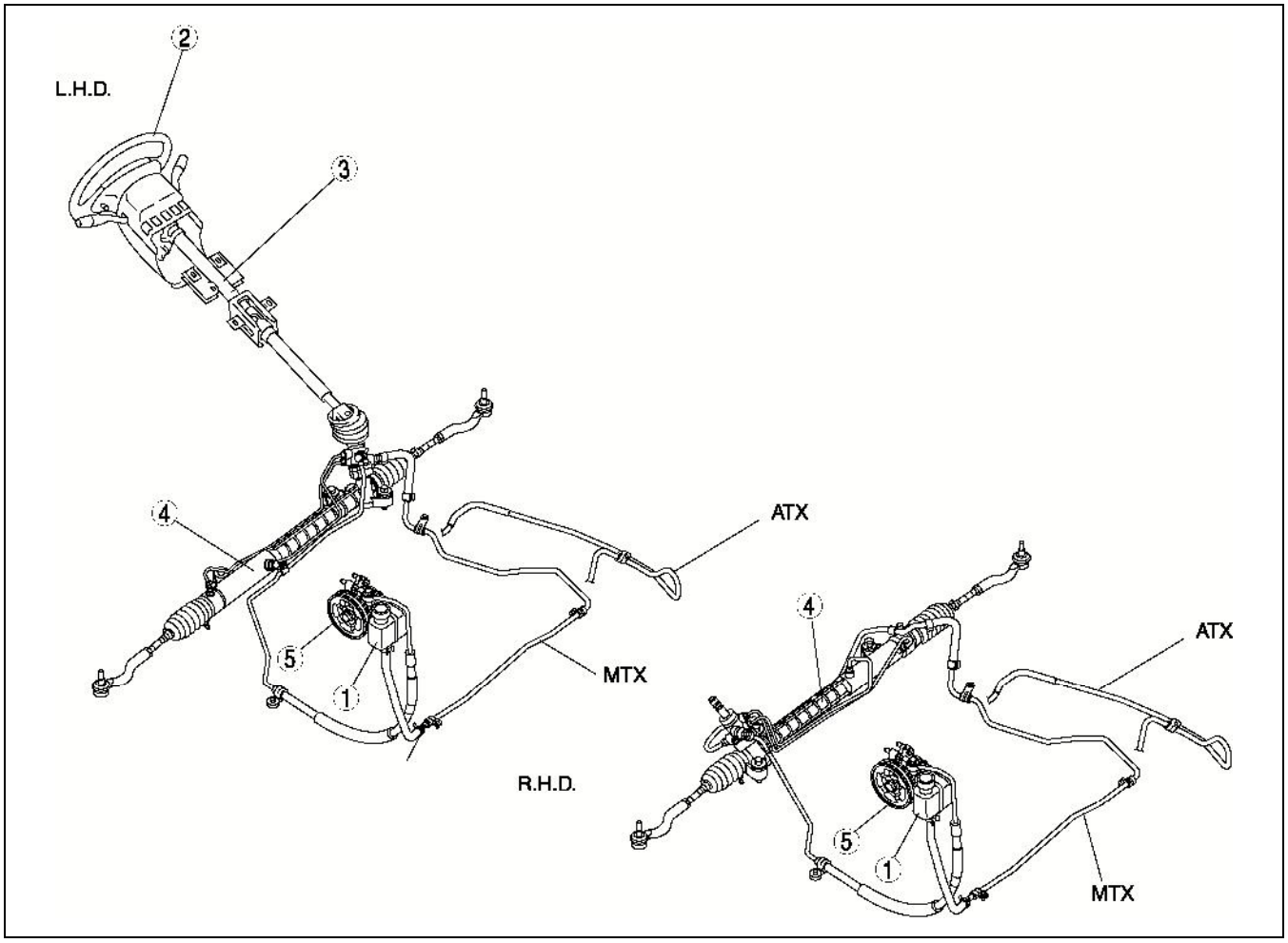
LOCATION INDEX

STEERING LOCATION INDEX

A6E660001036W01



A6E0610W010

1	Power steering fluid (See N–4 POWER STEERING FLUID INSPECTION)
2	Steering wheel and column (See N–6 STEERING WHEEL AND COLUMN INSPECTION) (See N–7 STEERING WHEEL AND COLUMN REMOVAL/INSTALLATION)
3	Steering shaft (See N–9 STEERING SHAFT INSPECTION)

4	Steering gear and linkage (See N–10 STEERING GEAR AND LINKAGE REMOVAL/INSTALLATION) (See N–12 STEERING GEAR AND LINKAGE DISASSEMBLY) (See N–16 STEERING GEAR AND LINKAGE INSPECTION) (See N–16 STEERING GEAR AND LINKAGE ASSEMBLY)
5	Power steering oil pump (See N–22 POWER STEERING OIL PUMP REMOVAL/INSTALLATION) (See N–22 POWER STEERING OIL PUMP DISASSEMBLY/ASSEMBLY)

GENERAL PROCEDURES

PRECAUTION (STEERING)

A6E661001036W01

Wheels and Tires Removal/Installation

1. The removal and installation procedures for the wheels and tires are not mentioned in this section. When a wheel is removed, tighten it to
88—118 N·m {9.0—12.0 kgf·m, 65.0—87.0 ft·lbf}.

Power Steering Components Removal/Installation

1. If any power steering fluid line has been disconnected anytime during the procedure, add ATF M-III or equivalent (e.g. Dexron®II), bleed the fluid lines, and inspect for leakage after the procedure has been completed.

Connectors Disconnection/Connection

1. Disconnect the negative battery cable before doing any work that requires handling of connectors. Reconnect the negative battery cable only after the work is completed.

Suspension Arm Removal/Installation

1. Tighten any part of the suspension that uses rubber bushings only after vehicle has been lowered and unloaded.

Note

- Unloaded: Fuel tank is full. Engine coolant and engine oil are at specified level. Spare tire, jack, and tools are in designated position.

N

ENGINE SPEED SENSING POWER STEERING

AIR BLEEDING

A6E661401036W01

1. Inspect the fluid level. (See N–4 POWER STEERING FLUID INSPECTION.)
2. Jack up the front of the vehicle and support it on safety stands.
3. Turn the steering wheel fully to the left and right several times with the engine not running.
4. Reinspect the fluid level.
   - If it has dropped, add fluid.
5. Repeat Steps 3 and 4 until the fluid level stabilizes.
6. Lower the vehicle.
7. Start the engine and let it idle.
8. Turn the steering wheel fully to the left and right several times.
9. Verify that the fluid is not foamy and that the fluid level has not dropped.
   - If the fluid level has dropped, add fluid as necessary and repeat Steps 8 and 9.

