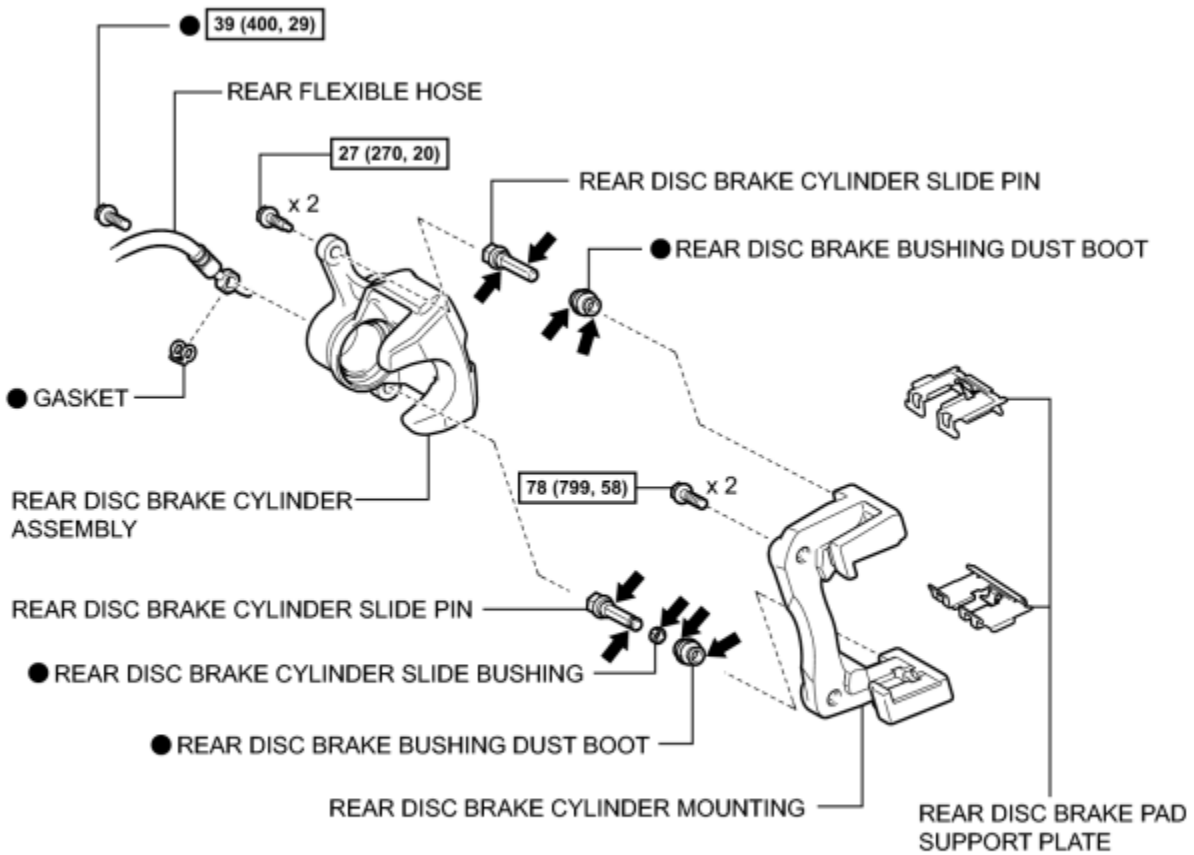


Last Modified: 5-25-2010	6.4 K	From: 200907
Model Year: 2010	Model: HS250H	Doc ID: RM00000359Z00AX
Title: BRAKE (REAR): REAR BRAKE: COMPONENTS (2010 HS250H)		

