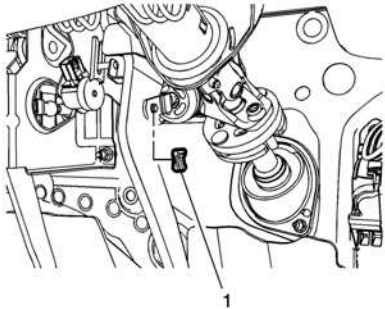


2013 Chevrolet Colorado

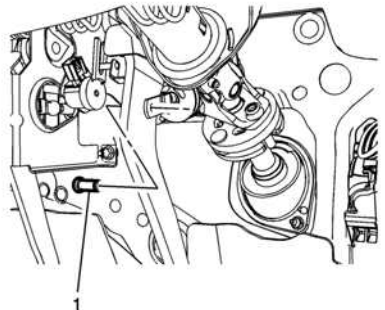
Submodel: | Engine Type: | Liters:
Fuel Delivery: | Fuel:

Removal Procedure

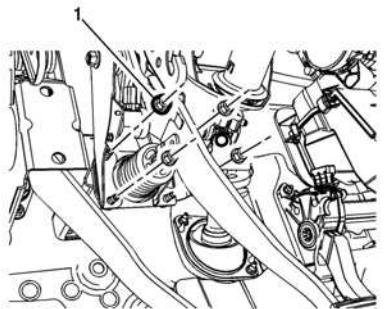
1. Disconnect the brake pedal position sensor electrical connector. Refer to Brake Pedal Position Sensor Replacement.



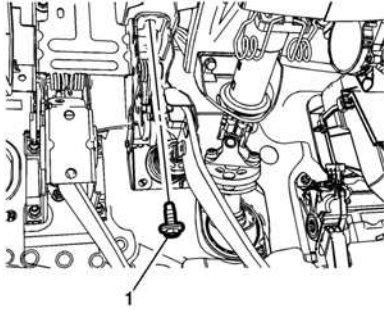
2. Remove the brake booster pushrod pin retainer (1).



3. Remove the brake booster pushrod pin (1).



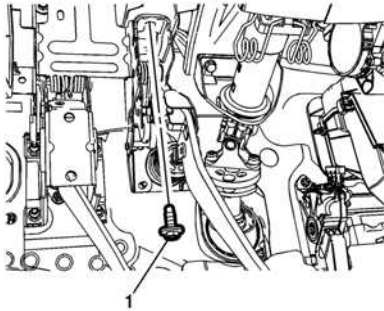
4. Remove the brake pedal bracket nuts (1).



5. Remove the brake pedal bracket bolt (1).
6. Pull the brake pedal assembly rearward to disengage the brake pedal bracket from the brake booster studs.
7. Lower and remove the brake pedal assembly from the vehicle.

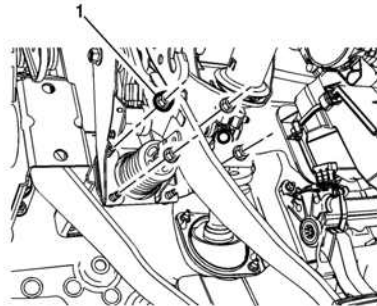
Installation Procedure

1. Position the brake pedal assembly to the brake booster studs.
2. Raise and install the brake pedal assembly to the brake booster studs.



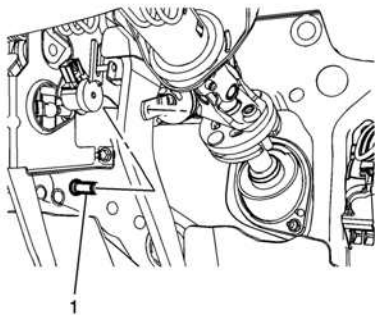
Note: Do not tighten the brake pedal bracket bolt until instructed to do so.

3. Loosely install the brake pedal bracket bolt (1).

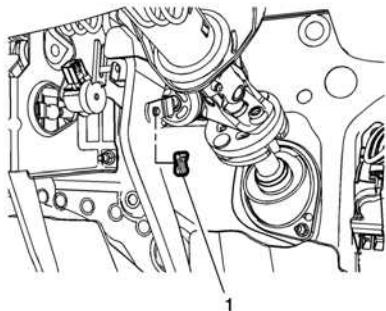


Caution: Refer to Fastener Caution.

4. Install the brake pedal bracket nuts (1) and tighten to **21 Y (15 lb ft)**.
5. Tighten the brake pedal bracket bolt to **22 Y (16 lb ft)**.



6. Install the brake booster pushrod pin (1).



7. Install the brake booster pushrod pin retainer (1).
8. Connect the brake pedal position sensor electrical connector. Refer to Brake Pedal Position Sensor Replacement.

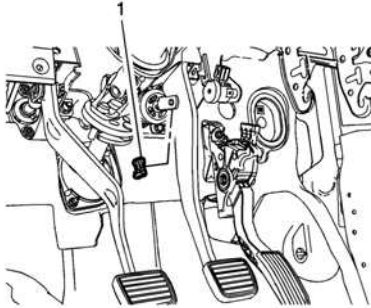
2013 Chevrolet Colorado

Submodel: | Engine Type: | Liters:

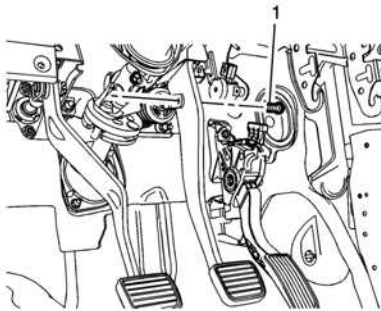
Fuel Delivery: | Fuel:

Removal Procedure

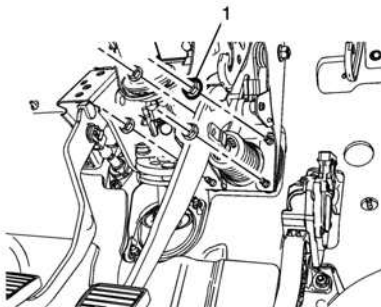
1. Without disconnecting the electrical connectors or cables, remove and position aside the driver side instrument lower panel. Refer to Instrument Lower Panel Replacement.
2. Remove the brake pedal position sensor. Refer to Brake Pedal Position Sensor Replacement.



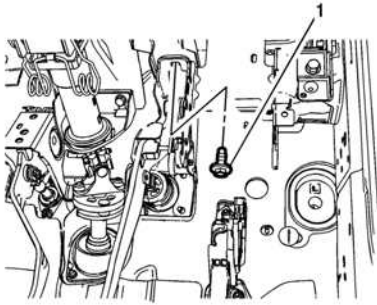
3. Remove the brake booster pushrod pin (1).



4. Remove the brake booster pushrod pin (1).



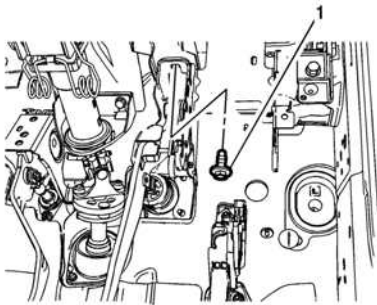
5. Remove the brake pedal bracket nuts (1).



6. Remove the brake pedal bracket bolt (1).
7. Pull the brake pedal assembly rearward to disengage the brake pedal bracket from the brake booster studs.
8. Lower and remove the brake pedal assembly from the vehicle.

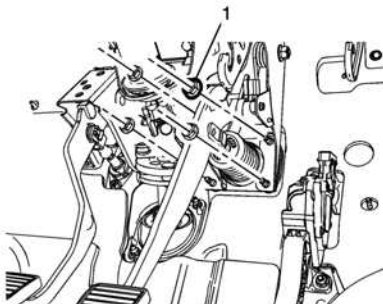
Installation Procedure

1. Position the brake pedal assembly to the brake booster studs.
2. Raise and install the brake pedal assembly to the brake booster studs.



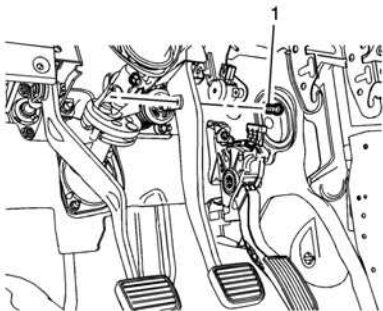
Note: Do not tighten the brake pedal bracket bolt until instructed to do so.

3. Loosely install the brake pedal bracket bolt (1).

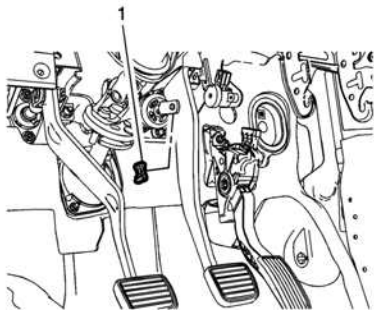


Caution: Refer to Fastener Caution.

4. Install the brake pedal bracket nuts (1) and tighten to **21 Y (15 lb ft)**.
5. Tighten the brake pedal bracket bolt to **22 Y (16 lb ft)**.



6. Install the brake booster pushrod pin (1).



7. Install the brake booster pushrod pin retainer (1).
8. Install the brake pedal position sensor. Refer to Brake Pedal Position Sensor Replacement.
9. Install the driver side instrument lower panel. Refer to Instrument Lower Panel Replacement.

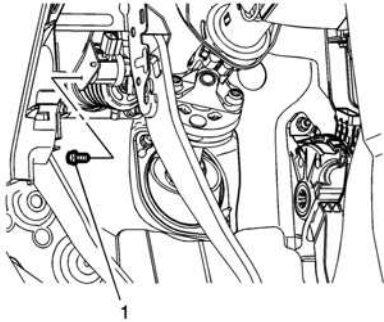
2013 Chevrolet Colorado

Submodel: | Engine Type: | Liters:

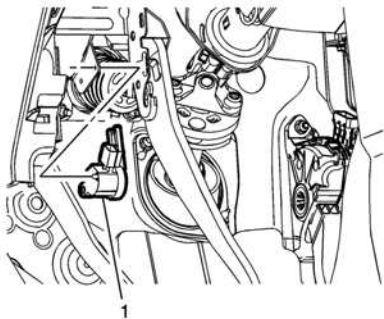
Fuel Delivery: | Fuel:

Removal Procedure

1. Turn the ignition OFF.
2. Without disconnecting the electrical connectors or hood release cable, remove and position aside the instrument lower panel. Refer to Lower Panel Replacement.

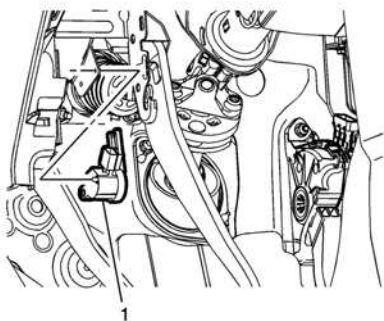


3. Disconnect the brake pedal position sensor electrical connector.
4. Remove the brake pedal position sensor bolt (1).



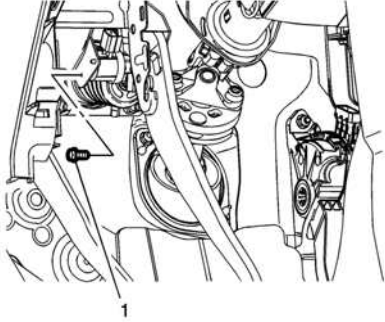
5. Remove the brake pedal position sensor (1).

Installation Procedure



Note: Align the locating pin on the brake pedal position sensor with the hole on the brake pedal bracket.

