



cardiagn.com

Last Modified: 5-10-2010	6.4 A	From: 200908
Model Year: 2010	Model: 4Runner	Doc ID: RM000001Q9300FX
Title: BRAKE (REAR): REAR BRAKE: REMOVAL (2010 4Runner)		

REMOVAL

HINT:

- Use the same procedure for the RH and LH sides.
- The procedure listed below is for the LH side.

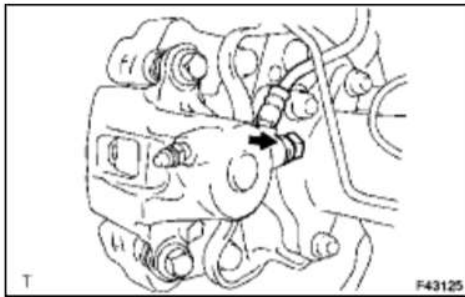
1. REMOVE REAR WHEEL

2. DRAIN BRAKE FLUID

NOTICE:

Wash the brake fluid off immediately if it adheres to any painted surfaces.

3. DISCONNECT REAR FLEXIBLE HOSE LH

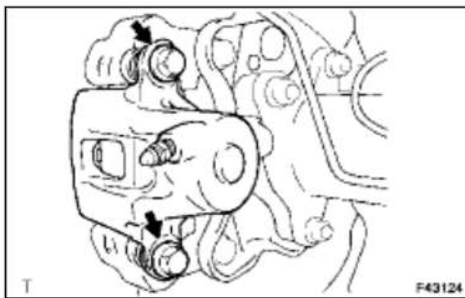


- (a) Remove the union bolt and gasket from the rear disc brake cylinder, and then disconnect the rear flexible hose from the rear disc brake cylinder.

HINT:

Use a container to catch brake fluid as it drains out.

4. REMOVE REAR DISC BRAKE CYLINDER ASSEMBLY LH



- (a) Remove the 2 cylinder slide pins from the rear disc brake cylinder.

- (b) Remove the rear disc brake cylinder from the rear disc brake cylinder mounting.

5. REMOVE REAR DISC BRAKE PAD

- (a) Remove the 2 rear disc brake pads together with the rear disc brake anti-squeal shims from the rear disc brake cylinder mounting.

6. REMOVE REAR DISC BRAKE ANTI-SQUEAL SHIM

- (a) Remove the 2 rear disc brake anti-squeal shims from the rear disc brake pads.

7. REMOVE REAR DISC BRAKE PAD WEAR INDICATOR PLATE

- (a) Remove the rear disc brake pad wear indicator plate from the inner disc brake pad.

8. REMOVE REAR NO. 1 DISC BRAKE PAD SUPPORT PLATE

NOTICE:

If it is necessary to remove the pad support plates, replace them with new ones.

- (a) Remove the 2 pad support plates from the rear disc brake cylinder mounting.

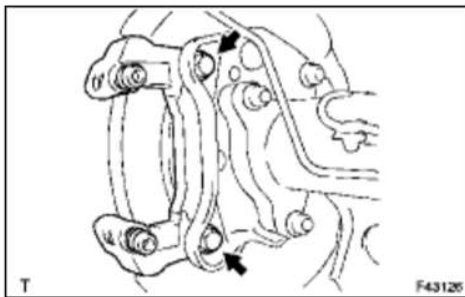
9. REMOVE REAR NO. 2 DISC BRAKE PAD SUPPORT PLATE

NOTICE:

If it is necessary to remove the pad support plates, replace them with new ones.

- (a) Remove the 2 pad support plates from the rear disc brake cylinder mounting.

10. REMOVE REAR DISC BRAKE CYLINDER MOUNTING LH



- (a) Remove the 2 bolts, 2 plate washers and rear disc brake cylinder mounting.

11. REMOVE REAR DISC BRAKE BUSH DUST BOOT

- (a) Remove the rear disc brake bush dust boot from the rear disc brake cylinder mounting.

