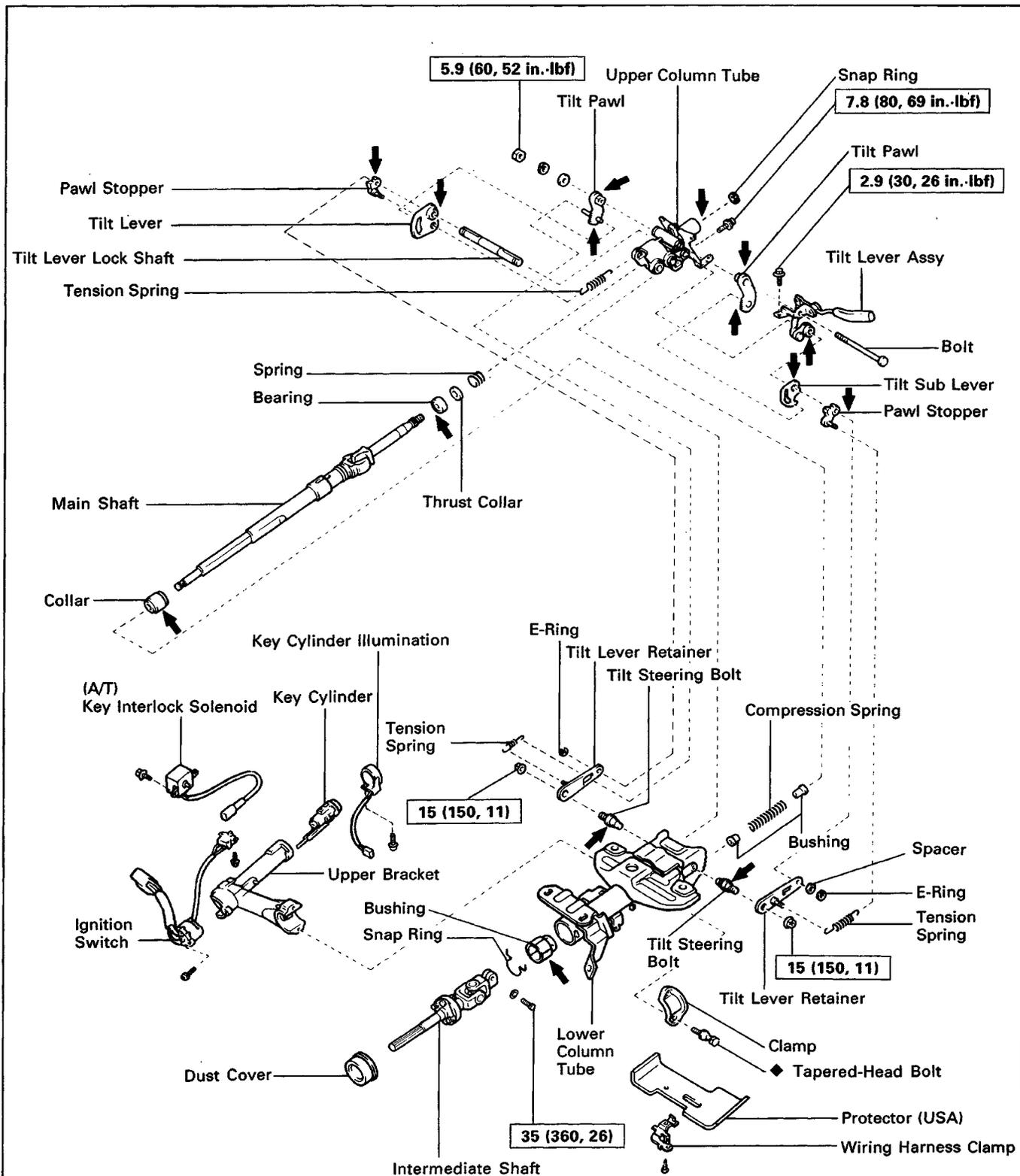


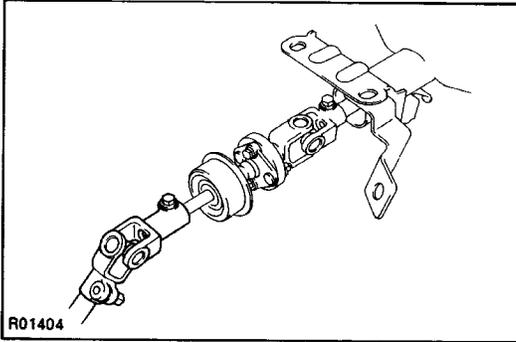
Tilt Steering Column COMPONENTS



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

◆ Non-reusable part

◀ : Apply Molybdenum Disulphide Lithium Base Grease



DISASSEMBLY OF STEERING COLUMN

1. (5S-FE ENGINE)

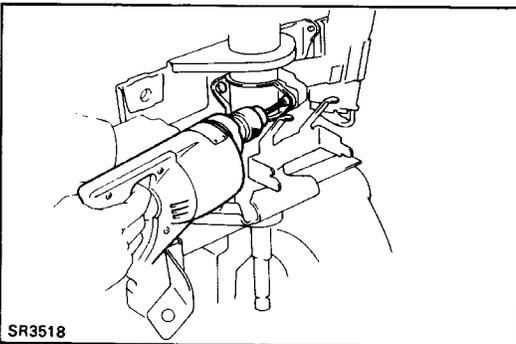
REMOVE IGNITION KEY CYLINDER ILLUMINATION

2. REMOVE INTERMEDIATE SHAFT

3. REMOVE WIRING HARNESS CLAMP

4. (USA)

