

STEERING SYSTEM

SECTION **ST**

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PRECAUTIONS AND PREPARATION	2	POWER STEERING GEAR AND LINKAGE	12
Precautions	2	Removal and Installation	12
Special Service Tools	2	Disassembly	15
Commercial Service Tools	3	Inspection	16
ON-VEHICLE SERVICE	4	Assembly	17
Checking Steering Wheel Play	4	Adjustment	21
Checking Neutral Position on Steering Wheel	4	POWER STEERING OIL PUMP	23
Front Wheel Turning Angle	4	Pre-disassembly Inspection	23
Checking Gear Housing Movement	4	Disassembly	23
Checking and Adjusting Drive Belts (For		Inspection	24
power steering)	5	Assembly	24
Checking Fluid Level	5	SERVICE DATA AND SPECIFICATIONS (SDS)	26
Checking Fluid Leakage	5	General Specifications	26
Bleeding Hydraulic System	5	Inspection and Adjustment	26
Checking Steering Wheel Turning Force (For			
power steering)	6		
Checking Hydraulic System	7		
STEERING WHEEL AND STEERING COLUMN	8		
Removal and Installation	8		
Disassembly and Assembly	10		
Inspection	11		

PRECAUTIONS AND PREPARATION

Precautions

SUPPLEMENTAL RESTRAINT SYSTEM "AIR BAG"

The Supplemental Restraint System "Air Bag" helps to reduce the risk or severity of injury to the driver in a frontal collision. The Supplemental Restraint System consists of an air bag (located in the center of the steering wheel), sensors, a diagnosis unit, warning lamp, wiring harness and spiral cable. Information necessary to service the system safely is included in the **BF section** of this Service Manual.

WARNING:

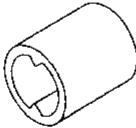
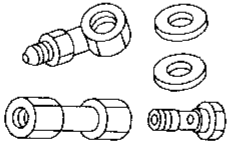
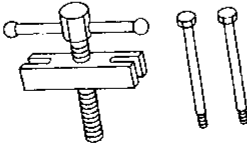
- To avoid rendering the SRS inoperative, which could lead to personal injury or death in the event of a severe frontal collision, all maintenance must be performed by an authorized NISSAN dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system.
- All SRS electrical wiring harnesses and connectors are covered with yellow outer insulation. Do not use electrical test equipment on any circuit related to the SRS "Air Bag".

STEERING SYSTEM

- Before disassembly, thoroughly clean the outside of the unit.
- Disassembly should be done in a clean work area. It is important to prevent the internal parts from becoming contaminated by dirt or other foreign matter.
- When disassembling parts, be sure to place them in order on a part rack so they can be reinstalled in their proper positions.
- Use nylon cloths or paper towels to clean the parts; common shop rags can leave lint that might interfere with their operation.
- Before inspection or reassembly, carefully clean all parts with a general purpose, non-flammable solvent.
- Before assembly, apply a coat of recommended ATF* to hydraulic parts. Vaseline may be applied to O-rings and seals. Do not use any grease.
- Replace all gaskets, seals and O-rings. Avoid damaging O-rings, seals and gaskets during installation. Perform functional tests whenever designated.

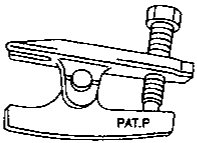
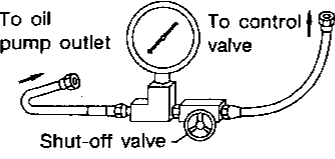
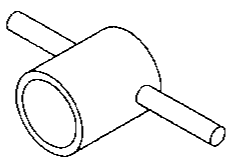
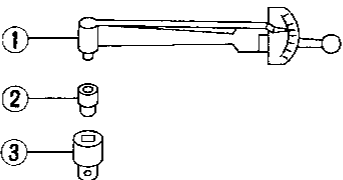
*: Automatic transmission fluid

Special Service Tools

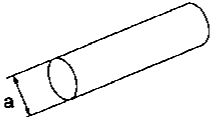
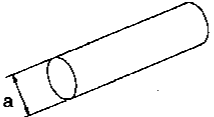
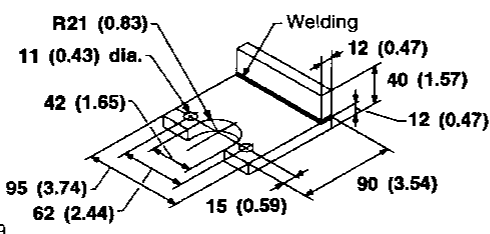
Tool number (Kent-Moore No.) Tool name	Description
KV48100700 (J26364) Torque adapter	 Measuring pinion rotating torque NT169
KV48102500 (—) Pressure gauge adapter	 Measuring oil pressure NT177
ST27180001 (J25726-A) Steering wheel puller	 Removing and installing steering wheel NT170

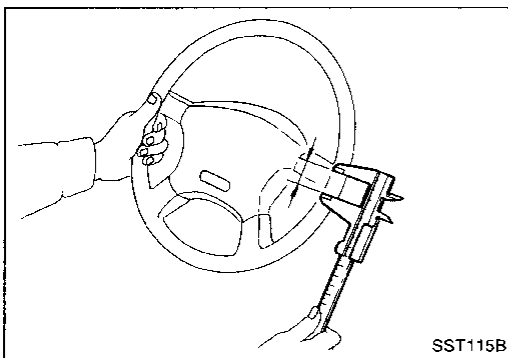
PRECAUTIONS AND PREPARATION

Special Service Tools (Cont'd)

Tool number (Kent-Moore No.) Tool name	Description	
HT72520000 (J25730-A) Ball joint remover		Removing ball joint
	NT146	GI MA
ST27091000 (J26357) Pressure gauge		Measuring oil pressure
	NT176	EM LC
KV48104400 (—) Rack seal ring reformer		Reforming teflon ring
	NT178	EF & EC FE
ST3127S000 (See J25765-A) ① GG91030000 (J25765-A) Torque wrench ② HT62940000 (—) Socket adapter ③ HT62900000 (—) Socket adapter		Measuring turning torque
	NT124	CL MT AT FA

Commercial Service Tools

Tool name	Description	
Rear oil seal drift		Installing rear oil seal
	NT063	BR ST
Pinion oil seal drift		Installing pinion oil seal
	NT063	BF HA
Oil pump attachment		Disassembling and assembling oil pump
	NT179	EL LDX Unit: mm (in)



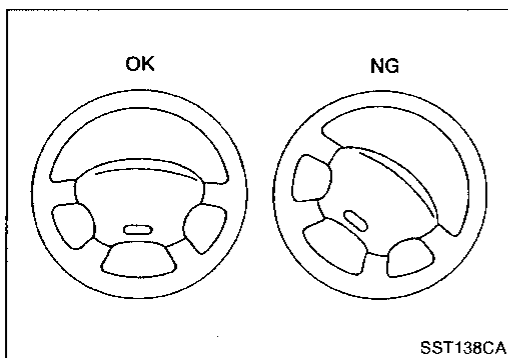
Checking Steering Wheel Play

1. With wheels in a straight-ahead position, check steering wheel play.

Steering wheel play:

35 mm (1.38 in) or less

2. If it is not within specification, check steering gear assembly when front suspension and axle, steering gear assembly and steering column are mounted correctly.



Checking Neutral Position on Steering Wheel

Pre-checking

- Make sure that wheel alignment is correct.

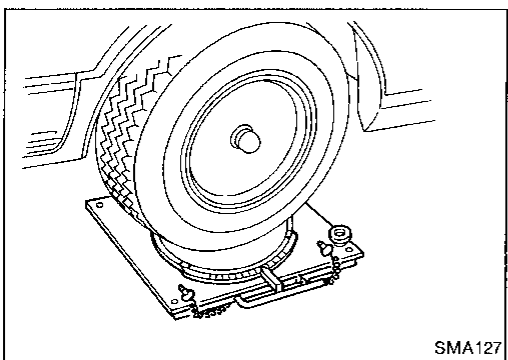
Wheel alignment:

Refer to FA section (SDS).

- Verify that the steering gear is centered before removing the steering wheel.

Checking

1. Check that the steering wheel is in the neutral position when driving straight ahead.
2. If it is not in the neutral position, remove the steering wheel and reinstall it correctly.
3. If the neutral position is between two serrated teeth, loosen tie-rod lock nut and move tie-rod in the opposite direction by the same amount on both left and right sides to compensate for error in the neutral position.



Front Wheel Turning Angle

1. Rotate steering wheel all the way right and left; measure turning angle.

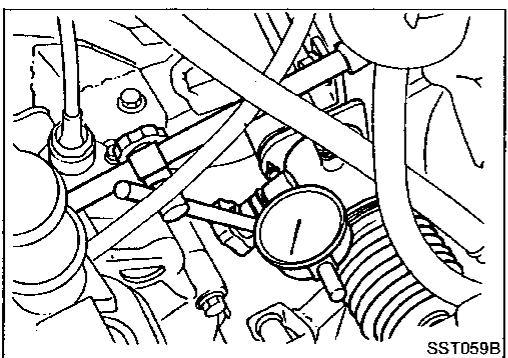
Turning angle of full turns:

Refer to FA section (SDS).

2. If it is not within specification, check rack stroke.

Rack stroke "L":

Refer to SDS.



Checking Gear Housing Movement

1. Check the movement of steering gear housing during stationary steering on a dry paved surface.

- Apply a force of 49 N (5 kg, 11 lb) to steering wheel to check the gear housing movement.

Turn off ignition key while checking.

Movement of gear housing:

± 2 mm (± 0.08 in) or less

2. If movement exceeds the limit, replace mount insulator after confirming proper installation of gear housing clamps.

Checking and Adjusting Drive Belts (For power steering)

Refer to MA section ("Checking Drive Belts", "ENGINE MAINTENANCE").

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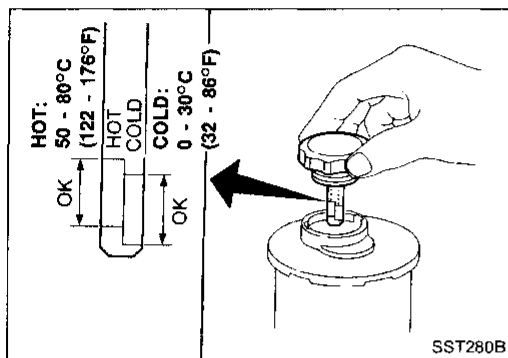
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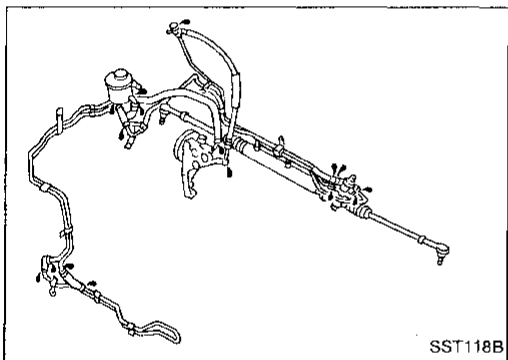
Checking Fluid Level

Check fluid level.