COMPONENTS

ILLUSTRATION



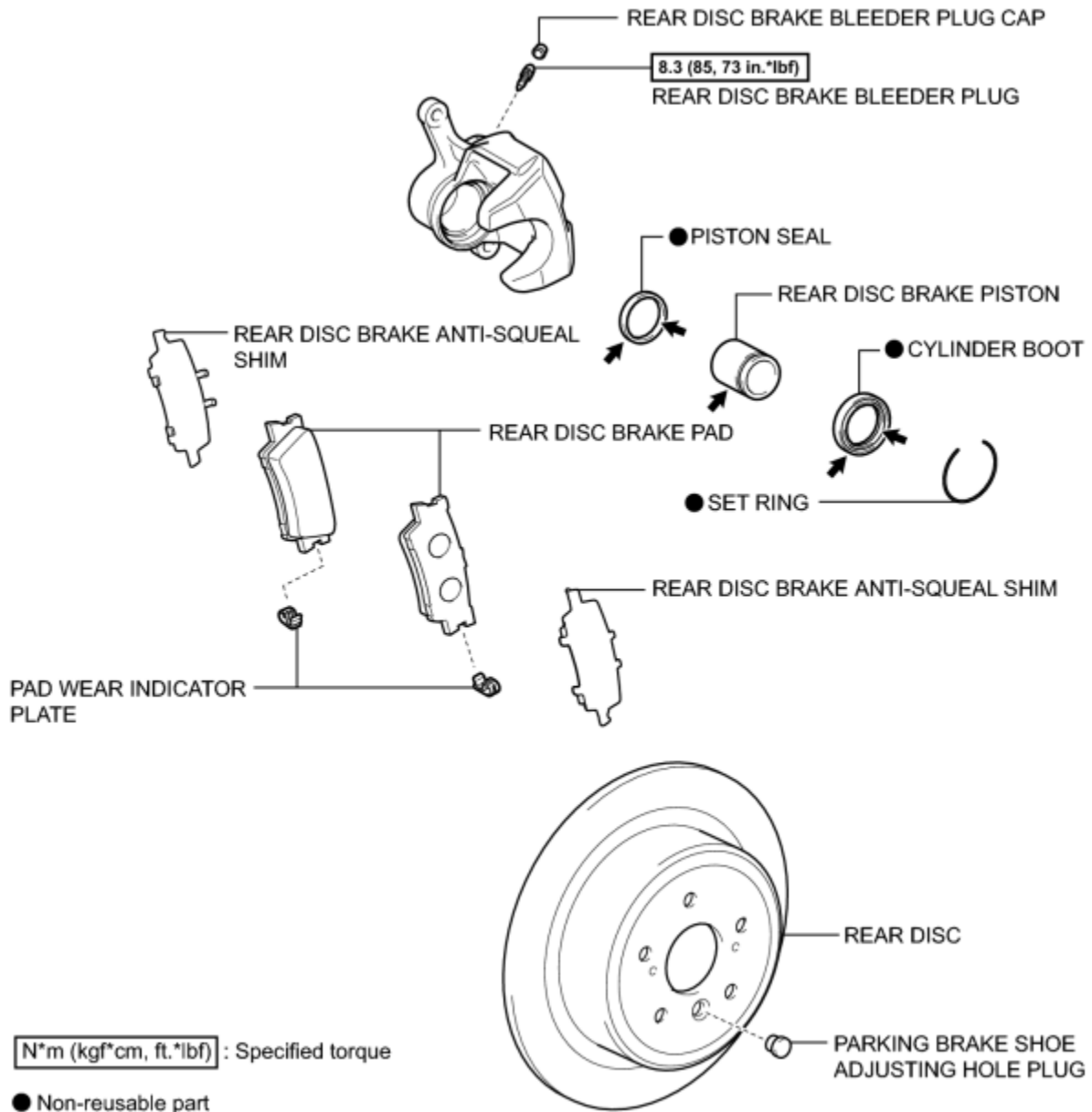
N*m (kgf*cm, ft.*lbf) : Specified torque

● Non-reusable part

← Lithium soap base glycol grease

c

ILLUSTRATION



N*m (kgf*cm, ft.*lbf) : Specified torque

● Non-reusable part

← Lithium soap base glycol grease



Last Modified: 5-25-2010	6.4 A	From: 200907
Model Year: 2010	Model: HS250H	Doc ID: RM000000LBO01FX
Title: BRAKE (REAR): REAR BRAKE: REMOVAL (2010 HS250H)		

REMOVAL

NOTICE:

When the brake pedal is first depressed after replacing the brake pads or pushing back the disc brake piston, DTC C1214 may be output. As there is no malfunction, clear the DTC.

HINT:

- Use the same procedure for the RH side and LH side.
- The following procedure is for the LH side.

1. DISABLE BRAKE CONTROL INFO

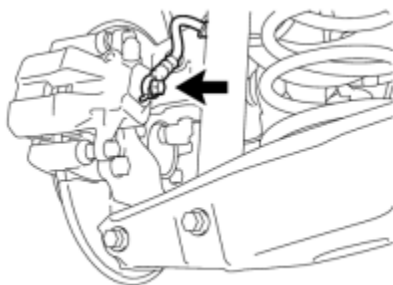
2. REMOVE REAR WHEEL

3. DRAIN BRAKE FLUID

NOTICE:

If brake fluid leaks onto any painted surface, immediately wash it off.

4. DISCONNECT REAR FLEXIBLE HOSE

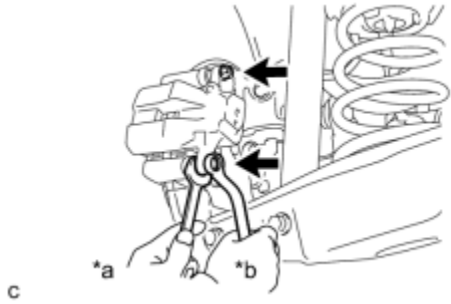


(a) Remove the union bolt and gasket, and disconnect the rear flexible hose from the rear disc brake cylinder assembly.

c

5. REMOVE REAR DISC BRAKE CYLINDER ASSEMBLY

(a) Hold the 2 rear disc brake cylinder slide pins, and remove the 2 bolts and rear disc brake cylinder assembly.

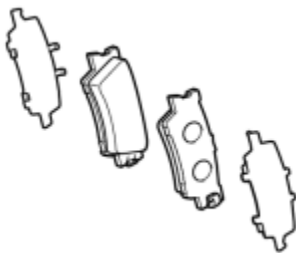


Text in Illustration	
*a	Hold
*b	Turn

6. REMOVE REAR DISC BRAKE PAD

(a) Remove the 2 rear disc brake pads from the rear disc brake cylinder mounting.

