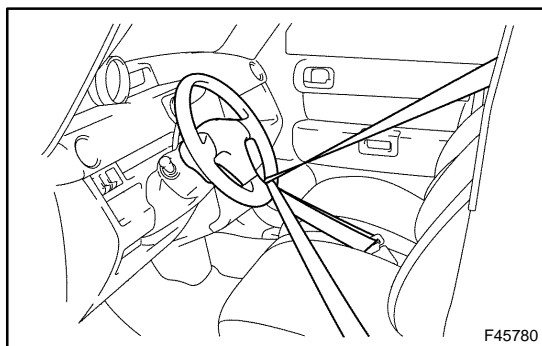


## OVERHAUL

### NOTICE:

When installing, apply power steering fluid or molybdenum disulfide lithium base grease to the parts indicated by arrows (See page 51-17).

1. REMOVE FR WIPER ARM RH (See page 66-6)
2. REMOVE FR WIPER ARM LH (See page 66-6)
3. REMOVE HOOD TO COWL TOP SEAL (See page 66-6)
4. REMOVE COWL TOP VENTILATOR LOUVER RH (See page 66-6)
5. REMOVE COWL TOP VENTILATOR LOUVER LH (See page 66-6)
6. REMOVE WINDSHIELD WIPER MOTOR & LINK ASSY (See page 66-6)
7. REMOVE COWL PANEL SUB-ASSY (See page 55-42)
8. INSPECT CENTER FRONT WHEEL
9. REMOVE STEERING COLUMN HOLE COVER PLATE (See page 50-8)

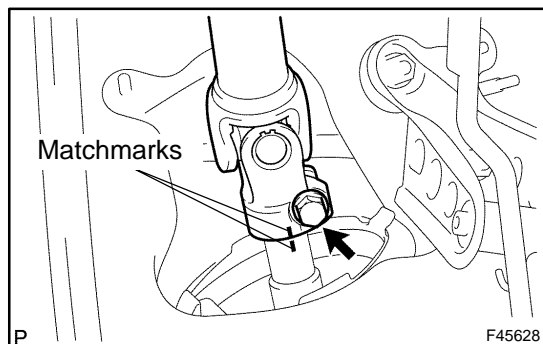


### 10. SEPARATE STEERING SLIDING YOKE SUB-ASSY

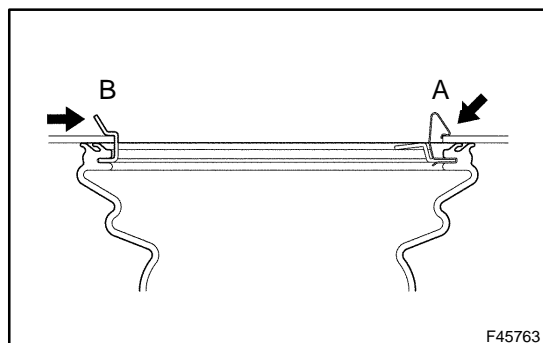
- (a) Fix the steering wheel with the seat belt in order to prevent rotation.

#### HINT:

This operation is also useful to prevent damaging the spiral cable.



- (b) Put matchmarks on the sliding yoke sub-assembly and the intermediate shaft.
- (c) Loosen the bolt, then separate the sliding yoke sub-assembly from the intermediate shaft.



### 11. SEPARATE STEERING COLUMN HOLE COVER SUB-ASSY NO.1

- (a) Disengage clip A and separate the hole cover sub-assembly No.1.

#### NOTICE:

Be careful not to damage clip B.

12. REMOVE HOOD SUB-ASSY
13. DRAIN POWER STEERING FLUID
14. REMOVE FRONT WHEELS

**15. SEPARATE TIE ROD END SUB-ASSY LH (See page 30-6)**

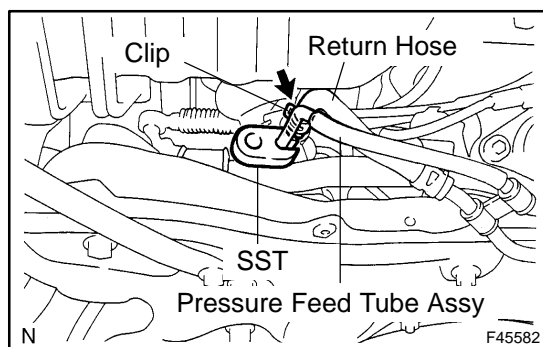
SST 09628-62011

**16. SEPARATE TIE ROD END SUB-ASSY RH**

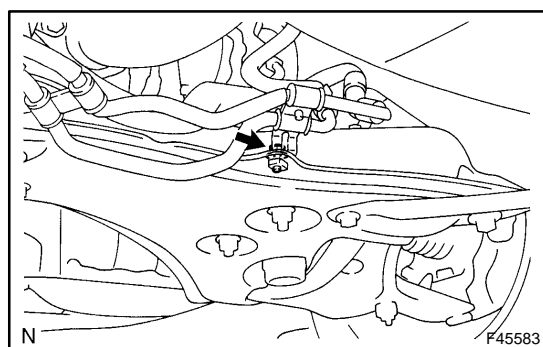
SST 09628-62011

**HINT:**

Perform the same procedure on the other side.

**17. REMOVE ENGINE UNDER COVER LH****18. REMOVE ENGINE UNDER COVER RH****19. SEPARATE PRESSURE FEED TUBE ASSY**

- (a) Remove the clip and disconnect the return hose.
- (b) Using SST, disconnect the pressure feed tube assy.  
SST 09023-12700
- (c) Using SST, remove the return tube.  
SST 09023-12700



- (d) Remove the bolt and separate the tube clamp.

**20. SEPARATE FRONT SUSPENSION ARM SUB-ASSY LOWER NO.1 LH (See page 30-6)**

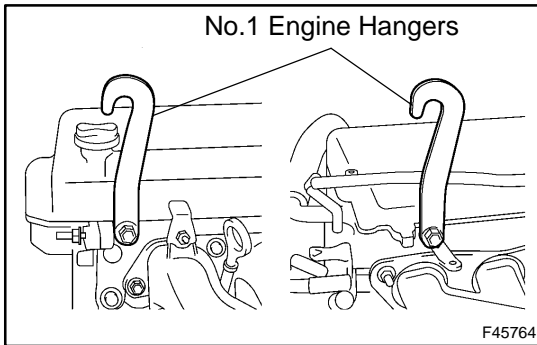
SST 09628-00011

**21. SEPARATE FRONT SUSPENSION ARM SUB-ASSY LOWER NO.1 RH**

SST 09628-00011

**HINT:**

Perform the same procedure on the other side.



## 22. SUSPEND ENGINE ASSEMBLY

- (a) Install 2 No.1 engine hangers with the bolts in the correct direction.

### Parts No.:

**No.1 engine hanger: 12281-21010**

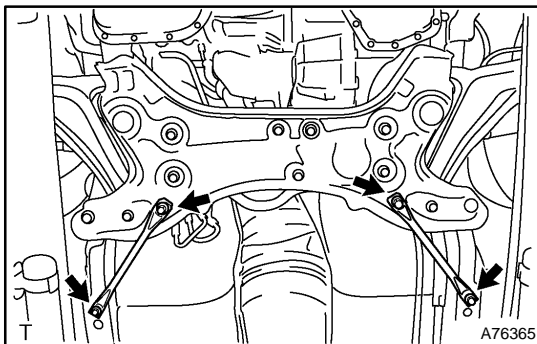
**Bolt: 91642-81025**

**Torque: 40 N·m (408 kgf·cm, 30 ft·lbf)**

- (b) Attach the engine chain hoist to the engine hangers.

