

## GROUP 36

# PARKING BRAKES

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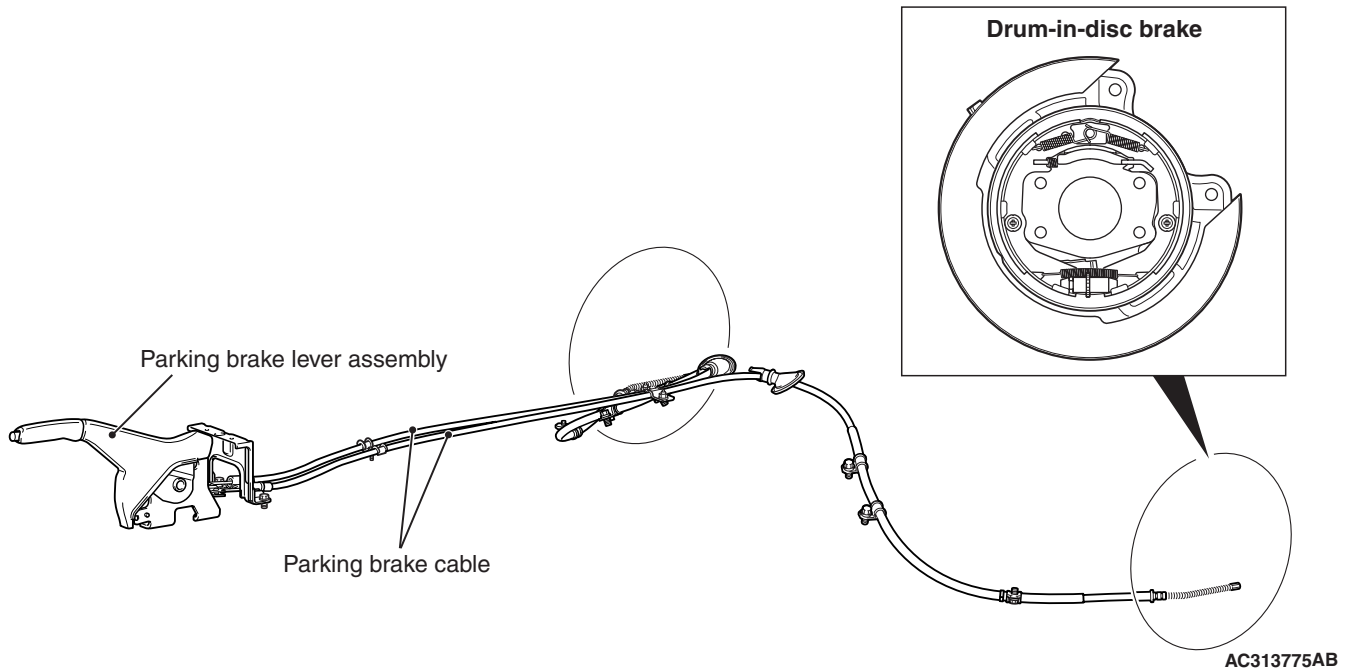
## GENERAL INFORMATION

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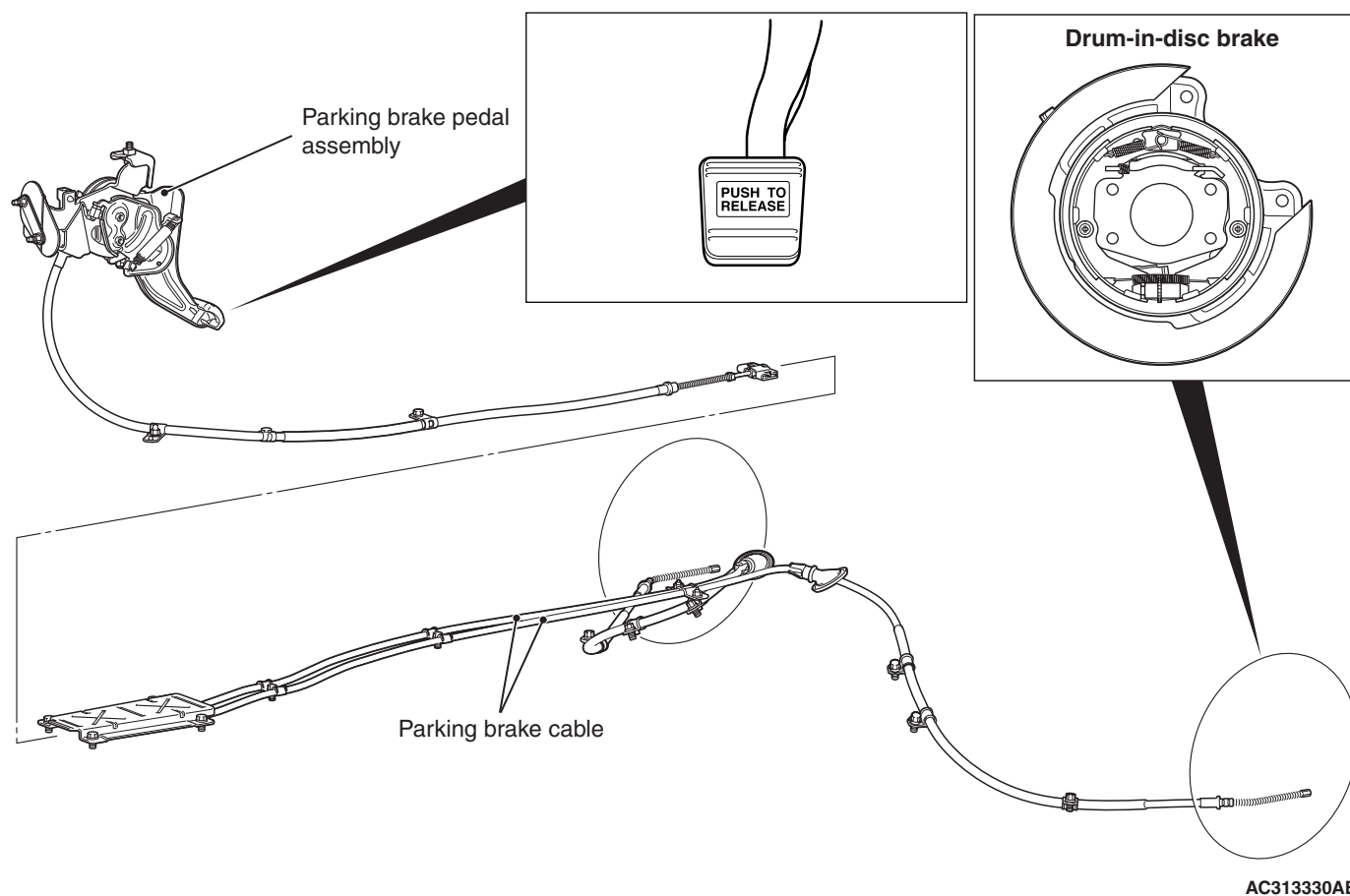
- The parking brake is operation utilises a parking brake lever. <Except for Hong Kong and Singapore>
- The parking brake is operation utilises a parking brake pedal. <Vehicles for Hong Kong and Singapore>
- The parking brake is of a mechanical rear-wheel acting type.

