

BRAKE SYSTEM

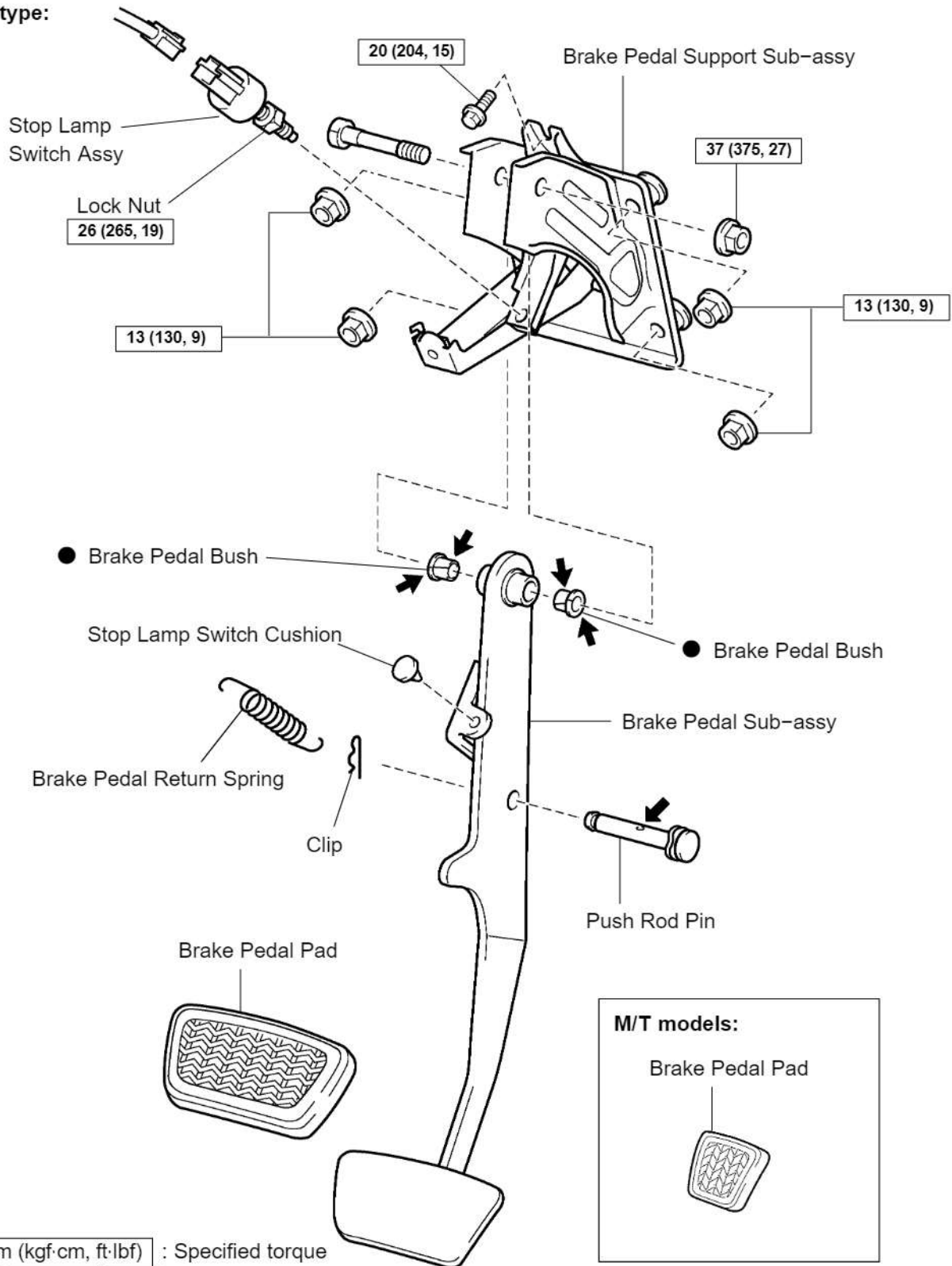
32038-12

PRECAUTION

- Care must be taken to replace each part properly as it could affect the performance of the brake system and result in a driving hazard. Replace the parts with parts having the same part number or equivalent.
- It is very important to keep parts and the area clean when repairing the brake system.
- If the vehicle is equipped with a mobile communication system, refer to the precaution in the INTRODUCTION section.

COMPONENTS

Normal type:

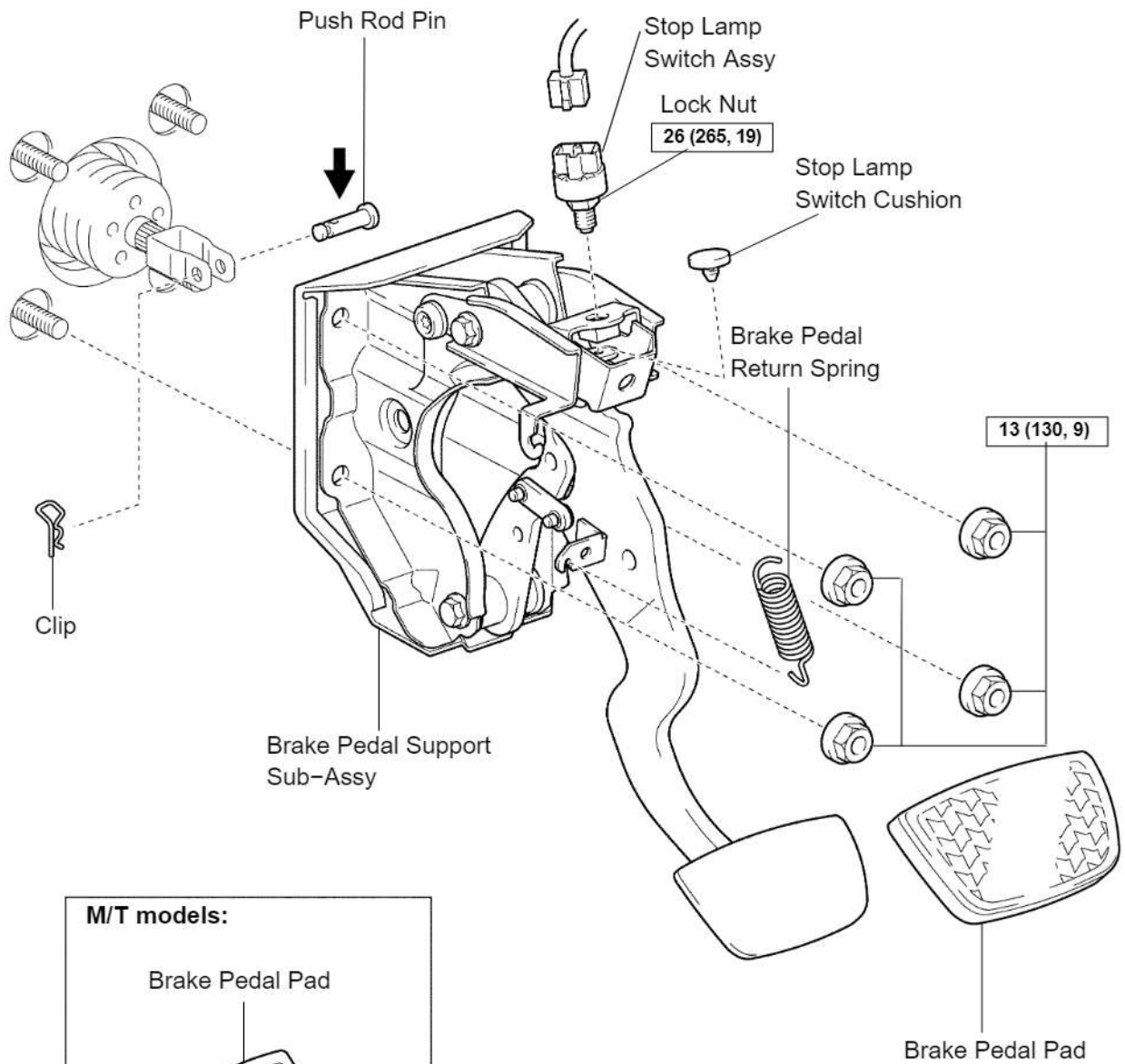


T N·m (kgf·cm, ft·lbf) : Specified torque

● Non-reusable part

← Lithium soap base glycol grease

Link type:



M/T models:

Brake Pedal Pad



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

← Lithium soap base glycol grease

OVERHAUL

1. **REMOVE INSTRUMENT PANEL REINFORCEMENT** (See page 55-34)
2. **REMOVE BRAKE PEDAL RETURN SPRING**
3. **REMOVE PUSH ROD PIN**
 - (a) Remove the clip and push rod pin.
4. **REMOVE BRAKE PEDAL SUPPORT ASSY**
 - (a) Disconnect the stop lamp switch connector.
 - (b) Normal type:
Remove the bolt, 4 nuts and brake pedal support assy.
 - (c) Link type:
Remove the 4 nuts and brake pedal support assy.
5. **REMOVE STOP LAMP SWITCH ASSY**
 - (a) Loosen the lock nut and remove the stop lamp switch.
6. **REMOVE BRAKE PEDAL SUB-ASSY (NORMAL TYPE BRAKE PEDAL)**
 - (a) Remove the nut, bolt and brake pedal sub-assy from brake pedal support sub-assy.
7. **REMOVE BRAKE PEDAL PAD**
8. **REMOVE BRAKE PEDAL BUSH (NORMAL TYPE BRAKE PEDAL)**
 - (a) Remove the 2 brake pedal bushes from brake pedal sub-assy.
9. **REMOVE STOP LAMP SWITCH CUSHION**
10. **INSTALL STOP LAMP SWITCH CUSHION**
11. **INSTALL BRAKE PEDAL BUSH (NORMAL TYPE BRAKE PEDAL)**
 - (a) Install the new 2 brake pedal bushes to brake pedal sub-assy.

HINT:

Apply the lithium soap base glycol grease to the parts indicates by arrows (See page 32-10).

12. **INSTALL BRAKE PEDAL PAD**
13. **INSTALL BRAKE PEDAL SUB-ASSY (NORMAL TYPE BRAKE PEDAL)**
 - (a) Install the brake pedal sub-assy with the bolt and nut.
Torque: 37 N·m (375 kgf·cm, 27 ft·lbf)
14. **INSTALL STOP LAMP SWITCH ASSY**
 - (a) Install the stop lamp switch with the lock nut.
Torque: 26 N·m (265 kgf·cm, 19 ft·lbf)
15. **INSTALL BRAKE PEDAL SUPPORT ASSY**
 - (a) Normal type:
Install the brake pedal support assy with the bolt and 4 nuts.
Torque:
Bolt: 20 N·m (204 kgf·cm, 15 ft·lbf)
Nut: 13 N·m (130 kgf·cm, 9 ft·lbf)
 - (b) Link type:
Install the brake pedal support assy with the 4 nuts.
Torque:
13 N·m (130 kgf·cm, 9 ft·lbf)
16. **INSTALL PUSH ROD PIN**
 - (a) Install the push rod pin and clip.

HINT:

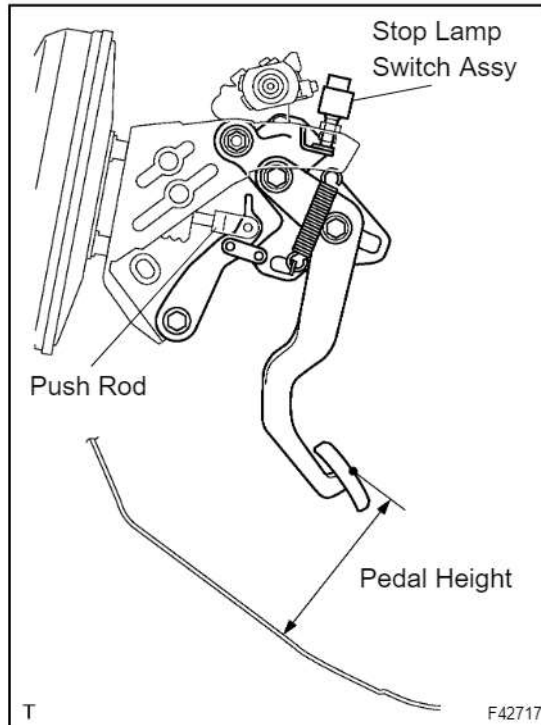
Apply the lithium soap base glycol grease to the parts indicates by arrows (See page 32-10).

17. **INSTALL BRAKE PEDAL RETURN SPRING**
18. **INSTALL INSTRUMENT PANEL REINFORCEMENT** (See page 55-34)
19. **CHECK AND ADJUST BRAKE PEDAL HEIGHT** (See page 32-8)
20. **CHECK PEDAL FREE PLAY** (See page 32-8)

21. CHECK PEDAL RESERVE DISTANCE (See page [32-8](#))

ACCELERATOR & BRAKE PEDAL ASSY ADJUSTMENT

320MZ-03



1. CHECK AND ADJUST BRAKE PEDAL HEIGHT

- (a) Inspect brake pedal height.

Pedal height from asphalt sheet:

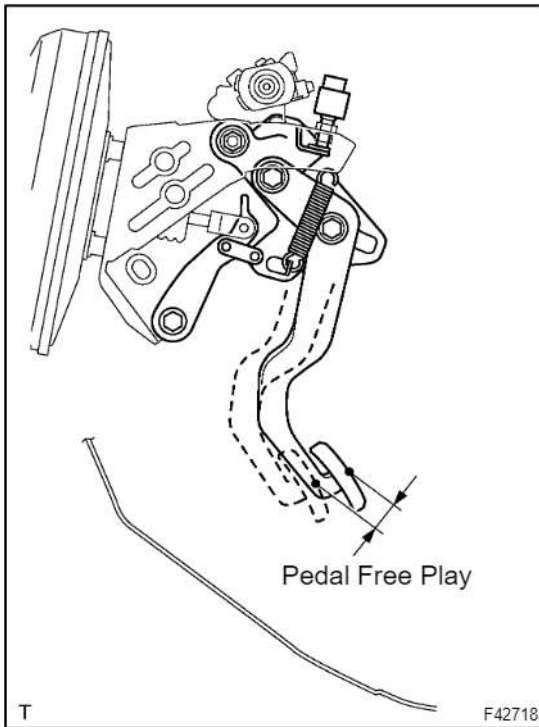
144.1 – 154.1 mm (5.673 – 6.067 in.)

- (b) Adjust brake pedal height.

- (1) Remove the instrument panel finish panel sub-assy lower and instrument panel insert sub-assy lower LH.
- (2) Disconnect the connector from the stop lamp switch assy.
- (3) Loosen the stop lamp switch lock nut and remove the stop lamp switch assy.
- (4) Loosen the clevis lock nut.
- (5) Adjust the pedal height by turning the pedal push rod.
- (6) Tighten the push rod lock nut.

Torque: 26 N·m (265 kgf·cm, 19 ft·lbf)

- (7) Install the stop lamp switch assy.
- (8) Connect the connector to the stop lamp switch assy.
- (9) Push the brake pedal in 5 – 10 mm (0.20 – 0.39 in.), turn the stop lamp switch assy to lock the nut in the position where the stop lamp goes off.
- (10) After installation, push the brake pedal in 5 – 10 mm (0.20 – 0.39 in.), check that stop lamp lights up.
- (11) Install the instrument panel insert sub-assy lower LH and instrument panel finish panel sub-assy lower.



2. CHECK PEDAL FREE PLAY

- Stop the engine and depress the brake pedal several times until there is no more vacuum left in the booster.
- Push in the pedal until the beginning of the resistance is felt. Measure the distance, as shown.

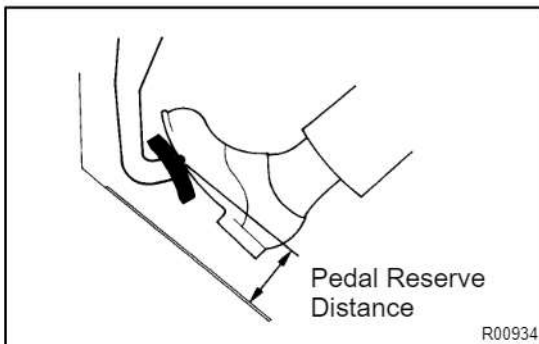
Pedal free play: 1 – 6 mm (0.04 – 0.24 in.)

If incorrect, check the stop lamp switch assy clearance.

If the clearance is OK, then troubleshoot the brake system.

Stop lamp switch clearance:

0.5 – 2.5 mm (0.020 – 0.098 in.)



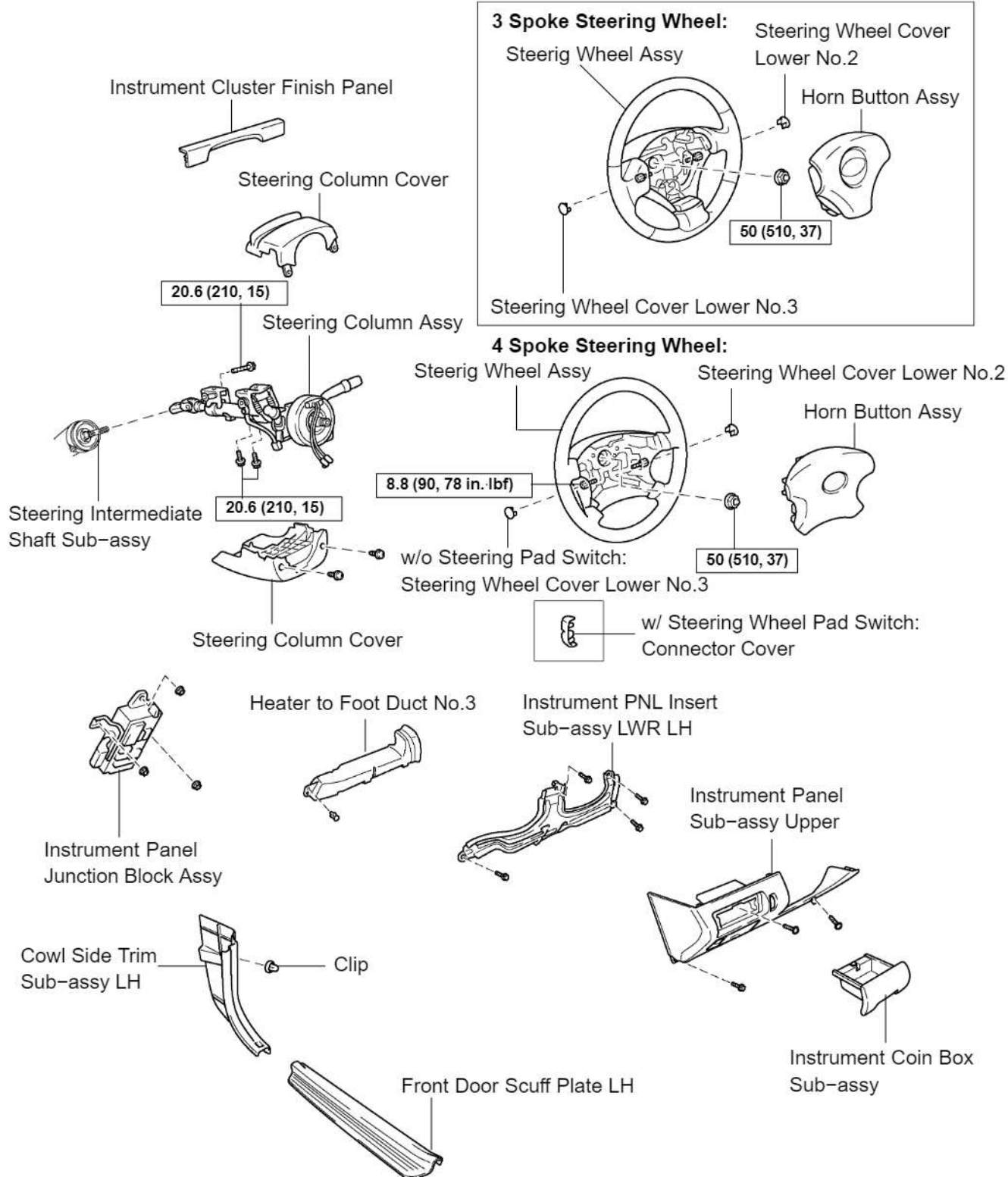
3. CHECK PEDAL RESERVE DISTANCE

- Release the parking brake pedal.
With engine running, depress the pedal and measure the pedal reserve distance, as shown.

Pedal reserve distance from asphalt sheet at 490 N (50 kgf, 110.2 lbf): More than 63 mm (2.48 in.)

If incorrect, troubleshoot the brake system.

