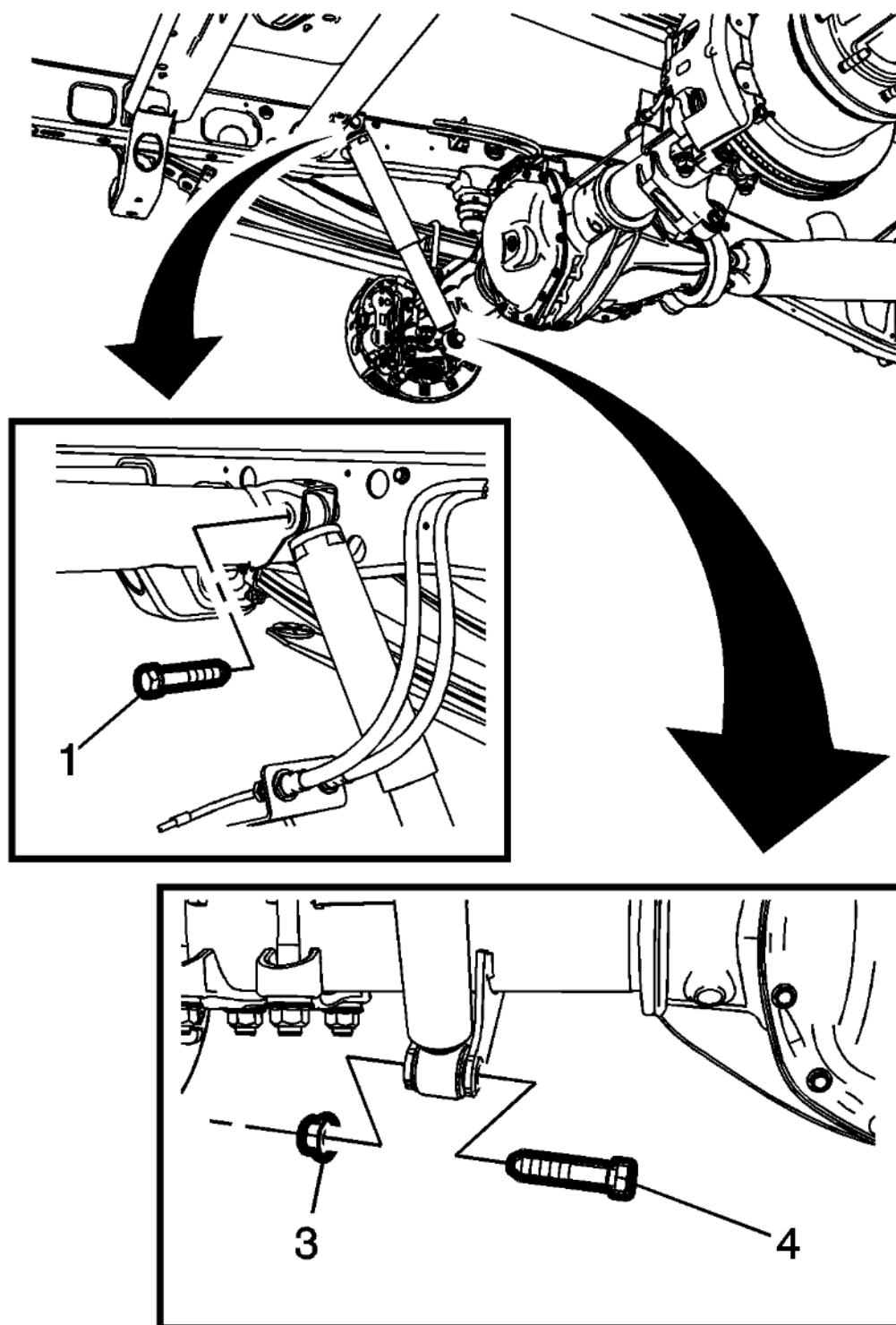


Fig. 13: Shock Absorber Nuts And Bolts

Courtesy of GENERAL MOTORS COMPANY

CAUTION: Refer to **Fastener Caution** .

2. Install the upper shock absorber bolt (1) and tighten to 115 N.m (85 lb ft).
3. Install the lower shock absorber nut (2) and bolt (3), then tighten the bolt to 115 N.m (85 lb ft)

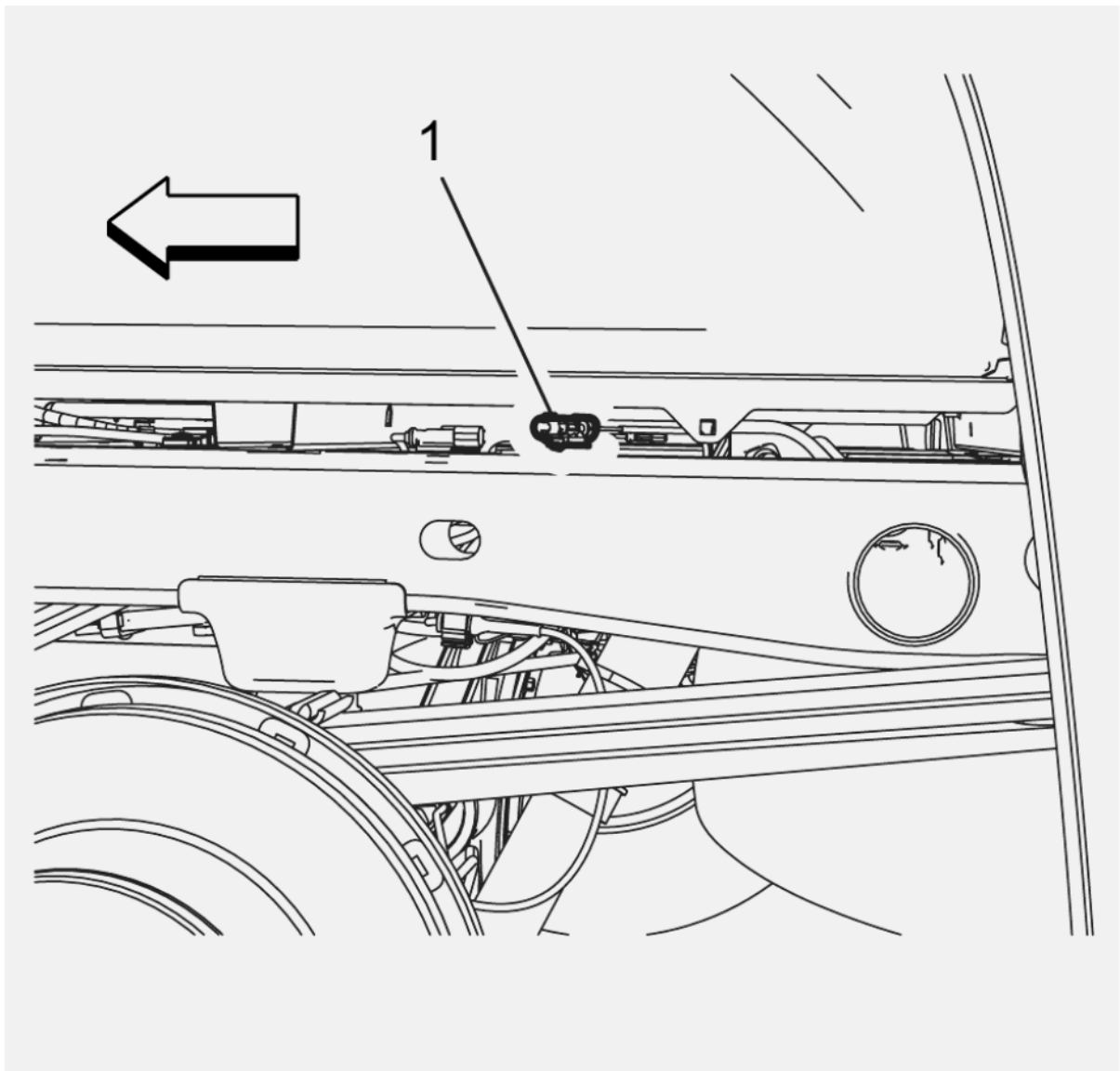


Fig. 14: Electronic Suspension Control Connector
Courtesy of GENERAL MOTORS COMPANY

4. Reconnect the electronic suspension control connector (1).
5. Remove the jack stand from the rear axle assembly.
6. Remove the support and lower the vehicle.

SHOCK ABSORBER 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.

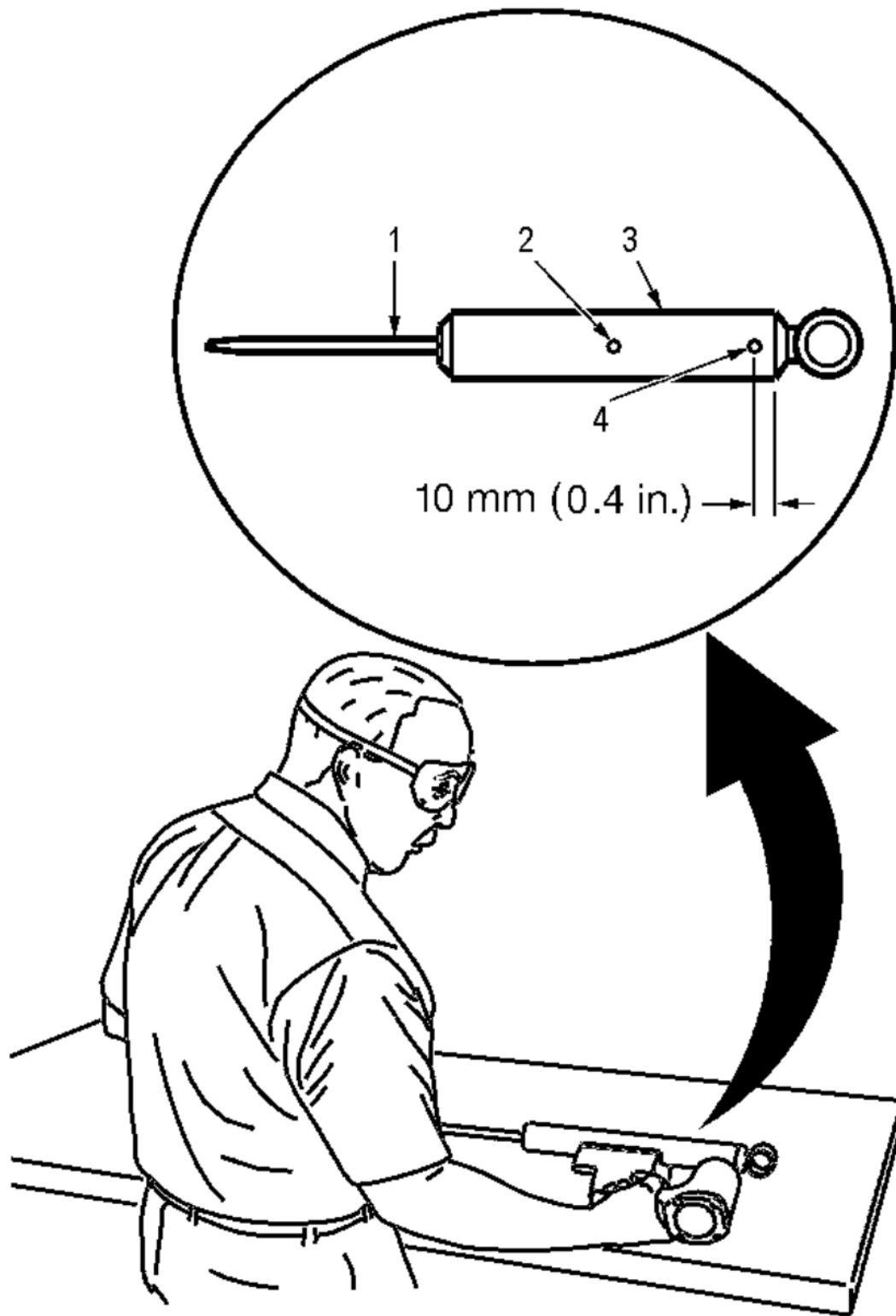


Fig. 15: Drilling Hole In Shock Absorber At Centerpunched Locations
Courtesy of GENERAL MOTORS COMPANY

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.