### CONSTRUCTION DIAGRAM

<Except for Hong Kong and Singapore  
(lever type)>



<Vehicles for Hong Kong and Singapore  
(pedal type)>



## SPECIFICATIONS

### SERVICE SPECIFICATIONS

M1361000300553

#### <LEVER TYPE>

Item	Standard value	Limit
Parking brake lever stroke (approximately 200N)	3 –5 notches	—
Rear brake lining thickness mm	2.8	0.8
Rear drum (rear brake disc) inside diameter mm	190.0	191.0

#### <PEDAL TYPE>

Item	Standard value	Limit
Parking brake pedal stroke (approximately 200N)	1 notch	—
Rear brake lining thickness mm	2.8	0.8
Rear drum (rear brake disc) inside diameter mm	190.0	191.0

## ON-VEHICLE SERVICE

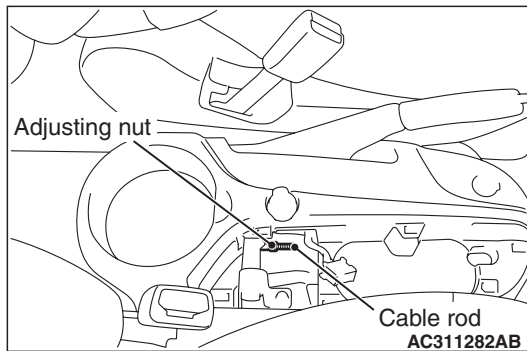
PARKING BRAKE LEVER STROKE  
CHECK AND ADJUSTMENT

M1361000900481

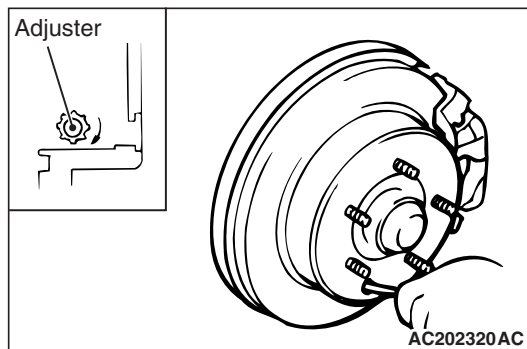
1. Pull the parking brake lever with a force of approximately 200 N and count the number of notches.

**Standard value: 3 – 5 notches**

2. If the parking brake lever stroke is not the standard value, adjust as described below.
  - (1) Remove the floor console panel (Refer to GROUP 52A, Floor Console Assembly P.52A-9).



- (2) Loosen the adjusting nut to move it to the cable rod end so that the cable will be free.



- (3) Remove the rear brake adjusting hole plug. Then insert a flat-tipped screwdriver to turn the adjuster to the arrow direction (to expand the shoe) until the parking brake shoe makes contact and the disc can no longer be turned. Back off the adjuster to the opposite direction by five notches.

**CAUTION**

If the parking brake lever stroke is below the standard value and the braking is too firm, the rear brakes may drag.

- (4) Adjust the parking brake lever stroke to the standard value by turning the adjusting nut. After the adjustment, ensure that there is no free play between the adjusting nut and the parking brake lever.

- (5) After the parking brake lever stroke is adjusted, raise the rear of the vehicle. Release the parking brake, turn the rear wheels to confirm that the rear brakes are not dragging.

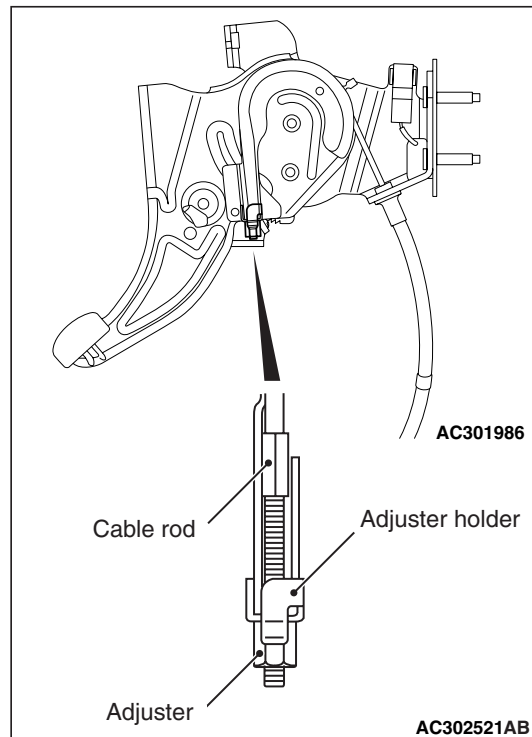
PARKING BRAKE PEDAL STROKE  
CHECK AND ADJUSTMENT

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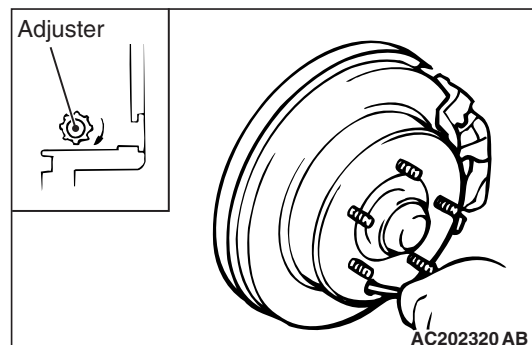
- Depress the parking brake pedal by approximately 200 N.

**Standard value: 1 notch (depressing pressure; approximately 200 N)**

1. If the parking brake pedal stroke is not within the standard value, adjust as described below.
  - (1) Raise the rear of the vehicle, and remove the right and left rear wheels.



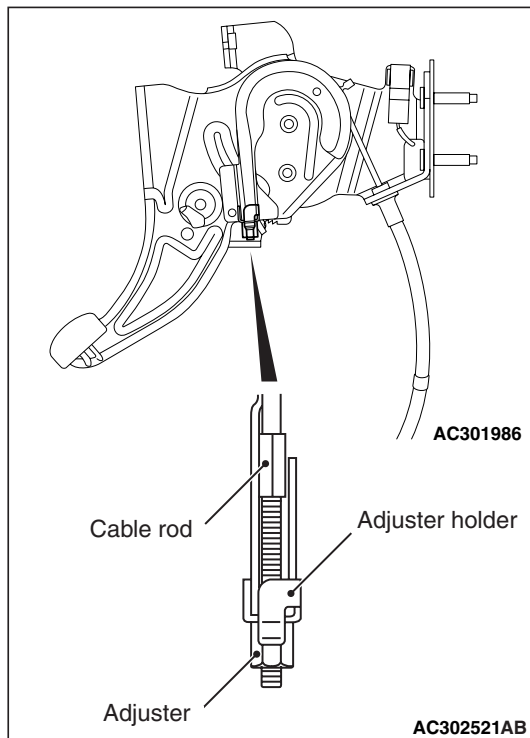
- (2) Loosen the adjuster to the end of the cable rod in order to allow slack in the cables.



