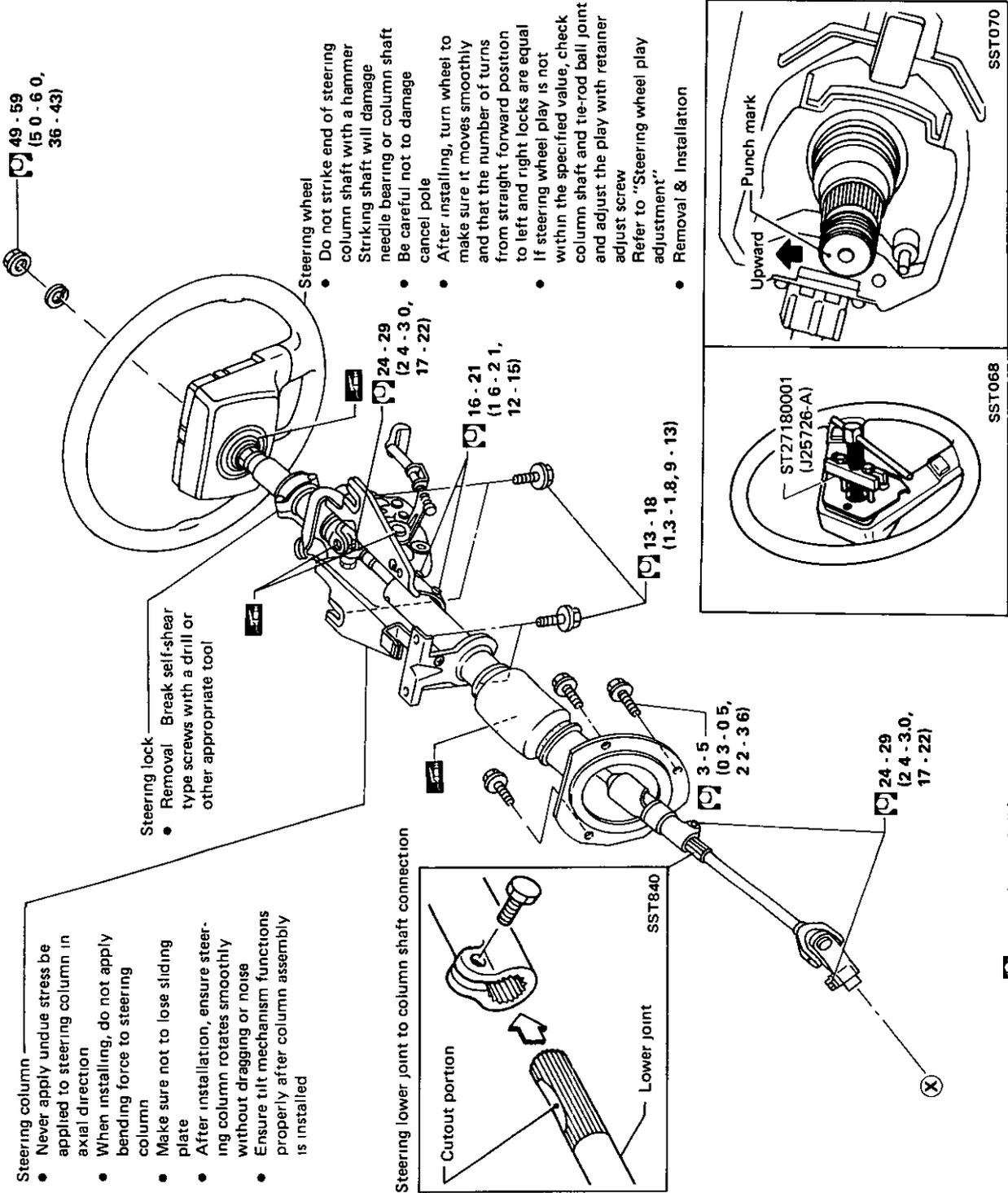




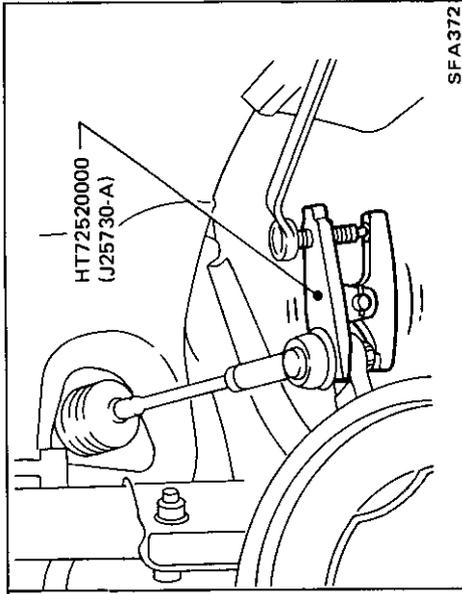
# STEERING SYSTEM

- Fully turn steering wheel to the right and disconnect whole hydraulic line to steering gear assembly, then remove steering gear.
- Whenever disconnecting hydraulic lines, cover openings to prevent foreign material from entering
- Be careful not to damage hydraulic line connection
- Do not reuse O-ring in hydraulic system
- When connecting hydraulic line, apply a coat of oil (Automatic transmission fluid "Dexron Type") to O-rings
- If disconnecting hydraulic line, always perform leak test and bleed air from line after filling it with oil.
- After properly installing steering gear and linkage, check wheel alignment Refer to section MA



N m (kg-m, ft-lb)

# STEERING SYSTEM



- Detach tie-rod ball-studs from knuckle arms with Tool

54 - 98  
(55 - 100, 40 - 72)

Cylinder tube flare nut

20 - 26  
(20 - 27, 14 - 20)

27 - 39  
(28 - 40, 20 - 29) \*

39 - 49  
(40 - 50, 29 - 36)

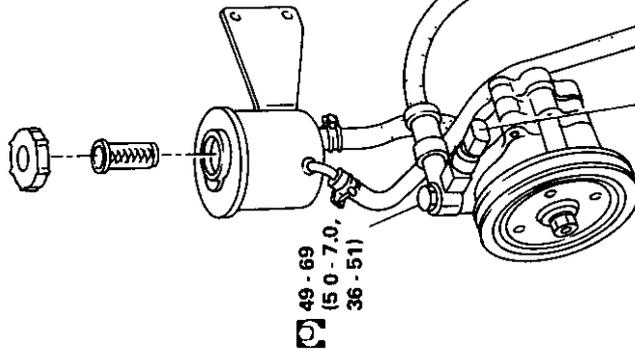
Retainer adjusting screw

High-pressure pipe to steering gear

15 - 25 (15 - 25, 11 - 18) \*

Toe-in adjustment

- When adjusting toe-in, be careful not to twist boots
- Toe-in Refer to MA section



Oil pressure switch  
(Non turbocharged model)

16 - 24  
(16 - 24, 12 - 17) \*

When hydraulic line pressure is above 1,961 - 2,550 kPa (20 - 26 kg/cm<sup>2</sup>, 284 - 370 psi), switch is conductive

78 - 98  
(80 - 100, 58 - 72)

Cylinder tube flare nut

20 - 26  
(20 - 27, 14 - 20)

Steering gear (PR24S)

- N m (kg-m, ft-lb)
- Grease-up points
- Do not reuse
- O-ring type connector

SST203A

# STEERING COLUMN

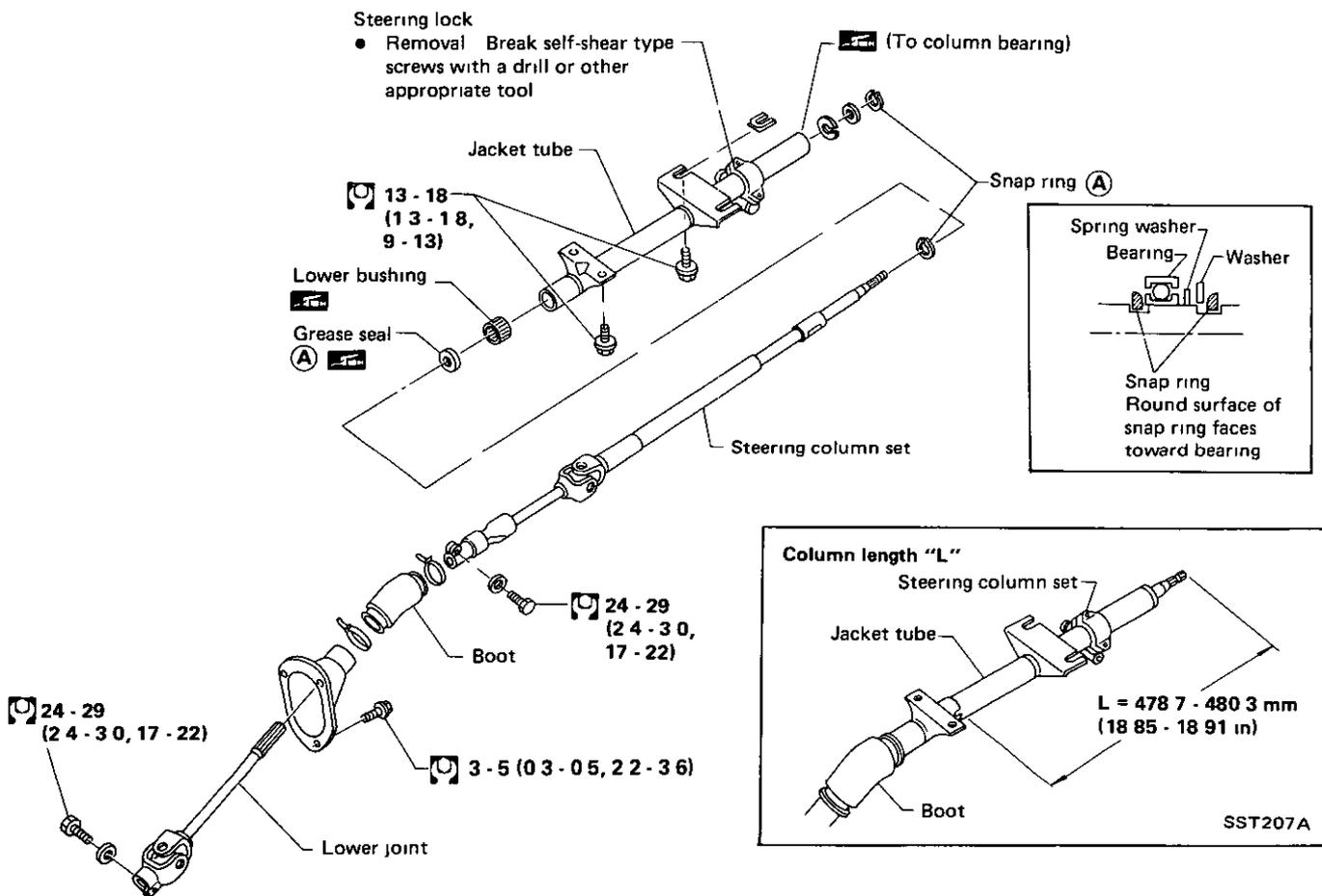
- Never in any case should undue stress be applied to steering column in axial direction
- When installing, do not apply bending force to steering column
- Be careful not to lose sliding plate.
- When the vehicle comes into light collision, check dimension "L", between steering column upper end and jacket tube crashable area