1. Install the brake pedal position sensor (1) to the brake pedal bracket.



Caution: Refer to Fastener Caution.

2. Install the brake pedal position sensor bolt (1) and tighten to **3 Y (27 lb in)**.
3. Connect the brake pedal position sensor electrical connector.
4. Install the instrument lower panel. Refer to Instrument Lower Panel Replacement.
5. Calibrate the brake pedal position sensor.

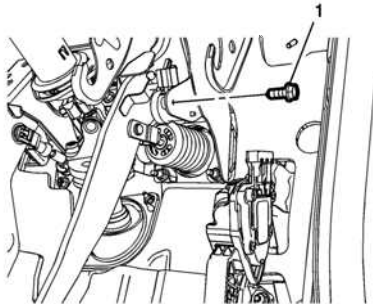
2013 Chevrolet Colorado

Submodel: | Engine Type: | Liters:

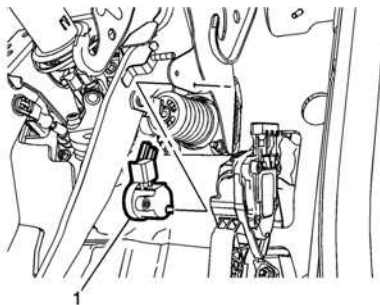
Fuel Delivery: | Fuel:

Removal Procedure

1. Turn the ignition OFF.
2. Without disconnecting the electrical connectors or hood release cable, remove and position aside the instrument lower panel. Refer to Lower Panel Replacement.

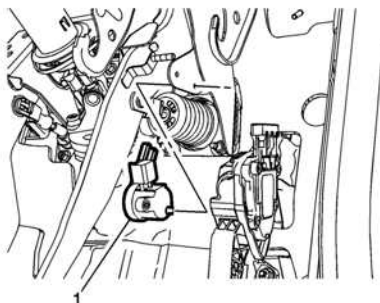


3. Disconnect the brake pedal position sensor electrical connector.
4. Remove the brake pedal position sensor bolt (1).



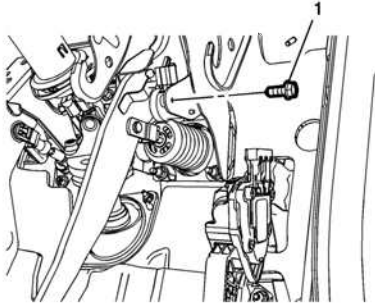
5. Remove the brake pedal position sensor (1).

Installation Procedure



Note: Align the locating pin on the brake pedal position sensor with the hole on the brake pedal bracket.

1. Install the brake pedal position sensor (1) to the brake pedal bracket.



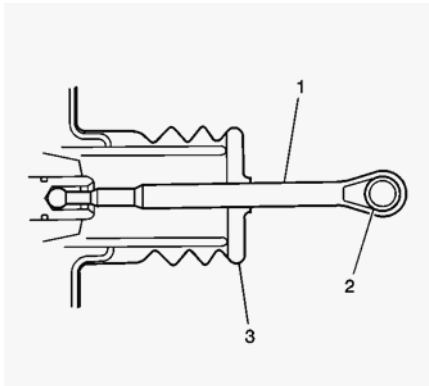
Caution: Refer to Fastener Caution.

2. Install the brake pedal position sensor bolt (1) and tighten to **3 Y (27 lb in)**.
3. Connect the brake pedal position sensor electrical connector.
4. Install the instrument lower panel. Refer to Instrument Lower Panel Replacement.
5. Calibrate the brake pedal position sensor.

2013 Chevrolet Colorado

Submodel: | **Engine Type:** | **Liters:**

Fuel Delivery: | **Fuel:**



1. Disconnect the brake pedal pushrod (1) from the brake pedal.
2. Inspect the brake pedal pushrod eyelet bushing (2), if equipped, for cracks and/or excessive wear.
3. Reposition the pedal pushrod boot (3) toward the front of the vehicle to expose as much of the pedal pushrod (1) as possible.
4. Inspect the brake pedal pushrod (1) for straightness.
5. If the brake pedal pushrod eyelet bushing (2) exhibited cracks and/or excessive wear, then the bushing requires replacement.
6. If the brake pedal pushrod (1) is not straight, then the pushrod requires replacement.
7. Return the pedal pushrod boot (3) to its original position on the pedal pushrod (1).
8. Connect the brake pedal pushrod (1) to the brake pedal.

2013 Chevrolet Colorado

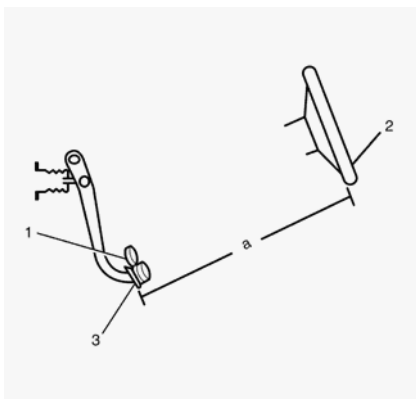
Submodel: | Engine Type: | Liters:
Fuel Delivery: | Fuel:

Special Tools

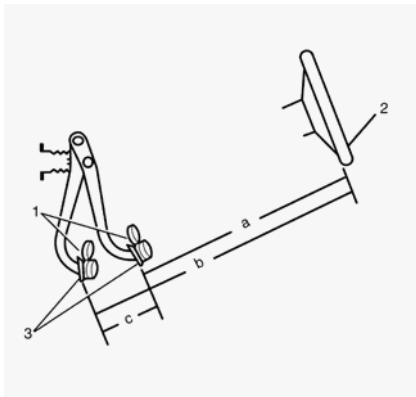
CH-28662 Brake Pedal Effort Gauge

For equivalent regional tools, refer to Special Tools.

1. With the ignition OFF and the brakes cool, apply the brakes 3–5 times, or until the brake pedal becomes firm, in order to deplete the brake bc reserve.



2. Install the CH-28662 gauge (1), or equivalent, to the brake pedal (3).
3. Measure and record the distance (a) from the brake pedal (3) to the rim of the steering wheel (2). Note the points of measurement.



4. Apply and maintain a force of 445 N (100 lb) to the brake pedal, as indicated on the CH-28662 gauge (1), or equivalent.
5. While maintaining 445 N (100 lb) of force to the brake pedal (3), measure and record the distance (b) from the same point on the brake pedal (point on the rim of the steering wheel (2).
6. Release the brake pedal (3) and repeat steps 4 and 5 to obtain a second measurement. After obtaining a second measurement, proceed to st
7. Average the first and second measurements recorded for the 2 applies of the brakes.
8. Subtract the initial unapplied distance (a), from the average applied distance (b) to obtain the brake pedal travel measurement (c).

Specification

Maximum brake pedal travel – measured with the ignition OFF, brake booster power assist depleted, and the brakes cool.

2013 Chevrolet Colorado

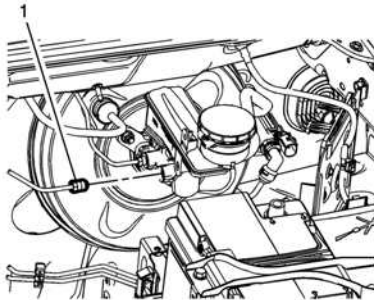
Submodel: | Engine Type: | Liters:

Fuel Delivery: | Fuel:

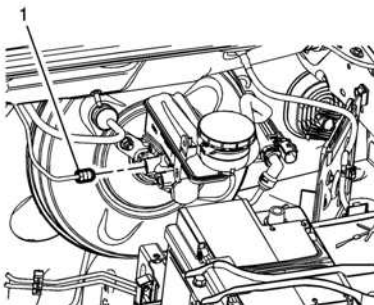
Removal Procedure

Warning: Refer to Brake Fluid Irritant Warning.

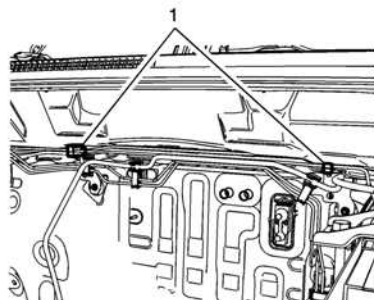
Caution: Refer to Brake Fluid Effects on Paint and Electrical Components Caution.



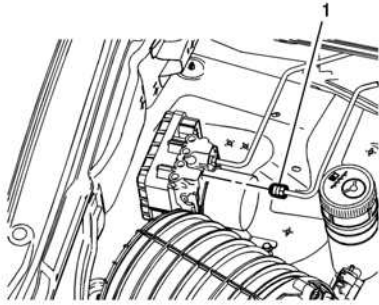
1. Disconnect the master cylinder secondary brake pipe fitting (1) from the master cylinder.
2. Cap the brake pipe to prevent brake fluid loss and contamination.



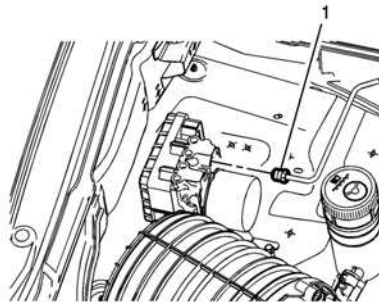
3. Disconnect the master cylinder primary brake pipe fitting (1) from the master cylinder.
4. Cap the brake pipe to prevent brake fluid loss and contamination.



5. Release the brake pressure modulator valve (BPMV) brake pipes from the clips (1) on the dash panel.



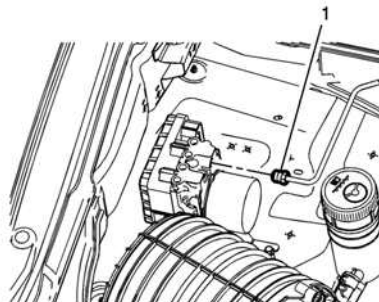
6. Disconnect the master cylinder secondary brake pipe fitting (1) from the BPMV.
7. Cap the brake pipe to prevent brake fluid loss and contamination.



8. Disconnect the master cylinder primary brake pipe fitting (1) from the BPMV.
9. Cap the brake pipe to prevent brake fluid loss and contamination.
10. Remove the BPMV brake pipes.

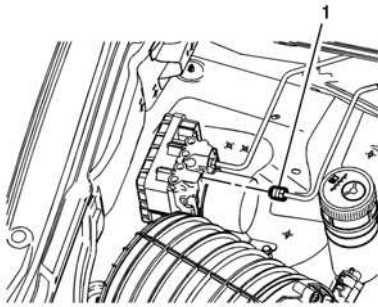
Installation Procedure

1. Install the BPMV brake pipes.

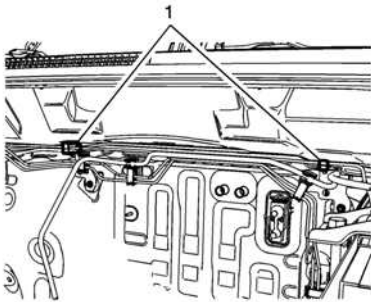


Caution: Refer to Fastener Caution.

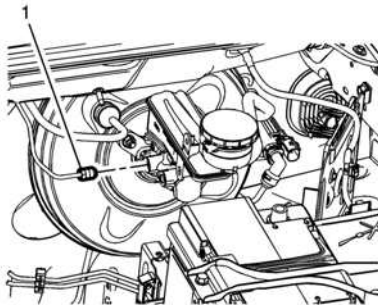
2. Connect the master cylinder primary brake pipe fitting (1) to the BPMV and tighten the brake pipe fitting.
 - With NW9: Tighten the brake pipe fitting to **20 Y (15 lb ft)**.
 - Without NW9: Tighten the brake pipe fitting to **16 Y (12 lb ft)**.