- (3) Remove the rear brake adjusting hole plug. Then insert a flat-tipped screwdriver to turn the adjuster to the arrow direction (to expand the shoe) until the parking brake shoe makes contact and the disc can no longer be turned. Back off the adjuster to the opposite direction by five notches.

**⚠ CAUTION**

Be careful that the parking brake pedal stroke should be within the standard value. If the stroke is too short, brake dragging can be caused.



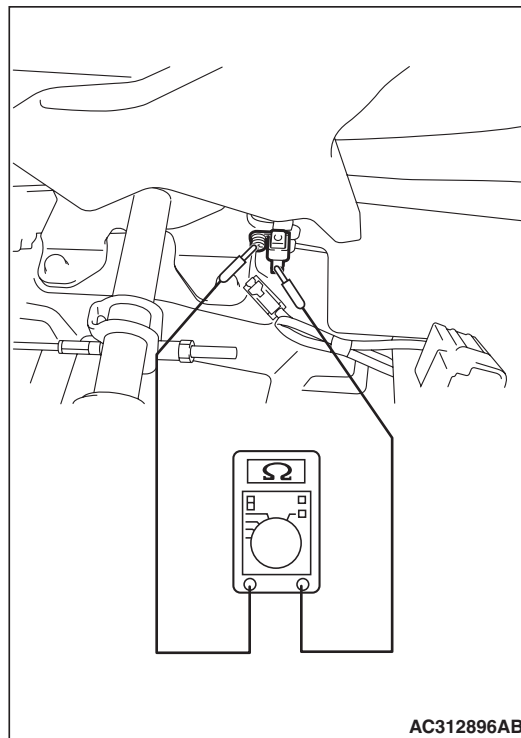
- (4) Adjust the parking brake pedal stroke to the standard value by turning the adjuster. After the adjustment, ensure that there is no free play between the adjuster and the parking brake pedal. In addition, check that the adjuster is secured by the adjuster holder.

- (5) After the parking brake pedal stroke is adjusted, release the parking brake. Then turn the rear wheels to confirm that the rear brakes are not dragging.
- (6) Install the right and left rear wheels.

**PARKING BRAKE SWITCH CHECK**

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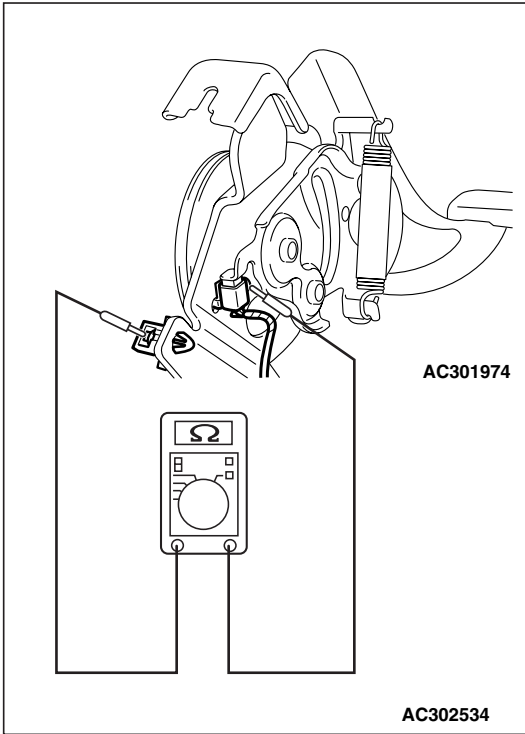
**<LEVER TYPE>**



1. Remove the floor console. (Refer to GROUP 52A, Floor Console Assembly P.52A-9).
2. Check for continuity between the parking brake switch terminal and the switch mounting bolt.

When parking brake lever is pulled	Less than 2 ohms
When parking brake lever is released	Open circuit

<PEDAL TYPE>



Check for continuity between the parking brake switch terminal and the switch mounting bolt.

When parking brake pedal is depressed	Less than 2 ohms
When parking brake pedal is released	Open circuit

LINING RUNNING-IN

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**CAUTION**

Carry out running-in in a place with good visibility, and pay careful attention to safety. Carry out running-in by the following procedure when replacing the rear brake disc, or when brake performance is insufficient.

<LEVER TYPE>

1. Adjust the parking brake lever stroke to the standard value.  
**Standard value (Operation force: Approx. 200 N): 3–5 notches**
2. Hook a spring balance onto the centre of the parking brake lever grip and pull it with a force of 100 –150 N in a direction perpendicular to the handle.
3. Drive the vehicle at a constant speed of 35–50 km/h for 100 metres.
4. Release the parking brake and let the brakes cool for 5–10 minutes.
5. Repeat the procedure in steps 2 to 4 four or five times.

<PEDAL TYPE>

1. Adjust the parking brake pedal stroke to the standard value.  
**Standard value (Operation force: Approx. 200 N): 1 notch**
2. Drive the vehicle at a constant speed of 35 –50 km/h for 100 metres.
3. Release the parking brake and let the brakes cool for 5–10 minutes.
4. Repeat the procedure in steps 2 to 4 four or five times.

# PARKING BRAKE LEVER

## REMOVAL AND INSTALLATION

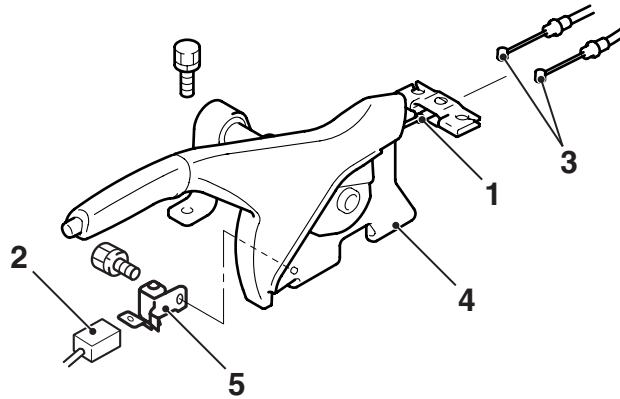
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### Pre-removal Operation