7. REMOVE REAR DISC BRAKE ANTI-SQUEAL SHIM



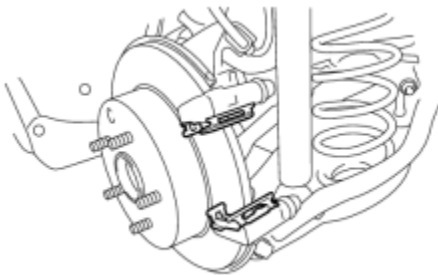
(a) Remove the 2 rear disc brake anti-squeal shims from the rear disc brake pads.

c

8. REMOVE PAD WEAR INDICATOR PLATE

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

9. REMOVE REAR DISC BRAKE PAD SUPPORT PLATE

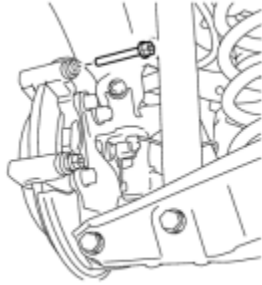


(a) Remove the 2 rear disc brake pad support plates from the disc brake cylinder mounting.

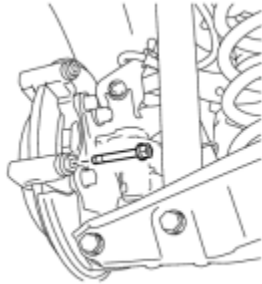
c

10. REMOVE REAR DISC BRAKE CYLINDER SLIDE PIN

(a) Remove the rear disc brake cylinder slide pin (upper)



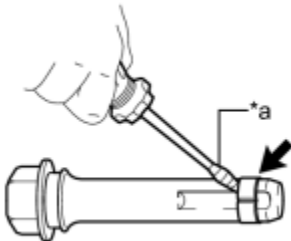
from the rear disc brake cylinder mounting.



(b) Remove the rear disc brake cylinder slide pin (lower) from the rear disc brake cylinder mounting.

11. REMOVE REAR DISC BRAKE CYLINDER SLIDE BUSHING

(a) Using a screwdriver with its tip wrapped with vinyl tape, remove the rear disc brake cylinder slide bushing from the rear disc brake cylinder slide pin (lower).



Text in Illustration

*a

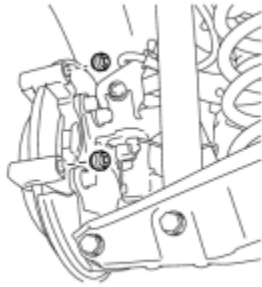
Vinyl Tape

NOTICE:

Do not damage the rear disc brake cylinder slide pin (lower).

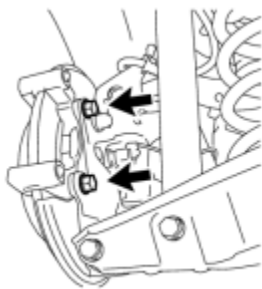
12. REMOVE REAR DISC BRAKE BUSHING DUST BOOT

(a) Remove the 2 rear disc brake bushing dust boots from the rear disc brake cylinder mounting.



c

13. REMOVE REAR DISC BRAKE CYLINDER MOUNTING



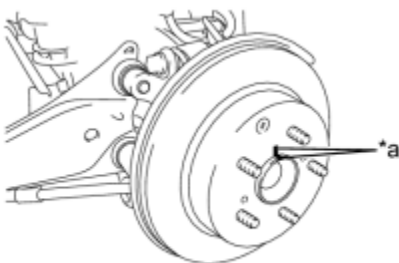
c

(a) Remove the 2 bolts and rear disc brake cylinder mounting from the rear axle carrier sub-assembly.

14. REMOVE PARKING BRAKE SHOE ADJUSTING HOLE PLUG

(a) Remove the parking brake shoe adjusting hole plug.

15. REMOVE REAR DISC



c

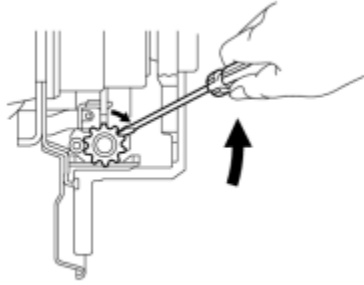
(a) Put matchmarks on the rear disc and the axle hub.

<p>Text in Illustration</p>	<p>Matchmark</p>
<p>*a</p>	

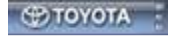
(b) Release the parking brake and remove the rear disc.

HINT:

If the disc cannot be removed easily, use a screwdriver to turn the shoe adjuster as shown in the illustration in order to contract the parking brake shoes.