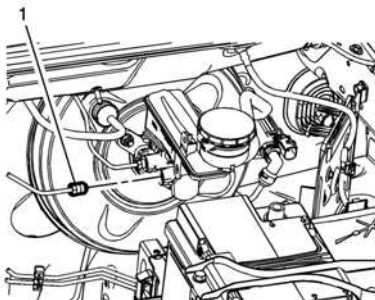
- Connect the master cylinder secondary brake pipe fitting (1) to the BPMV and tighten the brake pipe fitting.
- With NW9: Tighten the brake pipe fitting to **20 Y (15 lb ft)**.
- Without NW9: Tighten the brake pipe fitting to **16 Y (12 lb ft)**.



- Install the BPMV brake pipes to the clips (1) on the dash panel.



- Connect the master cylinder primary brake pipe fitting (1) to the master cylinder and tighten the brake pipe fitting to **16 Y (12 lb ft)**.



- Connect the master cylinder secondary brake pipe fitting (1) to the master cylinder and tighten the brake pipe fitting to **16 Y (12 lb ft)**.
- Bleed the hydraulic brake system. Refer to Hydraulic Brake System Bleeding.

2013 Chevrolet Colorado

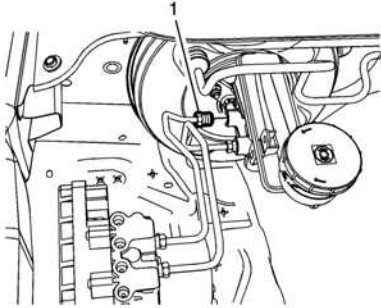
Submodel: | Engine Type: | Liters:

Fuel Delivery: | Fuel:

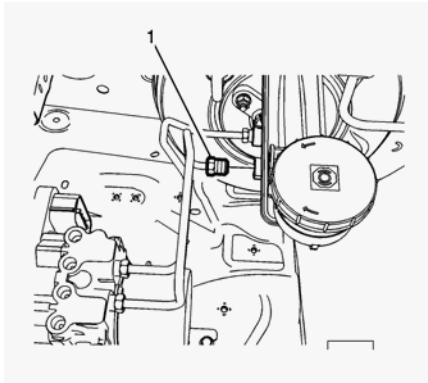
Removal Procedure

Warning: Refer to Brake Fluid Irritant Warning.

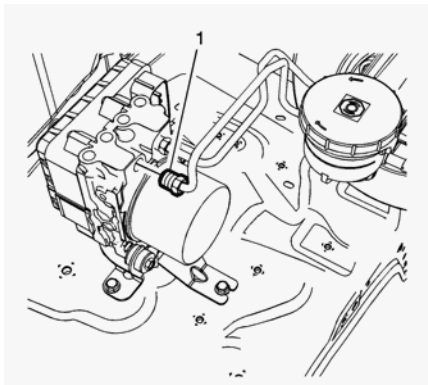
Caution: Refer to Brake Fluid Effects on Paint and Electrical Components Caution.



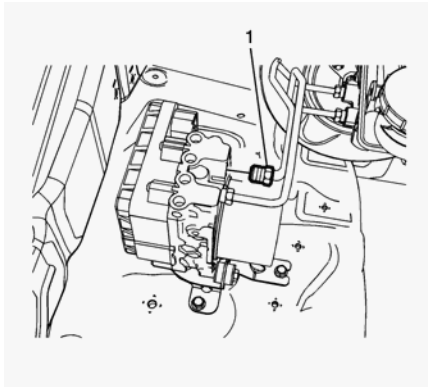
1. Disconnect the master cylinder primary brake pipe fitting (1) from the master cylinder.
2. Cap the brake pipe to prevent brake fluid loss and contamination.



3. Disconnect the master cylinder secondary brake pipe fitting (1) from the master cylinder.
4. Cap the brake pipe to prevent brake fluid loss and contamination.



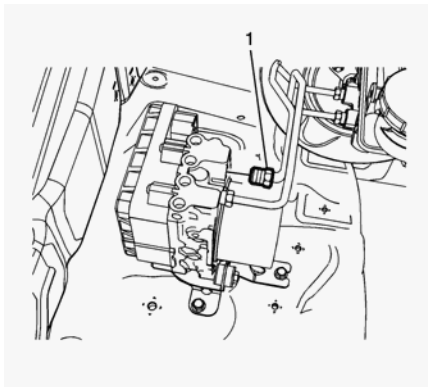
5. Disconnect the master cylinder secondary brake pipe fitting (1) from the brake pressure modulator valve (BPMV).
6. Plug the BPMV inlet port to prevent brake fluid loss and contamination.



7. Disconnect the master cylinder primary brake pipe fitting (1) from the BPMV.
8. Plug the BPMV inlet port to prevent brake fluid loss and contamination.
9. Remove the BPMV brake pipes.

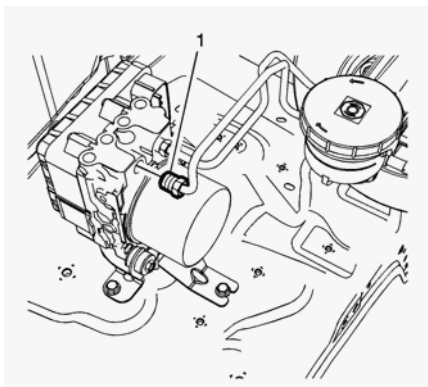
Installation Procedure

1. Install the BPMV brake pipes.

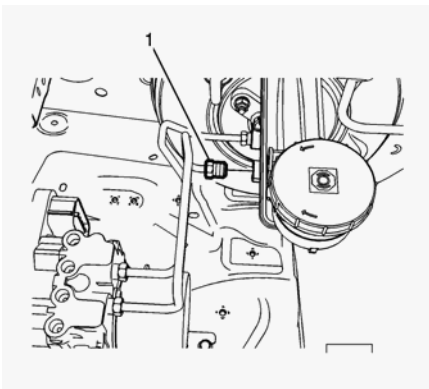


Caution: Refer to Fastener Caution.

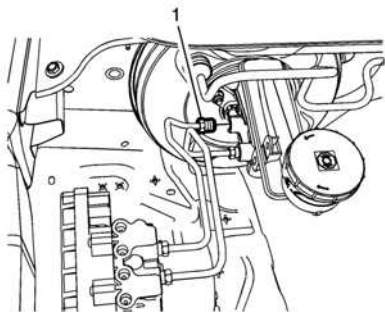
2. Connect the master cylinder primary brake pipe fitting (1) to the BPMV and tighten the brake pipe fitting.
 - With NW9: Tighten the brake pipe fitting to **20 Y (15 lb ft)**.
 - Without NW9: Tighten the brake pipe fitting to **16 Y (12 lb ft)**.



- Connect the master cylinder secondary brake pipe fitting (1) to the BPMV and tighten the brake pipe fitting.
 - With NW9: Tighten the brake pipe fitting to **20 Y (15 lb ft)**.
 - Without NW9: Tighten the brake pipe fitting to **16 Y (12 lb ft)**.



- Connect the master cylinder secondary brake pipe fitting (1) to the master cylinder and tighten the brake pipe fitting to **16 Y (12 lb ft)**.



- Connect the master cylinder primary brake pipe fitting (1) to the master cylinder and tighten the brake pipe fitting to **16 Y (12 lb ft)**.
- Bleed the hydraulic brake system. Refer to Hydraulic Brake System Bleeding.

2013 Chevrolet Colorado

Submodel: | **Engine Type:** | **Liters:**

Fuel Delivery: | **Fuel:**

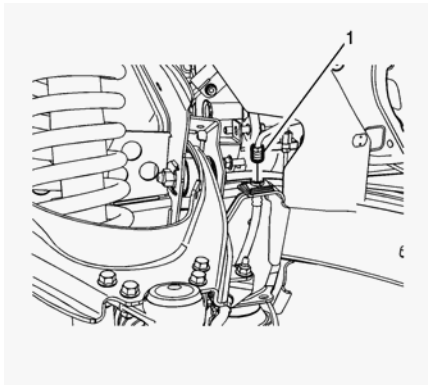
Removal Procedure

Warning: Refer to Brake Dust Warning.

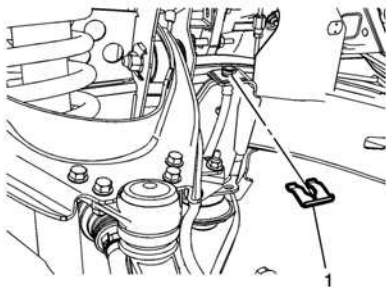
Warning: Refer to Brake Fluid Irritant Warning.

Caution: Refer to Brake Fluid Effects on Paint and Electrical Components Caution.

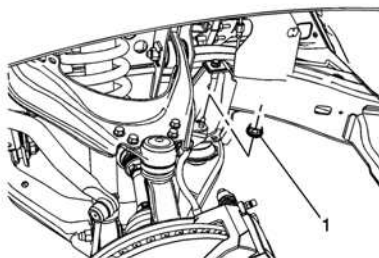
1. Raise and support the vehicle. Refer to Lifting and Jacking the Vehicle.
2. Remove the tire and wheel assembly. Refer to Tire and Wheel Removal and Installation.
3. Remove all dirt and debris from the brake pipe and the brake hose fitting areas.



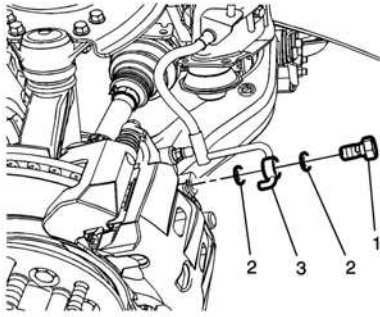
4. Disconnect the brake pipe fitting (1) from the front brake hose.
5. Cap the brake pipe fitting to prevent brake fluid loss and contamination.



6. Remove the front brake hose retaining clip (1).

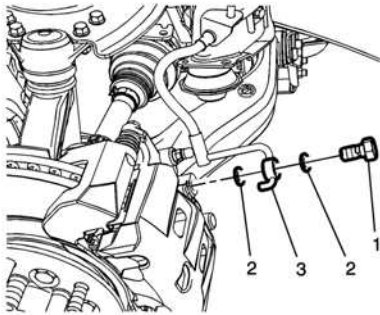


7. Remove the front brake hose bracket nut (1).

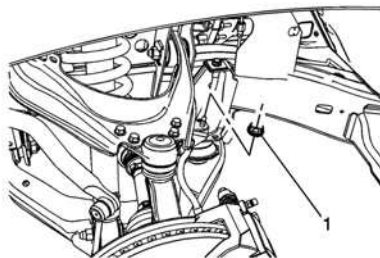


8. Remove the front brake hose fitting bolt (1).
- Note:** Do not reuse the brake hose fitting gaskets.
9. Remove and discard the brake hose fitting gaskets (2) from the brake hose fitting (3).
10. Cap the brake hose fitting to prevent brake fluid loss and contamination.

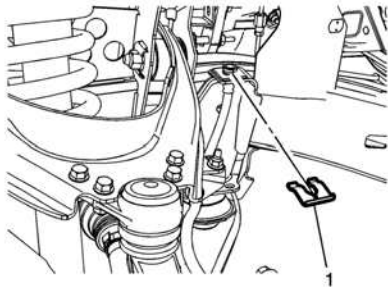
Installation Procedure



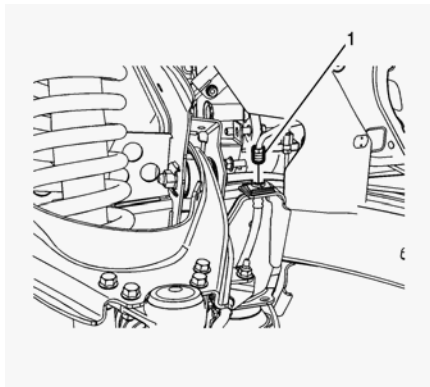
1. Assemble the brake hose fitting bolt (1) and the new brake hose fitting gaskets (2) to the front brake hose fitting (3).
- Caution:** Refer to Fastener Caution.
- Note:** Align the post on the front brake hose fitting with the hole next to the brake caliper inlet.
2. Install the front brake hose assembly to the caliper and tighten the brake hose fitting bolt to **34 Y (25 lb ft)**.



