

Frame and Underbody

Specifications

Fastener Tightening Specifications

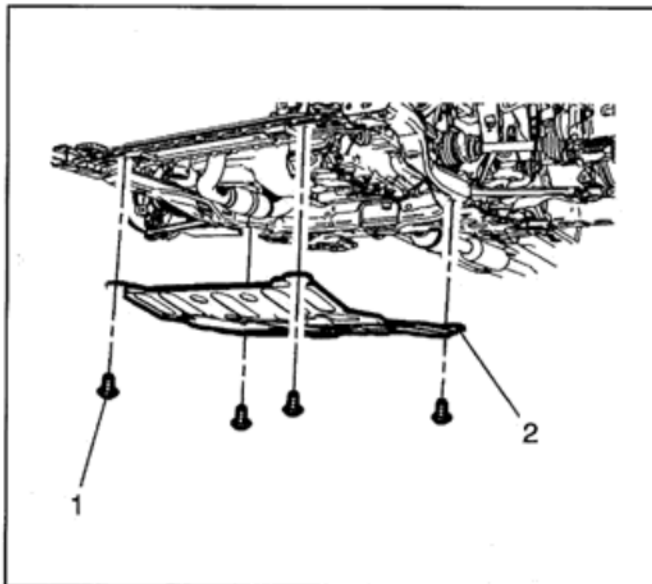
Application	Specification	
	Metric	English
Drivetrain and Front Suspension Frame Bolt Center	135 N•m	100 lb ft
Drivetrain and Front Suspension Frame Bolt Front	58 N•m	43 lb ft
Drivetrain and Front Suspension Frame Bolt Rear	135 N•m	100 lb ft
Front Compartment Front Insulator Cover Bolts	22 N•m	16 lb ft
Front Compartment Front Insulator Cover Screws-- Europe Only	2.5 N•m	22 lb in
Front Wheelhouse Liner Inner Front Extension Screws	3 N•m	27 lb in
Front Wheelhouse Liner Screw-- Front	3 N•m	27 lb in
Front Wheelhouse Rear Liner Nut	3 N•m	27 lb in
Front Wheelhouse Rear Liner Screw	3 N•m	27 lb in
Power Steering Fluid Cooling Pipe Bolt, if equipped	9 N•m	80 lb in
Power Steering Inlet and Outlet Hose Bolt, if equipped	9 N•m	80 lb in
Rear Wheelhouse Panel Liner Nut	2 N•m	18 lb in
Rear Wheelhouse Panel Liner Screw	3 N•m	27 lb in
Skid Plate Fasteners	22 N•m	16 lb ft
Transmission Rear Mount Bracket Bolts	100 N•m	74 lb ft

Repair Instructions

Drivetrain and Front Suspension Frame Skid Plate Replacement

Removal Procedure

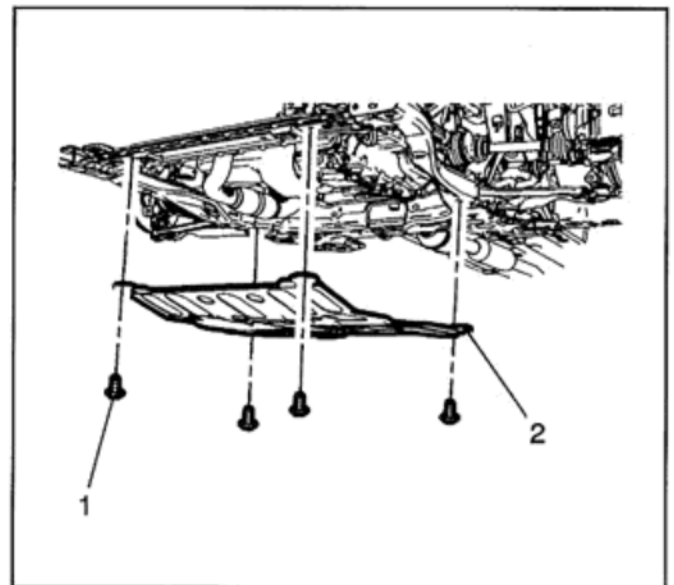
1. Raise and support the vehicle. Refer to *Lifting and Jacking the Vehicle* on page 1-31.



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2. Remove the mounting bolts (1) for the front suspension frame skid plate.
3. Remove the front suspension frame skid plate (2).

Installation Procedure



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1. Position the front suspension frame skid plate (2) on the frame.

Caution: Refer to *Fastener Caution* on page 0-8.

2. Install the front suspension frame skid plate mounting bolts (2) and tighten to 22 N·m (16 lb ft).

Drivetrain and Front Suspension Frame Replacement

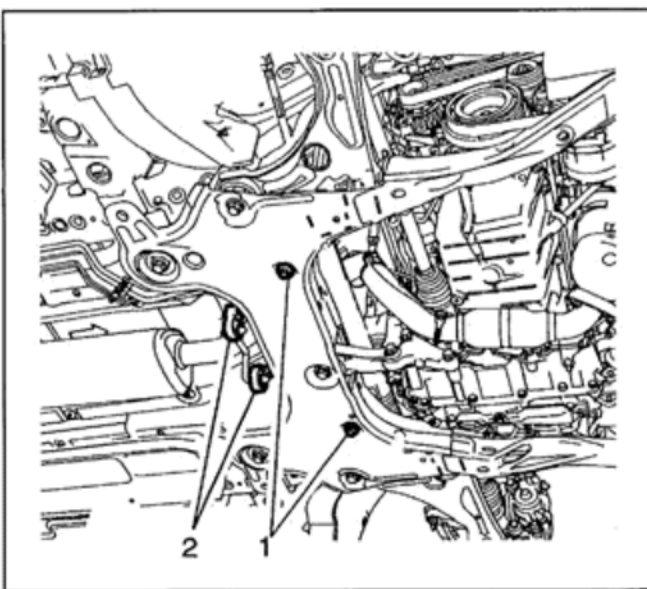
Special Tools

EN-45059 Angle Meter

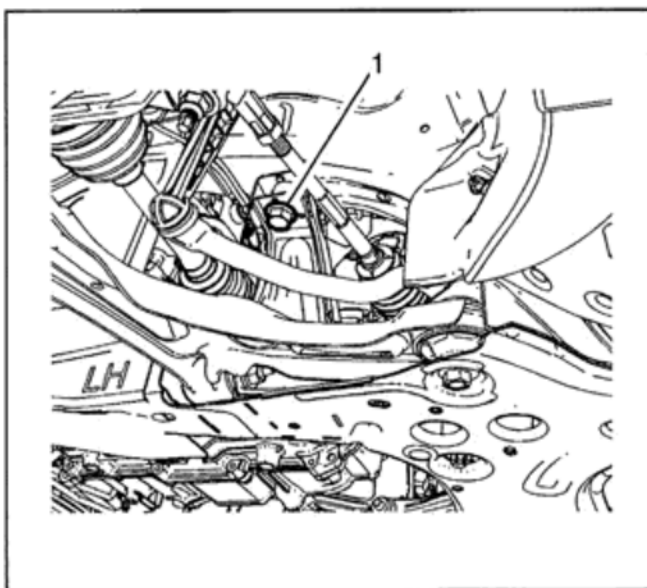
For equivalent regional tools, refer to *Special Tools* on page 3-158.

Removal Procedure

1. Support the radiator and condenser from above using the upper brackets on each side.
2. Raise the vehicle on a hoist. Refer to *Lifting and Jacking the Vehicle* on page 1-31.
3. Remove the front tire and wheel assembly. Refer to *Tire and Wheel Removal and Installation* on page 16-60.
4. Remove the skid plate from the front frame, if equipped. Refer to *Drivetrain and Front Suspension Frame Skid Plate Replacement* on page 3-143.
5. Remove the left and right front wheel house liner inner front extensions. Refer to *Front Wheelhouse Liner Inner Front Extension Replacement (Left Side)* on page 3-147 or *Front Wheelhouse Liner Inner Front Extension Replacement (Right Side, LUV)* on page 3-148 or *Front Wheelhouse Liner Inner Front Extension Replacement (Right Side, LWE, LUW)* on page 3-149.
6. Remove the front bumper impact bar lower bracket. Refer to *Front Bumper Impact Bar Lower Bracket Replacement* on page 3-54.
7. Disconnect the steering linkage tie rod end from the steering knuckle. Refer to *Steering Linkage Outer Tie Rod Replacement* on page 15-17.
8. Disconnect the lower ball joints from the steering knuckles. Refer to *Lower Control Arm Replacement* on page 16-12.
9. Disconnect the stabilizer links from the strut assemblies.
10. Remove the steering rack retaining bolts (1) and discard.
11. Using mechanics wire, secure the power steering gear to the vehicle.
12. Disconnect the hydraulic power steering hoses from the front frame, if equipped.
13. Disconnect the exhaust isolators (2) from the front suspension frame.
14. Disconnect the power brake booster pump hose and connector, if equipped.
15. Remove the rear transmission mount bracket to rear mount through bolt (1).
16. Remove both frame support braces.
17. Using a suitable support table or equivalent, support the front suspension frame.