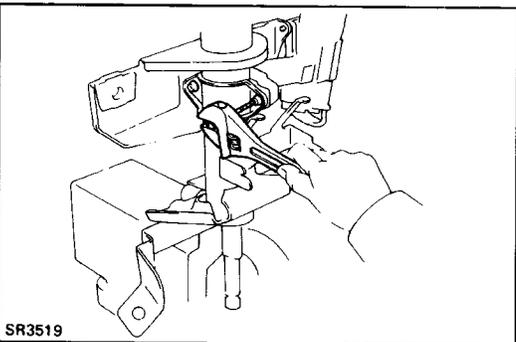
REMOVE PROTECTOR



5. REMOVE UPPER BRACKET

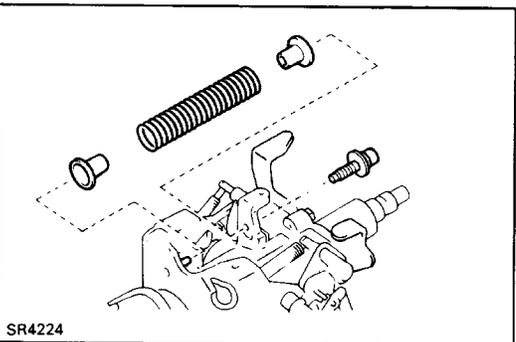
(a) Using a centering punch, mark the center of the tapered-head bolts.

(b) Using a 3-4 mm (0.12-0.16 in.) drill, drill into the tapered-head bolts.



(c) Using a screw extractor, remove the tapered-head bolts.

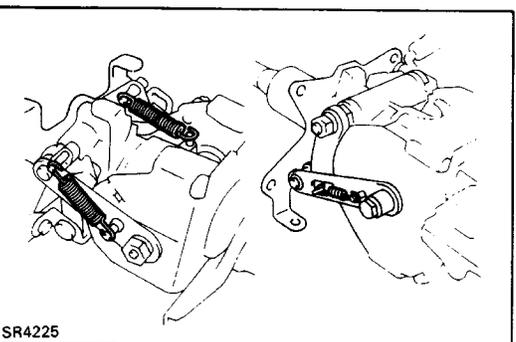
(d) Remove the two bolts, and separate the upper bracket and the column tube.



