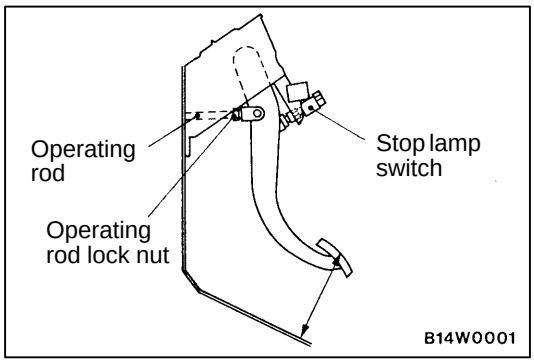
BASIC BRAKE SYSTEM

CONTENTS

GENERAL

OUTLINE OF CHANGE

- The service procedures for left-hand drive vehicles have been established as described below.
- The service procedures for the front and rear disc brakes have been changed since they had been replaced by a different type. <EVOLUTION-VI with BREMBO braking system>



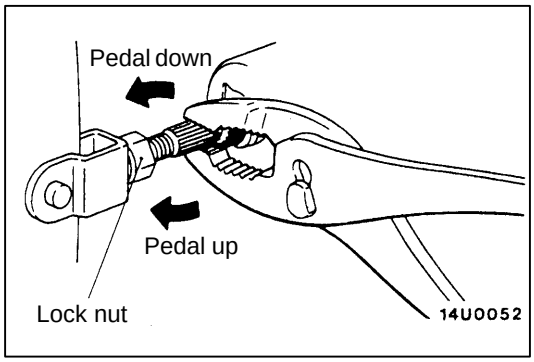
ON-VEHICLE SERVICE

BRAKE PEDAL CHECK AND ADJUSTMENT

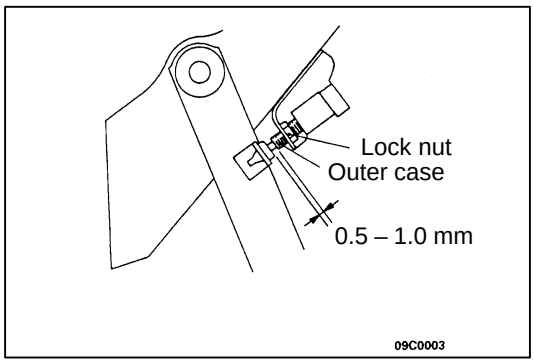
<L.H. DRIVE VEHICLES>

1. Turn up the carpet, etc under the brake pedal.
2. Measure the brake pedal height as illustrated. If the brake pedal height is not within the standard value, follow the procedure below.

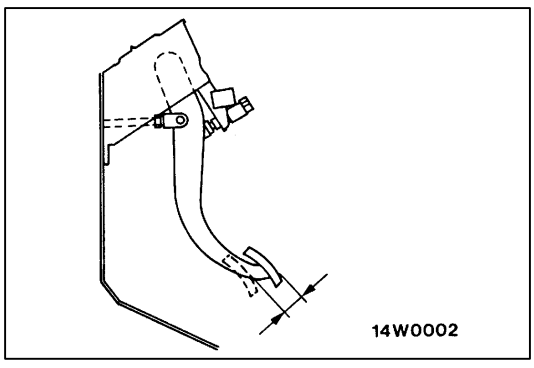
   Standard value: 163.5–166.5 mm



   (1) Disconnect the stop lamp switch connector.
   (2) Adjust the brake pedal height by turning the operating rod with pliers (with the operating rod lock nut loosened), until the correct brake pedal height is obtained.
   (3) Secure by tightening the lock nut of the operating rod.



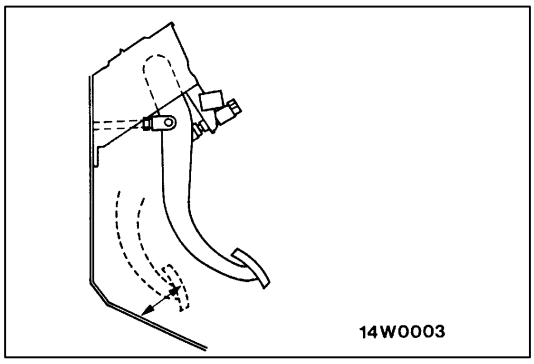
   (4) Push the stop lamp switch in the direction of the pedal stroke until it stops. (The switch will slide if it is pushed firmly.)
   (5) Lift up the pedal until the operating rod is fully extended, and then slide the stop lamp switch back to the required position. Adjust the position of the switch by turning it until the distance shown in the illustration is correct.
   (6) Connect the connector of the stop lamp switch.
   (7) Check that the stop lamp is not illuminated with the brake pedal unpressed.



