

**July 21, 2023**

Version 2

## Safety Recall: 2020–23 Multi-Model Brake Master Cylinder Mounting Inspection.

Supersedes 23-052, dated June 30, 2023, to revise the information highlighted in yellow.

### AFFECTED VEHICLES

Year	Model	Trim	VIN Range
2021–23	Passport	ALL	Check the iN VIN status for eligibility
2021–22	Pilot	ALL	Check the iN VIN status for eligibility
2020–23	Ridgeline	ALL	Check the iN VIN status for eligibility

### REVISION SUMMARY

- Under WARRANTY CLAIM INFORMATION, a table was updated.
- Under INSPECTION PROCEDURE, step 5 was updated.
- Under REPAIR PROCEDURE, step 17, and 32 was updated.

### BACKGROUND

The hex nuts that secure the brake master cylinder to the brake booster may not have been properly torqued to specification, or they may be missing. Over time, the master cylinder could separate from the brake booster, causing brake assist loss, the brake pedal going to the floor, or loss of braking, increasing the risk of crash.

### CUSTOMER NOTIFICATION

Owners of affected vehicles will be sent a notification of this campaign.

Do an iN VIN status inquiry to make sure the vehicle is shown as eligible.

Some vehicles affected by this campaign may be in your new or used vehicle inventory.

Failure to repair a vehicle subject to a recall or campaign may subject your dealership to claims or lawsuits from the customer or anyone else harmed as a result of such failure. Before selling a vehicle in inventory, always check if it is affected by a safety recall by conducting a VIN status inquiry.

### CORRECTIVE ACTION

Inspect the nuts on the brake booster. If needed, replace the brake booster and master cylinder.

**CUSTOMER INFORMATION:**The information in this bulletin is intended for use only by skilled technicians who have the proper tools, equipment, and training to correctly and safely maintain your vehicle. These procedures should not be attempted by “do-it-yourselfers,” and you should not assume this bulletin applies to your vehicle, or that your vehicle has the condition described. To determine whether this information applies, contact an authorized Honda automobile dealer.

## PARTS INFORMATION

Expected failure rate is very low. Inspection procedure must be completed to determine if parts replacement is required prior to ordering parts. Do not order for inventory.

### Passport

Part Name	Part Number	Quantity
Brake Booster (10.5") (Gasket Included With the Brake Booster)	01469-TGS-A00	1
Master Cylinder (O-ring Included With the Master Cylinder)	46100-TP6-A12	1
8 MM Hex Nut	94001-08000-0S	2
8 MM Spring Washer	94111-08800	2

### Pilot

Part Name	Part Number	Quantity
Brake Booster (10.5") (Gasket Included With the Brake Booster)	01469-TG7-A50	1
Master Cylinder (O-ring Included With the Master Cylinder)	46100-TP6-A12	1
8 MM Hex Nut	94001-08000-0S	2
8 MM Spring Washer	94111-08800	2

### Ridgeline

Part Name	Part Number	Quantity
Brake Booster (10.5") (Gasket Included With the Brake Booster)	01469-TGS-A00	1
Master Cylinder (O-ring Included With the Master Cylinder)	46100-TP6-A12	1
8 MM Hex Nut	94001-08000-0S	2
8 MM Spring Washer	94111-08800	2

## REQUIRED MATERIALS

Part Name	Part Number	Quantity
Honda DOT 3 Brake Fluid	08798-9108	1
Shin-Etsu G40M Silicone Grease (One tube repairs 50 vehicles)	08798-9013	1

## TOOLS INFORMATION

Part Name	Part Number	Quantity
1/4" Drive Flex-Head TechAngle Micro Torque Wrench or equivalent	ATECH1FS240	1

## WARRANTY CLAIM INFORMATION

### Inspection only

Operation Number	Description	Flat Rate Time	Defect Code	Symptom Code	Template ID	Failed Part Number
4135B3	Master cylinder nut inspection (photo not required).	0.3 hr	6BJ00	AEV00	A23052A	46100-TP6-A12

### Pilot

Operation Number	Description	Flat Rate Time	Defect Code	Symptom Code	Template ID	Failed Part Number
4131BH	Replace the master cylinder and booster (includes inspection).	1.4 hr	6BJ00	AEV00	A23052B	01469-TG7-A50

### Passport and Ridgeline

Operation Number	Description	Flat Rate Time	Defect Code	Symptom Code	Template ID	Failed Part Number
4131BH	Replace the master cylinder and booster (includes inspection).	1.4 hr	6BJ00	AEV00	A23052C	01469-TGS-A00

### Repair Technician

- When submitting Warranty claim, attach photo of the brake booster bar code to the claim.
- The Photo Attachments area automatically appears on a warranty claim form whenever PH is indicated on the sublet code, as shown below.

