

FRONT BRAKE DISC RUN-OUT CORRECTION

1. If the run-out of the brake disc is equivalent to or exceeds the limit specification, change the phase of the disc and hub, and then measure the run-out again.

(1) Before removing the brake disc, chalk both sides of the wheel stud on the side at which run-out is greatest.

- (2) Remove the brake disc, and then place a dial gauge as shown in the illustration; then move the hub in the axial direction and measure the play.

Limit: 0.05 mm

If the play is equivalent to or exceeds the limit, disassemble the hub knuckle and check each part.

- (3) If the play does not exceed the limit specification, install the brake disc at a position 180° away from the chalk mark, and then check the run-out of the brake disc once again.
2. If the run-out cannot be corrected by changing the phase of the brake disc, replace the brake disc or turn rotor with an on the car type brake lathe ("MAD, DL-8700PF" or equivalent). Be sure to follow the exact brake lathe manufacturer instructions. Rotors turned on the vehicle will often have a lower run-out than a new brake disc.

FRONT BRAKE DISC THICKNESS CHECK

1. Using a micrometer, measure disc thickness at eight positions, approximately 45° apart and 10 mm in from the outer edge of the disc.

Brake disc thickness

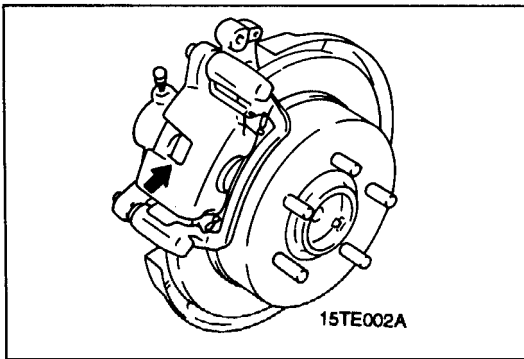
Standard value: 24 mm

Limit: 22.4 mm

Thickness variation (at least 8 positions)

The difference between any thickness measurements should not be more than 0.015 mm.

2. If the disc is beyond the limits for thickness, remove it and install a new one. If thickness variation exceeds the specification, replace the brake disc or turn rotor with an on the car type brake lathe ("MAD, DL-8700PF" or equivalent). Be sure to follow the exact brake lathe manufacturer instructions.



REAR DISC BRAKE PAD CHECK AND REPLACEMENT

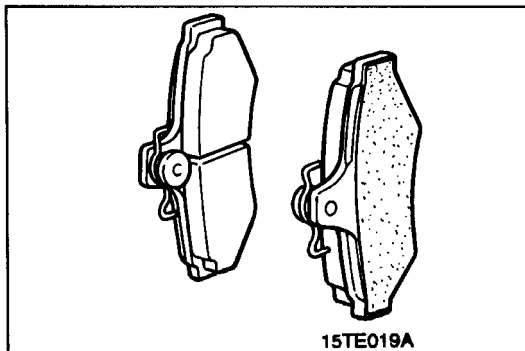
1. Check brake pad thickness through calliper body check port.

Standard value: 10 mm

Limit: 2.0 mm

Caution

1. When the limit is exceeded, the brake pads on both the left and right wheels must be replaced as a set.
2. If there is a significant difference in the thicknesses of the pads on the left and right sides, check the sliding condition of the piston, lock pin sleeve and guide pin sleeve.

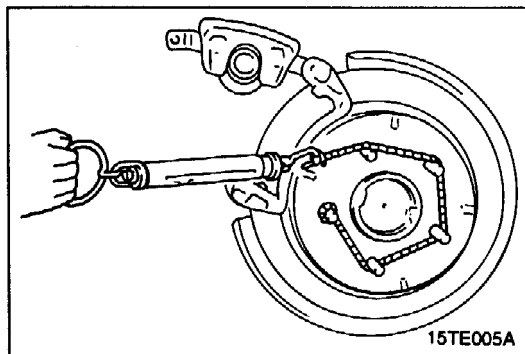


2. Remove the lower guide pin calliper bolt. Lift calliper assembly and retain with wire.

Caution

Do not wipe off the special grease that is on the guide pin or allow it to contaminate the guide pin.