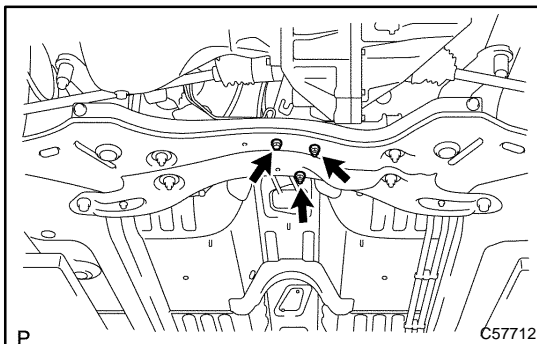
### CAUTION:

**Do not hang the engine by hooking the chain to any other parts.**



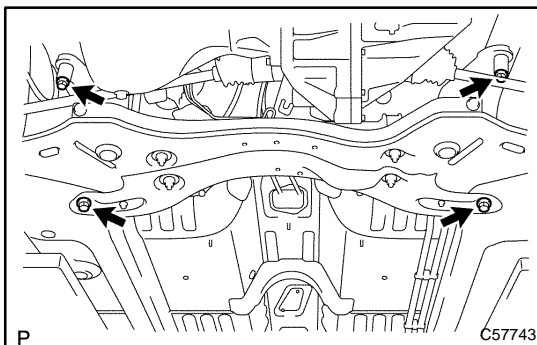
## 23. REMOVE FRONT SUSPENSION CROSSMEMBER SUB-ASSY

- (a) Remove the 4 bolts and the 2 reinforcements.



- (b) Remove the bolt and the 2 nuts, and separate the engine mounting insulator RR.

- (c) Using a transmission jack, support the crossmember sub-assy.

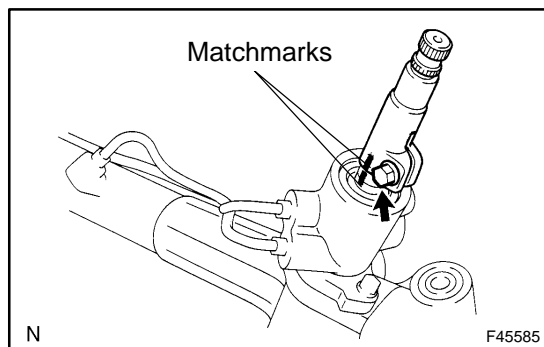


- (d) Remove the 4 bolts and the crossmember sub-assy.

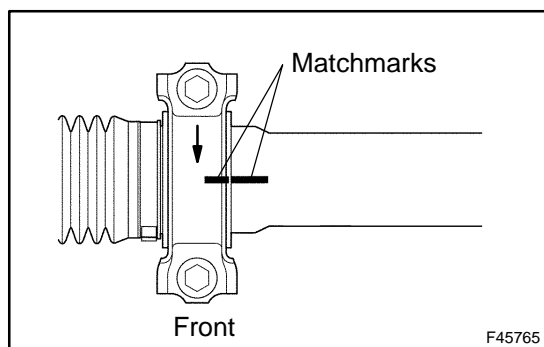
## 24. REMOVE POWER STEERING RACK HOUSING HEAT INSULATOR

- (a) Remove the 2 bolts and the heat insulator.

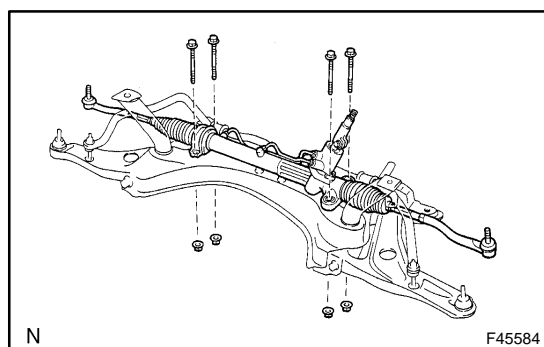
## 25. REMOVE STEERING COLUMN HOLE COVER SUB-ASSY NO.1

**26. REMOVE STEERING INTERMEDIATE SHAFT**

- (a) Put matchmarks on the steering link assy and the intermediate shaft.
- (b) Remove the bolt and the intermediate shaft.

**27. REMOVE POWER STEERING LINK ASSY**

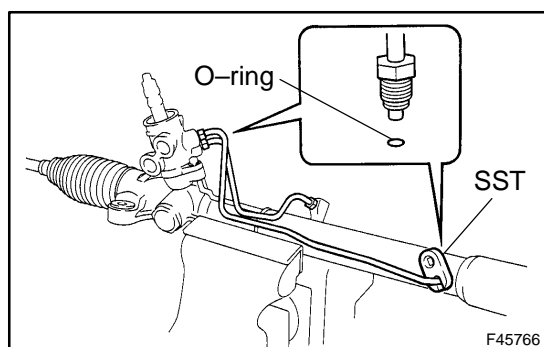
- (a) Put matchmarks on the steering link assy and the bracket No.2.



- (b) Remove the 4 bolts, the nuts, the bracket No.2, the grommet No.2 and the steering link assy.

**NOTICE:**

- Torque the bolt with the nut fixed as the nut has its own stopper.
- Do not turn the nut.

**28. REMOVE STEERING RIGHT TURN PRESSURE TUBE**

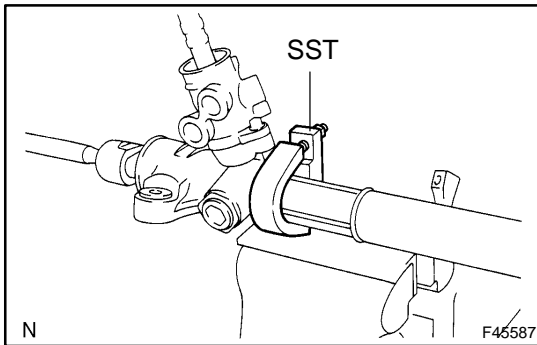
- (a) Using SST, remove the right turn pressure tube.  
SST 09023-38200
- (b) Remove the 2 O-rings from the right turn pressure tube.

**29. REMOVE STEERING LEFT TURN PRESSURE TUBE**

SST 09023-38200

**HINT:**

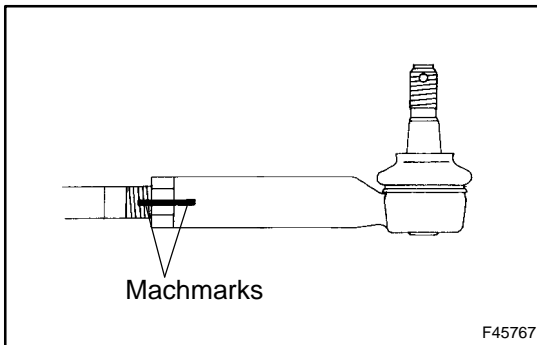
Perform the same procedure on the other side.

**30. FIX POWER STEERING LINK ASSY**

- (a) Using SST, secure the steering link assy.  
SST 09612-00012

HINT:

Wrap the SST with vinyl tape before use.

**31. REMOVE TIE ROD END SUB-ASSY LH**

- (a) Put matchmarks on the tie rod end sub-assy LH and the rack end sub-assy.  
(b) Loosen the lock nut and remove the tie rod end sub-assy LH and the lock nut.