3. With the engine stopped, depress the brake pedal two or three times. After eliminating the vacuum in the power brake booster, press the pedal down by hand, and confirm that the amount of movement before resistance is met (the free play) is within the standard value range.

   Standard value: 3–8 mm

If the free play exceeds the standard value, it is probably due to excessive play between the retaining ring bolt and brake pedal arm.
Check for excessive clearance and replace faulty parts as required.



4. Start the engine, depress the brake pedal with approximately 490 N of force, and measure the clearance between the brake pedal and the floorboard.

   Standard value: 80 mm or more

   If the clearance is outside the standard value, check for air trapped in the brake line, clearance between the lining and the drum and dragging in the parking brake.
   Adjust and replace defective parts as required.

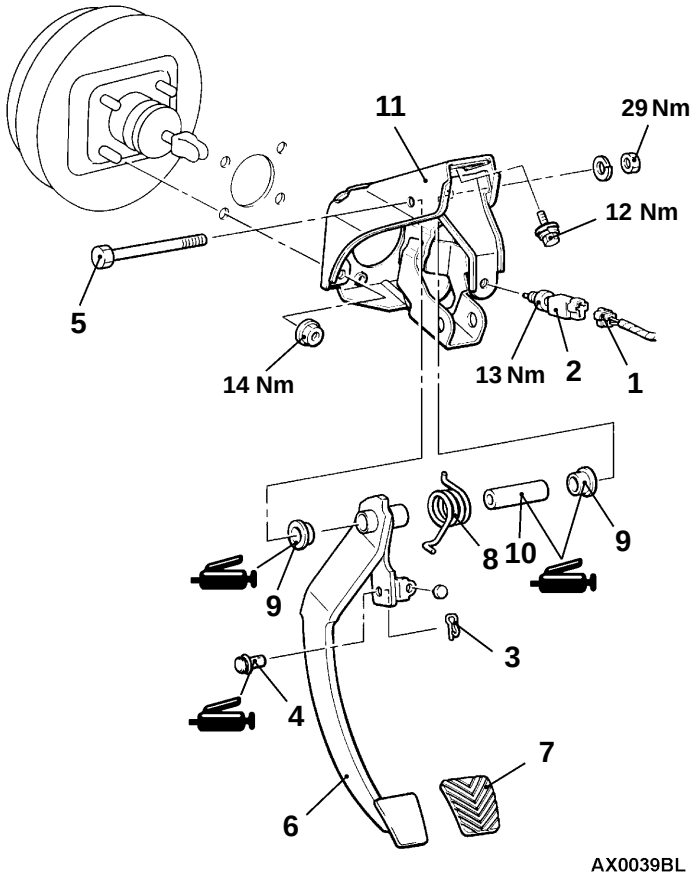
5. Turn back the carpet, etc.

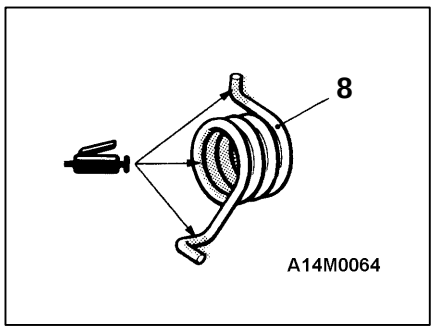
BRAKE PEDAL <L.H. DRIVE VEHICLES>

REMOVAL AND INSTALLATION

Pre-removal Operation
- Instrument Under Cover Removal
- Steering Column Assembly Removal (Refer to GROUP 37A – Steering Wheel and Shaft.)
- Accelerator Pedal Removal

Post-installation Operation
- Accelerator Pedal Installation
- Steering Column Assembly Installation (Refer to GROUP 37A – Steering Wheel and Shaft.)
- Instrument Under Cover Installation
- Brake Pedal Adjustment (Refer to P.35A-2.)





