

PARKING BRAKE SYSTEM

PROBLEM SYMPTOMS TABLE

HINT:
Use the table below to help you find the cause of the problem.
The numbers indicate the ranked order of probability of each of the possible causes. Check each part in the order suggested. If necessary, replace these parts.

PB

Symptom	Suspected area	See page
Brake drag	1. Parking brake lever travel (Out of adjustment)	PB-4
	2. Parking brake wire (Sticking)	PB-11
	3. Parking brake shoe clearance (Out of adjustment)	PB-20
	4. Parking brake shoe lining (Cracked or distorted)	PB-18
	5. Tension or return spring (Damaged)	PB-17

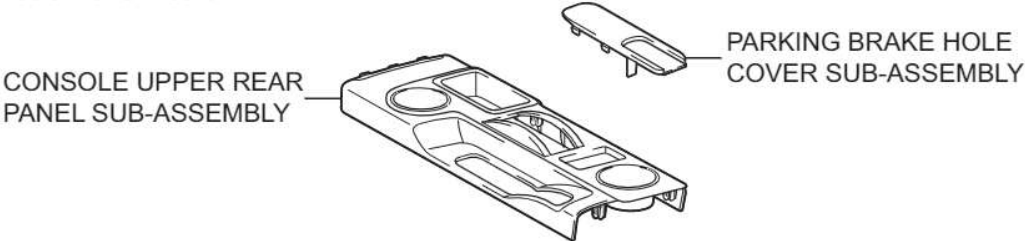
PB-2

PARKING BRAKE – PARKING BRAKE LEVER

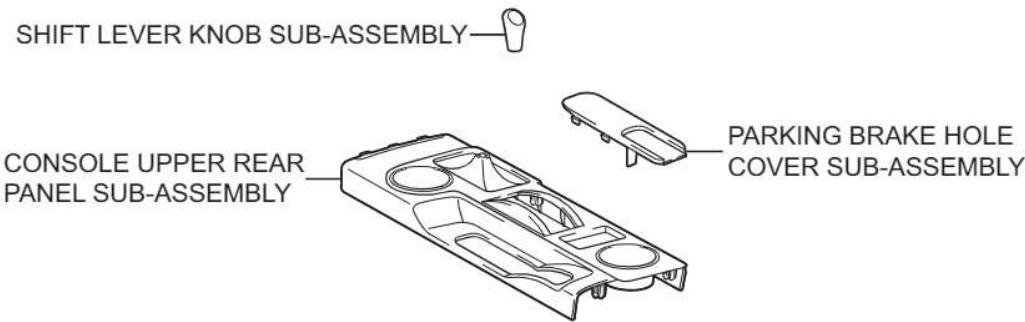
PARKING BRAKE LEVER
COMPONENTS

PB

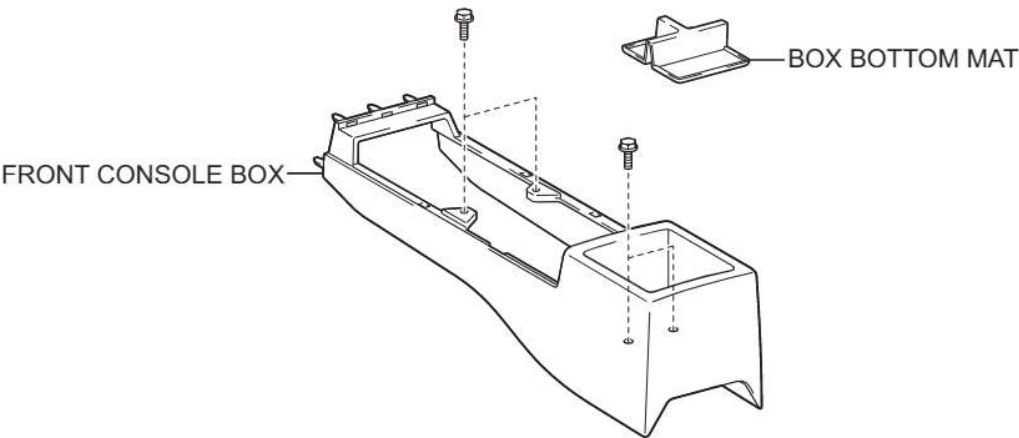
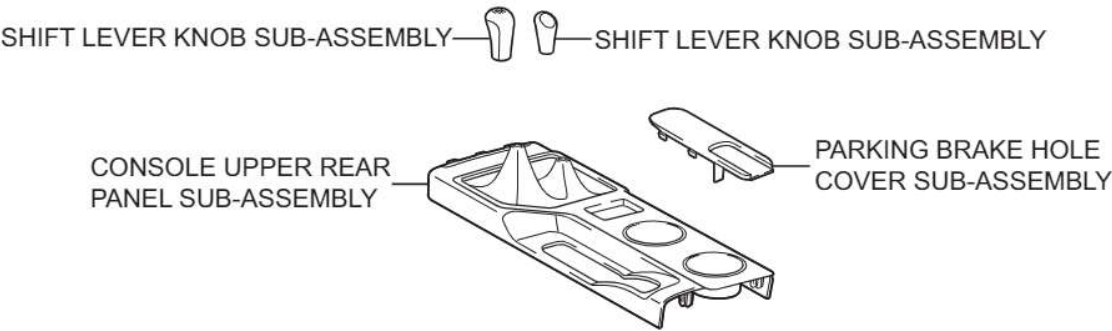
for Automatic Transmission 2WD:



for Automatic Transmission 4WD:

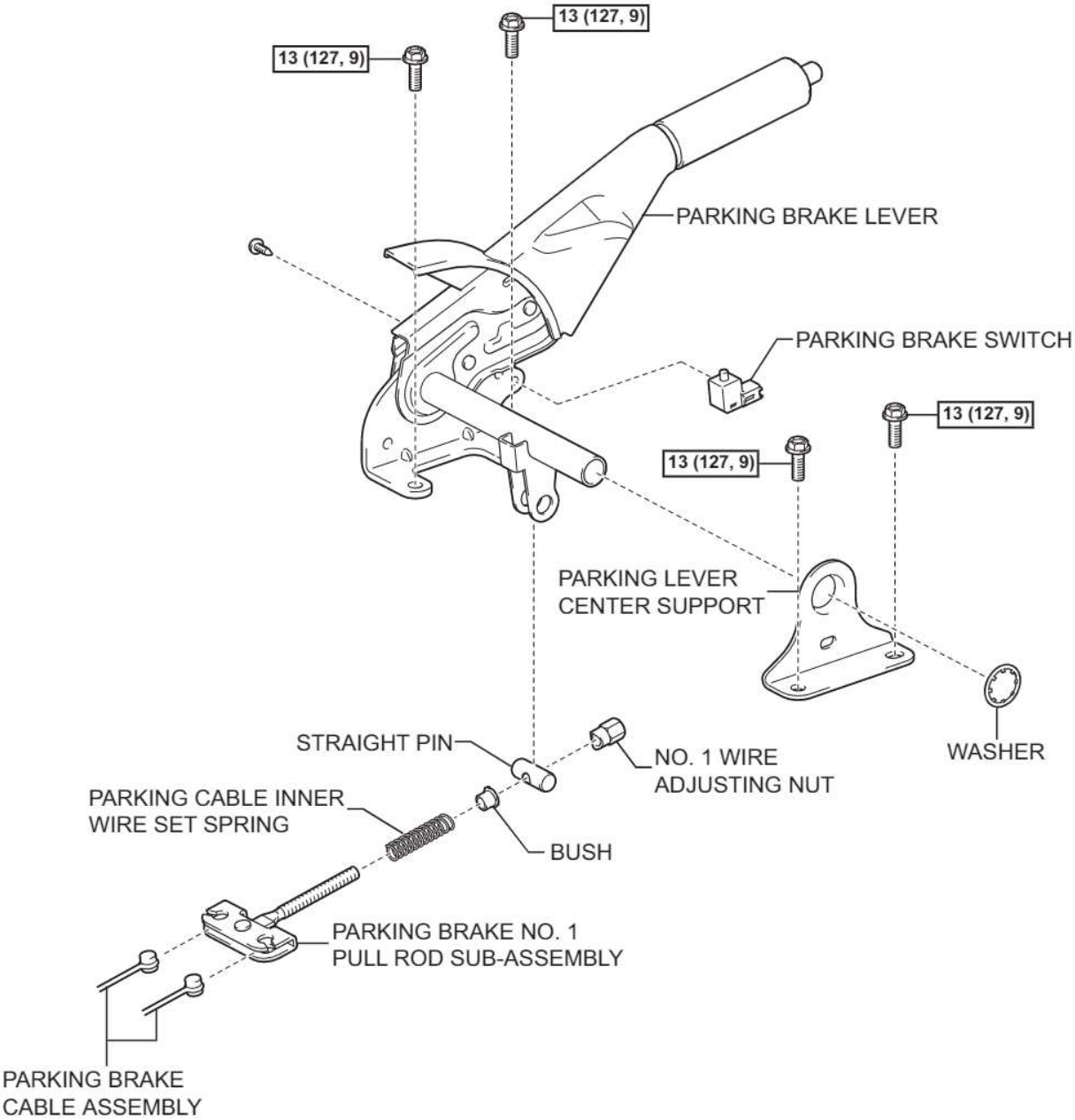


for Manual Transmission 4WD:



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[N*m (kgf*cm, ft*lbf)] : Specified torque