Column length "L" = 478.7 mm - 480.3 mm (18.85 - 18.91 in)

(Measure "L" at neutral position of steering column if equipped with tilt mechanism)

- Check steering column for smooth rotation without binding and noise. If it does not rotate smoothly, check as follows.

## Non-tilt Type Column



- N m (kg-m, ft-lb)
- Grease-up points
- Do not reuse

SST205A



# POWER STEERING SYSTEM —Checking

## Fluid Level Check

Check the fluid level when the fluid is cold.  
Refer to MA section

## Power Steering Pump Belt Tension

Refer to MA section

## Fluid Leakage Check

- 1 Run engine at idle speed or 1,000 rpm  
Make sure temperature of fluid in tank rises to 60 to 80°C (140 to 176°F).
- 2 Turn steering wheel right-to-left several times.
- 3 Hold steering wheel at each "lock" position for five seconds and carefully check for fluid leakage

### CAUTION:

- Do not hold steering wheel at "lock" position for more than 15 seconds at a time.
- If fluid leaks at connectors, replace O-ring (if equipped) Do not overtighten connector as this can damage O-ring and connector.

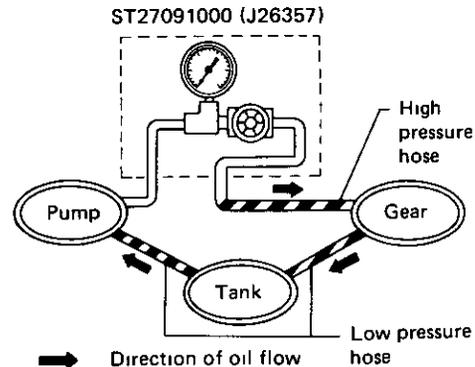
## Bleeding Hydraulic System

1. Raise front end of vehicle until wheels clear ground
- 2 While adding fluid, quickly turn steering wheel fully to right and left and lightly touch steering stoppers  
Repeat steering wheel operation until fluid level no longer decreases.
3. Start engine  
Repeat step 2 above.

## Hydraulic System Check

Before starting, check belt tension, driving pulley and tire pressure (Refer to MA section)

- 1 Set Tool. Open shut off valve. Then bleed air (See "Bleeding Hydraulic System")



SST834

- 2 Run engine.

Make sure temperature of fluid in tank rises to 60 to 80°C (140 to 176°F).

3. Check pressure with steering wheel fully turned to left and right position.

### CAUTION:

Do not hold steering wheel at lock position for more than fifteen seconds.

Oil pump maximum pressure:

6,669 - 7,257 kPa

(68 - 74 kg/cm<sup>2</sup>, 967 - 1,052 psi) at idling

- 4 If oil pressure is below the standard, slowly close shut-off valve and check pressure
  - If pressure raises to standard, gear is damaged
  - If pressure remains below standard, pump is damaged  
Gear may be damaged
5. If oil pressure is above the standard, pump may be damaged.

### CAUTION:

Do not close shut-off valve for more than fifteen seconds.

- 6 After checking hydraulic system, remove Tool and add fluid as necessary, then completely bleed air out of system.

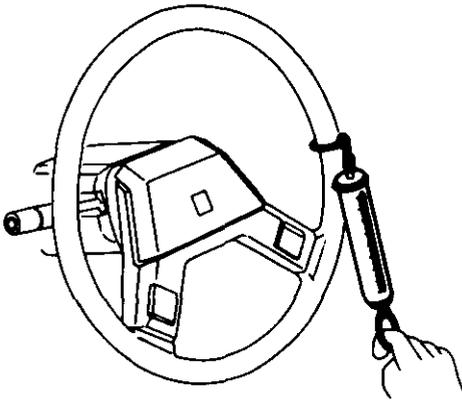
# POWER STEERING SYSTEM —Checking

## Turning Force Check

- 1 Park vehicle on a level, dry surface and set parking brake
- 2 Bring power steering fluid up to adequate operating temperature [Make sure temperature of fluid is approximately 60 to 80°C (140 to 176°F)]
- **Tires must be inflated to normal pressure.**
- 3 Check steering wheel turning force when steering wheel has been turned 360° from neutral position

### Steering wheel turning force:

39.2 N (4.0 kg, 8.8 lb) or less



SST474

## Steering Wheel Play Adjustment

### Steering wheel axial play:

0 mm (0 in)

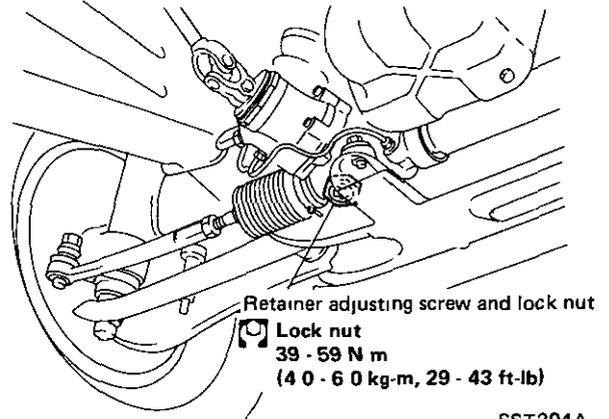
### Steering wheel play:

35 mm (1.38 in) or less

If steering wheel play is not within specifications, check condition of column shaft and tie-rod ball points. If they are in good order, adjust rack retainer.

### Rack retainer adjustment:

- a) Adjust only when steering wheel play is outside specifications
- b) Prior to adjustment, completely loosen adjustment screw, clean old locking sealer and apply new locking sealer. Tighten the screw to approximately 3 N·m (0.3 kg-m, 2.2 ft-lb) and back off by 20° to 25°. Measure steering wheel play to make sure it is within specifications. Then tighten lock nut.



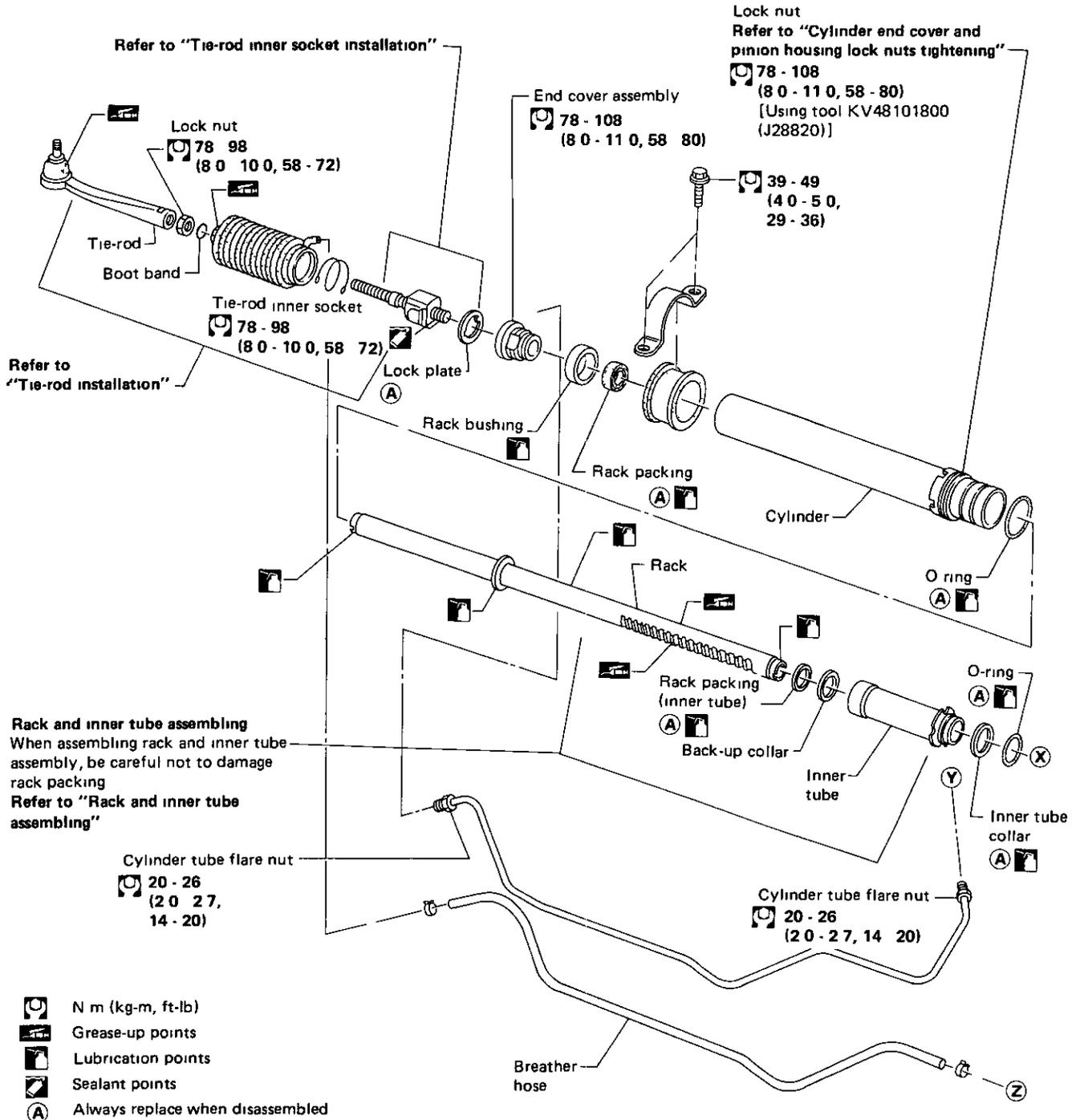
SST204A

- c) After adjustment, drive vehicle at low speeds to check for proper operation of steering system.