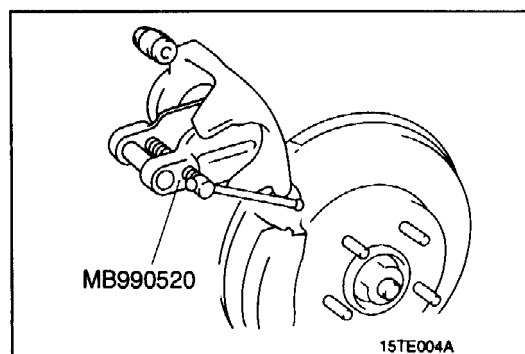
3. Remove the brake pads parts from the calliper support.



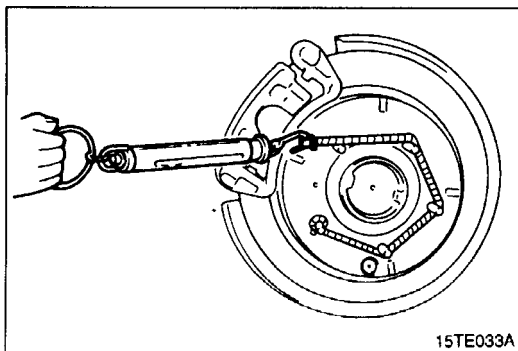
4. Measure hub torque (A) with pads removed to measure brake drag torque. Torque value (A) will be used later to calculate brake drag force with the pads installed.

NOTE

To secure the disc to the hub, tighten the nuts.



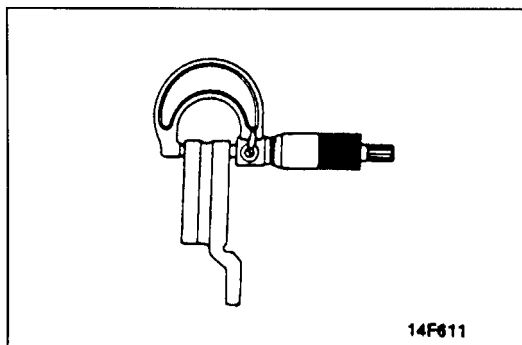
5. Clean the piston; then use the special tool to thread the piston into the cylinder (calliper).
6. Be careful that the piston boot does not catch and tear as the calliper assembly and guide pin locking bolts are installed.



7. Check brake drag torque as follows.
 - (1) Start engine and hold brake pedal down for 5 seconds. [Pedal depression force: approx. 196 N]
 - (2) Stop engine.
 - (3) Turn brake disc forward 10 times.
 - (4) Check brake hub torque (B) with spring balance.
 - (5) Calculate the drag torque of the disc brake [difference between hub torque (B) and hub torque (A)].

Standard value: 69 N [4 Nm] or less

8. If the difference between brake drag torque and hub torque exceeds the standard value, disassemble piston and clean piston. Check for corrosion or worn piston seal, and check the sliding condition of the lock pin and guide pin.



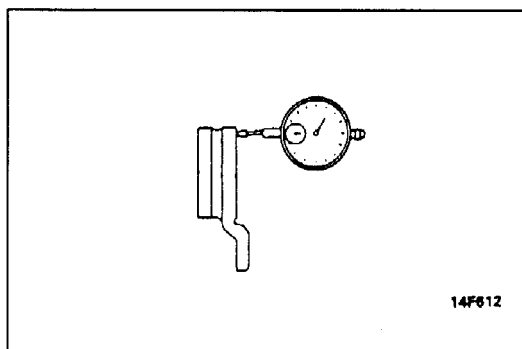
REAR BRAKE DISC THICKNESS CHECK

1. Remove dirt and rust from brake disc surface.
2. Measure disc thickness at 4 locations or more.

Standard value: 10.4 mm

Limit: 8.4 mm

Replace the discs and pad assembly for both sides left and right of the vehicle if they are worn beyond the specified limit.