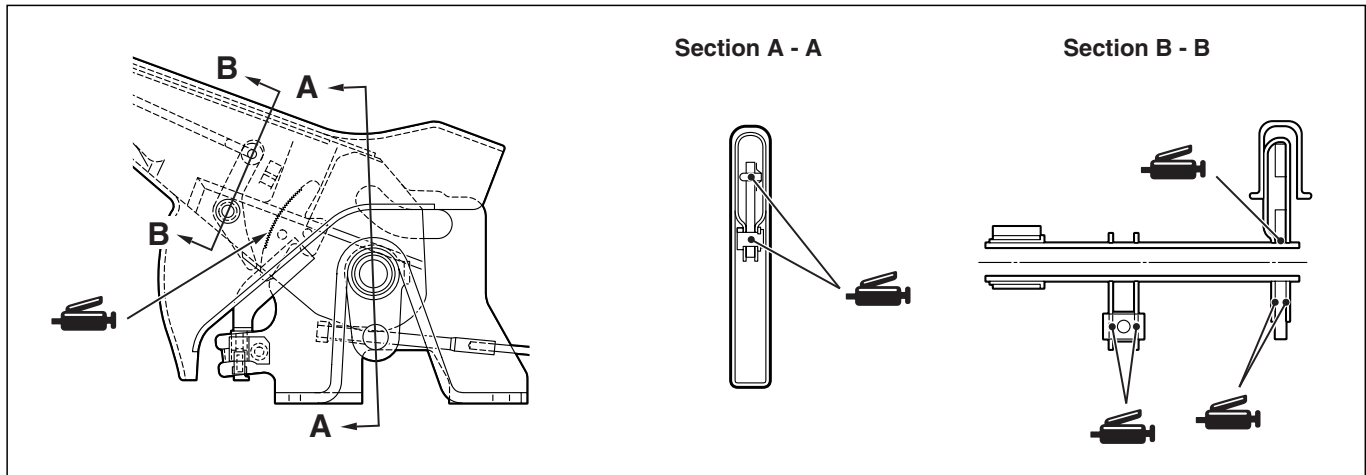
Floor Console Assembly Removal (Refer to GROUP 52A, Floor Console [P.52A-9.](#))

### Post-installation Operation

- Parking Brake Lever Stroke Adjustment (Refer to [P.36-4.](#))
- Floor Console Assembly Installation (Refer to GROUP 52A, Floor Console Assembly [P.52A-9.](#))



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### Removal steps

1. Adjusting nut
2. Parking brake switch connector
3. Parking brake cable connection
4. Parking brake lever assembly
5. Parking brake switch

## PARKING BRAKE PEDAL

## REMOVAL AND INSTALLATION

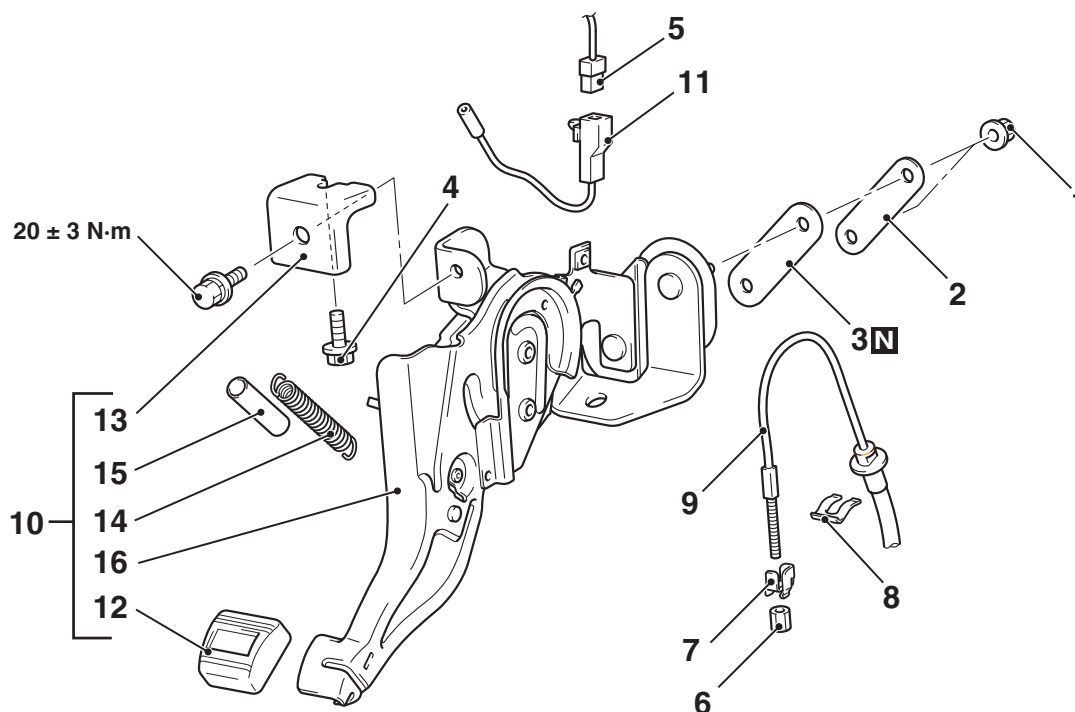
M1361001600182

**Pre-removal Operation**

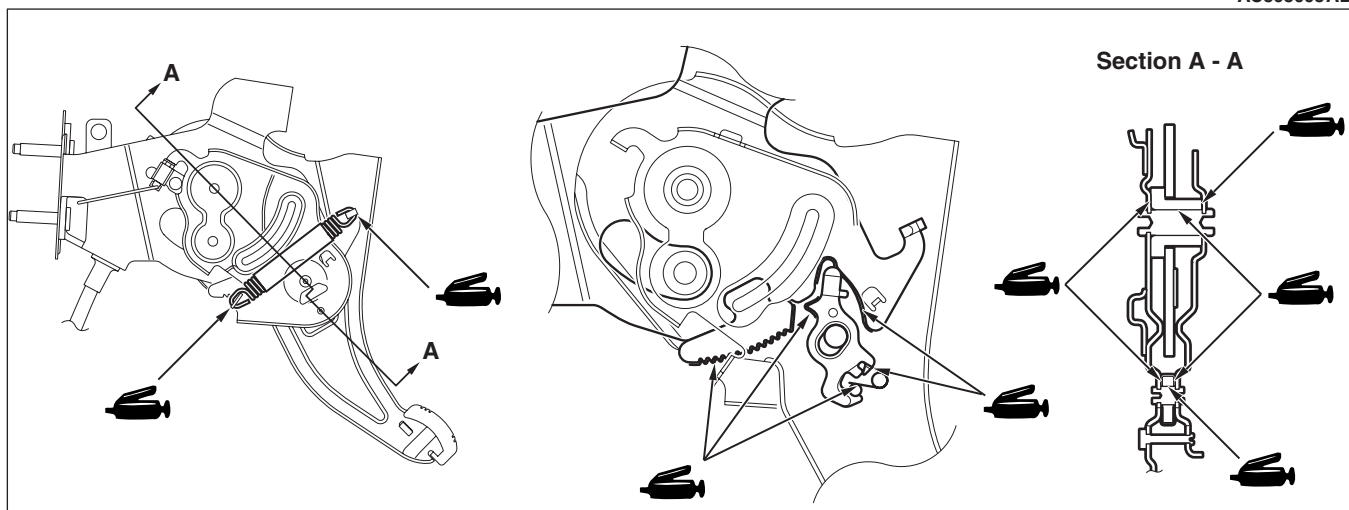
- Front scuff plate <driver's side> removal (Refer to GROUP 52A, Interior Trim [P.52A-10](#)).
- Cowl side trim <driver's side> removal (Refer to GROUP 52A, Interior Trim [P.52A-10](#)).
- Centre console side cover removal <driver's side> (Refer to GROUP 52A, Instrumental Panel [P.52A-2](#)).
- Footrest removal
- Accelerator pedal arm stopper removal (Refer to GROUP 17, Accelerator pedal [P.17-3](#)).