The screenshot shows a 'Sublet Information' form with the following fields:

Sublet Code	Work Description	Invoice No.	Rental Days	Sublet Amount
PH	PHOTO ATTACHMENT	PHOTO		0.00
<< SELECT >>				

Below the table, there is an 'Upload files' link and a 'File Attachments' section.

- To attach a photo to the claim, click the **Upload Images** link.

The screenshot shows the 'Sublet Information' form with the following fields:

Sublet Code	Invoice No.	Work Description	Sublet Amount	Rental Days
PH	1234567899	PHOTO ATTACHMENT	500.00	
<< SELECT >>				

Below the table, there is an 'Upload Images' link (highlighted in a red box) and a 'View Images' link.

- The Claim File Attachment screen appears. Then, select **Choose File**.

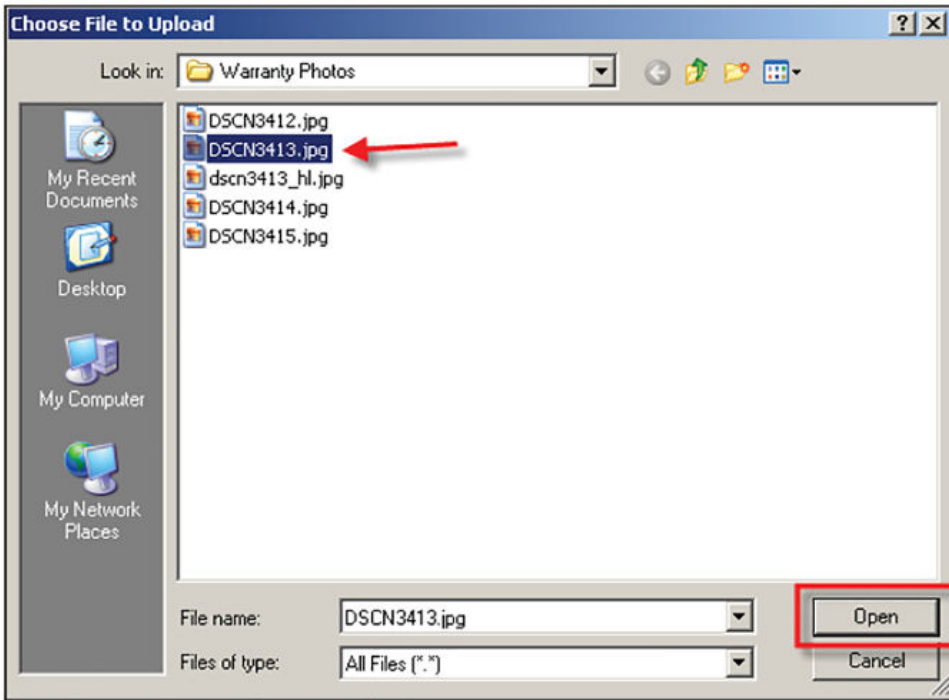
The screenshot shows the 'Claim File Attachment' screen with the following text:

Uploaded JPG/PDF Files 0 (Maximum 12)

Choose File NO FILE CHOSEN

Preview Upload

5. Click to highlight an image to be uploaded.



6. Click **Open** to select the file.
7. Click **Preview** if you would like to view the image before uploading. The preview image appears.  
NOTE: Fit To Window is selected by default as the size at which the preview images is displayed. Select Full Size if you want to enlarge the image, and use the scrollbars to view different areas of the enlarged image.



8. Click **Upload** to attach the image to the warranty claim.

**Claim File Attachment**

Uploaded JPG/PDF Files 0 (Maximum 12)  Fit To Window  Full Size

Name	Media Type	File Size	Image Size	Status	Action
IMG_0196.jpg	image/jpeg	3.49 MB	4032 x 3024	Not Uploaded	<a href="#">Delete</a>

9. The Uploaded Images count increases each time you upload a photo.
10. When finished attaching photos, click X to close.

