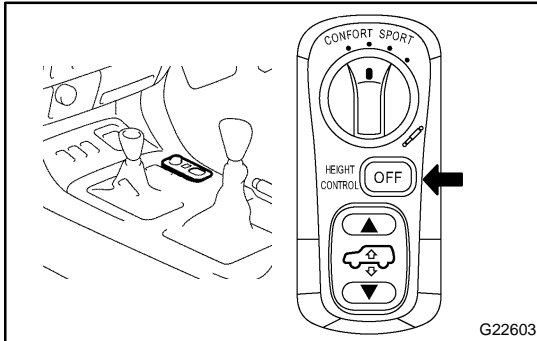


# SUSPENSION CONTROL SYSTEM

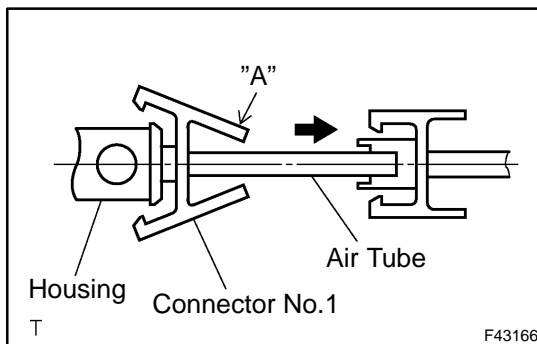
## PRECAUTION

25018-06



### 1. JACK OR LIFT UP AND DOWN

- (a) When jacking up or lifting up, stop operating the air suspension control system by pressing the height control OFF switch.



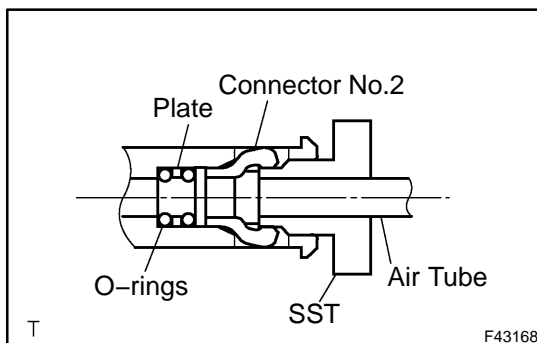
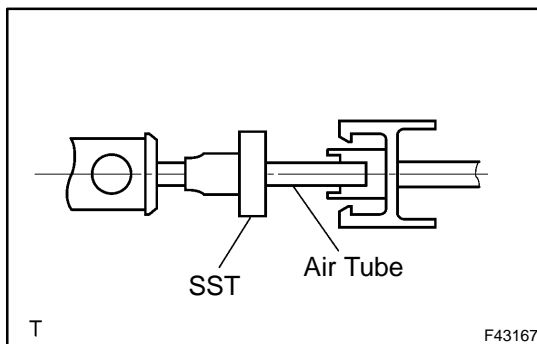
### 2. DISCONNECT AND CONNECT HEIGHT CONTROL TUBE

#### NOTICE:

- Disconnecting and connecting the height control tube should be performed by hand to prevent foreign objects from entering.
- Never damage the height control tube.

- (a) Disconnect the height control tube.

- (1) Pinch "A" of the connector No.1 and pull it out from the housing.
- (2) Set SST to the tube.  
SST 09730-00010



- (3) Insert SST into the housing to expand the claw of plug or tube connector in the housing.
- (4) Pull out the tube with SST inserted.

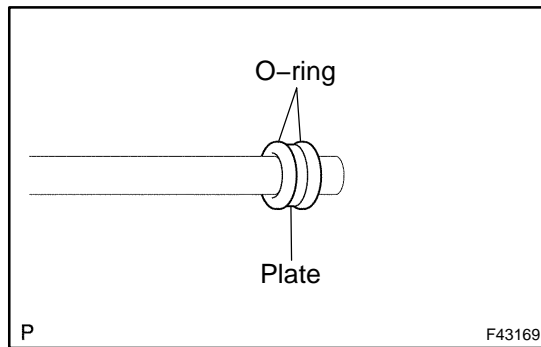
#### NOTICE:

**Never pull the tube forcibly.**

- (5) Insert a flat-head thin-bladed screwdriver into the circular hole on the housing, and remove connector No.2, the 2 O-rings and the plate from the housing.

#### HINT:

O-ring, plate and connector No.2 are non-reusable parts.



(b) Installs 2 O-rings and the plate.

**NOTICE:**

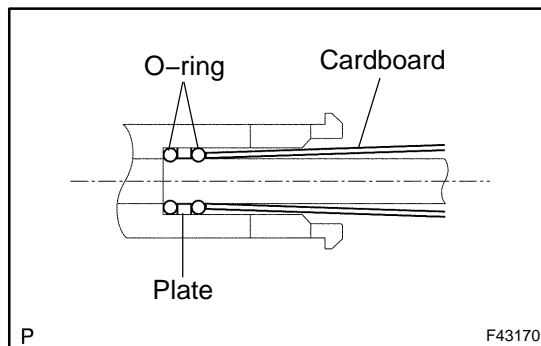
**When replacing the parts on which the tube to be installed with a new one, it is not necessary to perform the procedure for installation.**

- (1) Apply MP grease to 2 new O-rings and plate, and install them to the straight tube or equivalent.

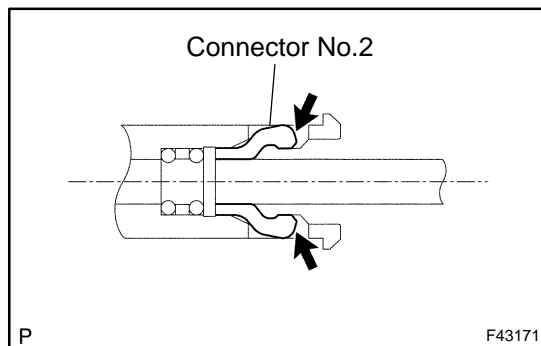
**NOTICE:**

**Install the plate between the O-rings.**

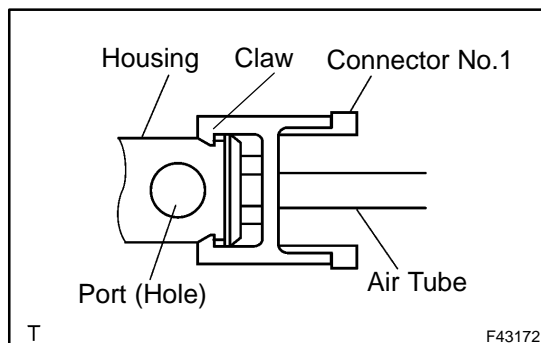
**Never adhere foreign object to the O-rings and the height control tube to prevent air leaks.**



- (2) Insert the tube on which 2 O-rings and a plate are installed into the housing, and then push it in lightly with rolled up cardboard.



- (3) Push the connector No.2 into the housing to the position where a clicking sound is heard.



(c) Install the height control tube.

- (1) Push the tube and connector No.1 into the housing to the position where a clicking sound is heard.

**NOTICE:**

- **Slide the phase of the housing port from that of the connector No.1 claw 90° to install.**
- **Pull the tube lightly to make sure that it is securely connected.**

## ON-VEHICLE INSPECTION

### 1. ADJUST STANDARD VEHICLE HEIGHT

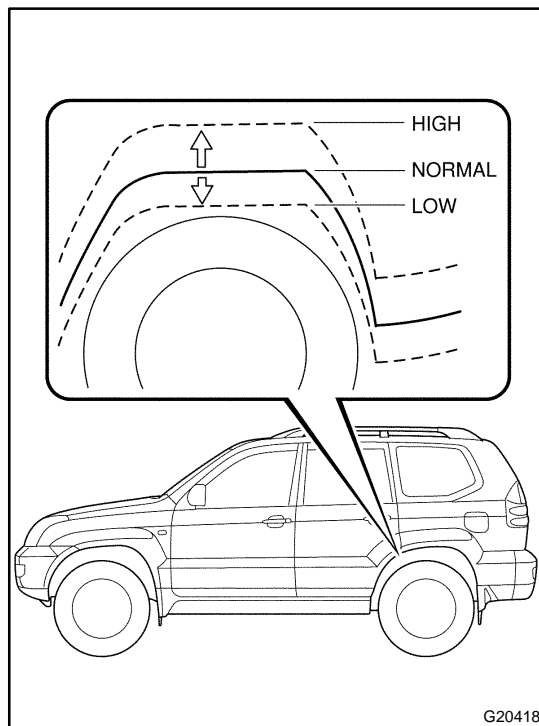
- Release the parking brake and stabilize the suspensions by pushing up and down the corners of the vehicle.
- Move the shift lever to the "N" position and settle the tires by moving the vehicle back and forth by hand.
- Start the engine.
- On the height control switch, first press "HIGH" to raise the vehicle height, and then change the switch to "LOW" to lower it. Perform this operation one more time.

#### NOTICE:

Make sure to release the parking brake and move the shift lever to the "N" position.

### 2. INSPECT TIRE (See page 28-1)

### 3. MEASURE VEHICLE HEIGHT (See page 26-7)



### 4. OPERATE HEIGHT CONTROL SWITCH AND CHECK CHANGE OF VEHICLE HEIGHT

- Start the engine and change the height control switch from the NORMAL position to the HIGH and LOW position.

Check the time until the height adjustment is completed and the amount of change in the vehicle height.

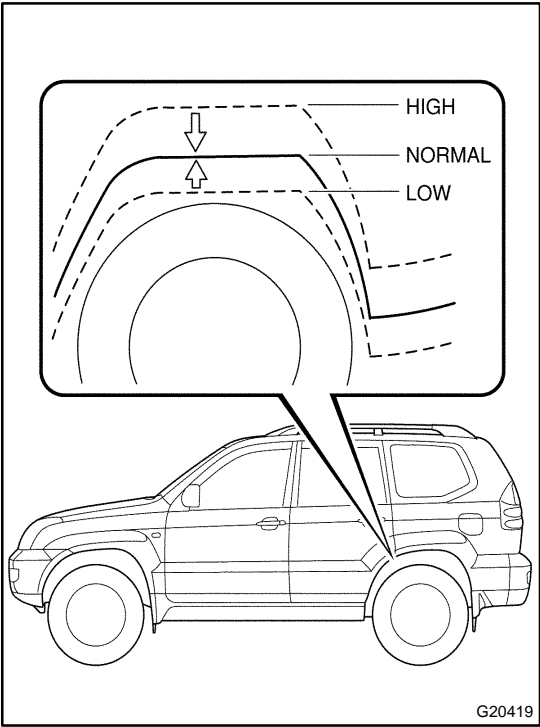
#### Adjustment time

From operation of height control switch to start of compressor.	Approx. 2 sec.
From start of compressor to completion of height adjustment.	15 – 20 sec. (HIGH position)

#### Amount of change in vehicle height

**HIGH position: 40 mm (1.57 in.)**

**LOW position: -20 mm (-0.79 in.)**



- (b) With the vehicle in the HIGH position height adjustment, start the engine and change the height control switch from the HIGH and LOW position to the NORMAL position. Check the time until the height adjustment is completed and the amount of change in the vehicle height.

**Adjustment time**

From operation of height control switch to open of exhaust valve.	Approx. 2 sec.
From open of exhaust valve to completion of height adjustment.	10 – 15 sec. (HIGH position)

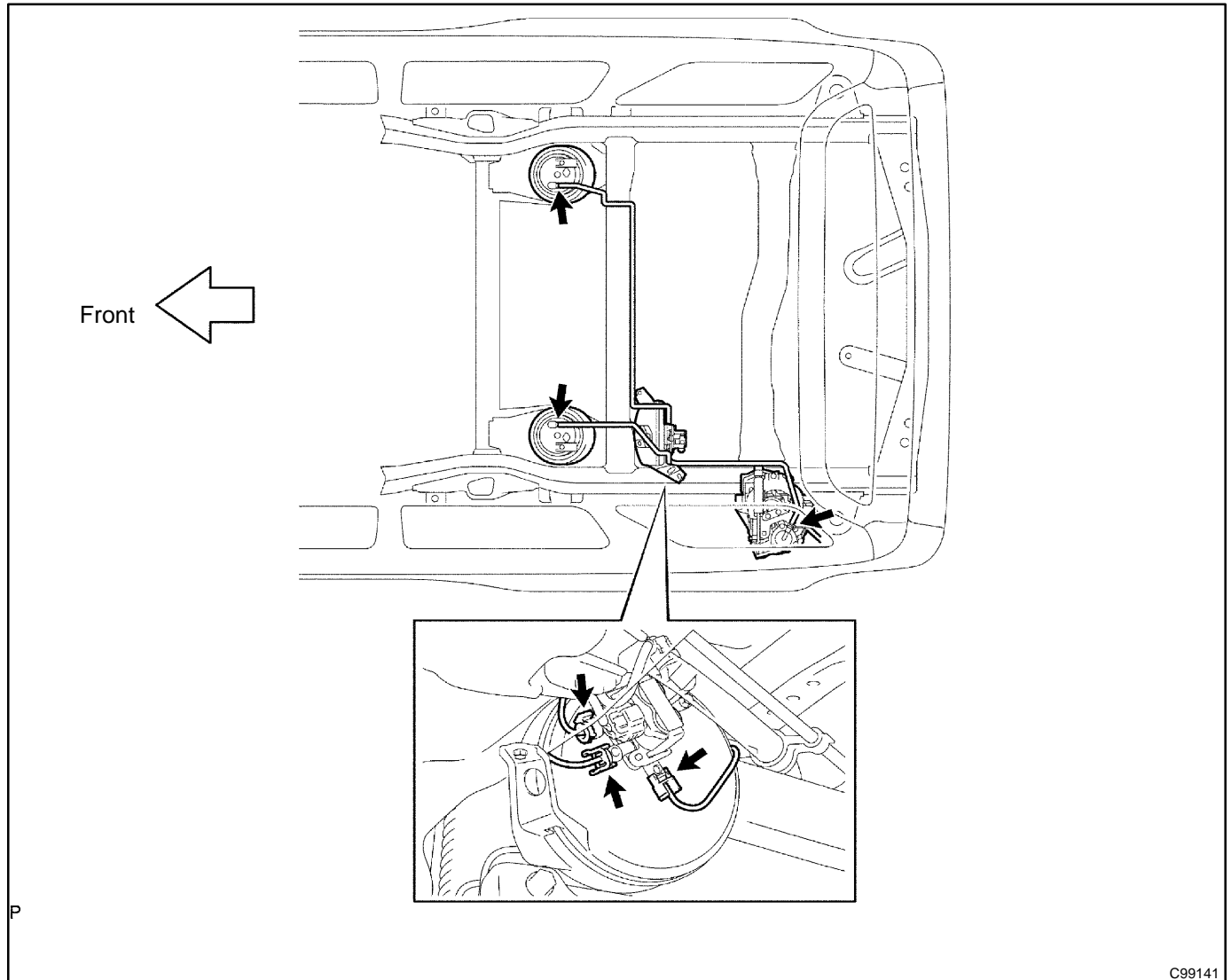
**Amount of change in vehicle height**

**HIGH position: 40 mm (1.57 in.)**

**LOW position: -20 mm (-0.79 in.)**

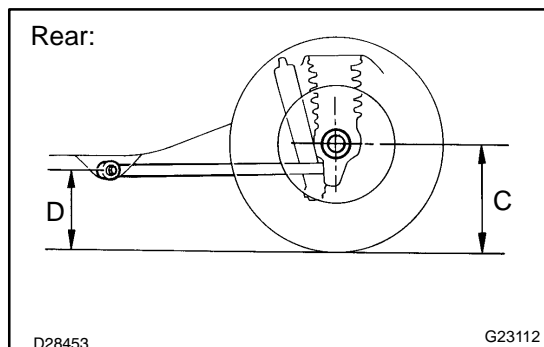
**5. CHECK CONNECTIONS OF TUBES FOR AIR LEAKAGE**

- (a) Set the height control switch in the HIGH position and raise the vehicle height.
- (b) Stop the engine.
- (c) Apply soapy water to the connections of the tubes and check if there is any air leakage.

**6. ADJUST VEHICLE HEIGHT****NOTICE:**

**While adjusting the vehicle height, never get on and off or load and unload the vehicle which causes the vehicle height to be changed.**

- (a) Suspend the vehicle height control by pressing the height control OFF switch.
- (b) Put the vehicle in a level state.



- (c) Measure again the vehicle height (C – D measurement) on the right side and left side.

**Standard vehicle height value: See page 26-7**

**Difference between the right side and the left side: 10 mm (0.39 in.) or less**

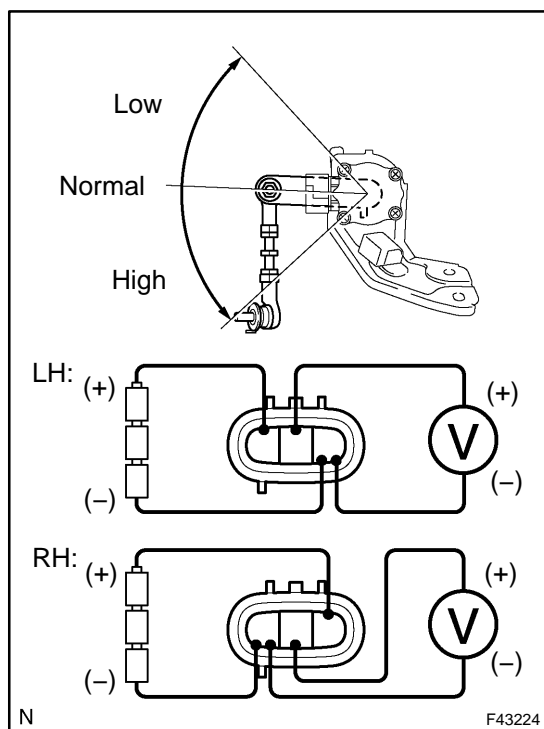
- (d) If the actual vehicle height differs from the vehicle height (C – D measurement), adjust it by jacking up the frame, etc.

- (e) When using the hand-held tester:

- (1) Turn the ignition switch to ON or ACC.
- (2) Using the hand-held tester, measure each vehicle height value of the right side and the left side sensors.

**Difference between the tester value and vehicle height (C – D measurement) : 5 mm (0.20 in.) or less**

**Difference between the right side and the left side: 5 mm (0.20 in.) or less**



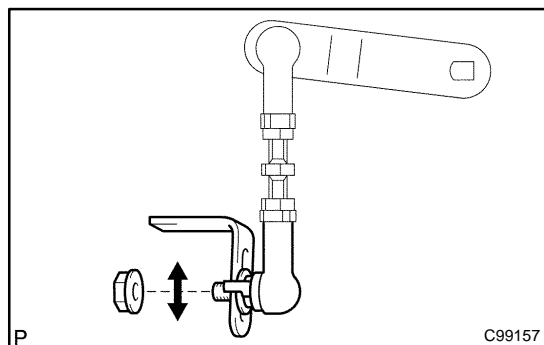
- (f) When not using the hand-held tester:

- (1) Disconnect the connector of the height control sensor.
- (2) Connect three 1.5 V dry cell batteries in series.
- (3) Connect the battery positive (+) and negative (-) to the terminals as shown in the illustration.

**Standard:**

Position	Voltage
High	2.31 – 3.81 V
Normal	2.31 ± 0.04 V
Low	1.39 – 2.31 V

**Difference between the right side and the left side: 0.06 V or less**

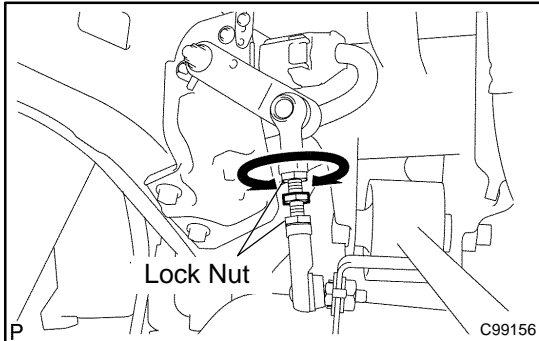


- (g) If the value in (e) or (f) differs from the vehicle height (C – D measurement), adjust it by following the procedures below:

- (1) Loosen the nut.
- (2) Move the height control sensor link up and down along the slotted hole of the bracket.
- (3) Adjust the vehicle height to the vehicle height (C – D measurement) while checking the value on the hand-held tester or the voltmeter.

(4) Tighten the nut.

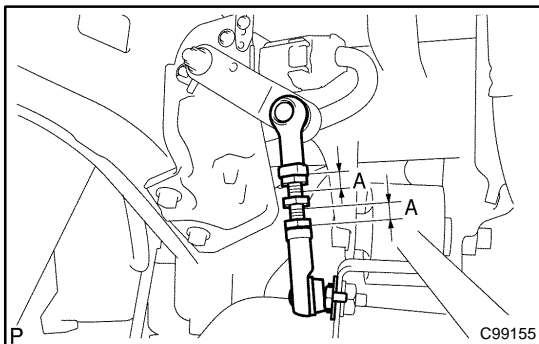
**Torque: 5.4 N·m (55 kgf·cm, 48 in.-lbf)**



(h) If the vehicle height cannot be adjusted by performing (g), adjust it again by following the procedures below:

- (1) Loosen the 2 lock nuts of the height control sensor link.
- (2) Adjust the vehicle height to the vehicle height (C – D measurement) by turning the link while checking the value on the hand-held tester or the voltmeter.
- (3) Tighten the 2 lock nuts.

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



(i) Check that the lengths of the screw parts, "A" in the illustration, are within the standard value.

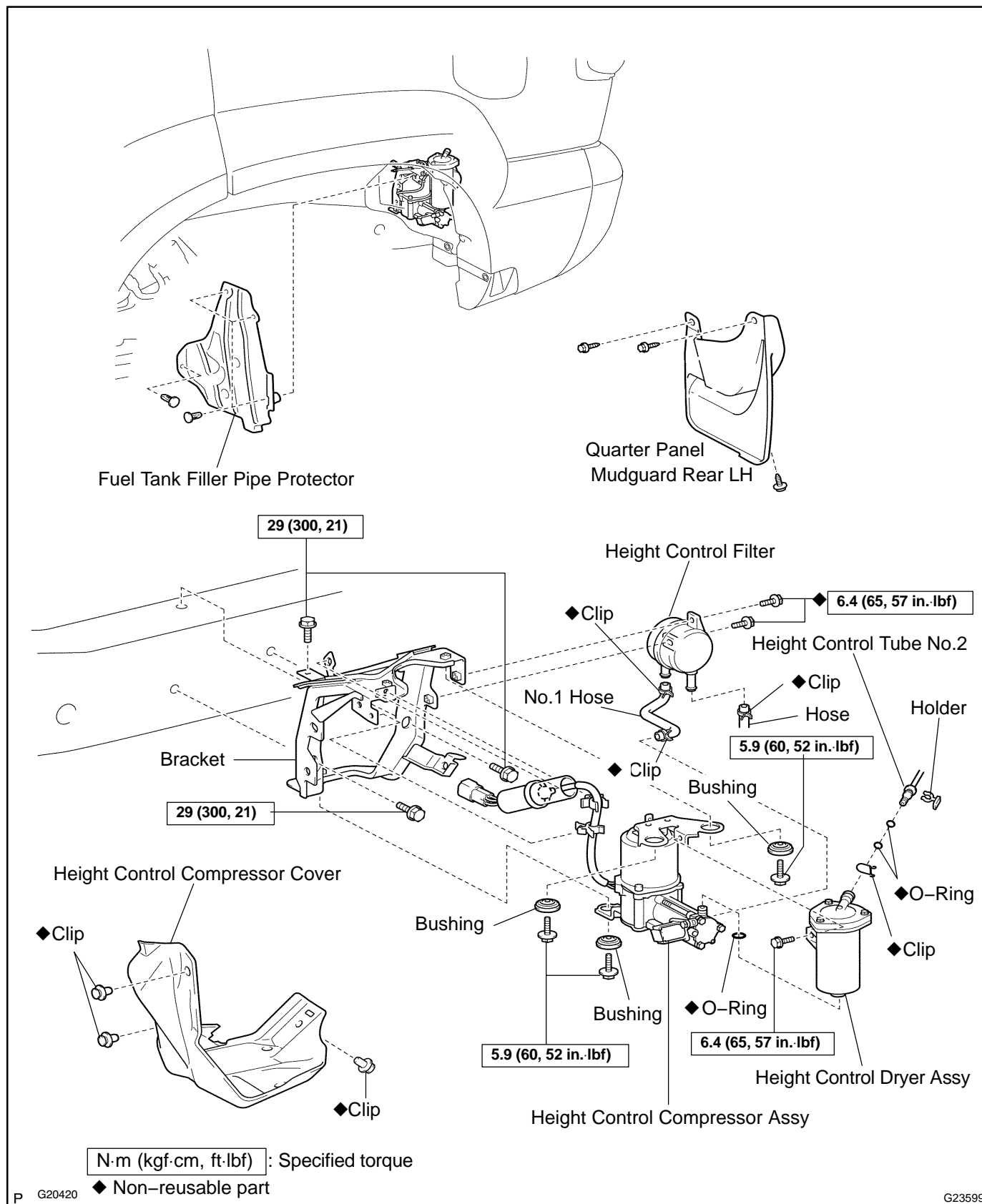
**Standard length: 6.5 – 15.0 mm (0.26 – 0.59 in.)**

- (j) Operate the height control (From normal position to high position, and from high position to normal position).
- (k) Measure again the vehicle height (C – D measurement) on the right side and left side.
- (l) Check that the vehicle height (C – D measurement) and the difference between the right side and the left side fall within the specification.

