

REASSEMBLY

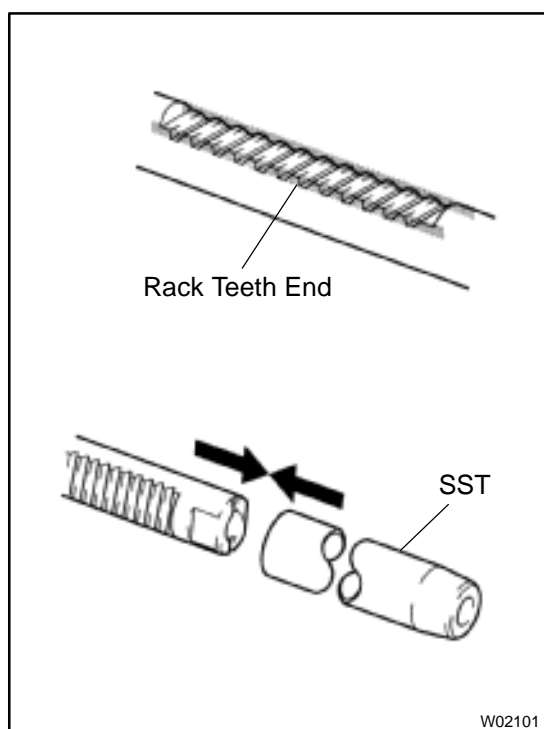
NOTICE:

When using a vise, do not overtighten it.

1. **COAT WITH POWER STEERING FLUID OR MOLYBDENUM DISULFIDE LITHIUM BASE GREASE**
(See page [SR-30](#))
2. **INSTALL OIL SEAL AND SPACER**
 - (a) Coat a new oil seal lip with power steering fluid.
 - (b) Install the oil seal and spacer to SST, and press in them.
SST 09950-60010 (09951-00200, 09951-00380, 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 09631-10041

HINT:

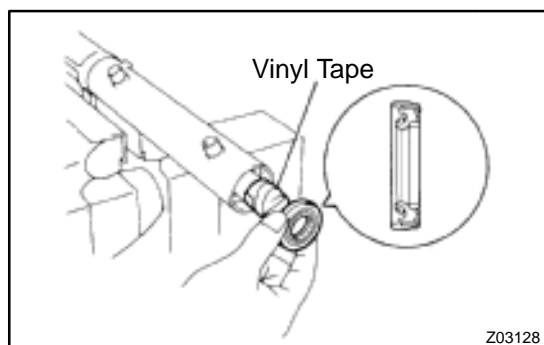
If necessary, scrape the burrs off the rack teeth end and bur-nish.

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

NOTICE:

Be careful not to damage the oil seal.

- (d) Remove the SST.

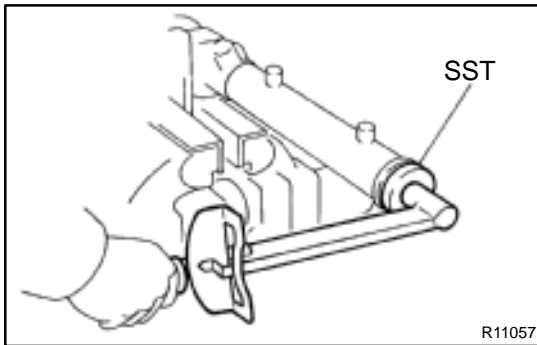


4. INSTALL OIL SEAL

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

NOTICE:

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

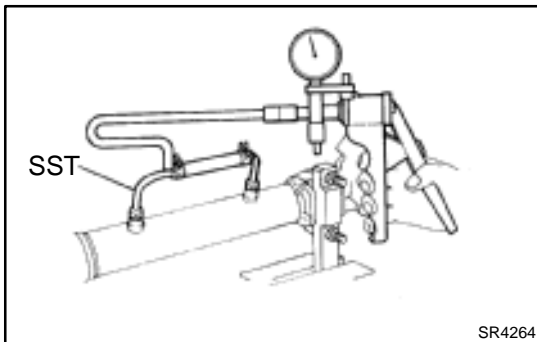


5. INSTALL BUSHING AND CYLINDER END STOPPER

- (a) Install a new bushing to the stopper.
- (b) Using SST, torque the stopper.

SST 09631-20090

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



6. AIR TIGHTNESS TEST

- (a) Install SST to the rack housing.

