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2012 MAZDA 6/Atenza Hatchback OEM Service and Repair Workshop Manual

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Step	Inspection	Results	Action
3	INSPECT DSC HU/CM POWER SUPPLY FUSE • Inspect the DSC HU/CM ignition power supply fuse. • Is the fuse normal?	Yes	Go to the next step.
		No	Inspect the blown fuse's circuit for short to ground Repair or replace the wiring harness for a possible short to ground as necessary. Install appropriate amperage fuse.
*4	VERIFY WHETHER MALFUNCTION IS IN WIRING HARNESS (BETWEEN DSC HU/CM POWER SUPPLY AND DSC HU/CM FOR CONTINUITY) OR ELSEWHERE • Switch the ignition to ON. • Measure the voltage at the DSC HU/CM terminal Q (wiring harness-side). • Is the voltage approx. 12 V?	Yes	Go to the next step.
		No	Inspect for open circuit between DSC HU/CM and IG1 relay. Repair or replace the wiring harness for a possible open circuit as necessary.
*5	VERIFY WHETHER MALFUNCTION IS IN WIRING HARNESS (BETWEEN DSC HU/CM AND GND FOR CONTINUITY) OR ELSEWHERE • Switch the ignition to off. • Disconnect the DSC HU/CM connector. • Inspect for continuity between DSC HU/CM terminal AL (wiring harness-side) and body ground. • Is there continuity?	Yes	Replace the DSC HU/CM. (open circuit in the DSC HU/CM) (See DSC HU/CM REMOVAL/INSTALLATION [SKYACTIV-G 2.5 (WITHOUT CYLINDER DEACTIVATION)].) (See DSC HU/CM REMOVAL/INSTALLATION [SKYACTIV-G 2.5 (WITH CYLINDER DEACTIVATION)].) (See DSC HU/CM REMOVAL/INSTALLATION [SKYACTIV-D 2.2].) (See DSC HU/CM REMOVAL/INSTALLATION [SKYACTIV-G 2.5T].)
		No	Repair or replace the wiring harness for a possible open circuit and poor contact in ground point.
6	CONFIRM PCM DTCs • Retrieve the PCM DTCs using the M-MDS. (See ON-BOARD DIAGNOSTIC TEST [PCM (SKYACTIV-G 2.5 (WITHOUT CYLINDER DEACTIVATION))].) (See ON-BOARD DIAGNOSTIC TEST [PCM (SKYACTIV-G 2.5 (WITH CYLINDER DEACTIVATION))].) (See ON-BOARD DIAGNOSTIC TEST [PCM (SKYACTIV-D 2.2)].) (See ON-BOARD DIAGNOSTIC TEST [PCM (SKYACTIV-G 2.5T)].) • Are any DTCs present?	Yes	Go to the applicable DTC inspection. (See DTC TABLE [PCM (SKYACTIV-G 2.5 (WITHOUT CYLINDER DEACTIVATION))].) (See DTC TABLE [PCM (SKYACTIV-G 2.5 (WITH CYLINDER DEACTIVATION))].) (See DTC TABLE [PCM (SKYACTIV-D 2.2)].) (See DTC TABLE [PCM (SKYACTIV-G 2.5T)].)
		No	Go to the next step.
7	VERIFY IF MALFUNCTION CAUSED BY INITIALIZATION PROCEDURE FOR MODULE NOT PERFORMED • Verify if malfunction caused by initialization procedure for brake fluid pressure sensor not performed. • Has the initial setting for the brake fluid pressure sensor been performed after replacing the DSC HU/CM?	Yes	Go to the next step.
		No	Perform the brake fluid pressure sensor initial setting. (See DSC RELATED PARTS SENSOR INITIALIZATION PROCEDURE.)