## INSPECTION PROCEDURE

1. Open air cleaner filter lid. Rotate lid 90 degrees to access the nuts to the brake master cylinder.



**AIR CLEANER  
FILTER LID**

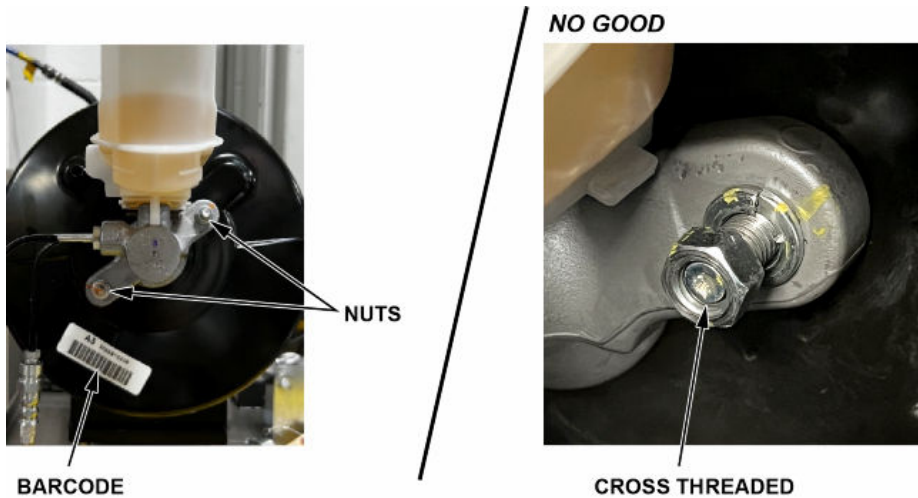
2. Visually inspect the two nuts holding the master cylinder.

Are both nuts fully seated?

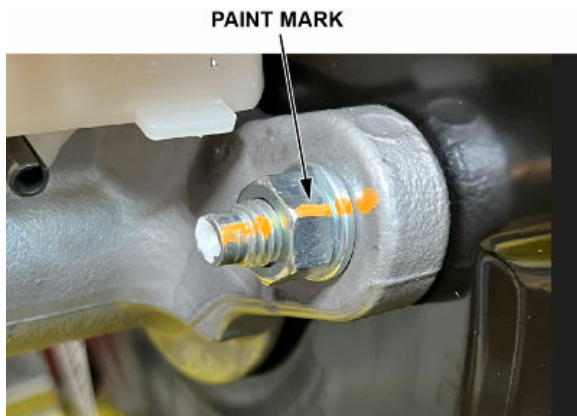
**YES** - Go to step 3.

**NO** - If the nuts are missing or cross threaded on the master cylinder (not fully seated), take a picture of the barcode on the brake booster, then go to the REPAIR PROCEDURE.

NOTE: Make sure the photo clearly shows the barcode.



3. Make a paint stripe mark on the studs, nuts, and the master cylinder flange as shown below.



4. Using a torque wrench, apply **10 N·m (88.5 in-lb)** to each nut.

5. Check the paint stripe to see if the nuts moved.

If both nuts did not move, the parts are OK. Torque the nuts to **15 N·m (11 lb-ft)**. The inspection is complete and the repair procedure is not needed. Reassemble the air filter lid (photo not required).

If either nut moved and paint line is no longer aligned, take a picture of the barcode on the brake booster. Proceed to the REPAIR PROCEDURE.

NOTE: Make sure the photo clearly shows the barcode.

