

2017 SUSPENSION

Rear Suspension - CT6

SPECIFICATIONS

FASTENER SPECIFICATIONS

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 Shock Absorber Bolt	
First Pass:	160 N.m (118 lb ft)
Final Pass:	45-60 degrees
Rear Suspension Adjust Link Outer Bolt	
First Pass:	100 N.m (74 lb ft)
Final Pass:	90-105 degrees
Rear Suspension Lateral Link Inner Bolt	
First Pass:	160 N.m (118 lb ft)
First Pass:	90-105 degrees
Rear Suspension Lateral Link Outer Bolt	
First Pass:	160 N.m (118 lb ft)
Final Pass:	90-105 degrees
Rear Suspension Lower Trailing Link Inner Bolt	
First Pass:	100 N.m (74 lb ft)
Final Pass:	90-105 degrees
Rear Suspension Lower Trailing Link Outer Bolt	
First Pass:	100 N.m (74 lb ft)
Final Pass:	90-105 degrees
Rear Suspension Upper Lateral Link Inner Bolt	
First Pass:	100 N.m (74 lb ft)
Final Pass:	90-105 degrees
Rear Suspension Upper Trailing Link Inner Bolt	
Rear Suspension Upper Trailing Link Outer Bolt	
First Pass:	100 N.m (74 lb ft)
Final Pass:	90-105 degrees
Wheel Stud	

Reusable Threaded Fastener Tightening Specifications

NOTE: <i>All fasteners listed in this table can be reused after removal.</i>	
Application	Specification
	Metric (English)
Rear Shock Absorber Nut (Rear Mount to Body)	22 N.m (16 lb ft)
Rear Shock Absorber Nut (Shock Rod to Shock Mount)	50 N.m (37 lb ft)
Rear Stabilizer Shaft Insulator Clamp Bolt	58 N.m (43 lb ft)
Rear Stabilizer Shaft Link Bolt	58 N.m (43 lb ft)

NOTE:

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

Application	Specification
	Metric (English)
Rear Stabilizer Shaft Link Nut	58 N.m (43 lb ft)
Rear Suspension Adjust Link Nut	100 N.m (74 lb ft)
Rear Suspension Upper Trailing Link Inner Nut	
First Pass:	100 N.m (74 lb ft)
Final Pass:	90-105 degrees
Rear Wheel Bearing and Hub Assembly Bolt	125 N.m (92 lb ft)

ADHESIVES, FLUIDS, LUBRICANTS AND SEALERS

Application	Type of Material	GM Part Number	
		United States	Canada
Knuckle Bearing Pilot Bore	Grease	12345996	10953501

REPAIR INSTRUCTIONS

REAR WHEEL BEARING AND HUB REPLACEMENT

Removal Procedure

1. Remove the rear tire and wheel assembly. Refer to [Tire and Wheel Removal and Installation](#)
2. Rear Wheel Speed Sensor» Remove - [Rear Wheel Speed Sensor Replacement](#)
3. Rear Brake Rotor» Remove - [Rear Brake Rotor Replacement](#)
4. Separate the wheel drive shaft from the wheel bearing and hub assembly. Refer to [Rear Wheel Drive Shaft Replacement - Left Side \(LTG\)](#) , [Rear Wheel Drive Shaft Replacement - Left Side \(LGX, LGW\)](#) or [Rear Wheel Drive Shaft Replacement - Right Side](#)
5. Rear Wheel Bearing and Hub Assembly Bolt (1)» Remove [3x]

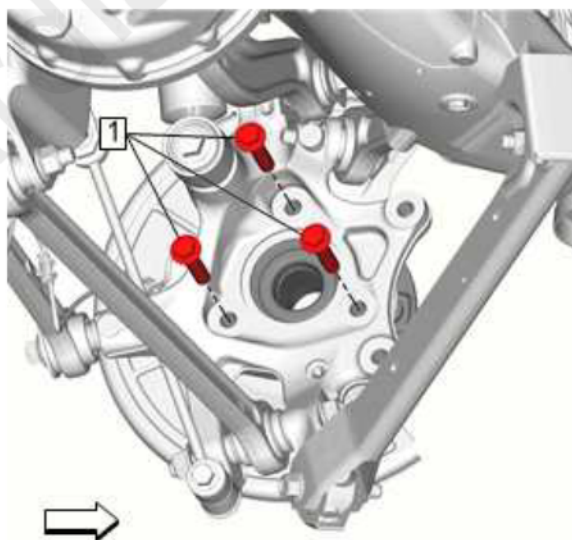


Fig. 1: Rear Wheel Bearing And Hub Assembly Bolt
Courtesy of GENERAL MOTORS COMPANY

6. Rear Wheel Bearing and Hub Assembly (1)» Remove

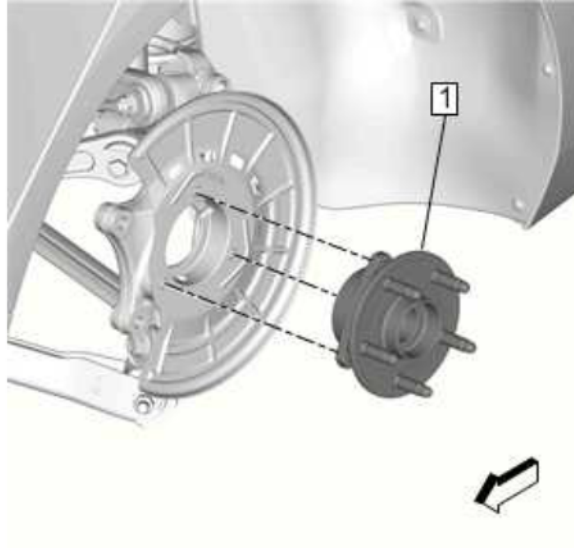


Fig. 2: Rear Wheel Bearing And Hub Assembly
Courtesy of GENERAL MOTORS COMPANY

Installation Procedure

1. Apply grease evenly and ensure complete coverage to the knuckle bearing pilot bore only. Refer to [Adhesives, Fluids, Lubricants and Sealers](#)

NOTE: Avoid applying grease to any other machined surface, holes or threads. Ensure the drain channel at the bottom of the bore is not blocked with grease or debris.

2. Rear Wheel Bearing and Hub Assembly (1) » Install
3. Rear Wheel Bearing and Hub Assembly Bolt (1) » Install and tighten [3x] 125 N.m (92 lb ft)

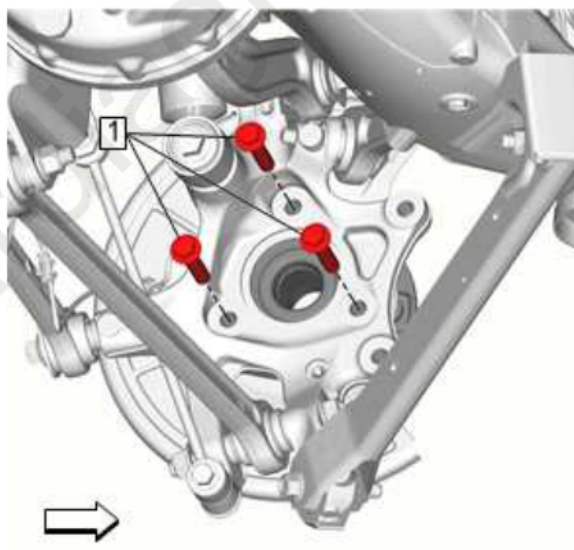


Fig. 3: Rear Wheel Bearing And Hub Assembly Bolt
Courtesy of GENERAL MOTORS COMPANY

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

4. Install the wheel drive shaft into the wheel bearing and hub assembly. Refer to [Rear Wheel Drive Shaft Replacement - Left Side \(LTG\)](#) , [Rear Wheel Drive Shaft Replacement - Left Side \(LGX, LGW\)](#) or [Rear Wheel Drive Shaft Replacement - Right Side](#)
5. Rear Brake Rotor » Install - [Rear Brake Rotor Replacement](#)
6. Rear Wheel Speed Sensor » Install - [Rear Wheel Speed Sensor Replacement](#)
7. Install the tire and wheel assembly. Refer to [Tire and Wheel Removal and Installation](#)

REAR WHEEL BEARING STUD REPLACEMENT

Special Tools

Equivalent regional tools: [Special Tools](#).

Removal Procedure

1. Remove the rear tire and wheel assembly. Refer to [Tire and Wheel Removal and Installation](#)
2. Rear Wheel Bearing and Hub Assembly» Remove - [Rear Wheel Bearing and Hub Replacement](#)
3. Position the wheel bearing and hub assembly in a suitable vise.

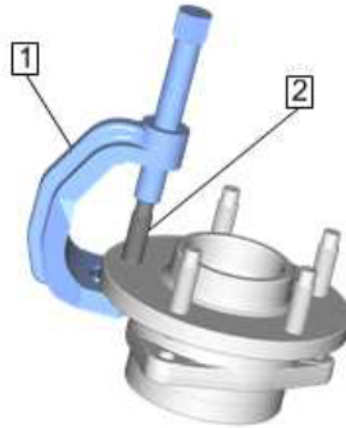


Fig. 4: Wheel Bearing And Hub Assembly
Courtesy of GENERAL MOTORS COMPANY

4. Use the **CH-43631** ball joint remover (1) to remove and discard the wheel stud (2).

Installation Procedure

1. Install the NEW wheel stud (1) into the wheel bearing hub flange (2).

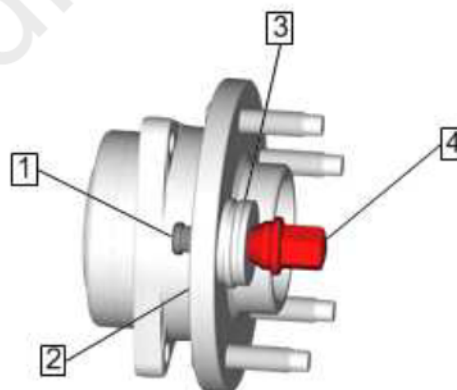


Fig. 5: Wheel Stud, Wheel Nut And Wheel Bearing Hub Flange
Courtesy of GENERAL MOTORS COMPANY

2. Add enough washers (3) in order to draw the stud into the hub flange (2).
3. Install the wheel nut (4) against the washers (3).
4. Tighten the wheel nut (4) until the head of the wheel stud (1) is fully seated against the back of the bearing hub flange (2).
5. Remove the wheel nut (4) and the washers (3).
6. Remove the wheel bearing and hub assembly from the vise.
7. Rear Wheel Bearing and Hub Assembly» Install - [Rear Wheel Bearing and Hub Replacement](#)

8. Install the rear tire and wheel assembly. Refer to [Tire and Wheel Removal and Installation](#).

KNUCKLE REPLACEMENT

Removal Procedure

1. Remove the rear tire and wheel assembly. Refer to [Tire and Wheel Removal and Installation](#)
2. Rear Brake Rotor (1) » Remove - [Rear Brake Rotor Replacement](#)

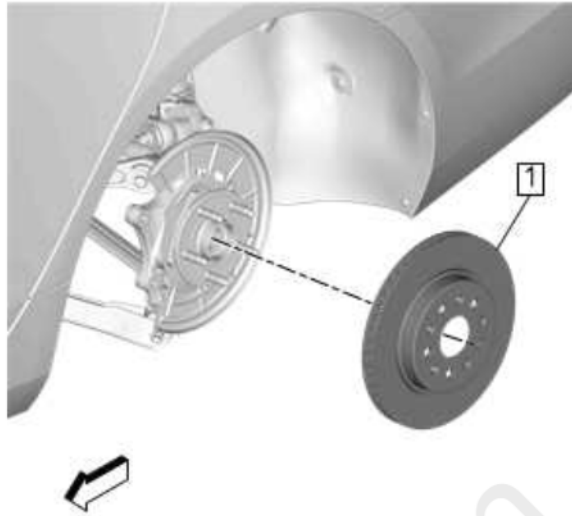


Fig. 6: Rear Brake Rotor

Courtesy of GENERAL MOTORS COMPANY

3. Rear Wheel Speed Sensor (1) @ Knuckle » Remove - [Rear Wheel Speed Sensor Replacement](#)

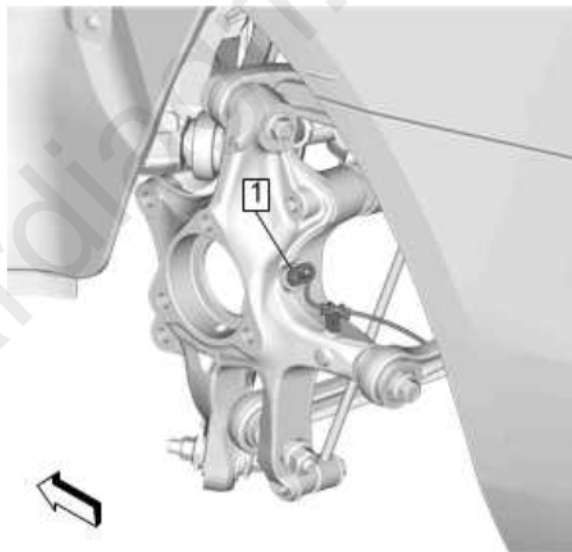


Fig. 7: Rear Wheel Speed Sensor

Courtesy of GENERAL MOTORS COMPANY

4. Rear Wheel Bearing and Hub Assembly (1) » Remove - [Rear Wheel Bearing and Hub Replacement](#)

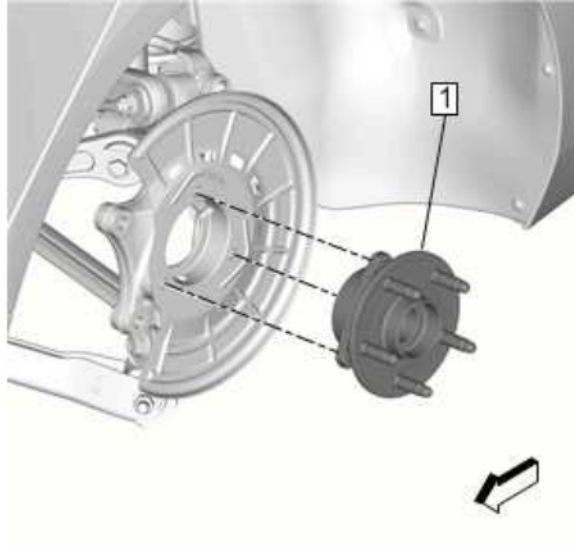


Fig. 8: Rear Wheel Bearing And Hub Assembly
 Courtesy of GENERAL MOTORS COMPANY

5. Rear Brake Shield (1) » Remove - [Rear Brake Shield Replacement](#)

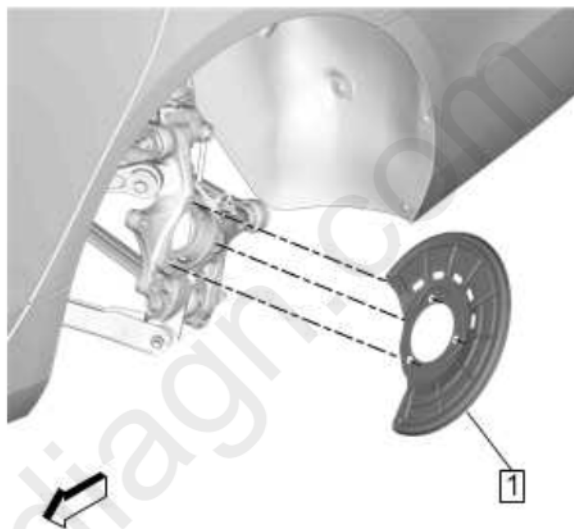


Fig. 9: Rear Brake Shield
 Courtesy of GENERAL MOTORS COMPANY

6. Stabilizer Shaft Link (1) @ Knuckle » Separate - [Stabilizer Shaft Link Replacement](#)

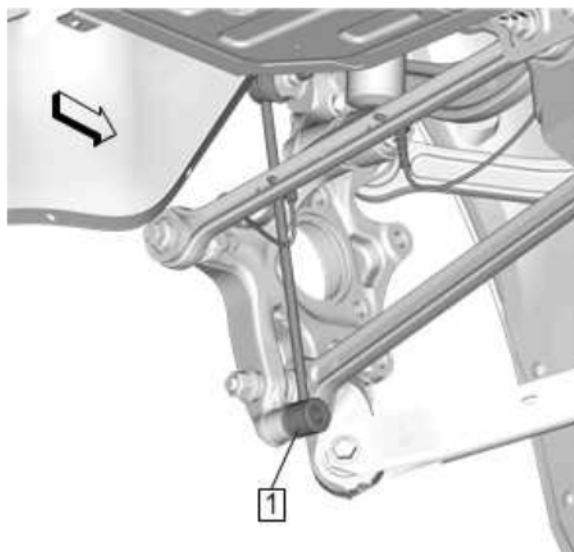


Fig. 10: Stabilizer Shaft Link
 Courtesy of GENERAL MOTORS COMPANY

7. Rear Shock Absorber (1) @ Knuckle » Separate - [Shock Absorber and Spring Removal and Installation](#)

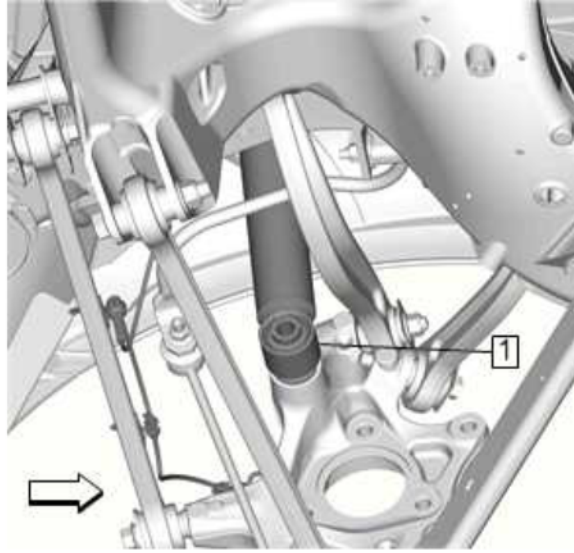


Fig. 11: Rear Shock Absorber

Courtesy of GENERAL MOTORS COMPANY

8. Rear Suspension Adjust Link (1) @ Knuckle» Separate - [Adjust Link Replacement \(Without NYS\)](#)[Adjust Link Replacement \(With NYS\)](#)

