

REASSEMBLY

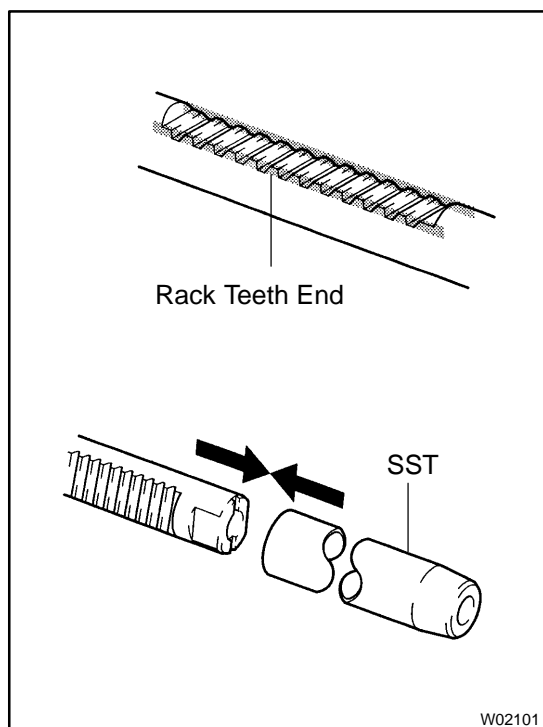
NOTICE:

When using a vise, do not overtighten it.

1. **COAT PARTS INDICATED BY ARROWS WITH POWER STEERING FLUID OR MOLYBDENUM DISULFIDE LITHIUM BASE GREASE (See page [SR-40](#))**
2. **INSTALL OIL SEAL**
 - (a) Coat a new oil seal lip with power steering fluid.
 - (b) Using SST, press in the oil seal.
SST 09950-60010 (09951-00240, 09951-00430, 09952-06010), 09950-70010 (09951-07360)

NOTICE:

- **Make sure to install the oil seal facing in the correct direction.**
- **Take care that the oil seal does not get reversed as you install it.**



3. INSTALL STEERING RACK

- (a) Install SST to the steering rack.
SST 09631-20102

HINT:

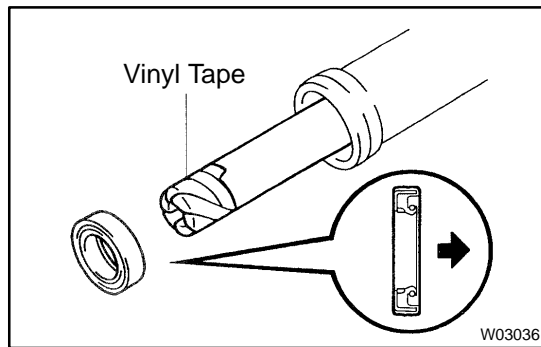
If necessary, scrape the burrs off the rack teeth end and bur-nish.

- (b) Coat SST with power steering fluid.
- (c) Install the steering rack into the rack housing.

NOTICE:

Be careful not to damage the oil seal lip.

- (d) Remove the SST.
SST 09631-20102

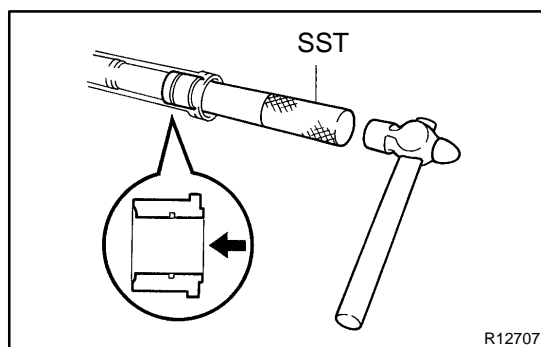


4. INSTALL OIL SEAL AND SPACER

- Coat a new oil seal lip with power steering fluid.
- To prevent oil seal lip damage, wind vinyl tape on the steering rack end, and apply power steering fluid.
- Install the oil seal by pushing it into the rack housing without tilting.

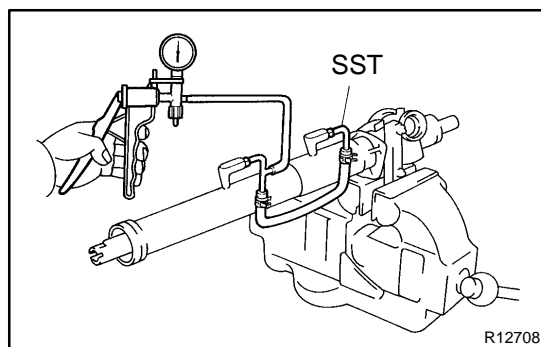
NOTICE:

- Make sure to install the oil seal facing in the correct direction.
 - Be careful not to damage the oil seal lip.
- Install the spacer.