3. Install the front brake hose bracket nut (1) and tighten to **21 Y (15 lb ft)**.



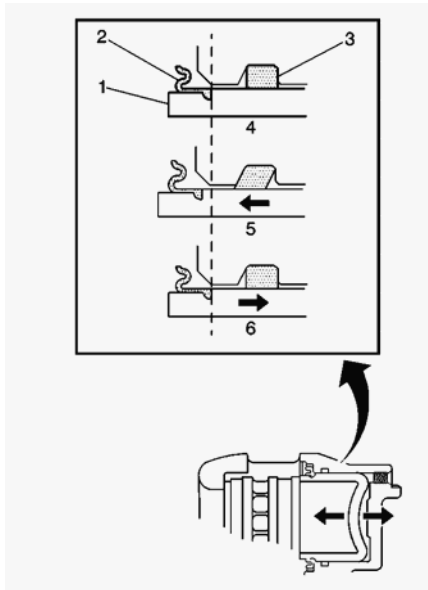
4. Install the front brake hose retaining clip (1).



5. Connect the brake pipe fitting (1) to the front brake hose and tighten the fitting to **16 Y (12 lb ft)**.
6. Bleed the hydraulic brake system. Refer to Hydraulic Brake System Bleeding.
7. Install the tire and wheel assembly. Refer to Tire and Wheel Removal and Installation.

2013 Chevrolet Colorado

Submodel: | Engine Type: | Liters:
Fuel Delivery: | Fuel:



Warning: Refer to Brake Fluid Irritant Warning.

1. With the tire and wheel assemblies removed and the brake rotors retained by wheel lug nuts, visually inspect the caliper piston dust boot (2) to ensure that there are no brake fluid leaks.
2. If any evidence of a brake fluid leak is present, the brake caliper requires overhaul or replacement.
3. While the brake system is at rest (4), observe the position of the caliper piston (1) in relation to the caliper housing.
4. Have an assistant apply and release the brake pedal several times while you observe the operation of the hydraulic brake caliper.
 1. Observe the caliper piston (1) for unrestricted and even movement during each apply of the brake system (5).
 2. Observe the caliper piston (1) for an unrestricted and even return motion during each release of the brake system (6).
5. If the caliper piston (1) did not exhibit unrestricted and even movement during brake system apply and/or release, the piston square seal (3) is damaged and the caliper may require overhaul or replacement.

2013 Chevrolet Colorado

Submodel: | Engine Type: | Liters:

Fuel Delivery: | Fuel:

Warning: Refer to Brake Fluid Irritant Warning.

Caution: Refer to Brake Fluid Effects on Paint and Electrical Components Caution.

Caution: Only use products that comply with GM specifications and check manufacturer information respectively. We recommend the use of GM genuine products. Instructions must be followed at all times. The use of any type of fluid other than the recommended type of brake fluid, may cause contamination which could result in damage to the internal rubber seals and/or rubber linings of hydraulic brake system components.

If hydraulic components were serviced on only one wheel hydraulic circuit, perform the following procedure.

Bleeding a Single Hydraulic Brake Circuit

1. With the ignition OFF and the brakes cool, apply the brakes 3–5 times, or until the brake pedal effort increases significantly, in order to deplete the brake booster power reserve.
2. Place a clean shop cloth beneath the brake master cylinder to catch brake fluid spills.
3. Clean the outside of the reservoir on and around the reservoir cap prior to removing the cap and diaphragm.
4. Fill the brake master cylinder reservoir to the maximum-full level with GM approved brake fluid from a clean, sealed brake fluid container. Add brake fluid as needed to ensure that the brake master cylinder reservoir remains at least half-full throughout the bleed procedure. The reservoir cap must be installed at all times except when filling the reservoir. Refer to Fluid and Lubricant Recommendations.
5. Install a proper box-end wrench onto the wheel hydraulic circuit bleeder valve which has been serviced.
6. Install a transparent hose over the end of the bleeder valve.
7. Submerge the open end of the transparent hose into a transparent container partially filled with brake fluid from a clean, sealed brake fluid container.
8. Have an assistant slowly press the brake pedal fully and maintain steady pressure on the pedal.
9. Loosen the bleeder valve to purge air from the wheel hydraulic circuit.
10. Tighten the bleeder valve, then have the assistant slowly release the brake pedal.
11. Wait 15 seconds, then repeat steps 8-10 until all air is purged from the wheel hydraulic circuit.
12. After all air has been purged from the hydraulic circuit, tighten the bleeder valve and install the dust cap.
13. Fill the brake master cylinder reservoir to the maximum-fill level with GM approved brake fluid from a clean, sealed brake fluid container.
14. Slowly press and release the brake pedal. Observe the brake pedal feel.
15. If the brake pedal feels spongy, perform the Bleeding the Complete Brake Hydraulic System procedure:
16. Turn the ignition key ON, with the engine OFF. Check to see if the brake system warning lamp remains illuminated.

Note: DO NOT allow the vehicle to be driven until it is diagnosed and repaired.

17. If the brake system warning lamp remains illuminated, refer to Diagnostic Starting Point - Vehicle.

Bleeding the Complete Brake Hydraulic System

1. With the ignition OFF and the brakes cool, apply the brakes 3–5 times, or until the brake pedal effort increases significantly, in order to deplete the brake booster power reserve.
2. Place a clean shop cloth beneath the brake master cylinder to catch brake fluid spills.
3. Clean the outside of the reservoir on and around the reservoir cap prior to removing the cap and diaphragm.
4. Fill the brake master cylinder reservoir to the maximum-full level with GM approved brake fluid from a clean, sealed brake fluid container. Add brake fluid as needed to ensure that the brake master cylinder reservoir remains at least half-full throughout the bleed procedure. The reservoir cap must be installed at all times except when filling the reservoir. Refer to Fluid and Lubricant Recommendations.
5. If the master cylinder was replaced, the master cylinder must be bench bled. Refer to Master Cylinder Bench Bleeding.
6. If the brake pipes have been removed from the master cylinder, the following steps must be performed.
 1. With the rear brake pipe installed securely to the master cylinder, loosen and separate the front brake pipe fitting from the front port of the brake master cylinder.
 2. Allow a small amount of brake fluid to gravity bleed from the open port of the master cylinder. Capture and properly dispose of the brake fluid in an approved container.
 3. Install the front brake pipe fitting to the front port of the brake master cylinder and tighten the fitting. Refer to Fastener Tightening Specifications.
 4. Have an assistant slowly press the brake pedal fully and maintain steady pressure on the pedal.
 5. Loosen the front brake pipe fitting from the front port of the brake master cylinder to purge air from the master cylinder port.
 6. Tighten the front brake pipe fitting, then have the assistant slowly release the brake pedal.
 7. Wait 15 seconds, then repeat steps 6.4-6.6 until all air is purged from the front brake pipe fitting of the front port of the master cylinder.
 8. After all air is purged from the front port of the brake master cylinder, tighten the front master cylinder brake pipe fitting. Refer to Fastener Tightening Specifications.
 9. With the front brake pipe fitting installed securely to the front port of the brake master cylinder, loosen and separate the rear brake pipe fitting from the rear port of the brake master cylinder.
 10. Repeat steps 6.2-6.7 for the rear port of the brake master cylinder.
 11. After all air is purged from the rear port of the brake master cylinder, tighten the rear master cylinder brake pipe fitting. Refer to Fastener Tightening Specifications.
 12. Slowly press and release the brake pedal. Observe the brake pedal feel.
 13. If the brake pedal feels spongy, proceed to step 7.
 14. If the brake pedal feels firm, proceed to step 24.
7. If the brake pipes have been removed from the brake pressure modulator valve (BPMV) assembly, if equipped, or the brake proportion valve assembly, if equipped, air must be purged from each port of the respective assembly beginning with the feed pipes from the master cylinder.
 1. Loosen and separate one of the master cylinder brake pipe fittings from the inlet port of the assembly to be bled.
 2. Allow a small amount of brake fluid to gravity bleed from the open port of the assembly. Capture and properly dispose of the brake fluid in an approved container.
 3. Install the brake pipe fitting and to the inlet port of the assembly and tighten securely.
 4. Have an assistant slowly press the brake pedal fully and maintain steady pressure on the pedal.
 5. Loosen the same brake pipe fitting to purge air from the open port of the assembly.
 6. Tighten the brake pipe fitting, then have the assistant slowly release the brake pedal.
 7. Wait 15 seconds, then repeat steps 7.4-7.6 until all air is purged from the brake pipe fitting of the assembly.
 8. Repeat steps 7.1-7.7 for all of the remaining ports of the assembly.
 9. After bleeding each port of the assembly, tighten all of the brake pipe fittings on the assembly. Refer to Fastener Tightening Specifications.
 10. Fill the master cylinder reservoir to the maximum-full level with GM approved brake fluid from a clean, sealed brake fluid container.
 11. Slowly press and release the brake pedal. Observe the brake pedal feel.
 12. If the brake pedal feels spongy, proceed to step 8.
 13. If the brake pedal feels firm, proceed to step 24.
8. Install a proper box-end wrench onto the RIGHT REAR wheel hydraulic circuit bleeder valve.
9. Install a transparent hose over the end of the bleeder valve.

10. Submerge the open end of the transparent hose into a transparent container partially filled with GM approved brake fluid from a clean, sealed brake fluid container.
 11. Have an assistant slowly press the brake pedal fully and maintain steady pressure on the brake pedal.
 12. Loosen the bleeder valve to purge air from the wheel hydraulic circuit.
 13. Tighten the bleeder valve, then have the assistant slowly release the brake pedal.
 14. Wait 15 seconds, then repeat steps 11-13 until all air is purged from the wheel hydraulic circuit.
 15. Tighten the RIGHT REAR hydraulic wheel circuit bleeder valve securely.
 16. Install a proper box-end wrench onto the LEFT REAR wheel hydraulic circuit bleeder valve, then repeat steps 9-14..
 17. Install a proper box-end wrench onto the RIGHT FRONT wheel hydraulic circuit bleeder valve, then repeat steps 9-14..
 18. Install a proper box-end wrench onto the LEFT FRONT wheel hydraulic circuit bleeder valve, then repeat steps 9-14..
 19. After completing the final wheel hydraulic circuit bleeding procedure, tighten all of the wheel hydraulic circuit bleeder valves and install the bleeder valve dust caps.
 20. Fill the master cylinder reservoir to the maximum-full level with GM approved brake fluid from a clean, sealed brake fluid container.
 21. Slowly press and release the brake pedal. Observe the brake pedal feel.
 22. If the brake pedal feels spongy, perform the following procedure.
 1. If equipped with antilock brakes, install a scan tool and perform the Antilock Brake System Automated Bleed to remove air which may be trapped in the BPMV.
 2. Inspect the hydraulic brake system for external leaks. Refer to Brake System External Leak Inspection.
 3. Repeat the Bleeding the Complete Brake Hydraulic System procedure.
 23. If the brake pedal still feels spongy, pressure bleed the hydraulic brake system. Refer to Hydraulic Brake System Bleeding
 24. Turn the ignition switch ON with the engine OFF. Check to see if the brake system warning lamp remains illuminated.
- Note:** DO NOT allow the vehicle to be driven until the brake system is diagnosed and repaired.
25. If the brake system warning lamp remains illuminated, refer to Diagnostic Starting Point - Vehicle.