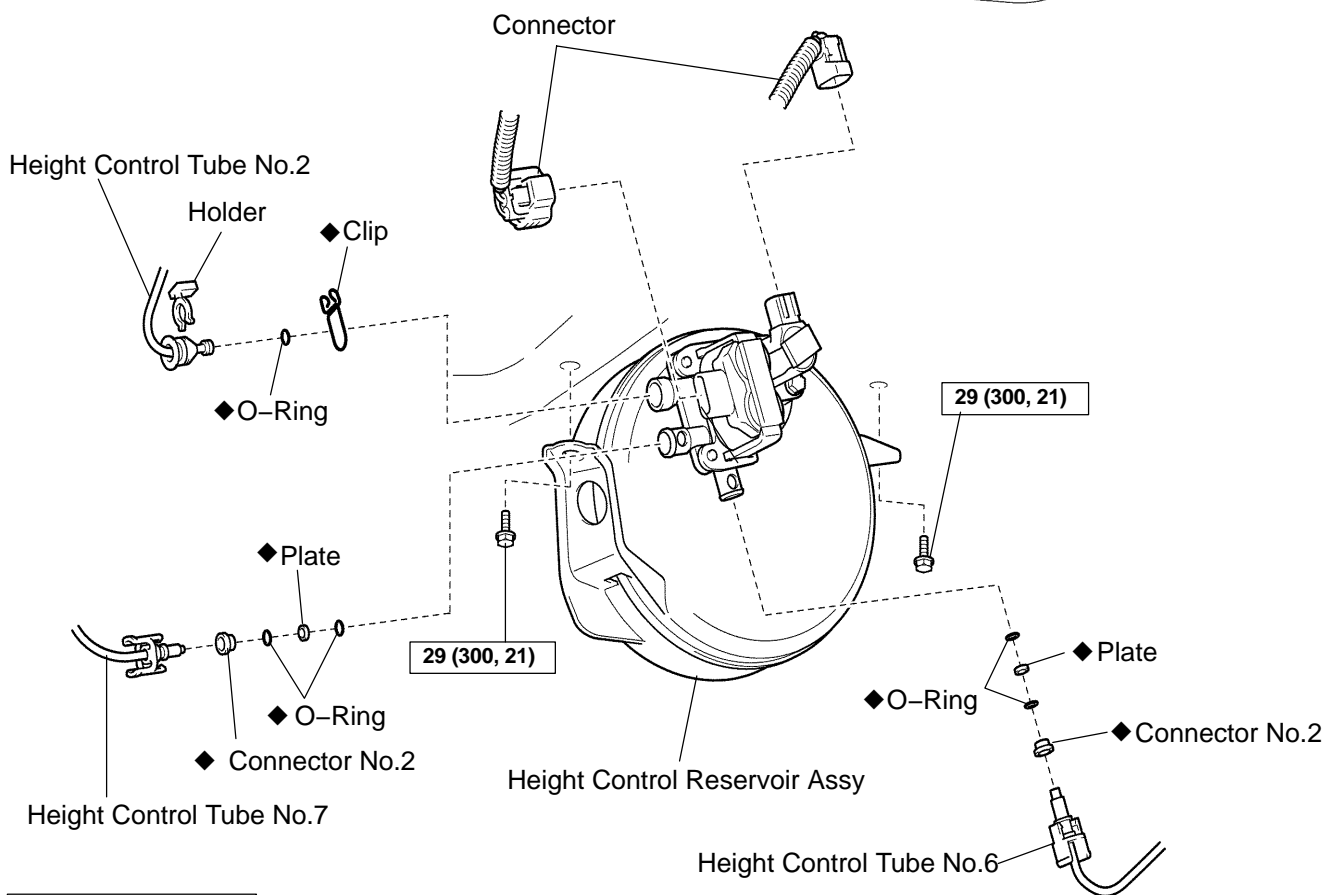
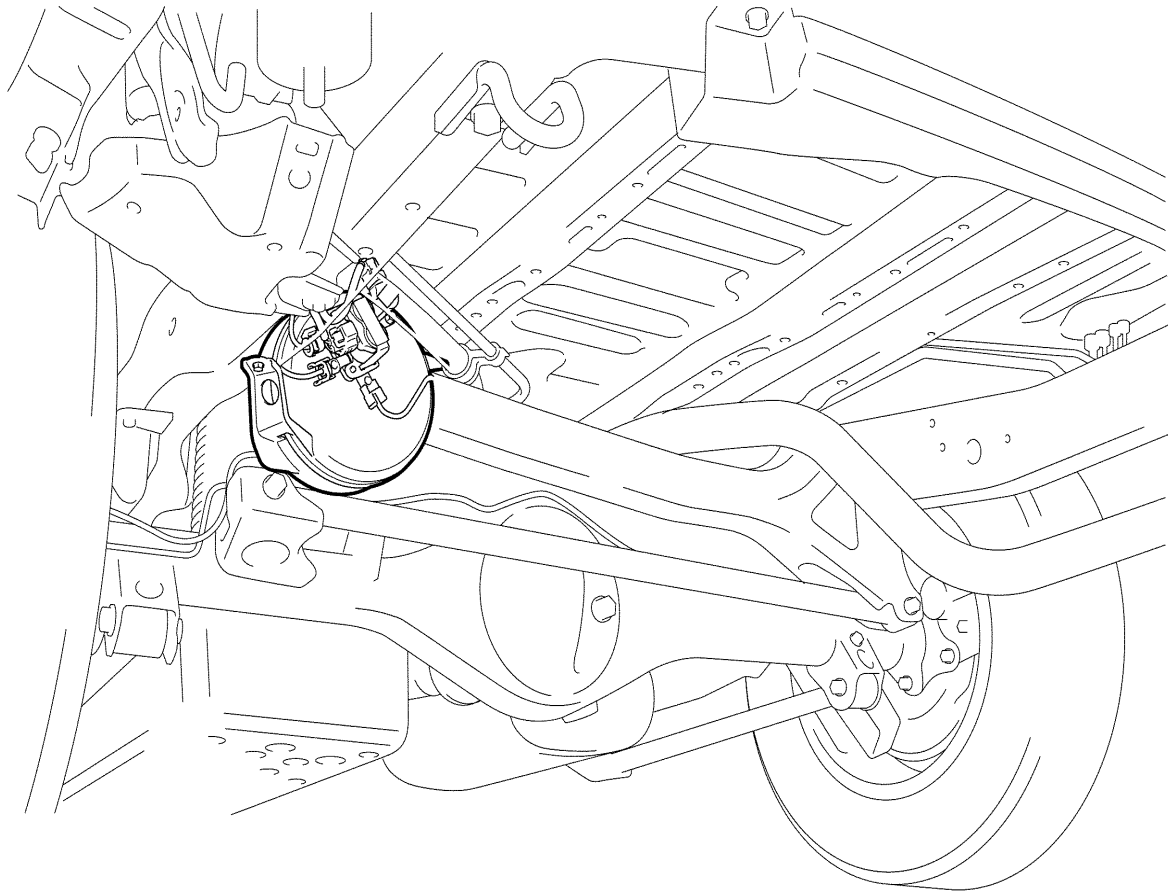
**HINT:**

If the values are out of the standard, perform the procedure from (d) to (k) again.

## COMPONENTS







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

◆ Non-reusable part

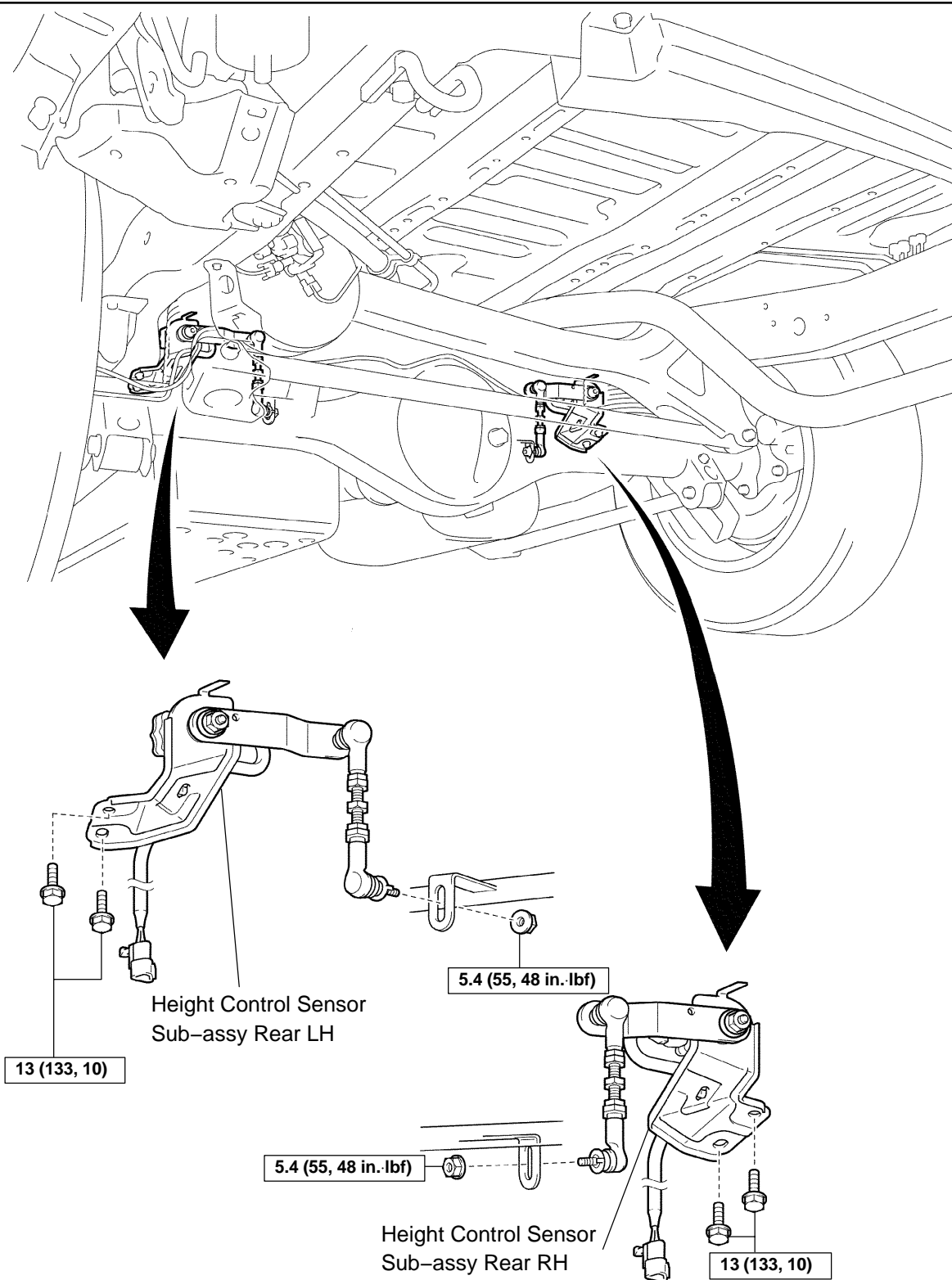
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Author :

Date :

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

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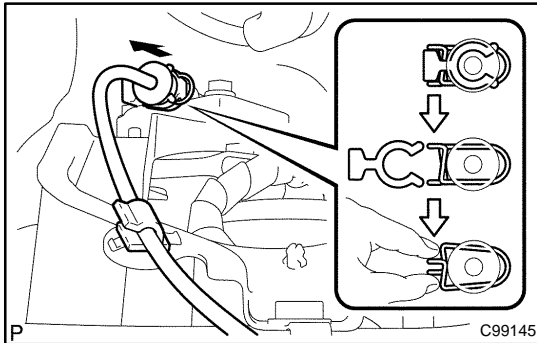
# HEIGHT CONTROL COMPRESSOR ASSY REPLACEMENT

2501B-04

HINT:

COMPONENTS: See page 25-8

1. **REMOVE REAR DISC WHEEL**
2. **REMOVE QUARTER PANEL MUDGUARD REAR LH**
3. **REMOVE FUEL TANK FILLER PIPE PROTECTOR**
  - (a) Remove the 4 clips and the fuel tank filler pipe protector.
4. **REMOVE HEIGHT CONTROL COMPRESSOR COVER**
  - (a) Remove the 3 clips and the height control compressor cover.
5. **REMOVE HEIGHT CONTROL FILTER**
  - (a) Disconnect the 2 clips and the 2 hoses.
  - (b) Remove the 2 bolts and the height control filter.

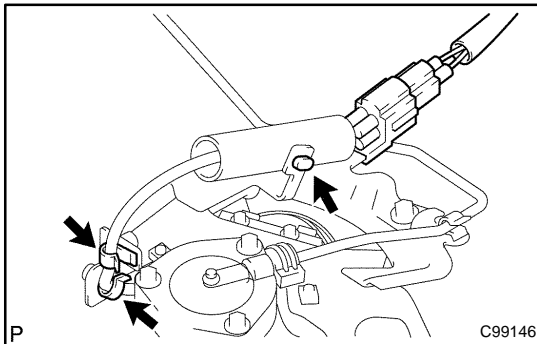


6. **DISCONNECT HEIGHT CONTROL TUBE NO.2**
  - (a) Remove the holder.
  - (b) Spread the clip and slowly pull the height control tube No.2 straight out.

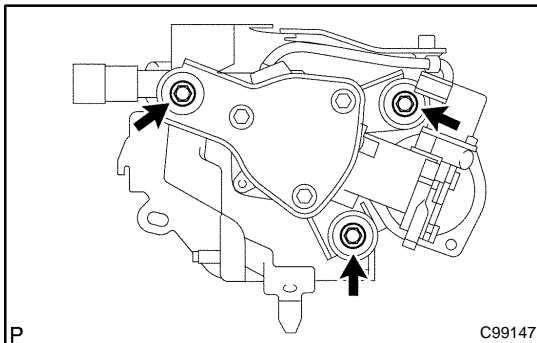
**NOTICE:**

**Do not remove the clip from the union except when replacing it.**

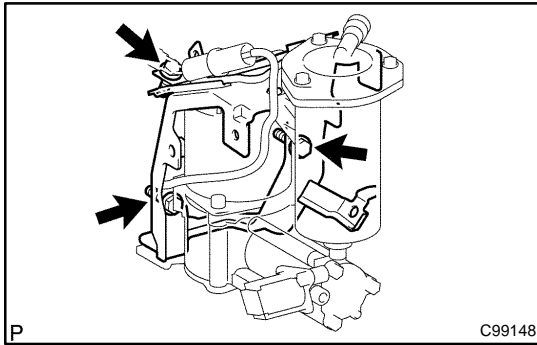
- (c) Remove the 2 O-rings.



7. **REMOVE HEIGHT CONTROL COMPRESSOR ASSY**
  - (a) Disconnect the connector.
  - (b) Remove the 3 clamps.



- (c) Remove the 3 bolts.
- (d) Disconnect the clip and remove the No.1 hose.



- (e) Remove the 3 bolts, the height control compressor and the dryer with the bracket.
- (f) Remove the bolt, the dryer and the O-ring.
- (g) Remove the 3 bushings from the height control compressor assy.

## 8. INSTALL HEIGHT CONTROL COMPRESSOR ASSY

- (a) Install the 3 bushings to the height control compressor assy.
- (b) Install the bolt, the dryer and the new O-ring.  
**Torque: 6.4 N·m (65 kgf·cm, 57 in·lbf)**
- (c) Assemble the height control compressor, the dryer and the bracket as a unit to the vehicle, and tighten the 3 bolts to fix the bracket to the frame.  
**Torque: 29 N·m (300 kgf·cm, 21 ft·lbf)**
- (d) Install the height control compressor assy to the bracket with the 3 bolts.  
**Torque: 5.9 N·m (60 kgf·cm, 52 in·lbf)**
- (e) Install the 3 clamps.
- (f) Connect the connector.
- (g) Connect the No.1 hose with a new clip.

## 9. CONNECT HEIGHT CONTROL TUBE NO.2

- (a) Coat 2 new O-rings with MP grease.
- (b) Push the height control tube No.2 in straight to connect it until the clip makes "click" sound.

### NOTICE:

**Do not get scratches or foreign particle on the O-ring, the O-ring seal and the flare section.**

- (c) Install the holder.

## 10. INSTALL HEIGHT CONTROL FILTER

- (a) Install the height control filter with the new 2 bolts.  
**Torque: 6.4 N·m (65 kgf·cm, 57 in·lbf)**

- (b) Connect 2 new clips and 2 hoses.

## 11. INSTALL HEIGHT CONTROL COMPRESSOR COVER

- (a) Install the height control compressor cover with 3 new clips.

## 12. INSPECT AIR LEAK (See page 25-3)

## 13. INSTALL FUEL TANK FILLER PIPE PROTECTOR

- (a) Install the fuel tank filler pipe protector with the 4 clips.

## 14. INSTALL QUARTER PANEL MUDGUARD REAR LH

## 15. INSTALL REAR DISC WHEEL

**Torque: 112 N·m (1,140 kgf·cm, 83 ft·lbf)**

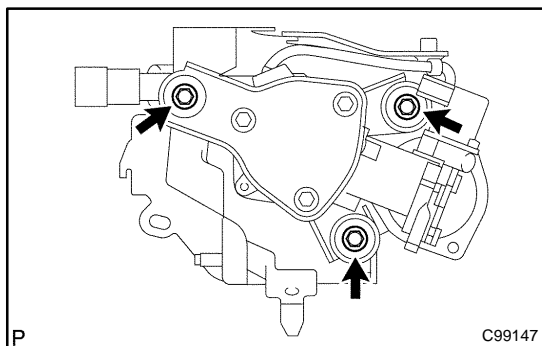
# HEIGHT CONTROL DRYER ASSY REPLACEMENT

2501C-04

HINT:

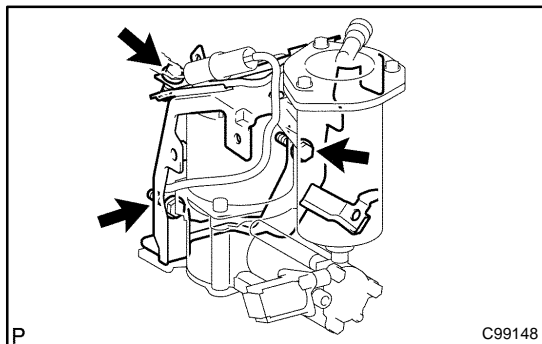
COMPONENTS: See page 25-8

1. REMOVE REAR DISC WHEEL
2. REMOVE QUARTER PANEL MUDGUARD REAR LH
3. REMOVE FUEL TANK FILLER PIPE PROTECTOR (See page 25-11)
4. REMOVE HEIGHT CONTROL COMPRESSOR COVER (See page 25-11)
5. REMOVE HEIGHT CONTROL FILTER (See page 25-11)
6. DISCONNECT HEIGHT CONTROL TUBE NO.2 (See page 25-11)



## 7. REMOVE HEIGHT CONTROL DRYER ASSY

- (a) Disconnect the connector.
- (b) Remove the 3 bolts.



- (c) Remove the 3 bolts, the height control compressor and the dryer with the bracket.
- (d) Remove the bolt and the dryer.
- (e) Remove the O-ring.

## 8. INSTALL HEIGHT CONTROL DRYER ASSY

- (a) Install the bolt, the dryer and a new O-ring.  
**Torque: 6.4 N·m (65 kgf·cm, 57 in·lbf)**
- (b) Assemble the height control compressor, the dryer and the bracket as a unit to the vehicle, and tighten the 3 bolts to fix the bracket to the frame.  
**Torque: 29 N·m (300 kgf·cm, 21 ft·lbf)**
- (c) Install the height control compressor assy to the bracket with the 3 bolts.  
**Torque: 5.9 N·m (60 kgf·cm, 52 in·lbf)**
- (d) Connect the connector.
9. CONNECT HEIGHT CONTROL TUBE NO.2 (See page 25-11)
10. INSTALL HEIGHT CONTROL FILTER (See page 25-11)
11. INSTALL HEIGHT CONTROL COMPRESSOR COVER (See page 25-11)
12. INSPECT AIR LEAK (See page 25-3)
13. INSTALL FUEL TANK FILLER PIPE PROTECTOR (See page 25-11)
14. INSTALL QUARTER PANEL MUDGUARD REAR LH

**15. INSTALL REAR DISC WHEEL****Torque: 112 N·m (1,140 kgf·cm, 83 ft·lbf)**

# HEIGHT CONTROL RESERVOIR ASSY REPLACEMENT

25029-02

HINT:

COMPONENTS: See page 25-8

**1. DISCONNECT HEIGHT CONTROL TUBE NO.2**

- (a) Remove the holder.
- (b) Spread the clip and slowly pull the height control tube No.2 straight out.
- (c) Remove the 2 O-rings.

**2. DISCONNECT HEIGHT CONTROL TUBE NO.6**

- (a) Using SST, disconnect the height control tube No.6.  
SST 09730-00010

**NOTICE:****Refer to PRECAUTION of removal and installation of the height control tube (See page 25-1).**

- (b) Remove the 2 O-rings, the plate and the connector No.2.

**3. DISCONNECT HEIGHT CONTROL TUBE NO.7**

- (a) Using SST, disconnect the height control tube No.7.  
SST 09730-00010

**NOTICE:****Refer to PRECAUTION of removal and installation of the height control tube (See page 25-1).**

- (b) Remove the 2 O-rings, the plate and the connector No.2.

**4. REMOVE HEIGHT CONTROL RESERVOIR ASSY**

- (a) Remove the 2 bolts and the height control reservoir assy.

**5. INSTALL HEIGHT CONTROL RESERVOIR ASSY**

- (a) Install the height control reservoir assy with the 2 bolts.

**Torque: 29 N·m (300 kgf·cm, 21 ft·lbf)****6. CONNECT HEIGHT CONTROL TUBE NO.7**

- (a) Install 2 new O-rings, a new plate, a new connector No.2, and connect the height control tube No.7.

**NOTICE:****Refer to PRECAUTION of removal and installation of the height control tube (See page 25-1).****7. CONNECT HEIGHT CONTROL TUBE NO.6**

- (a) Install 2 new O-rings, a new plate, a new connector No.2, and connect the height control tube No.6.

**NOTICE:****Refer to PRECAUTION of removal and installation of the height control tube (See page 25-1).****8. CONNECT HEIGHT CONTROL TUBE NO.2**

- (a) Coat 2 new O-rings with MP grease.
- (b) Push the height control tube No.2 in straight to connect it until the clip makes "click" sound.
- (c) Install the holder.

**9. INSPECT AIR LEAK (See page 25-3)**

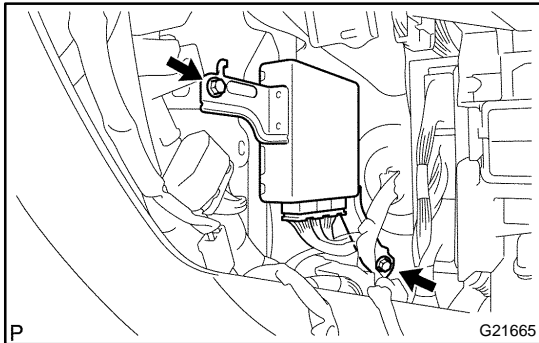
# SUSPENSION CONTROL ECU REPLACEMENT

2502A-02

HINT:

LOCATION: See page 05-479

1. **DISCONNECT BATTERY NEGATIVE TERMINAL**
2. **INSTALL INSTRUMENT PANEL UNDER COVER SUB-ASSY NO.1 (See page 76-38)**
3. **INSTALL COWL SIDE TRIM BOARD LH (See page 71-13)**
4. **REMOVE FRONT DOOR SCUFF PLATE LH (See page 71-13)**
5. **REMOVE COWL SIDE TRIM BOARD LH (See page 71-13)**
6. **REMOVE INSTRUMENT PANEL UNDER COVER SUB-ASSY NO.1 (See page 71-13)**
7. **REMOVE INSTRUMENT PANEL FINISH PLATE (See page 71-13)**



8. **REMOVE INSTRUMENT PANEL FINISH LOWER PANEL RH**
  - (a) Remove the 2 nuts and a bolt, disconnect the junction block.
  - (b) Disconnect the connector from the suspension control ECU.
  - (c) Remove the 2 bolts and the suspension control ECU.

9. **REMOVE INSTRUMENT PANEL LOWER LH**
  - (a) Install the suspension control ECU with the 2 bolts.  
**Torque: 7.8 N·m (80 kgf·cm, 69 in·lbf)**
  - (b) Connect the connector to the suspension control ECU.
  - (c) Install the junction block with the 2 nuts and a bolt.  
**Torque: 8.4 N·m (86 kgf·cm, 74 in·lbf)**
10. **REMOVE SUSPENSION CONTROL ECU**
11. **INSTALL SUSPENSION CONTROL ECU**
12. **INSTALL INSTRUMENT PANEL LOWER LH**
13. **INSTALL INSTRUMENT PANEL FINISH LOWER PANEL RH**
14. **INSTALL COWL SIDE TRIM BOARD LH**
15. **INSTALL FRONT DOOR SCUFF PLATE LH**

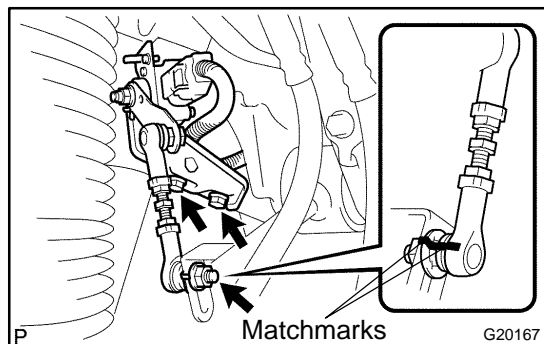


# HEIGHT CONTROL SENSOR SUB-ASSY REAR LH REPLACEMENT

2501G-04

HINT:

COMPONENTS: See page 25-8

**1. REMOVE REAR DISC WHEEL****2. REMOVE HEIGHT CONTROL SENSOR SUB-ASSY REAR LH**

- (a) Disconnect the connector from the height control sensor.
- (b) Place matchmarks on the link and the bracket.
- (c) Remove the nut and disconnect the sensor link.
- (d) Remove the 2 bolts and height control sensor.

**3. INSTALL HEIGHT CONTROL SENSOR SUB-ASSY REAR LH**

- (a) Install the height control sensor with the 2 bolts.  
**Torque: 13 N·m (133 kgf·cm, 10 ft·lbf)**
- (b) Align the matchmarks on the link and the bracket.
- (c) Connect the sensor link with the nut.  
**Torque: 5.4 N·m (55 kgf·cm, 48 in·lbf)**
- (d) Connect the connector to the height control sensor.