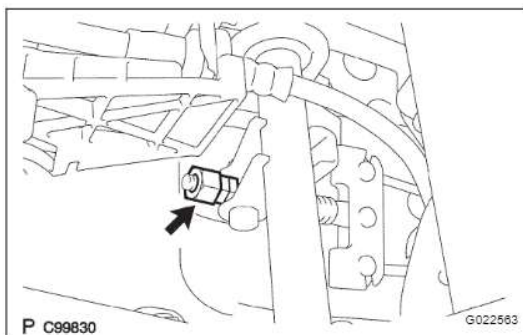
PB-4

PARKING BRAKE – PARKING BRAKE LEVER

PB

ON-VEHICLE INSPECTION

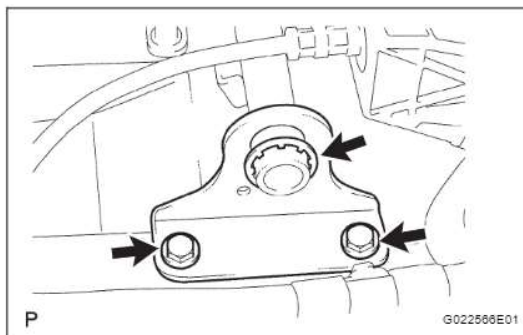
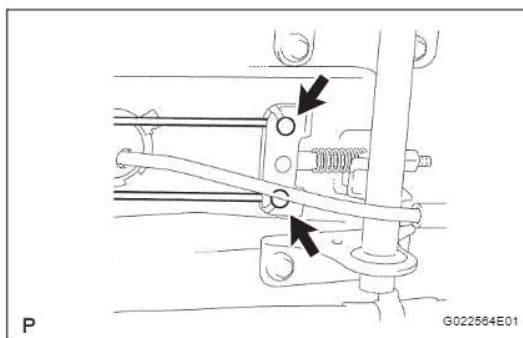
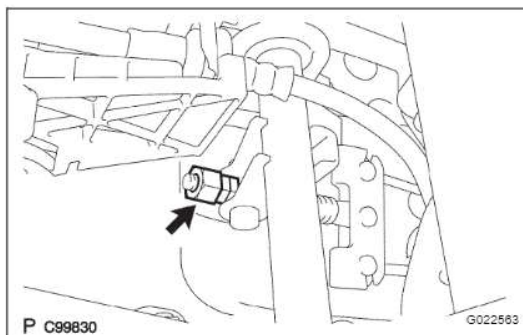
1. REMOVE REAR WHEEL
2. ADJUST PARKING BRAKE SHOE CLEARANCE (See page [PB-20](#))
3. INSTALL REAR WHEEL
Torque: 112 N*m (1,137 kgf*cm, 82 ft.*lbf)
4. INSPECT PARKING BRAKE LEVER TRAVEL
 - (a) Slowly pull the parking brake lever to the fully applied position, counting the number of clicks.
Parking brake lever travel:
5 to 7 clicks at 200 N (20 kgf, 45 lbf)
5. REMOVE PARKING BRAKE HOLE COVER SUB-ASSEMBLY (See page [IP-11](#))
6. REMOVE SHIFT LEVER KNOB SUB-ASSEMBLY (for Manual Transmission) (See page [IP-11](#))
7. REMOVE SHIFT LEVER KNOB SUB-ASSEMBLY (for 4WD) (See page [IP-11](#))
8. REMOVE CONSOLE UPPER REAR PANEL SUB-ASSEMBLY (See page [IP-12](#))
9. ADJUST PARKING BRAKE LEVER TRAVEL
 - (a) Turn the adjusting nut until the parking brake lever travel is corrected to within the specified range.
Parking brake lever travel:
5 to 7 clicks at 200 N (20 kgf, 45 lbf)
 - (b) Operate the parking brake lever 3 to 4 times, and check the parking brake lever travel.
 - (c) Check whether the parking brake drags or not.
 - (d) When operating the parking brake lever, check that the brake warning light illuminates.
Standard:
Brake warning light always illuminates at the first click.
10. INSTALL CONSOLE UPPER REAR PANEL SUB-ASSEMBLY (See page [IP-31](#))
11. INSTALL SHIFT LEVER KNOB SUB-ASSEMBLY (for 4WD) (See page [IP-32](#))
12. INSTALL SHIFT LEVER KNOB SUB-ASSEMBLY (for Manual Transmission) (See page [IP-32](#))
13. INSTALL PARKING BRAKE HOLE COVER SUB-ASSEMBLY (See page [IP-32](#))



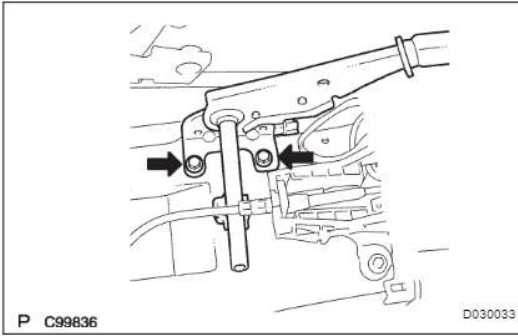
REMOVAL

1. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL
2. REMOVE PARKING BRAKE HOLE COVER SUB-ASSEMBLY (See page [IP-11](#))
3. REMOVE SHIFT LEVER KNOB SUB-ASSEMBLY (for Manual Transmission) (See page [IP-11](#))
4. REMOVE SHIFT LEVER KNOB SUB-ASSEMBLY (for 4WD) (See page [IP-11](#))
5. REMOVE CONSOLE UPPER REAR PANEL SUB-ASSEMBLY (See page [IP-12](#))
6. REMOVE BOX BOTTOM MAT (See page [IP-12](#))
7. REMOVE FRONT CONSOLE BOX (See page [IP-13](#))
8. REMOVE PARKING BRAKE LEVER
 - (a) Release the parking brake lever.
 - (b) Disconnect the parking brake switch connector.
 - (c) Remove the adjusting nut.

PB



- (d) Disconnect parking brake cables No. 2 and No. 3 from the parking brake pull rod.
- (e) Remove the parking brake pull rod, bush and set spring.
- (f) Remove the straight pin from the parking brake lever.
- (g) Remove the washer.
- (h) Remove the 2 bolts and center support from the parking brake lever.

PB-6**PARKING BRAKE – PARKING BRAKE LEVER**

(i) Remove the 2 bolts and parking brake lever.

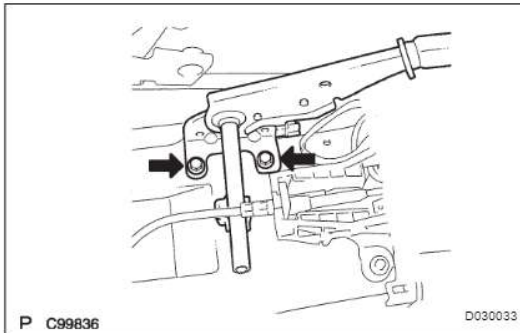
9. REMOVE PARKING BRAKE SWITCH

(a) Remove the screw and parking brake switch from the parking brake lever.

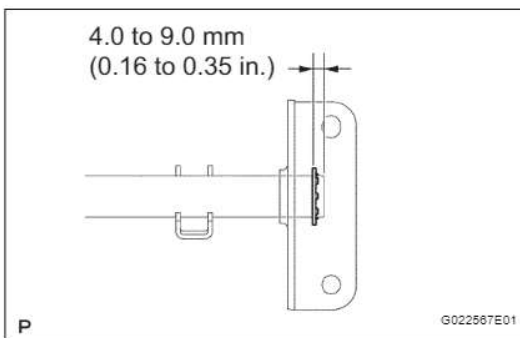
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PARKING BRAKE – PARKING BRAKE LEVER**PB-7****INSTALLATION****1. INSTALL PARKING BRAKE SWITCH**

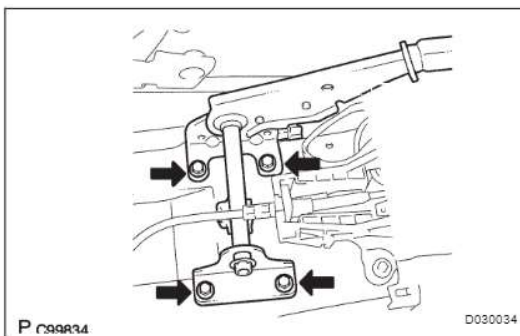
- (a) Install the parking brake switch with the screw.

**2. INSTALL PARKING BRAKE LEVER**

- (a) Install the parking brake lever and provisionally tighten the 2 bolts.



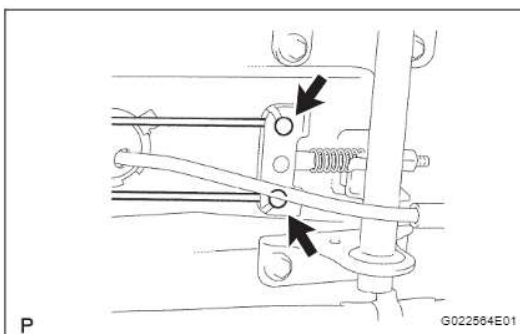
- (b) Install the center support and washer onto the parking brake lever.



- (c) Install the parking brake lever with the 4 bolts.

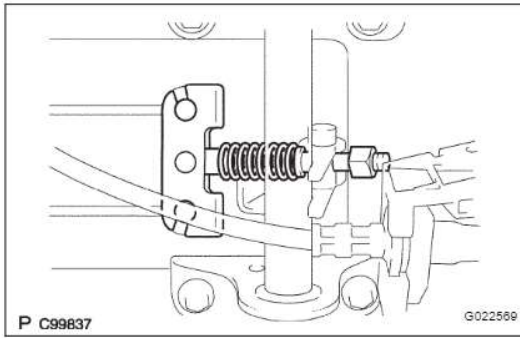
Torque: 13 N*m (127 kgf*cm, 9 ft.*lbf)

- (d) Install the straight pin into the parking brake lever.



- (e) Connect parking brake cables No. 2 and No. 3 to the parking brake pull rod.

PB

PB-8**PARKING BRAKE – PARKING BRAKE LEVER**

- (f) Install the set spring, bush and parking brake pull rod with the adjusting nut.
- (g) Connect the parking brake switch connector.