# POWER STEERING GEAR AND LINKAGE

## Disassembly and Assembly

- Do not disassemble unless repairing to stop oil leak, replacing tie-rod and tie-rod inner socket ball joint, or for various adjustments.
- Do not reuse O-rings or oil seals.
- When assembling, apply a coat of oil to mating surfaces of O-rings and oil seals
- When assembling, be careful not to damage oil seals
- Before starting work, thoroughly clean all parts in cleaning solvent or automatic transmission fluid "Dexron Type" and blow dry with compressed air, if available
- After assembling tie-rod inner socket to rack & housing assembly, check rack stroke (refer to "Rack stroke")



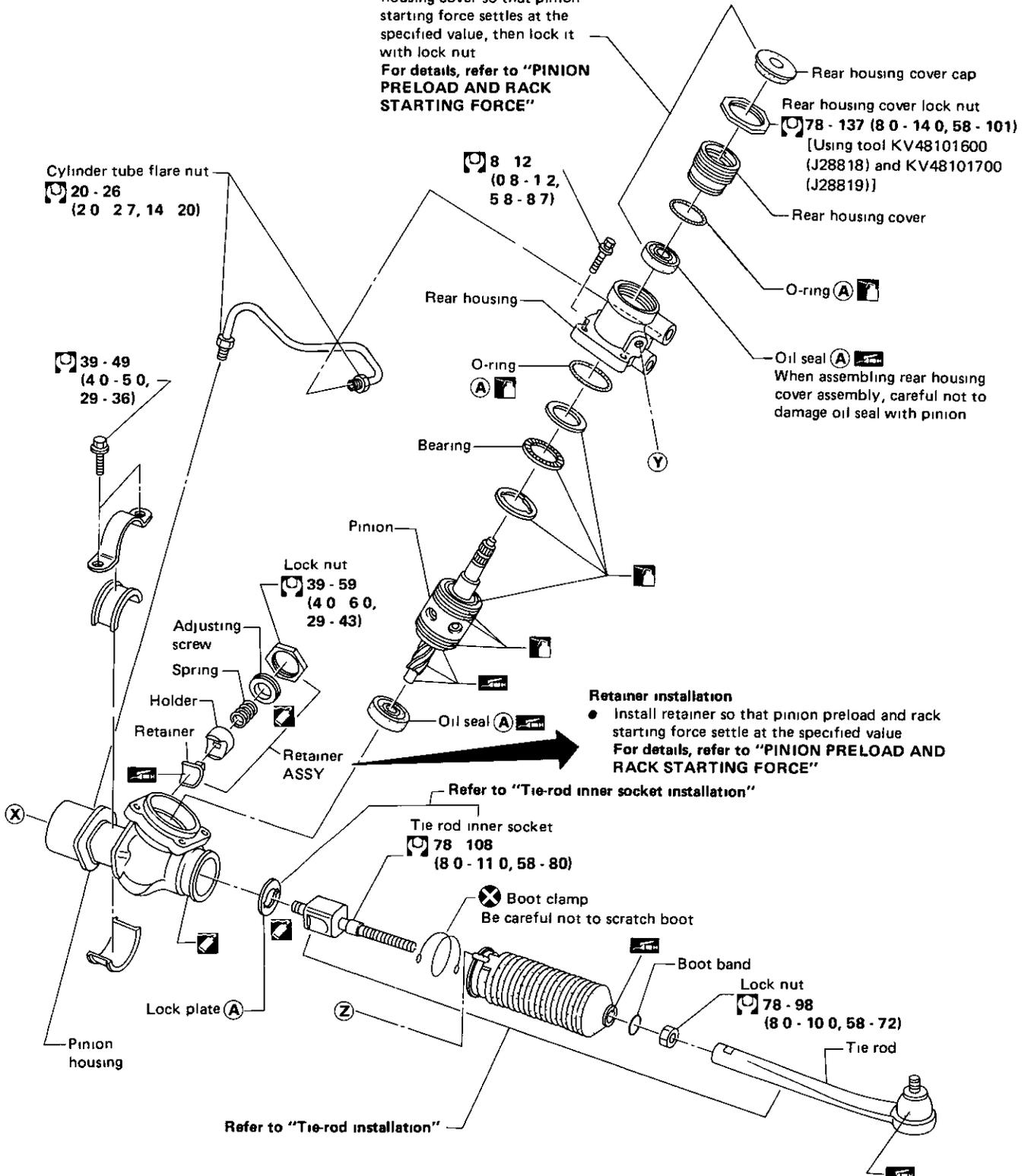
- N m (kg-m, ft-lb)
- Grease-up points
- Lubrication points
- Sealant points
- Always replace when disassembled

# POWER STEERING GEAR AND LINKAGE

## Disassembly and Assembly (Cont'd)

### Rear housing cover installation

- With retainer adjusting screw fully loosened, tighten rear housing cover so that pinion starting force settles at the specified value, then lock it with lock nut  
For details, refer to "PINION PRELOAD AND RACK STARTING FORCE"



SST934A

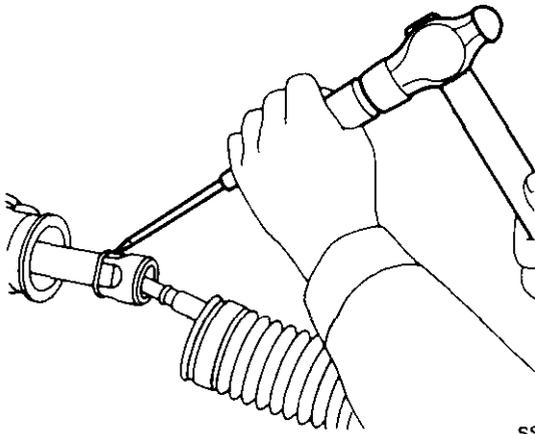
# POWER STEERING GEAR AND LINKAGE

## Disassembly

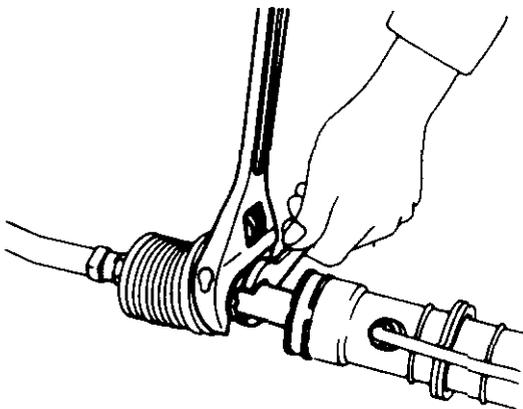
### CAUTION.

- The parts which can be disassembled are strictly limited, and never disassemble parts other than the specified ones
- Disassembly should be performed in a place as clean as possible
- Hands should be cleaned before disassembly
- Do not use a rag. Be sure to use nylon or paper cloth
- When disassembling and reassembling, do not allow any foreign matter to enter or contact any parts of steering gear

- 1 Remove tie-rod assembly
- Flatten lock plate

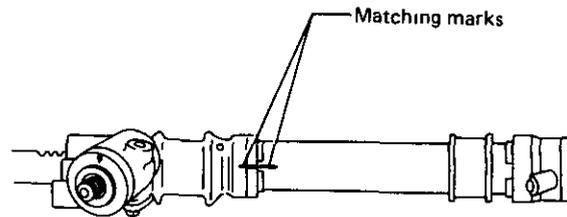


SST881



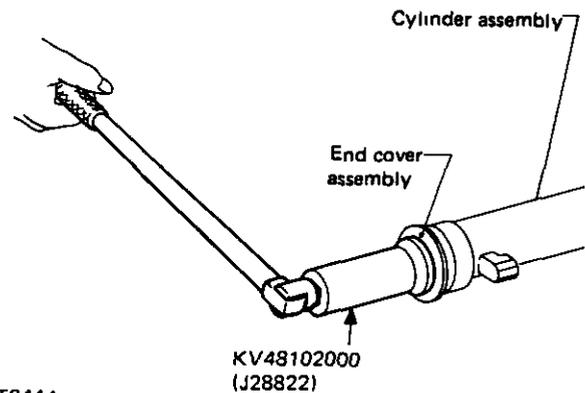
SST409

- 2 Remove retainer.
- 3 Remove pinion assembly
- 4 Apply matching marks as shown below



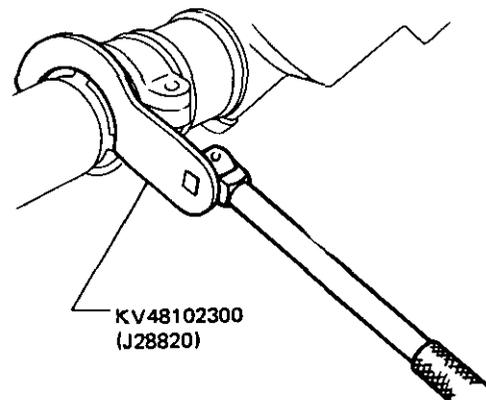
SST850A

- 5 Remove end cover assembly with Tool



SST844A

- 6 Disconnect cylinder lock nut using Tool and separate cylinder from pinion housing
7. Draw out rack assembly