**4. INSTALL REAR DISC WHEEL****Torque: 112 N·m (1,140 kgf·cm, 83 ft·lbf)****5. MEASURE VEHICLE HEIGHT (See page 26-7)****6. ADJUST VEHICLE HEIGHT (See page 25-3)**

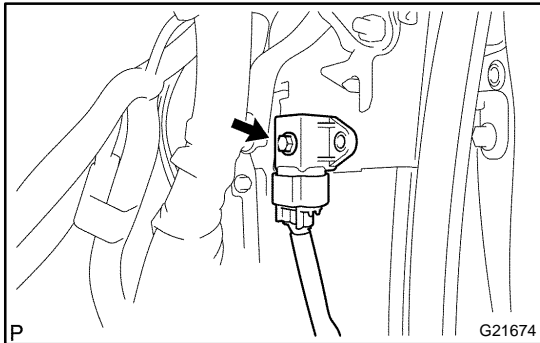
# ACCELERATION SENSOR REPLACEMENT

2502B-03

HINT:

LOCATION: See page 05-479

1. REMOVE FRONT DOOR SCUFF PLATE RH (See page 76-38)
2. REMOVE COWL SIDE TRIM BOARD RH (See page 71-13)
3. REMOVE INSTRUMENT PANEL UNDER COVER SUB-ASSY NO.1 (See page 71-13)
4. REMOVE INSTRUMENT PANEL FINISH PLATE (See page 71-13)
5. REMOVE INSTRUMENT PANEL FINISH LOWER PANEL RH (See page 71-13)
6. REMOVE INSTRUMENT PANEL LOWER LH (See page 71-13)



## 7. REMOVE ACCELERATION SENSOR

- (a) Disconnect the connector from the acceleration sensor.
- (b) Remove a bolt and the acceleration sensor.

## 8. INSTALL ACCELERATION SENSOR

- (a) Install the acceleration sensor with a bolt.  
**Torque: 7.8 N·m (80 kgf·cm, 69 in.-lbf)**
- (b) Connect the connector to the acceleration sensor.

## 9. INSTALL INSTRUMENT PANEL LOWER LH

## 10. INSTALL INSTRUMENT PANEL FINISH LOWER PANEL RH

## 11. INSTALL INSTRUMENT PANEL FINISH PLATE

## 12. INSTALL INSTRUMENT PANEL UNDER COVER SUB-ASSY NO.1

## 13. INSTALL COWL SIDE TRIM BOARD RH

## 14. INSTALL FRONT DOOR SCUFF PLATE RH

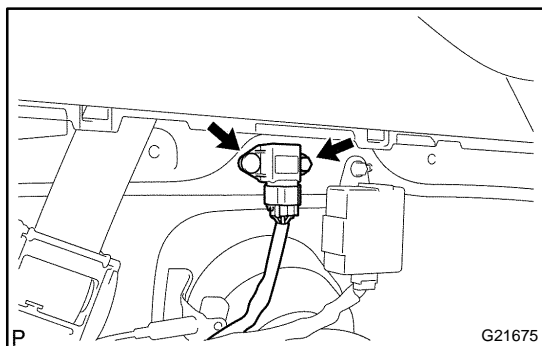
# ACCELERATION SENSOR ASSY REPLACEMENT

2502C-02

HINT:

LOCATION: See page 05-479

1. REMOVE REAR NO. 2 SEAT ASSY LH (See page 72-42)
2. REMOVE QUARTER SCUFF PLATE INSIDE LH (See page 76-38)
3. REMOVE REAR DOOR SCUFF PLATE LH (See page 76-38)
4. REMOVE REAR DOOR OPENING TRIM WEATHERSTRIP RH (See page 76-38)
5. REMOVE BACK DOOR WEATHERSTRIP (See page 76-38)
6. REMOVE REAR FLOOR MAT SUPPORT PLATE REAR (See page 76-38)
7. REMOVE QUARTER INSIDE TRIM BOARD LH (See page 76-38)



8. REMOVE ACCELERATION SENSOR ASSY
  - (a) Disconnect the connector.
  - (b) Remove a clip, bolt and the acceleration sensor assy.

## 9. INSTALL ACCELERATION SENSOR ASSY

- (a) Install the acceleration sensor assy with a clip and a bolt.  
**Torque: 7.8 N·m (80 kgf·cm, 69 in·lbf)**
- (b) Connect the connector.

## 10. INSTALL REAR NO. 2 SEAT ASSY LH (See page 72-42)

# SUSPENSION CONTROL SYSTEM (KDSS)

2504N-01

## PRECAUTION

1. To prevent dirt or mud on parts from entering the hydraulic circuits in the KDSS during removal and installation or disassembly, wash each part before starting operations.
2. Keep the removed or disassembled parts in order. Protect the parts to prevent foreign matter from entering the hydraulic circuits.
3. The fluid is sealed in the hydraulic circuits at high pressure. Start operations after reducing the pressure by draining the fluid from the bleeder plug on the accumulator. Be careful when removing and installing or disassembling the hydraulic circuit-related parts, such as bleeder plugs and tube flare nuts.
4. Wipe any residual fluid off each part before connecting the hydraulic circuits and checking for fluid leaks.
5. If a factory-installed piping (one piece pipe) vehicle requires replacement of the piping due to oil leakage or other reasons, replace each pipe with the two piece type pipes (split construction type supply parts 48890-60010 or 48880-60010).
6. It will be necessary to cut or deform the factory-installed piping (one piece pipe) to remove it from the vehicle.

### NOTICE:

Drain the oil from the piping and disconnect the connection points. Then cut the piping, being careful not to allow foreign matter to enter the system.

## HOW TO PROCEED WITH TROUBLESHOOTING

### HINT:

- The following troubleshooting procedure relates to non-electrical system problem symptoms only.
- For malfunctions in electrical systems such as accumulator pressure sensor, stabilizer control ECU and wire harness, refer to page [05-563](#).

### 1. Vehicle conditions:

Symptom	See procedure
The right and left sides of the vehicle are not level.	Refer to step 3.
The vehicle rolls excessively during driving.	Refer to step 4.

### 2. Suspension fluid

#### HINT:

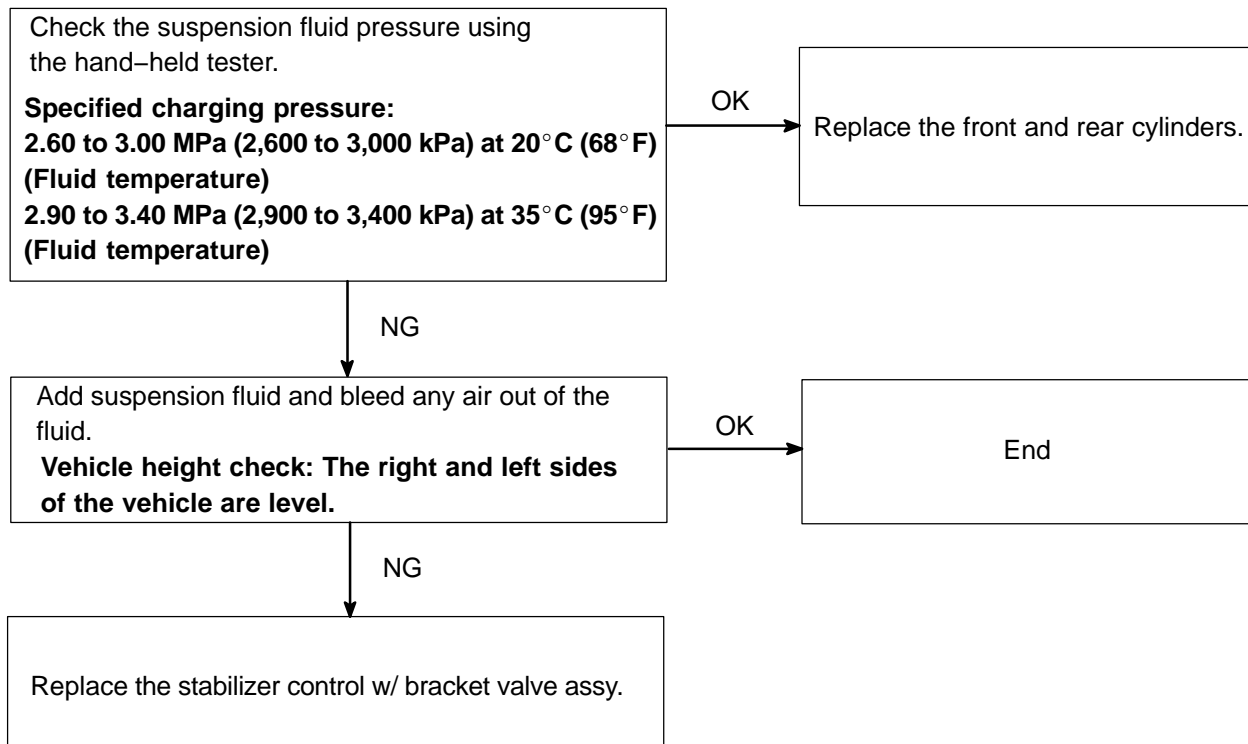
Check the suspension fluid pressure using the hand-held tester.

#### Standard:

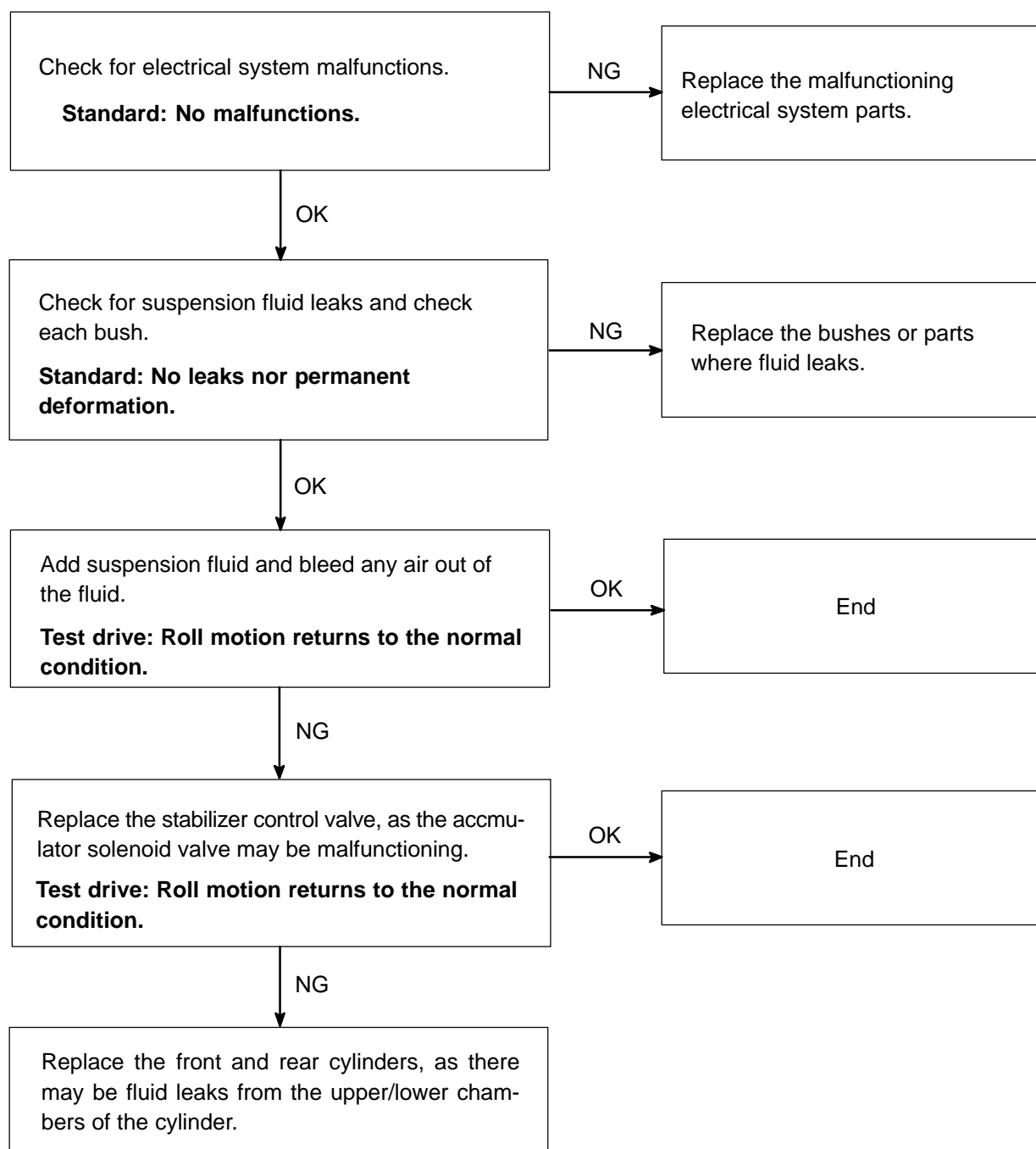
**2.60 to 3.00 MPa (2,600 to 3,000 kPa) at 20°C (68°F) (Fluid temperature)**

**2.90 to 3.40 MPa (2,900 to 3,400 kPa) at 35°C (95°F) (Fluid temperature)**

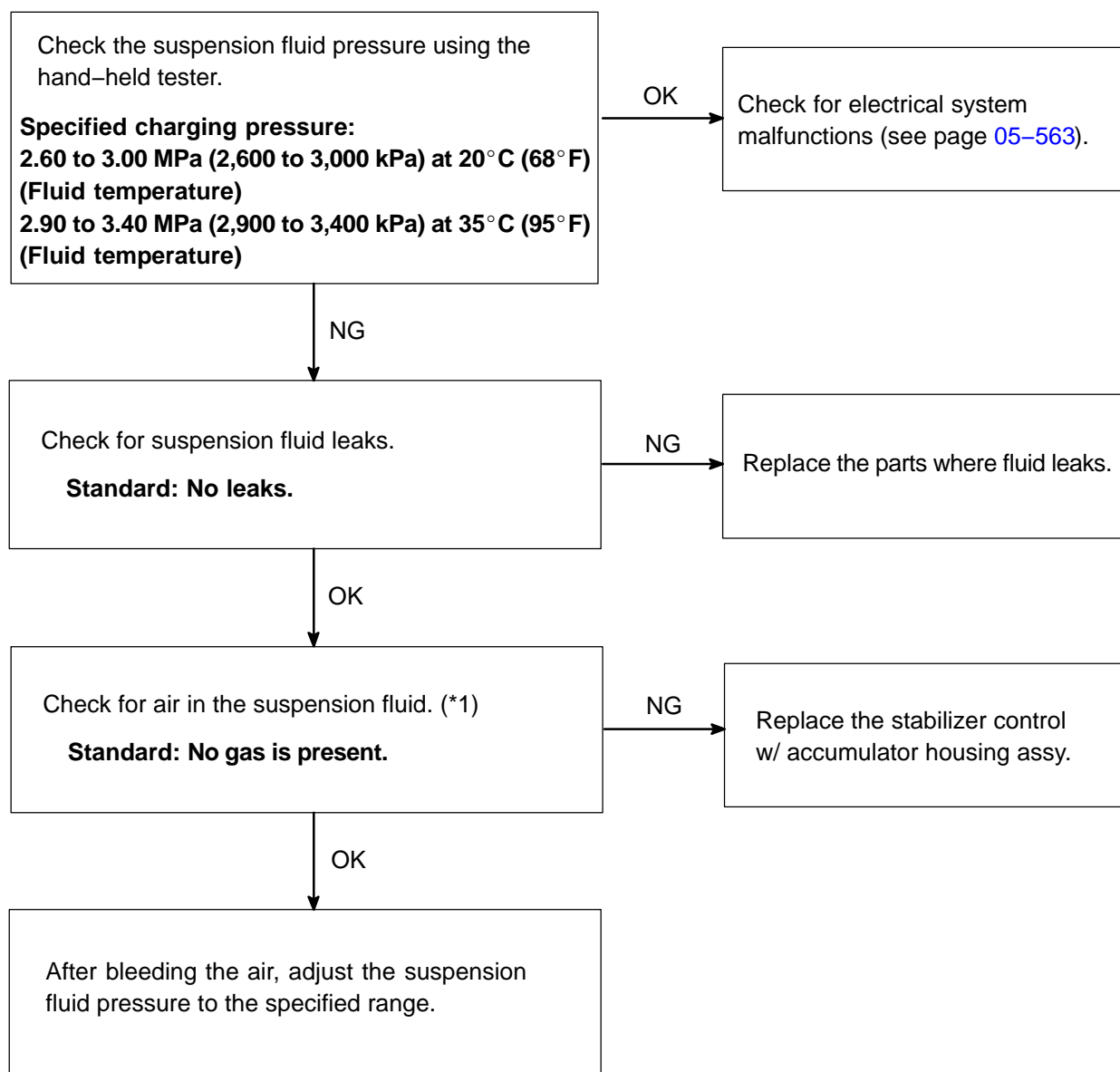
Symptom	See procedure
Suspension fluid pressure is abnormally low.	Refer to step 5.
Suspension fluid pressure is abnormally high.	Refer to step 6.

**3. The right and left sides of the vehicle are not level.**

## 4. The vehicle rolls excessively during driving.



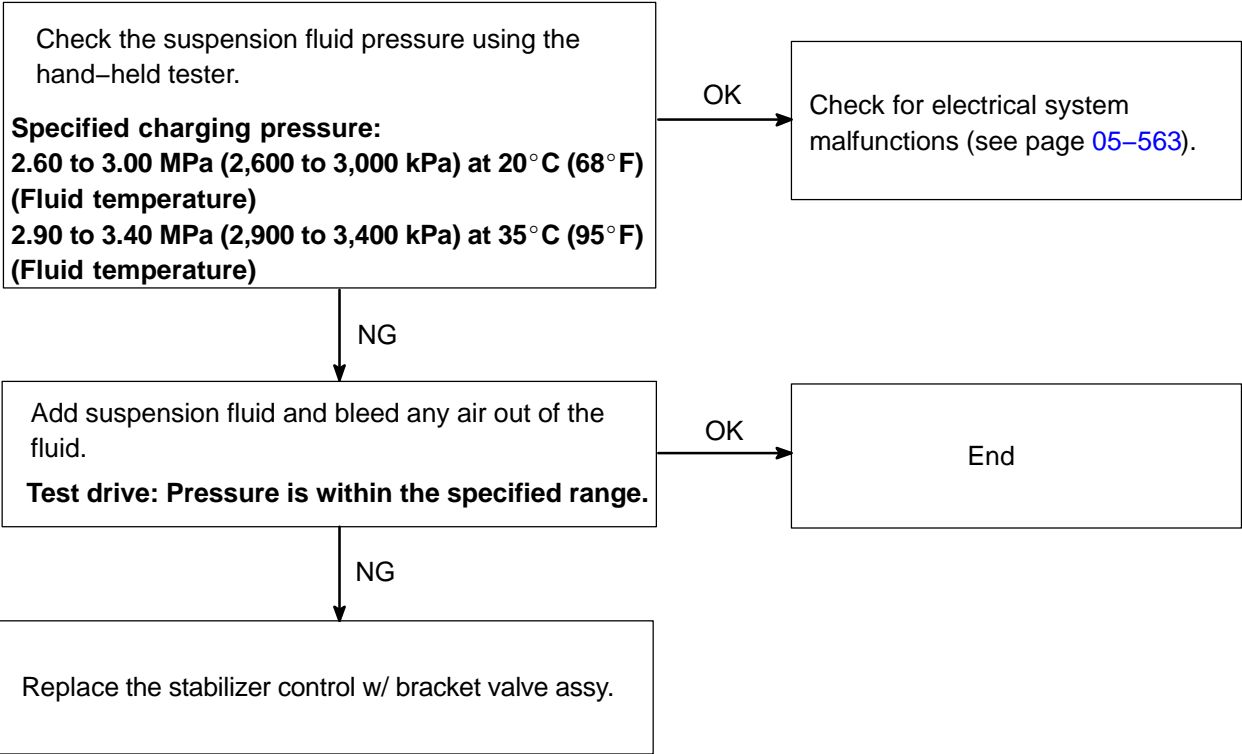
## 5. Suspension fluid pressure is abnormally low.



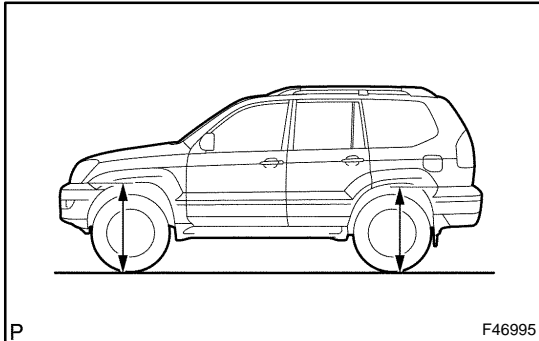
\*1: This check is to confirm that the suspension fluid pressure is not low because of N<sup>2</sup> gas in the fluid. When the bellows in the stabilizer control w/ accumulator housing assy is malfunctioning, N<sup>2</sup> gas enters the suspension fluid, causing the fluid pressure to decrease.



6. Suspension fluid pressure is abnormally high.



## ON-VEHICLE INSPECTION



### 1. MEASURE VEHICLE HEIGHT

- (a) Measure the distance from the ground to the top of the bumper and calculate the difference in the vehicle height between left and right. Perform this procedure for both the front and rear wheels.

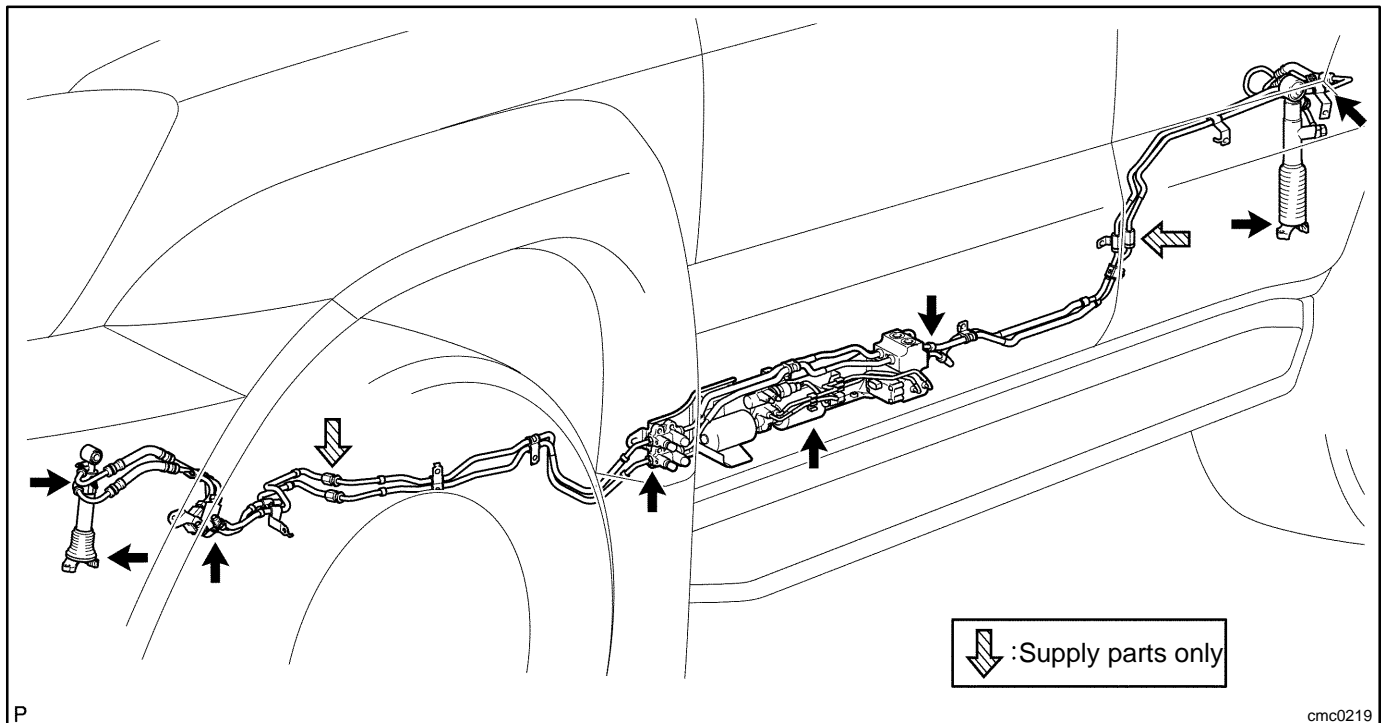
**Height difference of left and right sides: 20 mm (0.79 in.) or less**

#### NOTICE:

- Ensure that the wheels are on the ground and facing straight ahead.
- If the difference is not within the specified range, refer to "HOW TO PROCEED WITH TROUBLESHOOTING".

### 2. CHECK FOR FLUID LEAKS

- (a) Check the connection parts of the front stabilizer w/ tube cylinder assy, rear stabilizer control cylinder, stabilizer control w/ bracket valve assy and stabilizer control tube for suspension fluid leaks.



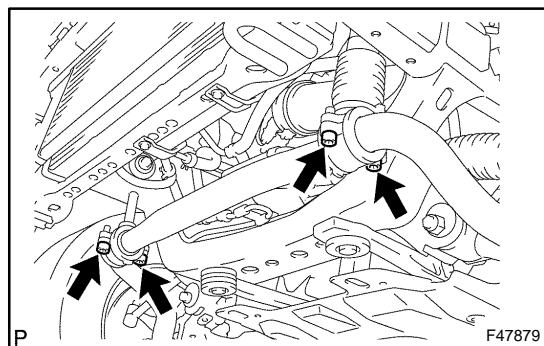
# SUSPENSION FLUID (KDSS)

2504Q-02

## BLEEDING

### NOTICE:

- Ensure that the reservoir tank of the SST is sufficiently filled with suspension fluid. Keep the suspension fluid at a reasonable level to prevent air from entering the SST hose.
  - Do not reuse suspension fluid. Use only specified fluid: Suspension fluid AHC.
  - Do not push the pin on the oil nozzle valve sub-assy with a tool.
1. REMOVE RADIATOR SUPPORT SEAL UPPER (SEE PAGE 65-11)
  2. REMOVE BATTERY
  3. REMOVE STEP SUB-ASSY LH (SEE PAGE 76-33)
  4. REMOVE ENGINE UNDER COVER SUB-ASSY NO.1



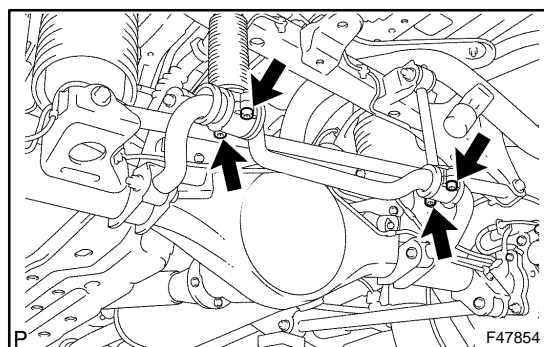
### 5. SEPARATE STABILIZER BAR FRONT

- (a) Using a socket hexagon wrench (10 mm), remove the 4 bolts and 2 front stabilizer lower brackets and separate the stabilizer bar front.