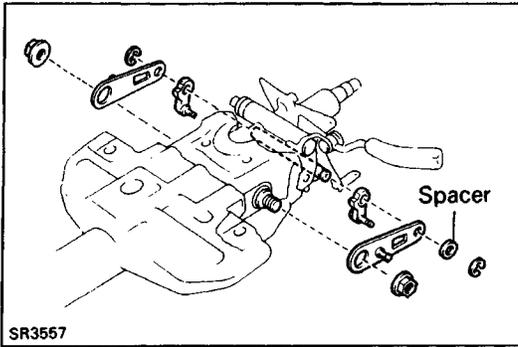
6. REMOVE COMPRESSION SPRING

(a) Using a torx wrench, remove the bolt and spring.
Torx wrench: T30 (Part No. 09042-00010 or locally manufactured tool)

(b) Remove the two bushings from the spring.

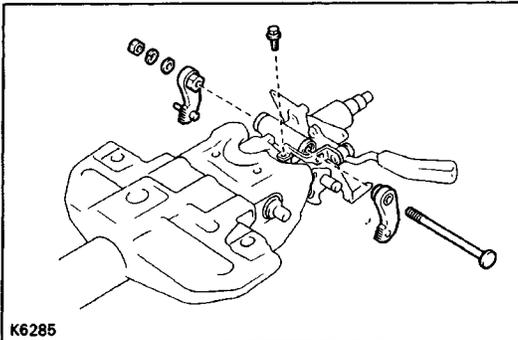


7. REMOVE THREE TENSION SPRINGS



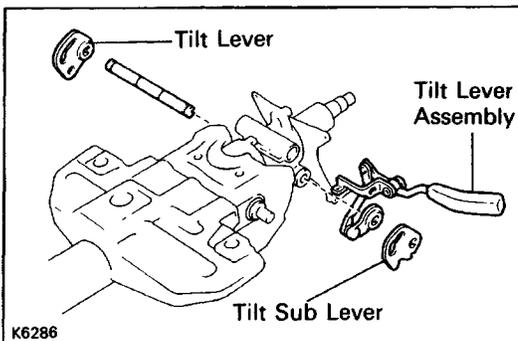
8. REMOVE TILT LEVER RETAINERS AND PAWL STOPPERS

- Remove the two E-rings from the tilt lever lock shaft.
- Remove the spacer.
- Remove the two nuts from the tilt steering bolts.
- Remove the two tilt lever retainers and two pawl stoppers.



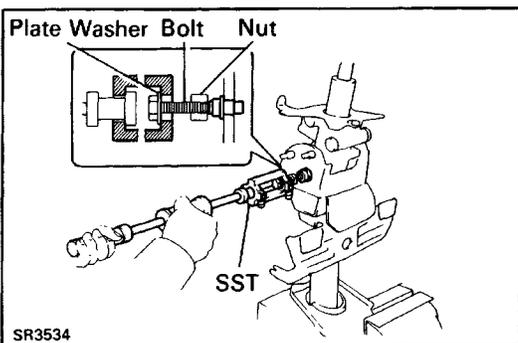
9. REMOVE TILT PAWLS

- Remove the nut and two washers.
- Pull out the bolt.
- Remove the tilt lever assembly installation bolt.
- Remove the two tilt pawls.



10. REMOVE TILT LEVER, TILT SUB LEVER, TILT LEVER ASSEMBLY AND TILT LEVER LOCK SHAFT

- Remove the tilt lever, tilt sub lever and tilt lever assembly from the tilt lever lock shaft.
- Pull out the tilt lever lock shaft.



11. REMOVE UPPER COLUMN TUBE

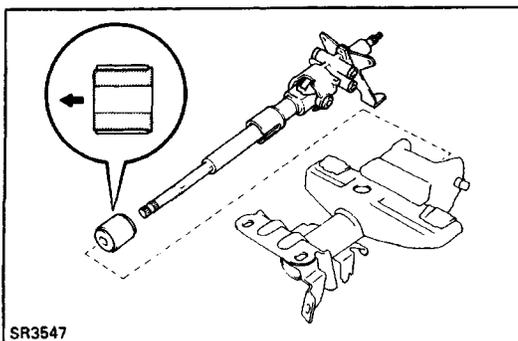
- Set SST, the nut (10 mm diameter, 1.25 mm pitch), plate washer (36 mm outer diameter) and bolt (10 mm diameter, 1.25 mm pitch, 50 mm length) as shown.