3. **INSPECT PARKING BRAKE LEVER TRAVEL** (See page [PB-4](#))
4. **ADJUST PARKING BRAKE LEVER TRAVEL** (See page [PB-4](#))
5. **INSTALL FRONT CONSOLE BOX** (See page [IP-30](#))
6. **INSTALL BOX BOTTOM MAT** (See page [IP-31](#))
7. **INSTALL CONSOLE UPPER REAR PANEL SUB-ASSEMBLY** (See page [IP-31](#))
8. **INSTALL SHIFT LEVER KNOB SUB-ASSEMBLY** (for 4WD) (See page [IP-32](#))
9. **INSTALL SHIFT LEVER KNOB SUB-ASSEMBLY** (for Manual Transmission) (See page [IP-32](#))
10. **INSTALL PARKING BRAKE HOLE COVER SUB-ASSEMBLY** (See page [IP-32](#))
11. **CONNECT CABLE TO NEGATIVE BATTERY TERMINAL**
Torque: 3.9 N*m (40 kgf*cm, 35 in.*lbf)

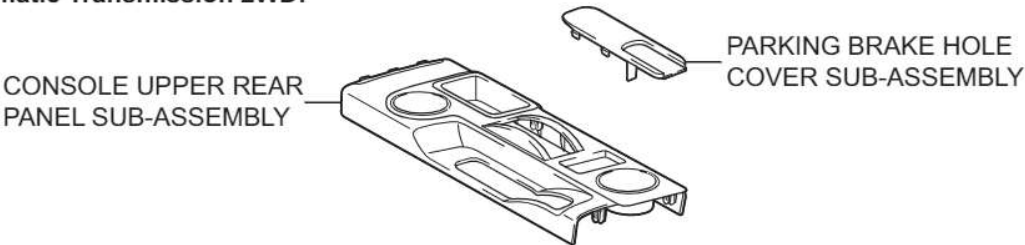
PB-8

PARKING BRAKE – PARKING BRAKE CABLE

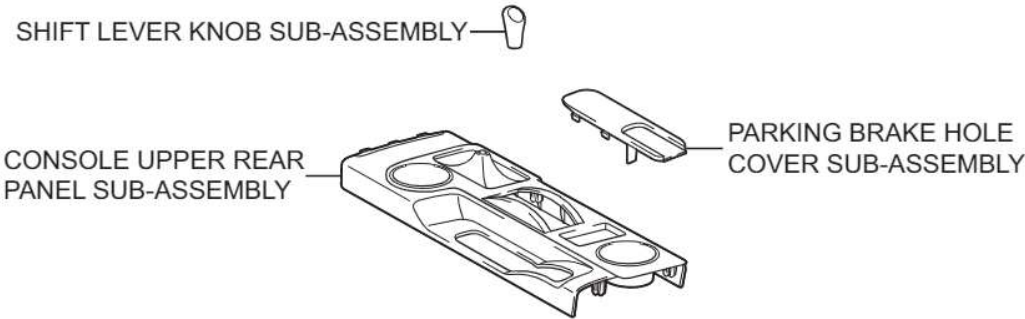
PARKING BRAKE CABLE
COMPONENTS

PB

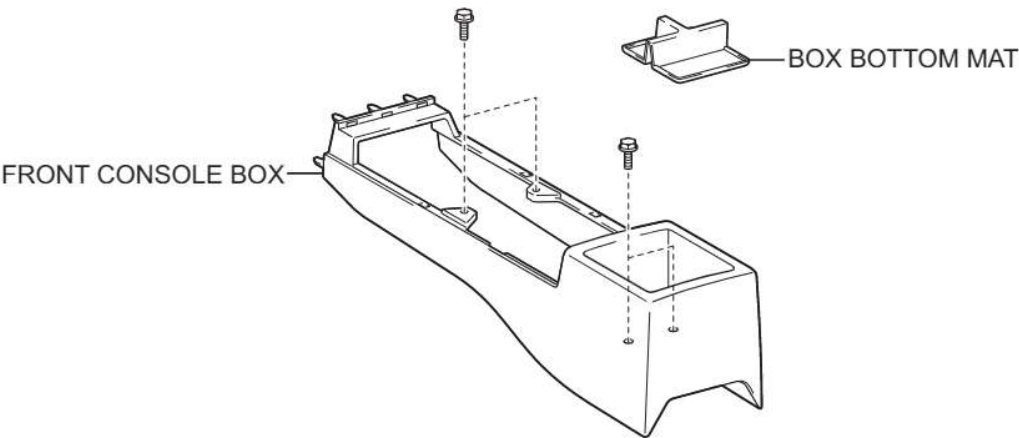
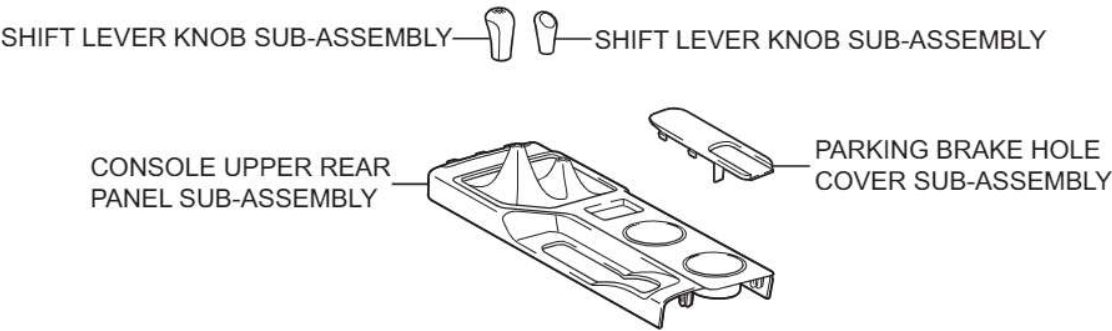
for Automatic Transmission 2WD:



for Automatic Transmission 4WD:



for Manual Transmission 4WD:



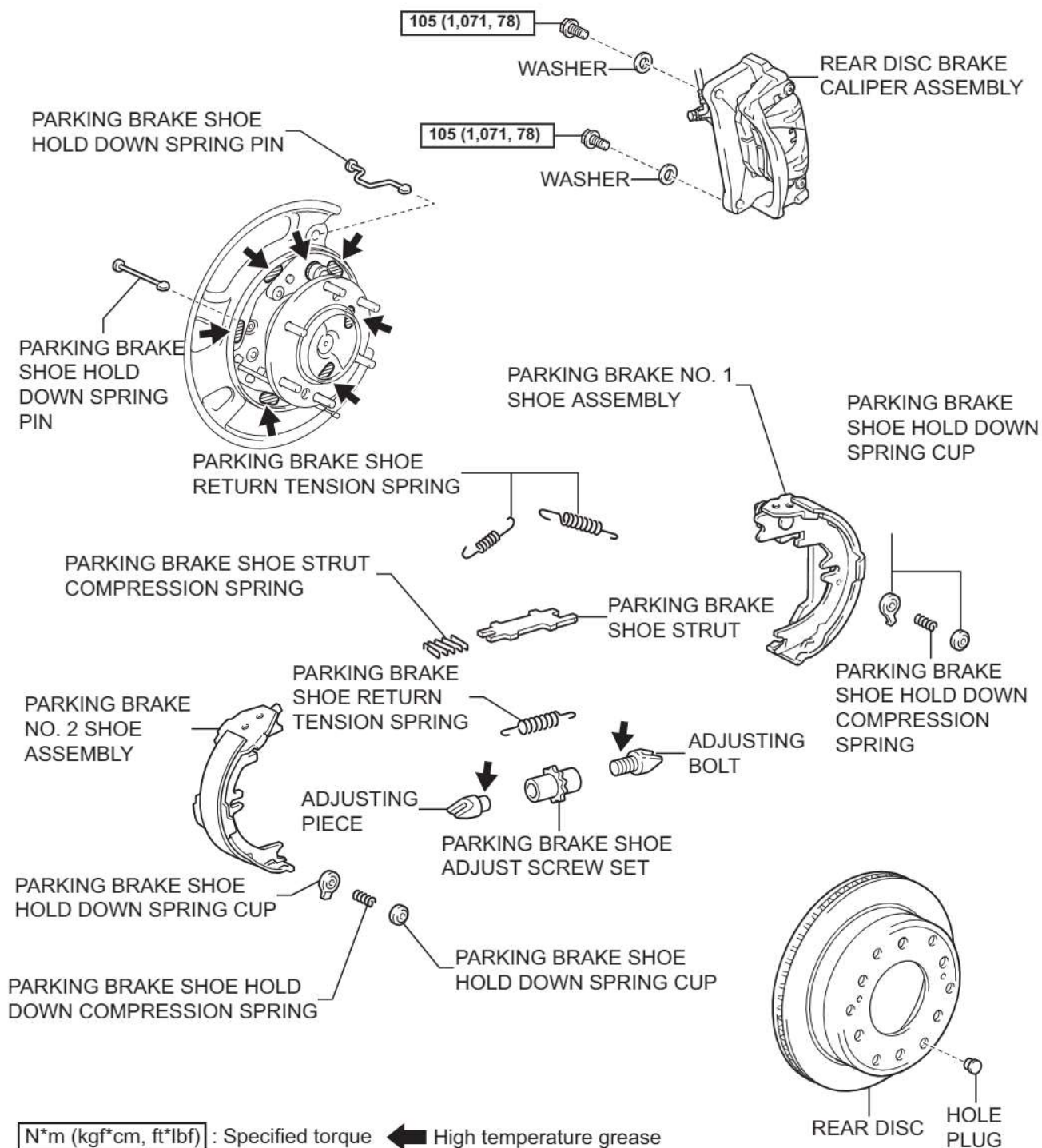
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PARKING BRAKE – PARKING BRAKE CABLE