POWER STEERING FLUID INSPECTION

A6E661432040W01

Fluid Level Inspection

1. Inspect the power steering fluid level.
   - Add fluid to the specified level as necessary.

Fluid specification
ATF M-III or equivalent (e.g. Dexron®II)

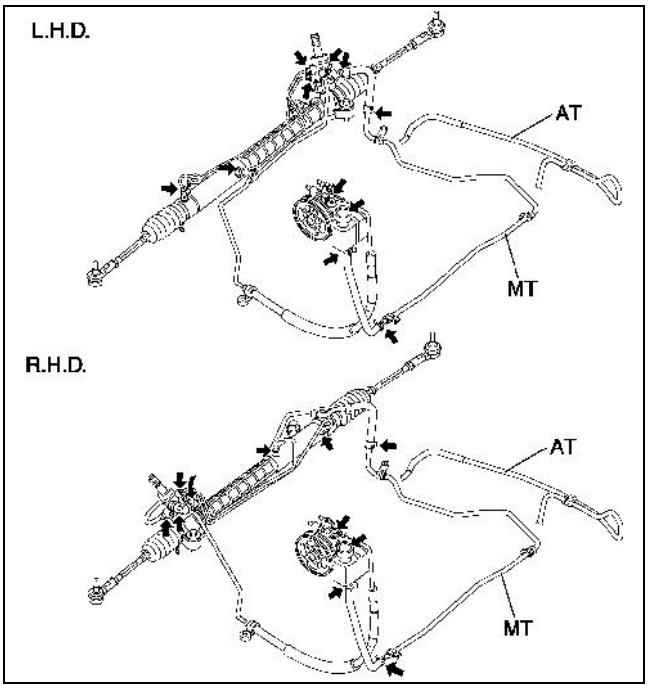
Fluid Leakage Inspection

1. Start the engine and let it idle.
2. Turn the steering wheel fully to the left and right to apply fluid pressure.

Caution
- **If the steering wheel is kept in the fully turned position for more than 5 seconds, the fluid temperature will rise excessively and adversely affect the oil pump.**

3. Inspect for fluid leakage.
   - If fluid leakage is found, replace related pipe or hose.

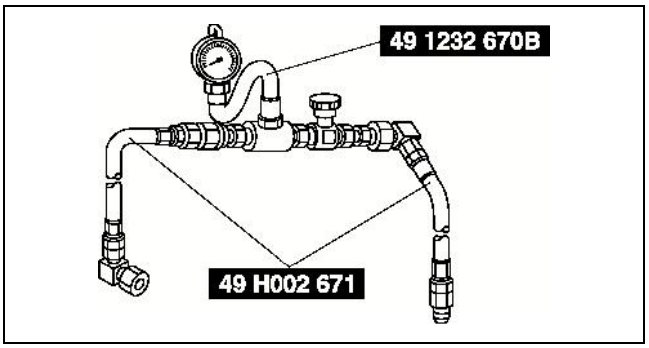
Note
- The points where fluid leakage may occur are indicated in the figure.



A6E0612W094

Fluid Pressure Inspection

1. Assemble the **SSTs** as shown in the figure.

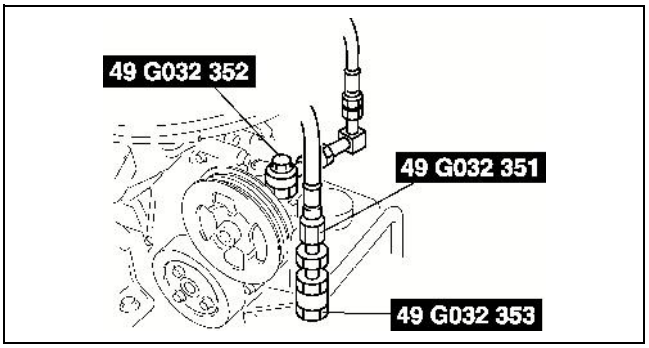


A6E0612W101

2. Disconnect the pressure pipe from the oil pump, and connect the **SSTs**.

Tightening torque
29.4—44.1 N·m {3.0—4.4 kgf·m, 22—32 ft·lbf}

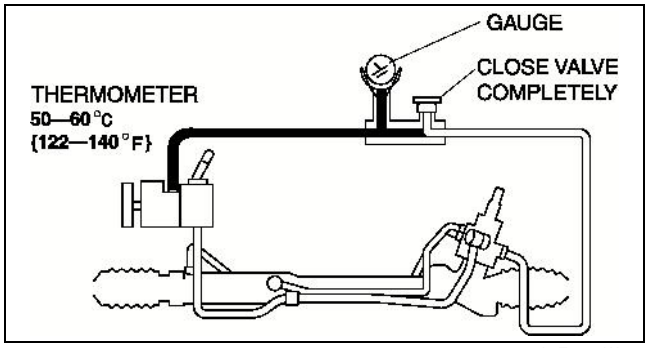
3. Bleed the air from the system.
4. Open the gauge valve fully.
5. Start the engine and turn the steering wheel fully left and right to raise the fluid temperature to **50—60 °C {122—140 °F}**.



A6E0612W012

6. Close the gauge valve completely.
7. Increase the engine speed to **1,000—1,500 rpm** and measure the fluid pressure generated by the oil pump.
   - If the pressure is not within the specification, repair or replace the oil pump component.

   Caution
   - **If the valve is left closed for more than 5 seconds, the fluid temperature will rise excessively and adversely affect the oil pump.**

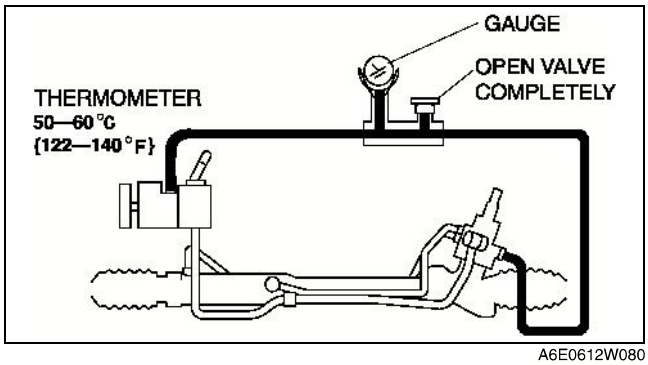


A6E0612W081

   Oil pump fluid pressure
   10.80—11.29 MPa {110.2—115.2 kgf/cm^2, 1567—1637 psi}

8. Open the gauge valve fully and increase the engine speed to **1,000—1,500 rpm**.
9. Turn the steering wheel fully to the left and right, then measure the fluid pressure generated at the gear housing.
   - If the pressure is not within the specification, repair or replace the steering gear component.