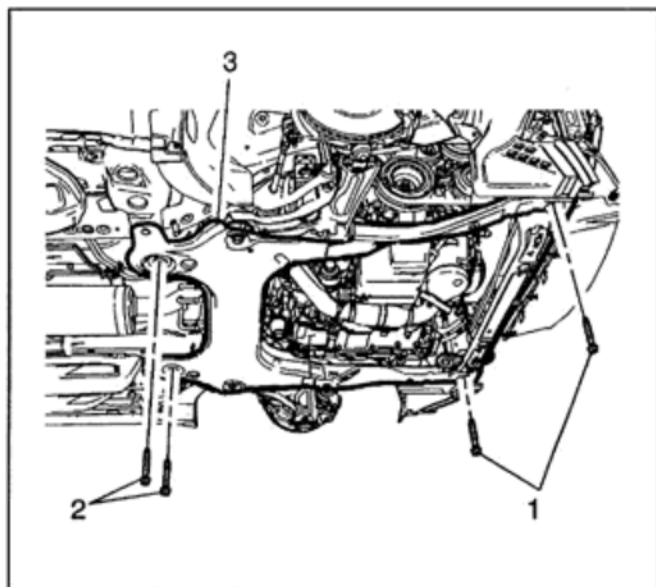


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18. Remove the upper frame suspension retaining bolts (1).

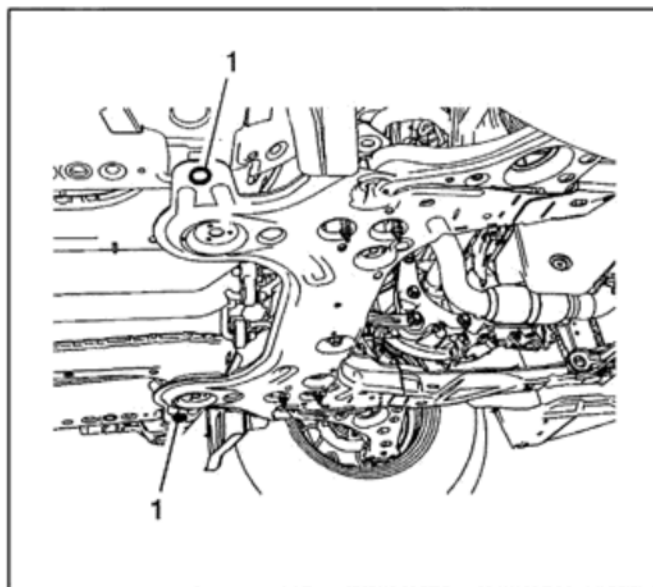


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19. Remove the frame front bolts (1).
20. Remove the frame rear bolts (2).
21. Remove the frame (3) from the vehicle.
22. Remove the following components, if replacing the frame:
 - The lower control arms—Refer to *Lower Control Arm Replacement* on page 16-12.
 - The stabilizer shaft—Refer to *Stabilizer Shaft Replacement* on page 16-3.
 - The front bumper lower impact bar—Refer to *Front Bumper Lower Impact Bar Replacement* on page 3-53.
 - The power brake booster pump, if equipped—Refer to *Power Brake Booster Pump Replacement* on page 5-178.

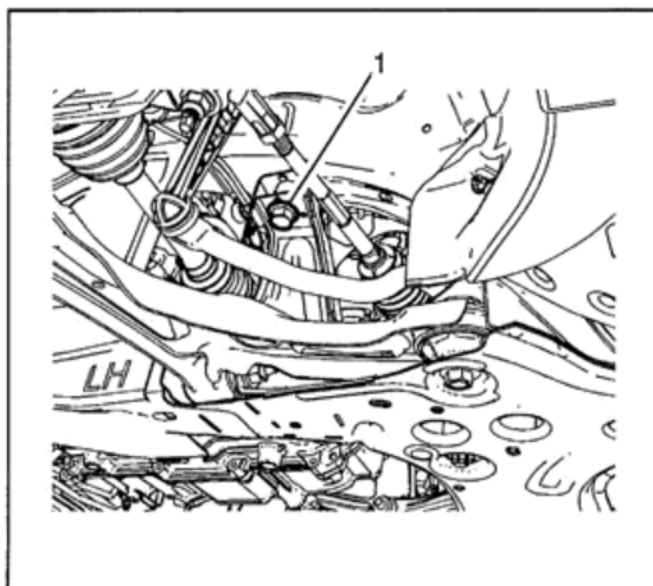
Installation Procedure

1. Install the following components on the drivetrain and front suspension frame if removed:
 - The power brake booster pump, if equipped—Refer to *Power Brake Booster Pump Replacement* on page 5-178.
 - The front bumper lower impact bar—Refer to *Front Bumper Lower Impact Bar Replacement* on page 3-53.
 - The stabilizer shaft—Refer to *Stabilizer Shaft Replacement* on page 16-3.
 - The lower control arms—Refer to *Lower Control Arm Replacement* on page 16-12.
2. Install the frame (3) into the vehicle.



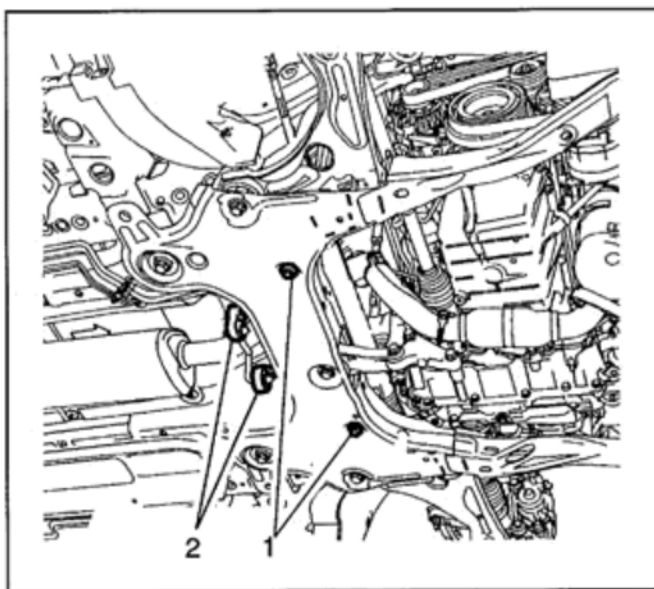
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3. Using two suitable drifts for adjusting pins, have an assistant vertically insert and hold the drifts through the front suspension frame and floor panel (1).
- Caution:** Refer to *Fastener Caution* on page 0-8.
4. Install the frame rear bolts (2) and tighten to **135 N·m (100 lb ft)**.
 5. Install the frame front bolts (1) and tighten to **58 N·m (43 lb ft)**.



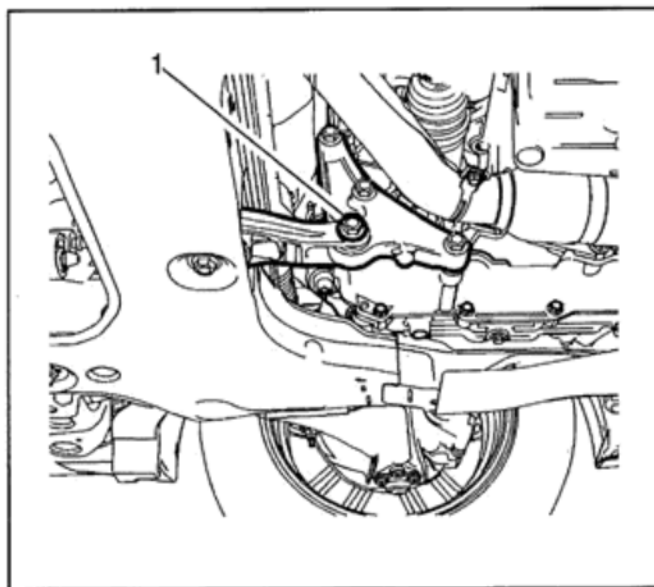
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6. Install the upper frame suspension retaining bolts (1) and tighten to **135 N·m (100 lb ft)**.
7. Install the frame braces and tighten the fasteners to **22 N·m (16 lb ft)**.
8. Remove the support for the power steering gear.



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9. Install the steering gear retaining fasteners (1). Refer to *Steering Gear Replacement* on page 15-20.
10. Connect the hydraulic power steering hoses to the front frame, if equipped.
11. Connect the exhaust isolators (2) to the front suspension frame.