**Post-installation Operation**

- Accelerator pedal arm stopper installation (Refer to GROUP 17, Accelerator pedal [P.17-3](#)).
- Footrest installation
- Centre console side cover installation <driver's side> (Refer to GROUP 52A, Instrumental Panel [P.52A-2](#)).
- Cowl side trim <driver's side> installation (Refer to GROUP 52A, Interior Trim [P.52A-10](#)).
- Front scuff plate <driver's side> installation (Refer to GROUP 52A, Interior Trim [P.52A-10](#)).
- Parking brake pedal stroke check and adjustment (Refer to [P.36-4](#)).



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**Removal steps**

- Turn up the floor carpet.
- 1. Parking brake pedal mounting nuts
- 2. Plate

**Removal steps (Continued)**

- 3. Plate seal



**Removal steps (Continued)**

4. Bolt (securing the parking brake pedal assembly to the front deck crossmember assembly)
5. Parking brake switch connector disconnection
6. Adjuster
7. Adjuster holder
8. Clip
- >>A<< 9. Parking brake front cable

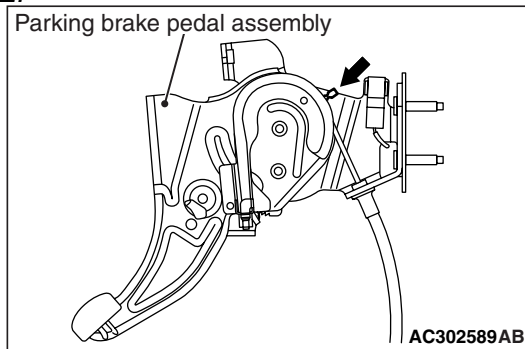
**Removal steps (Continued)**

- >>A<< 10. Parking brake pedal assembly
11. Parking brake switch
12. Pedal pad
13. Parking brake pedal bracket
14. Return spring
15. Tube
16. Parking brake pedal

**INSTALLATION SERVICE POINTS**

**>>A<< CONNECTING PARKING BRAKE  
FRONT CABLE TO PARKING BRAKE  
PEDAL ASSEMBLY**

**NOTE:**



*When connecting the parking brake front cable to the parking brake pedal assembly, the part shown may drop out. However, this is not a problem.*

## PARKING BRAKE CABLE

## REMOVAL AND INSTALLATION

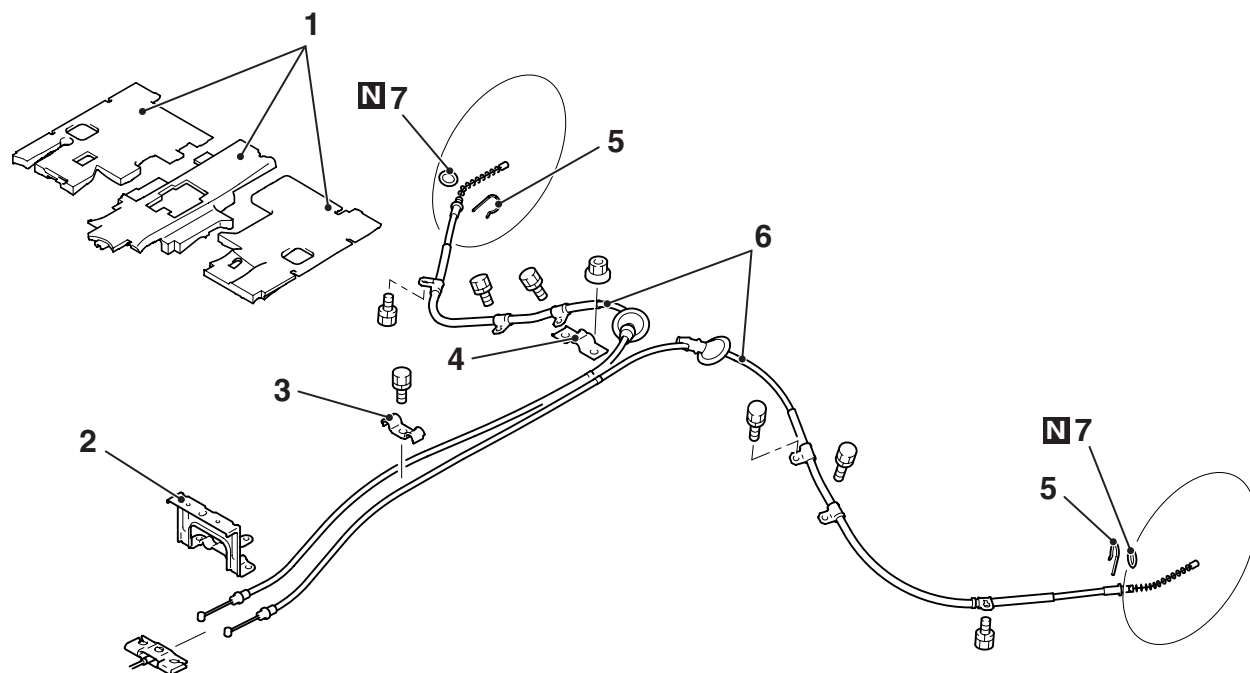
M1361001900718

**Pre-removal Operation**

- Front seat assembly removal (Refer to GROUP 52A, Front seat assembly [P.52A-21.](#))
- Front scuff plate and rear scuff plate removal (Refer to GROUP 52A, Interior trim [P.52A-10.](#))
- Seatbelt lower anchor bolt removal (Refer to GROUP 52A, Front seatbelt [P.52A-37.](#))
- Front door opening trim, rear door opening trim and centre pillar trim removal (Refer to GROUP 52A, Interior trim [P.52A-10.](#))
- Second seat assembly removal (Refer to GROUP 52A, Second seat assembly [P.52A-27.](#))
- Cowl side trim removal (Refer to GROUP 52A, Interior trim [P.52A-10.](#))
- Accelerator pedal arm stopper removal (Refer to GROUP 17, Accelerator pedal [P.17-3.](#))
- Footrest removal