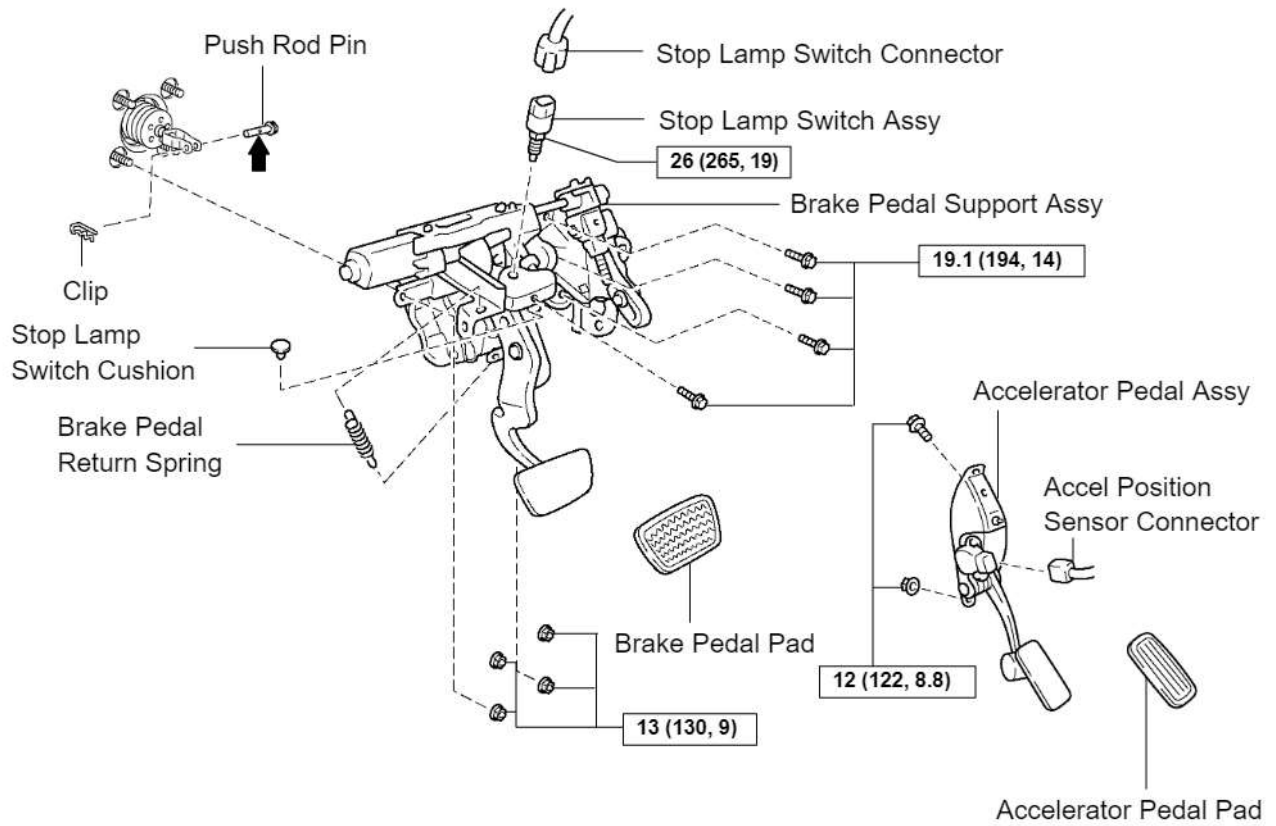
COMPONENTS



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

N

F16903



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

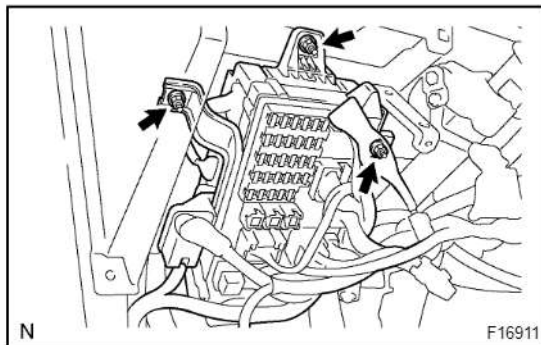
← Lithium soap base glycol grease

N

F16916

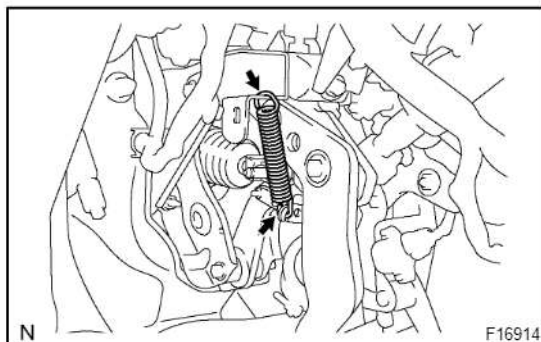
OVERHAUL

1. PRECAUTION (See page 60-1)
2. DISCONNECT BATTERY NEGATIVE TERMINAL
3. REMOVE STEERING WHEEL COVER LOWER NO.2
4. REMOVE STEERING WHEEL COVER LOWER NO.2 (W/O STEERING PAD SWITCH 4 SPOKE STEERING WHEEL)
5. REMOVE POWER WINDOW LOCK SWITCH BULB (W/ STEERING PAD SWITCH 4 SPOKE STEERING WHEEL)
(See page 50-6)
6. REMOVE STEERING WHEEL COVER LOWER NO.3 (3 SPOKE STEERING WHEEL ASSY)
(See page 50-6)
7. INSPECT PLACE FRONT WHEELS FACING STRAIGHT AHEAD
8. REMOVE HORN BUTTON ASSY (See page 60-25)
9. REMOVE STEERING WHEEL ASSY (See page 50-9)
SST 09950-50013 (09951-05010, 09952-05010, 09953-05020, 09954-05021)
10. REMOVE INSTRUMENT CLUSTER FINISH PANEL (See page 71-16)
11. REMOVE STEERING COLUMN COVER (See page 50-9)
12. DISCONNECT FLOOR SHIFT PARKING LOCK CABLE ASSY (See page 50-9)
13. REMOVE FRONT DOOR SCUFF PLATE LH (See page 71-16)
14. REMOVE COWL SIDE TRIM SUB-ASSY LH (See page 71-16)
15. REMOVE INSTRUMENT PANEL COIN BOX SUB-ASSY (See page 71-16)
16. REMOVE INSTRUMENT PANEL SUB-ASSY UPPER (See page 71-16)
17. REMOVE INSTRUMENT PNL INSERT SUB-ASSY LWR LH (See page 71-16)
18. REMOVE DUCT, FR VENTILATOR, LH (See page 71-16)
19. DISCONNECT STEERING INTERMEDIATE SHAFT SUB-ASSY (See page 50-9)
20. REMOVE STEERING COLUMN ASSY (See page 50-9)

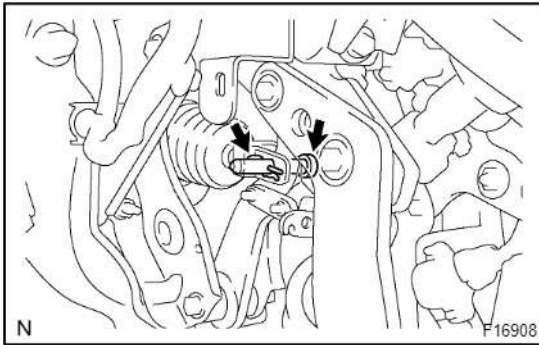


21. REMOVE INSTRUMENT PANEL JUNCTION BLOCK ASSY

- (a) Remove the 3 nuts and junction block assy, then disconnect the connector.

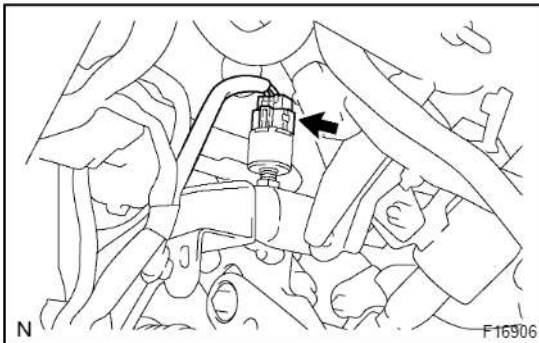


22. REMOVE BRAKE PEDAL RETURN SPRING



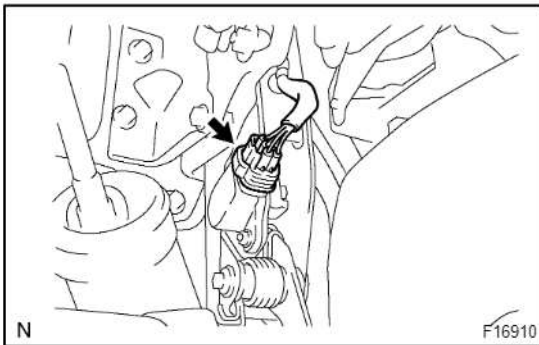
23. REMOVE PUSH ROD PIN

- (a) Remove the clip and push rod pin.

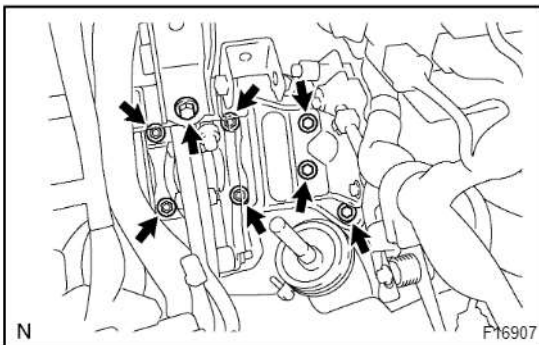


24. REMOVE ACCELERATOR & BRAKE PEDAL ASSY

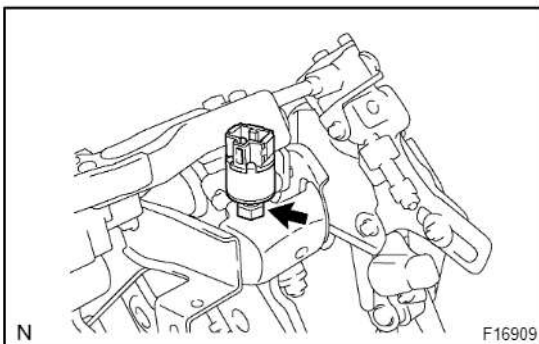
- (a) Disconnect the stop lamp switch connector.



- (b) Disconnect the accel position sensor connector.

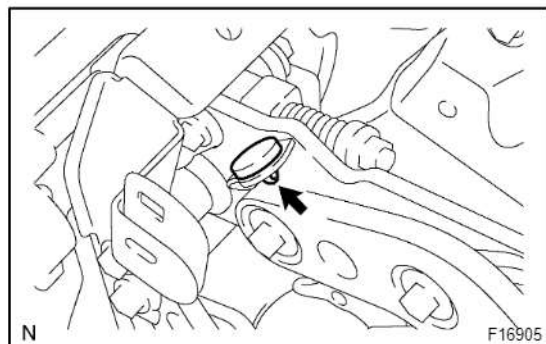
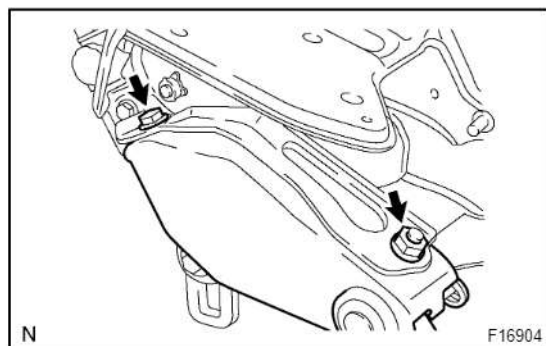


- (c) Remove the 4 bolts, 4 nuts and accelerator & brake pedal assy.

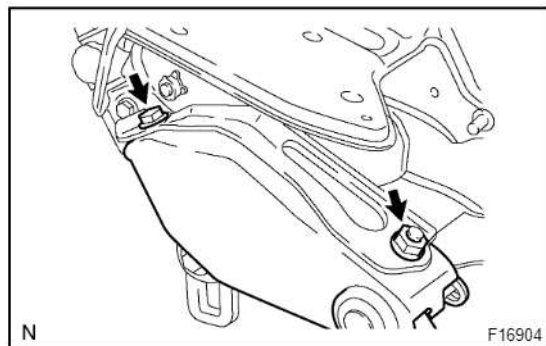


25. REMOVE STOP LAMP SWITCH ASSY

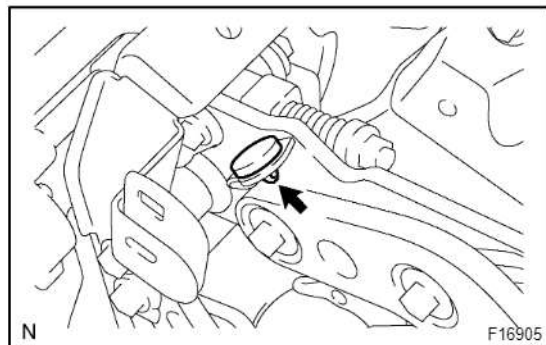
- (a) Loosen the nut and remove the stop lamp switch assy.

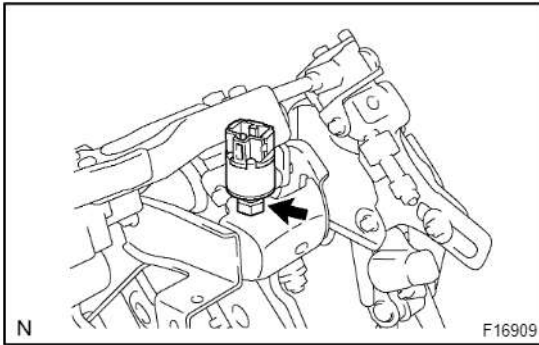
26. REMOVE BRAKE PEDAL PAD**27. REMOVE STOP LAMP SWITCH CUSHION****28. REMOVE ACCELERATOR PEDAL ASSY**

- (a) Remove the bolt, nut and accelerator pedal assy.

**29. INSTALL ACCELERATOR PEDAL ASSY**

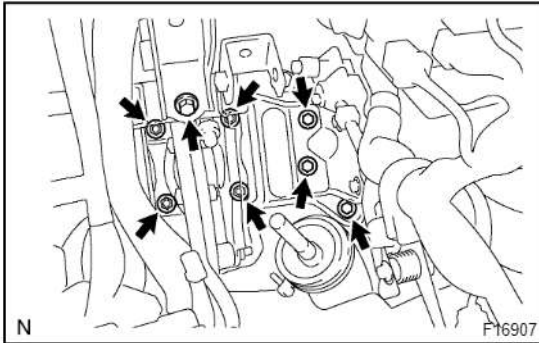
- (a) Install the accelerator pedal assy with nut and bolt.
Torque: 12 N·m (122 kgf·cm, 8.8 ft·lbf)

**30. INSTALL STOP LAMP SWITCH CUSHION****31. INSTALL BRAKE PEDAL PAD**



32. INSTALL STOP LAMP SWITCH ASSY

- (a) Install the stop lamp switch assy with a nut.
Torque: 26 N·m (265 kgf·cm, 19 ft·lbf)



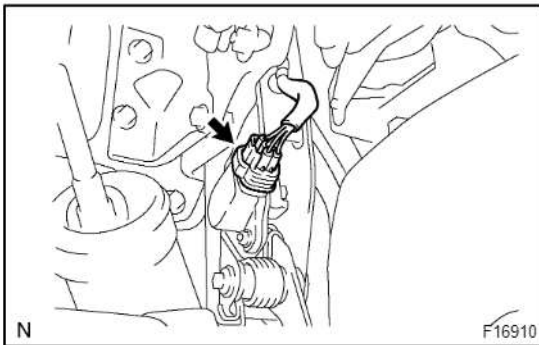
33. INSTALL ACCELERATOR & BRAKE PEDAL ASSY

- (a) Install the accelerator & brake pedal assy with the 4 nuts and 4 bolts.

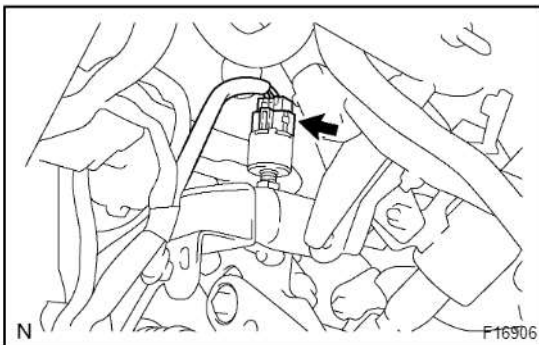
Torque:

Nut: 13 N·m (130 kgf·cm, 9 ft·lbf)

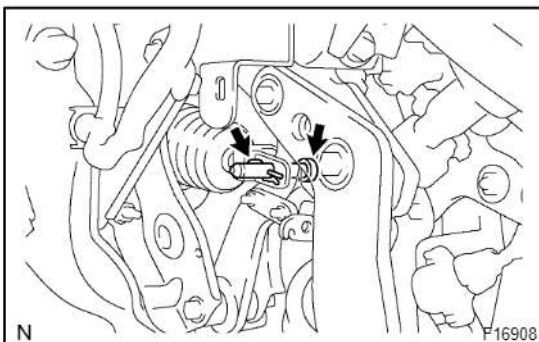
Bolt: 19.1 N·m (194 kgf·cm, 14 ft·lbf)



- (b) Connect the accel position sensor connector.



- (c) Connect the stop lamp switch connector.

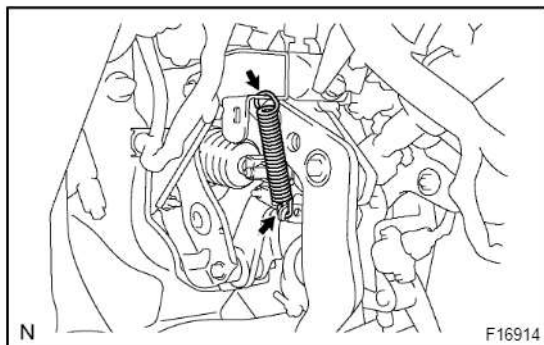


34. INSTALL PUSH ROD PIN

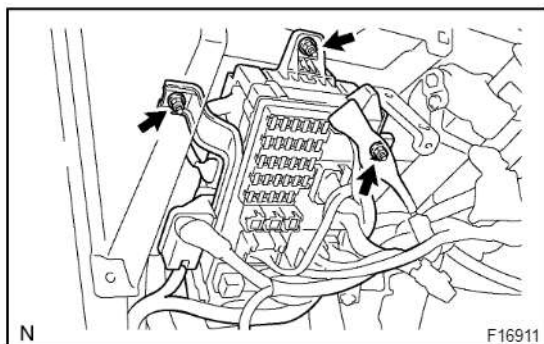
- (a) Install the push rod pin and clip.

HINT:

Apply the lithium soap base glycol grease to the parts indicated by arrows (See page 32-16).



35. INSTALL BRAKE PEDAL RETURN SPRING



36. INSTALL INSTRUMENT PANEL JUNCTION BLOCK ASSY

- (a) Install the junction block assy with the 3 nuts, then connect the each connector.

37. INSTALL STEERING COLUMN ASSY (See page 50-9)
38. CONNECT STEERING INTERMEDIATE SHAFT SUB-ASSY (See page 50-9)
39. PLACE FRONT WHEELS FACING STRAIGHT AHEAD
40. CONNECT FLOOR SHIFT PARKING LOCK CABLE ASSY (See page 50-9)
41. CHECK KEY INTERLOCK OPERATION
42. INSTALL STEERING COLUMN COVER (See page 50-9)
43. INSTALL INSTRUMENT CLUSTER FINISH PANEL (See page 71-16)
44. INSTALL DUCT, FR VENTILATOR, LH (See page 71-16)
45. INSTALL INSTRUMENT PNL INSERT SUB-ASSY LWR LH (See page 71-16)
46. INSTALL INSTRUMENT PANEL SUB-ASSY UPPER (See page 71-16)
47. INSTALL INSTRUMENT PANEL COIN BOX SUB-ASSY (See page 71-16)
48. INSTALL COWL SIDE TRIM SUB-ASSY LH (See page 71-16)
49. INSTALL FRONT DOOR SCUFF PLATE LH (See page 71-16)
50. CENTER SPIRAL CABLE (See page 60-34)
51. INSTALL STEERING WHEEL ASSY (See page 50-9)
52. INSPECT HORN BUTTON ASSY (See page 60-25)
53. INSTALL HORN BUTTON ASSY (See page 60-25)
54. INSTALL STEERING WHEEL COVER LOWER NO.2
55. INSTALL STEERING WHEEL COVER LOWER NO.3 (W/O STEERING PAD SWITCH 4 SPOKE STEERING WHEEL)
56. INSTALL POWER WINDOW LOCK SWITCH BULB (W/ STEERING PAD SWITCH 4 SPOKE STEERING WHEEL)
57. INSTALL STEERING WHEEL COVER LOWER NO.3 (3 SPOKE STEERING WHEEL ASSY)
58. INSPECT STEERING WHEEL CENTER POINT
59. INSPECT SRS WARNING LIGHT (See page 05-1464)

PROBLEM SYMPTOMS TABLE

Use the table below to help you find the cause of the problem. The numbers indicate the priority of the likely cause of the problem. Check each part in order. If necessary, replace these parts.

Symptom	Suspect Area	See page
Low pedal or spongy pedal	1. Fluid leaks for brake system	–
	2. Air in brake system	32-4
	3. Piston seals (Worn or damaged)	32-35
		32-44
	4. Rear brake shoe clearance (Out of adjustment)	32-50
	5. Master cylinder (Faulty)	32-23
	6. Booster push rod (Out of adjustment)	32-23
Brake drag	1. Brake pedal freeplay (Minimal)	32-8
		32-14
	2. Parking brake pedal travel (Out of adjustment)	33-19
	3. Parking brake wire (Sticking)	33-10
		33-14
		33-17
	4. Rear brake shoe clearance (Out of adjustment)	32-50
	5. Parking brake shoe clearance (Out of adjustment)	33-19
	6. Pad or lining (Cracked or distorted)	32-35
		32-44
		32-50
Brake pull	7. Piston (Stuck)	32-35
		32-44
	8. Piston (Frozen)	32-35
		32-44
	9. Anchor, tension or return spring (Faulty)	33-19
		32-50
	10. Booster push rod (Out adjustment)	32-23
	11. Master cylinder (Faulty)	32-23
	1. Piston (Stuck)	32-35
		32-44
	2. Pad or lining (Oily)	32-35
Brake pull		32-44
		32-50
	3. Piston (Frozen)	32-35
		32-44
	4. Disc (Scored)	32-35
		32-44
	5. Pad or lining (Cracked or distorted)	32-35
		32-44
		32-50

BRAKE - BRAKE SYSTEM

Hard pedal but brake inefficient	1. Fluid leaks for brake system 2. Air in brake system 3. Pad or lining (Worn) 4. Pad or lining (Cracked or distorted) 5. Rear brake shoe clearance (Out of adjustment) 6. Pad or lining (Oily) 7. Pad or lining (Glanzed) 8. Disc (Scored) 9. Booster push rod (Out of adjustment)	- 32-4 32-35 32-44 32-50 32-35 32-44 32-50 32-50 32-35 32-44 32-50 32-35 32-44 32-50 32-35 32-44 32-23
Noise from brakes	1. Pad on lining (Cracked or distorted) 2. Installation bolt (Loose) 3. Disc (Scored) 4. Pad support plate (Loose) 5. Sliding pin (Worn) 6. Pad or lining (dirty) 7. Pad or lining (Glanzed) 8. Anchor, tension or return spring (Faulty) 9. Anti-squeal shim (Damaged) 10. Shoe hold-down spring (Damaged)	32-35 32-44 32-50 32-35 32-44 32-35 32-44 32-35 32-44 32-50 32-35 32-44 32-50 32-50 33-19 32-35 32-44 32-50 33-19

BRAKE MASTER CYLINDER SUB-ASSY

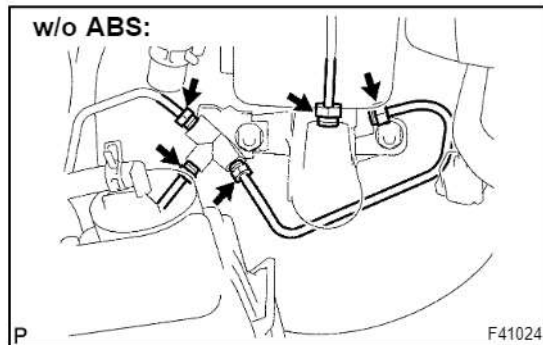
OVERHAUL

1. DRAIN BRAKE FLUID

NOTICE:

Wash off the brake fluid immediately if it comes into contact with a painted surface.

2. REMOVE AIR CLEANER ASSY



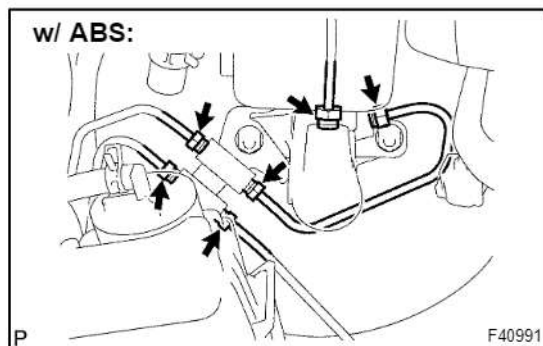
3. REMOVE BRAKE MASTER CYLINDER SUB-ASSY

(a) Disconnect the level warning switch connector.

(b) w/o ABS:

Using SST, disconnect the 5 brake tubes from the brake master cylinder.

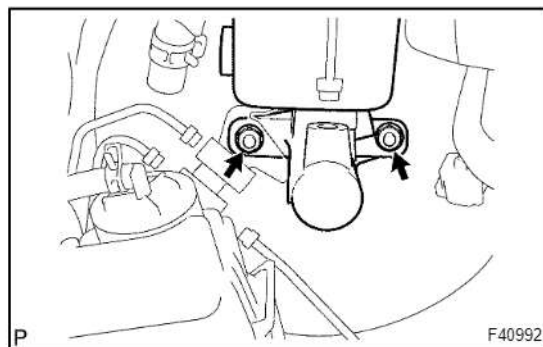
SST 09023-00101



(c) w/ ABS:

Using SST, disconnect the 6 brake tubes from the brake master cylinder.

SST 09023-00101



(d) w/o ABS:

Remove the 2 nuts, pull out the 3-way and brake master cylinder sub-assy.

(e) w/ ABS:

Remove the 2 nuts, pull out the 2-way and brake master cylinder sub-assy.