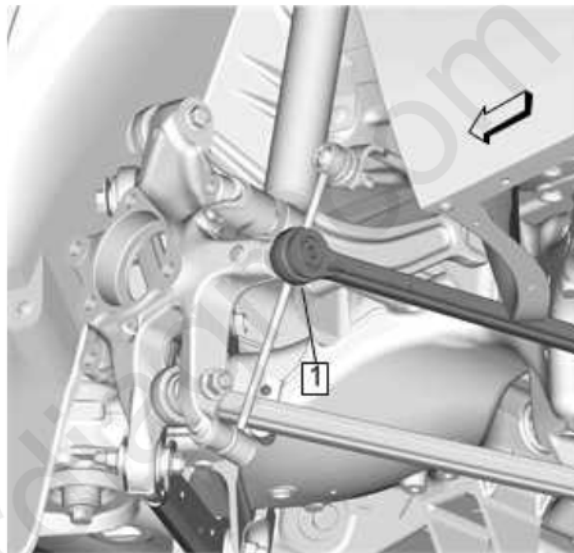


Fig. 12: Rear Suspension Adjust Link

Courtesy of GENERAL MOTORS COMPANY

9. Rear Suspension Lower Trailing Link (1) @ Knuckle» Separate - [Rear Suspension Lower Trailing Link Replacement](#)

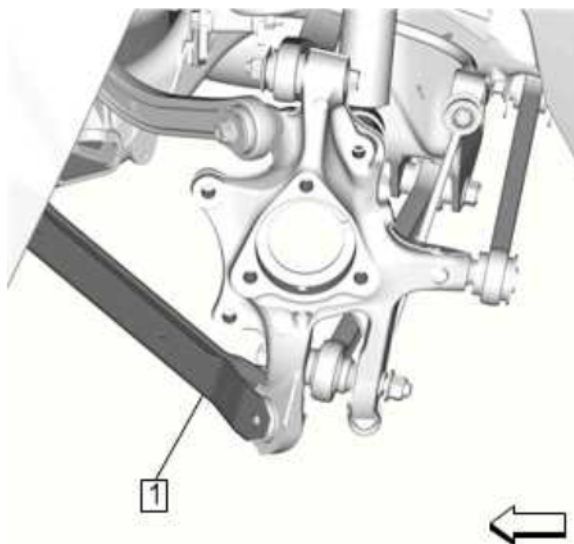


Fig. 13: Rear Suspension Lower Trailing Link

Courtesy of GENERAL MOTORS COMPANY

10. Rear Suspension Upper Trailing Link (1) @ Knuckle» Separate - [Rear Suspension Upper Trailing Link Replacement](#)

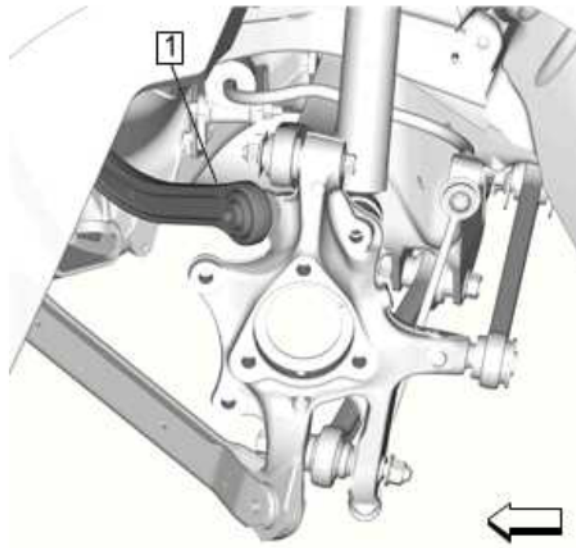


Fig. 14: Rear Suspension Upper Trailing Link
Courtesy of GENERAL MOTORS COMPANY

11. Rear Suspension Lateral Link (1) @ Knuckle» Separate - [Rear Suspension Lateral Link Replacement](#)

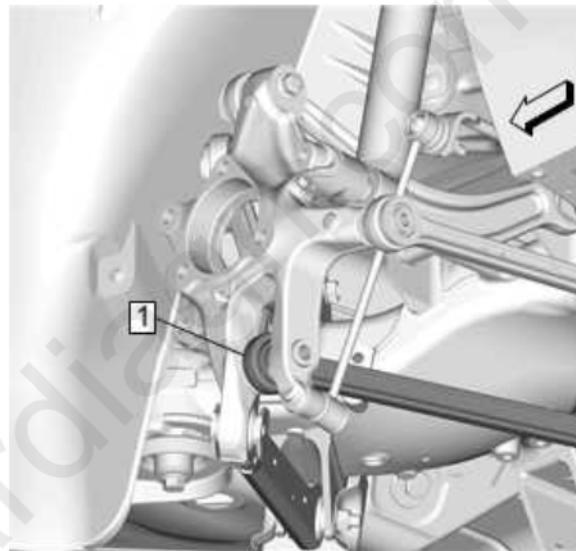


Fig. 15: Rear Suspension Lateral Link
Courtesy of GENERAL MOTORS COMPANY

12. Rear Suspension Upper Lateral Link (1) @ Knuckle» Separate - [Rear Suspension Upper Lateral Link Replacement](#)

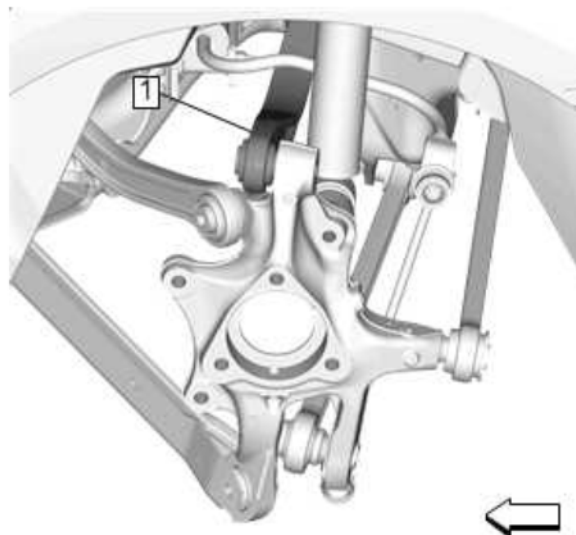


Fig. 16: Rear Suspension Upper Lateral Link
Courtesy of GENERAL MOTORS COMPANY

13. Remove the knuckle from the vehicle. (1)

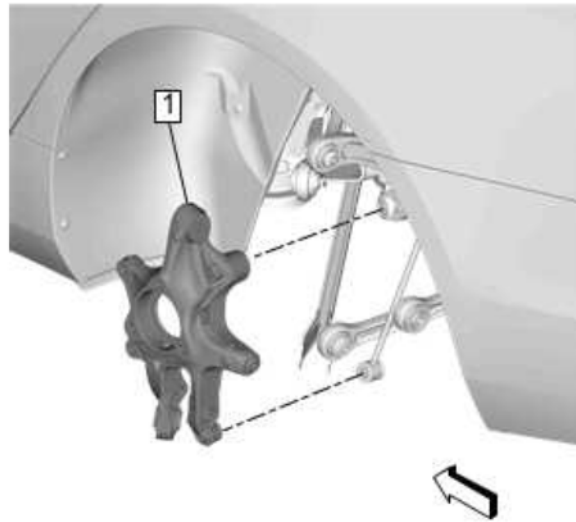


Fig. 17: Knuckle
Courtesy of GENERAL MOTORS COMPANY

Installation Procedure

1. Position the knuckle on the vehicle. (1)

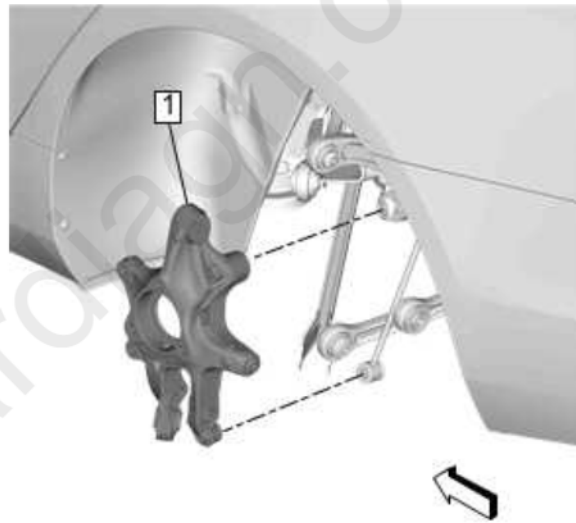


Fig. 18: Knuckle
Courtesy of GENERAL MOTORS COMPANY

2. Rear Suspension Upper Lateral Link (1) @ Knuckle» Install - **Rear Suspension Upper Lateral Link Replacement**

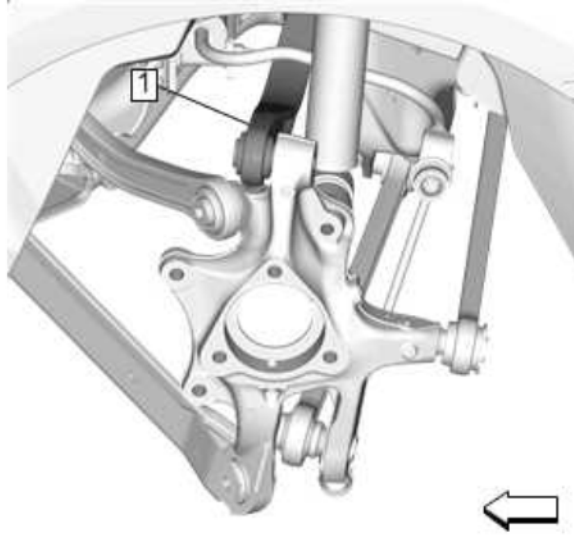


Fig. 19: Rear Suspension Upper Lateral Link
 Courtesy of GENERAL MOTORS COMPANY

3. Install a suitable socket (2) that is slightly smaller than the outside diameter of the knuckle bushing (1).

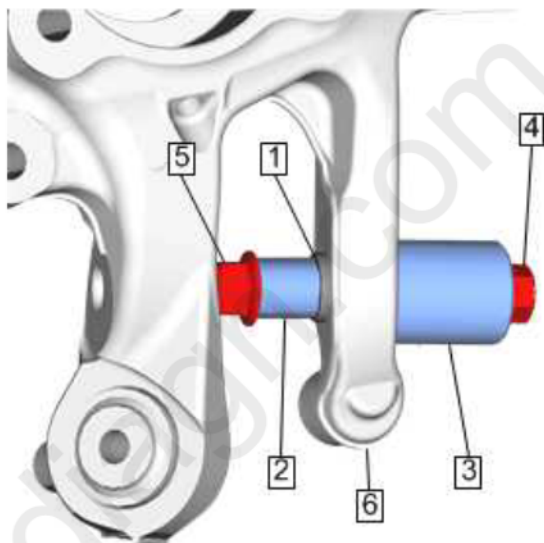


Fig. 20: Socket, Knuckle Bushing, Bolt And Nut
 Courtesy of GENERAL MOTORS COMPANY

CAUTION: Reposition the knuckle bushing prior to installing the rear suspension lateral link. Failure to reposition the knuckle bushing may cause damage to the rear suspension lateral link outer ball joint, requiring additional repairs.

4. Install a suitable socket (3) that is larger than the outside diameter of the knuckle bushing on the opposite side of the knuckle (6).
5. Install a suitable bolt (4) and nut (5).
6. Ensure that the socket (1) is larger than the bushing and sits flush against the knuckle (2).

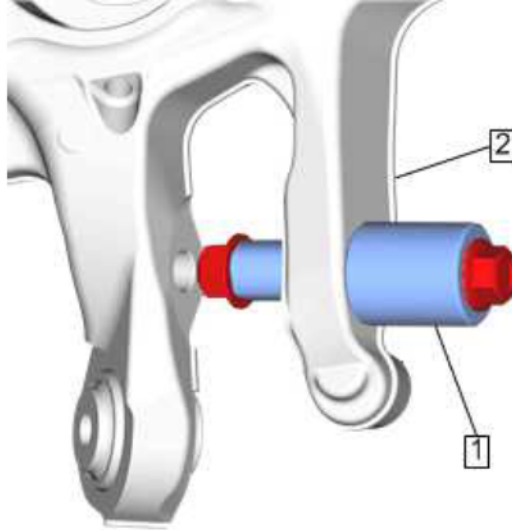


Fig. 21: Socket And Knuckle

Courtesy of GENERAL MOTORS COMPANY

7. Rotate the nut (1) forcing the socket (2) and the bushing (3) flush with the knuckle (4).

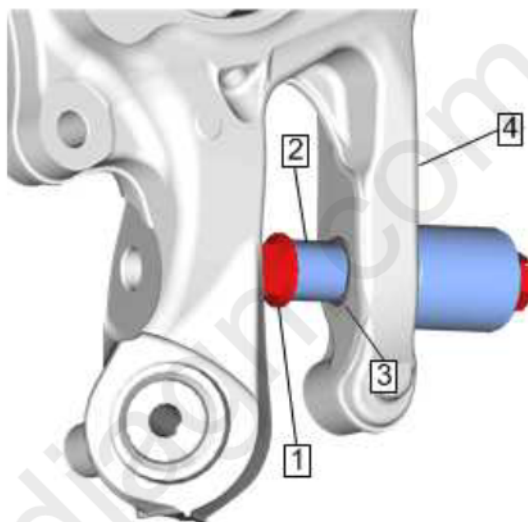


Fig. 22: Nut, Socket, Bushing And Knuckle

Courtesy of GENERAL MOTORS COMPANY

8. Rear Suspension Lateral Link (1) @ Knuckle» Install - **Rear Suspension Lateral Link Replacement**

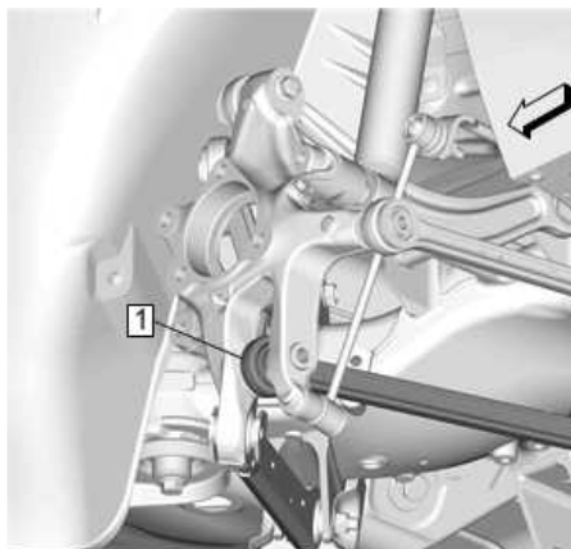


Fig. 23: Rear Suspension Lateral Link

Courtesy of GENERAL MOTORS COMPANY

9. Rear Suspension Upper Trailing Link (1) @ Knuckle» Install - [Rear Suspension Upper Trailing Link Replacement](#)

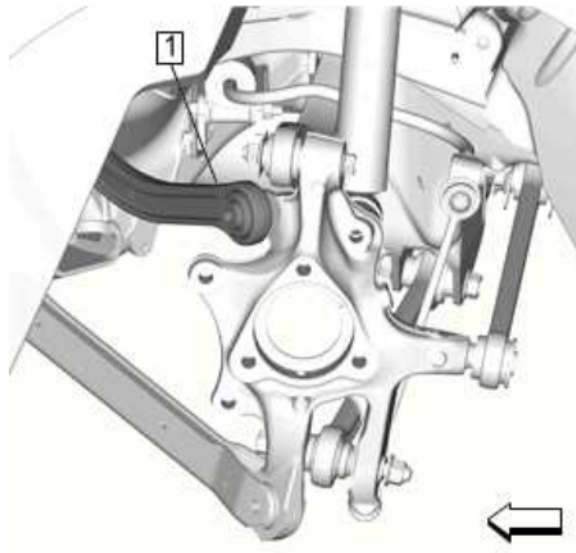


Fig. 24: Rear Suspension Upper Trailing Link
Courtesy of GENERAL MOTORS COMPANY

10. Rear Suspension Lower Trailing Link (1) @ Knuckle» Install - [Rear Suspension Lower Trailing Link Replacement](#)

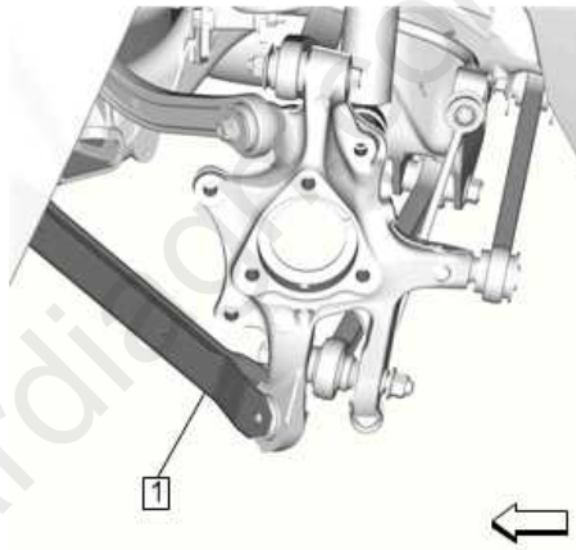
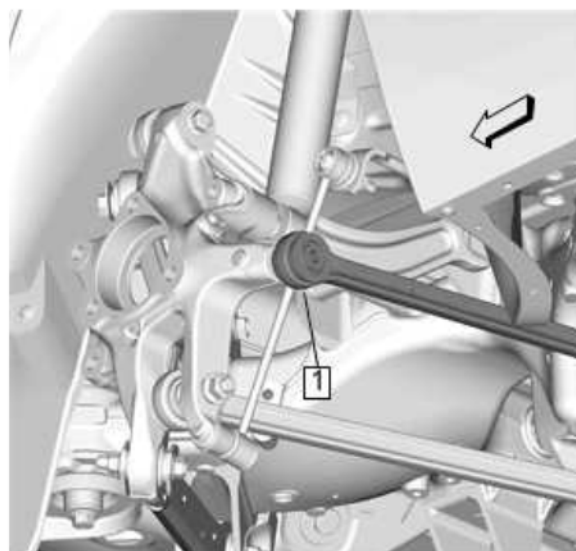


Fig. 25: Rear Suspension Lower Trailing Link
Courtesy of GENERAL MOTORS COMPANY

11. Rear Suspension Adjust Link (1) @ Knuckle» Install - [Adjust Link Replacement \(Without NYS\)](#)[Adjust Link Replacement \(With NYS\)](#)