SST 09631-12071

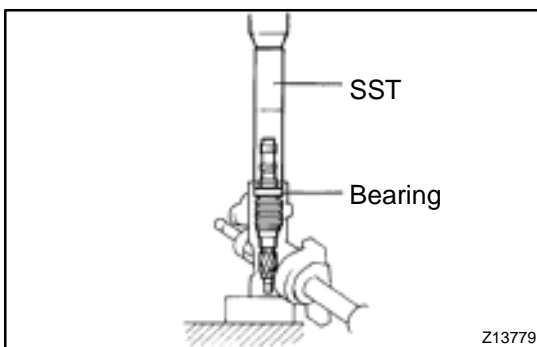
NOTICE:

Do not install union seats.

- (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

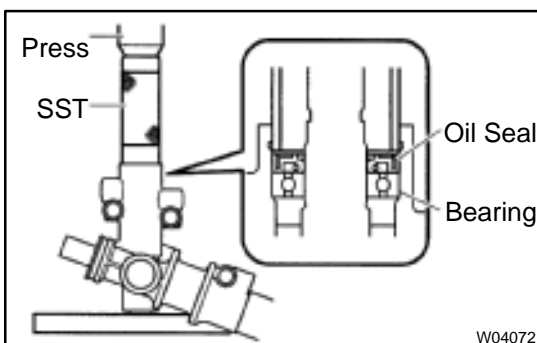
- (a) Coat the teflon rings with power steering fluid.
- (b) Push the valve assembly into the rack housing.



8. INSTALL BEARING

Using SST, press in a new bearing.

SST 09612-22011



9. INSTALL OIL SEAL

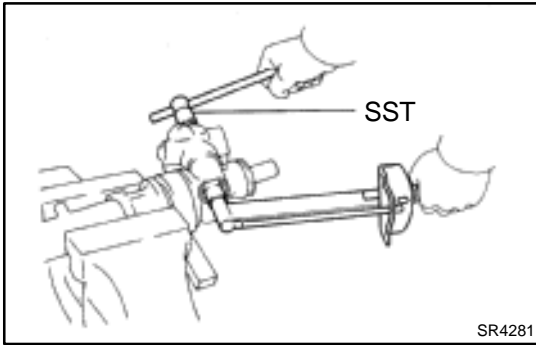
- (a) Coat a new oil seal lip with power steering fluid.
- (b) Using SST, press in the oil seal until it contacts the bearing.

SST 09612-22011

NOTICE:

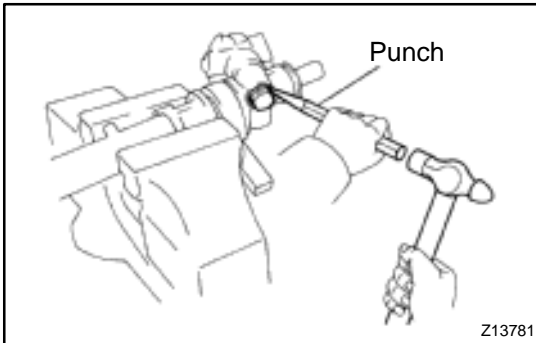
Make sure to install the oil seal facing the correct direction.

- (c) Using snap ring pliers, install a new snap ring to the rack housing.

**10. INSTALL SELF-LOCKING NUT**

- (a) Coat a new bearing with molybdenum disulfide lithium base grease and install it to the control valve shaft.
- (b) Using SST, stop the control valve shaft rotating and torque a new nut.

SST 09616-00010

Torque: 59 N·m (600 kgf-cm, 43 ft-lbf)**11. 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) Torque the cap.

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

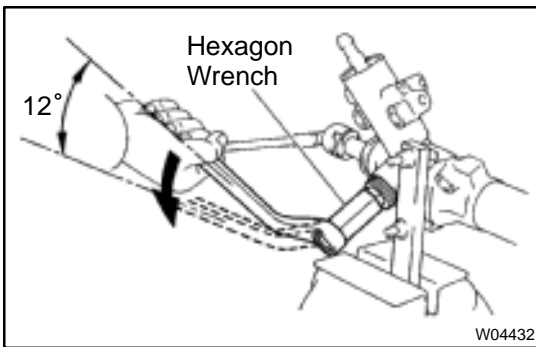
- (c) Using a punch and a hammer, stake the cap at 2 places.

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

- (a) Install the seat to the guide.
- (b) Install the guide to the rack housing.
- (c) Apply sealant to 2 or 3 threads of the spring cap.