**GOOD**



**PAINT MARK**

**NO GOOD**



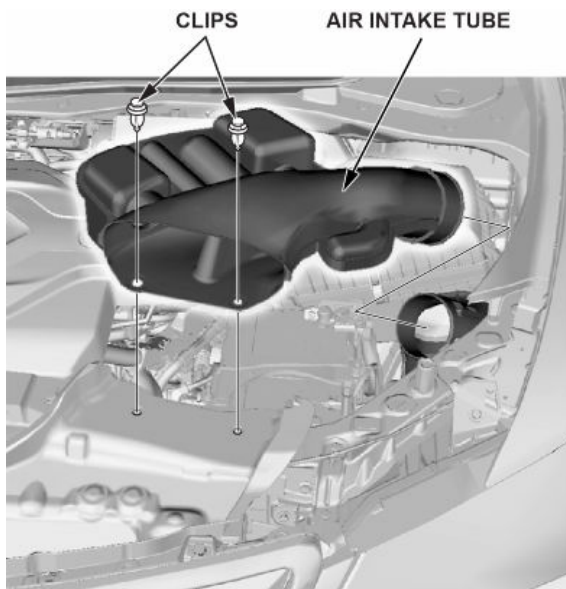
**BARCODE**

## REPAIR PROCEDURE

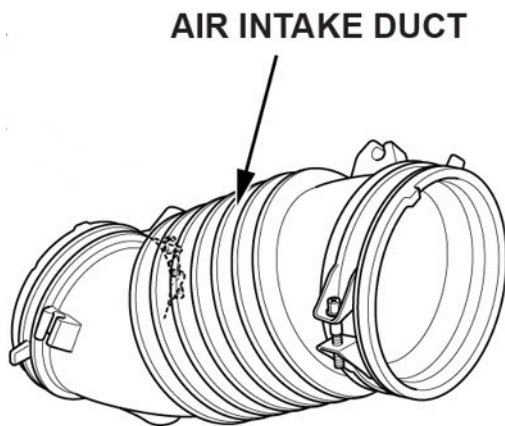
1. Remove front bulkhead cover.



2. Remove the air intake tube.

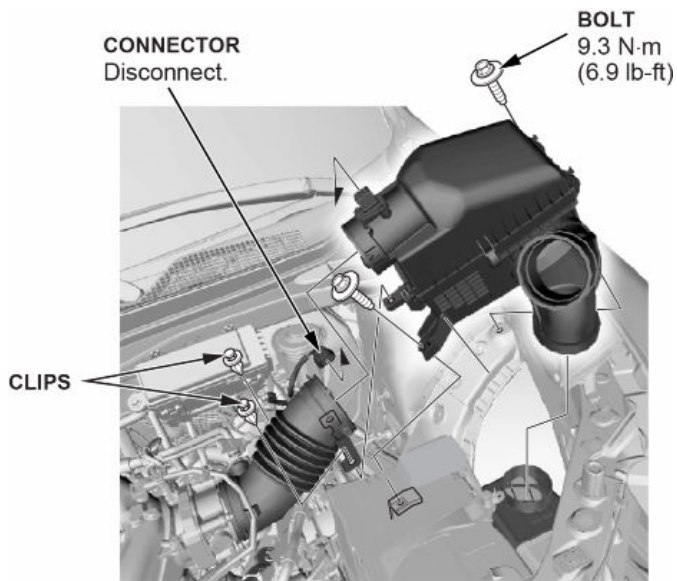


3. Remove the air intake duct.

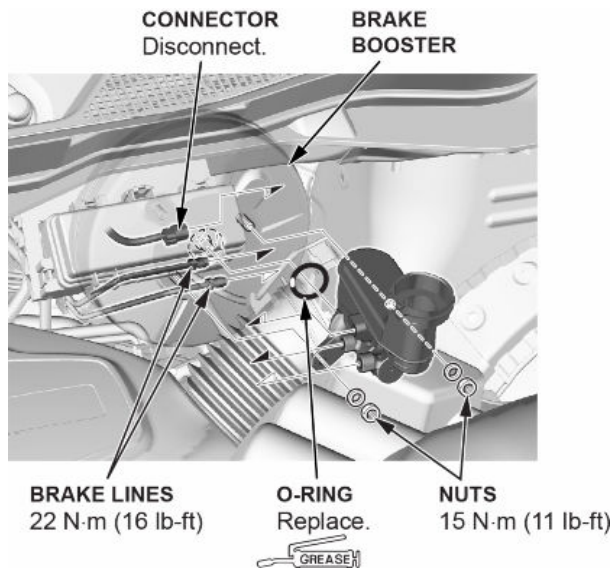




4. Disconnect the connector, remove the clips, remove the bolt, then remove the air cleaner.



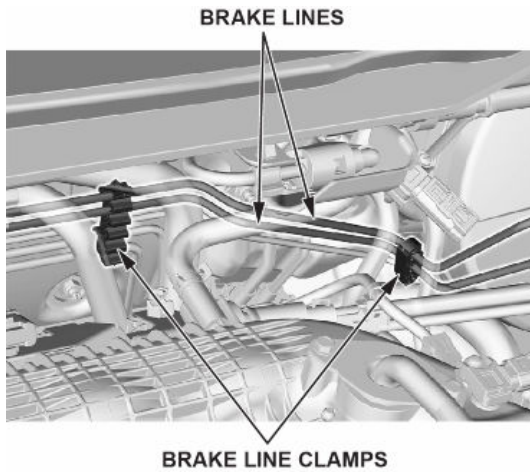
5. Remove the reservoir cap from the master cylinder, then remove the brake fluid.
6. Disconnect the connector.