12. Rear Shock Absorber (1) @ Knuckle» Install - [**Shock Absorber and Spring Removal and Installation**](#)

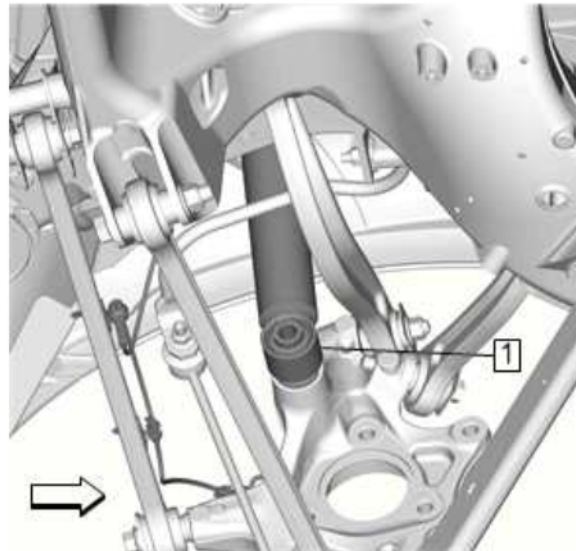


Fig. 27: Rear Shock Absorber
Courtesy of GENERAL MOTORS COMPANY

13. Stabilizer Shaft Link (1) @ Knuckle» Install - [**Stabilizer Shaft Link Replacement**](#)

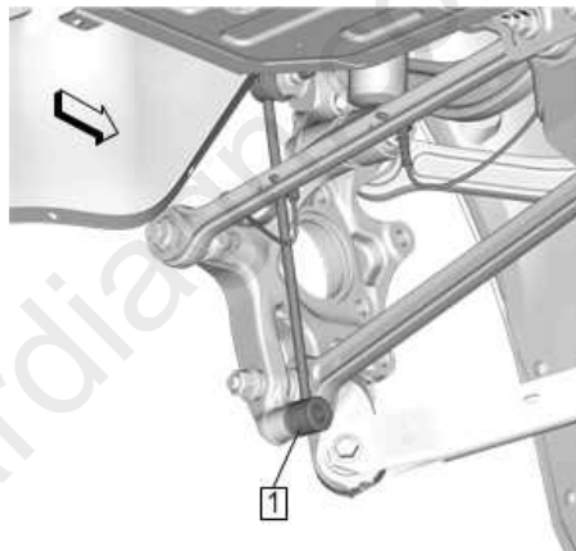


Fig. 28: Stabilizer Shaft Link
Courtesy of GENERAL MOTORS COMPANY

14. Rear Brake Shield (1)» Install - [**Rear Brake Shield Replacement**](#)

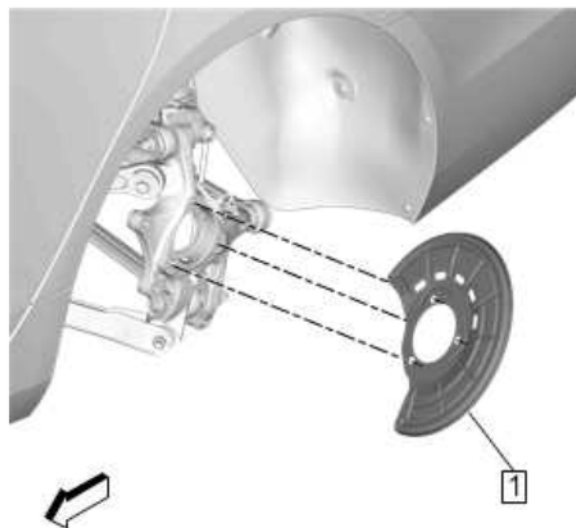


Fig. 29: Rear Brake Shield

Courtesy of GENERAL MOTORS COMPANY

15. Rear Wheel Bearing and Hub Assembly (1) » Install - [Rear Wheel Bearing and Hub Replacement](#)

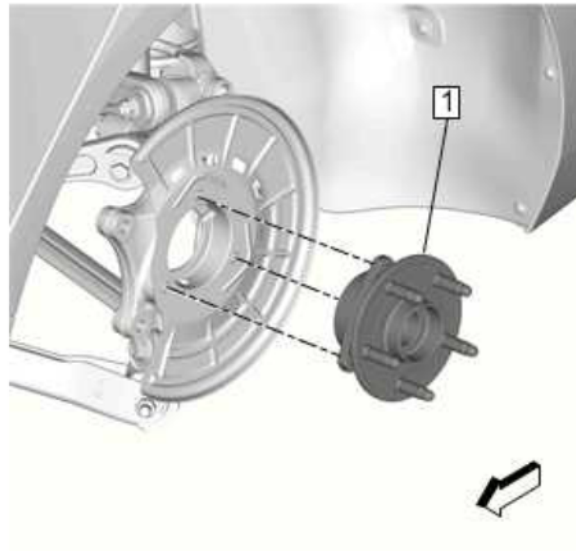


Fig. 30: Rear Wheel Bearing And Hub Assembly

Courtesy of GENERAL MOTORS COMPANY

16. Rear Wheel Speed Sensor (1) @ Knuckle » Install - [Rear Wheel Speed Sensor Replacement](#)

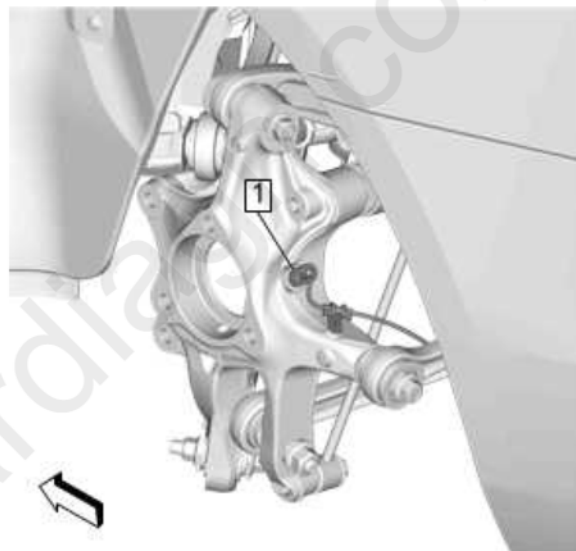
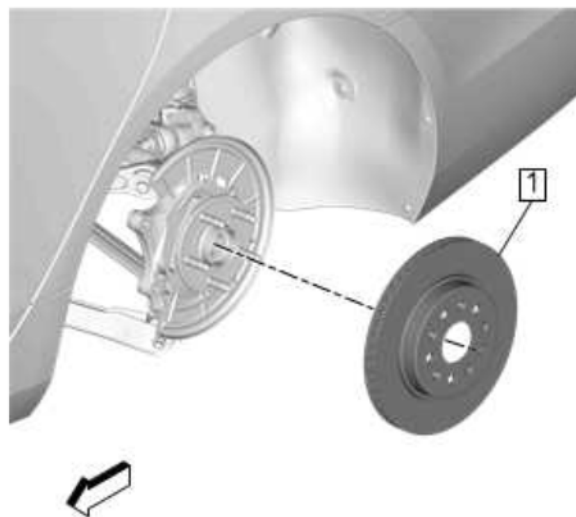


Fig. 31: Rear Wheel Speed Sensor

Courtesy of GENERAL MOTORS COMPANY

17. Rear Brake Rotor (1) » Install - [Rear Brake Rotor Replacement](#)



18. Install the rear tire and wheel assembly. Refer to [Tire and Wheel Removal and Installation](#)

STABILIZER SHAFT REPLACEMENT

Removal Procedure

1. Remove the tire and wheel assembly. Refer to [Tire and Wheel Removal and Installation](#)
2. Rear Suspension Cradle » Remove - [Rear Suspension Cradle Replacement](#)
3. Rear Stabilizer Shaft Link (1) @ Right Side » Separate - [Stabilizer Shaft Link Replacement](#)

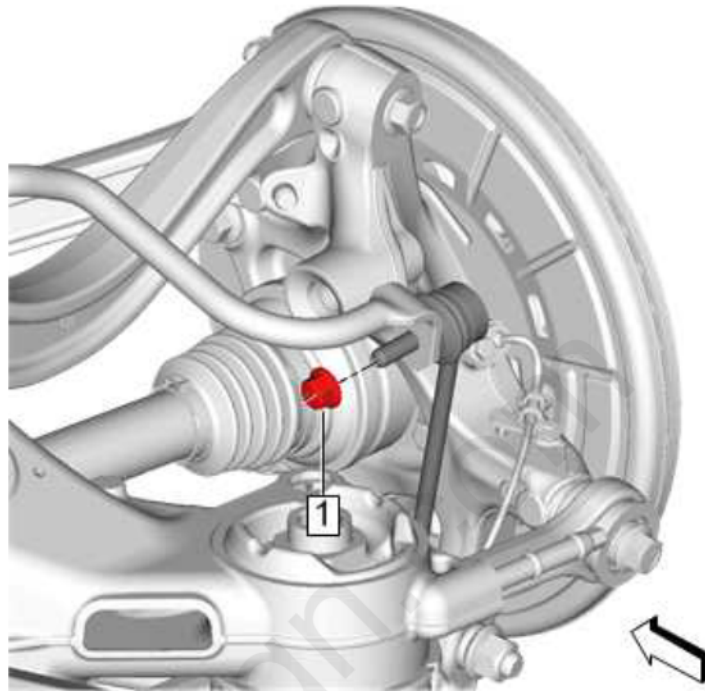


Fig. 33: Rear Stabilizer Shaft Link

Courtesy of GENERAL MOTORS COMPANY

4. Rear Stabilizer Shaft Link (1) @ Left Side » Separate - [Stabilizer Shaft Link Replacement](#)

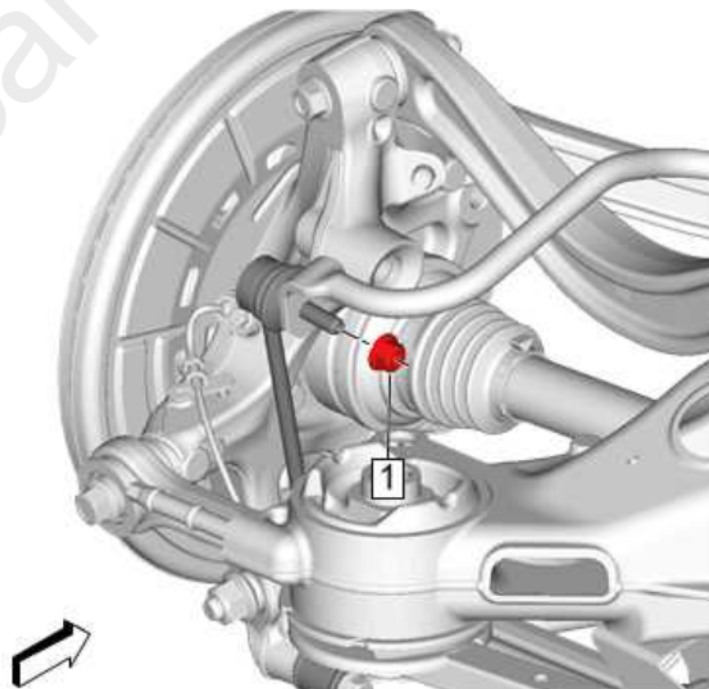


Fig. 34: Rear Stabilizer Shaft Link

Courtesy of GENERAL MOTORS COMPANY

5. Rear Stabilizer Shaft Insulator Clamp Nut (1) » Remove [2x]

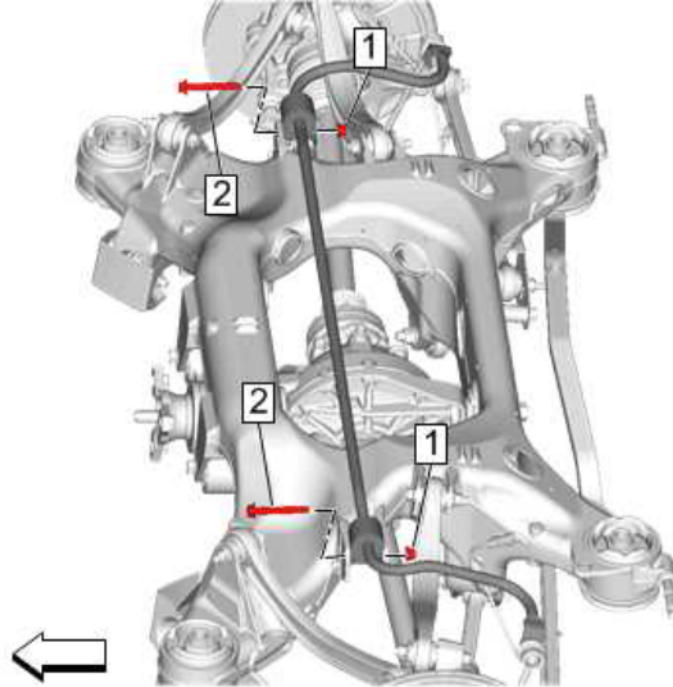


Fig. 35: Rear Stabilizer Shaft Insulator Clamp Nuts and Bolts
Courtesy of GENERAL MOTORS COMPANY

6. Rear Stabilizer Shaft Insulator Clamp Bolt (2) » Remove [2x]
7. Rear Stabilizer Shaft (1) » Remove

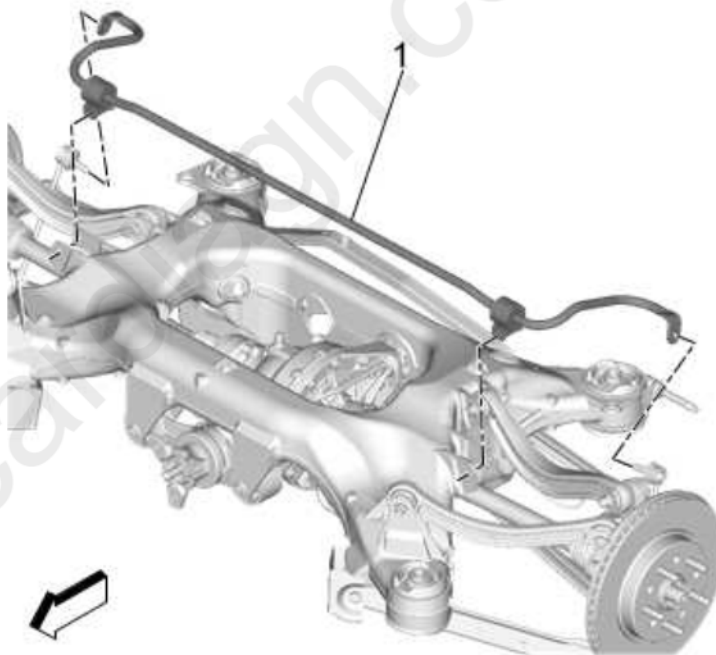


Fig. 36: Rear Stabilizer Shaft
Courtesy of GENERAL MOTORS COMPANY

Installation Procedure

1. Rear Stabilizer Shaft (1) » Install

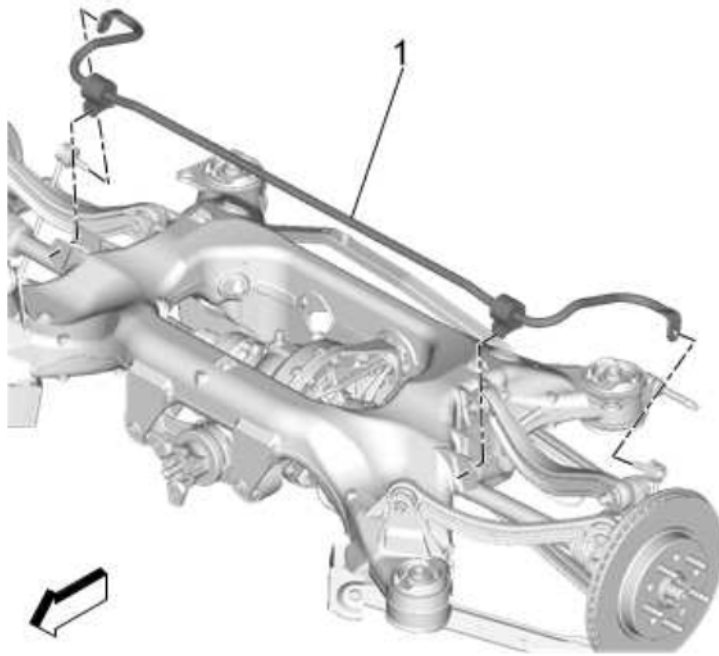


Fig. 37: Rear Stabilizer Shaft

Courtesy of GENERAL MOTORS COMPANY

2. Rear Stabilizer Shaft Insulator Clamp Bolt (2) » Install [2x]

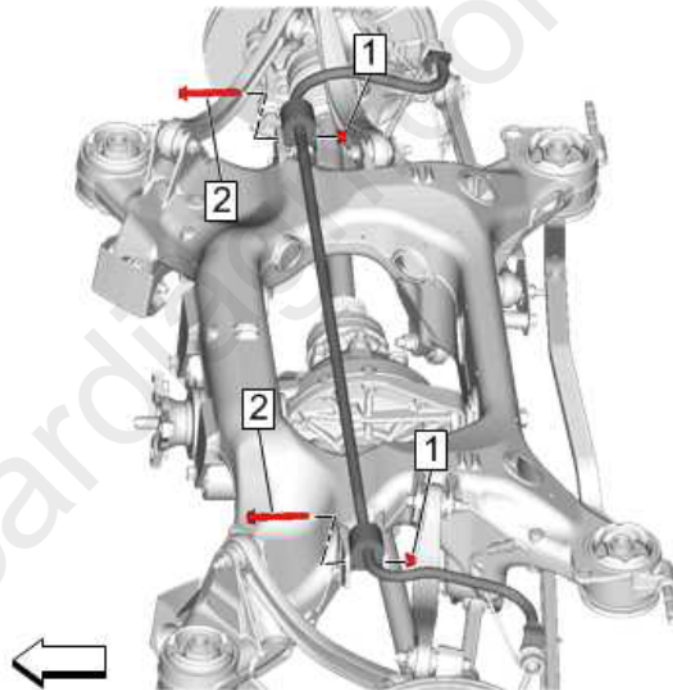


Fig. 38: Rear Stabilizer Shaft Insulator Clamp Nuts and Bolts

Courtesy of GENERAL MOTORS COMPANY

3. Rear Stabilizer Shaft Insulator Clamp Nut (1) » Install [2x]
4. **Tighten the Bolt to 58 N.m (43 lb ft)**

CAUTION: Refer to **Fastener Caution** .