Step	Inspection	Results	Action
5	CONFIRM DSC HU/CM DTC • Retrieve the DSC HU/CM DTC using the M-MDS. (See DTC INSPECTION [DSC HU/CM].) • Are any DTCs present?	Yes	Go to the applicable DTC inspection (See DTC TABLE [DSC HU/CM].)
		No	If communication error message is displayed on the M-MDS screen: • Go to the next step. If communication error message is not displayed: • Go to Step 9.
6	INSPECT DSC HU/CM POWER SUPPLY FUSE • Inspect the DSC HU/CM ignition power supply fuse. • Is the fuse normal?	Yes	Go to the next step.
		No	Inspect the blown fuse's circuit for short to ground. Repair or replace the wiring harness for a possible short to ground as necessary. Install appropriate amperage fuse.
*7	VERIFY WHETHER MALFUNCTION IS IN WIRING HARNESS (BETWEEN DSC HU/CM POWER SUPPLY AND DSC HU/CM FOR CONTINUITY) OR ELSEWHERE • Switch the ignition to ON. • Measure the voltage at the DSC HU/CM terminal Q (wiring harness-side). • Is the voltage approx. 12 V?	Yes	Go to the next step.
		No	Inspect for open circuit between DSC HU/CM and IG1 relay. Repair or replace the wiring harness for a possible open circuit as necessary.
*8	VERIFY WHETHER MALFUNCTION IS IN WIRING HARNESS (BETWEEN DSC HU/CM AND GROUND FOR CONTINUITY) OR ELSEWHERE • Switch the ignition to off. • Disconnect the DSC HU/CM connector. • Inspect for continuity between DSC HU/CM terminal AL (wiring harness-side) and body ground. • Is there continuity?	Yes	Replace the DSC HU/CM. (Open circuit in the DSC HU/CM) (See DSC HU/CM REMOVAL/INSTALLATION [SKYACTIV-G 2.5 (WITHOUT CYLINDER DEACTIVATION)].) (See DSC HU/CM REMOVAL/INSTALLATION [SKYACTIV-G 2.5 (WITH CYLINDER DEACTIVATION)].) (See DSC HU/CM REMOVAL/INSTALLATION [SKYACTIV-D 2.2].) (See DSC HU/CM REMOVAL/INSTALLATION [SKYACTIV-G 2.5T].)
		No	Repair or replace the wiring harness for a possible open circuit and poor contact in GND point.
9	CONFIRM INSTRUMENT CLUSTER DTC • Retrieve the instrument cluster DTC using the M-MDS. (See DTC INSPECTION [INSTRUMENT CLUSTER].) • Are any DTCs present?	Yes	Go to the applicable DTC inspection (See DTC TABLE [INSTRUMENT CLUSTER].)
		No	Replace the instrument cluster. (See INSTRUMENT CLUSTER REMOVAL/INSTALLATION.)

• When performing an asterisked (*) troubleshooting inspection, shake the wiring harness and connectors while doing the inspection to discover whether poor contact points are the cause of any intermittent malfunctions. If there is a problem, check to make sure connectors, terminals and wiring harness are connected correctly and undamaged.

FRONT BRAKE HOSE REMOVAL/INSTALLATION [WITH 2-PISTON FLOATING CALIPER]

SM2898163

id0411000006w

Replacement Part

Gasket
Quantity: 2
Location of use: Front brake hose

Oil and Chemical Type

Brake fluid type
Type: SAE J1703 or FMVSS116 DOT-3

Caution

• Brake fluid will damage painted surfaces. Be careful not to spill any on painted surfaces. In addition, if there is any brake fluid on the wiring harness, the wire insulation may corrode causing a malfunction such as a short circuit. If brake fluid gets on a painted surface or wiring harness, wash and flush it off completely with water immediately.

Note

• Tighten the brake pipe flare nut using any commercially available flare nut wrench.

1.Remove the wheel and tire. (See WHEEL AND TIRE REMOVAL/INSTALLATION.)

2.Remove in the order indicated in the table.

3.Install in the reverse order of removal.

4.After installation, add brake fluid, bleed the air, and inspect for fluid leakage. (See BRAKE FLUID AIR BLEEDING.)

The disc plate is deformed by heat.