P

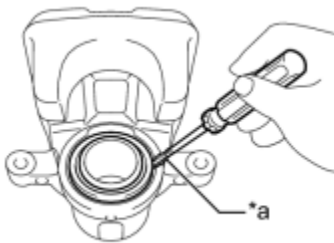


Last Modified: 5-25-2010	6.4 A	From: 200907
Model Year: 2010	Model: HS250H	Doc ID: RM000000LBP01FX
Title: BRAKE (REAR): REAR BRAKE: DISASSEMBLY (2010 HS250H)		

DISASSEMBLY

1. REMOVE CYLINDER BOOT

(a) Using a screwdriver with its tip wrapped with vinyl tape, remove the set ring and cylinder boot from the rear disc brake cylinder assembly.



Text in Illustration

*a

Vinyl Tape

NOTICE:

Be careful not to damage the rear disc brake cylinder assembly.

c

2. REMOVE REAR DISC BRAKE PISTON



(a) Place a piece of cloth between the rear disc brake piston and rear disc brake cylinder assembly.

(b) Apply compressed air to remove the rear disc brake piston from the rear disc brake cylinder assembly.

CAUTION:

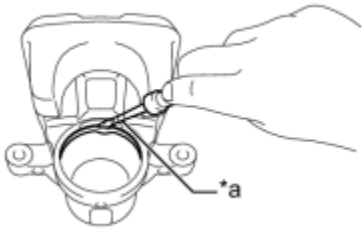
Do not place your fingers in front of the rear disc brake piston when using compressed air.

NOTICE:

Do not allow any brake fluid to spatter.

3. REMOVE PISTON SEAL

(a) Using a screwdriver with its tip wrapped with vinyl tape, remove the piston seal from the rear disc brake cylinder assembly.



c

Text in Illustration

*a

Vinyl Tape

NOTICE:

Be careful not to damage the inner cylinder or cylinder groove.

4. REMOVE REAR DISC BRAKE BLEEDER PLUG CAP

5. REMOVE REAR DISC BRAKE BLEEDER PLUG



Last Modified: 5-25-2010	6.4 G	From: 200907
Model Year: 2010	Model: HS250H	Doc ID: RM0000025RN01IX
Title: BRAKE (REAR): REAR BRAKE: INSPECTION (2010 HS250H)		

INSPECTION

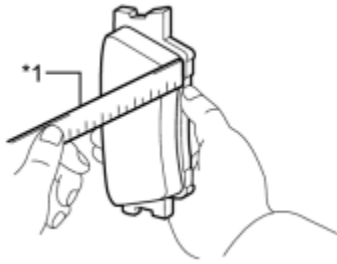
1. INSPECT BRAKE CYLINDER AND PISTON

(a) Inspect the cylinder bore and the piston for rust or scoring. If necessary, replace the rear disc brake cylinder assembly and piston.

2. INSPECT PAD LINING THICKNESS

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

Text in Illustration	Ruler
*1	



c

Standard thickness:

10.5 mm (0.413 in.)

Minimum thickness:

1.0 mm (0.0394 in.)

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

HINT:

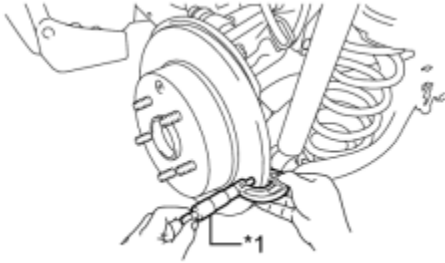
Be sure to check rear disc thickness after replacing the brake pads with new ones.

3. INSPECT REAR DISC BRAKE PAD SUPPORT PLATE

(a) Make sure that the rear disc brake pad support plates have sufficient rebound, no deformation, cracks or wear, and that all rust and dirt are removed. If necessary, replace the rear disc brake pad support plates.

4. INSPECT DISC THICKNESS

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



c

Text in Illustration

*1

Micrometer

Standard thickness:

12.0 mm (0.472 in.)

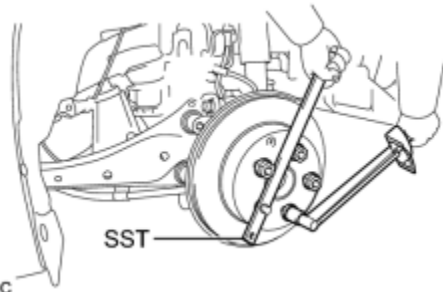
Minimum thickness:

10.5 mm (0.413 in.)

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

5. INSPECT DISC RUNOUT

(a) Inspect the rear axle hub bearing looseness INFO.



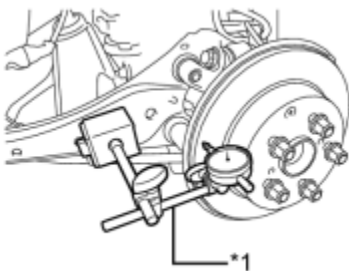
c

(b) Using SST to hold the rear disc, tighten the rear disc with the 5 hub nuts.

SST: 09330-00021

Torque: **103 N·m (1050 kgf·cm, 76ft·lbf)**

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



c

Text in Illustration

*1

Dial Indicator

Maximum disc runout:

0.15 mm (0.00591 in.)

NOTICE:

Keep the magnet of the dial indicator away from the axle hub and speed sensor.

HINT:

If the runout exceeds the maximum value, change the installation position of the disc to minimize the runout. If the runout exceeds the maximum even when the installation position is changed, grind the disc. If the disc thickness is less than the minimum, replace the rear disc.