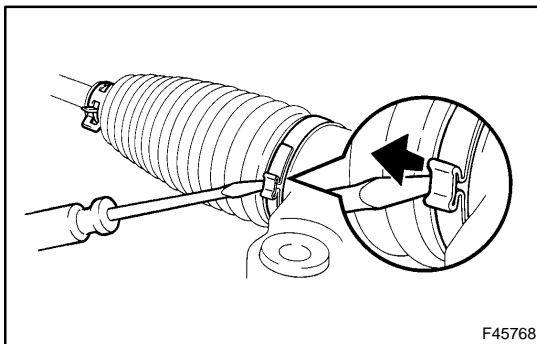
**32. REMOVE TIE ROD END SUB-ASSY RH**

HINT:

Perform the same procedure on the other side.

**33. REMOVE STEERING RACK BOOT CLIP**

- (a) Remove the 2 boot clips.

**34. REMOVE STEERING RACK BOOT NO.2 CLAMP**

- (a) Using a screwdriver, remove the rack boot No.2 clamp.

**NOTICE:**

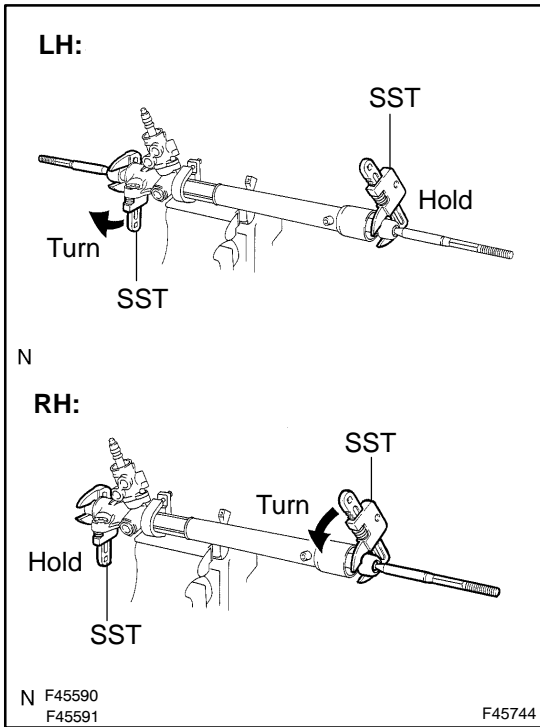
Be careful not to damage the boot.

**35. REMOVE STEERING RACK BOOT NO.1 CLAMP**

HINT:

Perform the same procedure on the other side.

**36. REMOVE STEERING RACK BOOT NO.2****37. REMOVE STEERING RACK BOOT NO.1**

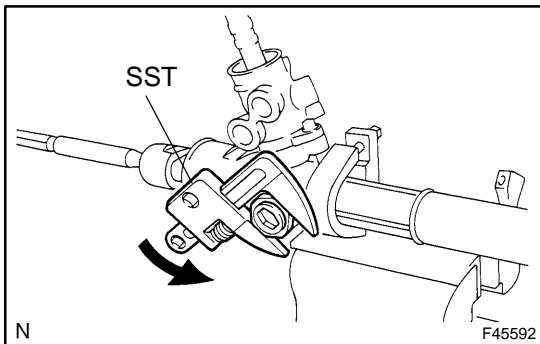


**38. REMOVE STEERING RACK END SUB-ASSY**

- (a) Using SST, remove the 2 rack ends sub-assy.  
SST 09922-10010

**NOTICE:**

Use SST 09922-10010 in the direction shown in the illustration.

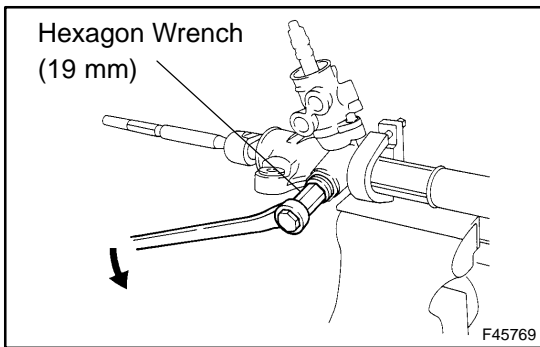


**39. REMOVE RACK GUIDE**

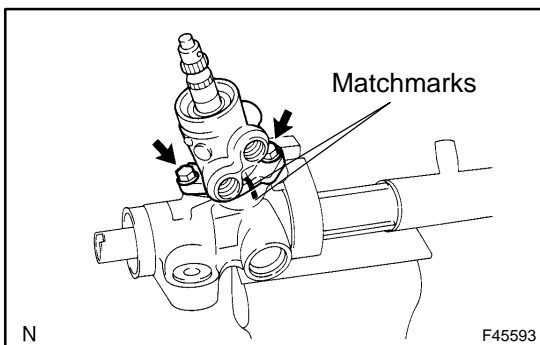
- (a) Using SST, remove the spring cap lock nut.  
SST 09922-10010

**NOTICE:**

Use SST 09922-10010 in the direction shown in the illustration.



- (b) Using a hexagon wrench (19 mm), remove the rack guide spring cap.
- (c) Remove the rack guide spring, the rack guide spring spacer and the rack guide.

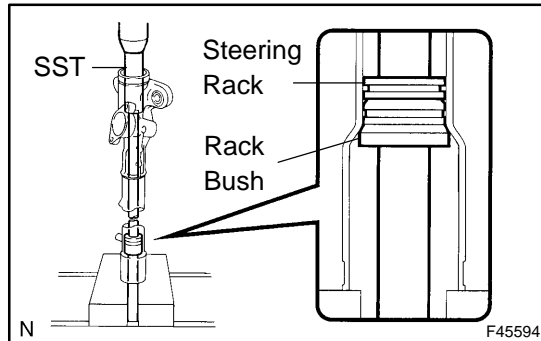


**40. REMOVE POWER STEERING CONTROL VALVE**

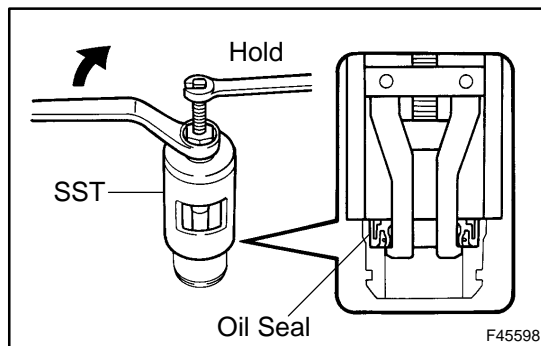
- (a) Put matchmarks on the control valve housing and the rack housing.
- (b) Remove the 2 bolts and the control valve housing with control valve.
- (c) Remove the gasket.

**41. REMOVE CYLINDER END STOPPER**

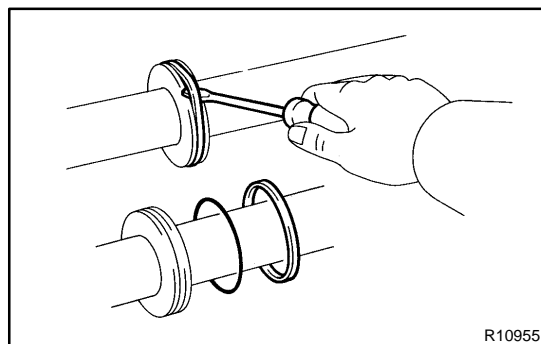
- (a) Using needle nose pliers, remove the hole snap ring.
- (b) Pull out the cylinder end stopper.