REAR SPRING ANCHOR PLATE REPLACEMENT (1500)

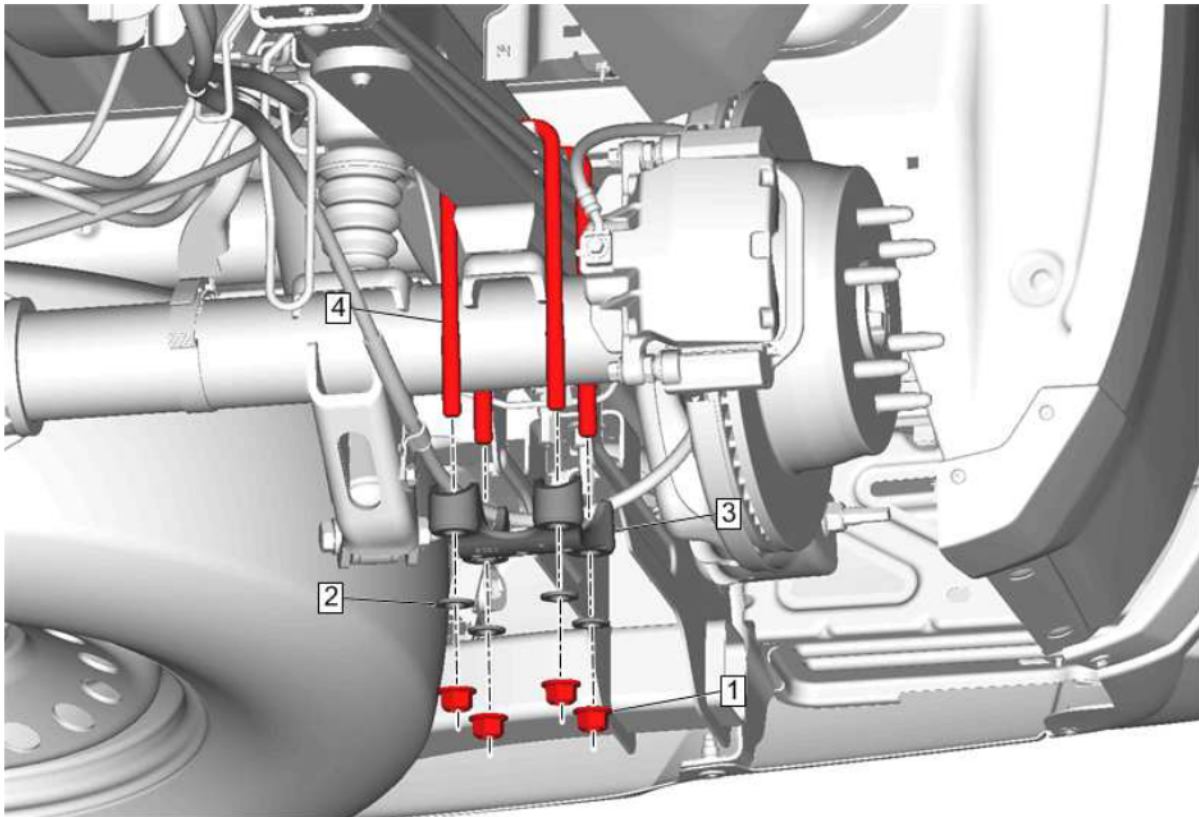


Fig. 16: Rear Spring Anchor Plate (1500)

Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedures	
1. Raise and support the vehicle. Lifting and Jacking the Vehicle	
2. Support the rear axle to relieve the tension on the leaf springs.	
1	Rear Spring U-bolt Nut [4x] CAUTION: Refer to Fastener Caution

Callout	Component Name
	CAUTION: This vehicle is equipped with torque-to-yield or single-use fasteners. Install a NEW torque-to-yield or single-use fastener when installing this component. 1. Remove and DISCARD the rear leaf spring U-bolt nuts. Replace with NEW only. Do NOT reuse old nuts. 2. Tighten - Leaf Spring Replacement (1500) 3. Install a NEW torque-to-yield or single-use fastener when installing this component. 4. Remove and DISCARD the rear leaf spring anchor plate washers. Replace with NEW only.
2	Rear Spring Anchor Plate Washer [4x]
3	Rear Spring Anchor Plate
4	Rear Spring U-bolt [2x]

REAR SPRING ANCHOR PLATE REPLACEMENT (2500/3500)

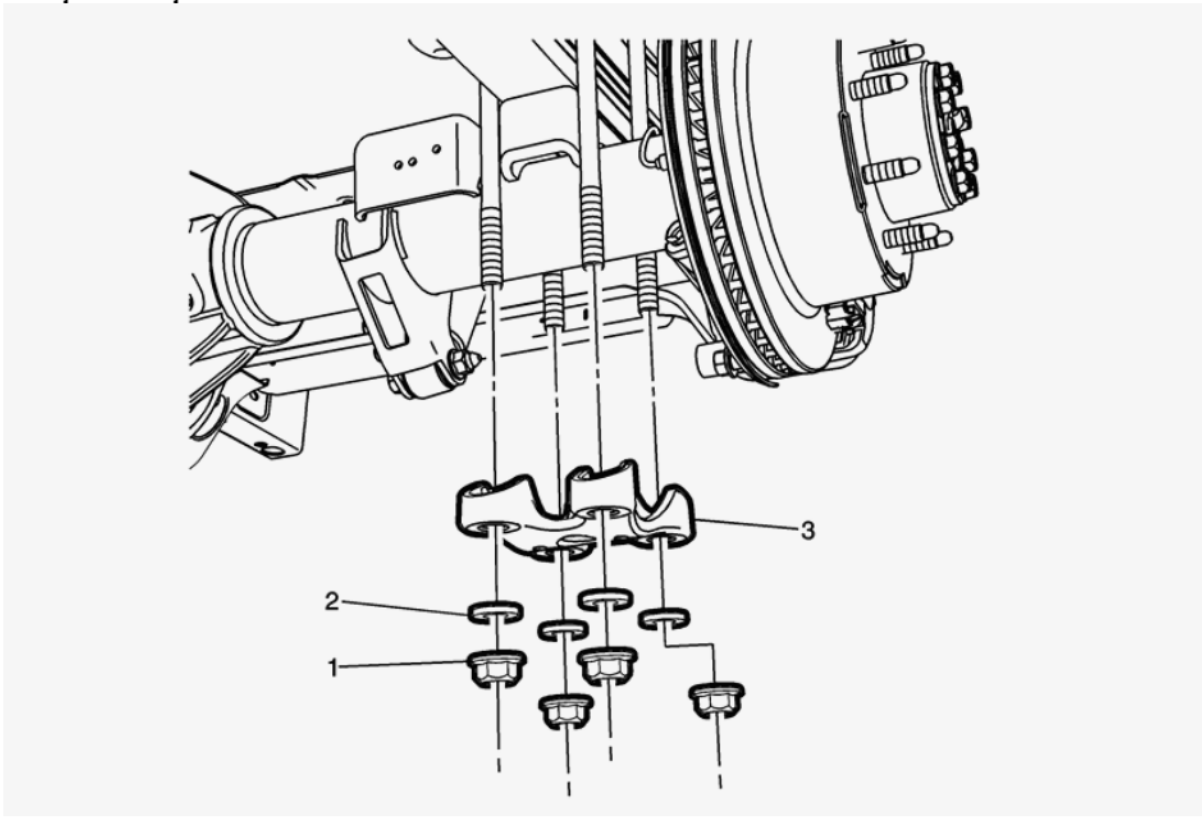


Fig. 17: Rear Spring Anchor Plate (2500/3500)
 Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedures	
1.	Raise and support the vehicle. Lifting and Jacking the Vehicle
2.	Support the rear axle to relieve the tension on the leaf springs.

REAR SPRING FRONT STOP REPLACEMENT (PICK UP)

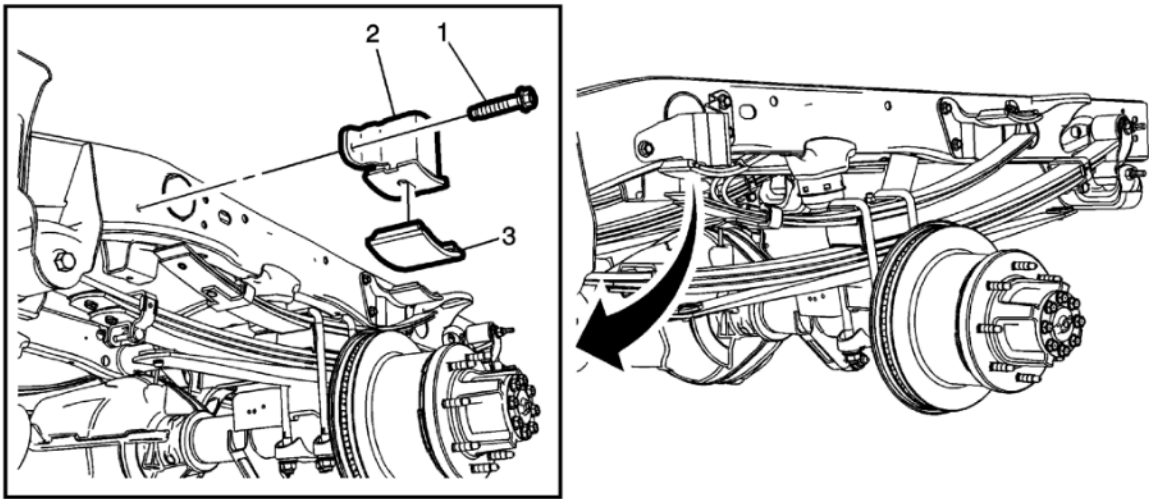


Fig. 18: Rear Spring Front Stop Components (Pick Up)
 Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary 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 (6-Lug Wheel) Tire and Wheel Removal and Installation (8-Lug Wheel) Tire and Wheel Removal and Installation (Dual Rear Wheels) .	
1	Rear Spring Front Stop Bolt (Qty: 3) CAUTION: Refer to Component Fastener Tightening Caution . Tighten 100 N.m (74 lb ft).
2	Rear Spring Front Stop Bracket TIP: The bracket does not have to be removed to service the insulator.
3	Rear Front Spring Stop Insulator Procedure Bend the insulator and in a downward motion, remove the it from the rear stop.

REAR SPRING FRONT STOP REPLACEMENT (CAB CHASSIS)

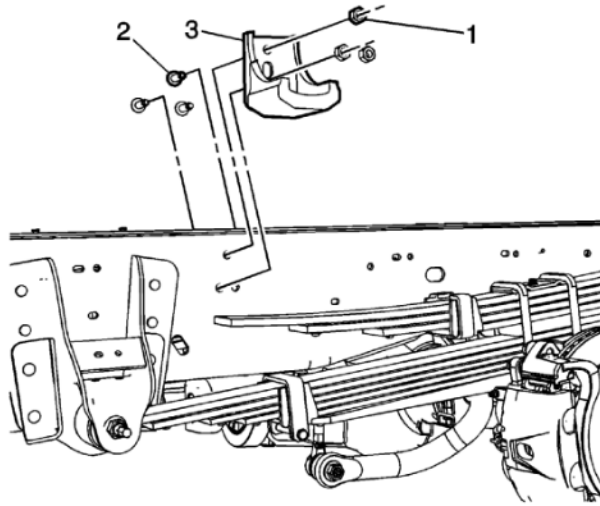


Fig. 19: View Of Rear Spring Front Stop (Cab Chassis)

Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary 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 (6-Lug Wheel) Tire and Wheel Removal and Installation (8-Lug Wheel) Tire and Wheel Removal and Installation (Dual Rear Wheels) .	
1	Rear Spring Stop Bolts (Qty: 3) Procedure Remove the fuel tank assembly. Refer to Fuel Tank Replacement (Cab/Chassis - Rear) Fuel Tank Replacement (Cab/Chassis - Front) TIP: For the left rear front spring stop, the fuel tank must be removed to gain access to the spring stop mounting bolts.
2	Rear Spring Stop Nuts (Qty: 3) CAUTION: Refer to Component Fastener Tightening Caution . Tighten 100 N.m (74 lb ft).
3	Rear Front Spring Stop

REAR SPRING REAR STOP REPLACEMENT (CAB CHASSIS)

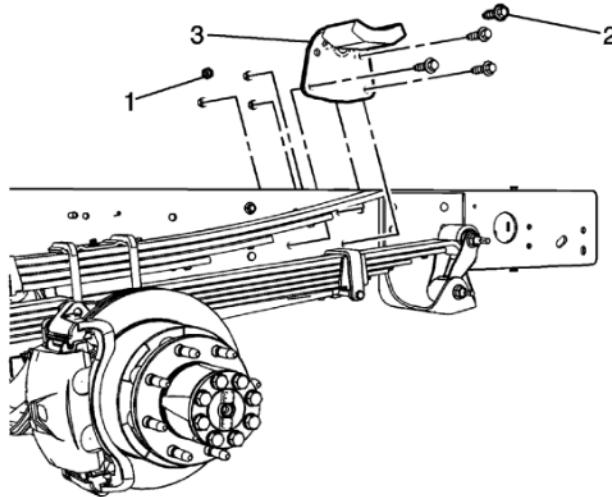


Fig. 20: View Of Rear Spring Rear Stop (Cab Chassis)
 Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary 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 (6-Lug Wheel) Tire and Wheel Removal and Installation (8-Lug Wheel) Tire and Wheel Removal and Installation (Dual Rear Wheels) .	
1	Rear Spring Rear Stop Nut (Qty: 4) NOTE: The auxiliary fuel tank must be removed from the vehicle to gain access to the left and right rear spring rear stop nuts. Refer to Fuel Tank Replacement (Cab/Chassis - Rear) Fuel Tank Replacement (Cab/Chassis - Front) .