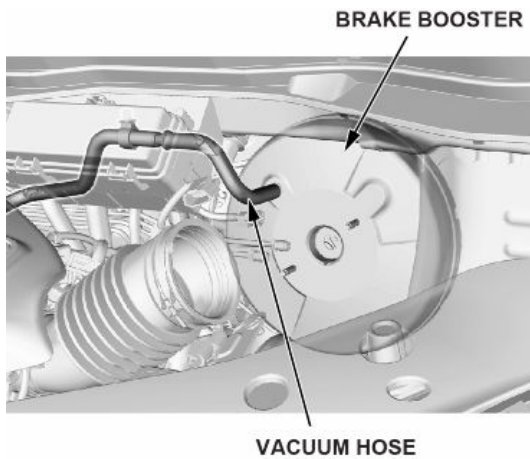
7. Disconnect the brake lines from the master cylinder.  
NOTE: To prevent spills, cover the brake line joints with clean rags or shop towels.
8. Remove the master cylinder from the brake booster.  
NOTE: Be careful not to damage the brake lines.
9. Remove the O-ring from the master cylinder.

10. Release and move brake lines from the brake line clamps.

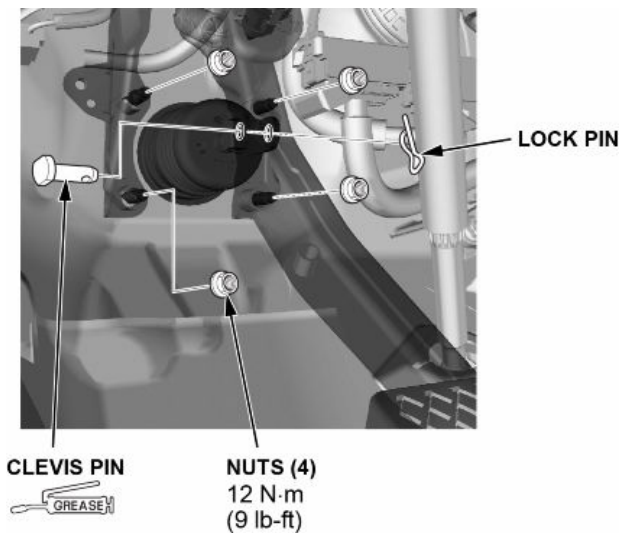
NOTE: Be careful not to bend the brake lines.



11. Disconnect the booster vacuum hose from the brake booster.



12. Remove the lock pin.



13. Remove the clevis pin.

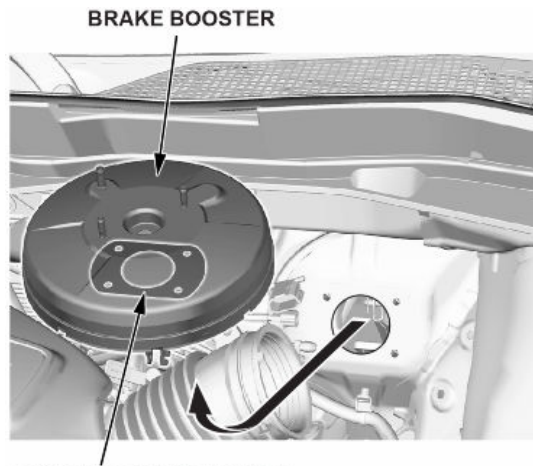
NOTE: Apply multipurpose grease to the yoke pin in the brake pedal.

14. Remove the brake booster mounting nuts.

15. Remove the brake booster from the engine compartment.

NOTE:

- Be careful not to bend or damage the brake lines.
- Use the new brake booster gasket during installation.



**BRAKE BOOSTER GASKET**  
Replace.

16. Install the new brake booster with a new gasket, and torque the nuts to **12 N·m (9 lb-ft)**.

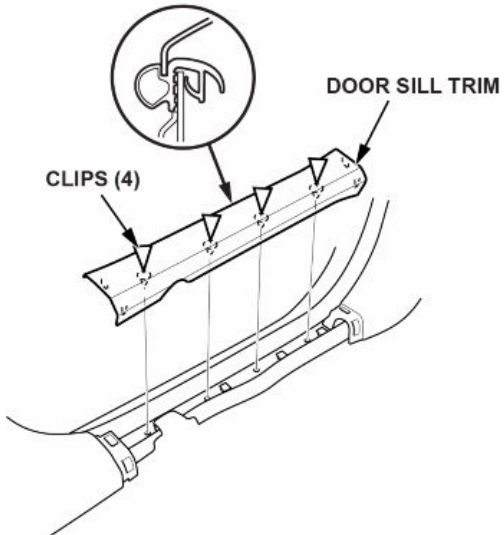
17. Install the master cylinder with a new o-ring, hex nuts and spring washers. When replacing master cylinder, the mounting nuts must be tightened uniformly. Alternate torque sequence in **3 N·m (2.2 lb-ft)** increments to reach **15 N·m (11 lb-ft)**. Then install the brake lines, and other remaining parts.