PB-9

PB



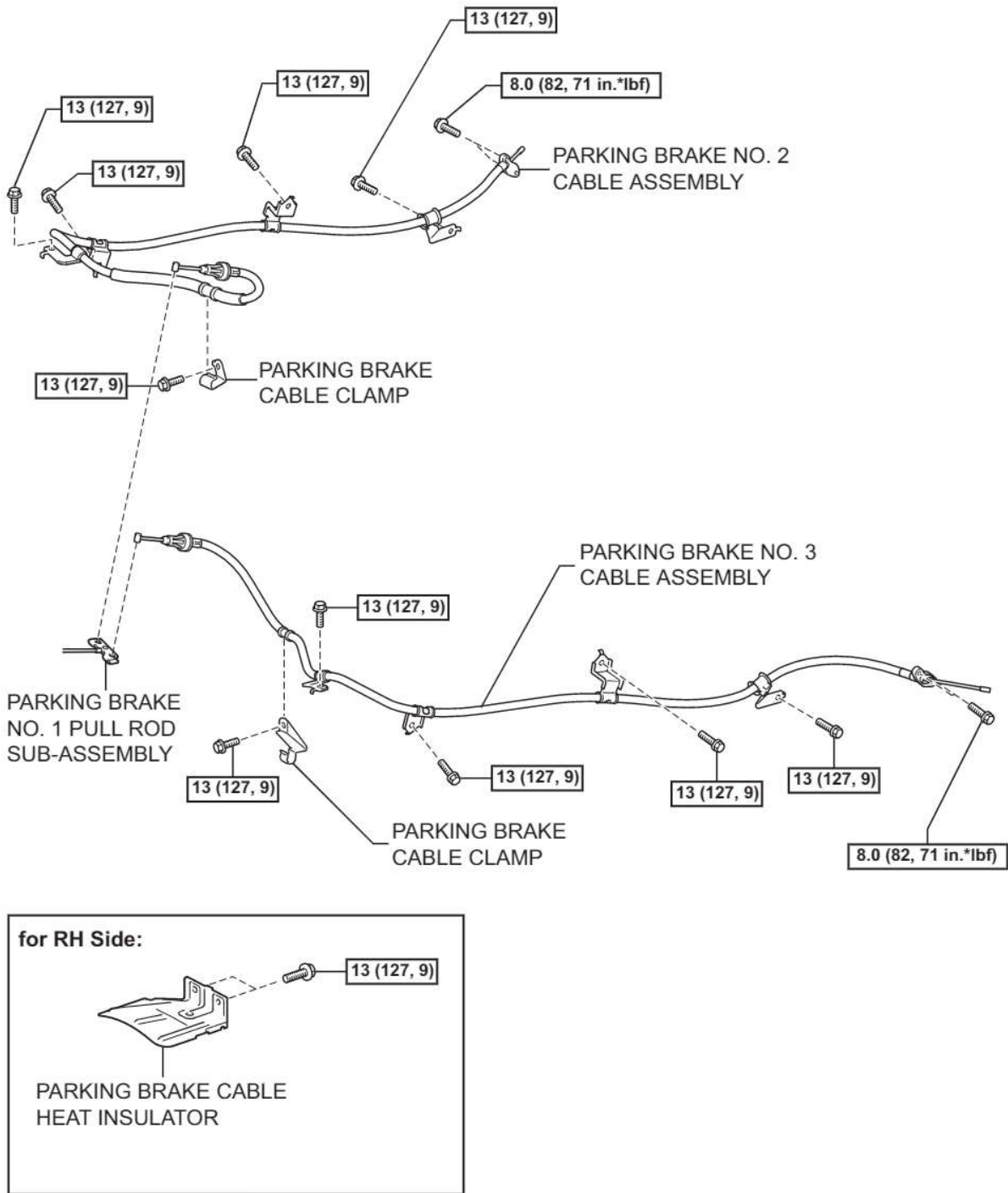
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PB-10

PARKING BRAKE – PARKING BRAKE CABLE

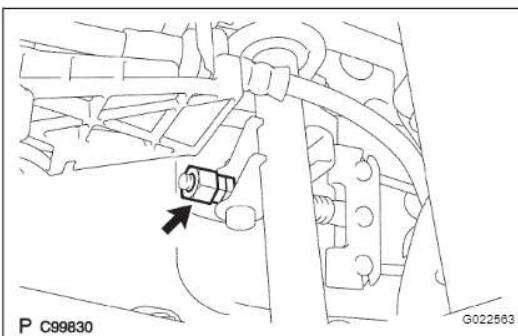
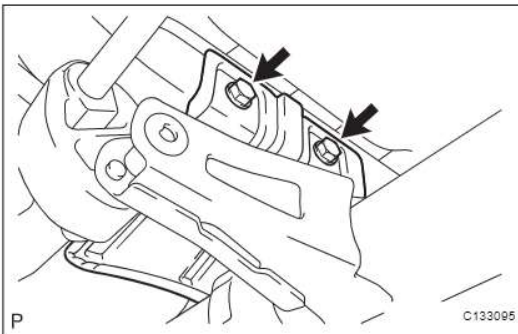
PB



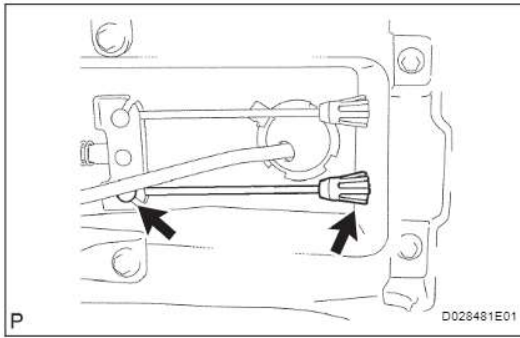
N*m (kgf*cm, ft*lbf) : Specified torque

REMOVAL

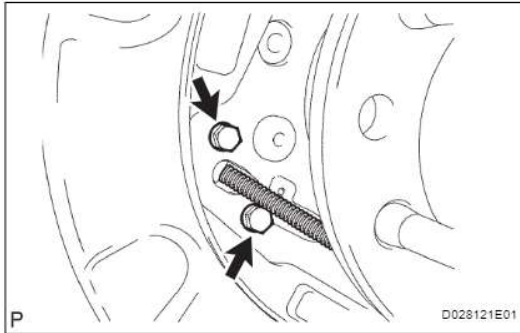
1. REMOVE PARKING BRAKE HOLE COVER SUB-ASSEMBLY (See page [IP-11](#))
2. REMOVE SHIFT LEVER KNOB SUB-ASSEMBLY (for Manual Transmission) (See page [IP-11](#))
3. REMOVE SHIFT LEVER KNOB SUB-ASSEMBLY (for 4WD) (See page [IP-11](#))
4. REMOVE CONSOLE UPPER REAR PANEL SUB-ASSEMBLY (See page [IP-12](#))
5. REMOVE BOX BOTTOM MAT (See page [IP-12](#))
6. REMOVE FRONT CONSOLE BOX (See page [IP-13](#))
7. REMOVE REAR WHEEL
8. SEPARATE REAR DISC BRAKE CALIPER ASSEMBLY (See page [PB-17](#))
9. REMOVE REAR DISC (See page [PB-17](#))
10. REMOVE PARKING BRAKE SHOE RETURN TENSION SPRING (See page [PB-17](#))
11. REMOVE PARKING BRAKE SHOE STRUT (See page [PB-17](#))
12. REMOVE PARKING BRAKE SHOE (See page [PB-17](#))
13. REMOVE PARKING BRAKE CABLE HEAT INSULATOR (for RH Side)
 - (a) Remove the 2 bolts and the heat insulator.

PB

14. REMOVE PARKING BRAKE CABLE
 - (a) Loosen the adjusting nut.

PB-12**PARKING BRAKE – PARKING BRAKE CABLE**

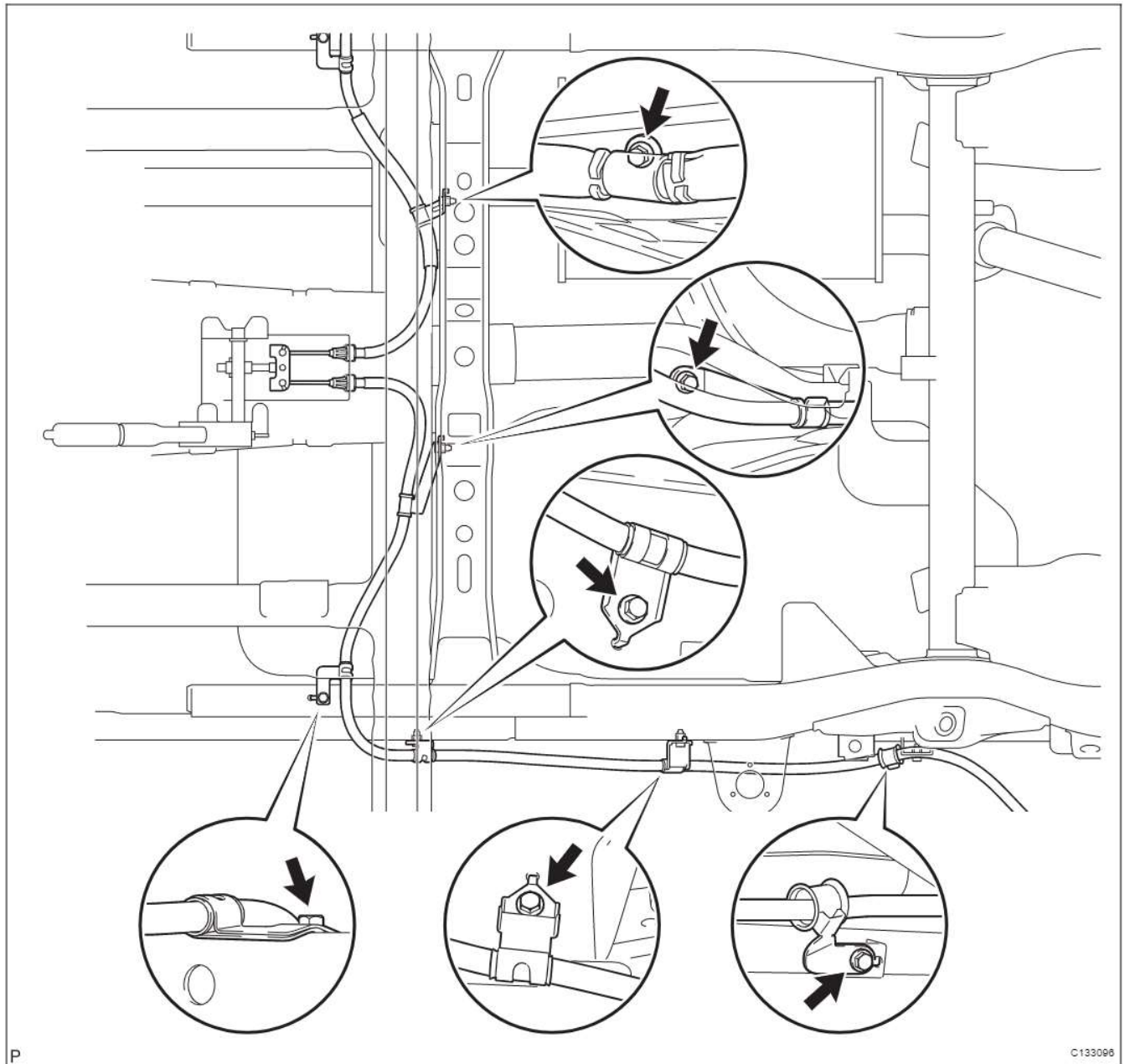
- (b) Disconnect the cable end from the parking brake pull rod.
- (c) Contract the claws of the spring cap and push the parking brake cable slightly out of the vehicle.



