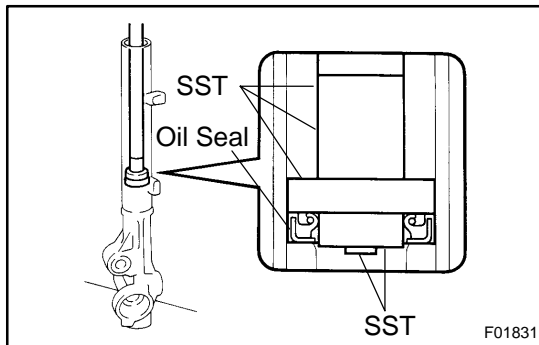


REASSEMBLY

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 pages SR-54)**



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 (09951-00250, 09951-00420, 09952-06010), 09950-70010 (09951-07360)

NOTICE:

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

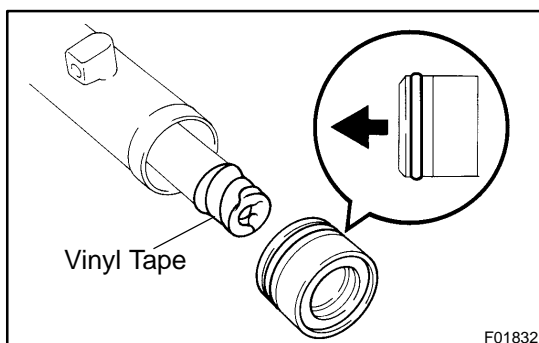
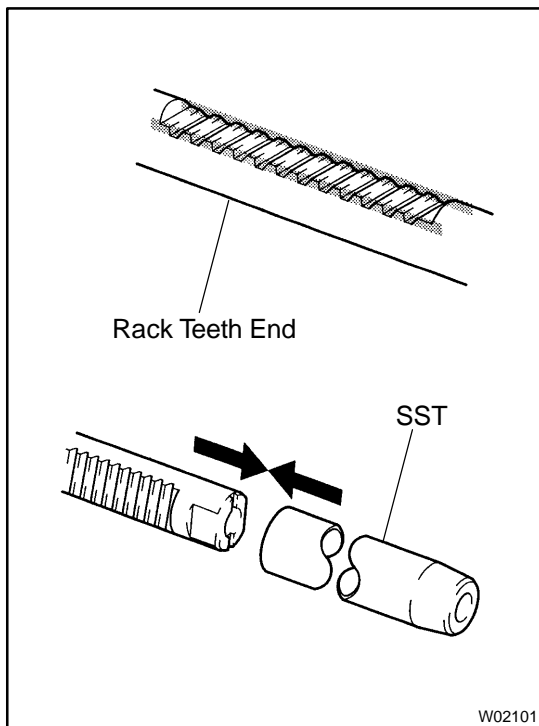
3. INSTALL STEERING RACK

- (a) Install SST to the 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 rack into the rack housing.
- (d) Remove the SST.

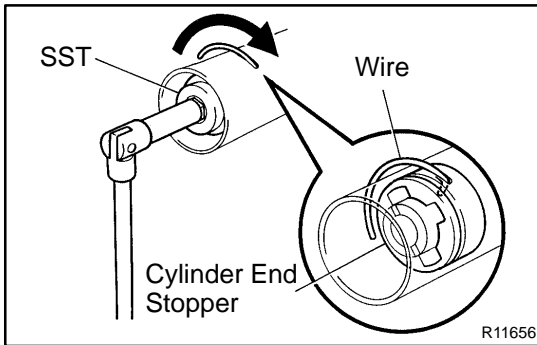


4. INSTALL BUSHING

- (a) Coat a new O-ring with power steering fluid and install it to the bushing.
- (b) To prevent oil seal lip damage, wind vinyl tape on the steering rack end, and apply power steering fluid.
- (c) Install the bushing.

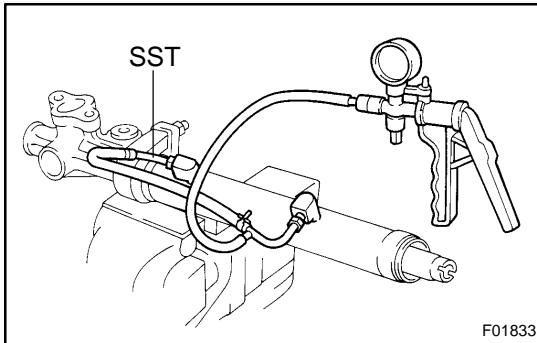
NOTICE:

- **Make sure to install the bushing facing the correct direction.**
- **Be careful not to damage the oil seal lip.**