2013 Chevrolet Colorado

Submodel: | Engine Type: | Liters:

Fuel Delivery: | Fuel:

Warning: Refer to Brake Fluid Irritant Warning.

Caution: Refer to Brake Fluid Effects on Paint and Electrical Components Caution.

Caution: Only use products that comply with GM specifications and check manufacturer information respectively. We recommend the use of GM genuine products. Instructions must be followed at all times. The use of any type of fluid other than the recommended type of brake fluid, may cause contamination which could result in damage to the internal rubber seals and/or rubber linings of hydraulic brake system components.

If hydraulic components were serviced on only one wheel hydraulic circuit, perform the following procedure.

Bleeding a Single Hydraulic Brake Circuit

1. With the ignition OFF and the brakes cool, apply the brakes 3–5 times, or until the brake pedal effort increases significantly, in order to deplete the brake booster power reserve.
2. Place a clean shop cloth beneath the brake master cylinder to catch brake fluid spills.
3. Clean the outside of the reservoir on and around the reservoir cap prior to removing the cap and diaphragm.
4. Fill the brake master cylinder reservoir to the maximum-full level with GM approved brake fluid from a clean, sealed brake fluid container. Refer to Fluid and Lubricant Recommendations.

Note: The pressure bleeding equipment must be the diaphragm type. The rubber diaphragm between the air supply and the brake fluid prevents air, moisture, oil, and other contaminants from entering the hydraulic system.

5. Following the brake pressure bleeder manufacturer's instructions, fill the brake pressure bleeder with GM approved brake fluid from a clean, sealed brake fluid container.
6. Install the appropriate master cylinder reservoir adapter and connect the brake pressure bleeder.
7. Charge the brake pressure bleeder air tank to 170-200 kPa/1.7-2.0 bar (25-30 psi), or as recommended by the brake pressure bleeder manufacturer's instructions.
8. Open the brake pressure bleeder fluid tank valve to allow pressurized brake fluid to enter the brake hydraulic system.

Note: Any brake fluid leaks identified require repair prior to completing this procedure.

9. Wait approximately 30 seconds, then inspect the entire hydraulic brake system for external brake fluid leaks.
10. Install a proper box-end wrench onto the wheel hydraulic circuit bleeder valve which has been serviced.
11. Install a transparent hose over the end of the bleeder valve.
12. Submerge the open end of the transparent hose into a transparent container partially filled with brake fluid from a clean, sealed brake fluid container.
13. Loosen the bleeder valve to purge air from the wheel hydraulic circuit.
14. Allow fluid to flow until air bubbles stop flowing from the bleeder.
15. After all air has been purged from the hydraulic circuit, tighten the bleeder valve and install the dust cap.

Note: The brake reservoir may have residual pressure after the bleeding operation is complete. Wrap a clean shop towel around the bleeder adapter and all hose connections before disconnecting the pressure bleeding equipment to prevent brake fluid from contacting and damaging vehicle components and painted surfaces.

16. Close the brake pressure bleeder fluid tank valve then disconnect the brake pressure bleeder from the master cylinder reservoir bleeder adapter.
17. Remove the master cylinder reservoir bleeder adapter from the master cylinder reservoir.
18. Fill the brake master cylinder reservoir to the maximum-fill level with GM approved brake fluid from a clean, sealed brake fluid container.
19. Slowly press and release the brake pedal. Observe the brake pedal feel.
20. If the brake pedal feels spongy, perform the Bleeding the Complete Brake Hydraulic System procedure:
21. Turn the ignition key ON, with the engine OFF. Check to see if the brake system warning lamp remains illuminated.

Note: DO NOT allow the vehicle to be driven until it is diagnosed and repaired.

22. If the brake system warning lamp remains illuminated, refer to Diagnostic Starting Point - Vehicle.

Bleeding the Complete Brake Hydraulic System

1. With the ignition OFF and the brakes cool, apply the brakes 3–5 times, or until the brake pedal effort increases significantly, in order to deplete the brake booster power reserve.
2. Place a clean shop cloth beneath the brake master cylinder to catch brake fluid spills.
3. Clean the outside of the reservoir on and around the reservoir cap prior to removing the cap and diaphragm.
4. Fill the brake master cylinder reservoir to the maximum-full level with GM approved brake fluid from a clean, sealed brake fluid container. Refer to Fluid and Lubricant Recommendations.
5. If the master cylinder was replaced, the master cylinder must be bench bled. Refer to Master Cylinder Bench Bleeding.
6. If the brake pipes have been removed from the master cylinder, the following steps must be performed.
 1. With the rear brake pipe installed securely to the master cylinder, loosen and separate the front brake pipe fitting from the front port of the brake master cylinder.
 2. Allow a small amount of brake fluid to gravity bleed from the open port of the master cylinder. Capture and properly dispose of the brake fluid in an approved container.
 3. Install the front brake pipe fitting to the front port of the brake master cylinder and tighten the fitting.
 4. Have an assistant slowly press the brake pedal fully and maintain steady pressure on the pedal.
 5. Loosen the front brake pipe fitting from the front port of the brake master cylinder to purge air from the master cylinder port.
 6. Tighten the front brake pipe fitting, then have the assistant slowly release the brake pedal.
 7. Wait 15 seconds, then repeat steps 6.4-6.6 until all air is purged from the front brake pipe fitting of the front port of the master cylinder.
 8. After all air is purged from the front port of the brake master cylinder, tighten the front master cylinder brake pipe fitting. Refer to Fastener Tightening Specifications.
 9. With the front brake pipe fitting installed securely to the front port of the brake master cylinder, loosen and separate the rear brake pipe fitting from the rear port of the brake master cylinder.
 10. Repeat steps 6.2-6.7 for the rear port of the brake master cylinder.
 11. After all air is purged from the rear port of the brake master cylinder, tighten the rear master cylinder brake pipe fitting. Refer to Fastener Tightening Specifications.
 12. Slowly press and release the brake pedal. Observe the brake pedal feel.
 13. If the brake pedal feels spongy, proceed to step 7.
 14. If the brake pedal feels firm, proceed to step 24.
7. If the brake pipes have been removed from the brake pressure modulator valve (BPMV) assembly, if equipped, or the brake proportion valve assembly, if equipped, air must be purged from each port of the respective assembly beginning with the feed pipes from the master cylinder.
 1. Loosen and separate one of the master cylinder brake pipe fittings from the inlet port of the assembly to be bled.
 2. Allow a small amount of brake fluid to gravity bleed from the open port of the assembly. Capture and properly dispose of the brake fluid in an approved container.
 3. Install the brake pipe fitting and to the inlet port of the assembly and tighten securely.
 4. Have an assistant slowly press the brake pedal fully and maintain steady pressure on the pedal.
 5. Loosen the same brake pipe fitting to purge air from the open port of the assembly.
 6. Tighten the brake pipe fitting, then have the assistant slowly release the brake pedal.

7. Wait 15 seconds, then repeat steps 7.4-7.6 until all air is purged from the brake pipe fitting of the assembly.
8. Repeat steps 7.1-7.7 for all of the remaining ports of the assembly.
9. After bleeding each port of the assembly, tighten all of the brake pipe fittings on the assembly. Refer to Fastener Tightening Specifications.
10. Fill the master cylinder reservoir to the maximum-full level with GM approved brake fluid from a clean, sealed brake fluid container.
11. Slowly press and release the brake pedal. Observe the brake pedal feel.
12. If the brake pedal feels spongy, proceed to step 8.
13. If the brake pedal feels firm, proceed to step 24.

Note: The pressure bleeding equipment must be the diaphragm type. The rubber diaphragm between the air supply and the brake fluid prevents air, moisture, oil, and other contaminants from entering the hydraulic system.

8. Following the brake pressure bleeder manufacturer's instructions, fill the brake pressure bleeder with GM approved brake fluid from a clean, sealed brake fluid container.
9. Install the appropriate master cylinder reservoir adapter and connect the brake pressure bleeder.
10. Charge the brake pressure bleeder air tank to 170-200 kPa/1.7-2.0 bar (25-30 psi), or as recommended by the brake pressure bleeder manufacturer's instructions.
11. Open the brake pressure bleeder fluid tank valve to allow pressurized brake fluid to enter the brake hydraulic system.

Note: Any brake fluid leaks identified require repair prior to completing this procedure.

12. Wait approximately 30 seconds, then inspect the entire hydraulic brake system for external brake fluid leaks.
13. Install a proper box-end wrench onto the RIGHT REAR wheel hydraulic circuit bleeder valve.
14. Install a transparent hose over the end of the bleeder valve.
15. Submerge the open end of the transparent hose into a transparent container partially filled with GM approved brake fluid from a clean, sealed brake fluid container.
16. Have an assistant slowly press the brake pedal fully and maintain steady pressure on the brake pedal.
17. Loosen the bleeder valve to purge air from the wheel hydraulic circuit.
18. Tighten the bleeder valve, then have the assistant slowly release the brake pedal.
19. Wait 15 seconds, then repeat steps 11-13 until all air is purged from the wheel hydraulic circuit.
20. Tighten the RIGHT REAR hydraulic wheel circuit bleeder valve securely.
21. Install a proper box-end wrench onto the LEFT REAR wheel hydraulic circuit bleeder valve, then repeat steps 9-14.
22. Install a proper box-end wrench onto the RIGHT FRONT wheel hydraulic circuit bleeder valve, then repeat steps 9-14.
23. Install a proper box-end wrench onto the LEFT FRONT wheel hydraulic circuit bleeder valve, then repeat steps 9-14.
24. After completing the final wheel hydraulic circuit bleeding procedure, tighten all of the wheel hydraulic circuit bleeder valves and install the bleeder valve dust caps.
25. Close the brake pressure bleeder fluid tank valve.

Note: The brake reservoir may have residual pressure after the bleeding operation is complete. Wrap a clean shop towel around the bleeder adapter and all hose connections before disconnecting the pressure bleeding equipment to prevent brake fluid from contacting and damaging vehicle components and painted surfaces.

26. Remove the brake pressure bleeding equipment from the vehicle.
27. Fill the brake master cylinder reservoir to the maximum-full level with GM approved brake fluid from a clean, sealed brake fluid container. Refer to Fluid and Lubricant Recommendations.
28. Slowly press and release the brake pedal. Observe the brake pedal feel.
29. If the brake pedal feels spongy, perform the following procedure.

1. If equipped with antilock brakes, install a scan tool and perform the Antilock Brake System Automated Bleed to remove air which may be trapped in the BPMV.
 2. Inspect the hydraulic brake system for external leaks. Refer to Brake System External Leak Inspection.
 3. Repeat the Bleeding the Complete Brake Hydraulic System procedure.
30. If the brake pedal still feels spongy, pressure bleed the hydraulic brake system. Refer to Hydraulic Brake System Bleeding.
 31. Turn the ignition switch ON with the engine OFF. Check to see if the brake system warning lamp remains illuminated.

Note: DO NOT allow the vehicle to be driven until the brake system is diagnosed and repaired.

32. If the brake system warning lamp remains illuminated, refer to Diagnostic Starting Point - Vehicle.

2013 Chevrolet Colorado

Submodel: | Engine Type: | Liters:

Fuel Delivery: | Fuel:

System Component Description

The hydraulic brake system consists of the following:

Hydraulic Brake Master Cylinder Fluid Reservoir

Contains supply of brake fluid for the hydraulic brake system.