Fluid level should be checked using "HOT" range on dipstick at fluid temperatures of 50 to 80°C (122 to 176°F) or using "COLD" range on dipstick at fluid temperatures of 0 to 30°C (32 to 86°F).

CAUTION:

- Do not overfill.
- Recommended fluid is Automatic Transmission Fluid "DEXRON II™" type or equivalent.



Checking Fluid Leakage

Check the lines for improper attachment and for leaks, cracks, damage, loose connections, chafing or deterioration.

1. Run engine between idle speed and 1,000 rpm.

Make sure temperature of fluid in oil 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 the steering wheel in a locked position for more than 15 seconds.

4. If fluid leakage at connectors is noticed, loosen flare nut and then retighten.

Do not overtighten connector as this can damage O-ring, washer and connector.

Bleeding Hydraulic System

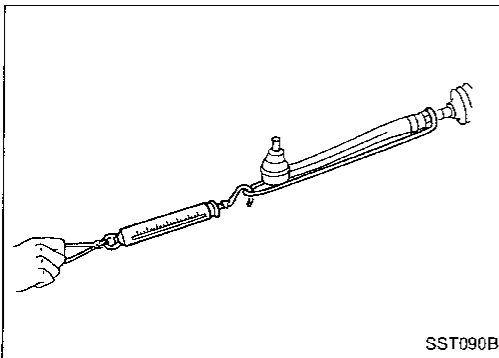
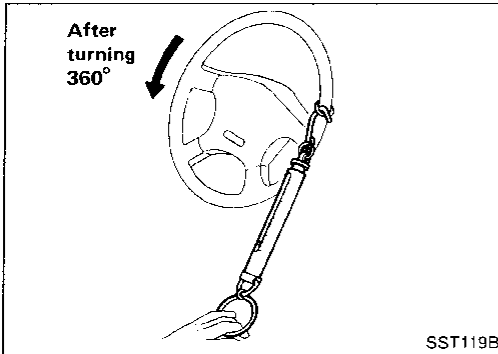
1. Raise front end of vehicle until wheels are clear of the ground.
2. Add fluid into oil tank to specified level. Meanwhile quickly turn steering wheel fully to right and left and lightly touch steering stoppers.
Repeat steering wheel operation until fluid level no longer decreases.
3. Start engine.
Repeat step 2 above.

ON-VEHICLE SERVICE

Bleeding Hydraulic System (Cont'd)

- Incomplete air bleeding will cause the following to occur. When this happens, bleed air again.
 - a. Generation of air bubbles in reservoir tank
 - b. Generation of clicking noise in oil pump
 - c. Excessive buzzing in oil pump

While the vehicle is stationary or while moving the steering wheel slowly, fluid noise may occur in the valve or oil pump. This noise is inherent in this steering system, and it will not affect performance or durability of the system.



Checking Steering Wheel Turning Force (For power steering)

1. Park vehicle on a level, dry surface and set parking brake.
2. Start engine.
3. 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 need to be inflated to normal pressure.

4. Check steering wheel turning force when steering wheel has been turned 360° from the neutral position.

Steering wheel turning force:

39 N (4 kg, 9 lb) or less

5. If steering wheel turning force is out of specifications, check rack sliding force to detect condition of steering gear assembly.
 - a. Disconnect steering column lower joint and knuckle arms from the gear.
 - b. Start and run engine at idle to make sure steering fluid has reached normal operating temperature.
 - c. While pulling tie-rod slowly in the ± 11.5 mm (± 0.453 in) range from the neutral position, make sure rack sliding force is within specification.

Rack sliding force:

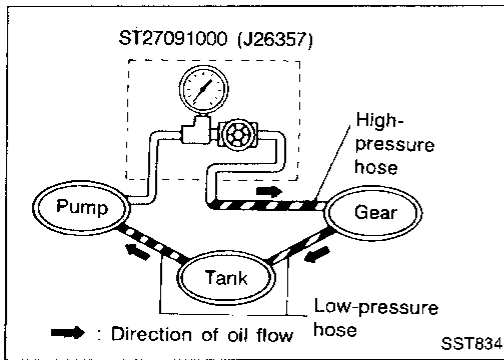
108 - 284 N (11 - 29 kg, 24 - 64 lb)

- d. Check sliding force outside above range.

Rack sliding force:

Not more than 294 N (30 kg, 66 lb)

6. If rack sliding force is not within specification, overhaul steering gear assembly.



Checking Hydraulic System

Before starting, check belt tension, driving pulley and tire pressure.

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

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

WARNING:

Warm up engine with shut-off valve fully opened. If engine is started with shut-off valve closed, oil pressure in oil pump will increase to relief pressure, resulting in an abnormal rise in oil temperature.

3. Check pressure with steering wheel fully turned to left and right positions with engine idling at 1,000 rpm.

CAUTION:

Do not hold the steering wheel in a locked position for more than 15 seconds.

**Oil pump maximum standard pressure:
7,649 - 8,238 kPa (78 - 84 kg/cm², 1,109 - 1,194 psi)**

4. If oil pressure is below the standard pressure, slowly close shut-off valve and check pressure.
 - When pressure reaches standard pressure, gear is damaged.
 - When pressure remains below standard pressure, pump is damaged.

CAUTION:

Do not close shut-off valve for more than 15 seconds.

5. If oil pressure is higher than standard pressure, check oil pump flow control valve.
6. After checking hydraulic system, remove Tool and add fluid as necessary, then completely bleed air out of system.

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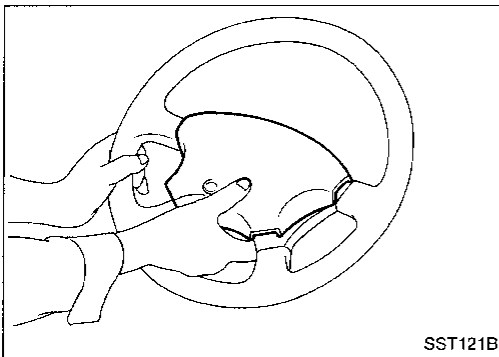
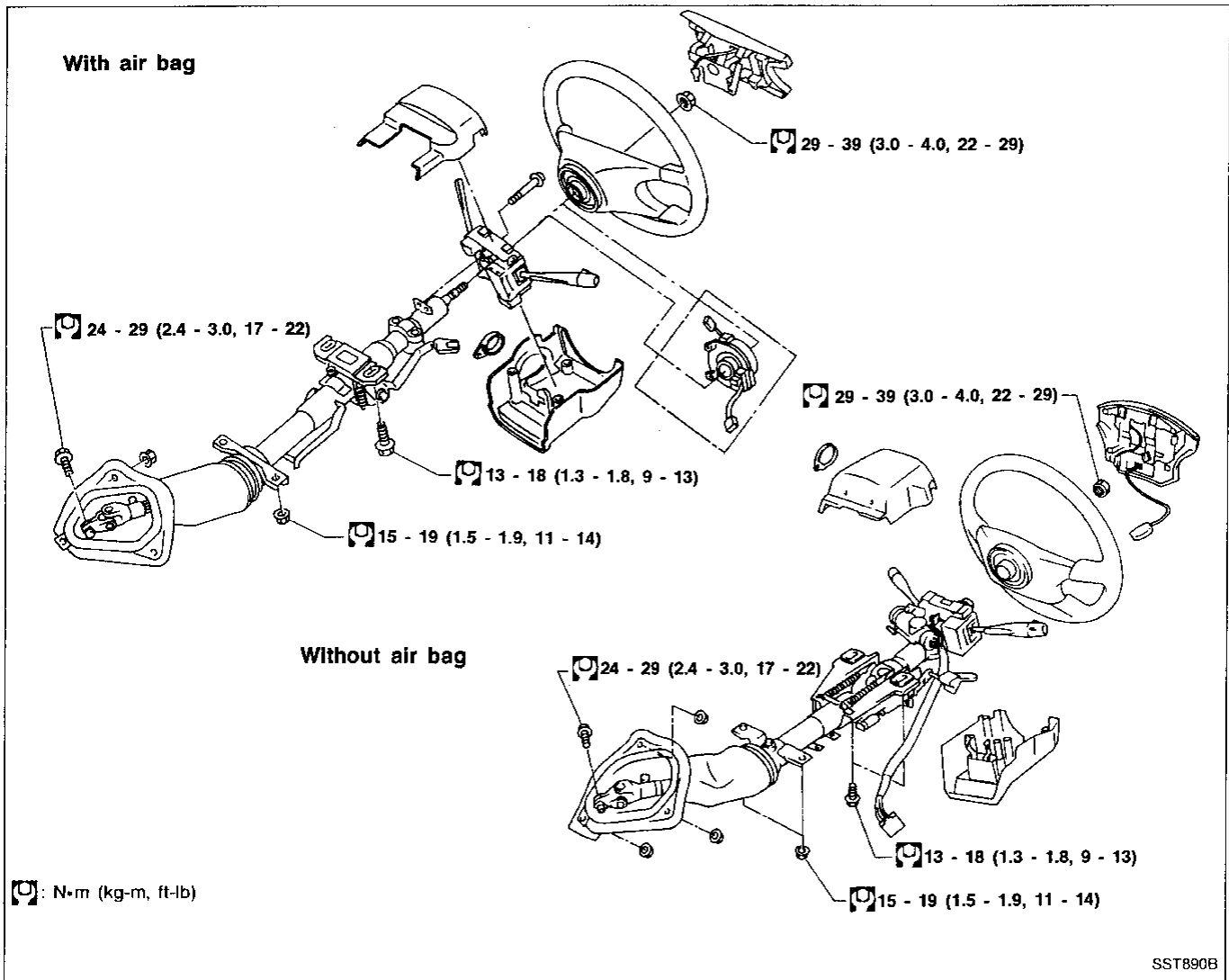
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STEERING WHEEL AND STEERING COLUMN

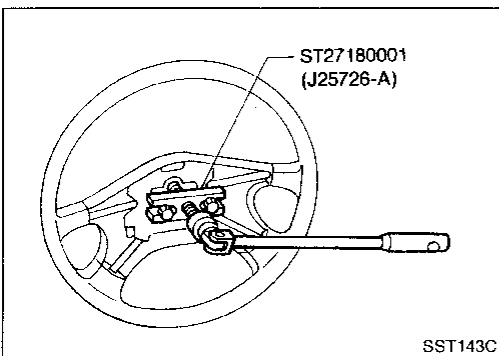


Removal and Installation

STEERING WHEEL

— Without air bag type —

- Pull out horn pad.
- Remove steering wheel with Tool.