12. REMOVE REAR DISC BRAKE CYLINDER SLIDE BUSH

- (a) Remove the rear disc brake cylinder slide bush from the rear disc brake cylinder mounting.

13. REMOVE REAR DISC BRAKE CYLINDER HOLE PLUG

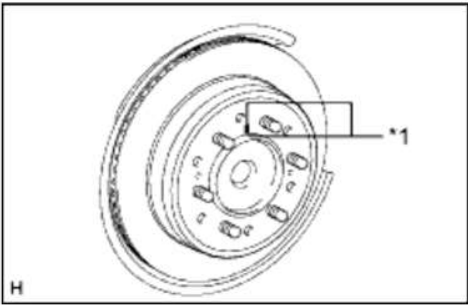
- (a) Remove the rear disc brake cylinder hole plug from the rear disc brake cylinder mounting.

14. REMOVE REAR DISC

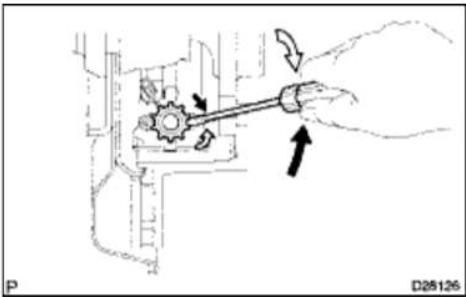
- (a) Put matchmarks on the rear disc and axle hub if planning to reuse the disc.

Text in Illustration

* 1	Matchmark
-----	-----------



(b) Turn the shoe adjuster until the disc turns freely, and then remove the disc.



Text in Illustration

	Shoe Adjuster Contracts
	Shoe Adjuster Expands

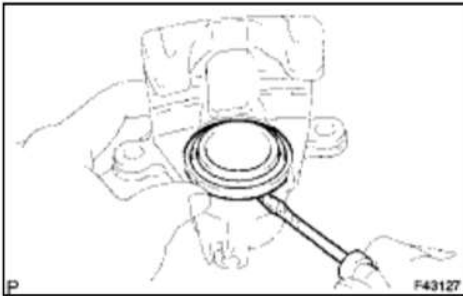
(c) Remove the rear disc.



Last Modified: 5-10-2010	6.4 A	From: 200908
Model Year: 2010	Model: 4Runner	Doc ID: RM000001Q9400FX
Title: BRAKE (REAR): REAR BRAKE: DISASSEMBLY (2010 4Runner)		

DISASSEMBLY

1. REMOVE CYLINDER BOOT

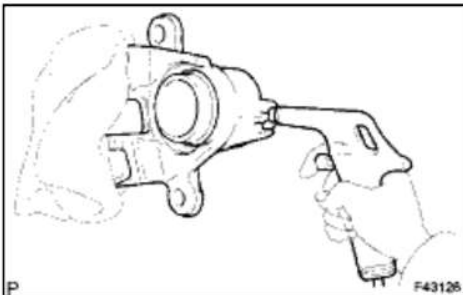


- (a) Using a screwdriver, remove the cylinder boot from the rear disc brake cylinder.

HINT:

Tape the screwdriver tip before use.

2. REMOVE REAR DISC BRAKE PISTON



- (a) Place a cloth or equivalent between the rear disc brake piston and rear disc brake cylinder.

- (b) Use compressed air to remove the rear disc brake piston from the rear disc brake cylinder.

CAUTION:

Do not place your fingers in front of the piston when using compressed air.

NOTICE:

Do not spatter the brake fluid.

3. REMOVE PISTON SEAL

- (a) Using a screwdriver, remove the piston seal from the rear disc brake cylinder.

HINT:

Tape the screwdriver tip before use.

NOTICE:

Do not damage the inner cylinder or cylinder groove.



4. REMOVE REAR DISC BRAKE BLEEDER PLUG

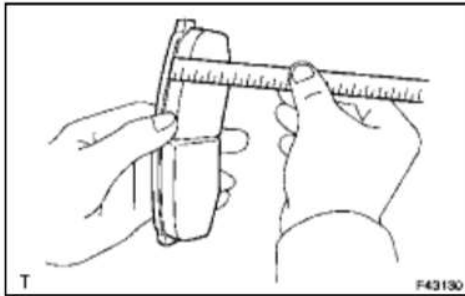
- (a) Remove the rear disc brake bleeder plug cap and rear disc brake bleeder plug from the rear disc brake cylinder.