Hydraulic Brake Master Cylinder

Converts mechanical input force into hydraulic output pressure.

Hydraulic output pressure is distributed from the master cylinder through two hydraulic circuits, supplying diagonally-opposed wheel apply circuits.

Hydraulic Brake Pressure Balance Control System

Regulates brake fluid pressure delivered to hydraulic brake wheel circuits, in order to control the distribution of braking force.

Pressure balance control is achieved through dynamic rear proportioning (DRP), which is a function of the ABS modulator. Refer to ABS Description and Operation for specific information on the operation of DRP.

Hydraulic Brake Pipes and Flexible Brake Hoses

Carries brake fluid to and from hydraulic brake system components.

Hydraulic Brake Wheel Apply Components

Converts hydraulic input pressure into mechanical output force.

System Operation

Mechanical force is converted into hydraulic pressure by the master cylinder, regulated to meet braking system demands by the pressure balance control system, and delivered to the hydraulic brake wheel circuits by the pipes and flexible hoses. The wheel apply components then convert the hydraulic pressure back into mechanical force which presses linings against rotating brake system components.

2013 Chevrolet Colorado

Submodel: | Engine Type: | Liters:
Fuel Delivery: | Fuel:

Warning: Refer to Brake Fluid Irritant Warning.

Caution: Only use products that comply with GM specifications and check manufacturer information respectively. We recommend the use of GM genuine products. Instructions must be followed at all times. The use of any type of fluid other than the recommended type of brake fluid, may cause contamination which could result in damage to the internal rubber seals and/or rubber linings of hydraulic brake system components.

Caution: Refer to Brake Fluid Effects on Paint and Electrical Components Caution.

1. Inspect the brake fluid for the following conditions, indicating brake fluid contamination:
 - Fluid separation, indicating 2 types of fluid are present; a substance other than the recommended brake fluid has been introduced into the brake hydraulic system
 - Swirled appearance—oil-based substance
 - Layered appearance— silicone-based substance
 - Fluid discoloration, indicating the presence of moisture or particles that have been introduced into the brake hydraulic system
 - Cloudy appearance – moisture
 - Dark appearance/suspended particles in fluid—dirt, rust, corrosion, brake dust
 - Inspect the master cylinder reservoir cap diaphragm and the reservoir-to-master cylinder grommets for swelling, indicating brake fluid contamination.
 - If the brake fluid WAS contaminated with an oil-based or a silicone-based substance, indicated by fluid separation and/or a swollen master cylinder reservoir cap diaphragm and/or swollen reservoir-to-master cylinder grommets, perform the following:
1. Remove ALL of the following components listed from the vehicle. Each component contains internal rubber seals/linings which have been contaminated by the contaminated brake fluid in the brake hydraulic system.

Refer to the procedures indicated:

 - Master Cylinder Replacement
 - Front Brake Hose Replacement
 - Rear Brake Hose Replacement
 - Rear Brake Hose Replacement
 - Front Brake Caliper Replacement
 - Rear Brake Cylinder Replacement
 - Brake Proportion Valve Replacement
 - Electronic Brake Control Module with Brake Pressure Modulator Valve Replacement
 - Clean out all the hydraulic brake pipes using denatured alcohol, or equivalent.
 - Dry the brake pipes using non-lubricated, filtered air.
 - Repair or replace ALL of the following components listed and install them to the vehicle. Each component contains internal rubber seals/linings which have been contaminated by the contaminated brake fluid in the brake hydraulic system.

Refer to the procedures indicated:

 - Master Cylinder Replacement —Also perform the following:

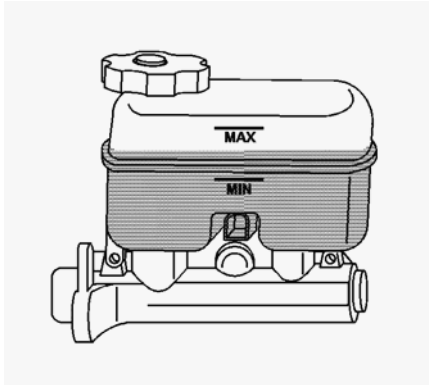
Clean the brake master cylinder reservoir using denatured alcohol, or equivalent, then dry the reservoir using non-lubricated, filtered air. Inspect the reservoir for cracks and/or damage and replace if necessary. Refer to Master Cylinder Replacement.

Replace the brake master cylinder reservoir cap diaphragm.
 - Front Brake Hose Replacement
 - Rear Brake Hose Replacement
 - Rear Brake Hose Replacement
 - Front Brake Caliper Overhaul or Front Brake Caliper Replacement
 - Rear Brake Cylinder Replacement
 - Brake Proportion Valve Replacement
 - Electronic Brake Control Module with Brake Pressure Modulator Valve Replacement
 - If the brake fluid was NOT contaminated with an oil-based or a silicone-based substance, but WAS contaminated with water or dirt, rust, corrosion, and/or brake dust, replace the brake master cylinder reservoir cap diaphragm which may have allowed the moisture or particles to enter the hydraulic system.
 - Fill the brake master cylinder reservoir to the maximum-fill level with GM approved brake fluid from a clean, sealed brake fluid container.
 - Pressure bleed the hydraulic brake system; begin the procedure with the pressure bleeder reservoir filled to the maximum-fill level with the correct brake fluid as indicated. Refer to Hydraulic Brake System Bleeding.

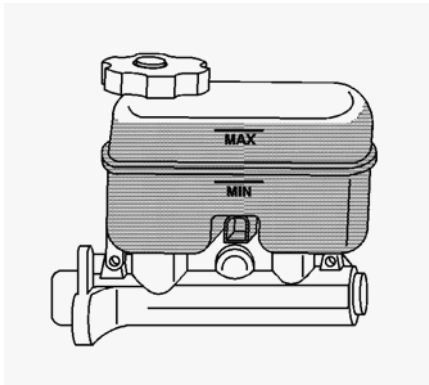
2013 Chevrolet Colorado

Submodel: | Engine Type: | Liters:
Fuel Delivery: | Fuel:

Warning: Refer to Brake Fluid Imitant Warning.



1. Visually inspect the brake fluid level through the brake master cylinder reservoir.
2. If the brake fluid level is at or below the half-full point during routine fluid checks, the brake system should be inspected for wear and possible leaks.
3. If the brake fluid level is at or below the half-full point during routine fluid checks, and an inspection of the brake system did not reveal wear or leaks, the brake fluid may be topped-off up to maximum-fill level.
4. If brake system service was just completed, the brake fluid may be topped-off up to the maximum-fill level.
5. If the brake fluid level is above the half-full point, adding brake fluid is not recommended under normal conditions.



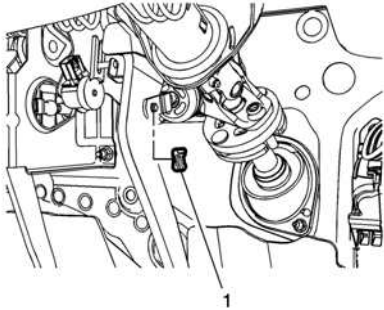
6. If brake fluid is to be added to the master cylinder reservoir, clean the outside of the reservoir on and around the reservoir cap prior to removing the cap. Use only GM approved brake fluid from a clean, sealed brake fluid container.

2013 Chevrolet Colorado

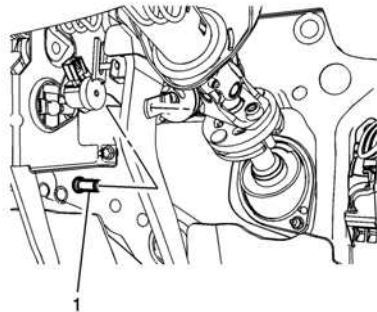
Submodel: | Engine Type: | Liters:
Fuel Delivery: | Fuel:

Removal Procedure

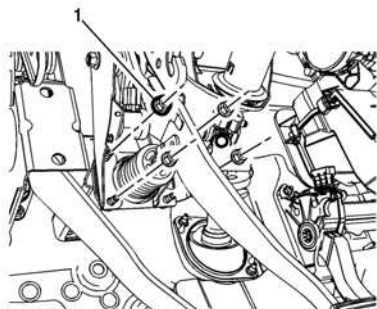
1. Apply and release the brake pedal several times until the pedal becomes firm to deplete the power brake booster vacuum reserve.
2. Disconnect the brake pedal position sensor electrical connector. Refer to Brake Pedal Position Sensor Replacement.



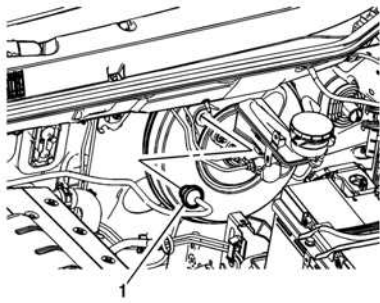
3. Remove the brake booster pushrod pin retainer (1).



4. Remove the brake booster pushrod pin (1).



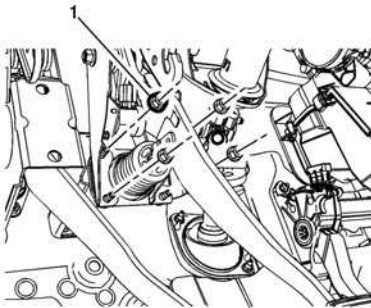
5. Remove the brake pedal bracket nuts (1).



6. Disconnect the power brake booster vacuum check valve and hose assembly (1).
7. Remove the master cylinder. Refer to Master Cylinder Replacement.
8. Remove the power brake booster.

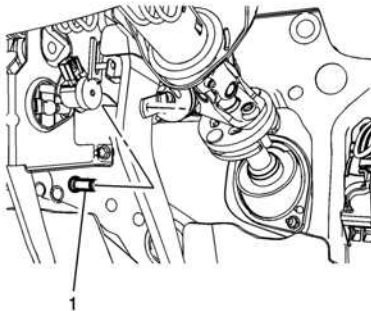
Installation Procedure

1. Install the power brake booster to the dash panel.

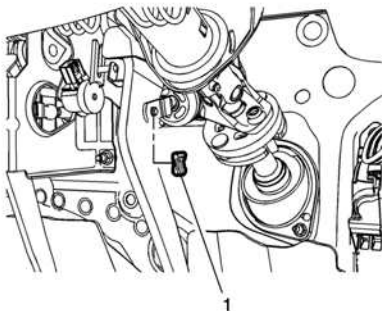


Caution: Refer to Fastener Caution.

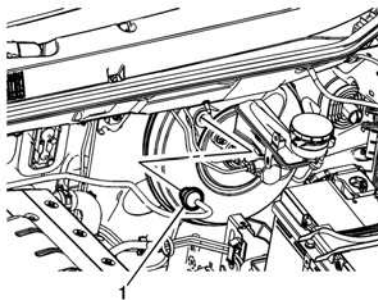
2. Install the brake pedal bracket nuts (1) and tighten to **21 Y (15 lb ft)**.
3. Tighten the brake pedal bracket bolt to **22 Y (16 lb ft)**.



4. Install the brake booster pushrod pin (1).



5. Install the brake booster pushrod pin retainer (1).
6. Connect the brake pedal position sensor electrical connector. Refer to Brake Pedal Position Sensor Replacement.



Note: A small amount of denatured alcohol may be used as a lubricant for assembly.

7. Install the power brake booster vacuum check valve and hose assembly (1).
8. Install the master cylinder. Refer to Master Cylinder Replacement.