**42. REMOVE POWER STEERING RACK**

- (a) Using SST and a press, remove the steering rack with rack bush.  
SST 09950-70010 (09951-07200)

**43. REMOVE POWER STEERING RACK BUSH**

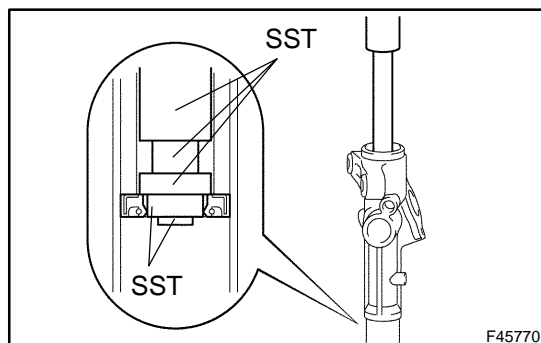
- (a) Remove the rack bush from the steering rack.
- (b) Using SST, remove the rack bush oil seal.  
SST 09612-24014 (09613-22011)
- (c) Using a screwdriver, remove the O-ring from the rack bush.

**44. REMOVE RACK STEERING PISTON RING**

- (a) Using a screwdriver, remove the piston ring and the O-ring.

**NOTICE:**

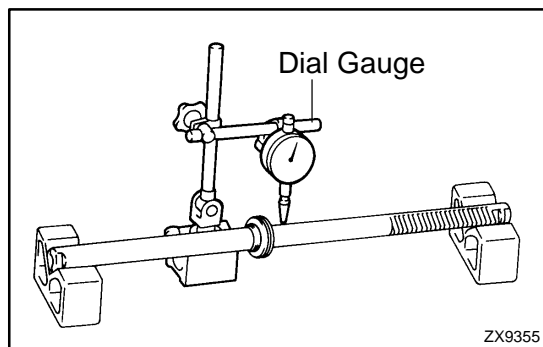
**Be careful not to damage the grooves for the piston ring and the O-ring.**

**45. REMOVE POWER STEERING RACK HOUSING OIL SEAL**

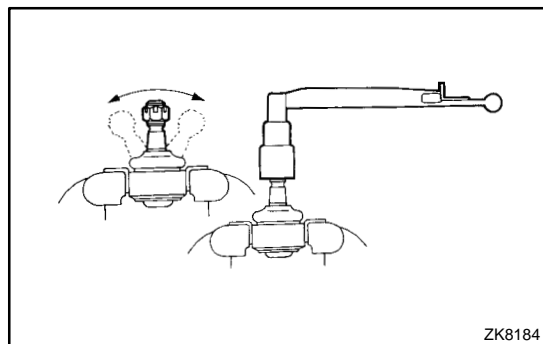
- (a) Using SST and a press, remove the housing oil seal.  
SST 09950-60010 (09951-00200, 09951-00240, 09952-06010), 09950-70010 (09951-07360)

**NOTICE:**

**Be careful not to damage the rack housing.**

**46. INSPECT POWER STEERING RACK**

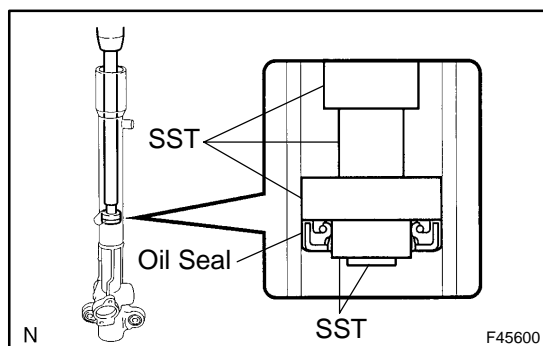
- (a) Using a dial gauge, check the steering rack for runout, teeth wear and damage.  
**Maximum runout: 0.1 mm (0.004 in.)**
- (b) Check the rack surface of the steering rack for wear and damage.

**47. INSPECT TIE ROD END SUB-ASSY LH**

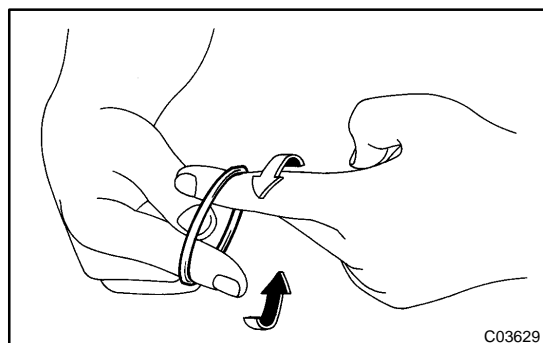
- (a) Secure the tie rod end sub-assy in a vise.
- (b) Install the nut to the stud bolt.
- (c) Flip the ball joint stud back and forth 5 times.
- (d) Using a torx wrench, turn the nut continuously at a rate of 2 to 4 seconds per turn and take the torque reading on the 5th turn.

**Turning torque:****0.8 to 3.4 N·m (8.2 to 34.7 kgf·cm, 7.1 to 30.1 in.-lbf)****48. INSPECT TIE ROD END SUB-ASSY RH****HINT:**

Perform the same procedure on the other side.

**49. INSTALL POWER STEERING RACK HOUSING OIL SEAL**

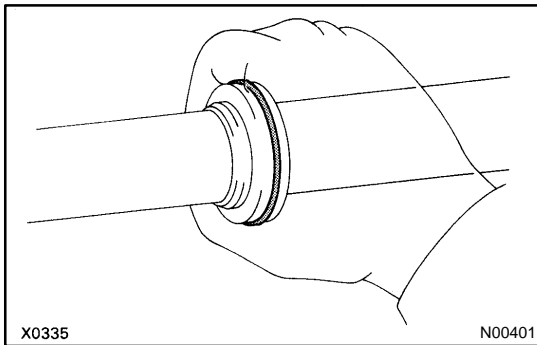
- (a) Coat a new oil seal lip with power steering fluid.
- (b) Using SST and a press, install the housing oil seal.  
SST 09950-60010 (09951-00210, 09951-00370, 09952-06010), 09950-70010 (09951-07360)

**NOTICE:****Make sure that the oil seal is installed correctly.****50. INSTALL RACK STEERING PISTON RING**

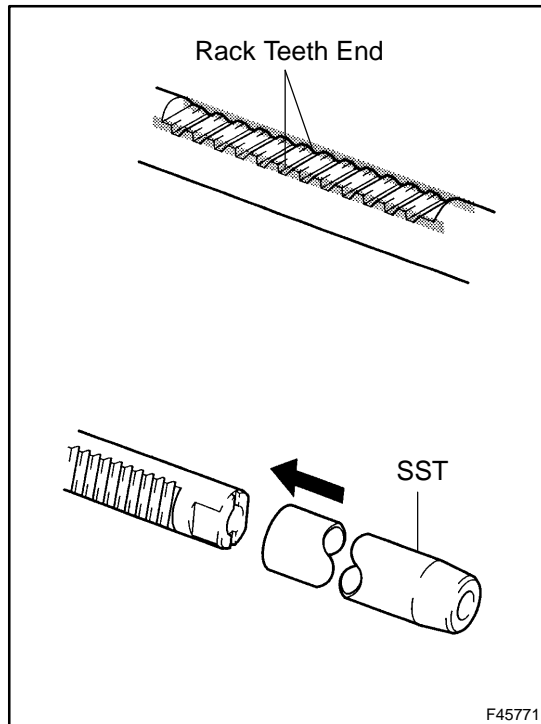
- (a) Apply power steering fluid to a new O-ring and install it to the steering rack.
- (b) Expand a new piston ring with your fingers.

**NOTICE:****Be careful not to overly expand the piston ring.**

- (c) Apply power steering fluid to the piston ring.