   Caution
   - **If the steering wheel is kept in the fully turned position for more than 5 seconds, the fluid temperature will rise excessively and adversely affect the oil pump.**



A6E0612W080

   Gear housing fluid pressure
   10.80—11.29 MPa {110.2—115.2 kgf/cm^2, 1567—1637 psi}

10. Remove the **SSTs**. Install and tighten the pressure pipe to the specified torque.

    Tightening torque
    29.4—44.1 N·m {3.0—4.4 kgf·m, 22—32 ft·lbf}

11. Bleed the air from the system.

STEERING WHEEL AND COLUMN INSPECTION

A6E661432010W01

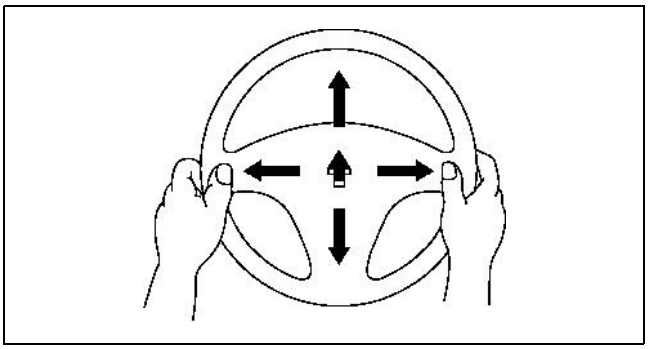
Steering Wheel Play Inspection

1. With the wheels in the straight-ahead position, gently turn the steering wheel to the left and right and verify that the play is within the specification.
   - If the play exceeds the specification, either the steering joints are worn or the backlash of the steering gear is excessive. Correct as necessary.

Play
0—30 mm {0—1.18 in}

Steering Wheel Looseness Inspection

1. Move the steering wheel as shown in the figure to inspect for column bearing wear, steering shaft joint play, steering wheel looseness, and column looseness.
   - Repair or replace as necessary.



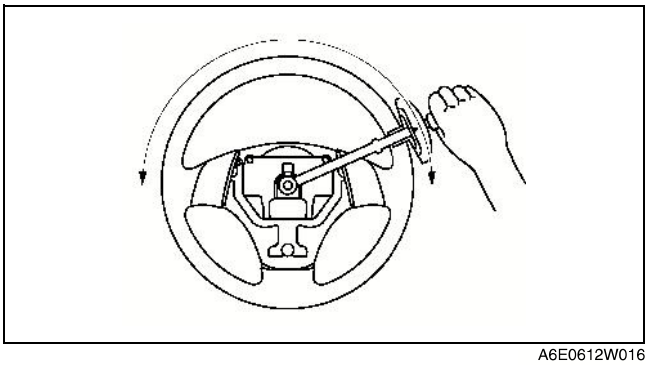
A6E0612W015

Steering Wheel Effort Inspection

1. Inspect the following points:
   - Tire size and tire pressure
   - Fluid level
   - Drive belt deflection
2. With the vehicle on a hard, level surface, put the wheels in the straight-ahead position.
3. Remove the air bag module.

Warning
- **See DRIVER-SIDE AIR BAG MODULE REMOVAL/INSTALLATION for removal/installation of the air bag module after inspection.**

4. Start the engine and warm the power steering fluid to **50—60 °C {122—140 °F}**.
5. Measure the steering wheel effort using a torque wrench.
   - If not within the specification, verify the following:
     — No air in steering system
     — No fluid leakage at hose or connectors
     — Function of oil pump and steering gear



A6E0612W016

Steering wheel effort
7.8 N·m {80 kgf·cm, 58 in·lbf} max.

Note
- To determine whether the steering effort is satisfactory or not, perform the inspection on another vehicle of the same model and under the same conditions, and compare the results.
- The steering wheel effort varies with conditions as shown below.
  — Road conditions, such as dry or wet, and asphalt or concrete.
  — Tire conditions, such as brand, wear, and tire pressure.