**Post-installation Operation**

- Footrest installation
- Accelerator pedal arm stopper installation (Refer to GROUP 17, Accelerator pedal [P.17-3.](#))
- Cowl side trim installation (Refer to GROUP 52A, Interior trim [P.52A-10.](#))
- Second seat assembly installation (Refer to GROUP 52A, Second seat assembly [P.52A-27.](#))
- Front door opening trim, rear door opening trim and centre pillar trim installation (Refer to GROUP 52A, Interior trim [P.52A-10.](#))
- Seatbelt lower anchor bolt installation (Refer to GROUP 52A, Front seatbelt [P.52A-37.](#))
- Front scuff plate and rear scuff plate installation (Refer to GROUP 52A, Interior trim [P.52A-10.](#))
- Front seat assembly installation (Refer to GROUP 52A, Front seat assembly [P.52A-21.](#))
- Parking brake lever stroke check and adjustment (Refer to [P.36-4.](#))



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**Removal steps**

1. Front floor backbone pad
  - Release the parking brake lever.
  - Parking brake front cable and parking brake rear cable connection
2. Parking brake cable support
3. Clamp

**Removal steps (Continued)**

4. Clip
  - Shoe and lining assembly (Refer to [P.36-13.](#))
5. Clip
6. Parking brake rear cable
7. O-ring

## REMOVAL AND INSTALLATION

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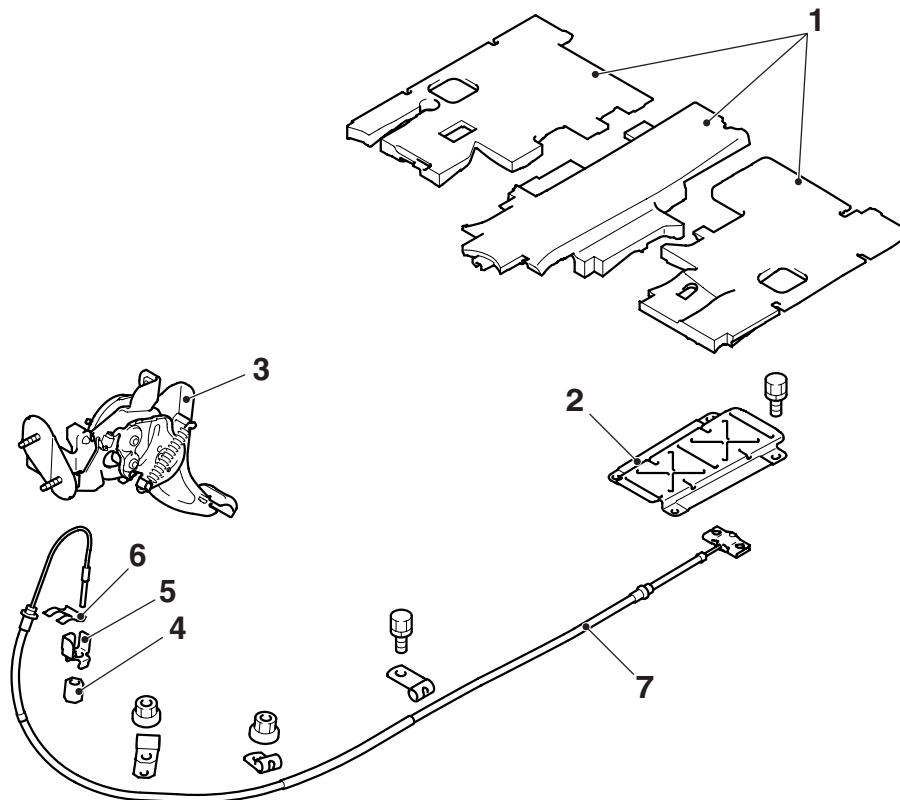
### Pre-removal Operation

- Front seat assembly removal (Refer to GROUP 52A, Front seat assembly [P.52A-21.](#))
- Front scuff plate and rear scuff plate removal (Refer to GROUP 52A, Interior trim [P.52A-10.](#))
- Seatbelt lower anchor bolt removal (Refer to GROUP 52A, Front seatbelt [P.52A-37.](#))
- Front door opening trim, rear door opening trim and centre pillar trim removal (Refer to GROUP 52A, Interior trim [P.52A-10.](#))
- Second seat assembly removal (Refer to GROUP 52A, Second seat assembly [P.52A-27.](#))
- Cowl side trim removal (Refer to GROUP 52A, Interior trim [P.52A-10.](#))
- Glove box assembly, lower panel removal (Refer to GROUP 52A, Instrumental Panel [P.52A-2.](#))
- Fuel filler lid lock release handle removal (Refer to GROUP 42, Fuel filler lid [P.42-10.](#))
- Accelerator pedal arm stopper removal (Refer to GROUP 17, Accelerator pedal [P.17-3.](#))
- Footrest removal

### Post-installation Operation

- Footrest installation
- Accelerator pedal arm stopper installation (Refer to GROUP 17, Accelerator pedal [P.17-3.](#))
- Fuel filler lid lock release handle installation (Refer to GROUP 42, Fuel filler lid [P.42-10.](#))
- Glove box assembly, lower panel installation (Refer to GROUP 52A, Instrumental Panel [P.52A-2.](#))
- Cowl side trim installation (Refer to GROUP 52A, Interior trim [P.52A-10.](#))
- Second seat assembly installation (Refer to GROUP 52A, Second seat assembly [P.52A-27.](#))
- Front door opening trim, rear door opening trim and centre pillar trim installation (Refer to GROUP 52A, Interior trim [P.52A-10.](#))
- Seatbelt lower anchor bolt installation (Refer to GROUP 52A, Front seatbelt [P.52A-37.](#))
- Front scuff plate and rear scuff plate installation (Refer to GROUP 52A, Interior trim [P.52A-10.](#))
- Front seat assembly installation (Refer to GROUP 52A, Front seat assembly [P.52A-21.](#))
- Parking brake pedal stroke check and adjustment (Refer to [P.36-4.](#))