NOTE:

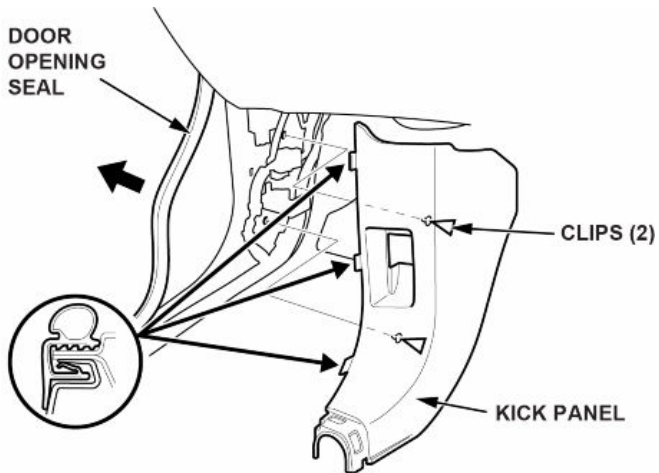
- Replace the O-ring whenever the master cylinder is removed.
- Make sure not to get any silicone grease on the terminal part of the connectors and switches, especially if you have silicone grease on your hands or gloves.
- Coat the new O-ring with silicone grease (Shin-Etsu G40M).
- Be careful when handling the master cylinder. Do not hold it at the piston, or the piston may separate from the body. If the piston separates from the body, then the master cylinder must be replaced. Do not reinsert the piston back into the master cylinder body.
- Before reassembling, check that all the parts are free of dirt and other foreign particles.

## Check the brake pedal height and free play

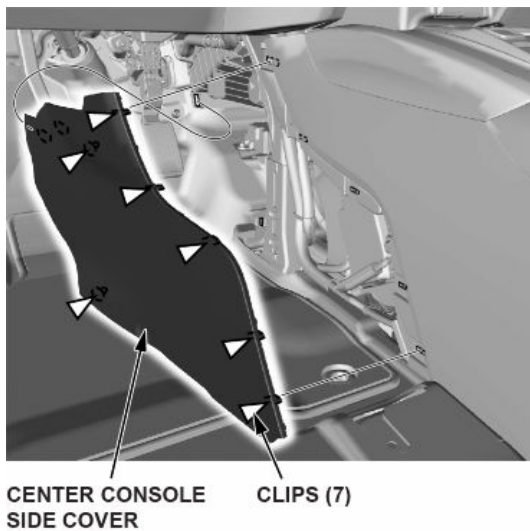
18. Remove the door sill trim.