REAR BRAKE DISC RUN-OUT CHECK

1. Remove the calliper support, raise the calliper assembly, and secure it by using a wire, etc.
2. Place a dial gauge approximately 5 mm from the outer circumference of the brake disc, and measure the run-out of the disc.

Limit: 0.05 mm

NOTE

To secure the disc to the hub, tighten the nuts.

REAR BRAKE DISC RUN-OUT CORRECTION

1. If the run-out of the brake disc is equivalent to or exceeds the limit specification, change the phase of the disc and hub, and then measure the run-out again.

NOTE

The procedures for checking and changing the rear disc phase are the same as those for the front brake discs.

2. If the problem cannot be corrected by changing the phase of the brake disc, replace the disc or turn rotor using an on the car type brake lathe. Be sure to follow the exact brake lathe manufacturer instructions. Rotors turned on the vehicle will often have a lower run-out than a new brake disc.

BRAKE PEDAL

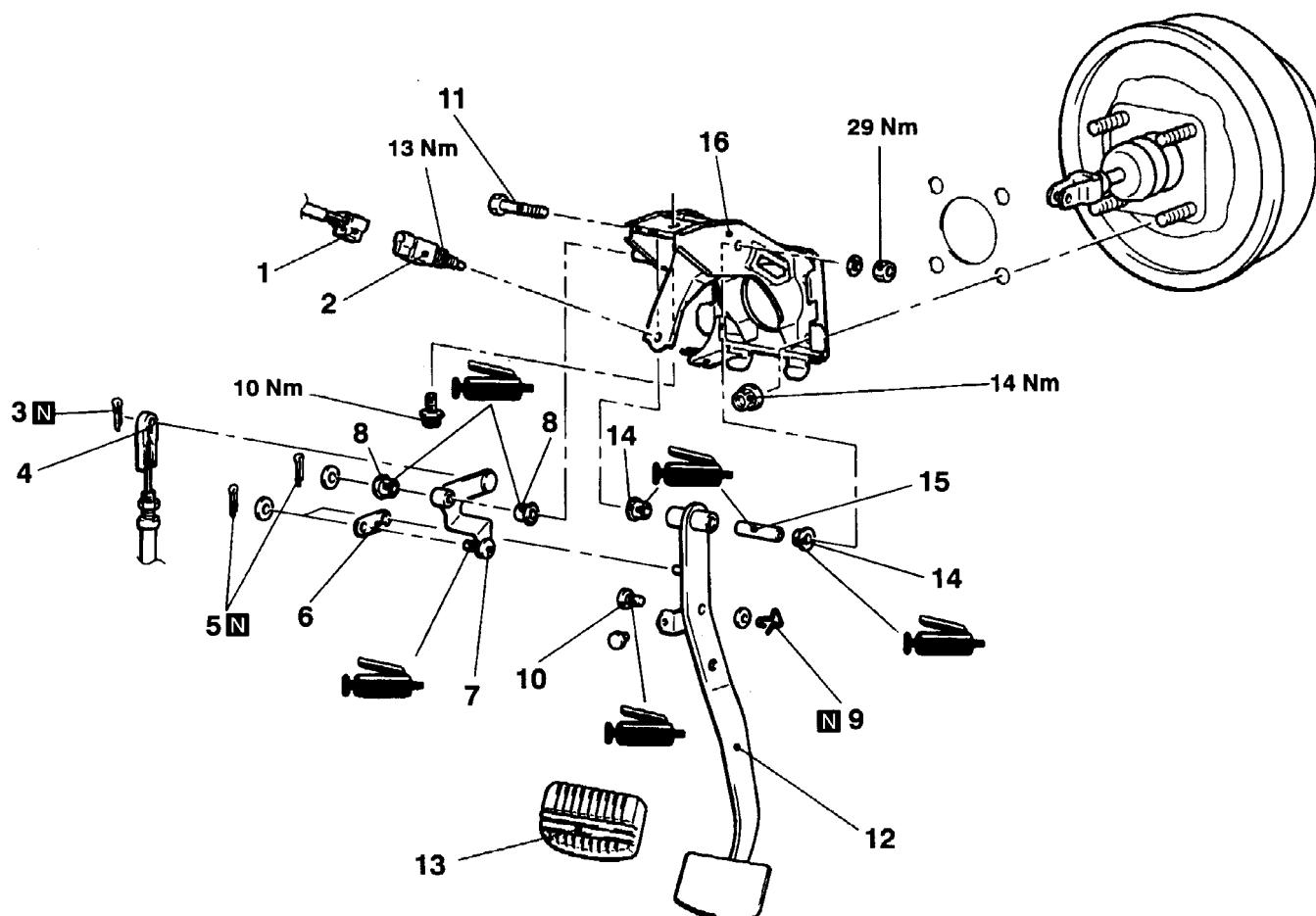
REMOVAL AND INSTALLATION

Pre-removal Operation

- Instrument panel lower cover removal (Refer to GROUP 52A.)
- Steering column assembly removal (Refer to GROUP 37A.)

Post-installation Operation

- Adjust the brake pedal (Refer to P.35A-5.)
- Fit the steering column assembly (Refer to GROUP 37A.)
- Fit the lower cover of the instrument panel (Refer to GROUP 52A.)



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Removal steps

- | | |
|--------------------------------|---------------------------|
| 1. Harness connector | 9. Split pin |
| 2. Stop lamp switch | 10. Clevis pin |
| 3. Split pin | 11. Brake pedal shaft rod |
| 4. Shift-lock cable connection | 12. Brake pedal |
| 5. Split pin | 13. Pedal pad |
| 6. Link | 14. Bushing |
| 7. Crank arm assembly | 15. Pipe |
| 8. Bushing | 16. Pedal support member |