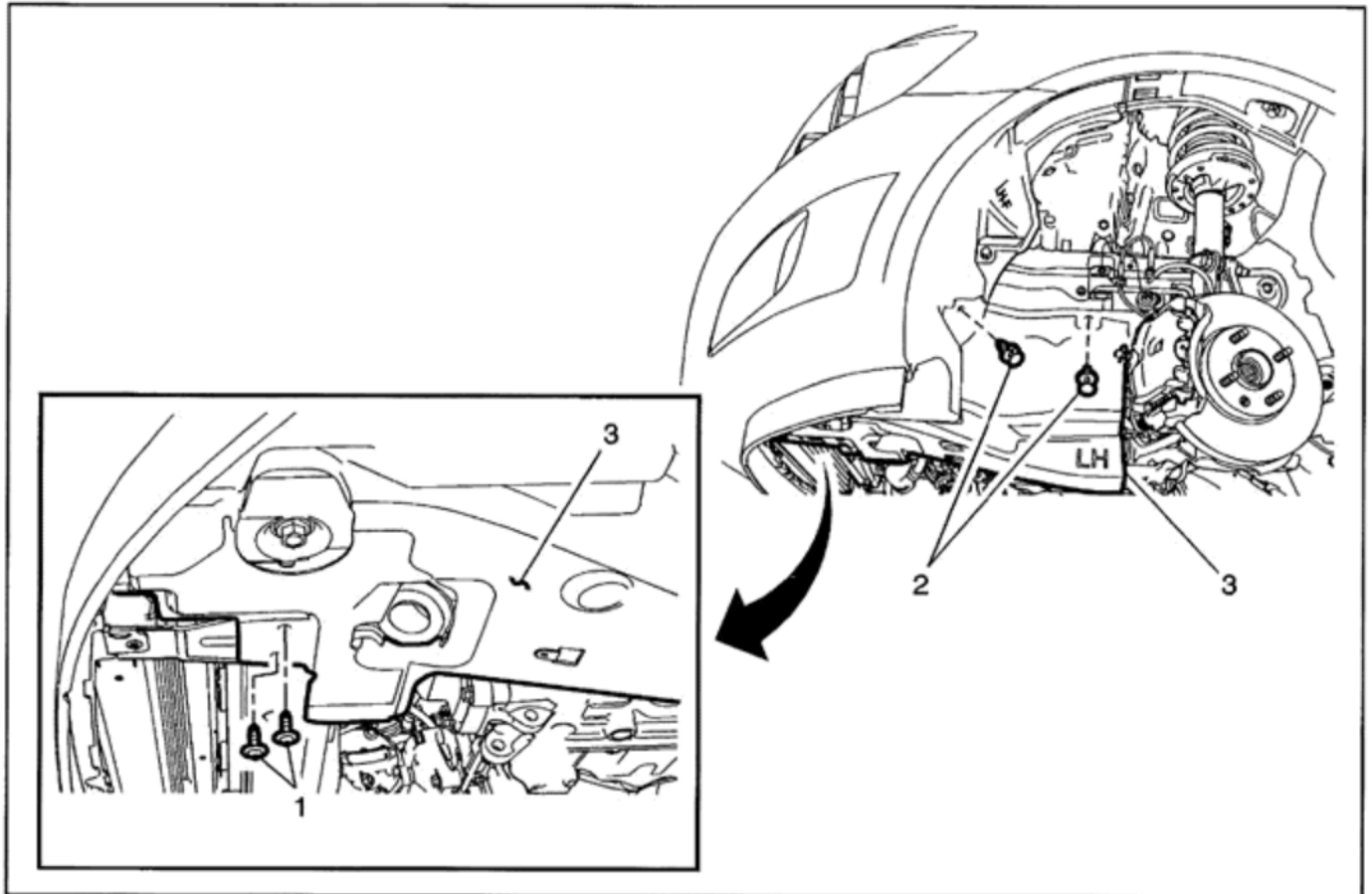


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12. Install the rear transmission mount bracket to rear mount through bolt (1). Refer to *Transmission Rear Mount Replacement* on page 17-217.

13. Connect the power brake booster pump hose and connector, if equipped.
14. Connect the lower ball joints to the steering knuckles. Refer to *Lower Control Arm Replacement* on page 16-12.
15. Connect the stabilizer links to the strut assemblies. Refer to *Stabilizer Shaft Link Replacement* on page 16-8.
16. Connect the steering linkage tie rod end to the steering knuckle. Refer to *Steering Linkage Outer Tie Rod Replacement* on page 15-17.
17. Install the front bumper impact bar lower bracket. Refer to *Front Bumper Impact Bar Lower Bracket Replacement* on page 3-54.
18. Install the left and right front wheel house liner inner front extensions. Refer to *Front Wheelhouse Liner Inner Front Extension Replacement (Left Side)* on page 3-147 or *Front Wheelhouse Liner Inner Front Extension Replacement (Right Side, LUV)* on page 3-148 or *Front Wheelhouse Liner Inner Front Extension Replacement (Right Side, LWE, LUW)* on page 3-149.
19. Install the skid plate to the front frame, if equipped. Refer to *Drivetrain and Front Suspension Frame Skid Plate Replacement* on page 3-143.
20. Install the front tire and wheel assembly. Refer to *Tire and Wheel Removal and Installation* on page 16-60.
21. Lower the vehicle.
22. Remove the support of the radiator and condenser.

Front Wheelhouse Liner Inner Front Extension Replacement (Left Side)

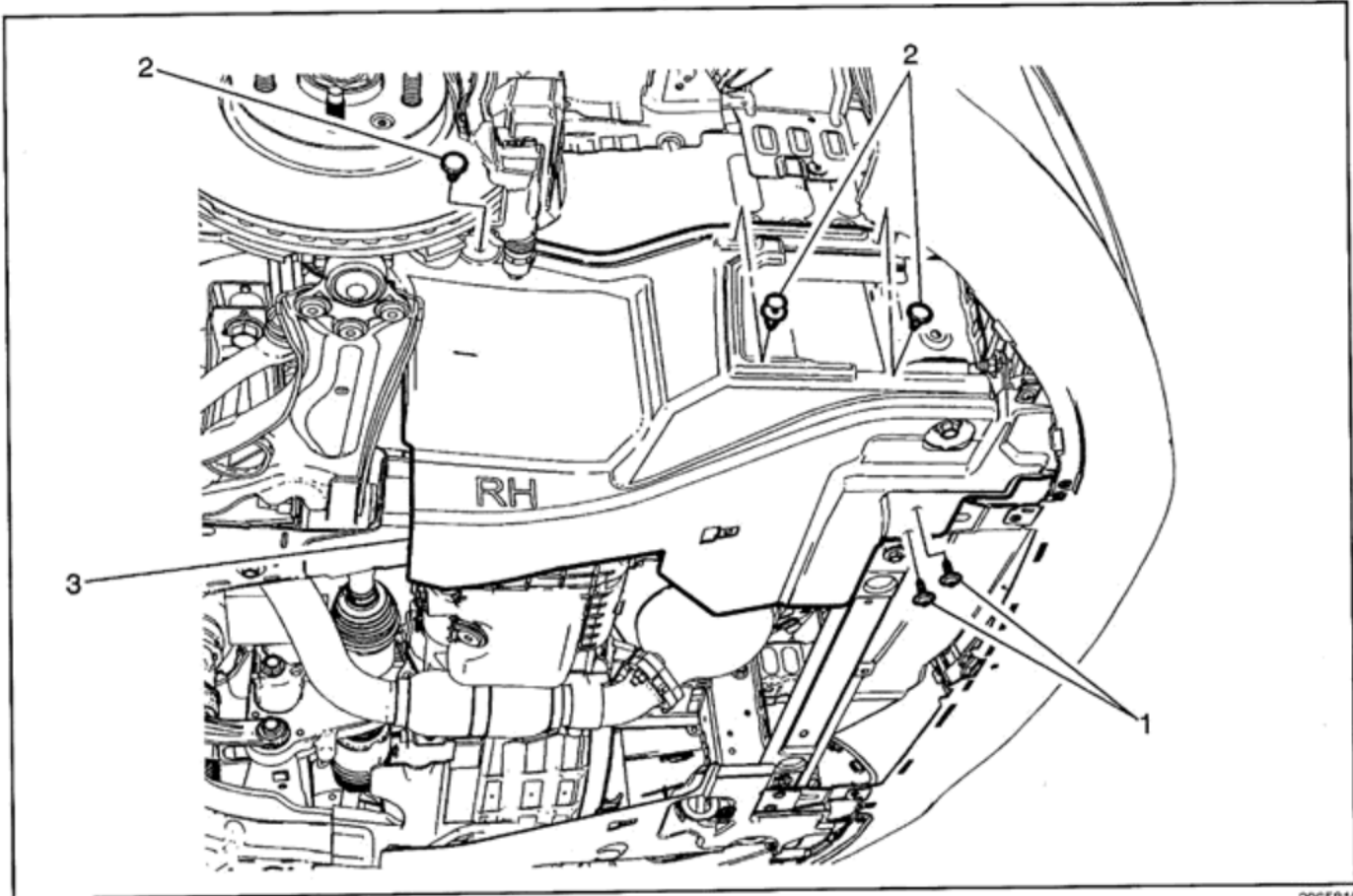


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Front Wheelhouse Liner Inner Front Extension Replacement (Left Side)