**5. INSTALL CYLINDER END STOPPER**

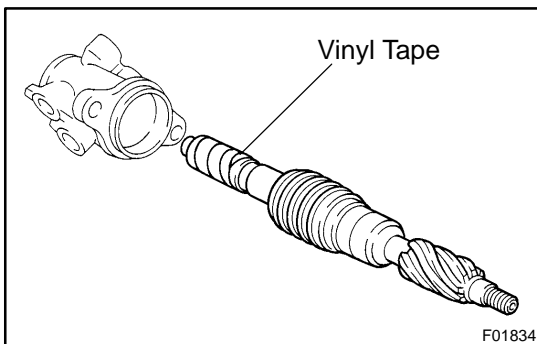
- (a) Align the installation hole for the wire of the stopper with the slot of the rack housing.
- (b) Install a new wire into the cylinder end stopper.
- (c) Using SST, turn the cylinder end stopper clockwise $450 \pm 50^\circ$.

SST 09631-10021

**6. AIR TIGHTNESS TEST**

- (a) Install SST to the unions of the rack housing.
SST 09631-12071
- (b) Apply 53 kPa (400 mmHg, 15.75 in.Hg) of vacuum for about 30 seconds.
- (c) Check that there is no change in the vacuum.

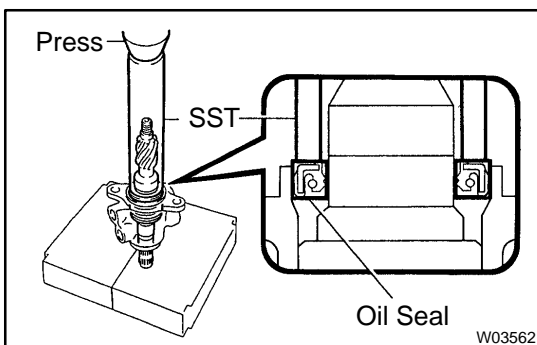
If there is change in the vacuum, check the installation of the oil seals.

**7. INSTALL CONTROL VALVE ASSEMBLY**

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

NOTICE:

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

**8. INSTALL OIL SEAL**

- (a) Coat a new oil seal lip with power steering fluid.
- (b) Using SST, press in the oil seal.

SST 09612-22011

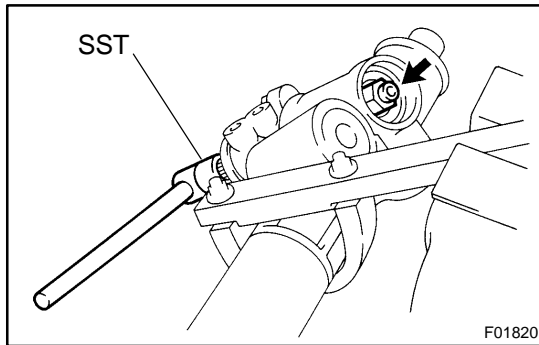
NOTICE:

Make sure to install the oil seal facing the correct direction.

9. INSTALL CONTROL VALVE HOUSING WITH CONTROL VALVE ASSEMBLY

- (a) Place a new gasket on the rack housing.
- (b) Align the matchmarks on the control valve housing and rack housing.
- (c) Install the control valve housing with the 2 bolts.

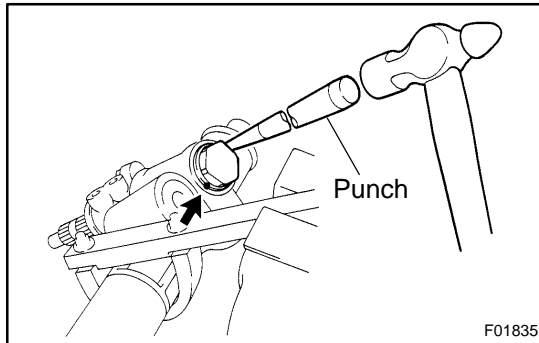
Torque: 18 N·m (185 kgf·cm, 13 ft·lbf)

**10. INSTALL SELF-LOCKING NUT**

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

SST 09616-00011

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

11. INSTALL DUST COVER**12. INSTALL RACK HOUSING CAP**

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

Sealant:

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

(b) Install the rack housing cap.

Torque: 59 N·m (600 kgf·cm, 43 ft·lbf)

(c) Using a punch and hammer, stake the 2 parts of the rack housing cap.

13. INSTALL RACK GUIDE SEAT, RACK GUIDE, RACK GUIDE SPRING AND RACK GUIDE SPRING CAP

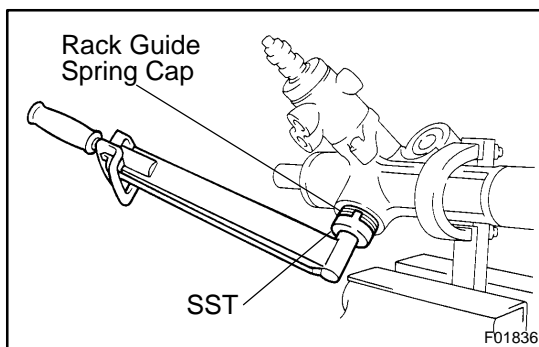
(a) Install the rack guide seat to the rack guide.