(d) Remove the 5 hub nuts and the rear disc.



Last Modified: 5-25-2010	6.4 G	From: 200907
Model Year: 2010	Model: HS250H	Doc ID: RM0000025RN01IX
Title: BRAKE (REAR): REAR BRAKE: INSPECTION (2010 HS250H)		

INSPECTION

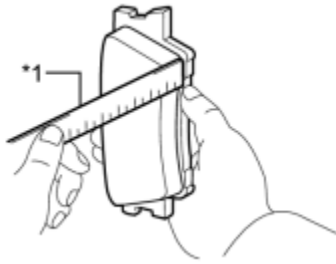
1. INSPECT BRAKE CYLINDER AND PISTON

(a) Inspect the cylinder bore and the piston for rust or scoring. If necessary, replace the rear disc brake cylinder assembly and piston.

2. INSPECT PAD LINING THICKNESS

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

Text in Illustration	Ruler
*1	



c

Standard thickness:

10.5 mm (0.413 in.)

Minimum thickness:

1.0 mm (0.0394 in.)

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

HINT:

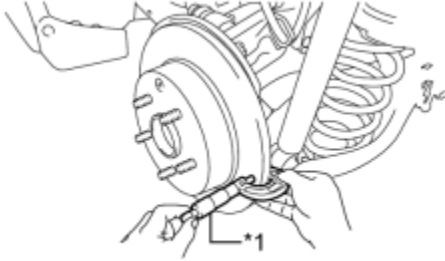
Be sure to check rear disc thickness after replacing the brake pads with new ones.

3. INSPECT REAR DISC BRAKE PAD SUPPORT PLATE

(a) Make sure that the rear disc brake pad support plates have sufficient rebound, no deformation, cracks or wear, and that all rust and dirt are removed. If necessary, replace the rear disc brake pad support plates.

4. INSPECT DISC THICKNESS

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



c

Text in Illustration

*1

Micrometer

Standard thickness:

12.0 mm (0.472 in.)

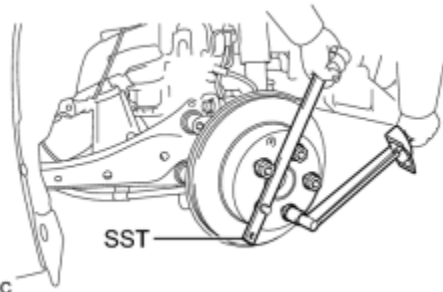
Minimum thickness:

10.5 mm (0.413 in.)

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

5. INSPECT DISC RUNOUT

(a) Inspect the rear axle hub bearing looseness INFO.



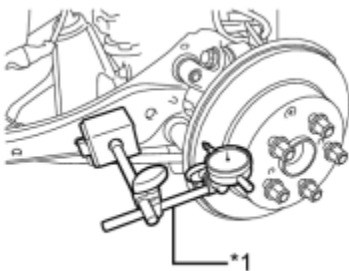
c

(b) Using SST to hold the rear disc, tighten the rear disc with the 5 hub nuts.

SST: 09330-00021

Torque: **103 N·m (1050 kgf·cm, 76ft·lbf)**

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



c

Text in Illustration

*1

Dial Indicator

Maximum disc runout:

0.15 mm (0.00591 in.)

NOTICE:

Keep the magnet of the dial indicator away from the axle hub and speed sensor.

HINT:

If the runout exceeds the maximum value, change the installation position of the disc to minimize the runout. If the runout exceeds the maximum even when the installation position is changed, grind the disc. If the disc thickness is less than the minimum, replace the rear disc.

(d) Remove the 5 hub nuts and the rear disc.



Last Modified: 5-25-2010	6.4 G	From: 200907
Model Year: 2010	Model: HS250H	Doc ID: RM0000025RN01IX
Title: BRAKE (REAR): REAR BRAKE: INSPECTION (2010 HS250H)		

INSPECTION

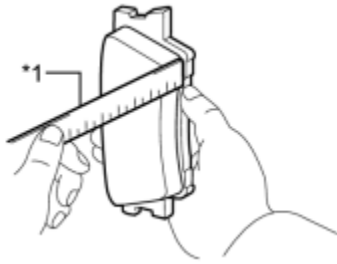
1. INSPECT BRAKE CYLINDER AND PISTON

(a) Inspect the cylinder bore and the piston for rust or scoring. If necessary, replace the rear disc brake cylinder assembly and piston.

2. INSPECT PAD LINING THICKNESS

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

Text in Illustration	Ruler
*1	



c

Standard thickness:

10.5 mm (0.413 in.)

Minimum thickness:

1.0 mm (0.0394 in.)

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

HINT:

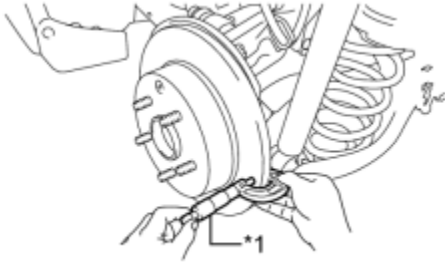
Be sure to check rear disc thickness after replacing the brake pads with new ones.