Callout	Component Name
2	Rear Spring Rear Stop Bolt (Qty: 4) CAUTION: Refer to Component Fastener Tightening Caution . Tighten 70 N.m (52 lb ft)
3	Rear Spring Stop

REAR SPRING REAR STOP REPLACEMENT (PICKUP)

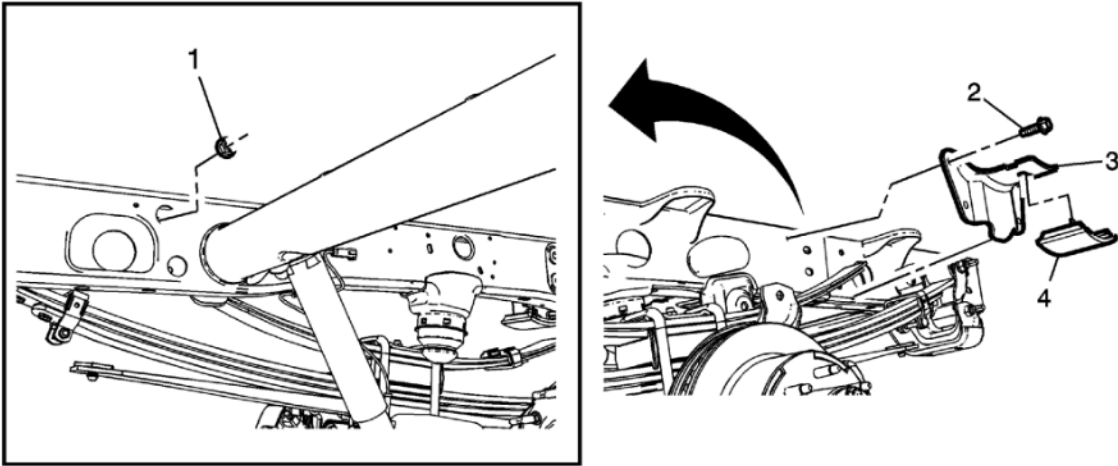


Fig. 21: Rear Spring Rear Stop (Pickup)
 Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure Raise and support the vehicle. Refer to Lifting and Jacking the Vehicle .	
1	Rear Spring Rear Stop Nut (Qty: 4) CAUTION: Refer to Component Fastener Tightening Caution . Tighten 70 N.m (52 lb ft)

Callout	Component Name
2	Rear Spring Stop Rear Bolt (Qty: 4)
3	Rear Spring Rear Stop NOTE: The bracket DOES NOT have to be removed to service the rear spring insulator
4	Rear Spring Rear Insulator Procedure Using the proper tool, bend the rear spring insulator and in a downward motion, remove the rear spring insulator from the rear spring stop.

JOUNCE BUMPER REPLACEMENT (1500)

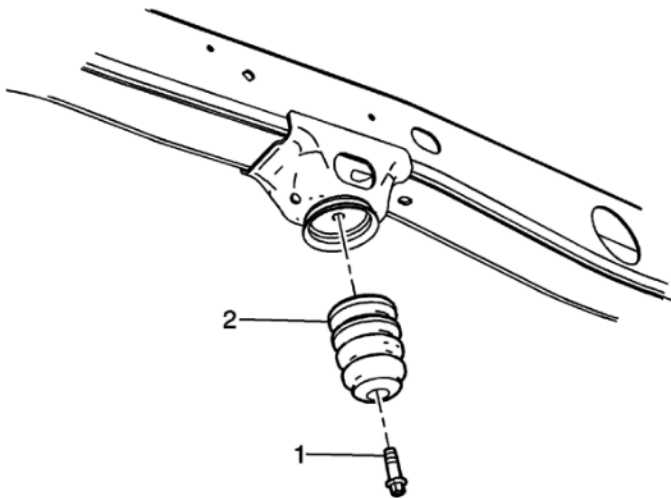


Fig. 22: Spring Jounce Bumper (1500)
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure 1. Raise and support the vehicle. Lifting and Jacking the Vehicle 2. Remove the tire and wheel. Tire and Wheel Removal and Installation (6-Lug Wheel) Tire and Wheel Removal and Installation (8-Lug Wheel) Tire and Wheel Removal and Installation (Dual Rear Wheels)	
1	Jounce Bumper Bolt CAUTION:

Callout	Component Name
	Refer to Fastener Caution . Tighten 50 N.m (37 lb ft)
2	Jounce Bumper

JOUNCE BUMPER REPLACEMENT (2500/3500)

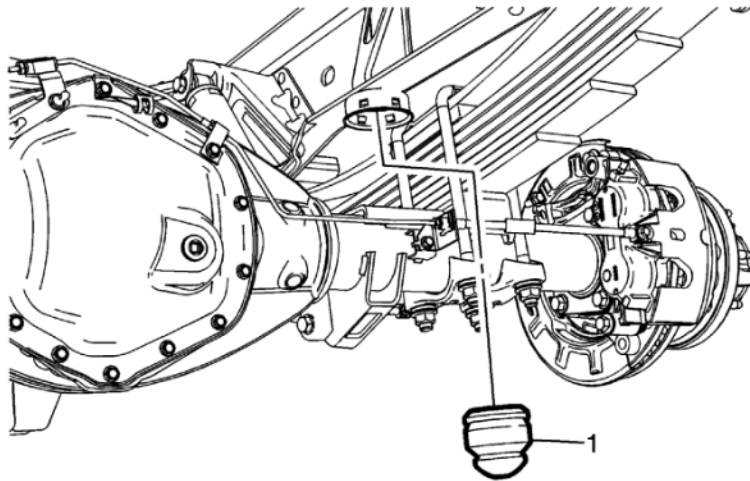


Fig. 23: View Of Spring Jounce Bumper And Bolt (2500, 3500)
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure Raise and support the vehicle. Refer to Lifting and Jacking the Vehicle .	
1	Rear Suspension Bumper

LEAF SPRING REPLACEMENT (1500)

Removal Procedure

NOTE: Before replacing the rear leaf spring for a noise complaint, proper noise diagnosis must be performed and the technician should check for any available bulletins.

1. Raise and support the vehicle. [Lifting and Jacking the Vehicle](#)
2. Support the rear axle independently in order to relieve the tension on the leaf springs.
3. If servicing the left side leaf spring, remove the fuel tank. [Fuel Tank Replacement \(Regular Cab w/26 Gal Tank\)](#) [Fuel Tank Replacement \(Extended Cab w/26 Gal Tank\)](#) [Fuel Tank Replacement \(Regular Cab w/34 Gal Tank\)](#)

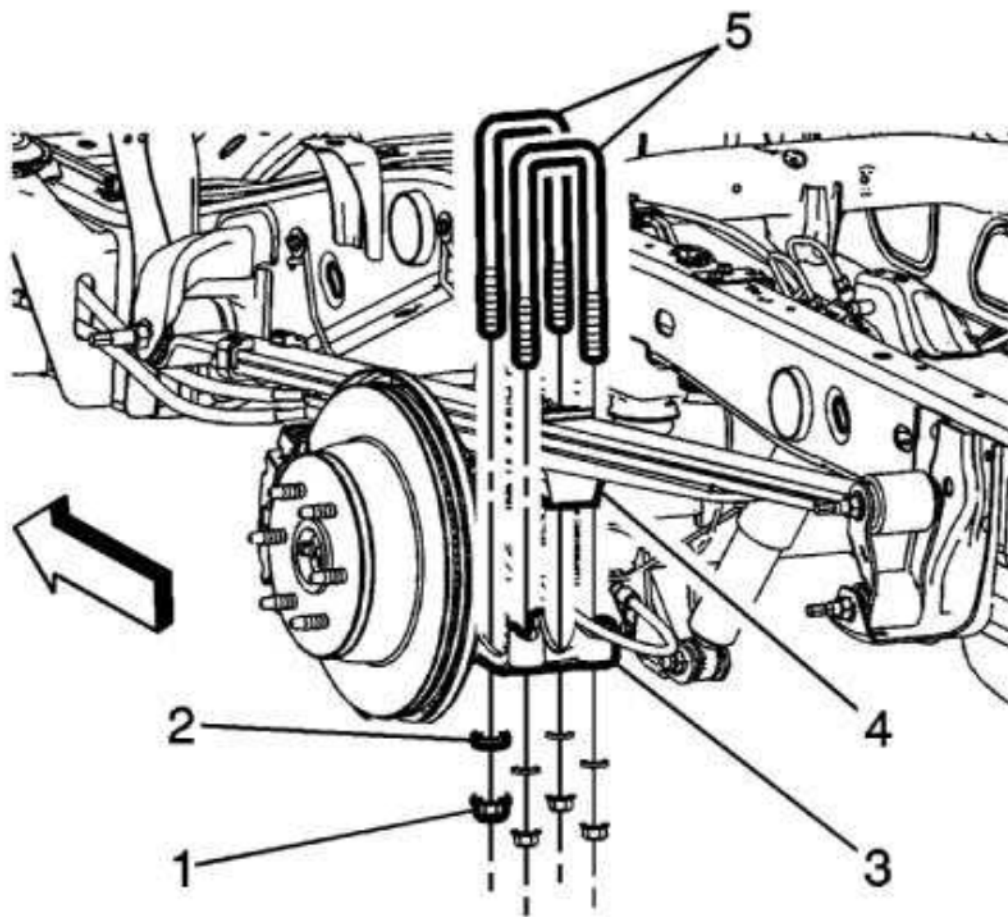


Fig. 24: Spring Spacer, U-bolts And Anchor Plate

Courtesy of GENERAL MOTORS COMPANY

4. Remove and DISCARD the U-bolt nuts (1) and washers (2).
5. Remove and DISCARD the U-bolts (5).
6. Remove the spring spacer (4).
7. Remove the anchor plate (3).
8. Remove the rear leaf spring shackle bolts and nuts. [Rear Spring Shackle Replacement \(1500\)](#)