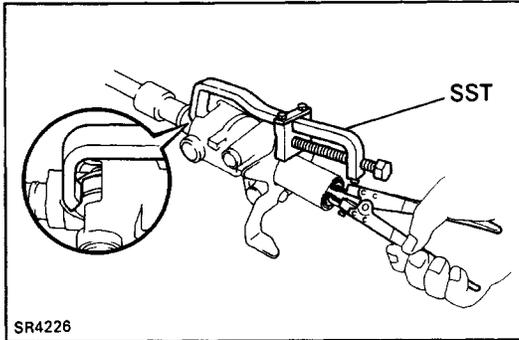
And then remove the two tilt steering bolts.

SST 09910-00015 (09911-00011, 09912-00010)

(Reference) Nut	90170-10004
Plate washer	90201-10201
Bolt	91111-51050

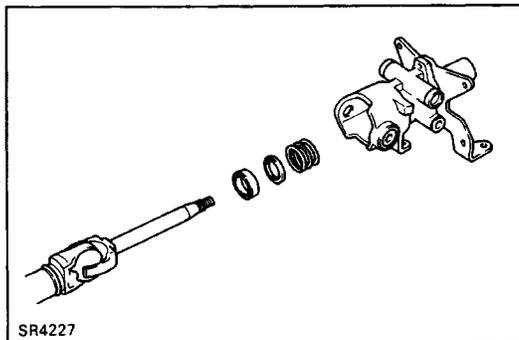
- Remove the upper column tube from the lower column tube.
- Remove the collar from the main shaft.



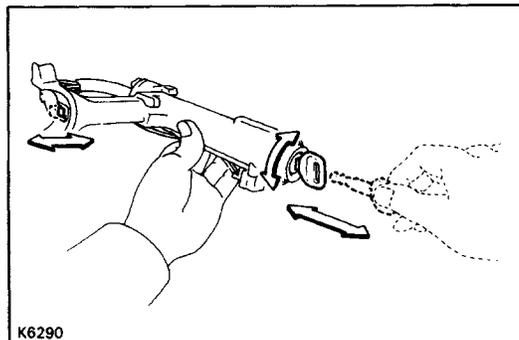


12. REMOVE MAIN SHAFT

- (a) Using SST to compress the main shaft spring, remove the snap ring with snap ring pliers. SST 09950-20017



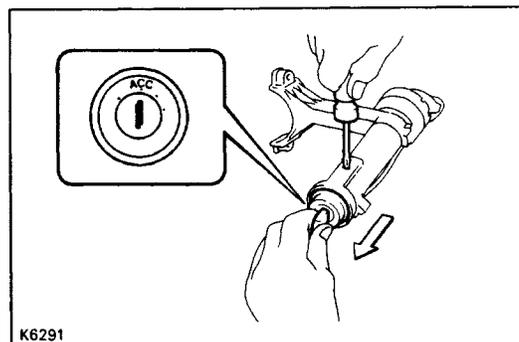
- (b) Remove the main shaft from the column tube.
(c) Remove the spring, thrust collar and bearing.



INSPECTION AND REPLACEMENT OF STEERING COLUMN

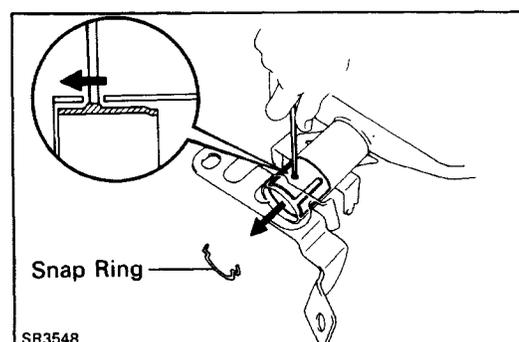
1. INSPECT KEY CYLINDER

Check that the steering lock mechanism operates properly.