- (d) Remove the 2 bolts and separate the parking brake cable from the parking brake plate.

PARKING BRAKE – PARKING BRAKE CABLE**PB-13**

(e) Remove the 5 bolts and the parking brake cable.

**15. REMOVE PARKING BRAKE CABLE CLAMP**

(a) Remove the parking brake cable clamp from the parking brake cable.

PB-14

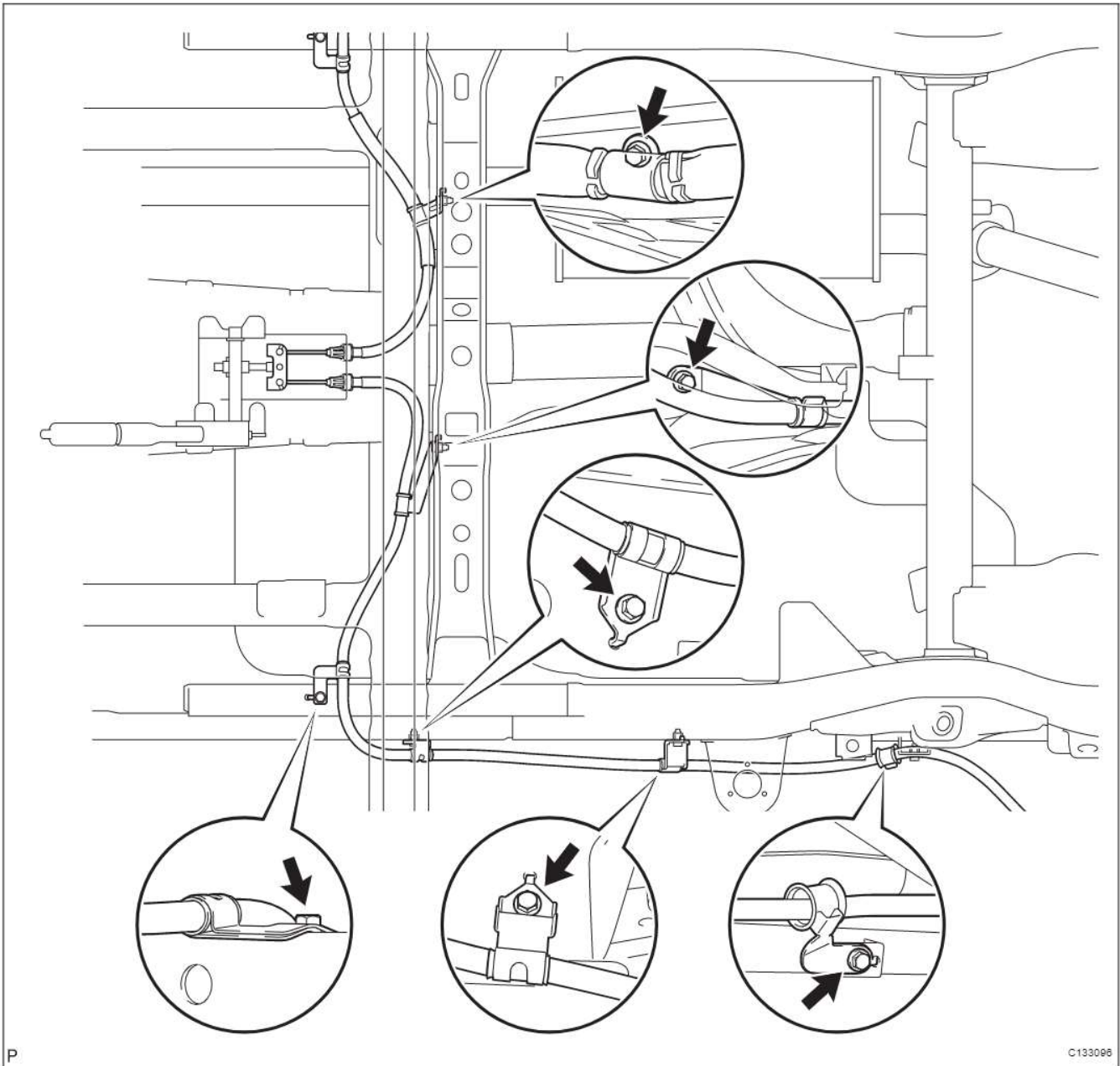
PARKING BRAKE – PARKING BRAKE CABLE

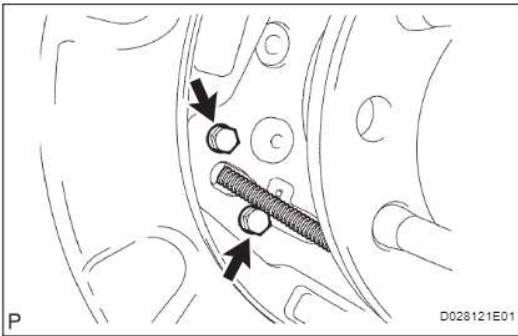
INSTALLATION**1. INSTALL PARKING BRAKE CABLE CLAMP**

- (a) Install the parking brake cable clamp onto the parking brake cable.

2. INSTALL PARKING BRAKE CABLE

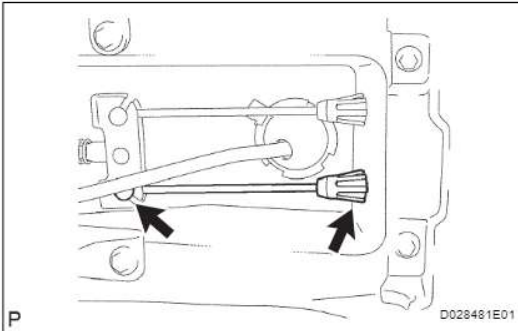
- (a) Install the parking brake cable with the 5 bolts.
Torque: 13 N*m (127 kgf*cm, 9 ft.*lbf)

PB

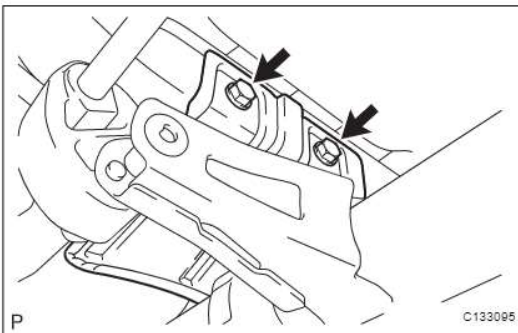
PARKING BRAKE – PARKING BRAKE CABLE**PB-15**

- (b) Install the parking brake cable to the parking brake plate with the 2 bolts.

Torque: 8.0 N*m (82 kgf*cm, 71 in.*lbf)



- (c) Install the spring cap into the body.
(d) Connect the cable end to the parking brake pull rod.



3. INSTALL PARKING BRAKE CABLE HEAT INSULATOR (for RH Side)

- (a) Install the heat insulator with the 2 bolts.

Torque: 13 N*m (127 kgf*cm, 9 ft.*lbf)

- 4. APPLY HIGH TEMPERATURE GREASE (See page [PB-19](#))**
- 5. INSTALL PARKING BRAKE SHOE (See page [PB-19](#))**
- 6. INSTALL PARKING BRAKE SHOE STRUT (See page [PB-19](#))**
- 7. INSTALL PARKING BRAKE SHOE RETURN TENSION SPRING (See page [PB-19](#))**
- 8. CHECK PARKING BRAKE INSTALLATION (See page [PB-20](#))**
- 9. INSTALL REAR DISC (See page [PB-20](#))**
- 10. ADJUST PARKING BRAKE SHOE CLEARANCE (See page [PB-20](#))**
- 11. INSTALL REAR DISC BRAKE CALIPER ASSEMBLY (See page [PB-20](#))**
- 12. INSTALL REAR WHEEL**
Torque: 112 N*m (1,137 kgf*cm, 82 ft.*lbf)
- 13. INSPECT PARKING BRAKE LEVER TRAVEL (See page [PB-4](#))**
- 14. ADJUST PARKING BRAKE LEVER TRAVEL (See page [PB-4](#))**
- 15. INSTALL FRONT CONSOLE BOX (See page [IP-30](#))**
- 16. INSTALL BOX BOTTOM MAT (See page [IP-31](#))**

PB

PB-16**PARKING BRAKE – PARKING BRAKE CABLE**

17. INSTALL CONSOLE UPPER REAR PANEL SUB-ASSEMBLY (See page [IP-31](#))
18. INSTALL SHIFT LEVER KNOB SUB-ASSEMBLY (for 4WD) (See page [IP-32](#))
19. INSTALL SHIFT LEVER KNOB SUB-ASSEMBLY (for Manual Transmission) (See page [IP-32](#))
20. INSTALL PARKING BRAKE HOLE COVER SUB-ASSEMBLY (See page [IP-32](#))