19. Pull out the door opening seal as needed, then remove the kick panel.

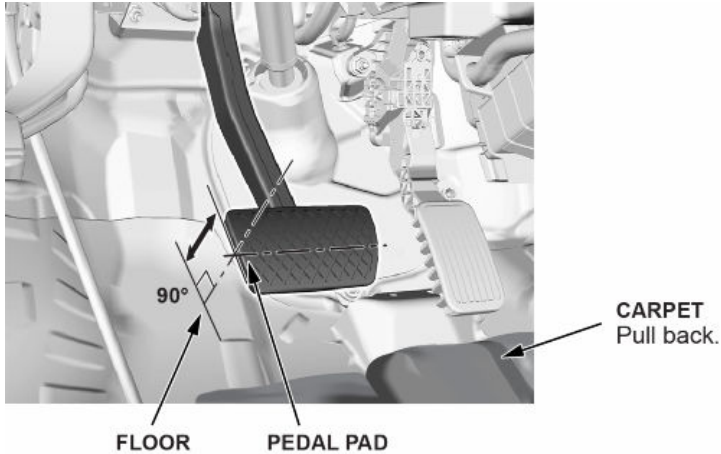


20. Remove the center console side cover.



## Inspect the brake pedal height

21. Pull back the carpet.

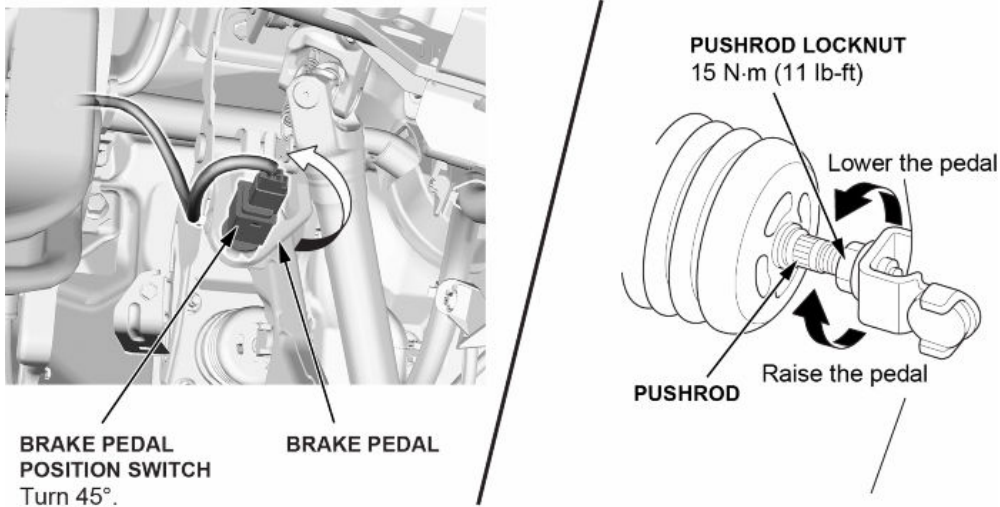


22. Measure the pedal height from the middle left side of the pedal pad to the floor.

**Standard pedal height: 166 + - 5 mm (6.54 + - 0.20 in).**

### Adjust the Brake Pedal

23. Turn the brake pedal position switch 45 degrees counterclockwise, and pull it back until it is no longer touching the brake pedal.

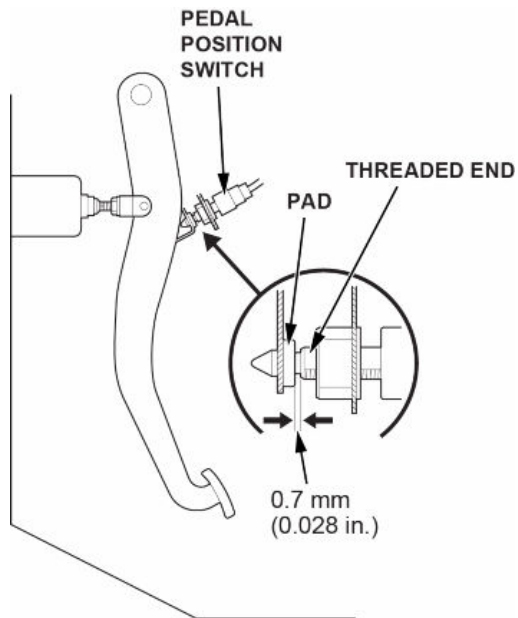


24. Loosen the pushrod locknut.
25. Screw the pushrod in or out with pliers until the standard pedal height from the floor is reached.
26. Torque the locknut to the specified torque spec.

**NOTE:** Do not adjust the pedal height with the pushrod pressed.

### Adjust the Brake Pedal Position Switch

27. Lift up on the brake pedal by hand.



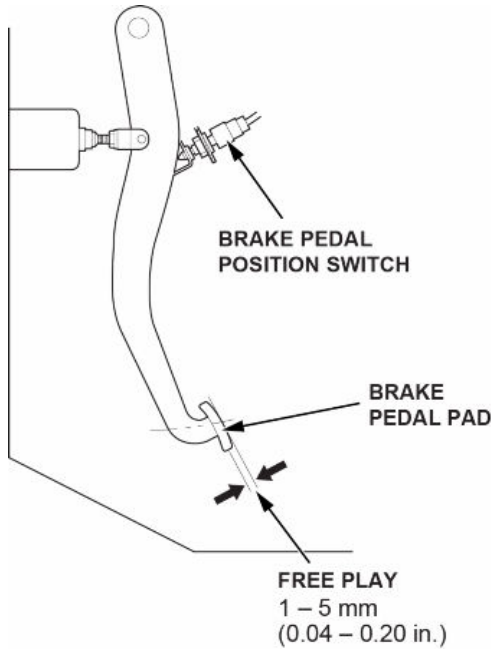
28. Push in the brake pedal position switch until its plunger is fully pressed (threaded end touching the pad on the pedal arm).
29. Turn the switch 45 degrees clockwise to lock it. The gap between the brake pedal position switch and the pad is automatically adjusted to 0.7 mm(0.028 in) by locking the switch.
30. Make sure the brake lights go off when the pedal is released.