MASTER CYLINDER AND BRAKE BOOSTER

REMOVAL AND INSTALLATION

Pre-removal Operation

- Brake Fluid Draining

Post-installation Operation

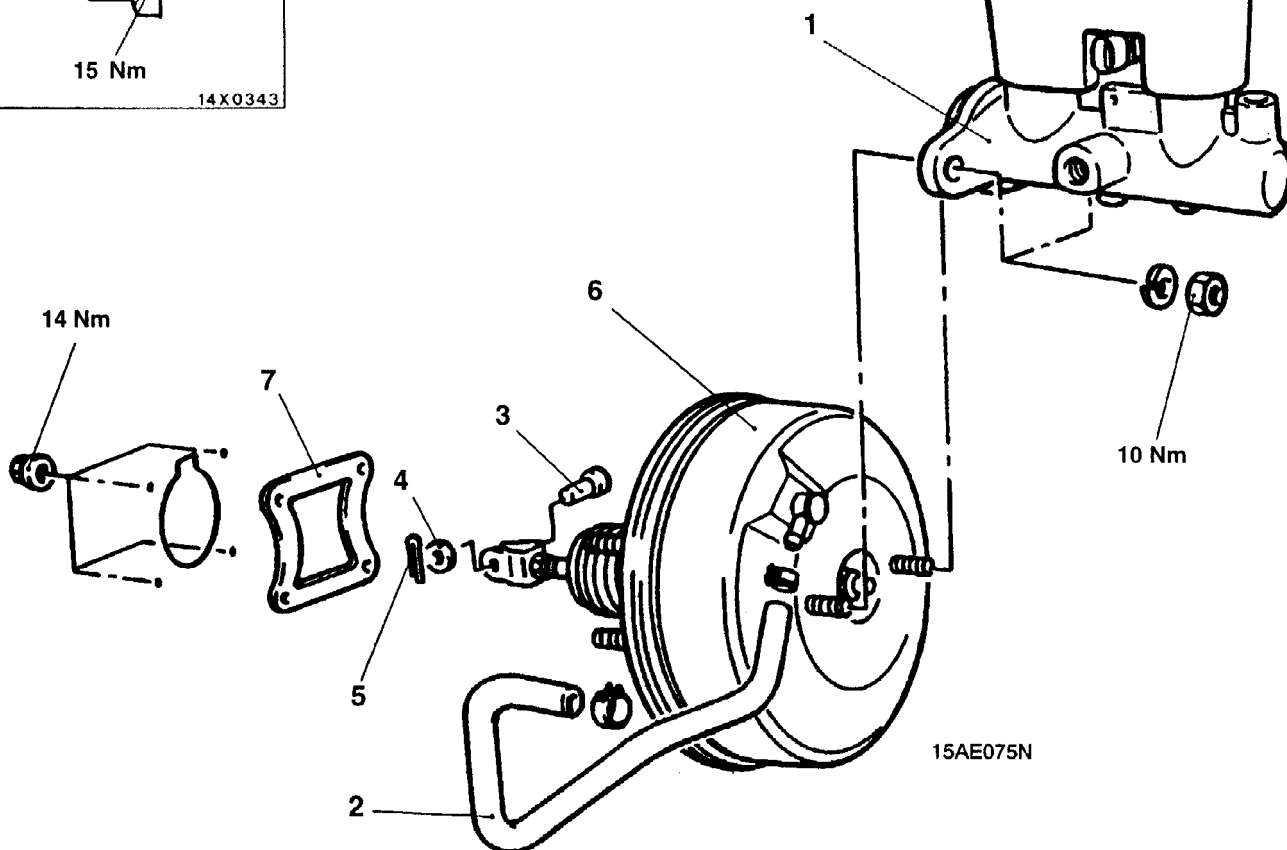
- Brake Fluid Supplying
- Brake Line Bleeding (Refer to P. 35A-8.)
- Brake Pedal Adjustment (Refer to P.35A-5.)

Flared brake line nuts



15 Nm

14X0343



Master cylinder removal steps

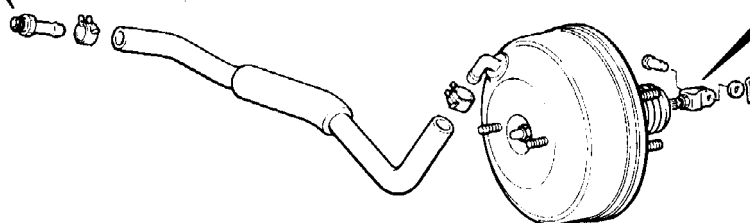
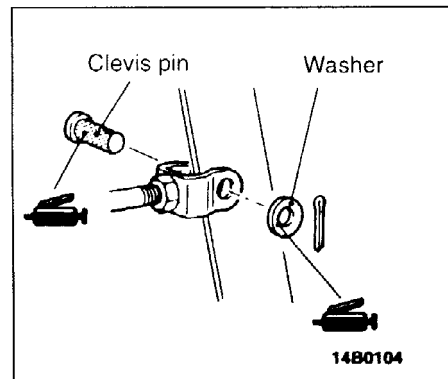
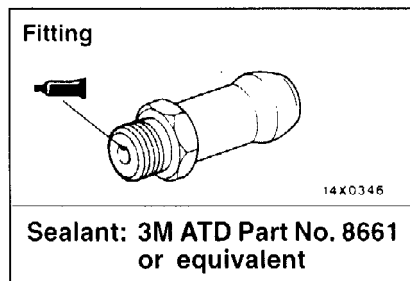
- A◄
1. Master cylinder
 - Adjustment of clearance between brake booster push rod and primary piston