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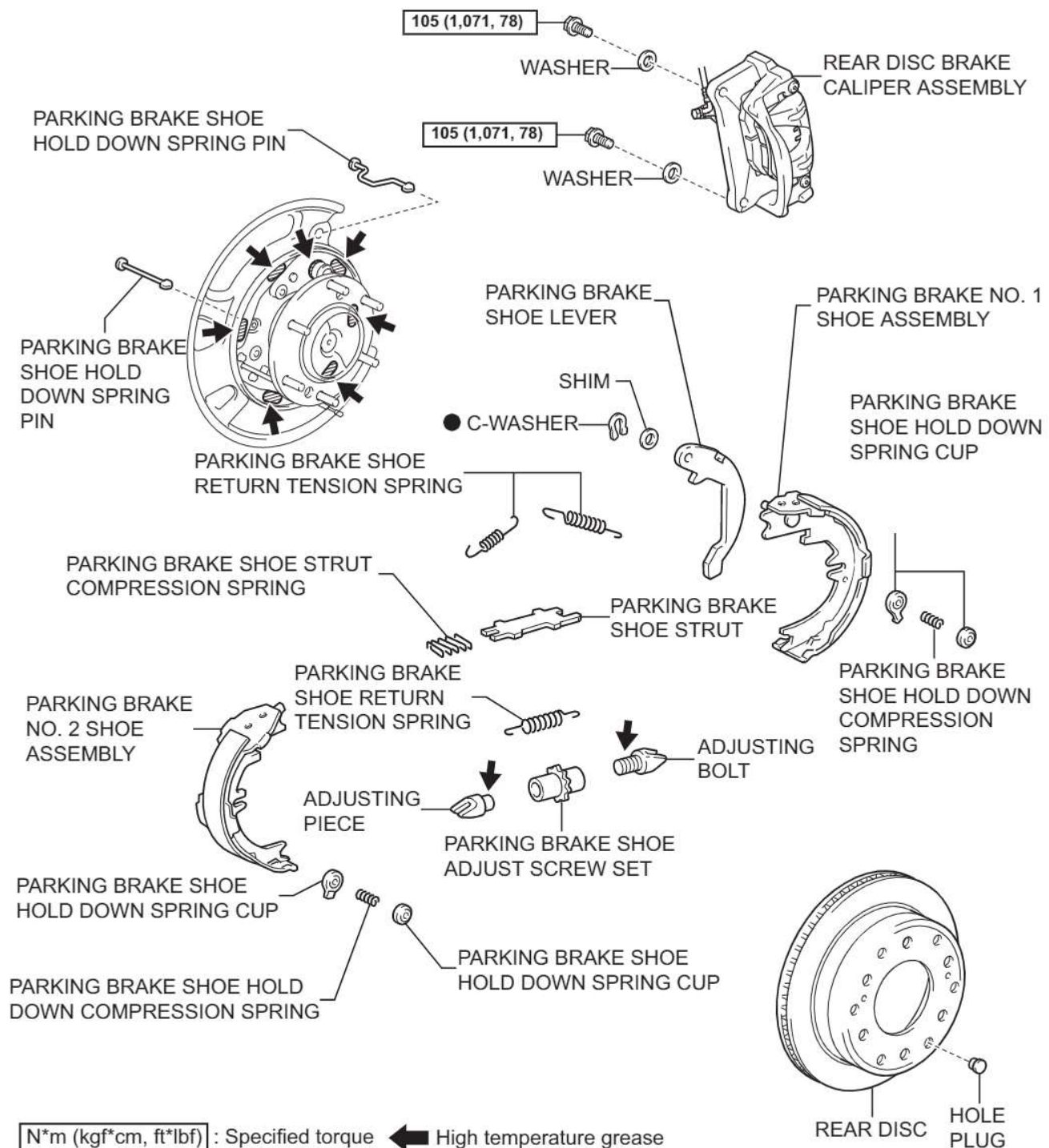
PB-16

PARKING BRAKE – PARKING BRAKE ASSEMBLY

PARKING BRAKE ASSEMBLY

COMPONENTS

PB



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PARKING BRAKE – PARKING BRAKE ASSEMBLY**PB-17****REMOVAL**

1. **REMOVE REAR WHEEL**
2. **SEPARATE REAR DISC BRAKE CALIPER ASSEMBLY**

(a) Remove the 2 bolts and 2 washers and separate the disc brake caliper assembly.

NOTICE:

Suspend the disc brake caliper assembly with a piece of rope.

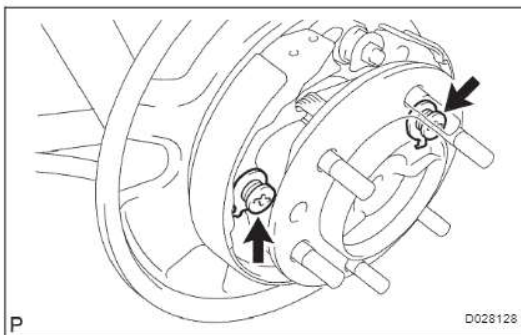
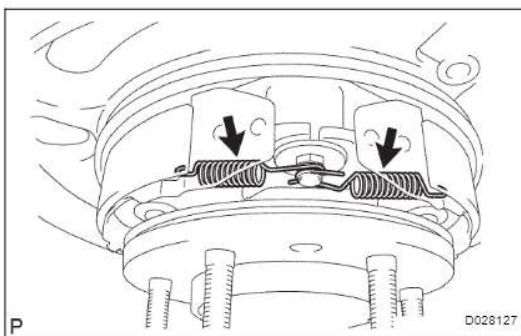
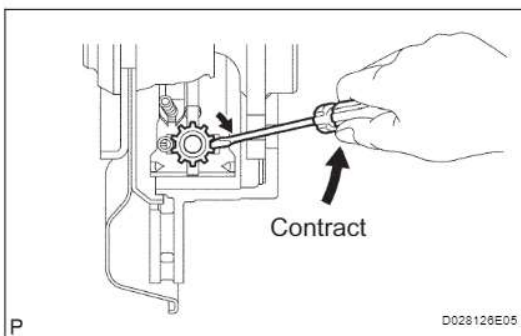
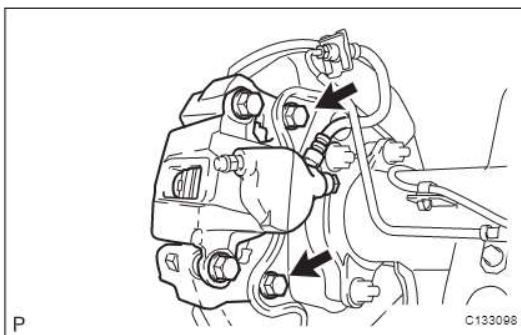
3. **REMOVE REAR DISC**

(a) Release the parking brake lever.

(b) Place matchmarks on the disc and axle hub and remove the disc.

HINT:

If the disc cannot be removed easily, turn the shoe adjuster until the wheel turns freely.

**DISASSEMBLY**

1. **REMOVE PARKING BRAKE SHOE RETURN TENSION SPRING**

(a) Using needle-nose pliers, remove the 2 return tension springs.

2. **REMOVE PARKING BRAKE SHOE STRUT**

(a) Remove the parking brake shoe strut and compression spring.

3. **REMOVE PARKING BRAKE SHOE**

(a) Remove the 2 hold down spring cups, hold down compression spring and hold down spring pin.

(b) Disconnect the return tension spring and remove the No. 2 shoe.

(c) Remove the shoe adjusting screw set and return tension spring.

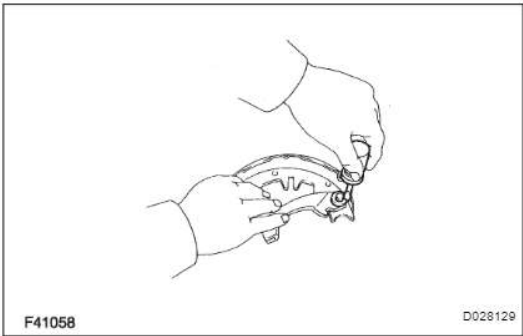
(d) Remove the 2 hold down spring cups, hold down compression spring and hold down spring pin.

(e) Using needle-nose pliers, disconnect the parking brake cable and remove the No. 1 shoe.

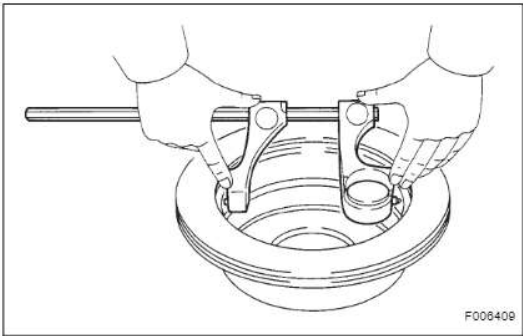
PB-18

PARKING BRAKE – PARKING BRAKE ASSEMBLY

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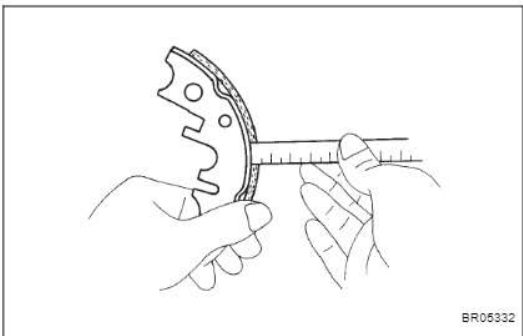


4. REMOVE PARKING BRAKE SHOE LEVER
- (a) Using a screwdriver, remove the C-washer.
 - (b) Remove the shim and parking brake shoe lever from the No. 1 shoe.

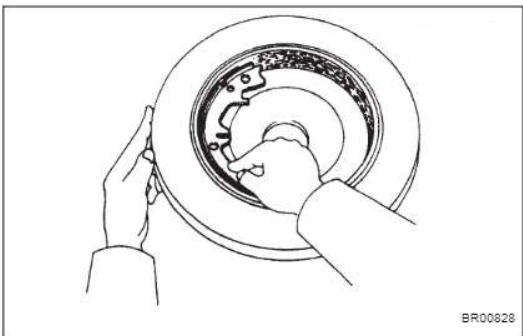


INSPECTION

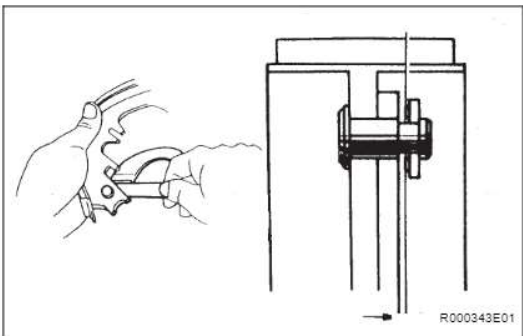
1. INSPECT BRAKE DISC INSIDE DIAMETER
- (a) Using a brake drum gauge or the equivalent, measure the inside diameter of the rear disc.
Standard inside diameter:
210 mm (8.268 in.)
Maximum inside diameter:
211 mm (8.307 in.)
If the inside diameter is greater than the maximum, replace the rear disc.



2. INSPECT PARKING BRAKE SHOE LINING THICKNESS
- (a) Using a ruler, measure the thickness of the shoe lining.
Standard thickness:
4.0 mm (0.157 in.)
Minimum thickness:
1.0 mm (0.039 in.)
If the lining thickness is equal to or less than the minimum value, or if there is any severe or uneven wear, replace the brake shoe.



3. INSPECT BRAKE DISC AND PARKING BRAKE SHOE LINING FOR PROPER CONTACT
- (a) Apply chalk to the inside surface of the disc, then grind the brake shoe lining so that they fit together properly.
If the contact between the disc and the shoe lining is improper, repair it using a brake shoe grinder or replace the brake shoe assembly.