5. Rear Stabilizer Shaft Link (1) @ Left Side » Install - **Stabilizer Shaft Link Replacement**

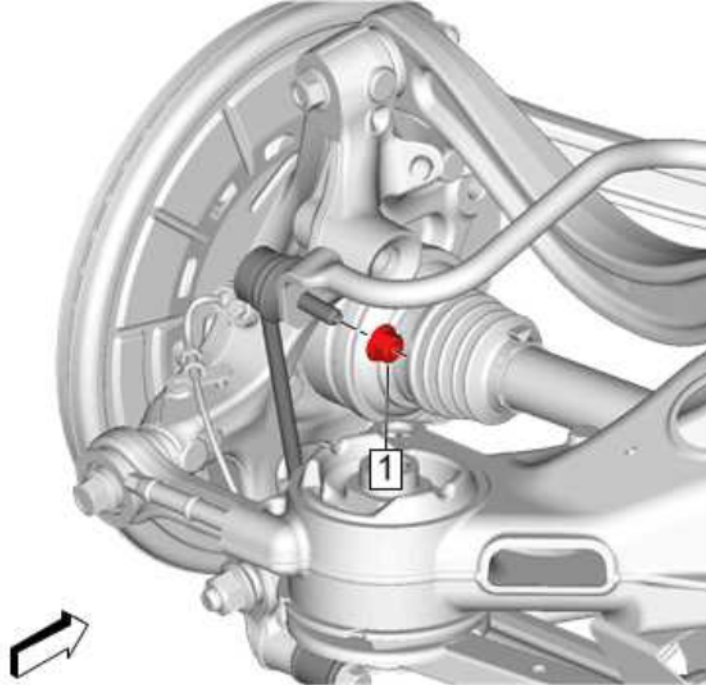


Fig. 39: Rear Stabilizer Shaft Link

Courtesy of GENERAL MOTORS COMPANY

6. Rear Stabilizer Shaft Link (1) @ Right Side» Install - [Stabilizer Shaft Link Replacement](#)

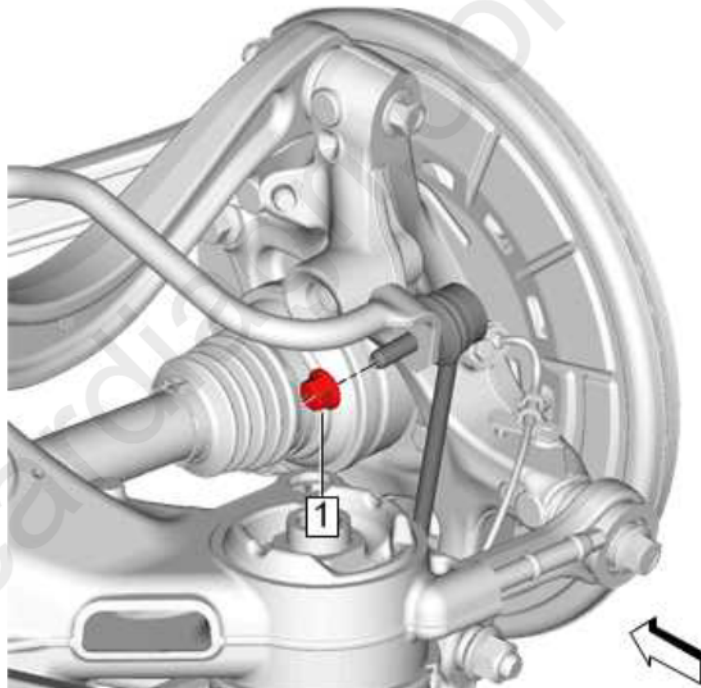


Fig. 40: Rear Stabilizer Shaft Link

Courtesy of GENERAL MOTORS COMPANY

7. Rear Shock Absorber @ Left Side» Install - [Shock Absorber and Spring Removal and Installation](#)
 8. Rear Suspension Cradle» Install - [Rear Suspension Cradle Replacement](#)
 9. Install the tire and wheel assembly. Refer to [Tire and Wheel Removal and Installation](#)

STABILIZER SHAFT LINK REPLACEMENT

Removal Procedure

1. Raise and support the vehicle. Refer to [Lifting and Jacking the Vehicle](#)
2. Rear Stabilizer Shaft Link Nut (1)» Remove

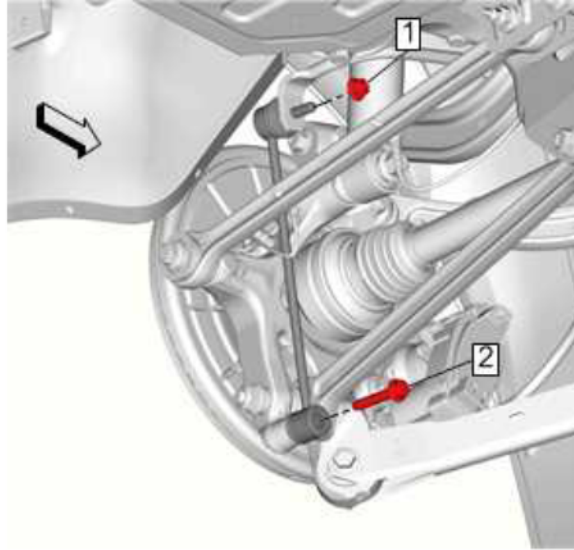


Fig. 41: Rear Stabilizer Shaft Link Nut And Bolt
 Courtesy of GENERAL MOTORS COMPANY

3. Rear Stabilizer Shaft Link Bolt (2)» Remove
4. Rear Stabilizer Shaft Link (1)» Remove

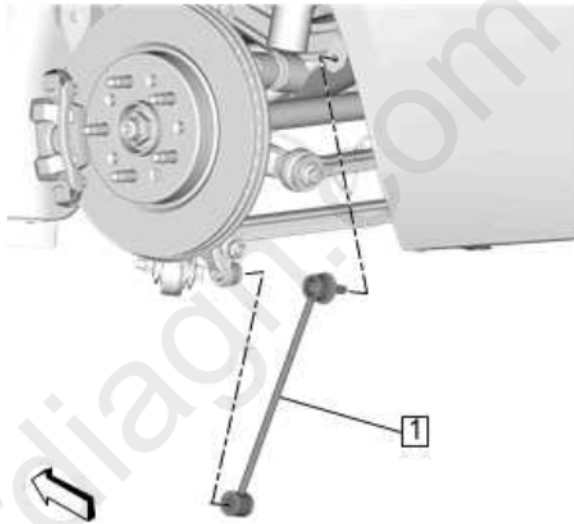
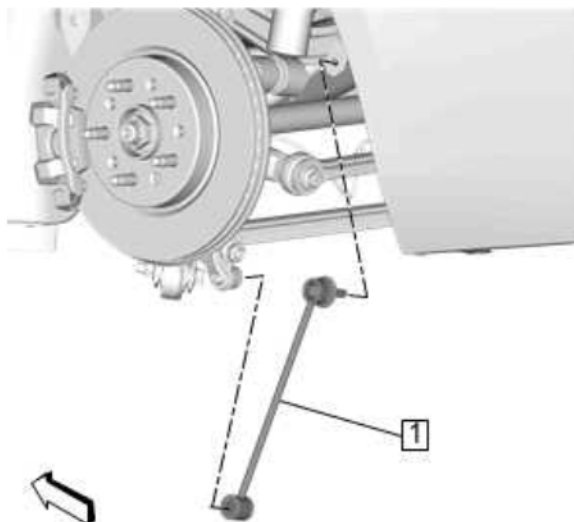


Fig. 42: Rear Stabilizer Shaft Link
 Courtesy of GENERAL MOTORS COMPANY

Installation Procedure

1. Rear Stabilizer Shaft Link (1)» Install



2. Rear Stabilizer Shaft Link Bolt (2)» Install and tighten 58 N.m (43 lb ft)

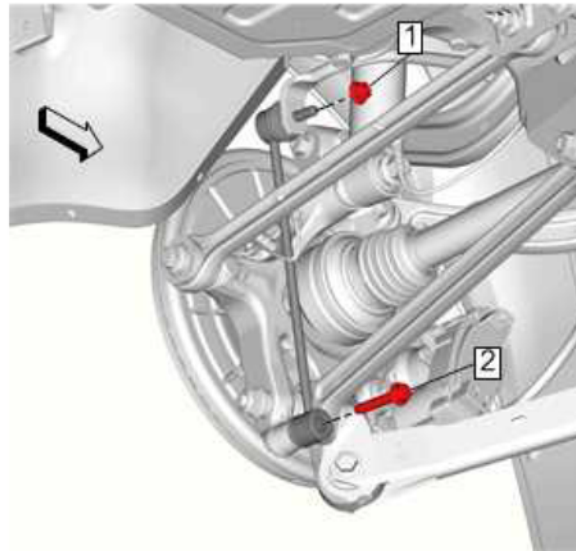


Fig. 44: Rear Stabilizer Shaft Link Nut And Bolt
Courtesy of GENERAL MOTORS COMPANY

CAUTION: Refer to **Fastener Caution** .

3. Rear Stabilizer Shaft Link Nut (1)» Install and tighten 58 N.m (43 lb ft)
4. Lower the vehicle.

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.

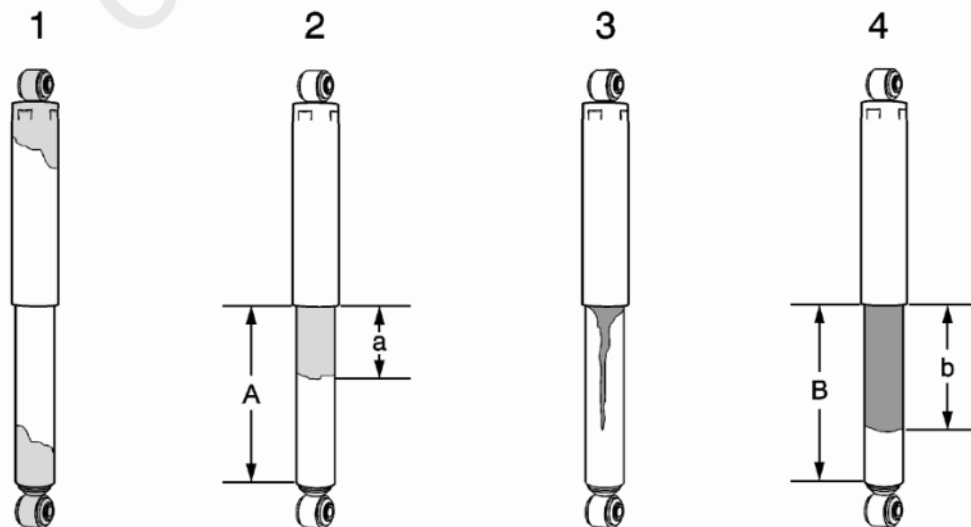


Fig. 45: Identifying Shock Absorber Conditions
Courtesy of GENERAL MOTORS COMPANY

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. Refer to [Shock Absorber and Spring Removal and Installation](#)

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.
2. Raise and support the vehicle. Refer to [Lifting and Jacking the Vehicle](#).

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

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. Refer to [Shock Absorber and Spring Removal and Installation](#)
4. If equipped with electronic suspension control system, ensure that the system is working properly. Refer to Diagnostic Starting Point - Electronic Suspension Control.
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 AND SPRING REMOVAL AND INSTALLATION

Removal Procedure

1. Remove the rear tire and wheel assembly. Refer to [Tire and Wheel Removal and Installation](#)
2. Rear Window Panel Trim» Remove - [Rear Window Panel Trim Replacement](#)
3. Rear Shock Absorber Nut @ Body (1)» Remove [3x]

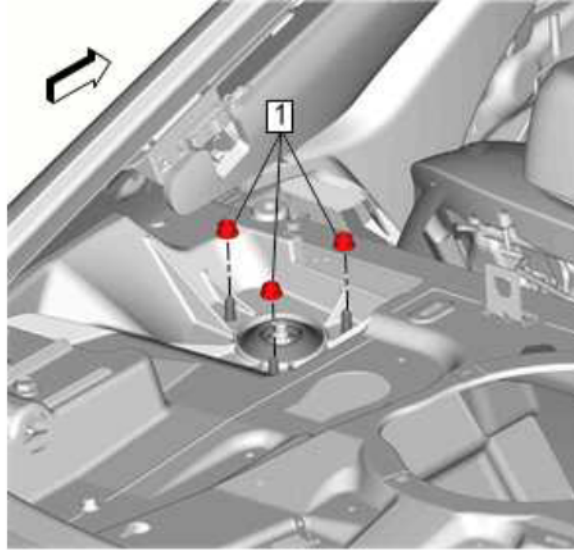


Fig. 46: Rear Shock Absorber Nut

Courtesy of GENERAL MOTORS COMPANY

4. Rear Shock Absorber Bolt (1)» Remove and DISCARD

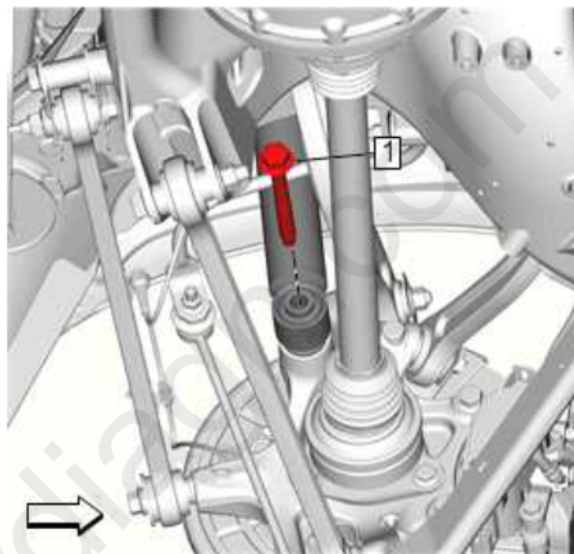


Fig. 47: Rear Shock Absorber Bolt

Courtesy of GENERAL MOTORS COMPANY

5. Remove the rear shock absorber electrical connection, if applicable.
6. Rear Shock Absorber (1)» Remove

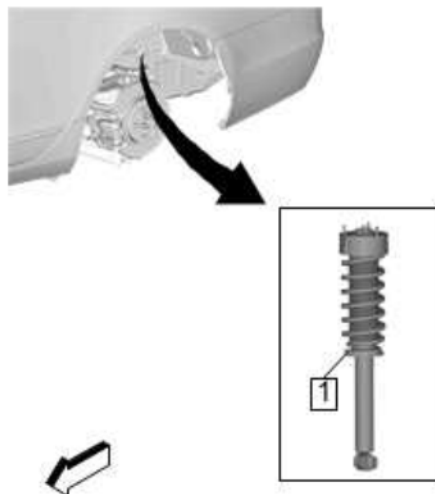


Fig. 48: Rear Shock Absorber

Courtesy of GENERAL MOTORS COMPANY

1. Rear Shock Absorber (1)» Install

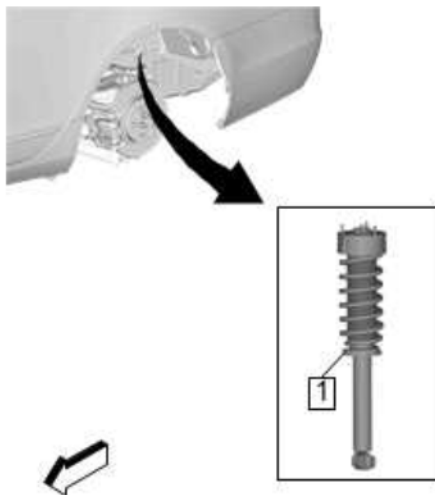


Fig. 49: Rear Shock Absorber

Courtesy of GENERAL MOTORS COMPANY

2. Rear Shock Absorber Nut @ Body (1) [3x]» Install and tighten 22 N.m (16 lb ft)

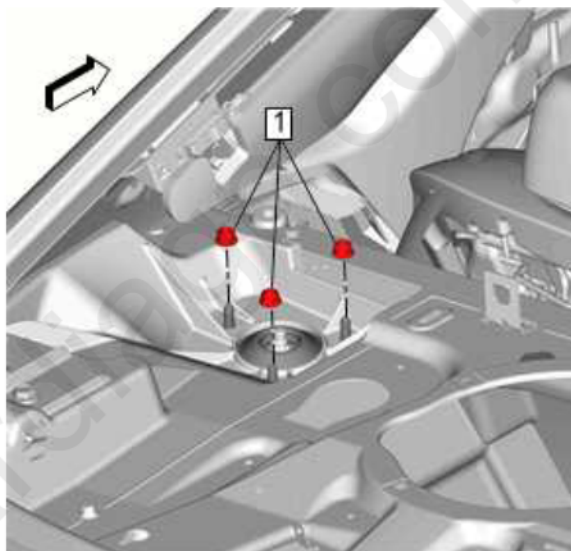


Fig. 50: Rear Shock Absorber Nut

Courtesy of GENERAL MOTORS COMPANY

CAUTION: Refer to **Fastener Caution** .

3. Rear Shock Absorber Bolt (1)» Install a NEW bolt.

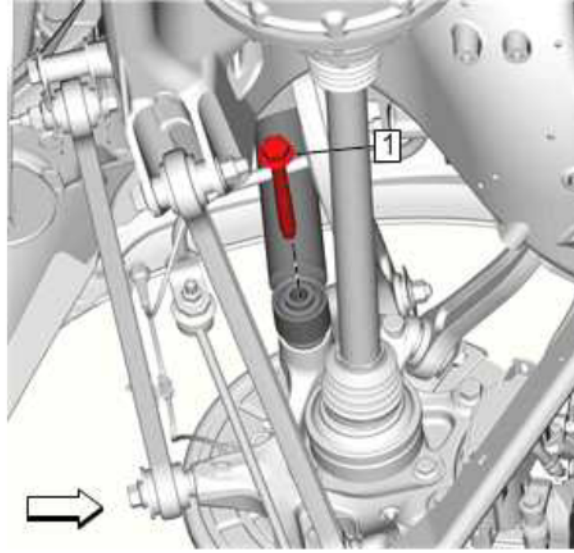


Fig. 51: Rear Shock Absorber Bolt

Courtesy of GENERAL MOTORS COMPANY

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.

Tighten

1. First Pass: 160 N.m (118 lb ft)
2. Final Pass: (45-60 degrees)
4. Install the rear shock absorber electrical connection, if applicable.
5. Rear Window Panel Trim» Install - [Rear Window Panel Trim Replacement](#)
6. Install the tire and wheel assembly. Refer to [Tire and Wheel Removal and Installation](#)

SHOCK ABSORBER, SHOCK ABSORBER COMPONENT OR SPRING REPLACEMENT (WITHOUT F55)

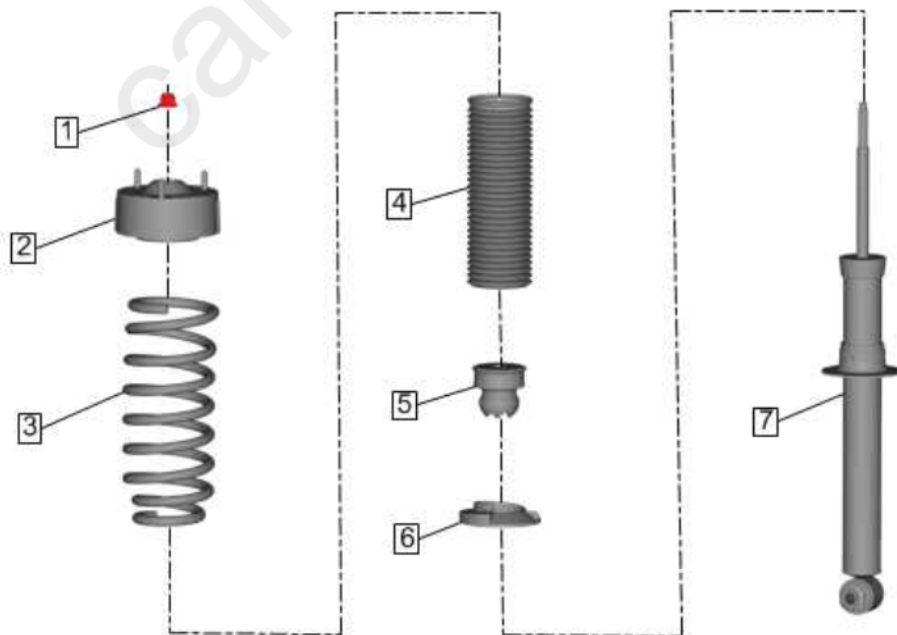


Fig. 52: Shock Absorber, Shock Absorber Component or Spring

Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
WARNING: To prevent personal injury and/or component damage, use the proper tools to support and compress the coil spring prior to removal of the strut shaft nut when removing the coil spring. The coil spring is under extreme pressure and can become a projectile should the spring separate from the strut before all of the tension is relieved.	
Preliminary Procedure Shock Absorber and Spring Removal and Installation	
1	Rear Shock Absorber Shock Rod to Shock Mount Nut CAUTION: Refer to Fastener Caution . Procedure 1. Use the CH-45400-A compressor to compress the front coil spring. 2. Use the CH-50732 socket to remove and install the front suspension strut mount nut. Tighten 50 N.m (37 lb ft) Special Tools • CH-45400-A Strut Spring Compressor • CH-50732 Strut Rod Nut Socket, 18 mm Equivalent regional tools: Special Tools
2	Rear Shock Absorber Mount
3	Rear Coil Spring NOTE: Do NOT blemish or modify the coating on the rear coil spring in any manner.
4	Rear Shock Absorber Boot
5	Rear Shock Absorber Bumper
6	Rear Coil Spring Lower Insulator
7	Rear Shock Absorber

SHOCK ABSORBER, SHOCK ABSORBER COMPONENT OR SPRING REPLACEMENT (WITH F55)