Callout	Component Name
Preliminary Procedure Remove the tire and wheel assembly. Refer to <i>Tire and Wheel Removal and Installation</i> on page 16-60.	
1	Front Wheelhouse Liner Inner Front Extension Screw (Qty: 2) Caution: Refer to <i>Fastener Caution</i> on page 0-8. Tighten 3 N•m (27 lb in)
2	Front Wheelhouse Liner Inner Front Extension Push-In Retainer (Qty: 2)
3	Front Wheelhouse Liner Inner Front Extension

Front Wheelhouse Liner Inner Front Extension Replacement (Right Side, LUV)

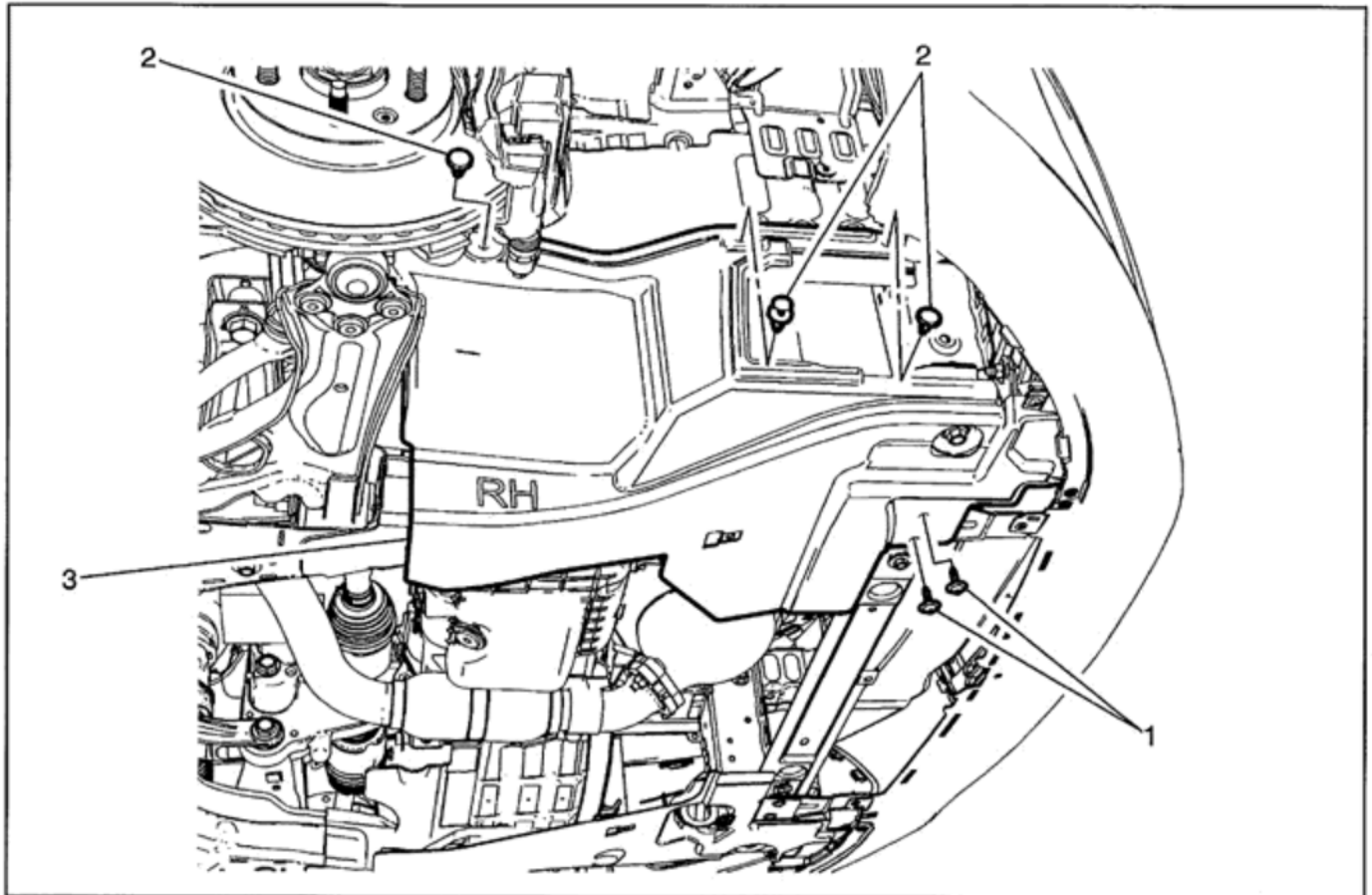


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Front Wheelhouse Liner Inner Front Extension Replacement (Right Side, LUV)

Callout	Component Name
Preliminary Procedure 1. Remove the tire and wheel assembly. Refer to <i>Tire and Wheel Removal and Installation</i> on page 16-60. 2. Remove the front fascia opening lower cover. Refer to <i>Front Bumper Fascia Opening Lower Cover Replacement</i> on page 3-58. 3. Remove the front wheelhouse front liner. Refer to <i>Front Wheelhouse Liner Replacement (Rear)</i> on page 3-151 or <i>Front Wheelhouse Liner Replacement (Front)</i> on page 3-150	
1	Front Wheelhouse Liner Inner Front Extension Screw (Qty: 2) Caution: Refer to <i>Fastener Caution</i> on page 0-8. Tighten 3 N•m (27 lb in)
2	Front Wheelhouse Liner Inner Front Extension Push-In Retainer (Qty: 3)
3	Front Wheelhouse Liner Inner Front Extension

Front Wheelhouse Liner Inner Front Extension Replacement (Right Side, LWE, LUW)

