

2012 - Mazda6 - Brakes

POWER BRAKE UNIT INSPECTION

NOTE:

- The following inspection methods are simple inspection methods to judge the function of the power brake unit.
- If there is any malfunction in the power brake unit, replace the power brake unit as a single component.

Without Using SST

Operation inspection

1. Depress the pedal several times with the engine stopped.
2. With the pedal depressed, start the engine.
3. If the pedal moves down slightly immediately after engine start, the unit is normal.

Vacuum function inspection

1. Start the engine.
2. Stop the engine after driving the vehicle for **1—2 min.**
3. Depress the pedal with normal force.
4. If the first pedal stroke is long and becomes shorter with subsequent strokes, the unit is normal.
 - If a malfunction is found, inspect for damage to or improper installation of the check valve and vacuum hose. After repairing, inspect again.

Vacuum loss function inspection

1. Start the engine.
2. Depress the pedal with normal force.
3. Stop the engine under this condition.
4. Hold the pedal depressed for **approx. 30 s.**
5. If the pedal height does not change during this time, the unit is normal.

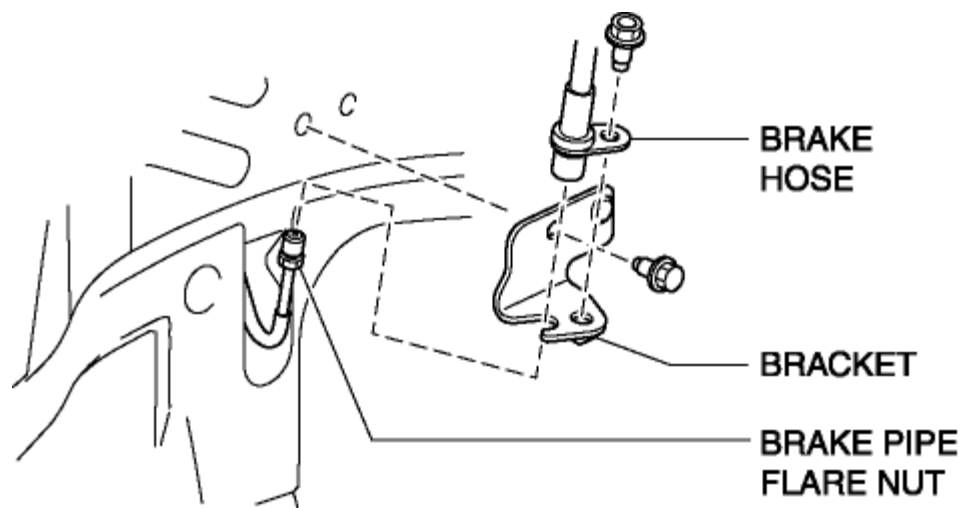
When using SST

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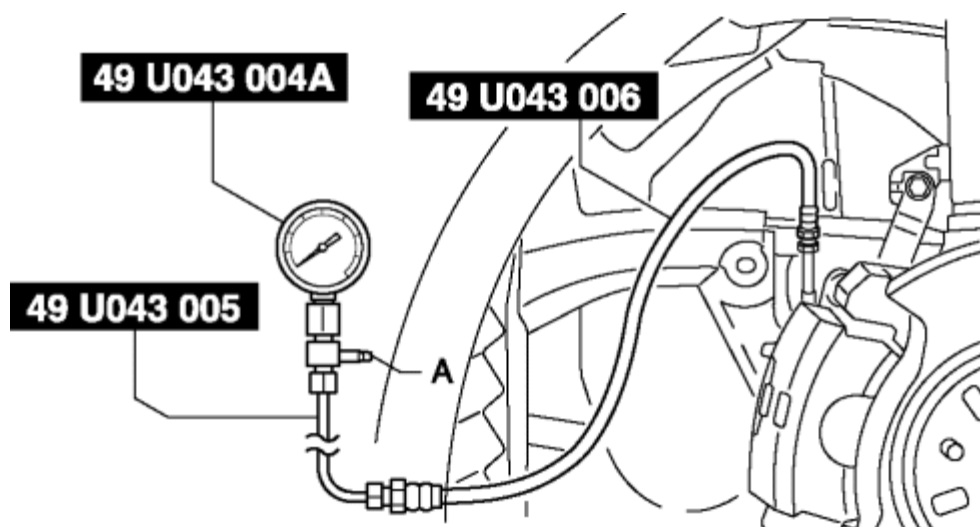
- When performing the inspection using the **SST**, inspect the brake pipe on the left or right front wheel.
- The following procedure and figures show the inspection for the brake pipe on the left front wheel.

Preparation before inspection

1. Disconnect the brake pipe.



2. Remove the brake hose (LF).
3. Remove the bracket.
4. Install the **SSTs** to the brake pipe as shown in the figure.



5. Perform air bleeding of the **SST** and brake line from bleeder screw A.
6. Install the pedal force gauge to the brake pedal.