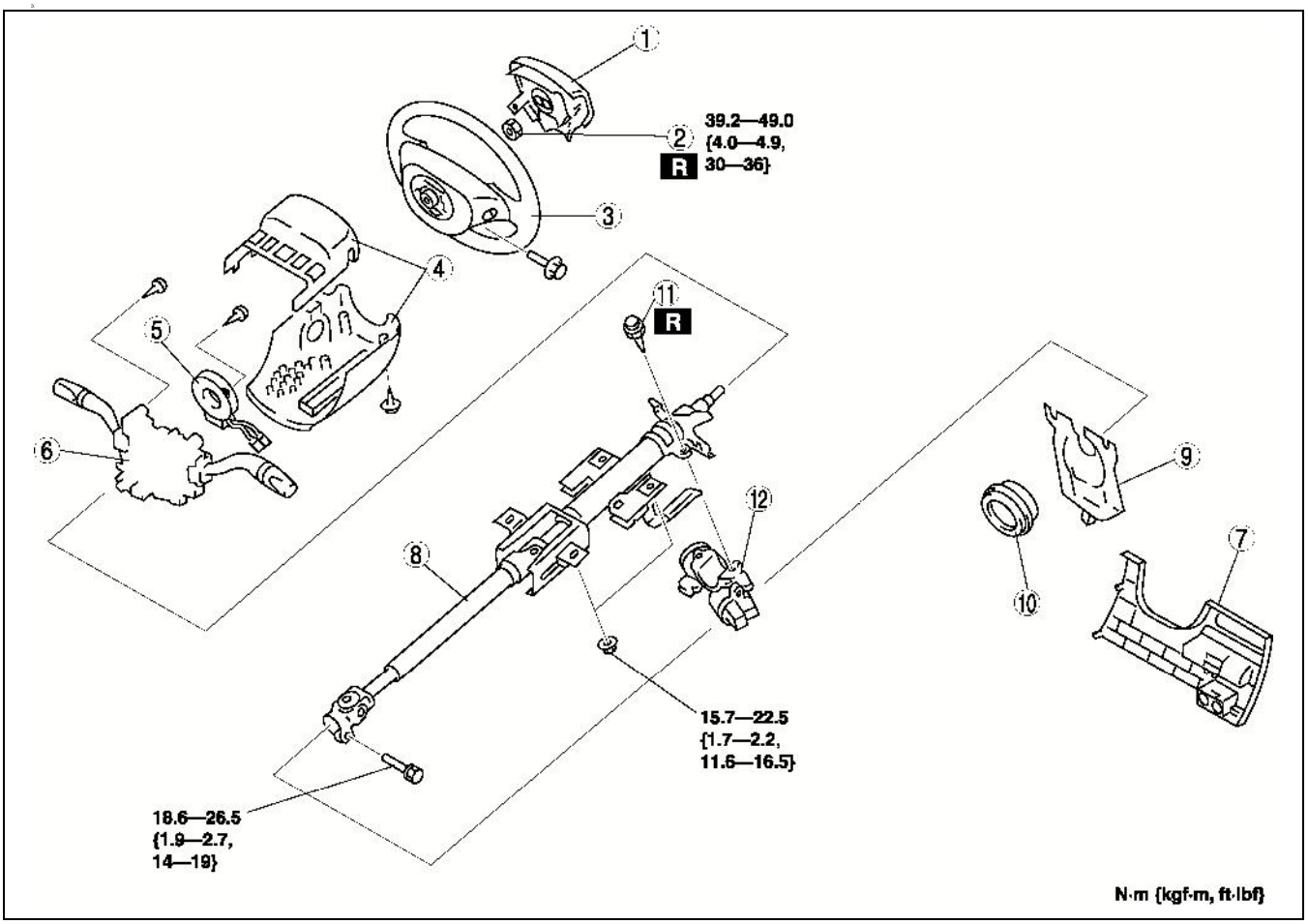
STEERING WHEEL AND COLUMN REMOVAL/INSTALLATION

A6E661432010W02

Warning

- **Handling the air bag module improperly can accidentally deploy the air bag module, which may seriously injure you. Read AIR BAG SYSTEM WARNINGS before handling the air bag module. (See T–117 SERVICE WARNINGS.)**

1. Remove in the order indicated in the table.
2. Install in the reverse order of removal.



A6E0612W017

1	Air bag module (See T–120 DRIVER-SIDE AIR BAG MODULE REMOVAL/INSTALLATION)
2	Locknut
3	Steering wheel (See N–8 Steering Wheel Removal Note) (See N–8 Steering Wheel Installation Note)
4	Column cover
5	Clock spring (See T–125 CLOCK SPRING REMOVAL/INSTALLATION)
6	Combination switch

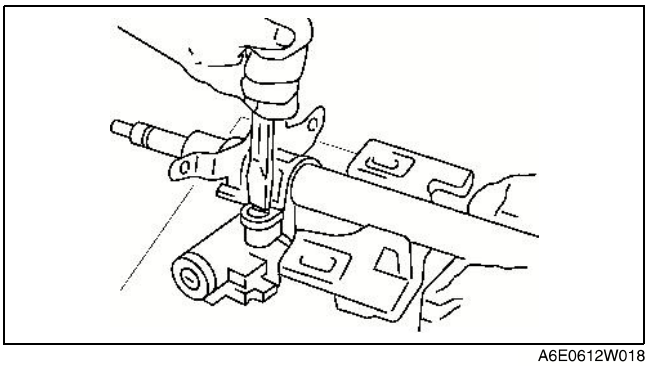
7	Lower panel
8	Steering shaft (See N–8 Steering Shaft Installation Note)
9	Joint cover
10	Dust cover
11	Steering lock mounting bolts (See N–8 Steering Lock Mounting Bolts Removal Note) (See N–8 Steering Lock Mounting Bolts Installation Note)
12	Steering lock component

Steering Wheel Removal Note

Caution
- **Do not try to remove the steering wheel by hitting the shaft with a hammer. The column will collapse.**

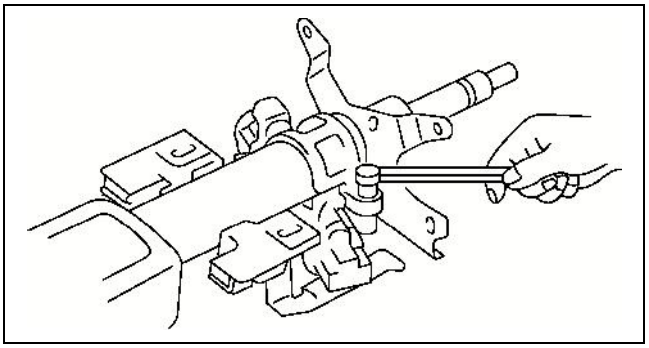
1. Set the vehicle in the straight-ahead position.
2. Remove the steering wheel using a suitable puller.

Steering Lock Mounting Bolts Removal Note
1. Make a groove in the heads of the steering lock mounting bolts using a chisel and a hammer.
2. Remove the bolts using a screwdriver.
3. Disassemble the steering lock component.



A6E0612W018

Steering Lock Mounting Bolts Installation Note
1. Assemble the steering lock component to the steering shaft.
2. Verify that the lock operates correctly.
3. Install new steering lock mounting bolts.
4. Tighten the bolts until the heads break off.

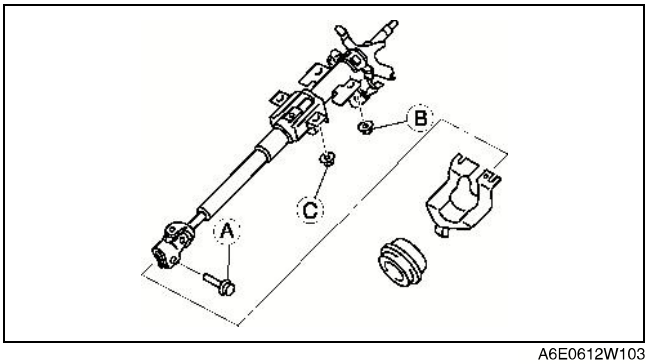


A6E0612W020

Steering Shaft Installation Note

Caution
- **Do not apply a shock in the axial direction of the shaft.**

1. Lock the tilt lever.
2. Tighten bolt A.
3. Tighten nut B.
4. Tighten nut C.



A6E0612W103

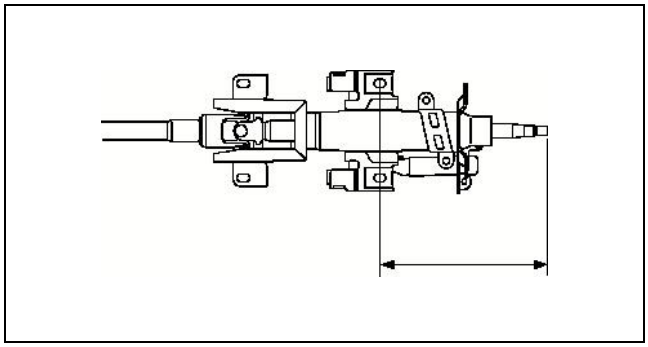
Steering Wheel Installation Note
1. Set the wheels in the straight-ahead position, and install the steering wheel.