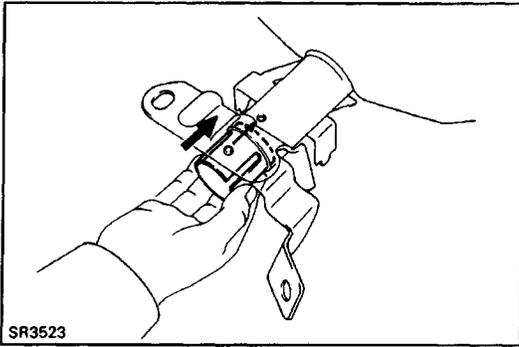
2. IF NECESSARY, REPLACE KEY CYLINDER

- (a) Place the ignition key at the ACC position.
(b) Push down the stop pin with a thin rod, and pull out the key cylinder.
(c) Make sure the ignition key is at the ACC position.
(d) Install a new key cylinder.

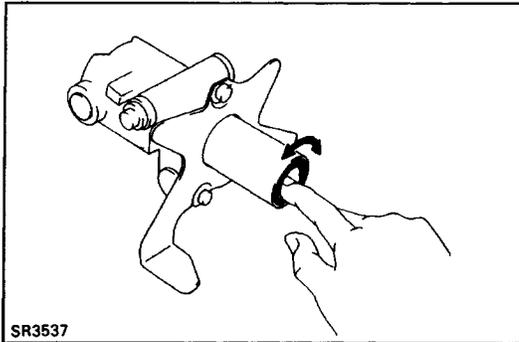


3. IF NECESSARY, REPLACE MAIN SHAFT BUSHING

- (a) Remove the snap ring.
(b) Using a screwdriver, remove the bushing.



- (c) Align the holes of the tube and projections of a new bushing, and install the bushing to the column tube.
- (d) Install the snap ring.

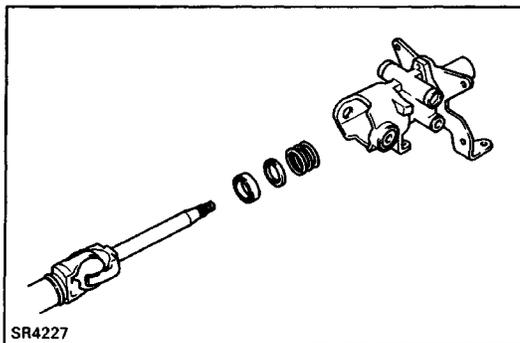


4. INSPECT UPPER BEARING

Check the upper bearing rotation condition and check for abnormal noise.

5. INSPECT KEY INTERLOCK SOLENOID

(See page AT-182)



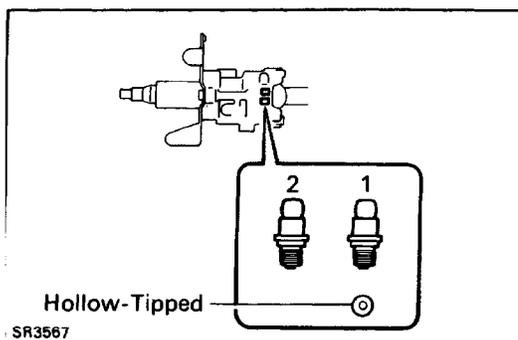
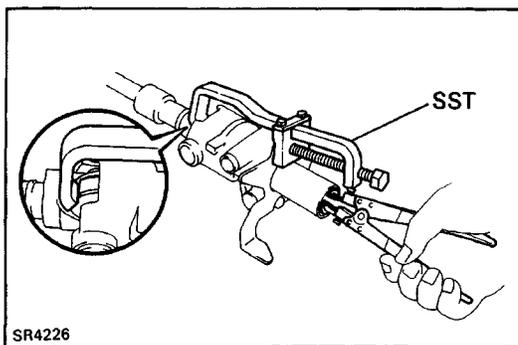
ASSEMBLY OF STEERING COLUMN

(See page SR-11)