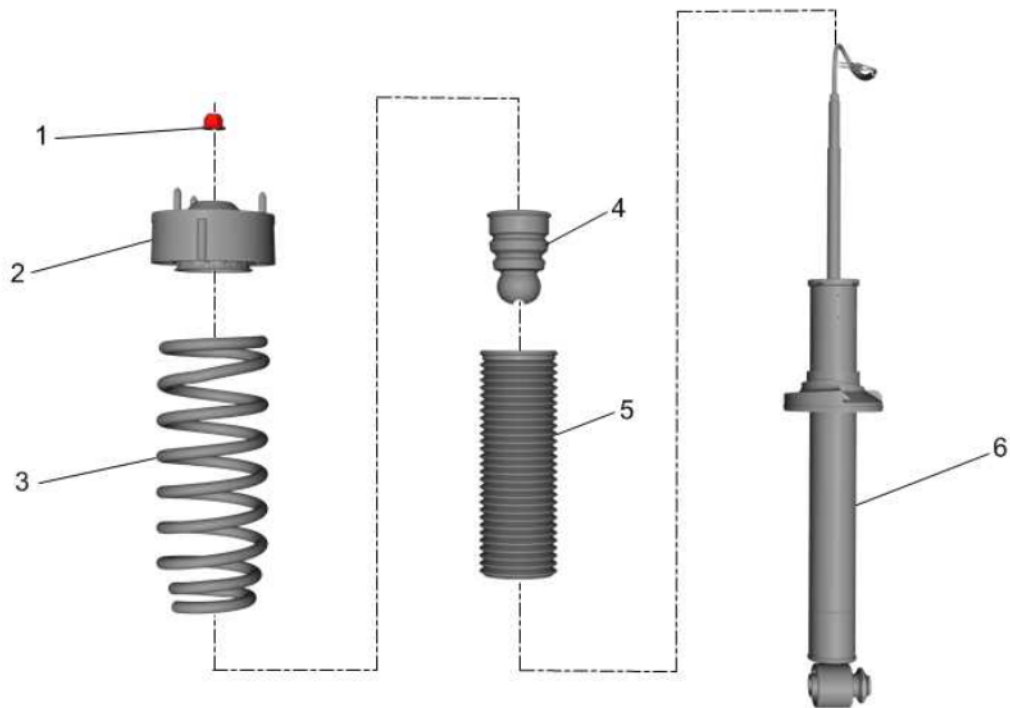


Fig. 53: Shock Absorber, Shock Absorber Component or Spring

Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
WARNING: To prevent personal injury and/or component damage, use the proper tools to support and compress the coil spring prior to removal of the strut shaft nut when removing the coil spring. The coil spring is under extreme pressure and can become a projectile should the spring separate from the strut before all of the tension is relieved.	
Preliminary Procedure Shock Absorber and Spring Removal and Installation Disassemble the electrical connector for the electronic suspension. Terminal Removal	
1	Rear Shock Absorber Shock Rod to Shock Mount Nut CAUTION: Refer to Fastener Caution . Procedure 1. Use the CH-45400-A compressor to compress the front coil spring. 2. Use the CH-50732 socket to remove and install the front suspension strut mount nut. Tighten 50 N.m (37 lb ft) Special Tools • CH-45400-A Strut Spring Compressor • CH-50732 Strut Rod Nut Socket, 18 mm Equivalent regional tools: Special Tools
2	Rear Shock Absorber Mount

Callout	Component Name
3	Rear Coil Spring NOTE: Do NOT blemish or modify the coating on the rear coil spring in any manner.
4	Rear Shock Absorber Bumper
5	Rear Shock Absorber Boot
6	Rear Shock Absorber

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.

1. Make an indentation 10 mm (0.4 in) from the bottom of the tube (3) using a centerpunch.

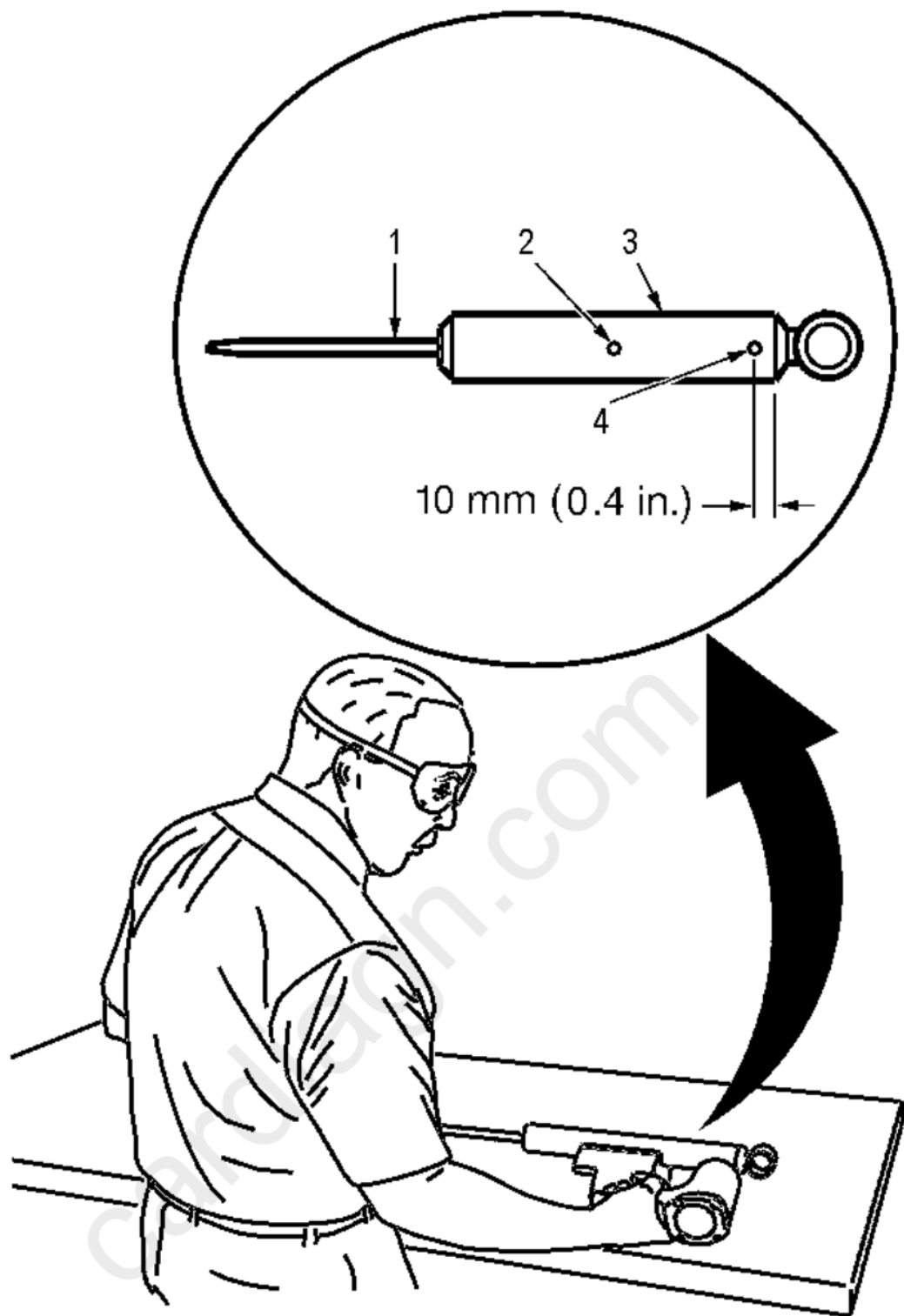


Fig. 54: Drilling Hole In Shock Absorber At Centerpunched Locations
Courtesy of GENERAL MOTORS COMPANY

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.

ADJUST LINK REPLACEMENT (WITHOUT NYS)

Removal Procedure

1. Remove the tire and wheel assembly. Refer to [Tire and Wheel Removal and Installation](#)
2. Rear Wheel Speed Sensor Harness (1) @ Rear Suspension Adjust Link» Separate

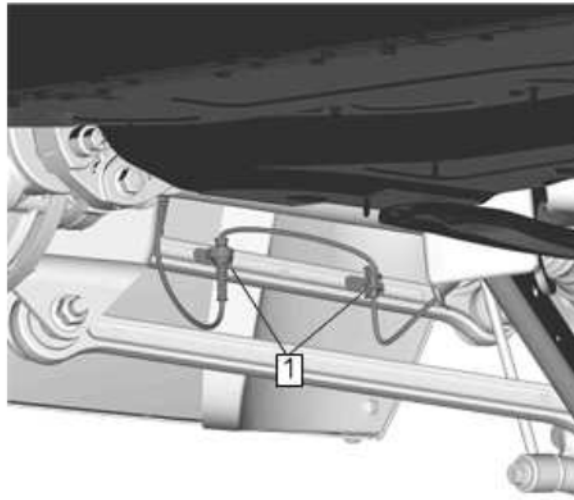


Fig. 55: Rear Wheel Speed Sensor Harness
Courtesy of GENERAL MOTORS COMPANY

3. Rear Suspension Adjust Link Outer Bolt (1)» Remove and DISCARD

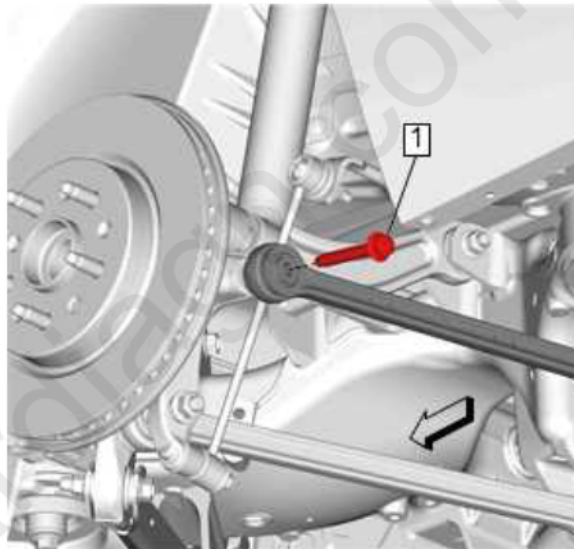


Fig. 56: Rear Suspension Adjust Link Outer Bolt
Courtesy of GENERAL MOTORS COMPANY

4. Rear Suspension Adjust Link Nut (1)» Remove

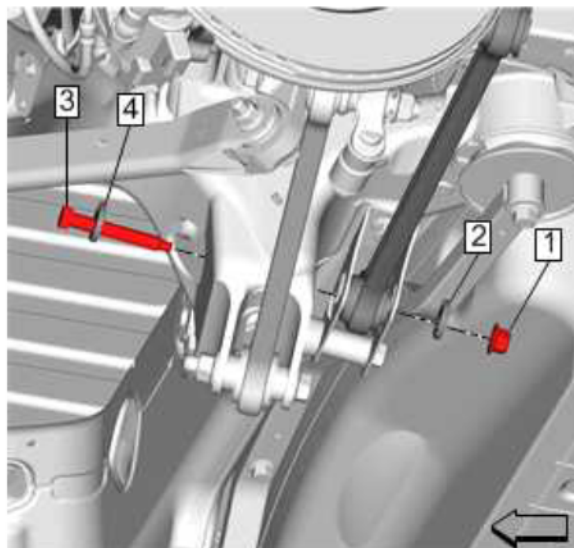


Fig. 57: Rear Suspension Adjust Link Nut And Link Cam
Courtesy of GENERAL MOTORS COMPANY

5. Rear Suspension Adjust Link Cam (2) » Remove
6. Rear Suspension Adjust Link Inner Bolt (3) » Remove
7. Rear Suspension Adjust Link Cam (4) » Remove
8. Rear Suspension Adjust Link (1) » Remove

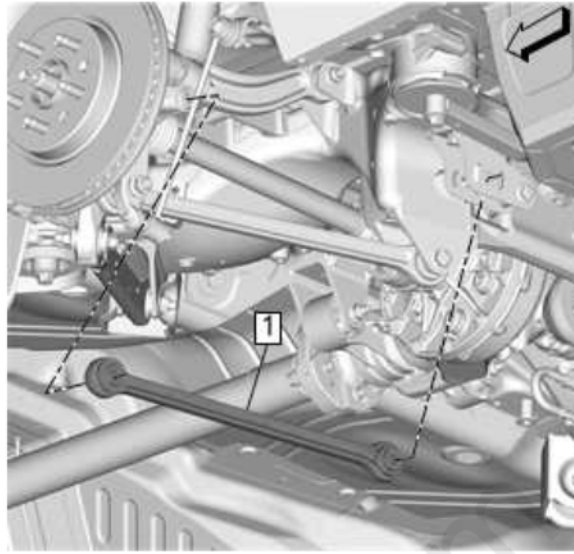


Fig. 58: Rear Suspension Adjust Link
Courtesy of GENERAL MOTORS COMPANY

Installation Procedure

1. Rear Suspension Adjust Link (1) » Install

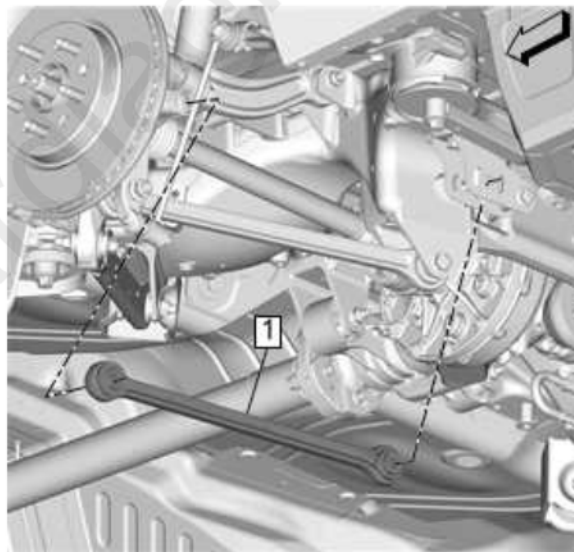


Fig. 59: Rear Suspension Adjust Link
Courtesy of GENERAL MOTORS COMPANY

2. Rear Suspension Adjust Link Inner Bolt (3) » Install

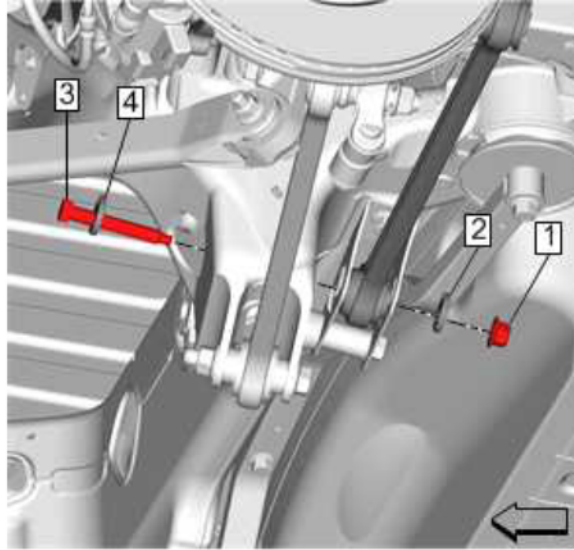


Fig. 60: Rear Suspension Adjust Link Nut And Link Cam

Courtesy of GENERAL MOTORS COMPANY

CAUTION: Refer to **Fastener Caution** .

3. Rear Suspension Adjust Link Cam (4)» Install
4. Rear Suspension Adjust Link Cam (2)» Install
5. Rear Suspension Adjust Link Nut (1)» Install and tighten 100 N.m (74 lb ft)
6. Rear Suspension Adjust Link Outer Bolt (1)» Install a NEW bolt.

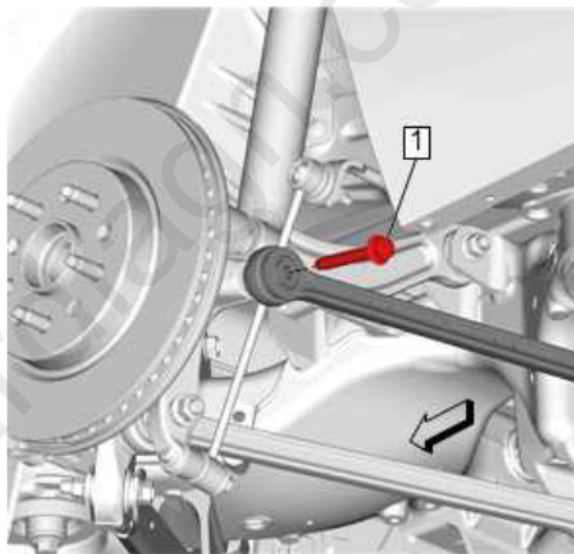


Fig. 61: Rear Suspension Adjust Link Outer Bolt

Courtesy of GENERAL MOTORS COMPANY

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.