Last Modified: 5-10-2010	6.4 G	From: 200908
Model Year: 2010	Model: 4Runner	Doc ID: RM000001Q9100FX
Title: BRAKE (REAR): REAR BRAKE: INSPECTION (2010 4Runner)		

INSPECTION

1. CHECK PAD LINING THICKNESS



(a) Using a ruler, measure the pad lining thickness.

Standard thickness:

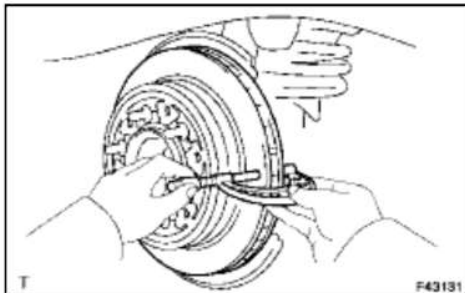
10.0 mm (0.394 in.)

Minimum thickness:

1.0 mm (0.0394 in.)

If the pad lining thickness is less than the minimum, replace the pad.

2. CHECK DISC THICKNESS



(a) Using a micrometer, measure the disc thickness.

Standard thickness:

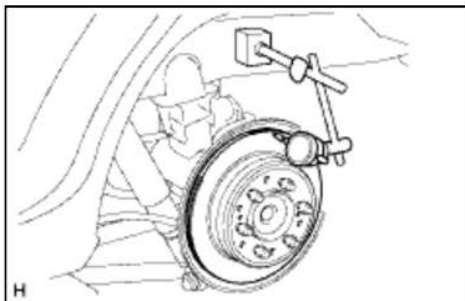
18.0 mm (0.709 in.)

Minimum thickness:

16.0 mm (0.630 in.)

If the disc thickness is less than the minimum, replace the disc.

3. CHECK DISC RUNOUT



(a) Install the disc with the 6 hub nuts.

Torque: 112 N·m (1137 kgf·cm, 82ft·lbf)

(b) Using a dial indicator, measure the disc runout 10 mm (0.394 in.) from the outer edge of the disc.

Maximum disc runout:

0.20 mm (0.00787 in.)

If the disc runout is more than the maximum, check the rear axle shaft . If the rear axle shaft is normal, adjust the disc runout or grind the disc using an on-vehicle brake lathe.

4. ADJUST DISC RUNOUT

- (a) Remove the 2 bolts and rear disc brake cylinder mounting from the backing plate.
- (b) Remove the hub nuts and disc. Rotate the disc 1/5 of a turn from its original position on the hub and install the disc with the hub nuts.

Torque: 112 N·m (1137 kgf·cm, 82ft·lbf)

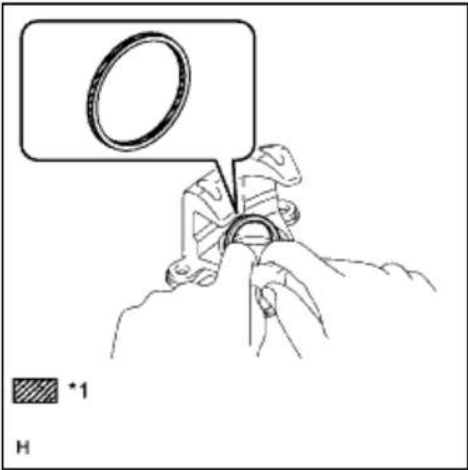
- (c) Measure the disc runout. Make a note of the runout and the disc position on the hub.
- (d) Repeat the 2 previous steps until the disc has been installed on the 3 remaining hub positions. If the minimum runout recorded above is less than 0.20 mm (0.00787 in.), install the disc in that position. If the minimum runout recorded above is more than 0.20 mm (0.00787 in.), replace the disc and repeat the "Check Disc Runout" procedure.