(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, rack guide spring and rack guide spring cap.

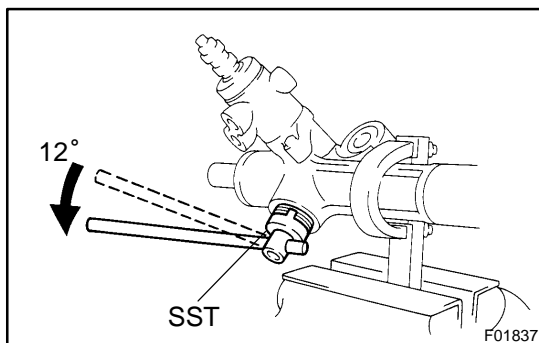
**14. ADJUST TOTAL PRELOAD**

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

(b) Using SST, torque the rack guide spring cap.

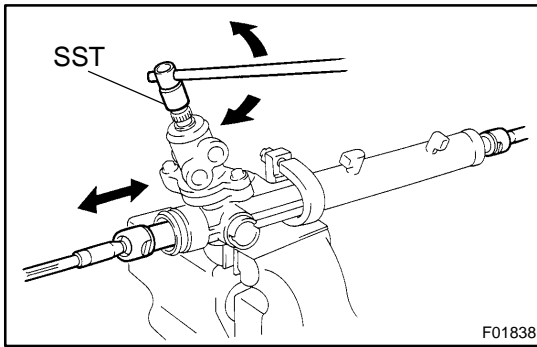
SST 09631-10021

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

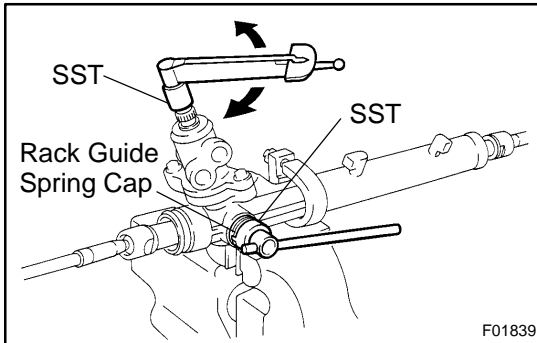


(c) Using SST, return the cap 12°.

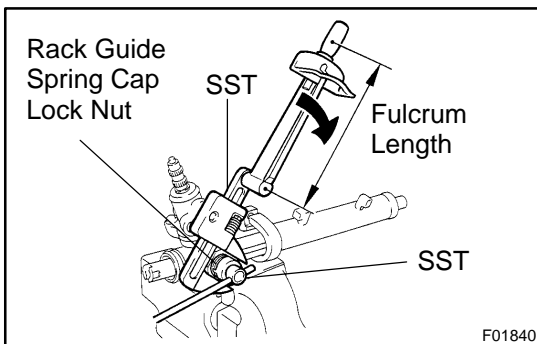
SST 09631-10021



- (d) Using SST, turn the control valve shaft right and left 1 or 2 times.
SST 09616-00011
- (e) Using SST, loosen the cap until the rack guide spring is not functioning.
SST 09631-10021



- (f) Using SST and a torque wrench, tighten the cap until the preload is within specification.
SST 09616-00011, 09631-10021

Preload (turning):**0.9 – 1.5 N·m (9 – 15 kgf-cm, 7.8 – 13.0 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) Using SST to hold the rack guide spring cap, and using SST, install the lock nut.

SST 09631-10021, 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.).

- (c) Recheck the total preload.

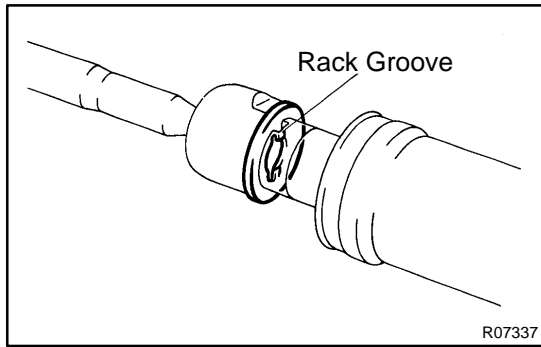
Preload (turning):**0.9 – 1.5 N·m (9 – 15 kgf-cm, 7.8 – 13.0 in.-lbf)**

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

16. INSTALL RACK HOUSING NO.2 BRACKET AND GROMMET

- (a) Install the rack housing No.2 grommet.
(b) Align the matchmarks on the rack housing No.2 bracket and rack housing.
(c) Install the rack housing No.2 bracket with the bolt.