1. APPLY MOLYBDENUM DISULPHID LITHIUM BASE GREASE (See page SR-11)

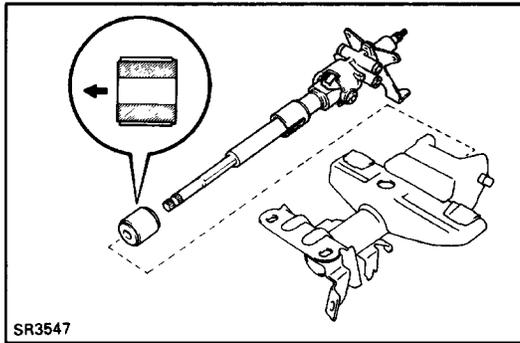
2. INSTALL MAIN SHAFT

- (a) Install the bearing, thrust collar and spring to the main shaft.
 - (b) Install the main shaft into the upper column tube.
 - (c) Using SST to compress the main shaft spring, install the snap ring with snap ring pliers.
- SST 09950-20017



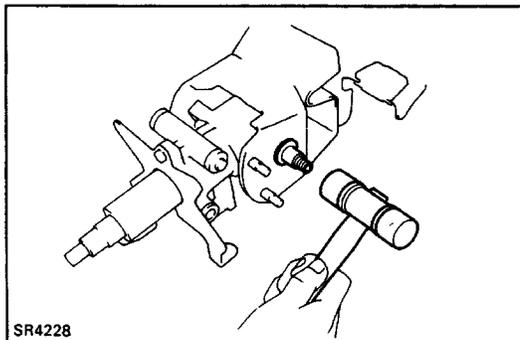
3. SELECT TILT STEERING BOLTS

Select the bolt with the plain thread end when the upper column tube mark is 2, and the bolt with the hollow-tipped thread end when the mark is 1.

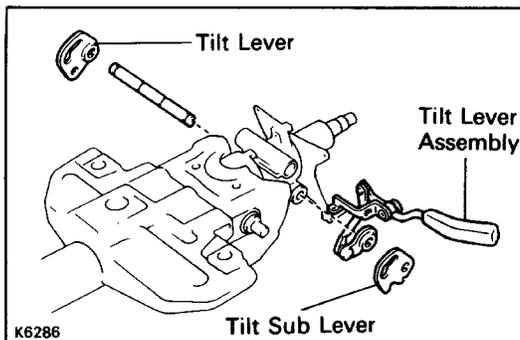


4. INSTALL MAIN SHAFT WITH UPPER COLUMN TUBE

- (a) Install the collar to the main shaft.
- (b) Install the main shaft with the upper column tube into the lower column tube.

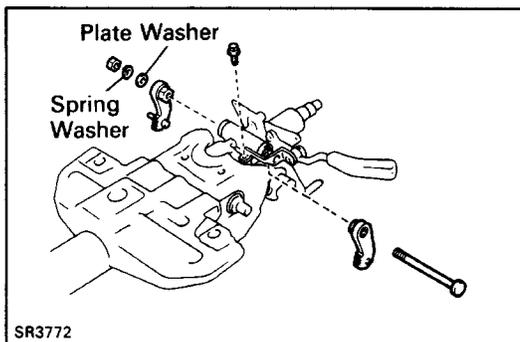


- (c) Using a plastic hammer, drive in the tilt steering bolts.



5. INSTALL TILT LEVER LOCK SHAFT, TILT LEVER ASSEMBLY, TILT SUB LEVER AND TILT LEVER

- (a) Install the tilt lever lock shaft into the upper column tube.
- (b) Install the tilt lever assembly.
- (c) Install the tilt lever and tilt sub lever.



6. INSTALL TILT PAWLS

- (a) Install the two tilt pawls to the upper column tube.
HINT: Install the pawl pin into the long hole of the tilt lever and tilt sub lever.
- (b) Install the bolt through the tilt pawls and tilt lever assembly.
- (c) Temporarily install the two washers and nut.
- (d) Install and torque the tilt lever assembly installation bolt.