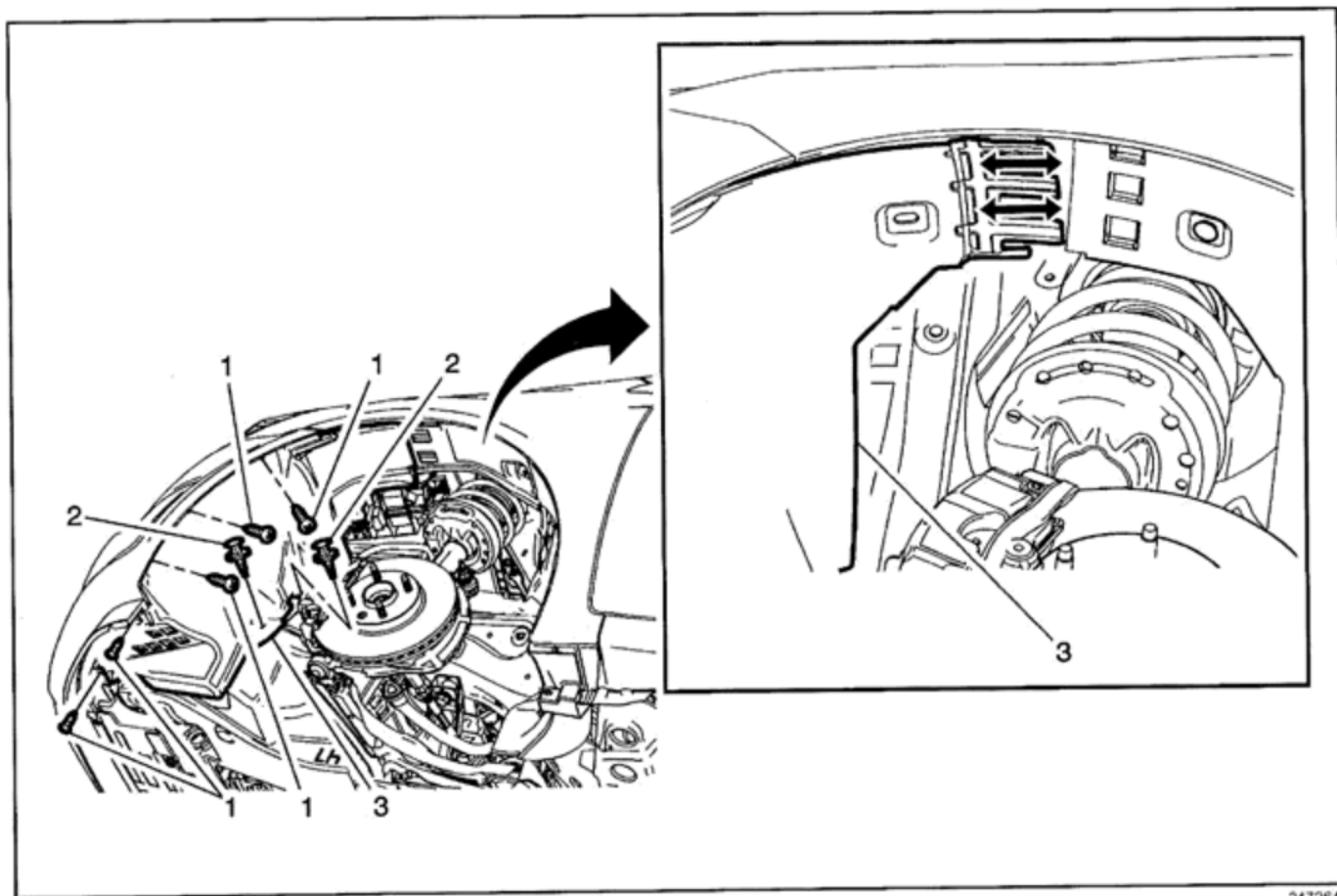


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Front Wheelhouse Liner Inner Front Extension Replacement (Right Side, LWE, LUW)

Callout	Component Name
Preliminary Procedure	
1. Remove the tire and wheel assembly. Refer to <i>Tire and Wheel Removal and Installation</i> on page 16-60.	
2. Remove the front fascia opening lower cover. Refer to <i>Front Bumper Fascia Opening Lower Cover Replacement</i> on page 3-58.	
3. Remove the front wheelhouse front liner. Refer to <i>Front Wheelhouse Liner Replacement (Rear)</i> on page 3-151 or <i>Front Wheelhouse Liner Replacement (Front)</i> on page 3-150	
4. Remove the air cleaner intake duct. Refer to <i>Air Cleaner Inlet Duct Replacement</i> on page 9-579	
1	Front Wheelhouse Liner Inner Front Extension Screw (Qty: 2) Caution: Refer to <i>Fastener Caution</i> on page 0-8. Tighten 3N•m (27 lb in)
2	Front Wheelhouse Liner Inner Front Extension Push-In Retainer (Qty: 3)
3	Front Wheelhouse Liner Inner Front Extension

Front Wheelhouse Liner Replacement (Front)

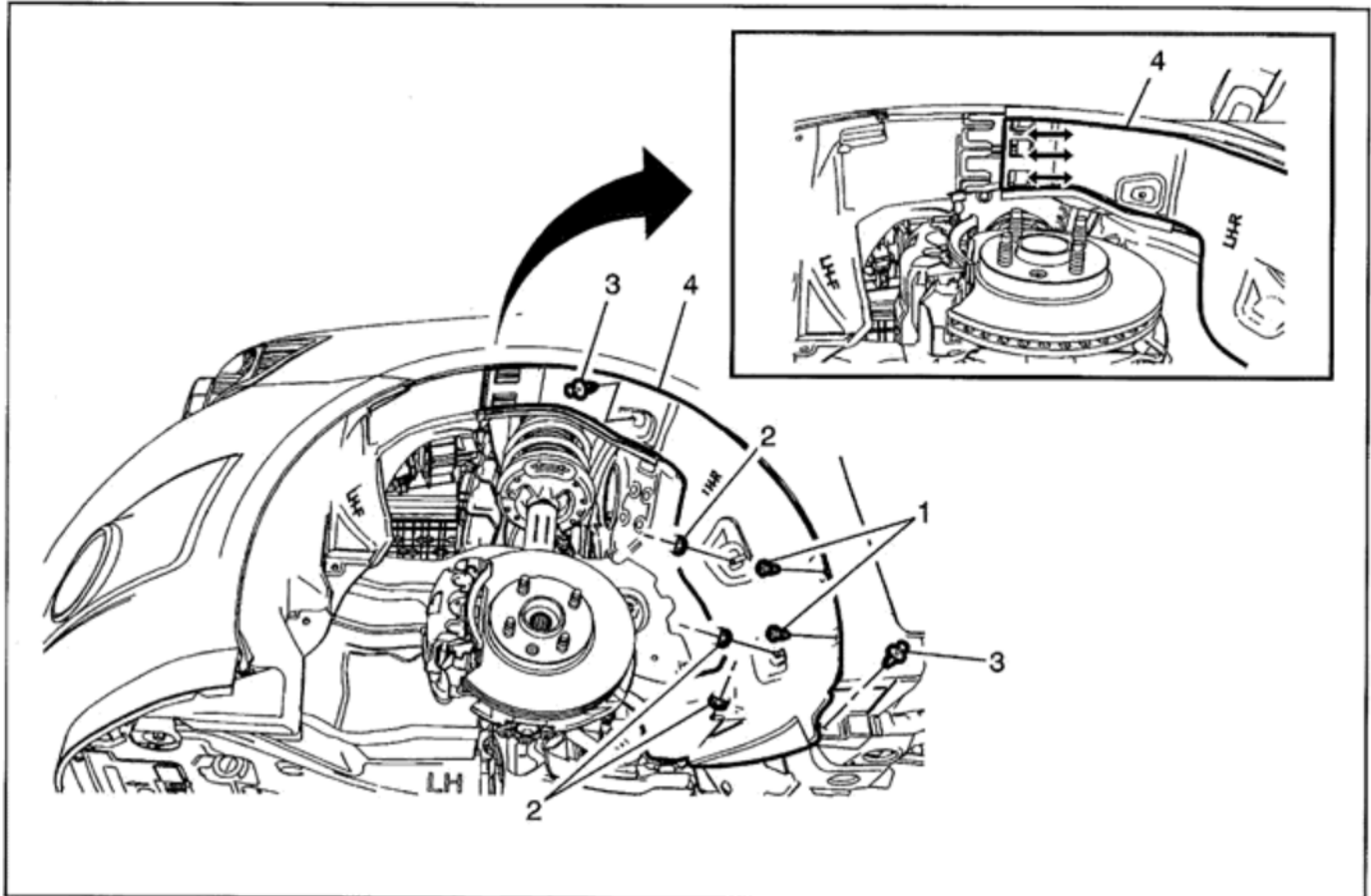


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Front Wheelhouse Liner Replacement (Front)

Callout	Component Name
Preliminary Procedure Remove the tire and wheel assembly. Refer to <i>Tire and Wheel Removal and Installation</i> on page 16-60.	
1	Front Wheelhouse Liner Screw – Front (Qty: 5) Caution: Refer to <i>Fastener Caution</i> on page 0-8. Tighten 2.5 N•m (22 lb in)
2	Front Wheelhouse Liner Push-In Retainer – Front (Qty: 2)
3	Front Wheelhouse Liner – Front Procedure Disengage the upper interlocking retainers.

Front Wheelhouse Liner Replacement (Rear)