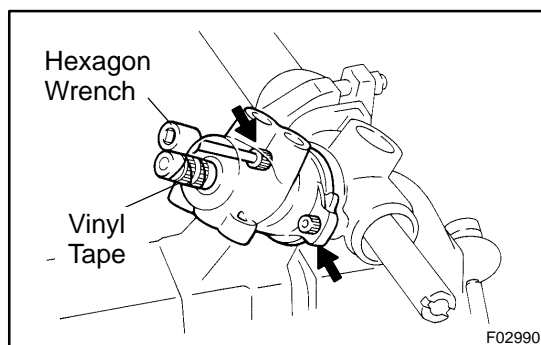
5. INSTALL CYLINDER END STOPPER

- Using SST and a hammer, drive in the cylinder end stopper.
SST 09612-22011
- Using snap ring pliers, install the snap ring.



6. AIR TIGHTNESS TEST

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



7. INSTALL CONTROL VALVE ASSEMBLY

- Coat the teflon rings of the control valve assembly with power steering fluid.
- To prevent oil seal lip damage, wind vinyl tape on the serrated part of the control valve shaft.
- Install the control valve assembly into the control valve housing.

NOTICE:

Be careful not to damage the teflon rings and oil seal.

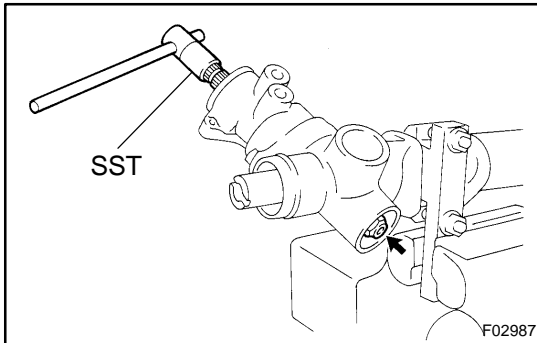
8. INSTALL CONTROL VALVE HOUSING

- (a) Coat a new O-ring with power steering fluid and install it to the control valve housing.
- (b) Using a hexagon wrench (6 mm), install the control valve housing with the 2 bolts.

Torque: 18 N·m (185 kgf·cm, 13 ft·lbf)

9. INSTALL DUST COVER**10. INSTALL BEARING AND SPACER**

Install the spacer and a new bearing to the rack housing.

**11. INSTALL SELF-LOCKING NUT**

Using SST, stop the control valve shaft rotating and install a new self-locking nut.

SST 09616-00010

Torque: 39 N·m (400 kgf·cm, 29 ft·lbf)

12. INSTALL RACK HOUSING CAP

- (a) Apply sealant to 2 or 3 threads of the rack housing cap.

Sealant:

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

- (b) Install the rack housing cap.

Torque: 69 N·m (700 kgf·cm, 51 ft·lbf)

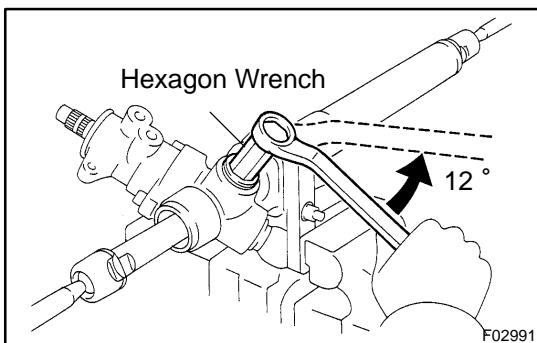
13. INSTALL RACK GUIDE SUB-ASSEMBLY, RACK GUIDE SPRING AND RACK GUIDE SPRING CAP

- (a) Install the rack guide sub-assembly and rack guide spring.
- (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

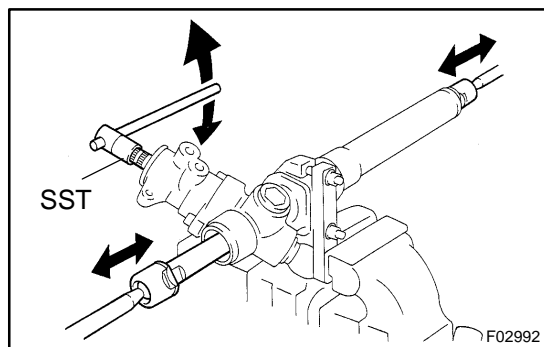
- (c) Temporarily install the rack guide spring cap.