### Brake Pedal Free Play Check

31. Turn the vehicle to the OFF (LOCK) mode.

32. Inspect the free play at the brake pedal pad by pushing the brake pedal by hand. If the brake pedal free play is out of specification, adjust the brake pedal position switch. If the brake pedal free play is insufficient, it may result in brake drag.

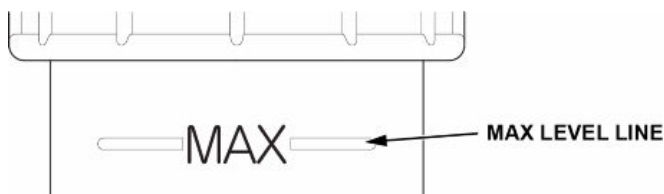
**Free play: 1 - 5 mm (0.04-0.20 in)**



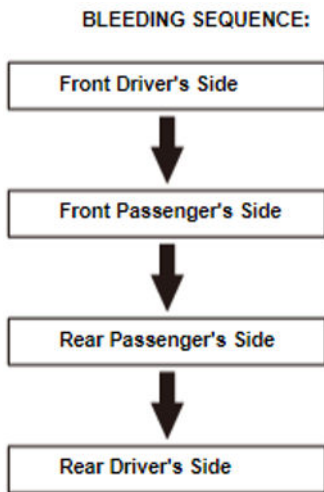
### Bleed the Brake System

NOTE:

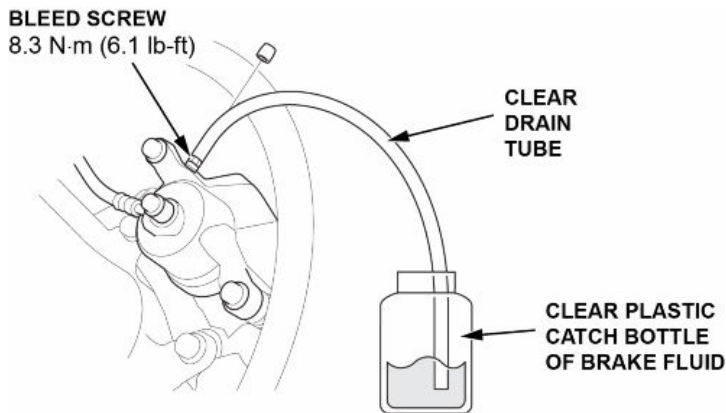
- If a large amount of air is introduced into the system from a brake system component replacement, first drain the brake fluid into a container from each caliper by pumping the brake pedal slowly before starting the normal brake system bleed.
  - There are three different methods used for bleeding brake systems. The method shown in this procedure is the preferred method for removing the air from the system. For pressure or vacuum bleeding, refer to the tool manufacturer's instructions included with the tool. If you use a commercially available pressure feed bleeder and operate the brake pedal, excessive hydraulic pressure will be applied to the cup inside the master cylinder causing damage. Do not use these methods together.
  - Do not pump the brake pedal when using a pressure-feeding brake bleeder.
33. Make sure the brake fluid level in the reservoir is at the MAX (upper) level line.



34. Bleed the brake system in the sequence shown.



35. Attach a length of clear drain tube to the bleed screw.



36. Submerge the other end of the clear tube into a clear plastic catch bottle of brake fluid.

37. Have an assistant slowly pump the brake pedal several times, then apply steady continuous pressure.

38. Loosen the bleed screw slowly to bleed the fluid into the plastic catch bottle. The brake pedal will travel toward the floor as the fluid is bled from the system.

39. When the brake pedal reaches the floor, have the assistant hold the pedal in that position, then tighten the bleed screw. The brake pedal can now be released.

40. Check and refill the master cylinder reservoir tank to the MAX (upper) level line. Be sure to install the master cylinder reservoir cap.

41. Repeat steps 37 thru 40 until the brake fluid in the clear drain tube appears fresh and there are no air bubbles in the fluid.

42. Repeat this procedure for each caliper in the bleeding sequence.

43. Spin the wheels to check for brake drag.

END