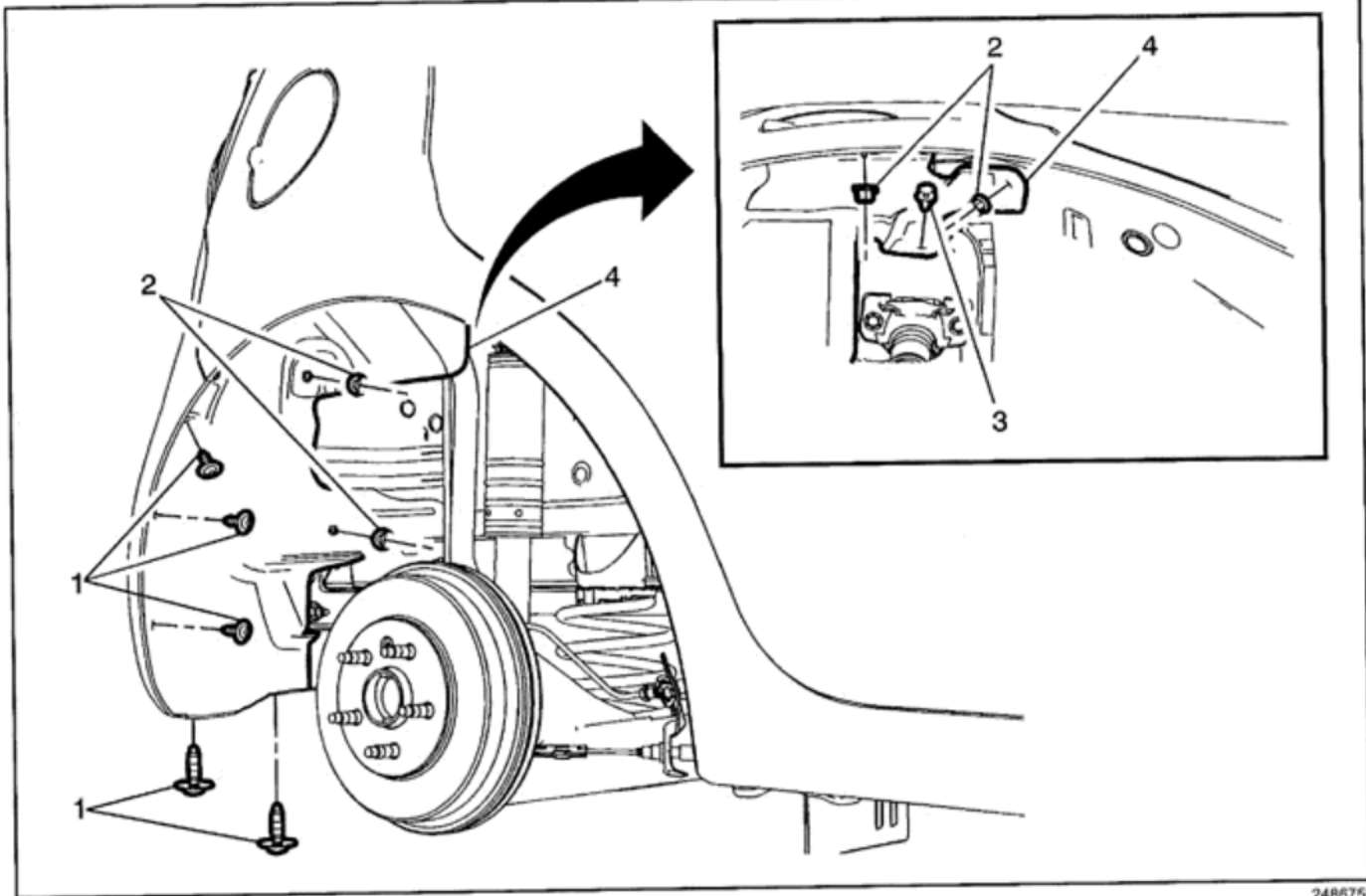


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Front Wheelhouse Liner Replacement (Rear)

Callout	Component Name
Preliminary Procedure Remove the tire and wheel assembly. Refer to <i>Tire and Wheel Removal and Installation</i> on page 16-60.	
1	Front Wheelhouse Rear Liner Screw (Qty: 2) Caution: Refer to <i>Fastener Caution</i> on page 0-8. Tighten 3 N•m (27 lb in)
2	Front Wheelhouse Rear Liner Nut (Qty: 3) Tighten 3 N•m (27 lb in)
3	Front Wheelhouse Rear Liner Push-In Retainer (Qty: 2)
4	Front Wheelhouse Rear Liner Procedure Disengage the upper interlocking retainers.

Rear Wheelhouse Liner Replacement (Hatchback - Right)

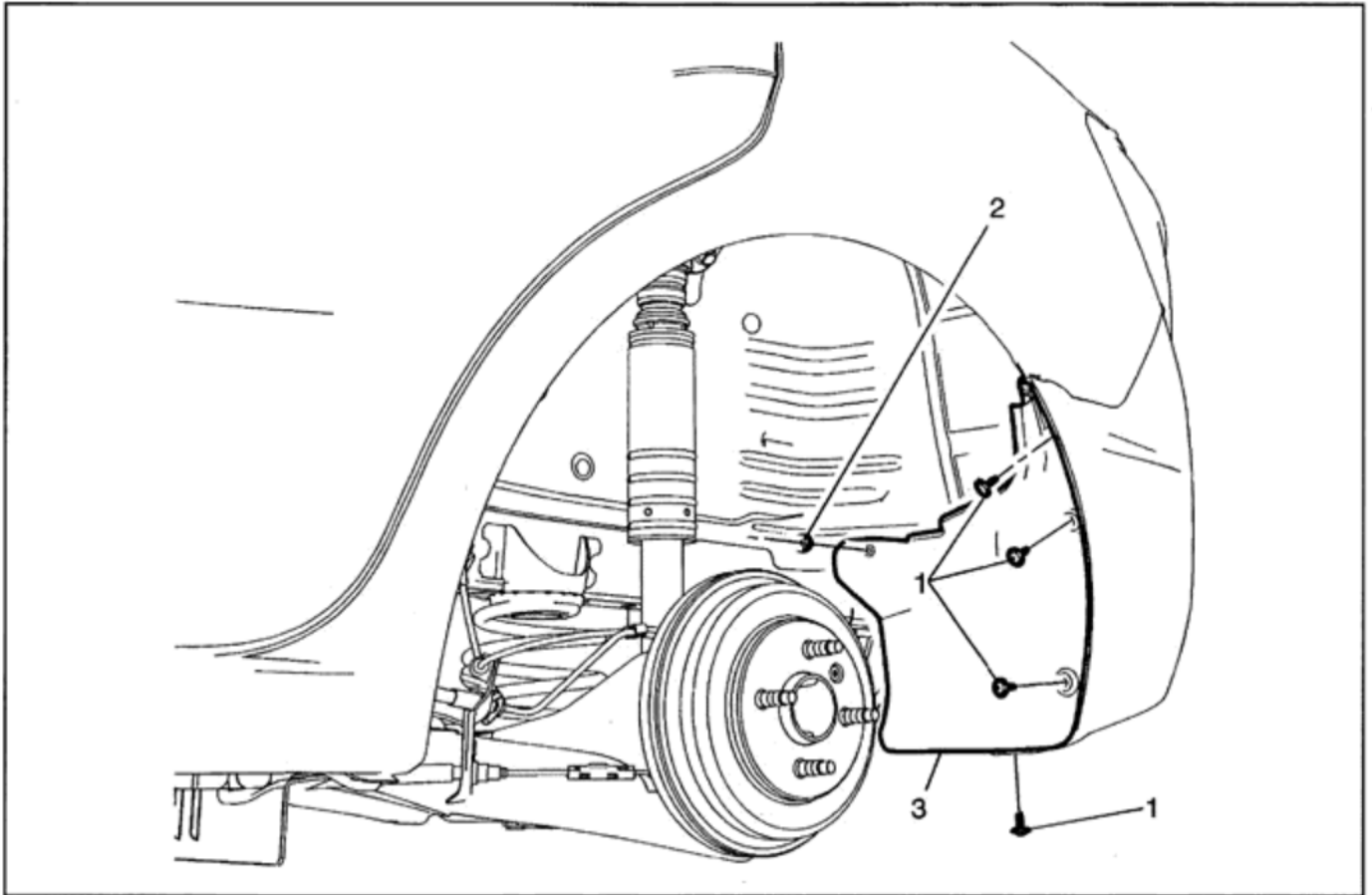


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Rear Wheelhouse Liner Replacement (Hatchback - Right)

Callout	Component Name
Preliminary Procedure Remove the tire and wheel assembly. Refer to <i>Tire and Wheel Removal and Installation</i> on page 16-60.	
1	Rear Wheelhouse Panel Liner Screw (Qty: 5) Caution: Refer to <i>Fastener Caution</i> on page 0-8. Tighten 3 N·m (27 lb in)
2	Rear Wheelhouse Panel Liner Nut (Qty: 4) Tighten 2 N·m (18 lb in)
3	Rear Wheelhouse Panel Liner Push-In Retainer
4	Rear Wheelhouse Panel Liner

Rear Wheelhouse Liner Replacement (Sedan - Left)