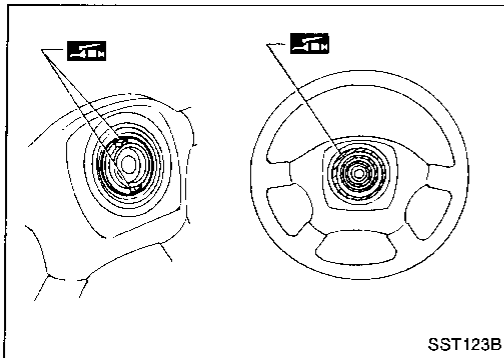
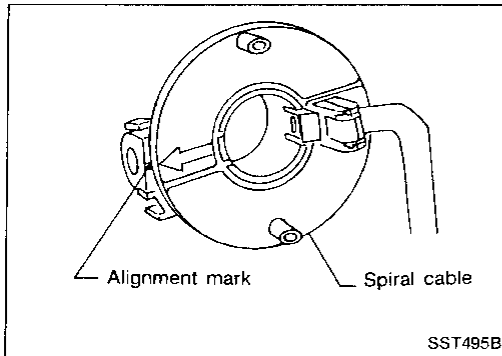
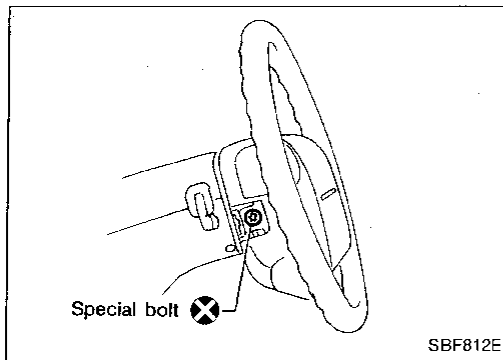


STEERING WHEEL AND STEERING COLUMN

Removal and Installation (Cont'd)

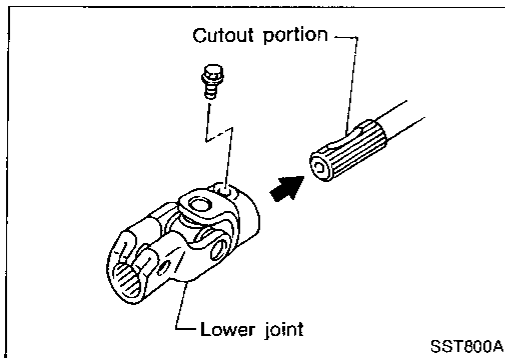
— With air bag type —

- Remove air bag module and spiral cable. Refer to BF section ("Removal — Air Bag Module and Spiral Cable", "SUPPLEMENTAL RESTRAINT SYSTEM").



- Align spiral cable correctly when installing steering wheel.

When installing steering wheel, apply multi-purpose grease to entire surface of turn signal cancel pin (both portions) and also to horn contact slip ring.



STEERING COLUMN

- When installing steering column, fingertighten all lower bracket and clamp retaining bolts; then tighten them securely. Do not apply undue stress to steering column.
- When attaching coupling joint, be sure tightening bolt faces cutout portion.

CAUTION:

After installing steering column, turn steering wheel to make sure it moves smoothly and that the number of turns from the straight forward position to left and right locks are equal. Be sure that the steering wheel is in a neutral position when driving straight ahead.

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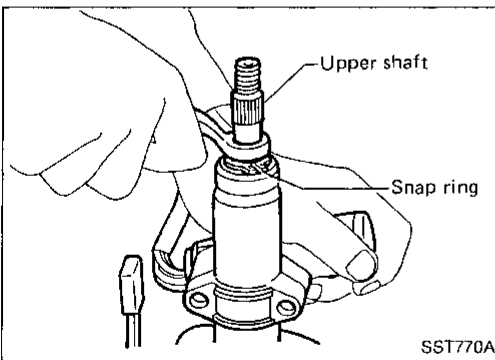
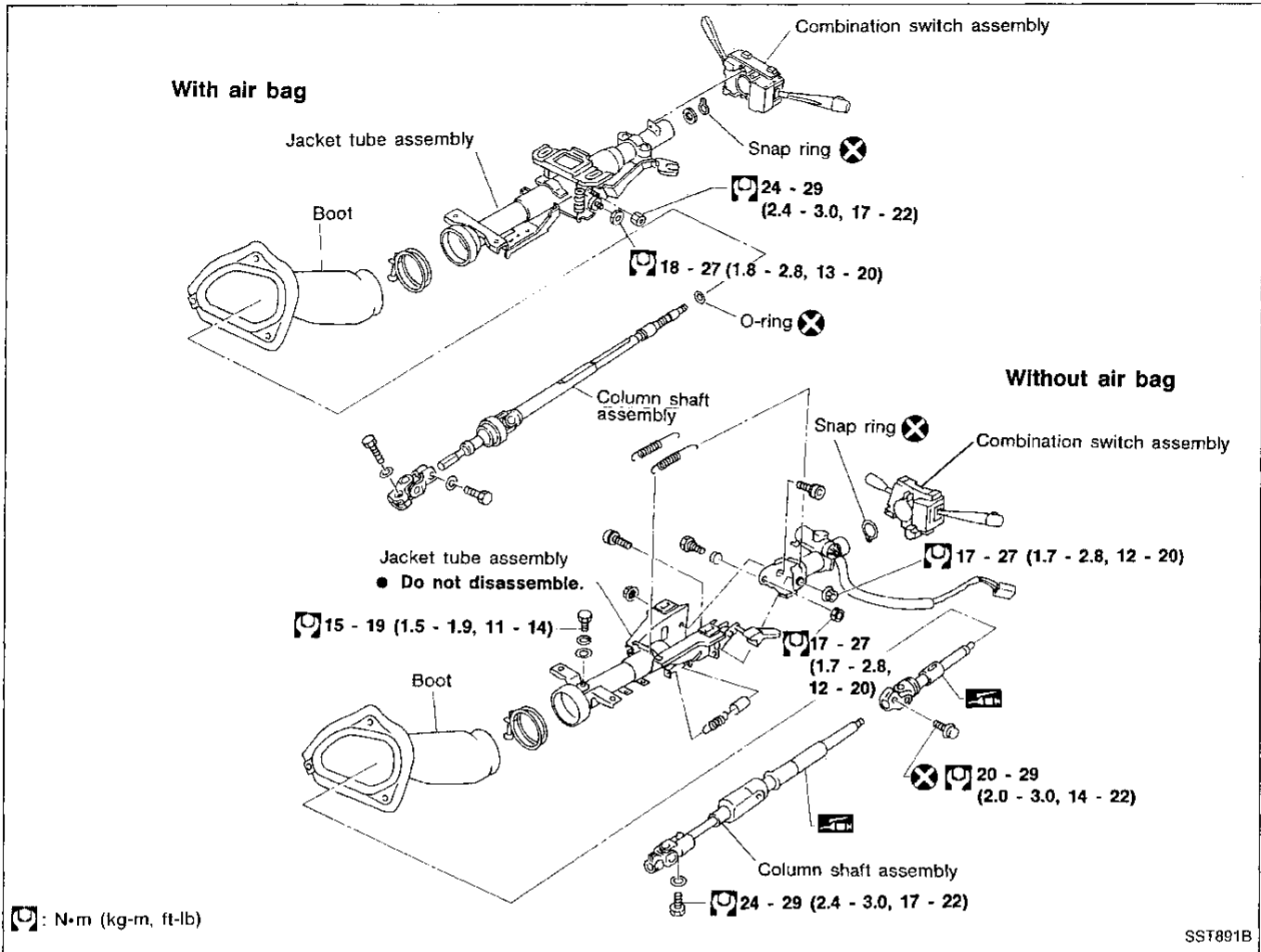
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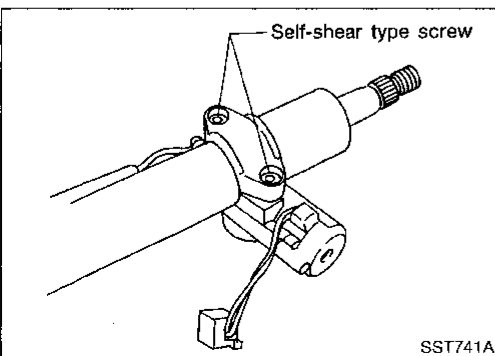
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STEERING WHEEL AND STEERING COLUMN

Disassembly and Assembly



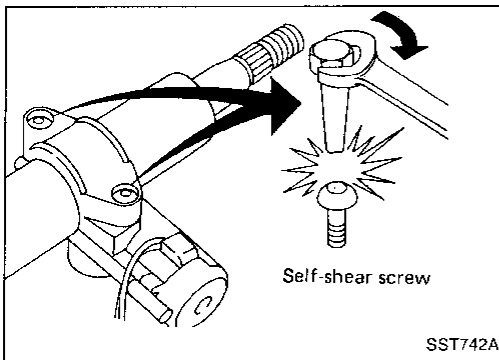
- When disassembling and assembling, unlock steering lock with key.
- Install snap ring on upper shaft with a suitable tool. Ensure that rounded surface of snap ring faces toward bearing when snap ring is installed.



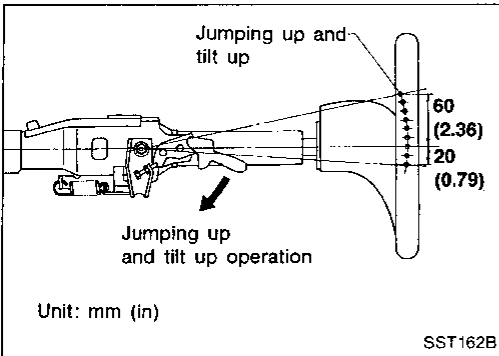
- Steering lock
 - a. Break self-shear type screws with a drill or other appropriate tool.

STEERING WHEEL AND STEERING COLUMN

Disassembly and Assembly (Cont'd)



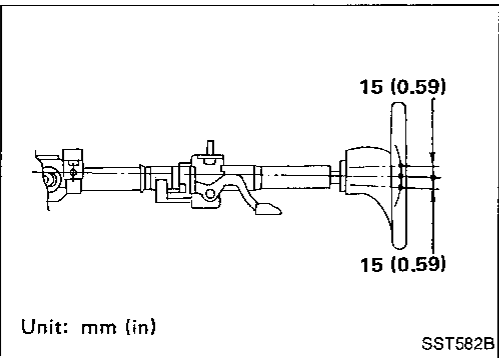
- b. Install new self-shear type screws and then cut off self-shear type screw heads.