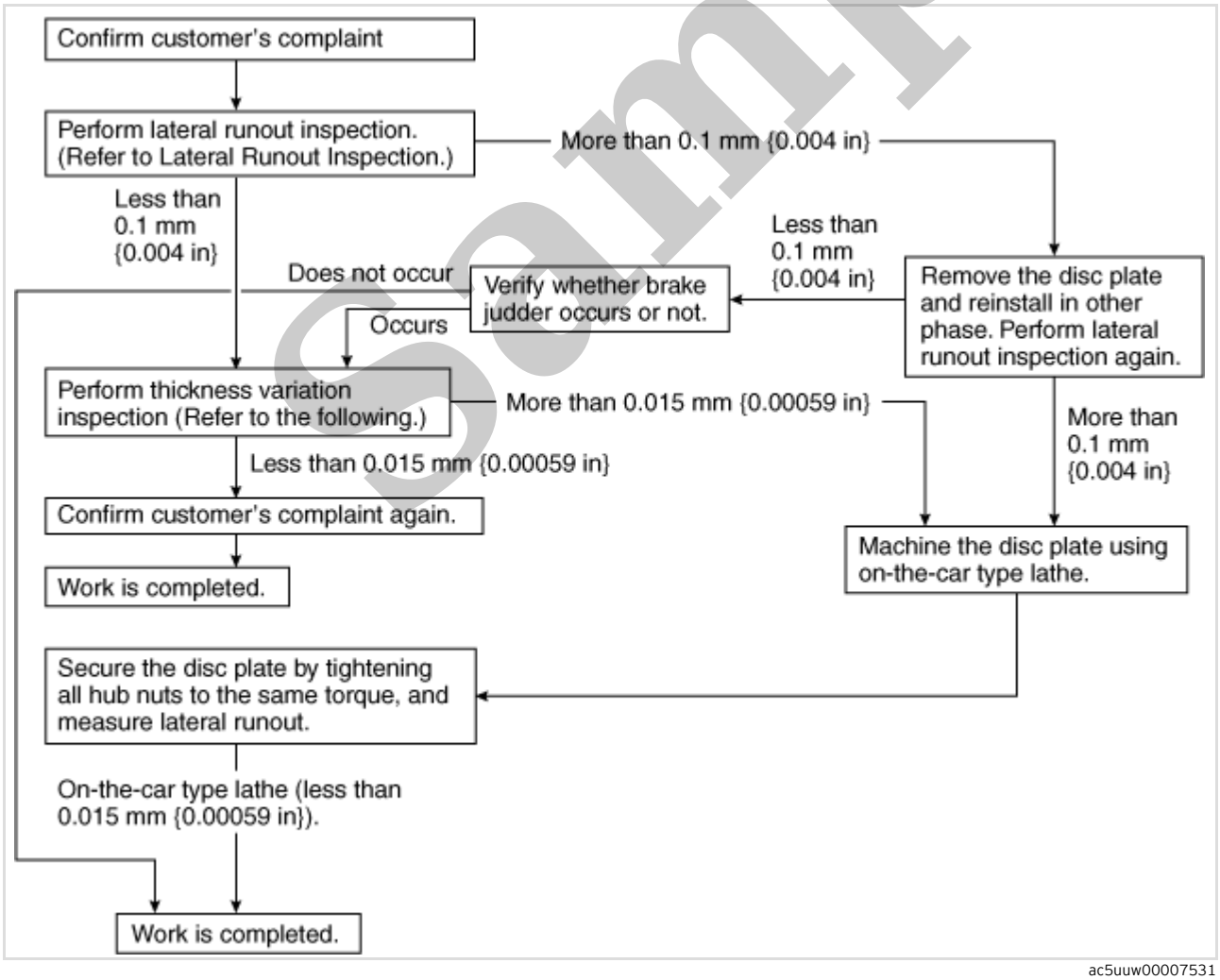
1.Repeated panic braking may raise the temperature in some portions of the disc plate by approx. 1,000 °C {1,832 °F}. This results in a deformed disc plate.

Due to corrosion, the thickness and friction coefficient of the disc plate change.

1.If the vehicle is parked in damp conditions for a long time, corrosion occurs on the friction surface of the disc plate.

2.The thickness of corrosion is uneven and sometimes appears like a wave pattern, which changes the friction coefficient and causes a reaction force.

Inspection and repair procedure



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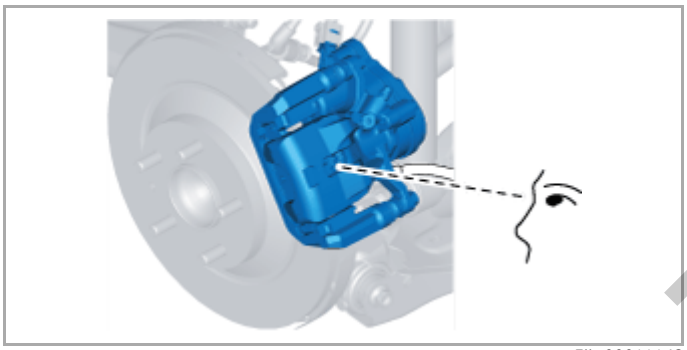
Disc Pad Thickness Inspection

1.Jack up the front of the vehicle and support it with safety stands.

2.Remove the wheel and tire. (See WHEEL AND TIRE REMOVAL/INSTALLATION.)