Tighten

1. First Pass: 100 N.m (74 lb ft)
 2. Final Pass: (90-105 degrees)
7. Rear Wheel Speed Sensor Harness (1) @ Rear Suspension Adjust Link» Install

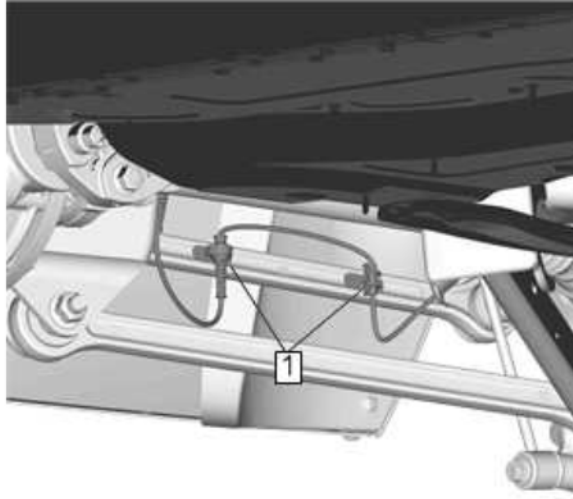


Fig. 62: Rear Wheel Speed Sensor Harness

Courtesy of GENERAL MOTORS COMPANY

8. Check the rear wheel alignment. Refer to [Rear Toe Adjustment \(Without NYS\)](#)

ADJUST LINK REPLACEMENT (WITH NYS)

Removal Procedure

1. Remove the tire and wheel assembly. Refer to [Tire and Wheel Removal and Installation](#)
2. Rear Wheel Speed Sensor Harness (1) @ Rear Suspension Adjust Link» Separate

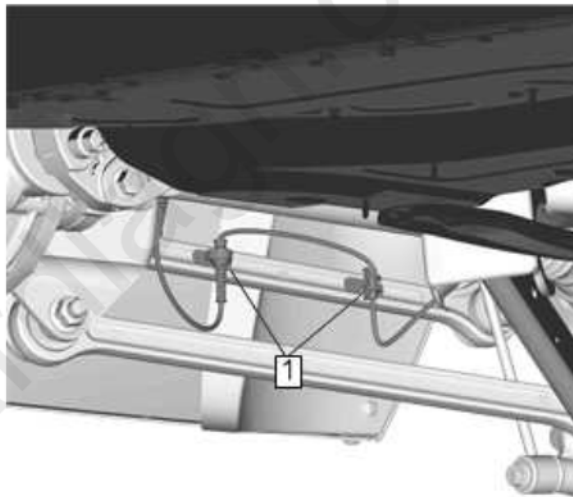


Fig. 63: Rear Wheel Speed Sensor Harness

Courtesy of GENERAL MOTORS COMPANY

3. Rear Suspension Adjust Link Outer Bolt (1)» Remove and DISCARD

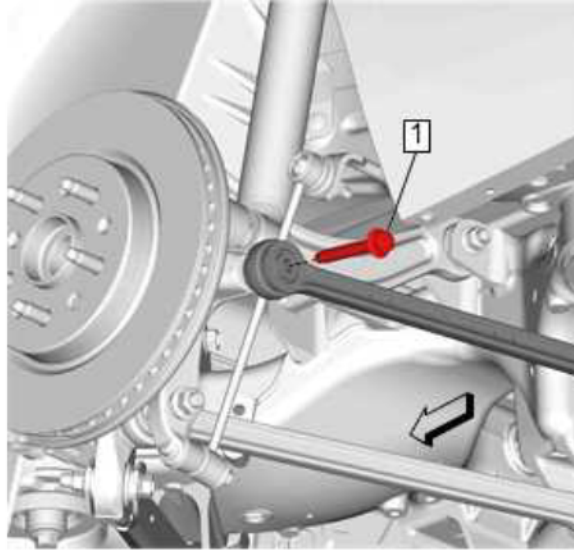


Fig. 64: Rear Suspension Adjust Link Outer Bolt
Courtesy of GENERAL MOTORS COMPANY

4. Rear Suspension Adjust Link Nut (1)» Remove

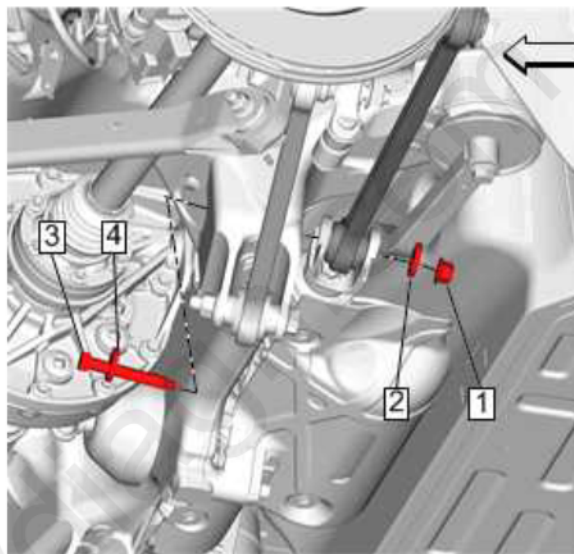
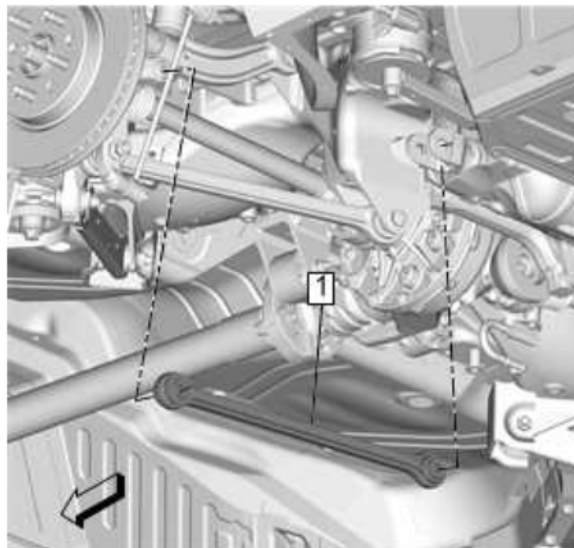


Fig. 65: Rear Suspension Adjust Link Nut And Cam
Courtesy of GENERAL MOTORS COMPANY

5. Rear Suspension Adjust Link Cam (2)» Remove
6. Rear Suspension Adjust Link Inner Bolt (3)» Remove
7. Rear Suspension Adjust Link Cam (4)» Remove
8. Rear Suspension Adjust Link (1)» Remove



Installation Procedure

1. Rear Suspension Adjust Link (1)» Install

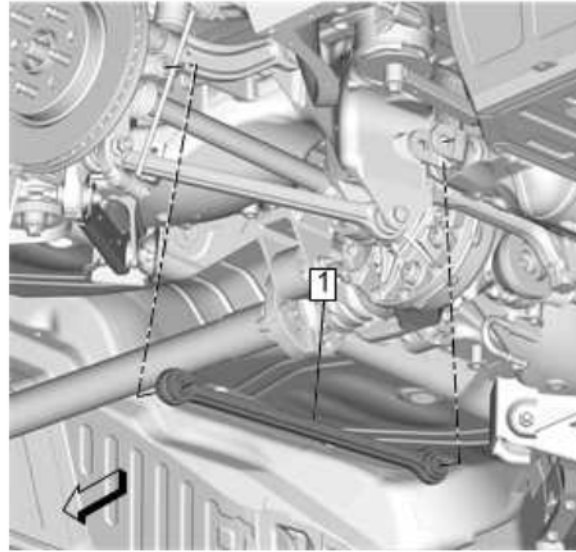


Fig. 67: Rear Suspension Adjust Link
Courtesy of GENERAL MOTORS COMPANY

2. Rear Suspension Adjust Link Inner Bolt (3)» Install

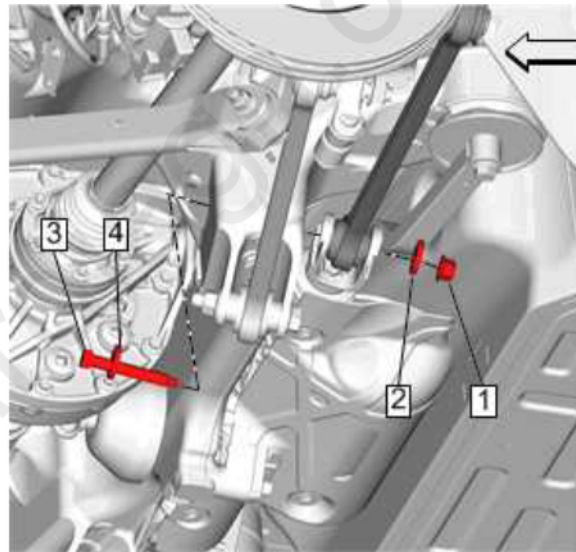


Fig. 68: Rear Suspension Adjust Link Nut And Cam
Courtesy of GENERAL MOTORS COMPANY

CAUTION: Refer to **Fastener Caution** .

3. Rear Suspension Adjust Link Cam (4)» Install
4. Rear Suspension Adjust Link Cam (2)» Install
5. Rear Suspension Adjust Link Nut (1)» Install and tighten 100 N.m (74 lb ft)
6. Rear Suspension Adjust Link Outer Bolt (1)» Install a NEW bolt.

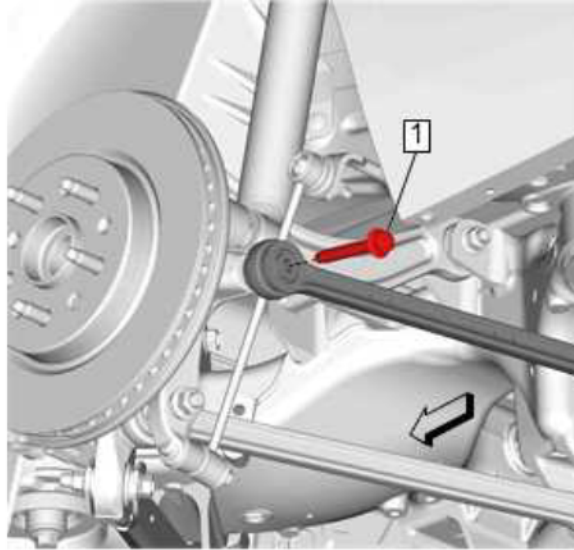


Fig. 69: Rear Suspension Adjust Link Outer Bolt

Courtesy of GENERAL MOTORS COMPANY

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.

Tighten

1. First Pass: 100 N.m (74 lb ft)
 2. Final Pass: (90-105 degrees)
7. Rear Wheel Speed Sensor Harness (1) @ Rear Suspension Adjust Link» Install

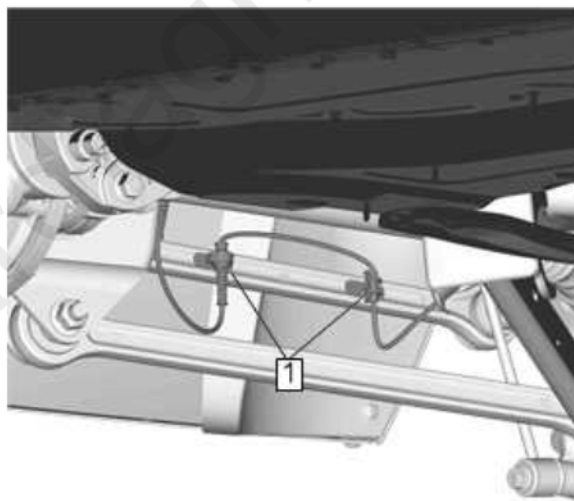


Fig. 70: Rear Wheel Speed Sensor Harness

Courtesy of GENERAL MOTORS COMPANY

8. Check the rear wheel alignment. Refer to [Rear Toe Adjustment \(With NYS\)](#)

REAR SUSPENSION LATERAL LINK REPLACEMENT

Removal Procedure

1. Remove the rear tire and wheel assembly. Refer to [Tire and Wheel Removal and Installation](#)
2. Rear Suspension Lower Lateral Link Outer Nut (1)» Remove

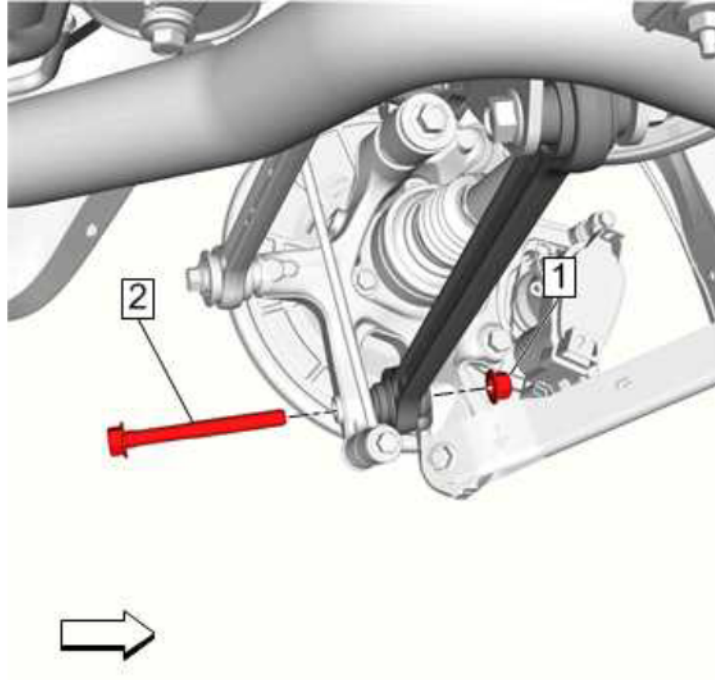


Fig. 71: Rear Suspension Lateral Link Outer Nut
 Courtesy of GENERAL MOTORS COMPANY

3. Rear Suspension Lower Lateral Link Outer Bolt (2)» Remove and DISCARD
4. Rear Suspension Lower Lateral Link Inner Nut (1)» Remove

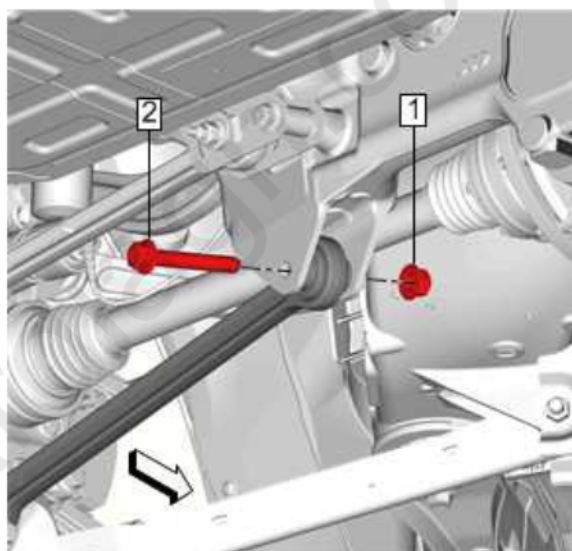


Fig. 72: Rear Suspension Lateral Link Inner Nut
 Courtesy of GENERAL MOTORS COMPANY

5. Rear Suspension Lower Lateral Link Inner Bolt (2)» Remove and DISCARD
6. Rear Suspension Lateral Link (1)» Remove

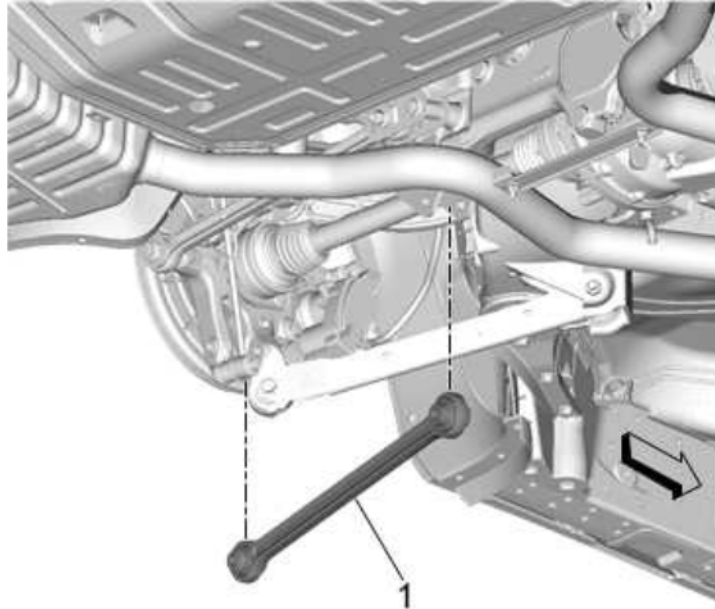


Fig. 73: Rear Suspension Lateral Link
 Courtesy of GENERAL MOTORS COMPANY

Installation Procedure

1. Install a suitable socket (2) that is slightly smaller than the outside diameter of the knuckle bushing (1).

NOTE: Prior to installation of the rear suspension lateral link the knuckle bushing must be repositioned to prevent damage to the rear suspension lateral link outer ball joint.

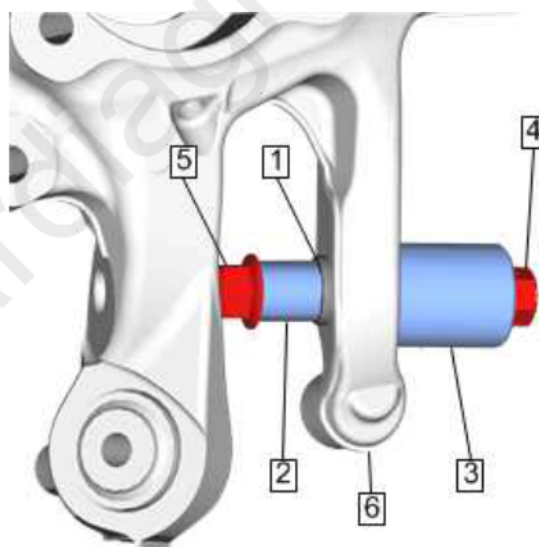


Fig. 74: Socket, Knuckle Bushing, Bolt And Nut
 Courtesy of GENERAL MOTORS COMPANY

2. Install a suitable socket (3) that is larger than the outside diameter of the knuckle bushing on the opposite side of the knuckle (6).
3. Install a suitable bolt (4) and nut (5).
4. Ensure that the socket (1) is larger than the bushing and sits flush against the knuckle (2).

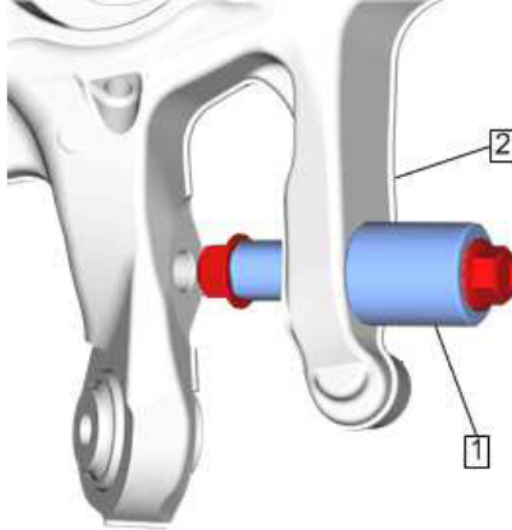


Fig. 75: Socket And Knuckle

Courtesy of GENERAL MOTORS COMPANY

5. Rotate the nut (1) forcing the socket (2) and the bushing (3) flush with the knuckle (4).

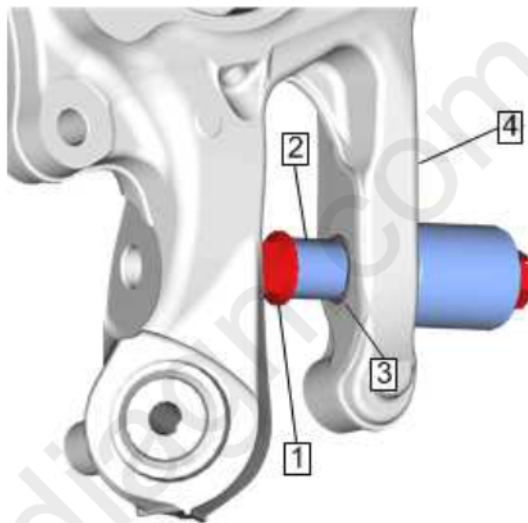
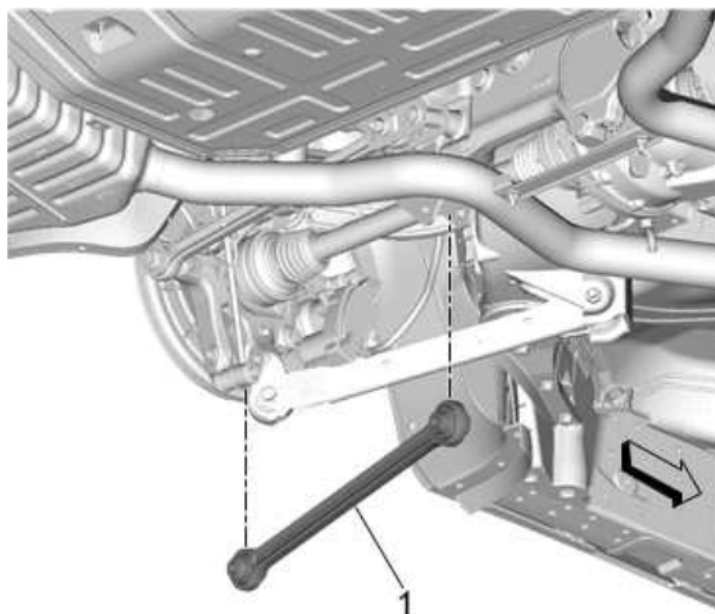


Fig. 76: Nut, Socket, Bushing And Knuckle

Courtesy of GENERAL MOTORS COMPANY

6. Rear Suspension Lateral Link (1)» Install



7. Rear Suspension Lower Lateral Link Inner Bolt (2)» Install a NEW bolt.

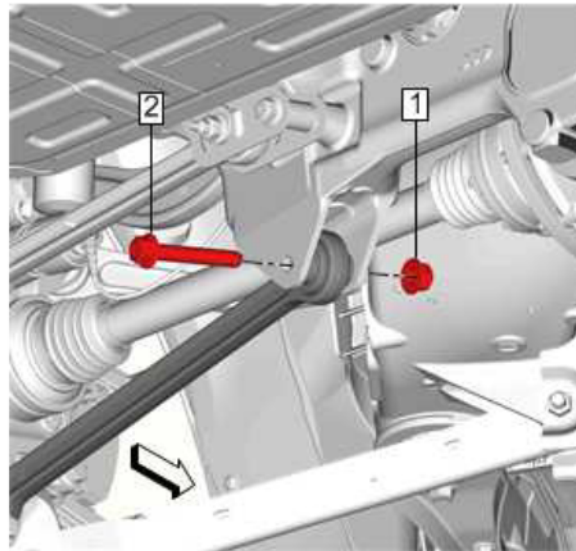


Fig. 78: Rear Suspension Lateral Link Inner Nut
Courtesy of GENERAL MOTORS COMPANY

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.