7. Connect the vacuum piping to the vacuum gauge.

Checking for vacuum loss (loaded condition)

1. Start the engine.
2. Depress the brake pedal with a force of **200 N { 20.4 kgf, 45.0 lbf }** .
3. Stop the engine when the vacuum gauge reading reaches **68 kPa { 510 mmHg, 20 inHg }** with the pedal depressed.
4. Measure the amount of vacuum decrease for **15 s** immediately after stopping the engine.
5. If the gauge indicates a drop of **3.3 kPa { 25 mmHg, 0.97 inHg }** or less, the unit is normal.

Non-servo operation inspection

1. If the pedal force and fluid pressure correlation is within the specification with the engine stopped and a vacuum amount of **0 kPa { 0 mmHg, 0 inHg }** , the system is normal. **Standard power brake unit non-servo operation**

Vacuum amount at 0 kPa {0 mmHg, 0 inHg}	
Pedal force	Fluid pressure
200 N {20.4 kgf, 45.0 lbf}	390 kPa {3.98 kgf/cm ² , 56.6 psi} or more

Servo operation inspection

1. Start the engine and depress the brake pedal when the vacuum reaches **66.7 kPa { 500 mmHg, 19.7 inHg }** .
2. At this time, apply the indicated pedal force and if the fluid pressure is within the specification, the unit is normal.

Standard power brake unit servo operation

Vacuum amount at 66.7 kPa {500 mmHg, 19.7 inHg}	
Pedal force	Fluid pressure
200 N {20.4 kgf, 45.0 lbf}	8,450 kPa {86.16 kgf/cm ² , 1,226 psi} or more

Procedure after inspection

1. Remove the **SSTs** after the inspection and install the bracket, brake hose and brake pipe to their original positions. (See **BRAKE HOSE (FRONT) REMOVAL/ INSTALLATION.**)
2. Perform air bleeding of the brake line. (See **BRAKE FLUID AIR BLEEDING.**)

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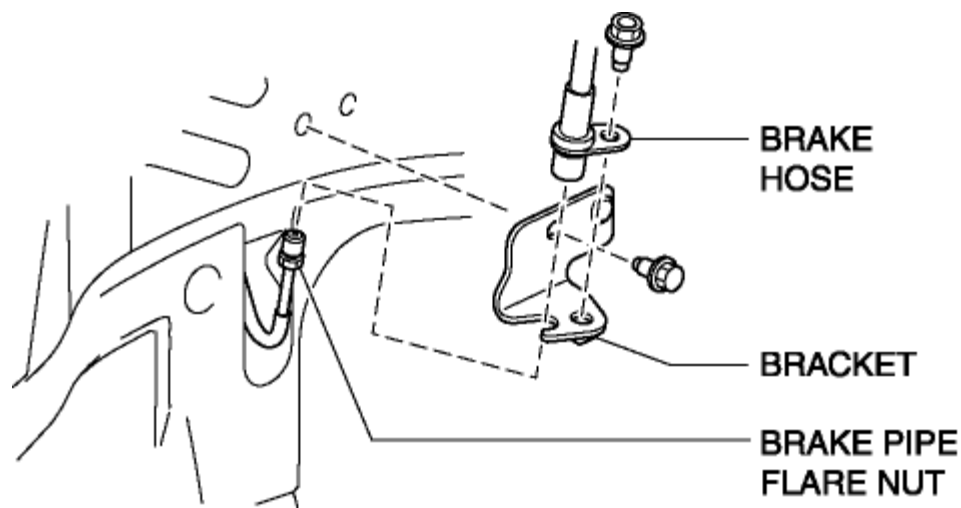
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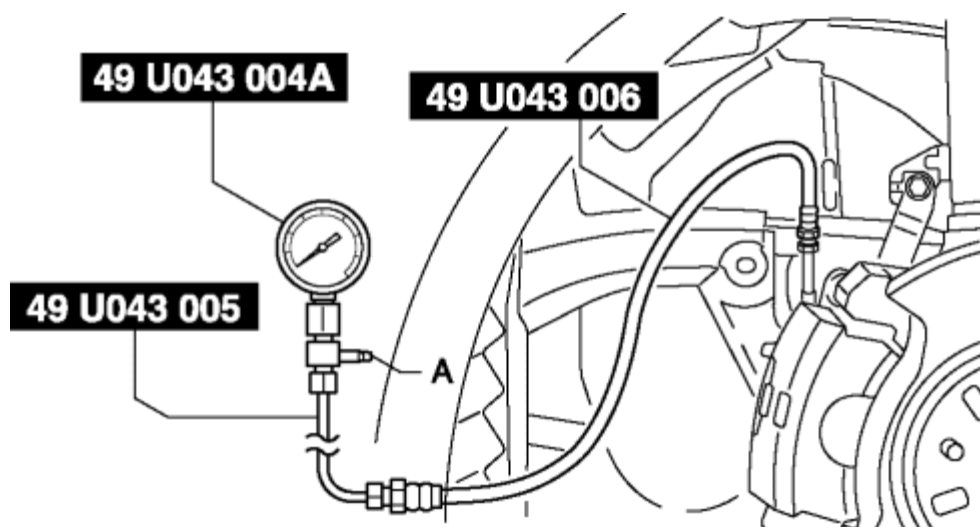
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