4. REMOVE BRAKE MASTER CYLINDER RESERVOIR FILLER CAP ASSY

(a) Pull out the master cylinder reservoir filler cap assy.

5. REMOVE BRAKE MASTER CYLINDER RESERVOIR STRAINER

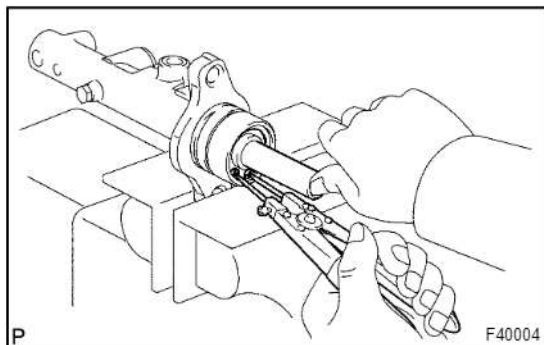
(a) Pull out the master cylinder reservoir strainer.

6. REMOVE BRAKE MASTER CYLINDER RESERVOIR SUB-ASSY

(a) Remove the screw and pull out the master cylinder reservoir sub-assy.

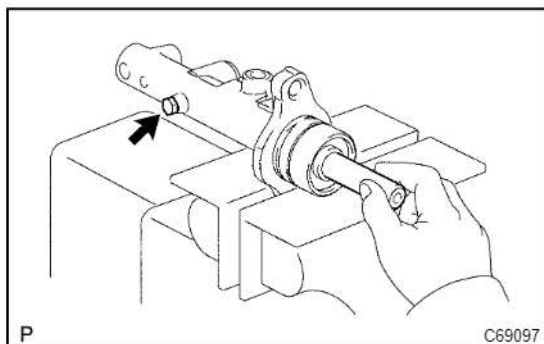
7. REMOVE MASTER CYLINDER RESERVOIR GROMMET

(a) Remove the 2 master cylinder reservoir grommets.



8. REMOVE BRAKE MASTER CYLINDER KIT (W/O VSC)

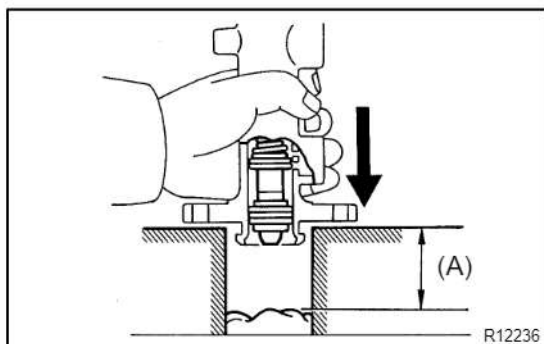
- Place master cylinder in vise.
- Remove the O-ring.
- Push in the piston and remove the snap ring with snap ring pliers.



- Push in the piston and remove the piston stopper bolt and gasket.
- Remove the No.1 piston sub-assy, pulling straight out not at an angle.

NOTICE:

If pulled out at an angle, there is a possibility that the cylinder bore could be damaged.



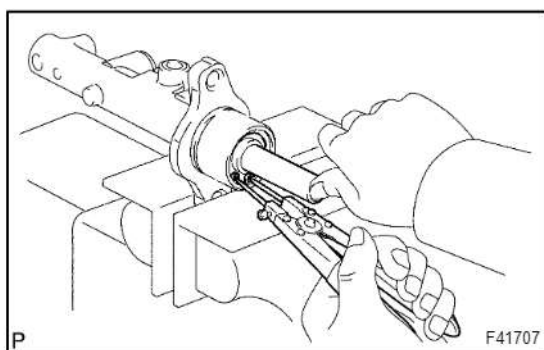
- Place a waste cloth and 2 wooden blocks on the work table and lightly edges until the No.2 piston sub-assy drops out of the cylinder.

HINT:

Make sure the distance (A) from the rag the top of the blocks is at least 100 mm (3.94 in.).

NOTICE:

If pulled out at an angle, there is a possibility that the cylinder bore could be damaged.

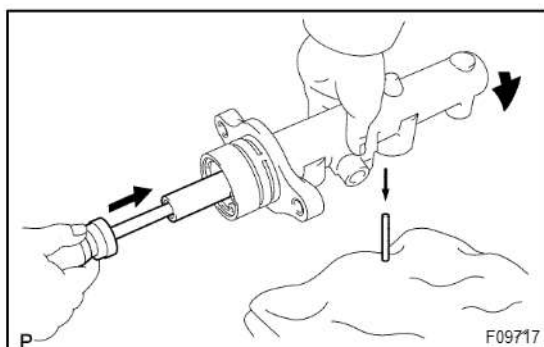


9. REMOVE BRAKE MASTER CYLINDER KIT (W/ VSC)

- Place master cylinder in vise.
- Remove the O-ring.
- Push in the piston and remove the snap ring with snap ring pliers.

NOTICE:

If pulled out at an angle, there is a possibility that the cylinder bore could be damaged.



- Push in the piston with a screwdriver, and remove the straight pin by turning over the cylinder body.

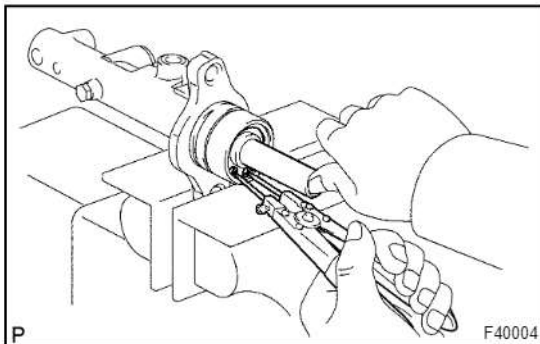
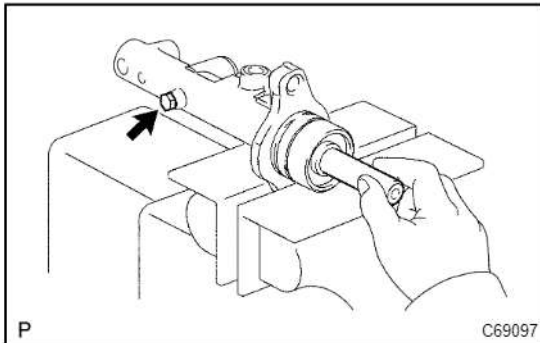
HINT:

Tape the screwdriver tip before use.

- Remove the No.1 and No.2 piston sub-assy and 2 springs by hand, pulling straight out, not at an angle.

10. INSPECT MASTER CYLINDER BODY

- (a) Check the cylinder bore for rust or scoring.

**11. INSTALL BRAKE MASTER CYLINDER KIT (W/O VSC)**

- (a) Place master cylinder in vise.
 (b) Apply the lithium soap base glycol grease on new No.1 and No.2 piston sub-assy.
 (c) Install the No.2 and No.1 piston sub-assy.

NOTICE:

- If the piston is inserted at an angle, there is a possibility that the cylinder bore could be damaged.
 - Be careful not to damage the rubber lips on the pistons.
- (d) Push in the piston and install a new gasket and a new piston stopper bolt.

Torque: 10 N·m (100 kgf·cm, 7 ft·lbf)

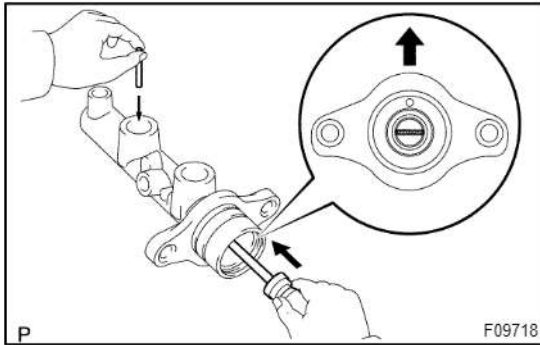
- (e) Push in the piston and install the snap ring with snap ring pliers.
 (f) Apply the lithium soap base glycol grease on a new O-ring and install the O-ring to the master cylinder.

12. INSTALL BRAKE MASTER CYLINDER KIT (W/ VSC)

- (a) Place master cylinder in vise.
 (b) Apply the lithium soap base glycol grease on new No.1 and No.2 piston sub-assy.
 (c) Install the No.2 and No.1 piston sub-assy.

NOTICE:

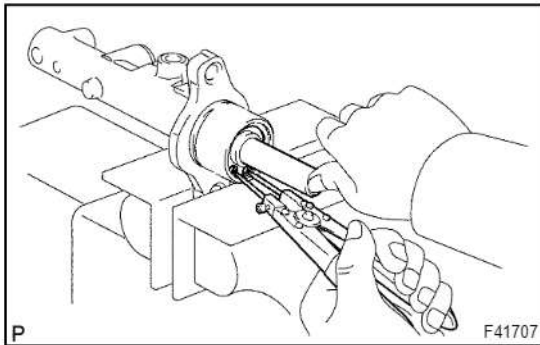
- If the piston is inserted at an angle, there is a possibility that the cylinder bore could be damaged.
- Be careful not to damage the rubber lips on the pistons.



(d) Install the straight pin.

HINT:

Insert the No.2 piston with the groove positioning horizontally.



(e) Push in the piston and install the snap ring with snap ring pliers.

(f) Apply the lithium soap base glycol grease on a new O-ring and install the O-ring to the master cylinder.

13. INSTALL MASTER CYLINDER RESERVOIR GROMMET

- (a) Apply the lithium soap base glycol grease on the 2 master cylinder reservoir grommets.
- (b) Install the 2 master cylinder reservoir grommets to the master cylinder reservoir sub-assy.

14. INSTALL BRAKE MASTER CYLINDER RESERVOIR SUB-ASSY

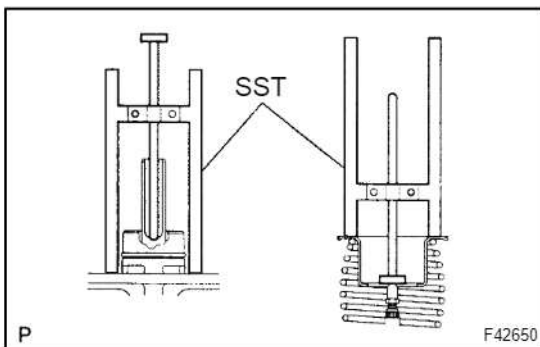
- (a) Install the master cylinder reservoir sub-assy to the master cylinder with the screw.

15. INSTALL BRAKE MASTER CYLINDER RESERVOIR STRAINER

- (a) Install the brake master cylinder reservoir strainer.

16. INSTALL BRAKE MASTER CYLINDER RESERVOIR FILLER CAP ASSY

- (a) Install the brake master cylinder reservoir filler cap assy.



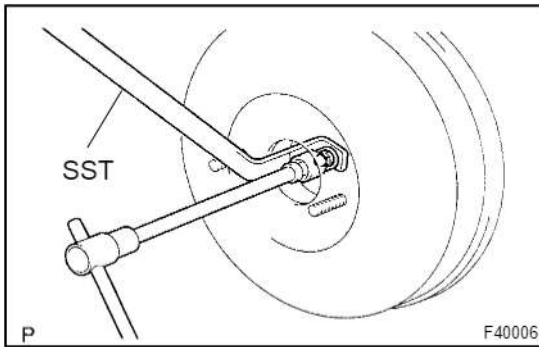
17. INSPECT AND ADJUST BRAKE BOOSTER PUSH ROD

- (a) Apply SST to the master cylinder.
SST 09737-00013
- (b) Set SST, on the master cylinder, lower the pin of the SST until it slightly touches the piston.
- (c) Apply the chalk to the flat surfaced tip of the SST pin.
- (d) Turn SST upside down and place it clearance between the brake booster and SST.

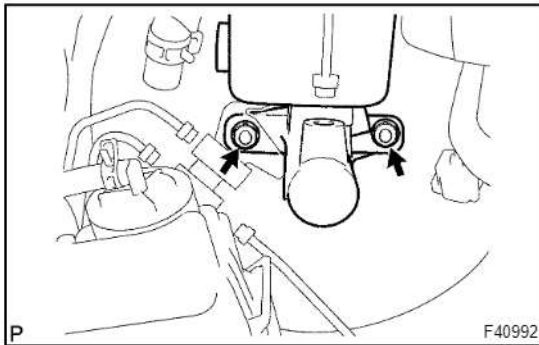
Clearance: 0 mm (0 in.)

HINT:

- If there is a clearance between the SST main body and the booster shell. It means that the specified value, and no chalk attachment on the booster push rod means that it is more than the specified value.
- Brake booster push rod clearance before shipment is adjusted to be ± 0.105 mm (± 0.004 in.).



- (e) Using SST, adjust the booster push rod length until the push rod lightly touches the pin head.
SST 09737-00020



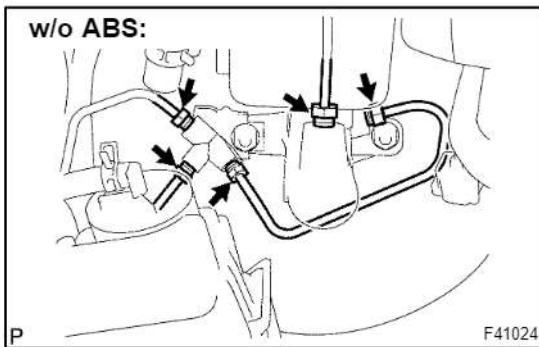
18. INSTALL BRAKE MASTER CYLINDER SUB-ASSY

- (a) w/o ABS:
Install the master cylinder sub-assy and 3-way with the 2 nuts.

Torque: 13 N·m (130 kgf·cm, 9 ft·lbf)

- (b) w/ ABS:
Install the master cylinder sub-assy and 2-way with the 2 nuts.

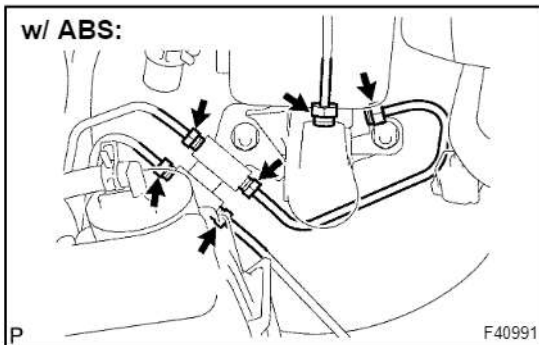
Torque: 13 N·m (130 kgf·cm, 9 ft·lbf)



- (c) w/o ABS:
Using SST and connect the 5 brake tubes to the master cylinder sub-assy.

SST 09023-00101

Torque: 15 N·m (155 kgf·cm, 11 ft·lbf)



- (d) w/ ABS:
Using SST and connect the 6 brake tubes to the master cylinder sub-assy.

SST 09023-00101

Torque: 15 N·m (155 kgf·cm, 11 ft·lbf)

- (e) Connect the level warning switch connector.

19. FILL RESERVOIR WITH BRAKE FLUID

20. BLEED MASTER CYLINDER (See page 32-4)

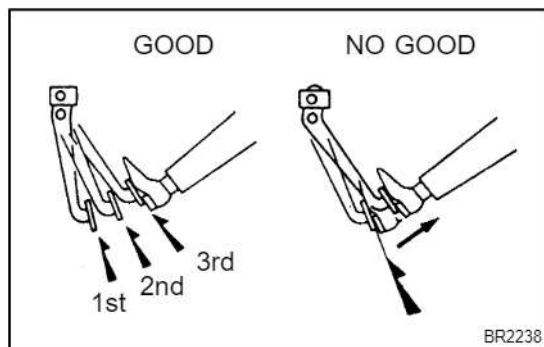
SST 09023-00101

21. BLEED BRAKE LINE (See page 32-4)

22. INSTALL AIR CLEANER ASSY

23. CHECK FLUID LEVEL IN RESERVOIR (See page 32-4)

24. CHECK BRAKE FLUID LEAKAGE



BRAKE BOOSTER ASSY ON-VEHICLE INSPECTION

320CU-08

1. INSPECT BRAKE BOOSTER

(a) Air tightness check.

- (1) Start the engine and stop it after 1 or 2 minutes. Depress the brake pedal several times slowly.

HINT:

If the pedal goes down farthest the 1st time, but gradually rises after the 2nd or 3rd time, the booster is air tight.

- (2) Depress the brake pedal while the engine is running, and stop the engine with the pedal depressed.

HINT:

If there is no change in the pedal reserve distance after holding the pedal for 30 seconds, the booster is air-tight.

(b) Operating check.

- (1) Depress the brake pedal several times with the ignition switch OFF and check that there is no change in the pedal reserve distance.
- (2) Depress the brake pedal and start the engine.

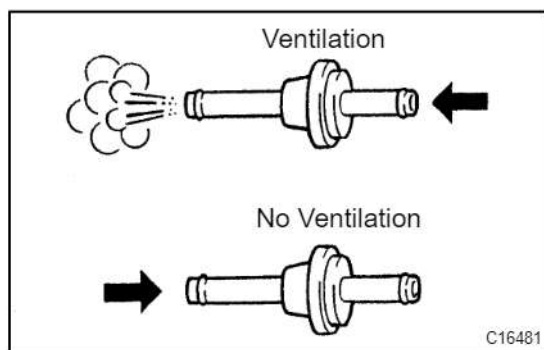
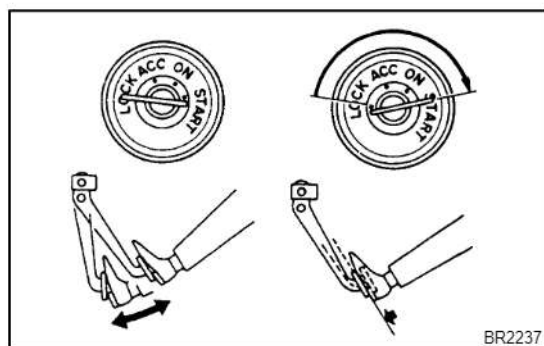
HINT:

If the pedal goes down slightly, operation is normal.

2. INSPECT VACUUM CHECK VALVE

(a) Check vacuum check valve.

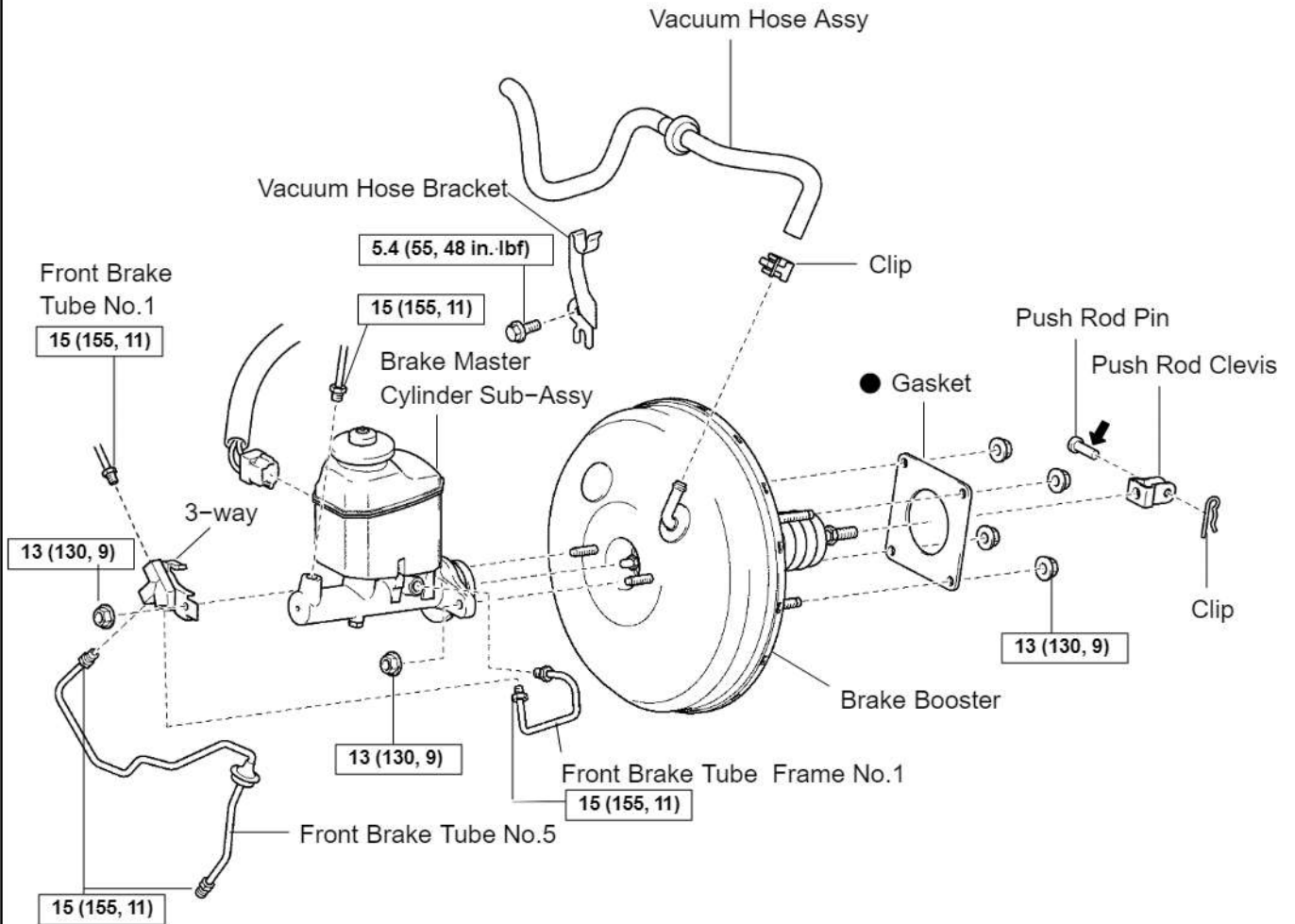
- (1) Slide the clip and disconnect the vacuum hose.
- (2) Remove the vacuum check valve.



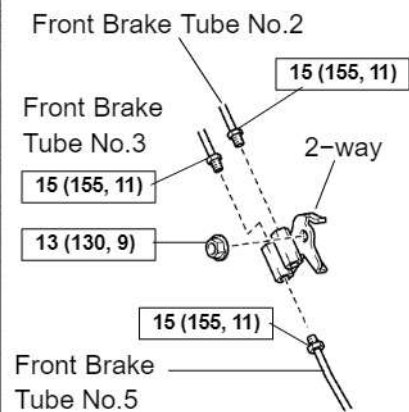
- (3) Check that there is ventilation from the booster to engine, and no ventilation from the engine to the booster.
- (4) If any fault is found, replace the vacuum check valve.

COMPONENTS

w/o ABS:



w/ ABS:



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

● Non-reusable part

← Lithium soap base glycol grease

REPLACEMENT

HINT:

COMPONENTS: See page 32-29

1. DRAIN BRAKE FLUID

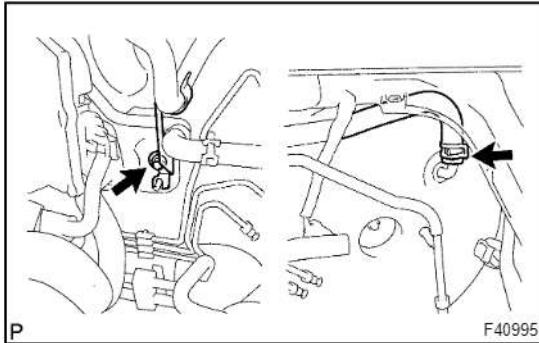
NOTICE:

Wash off the brake fluid immediately if it comes into contact with a painted surface.