Tilt mechanism

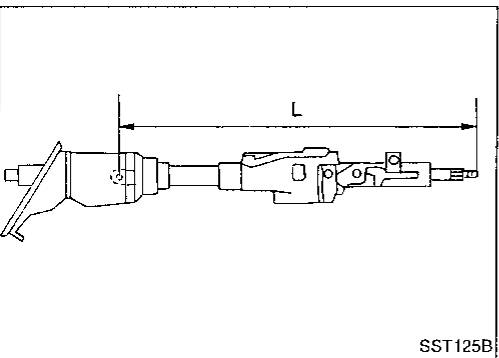
— Without air bag type —

- After installing steering column, check tilt mechanism operation.



— With air bag type —

- After installing steering column, check tilt mechanism operation.



Inspection

- When steering wheel can not be rotated smoothly, check the steering column for the following matters and replace damaged parts.
 - a. Check column bearings for damage or unevenness. Lubricate with recommended multi-purpose grease or replace steering column as an assembly, if necessary.
 - b. Check jacket tube for deformation or breakage. Replace if necessary.
- When the vehicle is involved in a light collision, check column length "L". If it is not within specifications, replace steering column as an assembly.

Column length "L":

Without air bag type

581.2 - 582.8 mm (22.88 - 22.94 in)

With air bag type

576.2 - 577.8 mm (22.68 - 22.75 in)

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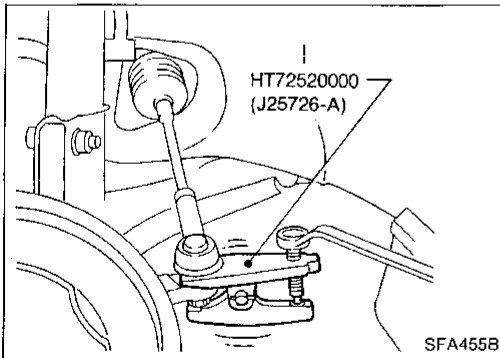
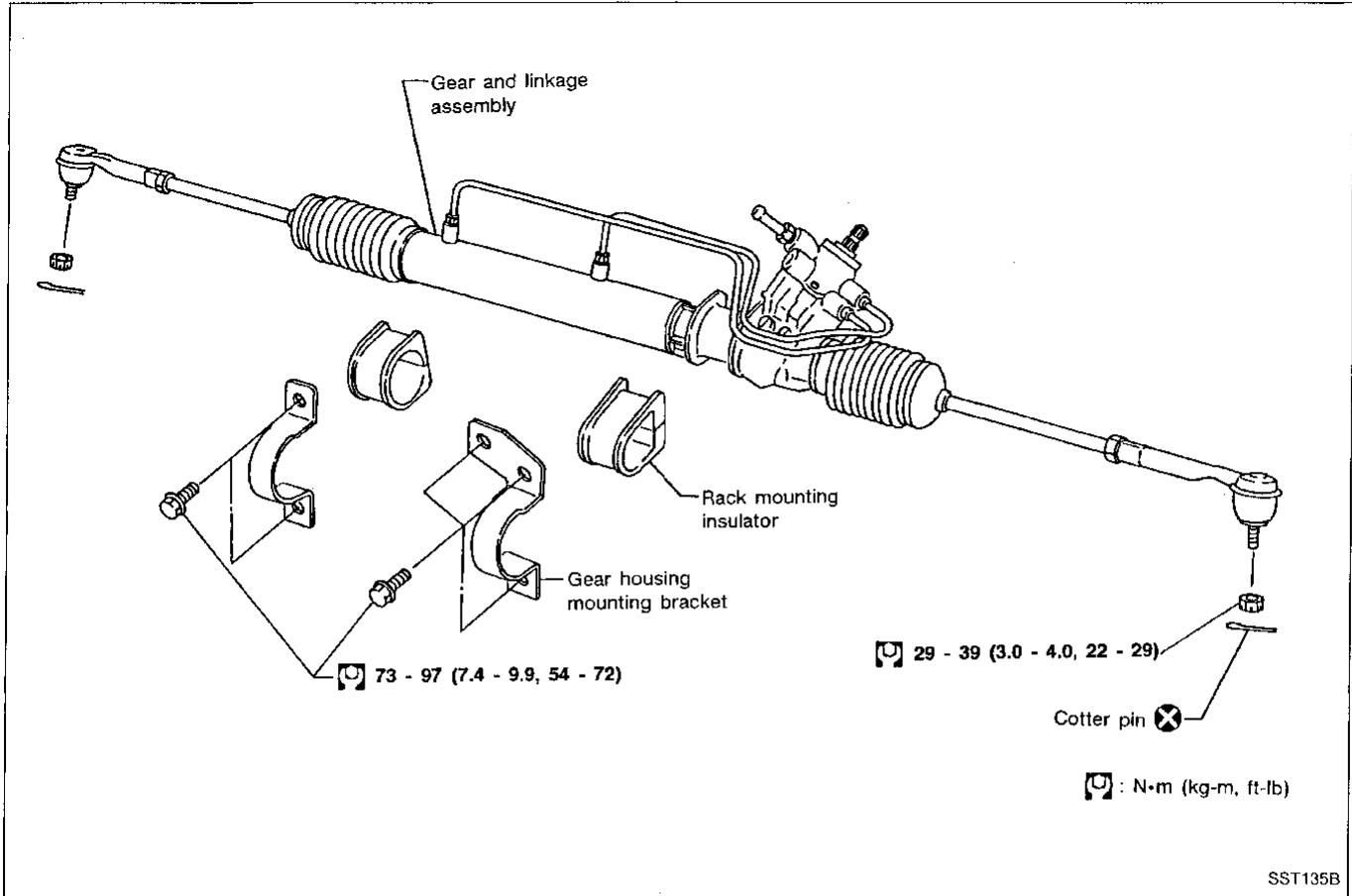
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POWER STEERING GEAR AND LINKAGE

Removal and Installation



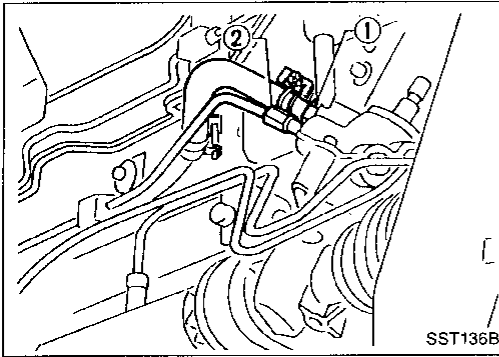
CAUTION:

The rotation of the spiral cable (SRS "Air bag" component part) is limited. If the steering gear must be removed, set the front wheels in the straight-ahead direction. Do not rotate the steering column while the steering gear is removed.

- Detach tie-rod outer sockets from knuckle arms with Tool.

POWER STEERING GEAR AND LINKAGE

Removal and Installation (Cont'd)



- Install pipe connector.
- Observe specified tightening torque when tightening high-pressure and low-pressure pipe connectors. Excessive tightening will damage threads or connector O-ring.

Connector tightening torque:

Low-pressure side "1"

27 - 39 N·m (2.8 - 4.0 kg-m, 20 - 29 ft-lb)

High-pressure side "2"

15 - 25 N·m (1.5 - 2.5 kg-m, 11 - 18 ft-lb)

- The O-ring in low-pressure pipe connector is larger than that in high-pressure connector. Take care to install the proper O-ring.

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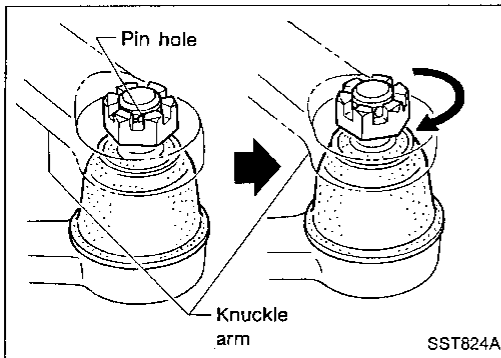
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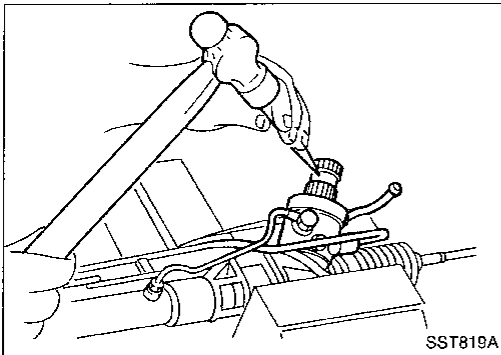
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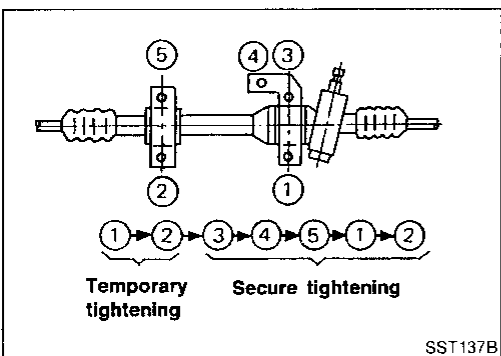
- Initially, tighten nut on tie-rod outer socket and knuckle arm to 29 to 39 N·m (3 to 4 kg-m, 22 to 29 ft-lb). Then tighten further to align nut groove with first pin hole so that cotter pin can be installed.

CAUTION:

Tightening torque must not exceed 49 N·m (5 kg-m, 36 ft-lb).