8. Rear Suspension Lower Lateral Link Inner Nut (1)» Install

Tighten the bolt.

1. First Pass: 160 N.m (118 lb ft)
2. Final Pass: (90-105 degrees)

9. Rear Suspension Lower Lateral Link Outer Bolt (2)» Install a NEW bolt.

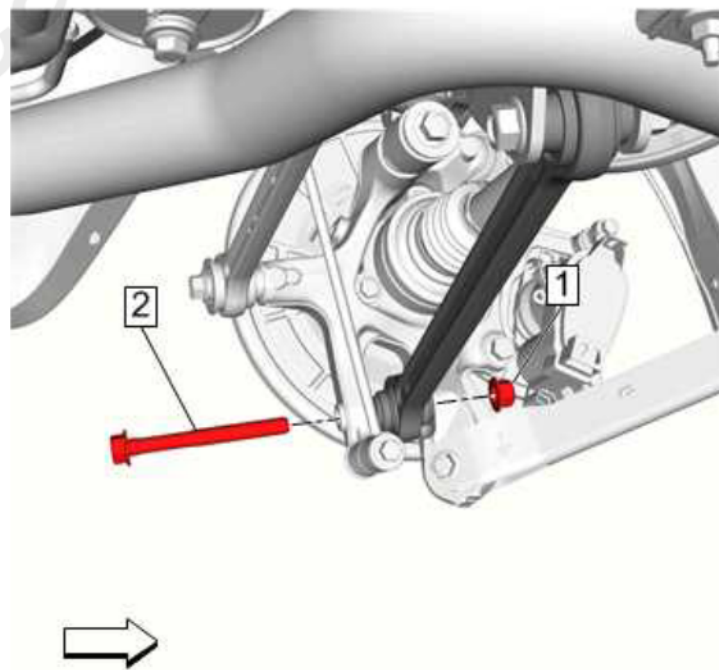


Fig. 79: Rear Suspension Lateral Link Outer Nut
Courtesy of GENERAL MOTORS COMPANY

10. Rear Suspension Lower Lateral Link Outer Nut (1)» Install

Tighten the bolt.

1. First Pass: 160 N.m (118 lb ft)
 2. Final Pass: (90-105 degrees)
11. Install the rear tire and wheel assembly. Refer to [Tire and Wheel Removal and Installation](#)

REAR SUSPENSION UPPER LATERAL LINK REPLACEMENT

Removal Procedure

1. Remove the rear tire and wheel assembly. Refer to [Tire and Wheel Removal and Installation](#)
2. Rear Suspension Cradle» Remove - [Rear Suspension Cradle Replacement](#)
3. Stabilizer Shaft» Remove - [Stabilizer Shaft Replacement](#)
4. Rear Suspension Upper Lateral Link Inner Nut (1)» Remove

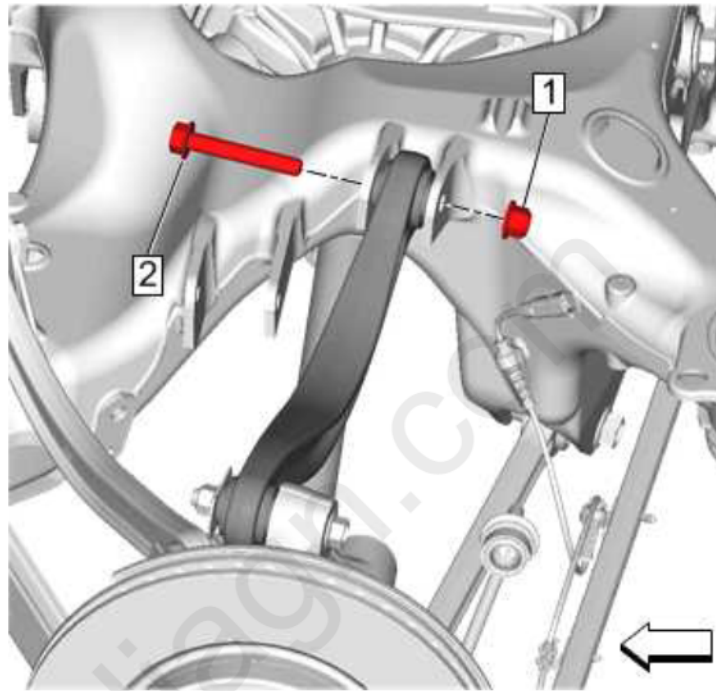


Fig. 80: Rear Suspension Upper Lateral Link Inner Nut And Bolt
Courtesy of GENERAL MOTORS COMPANY

5. Rear Suspension Upper Lateral Link Inner Bolt (2)» Remove and DISCARD
6. Rear Suspension Upper Lateral Link Outer Nut (1) and Washer (2)» Remove

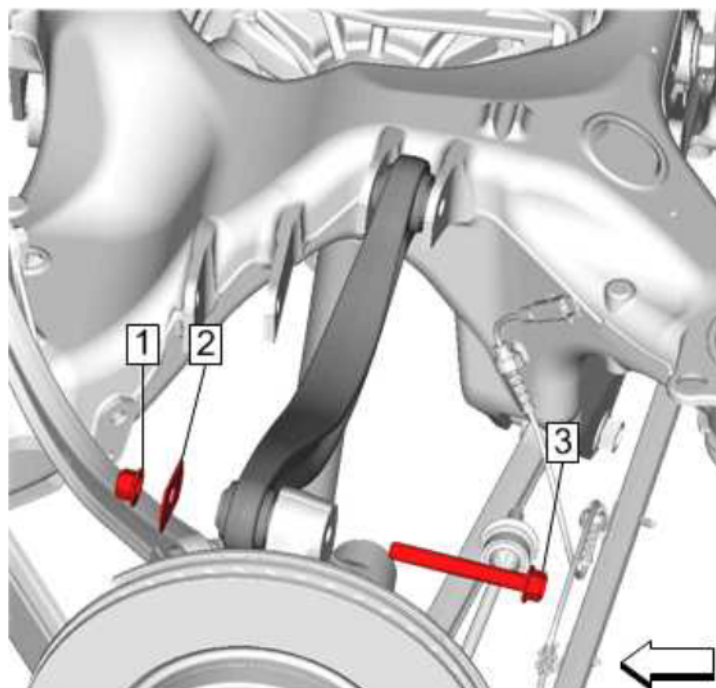


Fig. 81: Rear Suspension Upper Lateral Link Outer Nut, Washer And Bolt
Courtesy of GENERAL MOTORS COMPANY

7. Rear Suspension Upper Lateral Link Outer Bolt (3)» Remove and DISCARD
8. Rear Suspension Upper Lateral Link (1)» Remove

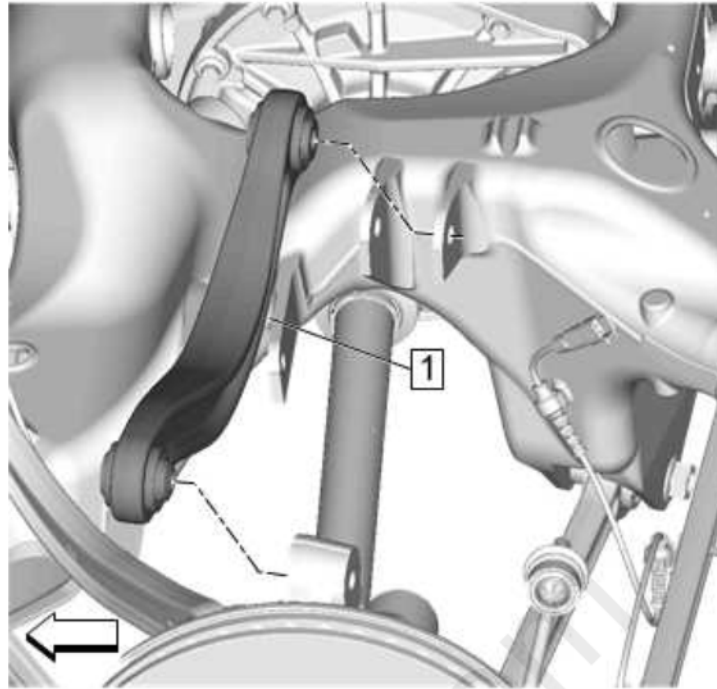


Fig. 82: Rear Suspension Upper Lateral Link
Courtesy of GENERAL MOTORS COMPANY

Installation Procedure

1. Rear Suspension Upper Lateral Link (1)» Install

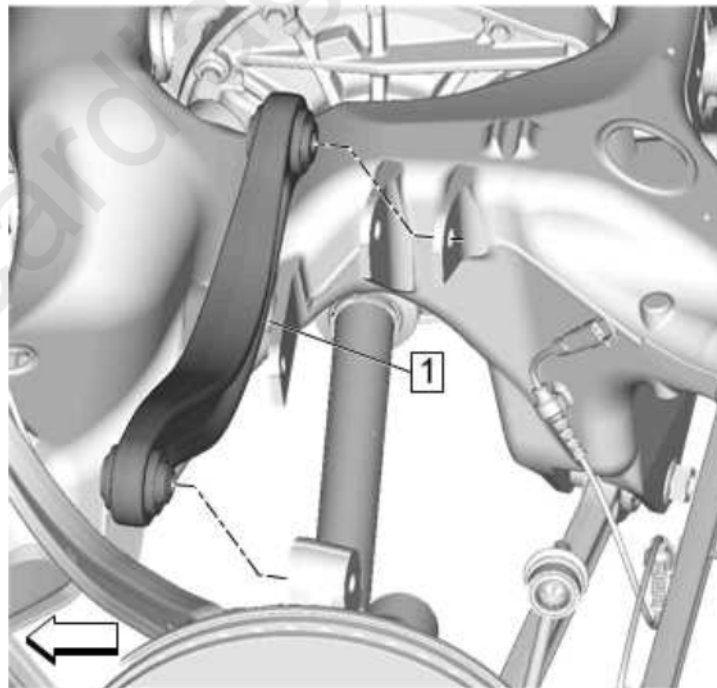


Fig. 83: Rear Suspension Upper Lateral Link
Courtesy of GENERAL MOTORS COMPANY

2. Rear Suspension Upper Lateral Link Inner Bolt (2)» Install a NEW bolt.

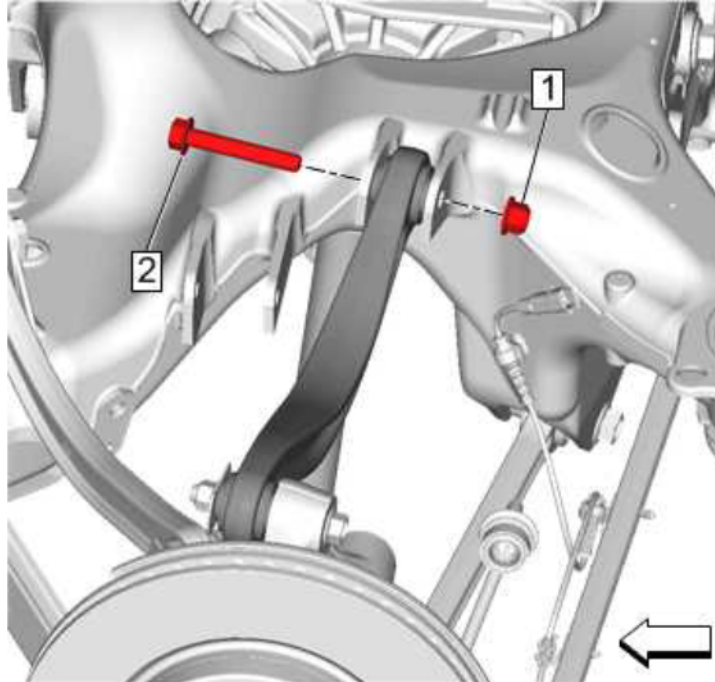


Fig. 84: Rear Suspension Upper Lateral Link Inner Nut And Bolt
 Courtesy of GENERAL MOTORS COMPANY

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.

3. Rear Suspension Upper Lateral Link Inner Nut» Install

Tighten the bolt.

1. First Pass: 100 N.m (74 lb ft)
2. Final Pass: 90-105 degrees

4. Rear Suspension Upper Lateral Link Outer Bolt (3)» Install a NEW bolt.

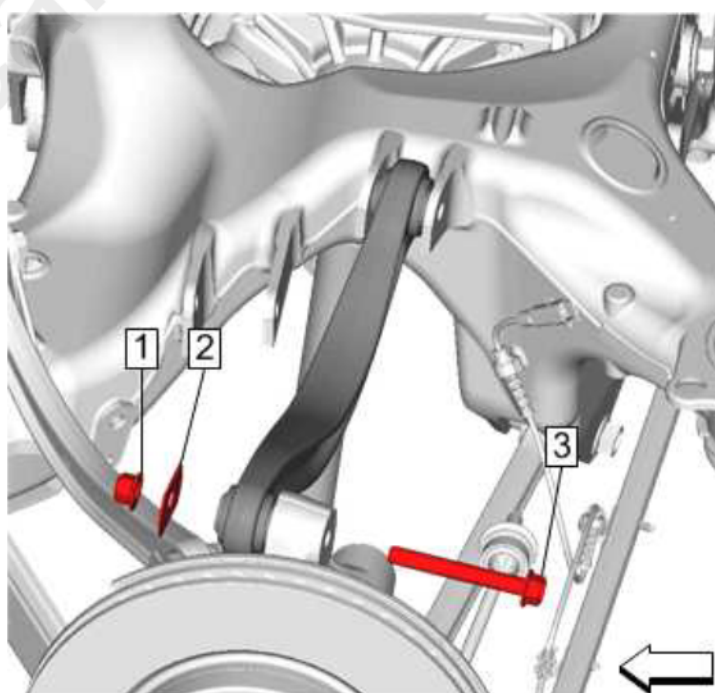


Fig. 85: Rear Suspension Upper Lateral Link Outer Nut, Washer And Bolt
 Courtesy of GENERAL MOTORS COMPANY

5. Rear Suspension Upper Lateral Link Outer Nut (1) and Washer (2)» Install

Tighten the bolt.

1. First Pass: 100 N.m (74 lb ft)
2. Final Pass: 90-105 degrees
6. Stabilizer Shaft» Install - [Stabilizer Shaft Replacement](#)
7. Rear Suspension Cradle» Install - [Rear Suspension Cradle Replacement](#)
8. Install the rear tire and wheel assembly. Refer to [Tire and Wheel Removal and Installation](#)

REAR SUSPENSION UPPER TRAILING LINK REPLACEMENT

Removal Procedure

1. Remove the rear tire and wheel assembly. Refer to [Tire and Wheel Removal and Installation](#)
2. Rear Suspension Cradle» Remove - [Rear Suspension Cradle Replacement](#)
3. Remove the rear suspension upper trailing link outer bolt (1) and washer (2).» DISCARD the bolt.

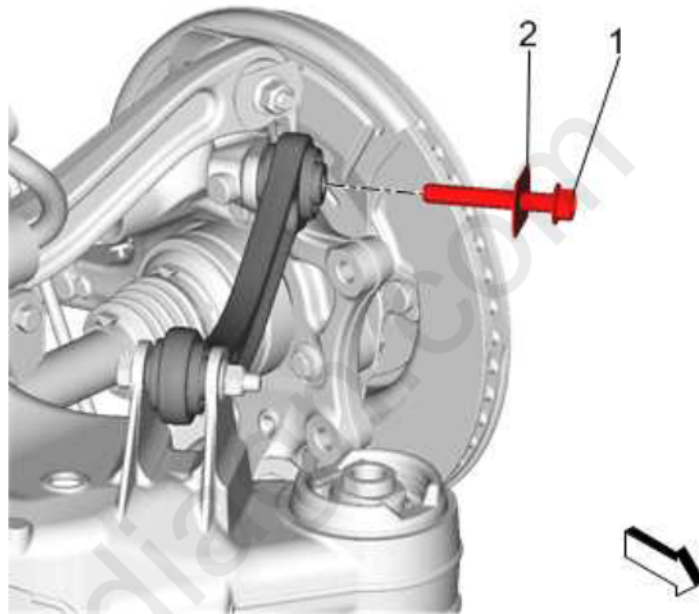


Fig. 86: Rear Suspension Upper Trailing Link Outer Bolt And Washer
Courtesy of GENERAL MOTORS COMPANY

4. Rear Suspension Upper Trailing Link Inner Nut (1)» Remove

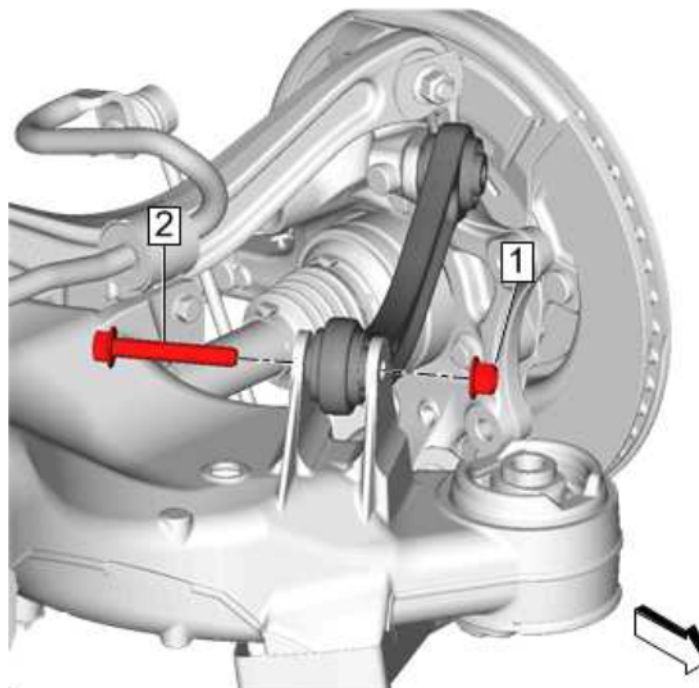


Fig. 87: Rear Suspension Upper Trailing Link Inner Nut And Bolt
Courtesy of GENERAL MOTORS COMPANY

5. Rear Suspension Upper Trailing Link Inner Bolt (2)» Remove and DISCARD
6. Rear Suspension Upper Trailing Link (1)» Remove