Last Modified: 5-10-2010	6.4 A	From: 200908
Model Year: 2010	Model: 4Runner	Doc ID: RM000001Q9500FX
Title: BRAKE (REAR): REAR BRAKE: REASSEMBLY (2010 4Runner)		

REASSEMBLY

1. INSTALL PISTON SEAL



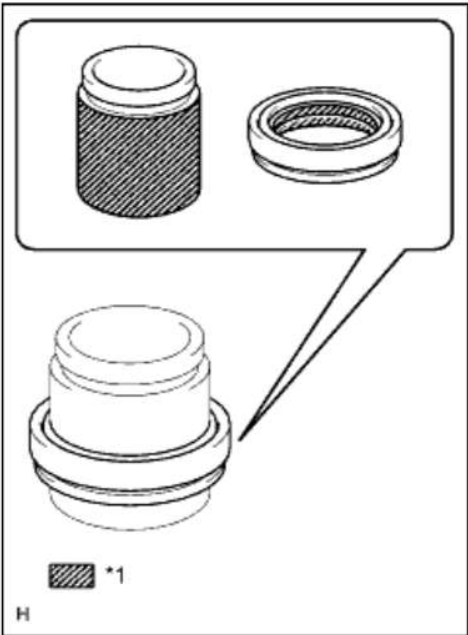
(a) Apply a light layer of lithium soap base glycol grease to the entire inner and outer circumference of a new piston seal.

Text in Illustration

*1	Lithium soap base glycol grease
----	---------------------------------

(b) Install the piston seal to the rear disc brake cylinder.

2. INSTALL CYLINDER BOOT



(a) Apply a light layer of lithium soap base glycol grease to the entire inner circumference of a new cylinder boot.

Text in Illustration

*1	Lithium soap base glycol grease
----	---------------------------------

(b) Apply a light layer of lithium soap base glycol grease to the entire outer circumference of the rear disc brake piston where it contacts the rear disc brake cylinder.

- (c) Install the cylinder boot to the rear disc brake piston.
- (d) Install the rear disc brake piston to the rear disc brake cylinder.

NOTICE:

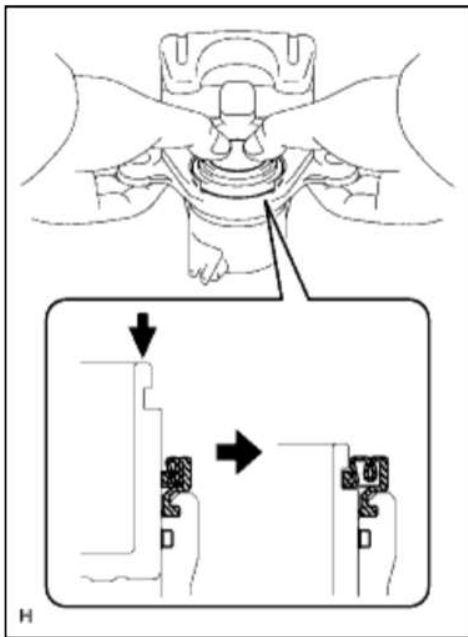
Do not forcibly install the piston into the disc brake cylinder.

3. INSTALL REAR DISC BRAKE PISTON

- (a) Install the cylinder boot to the rear disc brake cylinder.

NOTICE:

Install the boot securely into the groove of the disc brake cylinder.



- (b) Push in the rear disc brake piston by hand and install the cylinder boot into the groove of the rear disc brake piston.

NOTICE:

Install the boot securely into the groove of the piston.

4. TEMPORARILY INSTALL REAR DISC BRAKE BLEEDER PLUG

- (a) Temporarily install the bleeder plug to the rear disc brake cylinder.

HINT:

The bleeder plug will be tightened to the torque specification in the "Bleed Brake Line" procedure.