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

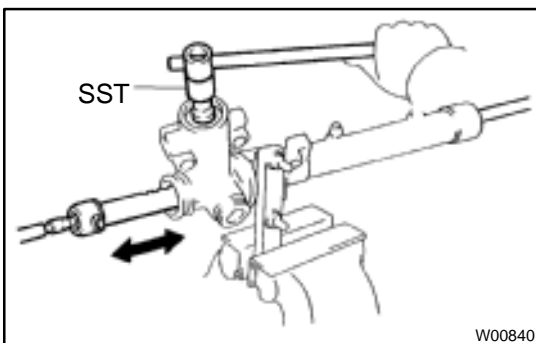
- (d) Temporarily install the cap.

**13. 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 (21 mm), torque the rack guide spring cap.

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

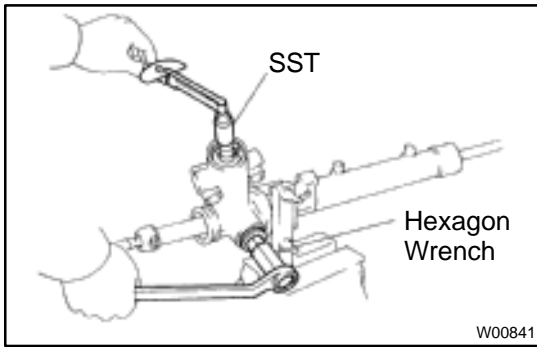
- (c) Using a hexagon wrench (21 mm), return the cap 12°.



- (d) Using SST, turn the control valve shaft right and left 1 or 2 times.

SST 09616-00010

- (e) Using a hexagon wrench (21 mm), loosen the cap until the rack guide spring is not functioning.

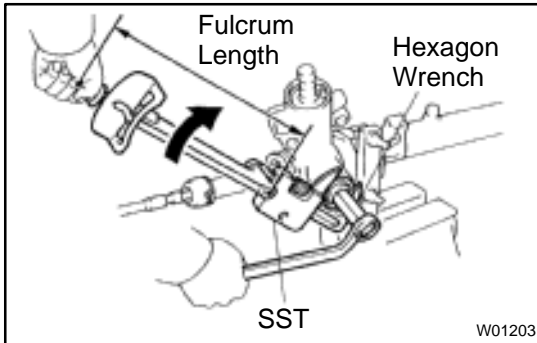


- (f) Using SST, a torque wrench and hexagon wrench (21 mm), tighten the cap until the preload is within the specification.

SST 09616-00010

Preload (turning):

0.8 – 1.4 N·m (8 – 14 kgf·cm, 6.9 – 12.2 in.-lbf)



14. INSTALL RACK GUIDE SPRING CAP LOCK NUT

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

Sealant:

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

- (b) Using a hexagon wrench (21 mm), hold the rack guide spring cap and using SST, torque the nut.

SST 09922-10010

Torque: 36 N·m (366 kgf·cm, 26 ft·lbf)

NOTICE:

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

HINT:

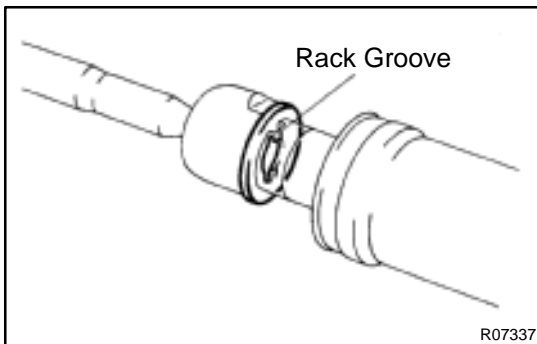
Use a torque wrench with a fulcrum length of 300 mm (11.81 in.).

- (c) Recheck the total preload.

Preload (turning):

0.8 – 1.4 N·m (8 – 14 kgf·cm, 6.9 – 12.2 in.-lbf)

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

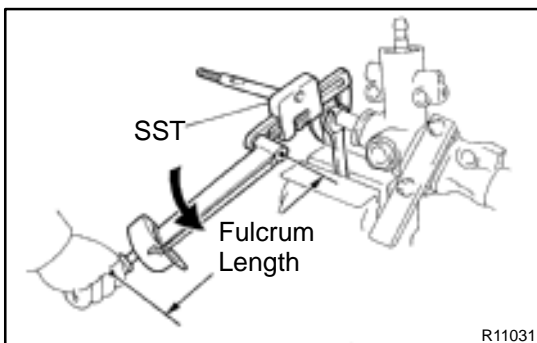


15. INSTALL RH AND LH CLAW WASHERS AND RACK ENDS

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

HINT:

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



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

SST 09922-10010

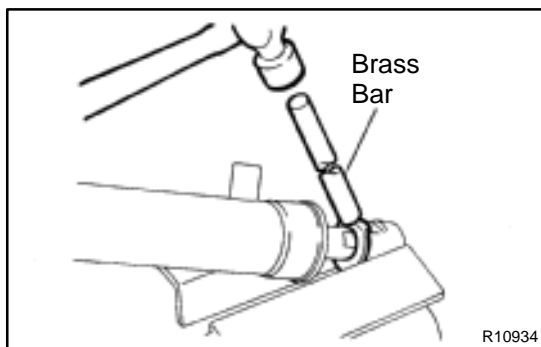
Torque: 51 N·m (520 kgf·cm, 18 ft·lbf)

NOTICE:

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

HINT:

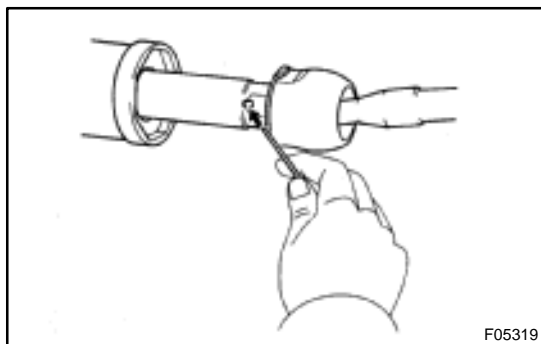
Use a torque wrench with a fulcrum length of 345 mm (13.58 in.).



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

NOTICE:

Avoid any impact to the rack.



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

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

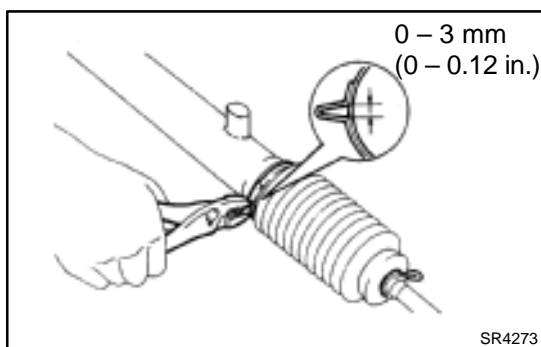
HINT:

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

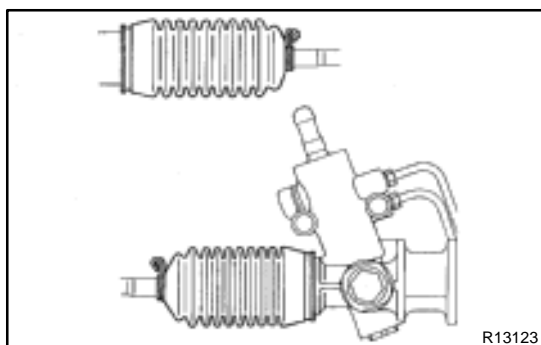
(b) Install the boot.

NOTICE:

Be careful not to damage or twist the boots.



(c) Tighten a new clamp, as shown in the illustration.



(d) Install the clip.

HINT:

Face the open ends of the clip outward/upward, as shown in the illustration.

17. 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.

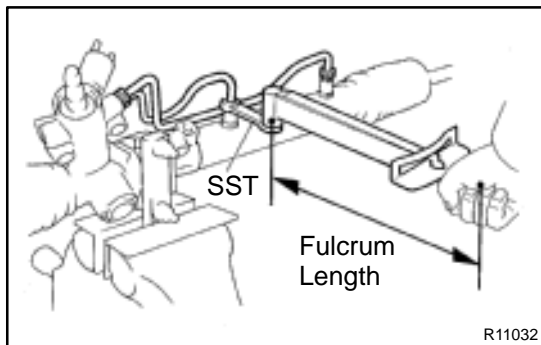
(b) After adjusting toe-in, torque the nut (See page [SA-4](#)).

Torque: 47 N·m (480 kgf-cm, 35 ft-lbf)

18. INSTALL AIR CONTROL VALVE

Torque the valve.

Torque: 29 N·m (300 kgf-cm, 22 ft-lbf)

**19. INSTALL 2 TURN PRESSURE TUBES**

- (a) Install 2 new union seats.
- (b) Using SST, install the tube.

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.