2. REMOVE AIR CLEANER ASSY

3. REMOVE BRAKE MASTER CYLINDER SUB-ASSY (See page 32-23)

SST 09023-00101



4. DISCONNECT VACUUM HOSE ASSY

- Remove the bolt and separate the vacuum hose from the vacuum hose bracket.
- Slide the clip and disconnect the vacuum hose from the brake booster.

5. REMOVE FRONT DOOR SCUFF PLATE LH (See page 71-16)

6. REMOVE COWL SIDE TRIM SUB-ASSY LH (See page 71-16)

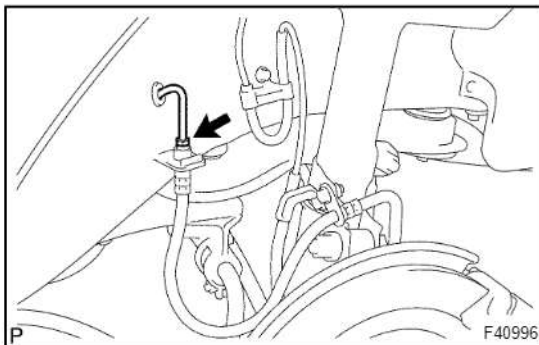
7. REMOVE INSTRUMENT PANEL SUB-ASSY UPPER (See page 71-16)

8. REMOVE PUSH ROD PIN

- Remove the clip and push rod pin.

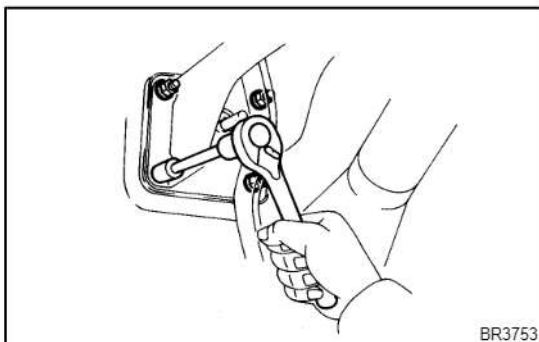
9. REMOVE BRAKE MASTER CYLINDER PUSH ROD CLEVIS

- Loosen the lock nut and remove the push rod clevis.



10. REMOVE FRONT BRAKE TUBE NO.5

- Using SST and remove the front brake tube No.5.
SST 09023-00101

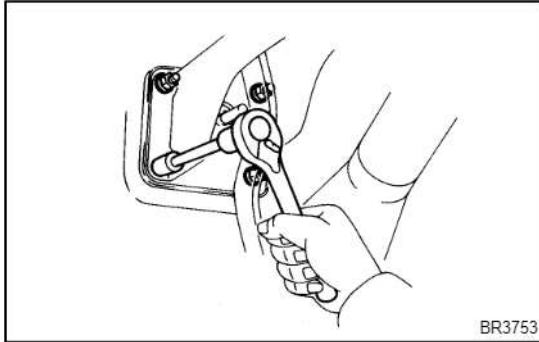


11. REMOVE BRAKE BOOSTER ASSY

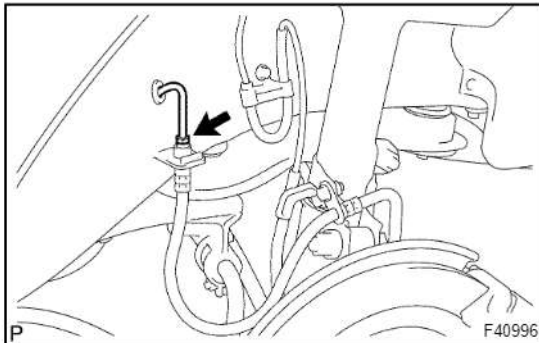
- Remove the 4 nuts.
- Pull out the brake booster assy.

12. REMOVE BRAKE BOOSTER GASKET**13. INSTALL BRAKE BOOSTER GASKET**

- (a) Install a new brake booster gasket to the brake booster.

**14. INSTALL BRAKE BOOSTER ASSY**

- (a) Install the brake booster with the 4 nuts.
Torque: 13 N·m (130 kgf·cm, 9 ft·lbf)

**15. INSTALL FRONT BRAKE TUBE NO.5**

- (a) Using SST and install the front brake tube No.5.
Torque: 15 N·m (155 kgf·cm, 11 ft·lbf)
SST 09023-00101

16. INSTALL BRAKE MASTER CYLINDER PUSH ROD CLEVIS

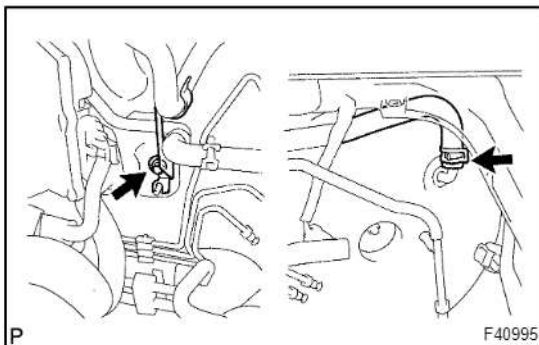
- (a) Install the push rod clevis and lock nut.

17. INSTALL PUSH ROD PIN

- (a) Install the push rod pin and clip.

HINT:

Apply the lithium soap base glycol grease to the part indicate by arrow (See page 32-29).

18. INSTALL INSTRUMENT PANEL SUB-ASSY UPPER (See page 71-16)**19. INSTALL COWL SIDE TRIM SUB-ASSY LH (See page 71-16)****20. INSTALL FRONT DOOR SCUFF PLATE LH (See page 71-16)****21. INSTALL VACUUM HOSE ASSY**

- (a) Install the vacuum hose and vacuum hose bracket to the body with a bolt.
Torque: 5.4 N·m (55 kgf·cm, 48 in·lbf)
(b) Connect the vacuum hose to the brake booster with the clip.

22. INSPECT AND ADJUST BRAKE BOOSTER PUSH ROD

SST 09737-00013, 09737-00020

23. INSTALL BRAKE MASTER CYLINDER SUB-ASSY (See page 32-23)

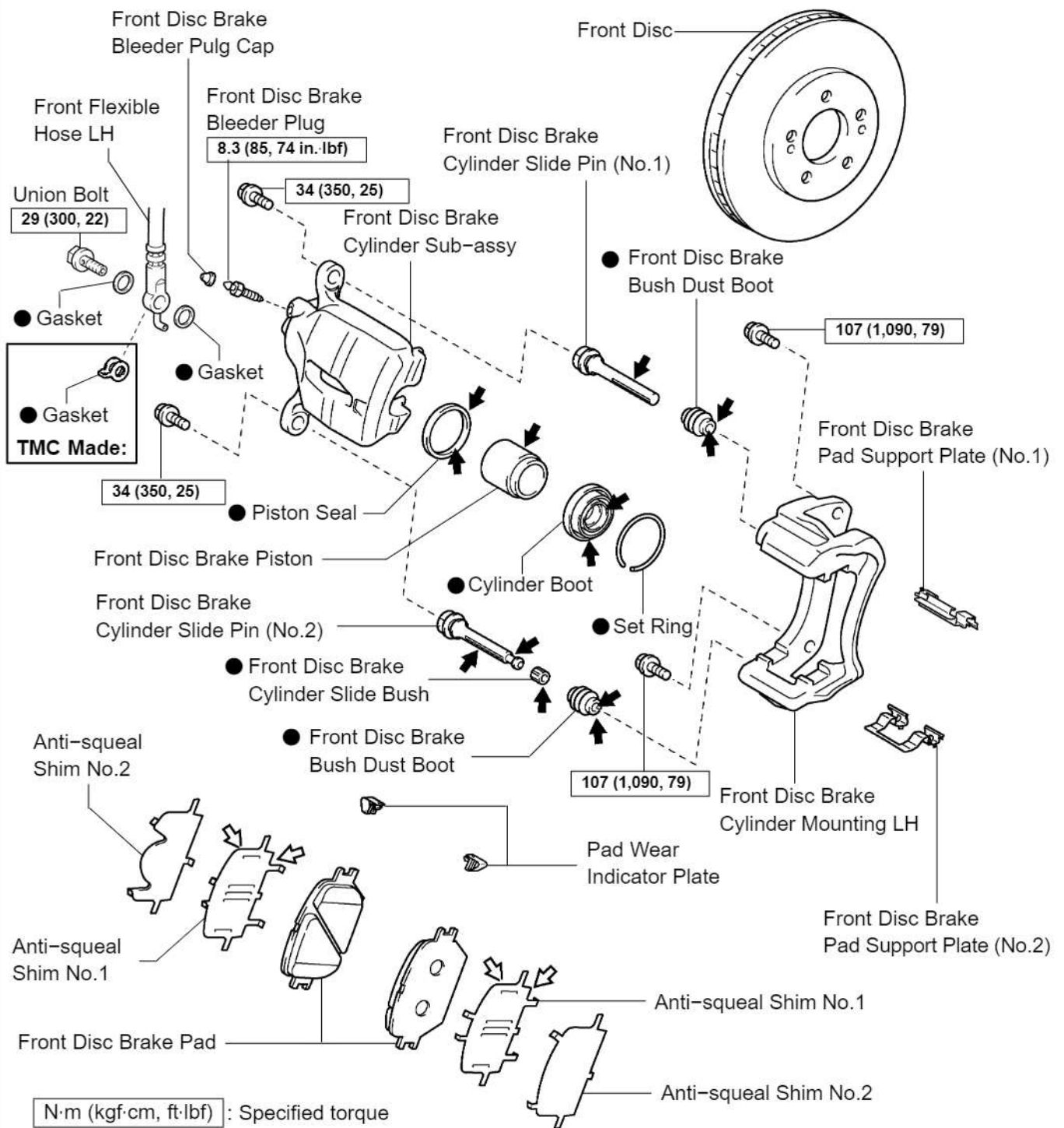
SST 09023-00101

24. INSTALL AIR CLEANER ASSY

25. **FILL RESERVOIR WITH BRAKE FLUID**
26. **BLEED MASTER CYLINDER (See page 32-4)**
SST 09023-00101
27. **BLEED BRAKE LINE (See page 32-4)**
28. **CHECK FLUID LEVEL IN RESERVOIR**
29. **CHECK BRAKE FLUID LEAKAGE**
30. **CHECK AND ADJUST BRAKE PEDAL HEIGHT (See page 32-8 or 32-14)**

3218Z-01



Except MZ Series (SE, XLE Grade):

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

● Non-reusable part

← Lithium soap base glycol grease

τ ⇐ Disc brake grease

OVERHAUL

HINT:

- Use the same procedures for the RH side and LH side.
- The procedures listed below are for the LH side.

1. REMOVE FRONT WHEEL

2. DRAIN BRAKE FLUID

NOTICE:

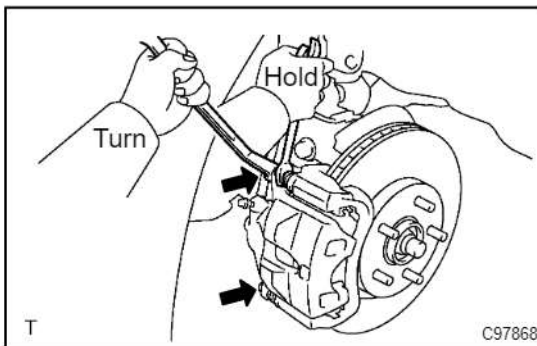
Wash brake fluid off immediately if it adheres to any painted surface.

3. DISCONNECT FRONT FLEXIBLE HOSE

- (a) Remove the union bolt and the gasket(s) from the disc brake cylinder sub-assy, then disconnect the flexible hose.

HINT:

Gasket has 2 types: 2-piece type and 1-piece type.

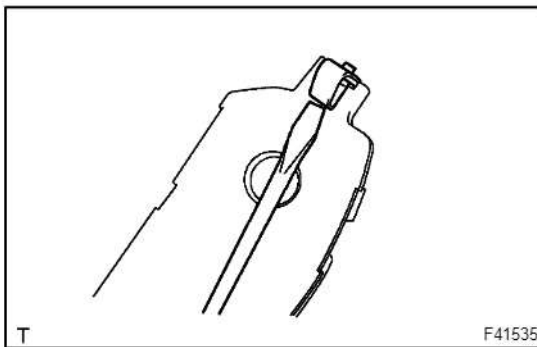


4. REMOVE FRONT DISC BRAKE CYLINDER SUB-ASSY

- (a) Hold the front disc brake cylinder slide pin (No.1) and slide pin (No.2), and remove the 2 bolts.

5. REMOVE DISC BRAKE PAD KIT FRONT (PAD ONLY)

- (a) Remove the 2 disc brake pads with anti-squeal shims from the front disc brake cylinder mounting LH.

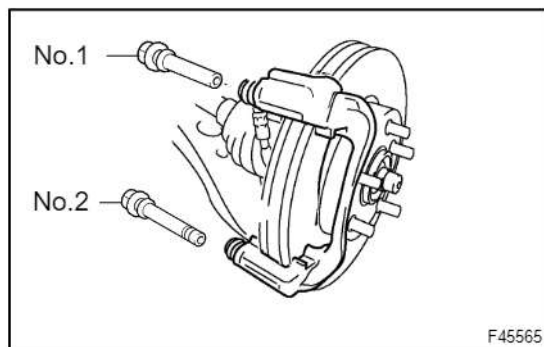


6. REMOVE ANTI SQUEAL SHIM KIT FRONT

- (a) MZ Series (SE, XLE Grade):
Remove the 2 anti-squeal shims from each pad.
- (b) Except MZ Series (SE, XLE Grade):
Remove the 4 anti-squeal shims from each pad.
- (c) Using a screwdriver, remove the pad wear indicator plates from each pad.

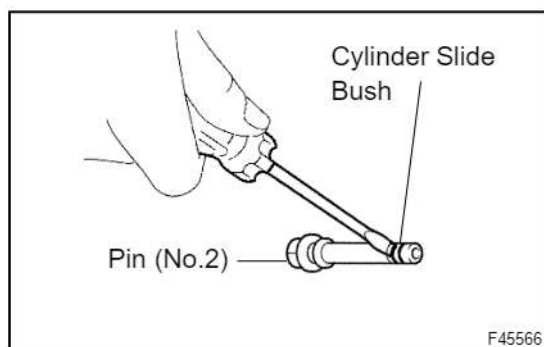
7. REMOVE FRONT DISC BRAKE PAD SUPPORT PLATE

- (a) Remove the front disc brake pad support plate (No.1) and front disc brake pad support plate (No.2) from the front disc brake cylinder mounting LH.



8. REMOVE FRONT DISC BRAKE CYLINDER SLIDE PIN

- (a) Remove the front disc brake cylinder slide pin (No.1) and front disc brake cylinder slide pin (No.2) from the front disc brake cylinder mounting LH.

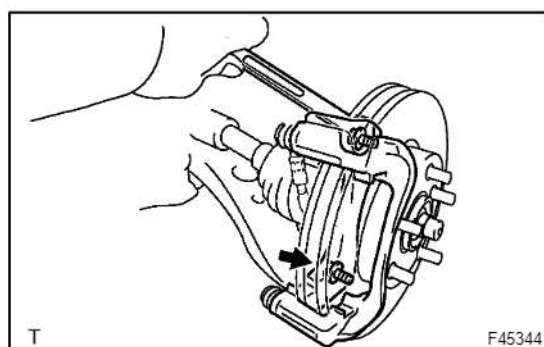


9. REMOVE FRONT DISC BRAKE CYLINDER SLIDE BUSH

- (a) Using a screwdriver, remove the front disc brake cylinder slide bush from the front disc brake cylinder slide pin (No.2).

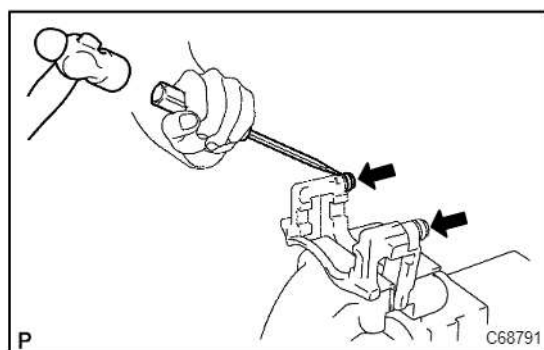
NOTICE:

Do not damage the front disc brake cylinder slide pin (No.2).



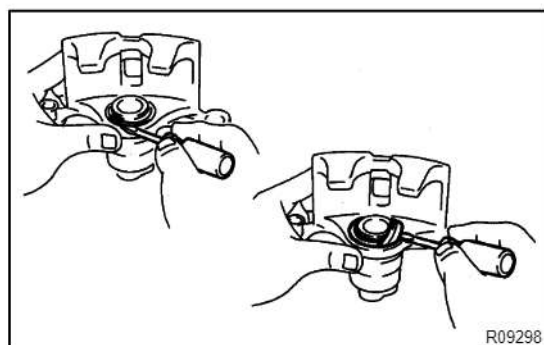
10. REMOVE FRONT DISC BRAKE CYLINDER MOUNTING

- (a) Remove the 2 bolts and front disc brake cylinder mounting LH.



11. REMOVE FRONT DISC BRAKE BUSH DUST BOOT

- (a) Hold the front disc brake cylinder mounting LH in the vise through the soft jaws.
(b) Using a screwdriver and a hammer, remove the 2 front disc brake bush dust boots from the front disc brake cylinder mounting LH.

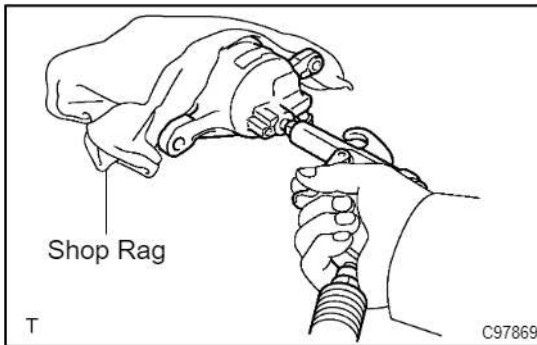


12. REMOVE CYLINDER BOOT

- (a) Using a screwdriver, remove the set ring and cylinder boot.

NOTICE:

Do not damage the piston groove and cylinder groove.

**13. REMOVE FRONT DISC BRAKE PISTON**

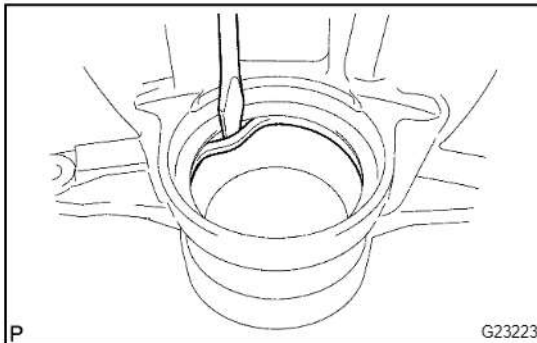
- (a) Place a shop rag between the front disc brake piston and the disc brake cylinder sub-assy.
- (b) Use compressed air to remove the front disc brake piston from the disc brake cylinder sub-assy.

CAUTION:

Do not place your fingers in front of the piston when using compressed air.

NOTICE:

Do not spatter the brake fluid.

**14. REMOVE PISTON SEAL**

- (a) Using a screwdriver, remove the piston seal from the front disc brake cylinder sub-assy.

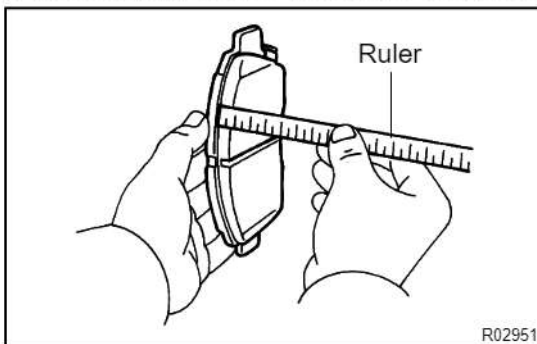
NOTICE:

Do not damage the inner cylinder and cylinder groove.

15. REMOVE FRONT DISC BRAKE BLEEDER PLUG CAP**16. REMOVE FRONT DISC BRAKE BLEEDER PLUG****17. INSPECT BRAKE CYLINDER AND PISTON**

- (a) Check the brake cylinder bore and front disc brake piston for rust or scoring.

If necessary, replace the brake cylinder and piston.

**18. INSPECT PAD LINING THICKNESS**

- (a) Using a ruler, measure the pad lining thickness.

Standard thickness: 12.0 mm (0.472 in.)

Minimum thickness: 1.0 mm (0.039 in.)

If the pad lining thickness is equal to the minimum thickness or less, replace the brake pad.

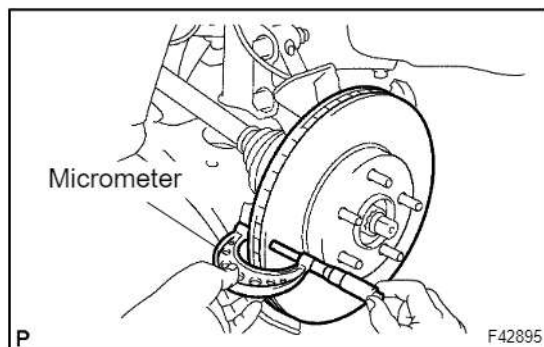
19. INSPECT FRONT DISC BRAKE PAD SUPPORT PLATE

- (a) Inspect the front disc brake pad support plate (No.1) and front disc brake pad support plate (No.2).

HINT:

Make sure that both have sufficient rebound, have no deformation, cracks or wear, and that all rust and dirt is cleaned off.

If necessary, replace the brake pad support plate.

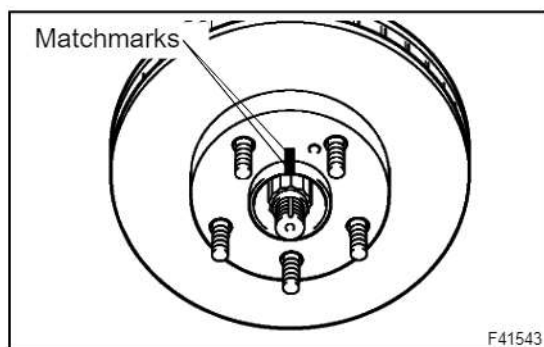
**20. INSPECT DISC THICKNESS**

- (a) Using a micrometer, measure the disc thickness.

Standard thickness: 28.0 mm (1.102 in.)

Minimum thickness: 26.0 mm (1.024 in.)

If the disc thickness is less than the minimum, replace the disc.

**21. REMOVE FRONT DISC**

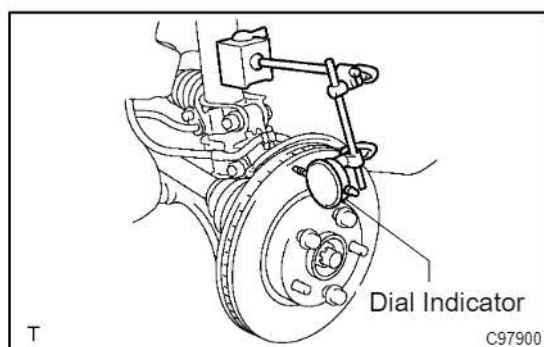
- (a) Put matchmarks on the front disc and the axle hub.
(b) Remove the front disc.

22. INSTALL FRONT DISC

- (a) Aligning the matchmarks, install the front disc.

HINT:

When replacing the disc with a new one, select the installation position where the front disc has the minimum runout.

**23. INSPECT DISC RUNOUT**

- (a) Check the bearing play in the axial direction and check for the axle hub runout (see page 30-2).
(b) Temporarily fasten the front disc together with the hub nuts.