STEERING SHAFT INSPECTION

A6E661432100W01

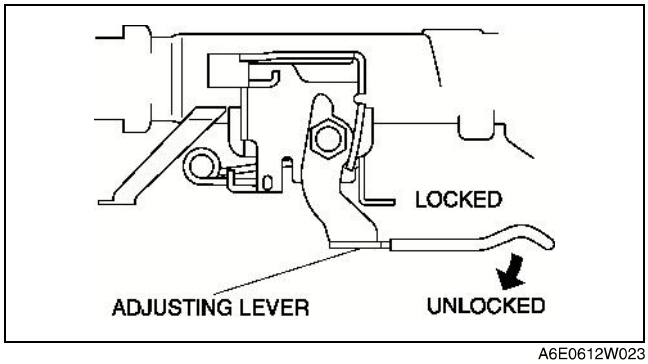
1. Inspect the following.
   (1) Column bearing for damage
   (2) Steering shaft length
      - Replace the steering shaft component as necessary.

   Length
   211.6 mm {8.3 in}



A6E0612W022

2. Inspect the tilt and telescope operation
   (1) Verify that the adjusting lever moves smoothly from unlock position to lock position.
   (2) Verify that the steering shaft is fixed firmly when the adjusting lever is locked.
      - Replace the steering shaft component as necessary.



A6E0612W023

N

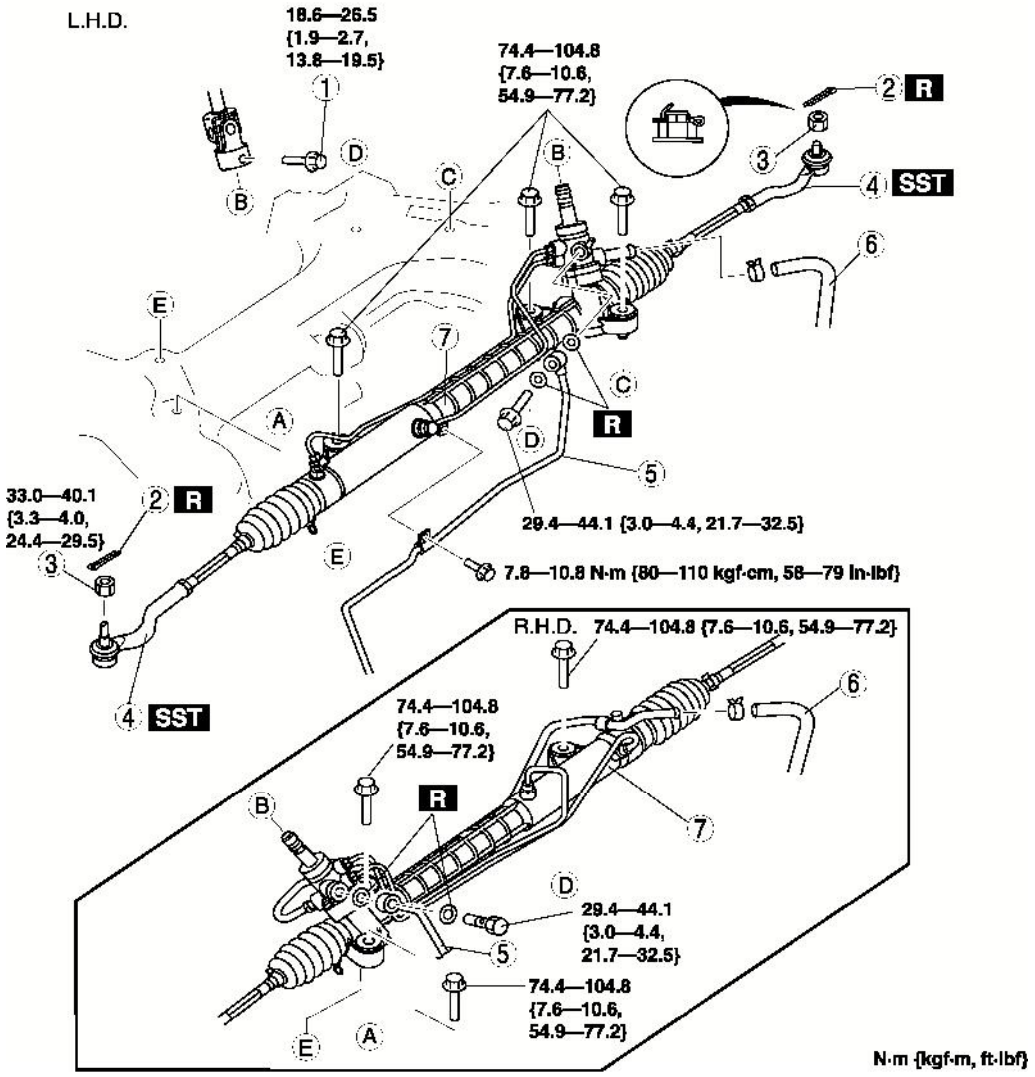
STEERING GEAR AND LINKAGE REMOVAL/INSTALLATION

A6E661432960W01

Caution

- **Performing the following procedures without first removing the ABS wheel-speed sensor may possibly cause an open circuit in the harness if it is pulled by mistake. Before performing the following procedures, remove the ABS wheel-speed sensor (axle side) and fix it to an appropriate place where the sensor will not be pulled by mistake while servicing the vehicle.**

1. Remove in the order indicated in the table.
2. Install in the reverse order of removal.
3. After installation, inspect the toe-in. (See R–5 FRONT WHEEL ALIGNMENT.)



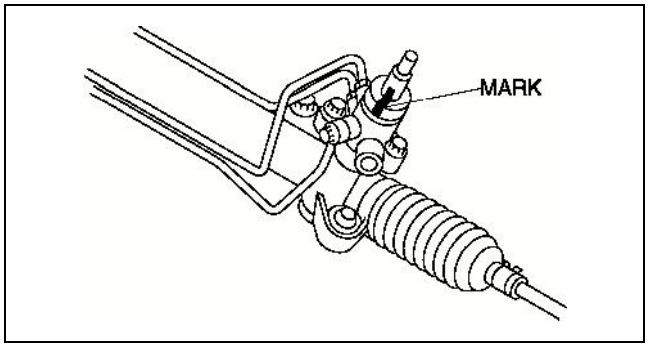
A6E0612W108

1	Bolt (intermediate shaft) (See N–11 Bolt (Intermediate Shaft) Removal Note) (See N–12 Bolt (Intermediate Shaft) Installation Note)
2	Cotter pin
3	Nuts (tie-rod end ball joint)
4	Tie-rod end ball joint (See N–11 Tie-rod End Ball Joint Removal Note)

5	Pressure pipe
6	Return pipe
7	Steering gear and linkage (See N–11 Steering Gear and Linkage Removal Note) (See N–12 Steering Gear and Linkage Installation Note)