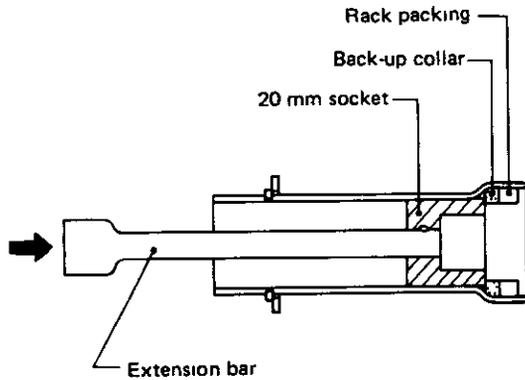
SST845A

# POWER STEERING GEAR AND LINKAGE

## Disassembly (Cont'd)

8. Remove rack packing and back-up collar with 20 mm socket and extension bar

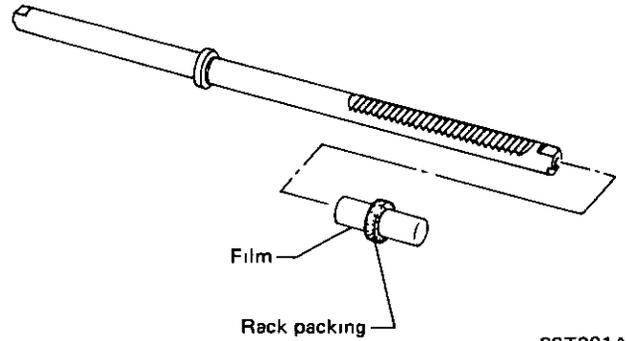
**Do not scratch inner surfaces of cylinder.**



SST761A

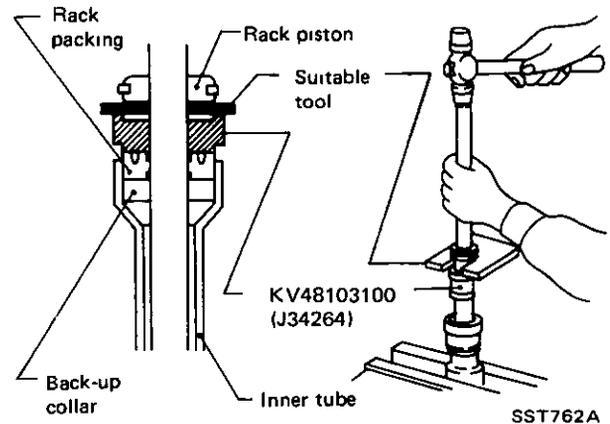
## Assembly

- 1 Insert rack packing
  - Place plastic film on inner side of rack packing to prevent damage by rack teeth
  - Always remove plastic film after rack packing is positioned properly



SST201A

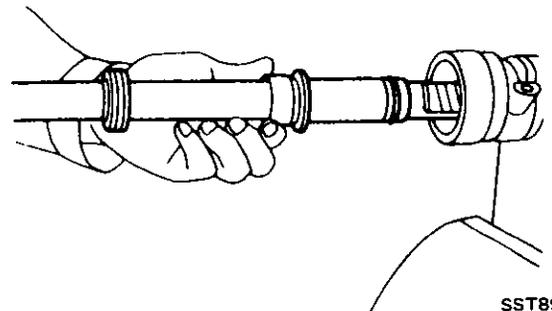
- 2 Attach back-up collar to inner tube
- 3 Insert rack assembly into inner tube
- 4 Press rack packing into inner tube



SST762A

- 5 Insert rack assembly and set inner tube assembly to pinion housing

**Coat rack teeth with multi-purpose grease.**



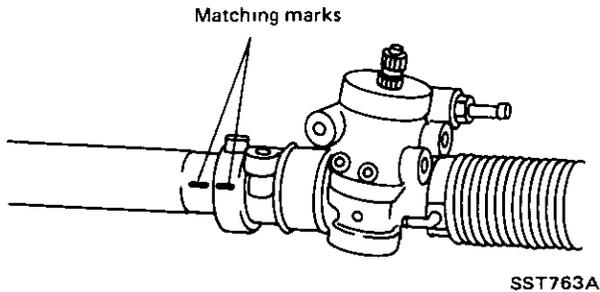
SST894

# POWER STEERING GEAR AND LINKAGE

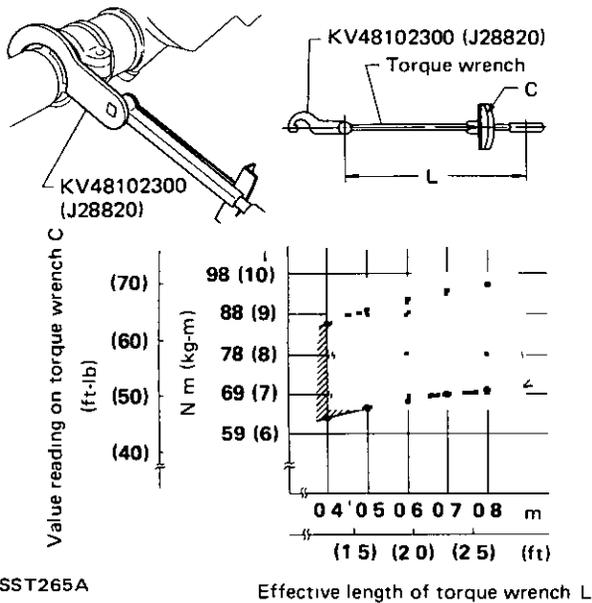
## Assembly (Cont'd)

- 6 Position cylinder assembly on pinion housing by aligning matching marks

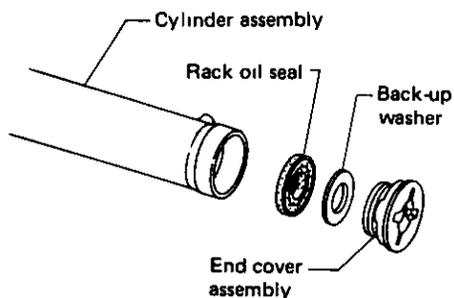
Be careful not to damage piston teflon ring.



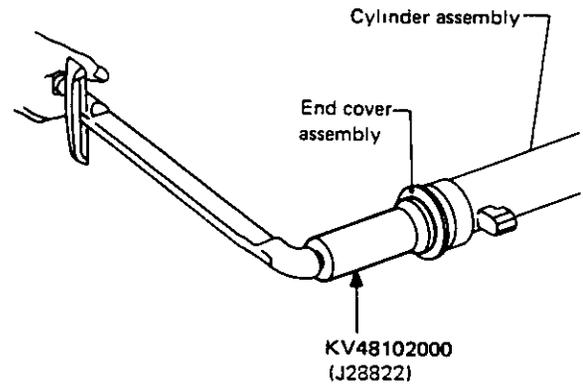
- 7 Tighten cylinder lock nut with Tool.



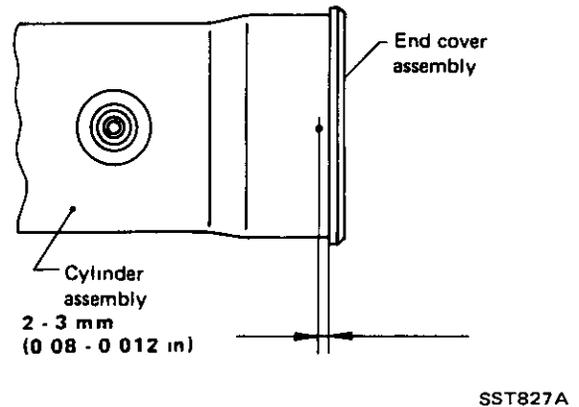
8. Install back-up washer and rack oil seal to cylinder assembly



- 9 Tighten end cover assembly with Tool.



- 10 Fasten end cover assembly to cylinder assembly by staking

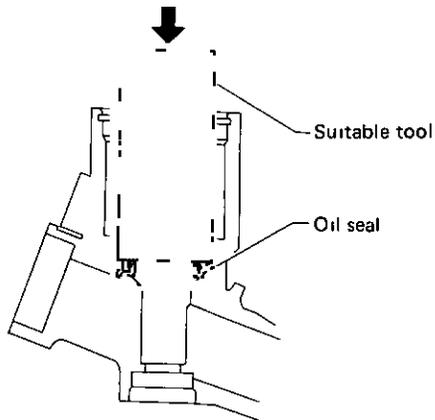


- 11 Set rack gear in neutral position

# POWER STEERING GEAR AND LINKAGE

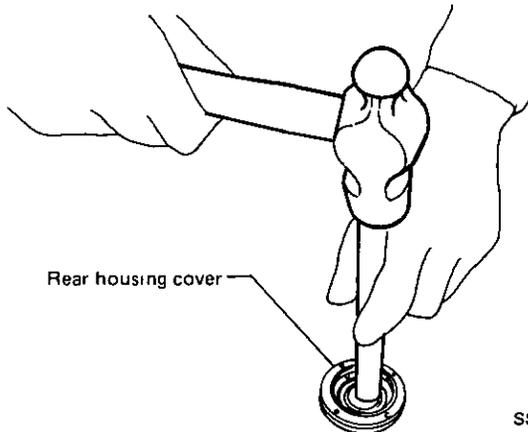
## Assembly (Cont'd)

- 12 Coat seal lip of oil seal with multi-purpose grease and install new pinion oil seal to pinion housing with suitable tool