Removal steps

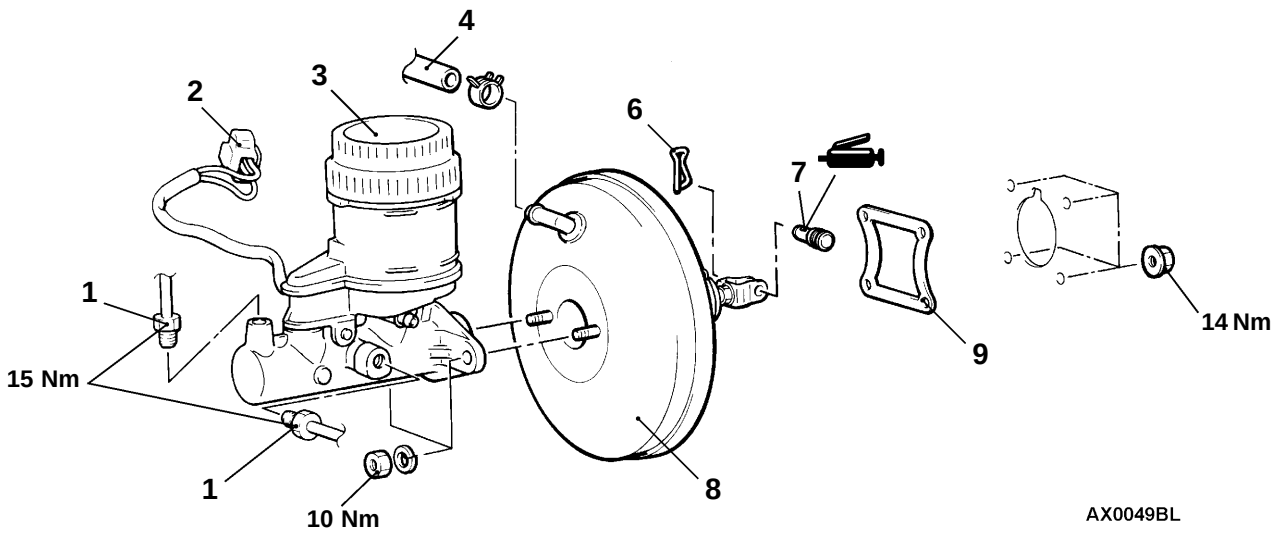
1. Stop lamp switch connector
2. Stop lamp switch
3. Snap pin
4. Clevis pin
5. Brake pedal shaft bolt
6. Brake pedal
7. Brake pedal pad
8. Brake pedal return spring
9. Bushing
10. Pipe
11. Pedal support member

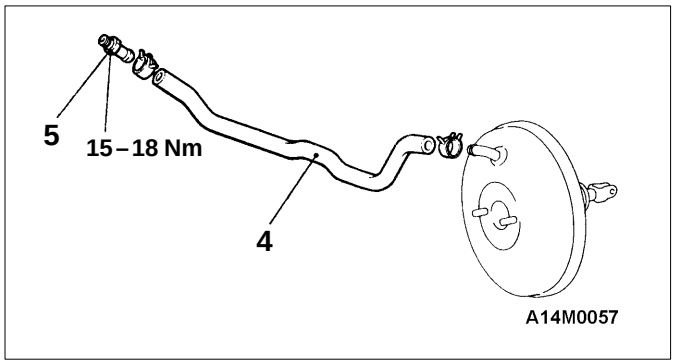
MASTER CYLINDER AND BRAKE BOOSTER <L.H. DRIVE VEHICLES>

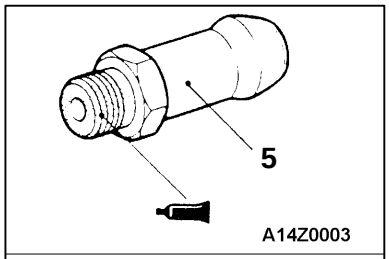
REMOVAL AND INSTALLATION

Pre-removal Operation
- Brake Fluid Draining
- Air Intake Hose Removal

Post-installation Operation
- Brake Fluid Supplying
- Brake Line Bleeding
- Brake Pedal Adjustment (Refer to P.35A-2.)
- Air Intake Hose Installation