REASSEMBLY

1. INSTALL PARKING BRAKE SHOE LEVER
- (a) Using a feeler gauge, measure the clearance.
Standard clearance:
Less than 0.25 mm (0.0098 in.)
If the clearance is not within the specifications, replace the shim with one of the correct size.

Part No.	Shim Thickness
90564-09184	0.3 mm (0.012 in.)
90564-09002	0.4 mm (0.016 in.)

PARKING BRAKE – PARKING BRAKE ASSEMBLY

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Part No.	Shim Thickness
90564-09003	0.5 mm (0.020 in.)
90564-09185	0.6 mm (0.024 in.)
90564-09186	0.9 mm (0.035 in.)

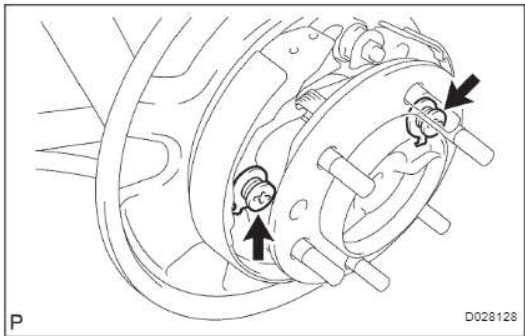
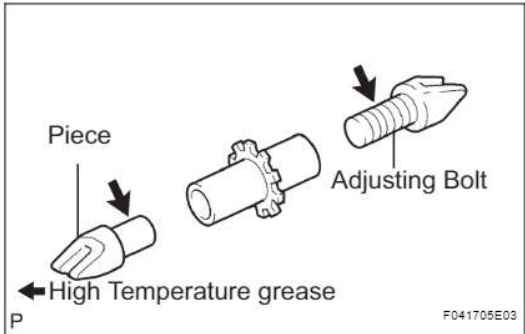
- (b) Using pliers, install the parking brake shoe lever and the shim with a new C-washer.

2. APPLY HIGH TEMPERATURE GREASE

- (a) Apply high temperature grease to the surface of the backing plate which is in contact with the shoe.

3. INSTALL PARKING BRAKE SHOE

- (a) Apply high temperature grease to the adjusting bolt and piece.
- (b) Using needle-nose pliers, connect the parking brake cable to the parking brake shoe lever.



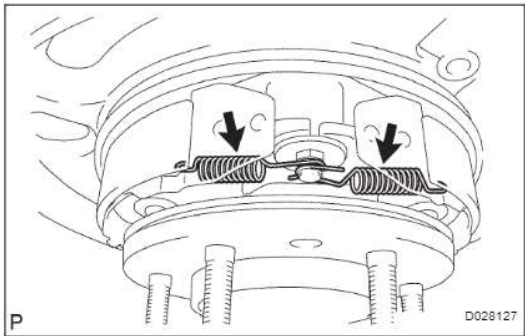
- (c) Install the No. 1 shoe, hold down spring pin, hold down compression spring and 2 hold down spring cups.
- (d) Install the return tension spring and shoe adjusting screw set.
- (e) Install the No. 2 shoe, hold down spring pin, hold down compression spring and 2 hold down spring cups.

4. INSTALL PARKING BRAKE SHOE STRUT

- (a) Attach the compression spring and parking brake shoe strut to the No. 2 and No. 1 shoes.

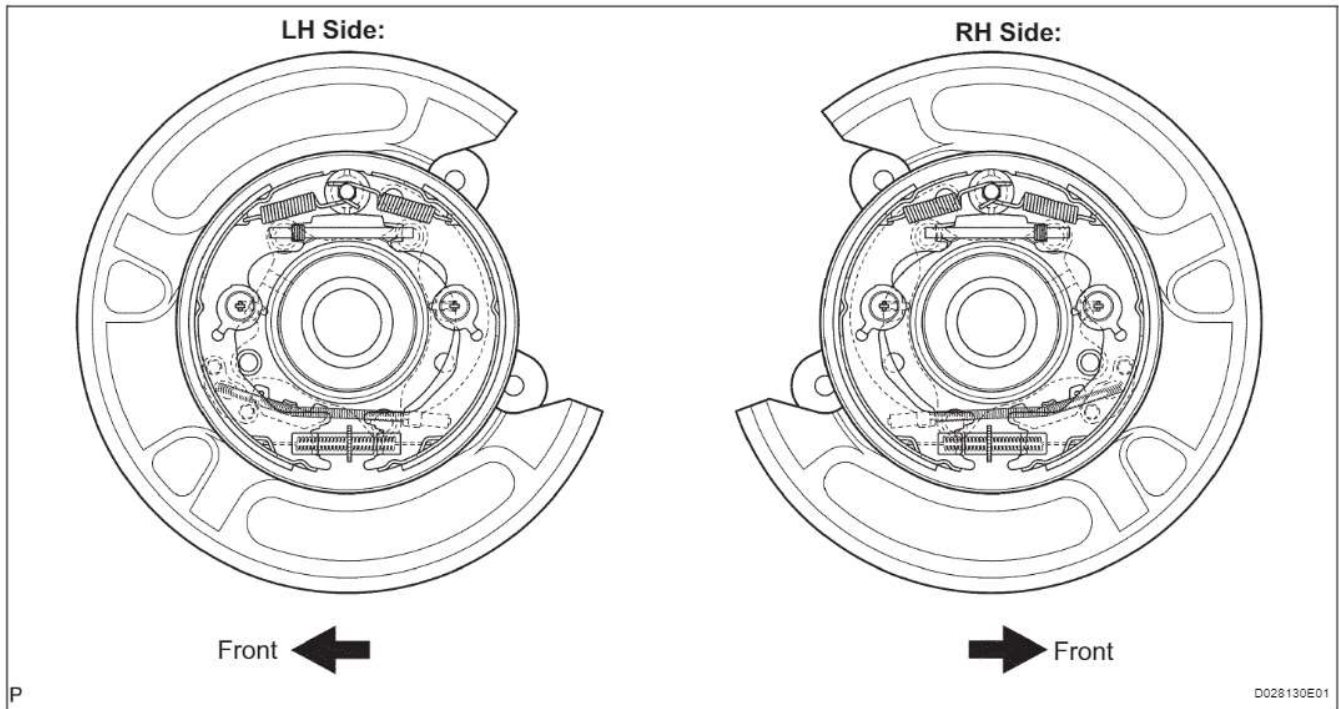
5. INSTALL PARKING BRAKE SHOE RETURN TENSION SPRING

- (a) Using needle-nose pliers, install the 2 return tension springs.
- HINT:
First install the front side spring then install the rear side spring.



PB-20**PARKING BRAKE – PARKING BRAKE ASSEMBLY****6. CHECK PARKING BRAKE INSTALLATION**

(a) Check that each part is installed properly.

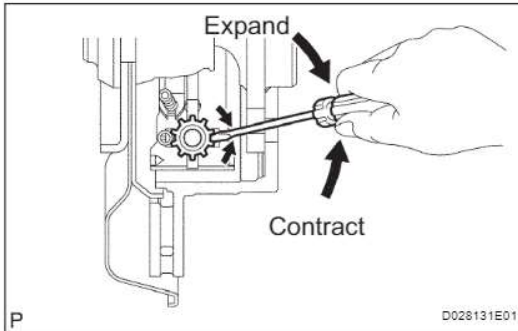
**NOTICE:**

There should be no oil or grease adhering to the friction surfaces of the shoe lining or the disc.

INSTALLATION

1. INSTALL REAR DISC

- Align the matchmarks of the disc and axle hub and install the disc.



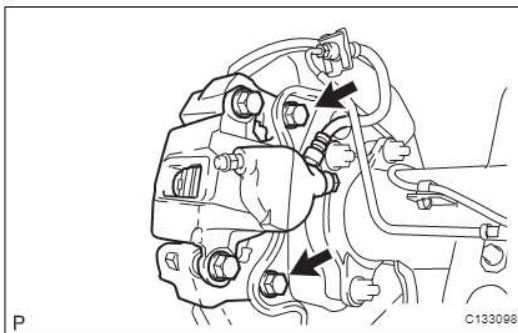
2. ADJUST PARKING BRAKE SHOE CLEARANCE

- Provisionally install the 2 hub nuts.
- Remove the hole plug, and turn the adjuster to expand the shoe until the disc locks.
- Contract the shoe adjuster until the disc rotates smoothly.

Standard:

Return 8 notches

- Install the hole plug.



3. INSTALL REAR DISC BRAKE CALIPER ASSEMBLY

- Install the disc brake caliper with the 2 bolts and 2 washers.

Torque: 105 N*m (1,071 kgf*cm, 78 ft.*lbf)

4. INSTALL REAR WHEEL

Torque: 112 N*m (1,137 kgf*cm, 82 ft.*lbf)