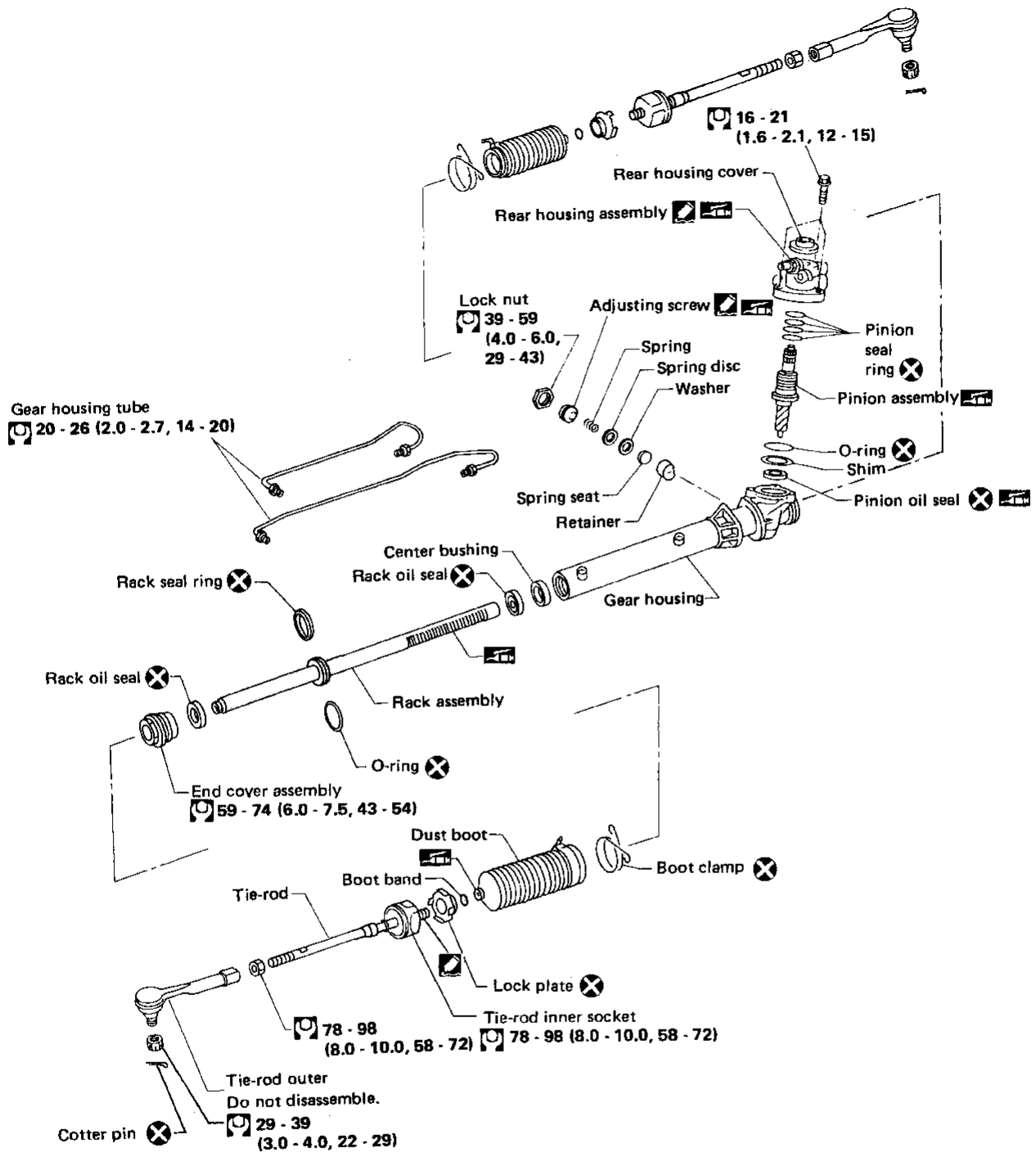


- Before removing lower joint from gear, set gear in neutral (wheels in straight-ahead position). After removing lower joint, put matching mark on pinion shaft and pinion housing to record neutral position of gear.
- To install, set left and right dust boots to equal deflection, and attach lower joint by aligning matching marks of pinion shaft and pinion housing.



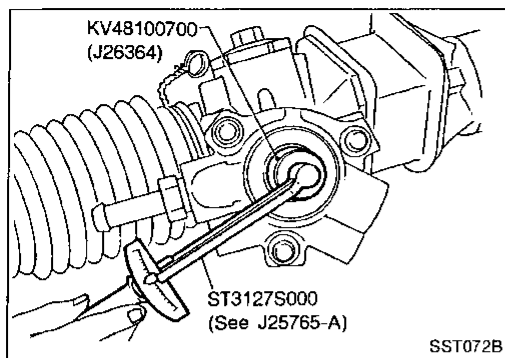
- Tighten gear housing mounting bracket bolts in the order shown.

POWER STEERING GEAR AND LINKAGE



☞ : N-m (kg-m, ft-lb)

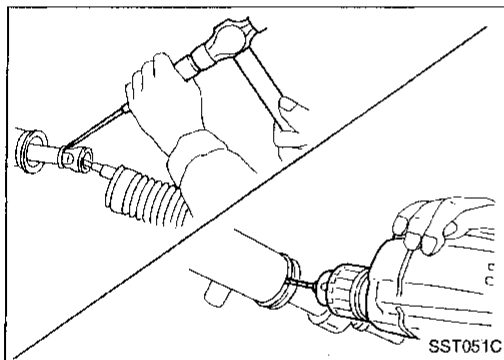
POWER STEERING GEAR AND LINKAGE



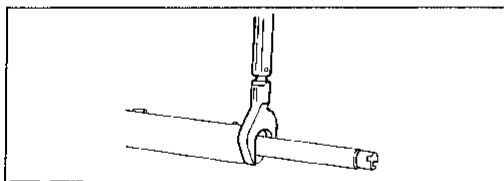
Disassembly

1. Prior to disassembling, measure pinion rotating torque. Record the pinion rotating torque as a reference. Refer to step 11 of "Adjustment" for reference torque data.
 - Before measuring, disconnect gear housing tube and drain fluid.
 - Use soft jaws when holding steering gear housing. Handle gear housing carefully, as it is made of aluminum. Do not grip cylinder in a vise.
2. Remove pinion gear.

Be careful not to damage pinion gear when removing pinion seal ring.



3. Remove tie-rod outer sockets and boots.
4. Loosen tie-rod inner socket by prying up staked portion, and remove socket.
5. Remove retainer.
6. Remove pinion assembly.
7. Drill staked portion of gear housing end with drill of 2 to 2.5 mm (0.079 to 0.098 in) diameter, until the staking is eliminated.



8. Remove end cover assembly with a suitable tool.

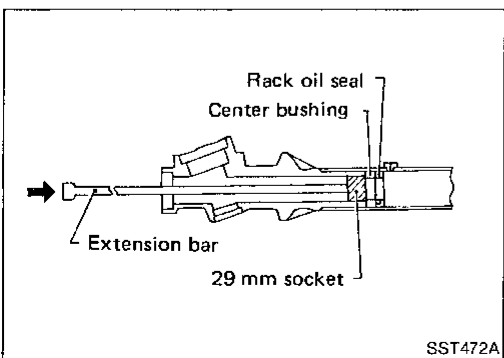
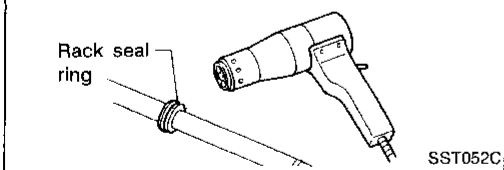
9. Draw out rack assembly.

10. Remove rack seal ring.

- Using a heat gun, heat rack seal to approximately 40°C (104°F).

- Remove rack seal ring.

Be careful not to damage rack.



11. Remove center bushing and rack oil seal using tape wrapped socket and extension bar.

Do not scratch inner surfaces of pinion housing.

Inspection

Thoroughly clean all parts in cleaning solvent or automatic transmission fluid "Dexron II™" type or equivalent, and blow dry with compressed air, if available.

BOOT

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

RACK

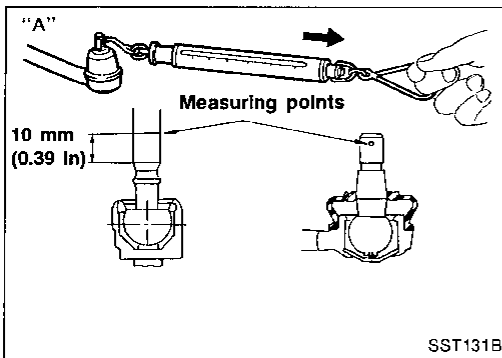
Thoroughly examine rack gear. If damaged, cracked or worn, replace it.

PINION ASSEMBLY

- Thoroughly examine pinion gear. If pinion gear is damaged, cracked or worn, replace it.
- Inspect bearings to see that they roll freely and are free from cracked, pitted, or worn balls, rollers and races. Replace if necessary.

GEAR HOUSING CYLINDER

Check gear housing cylinder bore for scratches or other damage. Replace if necessary.

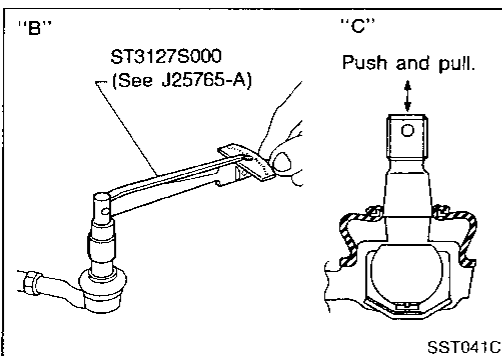


TIE-ROD OUTER AND INNER SOCKET

- Check ball joint for swinging force. "A"

Tie-rod outer ball joint:
6.9 - 64.7 N
(0.7 - 6.6 kg, 1.5 - 14.6 lb)

Tie-rod inner ball joint:
22.6 - 200.1 N
(2.3 - 20.4 kg, 5.1 - 45.0 lb)



- Check ball joint for rotating torque. "B"

Tie-rod outer ball joint:
0.3 - 2.9 N·m
(3 - 30 kg·cm, 2.6 - 26.0 in·lb)

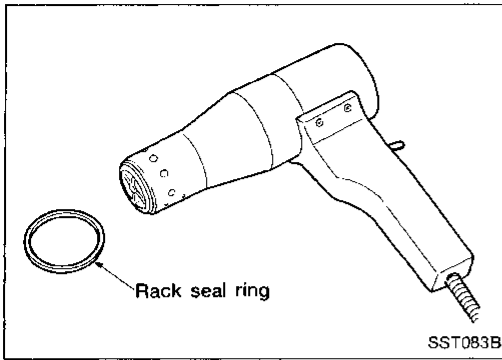
- Check ball joint for axial end play. "C"

Tie-rod outer ball joint:
0.5 mm (0.020 in) or less

Tie-rod inner ball joint:
0 mm (0 in)

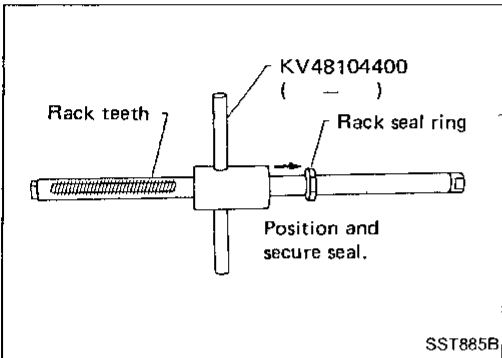
- Check condition of dust cover. If cracked excessively, replace outer tie-rod.