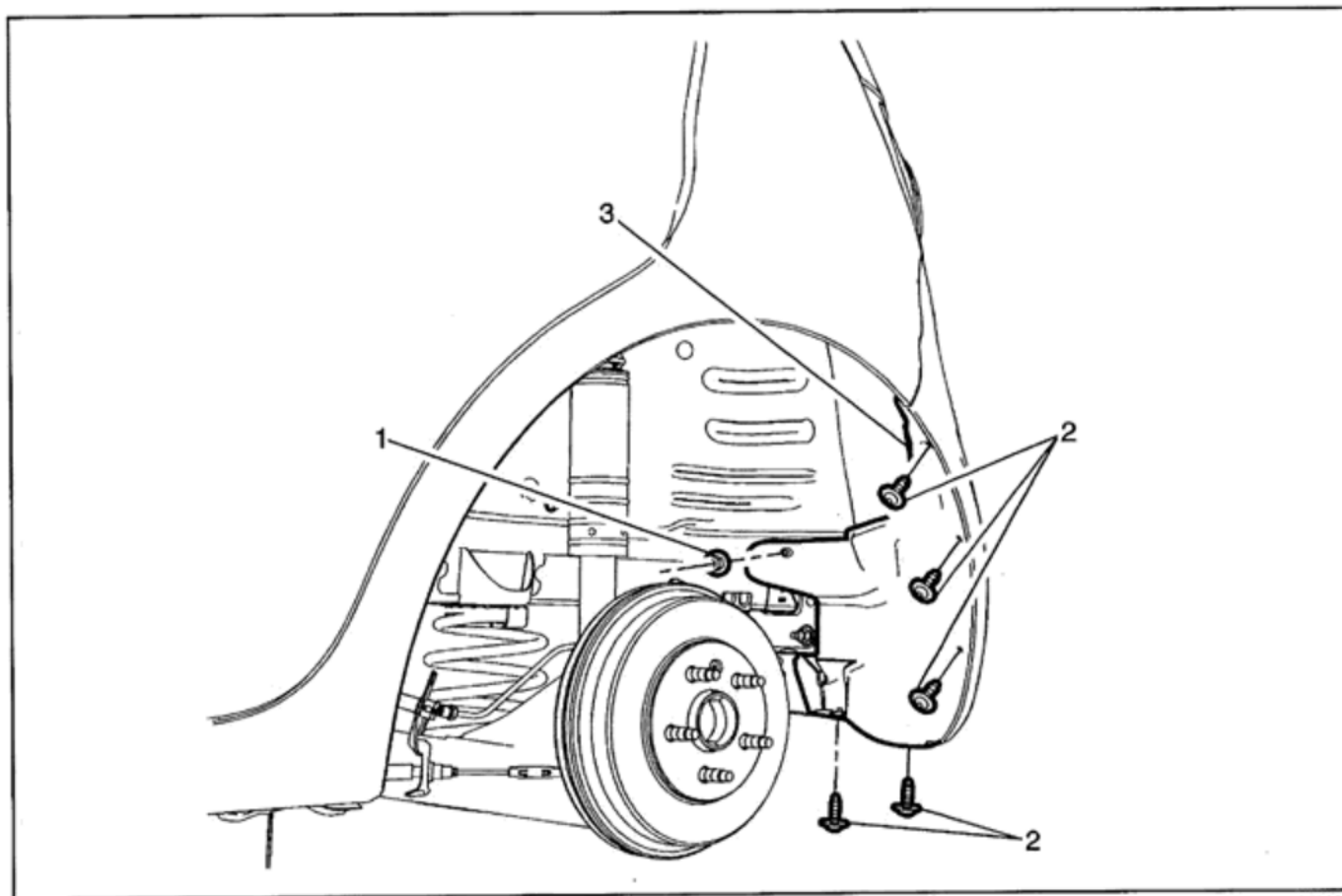


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Rear Wheelhouse Liner Replacement (Sedan - Left)

Callout	Component Name
Preliminary Procedure Remove the tire and wheel assembly. Refer to <i>Tire and Wheel Removal and Installation</i> on page 16-60.	
1	Rear Wheelhouse Panel Liner Screw (Qty: 4) Caution: Refer to <i>Fastener Caution</i> on page 0-8. Tighten 3 N•m (27 lb in)
2	Rear Wheelhouse Panel Liner Push-In Retainer
3	Rear Wheelhouse Panel Liner

Rear Wheelhouse Liner Replacement (Hatchback - Left)

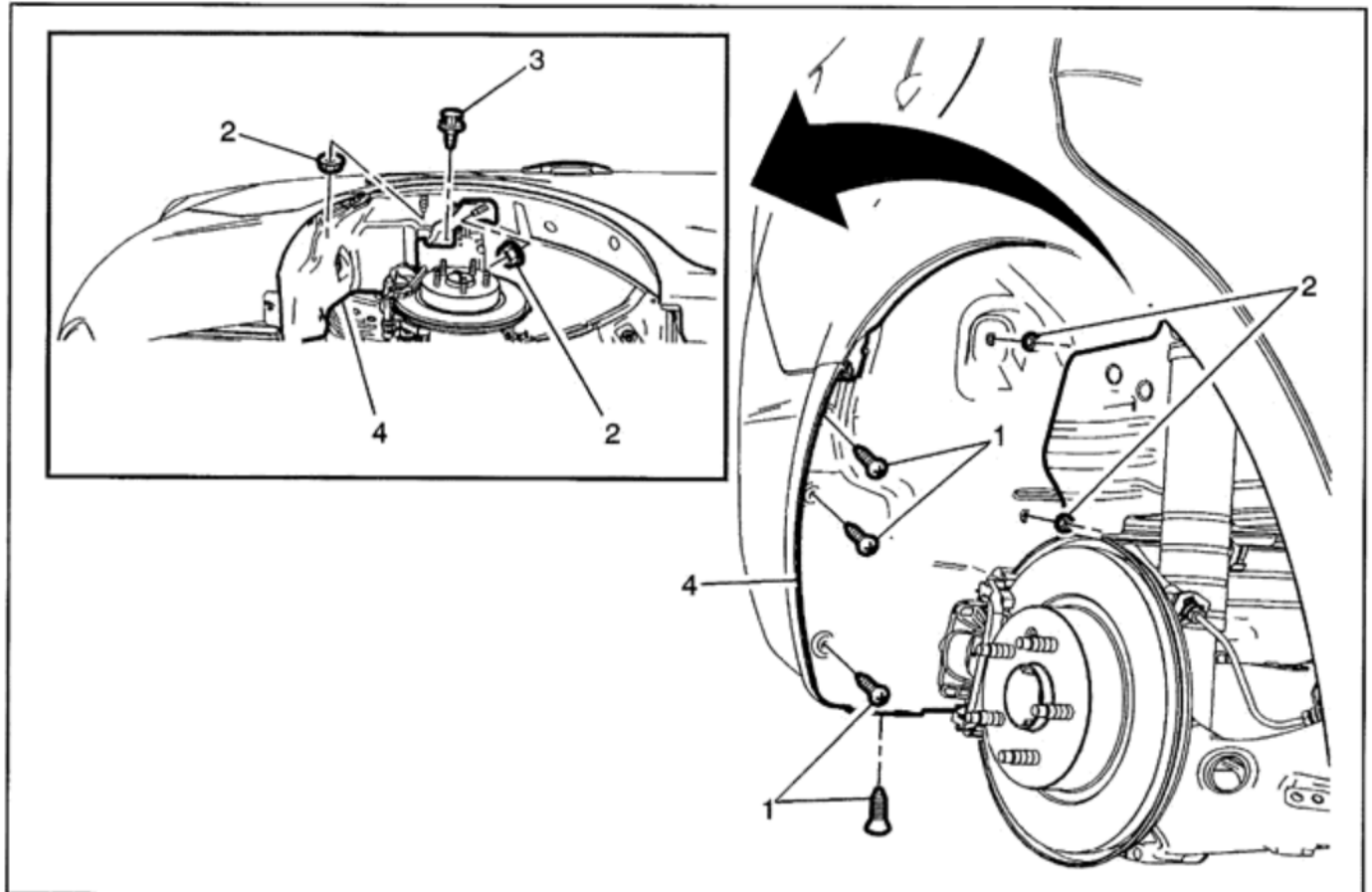


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Rear Wheelhouse Liner Replacement (Hatchback - Left)

Callout	Component Name
Preliminary Procedure Remove the tire and wheel assembly. Refer to <i>Tire and Wheel Removal and Installation</i> on page 16-60.	
1	Rear Wheelhouse Panel Liner Nut Caution: Refer to <i>Fastener Caution</i> on page 0-8. Tighten 2 N·m (18 lb in)
2	Rear Wheelhouse Panel Liner Screw (Qty: 5) Tighten 3 N·m (27 lb in)
3	Rear Wheelhouse Panel Liner

Rear Wheelhouse Liner Replacement (Sedan - Right)