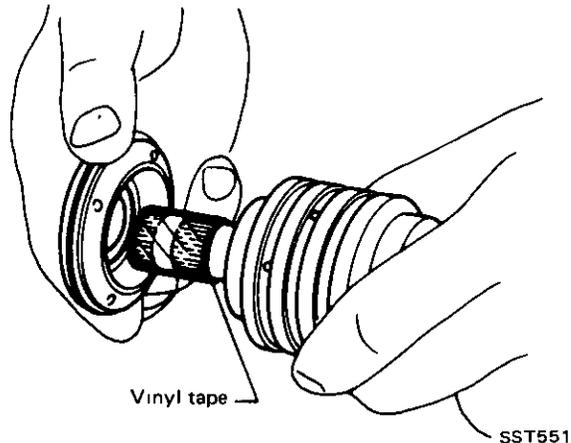
SST381A

- 13 Install rear oil seal using suitable tool

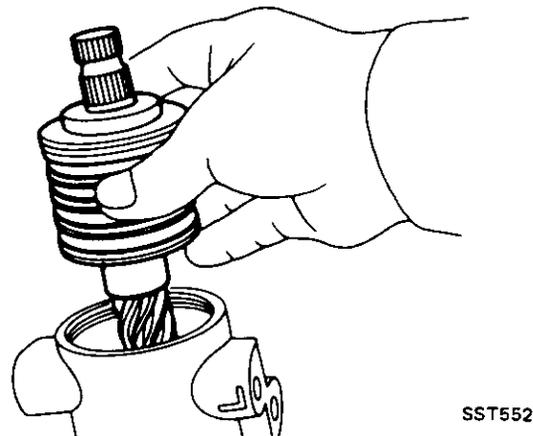


SST268A

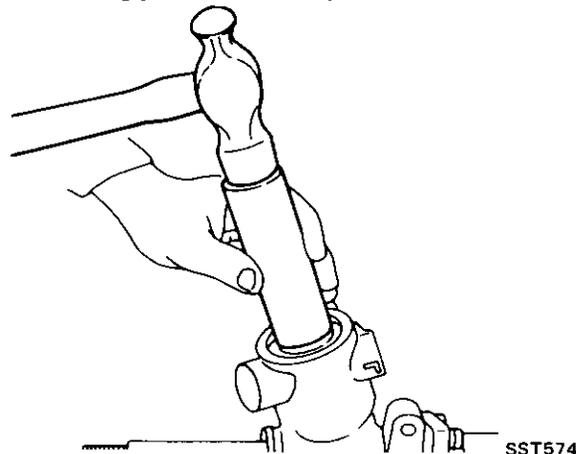
14. Install rear housing cover assembly to pinion  
Wrap vinyl tape around pinion serrations to prevent oil seal from being damaged.



- 15 Install pinion assembly to pinion housing  
Be careful not to damage pinion teflon ring.



When installing pinion assembly, use suitable tool.

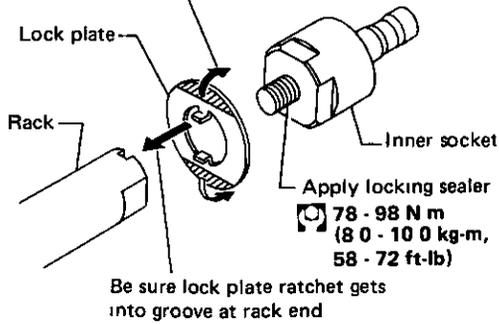


# POWER STEERING GEAR AND LINKAGE

## Assembly (Cont'd)

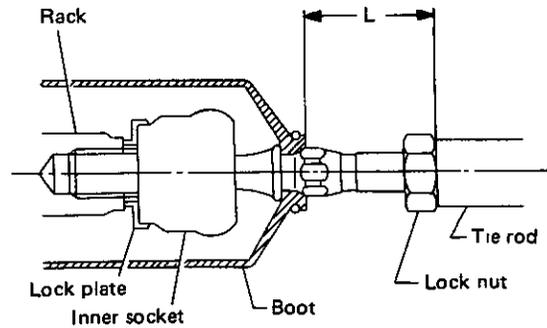
### 16 Install tie-rod inner socket

After tightening inner socket, bend lock plate securely and remove burrs



SST213A

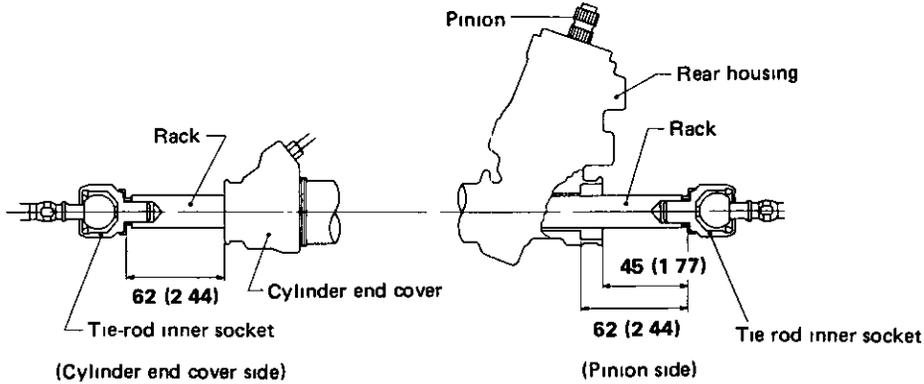
### 17. Install tie-rod



- Standard dimension L = 42.9 mm (1.689 in)
- When installing tie-rod or adjusting toe-in, be careful not to twist boots
- Toe-in Refer to MA section

SST936A

### 18 Measure rack stroke



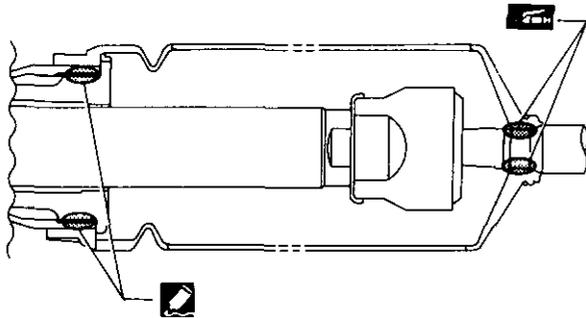
Unit mm (in)

SST215A

# POWER STEERING GEAR AND LINKAGE

## Assembly (Cont'd)

- 19 Apply a coat of sealant to contact surfaces between boot and cylinder before installing boot



SST477A

- 20 Install boot clamps

- To install, wrap boot clamp around boot groove twice. Tighten clamp by twisting rings at both ends four or four and a half turns with screwdriver while pulling with a force of approx 98 N (10 kg, 22 lb)

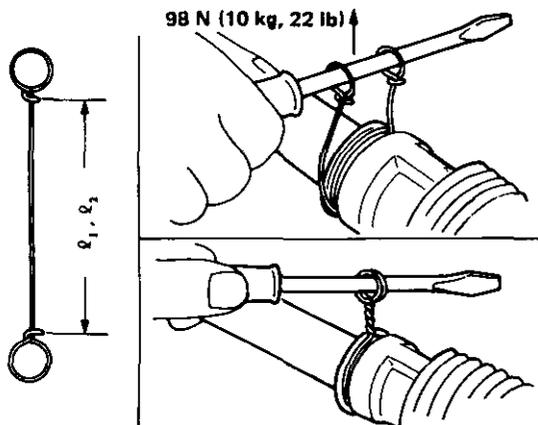
Boot clamp length:  $\ell_1, \ell_2$

$\ell_1 = 390 \text{ mm (15.35 in)}$

... at pinion gear side

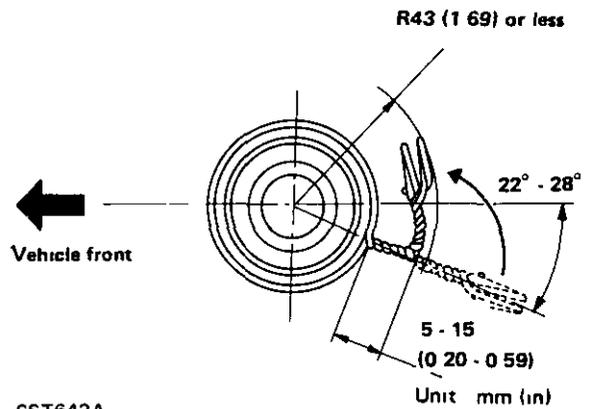
$\ell_2 = 430 \text{ mm (16.93 in)}$

... at opposite pinion gear side



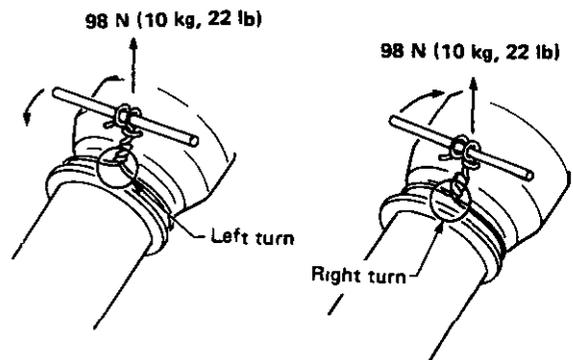
SST438A

- Install boot clamp so that it is to the rear of the vehicle when gear housing is attached to the body. (This will avoid interference with other parts.)