Torque: 103 N·m (1,050 kgf·cm, 76 ft·lbf)

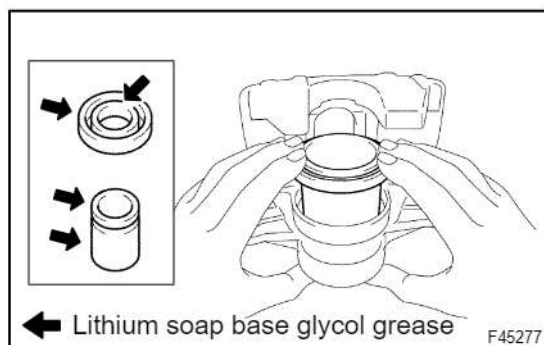
- (c) Using a dial indicator, measure the disc runout 10 mm (0.39 in.) away from the outer edge of the front disc.

Maximum disc runout: 0.05 mm (0.0020 in.)

If the runout exceeds the maximum value, change the installation positions of the disc and axle so that the runout will become minimal. If the runout exceeds the maximum even when the installation positions are changed, grind the disc. If the disc thickness is less than the minimum, replace the front disc.

24. TEMPORARILY TIGHTEN FRONT DISC BRAKE BLEEDER PLUG**25. INSTALL FRONT DISC BRAKE BLEEDER PLUG CAP****26. INSTALL PISTON SEAL**

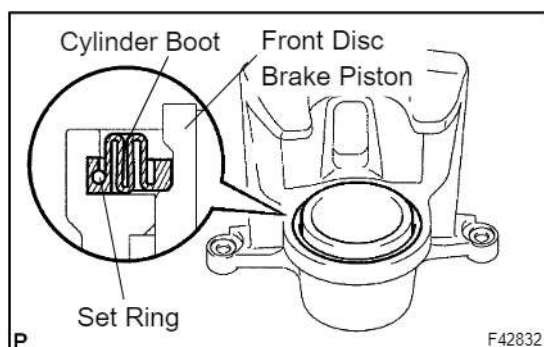
- (a) Apply lithium soap base glycol grease to a new piston seal.
(b) Install the piston seal to the front disc brake cylinder sub-assy.

**27. INSTALL FRONT DISC BRAKE PISTON**

- (a) Apply lithium soap base glycol grease to the front disc brake piston and new cylinder boot.
(b) Install the cylinder boot to the front disc brake piston.
(c) Install the front disc brake piston to the front disc brake cylinder sub-assy.

NOTICE:

Do not install the piston forcibly in the front disc brake cylinder sub-assy.



28. INSTALL CYLINDER BOOT

- (a) Install the cylinder boot to the front disc brake cylinder sub-assy.

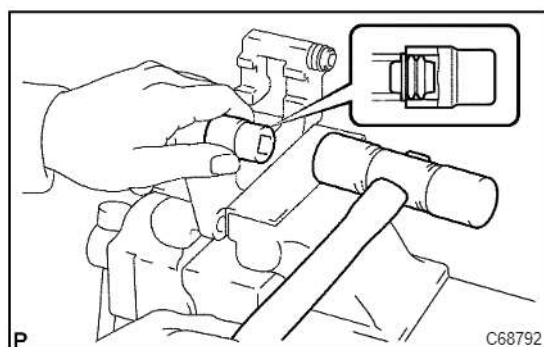
NOTICE:

Install the boot securely to the grooves of the cylinder and piston.

- (b) Using a screwdriver, install the set ring.

NOTICE:

Do not damage the cylinder boot.

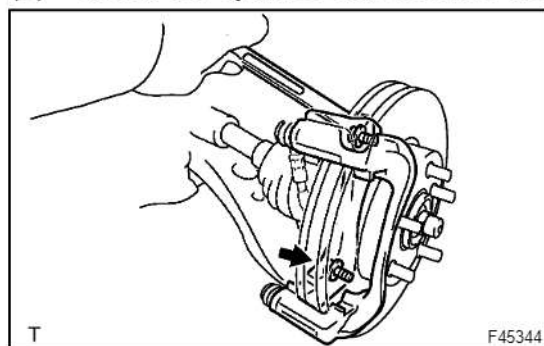


29. INSTALL FRONT DISC BRAKE BUSH DUST BOOT

- (a) Hold the front disc brake cylinder mounting LH in the vise through the soft jaws.
- (b) Place the front disc brake cylinder mounting LH in the vise.
- (c) Apply lithium soap base glycol grease to the sealing surface of 2 new front disc brake bush dust boots (see page 32-33).
- (d) Using a socket wrench (19 mm) and a hammer, drive the 2 front disc brake bush dust boots to the front disc brake cylinder mounting LH.

30. INSTALL FRONT DISC BRAKE CYLINDER SLIDE BUSH

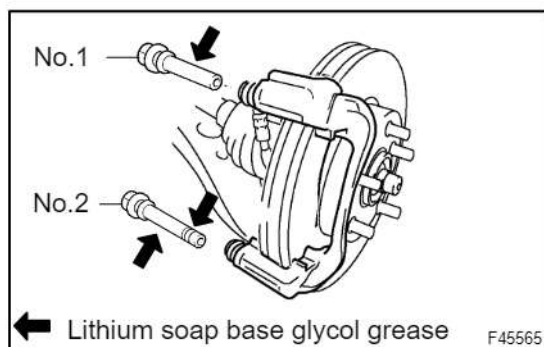
- (a) Apply lithium soap base glycol grease to a new front disc brake cylinder slide bush (see page 32-33).
- (b) Install the cylinder slide bush to the bottom side of the front disc brake cylinder slide pin (No.2).



31. INSTALL FRONT DISC BRAKE CYLINDER MOUNTING

- (a) Install the front disc brake cylinder mounting with the 2 bolts.

Torque: 107 N·m (1,090 kgf·cm, 79 ft·lbf)



32. INSTALL FRONT DISC BRAKE CYLINDER SLIDE PIN

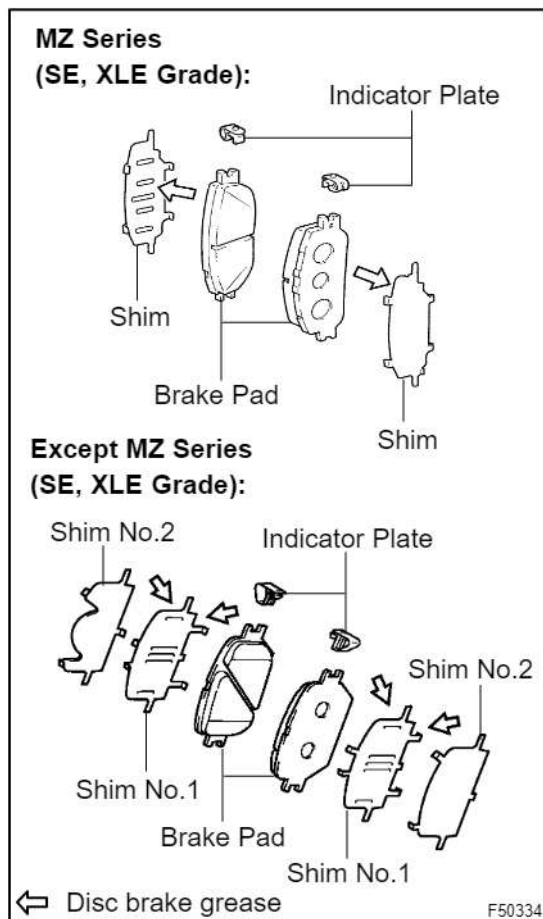
- (a) Apply lithium soap base glycol grease to the sliding part and the sealing surface of the front disc brake cylinder slide pin (No.1) and front disc brake cylinder slide pin (No.2).
- (b) Install the front disc brake cylinder slide pin (No.1) and front disc brake cylinder slide pin (No.2) to the front disc brake cylinder mounting LH.

33. INSTALL FRONT DISC BRAKE PAD SUPPORT PLATE

- (a) Install the front disc brake pad support plate (No.1) and front disc brake pad support plate (No.2) to the front disc brake cylinder mounting LH.

NOTICE:

Install the pad support plates in the correct position and direction.



34. INSTALL ANTI SQUEAL SHIM KIT FRONT

NOTICE:

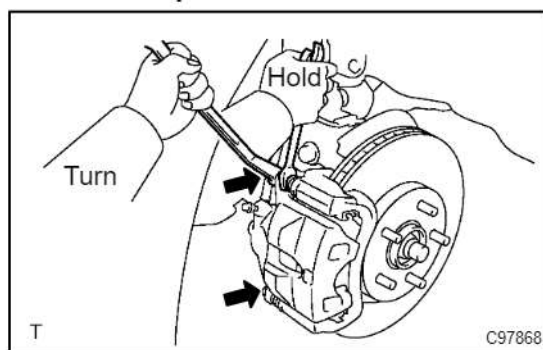
- When replacing worn pads, the anti-squeal shims must be replaced together with the pads.
 - Install the shims and pad wear indicator plates in the correct position and direction.
- Apply disc brake grease to the anti-squeal shims as shown in the illustration.
 - Install the anti-squeal shims on each pad as shown in the illustration.
 - Install the pad wear indicator plates to each pad.

35. INSTALL DISC BRAKE PAD KIT FRONT (PAD ONLY)

- Install the disc brake pad kit front to the front disc brake cylinder mounting LH.

NOTICE:

- There should be no oil or grease on the friction surface of the pads and the disc.
- Brake pads are installed with indicator plates facing upward.



36. INSTALL FRONT DISC BRAKE CYLINDER SUB-ASSY

- Install the front disc brake cylinder sub-assy with the 2 bolts.

Torque: 34 N·m (350 kgf·cm, 25 ft·lbf)

37. INSTALL FRONT FLEXIBLE HOSE

- Install new gasket(s) and flexible hose with the union bolt.
Torque: 29 N·m (300 kgf·cm, 22 ft·lbf)

NOTICE:

Install the flexible hose lock securely in the lock hole in the disc brake cylinder.

HINT:

Gasket has 2 types: 2-piece type and 1-piece type.

38. FILL RESERVOIR WITH BRAKE FLUID (SEE PAGE 32-4)

39. BLEED MASTER CYLINDER (SEE PAGE 32-4)

SST 09023-00101

- 40. BLEED BRAKE LINE (SEE PAGE [32-4](#))
- 41. CHECK FLUID LEVEL IN RESERVOIR (SEE PAGE [32-4](#))
- 42. CHECK FOR BRAKE FLUID LEAKAGE
- 43. INSTALL FRONT WHEEL
Torque: 103 N·m (1,050 kgf·cm, 76 ft·lbf)

BRAKE FLUID BLEEDING

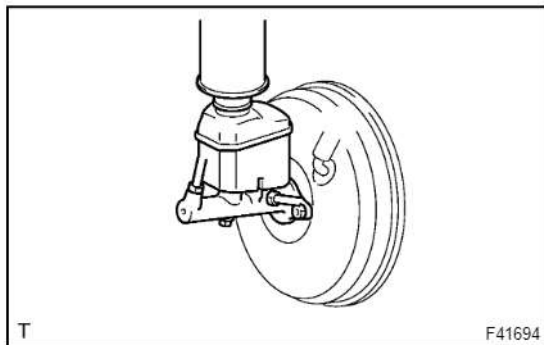
3211S-02

HINT:

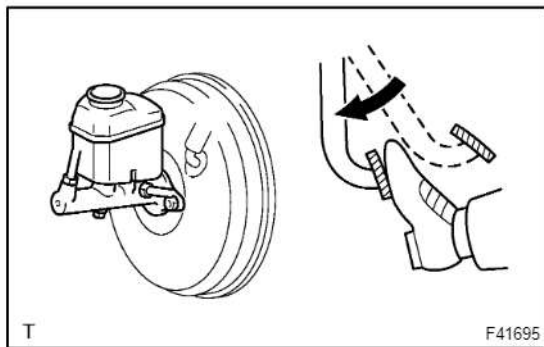
If any work is done on the brake system or if air in the brake lines is suspected, bleed the air from the system.

NOTICE:

Wash off the brake fluid immediately if it comes into contact with a painted surface.



1. **FILL RESERVOIR WITH BRAKE FLUID**
Fluid: SAE J1703 or FMVSS No. 116 DOT3

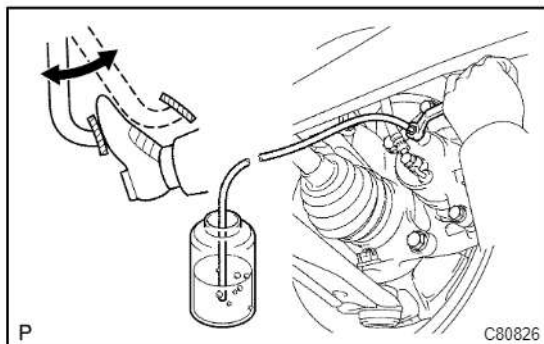
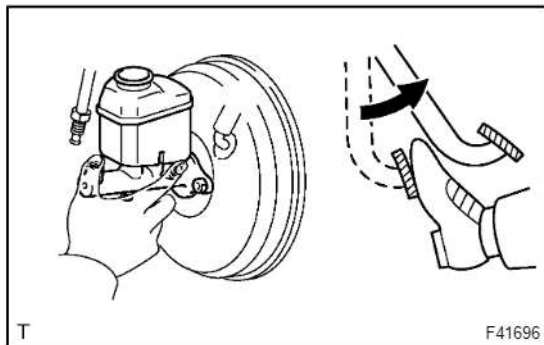


2. **BLEED MASTER CYLINDER**

HINT:

If the master cylinder has been disassembled or if the reservoir becomes empty, bleed the air from the master cylinder.

- (a) Remove the air cleaner assembly with hose.
- (b) Disconnect the brake lines from the master cylinder.
SST 09023-00101
- (c) Slowly depress the brake pedal and hold it.
- (d) Block off the outer holes with your fingers, and release the brake pedal.
- (e) Repeat (c) and (d) 3 or 4 times.
- (f) Install the air cleaner assembly with hose.



3. **BLEED BRAKE LINE**

- (a) Connect the vinyl tube to the brake caliper.
- (b) Depress the brake pedal several times, then loosen the bleeder plug with the pedal held down.
- (c) At the point when fluid stops coming out, tighten the bleeder plug, then release the brake pedal.
- (d) Repeat (b) and (c) until all the air in the fluid has been bled out.
- (e) Tighten the bleeder plug completely.
Torque: 8.3 N·m (85 kgf·cm, 74 in.-lbf)

- (f) Repeat the above procedure to bleed the air out of the brake line for each wheel.

4. BLEED BRAKE ACTUATOR ASSY (W/ VSC)

NOTICE:

After performing the usual air bleeding in the brake system, if the height or feel of the brake pedal cannot be obtained, perform air bleeding in the BRAKE actuator assy with a hand-held tester by following procedures below.

- (a) Depress the brake pedal more than 20 times with the engine off.
- (b) Connect the hand-held tester to the DLC3, then turn the ignition switch to the ON position.

NOTICE:

Do not start the engine.

- (c) Select "AIR BLEEDING" on the hand-held tester.

HINT:

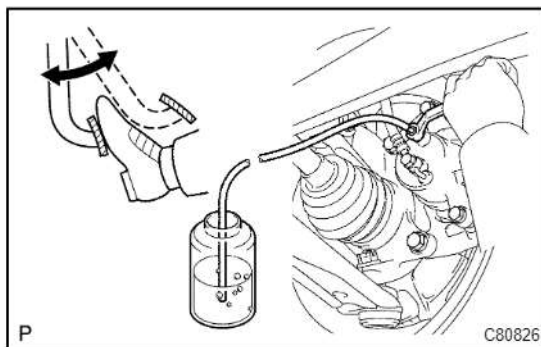
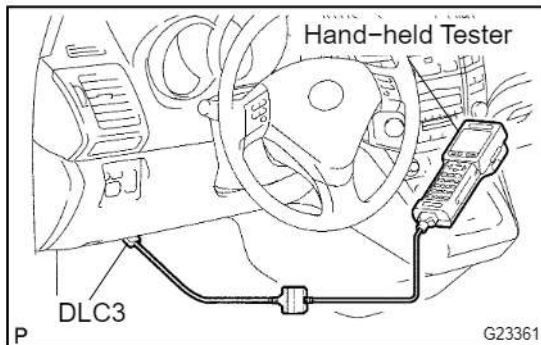
Please refer to the Hand-Held Tester Operator's Manual for further details.

- (d) Bleed the air out of the regular brake line in "Step1: Increase" on the hand-held tester display.

NOTICE:

- Perform the air bleeding by following the steps displayed on the hand-held tester.
- Make sure that the brake fluid in the master cylinder reservoir tank does not become empty.

- (1) Connect the vinyl tube to either one of the bleeder plugs.



- (2) Depress the brake pedal several times, then loosen the bleeder plug of one of the above wheels with the pedal depressed.
- (3) When fluid stops coming out, tighten the bleeder plug, then release the brake pedal.
- (4) Repeat (2) and (3) until all air in the fluid is completely bled out.
- (5) Tighten the bleeder plug completely.

Torque: 8.3 N·m (85 kgf·cm, 73 in·lbf)

- (6) Repeat the above procedure to bleed the air out of the brake line for each wheel.
- (e) Bleed the air out of the suction line in "Step2: Inhalation" on the hand-held tester display.

NOTICE:

- Perform the air bleeding by following the steps displayed on the hand-held tester.
- Make sure that the brake fluid in the master cylinder reservoir tank does not become empty.

- (1) Connect the vinyl tube to the bleeder plug at the right front wheel or the right rear wheel and loosen the bleeder plug.
- (2) Operate the BRAKE actuator assy using the hand-held tester to bleed the air.

NOTICE:

- **The operation stops automatically in 4 seconds.**
 - **At this time, be sure to release the brake pedal.**
- (3) Check that the operation has stopped, by referring to the hand-held tester display.
 - (4) Repeat (2) and (3) until all the air in the fluid is completely bled out.
 - (5) Tighten the bleeder plug completely.
Torque: 8.3 N·m (85 kgf·cm, 73 in.·lbf)
 - (6) For the rest of the wheels, bleed the air in the same way as stated in the above procedure.
- (f) Bleed the air out of the pressure reduction line in "Step3: Decrease" on the hand-held tester display.

NOTICE:

- **Perform air bleeding by following the steps displayed on the hand-held tester.**
 - **Make sure that the brake fluid in the master cylinder reservoir tank does not become empty.**
- (1) Connect a vinyl tube to either one of the bleeder plugs.
 - (2) Loosen the bleeder plug.
 - (3) Using the hand-held tester, operate the BRAKE actuator assy using hand-held tester, completely depress the brake pedal and keep it.

NOTICE:

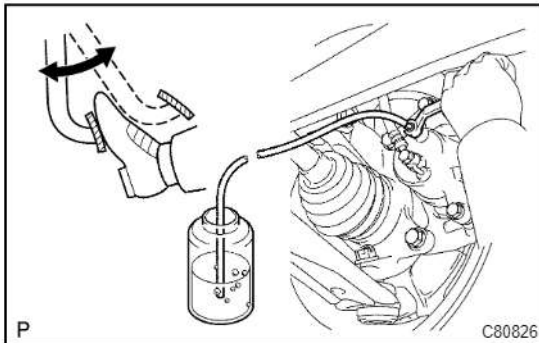
- **The operation stops automatically in 4 seconds. When performing this procedure continuously, an interval of at least 20 seconds is required.**
 - **When the operation is completed, the brake pedal slightly goes down. This is a normal phenomenon caused when the solenoid opens.**
 - **During this procedure, the pedal seems heavy, but completely depress it so that the brake fluid comes out from the bleeder plug.**
 - **Be sure to keep depressing the brake pedal. Never depress and release the pedal repeatedly.**
- (4) Tighten the bleeder plug, then release the brake pedal.
 - (5) Repeat (2) to (4) until all the air in the fluid is completely bled out.
 - (6) Tighten the bleeder plug completely.
Torque: 8.3 N·m (85 kgf·cm, 73 in.·lbf)
 - (7) Repeat the above procedure to bleed the air out of the brake line for each wheel.

- (g) Bleed the air out of the regular brake line again in "Step4: Increase" on the hand-held tester display.

NOTICE:

- **Perform air bleeding by following the steps displayed on the hand-held tester.**
- **Make sure that the brake fluid in the master cylinder reservoir tank does not become empty.**

- (1) Connect the vinyl tube to either one of the bleeder plug.



- (2) Depress the brake pedal several times, then loosen the bleeder plug of one of the above wheels with the pedal depressed.

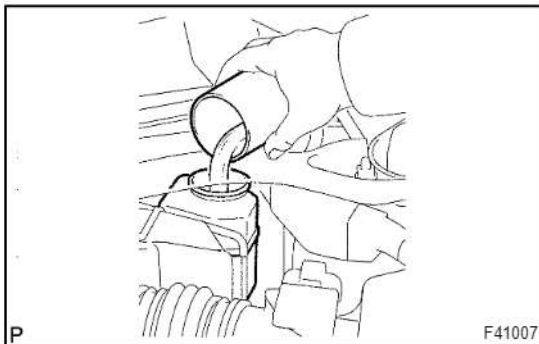
- (3) When fluid stops coming out, tighten the bleeder plug, then release the brake pedal.

- (4) Repeat (2) and (3) until all the air in the fluid is completely bled out.

- (5) Tighten the bleeder plug completely.

Torque: 8.3 N·m (85 kgf·cm, 73 in·lbf)

- (6) Repeat the above procedure to bleed the air out of the brake line for each wheel.

**5. CHECK FLUID LEVEL IN RESERVOIR**

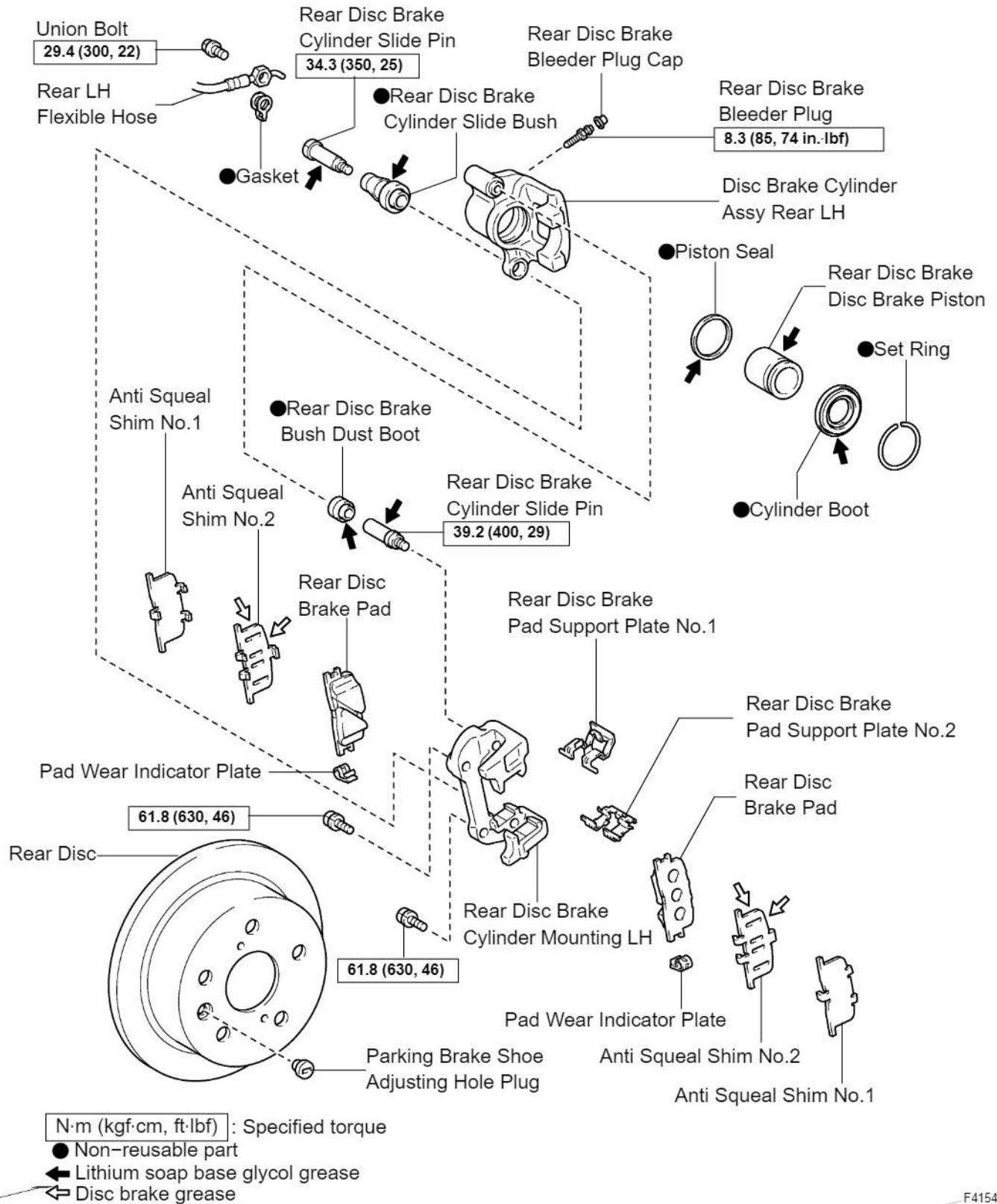
- (a) Check the fluid level and add fluid if necessary.