**14. ADJUST TOTAL PRELOAD**

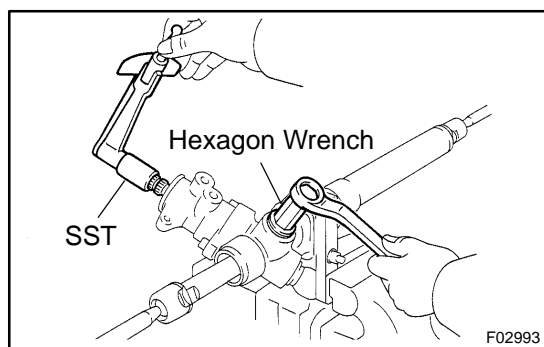
- (a) To prevent the steering rack teeth from damaging the oil seal lip, temporarily install the RH and LH rack ends.
- (b) Using a hexagon wrench (24 mm), torque the rack guide spring cap.

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

- (c) Using a hexagon wrench (24 mm), return the rack guide spring cap 12°.



- (d) Using SST, turn the control valve shaft right and left 1 or 2 times.
SST 09616-00010
- (e) Using a hexagon wrench (24 mm), loosen the rack guide spring cap until the rack guide spring is not functioning.



- (f) Using SST, a torque wrench and hexagon wrench (24 mm), tighten the rack guide spring cap until the preload is within specification.

SST 09616-00010

Preload (turning):

0.9 – 1.2 N·m (9 – 12 kgf·cm, 7.8 – 10.4 in.-lbf)

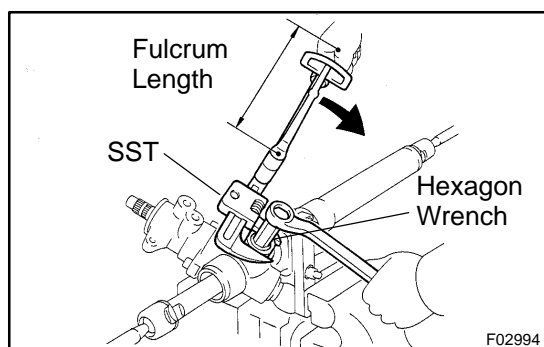
15. INSTALL RACK GUIDE SPRING CAP LOCK NUT

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

Sealant:

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

- (b) Temporarily install the rack guide spring cap lock nut.



- (c) Using a hexagon wrench (24 mm), hold the rack guide spring cap and using SST, torque the rack guide spring cap lock nut.

SST 09922-10010

Torque: 50 N·m (513 kgf·cm, 37 ft·lbf)

NOTICE:

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

HINT:

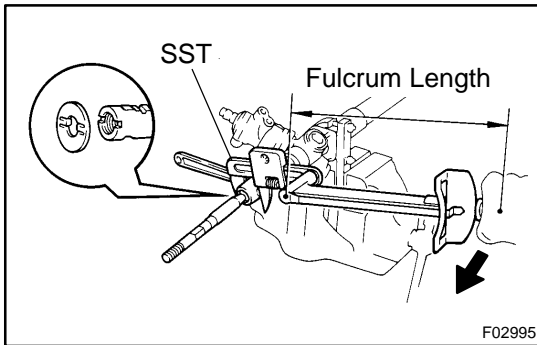
Use a torque wrench with a fulcrum length of 345 mm (13.58 in.).

- (d) Recheck the total preload.

Preload (turning):

0.9 – 1.2 N·m (9 – 12 kgf·cm, 7.8 – 10.4 in.-lbf)

- (e) Remove the RH and LH rack ends.



16. INSTALL RH AND LH CLAW WASHERS AND RACK ENDS

- (a) Install a new claw washer, and temporarily install the rack end.

HINT:

Align the claws of the washer with the steering rack grooves.

- (b) Using a wrench, hold the steering rack steadily and using SST, torque the rack end.

SST 09922-10010

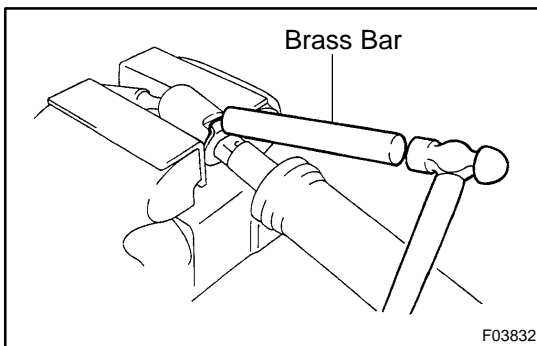
Torque: 77 N·m (782 kgf-cm, 57 ft-lbf)

NOTICE:

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

HINT:

Use a torque wrench with a fulcrum length of 380 mm (14.96 in.).