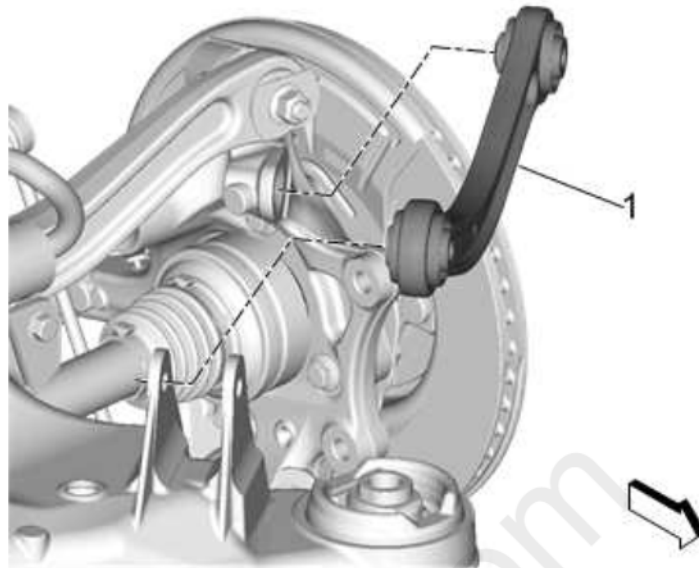


Fig. 88: Rear Suspension Upper Trailing Link
Courtesy of GENERAL MOTORS COMPANY

Installation Procedure

1. Rear Suspension Upper Trailing Link (1)» Install

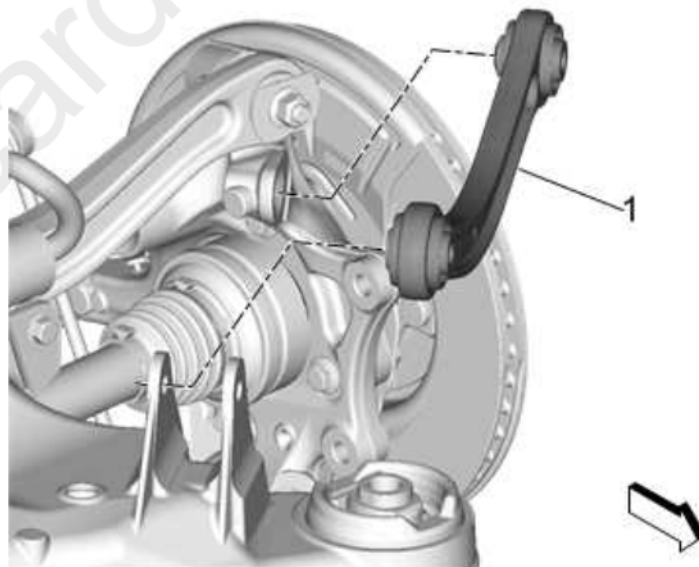


Fig. 89: Rear Suspension Upper Trailing Link
Courtesy of GENERAL MOTORS COMPANY

2. Rear Suspension Upper Trailing Link Inner Bolt (2)» Install a NEW bolt.

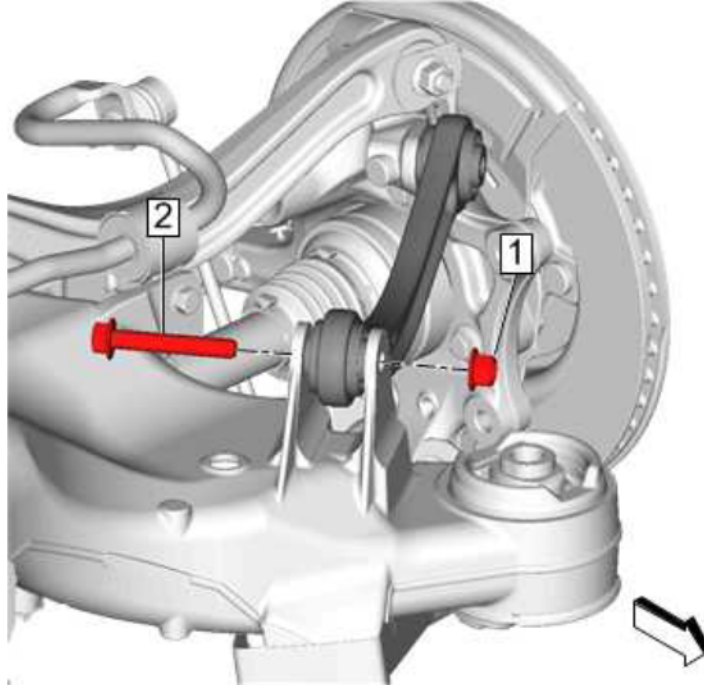


Fig. 90: Rear Suspension Upper Trailing Link Inner Nut And Bolt
 Courtesy of GENERAL MOTORS COMPANY

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.

3. Rear Suspension Upper Trailing Link Inner Nut (1)» Install and tighten

Tighten

1. First Pass: 100 N.m (74 lb ft)
2. Final Pass: (90-105 degrees)

4. Install the NEW rear suspension upper trailing link outer bolt (1) and washer (2).» Install a NEW bolt.

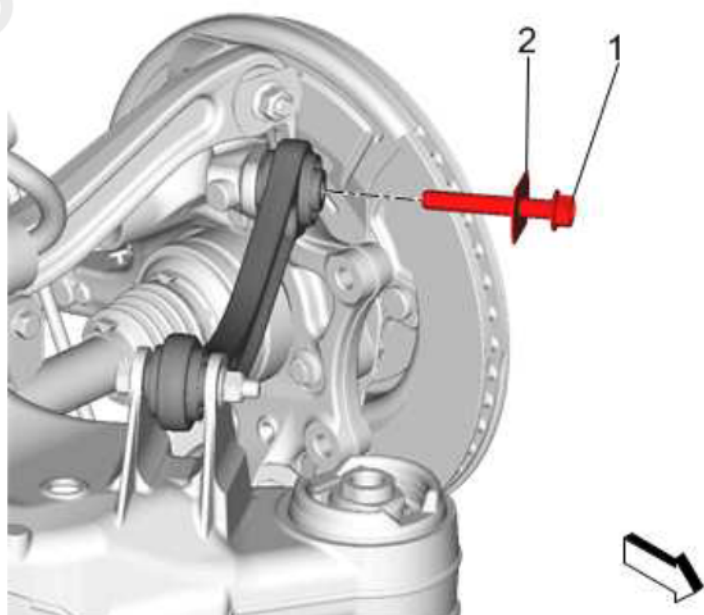


Fig. 91: Rear Suspension Upper Trailing Link Outer Bolt And Washer
 Courtesy of GENERAL MOTORS COMPANY

Tighten

1. First Pass: 100 N.m (74 lb ft)
2. Final Pass: (90-105 degrees)
5. Rear Suspension Cradle» Install - [Rear Suspension Cradle Replacement](#)
6. Install the rear tire and wheel assembly. Refer to [Tire and Wheel Removal and Installation](#)

REAR SUSPENSION LOWER TRAILING LINK REPLACEMENT

Removal Procedure

1. Remove the rear tire and wheel assembly. Refer to [Tire and Wheel Removal and Installation](#)
2. Rear Suspension Lower Trailing Link Inner Nut (1)» Remove

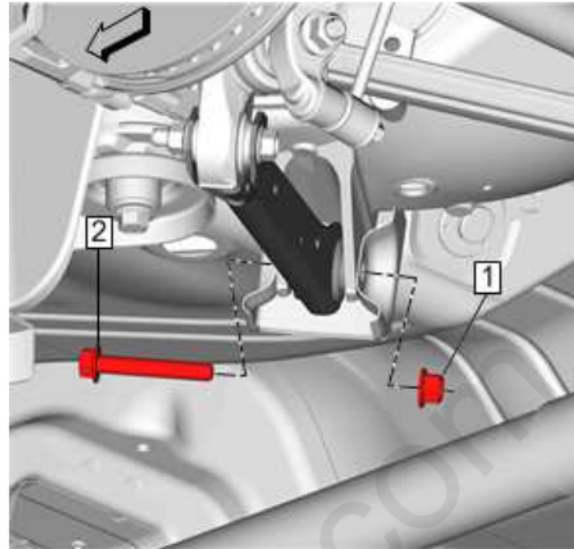


Fig. 92: Rear Suspension Lower Trailing Link Inner Nut And Bolt
 Courtesy of GENERAL MOTORS COMPANY

3. Rear Suspension Lower Trailing Link Inner Bolt (2)» Remove and DISCARD
4. Rear Suspension Lower Trailing Link Outer Nut (1)» Remove

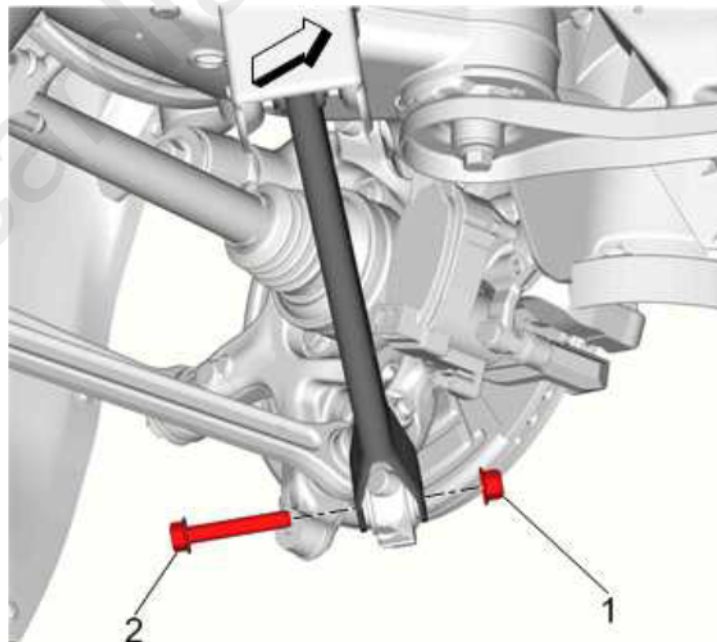


Fig. 93: Rear Suspension Lower Trailing Link Outer Nut And Bolt
 Courtesy of GENERAL MOTORS COMPANY

5. Rear Suspension Lower Trailing Link Outer Bolt (2)» Remove and DISCARD
6. If equipped, Rear Suspension Position Sensor Ball Socket @ Rear Suspension Lower Trailing Link» Disconnect
7. Rear Suspension Lower Trailing Link (1)» Remove

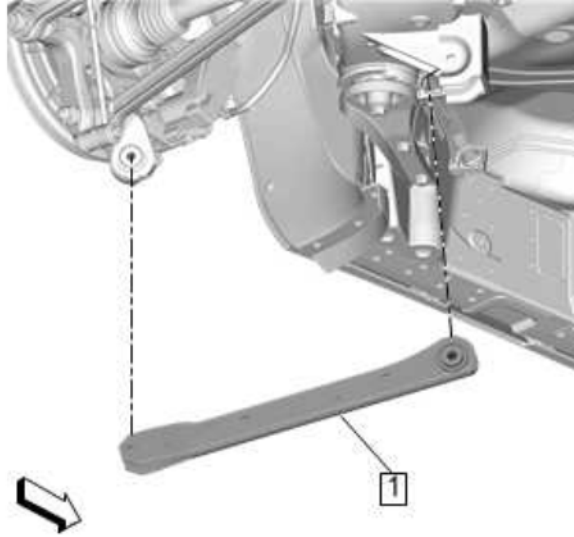


Fig. 94: Rear Suspension Lower Trailing Link
Courtesy of GENERAL MOTORS COMPANY

Installation Procedure

1. Rear Suspension Lower Trailing Link (1)» Install

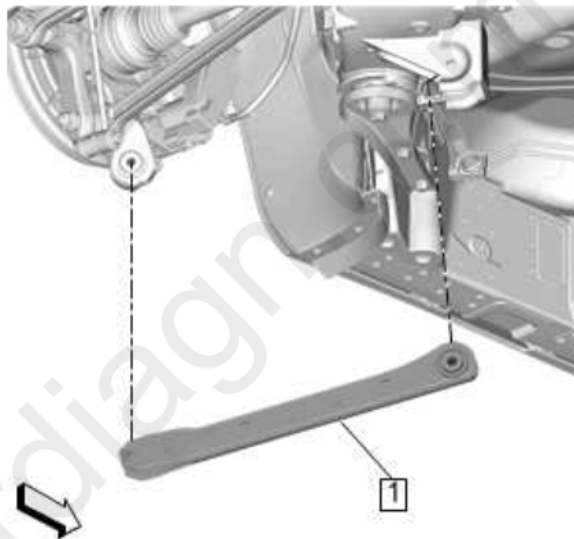
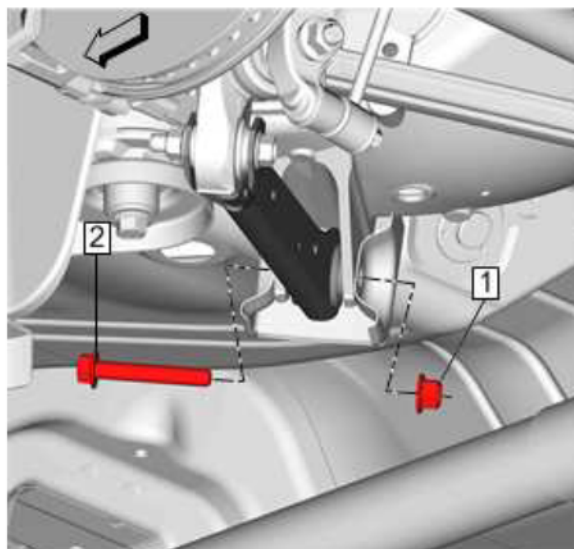


Fig. 95: Rear Suspension Lower Trailing Link
Courtesy of GENERAL MOTORS COMPANY

2. If equipped Rear Suspension Position Sensor Ball Socket @ Rear Suspension Lower Trailing Link» Connect
3. Rear Suspension Lower Trailing Link Inner Bolt (2)» Install a NEW bolt.



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.

4. Rear Suspension Lower Trailing Link Inner Nut (1)» Install

Tighten the bolt.

1. First Pass: 100 N.m (74 lb ft)
2. Final Pass: (90-105 degrees)

5. Rear Suspension Lower Trailing Link Outer Bolt (2)» Install a NEW bolt.

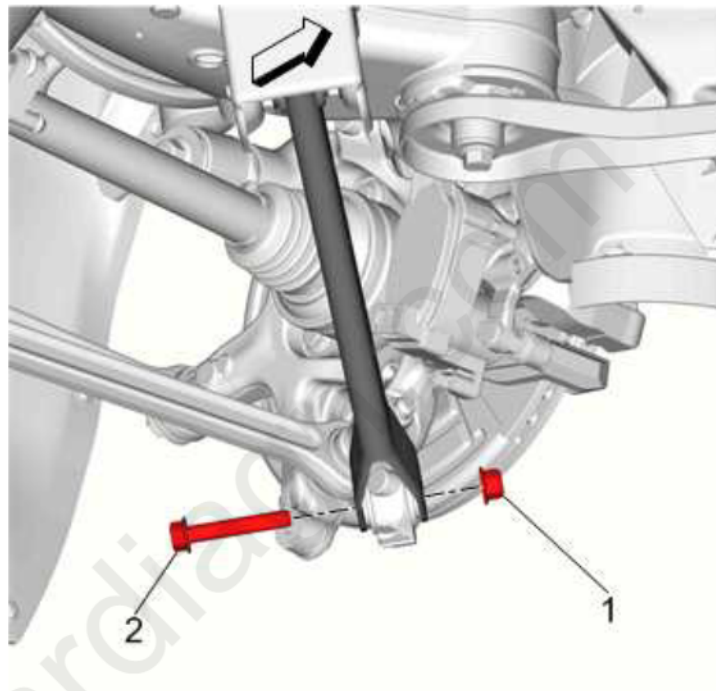


Fig. 97: Rear Suspension Lower Trailing Link Outer Nut And Bolt
Courtesy of GENERAL MOTORS COMPANY

6. Rear Suspension Lower Trailing Link Outer Nut (1)» Install

Tighten the bolt.

1. First Pass: 100 N.m (74 lb ft)
2. Final Pass: (90-105 degrees)

7. Install the rear tire and wheel assembly. Refer to [Tire and Wheel Removal and Installation](#)

DESCRIPTION AND OPERATION

REAR SUSPENSION DESCRIPTION AND OPERATION

Description and Operation

The CT6 has a 5 link independent rear suspension that uses multiple outer ball joints and cross braces for optimal handling and steering precision. Active rear steering with the Active Chassis System contributes to greater low-speed agility and high-speed stability. Active-on-demand all-wheel drive is part of the Active Chassis System, making the most of handling and stability in all weather conditions. The CT6 sport suspension package (F55) includes a continuously variable real time damping system that responds to road inputs within milliseconds to deliver precise body contact.

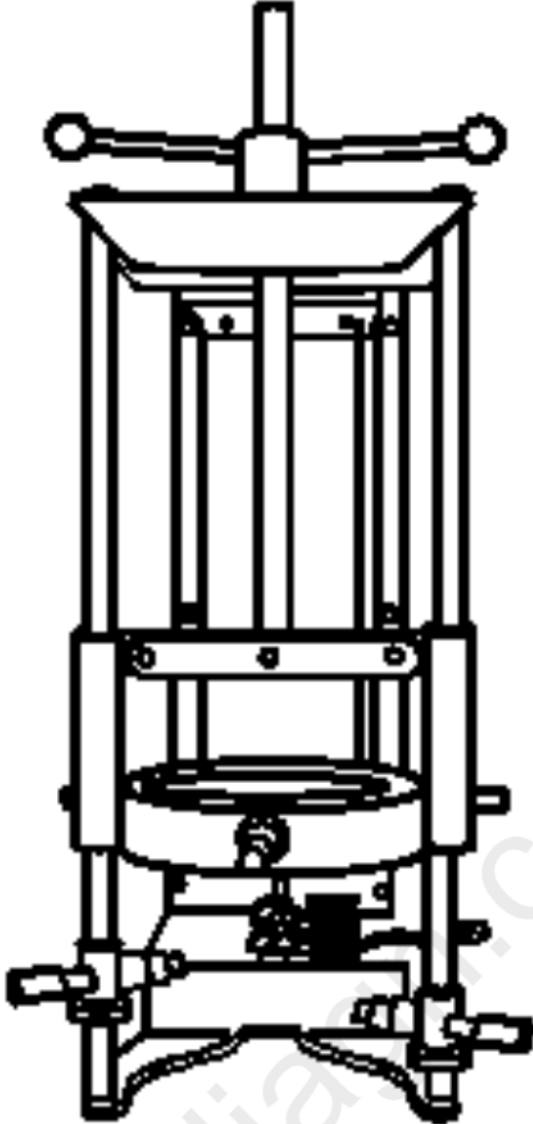
The Rear Suspension Assemblies are:

- Adjust Link
- Lower Lateral Link
- Upper Lateral Link
- Lower Trailing ink
- Upper Trailing Link
- Rear Knuckle Assembly
- Rear Stabilizer Bar, Links, Clamps and Bushings
- Shock Absorber and Coil Spring Assembly

SPECIAL TOOLS AND EQUIPMENT

SPECIAL TOOLS

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

Illustration	Tool Number/Description
	CH-45400 DW320-010 J-45400-A Strut Spring Compressor

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Illustration	Tool Number/Description
	CH-50732 MLR-9362 Strut Rod Nut Socket