5. INSTALL REAR DISC BRAKE BLEEDER PLUG CAP

Last Modified: 5-10-2010	6.4 A	From: 200908
Model Year: 2010	Model: 4Runner	Doc ID: RM000001Q9000FX
Title: BRAKE (REAR): REAR BRAKE: INSTALLATION (2010 4Runner)		

INSTALLATION

HINT:

- Use the same procedure for the RH and LH sides.
- The procedure listed below is for the LH side.

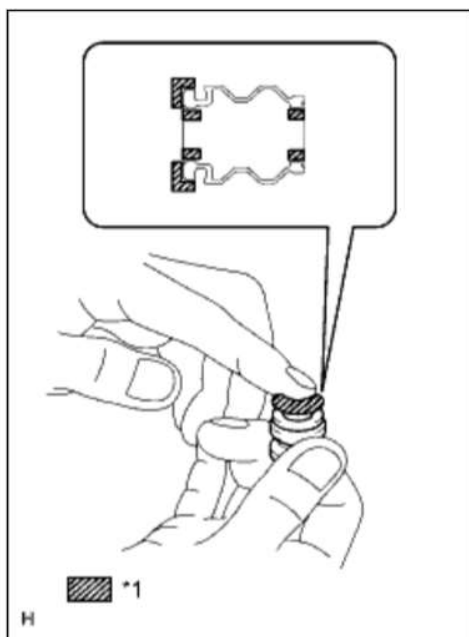
1. INSTALL REAR DISC

- (a) Align the matchmarks and install the rear disc.

HINT:

When replacing the disc with a new one, select the installation position where the disc has the smallest runout.

2. INSTALL REAR DISC BRAKE BUSH DUST BOOT



- (a) Apply a light layer of lithium soap base glycol grease to the entire circumference of a new rear disc brake bush dust boot where it contacts the rear disc brake cylinder mounting, and the entire inner circumference of both ends.

Text in Illustration

*1 Lithium soap base glycol grease

NOTICE:

Apply a sufficient amount of lithium soap base glycol grease to the entire circumference of the rear disc brake bush dust boot and rear disc brake cylinder mounting contact surfaces.

HINT:

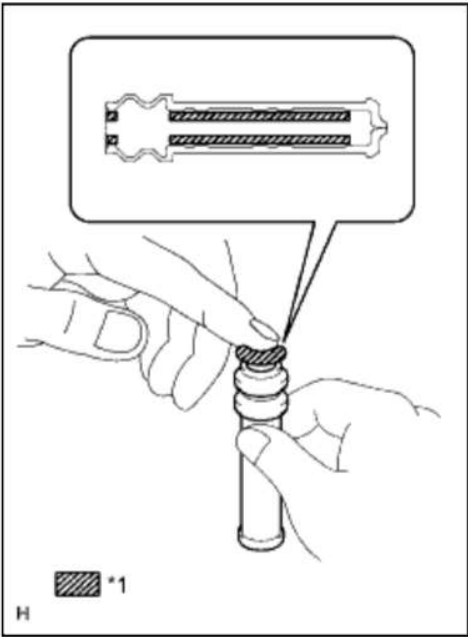
Apply at least 0.3 g (0.01 oz.) of lithium soap base glycol grease to the rear disc brake bush dust boot.

- (b) Install the rear disc brake bush dust boot to the rear disc brake cylinder mounting.

3. INSTALL REAR DISC BRAKE CYLINDER SLIDE BUSH

- (a) Apply a light coat of lithium soap base glycol grease to the rear disc brake cylinder slide bush.

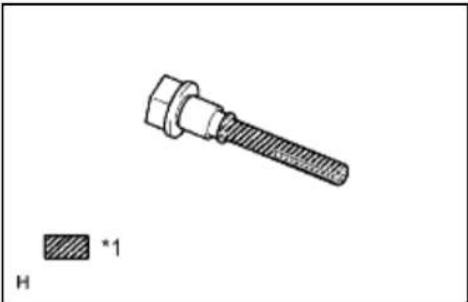
Text in Illustration



* 1 Lithium soap base glycol grease

HINT:
Apply at least 0.8 g (0.03 oz.) of lithium soap base glycol grease to the rear disc brake cylinder slide bush.