- (d) Install the piston ring to the steering rack, and adjust with your fingers.



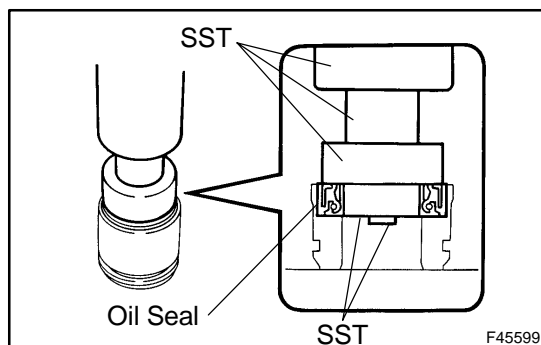
### 51. INSTALL POWER STEERING RACK

- (a) Install SST to the steering rack.  
SST 09631-10041

#### HINT:

If necessary, scrape the burrs off the steering rack teeth end and burnish.

- (b) Apply power steering fluid to the SST.  
(c) Install the steering rack to the rack housing.  
(d) Remove SST.



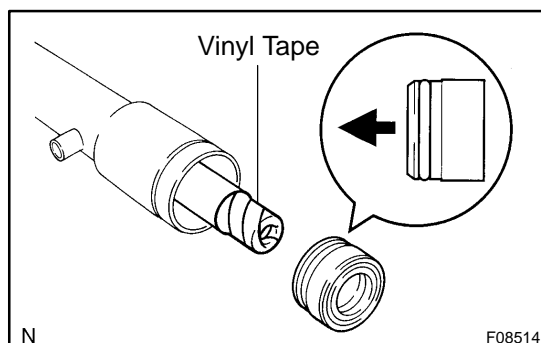
### 52. INSTALL POWER STEERING RACK BUSH

- (a) Using SST and a press, install the rack bush oil seal to the rack bush.  
SST 09950-60010 (09951-00210, 09951-00340, 09952-06010), 09950-70010 (09951-07100)

#### NOTICE:

**Make sure that the oil seal is installed correctly.**

- (b) Apply power steering fluid to a new O-ring and install it to the rack bush.



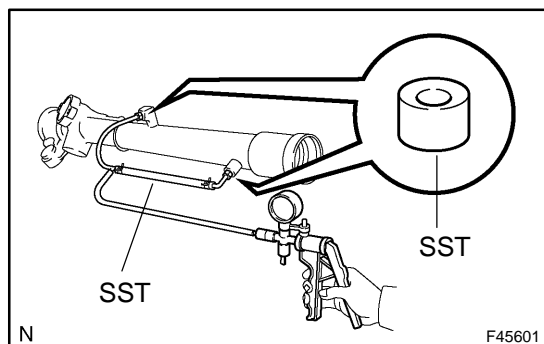
- (c) Wrap vinyl tape around the steering rack end to prevent damaging the rack bush oil seal lip, and apply power steering fluid to the rack bush oil seal.  
(d) Install the rack bush into the rack housing.

#### NOTICE:

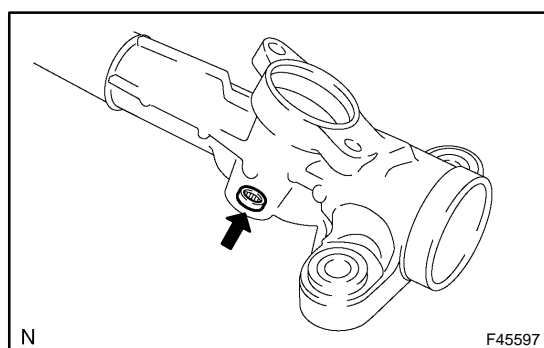
- **Make sure that the rack bush is installed correctly.**
- **Be careful not to damage the oil seal lip.**

**53. INSTALL CYLINDER END STOPPER**

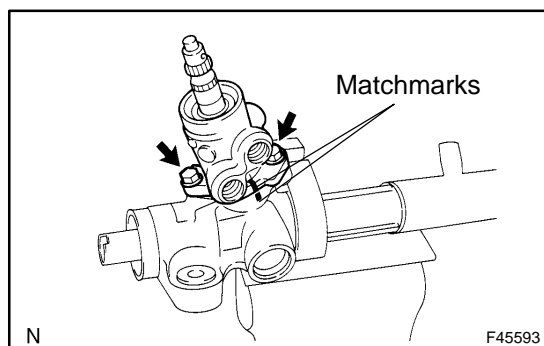
- (a) Push into the cylinder end stopper.
- (b) Using needle nose pliers, install the hole snap ring.

**54. AIR TIGHTNESS TEST**

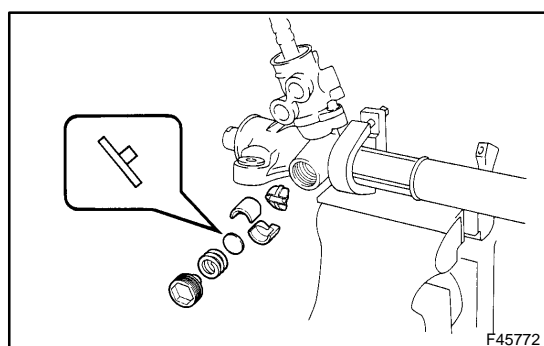
- (a) Install SST onto the rack housing.  
SST 09631-12071 (09633-00010)
- (b) Apply vacuum of 53 kPa (400 mmHg, 15.75 in.Hg) for approximately 30 seconds.
- (c) Check that there is no change in the vacuum.  
If there is a change in the vacuum, check the installation of the oil seals.

**55. INSTALL POWER STEERING CONTROL VALVE**

- (a) Apply grease to the needle roller bearing.
- (b) Install a new gasket to the rack housing.



- (c) Align the matchmarks and install the control valve housing with control valve to the rack housing with the 2 bolts.  
**Torque: 21 N·m (214 kgf·cm, 15 ft·lbf)**

**56. INSTALL RACK GUIDE**

- (a) Install the rack guide, the rack guide spring spacer and the rack guide spring.

**NOTICE:**

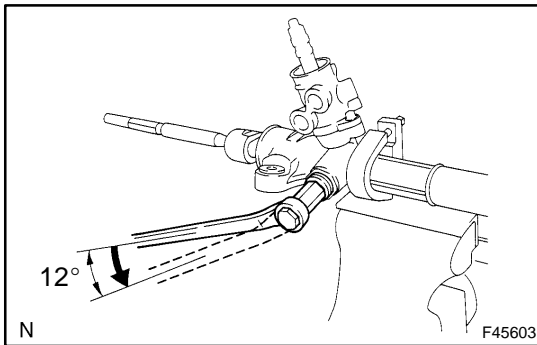
**Make sure that the rack guide spring spacer is installed correctly.**

- (b) Apply sealant to 2 or 3 threads of the rack guide spring cap.

**Sealant:**

**Part No. 08833-00080, THREE BOND 1344, LOCTITE 242 or equivalent**

- (c) Temporarily install the rack guide spring cap.

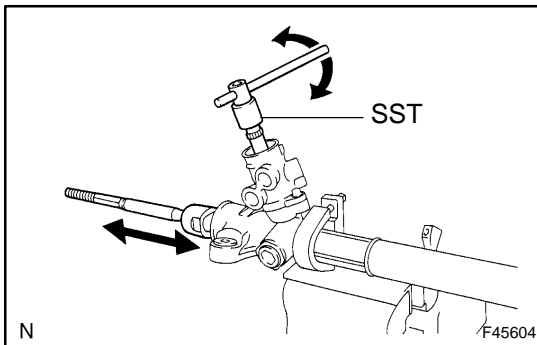
**57. ADJUST TOTAL PRELOAD**

(a) To prevent the steering rack teeth from damaging the oil seal lip, temporarily install the RH and LH rack ends sub-assy.