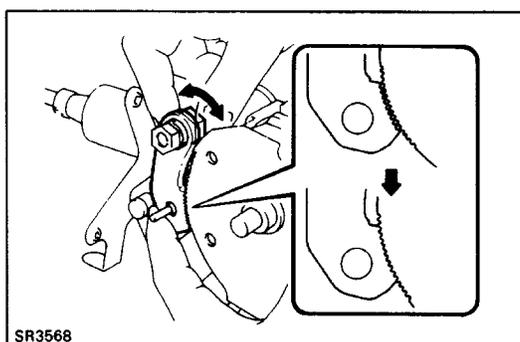
Torque: 2.9 N-m (30 kgf-cm, 26in.-lbf)

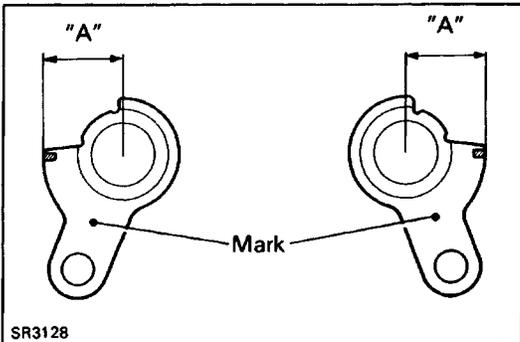
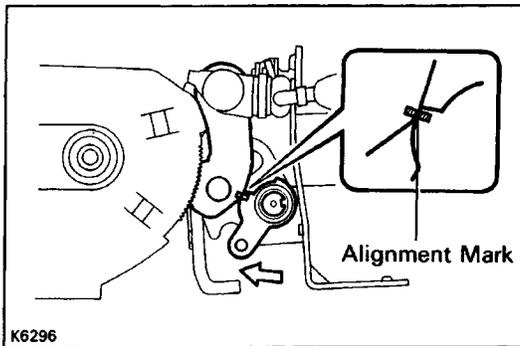
7. ENGAGE AND ADJUST TILT PAWL

- (a) Engage the tilt sub lever side pawl to the center of the ratchet.
- (b) While turning the tilt lever side collar, completely engage the tilt lever side pawl to the ratchet.
- (c) Tighten the nut.

Torque: 5.9 N-m (60 kgf-cm, 52 in.-lbf)

- (d) Check that the pawls rotate smoothly.



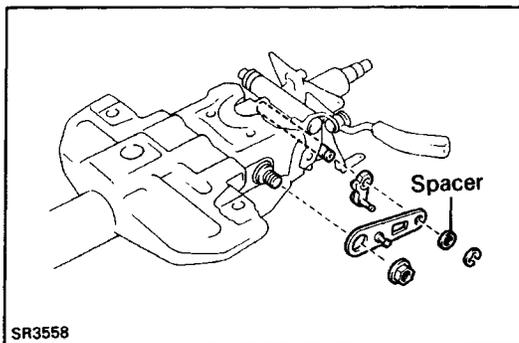


8. SELECT PAWL STOPPERS

- With the tilt pawl and ratchet engaged, install two pawl stoppers.
- Check that the alignment marks on the stopper and pawl align when the stopper is rotated to the pawl side.
- If the alignment marks do not align, select pawl stoppers according to the following table.

Tilt lever side	Tilt sub lever side	Dimension "A"	mm (in.)
1	A	12.68 – 12.74	(0.4992 – 0.5016)
2	B	12.61 – 12.67	(0.4965 – 0.4988)
3	C	12.54 – 12.60	(0.4937 – 0.4961)
4	D	12.47 – 12.53	(0.4909 – 0.4933)
5	E	12.40 – 12.46	(0.4882 – 0.4906)
6	F	12.33 – 12.39	(0.4854 – 0.4878)
7	G	12.26 – 12.32	(0.4827 – 0.4850)

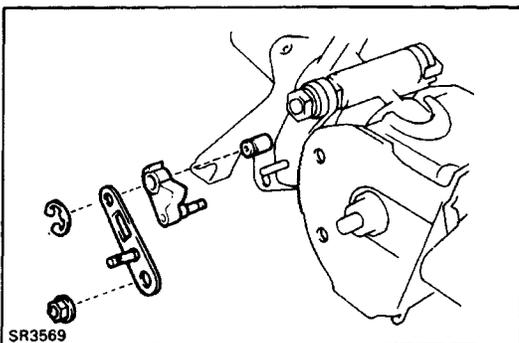
- After selecting the stoppers, check that on both sides the pawl and ratchet are fully engaged.