5. INSPECT PARKING BRAKE LEVER TRAVEL (See page [PB-4](#))

6. ADJUST PARKING BRAKE LEVER TRAVEL (See page [PB-4](#))

PB

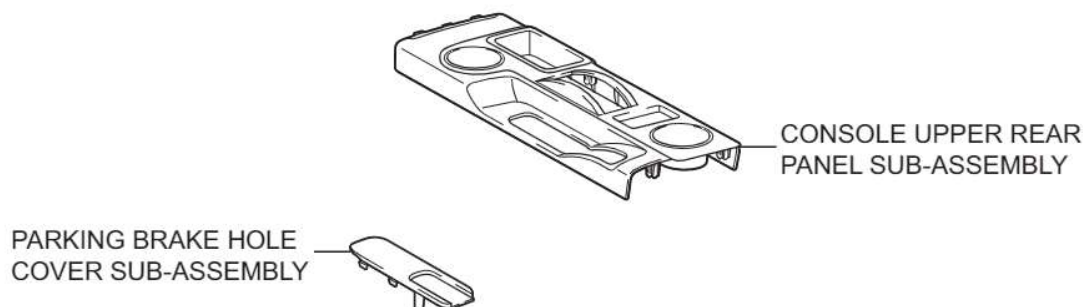
PB-22

PARKING BRAKE – PARKING BRAKE SWITCH

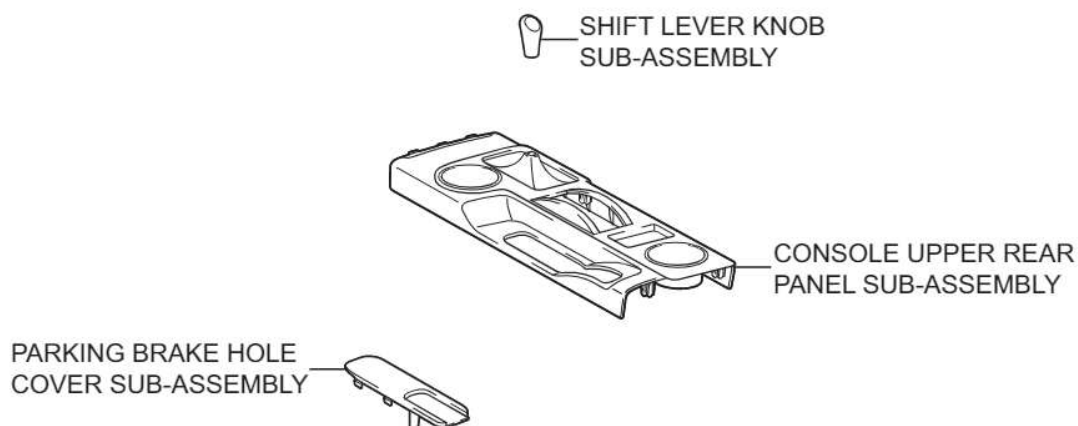
PARKING BRAKE SWITCH

COMPONENTS

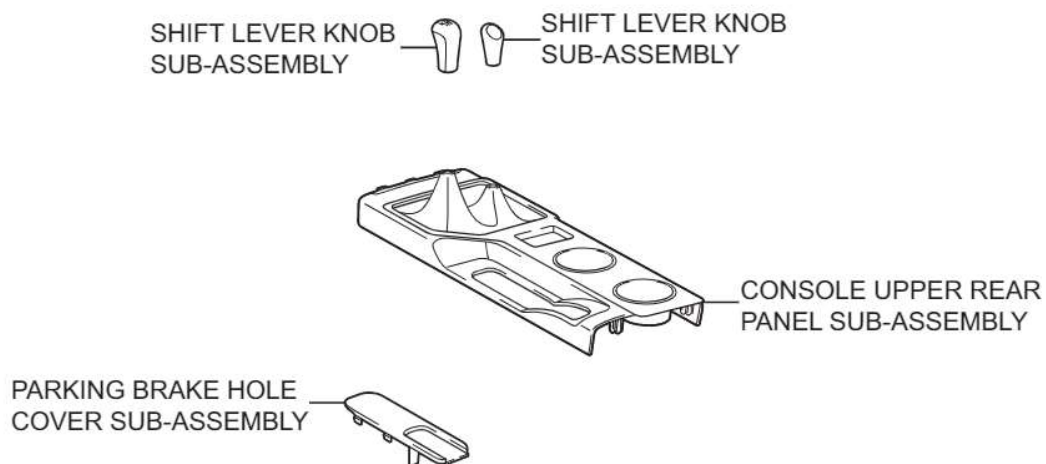
for Automatic Transmission 2WD:



for Automatic Transmission 4WD:



for Manual Transmission 4WD:



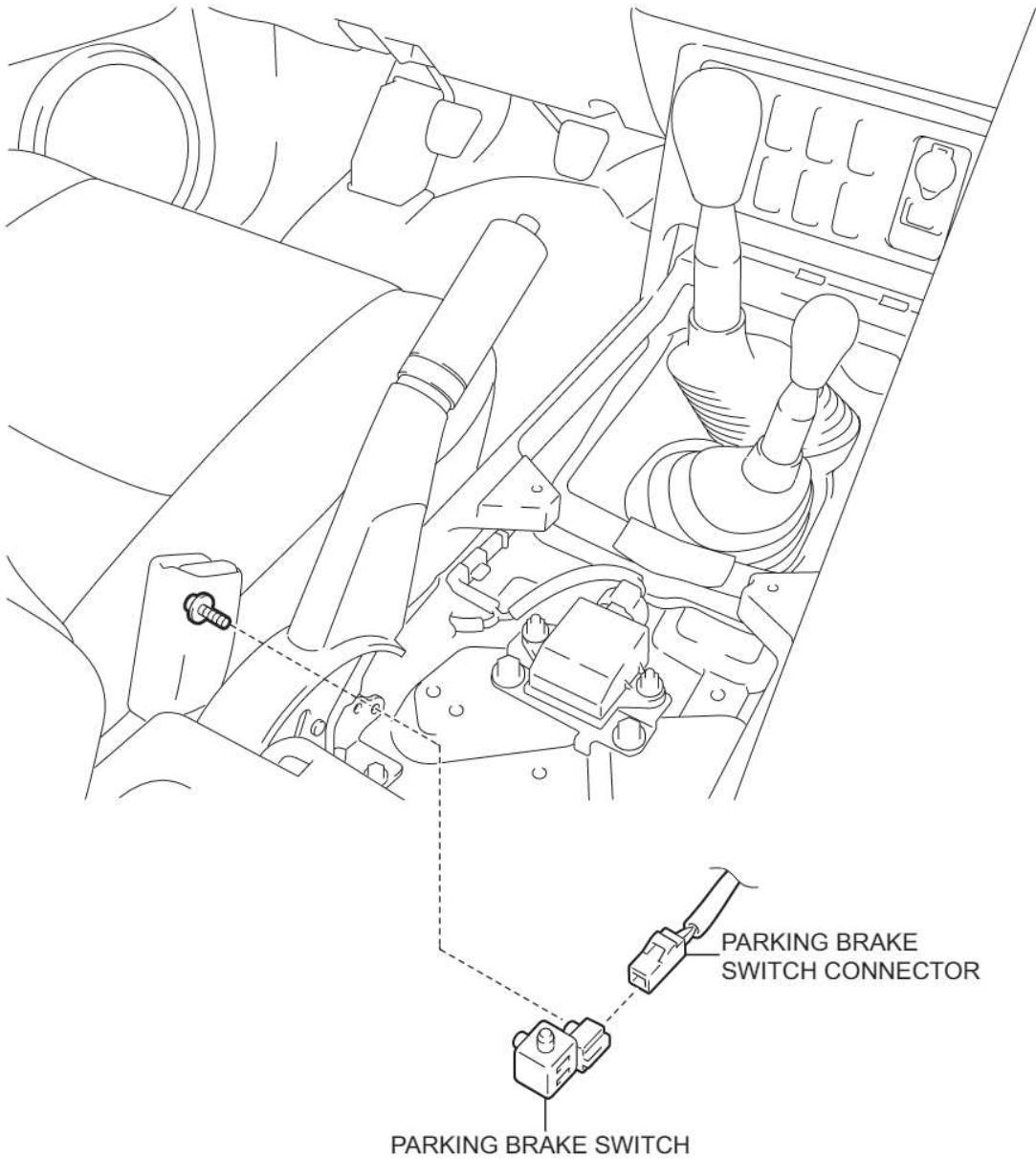
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PARKING BRAKE – PARKING BRAKE SWITCH

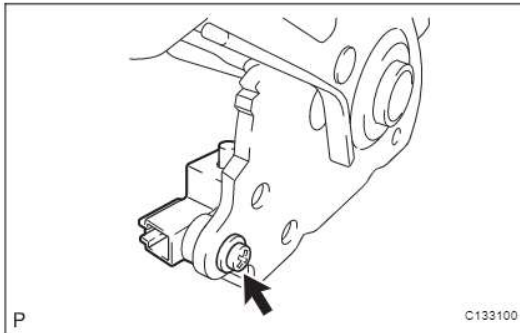
PB-23

PB



PB-24**PARKING BRAKE – PARKING BRAKE SWITCH****REMOVAL**

1. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL**
2. **REMOVE PARKING BRAKE HOLE COVER SUB-ASSEMBLY** (See page [IP-11](#))
3. **REMOVE SHIFT LEVER KNOB SUB-ASSEMBLY** (for Manual Transmission) (See page [IP-11](#))
4. **REMOVE SHIFT LEVER KNOB SUB-ASSEMBLY** (for 4WD) (See page [IP-11](#))
5. **REMOVE CONSOLE UPPER REAR PANEL SUB-ASSEMBLY** (See page [IP-12](#))
6. **REMOVE PARKING BRAKE SWITCH**
 - (a) Disconnect the parking brake switch connector.
 - (b) Remove the screw and parking brake switch.

**PB**

INSPECTION

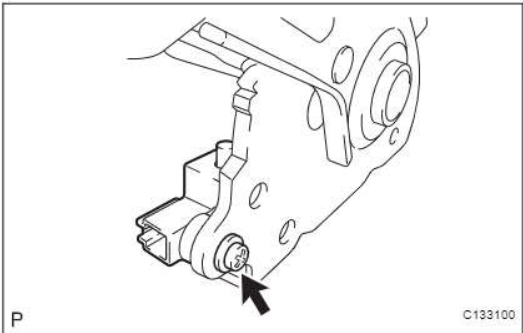
1. INSPECT PARKING BRAKE SWITCH
- (a) Check the resistance.

(1) Using an ohmmeter, measure the resistance between the terminals.

Standard resistance

Tester Connection	Switch Condition	Specified Condition
1 - Ground	Released	Below 1 Ω
1 - Ground	Pushed in	10 kΩ or higher

If the result is not as specified, replace the parking brake switch.



INSTALLATION

1. INSTALL PARKING BRAKE SWITCH
- (a) Install the parking brake switch with the screw.

(b) Connect the parking brake switch connector.
2. INSTALL CONSOLE UPPER REAR PANEL SUB-ASSEMBLY (See page [IP-31](#))
3. INSTALL SHIFT LEVER KNOB SUB-ASSEMBLY (for 4WD) (See page [IP-32](#))
4. INSTALL SHIFT LEVER KNOB SUB-ASSEMBLY (for Manual Transmission) (See page [IP-32](#))
5. INSTALL PARKING BRAKE HOLE COVER SUB-ASSEMBLY (See page [IP-32](#))
6. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL
- Torque: 3.9 N*m (40 kgf*cm, 35 in.*lbf)