3. INSPECT REAR DISC BRAKE PAD SUPPORT PLATE

(a) Make sure that the rear disc brake pad support plates have sufficient rebound, no deformation, cracks or wear, and that all rust and dirt are removed. If necessary, replace the rear disc brake pad support plates.

4. INSPECT DISC THICKNESS

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



c

Text in Illustration

*1

Micrometer

Standard thickness:

12.0 mm (0.472 in.)

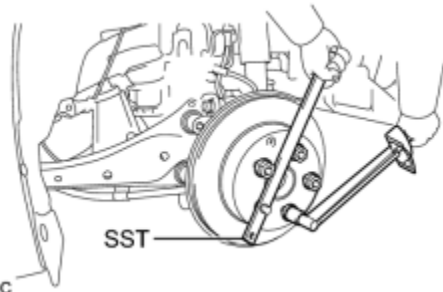
Minimum thickness:

10.5 mm (0.413 in.)

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

5. INSPECT DISC RUNOUT

(a) Inspect the rear axle hub bearing looseness INFO.



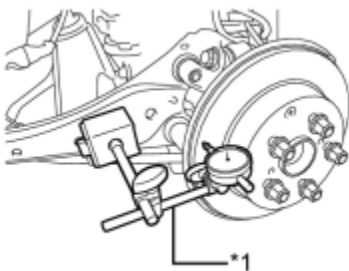
c

(b) Using SST to hold the rear disc, tighten the rear disc with the 5 hub nuts.

SST: 09330-00021

Torque: **103 N·m (1050 kgf·cm, 76ft·lbf)**

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



c

Text in Illustration

*1

Dial Indicator

Maximum disc runout:

0.15 mm (0.00591 in.)

NOTICE:

Keep the magnet of the dial indicator away from the axle hub and speed sensor.

HINT:

If the runout exceeds the maximum value, change the installation position of the disc to minimize the runout. If the runout exceeds the maximum even when the installation position is changed, grind the disc. If the disc thickness is less than the minimum, replace the rear disc.

(d) Remove the 5 hub nuts and the rear disc.



Last Modified: 5-25-2010	6.4 A	From: 200907
Model Year: 2010	Model: HS250H	Doc ID: RM000000LBR01IX
Title: BRAKE (REAR): REAR BRAKE: REASSEMBLY (2010 HS250H)		

REASSEMBLY

1. TEMPORARILY TIGHTEN REAR DISC BRAKE BLEEDER PLUG

HINT:

Fully tighten the rear disc brake bleeder plug after bleeding any air left in the system.

2. INSTALL REAR DISC BRAKE BLEEDER PLUG CAP


3. INSTALL PISTON SEAL

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



c

Text in Illustration

	Lithium Soap Base Glycol Grease
---	---------------------------------

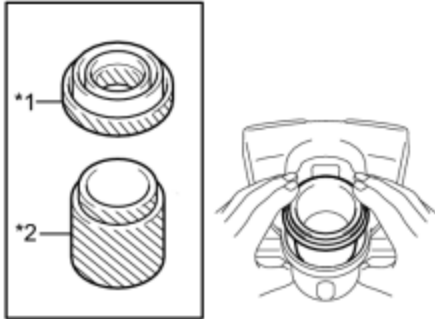
(b) Install the piston seal to the rear disc brake cylinder assembly.

NOTICE:

Securely install the piston seal to the groove of the rear disc brake cylinder assembly.

4. INSTALL REAR DISC BRAKE PISTON

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



c

Text in Illustration

*1	Cylinder Boot
*2	Rear Disc Brake Piston
	Lithium Soap Base Glycol Grease

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

(c) Apply a light layer of lithium soap base glycol grease to the contact surface of the rear disc brake piston, and install it to the rear disc brake cylinder assembly.

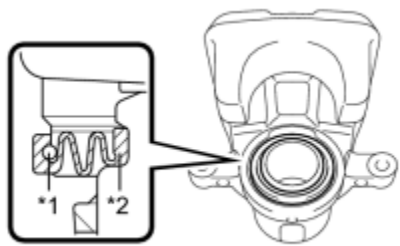
NOTICE:

Do not install the rear disc brake piston forcibly in the rear disc brake cylinder assembly.

5. INSTALL CYLINDER BOOT

(a) Install the cylinder boot to the rear disc brake cylinder assembly as shown in the illustration.

Text in Illustration	Set Ring
-----------------------------	----------

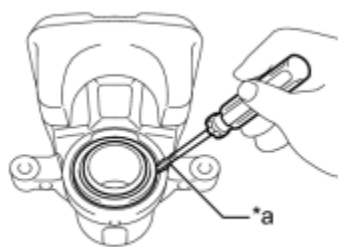


*1	
*2	Cylinder Boot

NOTICE:

Securely install the cylinder boot to the groove of the disc brake cylinder assembly and rear disc brake piston.

(b) Using a screwdriver with its tip wrapped with vinyl tape, install a new set ring.