Torque: 61 N·m (620 kgf-cm, 45 ft-lbf)

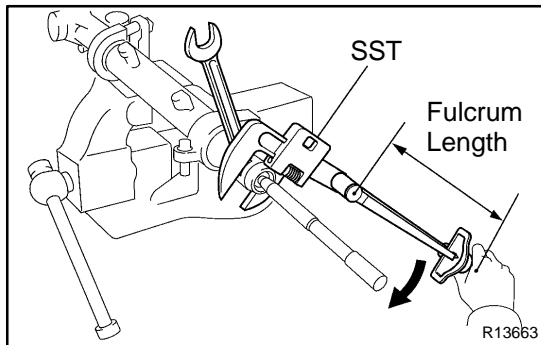


17. INSTALL RH AND LH CLAW WASHERS AND RACK ENDS

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

HINT:

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



- (b) Using a spanner to hold the steering rack steady, and using SST, torque the rack end.

SST 09922-10010

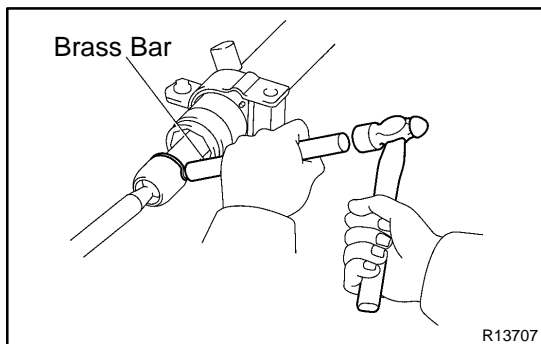
Torque: 60 N·m (615 kgf·cm, 45 ft·lbf)

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.).

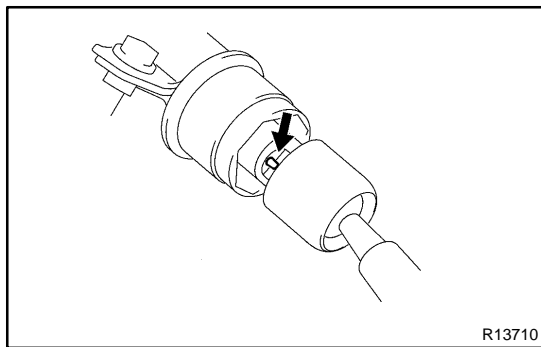


- (c) Using a brass bar and hammer, stake the claw washer.

NOTICE:

Avoid any impact to the rack.

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

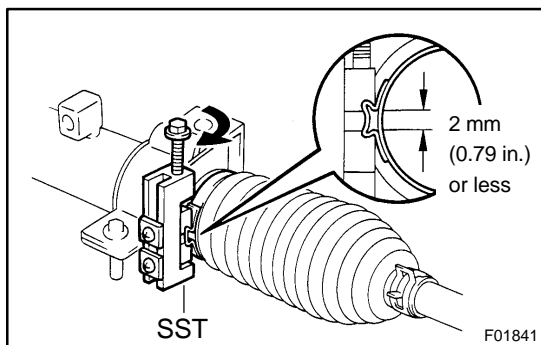


18. INSTALL RH AND LH RACK BOOTS, CLAMPS AND CLIPS

- (a) Ensure that the steering rack hole is not clogged with grease.

HINT:

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



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

NOTICE:

Be careful not to damage or twist the boot.

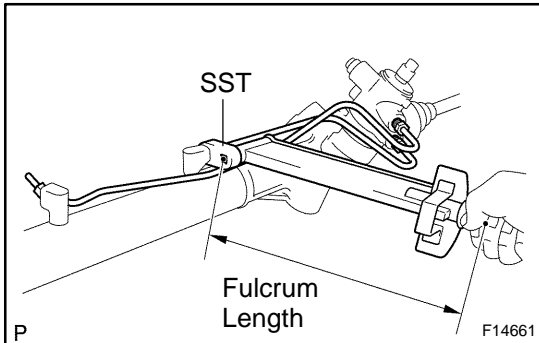
- (c) Using SST, tighten the clamp as shown in the illustration.

SST 09521-24010

19. 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-6](#)).

Torque: 54 N·m (550 kgf·cm, 40 ft·lbf)

**20. INSTALL 2 TURN PRESSURE TUBES**

- (a) Coat 4 new O-rings with power steering fluid and install them to the 2 turn pressure tubes.
- (b) Using SST, install the 2 turn pressure tubes.

SST 09023-38200

Torque: 12 N·m (122 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 in case that SST is parallel to a torque wrench.