#### HINT:

Separate the stabilizer bar front so that the air in the front stabilizer w/ tube cylinder assy can be bled out easily when bleeding the hydraulic circuits.

### 6. REMOVE SPARE DISC WHEEL



### 7. SEPARATE STABILIZER BAR REAR

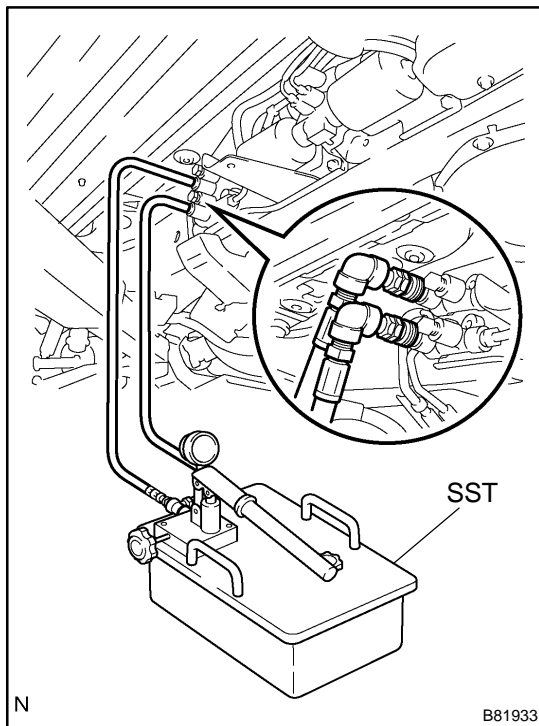
- (a) Using a socket hexagon wrench (8 mm), remove the 4 bolts and 2 rear stabilizer brackets lower and separate the stabilizer bar rear.

#### HINT:

Separate the stabilizer bar rear so that the air in the rear stabilizer control cylinder can be bled out easily when bleeding the hydraulic circuits.

### 8. BLEED SUSPENSION FLUID

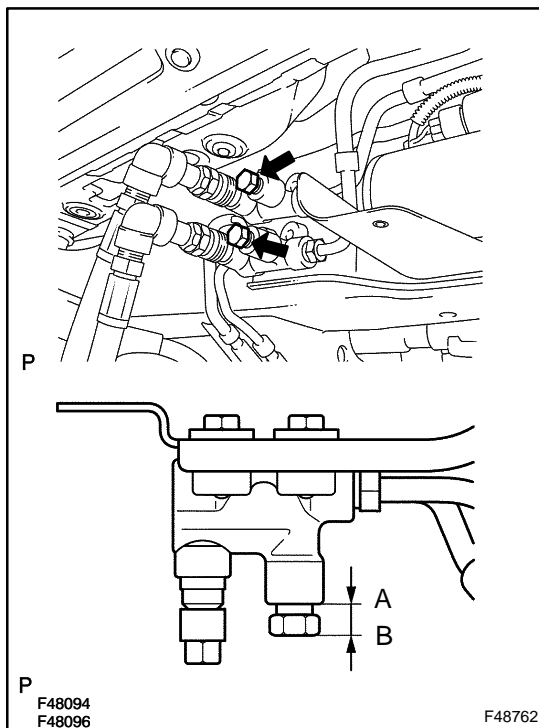
- (a) Fill the reservoir tank of the SST with suspension fluid.  
**Fluid: Suspension fluid AHC**  
 SST 09760-60010



(b) Connect the SST joints to the oil nozzle valves.

HINT:

The SST joints can be connected to either of the oil nozzle valves.

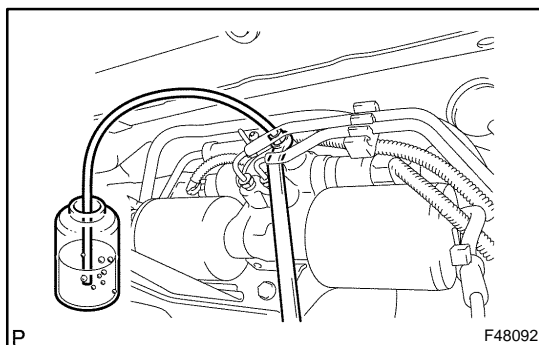


(c) Loosen the 2 stabilizer control adapter shutter valves.

**Distance between A and B: 15 to 16.5 mm (0.60 to 0.65 in.) or less**

**NOTICE:**

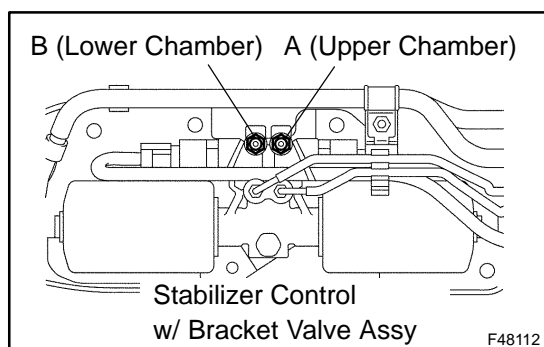
- Do not excessively loosen the valves.
- Ensure that all bleeder plugs are tightened.



(d) Set a wrench, vinyl tube and reservoir tank to the bleeder plug.

HINT:

Perform the following refill and air bleeding procedures in the same way for each bleeder plug.



- (e) Bleed any air out of the suspension fluid between the SST and stabilizer control w/ bracket valve assy.

- (1) Boost the fluid pressure to 5 MPa, loosen the bleeder plug, bleed air and tighten the plug.

**Torque: 9.5 N·m (97 kgf·cm, 84 in.-lbf)**

- (2) Perform the procedure for A shown in the illustration first, then for B.

- (f) Add suspension fluid to each unit.

- (1) Loosen the bleeder plug, add suspension fluid until air stops coming out and tighten the bleeder plug.

**Torque: 9.5 N·m (97 kgf·cm, 84 in.-lbf)**

**NOTICE:**

**Perform the operations in the following order: A, B, C, D, E and F. (Refer to the illustration below.)**

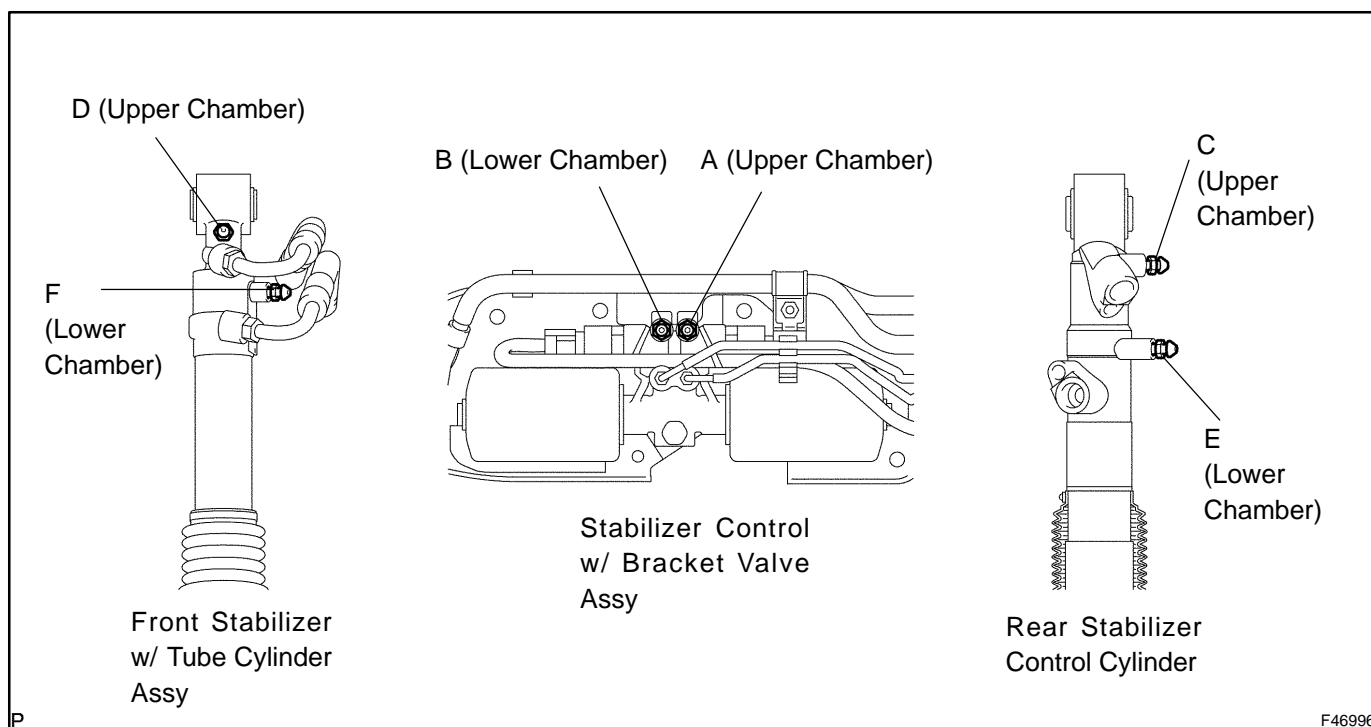
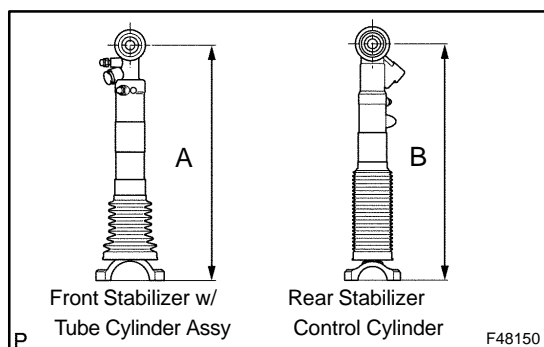
**HINT:**

- Ensure that only 1 bleeder plug is loose when adding suspension fluid.
- Perform the procedures with the front and rear cylinders fully stretched downward.

**Length of cylinder:**

**A: 411.5 to 417.5 mm (16.20 to 16.44 in.)**

**B: 436.5 to 442.5 mm (17.19 to 17.42 in.)**



- (g) Bleed any air out of the suspension fluid in each unit.
- (1) Boost the fluid pressure to 7 MPa, loosen the bleeder plug, bleed air and tighten the plug. Repeat the procedure until air stops coming out.

**Torque: 9.5 N·m (97 kgf·cm, 84 in.-lbf)**

**NOTICE:**

- Do not boost the fluid pressure to 8 MPa or more.
- Perform the operations in the following order: A, B, C, D, E and F. (Refer to the illustration above.)

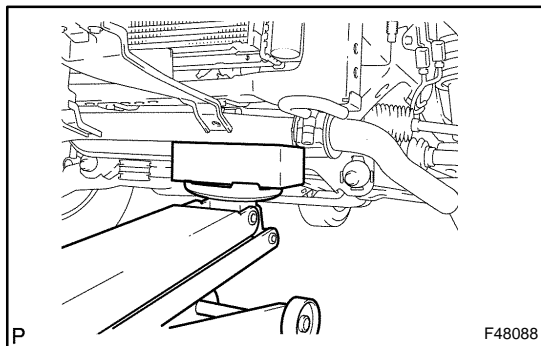
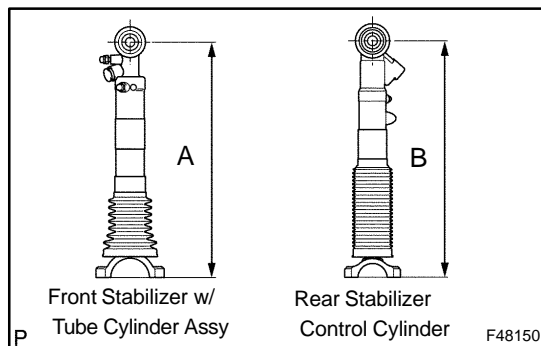
**HINT:**

- The procedure is complete when air does not come out twice in succession.
- Perform the procedures with the front and rear cylinders fully stretched downward.

**Length of cylinder:**

**A: 411.5 to 417.5 mm (16.20 to 16.44 in.)**

**B: 436.5 to 442.5 mm (17.19 to 17.42 in.)**

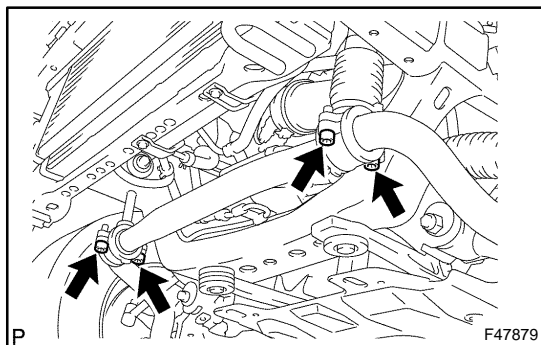


**9. CONNECT STABILIZER BAR FRONT**

- (a) Support the stabilizer bar front with a jack. Place a wooden block between the jack and the stabilizer bar front to prevent damage.

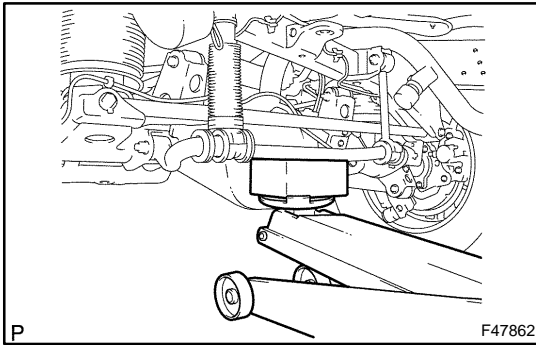
**HINT:**

Place the jack under the left side of the vehicle.



- (b) Using a socket hexagon wrench (10 mm), connect the stabilizer bar front with the 4 bolts and 2 front stabilizer lower brackets.

**Torque: 59 N·m (602 kgf·cm, 44 ft·lbf)**

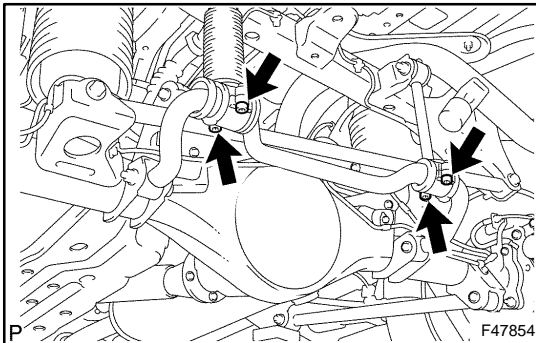


# 10. CONNECT STABILIZER BAR REAR

- (a) Support the stabilizer bar rear with a jack. Place a wooden block between the jack and the stabilizer bar rear to prevent damage.

HINT:

Place the jack under the left side of the vehicle.



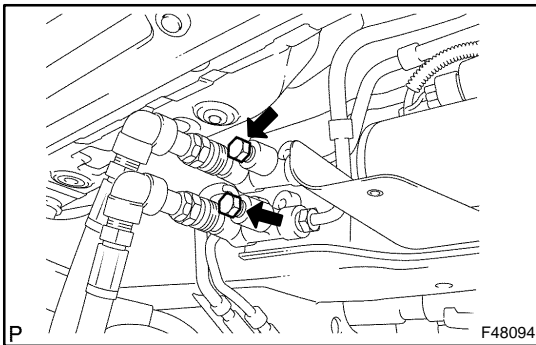
- (b) Using a socket hexagon wrench (8 mm), connect the stabilizer bar rear with the 4 bolts and 2 rear stabilizer brackets lower.

**Torque: 50 N·m (510 kgf·cm, 37 ft·lbf)**

# 11. STABILIZE SUSPENSION (SEE PAGE 25-33)

# 12. CHECK SUSPENSION FLUID PRESSURE

- (a) Check the suspension fluid pressure.



# 13. MEASURE VEHICLE HEIGHT

- (a) Measure the difference in vehicle height between the left and right sides.

(1) For measurement procedures, refer to ON-VEHICLE INSPECTION on page 25-26.

- (b) Tighten the stabilizer control adapter shutter valves.

**Torque: 14 N·m (140 kgf·cm, 10 ft·lbf)**

- (c) Disconnect the SST joints.

**NOTICE:**

- Ensure that the stabilizer control adapter shutter valves are completely closed before disconnecting the SST joints.
- Ensure that no pressure is applied to the SST hoses before disconnecting the SST joints.

# 14. INSTALL ENGINE UNDER COVER SUB-ASSY NO.1

# 15. INSTALL SPARE DISC WHEEL

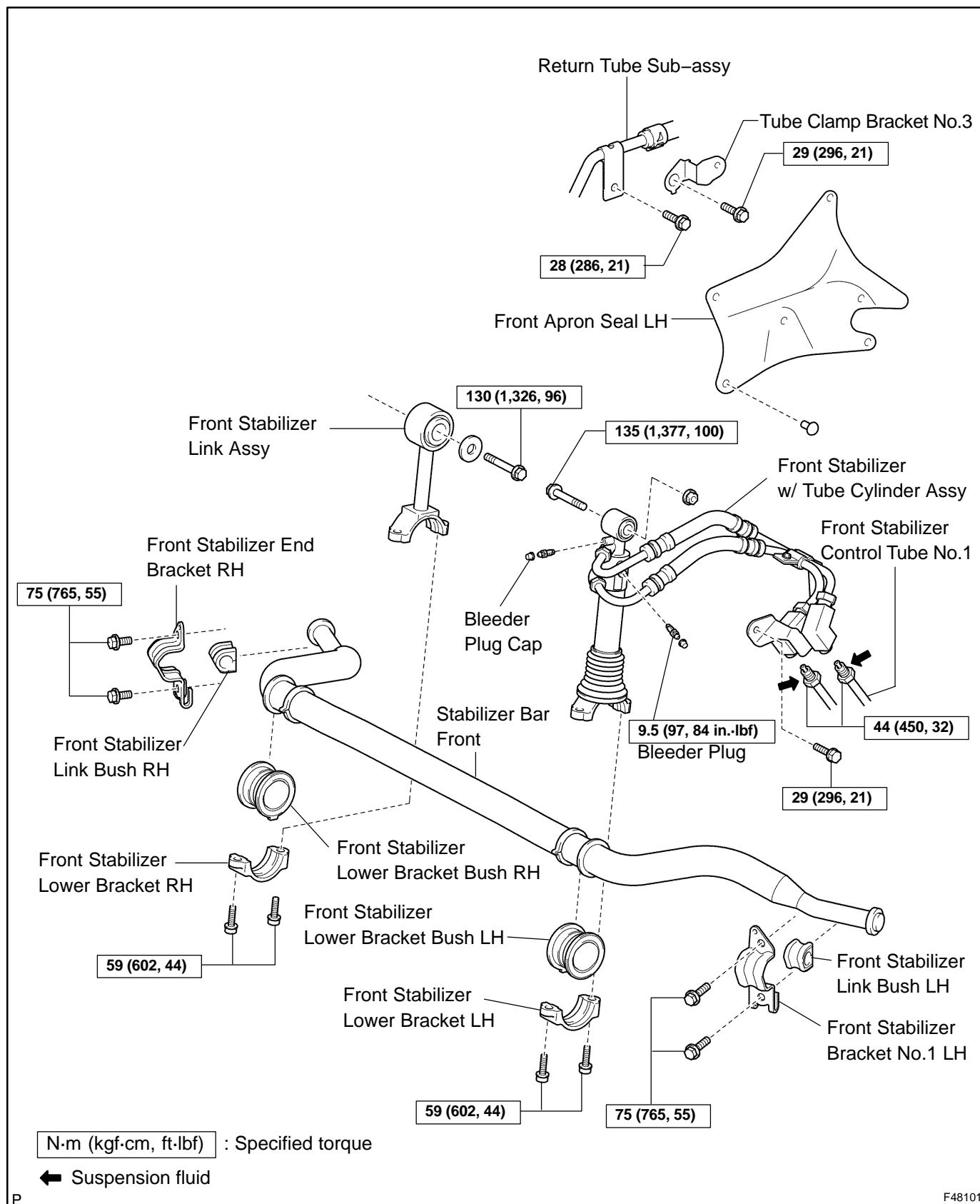
# 16. INSTALL STEP SUB-ASSY LH (SEE PAGE 76-33)

# 17. INSTALL BATTERY

# 18. INSTALL RADIATOR SUPPORT SEAL UPPER

# FRONT STABILIZER (KDSS) COMPONENTS

2504R-01



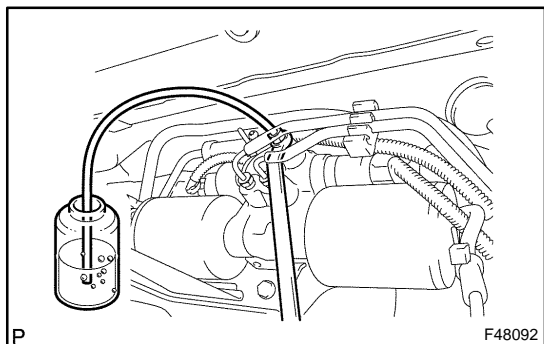
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## OVERHAUL

1. REMOVE RADIATOR SUPPORT SEAL UPPER (SEE PAGE 65-11)
2. REMOVE BATTERY
3. REMOVE STEP SUB-ASSY LH (SEE PAGE 76-33)



### 4. DRAIN SUSPENSION FLUID

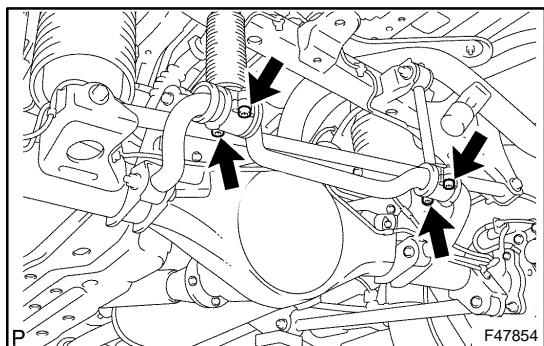
- (a) Loosen the bleeder plug on the stabilizer control w/ accumulator housing assy and drain suspension fluid.

#### HINT:

- Drain suspension fluid when performing the operations related to the hydraulic circuits.
  - Draining suspension fluid decreases suspension fluid pressure.
- (b) Tighten the bleeder plug.

**Torque: 9.5 N·m (97 kgf·cm, 84 in.-lbf)**

### 5. REMOVE SPARE DISC WHEEL



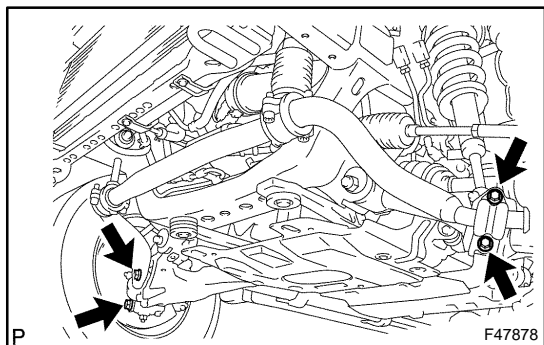
### 6. SEPARATE STABILIZER BAR REAR

- (a) Using a socket hexagon wrench (8 mm), remove the 4 bolts and 2 rear stabilizer brackets lower and separate the stabilizer bar rear.

#### HINT:

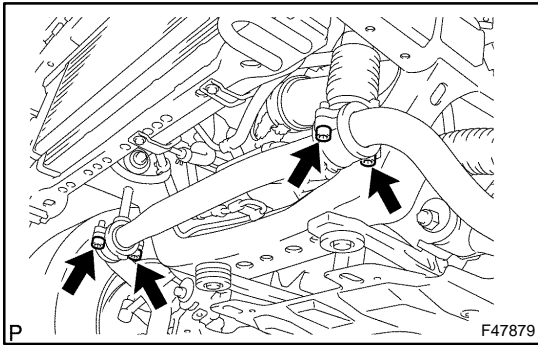
Separate the stabilizer bar rear so that the air in the rear stabilizer control cylinder can be bled out easily when bleeding the hydraulic circuits.

### 7. REMOVE ENGINE UNDER COVER SUB-ASSY NO.1



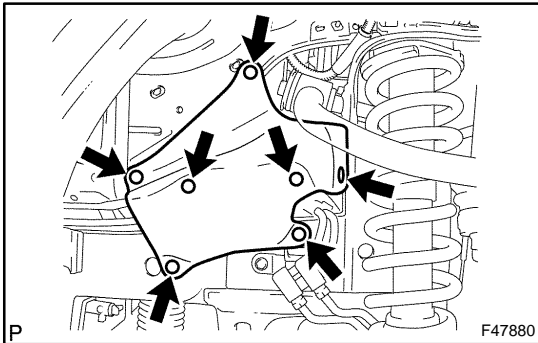
### 8. REMOVE STABILIZER BAR FRONT

- (a) Remove the 4 bolts and 2 front stabilizer brackets with the wheels on the ground.



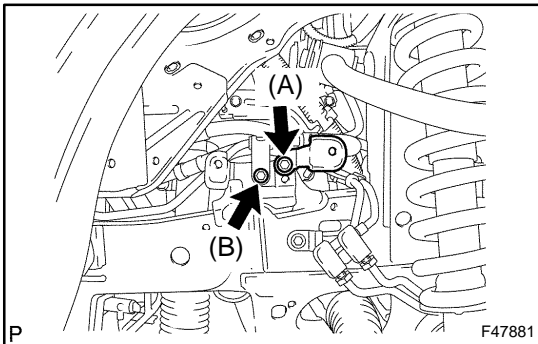
- (b) Using a socket hexagon wrench (10 mm), remove the 4 bolts, 2 front stabilizer lower brackets and stabilizer bar front.
- (c) Remove the 2 front stabilizer link bushes and front stabilizer lower bracket bushes from the stabilizer bar front.