(b) Install the rear disc brake cylinder slide bush to the rear disc brake cylinder mounting.

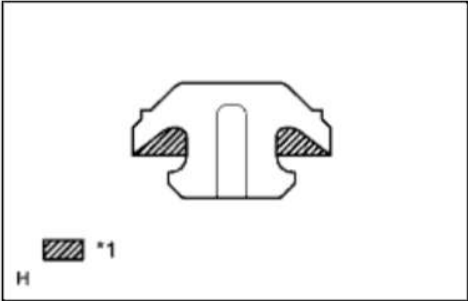


(c) Apply a light coat of lithium soap base glycol grease to the cylinder slide pin, insert it into the rear disc brake cylinder slide bush in order to properly grease the parts, and then remove it.

Text in Illustration

* 1 Lithium soap base glycol grease

4. INSTALL REAR DISC BRAKE CYLINDER HOLE PLUG



(a) Apply a light coat of lithium soap base glycol grease to a new rear disc brake cylinder hole plug.

Text in Illustration

* 1 Lithium soap base glycol grease

(b) Install the rear disc brake cylinder hole plug to the rear disc brake cylinder mounting.

5. INSTALL REAR DISC BRAKE CYLINDER MOUNTING LH

- (a) Install the rear disc brake cylinder mounting and 2 plate washers with the 2 bolts.

Torque: 105 N·m (1071 kgf·cm, 77ft·lbf)

6. INSTALL REAR NO. 1 DISC BRAKE PAD SUPPORT PLATE

- (a) Install the 2 rear No. 1 disc brake pad support plates to the rear disc brake cylinder mounting.

7. INSTALL REAR NO. 2 DISC BRAKE PAD SUPPORT PLATE

- (a) Install the 2 rear No. 2 disc brake pad support plates to the rear disc brake cylinder mounting.

8. INSTALL REAR DISC BRAKE PAD WEAR INDICATOR PLATE

- (a) Install the rear disc brake pad wear indicator plate to the inner disc brake pad.

HINT:

Install the rear disc brake pad wear indicator facing downward.

9. INSTALL REAR DISC BRAKE ANTI-SQUEAL SHIM

NOTICE:

If necessary, replace the anti-squeal shim when replacing the brake pad.

- (a) Install the rear disc brake anti-squeal shims to the rear disc brake pads.

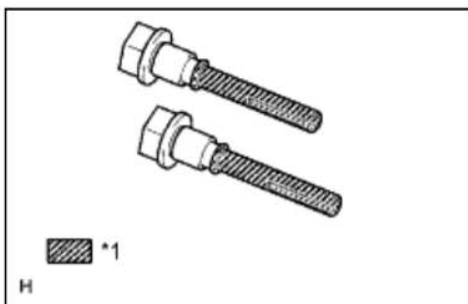
NOTICE:

There should be no oil or grease on the friction surfaces of the brake pads and the rear disc.

10. INSTALL REAR DISC BRAKE PAD

- (a) Install the 2 rear disc No. 1 and No. 2 brake pad support plates to the rear disc brake cylinder mounting.
- (b) Install the 2 rear disc brake pads together with the rear disc brake anti-squeal shims to the rear disc brake cylinder.

11. INSTALL REAR DISC BRAKE CYLINDER ASSEMBLY LH



- (a) Apply a light coat of lithium soap base glycol grease to the sliding surfaces of the rear disc brake cylinder slide pins.

Text in Illustration

*1	Lithium soap base glycol grease
----	---------------------------------

- (b) Install the rear disc brake cylinder with the 2 rear disc brake cylinder slide pins.

Torque: 88 N·m (900 kgf·cm, 65ft·lbf)

12. CONNECT REAR FLEXIBLE HOSE LH

- (a) Connect the rear flexible hose to the rear disc brake cylinder with the union bolt and a new gasket.

Torque: 31 N·m (316 kgf·cm, 23ft·lbf)

13. BLEED BRAKE LINE 

14. INSTALL REAR WHEEL 