POWER STEERING GEAR AND LINKAGE



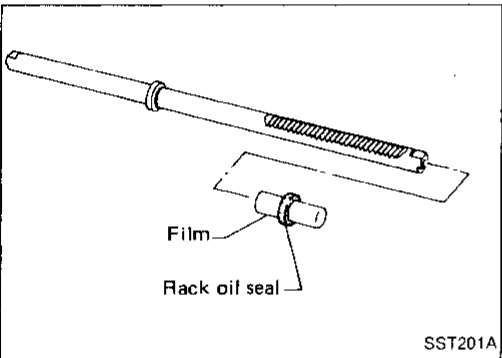
Assembly

1. Using a heat gun, heat new rack seal ring (made of Teflon) to approximately 40°C (104°F) and install it onto rack with your hand.



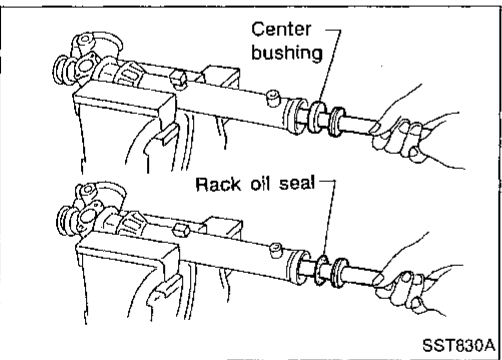
2. Using Tool, compress periphery of rack seal ring to position and secure it on rack.

Always insert Tool from the rack gear side.

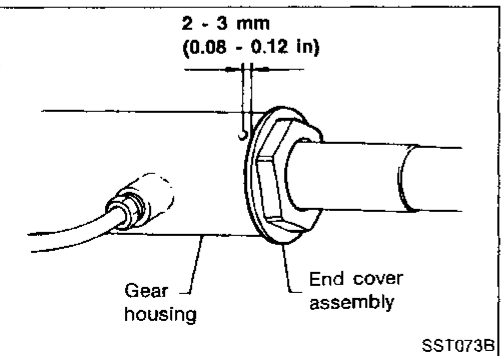


3. Insert new rack oil seal.

- Place plastic film into rack oil seal to prevent damage by rack teeth.
- Do not forget to remove plastic film after rack oil seal is positioned properly.
- Make sure lips of rack oil seal face each other.



4. Install center bushing and rack oil seal with rack assembly.



5. Tighten end cover assembly with a suitable tool.
6. Fasten end cover assembly to gear housing by staking.

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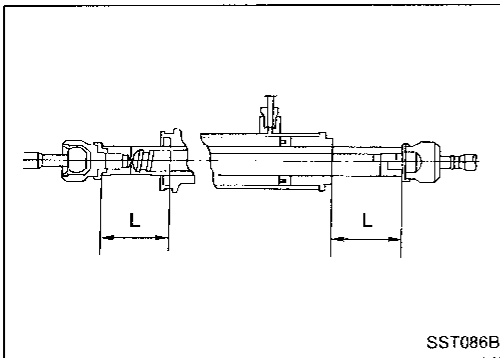
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POWER STEERING GEAR AND LINKAGE

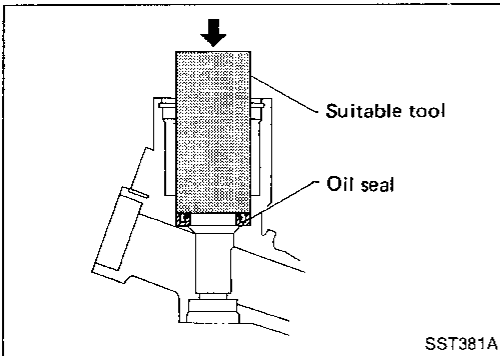
Assembly (Cont'd)



7. Set rack gear in neutral position.

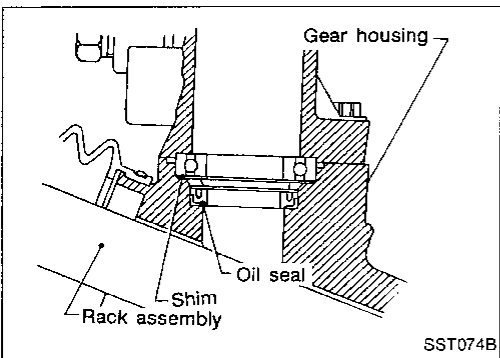
Rack stroke "L":

Refer to SDS.



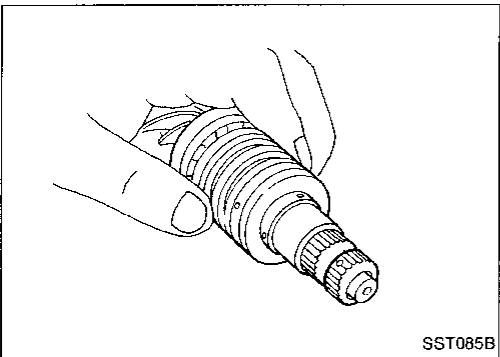
8. Coat seal lip of new pinion oil seal with multi-purpose grease and install it to pinion housing of gear housing with a suitable tool.

Make sure lip of oil seal faces up when installed.



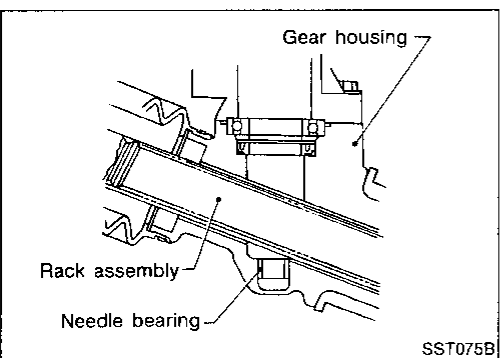
9. Install pinion bearing adjusting shim(s).

- Whenever pinion assembly, gear housing and rear housing are disassembled, replace shim(s) with new ones. Always use the same number of shim(s) when replacing.



10. Install new pinion seal ring (made of Teflon) on pinion gear assembly.

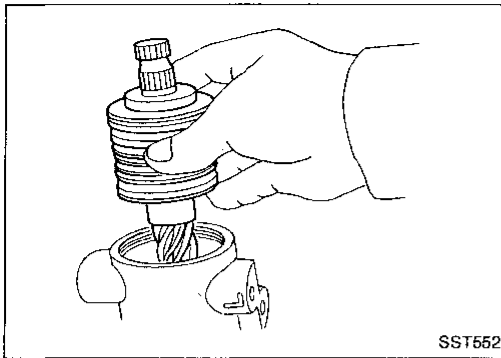
- Using a heat gun, heat pinion seal ring to approximately 40°C (104°F) before installing it onto pinion gear assembly.
- Make sure pinion seal ring is properly settled in valve groove.



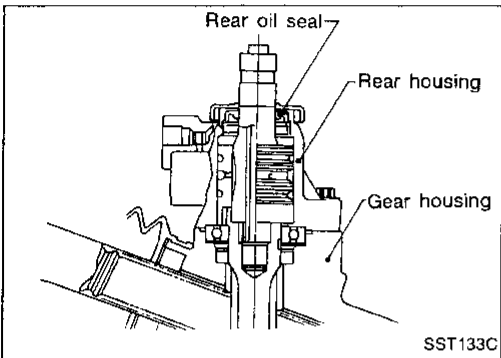
11. Apply a coat of multi-purpose grease to needle bearing roller and oil seal lip before installing pinion assembly in gear housing.

POWER STEERING GEAR AND LINKAGE

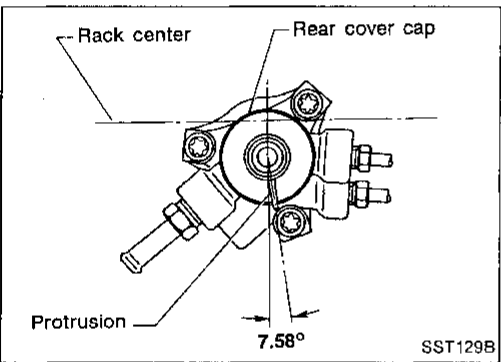
Assembly (Cont'd)



12. Install pinion assembly to pinion housing.
Be careful not to damage pinion oil seal.

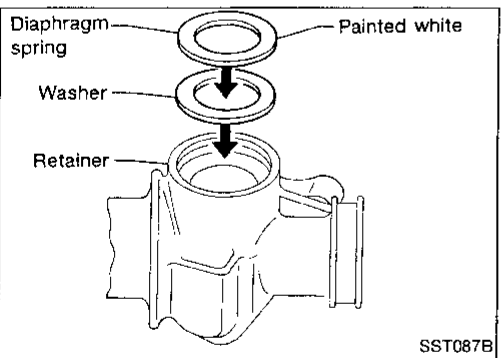


13. Apply a coat of multi-purpose grease to new rear oil seal lip before installing rear housing.



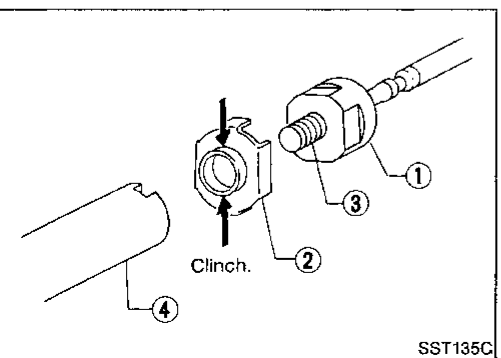
14. Install rear cover cap so that protrusion of rear housing cover is positioned as shown in figure at left when rack is centralized.

Be careful not to damage worm ring and oil seal.



15. Install diaphragm spring into gear housing.
- Always install retainer, spring washer and diaphragm spring in that order.
 - Make sure convex end (painted white) of diaphragm spring faces outward when installing.

16. Install retainer spring and adjusting screw temporarily.



17. Install new lock plate.
- Attach lock plate ② to side rod inner socket ①.
 - Apply locking sealant to inner socket threads ③. Screw inner socket into rack ④ and tighten to specified torque.
 - Clinch two places of lock plate at rack's groove.

CAUTION:

To prevent scratching the boot, remove burrs from lock plate.