(b) Using a hexagon wrench (19 mm), torque the rack guide spring cap.

**Torque: 25 N·m (250 kgf·cm, 18 ft·lbf)**

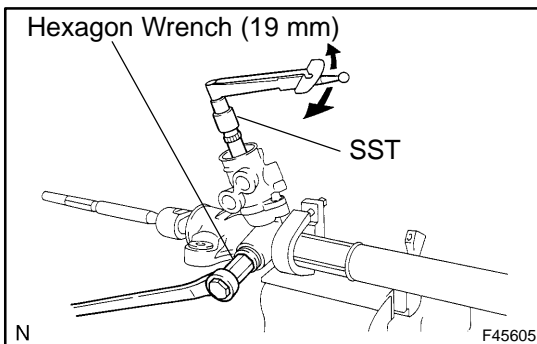
(c) Using a hexagon wrench (19 mm), return the rack guide spring cap approximately 12 degrees.



(d) Using SST, turn the control valve to the right and left once or twice.

SST 09616-00011

(e) Using a hexagon wrench (19 mm), loosen the rack guide spring cap until the rack guide spring stops functioning.



(f) Using SST, a torque wrench and a hexagon wrench (19 mm), tighten the rack guide spring cap until the preload is within the specification.

SST 09616-00011

**Preload (turning):**

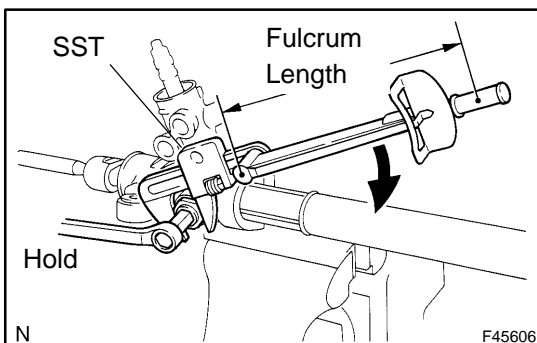
**1.2 to 1.5 N·m (12 to 15 kgf·cm, 10.6 to 13.3 in.-lbf)**

(g) Apply sealant to 2 or 3 threads of the spring cap lock nut.

**Sealant:**

**Part No. 08833-00080, THREE BOND 1344, LOCTITE 242 or equivalent**

(h) Temporarily install the spring cap lock nut.



(i) Hold the rack guide spring cap by using a hexagon wrench (19 mm), and using SST, torque the spring cap lock nut.

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

**NOTICE:**

**Use SST 09922-10010 in the direction shown in the illustration.**

**HINT:**

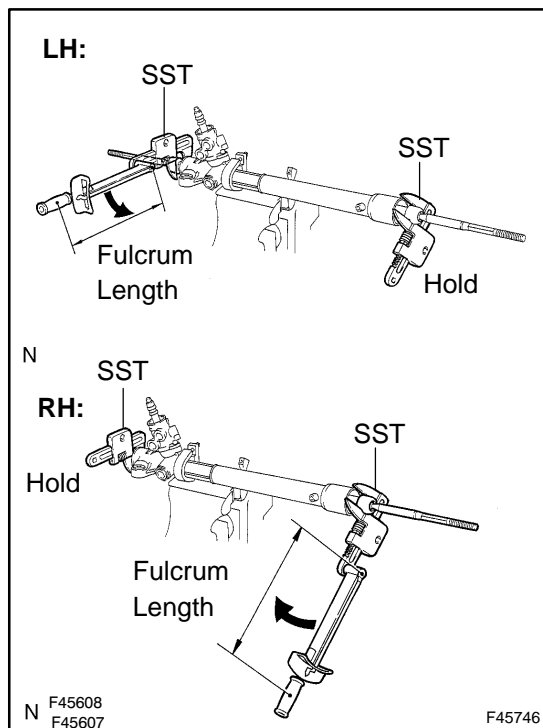
Use a torque wrench with a fulcrum length of 345 mm (13.58 in.).

(j) Recheck the total preload.

**Preload (turning):**

**1.2 to 1.5 N·m (12 to 15 kgf·cm, 10.6 to 13.3 in.-lbf)**

(k) Remove the RH and LH rack ends sub-assy.

**58. INSTALL STEERING RACK END SUB-ASSY**

- (a) Temporarily install the 2 rack end sub-assy.
- (b) Using SST, torque the 2 rack end sub-assy.  
SST 09922-10010

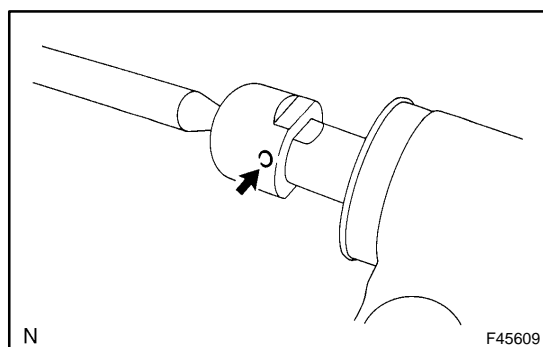
**Torque: 60 N·m (614 kgf·cm, 44 ft·lbf)**

**NOTICE:**

Use SST 09922-10010 in the direction shown in the illustration.

**HINT:**

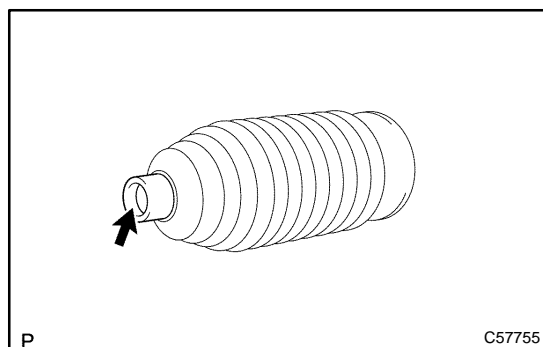
- Use a torque wrench with a fulcrum length of 345 mm (13.58 in.).
- Using SST, hold the rack and install the rack end sub-assy.

**59. INSPECT STEERING RACK END HOLE**

- (a) Ensure that the hole of the rack end sub-assy is not clogged with grease.

**HINT:**

If the hole is clogged, the pressure inside the boot will change after it is assembled and the steering wheel is turned.

**60. INSTALL STEERING RACK BOOT NO.2**

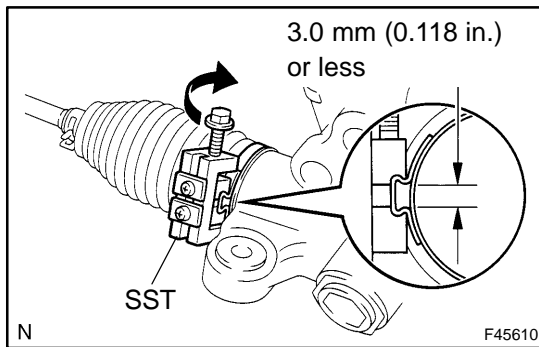
- (a) Apply silicon grease to the inside small caliber of rack boot No.2.
- (b) Install the rack boot No.2 onto the groove on the rack housing.

**NOTICE:**

**Be careful not to damage or twist the boot.**

**61. INSTALL STEERING RACK BOOT NO.1****HINT:**

Perform the same procedure on the other side.