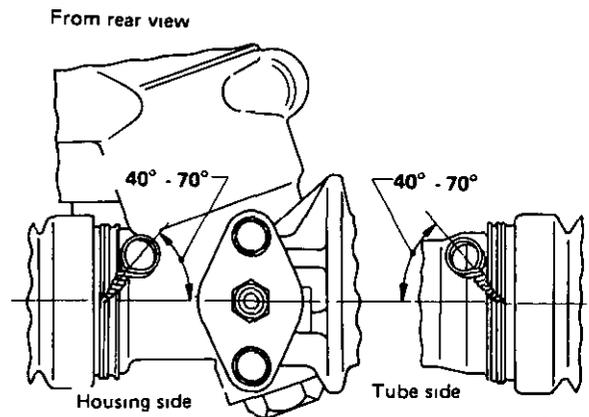
SST642A

- Twist boot clamp in the direction shown in figure at left



SST440A

- After twisting boot clamp four or four and a half turns, bend twisted end diagonally so it does not contact boot



SST842A

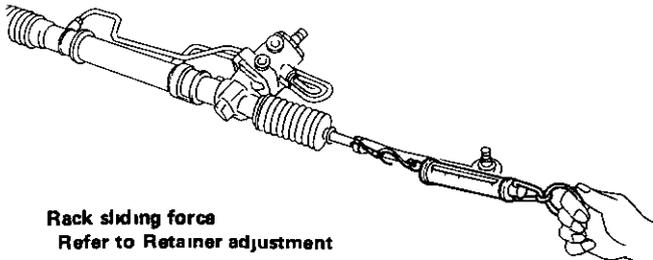
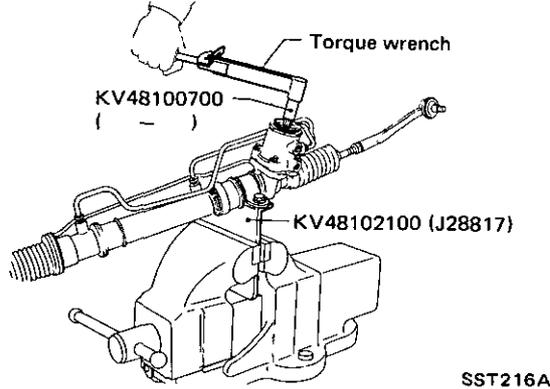
# POWER STEERING GEAR AND LINKAGE

## Inspection and Adjustment

### PINION PRELOAD AND RACK STARTING FORCE

- After disconnecting hydraulic line and draining fluid, measure them

Pinion rotating torque  
1.9 N·m (19 kg-cm, 16 in-lb) or less



- If they are not within specifications, adjust retainer adjusting screw
- If retainer adjustment cannot be made properly, fully loosen retainer adjusting screw, and then adjust pinion preload  
Then readjust retainer adjusting screw
- If pinion preload adjustment cannot be made properly, replace steering gear assembly

### Retainer adjustment (VG30E engine model)

1. Remove retainer adjusting screw and clean old locking sealer off the threads
2. Apply new locking sealer to the threads  
Tighten the screw to approximately 3 N·m (0.3 kg-m, 2.2 ft-lb) and back it off by 20° to 25°

3. If pinion and rack preloads are within specified ranges, tighten lock nut securely (Check rack for smooth movement over its entire stroke)

### Pinion rotating torque

1.9 N·m (19 kg-cm, 16 in-lb) or less

### Rack sliding force:

245 N (25 kg, 55 lb) or less  
in neutral position

- ☑ : Retainer adjusting screw lock nut:  
39 - 59 N·m  
(4.0 - 6.0 kg-m, 29 - 43 ft-lb)

### Retainer adjustment (VG30ET engine model)

1. Remove retainer adjusting screw and clean old locking sealer off the threads
2. Apply new locking sealer to the threads.  
Tighten the screw to approximately 3 N·m (0.3 kg-m, 2.2 ft-lb) and back it off by 20° to 25°
3. If pinion and rack preloads are within specified ranges, tighten lock nut securely. (Check rack for smooth movement over its entire stroke)

### Pinion rotating torque

1.9 N·m (19 kg-cm, 16 in-lb) or less

### Rack sliding force ( $F_1$ ):

245 N (25 kg, 55 lb) or less  
in neutral position

- ☑ : Retainer adjusting screw lock nut  
39 - 59 N·m  
(4.0 - 6.0 kg-m, 29 - 43 ft-lb)

4. Check rack sliding force ( $F_2$ ), when installing steering gear assembly on vehicle and starting engine.

### Rack sliding force ( $F_2$ ):

245 N (25 kg, 55 lb) or more

5. After checking rack sliding force ( $F_2$ ), make sure that the handle returns smoothly when driving

# POWER STEERING GEAR AND LINKAGE

## Inspection and Adjustment (Cont'd)

### CAUTION:

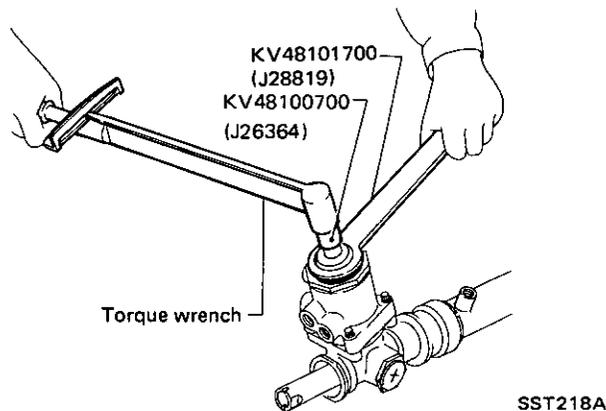
When changing retainer spring, use the same part number retainer spring as the former retainer spring.

| Part number | Set load N (kg, lb) | Identification (Color) |
|-------------|---------------------|------------------------|
| 48237-F6100 | 127 (13, 29)        | Brown                  |
| 48237-F6101 | 157 (16, 35)        | Pink                   |
| 48237-W1000 | 186 (19, 42)        | Unpainted              |
| 48237-F6102 | 216 (22, 49)        | Green                  |
| 48237-F6103 | 245 (25, 55)        | Purple                 |

### Pinion preload adjustment

Before making pinion preload adjustment, make sure retainer adjusting screw is loosened completely

- 1 Screw in rear housing cover completely and back it off by 180° to 360° Then turn pinion a few rotations and then measure pinion starting torque



Pinion starting torque  $T_1$  :

**0.7 N·m (7 kg-cm, 6.1 in-lb) or less**

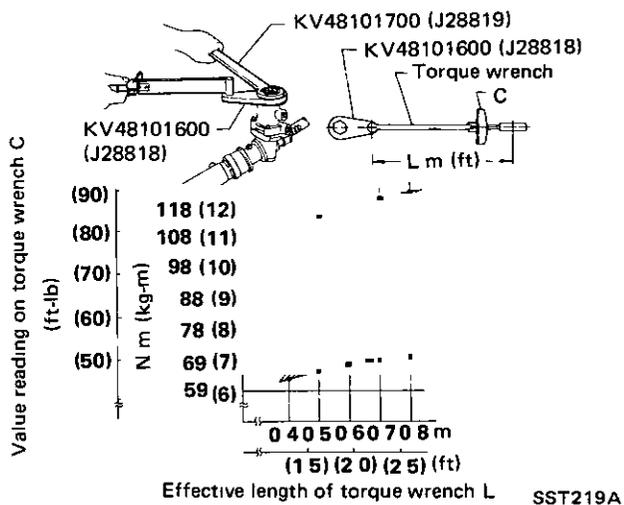
Free play should not be allowed for pinion

2. Screw in rear housing cover until pinion starting torque reaches " $T_2$ ", then tighten lock nut

$$T_2 = T_1 + 0.5 \text{ N·m (5 kg-cm, 4.3 in-lb)}$$

### Lock nut

**78 - 137 N·m  
(8.0 - 14.0 kg-m, 58 - 101 ft-lb)**



3. Measure pinion starting torque  $T_3$  to make sure it is within specified range

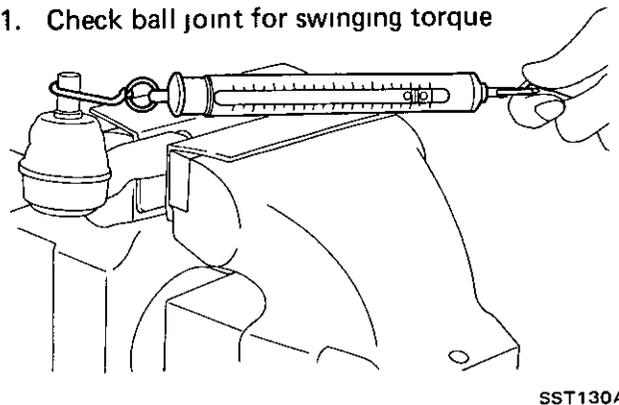
$T_3$  :

**0.8 N·m (8 kg-cm, 6.9 in-lb) or less and  
 $T_1 + [0.10 - 0.25 \text{ N·m (1.0 - 2.5 kg-cm, 0.87 - 2.17 in-lb)]$**

4. If  $T_3$  does not meet the above two values, repeat step 2 and re-adjust pinion preload

### TIE-ROD OUTER SOCKET

1. Check ball joint for swinging torque



# POWER STEERING GEAR AND LINKAGE

## —Inspection and Adjustment (Cont'd)

### Tie-rod outer socket:

#### Swinging torque

0.15 - 2.94 N·m

(1.5 - 30 kg-cm, 1.3 - 26.0 in-lb)

- 2 Check condition of dust cover. If it is cracked excessively, replace

### TIE-ROD INNER SOCKET

Check inner socket for swinging torque and axial play. If ball stud is worn and play in axial direction is excessive or joint is hard to swing, replace as a complete unit.

### Tie-rod inner socket:

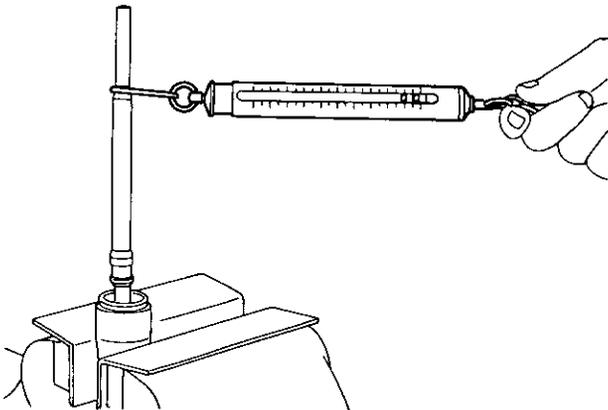
#### Swinging torque

0.1 - 7.8 N·m

(1 - 80 kg-cm, 0.9 - 69.4 in-lb)

#### Axial play

0 mm (0 in)



SST106A

### BOOT

Check condition of boot. If it is cracked, replace boot.