## 9. REMOVE FRONT DISC WHEEL

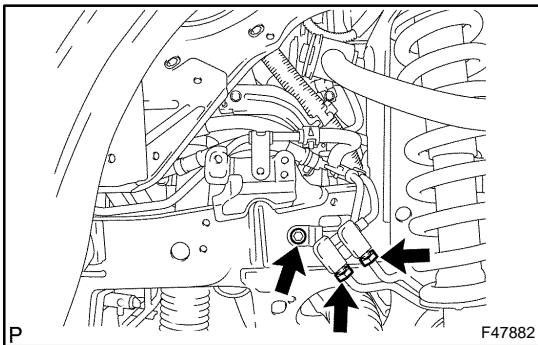


## 10. SEPARATE FRONT STABILIZER CONTROL TUBE NO.1

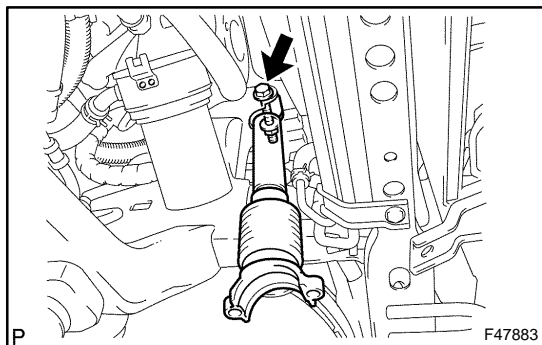
- (a) Remove the 7 clips and front apron seal LH.



- (b) Remove bolt (A) and tube clamp bracket No.3.
- (c) Remove bolt (B) and separate the return tube sub-assy.



- (d) Using SST, separate the front stabilizer control tube No.1 from the front stabilizer w/ tube cylinder assy.  
SST 09023-12701
- (e) Remove the bolt.

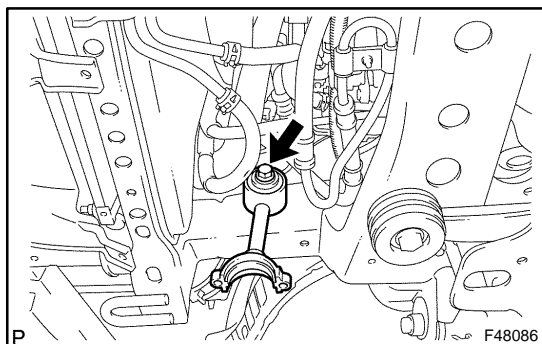
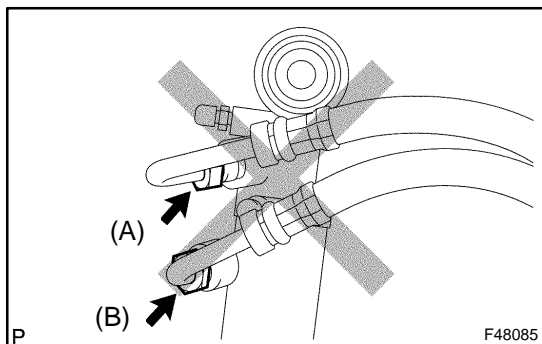


# 11. REMOVE FRONT STABILIZER W/TUBE CYLINDER ASSY

- (a) Remove the bolt, nut and front stabilizer w/ tube cylinder assy.

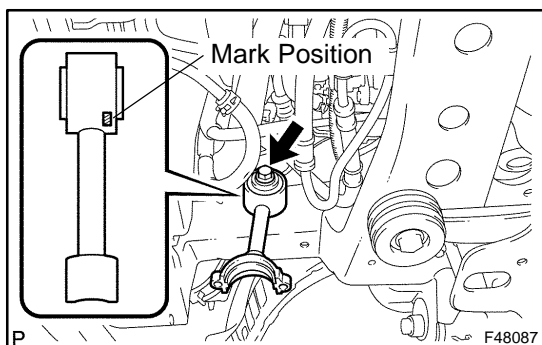
## NOTICE:

- Turn the bolt while holding the nut.
  - Do not loosen or remove flare nuts (A) and (B) shown in the illustration.
  - Do not remove or hold the front stabilizer w/ tube cylinder assy by the cylinder boot.
- (b) Remove the 2 bleeder plug caps and bleeder plugs from the front stabilizer w/ tube cylinder assy.



# 12. REMOVE FRONT STABILIZER LINK ASSY

- (a) Remove the bolt, spacer and front stabilizer link assy.



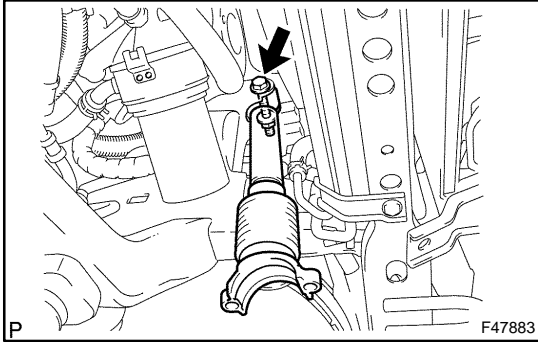
# 13. TEMPORARILY TIGHTEN FRONT STABILIZER LINK ASSY

- (a) Install the front stabilizer link assy with the spacer by temporarily tightening the bolt. Ensure that the identification mark on the front stabilizer link assy faces inward and to the front of the vehicle.

# 14. TEMPORARILY TIGHTEN FRONT STABILIZER W/TUBE CYLINDER ASSY

- (a) Install the 2 bleeder plugs and bleeder plug caps to the front stabilizer cylinder w/ tube cylinder assy.

**Torque: 9.5 N·m (97 kgf·cm, 84 in.-lbf)**



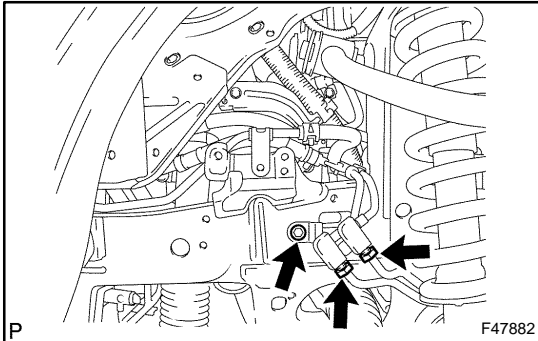
- (b) Install the front stabilizer w/ tube cylinder assy by temporarily tightening the nut and bolt.

**NOTICE:**

- Turn the bolt while holding the nut.
- Do not hold or install the front stabilizer w/ tube cylinder assy by the cylinder boot.

**HINT:**

Pass the tube side of the front stabilizer w/ tube cylinder assy under the return tube sub-assy before installing.

**15. CONNECT FRONT STABILIZER CONTROL TUBE NO.1**

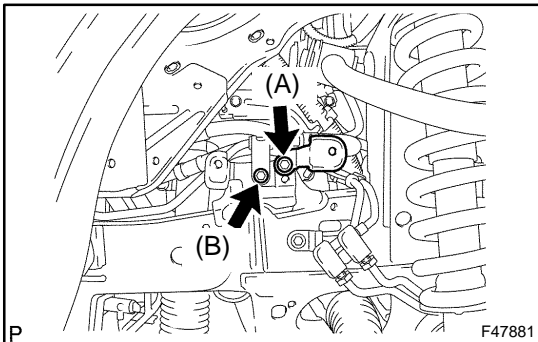
- (a) Install the bracket by temporarily tightening the bolt.
- (b) Connect the front stabilizer control tube No.1.
- (1) Apply suspension fluid to the threads of the flare nuts.
  - (2) Using SST, connect the front stabilizer control tube No.1 to the front stabilizer w/ tube cylinder assy and tighten the flare nuts.

SST 09023-12701

**Torque: 44 N·m (450 kgf·cm, 32 ft·lbf)**

- (c) Fully tighten the bolt.

**Torque: 29 N·m (296 kgf·cm, 21 ft·lbf)**

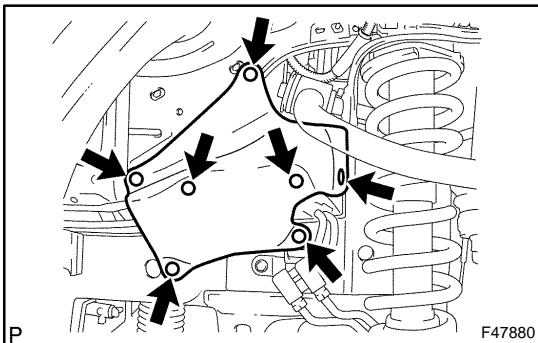


- (d) Install the tube clamp bracket No.3 with bolt (A).

**Torque: 29 N·m (296 kgf·cm, 21 ft·lbf)**

- (e) Install the return tube sub-assy with bolt (B).

**Torque: 28 N·m (286 kgf·cm, 21 ft·lbf)**



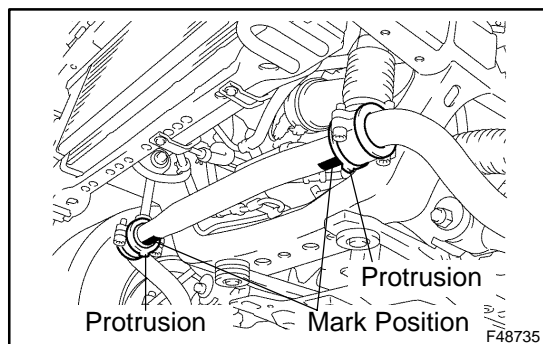
- (f) Install the front apron seal LH with the 7 clips.

**16. BLEED SUSPENSION FLUID (SEE PAGE 25-27)**

SST 09760-60010

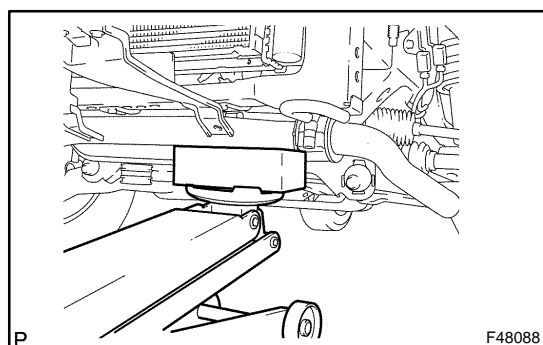
**17. CHECK FOR FLUID LEAKS (SEE PAGE 25-26)****18. INSTALL FRONT DISC WHEEL**

**Torque: 112 N·m (1,140 kgf·cm, 83 ft·lbf)**



### 19. INSTALL STABILIZER BAR FRONT

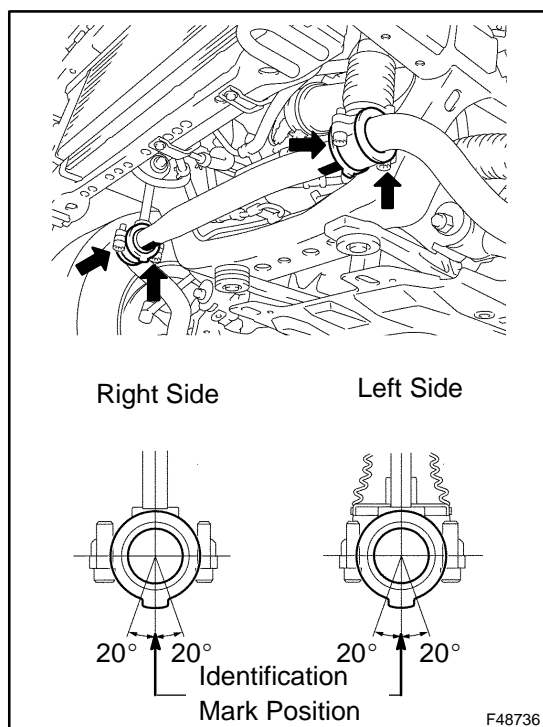
- (a) Install the 2 front stabilizer lower bracket bushes to the stabilizer bar front.
- (1) Align the protrusions on the bushes with the identification marks on the front stabilizer bar front with the protrusions facing inward.



- (b) Support the stabilizer bar front with the identification marks facing down with a jack. Place a wooden block between the jack and the stabilizer bar front to prevent damage.

**HINT:**

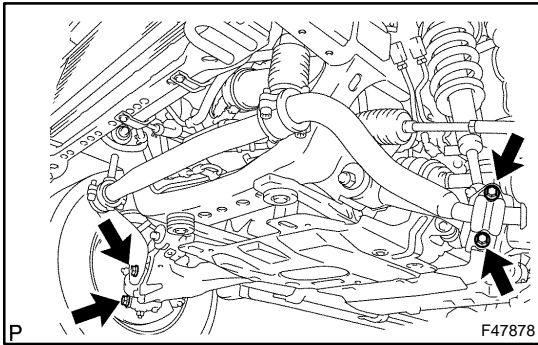
Place the jack under the left side of the vehicle.



- (c) Using a socket hexagon wrench (10 mm), install the stabilizer bar front with the 4 bolts and 2 front stabilizer lower brackets.

**Torque: 59 N·m (602 kgf·cm, 44 ft·lbf)**

- (1) Check that the protrusions on the front stabilizer lower bracket bushes are positioned within 20° of the identification marks.

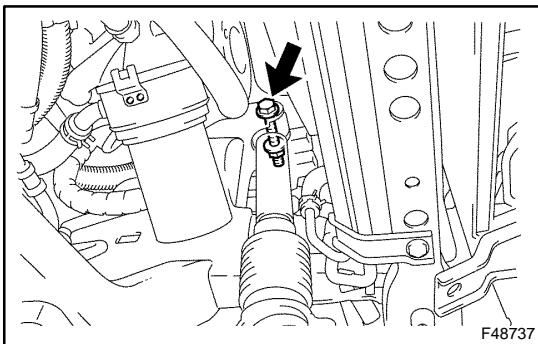
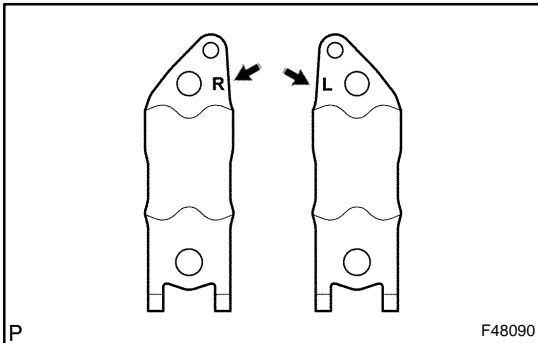


- (d) Install the 4 bolts, 2 front stabilizer brackets and 2 front stabilizer link bushes with the wheels on the ground.

**Torque: 75 N·m (765 kgf·cm, 55 ft·lbf)**

**HINT:**

There are stamps on the front stabilizer brackets to distinguish between right and left.



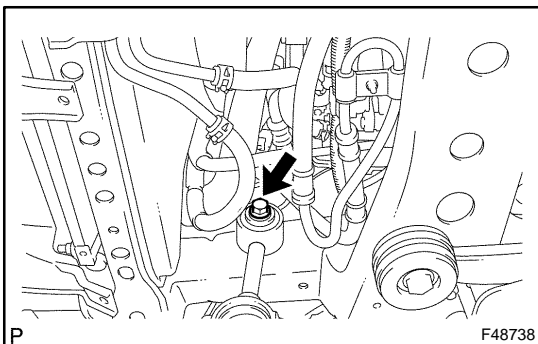
## 20. FULLY TIGHTEN FRONT STABILIZER W/TUBE CYLINDER ASSY

- (a) Fully tighten the bolt on the front stabilizer w/ tube cylinder assy.

**Torque: 135 N·m (1,377 kgf·cm, 100 ft·lbf)**

**NOTICE:**

Tighten the bolt with the wheels on the ground.



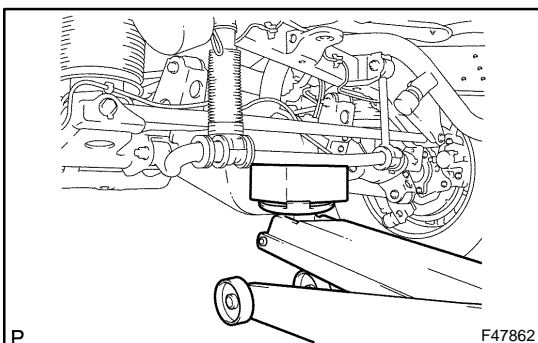
## 21. FULLY TIGHTEN FRONT STABILIZER LINK ASSY

- (a) Fully tighten the bolt on the front stabilizer link assy.

**Torque: 130 N·m (1,326 kgf·cm, 96 ft·lbf)**

**NOTICE:**

Tighten the bolt with the wheels on the ground.

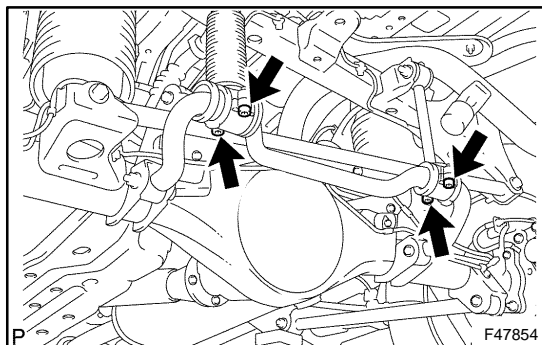


## 22. CONNECT STABILIZER BAR REAR

- (a) Support the stabilizer bar rear with a jack. Place a wooden block between the jack and the stabilizer bar rear to prevent damage.

**HINT:**

Place the jack under the left side of the vehicle.



- (b) Using a socket hexagon wrench (8 mm), connect the stabilizer bar rear with the 4 bolts and 2 rear stabilizer brackets lower.

**Torque: 50 N·m (510 kgf·cm, 37 ft·lbf)**

## 23. STABILIZE SUSPENSION

- (a) Lower the vehicle.

- (1) Place the 4 wheels on the ground with the SST connected.

### NOTICE:

- Pay attention to the SST while lowering the vehicle.
- Ensure that the jack and lift are completely separated from the vehicle.

- (b) Set charging pressure to within the specified range.

- (1) Charge suspension fluid with the SST.

#### Specified charging pressure:

**2.60 to 3.00 MPa at 20°C (68°F) (Fluid temperature)**

**2.90 to 3.40 MPa at 35°C (95°F) (Fluid temperature)**

- (c) Stabilize the vehicle.

- (1) Do not perform any operations on the vehicle for 30 seconds or more after charging suspension fluid. The vehicle will stabilize during this time.

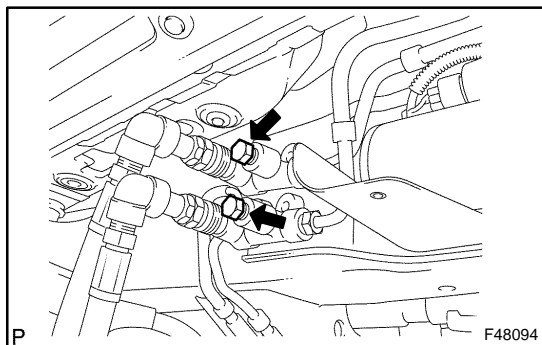
## 24. CHECK SUSPENSION FLUID PRESSURE

- (a) Check the suspension fluid pressure.

## 25. MEASURE VEHICLE HEIGHT

- (a) Measure the difference in vehicle height between the left and right sides.

- (1) For measurement procedures, refer to ON-VEHICLE INSPECTION on page [25-26](#).



- (b) Tighten the stabilizer control adapter shutter valves.

**Torque: 14 N·m (140 kgf·cm, 10 ft·lbf)**

- (c) Disconnect the SST joints.

### NOTICE:

- Ensure that the stabilizer control adapter shutter valves are completely closed before disconnecting the SST joints.
- Ensure that no pressure is applied to the SST hoses before disconnecting the SST joints.

## 26. INSTALL ENGINE UNDER COVER SUB-ASSY NO.1

## 27. INSTALL SPARE DISC WHEEL

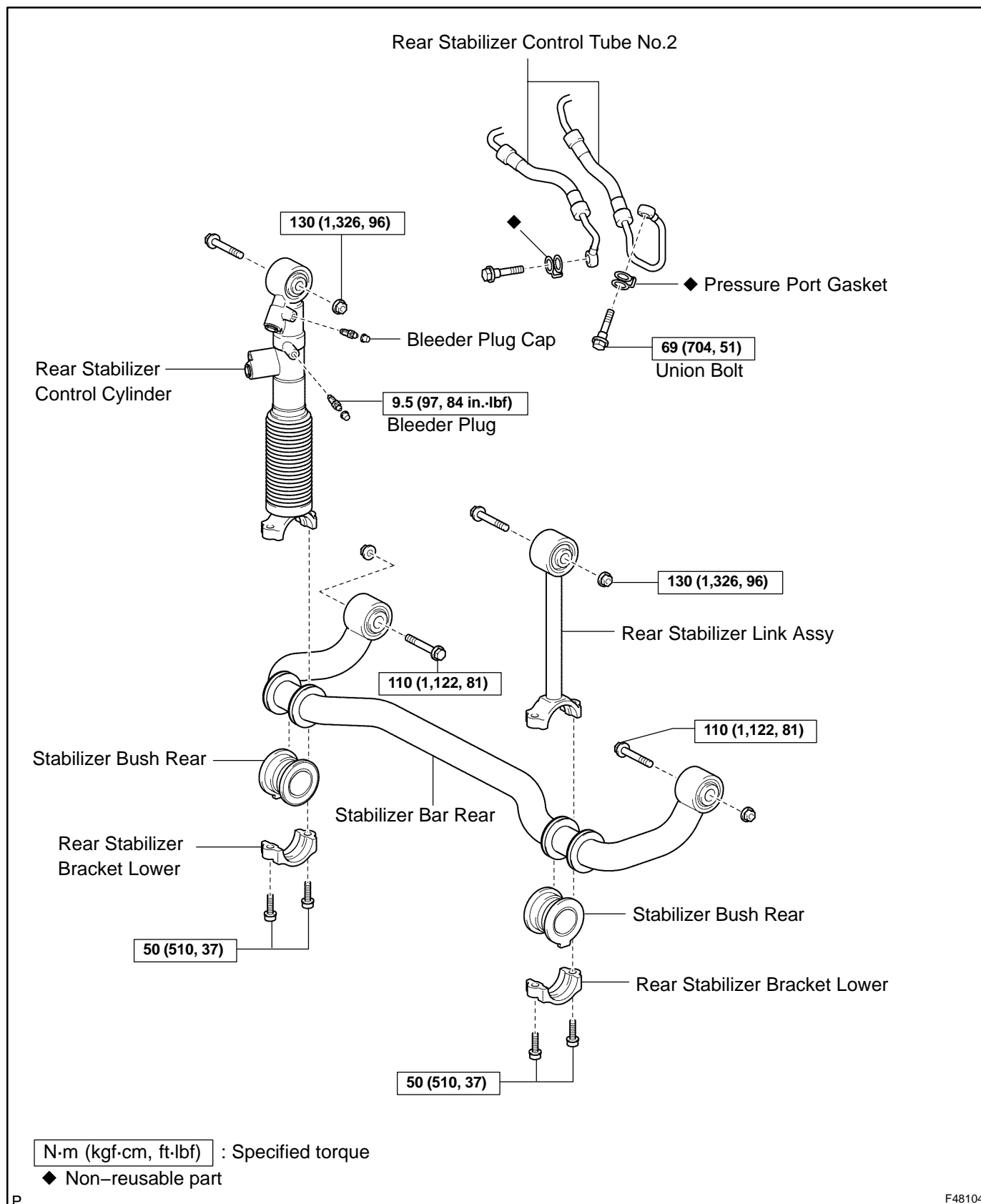
## 28. INSTALL STEP SUB-ASSY LH (SEE PAGE [76-33](#))

## 29. INSTALL BATTERY

## 30. INSTALL RADIATOR SUPPORT SEAL UPPER

# REAR STABILIZER (KDSS) COMPONENTS

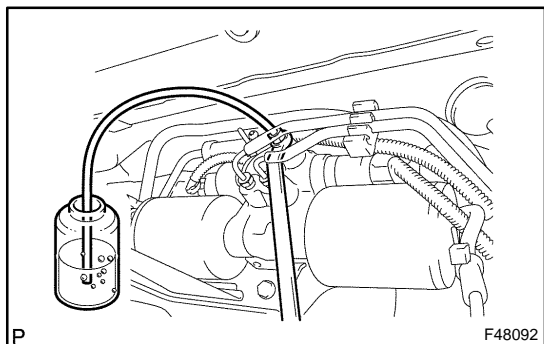
2504T-01





## OVERHAUL

1. REMOVE RADIATOR SUPPORT SEAL UPPER (SEE PAGE 65-11)
2. REMOVE BATTERY
3. REMOVE STEP SUB-ASSY LH (SEE PAGE 76-33)



### 4. DRAIN SUSPENSION FLUID

- (a) Loosen the bleeder plug on the stabilizer control w/ accumulator housing assy and drain suspension fluid.

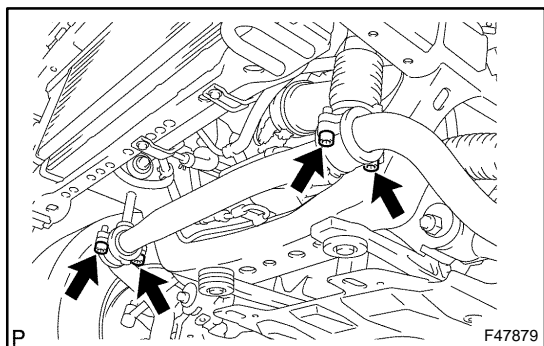
#### HINT:

- Drain suspension fluid when performing the operations related to the hydraulic circuits.
- Draining suspension fluid decreases suspension fluid pressure.

- (b) Tighten the bleeder plug.

**Torque: 9.5 N·m (97 kgf·cm, 84 in.-lbf)**

### 5. REMOVE ENGINE UNDER COVER SUB-ASSY NO.1



### 6. SEPARATE STABILIZER BAR FRONT

- (a) Using a socket hexagon wrench (10 mm), remove the 4 bolts and 2 front stabilizer lower brackets and separate the stabilizer bar front.

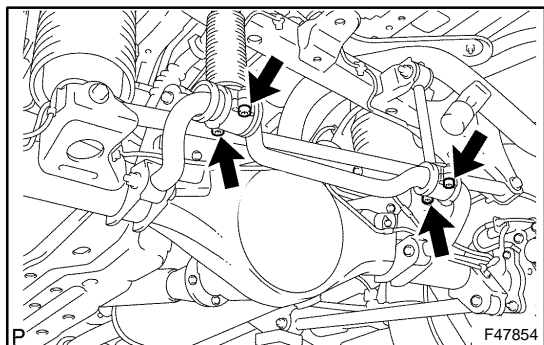
#### NOTICE:

**Ensure that the bottom of the front stabilizer w/ tube cylinder assy is separated from the stabilizer bar front.**

#### HINT:

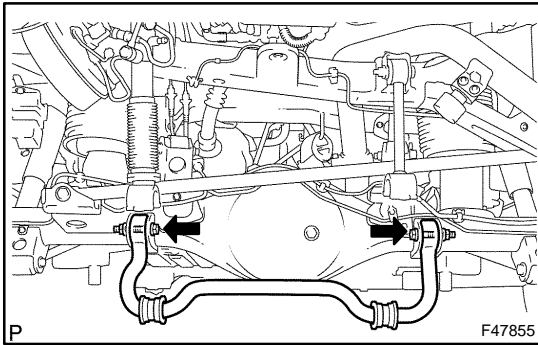
Separate the stabilizer bar front so that the air in the front stabilizer w/ tube cylinder assy can be bled out easily when bleeding the hydraulic circuits.