Sealant: 3M ATD Part No. 8661 or equivalent

Removal steps

1. Brake pipe connection
2. Brake fluid level sensor connector
3. Master cylinder assembly

▶B◀ • Clearance adjustment between brake booster push rod and primary piston

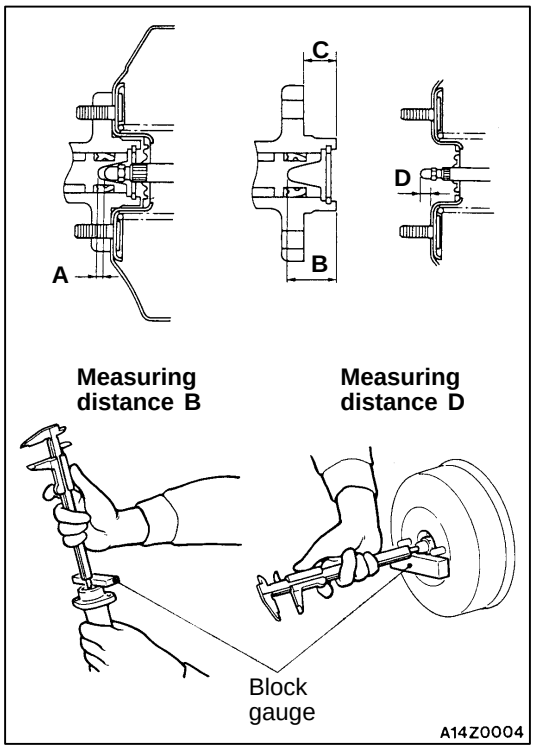
▶A◀ 4. Vacuum hose (With built-in check valve)

5. Fitting
6. Snap pin
7. Clevis pin assembly
8. Brake booster
9. Sealer

INSTALLATION SERVICE POINTS

▶A◀ VACUUM HOSE CONNECTION

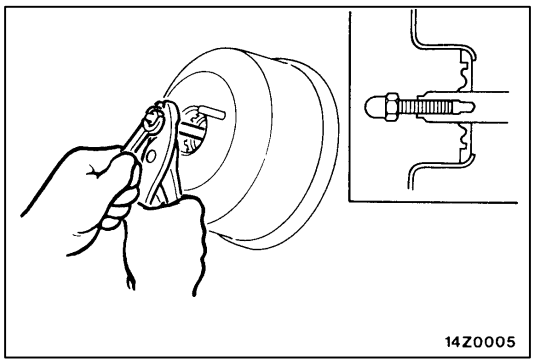
Insert securely and completely until the vacuum hose at the engine side contacts the edge of the hexagonal part of the fitting, and then secure by using the hose clip.



▶B◀ CLEARANCE ADJUSTMENT BETWEEN BRAKE BOOSTER PUSH ROD AND PRIMARY PISTON

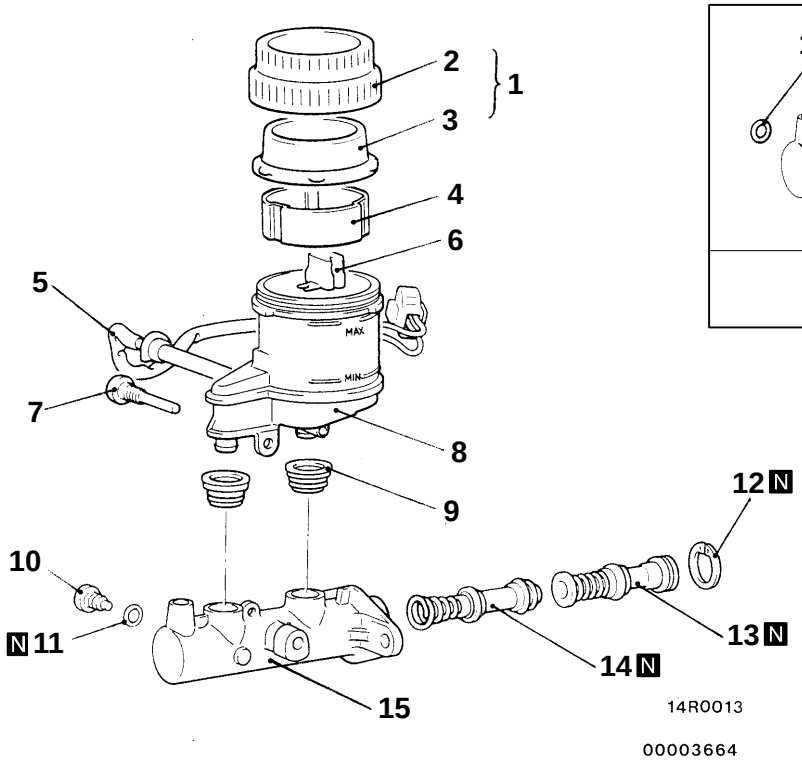
Calculate clearance A from the B, C and D measurements.
A = B – C – D