### CYLINDER TUBES AND BREATHER HOSE

Check cylinder tubes and breather hose for scratches or other damage.

Replace if necessary.

### STEERING GEAR COMPONENT PARTS

Thoroughly examine steering gear component parts. If those parts are damaged, cracked or worn, replace steering gear as an assembly.



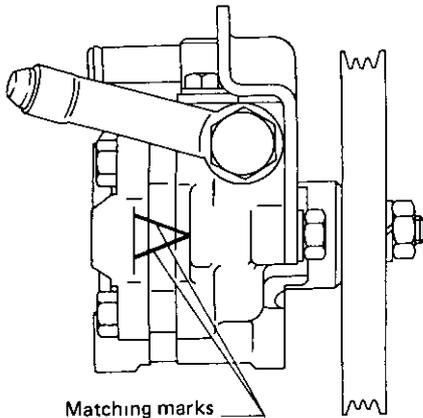
# POWER STEERING OIL PUMP

## Disassembly

### CAUTION:

- The parts which can be disassembled are strictly limited. Never disassemble parts other than the specified ones.
- Disassembly should be performed in a place as clean as possible.
- Do not use a rag. Be sure to use nylon or paper cloth.
- When disassembling and reassembling, do not allow any foreign material to enter or contact any parts.

1 Inscribe matching marks as shown below



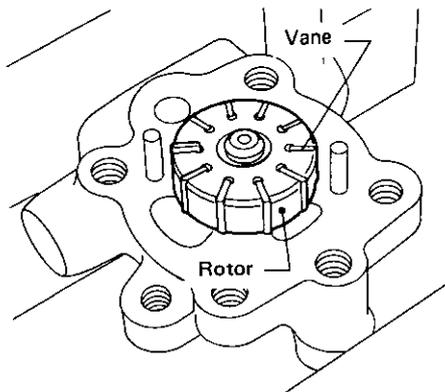
SST127A

2. Remove rear cover

3 Remove O-rings from cam case.

### CAUTION:

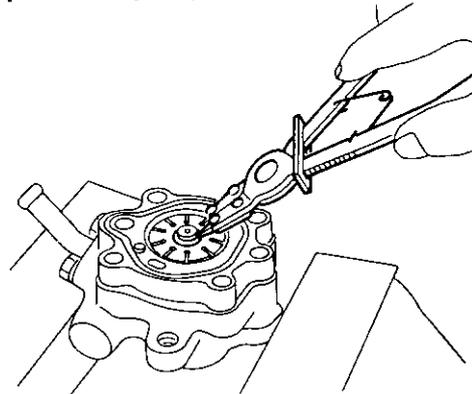
When removing cam case, be sure that the vane does not come off the rotor.



SST032A

4 Remove snap ring, then draw pulley shaft out.

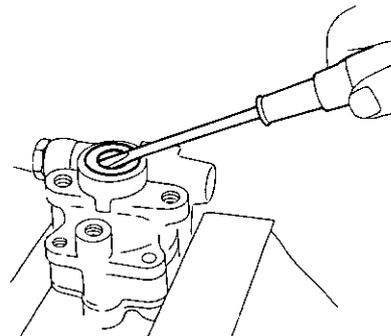
- Be careful not to drop pulley shaft.
- Be careful not to damage rotor. If damaged, replace as a pump assembly.



SST033A

5. Install cam case and rear cover, then remove oil seal.

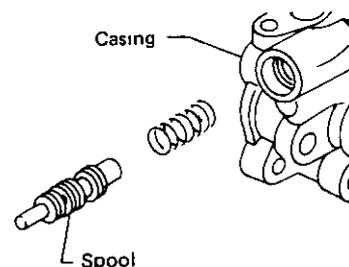
- Be careful not to damage casing.



SST034A

6. Remove joint.

- Be careful not to drop spool.



SST036A

7. Remove suction pipe, then remove O-ring

# POWER STEERING OIL PUMP

## Inspection

Wash clean all disassembled parts (inside pump) in suitable cleaning solvent

### INSIDE PARTS

If there are any cracks or flaws in the following parts, replace pump assembly

- Inside of cam case
- Matching surface of casing, rear cover and/or cam case
- Vane and rotor
- Pulley shaft

### PULLEY AND PULLEY SHAFT

- If pulley is cracked or deformed, replace it
- If an oil leak is observed around pulley shaft oil seal, replace it.
- If serration of pulley or pulley shaft is deformed or worn, replace it

### OIL PRESSURE SWITCH

(Non-turbocharged model)

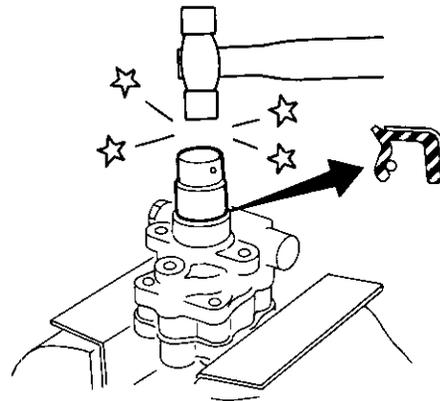
| High-pressure side hydraulic line pressure kPa (kg/cm <sup>2</sup> , psi) | Operation |
|---------------------------------------------------------------------------|-----------|
| Increasing to 1,961 - 2,942 (20- 30, 284 - 427)                           | Turn ON   |
| Decreasing to Approx 981 - 2,942 (10 - 30, 142 - 427)                     | Turn OFF  |

Refer to "Hydraulic System Check" in "POWER STEERING SYSTEM – Checking"

## Assembly

Assemble oil pump in the reverse order of disassembly, noting the following instructions

- Before installing O-rings and oil seal, apply a thin coat of power steering fluid to them
- Make certain that O-rings and oil seal are installed properly
- Always install new O-rings and an oil seal
- Be careful of oil seal direction



SST038A

- When assembling vanes to rotor, rounded surfaces of vanes must be facing cam case

# SERVICE DATA AND SPECIFICATIONS (S.D.S.)

## General Specifications

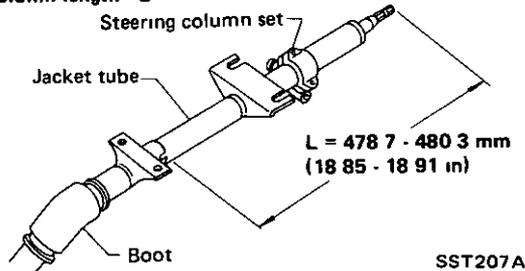
## Inspection and Adjustment

|                      |                           |
|----------------------|---------------------------|
| Steering gear type   | PR24S<br>[Power steering] |
| Steering column Type | Collapsible               |

Column length L

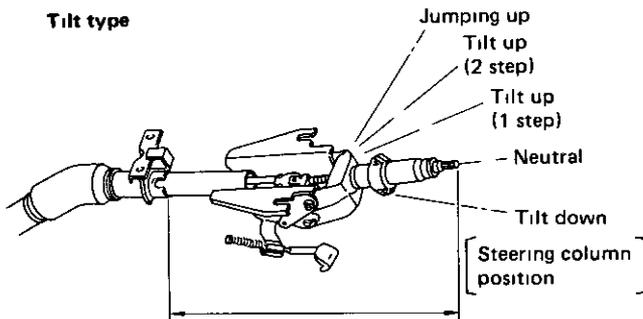
### Non-tilt type

Column length "L"



SST207A

### Tilt type



L = 478.7 - 480.3 mm (18.85 - 18.91 in)  
at steering column Neutral position

SST208A

|                                       |                                            |
|---------------------------------------|--------------------------------------------|
| Turn of steering wheel (Lock to lock) | 2.8                                        |
| Steering overall gear ratio           | 15.3                                       |
| Power steering fluid                  |                                            |
| Type                                  | Automatic transmission fluid "DEXRON type" |
| Capacity ℓ (US pt, Imp pt)            | Approx 0.9 (1-7/8, 1-5/8)                  |
| Normal operating temperature °C (°F)  | 60 - 80 (140 - 176)                        |

## GENERAL

|                                                            |                                |                                                                                                      |
|------------------------------------------------------------|--------------------------------|------------------------------------------------------------------------------------------------------|
| Steering wheel axial play                                  | mm (in)                        | 0 (0)                                                                                                |
| Steering wheel play                                        | mm (in)                        | 35 (1.38) or less                                                                                    |
| Power steering system                                      |                                |                                                                                                      |
| Steering wheel turning force at 360° position from Neutral | N (kg, lb)                     | 39.2 (40.8, 8.8) or less                                                                             |
| Oil pump belt deflection (Measured when engine is cold)    | mm (in)/98 N (10 kg, 22 lb)    | New 10 - 13 (0.39 - 0.51)<br>Used 13 - 16 (0.51 - 0.63)<br>Limit 21 (0.83) - Replace belt to new one |
| Oil pump maximum pressure                                  | kPa (kg/cm <sup>2</sup> , psi) | 6,669 - 7,257 (68 - 74, 967 - 1,052)                                                                 |

### Oil pressure switch operation

| Hydraulic line pressure kPa (kg/cm <sup>2</sup> , psi) | Operation |
|--------------------------------------------------------|-----------|
| Increasing to 1,961 - 2,942 (20 - 30, 284 - 427)       | Turn ON   |
| Decreasing to 981 - 2,942 (10 - 30, 142 - 427)         | Turn OFF  |

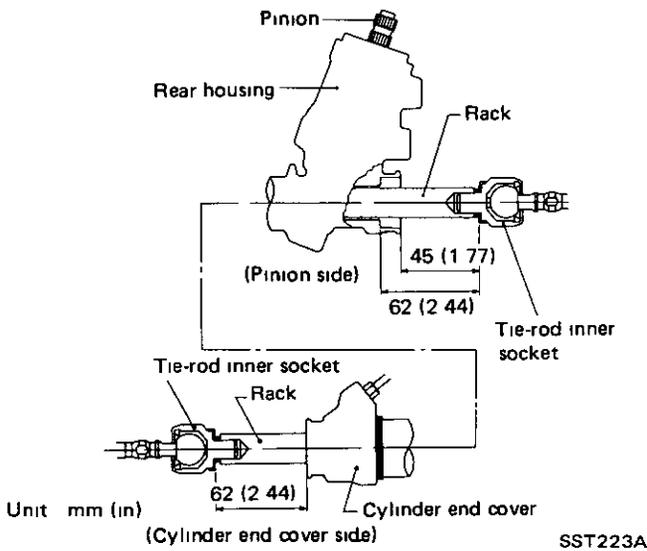
# SERVICE DATA AND SPECIFICATIONS (S.D.S.)