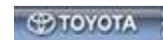


Text in Illustration	Vinyl Tape
*a	

NOTICE:

- Securely install the set ring to the outer groove of the cylinder boot.
- Do not damage the cylinder boot.

c



Last Modified: 5-25-2010	6.4 A	From: 200907
Model Year: 2010	Model: HS250H	Doc ID: RM000000LBM01LX
Title: BRAKE (REAR): REAR BRAKE: INSTALLATION (2010 HS250H)		

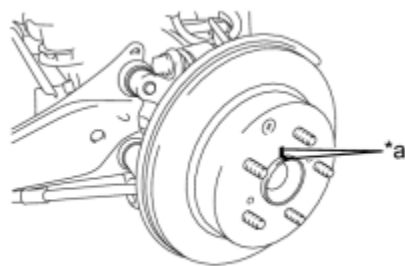
INSTALLATION

HINT:

- Use the same procedure for the RH side and LH side.
- The following procedure is for the LH side.

1. INSTALL REAR DISC

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



c

Text in Illustration

*a

Matchmark

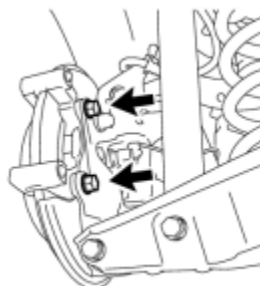
NOTICE:

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

2. INSTALL PARKING BRAKE SHOE ADJUSTING HOLE PLUG

(a) Install the parking brake shoe adjusting hole plug.

3. INSTALL REAR DISC BRAKE CYLINDER MOUNTING



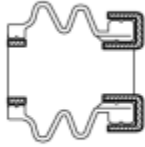
c

(a) Install the rear disc brake cylinder mounting to the rear axle carrier sub-assembly with the 2 bolts.

Torque: 78 N·m (799 kgf·cm, 58ft·lbf)

4. INSTALL REAR DISC BRAKE BUSHING DUST BOOT

(a) Apply a light layer of lithium soap base glycol grease to the entire circumference of 2 new rear disc brake bushing dust boots.



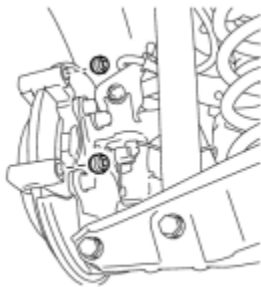
c

Text in Illustration

	Lithium Soap Base Glycol Grease
---	---------------------------------

HINT:

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

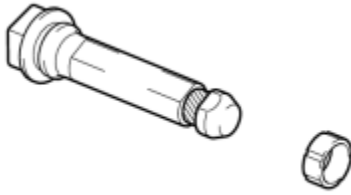


(b) Install the 2 rear disc brake bushing dust boots to the rear disc brake cylinder mounting.

c

5. INSTALL REAR DISC BRAKE CYLINDER SLIDE BUSHING

(a) Apply a light layer of lithium soap base glycol grease to the contact surface of the rear disc brake cylinder slide pin (lower).



c

Text in Illustration

	Lithium Soap Base Glycol Grease
---	---------------------------------

(b) Install a new rear disc brake cylinder slide bushing to the rear disc brake cylinder slide pin (lower).

6. INSTALL REAR DISC BRAKE CYLINDER SLIDE PIN

(a) Apply a light layer of lithium soap base glycol grease to the sliding part and the seal surface of the rear disc brake cylinder slide pin (lower).

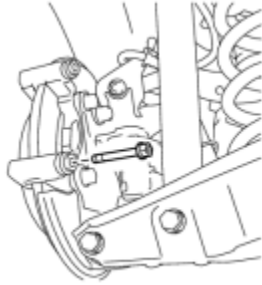


c

Text in Illustration

	Lithium Soap Base Glycol Grease
---	---------------------------------

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



c

(c) Push the rear disc brake cylinder slide pin (lower) into the rear disc brake bushing dust boot to align them.

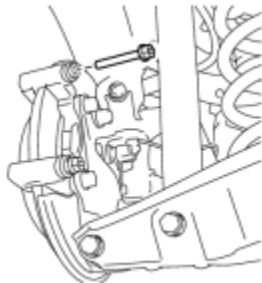
(d) Apply a light layer of lithium soap base glycol grease to the sliding part and the seal surface of the rear disc brake cylinder slide pin (upper).



c

Text in Illustration

	Lithium Soap Base Glycol Grease
--	---------------------------------

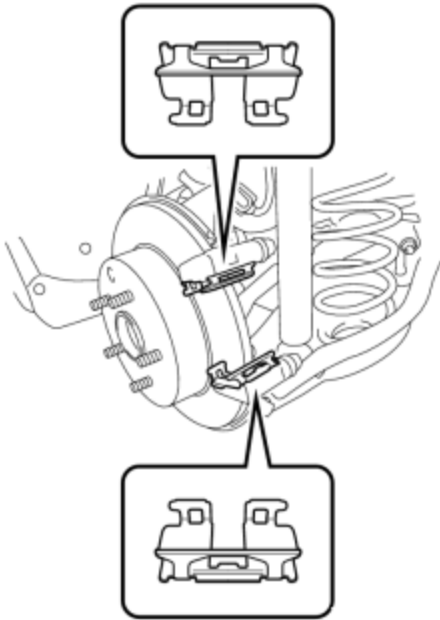


c

(e) Install the rear disc brake cylinder slide pin (upper) to the rear disc brake cylinder mounting.