Bolt (Intermediate Shaft) Removal Note

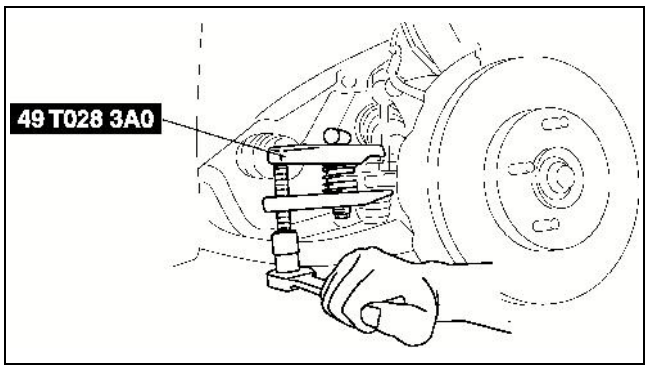
1. Mark the pinion shaft and gear housing for proper installation.



A6E0612W084

Tie-rod End Ball Joint Removal Note

1. Remove the tie rod-nut.
2. Separate the tie-rod end from the steering knuckle using the **SSTs**.



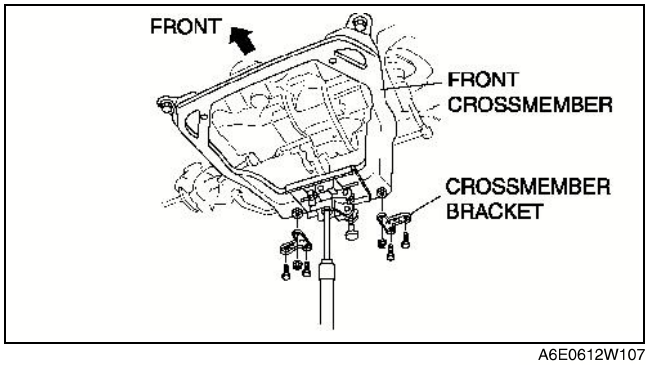
A6E0612W085

Steering Gear and Linkage Removal Note
L.H.D.

Caution

- **Excessively loosening the crossmember nuts may possibly cause the crossmember to fall off. The crossmember nuts must remain threaded on the studs when loosening.**

1. Support the crossmember using jack before removing the crossmember bracket.
2. Loosen the jack and lower the crossmember.
3. Remove the steering gear and linkage by pulling it from the left side.



A6E0612W107

R.H.D.

1. Remove the steering gear and linkage by pulling it from the right side.

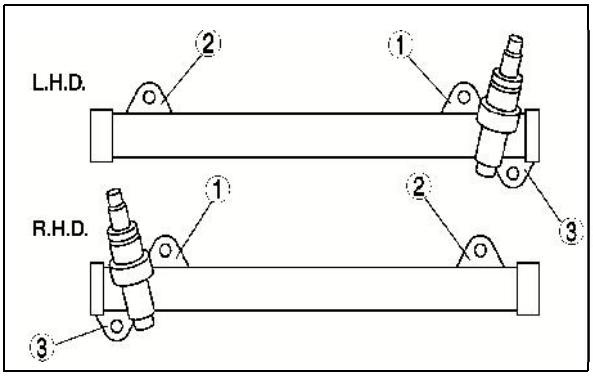
Steering Gear and Linkage Installation Note

1. Loosely tighten bolts.
2. Tighten the mounting bracket bolts to the specified torque in the order shown.

   Tightening torque
   74.4—104.8 N·m {7.6—10.6 kgf·m, 55—77 ft·lbf}

3. Tighten the crossmember installation nuts. (L.H.D.)

   Tightening torque
   Nut: 119.6—154.8 N·m {12.2—15.7 kgf·m, 89—114 ft·lbf}
   Bolt: 93.1—131.3 N·m {9.5—13.3 kgf·m, 69—96 ft·lbf}