**62. INSTALL STEERING RACK BOOT NO.2 CLAMP**

- (a) Using SST, tighten the rack boot No.2 clamp, as shown in the illustration.

SST 09240-00020, 09521-24010

**Clearance: 3.0 mm (0.118 in.) or less**

**NOTICE:**

**Be careful not to damage the boot.**

**63. INSTALL STEERING RACK BOOT NO.1 CLAMP**

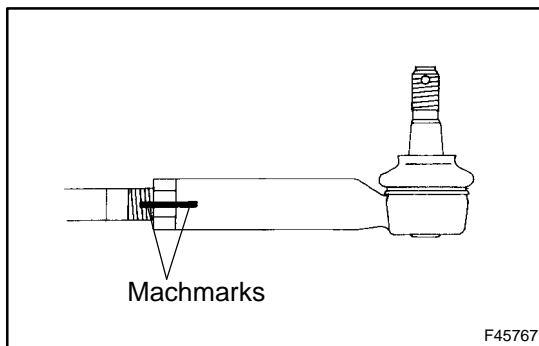
SST 09240-00020, 09521-24010

**HINT:**

Perform the same procedure on the other side.

**64. INSTALL STEERING RACK BOOT CLIP**

- (a) Using a pliers, install the 2 rack boot clips.

**65. INSTALL TIE ROD END SUB-ASSY LH**

- (a) Screw the lock nut and the tie rod end sub-assy LH on the rack end sub-assy until the matchmarks are aligned.

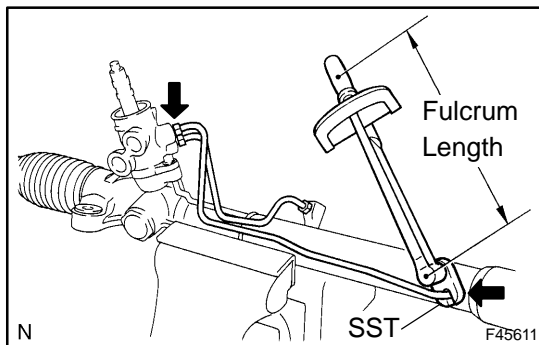
**Torque: 74 N·m (750 kgf·cm, 54 ft·lbf)**

**HINT:**

After adjusting toe-in, torque the lock nut (See page 26-7).

**66. INSTALL TIE ROD END SUB-ASSY RH****HINT:**

Perform the same procedure on the other side.

**67. INSTALL STEERING RIGHT TURN PRESSURE TUBE**

- (a) Apply power steering fluid to the 2 new O-rings and install them to the right turn pressure tube.
- (b) Using SST, install the right turn pressure tube to the steering link assy.

SST 09023-38200

**Torque: 12 N·m (118 kgf·cm, 9 ft·lbf)**

**HINT:**

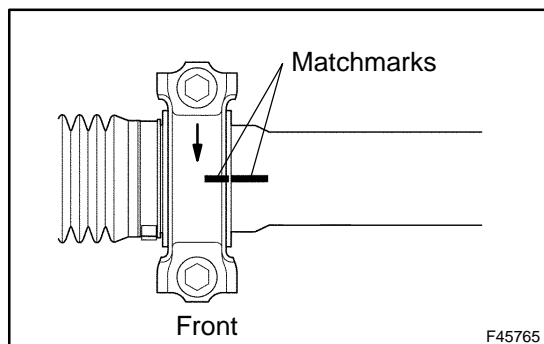
- Use a torque wrench with a fulcrum length of 250 mm (9.84 in.).
- This torque value is effective when SST is parallel to a torque wrench.

**68. INSTALL STEERING LEFT TURN PRESSURE TUBE**

SST 09023-38200

HINT:

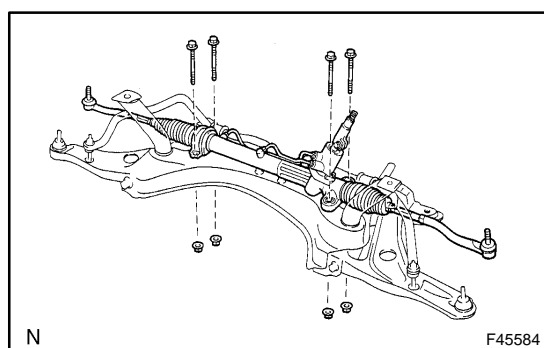
Perform the same procedure on the other side.

**69. INSTALL POWER STEERING LINK ASSY**

- (a) Install the grommet No.2 to the the steering link assy.
- (b) Align the matchmarks and install the bracket No.2 to the steering link assy.

**NOTICE:**

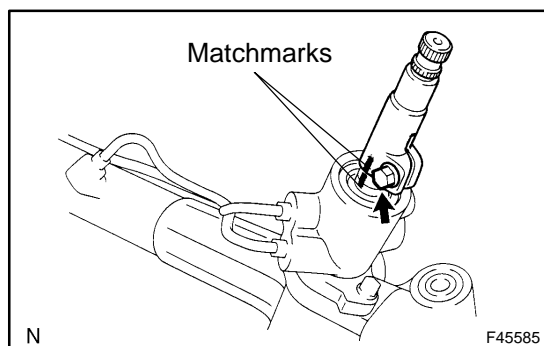
Install the bracket with the inscribed mark facing to the front of the vehicle.



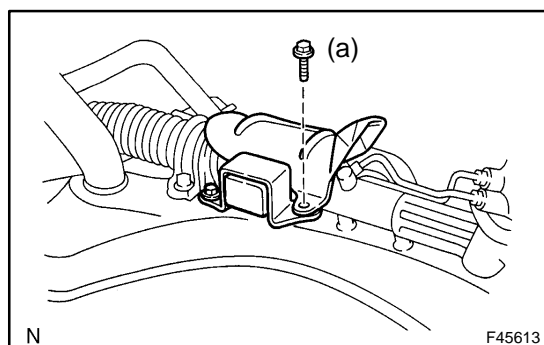
- (c) Install the steering link assy with the 4 bolts and the nuts.  
**Torque: 74 N·m (749 kgf·cm, 54 ft·lbf)**

**NOTICE:**

- Torque the bolt with the nut fixed as the nut has its own stopper.
- Do not turn the nut.

**70. INSTALL STEERING INTERMEDIATE SHAFT**

- (a) Align the matchmarks on the intermediate shaft with the pinion shaft.
- (b) Install the bolt.

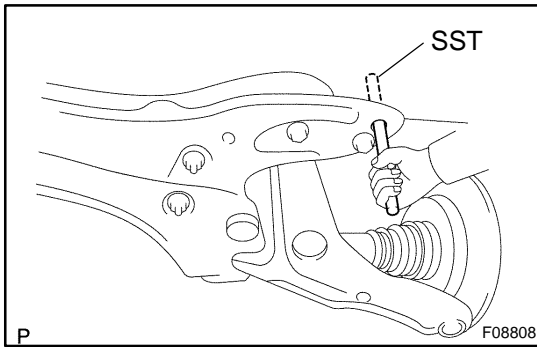
**Torque: 28 N·m (290 kgf·cm, 21 ft·lbf)****71. INSTALL STEERING COLUMN HOLE COVER SUB-ASSY NO.1****72. INSTALL POWER STEERING RACK HOUSING HEAT INSULATOR**

- (a) Install the heat insulator with the bolt as shown in the illustration.

**Torque: 18 N·m (178 kgf·cm, 13 ft·lbf)**

- (b) Install the bolt to the heat insulator.