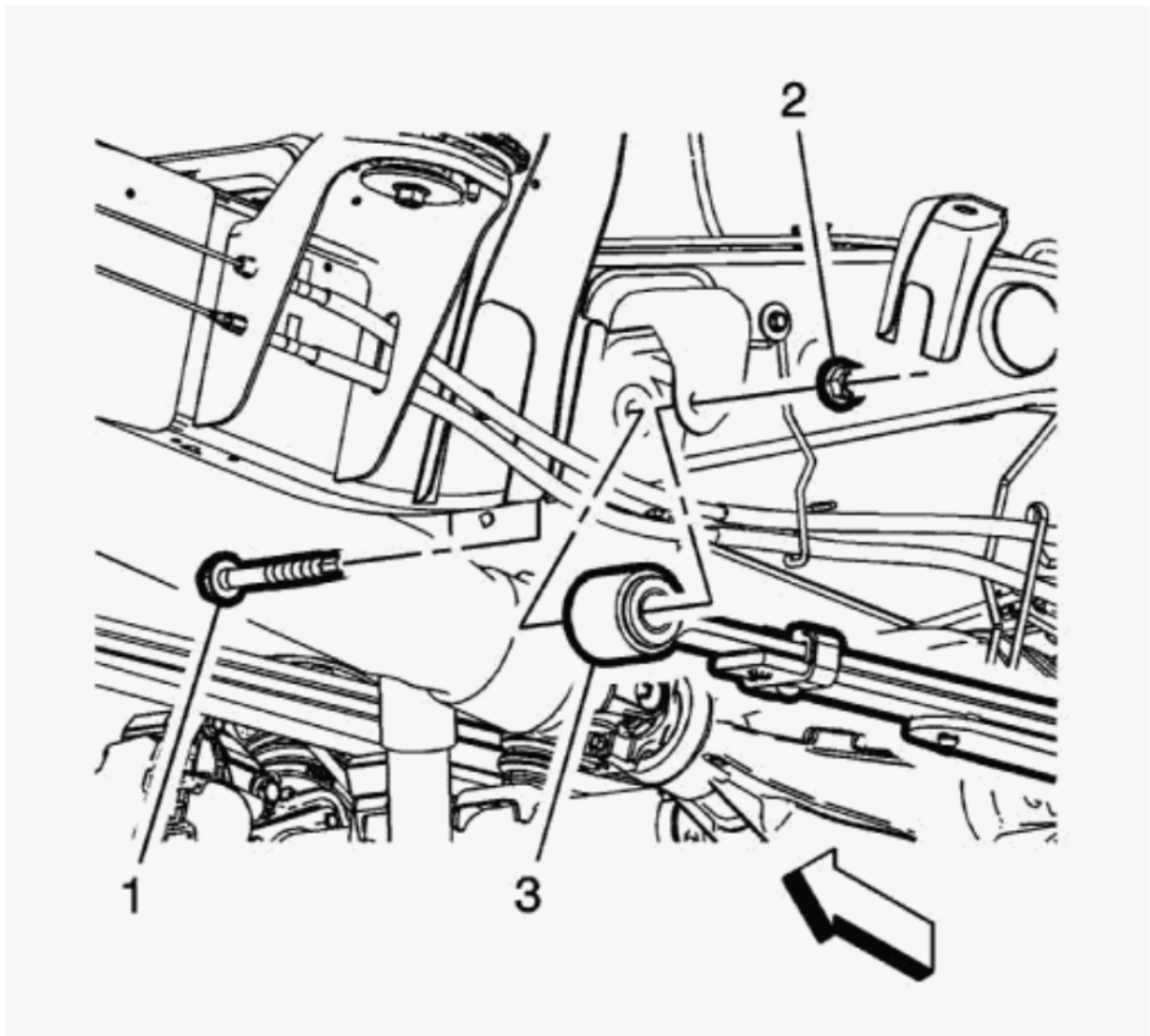


Fig. 25: Front Bolt And Nut

Courtesy of GENERAL MOTORS COMPANY

9. Remove the front bolt (1) and nut (2).
10. Remove the leaf spring assembly (3) from the vehicle.
11. Remove the rear leaf spring shackle. [Rear Spring Shackle Replacement \(1500\)](#)

Installation Procedure

1. Install the rear leaf spring shackle. [Rear Spring Shackle Replacement \(1500\)](#)

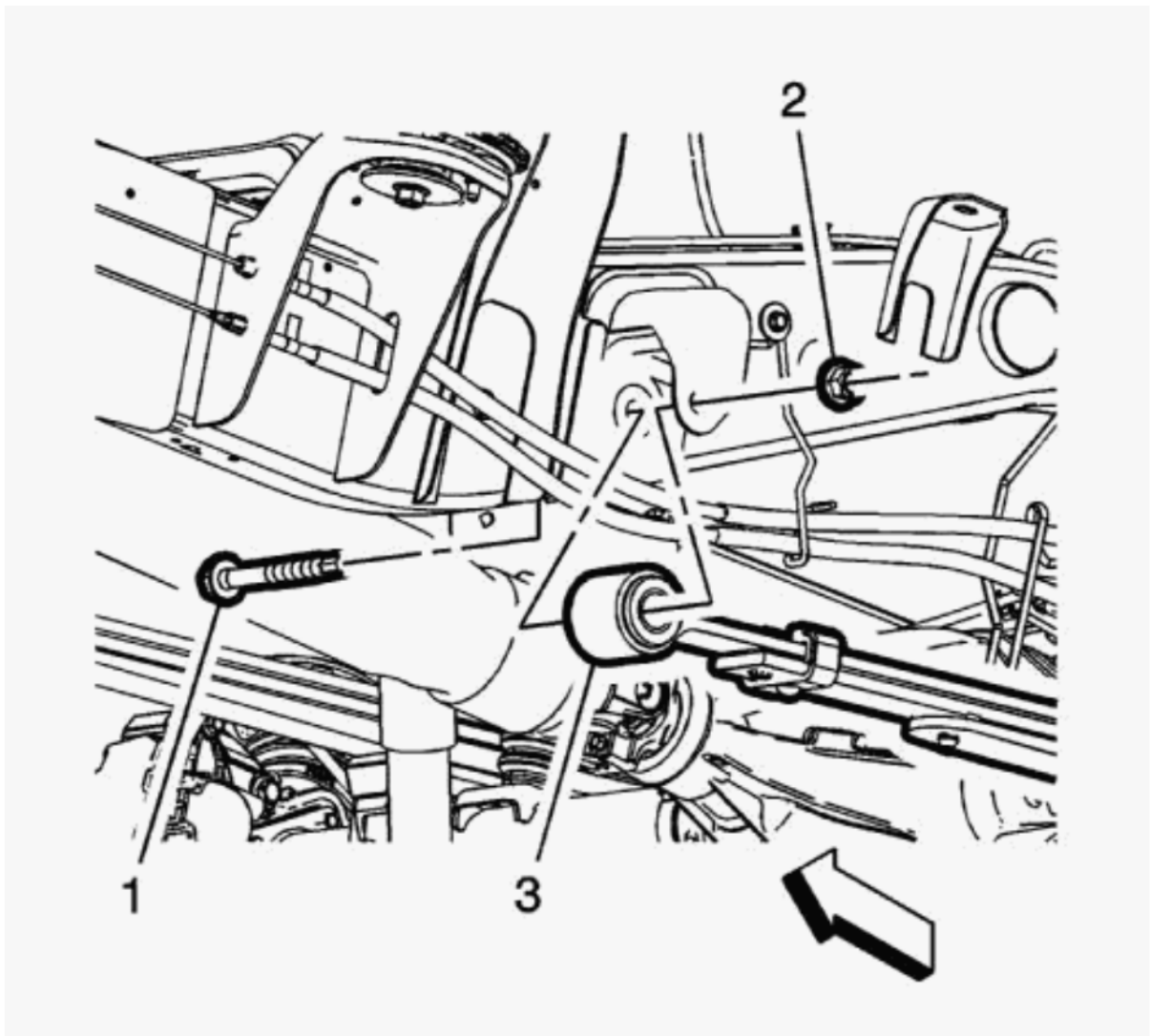


Fig. 26: Front Bolt And Nut

Courtesy of GENERAL MOTORS COMPANY

2. Install the leaf spring assembly (3) to the vehicle.
3. Install the front bolt (1) and nut (2) but do not tighten yet.
4. Install the rear leaf spring hanger to shackle nut and bolt, but do not tighten yet.

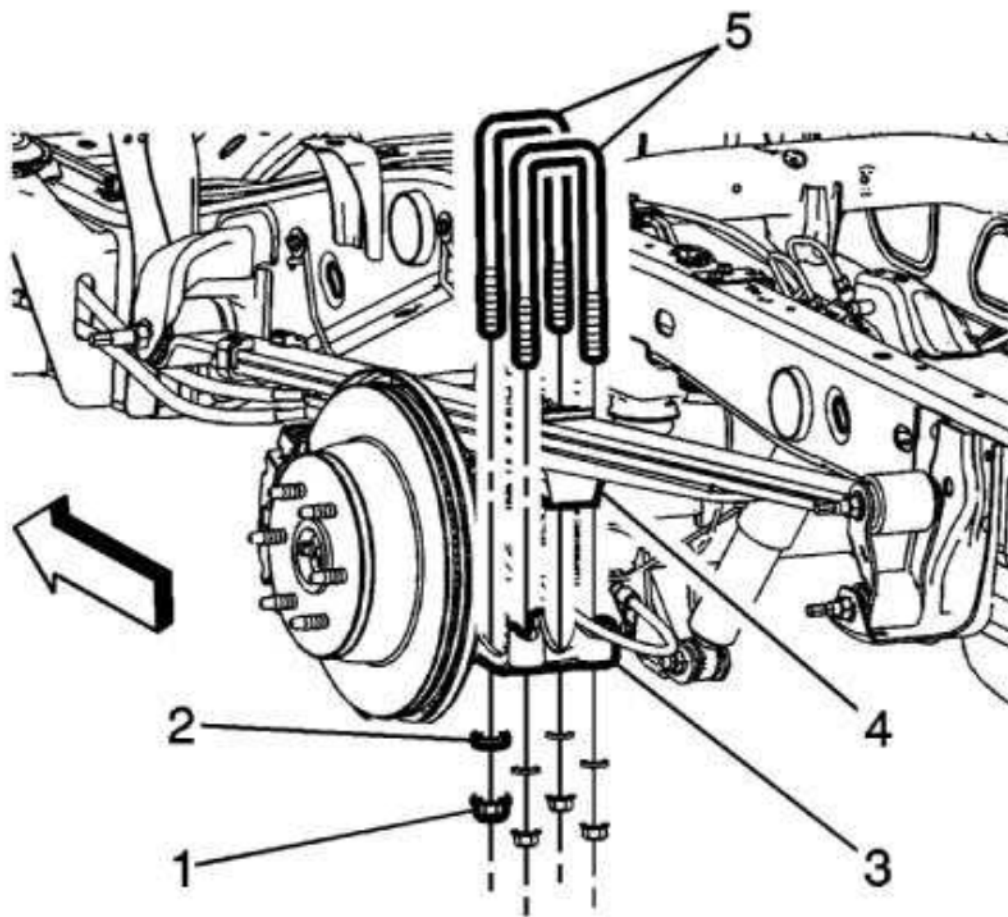


Fig. 27: Spring Spacer, U-bolts And Anchor Plate
Courtesy of GENERAL MOTORS COMPANY

5. Install the spring spacer (4).
6. Install the NEW U-bolts (5).
7. Raise the rear axle until it touches the leaf spring and applies light compression to the leaf spring.
8. Install the anchor plate (3).

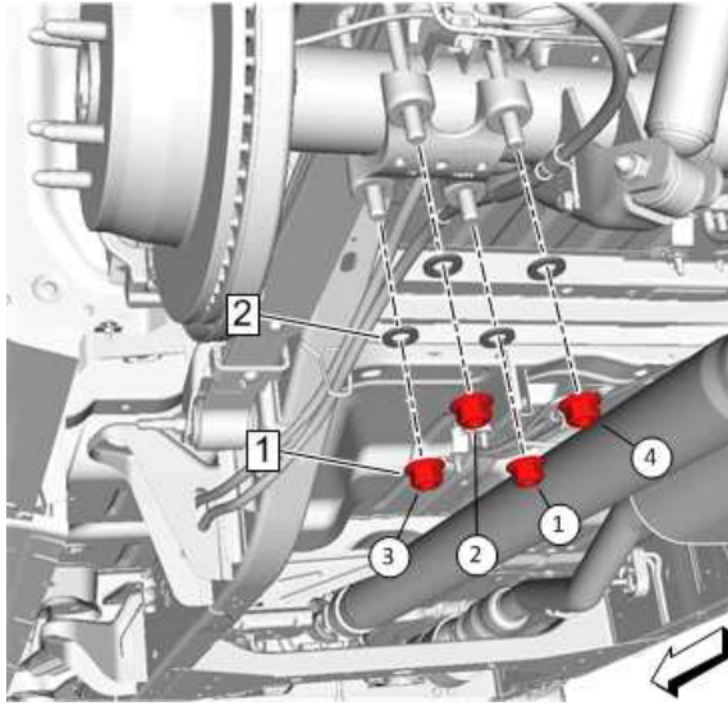


Fig. 28: U-Bolt, Nuts And Washers
Courtesy of GENERAL MOTORS COMPANY

9. Install the NEW washers (2) and NEW U-bolt nuts (1) and tighten in sequence 1-4 to:
 1. First Pass: 80 N.m (59 lb ft)
 2. Second Pass: Loosen 180 degrees
 3. Third Pass: 80 N.m (59 lb ft)
 4. Final Pass: 120-140 degrees
10. Tighten the front rear spring mounting nut to:
 1. First Pass 170 N.m (125 lb ft)
 2. Final Pass (48 degrees)
11. Tighten the rear leaf spring hanger to shackle nut. [**Rear Spring Shackle Replacement \(1500\)**](#)
12. If left side leaf spring was serviced, install the fuel tank. [**Fuel Tank Replacement \(Regular Cab w/26 Gal Tank\)**](#) [**Fuel Tank Replacement \(Extended Cab w/26 Gal Tank\)**](#) [**Fuel Tank Replacement \(Regular Cab w/34 Gal Tank\)**](#)
13. Remove the rear axle support.
14. Remove the safety stands.
15. Lower the vehicle.