A6E0612W027

Bolt (Intermediate Shaft) Installation Note

1. Align the marks and install the intermediate shaft and bolt.

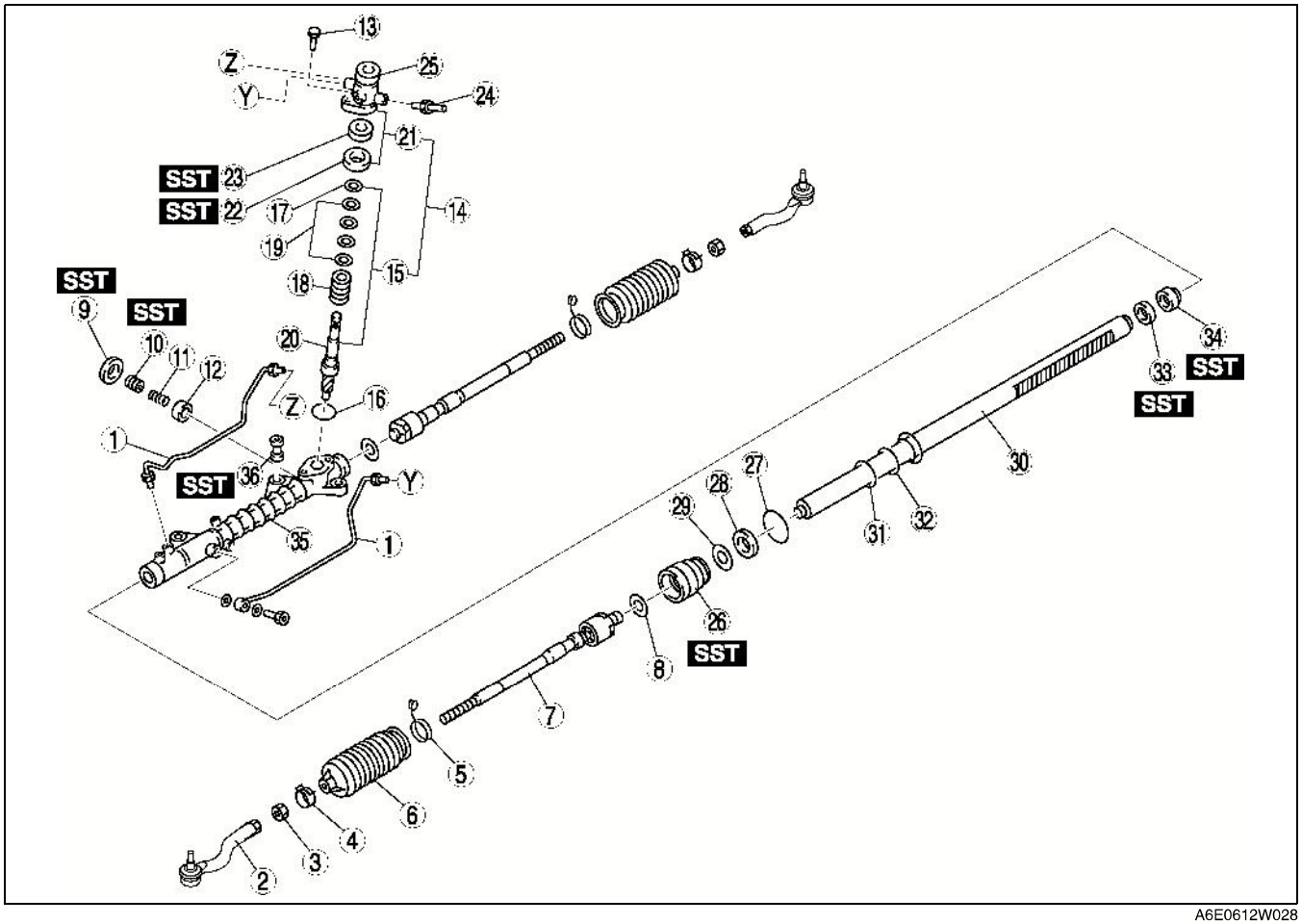
STEERING GEAR AND LINKAGE DISASSEMBLY

A6E661432960W02

Caution

- **Place copper plates, rag, or similar material in a vise, when securing the mounting bracket portion of the steering gear.**

1. Disassemble in the order indicated in the table.



A6E0612W028

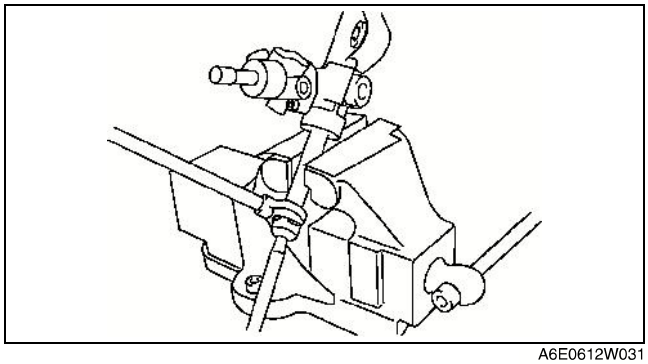
1	Oil pipe
2	Tie-rod end
3	Locknut
4	Boot clamp
5	Boot band
6	Boot
7	Tie rod (See N–13 Tie Rod Disassembly Note)
8	Washer
9	Locknut (adjusting cover) (See N–13 Locknut (Adjusting Cover) Disassembly Note)
10	Adjusting cover (See N–14 Adjusting Cover Disassembly Note)
11	Yoke spring
12	Support yoke
13	Bolt
14	Pinion shaft and housing component (See N–14 Pinion Shaft and Housing Component Disassembly Note)
15	Pinion shaft component (See N–14 Pinion Shaft Component Disassembly Note)
16	O-ring
17	Snap ring (See N–14 Snap Ring Disassembly Note)
18	Control valve component

19	Seal ring
20	Pinion shaft
21	Valve housing component
22	Upper bearing (See N–15 Upper Bearing, Oil Seal Disassembly Note)
23	Oil seal (See N–15 Upper Bearing, Oil Seal Disassembly Note)
24	Return pipe
25	Valve Housing
26	Holder (See N–15 Holder Disassembly Note)
27	O-ring
28	U-gasket
29	Backup ring
30	Steering rack
31	Seal ring
32	O-ring
33	Oil seal (See N–15 Oil Seal, Inner Guide Disassembly Note)
34	Inner guide (See N–15 Oil Seal, Inner Guide Disassembly Note)
35	Gear housing
36	Mounting rubber (See N–15 Mounting Rubber Disassembly Note)

N

Tie Rod Disassembly Note

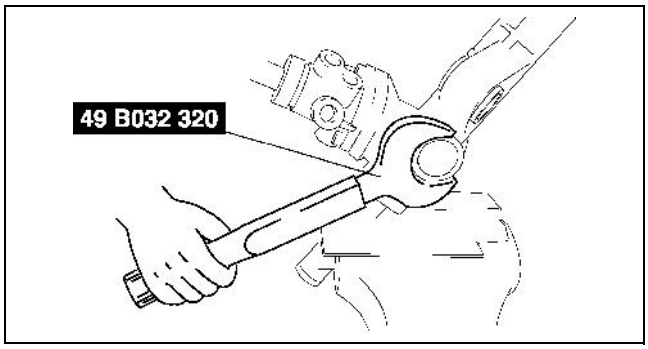
1. Unclamp the washer.
2. Remove the tie rod.



A6E0612W031

Locknut (Adjusting Cover) Disassembly Note

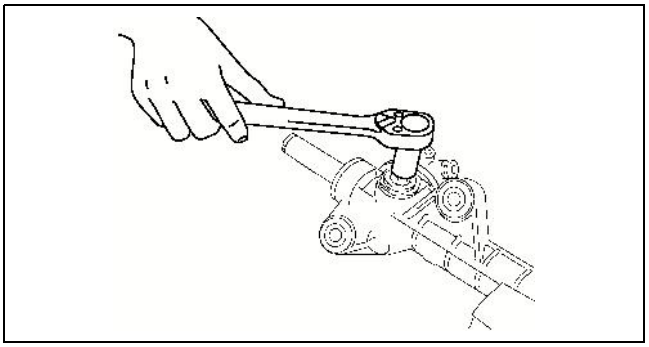
1. Remove the locknut using the **SST**.



A6E0612W056

Adjusting Cover Disassembly Note

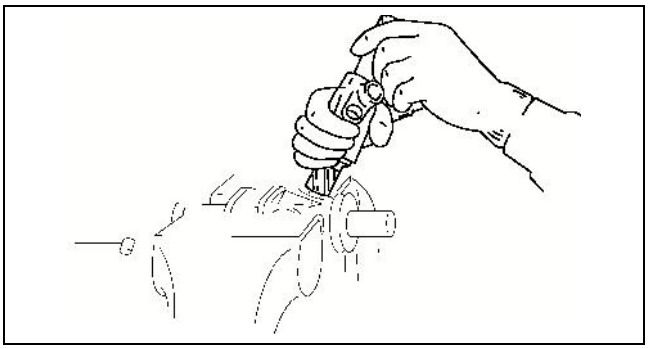
1. Remove the adjusting cover.