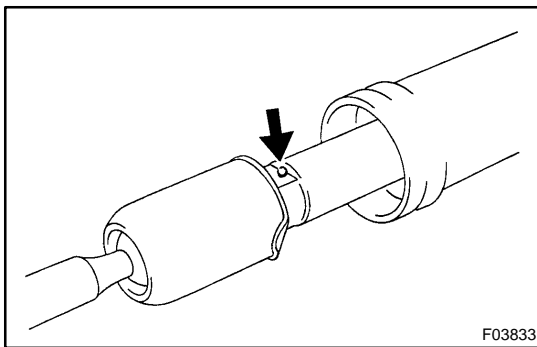


- (c) Using a brass bar and hammer, stake the washer.

NOTICE:

Avoid any impact on the steering rack.

- (d) Employ the same manner described above to the other side.



17. INSTALL RH AND LH RACK BOOTS, CLAMPS AND CLIPS

- (a) Ensure that the steering rack hole 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.

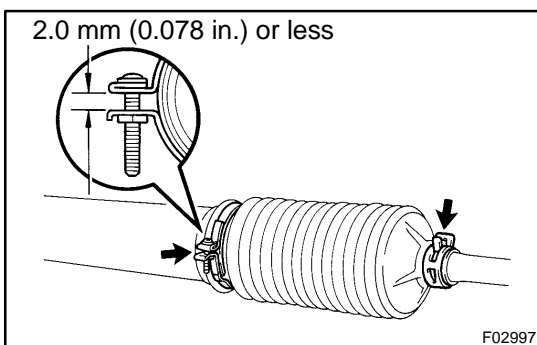
- (b) Install the boot, clip and clamp.

NOTICE:

Be careful not to damage or twist the boot.

- (c) Tighten the clamp with the screw as shown in the illustration.

- (d) Employ the same manner described above to the other side.

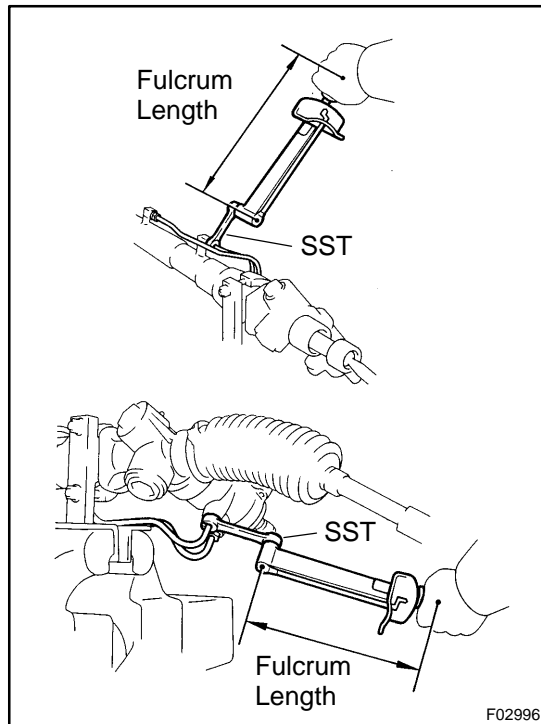


18. INSTALL RH AND LH TIE ROD ENDS AND LOCK NUTS

- (a) Screw the lock nut and tie rod end onto the rack end until the matchmarks are aligned.
- (b) After adjusting toe-in, torque the nut
(See page [SA-5](#)).

Torque: 56 N·m (570 kgf-cm, 41 ft-lbf)

- (c) Employ the same manner described above to the other side.

**19. INSTALL 2 TURN PRESSURE TUBES**

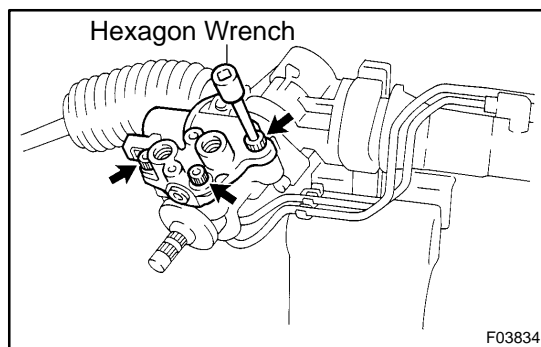
- (a) Using SST, install the 2 turn pressure tubes.

SST 09633-00020

Torque: 20 N·m (203 kgf-cm, 15 ft-lbf)

HINT:

- Use a torque wrench with a fulcrum length of 300 mm (11.81 in.).
 - This torque value is effective in case that SST is parallel to a torque wrench.
- (b) Install the tube clamp.

**20. INSTALL PRESSURE CONTROL VALVE**

- (a) Coat 4 new O-rings with power steering fluid and install them to the pressure control valve.
- (b) Using hexagon wrench (6 mm), install the pressure control valve with the 3 bolts.

Torque: 18 N·m (185 kgf-cm, 13 ft-lbf)