LEAF SPRING REPLACEMENT (2500/3500)

Removal Procedure

NOTE: Before replacing the rear leaf spring for a noise complaint, proper noise diagnosis must be performed and the technician should check for any available bulletins.

1. Raise and support the vehicle. [**Lifting and Jacking the Vehicle**](#)

NOTE: Support the axle independently from the vehicle.

2. Support the rear axle to relieve the tension on the leaf springs.

NOTE: For the 3500 Cab chassis vehicles, the auxiliary fuel tank must be removed to service the left or right rear shackle bolts.

3. Remove the auxiliary fuel tank assembly, if needed. [Fuel Tank Replacement \(Cab/Chassis - Rear\)](#) [Fuel Tank Replacement \(Cab/Chassis - Front\)](#) [Fuel Tank Replacement \(25/35 Series\)](#)

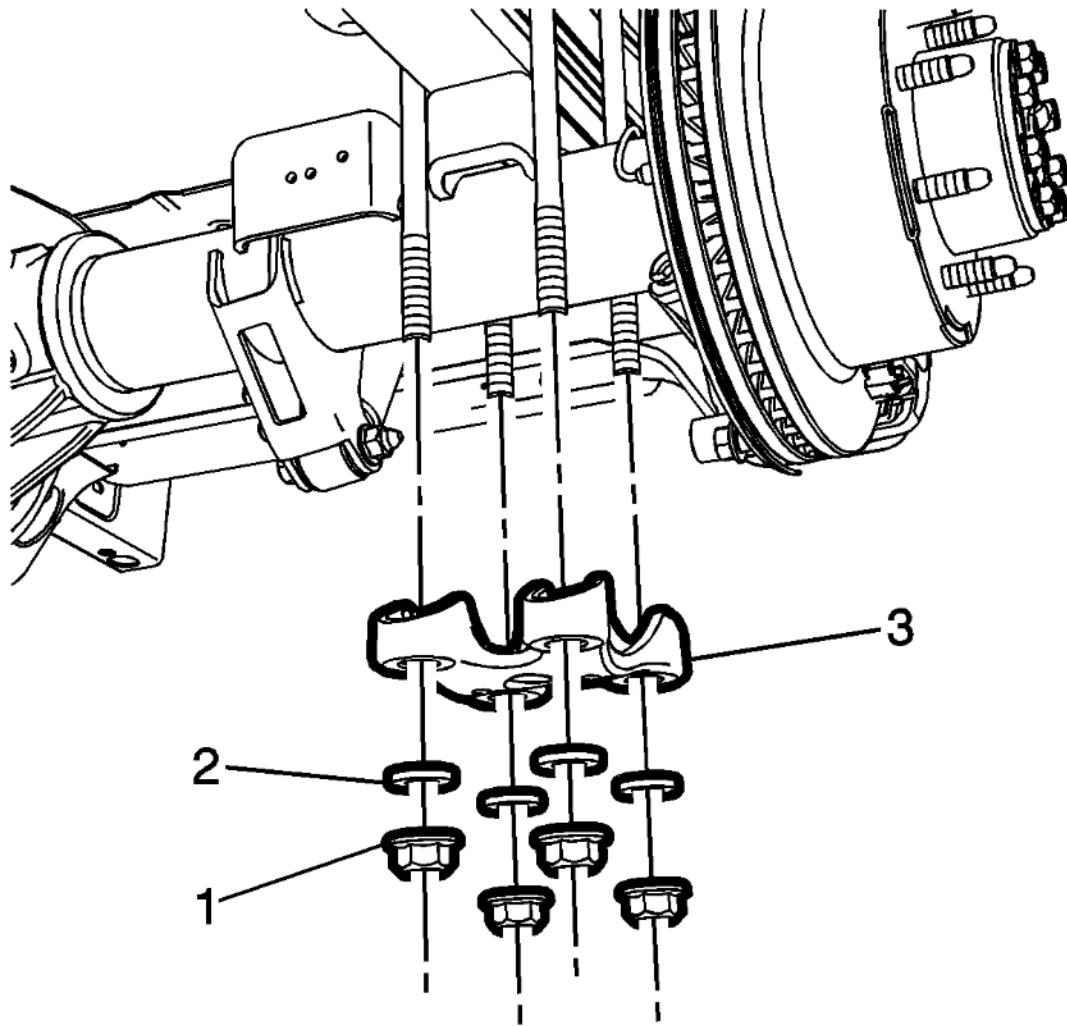


Fig. 29: View Of Rear Spring Anchor Plate, U-Bolt Nuts And Washers

Courtesy of GENERAL MOTORS COMPANY

4. Remove and DISCARD the rear spring U-bolt nuts (1) and the washers (2). Replace with NEW only.
5. Remove the rear spring anchor plate (3).

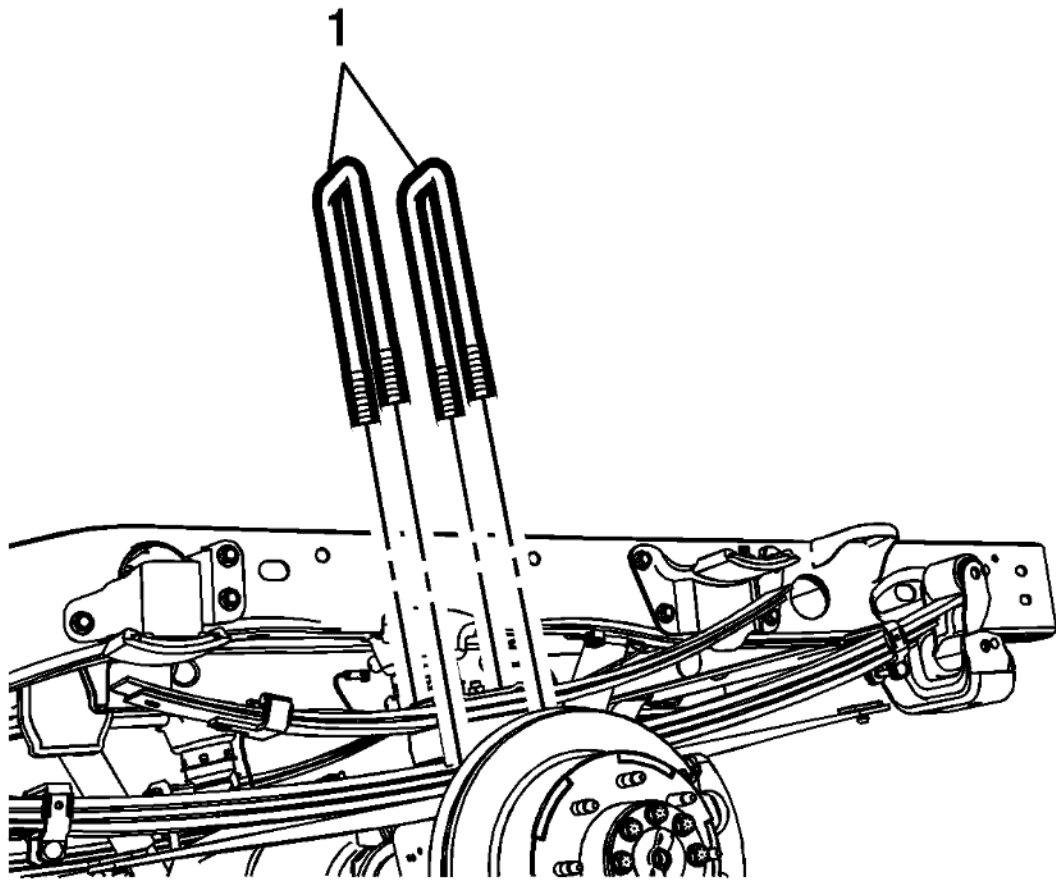


Fig. 30: Rear Spring U-Bolts

Courtesy of GENERAL MOTORS COMPANY

6. Remove and DISCARD the rear spring U-bolts (1). Replace with NEW only.

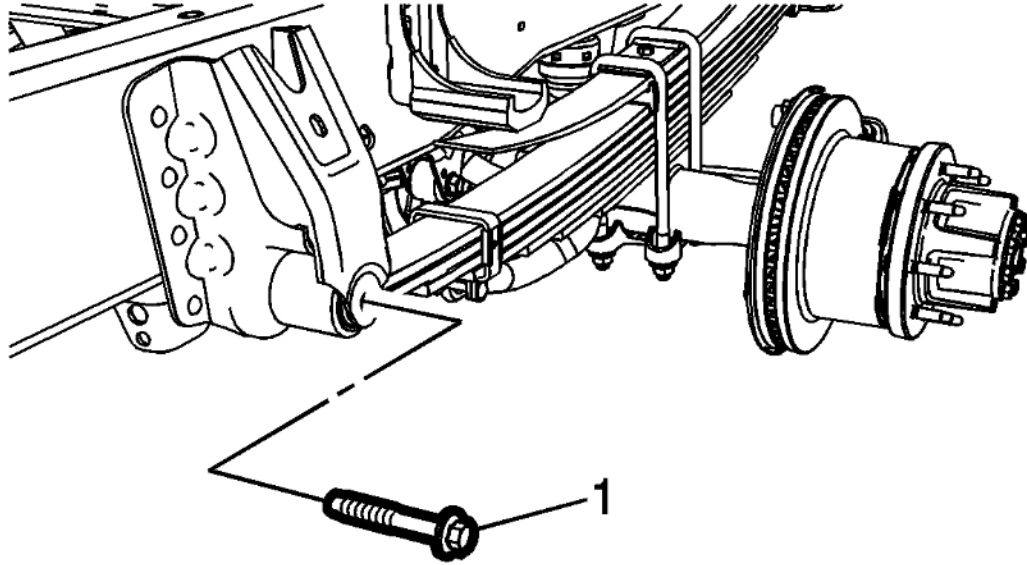


Fig. 31: Rear Spring Front Bolt

Courtesy of GENERAL MOTORS COMPANY

7. Remove the rear spring front bolt (1).
8. Remove the rear shackle nut and bolt from the frame. [**Rear Spring Shackle Replacement \(2500/3500\)**](#)

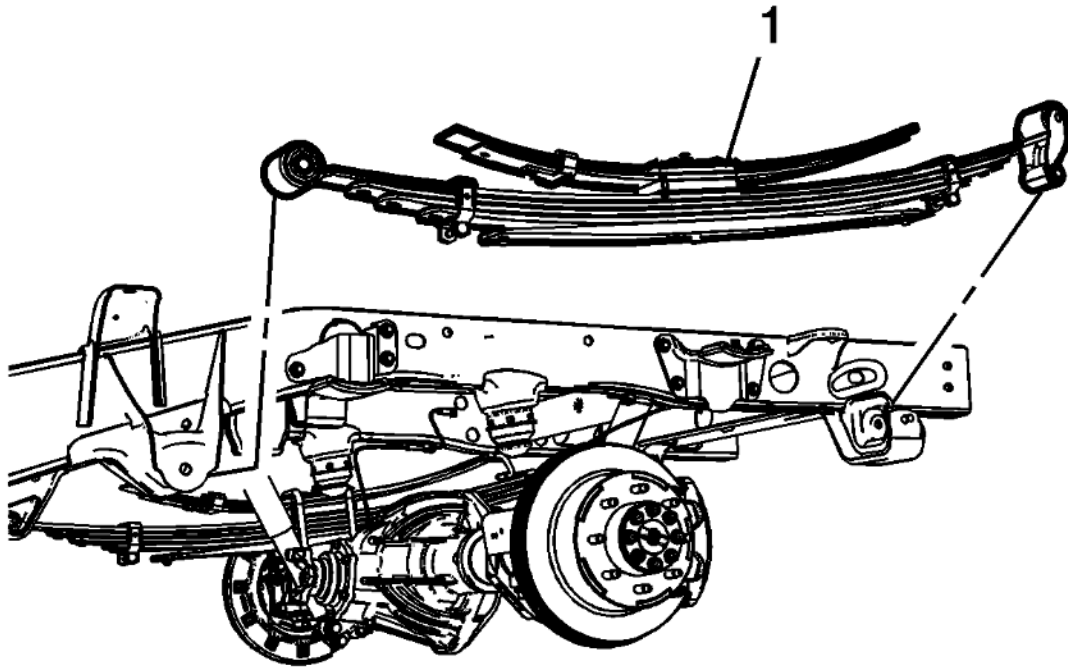


Fig. 32: Leaf Spring Assembly

Courtesy of GENERAL MOTORS COMPANY

9. With the aide of an assistant, remove the leaf spring assembly (1) from the vehicle.
10. Remove the rear leaf spring shackle, if needed. [Rear Spring Shackle Replacement \(2500/3500\)](#)

Installation Procedure

NOTE: Do NOT tighten the rear shackle to specifications, leave loose.