### 7. REMOVE SPARE DISC WHEEL



### 8. REMOVE STABILIZER BAR REAR

- (a) Using a socket hexagon wrench (8 mm), remove the 4 bolts and 2 rear stabilizer brackets lower.

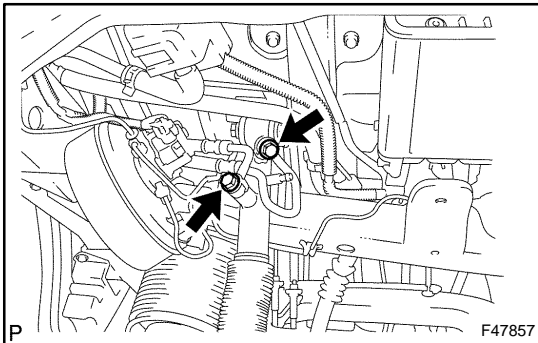


- (b) Remove the 2 bolts, nuts and stabilizer bar rear.

**NOTICE:**

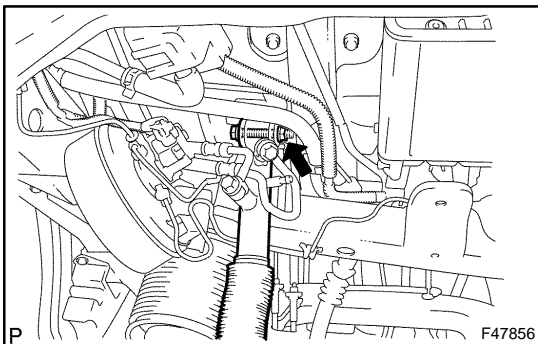
**Turn the bolts while holding the nuts.**

- (c) Remove the 2 stabilizer bushes from the stabilizer bar rear.



**9. SEPARATE REAR STABILIZER CONTROL TUBE NO.2**

- (a) Remove the 2 union bolts and pressure port gaskets and separate the rear stabilizer control tube No.2 from the rear stabilizer control cylinder.



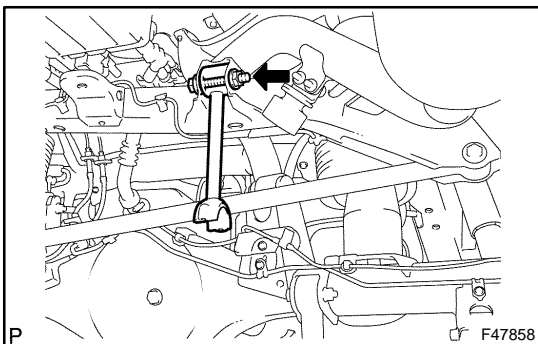
**10. REMOVE REAR STABILIZER CONTROL CYLINDER**

- (a) Remove the bolt, nut and rear stabilizer control cylinder.

**NOTICE:**

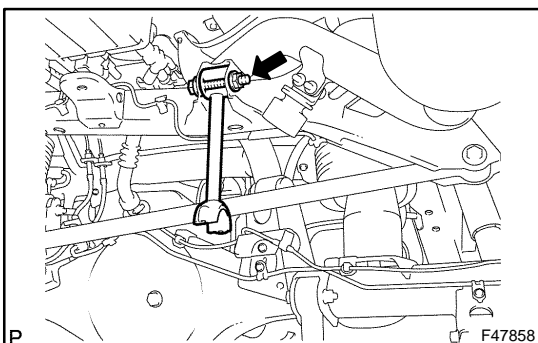
**Do not remove or hold the rear stabilizer control cylinder by the cylinder boot.**

- (b) Remove the 2 bleeder plug caps and bleeder plugs from the rear stabilizer control cylinder.



**11. REMOVE REAR STABILIZER LINK ASSY**

- (a) Remove the bolt, nut and rear stabilizer link assy.



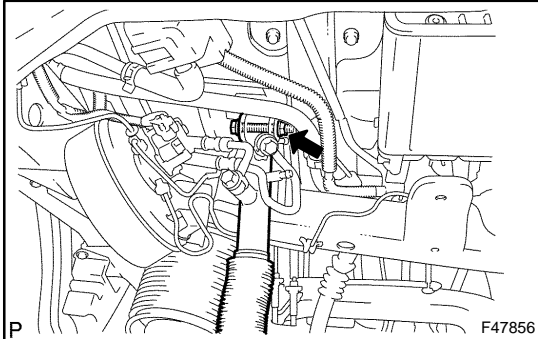
**12. INSTALL REAR STABILIZER LINK ASSY**

- (a) Install the rear stabilizer link assy with the bolt and nut.  
**Torque: 130 N·m (1,326 kgf·cm, 96 ft·lbf)**

**13. INSTALL REAR STABILIZER CONTROL CYLINDER**

- (a) Install the 2 bleeder plugs and bleeder plug caps to the rear stabilizer control cylinder.

**Torque: 9.5 N·m (97 kgf·cm, 84 in·lbf)**

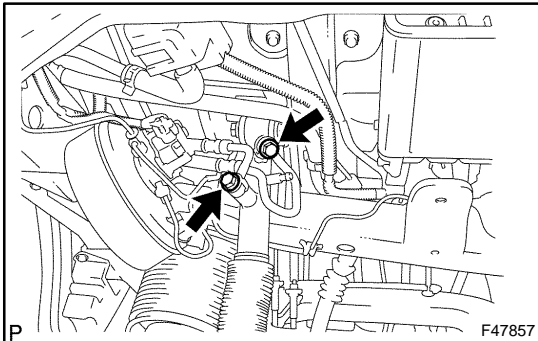


- (b) Install the rear stabilizer control cylinder with the bolt and nut.

**Torque: 130 N·m (1,326 kgf·cm, 96 ft·lbf)**

**NOTICE:**

**Do not hold or install the rear stabilizer control cylinder by the cylinder boot.**

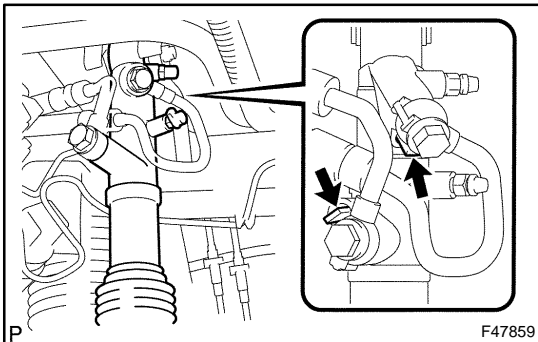
**14. CONNECT REAR STABILIZER CONTROL TUBE NO.2**

- (a) Install the rear stabilizer control tube No.2 to the rear stabilizer control cylinder with the 2 union bolts and 2 new pressure port gaskets.

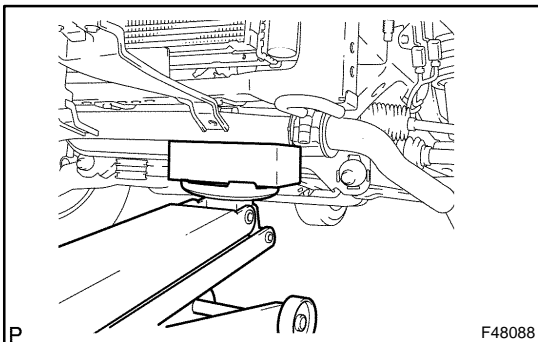
**Torque: 69 N·m (704 kgf·cm, 51 ft·lbf)**

**NOTICE:**

**Insert the stopper of the rear stabilizer control tube No.2 into the rear stabilizer control cylinder.**

**15. BLEED SUSPENSION FLUID (SEE PAGE 25-27)**

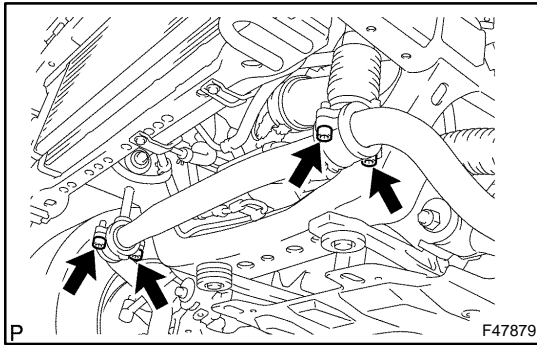
SST 09760-60010

**16. CHECK FOR FLUID LEAKS (SEE PAGE 25-26)****17. CONNECT STABILIZER BAR FRONT**

- (a) Support the stabilizer bar front with a jack. Place a wooden block between the jack and the stabilizer bar front to prevent damage.

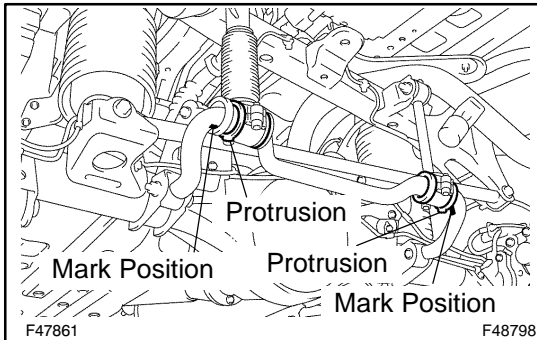
**HINT:**

Place the jack under the left side of the vehicle.



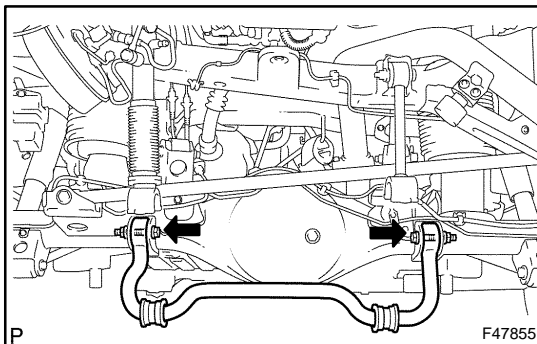
- (b) Using a socket hexagon wrench (10 mm), connect the stabilizer bar front with the 4 bolts and 2 front stabilizer lower brackets.

**Torque: 59 N·m (602 kgf·cm, 44 ft·lbf)**



#### 18. INSTALL STABILIZER BAR REAR

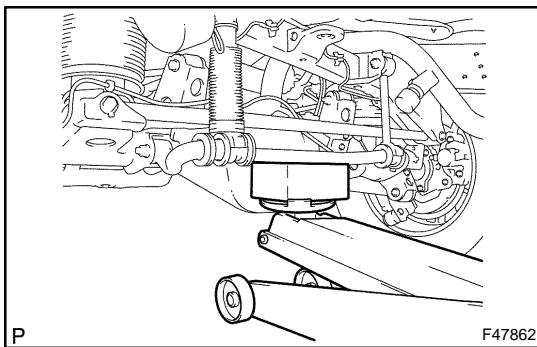
- (a) Install the 2 stabilizer bushes rear to the stabilizer bar rear.
- (1) Align the protrusions on the bushes with the identification marks on the stabilizer bar rear. Ensure that the protrusions face outward.



- (b) Install the stabilizer bar rear with the 2 bolts and nuts with the identification marks facing down.

#### NOTICE:

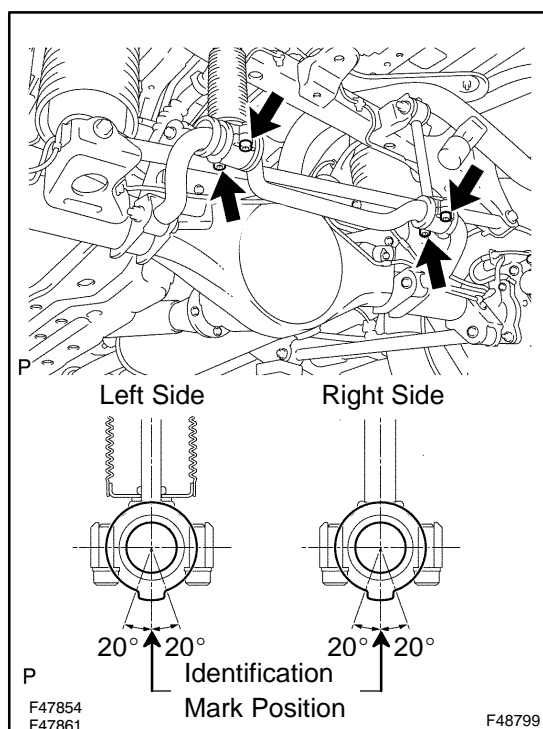
**Turn the bolts while holding the nuts.**



- (c) Support the stabilizer bar rear with a jack. Place a wooden block between the jack and the stabilizer bar rear to prevent damage.

#### HINT:

Set the jack under the left side of the vehicle.



- (d) Using a socket hexagon wrench (8 mm), install the stabilizer bar rear with the 4 bolts and 2 rear stabilizer brackets lower.

**Torque: 50 N·m (510 kgf·cm, 37 ft·lbf)**

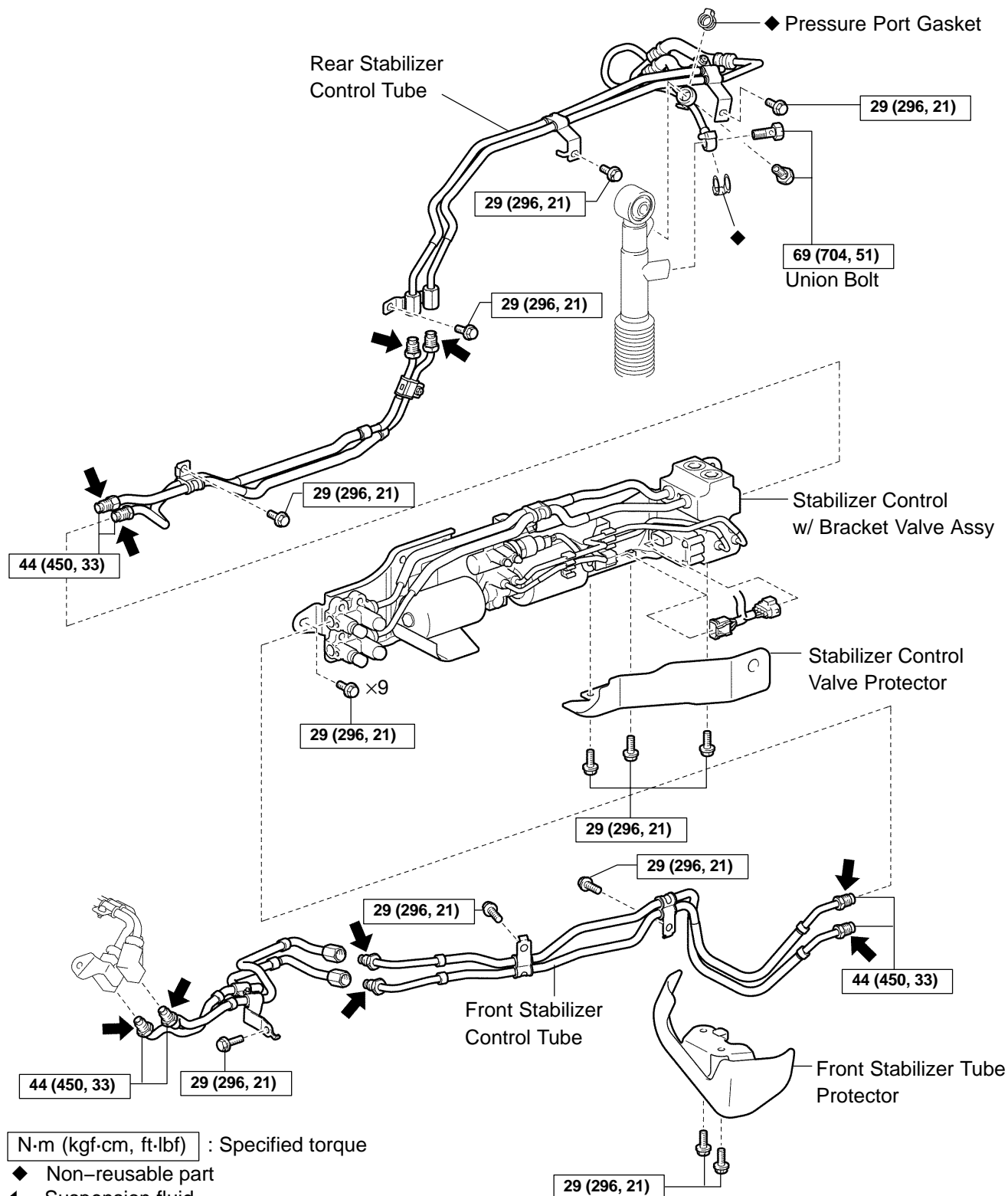
- (1) Check that the protrusions on the stabilizer bushes rear are positioned within 20° of the identification marks.

19. **STABILIZE SUSPENSION (SEE PAGE 25-33)**
20. **CHECK SUSPENSION FLUID PRESSURE**
  - (a) Check the suspension fluid pressure.
21. **MEASURE VEHICLE HEIGHT (SEE PAGE 25-33)**
22. **INSTALL ENGINE UNDER COVER SUB-ASSY NO.1**
23. **INSTALL SPARE DISC WHEEL**
24. **INSTALL STEP SUB-ASSY LH (SEE PAGE 76-33)**
25. **INSTALL BATTERY**
26. **INSTALL RADIATOR SUPPORT SEAL UPPER**

# STABILIZER CONTROL W/BRACKET VALVE ASSY (KDSS) COMPONENTS

2504V-01

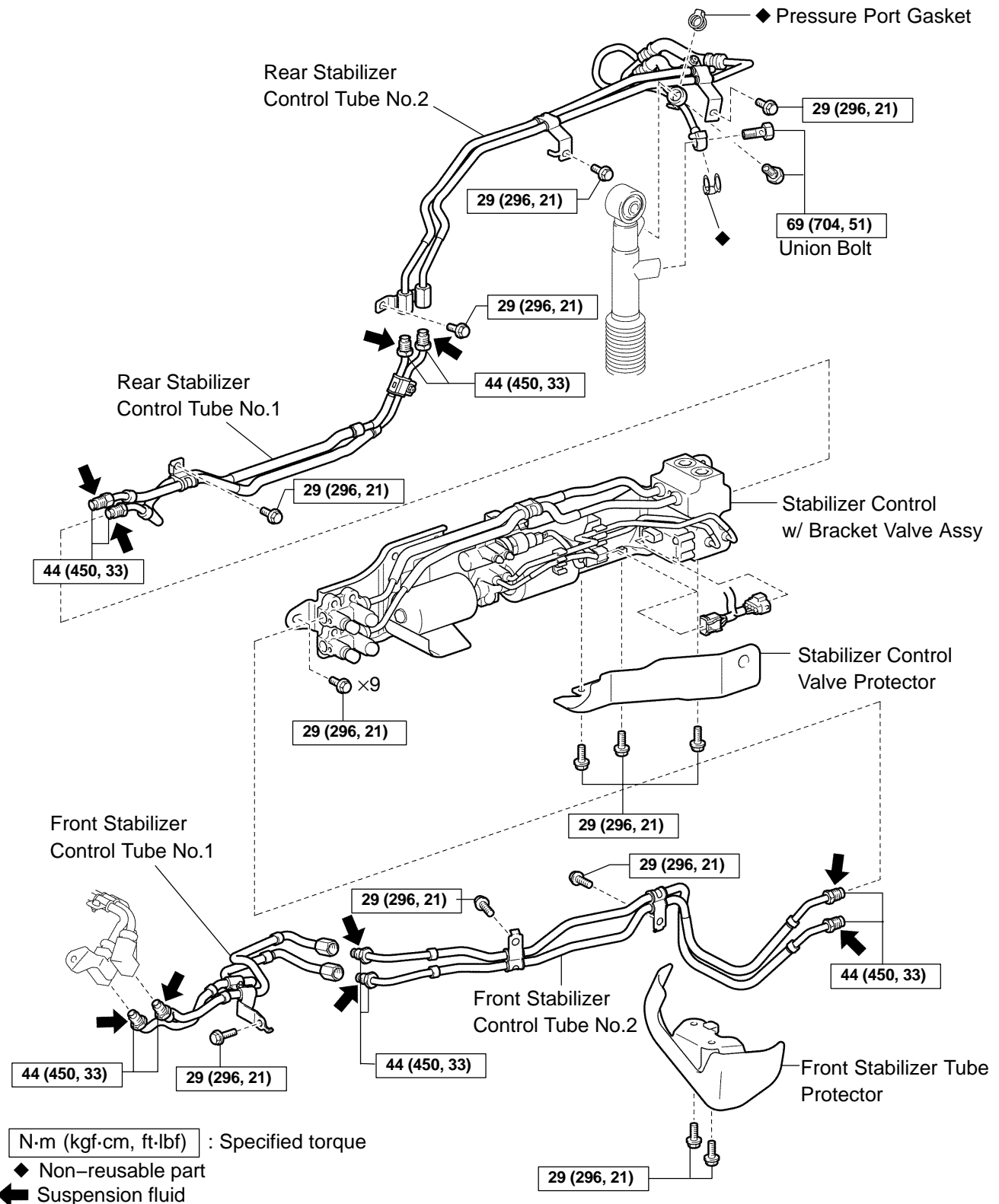
Factory-installed piping (one-piece pipe):



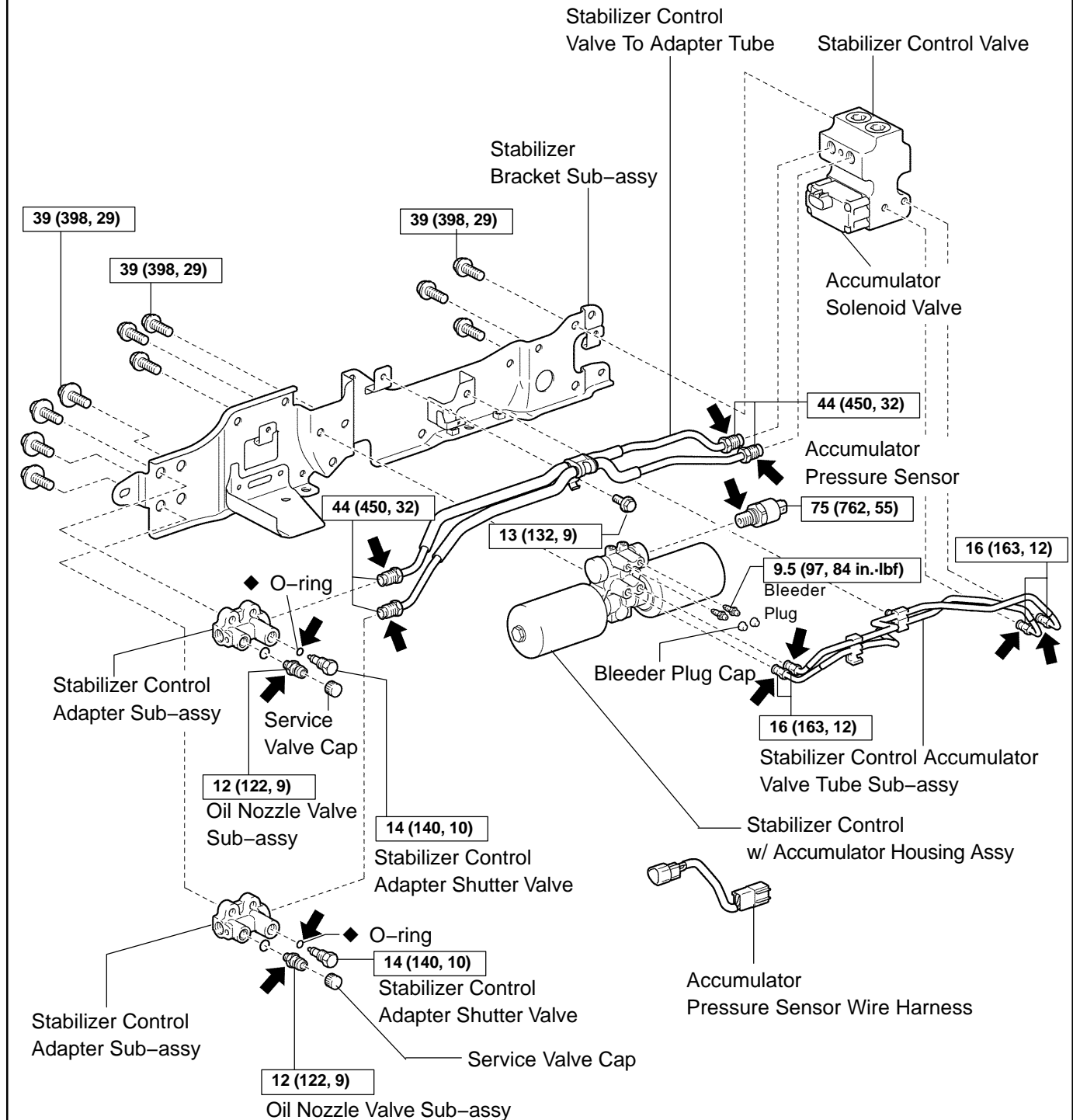
P

cmc0218

Supplied Parts (two-piece type pipes):



cmc0735

**Stabilizer Control w/ Bracket Valve Assy:**

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

◆ Non-reusable part

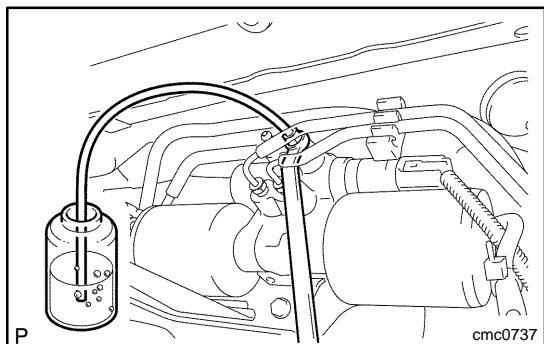
P ← Suspension fluid

cmc0736



## OVERHAUL

1. REMOVE RADIATOR SUPPORT SEAL UPPER (SEE PAGE 65-11)
2. REMOVE BATTERY
3. REMOVE STEP SUB-ASSY LH (SEE PAGE 76-33)



### 4. DRAIN SUSPENSION FLUID

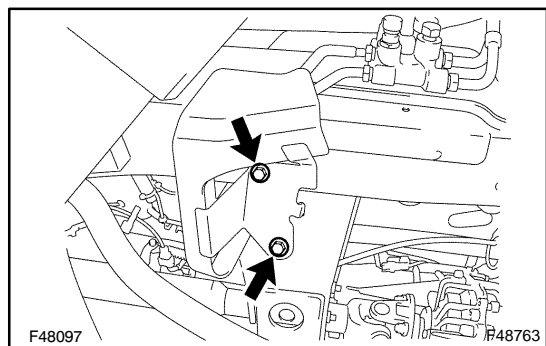
- (a) Loosen the bleeder plug on the stabilizer control w/ accumulator housing assy and drain suspension fluid.