Fluid: SAE J1703 or FMVSS No. 116 DOT3

REAR DISC BRAKE COMPONENTS

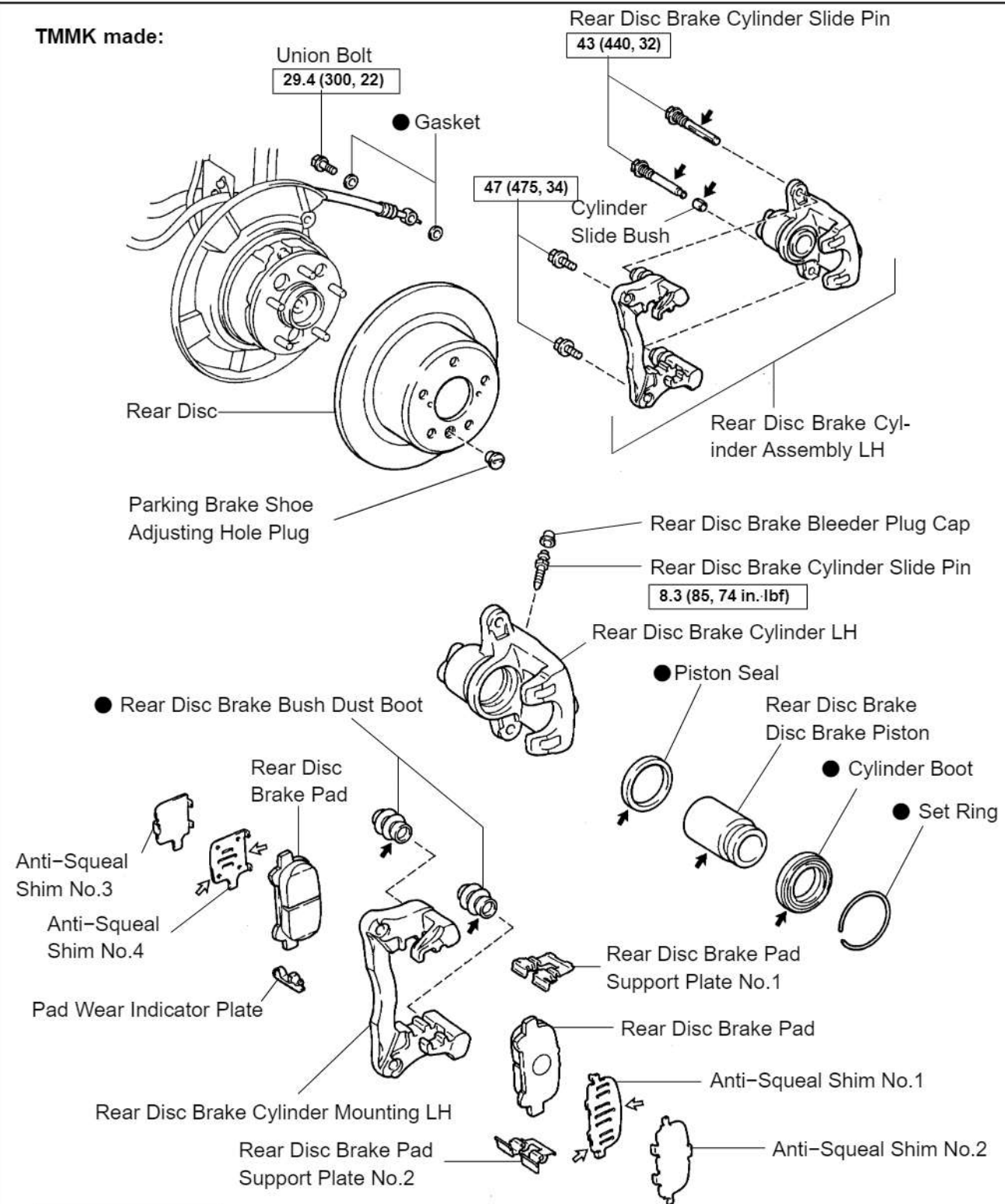
32002-03

TMC made:



F41546

TMMK made:



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

● Non-reusable part

← Lithium soap base glycol grease

N → Disc brake grease

F41706

OVERHAUL

HINT:

- COMPONENTS: See page 32-42
- Overhaul the RH side by the same procedures with LH side.
- Two types of brake pad exist; one is with slit and the other without slit.

1. REMOVE REAR WHEEL

2. DRAIN BRAKE FLUID

NOTICE:

Wash off the brake fluid immediately if it comes into contact with a painted surface.

3. DISCONNECT REAR LH FLEXIBLE HOSE

- (a) Remove the union bolt and a gasket from the disc brake cylinder, then disconnect the flexible hose from the disc brake cylinder.

HINT:

Gasket has 2 types: 2-piece type and 1-piece type.

4. REMOVE REAR DISC BRAKE CYLINDER SLIDE PIN

- (a) TMC made:
Remove the cylinder slide pin.
- (b) TMMK made:
Remove the cylinder slide pin and cylinder slide bush.

5. REMOVE REAR DISC BRAKE CYLINDER ASSY LH

- (a) TMC made:
Lift up the disc brake cylinder and remove the disc brake cylinder.
- (b) TMMK made:
Remove the cylinder slide pin and disc brake cylinder.

6. REMOVE DISC BRAKE PAD KIT REAR (PAD ONLY)

- (a) Remove the 2 brake pads with the anti-squeal shim.

7. REMOVE REAR DISC BRAKE ANTI SQUEAL SHIM KIT

- (a) Remove the 2 anti-squeal shims and pad wear indicator from each of 2 brake pads.
- (b) TMC made:
Remove the 2 pad wear indicator plates from each of 2 brake pads.
- (c) TMMK made:
Remove the pad wear indicator plate from inner pad.

8. REMOVE REAR DISC BRAKE PAD SUPPORT PLATE

- (a) Remove the rear disc brake pad support plate No.1.

9. REMOVE REAR DISC BRAKE PAD SUPPORT PLATE

- (a) Remove the rear disc brake pad support plate No.2.

10. REMOVE REAR DISC BRAKE BUSH DUST BOOT

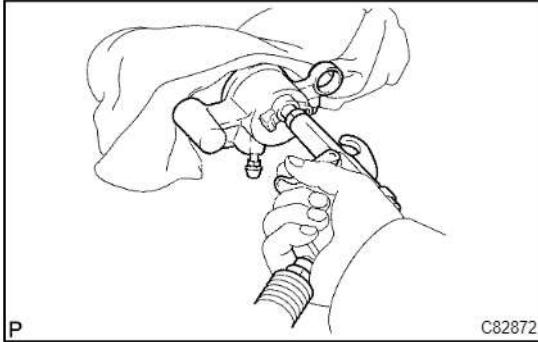
- (a) TMC made:
Remove the rear disc brake bush dust boot.
- (b) TMMK made:
Remove the 2 rear disc brake bush dust boots.

11. REMOVE REAR DISC BRAKE CYLINDER MOUNTING LH

- (a) TMC made:
Using a hexagon wrench (φ8 mm), remove the cylinder slide pin.
- (b) Remove the 2 bolts and cylinder mounting LH.

12. REMOVE CYLINDER BOOT

- (a) Using a screwdriver, remove the set ring and disc cylinder boot.

**13. REMOVE REAR DISC BRAKE PISTON**

- (a) Place a piece of cloth or similar, between the piston and the disc brake cylinder.
- (b) Use compressed air to remove the piston from the disc brake cylinder.

CAUTION:

Do not place your fingers in front of the piston when using compressed air.

NOTICE:

Do not spatter the brake fluid.

14. REMOVE PISTON SEAL

- (a) Using a screwdriver, remove the piston seal from the brake cylinder.

NOTICE:

Do not damage the inner cylinder and the cylinder groove.

15. REMOVE REAR DISC BRAKE BLEEDER PLUG CAP**16. REMOVE REAR DISC BRAKE BLEEDER PLUG****17. INSPECT BRAKE CYLINDER AND PISTON**

- (a) Check the cylinder bore and piston for rust or scoring.

18. INSPECT PAD LINING THICKNESS

- (a) Using a ruler, measure the pad lining thickness.

Standard thickness: 10.0 mm (0.394 in.)

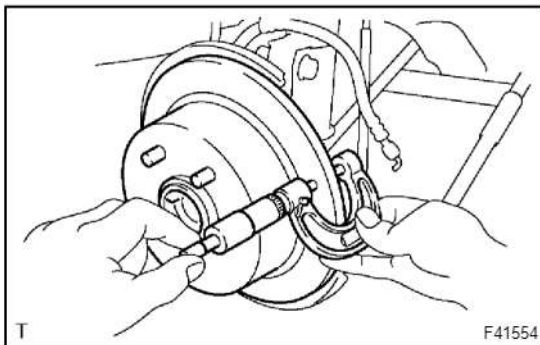
Minimum thickness: 1.0 mm (0.039 in.)

19. INSPECT REAR DISC BRAKE PAD SUPPORT PLATE

- (a) Make sure that they have sufficient rebound, no deformation cracks or wear, and have had all rust and dirt cleaned off.

20. INSPECT REAR DISC BRAKE PAD SUPPORT PLATE

- (a) Make sure that they have sufficient rebound, no deformation cracks or wear, and have had all rust and dirt and cleaned off.

**21. INSPECT DISC THICKNESS**

- (a) Using a micrometer, measure the disc thickness.

Standard thickness: 12.0 mm (0.472 in.)

Minimum thickness: 10.5 mm (0.413 in.)

22. REMOVE PARKING BRAKE SHOE ADJUSTING HOLE PLUG**23. REMOVE REAR DISC**

- (a) Put matchmarks on the disc and the axle hub.
- (b) Remove the disc.

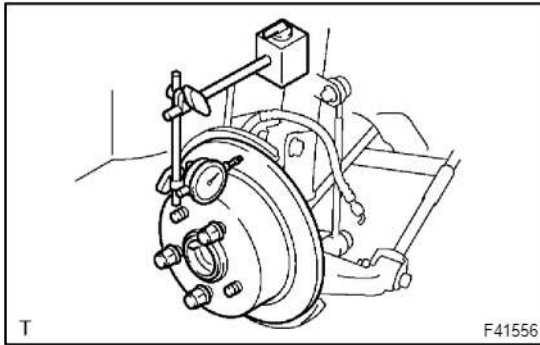
24. INSTALL REAR DISC

- (a) Aligning the matchmarks, install the rear disc.

HINT:

When replacing the disc with new one, select the installation position where the disc has the minimum runout.

25. INSTALL PARKING BRAKE SHOE ADJUSTING HOLE PLUG

**26. INSPECT DISC RUNOUT**

- (a) Temporarily fasten the disc with hub nuts.
Torque: 103 N·m (1,050 kgf·cm, 76 ft·lbf)
- (b) Using dial indicator, measure the disc runout 10 mm (0.39 in.) away from the outer edge of the disc.
Maximum disc runout: 0.15 mm (0.0059 in.)
- (c) If the disc's runout is maximum value or greater, check the bearing play in the axial direction and check the axle hub runout. (See page 30-2) If the bearing play and axle hub runout are not abnormal, adjust the disc runout or grind it on a "On-car" brake lathe.

27. ADJUST PARKING BRAKE SHOE CLEARANCE (See page 33-19)**28. TEMPORARILY TIGHTEN REAR DISC BRAKE BLEEDER PLUG**

- (a) Temporarily tighten the bleeder plug to the disc brake cylinder.

29. INSTALL REAR DISC BRAKE BLEEDER PLUG CAP**30. INSTALL PISTON SEAL**

- (a) Apply the lithium soap base glycol grease on a new piston seal.
- (b) Install the piston seal to the disc brake cylinder.

31. INSTALL REAR DISC BRAKE PISTON

- (a) Apply the lithium soap base glycol grease on the piston.
- (b) Install the piston to the disc brake cylinder.

NOTICE:

Do not screw the piston forcedly in the disc brake cylinder.

32. INSTALL CYLINDER BOOT

- (a) Apply the lithium soap base glycol grease on a new cylinder boot.
- (b) Install the cylinder boot to the disc brake cylinder.

HINT:

Install the boot securely to the grooves of the cylinder and piston.

- (c) Using a screwdriver, install a new set ring.

NOTICE:

Do not damage the cylinder boot.

33. INSTALL REAR DISC BRAKE CYLINDER MOUNTING LH

- (a) Install the cylinder mounting LH with the 2 bolts.

Torque:

TMC made: 61.8 N·m (630 kgf·cm, 46 ft·lbf)

TMMK made: 47 N·m (475 kgf·cm, 34 ft·lbf)

34. INSTALL REAR DISC BRAKE CYLINDER SLIDE PIN

- (a) TMC made:

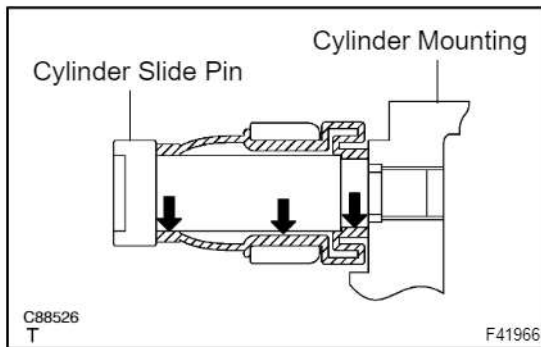
Using a hexagon wrench (8 mm), install the cylinder slide pin.

Torque: 39.2 N·m (400 kgf·cm, 29 ft·lbf)

- (b) TMMK made:

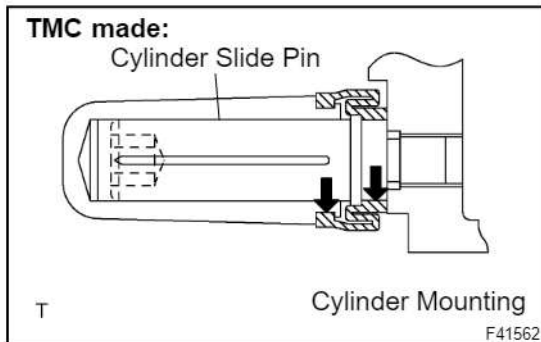
Install the cylinder slide pin with the cylinder slide bush.

Torque: 43 N·m (440 kgf·cm, 32 ft·lbf)



35. INSTALL REAR DISC BRAKE CYLINDER SLIDE BUSH (TMC MADE)

- Apply the lithium soap base glycol grease on a new cylinder slide bush.
- Install the cylinder slide bush to the disc brake cylinder assy.



36. INSTALL REAR DISC BRAKE BUSH DUST BOOT

- TMC made:
Install the rear disc brake bush dust boot.
 - Apply the lithium soap base glycol grease to seal surface of a new bush dust boot.
 - Install the bush dust boot to the cylinder slide pin.
- TMMK made:
Install the rear disc brake bush dust boot.
 - Apply the lithium soap base glycol grease to seal surface of a 2 new bush dust boots.
 - Install the 2 bush dust boots to the each cylinder slide pin.

37. INSTALL REAR DISC BRAKE PAD SUPPORT PLATE

- Install the rear disc brake pad support plate No.1.

38. INSTALL REAR DISC BRAKE PAD SUPPORT PLATE

- Install the rear disc brake pad support plate No.2.

39. INSTALL REAR DISC BRAKE ANTI SQUEAL SHIM KIT

- Coat the both sides of No.1 anti-squeal shim with pad grease all over, and install the shim together with No.2 anti-squeal shim to each pad.
- TMC made:
Install the 2 pad wear indicator plates to the each of 2 brake pads.

NOTICE:

When replacing worn pads, the anti-squeal shims must be replaced together with the pads.

- TMMK made:
Install the pad wear indicator plate to the inner pad.

NOTICE:

When replacing worn pads, the anti-squeal shims must be replaced together with the pads.

40. INSTALL DISC BRAKE PAD KIT REAR (PAD ONLY)

- Install the 2 brake pads with the anti-squeal shim.

NOTICE:

There should be no oil or grease on to the friction surface of the pads and the disc.

41. INSTALL REAR DISC BRAKE CYLINDER ASSY LH (TMC MADE)

- Apply the lithium soap base glycol grease to the cylinder slide pin.
- Install the disc brake cylinder assembly rear LH to the cylinder slide pin.

42. INSTALL REAR DISC BRAKE CYLINDER SLIDE PIN

- Apply the lithium soap base glycol grease to the cylinder slide pin.
- Install and torque the cylinder slide pin to the disc brake cylinder assembly.

Torque:

TMC made: 34.3 N·m (350 kgf·cm, 25 ft·lbf)

TMMK made: 43 N·m (440 kgf·cm, 32 ft·lbf)

43. CONNECT REAR LH FLEXIBLE HOSE

- (a) Connect a new gasket and flexible hose with the union bolt.
Torque: 29.4 N·m (300 kgf·cm, 22 ft·lbf)

44. FILL RESERVOIR WITH BRAKE FLUID

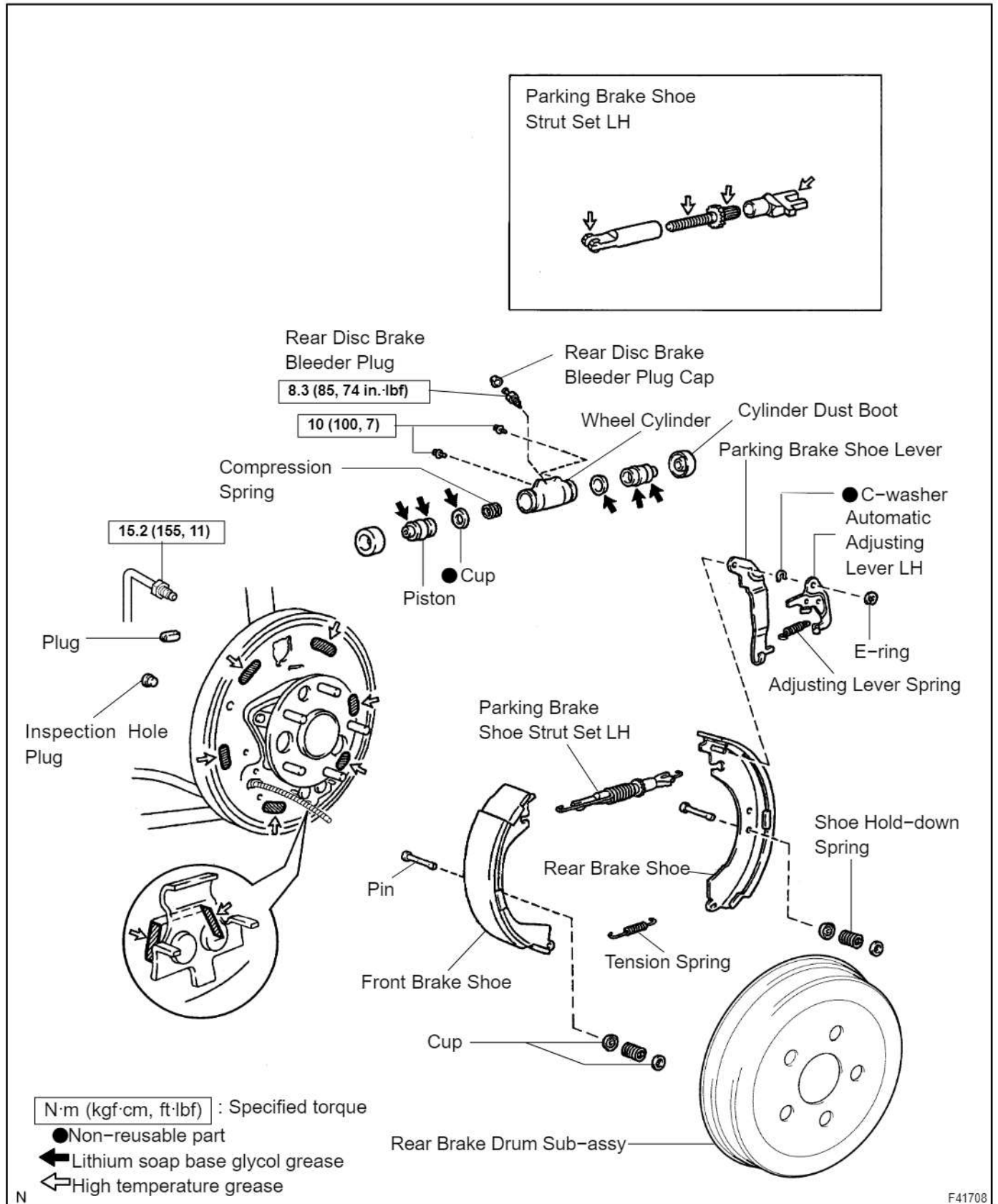
- 45. BLEED MASTER CYLINDER (See page 32-4)**
SST 09023-00101

46. BLEED BRAKE LINE (See page 32-4)**47. CHECK FLUID LEVEL IN RESERVOIR****48. CHECK BRAKE FLUID LEAKAGE****49. INSTALL REAR WHEEL**

Torque: 103 N·m (1,050 kgf·cm, 76 ft·lbf)

REAR DRUM BRAKE COMPONENTS

32004-03



F41708

BRAKE ACTUATOR ASSY (W/O VSC)

3203J-10

ON-VEHICLE INSPECTION

1. CONNECT HAND-HELD TESTER:

- (a) Connect the hand-held tester to the DLC3.
- (b) Start the engine and run it at idle.
- (c) Select the ACTIVE TEST mode on the hand-held tester.

HINT:

Please refer to the hand-held tester operator's manual for further details.

2. INSPECT ACTUATOR MOTOR OPERATION

- (a) With the motor relay ON, check the actuator motor operation noise.
- (b) Turn the motor relay OFF.
- (c) Depress the brake pedal and hold it for about 15 seconds. Check that the brake pedal cannot be depressed.
- (d) With the motor relay ON, check that the pedal does not pulsate.

NOTICE:

Do not keep motor relay ON for more than 5 seconds continuously. When operating it continuously, set the interval of more than 20 seconds.

- (e) Turn the motor relay OFF and release the brake pedal.