1. Install the rear leaf spring shackle, if needed. [Rear Spring Shackle Replacement \(2500/3500\)](#)

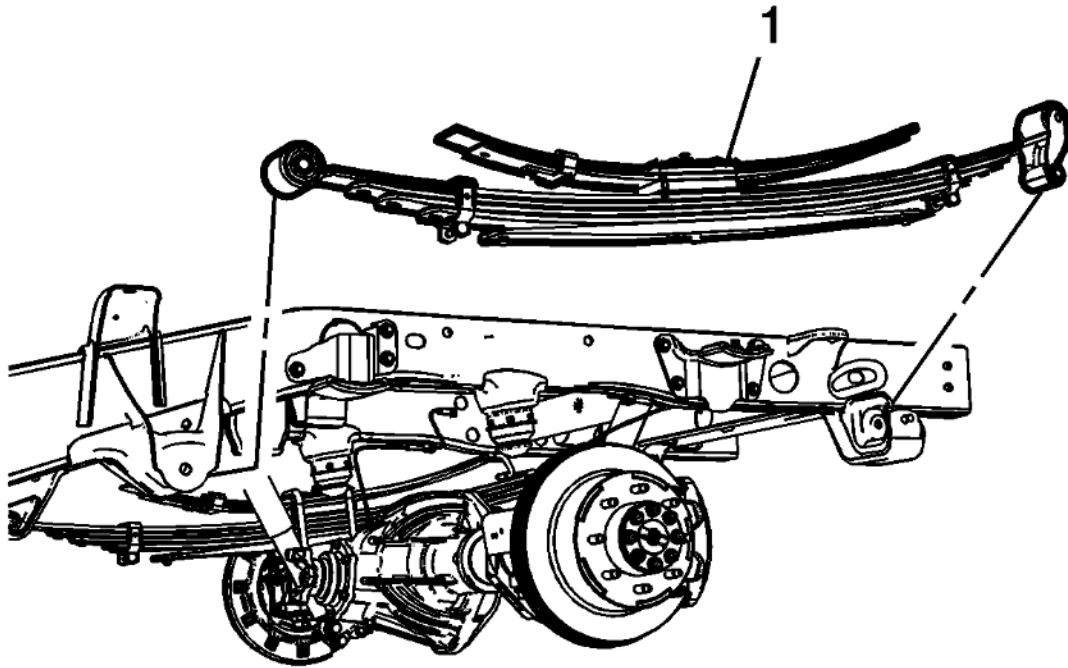


Fig. 33: Leaf Spring Assembly

Courtesy of GENERAL MOTORS COMPANY

2. With the aide of an assistant, position the rear leaf spring (1) in the vehicle.

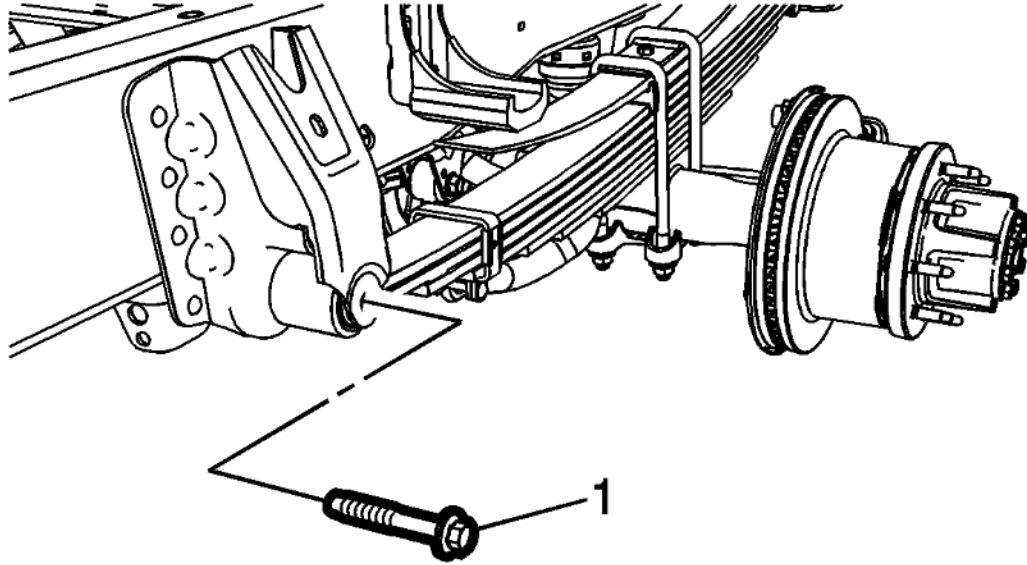


Fig. 34: Rear Spring Front Bolt

Courtesy of GENERAL MOTORS COMPANY

NOTE: Do NOT tighten the rear spring front bolt or the rear shackle nut and bolt. Leave the bolts loose to allow the rear spring assembly to move.

3. Install the rear spring front bolt (1).
4. Install the rear spring shackle to frame bolt. [Rear Spring Shackle Replacement \(2500/3500\)](#)

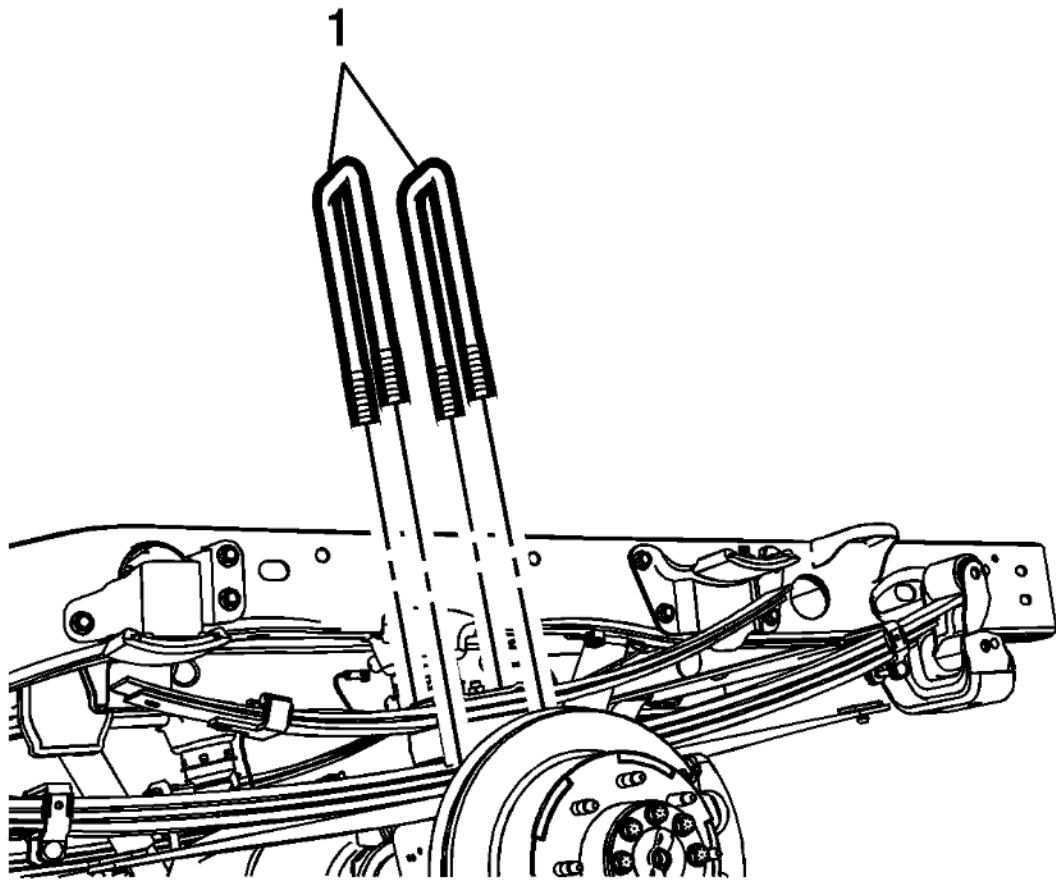


Fig. 35: Rear Spring U-Bolts

Courtesy of GENERAL MOTORS COMPANY

5. Position the NEW U-bolts (1) on the rear axle assembly
6. Using a hydraulic jack stand, lift the rear axle assembly until the it comes in contact with the rear spring assembly.

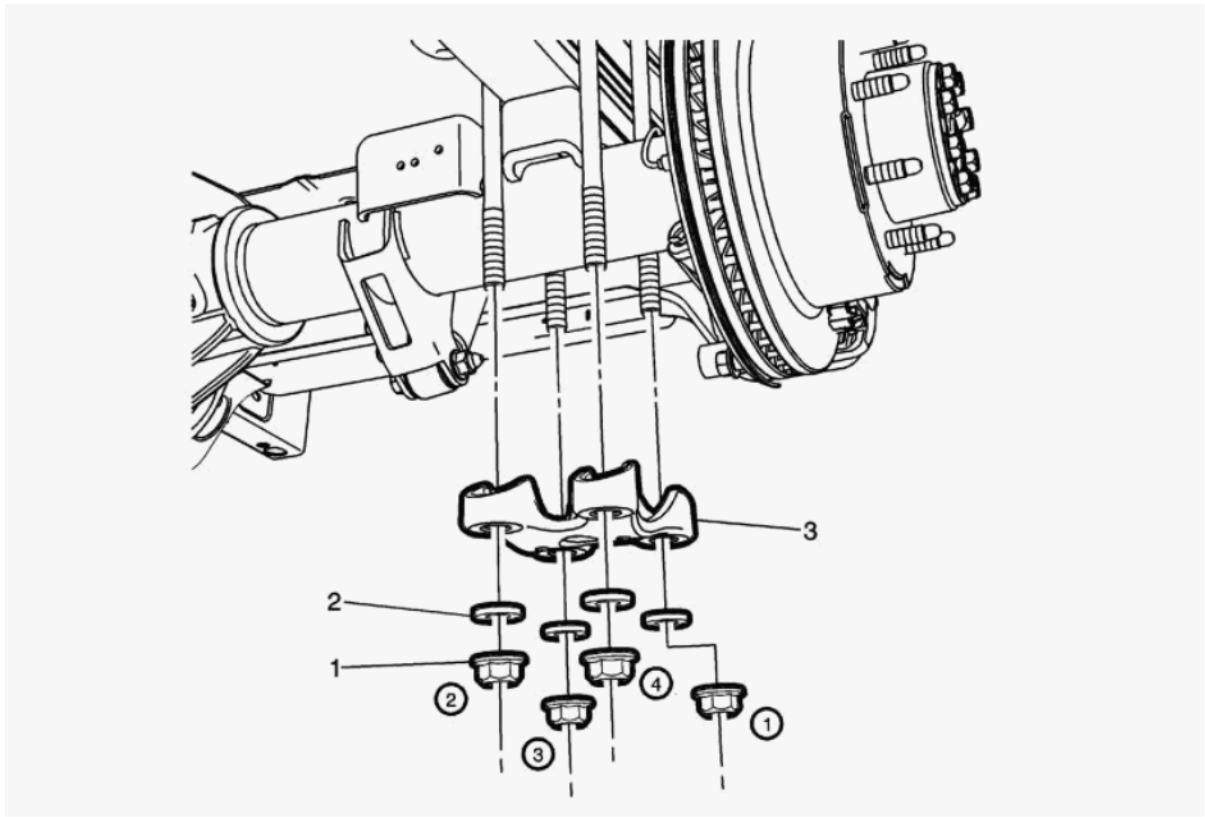


Fig. 36: Rear Spring Anchor Plate (2500, 3500)

Courtesy of GENERAL MOTORS COMPANY

CAUTION: Refer to [Fastener Caution](#) .