(f) Push the rear disc brake cylinder slide pin (upper) into the rear disc brake bushing dust boot to align them.

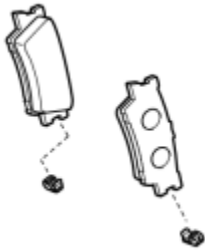
7. INSTALL REAR DISC BRAKE PAD SUPPORT PLATE



(a) Install the 2 rear disc brake pad support plates to the rear disc brake cylinder mounting.

c

8. INSTALL PAD WEAR INDICATOR PLATE



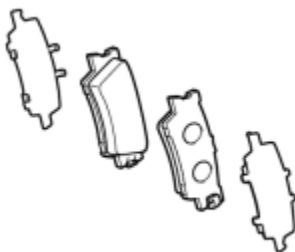
(a) Install the 2 pad wear indicator plates to the 2 rear disc brake pads.

NOTICE:

Install each pad wear indicator plate in the correct position and direction.

c

9. INSTALL REAR DISC BRAKE ANTI-SQUEAL SHIM



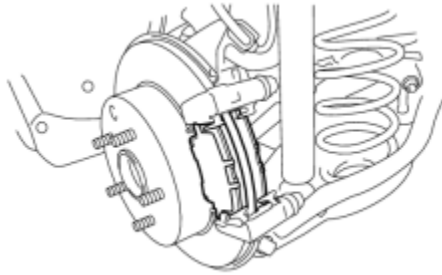
(a) Install the rear disc brake anti-squeal shims to each of the 2 rear disc brake pads.

NOTICE:

When replacing worn pads, the anti-squeal shims must be replaced together with the pads.

c

10. INSTALL REAR DISC BRAKE PAD



(a) Install the 2 rear disc brake pads to the rear disc brake cylinder mounting.

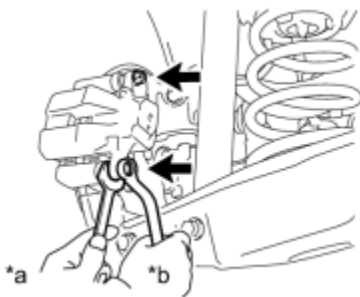
NOTICE:

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

c

11. INSTALL REAR DISC BRAKE CYLINDER ASSEMBLY

(a) Hold the 2 rear disc brake cylinder slide pins and install the rear disc brake cylinder assembly to the rear disc brake cylinder mounting with the 2 bolts.

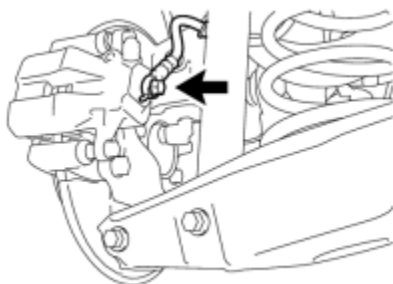


c

Text in Illustration	
*a	Hold
*b	Turn

Torque: **27 N·m (270 kgf·cm, 20ft·lbf)**

12. CONNECT REAR FLEXIBLE HOSE



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

Torque: **39 N·m (400 kgf·cm, 29ft·lbf)**

c

13. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

HINT:

Perform this step only when the Techstream cannot prohibit brake control.

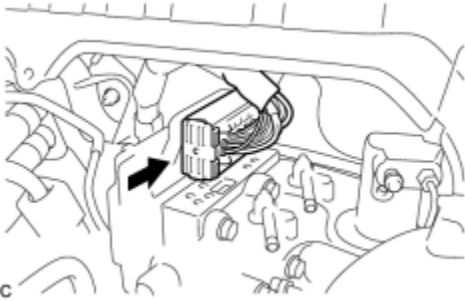
(a) Disconnect the cable from the negative (-) battery terminal **INFO**.

14. CONNECT CONNECTOR

HINT:

Perform the following step only when the Techstream cannot prohibit brake control.

(a) Connect the connector to the brake booster with master cylinder assembly.



NOTICE:

- Make sure that the connector can be connected smoothly. Do not allow water, oil or dirt to enter.
- Make sure that the connector lock is locked securely.

15. CONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

HINT:

Perform this step only when the Techstream cannot prohibit brake control.

(a) Connect the cable to the negative (-) battery terminal **INFO**.

16. BLEED BRAKE LINE **INFO**

17. PERFORM INITIALIZATION AND CALIBRATION OF LINEAR SOLENOID VALVE

HINT:

If the brake control has been disabled, make sure to perform initialization and calibration of the linear solenoid valve **INFO**.

18. ADJUST PARKING BRAKE SHOE CLEARANCE AND PARKING BRAKE PEDAL TRAVEL **INFO**

19. INSTALL REAR WHEEL

Torque: **103 N·m (1050 kgf·cm, 76ft·lbf)**