3. INSPECT RIGHT FRONT WHEEL OPERATION

NOTICE:

Never turn ON the solenoid which is not described below.

- (a) With the brake pedal depressed, perform the following operations.
- (b) Turn the SFRH and SFRR solenoid ON simultaneously, and check that the pedal cannot be depressed.

NOTICE:

Do not keep solenoid ON for more than 10 seconds continuously. When operating it continuously, set the interval of more than 20 seconds.

- (c) Turn the SFRH and SFRR solenoid OFF simultaneously, and check that the pedal can be depressed.
- (d) Turn the motor relay ON, and check that the pedal returns.

NOTICE:

Do not keep motor relay ON for more than 5 seconds continuously. When operating it continuously, set the interval of more than 20 seconds.

- (e) Turn the motor relay OFF and release the brake pedal.

4. INSPECT OTHER WHEEL OPERATION

- (a) As in the same procedure, check the solenoids of other wheels.

HINT:

Left front wheel: SFLH, SFLR

Right rear wheel: SRRH, SRRR

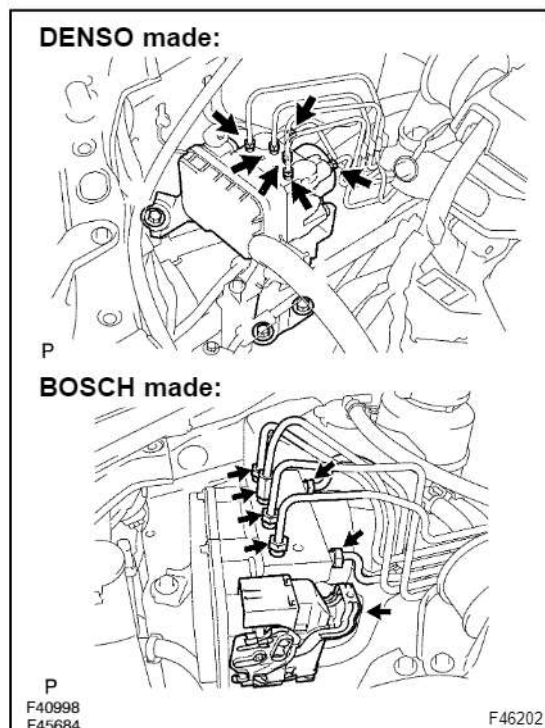
Left rear wheel: SRLH, SRLR

REPLACEMENT

1. DRAIN BRAKE FLUID

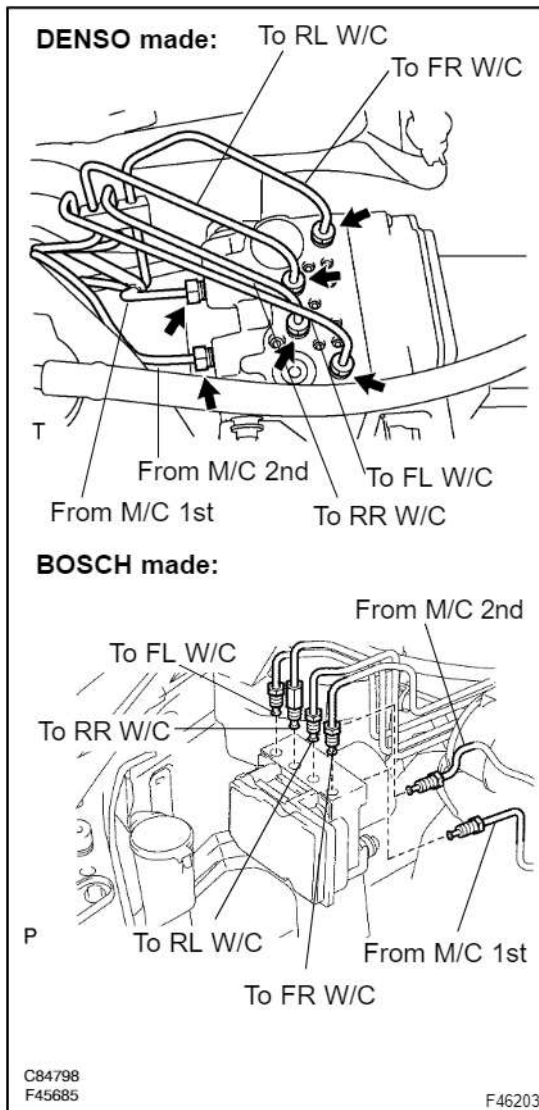
NOTICE:

Wash off the brake fluid immediately if it comes into contact with a painted surface.



2. REMOVE BRAKE ACTUATOR WITH BRACKET

- (a) Using SST, disconnect the 6 brake lines from the actuator.
SST 09023-00101



- (b) Use tags or make a memo to identify the place to reconnect.
- (c) Disconnect the brake actuator connector.
- (d) Remove the 3 nuts and brake actuator with bracket.

3. REMOVE BRAKE ACTUATOR ASSY

- (a) Remove the 2 nuts and brake actuator from the bracket.

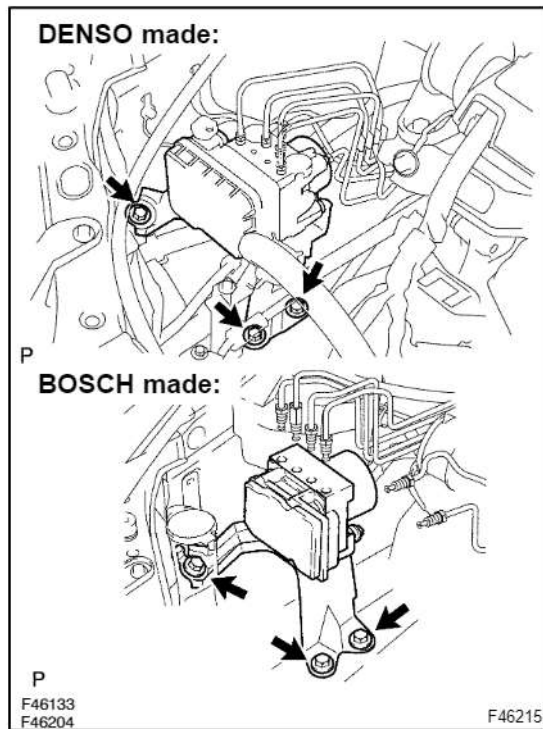
4. INSTALL BRAKE ACTUATOR ASSY

- (a) Install the brake actuator to the bracket with the 2 nuts.

Torque:

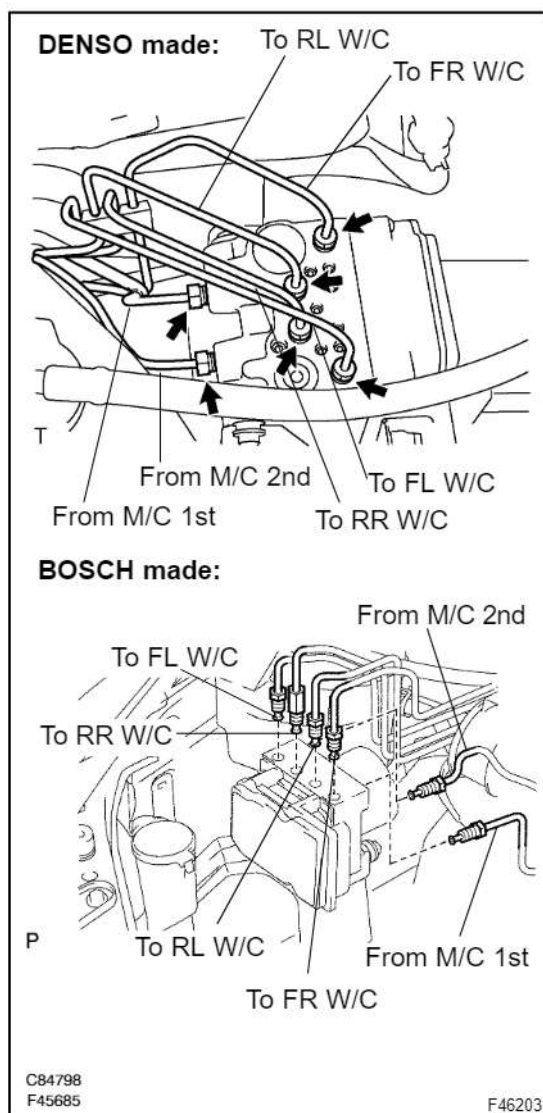
DENSO made: 5.4 N·m (55 kgf·cm, 48 in.·lbf)

BOSCH made: 8.0 N·m (82 kgf·cm, 71 in.·lbf)



5. INSTALL BRAKE ACTUATOR WITH BRACKET

- (a) Install the brake actuator with the 3 nuts.
Torque: 19 N·m (194 kgf·cm, 14 ft·lbf)
- (b) Connect the brake actuator connector.



- (c) Using SST, connect the each brake line to the correct position of brake actuator, as shown in the illustration.
SST 09023-00101
Torque: 15 N·m (155 kgf·cm, 11 ft·lbf)

6. **FILL RESERVOIR WITH BRAKE FLUID**
7. **BLEED MASTER CYLINDER (See page 32-4)**
SST 09023-00101
8. **BLEED BRAKE LINE (See page 32-4)**
9. **CHECK FLUID LEVEL IN RESERVOIR**
10. **CHECK BRAKE FLUID LEAKAGE**
11. **CHECK OPERATION OF BRAKE ACTUATOR (See page 32-4)**

BRAKE ACTUATOR ASSY (W/ VSC)

ON-VEHICLE INSPECTION

1. CONNECT HAND-HELD TESTER:

- (a) Connect the hand-held tester to the DLC3.
- (b) Start the engine and run it at idle.
- (c) Select the ACTIVE TEST mode on the hand-held tester.

HINT:

Please refer to the hand-held tester operator's manual for further details.

2. INSPECT ACTUATOR MOTOR OPERATION

- (a) With the motor relay ON, check the actuator motor operation noise.
- (b) Turn the motor relay OFF.
- (c) Depress the brake pedal and hold it for about 15 seconds. Check that the brake pedal cannot be depressed.
- (d) With the motor relay ON, check that the pedal does not pulsate.

NOTICE:

Do not keep motor relay ON for more than 5 seconds continuously. When operating it continuously, set the interval of more than 20 seconds.

- (e) Turn the motor relay OFF and release the brake pedal.

3. INSPECT RIGHT FRONT WHEEL OPERATION

NOTICE:

Never turn ON the solenoid which is not described below.

- (a) With the brake pedal depressed, perform the following operations.
- (b) Turn the SFRH and SFRR solenoid ON simultaneously, and check that the pedal cannot be depressed.

NOTICE:

Do not keep solenoid ON for more than 10 seconds continuously. When operating it continuously, set the interval of more than 20 seconds.

- (c) Turn the SFRH and SFRR solenoid OFF simultaneously, and check that the pedal can be depressed.
- (d) Turn the motor relay ON, and check that the pedal returns.

NOTICE:

Do not keep motor relay ON for more than 5 seconds continuously. When operating it continuously, set the interval of more than 20 seconds.

- (e) Turn the motor relay OFF and release the brake pedal.

4. INSPECT OTHER WHEEL OPERATION

- (a) As in the same procedure, check the solenoids of other wheels.

HINT:

Left front wheel: SFLH, SFLR

Right rear wheel: SRRH, SRRR

Left rear wheel: SRLH, SRLR

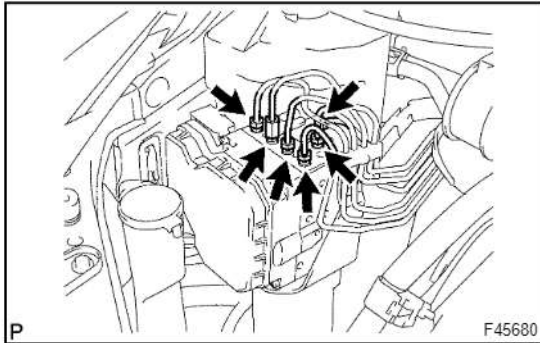
REPLACEMENT

1. DRAIN BRAKE FLUID

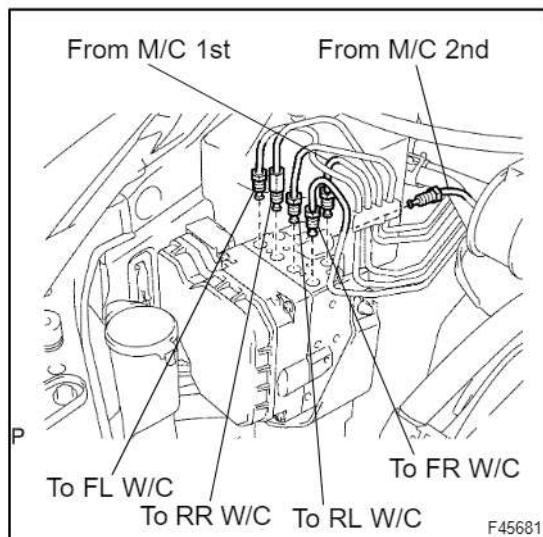
NOTICE:

Wash off the brake fluid immediately if it comes into contact with a painted surface.

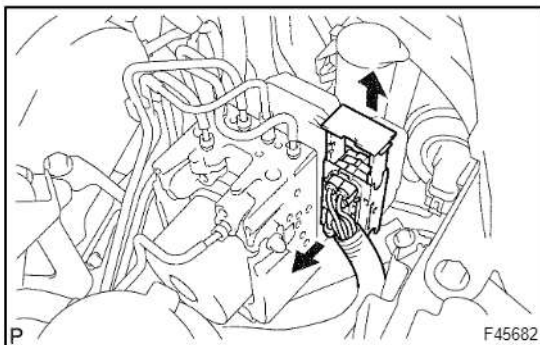
2. REMOVE BRAKE ACTUATOR WITH BRACKET



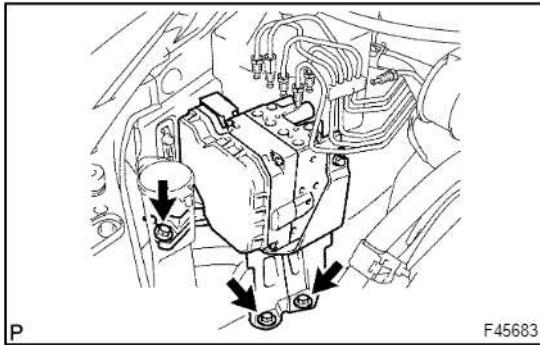
- (a) Using SST, disconnect the 6 brake lines from the actuator.
SST 09023-00101



- (b) Use tags or make a memo to identify the place to reconnect.



- (c) Disconnect the actuator connector.



- (d) Remove the 3 nuts and brake actuator with bracket.

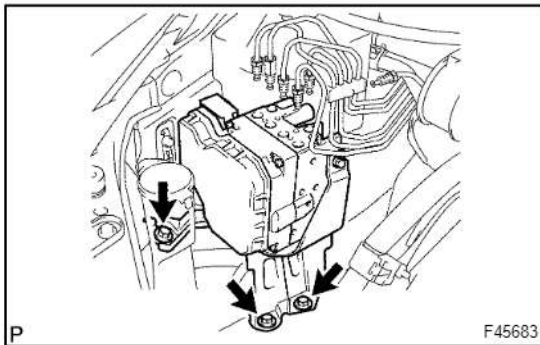
3. REMOVE BRAKE ACTUATOR ASSY

- (a) Remove the 2 nuts and BRAKE actuator from the bracket.

4. INSTALL BRAKE ACTUATOR ASSY

- (a) Install the BRAKE actuator to the bracket with the 2 nuts.

Torque: 5.4 N·m (55 kgf·cm, 48 in·lbf)

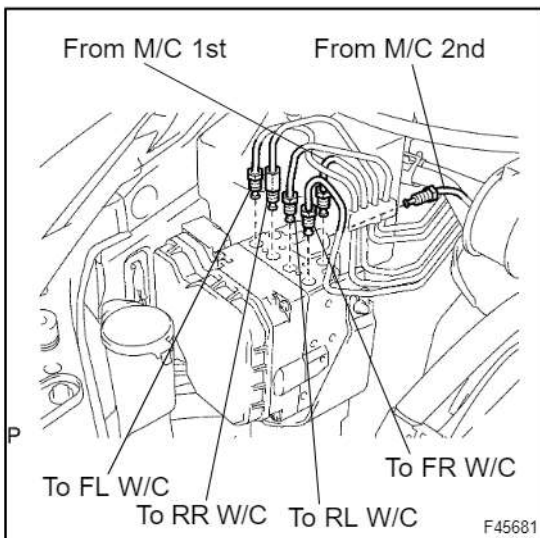


5. INSTALL BRAKE ACTUATOR WITH BRACKET

- (a) Install the brake actuator with the 3 nuts.

Torque: 19 N·m (194 kgf·cm, 14 ft·lbf)

- (b) Connect the brake actuator connector.



- (c) Using SST, connect the each brake line to the correct position of brake actuator, as shown in the illustration.

SST 09023-00101

Torque: 15 N·m (155 kgf·cm, 11 ft·lbf)

6. FILL RESERVOIR WITH BRAKE FLUID

7. BLEED MASTER CYLINDER (See page 32-4)

SST 09023-00101

8. BLEED BRAKE LINE (See page 32-4)

9. **BLEED BRAKE ACTUATOR ASSY (See page [32-4](#))**
SST 09992-00242, 09992-00350
10. **CHECK FLUID LEVEL IN RESERVOIR**
11. **CHECK BRAKE FLUID LEAKAGE**
12. **CHECK OPERATION OF BRAKE ACTUATOR (See page [32-28](#))**

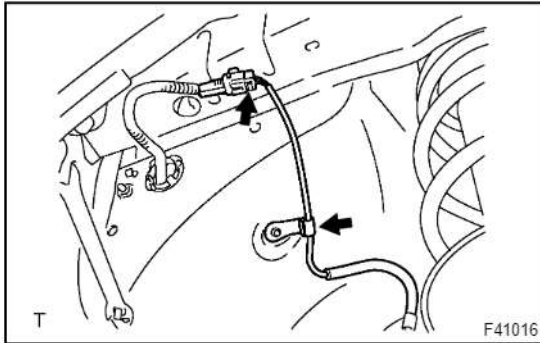
SPEED SENSOR FRONT LH REPLACEMENT

3203N-12

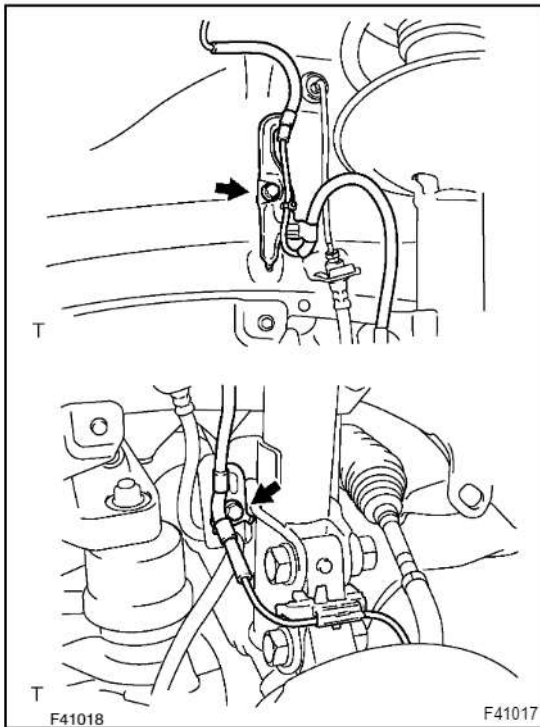
HINT:

Replace the RH side by the same procedures with LH side.

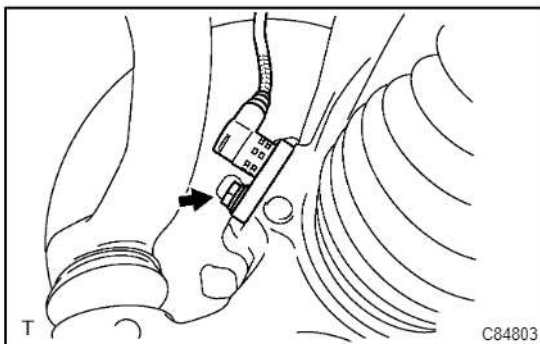
1. **REMOVE FRONT WHEEL**
2. **REMOVE FRONT FENDER LINER LH**

**3. REMOVE SPEED SENSOR FRONT LH**

- (a) Disconnect the speed sensor connector and clamp.



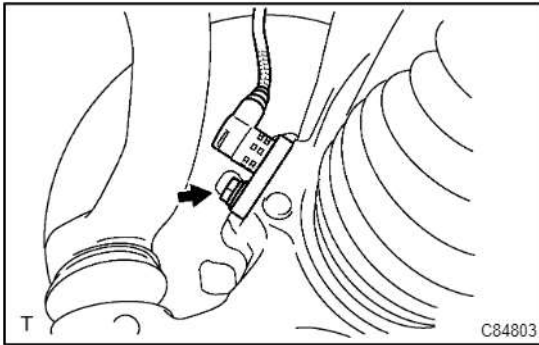
- (b) Remove the 2 clamp bolts holding the sensor harness and clamp from the body and shock absorber.



- (c) Remove the bolt and speed sensor FR LH.

NOTICE:

Do not stick and foreign matter on the sensor tip.

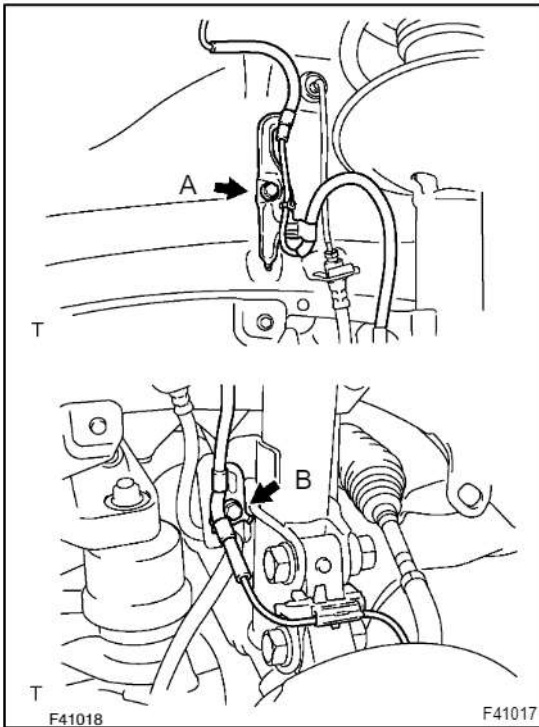


4. INSTALL SPEED SENSOR FRONT LH

- (a) Install the speed sensor FR LH with the bolt.
Torque: 8.0 N·m (82 kgf·cm, 71 in·lbf)

NOTICE:

Make sure the sensor tip is clean.



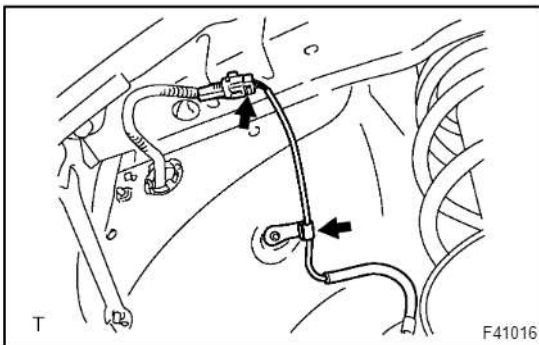
- (b) Install the sensor harness clamps with the 2 bolts "A" and "B" to the body and shock absorber.