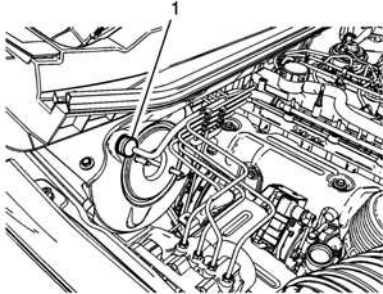
2013 Chevrolet Colorado

Submodel: | **Engine Type:** | **Liters:**

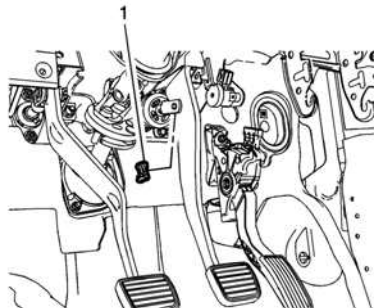
Fuel Delivery: | **Fuel:**

Removal Procedure

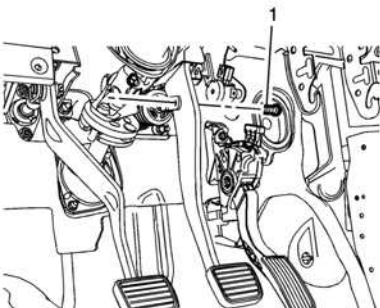
1. Apply and release the brake pedal several times until the pedal becomes firm to deplete the power brake booster vacuum reserve.
2. Remove the master cylinder. Refer to Master Cylinder Replacement.



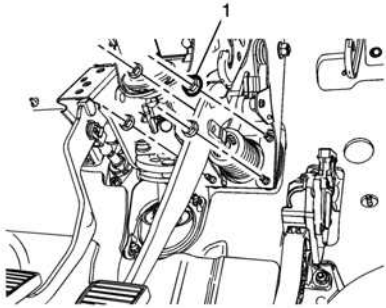
3. Disconnect the power brake booster vacuum check valve and hose assembly (1).
4. Disconnect all of the brake pipe fittings from the electronic brake control module with brake pressure modulator valve. Refer to Electro Control Module with Brake Pressure Modulator Valve Replacement.
5. Cap all brake pipe fittings to prevent brake fluid loss and contamination.
6. Remove the cowl front panel. Refer to Cowl Front Panel Replacement.
7. Remove the theft deterrent alarm. Refer to Theft Deterrent Alarm Replacement.
8. Without disconnecting the electrical connectors, release and position aside the instrument lower panel. Refer to Instrument Lower Panel Replacement.
9. Disconnect the brake pedal position sensor electrical connector.



10. Remove the brake booster pushrod pin retainer (1).



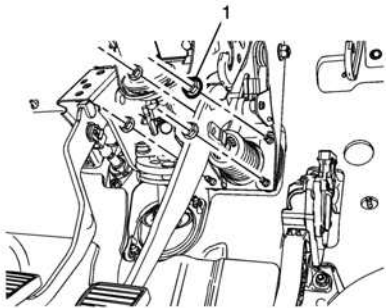
11. Remove the brake booster pushrod pin (1).



12. Remove the brake pedal bracket nuts (1).
13. Remove the power brake booster.

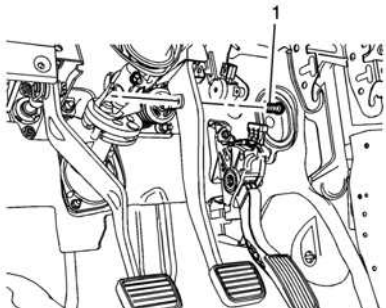
Installation Procedure

1. Install the power brake booster to the dash panel.

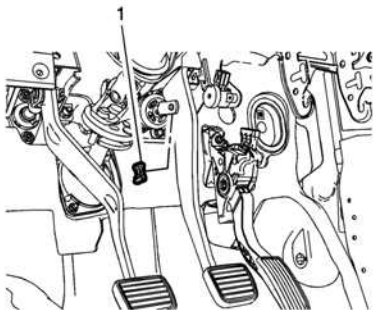


Caution: Refer to Fastener Caution.

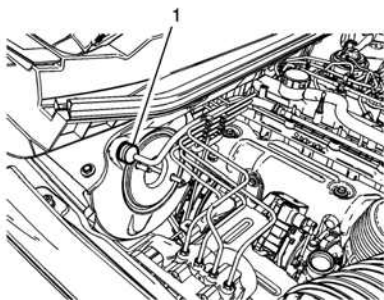
2. Install the brake pedal bracket nuts (1) and tighten to **21 Y (15 lb ft)**.



3. Install the brake booster pushrod pin (1).



4. Install the brake booster pushrod pin retainer (1).
5. Connect the brake pedal position sensor electrical connector.
6. Install the instrument lower panel. Refer to Instrument Lower Panel Replacement.
7. Install the theft deterrent alarm. Refer to Theft Deterrent Alarm Replacement.
8. Install the cowl front panel. Refer to Cowl Front Panel Replacement.
9. Install all of the brake pipe fittings to the electronic brake control module with brake pressure modulator valve. Refer to Electronic Brake Module with Brake Pressure Modulator Valve Replacement.



Note: A small amount of denatured alcohol may be used as a lubricant for assembly.

10. Install the power brake booster vacuum check valve and hose assembly (1).
11. Install the master cylinder. Refer to Master Cylinder Replacement.

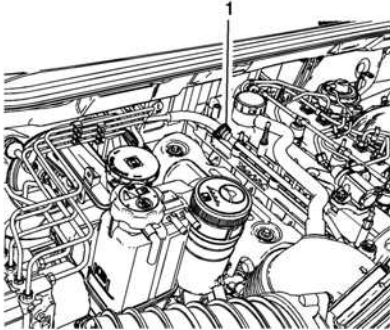
2013 Chevrolet Colorado

Submodel: | Engine Type: | Liters:

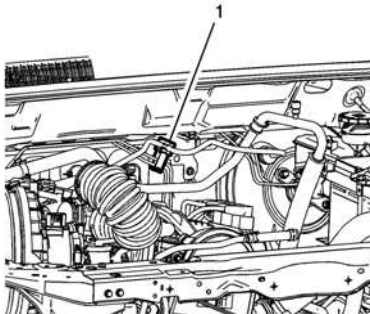
Fuel Delivery: | Fuel:

Removal Procedure

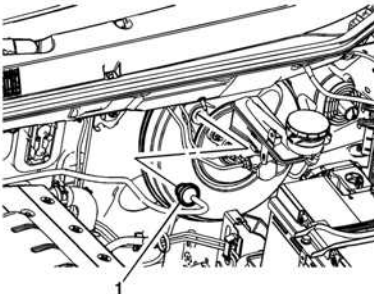
1. Apply and release the brake pedal several times until the pedal becomes firm to deplete the power brake booster vacuum reserve.
2. Remove the intake manifold cover. Refer to Intake Manifold Cover Replacement



3. Compress the clamp (1) and disconnect the power brake booster vacuum hose from the intake manifold vacuum port.



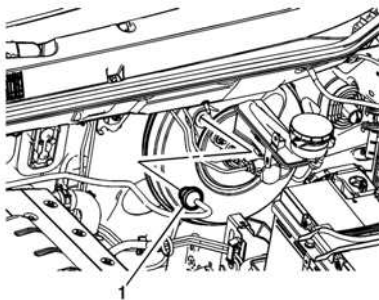
4. Release the power brake booster vacuum hose from the retaining clip (1) on the dash panel.



5. Remove the vacuum check valve (1) from the power brake booster.
6. Remove the power brake booster vacuum check valve and hose assembly.

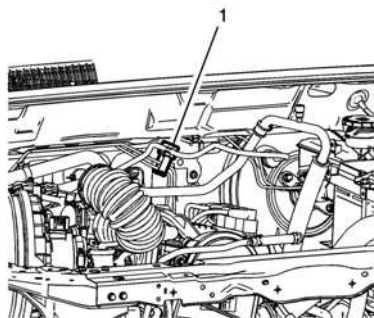
Installation Procedure

1. Install the power brake booster vacuum check valve and hose assembly to the vehicle.

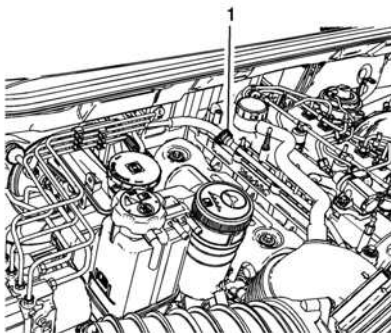


Note: A small amount of denatured alcohol may be used as a lubricant for installation.

2. Install the vacuum check valve (1) to the power brake booster.



3. Install the power brake booster vacuum hose to the retaining clip (1) on the dash panel.



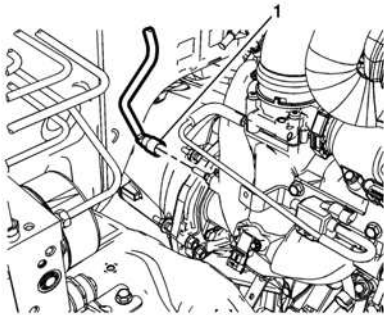
4. Compress the clamp (1) and connect the power brake booster vacuum hose to the intake manifold vacuum port.
5. Install the intake manifold cover. Refer to Intake Manifold Cover Replacement

2013 Chevrolet Colorado

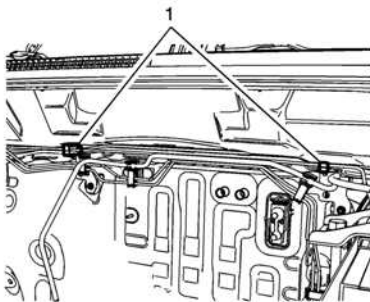
Submodel: | **Engine Type:** | **Liters:**
Fuel Delivery: | **Fuel:**

Removal Procedure

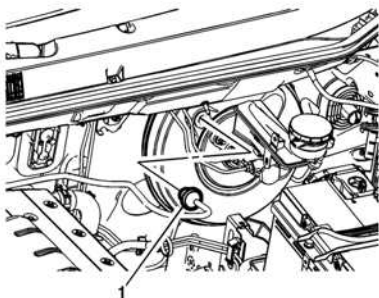
1. Apply and release the brake pedal several times until the brake pedal becomes firm to deplete the power brake booster vacuum reserv



2. Disconnect the power brake booster vacuum hose quick connect (1) from the intake manifold.



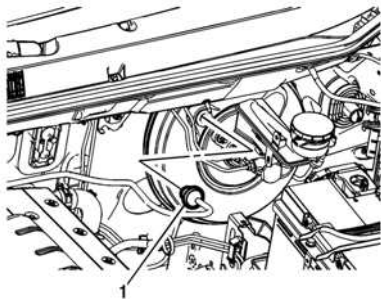
3. Release the power brake booster vacuum hose from the clips (1) on the dash panel.



4. Remove the vacuum check valve (1) from the power brake booster.
5. Remove the power brake booster vacuum check valve and hose assembly.

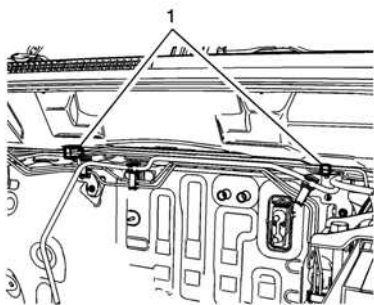
Installation Procedure

1. Install the power brake booster vacuum check valve and hose assembly to the vehicle.

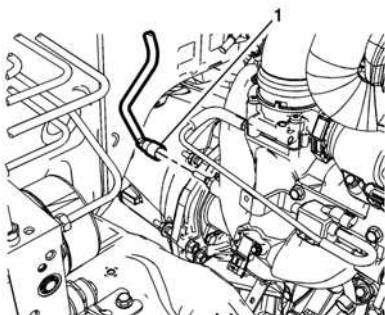


Note: A small amount of denatured alcohol may be used as a lubricant for installation.