## Inspection and Adjustment (Cont'd)

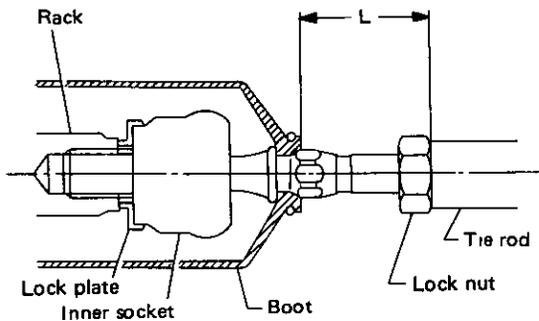
### STEERING GEAR AND LINKAGE (PR24S)

|                                                                |                                       |
|----------------------------------------------------------------|---------------------------------------|
| Tie-rod outer ball joint<br>Swinging torque N m (kg-cm, in-lb) | 0 15 - 2 94<br>(1 5 - 30, 1 3 - 26 0) |
| Tie-rod inner ball joint<br>Swinging torque N m (kg-cm, in-lb) | 0 1 - 7.8<br>(1 - 80, 0 9 - 69 4)     |
| Axial play mm (in)                                             | 0 (0)                                 |

Rack stroke



Tie-rod standard length mm (in)



- Standard dimension L = 429 mm (1 689 in)
- When installing tie rod or adjusting toe-in, be careful not to twist boots
- Toe-in Refer to MA section

SST936A

|                                                                                                       |                      |
|-------------------------------------------------------------------------------------------------------|----------------------|
| Pinion rotating torque<br>(Pinion and rack gear assembly without fluid)<br>N m (kg-cm, in-lb)         | 1 9 (19, 16) or less |
| Rack sliding force in neutral position<br>(Pinion and rack gear assembly without fluid)<br>N (kg, lb) | 245 (25, 55) or less |

## Tightening Torque

### STEERING COLUMN

| Unit                                                  | N m     | kg-m      | ft-lb     |
|-------------------------------------------------------|---------|-----------|-----------|
| Steering wheel nut                                    | 49 - 59 | 5 0 - 6 0 | 36 - 43   |
| Steering column to body                               | 13 - 18 | 1 3 - 1 8 | 9 - 13    |
| Hole cover to dash panel                              | 3 - 5   | 0 3 - 0 5 | 2 2 - 3 6 |
| Column joint fixing bolt<br>(Lower joint, column set) | 24 - 29 | 2 4 - 3 0 | 17 - 22   |
| Jacket lower tube to<br>steering column clamp         | 16 - 21 | 1 6 - 2 1 | 12 - 15   |

### STEERING GEAR & LINKAGE (PR24S)

| Unit                                                              | N m      | kg-m       | ft-lb    |
|-------------------------------------------------------------------|----------|------------|----------|
| Tie-rod lock nut                                                  | 78 - 98  | 8 0 - 10 0 | 58 - 72  |
| Tie-rod inner socket to<br>rack (With sealant)                    | 78 - 98  | 8 0 - 10 0 | 58 - 72  |
| Cylinder end cover &<br>pinion housing lock nut<br>(Without Tool) | 78 - 108 | 8 0 - 11 0 | 58 - 80  |
| Rear housing cover lock<br>nut                                    | 78 - 137 | 8 0 - 14 0 | 58 - 101 |
| Retainer lock nut                                                 | 39 - 59  | 4 0 - 6 0  | 29 - 43  |
| Cylinder tube flare nut                                           | 20 - 26  | 2 0 - 2 7  | 14 - 20  |
| Gear & linkage mounting                                           | 39 - 49  | 4 0 - 5 0  | 29 - 36  |
| Tie-rod to knuckle arm                                            | 54 - 98  | 5 5 - 10 0 | 40 - 72  |

### OIL PUMP

| Unit                                           | N m     | kg-m      | ft-lb     |
|------------------------------------------------|---------|-----------|-----------|
| Mounting bracket to engine                     | 14 - 18 | 1 4 - 1 8 | 10 - 13   |
| Oil pump to mounting<br>bracket (Through bolt) | 31 - 42 | 3 2 - 4 3 | 23 - 31   |
| Oil pump casing to<br>sub bracket              | 31 - 42 | 3 2 - 4 3 | 23 - 31   |
| Adjusting bar bracket to<br>mounting bracket   | 16 - 21 | 1 6 - 2 1 | 12 - 15   |
| Sub bracket to adjusting bar                   | 16 - 21 | 1 6 - 2 1 | 12 - 15   |
| Pulley lock nut                                | 54 - 68 | 5 5 - 6 9 | 40 - 50   |
| Rear cover fixing bolt                         | 31 - 42 | 3 2 - 4 3 | 23 - 31   |
| Connector (Spool cover)                        | 69 - 78 | 7 0 - 8 0 | 51 - 58   |
| Connector (to flexible<br>hose)                | 49 - 69 | 5 0 - 7 0 | 36 - 51   |
| Suction pipe to casing                         | 9 - 12  | 0 9 - 1 2 | 6 5 - 8 7 |

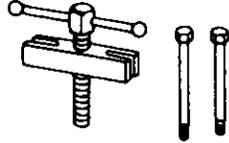
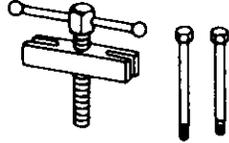
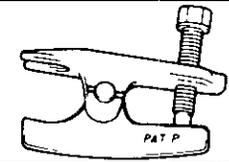
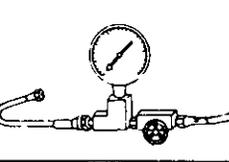
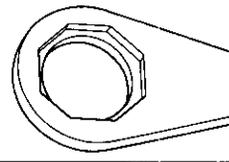
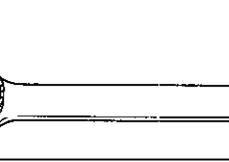
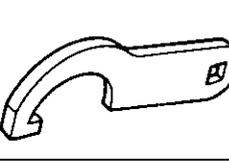
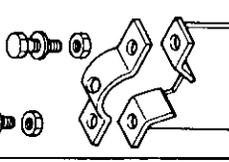
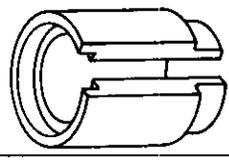
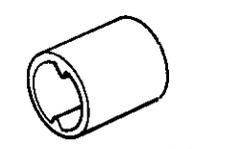
# SERVICE DATA AND SPECIFICATIONS (S.D.S.)

## Tightening Torque (Cont'd)

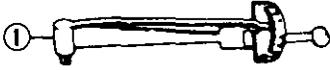
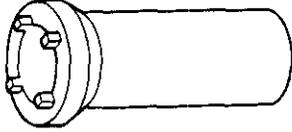
### HYDRAULIC LINE AND OIL PRESSURE SWITCH

| Unit                                            | N m     | kg-m      | ft-lb   |
|-------------------------------------------------|---------|-----------|---------|
| Low-pressure pipe to steering gear              | 27 - 39 | 2.8 - 4.0 | 20 - 29 |
| High-pressure pipe to steering gear             | 15 - 25 | 1.5 - 2.5 | 11 - 18 |
| High-pressure pipe connector bolt (At oil pump) | 49 - 69 | 5.0 - 7.0 | 36 - 51 |
| Oil pressure switch                             | 16 - 24 | 1.6 - 2.4 | 12 - 17 |

# SPECIAL SERVICE TOOLS

| Tool number<br>(Kent-Moore No ) | Tool name                    |    |
|---------------------------------|------------------------------|-------------------------------------------------------------------------------------|
| ST27180001<br>(J25726-A)        | Steering wheel puller        |    |
| HT72520000<br>(J25730-A)        | Ball joint remover           |    |
| ST27091000<br>(J26357)          | Pressure gauge               |    |
| KV48101600<br>(J28818)          | Rear housing lock nut wrench |   |
| KV48101700<br>(J28819)          | Rear cover wrench            |  |
| KV48102300<br>(J28820)          | Cylinder lock nut wrench     |  |
| KV48102100<br>(J28817)          | Power steering stand         |  |
| KV48103100<br>(J34264)          | Rack packing installer       |  |
| KV48100700<br>(J26364)          | Torque adapter               |  |

# SPECIAL SERVICE TOOLS

| Tool number<br>(Kent-Moore No )                                                                                                     | Tool name                                                                                                                                                                                                                                                                                                                                         |
|-------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>ST3127S000<br/>(See J25765-A)</p> <p>① GG91030000<br/>(J25765-A)</p> <p>② HT62940000<br/>( - )</p> <p>③ HT62900000<br/>( - )</p> | <p>Preload gauge</p> <p>Torque wrench ① </p> <p>Socket adapter ② </p> <p>Socket adapter ③ </p> |
| <p>KV48102000<br/>(J28822)</p>                                                                                                      | <p>End cover socket wrench </p>                                                                                                                                                                                                                                  |

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