Torque:

Bolt A: 5.0 N·m (51 kgf·cm, 44 in·lbf)

Bolt B: 18.8 N·m (192 kgf·cm, 14 ft·lbf)

- (c) Connect the clamp to the knuckle.



- (d) Connect the speed sensor connector and clamp.

5. INSTALL FRONT FENDER LINER LH

6. INSTALL FRONT WHEEL

Torque: 103 N·m (1,050 kgf·cm, 76 ft·lbf)

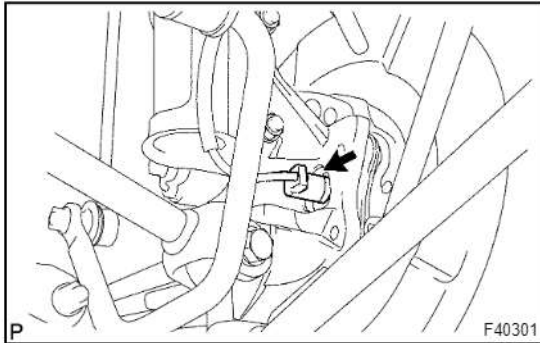
7. CHECK ABS SPEED SENSOR SIGNAL (See page [05-873](#), [05-933](#) or [05-990](#))

SKID CONTROL SENSOR REPLACEMENT

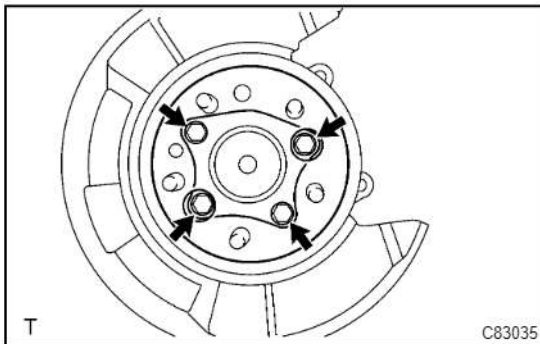
320CS-06

HINT:

Replace the RH side by the same procedure with LH side.

1. REMOVE REAR WHEEL**2. DISCONNECT SKID CONTROL SENSOR WIRE**

- (a) Disconnect the connector from the skid control sensor.

3. REMOVE REAR DISC BRAKE CALIPER ASSY LH (See page 32-44)**4. REMOVE REAR DISC****5. REMOVE REAR AXLE HUB & BEARING ASSY LH**

- (a) Remove the 4 bolts and rear axle hub & bearing assy.

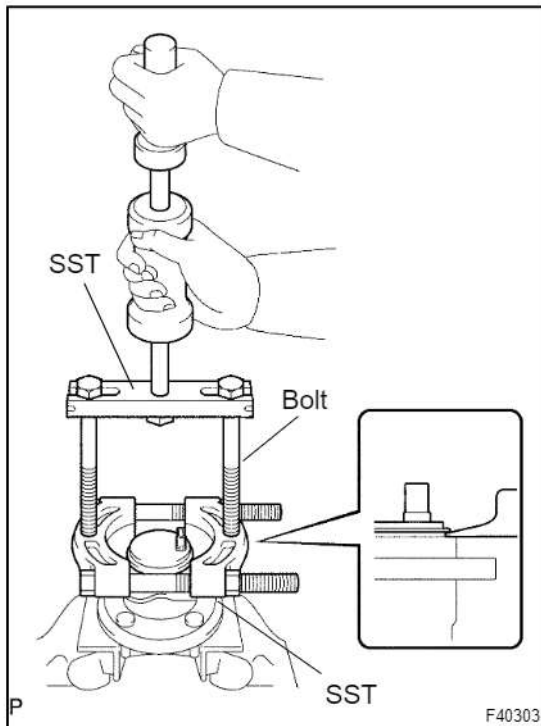
6. REMOVE SKID CONTROL SENSOR

- (a) Mount the rear axle hub in a soft jaw vise.

NOTICE:

Replace the axle hub assembly if it is dropped or a strong shock is given to it.

- (b) Using a pin punch and hammer, drive out the 2 pins and remove the 2 attachments from SST.



- (c) Using SST and 2 bolts (Diameter: 12 mm, pitch: 1.5 mm), remove the skid control sensor from the rear axle hub.
SST 09520-00031 (09520-00040), 09521-00020, 09950-00020

NOTICE:

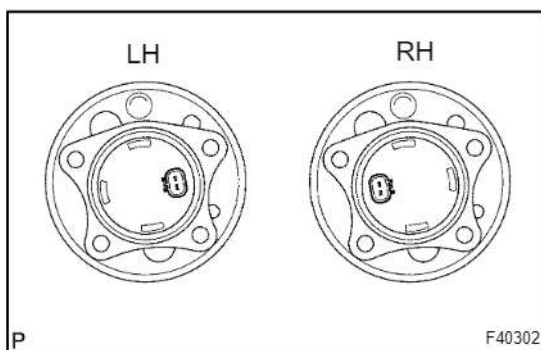
- If a damage is inflicted to the sensor rotor, replace the axle hub assembly.
- Do not scratch the contacting surface of axle hub and speed sensor.

7. INSTALL SKID CONTROL SENSOR

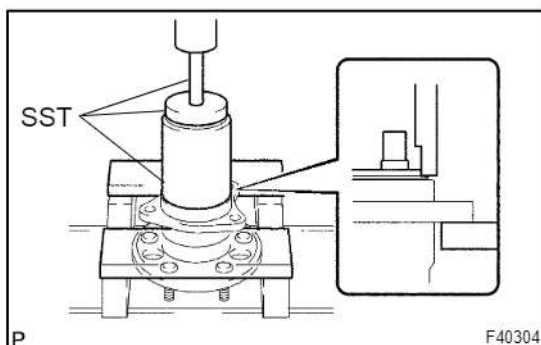
- (a) Clean the contacting surface of the axle hub and a new skid control sensor.

NOTICE:

Make sure the sensor rotor is clean.



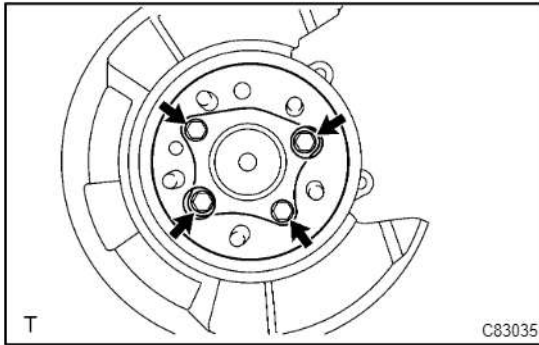
- (b) Place the speed sensor on the axle hub so that the connector is positioned, as shown in the illustration.



- (c) Using SST and a press, install the skid control sensor to the axle hub.
SST 09830-36010, 09950-60010 (09951-00650), 09950-70010 (09951-07100)

NOTICE:

- Do not tap the skid control sensor with a hammer directly.
- Check that the skid control sensor detection part is clean.
- Press in the skid control sensor straight and slowly.

**8. INSTALL REAR AXLE HUB & BEARING ASSY LH**

- (a) Install the rear axle hub & bearing assy with the 4 bolts.
Torque: 80 N·m (816 kgf·cm, 59 ft·lbf)

9. INSTALL REAR DISC**10. INSTALL REAR DISC BRAKE CALIPER ASSY LH (See page [32-44](#))****11. CONNECT SKID CONTROL SENSOR WIRE****12. INSTALL REAR WHEEL**

Torque: 103 N·m (1,050 kgf·cm, 76 ft·lbf)

13. INSPECT TIRE (See page [28-1](#))**14. MEASURE VEHICLE HEIGHT (See page [26-5](#))****15. INSPECT SIDE SLIP (See page [27-3](#))****16. INSPECT CAMBER (See page [27-3](#))****17. INSPECT TOE-IN (See page [27-3](#))****18. ADJUST CAMBER AND TOE-IN (See page [27-3](#))****19. CHECK ABS SPEED SENSOR SIGNAL (See page [05-873](#), [05-938](#) or [05-1002](#))**

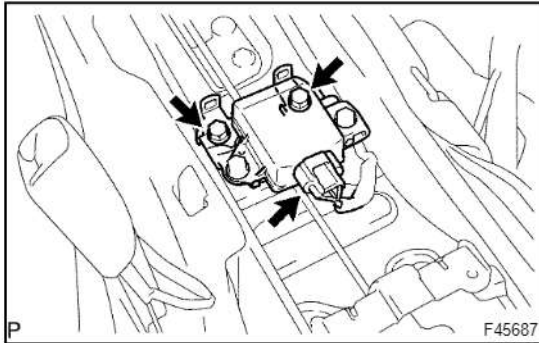
YAWRATE SENSOR REPLACEMENT

32006-07

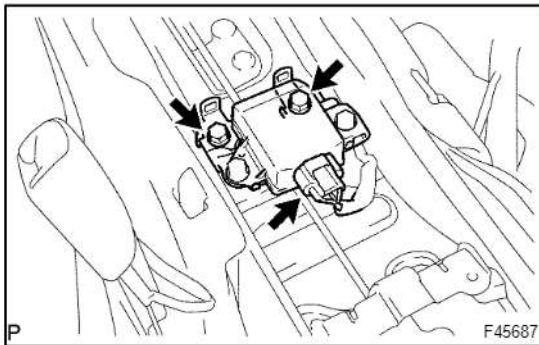
NOTICE:

Do not separate the sensor from the bracket.

1. REMOVE CONSOLE PANEL UPPER REAR (See page 71-16)
2. REMOVE RR CONSOLE BOX (See page 71-16)

**3. REMOVE YAWRATE SENSOR**

- (a) Disconnect the yawrate sensor connector.
- (b) Remove the 2 bolts and yawrate sensor.

**4. INSTALL YAWRATE SENSOR**

- (a) Install the yawrate sensor with the 2 bolts.
Torque: 12.5 N·m (127 kgf·cm, 9 ft·lbf)
- (b) Connect the yawrate sensor connector.

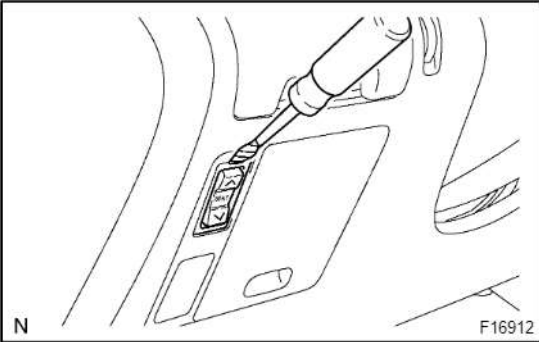
5. INSTALL RR CONSOLE BOX (See page 71-16)
6. INSTALL CONSOLE PANEL UPPER REAR (See page 71-16)
7. PERFORM YAWRATE SENSOR ZERO POINT CALIBRATION (See page 05-987)

STEERING SENSOR REPLACEMENT

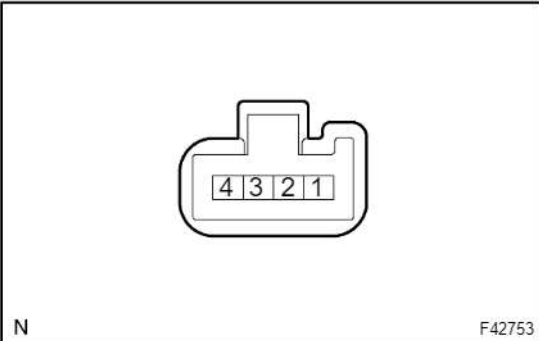
1. PRECAUTION (See page [60-1](#))
2. SEPARATE BATTERY NEGATIVE TERMINAL
3. PLACE FRONT WHEELS FACING STRAIGHT AHEAD
4. REMOVE STEERING WHEEL COVER LOWER NO.2
5. REMOVE STEERING WHEEL COVER LOWER NO.2 (4 SPOKE STEERING WHEEL ASSY)
6. REMOVE STEERING WHEEL COVER LOWER NO.3 (3 SPOKE STEERING WHEEL ASSY)
7. REMOVE HORN BUTTON ASSY (See page [60-25](#))
8. REMOVE STEERING WHEEL ASSY (See page [50-9](#) or [50-21](#))
SST 09950-50013 (09951-05010, 09952-05010, 09953-05020, 09954-05021)
9. REMOVE INSTRUMENT CLUSTER FINISH PANEL (See page [71-16](#))
10. REMOVE STEERING COLUMN COVER (See page [50-9](#))
11. REMOVE SPIRAL CABLE SUB-ASSY (See page [60-34](#))
12. REMOVE STEERING SENSOR
13. INSTALL STEERING SENSOR
14. INSPECT SPIRAL CABLE SUB-ASSY
 - (a) If the following condition is identified, replace the spiral cable sub-assy with new one.
Condition:
Scratches or cracks on the connector
Cracks, dents or chipping of the spiral cable sub-assy
15. PLACE FRONT WHEELS FACING STRAIGHT AHEAD
16. INSTALL SPIRAL CABLE SUB-ASSY (See page [60-34](#))
17. CENTER SPIRAL CABLE (See page [60-34](#))
18. INSTALL STEERING WHEEL ASSY (See page [50-9](#))
19. INSTALL HORN BUTTON ASSY (See page [60-25](#))
20. INSPECT HORN BUTTON ASSY (See page [60-25](#))
21. INSPECT SRS WARNING LIGHT (See page [05-1464](#))

ADJUSTABLE PEDAL SWITCH INSPECTION

320N2-03



- 1. REMOVE ADJUSTABLE PEDAL SWITCH**
- (a) Using a screwdriver, remove the adjustable pedal switch, then disconnect the connector.



2. INSPECT ADJUSTABLE PEDAL SWITCH

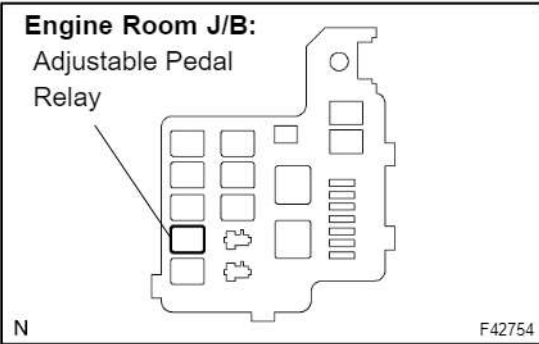
Switch position	Tester connection	Specified condition
OFF	1 - 2 - 3	Continuity
FRONT	1 - 3	Continuity
	2 - 4	
REAR	1 - 2	Continuity
	3 - 4	

3. INSTALL ADJUSTABLE PEDAL SWITCH

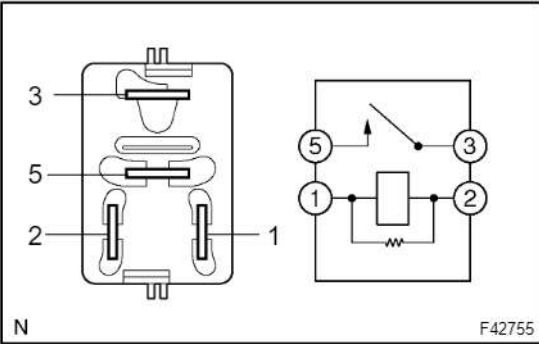
- (a) Connect the connector.
- (b) Install the adjustable pedal switch.

ADJUSTABLE PEDAL RELAY INSPECTION

320A3-03



- 1. REMOVE ADJUSTABLE PEDAL RELAY**
(a) Remove the adjustable pedal relay from the engine room J/B.



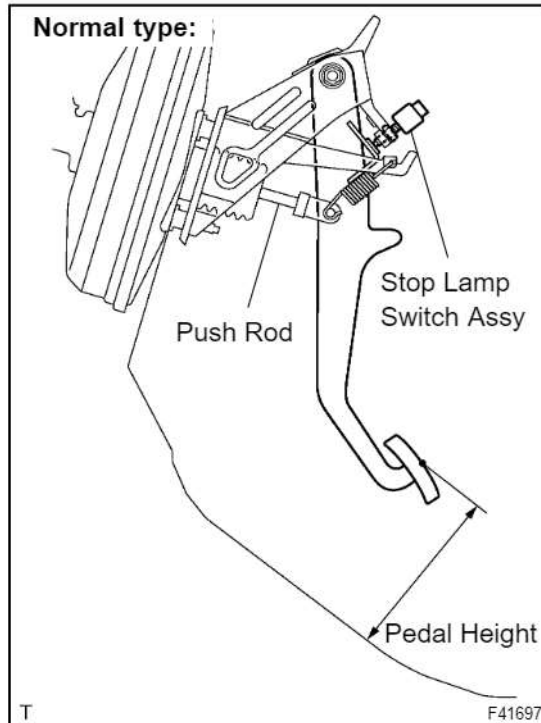
2. INSPECT ADJUSTABLE PEDAL RELAY

Condition	Tester condition	Specified condition
Constant	1 - 2	Continuity
	3 - 5	No continuity
Apply +B between terminals 1 and 2	3 - 5	continuity

- 3. INSTALL ADJUSTABLE PEDAL RELAY**
(a) Install the adjustable pedal relay to the engine room J/B.

BRAKE PEDAL SUPPORT ASSY ADJUSTMENT

321BV-01



1. CHECK AND ADJUST BRAKE PEDAL HEIGHT

- (a) Inspect brake pedal height.

Pedal height from asphalt sheet:

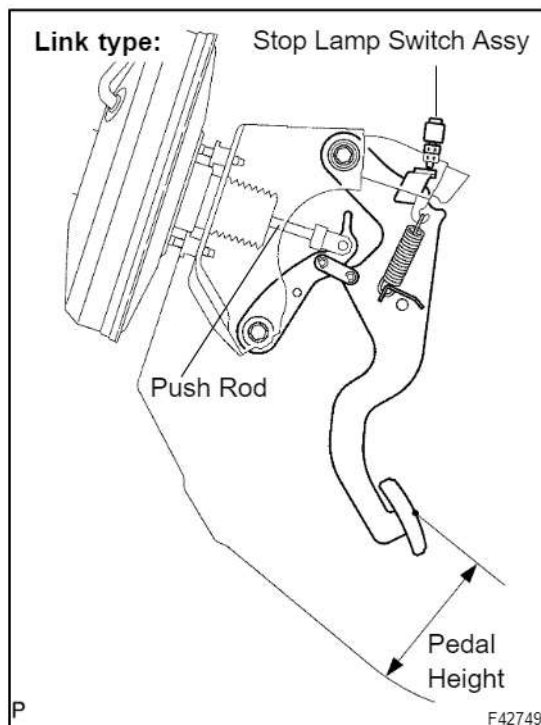
144.1 – 154.1 mm (5.673 – 6.067 in.)

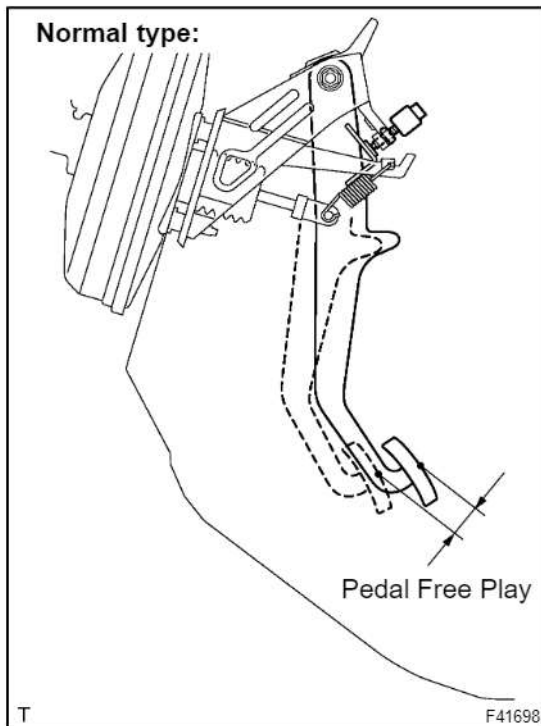
- (b) Adjust brake pedal height.

- (1) Remove the instrument panel finish panel sub-assy lower and instrument panel insert sub-assy lower LH.
- (2) Disconnect the connector from the stop lamp switch assy.
- (3) Loosen the stop lamp switch lock nut and remove the stop lamp switch assy.
- (4) Loosen the clevis lock nut.
- (5) Adjust the pedal height by turning the pedal push rod.
- (6) Tighten the push rod lock nut.

Torque: 26 N·m (265 kgf·cm, 19 ft·lbf)

- (7) Install the stop lamp switch assy.
- (8) Connect the connector to the stop lamp switch assy.
- (9) Push the brake pedal in 5 – 10 mm (0.20 – 0.39 in.), turn the stop lamp switch assy to lock the nut in the position where the stop lamp goes off.
- (10) After installation, push the brake pedal in 5 – 10 mm (0.20 – 0.39 in.), check that stop lamp lights up.
- (11) Install the instrument panel insert sub-assy lower LH and instrument panel finish panel sub-assy lower.





2. CHECK PEDAL FREE PLAY

- Stop the engine and depress the brake pedal several times until there is no more vacuum left in the booster.
- Push in the pedal until the beginning of the resistance is felt. Measure the distance, as shown.

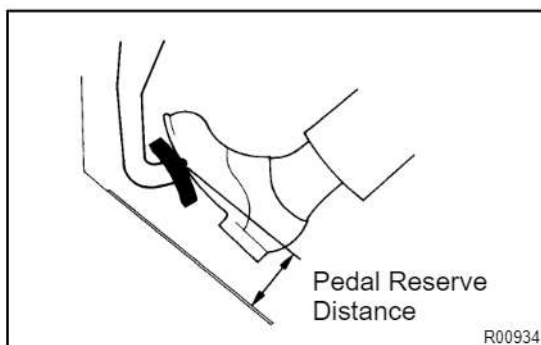
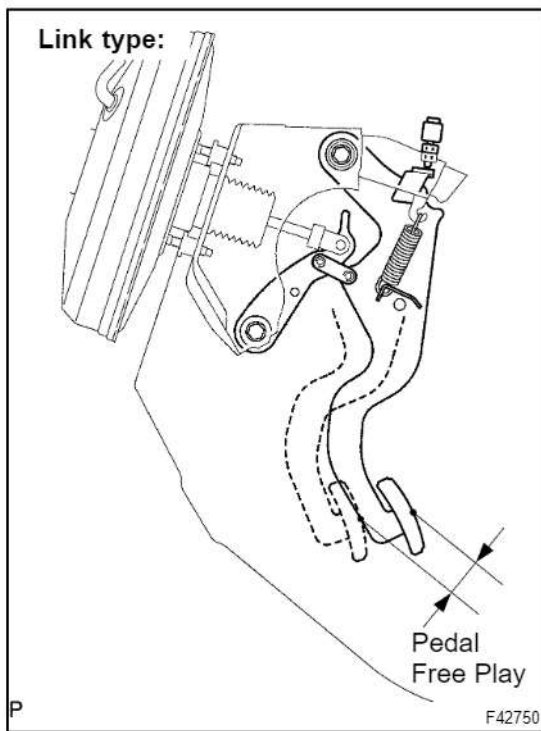
Pedal free play: 1 – 6 mm (0.04 – 0.24 in.)

If incorrect, check the stop lamp switch assy clearance.

If the clearance is OK, then troubleshoot the brake system.

Stop lamp switch clearance:

0.5 – 2.5 mm (0.020 – 0.098 in.)



3. CHECK PEDAL RESERVE DISTANCE

- Release the parking brake pedal.
With engine running, depress the pedal and measure the pedal reserve distance, as shown.

Pedal reserve distance from asphalt sheet at 490 N (50 kgf, 110.2 lbf): More than 63 mm (2.48 in.)

If incorrect, troubleshoot the brake system.