**Torque: 35 N·m (360 kgf·cm, 26 ft·lbf)**

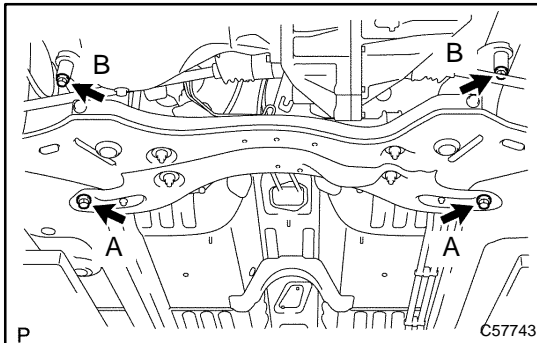


### 73. INSTALL FRONT SUSPENSION CROSSMEMBER SUB-ASSY

- (a) Using a transmission jack, support the crossmember sub-assy.
- (b) Using SST, align the holes of the crossmember sub-assy.  
SST 09670-00010

HINT:

Perform the same procedure on the other side.

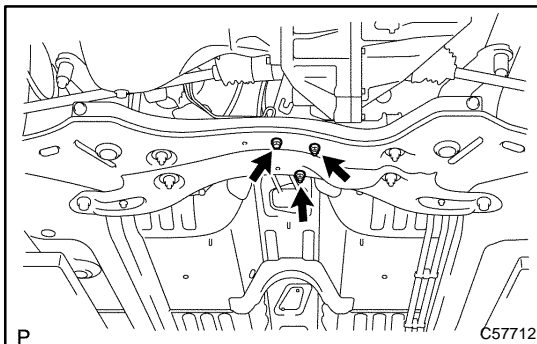


- (c) Install the crossmember sub-assy with the 4 bolts.

**Torque:**

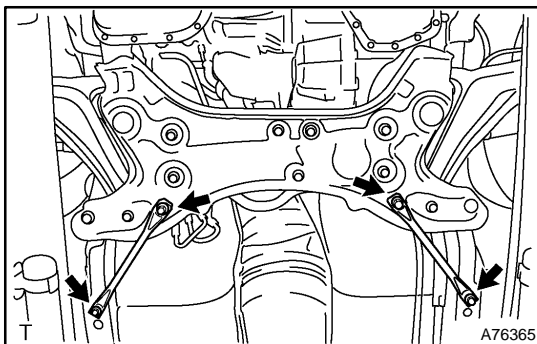
**Bolt A: 116 N·m (1,183 kgf·cm, 86 ft·lbf)**

**Bolt B: 70 N·m (714 kgf·cm, 52 ft·lbf)**



- (d) Install the crossmember sub-assy with the bolt and the 2 nuts.

**Torque: 72 N·m (734 kgf·cm, 53 ft·lbf)**



- (e) Install the 2 reinforcements with the 4 bolts.

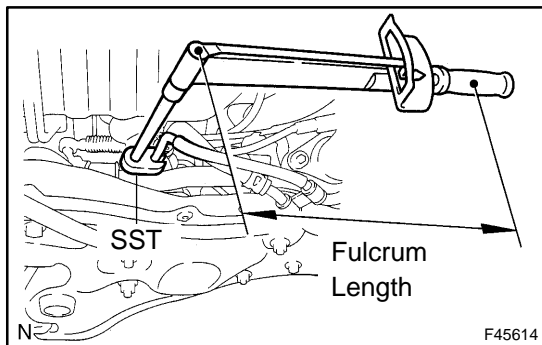
**Torque: 47 N·m (479 kgf·cm, 35 ft·lbf)**

### 74. INSTALL FRONT SUSPENSION ARM SUB-ASSY LOWER NO.1 LH (See page 30-6)

### 75. INSTALL FRONT SUSPENSION ARM SUB-ASSY LOWER NO.1 RH

HINT:

Perform the same procedure on the other side.

**76. CONNECT PRESSURE FEED TUBE ASSY**

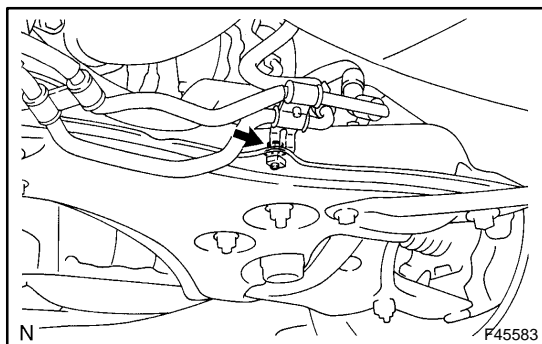
- (a) Using SST, connect the pressure feed tube assy.  
SST 09023-12700

**Torque: 27 N·m (273 kgf·cm, 20 ft·lbf)**

**HINT:**

- Use a torque wrench with a fulcrum length of 345 mm (13.58 in.).
  - This torque value is effective when SST is parallel to a torque wrench.
- (b) Connect the return hose with the clip.
- (c) Install the tube clamp to the crossmember sub-assy with the bolts.

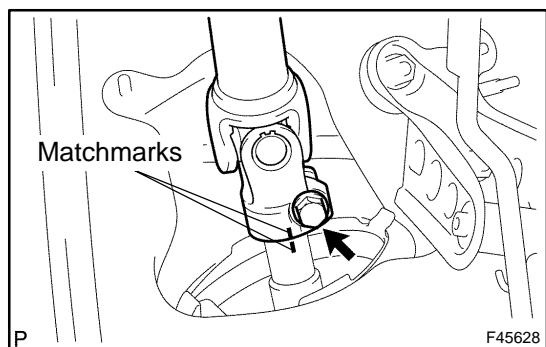
**Torque: 7.8 N·m (80 kgf·cm, 69 in·lbf)**

**77. INSTALL TIE ROD END SUB-ASSY LH (See page 30-6)****78. INSTALL TIE ROD END SUB-ASSY RH****HINT:**

Perform the same procedure on the other side.

**79. INSTALL FRONT WHEELS**

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

**80. INSTALL STEERING SLIDING YOKE SUB-ASSY**

- (a) Align the matchmarks on the sliding yoke sub-assy and the intermediate shaft.
- (b) Tighten the bolt.

**Torque: 28 N·m (290 kgf·cm, 21 ft·lbf)**

**81. INSPECT CENTER FRONT WHEEL****82. INSTALL STEERING COLUMN HOLE COVER SUB-ASSY NO.1****83. ADD POWER STEERING FLUID****84. BLEED POWER STEERING FLUID (See page 51-3)****85. CHECK POWER STEERING FLUID LEVEL IN RESERVER (See page 51-3)****86. INSPECT FLUID LEAK****87. INSTALL HOOD SUB-ASSY (See page 75-1)****88. ADJUST HOOD SUB-ASSY (See page 75-1)****89. INSPECT AND ADJUST FRONT WHEEL ALIGNMENT (See page 26-7)**

90. INSTALL ENGINE UNDER COVER LH
91. INSTALL ENGINE UNDER COVER RH
92. INSTALL COWL PANEL SUB-ASSY (See page 55-42)
93. INSTALL WINDSHIELD WIPER MOTOR & LINK ASSY (See page 66-6)
94. INSTALL COWL TOP VENTILATOR LOUVER LH (See page 66-6)
95. INSTALL COWL TOP VENTILATOR LOUVER RH (See page 66-6)
96. INSTALL HOOD TO COWL TOP SEAL (See page 66-6)
97. INSTALL FR WIPER ARM LH (See page 66-6)
98. INSTALL FR WIPER ARM RH (See page 66-6)