#### HINT:

- Drain suspension fluid when performing the operations related to the hydraulic circuits.
  - Draining suspension fluid decreases suspension fluid pressure.
- (b) Tighten the bleeder plug.

**Torque: 9.5 N·m (97 kgf·cm, 84 in·lbf)**

5. REMOVE ENGINE UNDER COVER SUB-ASSY NO.1
6. SEPARATE STABILIZER BAR FRONT (SEE PAGE 25-41)
7. REMOVE SPARE DISC WHEEL
8. SEPARATE STABILIZER BAR REAR (SEE PAGE 25-33)
9. REMOVE FRONT DISC WHEEL



### 10. REMOVE FRONT STABILIZER CONTROL TUBE

- (a) Remove the 2 bolts and front stabilizer tube protector.

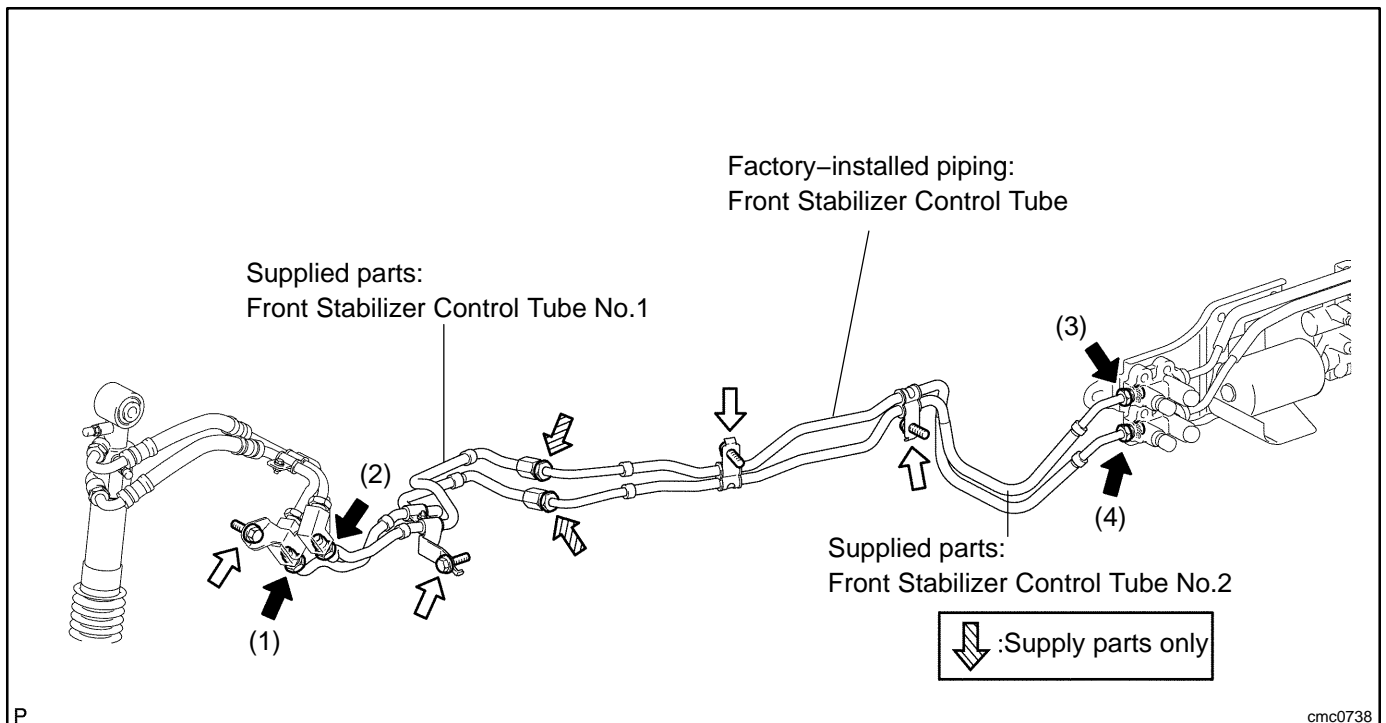
- (b) Factory-installed piping:  
Using SST, disconnect the front stabilizer control tube.  
SST 09023-12701
- (c) Supplied parts:  
Using SST, disconnect the front stabilizer control tube No.1 and No.2.  
SST 09023-12701
- (d) Factory-installed piping:  
Remove the 4 bolts and front stabilizer control tube.
- (e) Supplied parts:  
Remove the 4 bolts and front stabilizer control tube No.1 and No.2.

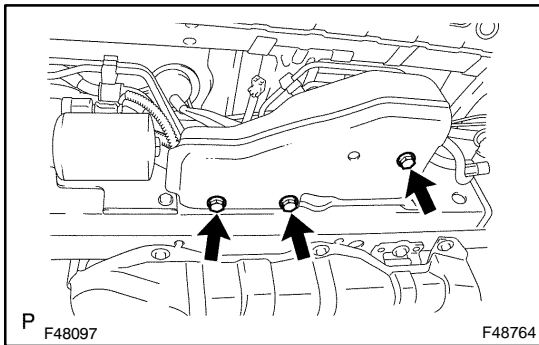
**NOTICE:**

- Drain the oil from the piping and disconnect the connection points. Then cut the piping, being careful not to allow foreign matter to enter the system.
- Make sure to remove union nuts (1) to (4) shown in the illustration before cutting the piping in order to prevent foreign matter from entering the system.

**HINT:**

It will be necessary to cut or deform the factory-installed piping (one piece pipe) to remove it from the vehicle.



**11. REMOVE REAR STABILIZER CONTROL TUBE**

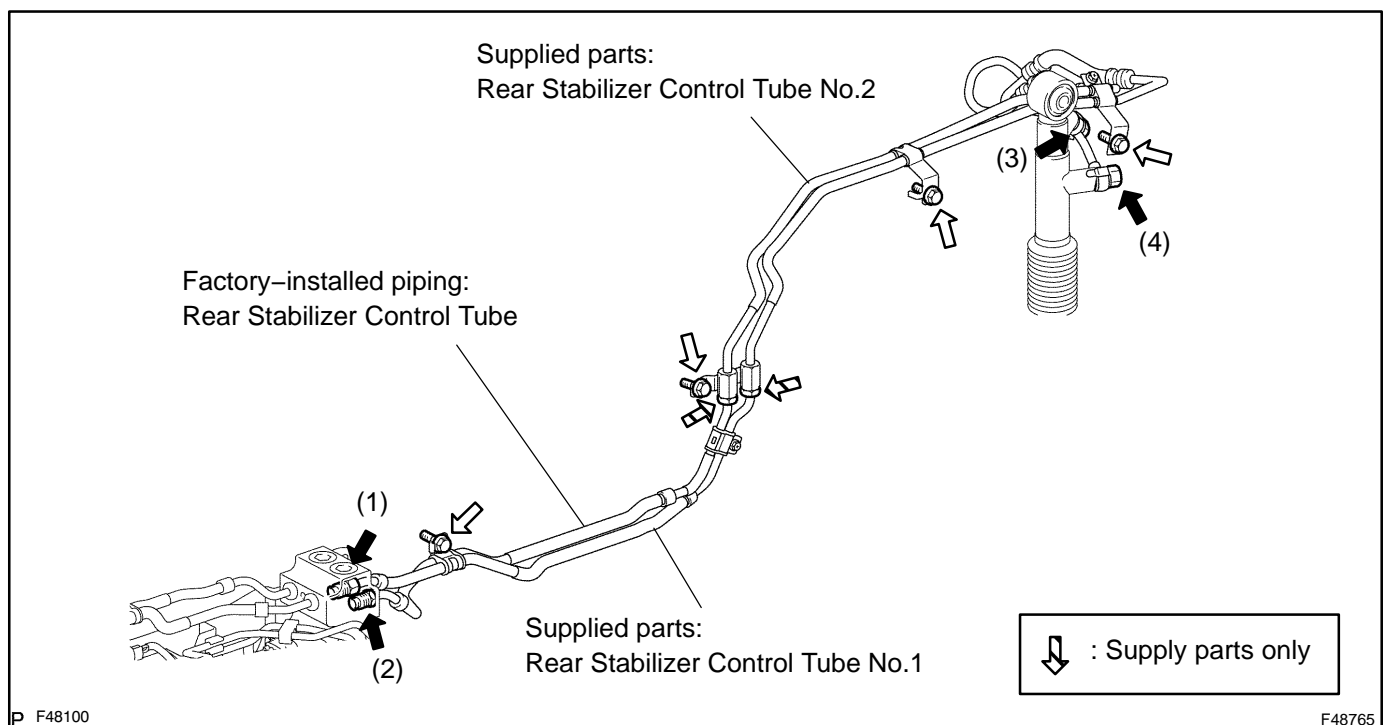
- (a) Remove the 3 bolts and stabilizer control valve protector.
- (b) Factory-installed piping:  
Using SST, disconnect the rear stabilizer control tube.  
SST 09023-12701
- (c) Supplied parts:  
Using SST, disconnect the rear stabilizer control tube No.1.  
SST 09023-12701
- (d) Remove the 2 union bolts of the rear stabilizer control cylinder and the 2 pressure port gaskets.
- (e) Factory-installed piping:  
Remove the 4 bolts and rear stabilizer control tube.
- (f) Supplied parts:  
Remove the 4 bolts and rear stabilizer control tube No.1 and No.2.

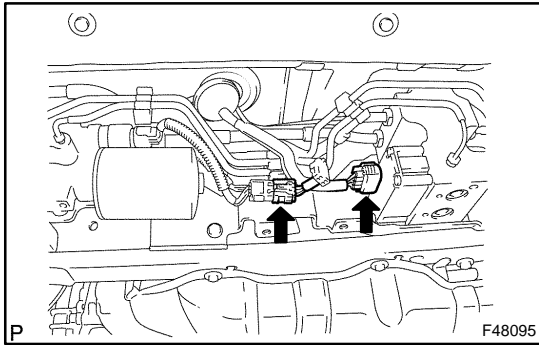
**NOTICE:**

- **Drain the oil from the piping and disconnect the connection points. Then cut the piping, being careful not to allow foreign matter to enter the system.**
- **Make sure to remove union nuts and union bolts (1) to (4) shown in the illustration before cutting the piping in order to prevent foreign matter from entering the system.**

**HINT:**

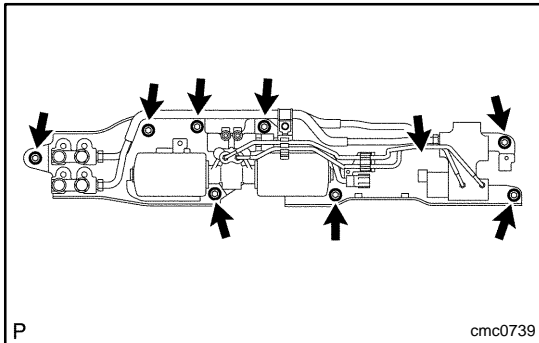
It will be necessary to cut or deform the factory-installed piping (one piece pipe) to remove it from the vehicle.



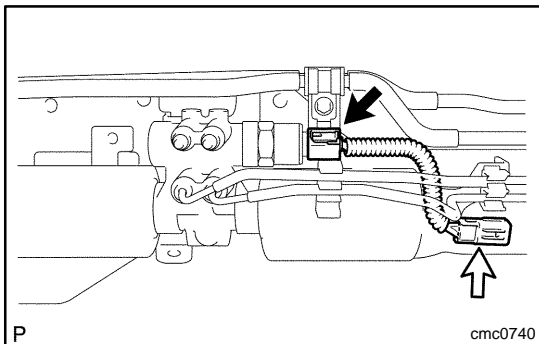


## 12. REMOVE STABILIZER CONTROL W/BRACKET VALVE ASSY

- (a) Disconnect the 2 connectors.

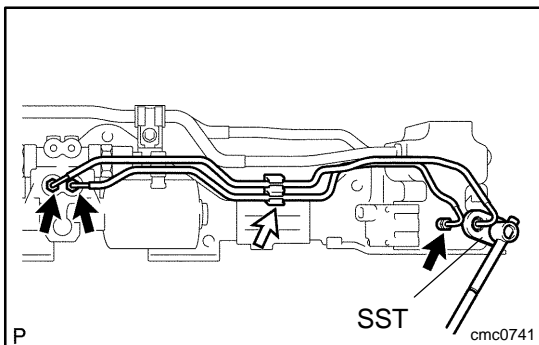


- (b) Remove the 9 bolts and stabilizer control w/ bracket valve assy.



## 13. REMOVE ACCUMULATOR PRESSURE SENSOR WIRE HARNESS

- (a) Disconnect the connector, disengage the clip and remove the accumulator pressure sensor wire harness.



## 14. REMOVE STABILIZER CONTROL ACCUMULATOR VALVE TUBE SUB-ASSY

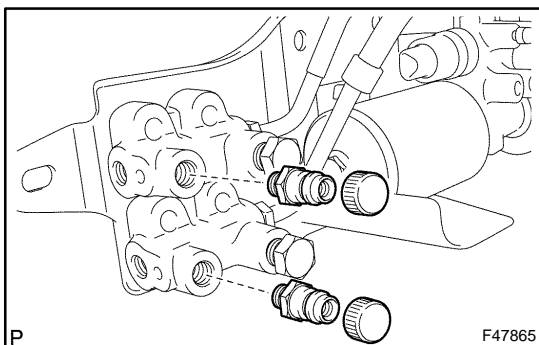
- (a) Using SST, disconnect the stabilizer control accumulator valve tube.

SST 09023-00101

### NOTICE:

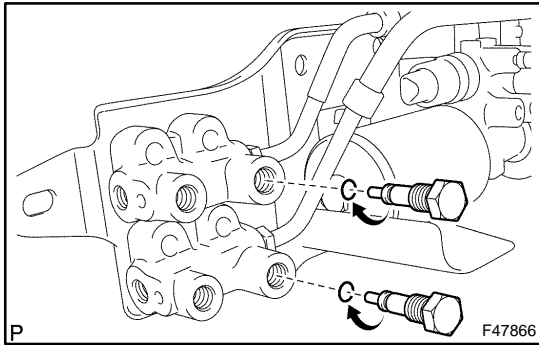
**Do not damage the accumulator valve tube and flare nuts.**

- (b) Disengage the clip and remove the stabilizer control accumulator valve tube.

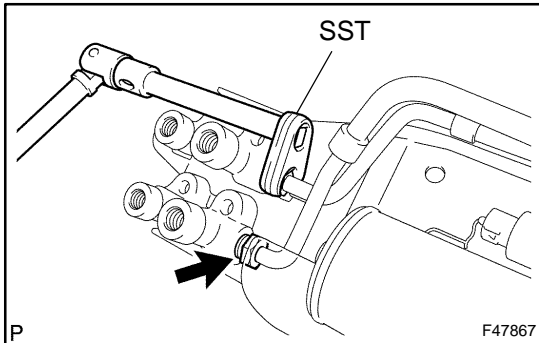


## 15. REMOVE STABILIZER CONTROL ADAPTER SUB-ASSY

- (a) Remove the 2 service valve caps and 2 oil nozzle valves.



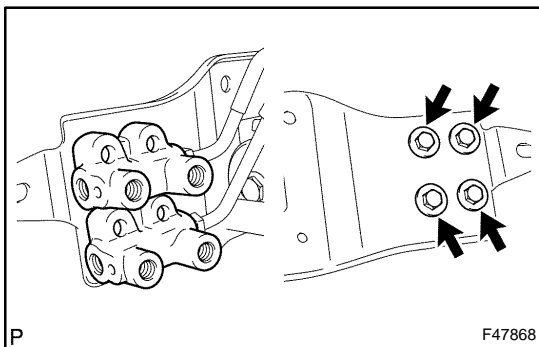
- (b) Remove the 2 stabilizer control adapter shutter valves.
- (c) Remove the 2 O-rings from the stabilizer control adapter shutter valves.



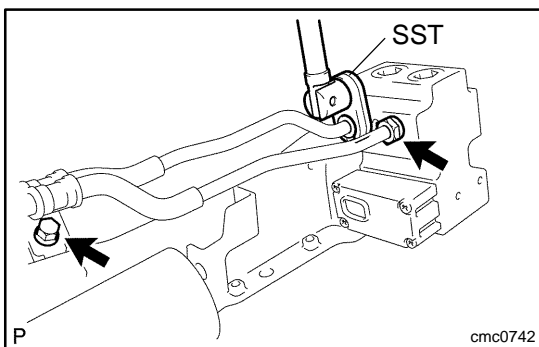
- (d) Using SST, disconnect the stabilizer control valve to adapter tube.  
SST 09023-12700

**NOTICE:**

**Do not damage the control valve adapter tube and flare nuts.**



- (e) Remove the 4 bolts and 2 stabilizer control adapters.

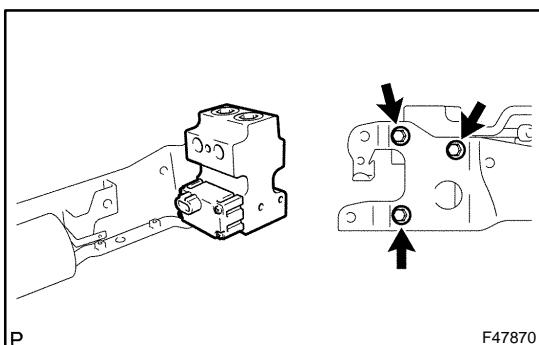
**16. REMOVE STABILIZER CONTROL VALVE TO ADAPTER TUBE**

- (a) Using SST, disconnect the stabilizer control valve to adapter tube.  
SST 09023-12701

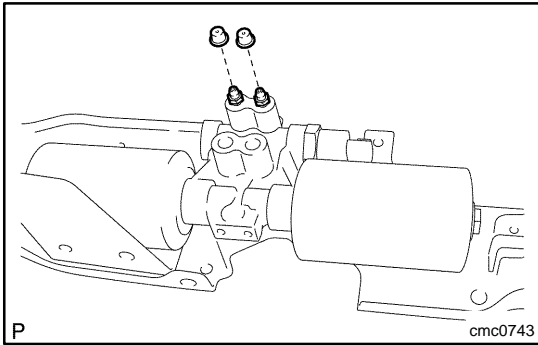
**NOTICE:**

**Do not damage the control valve adapter tube and flare nuts.**

- (b) Remove the bolt and stabilizer control adapter tube.

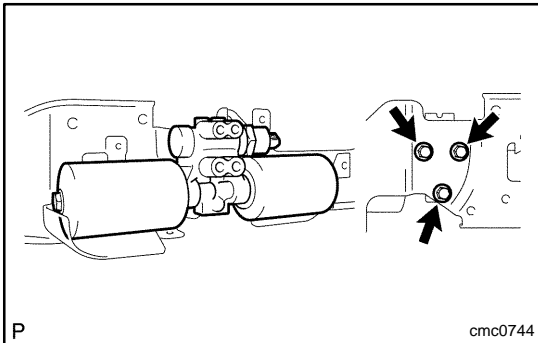
**17. REMOVE STABILIZER CONTROL VALVE**

- (a) Remove the 3 bolts and stabilizer control valve.

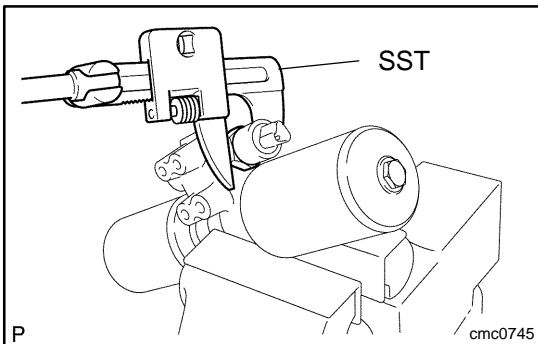


## 18. REMOVE STABILIZER CONTROL W/ACCUMULATOR HOUSING ASSY

- (a) Remove the 2 bleeder plug caps and 2 bleeder plugs.



- (b) Remove the 3 bolts and stabilizer control w/ accumulator housing.

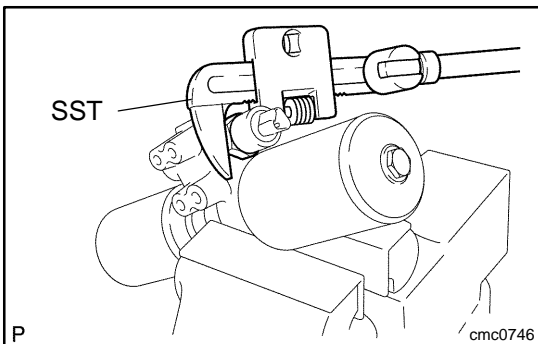


## 19. REMOVE ACCUMULATOR PRESSURE SENSOR

- (a) Secure the stabilizer control w/ accumulator housing in a vise.
- (b) Using SST, remove the 2 accumulator pressure sensors. SST 09922-10010

### NOTICE:

**Do not damage the stabilizer control w/ accumulator housing with the SST.**



## 20. INSTALL ACCUMULATOR PRESSURE SENSOR

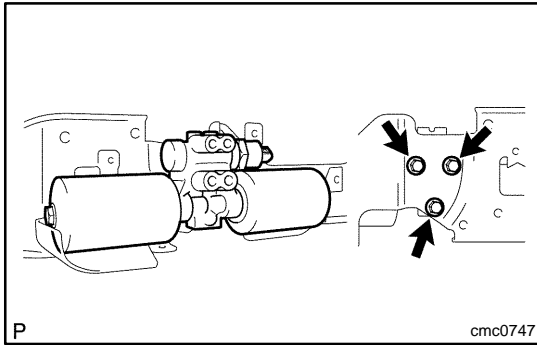
- (a) Secure the stabilizer control w/ accumulator housing in a vise.
- (b) Install the accumulator pressure sensors.
  - (1) Apply suspension fluid to the threads of the accumulator pressure sensors and O-rings.
  - (2) Using SST, install the 2 accumulator pressure sensors to the stabilizer control w/ accumulator housing.

SST 09922-10010

**Torque: 75 N·m (762 kgf·cm, 55 ft·lbf)**

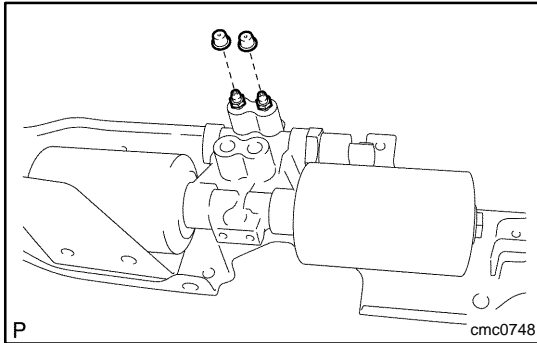
### NOTICE:

**Do not damage the stabilizer control w/ accumulator housing with the SST.**

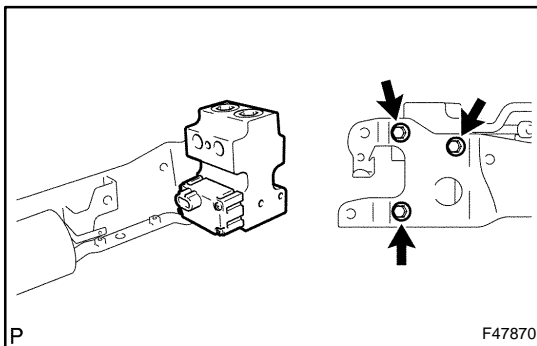


## 21. TEMPORARILY TIGHTEN STABILIZER CONTROL W/ACCUMULATOR HOUSING ASSY

- (a) Install the stabilizer control w/ accumulator housing by temporarily tightening the 3 bolts.

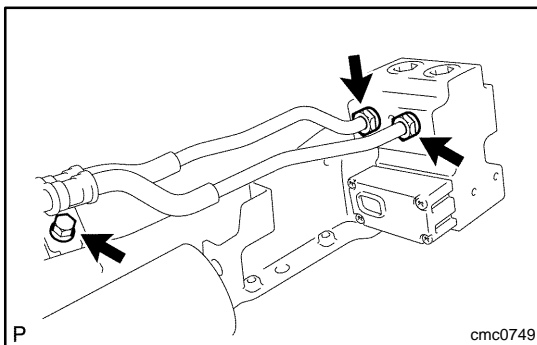


- (b) Install the 2 bleeder plugs and 2 bleeder plug caps.  
**Torque: 9.5 N·m (97 kgf·cm, 84 in.-lbf)**



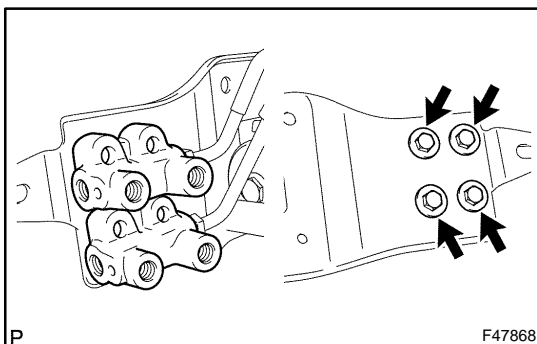
## 22. TEMPORARILY TIGHTEN STABILIZER CONTROL VALVE

- (a) Install the stabilizer control valve by temporarily tightening the 3 bolts.