**<Front>**



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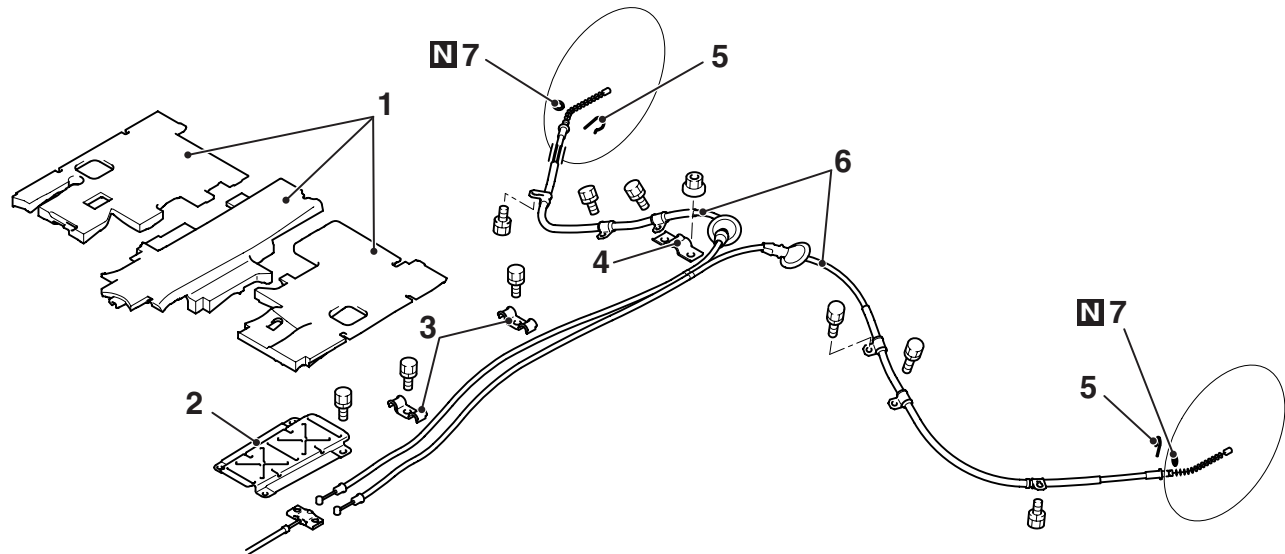
### Removal steps

1. Front floor backbone pad
2. Parking brake cable cover
  - Release the parking brake lever.
  - Parking brake front cable and parking brake rear cable connection

### Removal steps (Continued)

3. Parking brake pedal assembly (Refer [P.36-8.](#))
4. Adjuster
5. Adjuster holder
6. Clip
7. Parking brake front cable

&lt;Rear&gt;



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**Removal steps**

1. Front floor backbone pad
2. Parking brake cable cover
  - Release the parking brake lever.
  - Parking brake front cable and parking brake rear cable connection
3. Clamp
4. Clip

**Removal steps (Continued)**

- Shoe and lining assembly (Refer to [P.36-13.](#))
- 5. Clip
- 6. Parking brake rear cable
- 7. O-ring

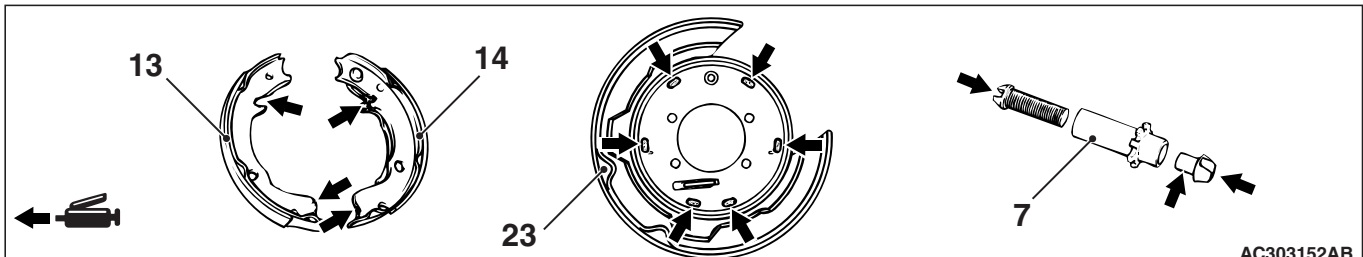
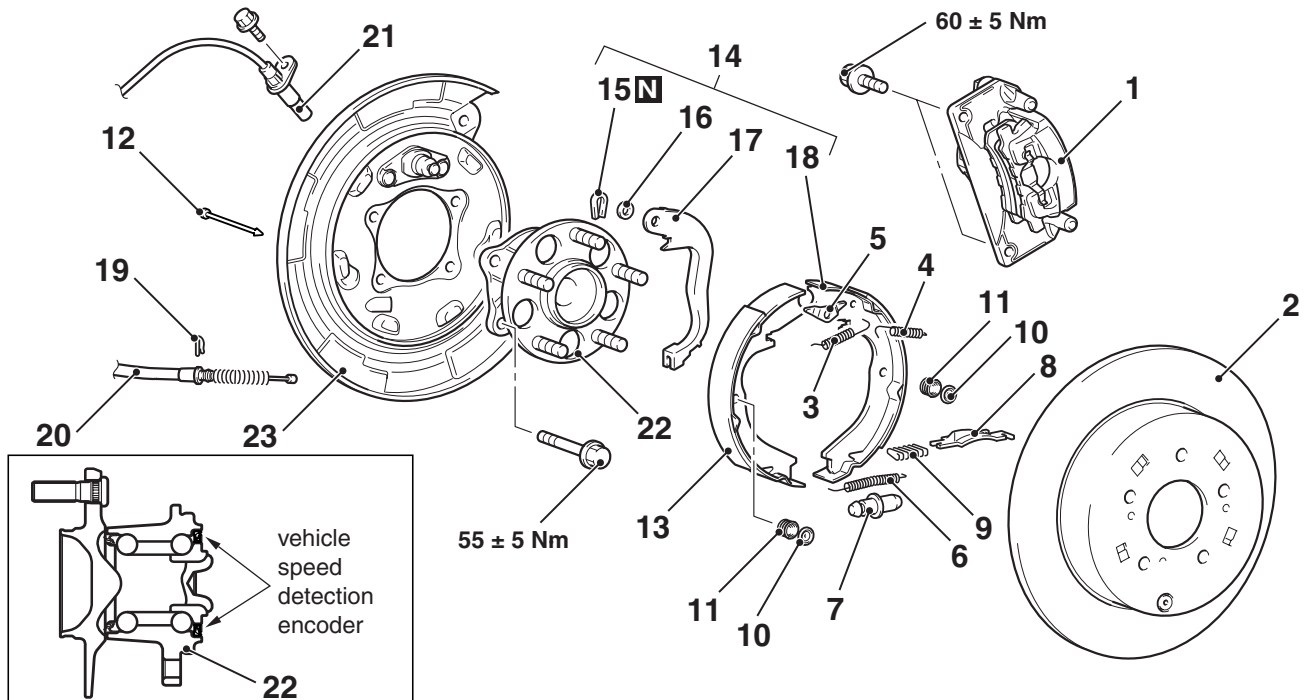
# PARKING BRAKE LINING AND DRUM

## REMOVAL AND INSTALLATION

M1361002500445

### CAUTION

- The vehicle speed detection encoder collects any metallic particle easily, because it is magnetised. Make sure that the encoder should not collect any metallic particle. Check that there is not any trouble prior to reassembling it.
- When the rear wheel speed sensor is removed and installed, make sure that its pole piece does not contact with surrounding parts to avoid damage.