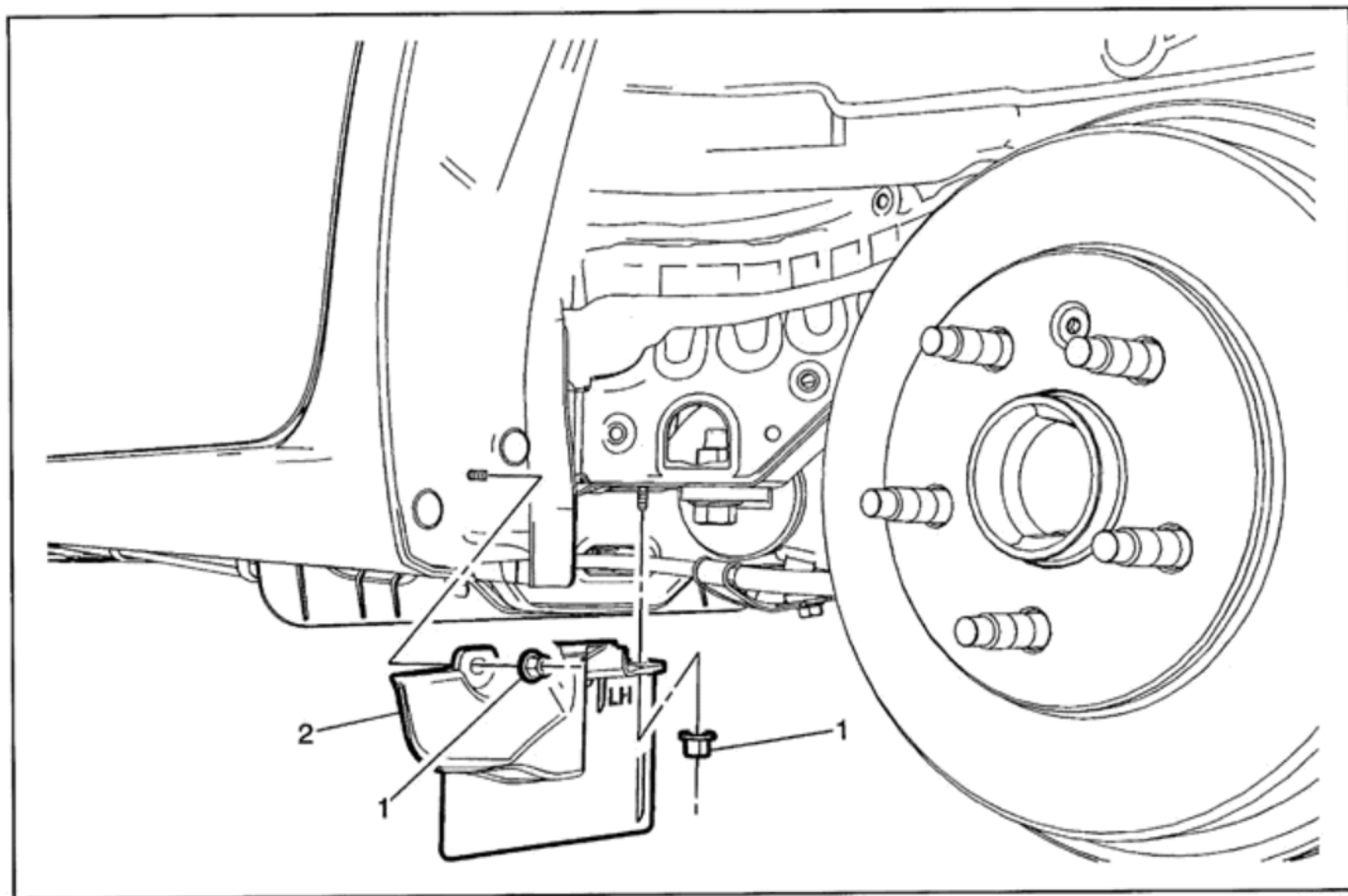


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Rear Wheelhouse Liner Replacement (Sedan - Right)

Callout	Component Name
Preliminary Procedure	
Remove the tire and wheel assembly. Refer to <i>Tire and Wheel Removal and Installation</i> on page 16-60.	
1	Rear Wheelhouse Panel Liner Screw (Qty: 4) Caution: Refer to <i>Fastener Caution</i> on page 0-8. Tighten 3 N•m (27 lb in)
2	Rear Wheelhouse Panel Liner Nut (Qty: 4) Tighten 2 N•m (18 lb in)
3	Rear Wheelhouse Panel Liner Push-In Retainer
4	Rear Wheelhouse Panel Liner

Rear Wheelhouse Panel Liner Extension Replacement

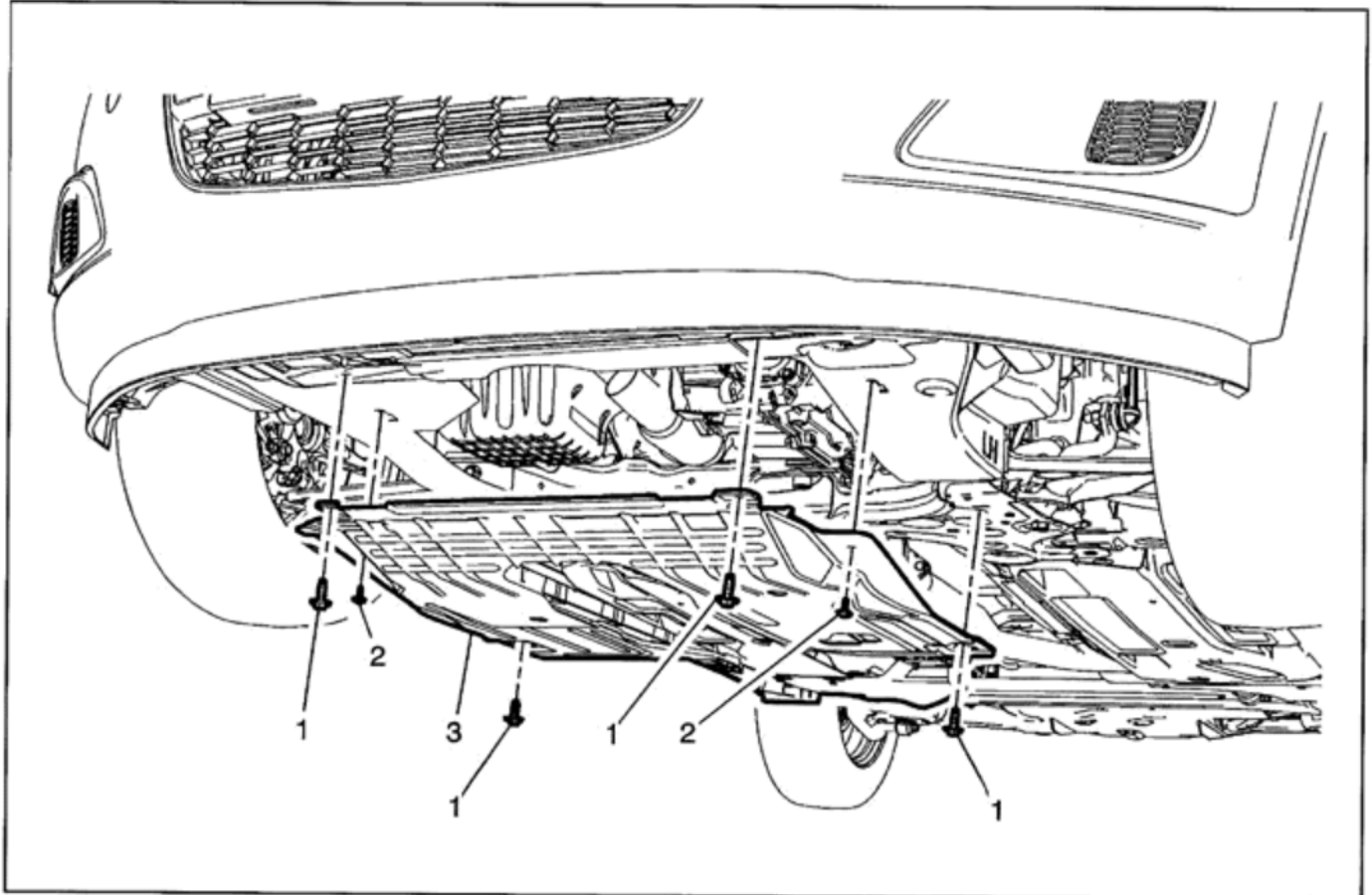


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Rear Wheelhouse Panel Liner Extension Replacement

Callout	Component Name
Preliminary Procedure Remove the tire and wheel assembly. Refer to <i>Tire and Wheel Removal and Installation</i> on page 16-60.	
1	Rear Wheelhouse Panel Liner Extension Nut (Qty: 2) Caution: Refer to <i>Fastener Caution</i> on page 0-8.
2	Rear Wheelhouse Panel Liner Extension

Front Compartment Front Insulator Cover Replacement



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Front Compartment Front Insulator Cover Replacement

Callout	Component Name
1	Front Compartment Front Insulator Cover Screw (Qty: 2) Caution: Refer to <i>Fastener Caution</i> on page 0-8. Tighten 2.5 N•m (22 lb in)
2	Front Compartment Front Insulator Cover Bolt (Qty: 4) Tighten 22 N•m (16 lb ft)
3	Front Compartment Front Insulator Cover

Special Tools and Equipment

Illustration	Tool Number/ Description
 1197696	EN-45059 J-45059 Angle Meter