3.Verify the remaining thickness of the pads.



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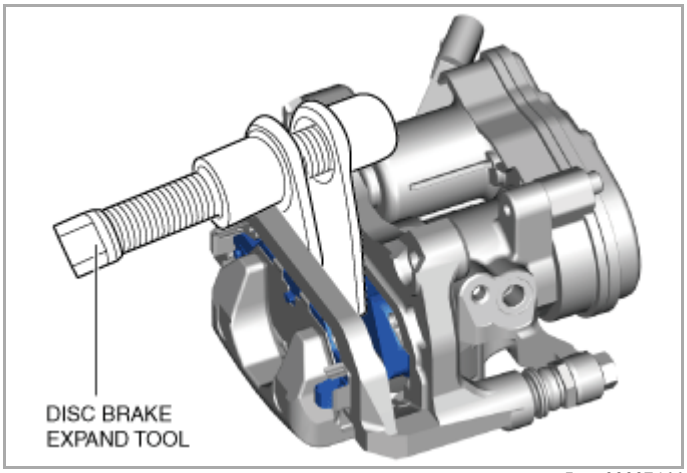
Minimum rear disc pad thickness

2.0 mm {0.079 in}

• Replace the pads as a set (right and left wheels) if either one is at or less than the minimum thickness. (See REAR BRAKE DISC PAD REMOVAL/INSTALLATION.)



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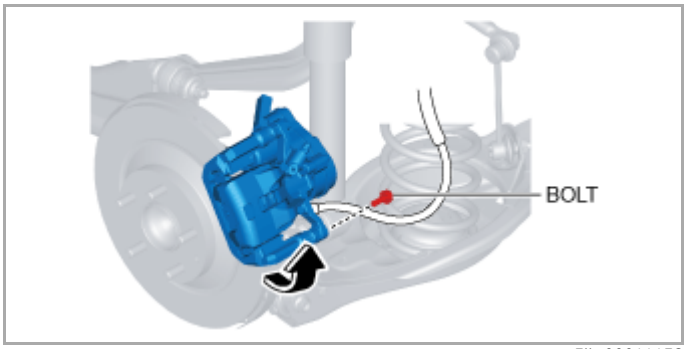
2.Install the rear brake caliper component.



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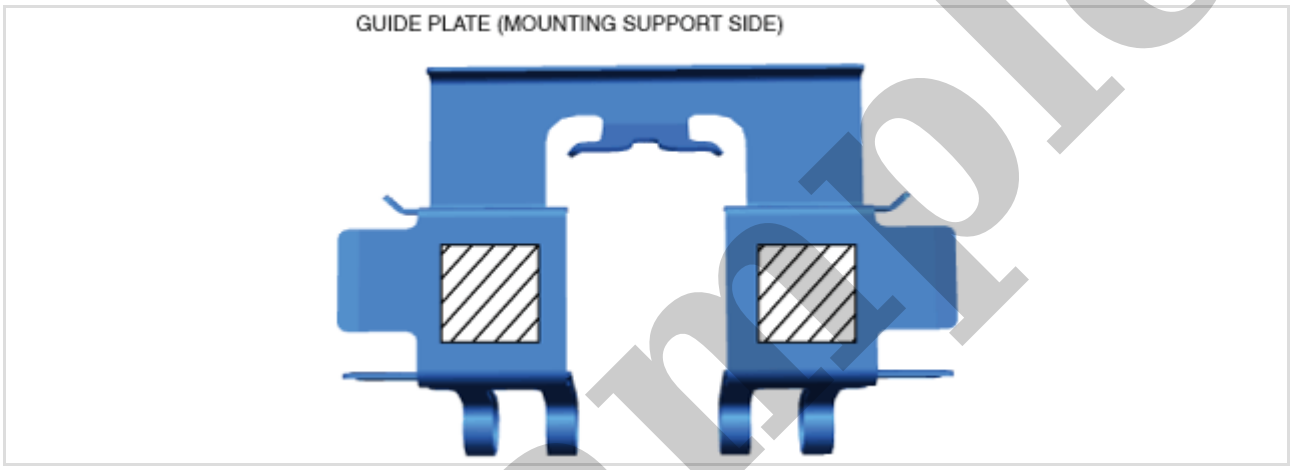
Guide Plate Installation Note

1.Clean the areas where the mounting support and the double-sided adhesive tape on the guide plates come into contact.