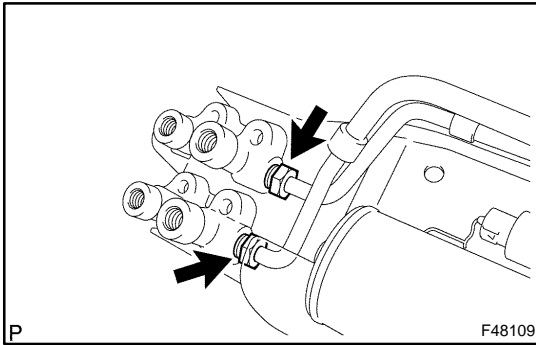
## 23. TEMPORARILY TIGHTEN STABILIZER CONTROL VALVE TO ADAPTER TUBE

- (a) Install the stabilizer control valve to adapter tube.
- (1) Apply suspension fluid to the threads of the flare nuts.
  - (2) Install the stabilizer control valve to adapter tube to the stabilizer control valve by temporarily tightening the 2 flare nuts.
- (b) Install the stabilizer control valve to adapter tube by temporarily tightening the bolt.

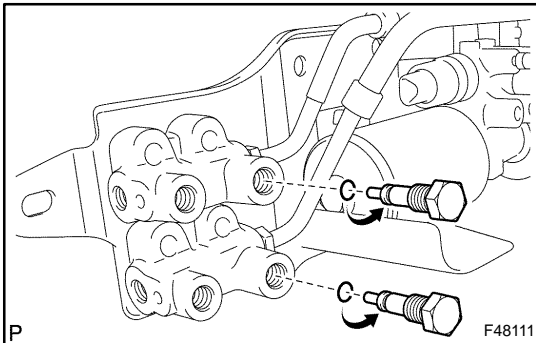


## 24. TEMPORARILY TIGHTEN STABILIZER CONTROL ADAPTER SUB-ASSY

- (a) Install the 2 stabilizer control adapters by temporarily tightening the 4 bolts.

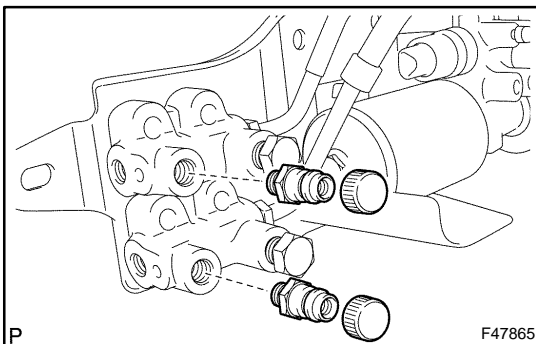


- (b) Install the stabilizer control valve to adapter tube.
- (1) Apply suspension fluid to the threads of the flare nuts.
  - (2) Install the stabilizer control valve to adapter tube to the stabilizer control adapter by temporarily tightening the 2 flare nuts.



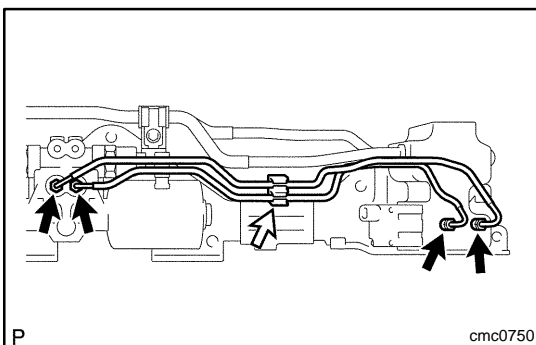
- (c) Install the stabilizer control adapter shutter valves.
- (1) Apply suspension fluid to 2 new O-rings and install them to the stabilizer control adapter shutter valves.
  - (2) Install the 2 stabilizer control adapter shutter valves to the stabilizer control adapter.

**Torque: 14 N·m (140 kgf·cm, 10 ft·lbf)**



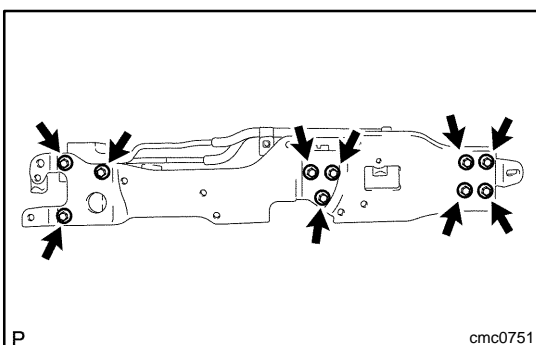
- (d) Install the oil nozzle valve sub-assy.
- (1) Apply suspension fluid to the 2 O-rings.
  - (2) Install the 2 oil nozzle valve sub-assy and 2 service valve caps to the stabilizer control adapter.

**Torque: 12 N·m (122 kgf·cm, 9 ft·lbf)**



## 25. TEMPORARILY TIGHTEN STABILIZER CONTROL ACCUMULATOR VALVE TUBE SUB-ASSY

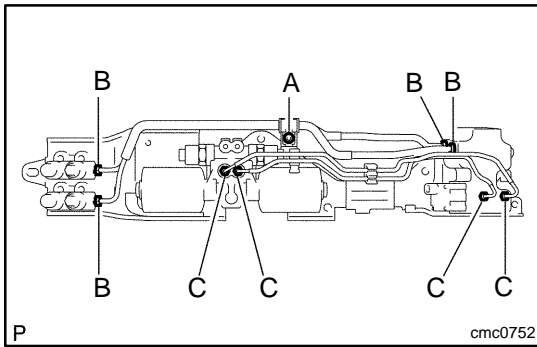
- (a) Apply suspension fluid to the threads of the flare nuts.
- (b) Temporarily tighten the 4 flare nuts on the stabilizer control accumulator valve tube sub-assy, and engage the clip.



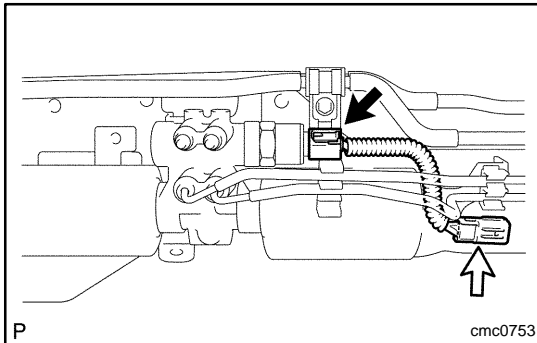
## 26. FULLY TIGHTEN STABILIZER CONTROL W/BRACKET VALVE ASSY

- (a) Fully tighten the 10 bolts.
- Torque: 39 N·m (398 kgf·cm, 29 ft·lbf)**



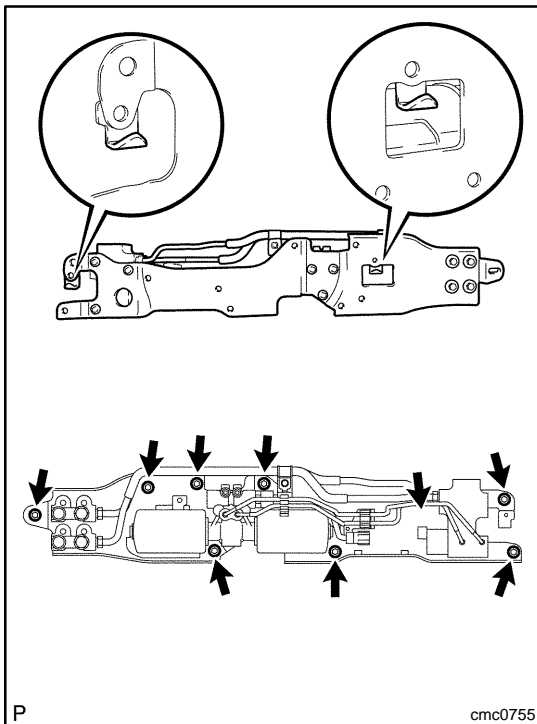


- (b) Fully tighten bolt (A).  
**Torque: 13 N·m (132 kgf·cm, 9 ft·lbf)**
- (c) Using SST, fully tighten flare nuts (B).  
SST 09023-12701  
**Torque: 44 N·m (450 kgf·cm, 32 ft·lbf)**
- (d) Using SST, fully tighten flare nuts (C).  
SST 09023-00101  
**Torque: 16 N·m (163 kgf·cm, 12 ft·lbf)**



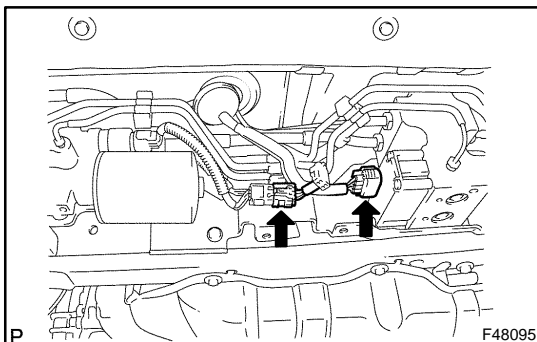
## 27. INSTALL ACCUMULATOR PRESSURE SENSOR WIRE HARNESS

- (a) Connect the 2 connectors and engage the clip.



## 28. INSTALL STABILIZER CONTROL W/BACKET VALVE ASSY

- (a) Insert the protrusion on the stabilizer bracket into the frame, and install the stabilizer control w/ bracket valve assy with the 9 bolts.  
**Torque: 29 N·m (296 kgf·cm, 21 ft·lbf)**



- (b) Connect the 2 connectors.

## 29. INSTALL FRONT STABILIZER CONTROL TUBE NO.1 AND NO.2

- (a) Install the front stabilizer control tube No.1 and No.2.
  - (1) Apply suspension fluid to the threads of the flare nuts.
  - (2) Temporarily tighten the 6 flare nuts on the front stabilizer control tube No.1 and No.2.

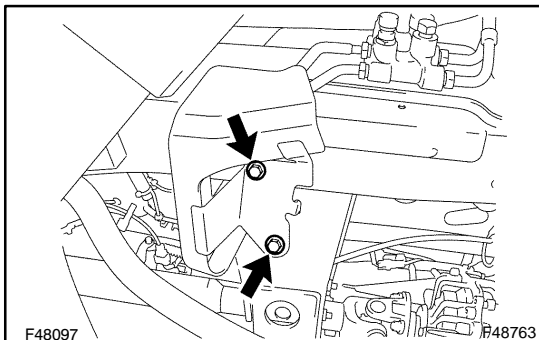
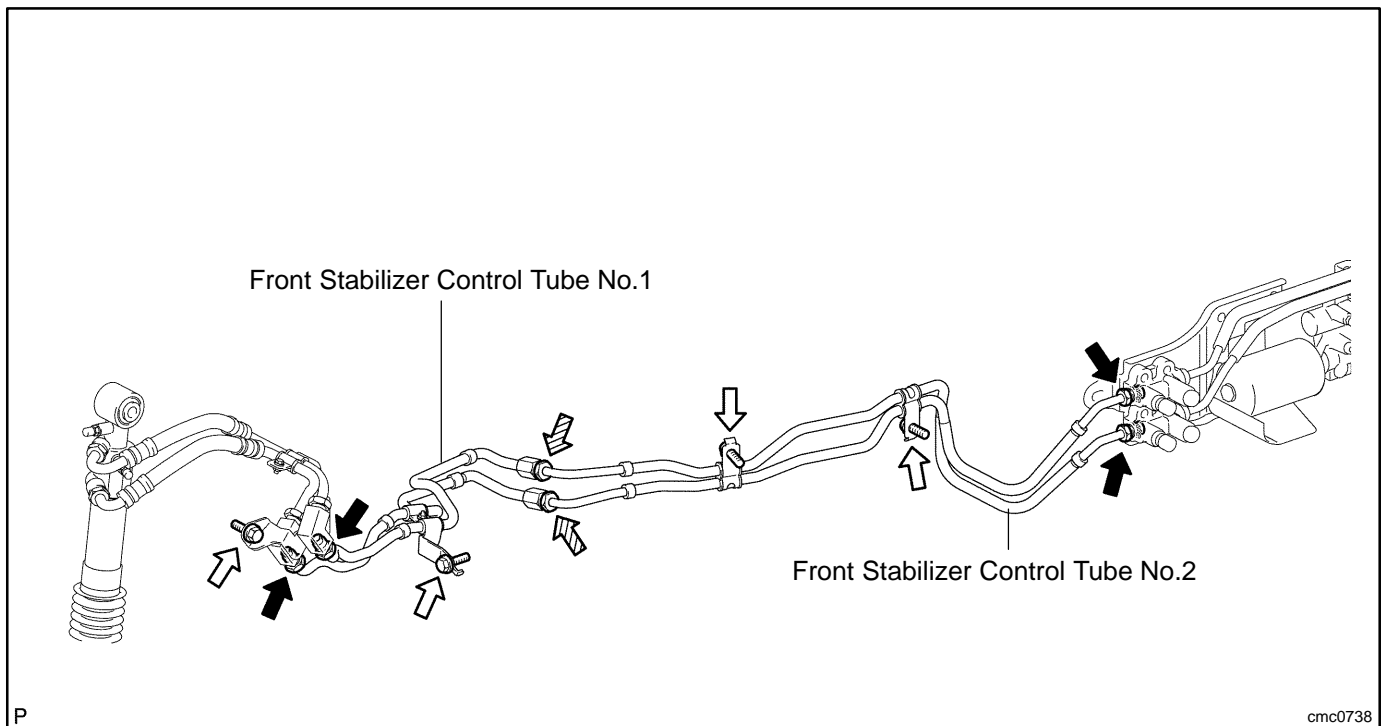
### NOTICE:

- **Do not bend the control tubes.**
- **Ensure that the control tubes do not contact other parts.**
- **Do not damage the control tubes and flare nuts.**

- (b) Install the 4 bolts.  
**Torque: 29 N·m (296 kgf·cm, 21 ft·lbf)**
- (c) Using SST, fully tighten the 6 flare nuts on the front stabilizer control tube No.1 and No.2.

SST 09023-12701

**Torque: 44 N·m (450 kgf·cm, 33 ft·lbf)**



- (d) Install the front stabilizer tube protector with the 2 bolts.  
**Torque: 29 N·m (296 kgf·cm, 21 ft·lbf)**

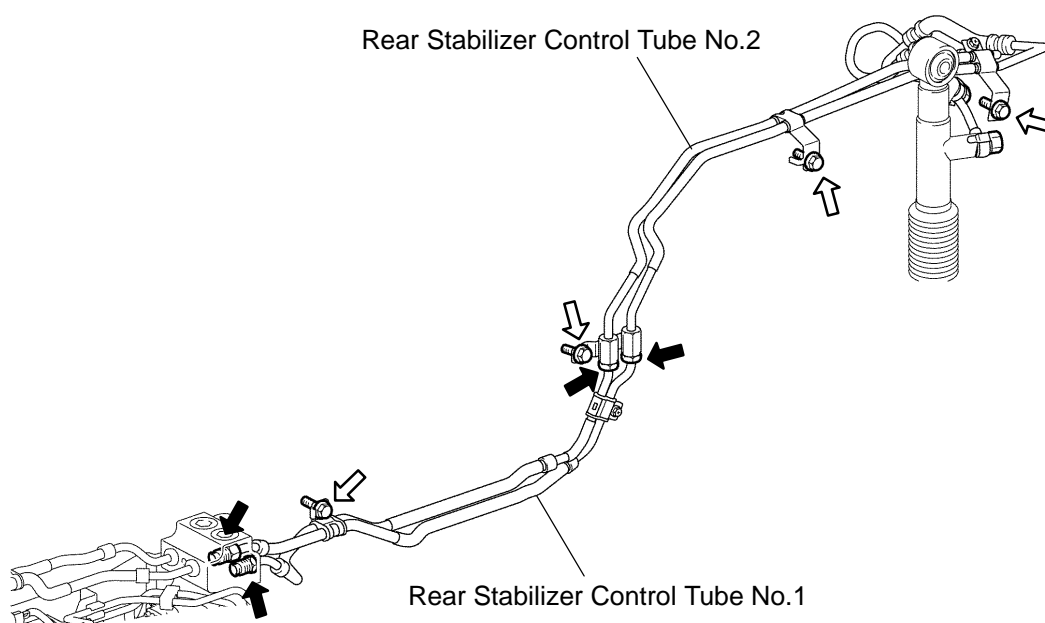
**30. INSTALL REAR STABILIZER CONTROL TUBE NO.1 AND NO.2**

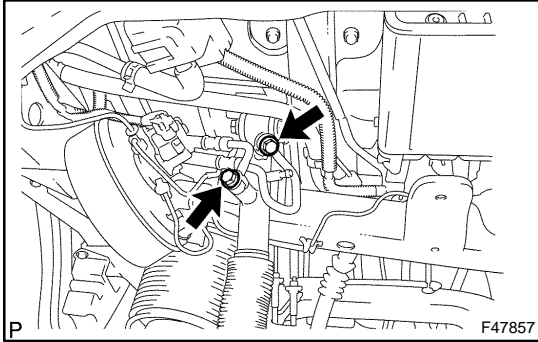
- (a) Install the rear stabilizer control tube No.1 and No.2.
- (1) Apply suspension fluid to the threads of the flare nuts.
  - (2) Temporarily tighten the 4 flare nuts on the rear stabilizer control tube No.1.

**NOTICE:**

- **Ensure that the control tubes do not contact other parts.**
  - **Do not bend the control tubes.**
  - **Do not damage the control tubes and flare nuts.**
- (b) Install the 4 bolts.  
**Torque: 29 N·m (296 kgf·cm, 21 ft·lbf)**
- (c) Using SST, fully tighten the 4 flare nuts on the rear stabilizer control tube No.1 and No.2.

SST 09023-12701

**Torque: 44 N·m (450 kgf·cm, 33 ft·lbf)**

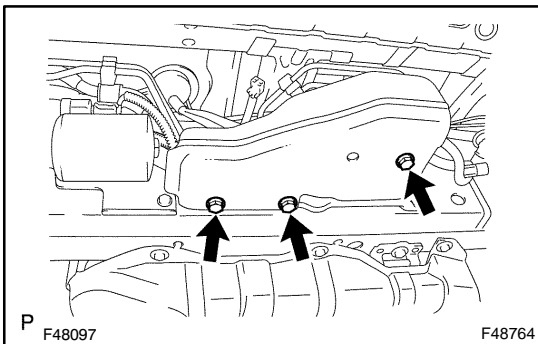
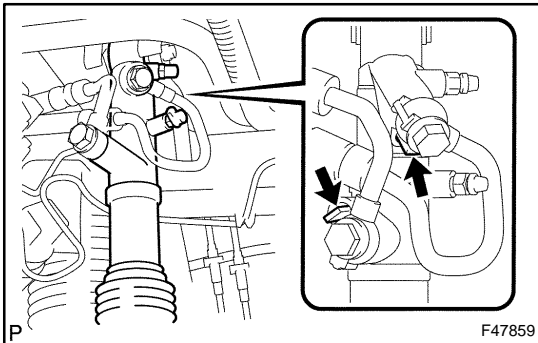


- (d) Install the rear stabilizer tube No.2 to the rear stabilizer control cylinder with the 2 union bolts and 2 new pressure port gaskets.

**Torque: 69 N·m (704 kgf·cm, 51 ft·lbf)**

**NOTICE:**

Insert the stoppers of the rear stabilizer control tube No.2 into the rear stabilizer control cylinder.



- (e) Install the stabilizer control valve protector with the 3 bolts.

**Torque: 29 N·m (296 kgf·cm, 21 ft·lbf)**

**31. BLEED SUSPENSION FLUID (SEE PAGE 25-27)**

SST 09760-60010

**32. CHECK FOR FLUID LEAKS (SEE PAGE 25-26)**

**33. INSTALL FRONT DISC WHEEL**

**Torque: 112 N·m (1,140 kgf·cm, 83 ft·lbf)**

**34. CONNECT STABILIZER BAR FRONT (SEE PAGE 25-41)**

**35. CONNECT STABILIZER BAR REAR (SEE PAGE 25-33)**

**36. STABILIZE SUSPENSION (SEE PAGE 25-33)**

**37. CHECK SUSPENSION FLUID PRESSURE (SEE PAGE 25-21)**

- (a) Check the suspension fluid pressure.

**38. MEASURE VEHICLE HEIGHT (SEE PAGE 25-33)**

**39. INSTALL ENGINE UNDER COVER SUB-ASSY NO.1**

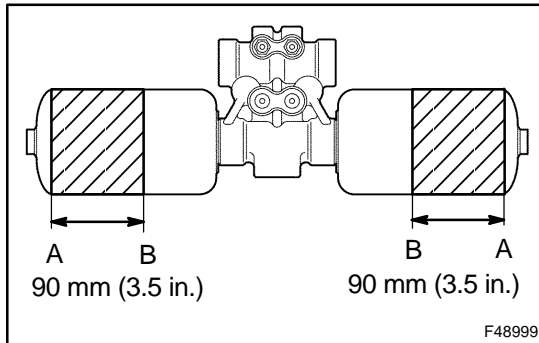
**40. INSTALL SPARE DISC WHEEL**

**41. INSTALL STEP SUB-ASSY LH (SEE PAGE 76-33)**

**42. INSTALL BATTERY**

**43. INSTALL RADIATOR SUPPORT SEAL UPPER**

## DISPOSAL



### 1. DISPOSE OF STABILIZER CONTROL W/ACCUMULATOR HOUSING ASSY

- (a) Using a drill, make a hole in the areas between A and B of the accumulator housing indicated in the illustration to discharge the inside gas.

#### CAUTION:

- Be careful when drilling because shards of metal may fly about, so always use the proper safety equipment.
- The gas is colorless, odorless and non-poisonous.

# ACCELERATION SENSOR ASSY (KDSS)

## REPLACEMENT

2504Y-02

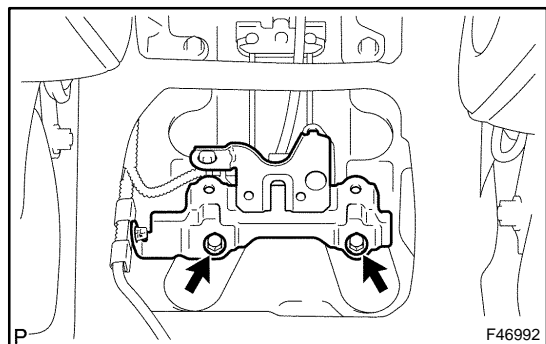
HINT:

LOCATION: See page 05-556.

1. **DISCONNECT BATTERY NEGATIVE TERMINAL**
2. **REMOVE RR CONSOLE BOX ASSY (SEE PAGE 71-13)**

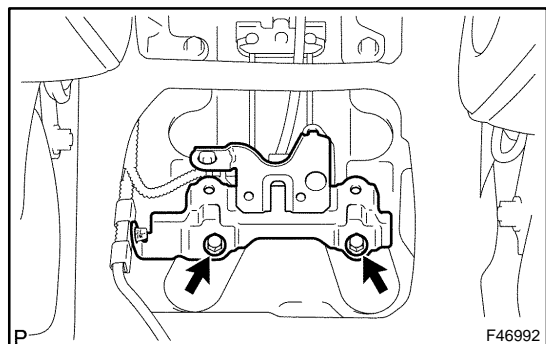
HINT:

Refer to the procedures up to "REMOVE RR CONSOLE BOX ASSY".



### 3. REMOVE ACCELERATION SENSOR ASSY

- (a) Disengage the 2 clamps.
- (b) Remove the 2 bolts and acceleration sensor assy.
- (c) Disconnect the connector from the acceleration sensor assy.



### 4. INSTALL ACCELERATION SENSOR ASSY

- (a) Connect the connector to the acceleration sensor assy.
- (b) Install the acceleration sensor assy with the 2 bolts.  
**Torque: 8.0 N·m (82 kgf·cm, 71 in·lbf)**
- (c) Engage the 2 clamps.

### 5. INSTALL RR CONSOLE BOX ASSY

NOTICE:

When installing the rear console box assy, do not apply excessive force, as the bracket may become deformed.

6. **CONNECT BATTERY NEGATIVE TERMINAL**
7. **PERFORM ACCELERATION SENSOR ASSY ZERO POINT CALIBRATION (SEE PAGE 05-566)**

# STABILIZER CONTROL ECU (KDSS) REPLACEMENT

2504Z-02

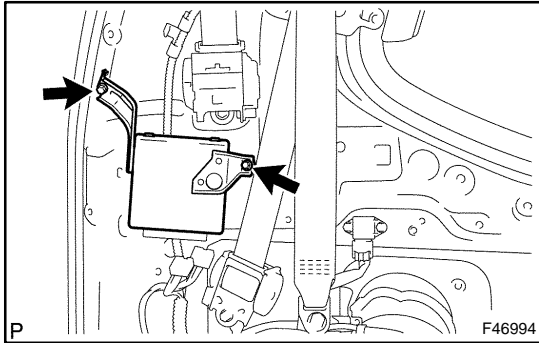
HINT:

LOCATION: See page 05-556.

1. **DISCONNECT BATTERY NEGATIVE TERMINAL**
2. **REMOVE ROOF SIDE GARNISH INNER LH (SEE PAGE 76-38)**

HINT:

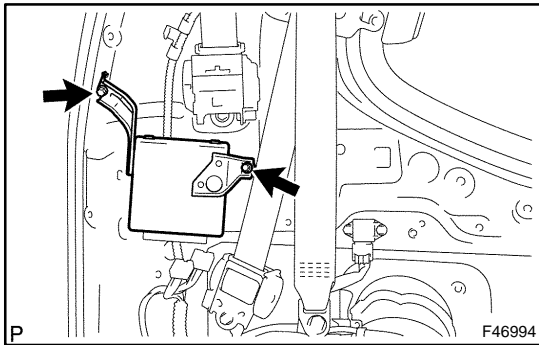
Refer to the procedures up to "REMOVE ROOF SIDE GARNISH INNER LH".


**3. REMOVE STABILIZER CONTROL ECU**

- (a) Disconnect the connector.
- (b) Remove the 2 bolts and stabilizer control ECU.

**NOTICE:**

- Avoid any impact to the stabilizer control ECU.
- Replace the stabilizer control ECU with a new one if it is dropped.

**4. INSTALL STABILIZER CONTROL ECU**

- (a) Install the stabilizer control ECU with the 2 bolts. 
- Torque: 7.8 N·m (80 kgf·cm, 69 in.-lbf)**
- (b) Connect the connector.

**5. INSTALL ROOF SIDE GARNISH INNER LH (SEE PAGE 76-38)**

HINT:

Refer to the procedures from "INSTALL ROOF SIDE GARNISH INNER LH".

6. **CONNECT BATTERY NEGATIVE TERMINAL**
7. **PERFORM ACCELERATION SENSOR ASSY ZERO POINT CALIBRATION (SEE PAGE 05-566)**