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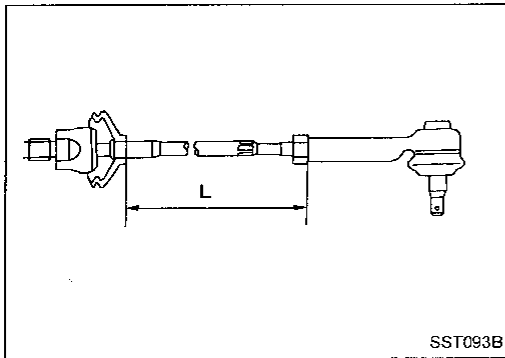
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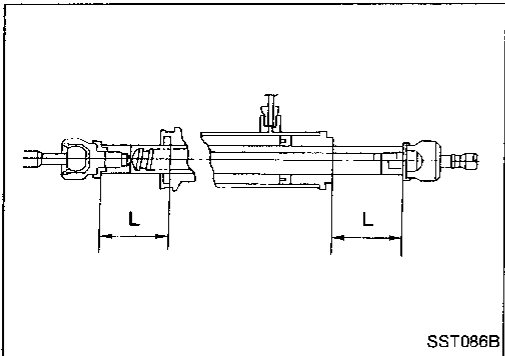
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POWER STEERING GEAR AND LINKAGE

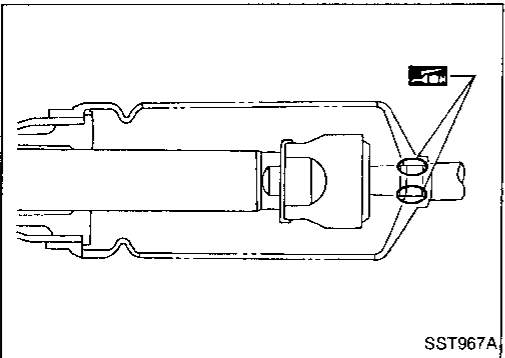
Assembly (Cont'd)



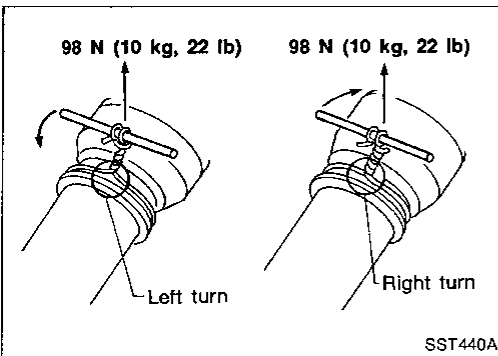
18. Tighten outer socket lock nut.
Tie-rod length "L":
 Refer to SDS.



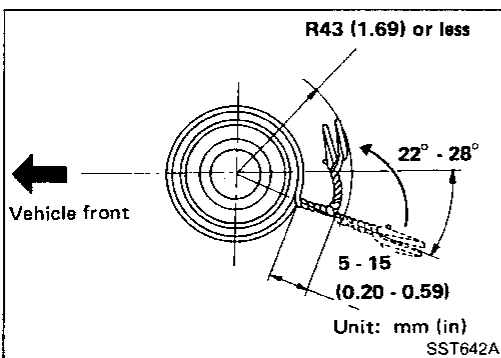
19. Measure rack stroke.
Rack stroke "L":
 Refer to SDS.



20. Before installing boot, coat the contact surfaces between boot and tie-rod with grease.



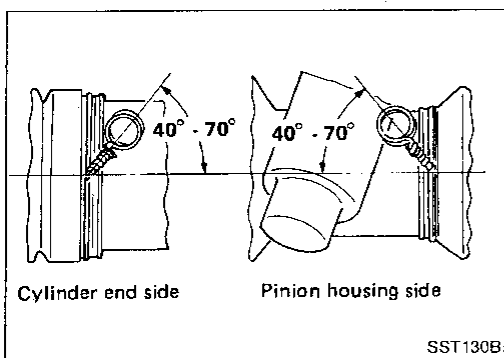
21. Install boot clamps.
- To install, wrap boot clamp around boot groove twice. Tighten clamp by twisting rings at both ends 4 to 4-1/2 turns with suitable tool while pulling with a force of approx. 98 N (10 kg, 22 lb).
 - Twist boot clamp in the direction shown in figure at left.



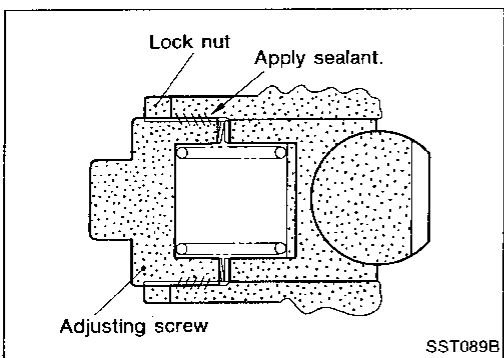
- Install boot clamp so that it is to the rear of the vehicle when gear housing is attached to the body. (This will prevent interference with other parts.)

POWER STEERING GEAR AND LINKAGE

Assembly (Cont'd)

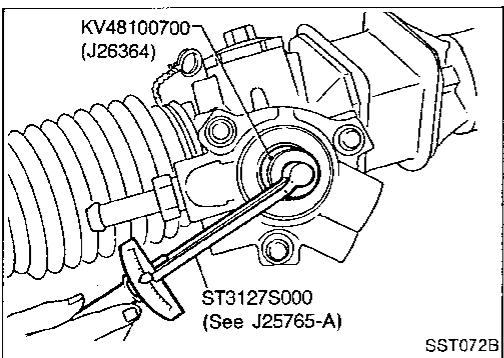


- After twisting boot clamp, bend twisted and diagonally so it does not contact boot.

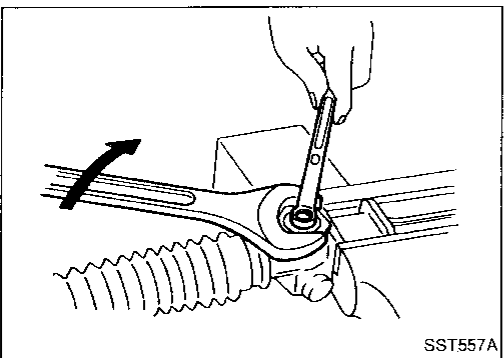


Adjustment

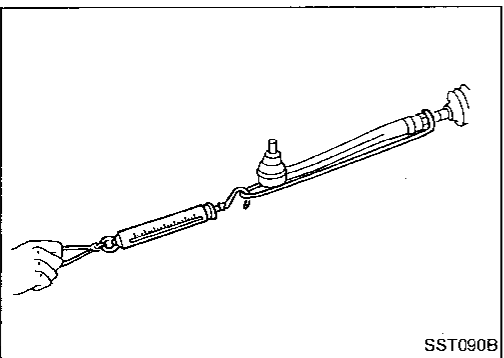
Adjust pinion rotating torque as follows:



1. Set rack to the neutral position without fluid in the gear.
2. Coat the adjusting screw with locking sealant and screw it in.
3. Lightly tighten lock nut.
4. Tighten adjusting screw to a torque of 4.9 to 5.9 N·m (50 to 60 kg-cm, 43 to 52 in-lb).
5. Loosen adjusting screw, then retighten it to 0.2 N·m (2 kg-cm, 1.7 in-lb).
6. Move rack over its entire stroke several times.
7. Measure pinion rotating torque within the range of 180° from neutral position.
Stop the gear at the point of maximum torque.
8. Loosen adjusting screw, then retighten it to 4.9 N·m (50 kg-cm, 43 in-lb).
9. Loosen adjusting screw by 40° to 60°.



10. Prevent adjusting screw from turning, and tighten lock nut to specified torque.



11. Check rack sliding force on vehicle as follows:
 - a. Install steering gear onto vehicle, but do not connect tie-rod to knuckle arm.
 - b. Connect all piping and fill with steering fluid.
 - c. Start engine and bleed air completely.
 - d. Disconnect steering column lower joint from the gear.
 - e. Keep engine at idle and make sure steering fluid has reached normal operating temperature.
 - f. While pulling tie-rod slowly in the ± 11.5 mm (± 0.453 in) range from the neutral position, make sure rack sliding force is within specification.

POWER STEERING GEAR AND LINKAGE

Adjustment (Cont'd)

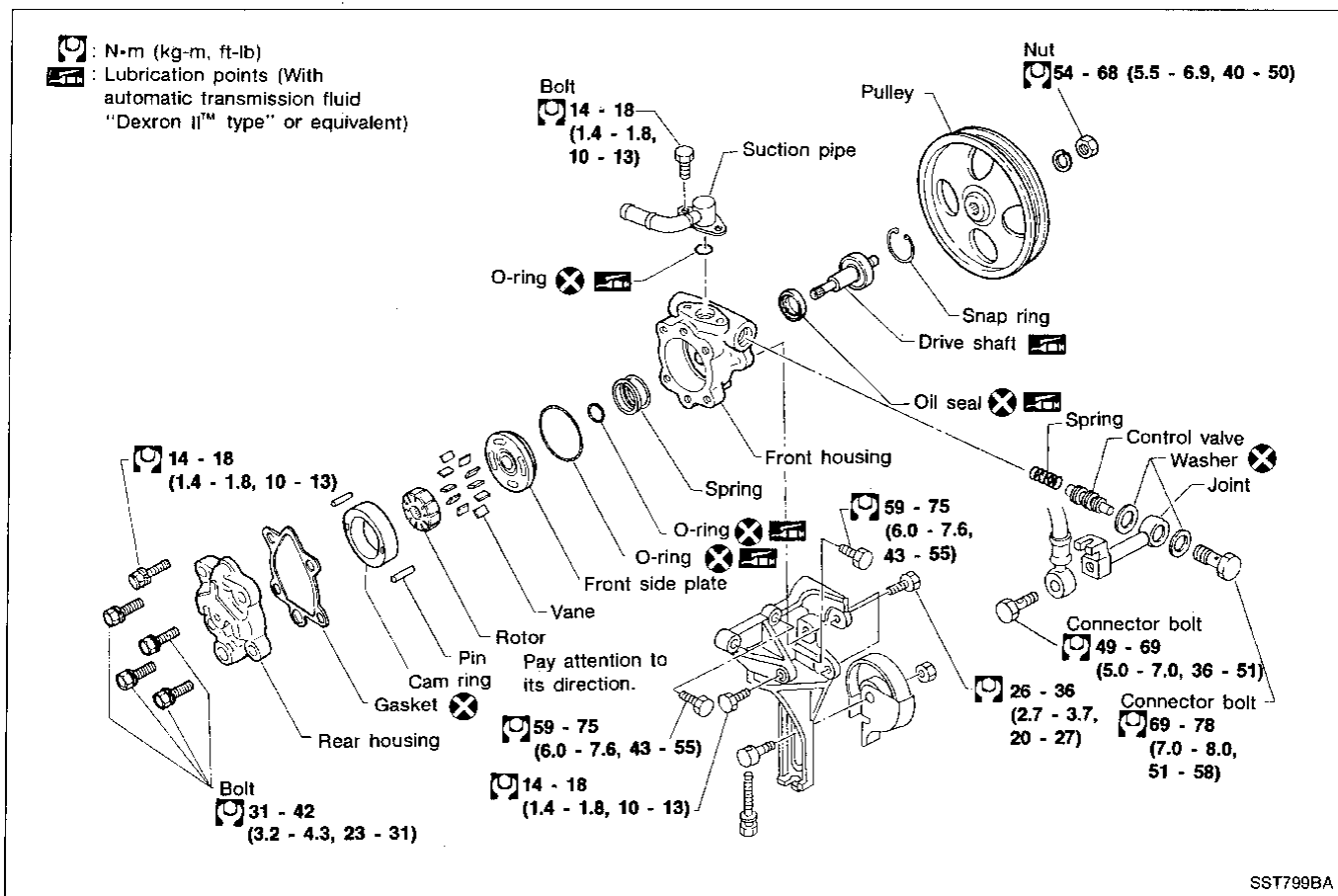
Rack sliding force: 108 - 284 N (11 - 29 kg, 24 - 64 lb)

g. Check sliding force outside above range.