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Brake grease: Multipurpose grease

### Removal steps

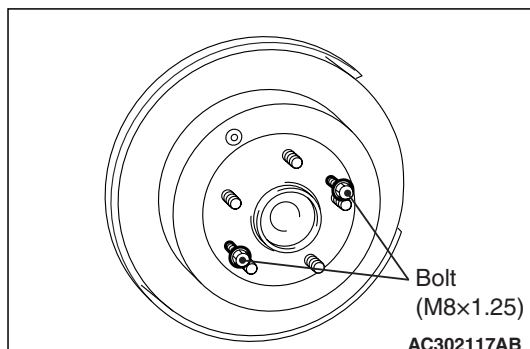
- <<A>> 1. Rear brake caliper assembly  
<<B>> 2. Rear brake disc  
>>D<< 3. Shoe to anchor spring  
>>D<< 4. Shoe to anchor spring  
5. Shoe guide plate  
>>C<< 6. Adjusting wheel spring  
7. Adjuster assembly  
8. Strut  
9. Strut shoe-to-spring  
10. Shoe hold down cup  
11. Shoe hold down spring  
12. Shoe hold down pin

### Removal steps (Continued)

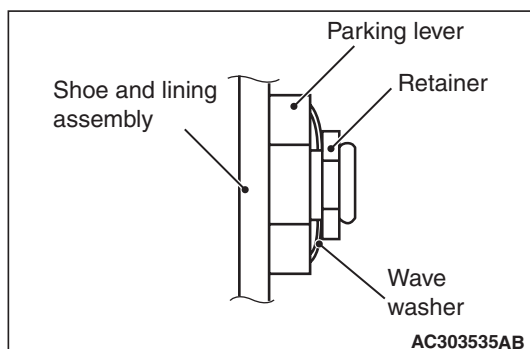
- >>B<< 13. Shoe and lining assembly  
>>A<< 14. Shoe and lever assembly  
15. Retainer  
16. Wave washer  
17. Parking lever  
18. Shoe and lining assembly  
19. Pin  
20. Parking brake rear cable  
21. Rear wheel speed sensor  
22. Rear hub assembly  
23. Backing plate

**REMOVAL SERVICE POINTS****<<A>> REAR BRAKE CALIPER ASSEMBLY REMOVAL**

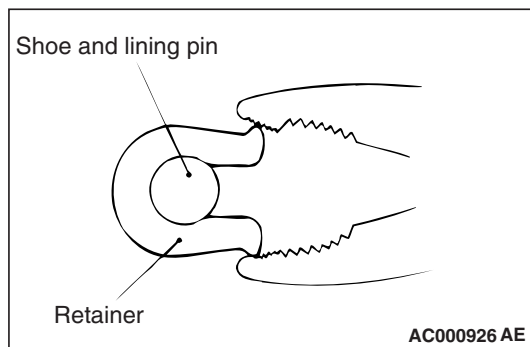
Remove the rear brake caliper assembly and hold it with a wire .

**<<B>> BRAKE DISC REMOVAL**

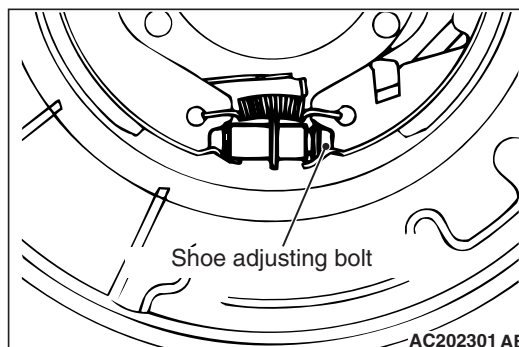
If the brake disc is seized, install a M8x1.25 mm bolts as shown, and remove the disc by tightening the bolts evenly and gradually.

**INSTALLATION SERVICE POINTS****>>A<< WAVE WASHER INSTALLATION**

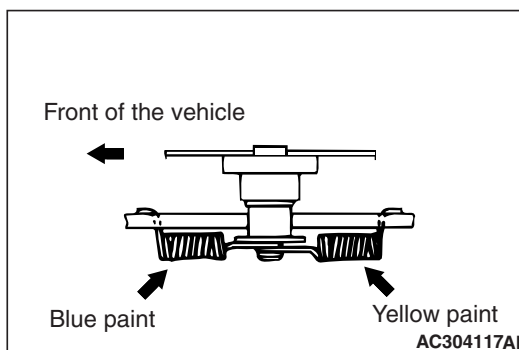
Install the wave washer in the direction shown in the illustration.

**>>B<< RETAINER INSTALLATION**

Crimp the retainer firmly to the pin with pliers.

**>>C<< ADJUSTER ASSEMBLY INSTALLATION**

Install the adjuster assemblies. For left wheel, the shoe adjusting bolt should be located at the front of the vehicle, and for right wheel, it should be located at the rear of the vehicle.

**>>D<< SHOE-TO-ANCHOR SPRING INSTALLATION**

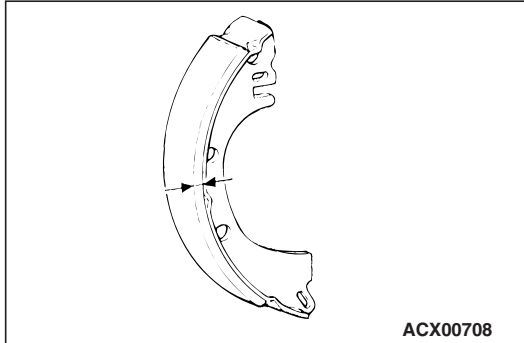
The shoe-to-anchor springs are not interchangeable as their constants are different. The one with blue paint mark should be install at the front of the vehicle, and the other with yellow paint at the rear of the vehicle, respectively.

*NOTE: The illustration shows the left rear wheel. The right rear wheel is symmetrical to that.*

## INSPECTION

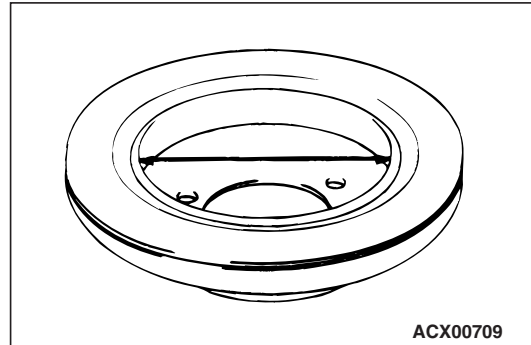
### BRAKE LINING THICKNESS INSPECTION

M1361002600367



1. Measure the lining thickness at the most worn area.  
**Standard value: 2.8 mm**  
**Limit: 0.8 mm**
2. If the thickness is less than limit value, replace the right and left shoe and lining assemblies as a set.

### BRAKE DRUM INSIDE DIAMETER INSPECTION



1. Measure the inside diameter of the brake drum at two positions or more.  
**Standard value: 190.0 mm**  
**Limit: 191.0 mm**
2. If the inside diameter is more than limit value or if there is excessive wear, replace the brake disc.