2. Install the vacuum check valve (1) to the power brake booster.



3. Install the power brake booster vacuum hose to the clips (1) on the dash panel.



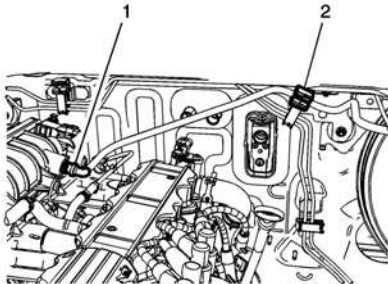
4. Connect the power brake booster vacuum hose quick connect (1) to the intake manifold.

2013 Chevrolet Colorado

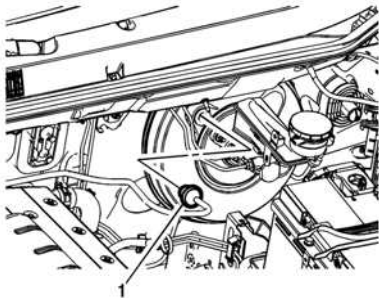
Submodel: | Engine Type: | Liters:
Fuel Delivery: | Fuel:

Removal Procedure

1. Apply and release the brake pedal several times until the brake pedal becomes firm to deplete the power brake booster vacuum reserv



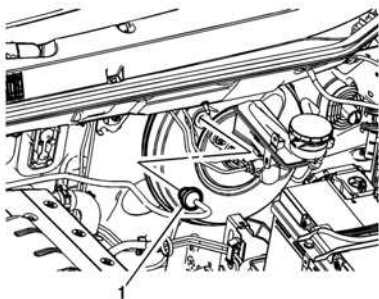
2. Disconnect the power brake booster vacuum hose quick connect (1) from the intake manifold.
3. Release the power brake booster vacuum hose from the clip (2) on the dash panel.



4. Remove the vacuum check valve (1) from the power brake booster.
5. Remove the power brake booster vacuum check valve and hose assembly.

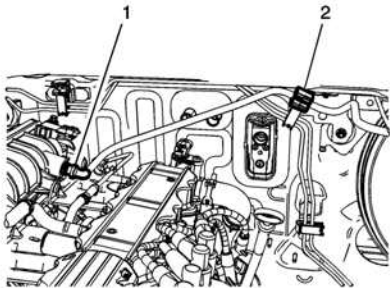
Installation Procedure

1. Install the power brake booster vacuum check valve and hose assembly to the vehicle.



Note: A small amount of denatured alcohol may be used as a lubricant for installation.

2. Install the vacuum check valve (1) to the power brake booster.



3. Connect the power brake booster vacuum hose quick connect (1) to the intake manifold.
4. Install the power brake booster vacuum hose to the clip (2) on the dash panel.

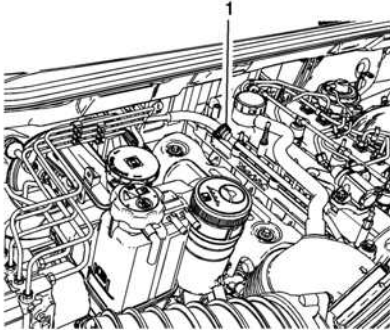
2013 Chevrolet Colorado

Submodel: | Engine Type: | Liters:

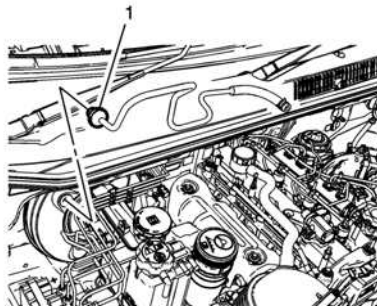
Fuel Delivery: | Fuel:

Removal Procedure

1. Apply and release the brake pedal several times until the pedal becomes firm to deplete the power brake booster vacuum reserve.
2. Remove the intake manifold cover. Refer to Intake Manifold Cover Replacement



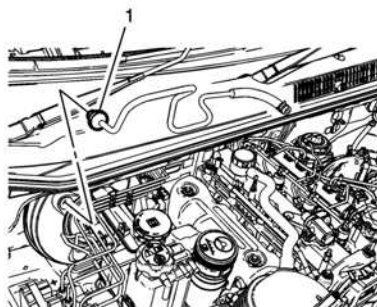
3. Compress the clamp (1) and disconnect the power brake booster vacuum hose from the intake manifold vacuum port.



4. Remove the vacuum check valve (1) from the power brake booster.
5. Remove the power brake booster vacuum check valve and hose assembly.

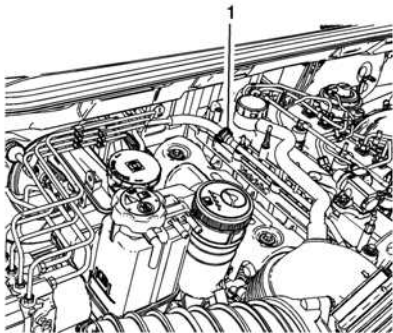
Installation Procedure

1. Install the power brake booster vacuum check valve and hose assembly to the vehicle.



Note: A small amount of denatured alcohol may be used as a lubricant for installation.

2. Install the vacuum check valve (1) to the power brake booster.

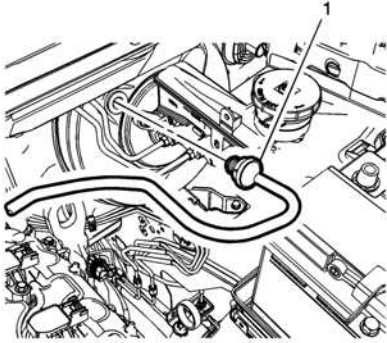


3. Compress the clamp (1) and connect the power brake booster vacuum hose to the intake manifold vacuum port.
4. Install the intake manifold cover. Refer to Intake Manifold Cover Replacement

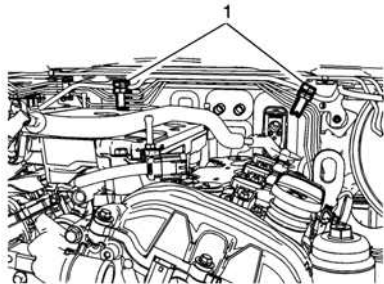
2013 Chevrolet Colorado

Submodel: | Engine Type: | Liters:
Fuel Delivery: | Fuel:

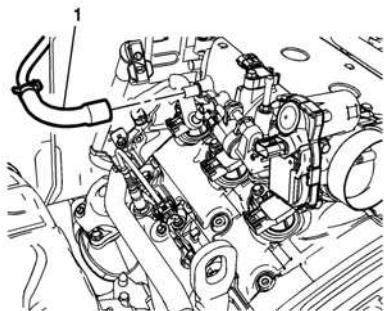
Removal Procedure



1. Apply and release the brake pedal several times until the pedal becomes firm to deplete the power brake booster vacuum reserve.
2. Remove the intake manifold cover. Refer to Intake Manifold Cover Replacement.
3. Remove the vacuum check valve (1) from the power brake booster.



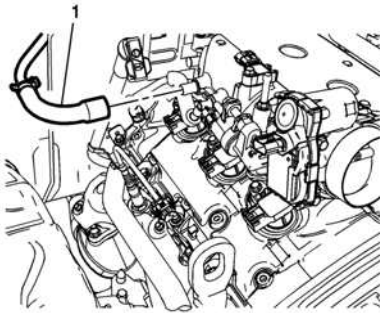
4. Release the power brake booster vacuum hose from the retaining clips (1) on the dash panel.



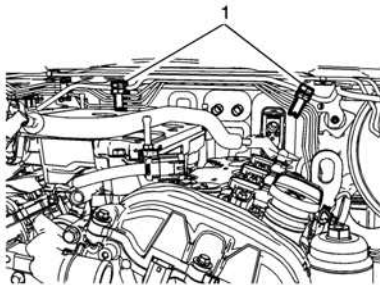
5. Compress the clamp and disconnect the power brake booster vacuum hose (1) from the intake manifold vacuum port.
6. Remove the power brake booster vacuum check valve and hose assembly from the vehicle.

Installation Procedure

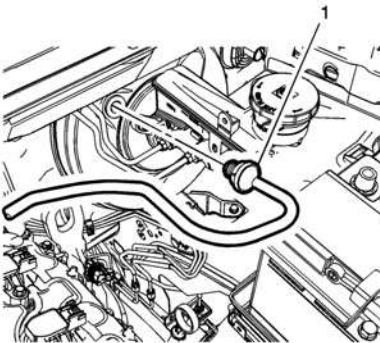
1. Install the power brake booster vacuum check valve and hose assembly to the vehicle.



2. Compress the clamp and connect the power brake booster vacuum hose (1) to the intake manifold vacuum port.



3. Install the power brake booster vacuum hose to the retaining clips (1) on the dash panel.



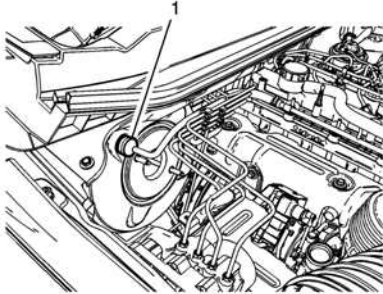
Note: A small amount of alcohol may be used as a lubricant for installation.

4. Install the vacuum check valve (1) to the power brake booster.
5. Install the intake manifold cover. Refer to Intake Manifold Cover Replacement.

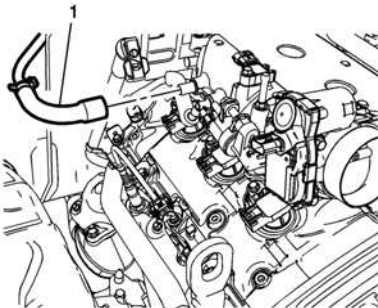
2013 Chevrolet Colorado

Submodel: | Engine Type: | Liters:
Fuel Delivery: | Fuel:

Removal Procedure



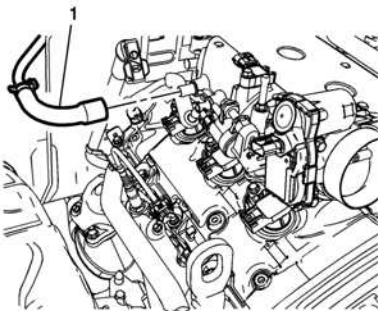
1. Apply and release the brake pedal several times until the pedal becomes firm to deplete the power brake booster vacuum reserve.
2. Remove the intake manifold cover. Refer to Intake Manifold Cover Replacement.
3. Remove the vacuum check valve (1) from the power brake booster.



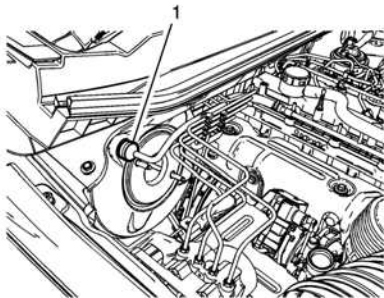
4. Compress the clamp and disconnect the power brake booster vacuum hose (1) from the intake manifold vacuum port.
5. Remove the power brake booster vacuum check valve and hose assembly from the vehicle.

Installation Procedure

1. Install the power brake booster vacuum check valve and hose assembly to the vehicle.



2. Compress the clamp and connect the power brake booster vacuum hose (1) to the intake manifold vacuum port.



Note: A small amount of alcohol may be used as a lubricant for installation.

3. Install the vacuum check valve (1) to the power brake booster.
4. Install the intake manifold cover. Refer to Intake Manifold Cover Replacement.