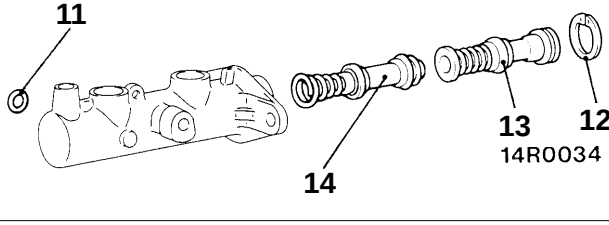
Standard value: 0.65–0.85 mm



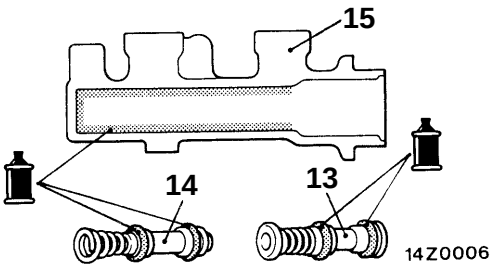
If the clearance is not within the standard value range, adjust by changing the push rod length by turning the screw of the push rod.

MASTER CYLINDER
DISASSEMBLY AND REASSEMBLY





Master cylinder kit



Brake fluid: DOT3 or DOT4

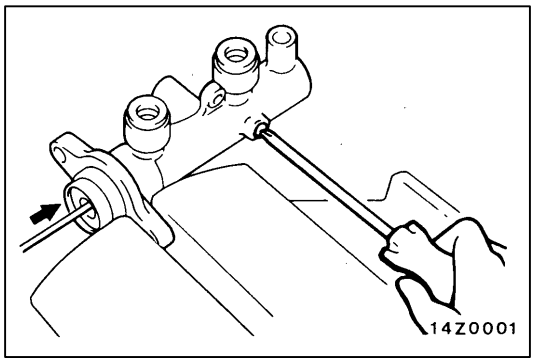
Disassembly steps

1. Reservoir cap assembly
2. Reservoir cap
3. Diaphragm
4. Filter
5. Brake fluid level sensor
6. Float
7. Reservoir stopper bolt

◀A▶

◀B▶

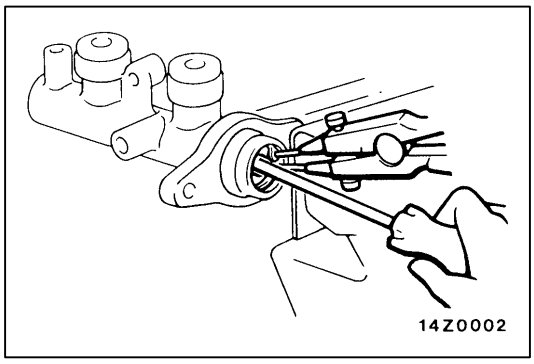
8. Reservoir tank
9. Reservoir seal
10. Piston stopper bolt
11. Gasket
12. Piston stopper ring
13. Primary piston assembly
14. Secondary piston assembly
15. Master cylinder body



DISASSEMBLY SERVICE POINTS

◀A▶ PISTON STOPPER BOLT DISASSEMBLY

Remove the piston stopper bolt, while depressing the piston.



◀B▶ PISTON STOPPER RING DISASSEMBLY

Remove the piston stopper ring, while depressing the piston.