9. INSTALL PAWL STOPPERS AND TILT LEVER RETAINERS

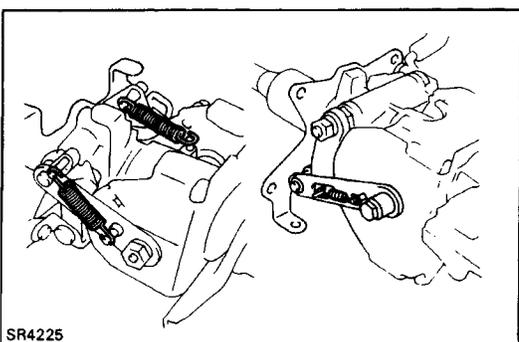
- Install the tilt sub lever side pawl stopper and tilt lever retainer.
- Install the spacer.
- Install the E-ring.
- Install and torque the nut.

Torque: 15 N-m (150 kgf-cm, 11 ft-lbf)

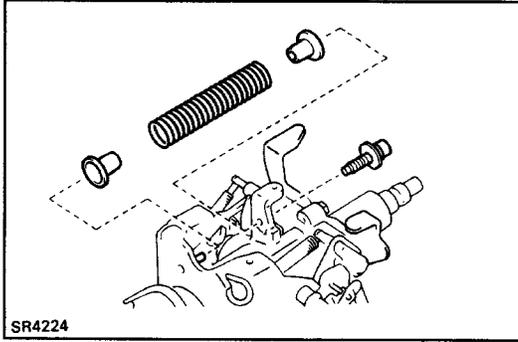


- Install the tilt lever side pawl stopper and tilt lever retainer.
- Install the E-ring.
- Install and torque the nut.

Torque: 15 N-m (150 kgf-cm, 11 ft-lbf)



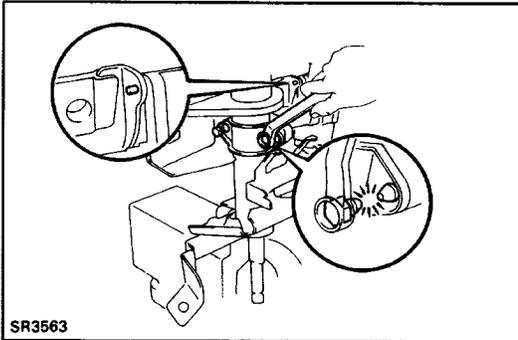
10. INSTALL THREE TENSION SPRINGS

**11. INSTALL COMPRESSION SPRING**

- (a) Install the two bushings to the spring.
- (b) Install the spring and bolt.
- (c) Using a torx wrench, tighten the bolt.

Torx wrench: T30 (Part No. 09042-00010 or locally manufactured tool)

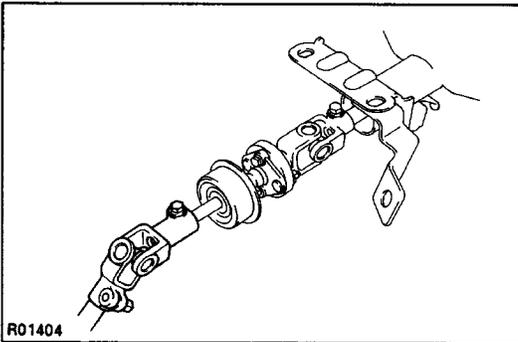
Torque: 7.9 N-m (80 kgf-cm, 69In.-lbf)

**12. INSTALL UPPER BRACKET**

- (a) Install the upper bracket with two new tapered-head bolts.

HINT: Install the upper bracket pin into the column tube hole.

- (b) Tighten the tapered-head bolts until the bolt heads break off.

13. (USA)**INSTALL PROTECTOR****14. INSTALL WIRING HARNESS CLAMP****15. INSTALL INTERMEDIATE SHAFT**

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

16. (5S-FE ENGINE)**INSTALL IGNITION KEY CYLINDER ILLUMINATION****17. CHECK OPERATION OF TILT STEERING**

- (a) Check that there is no axial play at the end of the main shaft.
- (b) With the main shaft in the neutral position, push the tilt lever and check that the main shaft rises to the uppermost position.
- (c) Lower the main shaft, and check that it locks in the uppermost position.