CAUTION: This vehicle is equipped with torque-to-yield or single use fasteners. Install a NEW torque-to-yield or single use fastener when installing this component. Failure to replace the torque-to-yield or single use fastener could cause damage to the vehicle or component.

7. Install the rear spring anchor plate (3), NEW washers (2) and tighten the NEW U-bolt nuts (1) in sequence 1-4 to:

- First Pass 100 N.m (74 lb ft).
- Second Pass Loosen 270 degrees
- Third Pass 100 N.m (74 lb ft)
- Final Pass 180 degrees.

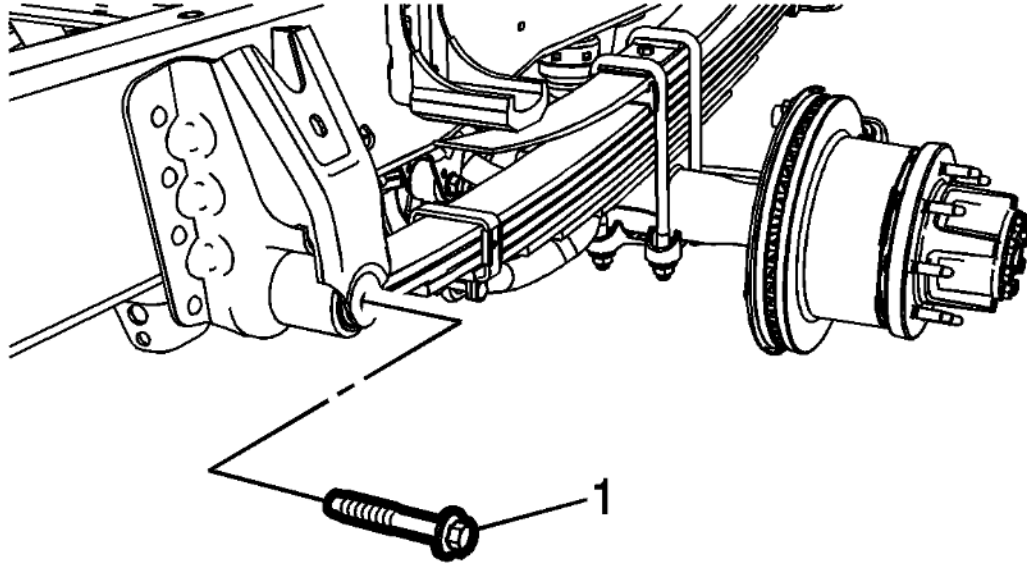


Fig. 37: Rear Spring Front Bolt

Courtesy of GENERAL MOTORS COMPANY

8. Tighten the rear spring front bolt to:
 - First Pass 170 N.m (125 lb ft).
 - Final Pass 90 degrees.
9. Tighten the rear spring shackle to frame bolt. [Rear Spring Shackle Replacement \(2500/3500\)](#)
10. Install the fuel tank assembly, if removed. [Fuel Tank Replacement \(Cab/Chassis - Rear\)](#) [Fuel Tank Replacement \(Cab/Chassis - Front\)](#) [Fuel Tank Replacement \(25/35 Series\)](#)
11. Remove the rear axle support.
12. Remove the safety stands.
13. Lower the vehicle.

REAR SPRING SHACKLE REPLACEMENT (2500/3500)

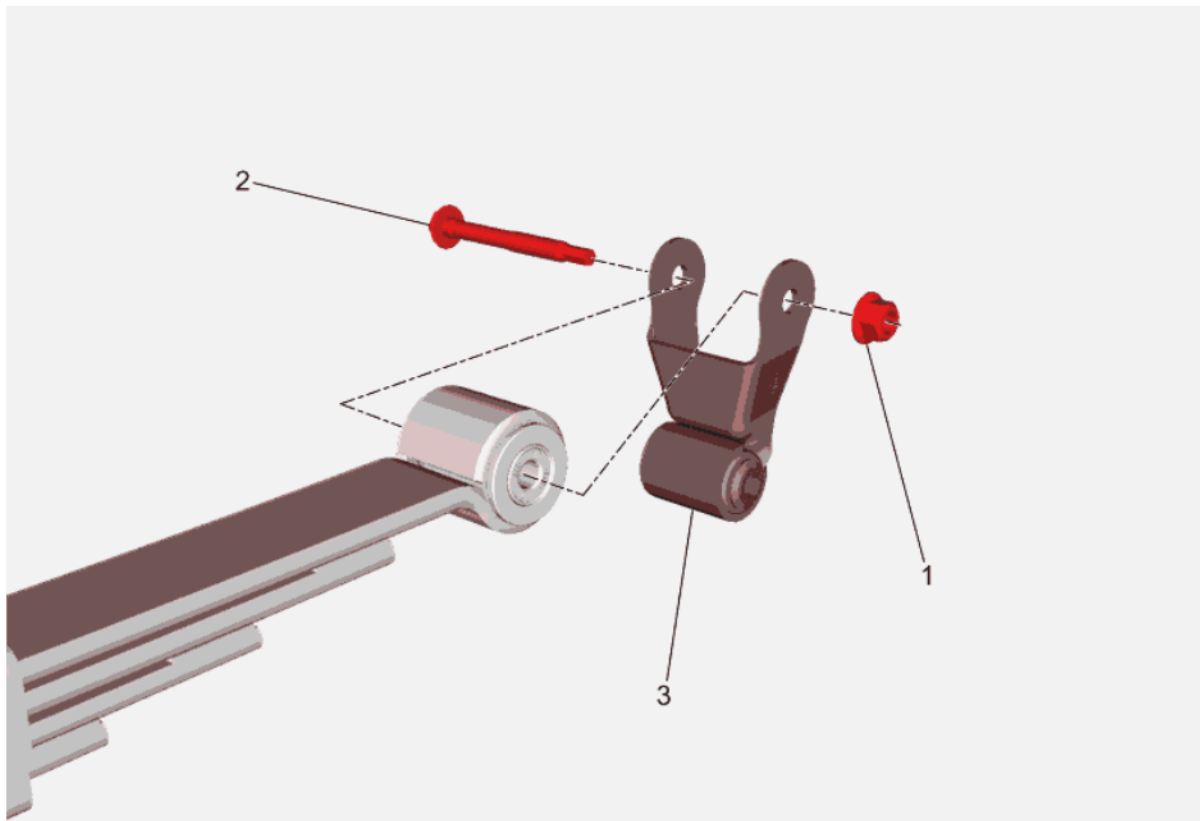


Fig. 38: Rear Spring Shackle (2500, 3500)

Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure 1. Remove the tire and wheel assembly. Tire and Wheel Removal and Installation (6-Lug Wheel) Tire and Wheel Removal and Installation (8-Lug Wheel) Tire and Wheel Removal and Installation (Dual Rear Wheels) 2. Remove the leaf spring assembly from the vehicle. Leaf Spring Replacement (2500/3500)	
1	Rear Shackle Spring Nut CAUTION: Refer to Fastener Caution . Tighten 175 N.m (129 lb ft)
2	Rear Spring Shackle Bolt
3	Rear Spring Shackle

REAR SPRING SHACKLE REPLACEMENT (1500)

Removal Procedure

1. Raise and support the vehicle. [Lifting and Jacking the Vehicle](#)

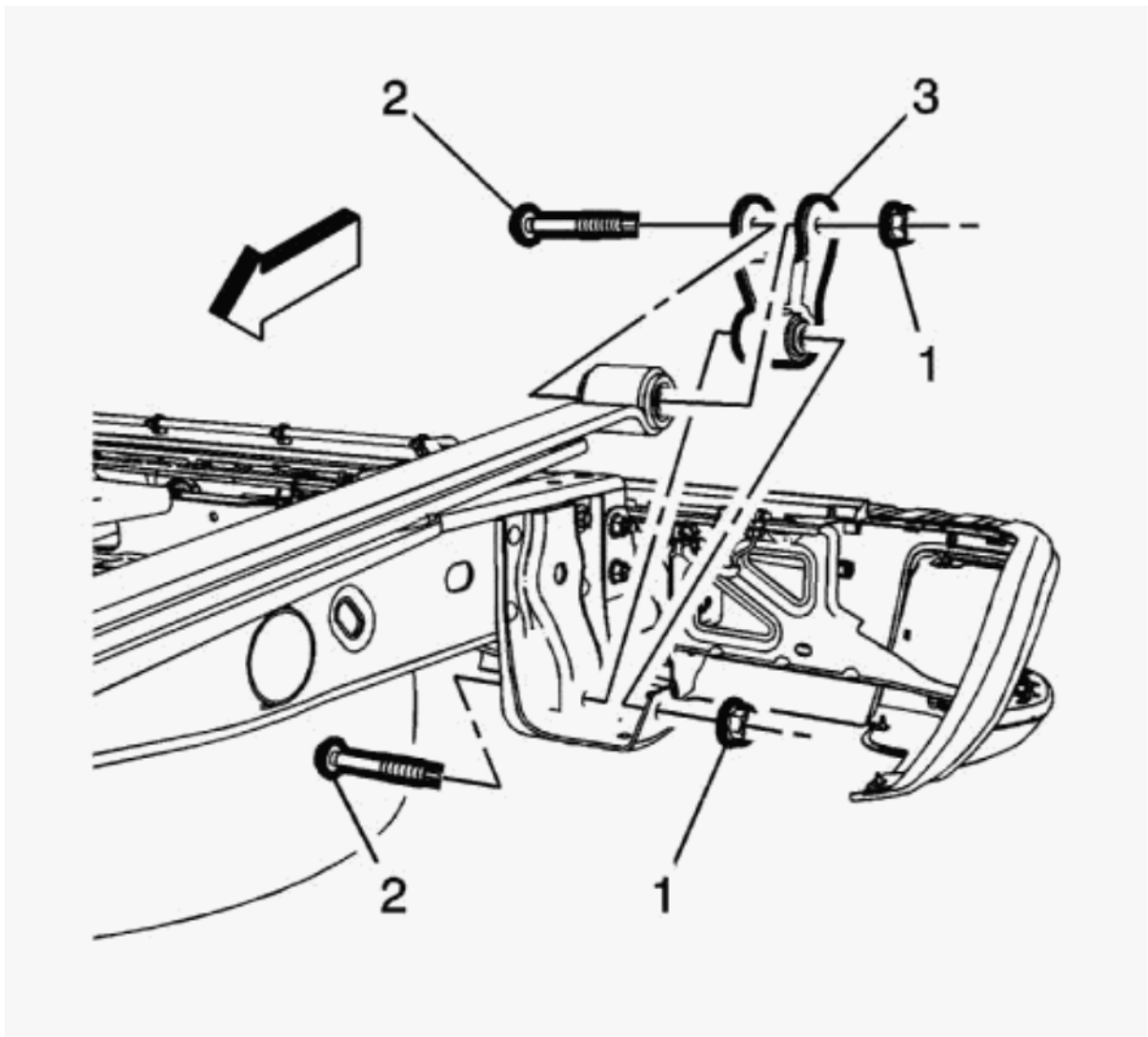


Fig. 39: Shackle Nuts And Bolts

Courtesy of GENERAL MOTORS COMPANY

2. Remove the leaf spring assembly from vehicle. [Leaf Spring Replacement \(1500\)](#)
3. Remove the shackle nuts (1) and bolts (2).
4. Remove the shackle (3).