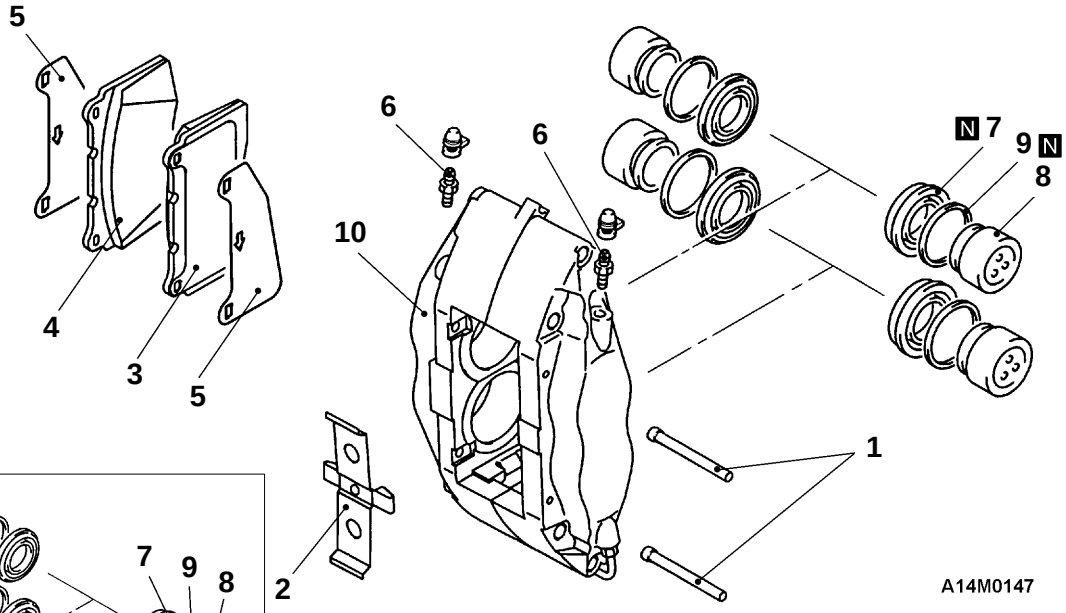
INSPECTION

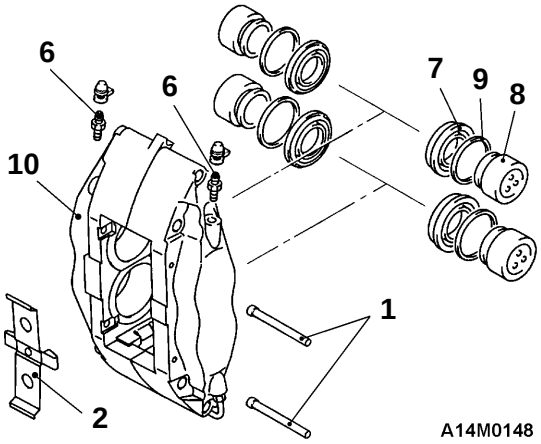
- Check the inner surface of master cylinder body for rust or pitting.
- Check the primary and secondary pistons for rust, scoring, wear, damage or wear.
- Check the diaphragm for cracks and wear.