Brake booster removal steps

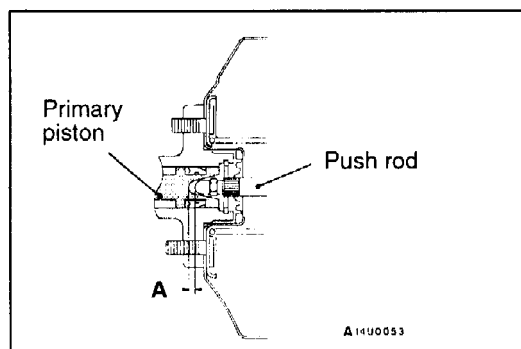
- A◄
1. Master cylinder
 - Adjustment of clearance between brake booster push rod and primary piston
 2. Vacuum hose (With built-in check valve)
 3. Cotter pin
 4. Washer
 5. R-clip
 6. Brake booster
 7. Sealer

35A-18 BASIC BRAKE SYSTEM – Master Cylinder and Brake Booster

Grease points



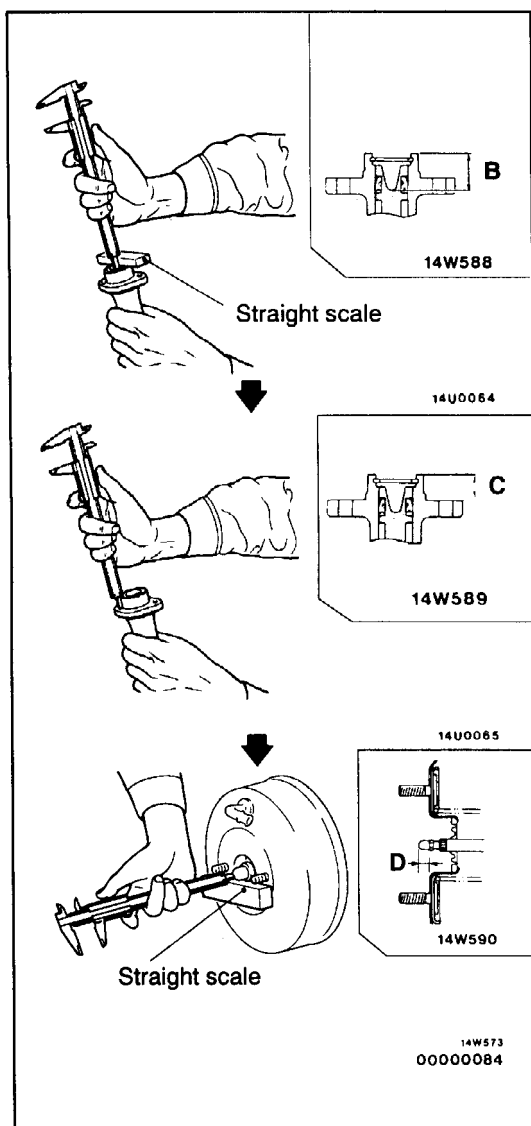
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INSTALLATION SERVICE POINT

►A◄ CLEARANCE ADJUSTMENT BETWEEN BRAKE BOOSTER PUSH ROD AND PRIMARY PISTON

Adjust the clearance (A) between the brake booster push rod and primary piston as follows:



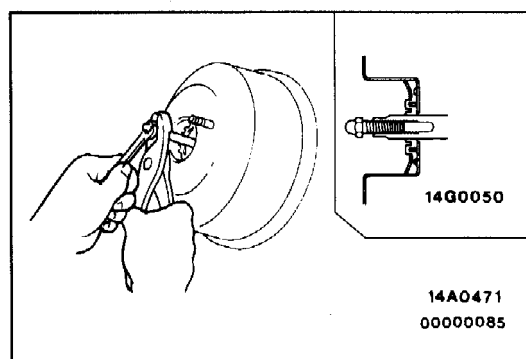
Calculate clearance A from the B, C and D measurements.

$$A = B - C - D$$

Standard value: 0.40–0.60mm

NOTE

When brake booster negative pressure –93.3 kPa is applied, clearance value will become 0.05–0.30 mm.



NOTE

If the clearance is not within the standard value range, turn the push rod screw to achieve desired length.