Rack sliding force: Not more than 294 N (30 kg, 66 lb)

- If rack sliding force is not within specification, readjust by repeating adjustment procedure from the beginning.
- If rack sliding force is still out of specification after readjustment, gear assembly needs to be replaced.

POWER STEERING OIL PUMP



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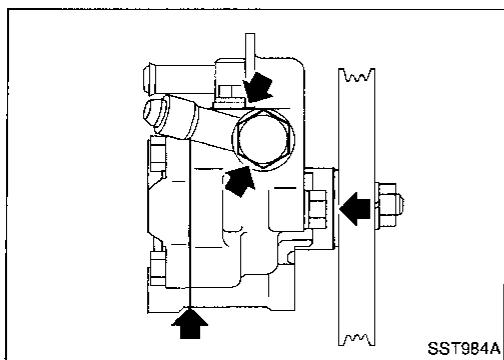
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Pre-disassembly Inspection

Disassemble the power steering oil pump only if the following items are found.

- Oil leak from any point shown in the figure.
- Deformed or damaged pulley.
- Poor performance.

Disassembly

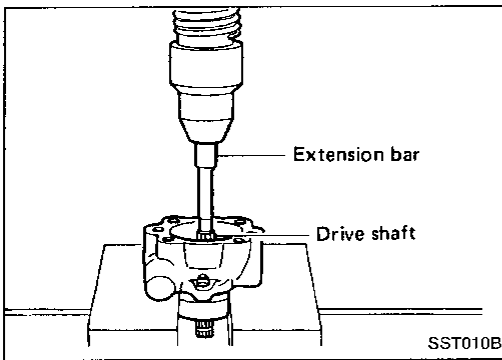
CAUTION:

- Parts which can be disassembled are strictly limited. Never disassemble parts other than those specified.
- Disassemble in as clean a place as possible.
- Clean your hands before disassembly.
- Do not use rags; use nylon cloths or paper towels.
- Follow the procedures and cautions in the Service Manual.
- When disassembling and reassembling, do not let foreign matter enter or contact the parts.

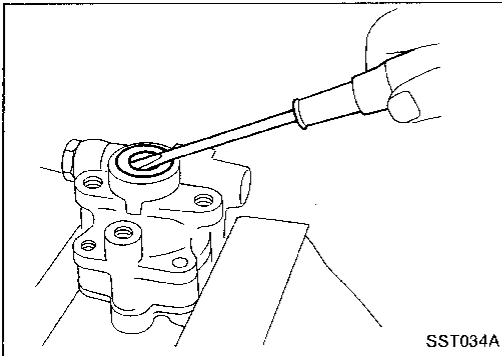
POWER STEERING OIL PUMP

Disassembly (Cont'd)

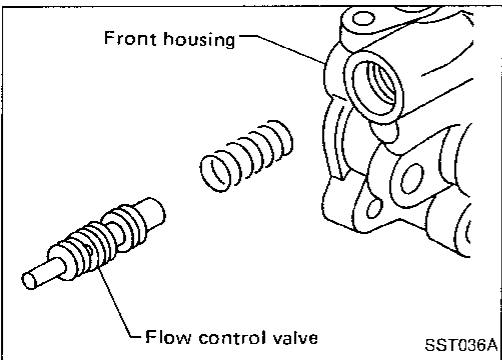
- Remove snap ring, then draw drive shaft out.
Be careful not to drop drive shaft.



- Remove oil seal.
Be careful not to damage front housing.



- Remove connector.
Be careful not to drop flow control valve.



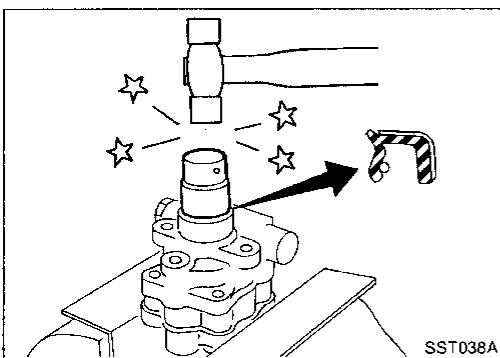
Inspection

Inspect each component part for wear, deformation, scratches and cracks. If damage is found, replace the part.

Assembly

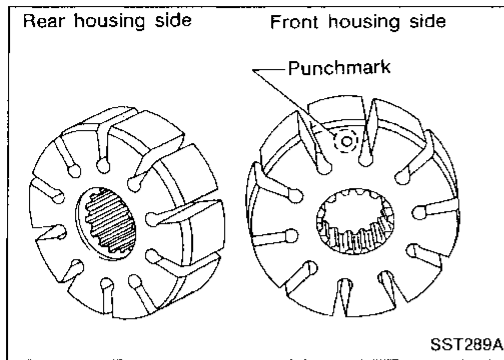
Assemble oil pump, noting the following instructions.

- Make sure O-rings and oil seal are properly installed.
- Always install new O-rings and oil seal.
- Be careful of oil seal direction.
- Cam ring, rotor and vanes must be replaced as a set if necessary.
- Coat each part with ATF when assembling.

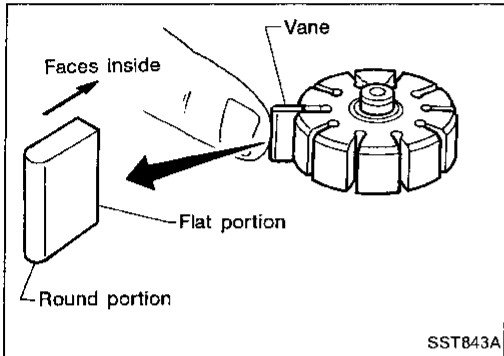


POWER STEERING OIL PUMP

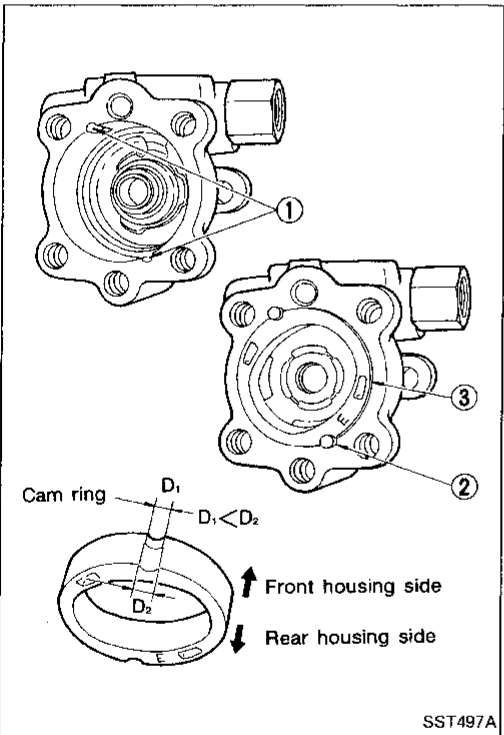
Assembly (Cont'd)



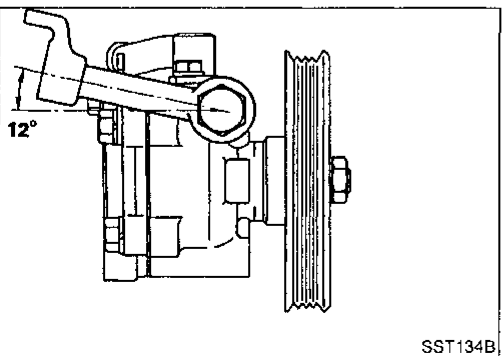
- Pay attention to the direction of rotor.



- When assembling vanes to rotor, rounded surfaces of vanes must face cam ring side.



- Insert pin (2) into pin groove (1) of front housing and rotor. Then install cam ring (3) as shown at left.



- Install connector properly.

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SERVICE DATA AND SPECIFICATIONS (SDS)

General Specifications

Applied model	All
Steering model	Power steering
Steering gear type	PR26AC
Steering overall gear ratio	18.7
Turns of steering wheel (Lock to lock)	3.01
Steering column type	Collapsible, tilt

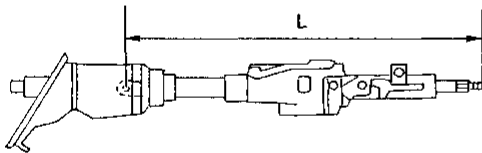
Inspection and Adjustment

GENERAL

Steering wheel axial play mm (in)	0 (0)
Steering wheel play mm (in)	35 (1.38) or less
Movement of gear housing mm (in)	± 2 (± 0.08) or less

STEERING COLUMN

Applied model	Without air bag	With air bag
Steering column length "L" mm (in)	581.2 - 582.8 (22.88 - 22.94)	576.2 - 577.8 (22.68 - 22.75)

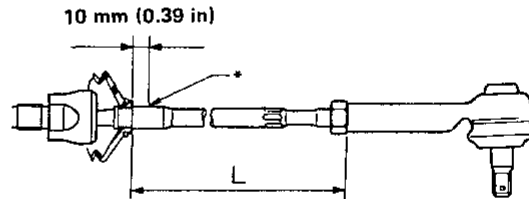


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STEERING GEAR AND LINKAGE

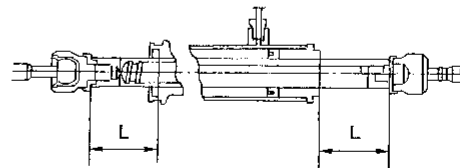
Steering gear type	PR26AC
Tie-rod outer ball joint "A" Swinging force at cotter pin hole N (kg, lb)	6.9 - 64.7 (0.7 - 6.6, 1.5 - 14.6)
Rotating torque "B" N·m (kg-cm, in-lb)	0.3 - 2.9 (3 - 30, 2.6 - 26.0)
Axial end play "C" mm (in)	0.5 (0.020) or less
Tie-rod inner ball joint "A" Swinging force* N (kg, lb)	22.6 - 200.1 (2.3 - 20.4, 5.1 - 45.0)
Axial end play "C" mm (in)	0 (0)
Tie-rod standard length "L" mm (in)	173 (6.81)

*: Measuring point



SST800B

Rack stroke "L" mm (in)	68.5 (2.697)
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SST086B