DISC BRAKE
<EVOLUTION-VI WITH BREMBO BRAKING SYSTEM>

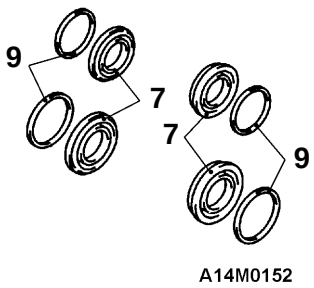
DISASSEMBLY AND REASSEMBLY

Front Brake

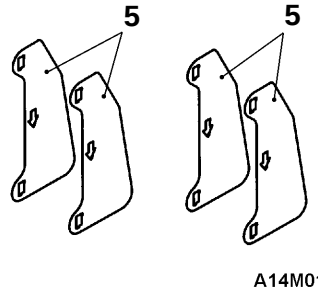




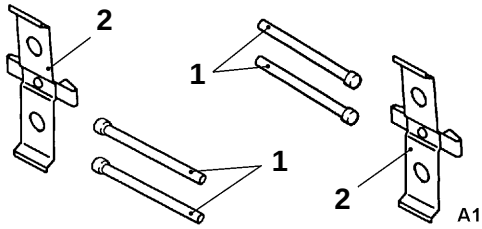
Brake caliper kit



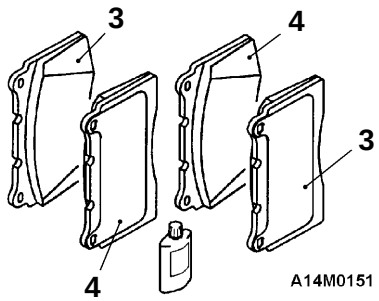
Seal & boot kit



Shim set



Clip set

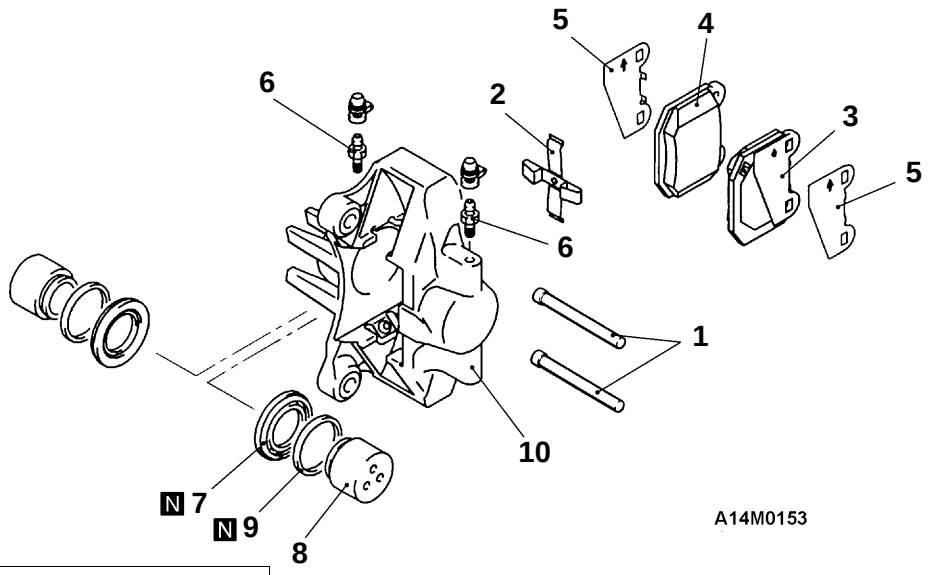


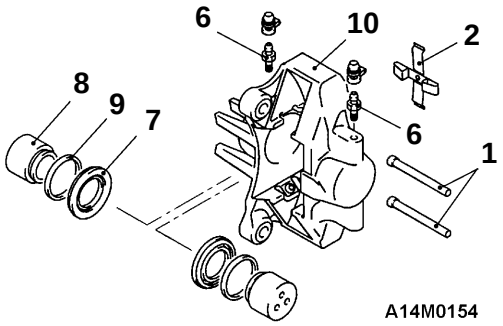
Pad set

Disassembly steps

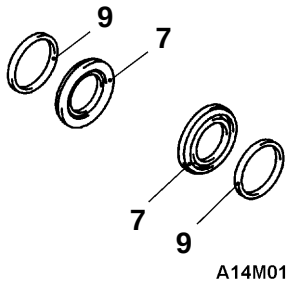
1. Pin
2. Cross spring
3. Pad & wear indicator assembly
4. Pad assembly
5. Shim
6. Air bleeder screw
7. Piston boot
8. Piston
9. Piston seal
10. Caliper body

Rear Brake

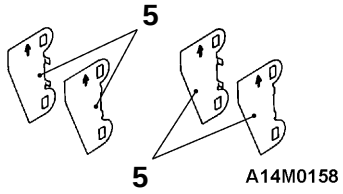




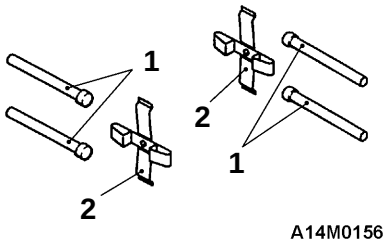
Brake caliper kit



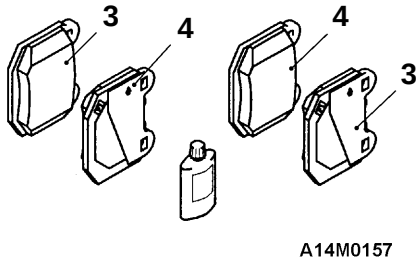
Seal & boot kit



Shim set



Clip set



Pad set

Disassembly steps

1. Pin
2. Cross spring
3. Pad & wear indicator assembly
4. Pad assembly
5. Shim
6. Air bleeder screw
7. Piston boot
8. Piston
9. Piston seal
10. Caliper body