2.Apply double-sided adhesive tape to the positions shown in the figure.



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3.Peel off the backing of the double-sided adhesive tape.

4.Install the guide plates to the mounting support.

5.Apply brake grease to the contact surfaces of the guide plate and disc pads.

Rear Brake Caliper Installation Note

1.Clean the exposed area of the piston.

Caution

• When pressing the piston into the rear brake caliper, the rear brake caliper internal parts could be damaged while rotating and pressing the piston. Be careful not to rotate the piston when pressing the piston into the rear brake caliper.

2.Press in the piston using a commercially available disc brake expander tool.

REAR BRAKE CALIPER REMOVAL/INSTALLATION

SM2898167

id04110000110

Special Service Tool (SST)

49 F043 002 Wrench	

Replacement Part

Bolt Quantity: 2 Location of use: Electric parking brake motor gear unit	O-ring Quantity: 1 Location of use: Electric parking brake motor gear unit	Gasket Quantity: 2 Location of use: Rear brake hose

Note

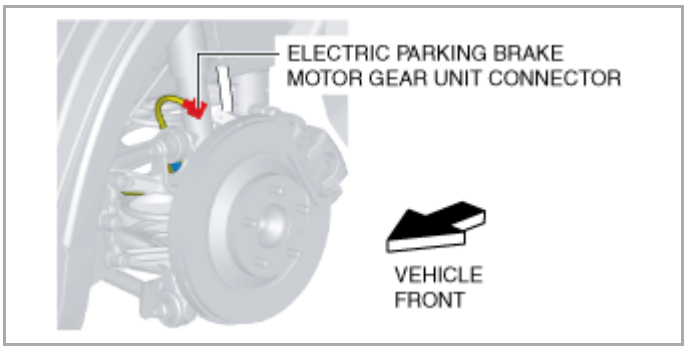
- **When in maintenance mode, the clearance between the disc pad and the disc plate expands.**
- **When the maintenance mode is completed, perform the electric parking brake automatic adjustment.**
- **With the electric parking brake automatic adjustment, the electric parking brake motor gear unit operation time is longer than normal.**

1.Switch to the maintenance mode. (See MAINTENANCE MODE.)

2.Disconnect the negative battery terminal. (See NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.)

3.Remove the wheel and tire. (See WHEEL AND TIRE REMOVAL/INSTALLATION.)

4.Disconnect the electric parking brake motor gear unit connector.



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REAR BRAKE CALIPER DISASSEMBLY/ASSEMBLY

SM2898168

id04110000120

Special Service Tool (SST)

49 F043 002 Wrench	

Replacement Part

Dust seal Quantity: 1 Location of use: Caliper body	Piston seal Quantity: 1 Location of use: Piston

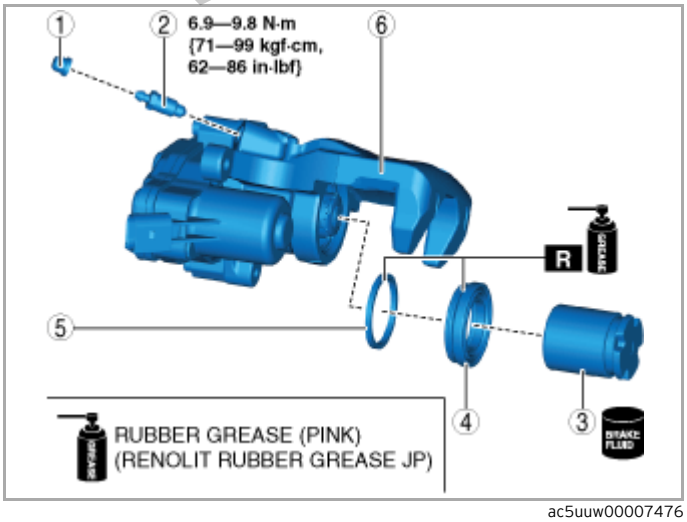
Oil and Chemical Type

Brake fluid type Type: SAE J1703 or FMVSS116 DOT-3	Rubber grease (Pink) Type: RENOLIT RUBBER GREASE JP

Caution

• Brake fluid will damage painted surfaces. Be careful not to spill any on painted surfaces. In addition, if there is any brake fluid on the wiring harness, the wire insulation may corrode causing a malfunction such as a short circuit. If brake fluid gets on a painted surface or wiring harness, wash and flush it off completely with water immediately.

1.Remove in the order indicated in the table.



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