Installation Procedure

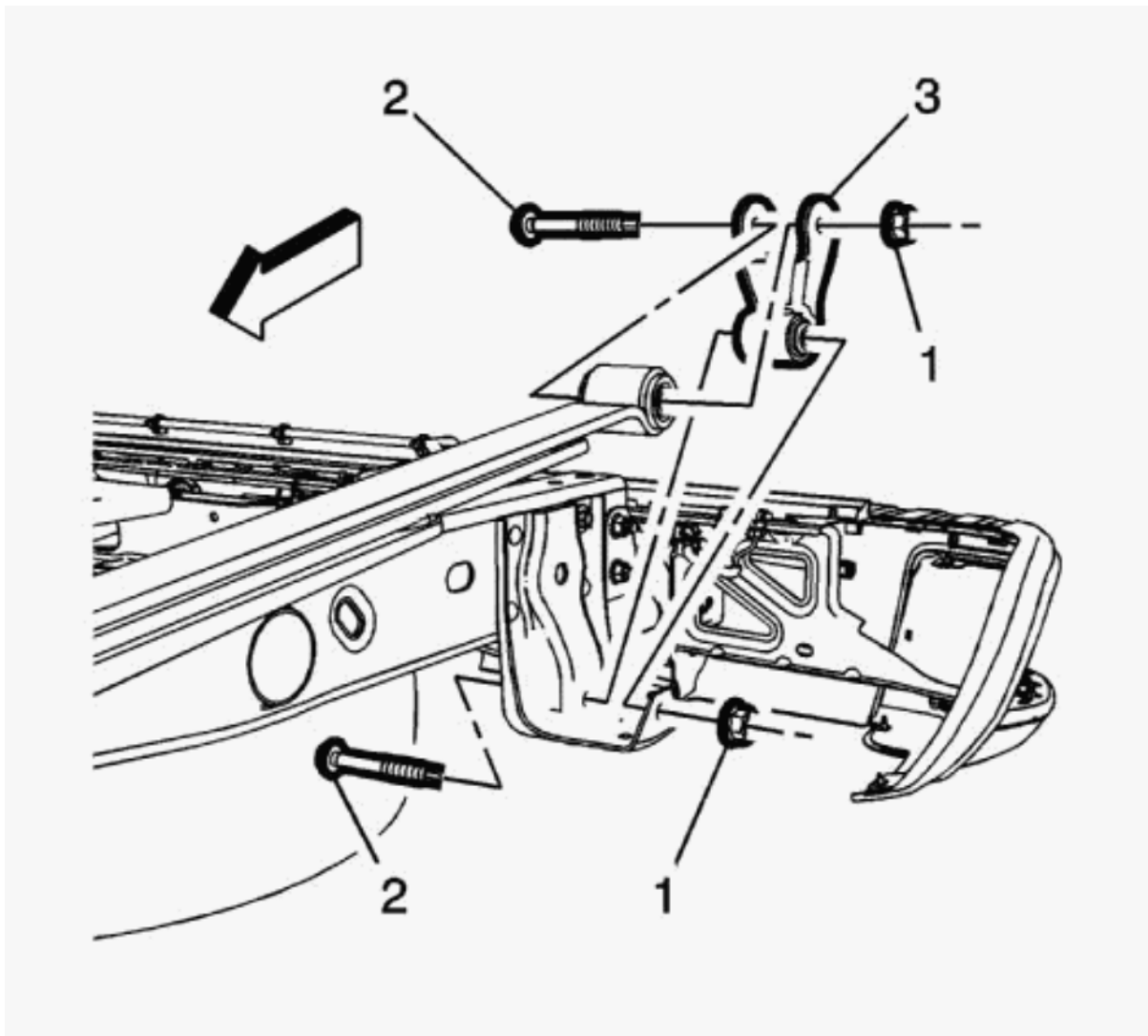


Fig. 40: Shackle Nuts And Bolts

Courtesy of GENERAL MOTORS COMPANY

1. Install the shackle (3) to the spring.

CAUTION: Refer to [Fastener Caution](#) .

2. Install the shackle nuts (1) and bolts (2) to the spring and frame.

Tighten

1. First Pass: 115 N.m (85 lb ft)
2. Final Pass: 90 degrees
3. Install the leaf spring assembly to the vehicle. [Leaf Spring Replacement \(1500\)](#)
4. Remove the safety stands.
5. Lower the vehicle.

WHEEL STUD REPLACEMENT

Special Tools

CH 43631 Ball Stud Remover

For equivalent regional tools, refer to [Special Tools](#).

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 \(6-Lug Wheel\)](#) [Tire and Wheel Removal and Installation \(8-Lug Wheel\)](#) [Tire and Wheel Removal and Installation \(Dual Rear Wheels\)](#) .
3. Remove the brake rotor. Refer to [Rear Brake Rotor Replacement \(JD9\)](#) [Rear Brake Rotor Replacement \(J95\)](#) [Rear Brake Rotor Replacement \(J96\)](#) .

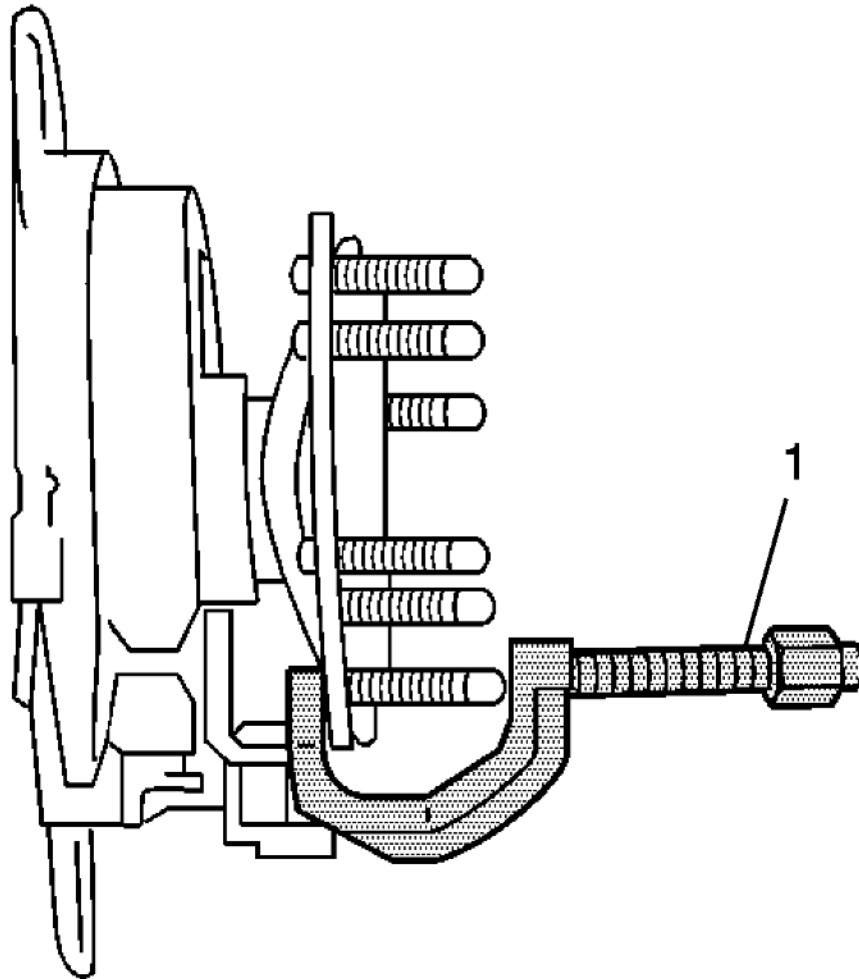


Fig. 41: Removing Wheel Stud From Hub Flange

Courtesy of GENERAL MOTORS COMPANY

4. Using the **CH 43631** remover (1), remove the wheel stud.
5. Remove the wheel stud from the hub flange.

Installation Procedure

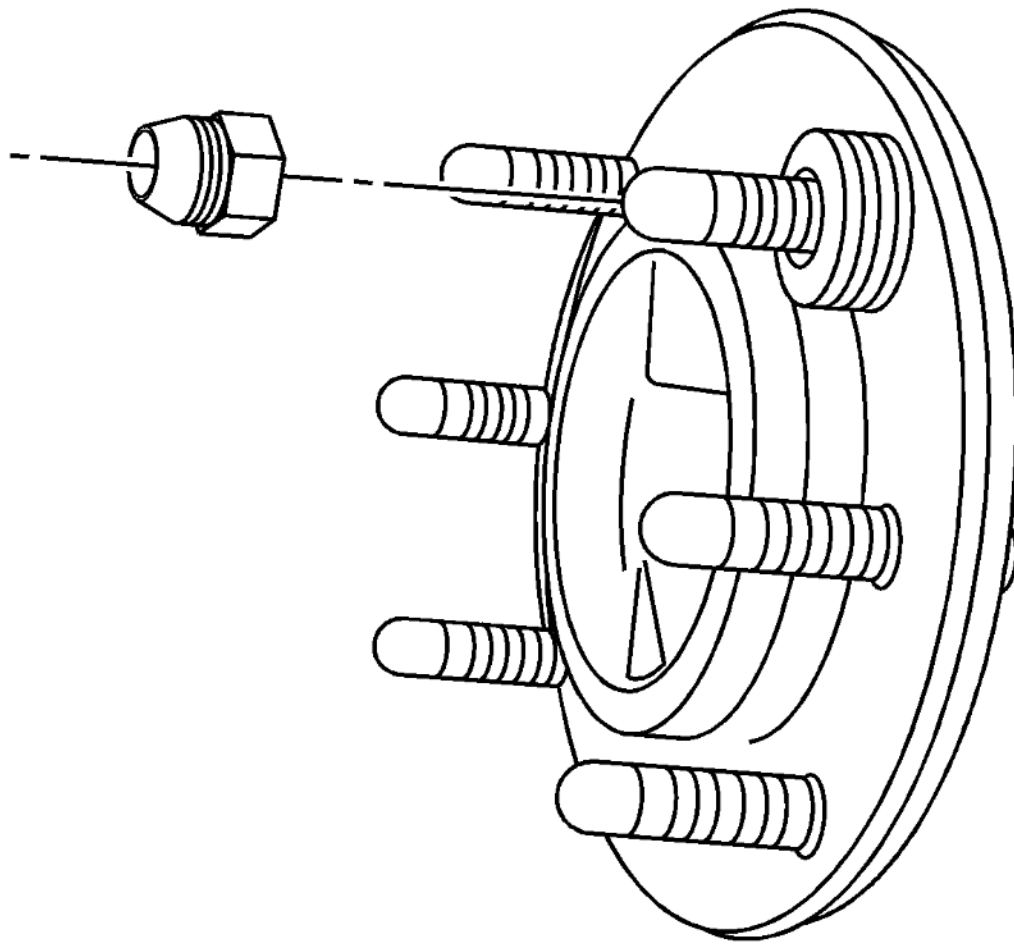


Fig. 42: View Of Wheel Nut & Studs

Courtesy of GENERAL MOTORS COMPANY

1. Install the new stud into the hub flange hole using firm hand pressure.
2. Install 4 washers to the new wheel stud.
3. Thread a wheel nut onto the new stud with the flat side facing the front hub flange .
4. Tighten the lug nut until the stud contacts the back of the hub flange.
5. Remove the wheel nut.
6. Remove the washers.
7. Install the brake rotor. Refer to [Rear Brake Rotor Replacement \(JD9\)](#) [Rear Brake Rotor Replacement \(J95\)](#) [Rear Brake Rotor Replacement \(J96\)](#) .
8. Install the tire and wheel. Refer to [Tire and Wheel Removal and Installation \(6-Lug Wheel\)](#) [Tire and Wheel Removal and Installation \(8-Lug Wheel\)](#) [Tire and Wheel Removal and Installation \(Dual Rear Wheels\)](#) .
9. Remove the safety stands.
10. Lower the vehicle.

DESCRIPTION AND OPERATION

REAR SUSPENSION DESCRIPTION AND OPERATION

These vehicles use a leaf spring and a solid rear axle suspension system.

The rear axle assembly is attached to multi-leaf springs with U-bolts. The front ends of the springs are attached to the frame at the front hangers with rubber bushings. The rear ends of the springs are attached to the frame with shackles that use rubber bushings. Shackles allow the springs to change position while the vehicle is in motion.

Two direct double-acting shock absorbers provide ride control. The shock absorbers are angle-mounted between the frame. The shock absorbers are attached with brackets. The brackets are attached to the anchor plate.

The rear spring steel stabilizing shaft helps minimize body roll and sway during cornering. The rear stabilizer shaft is connected to the rear axle and the frame with the following components:

- The rubber insulators
- The clamps
- The link assemblies

SPECIAL TOOLS AND EQUIPMENT

SPECIAL TOOLS

Illustration	Tool Number/ Description
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Illustration	Tool Number/ Description
	CH 43631 J 43631 Ball Joint Remover

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