A6E0612W033

Pinion Shaft and Housing Component Disassembly Note

1. Hold the pinion shaft as shown, and pull out the pinion shaft and housing component.



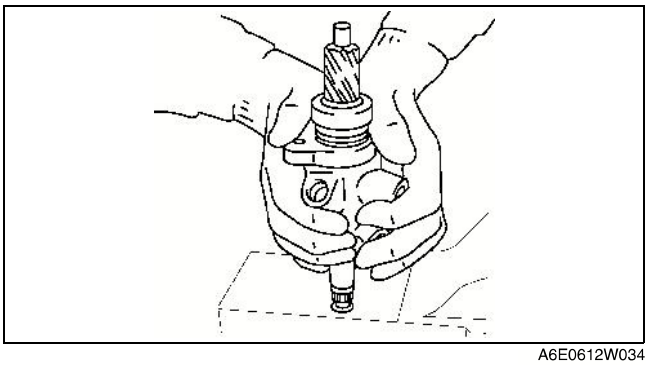
A6E0612W038

Pinion Shaft Component Disassembly Note

Note

- If the pinion shaft does not come out easily, remove it using a press.

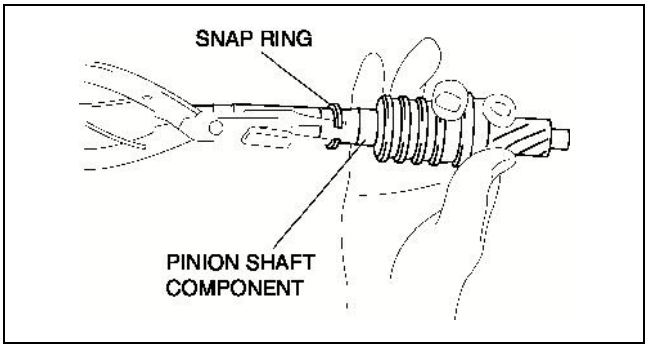
1. Push out the pinion shaft componet from the valve housing as shown.



A6E0612W034

Snap Ring Disassembly Note

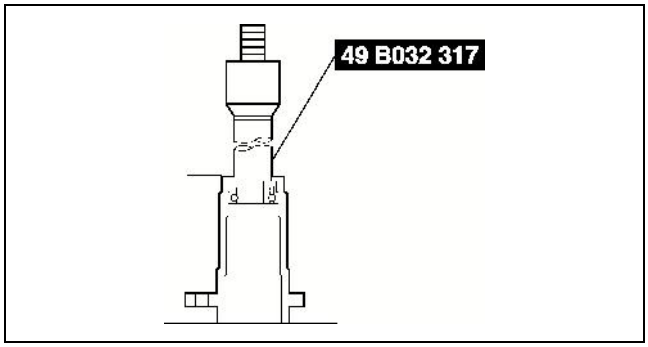
1. Carefully remove the snap ring without damaging the pinion shaft component.



A6E0612W074

Upper Bearing, Oil Seal Disassembly Note

1. Set the **SST** as shown.
2. Using a press, remove the oil seal and upper bearing without applying pressure to the edge of the valve housing.



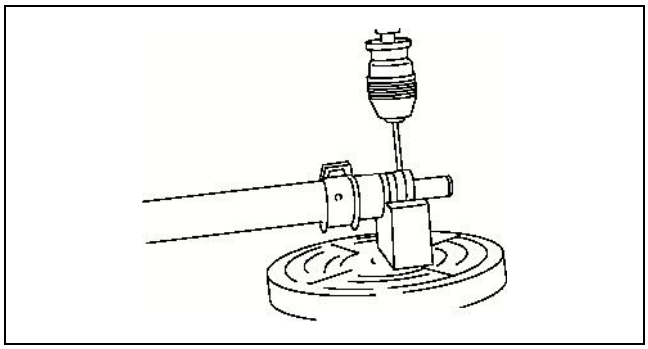
A6E0612W035

Holder Disassembly Note

1. Cut away the staked area by using a drill.

   Caution
   - **Carefully pull out the holder without damaging the U gasket.**

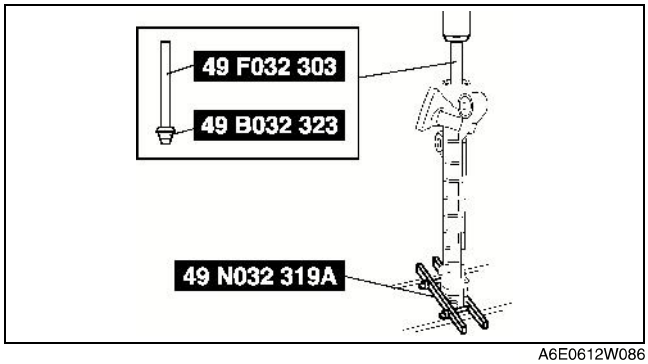
2. Disassemble the holder.



A6E0612W037

Oil Seal, Inner Guide Disassembly Note

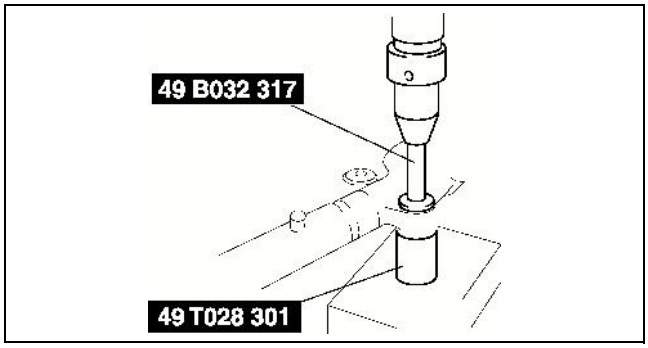
1. Set the **SSTs** into the valve side.
2. Install the **SST** to the gear housing.
3. Press out the oil seal and inner guide.



A6E0612W086

Mounting Rubber Disassembly Note

- Press the mounting rubber out from the gear housing using the **SSTs** and a press.



A6E0612W040

STEERING GEAR AND LINKAGE INSPECTION

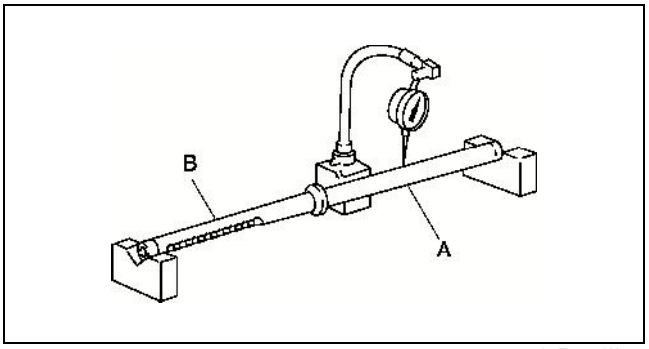
A6E661432960W03

Rack Inspection

1. Inspect the rack for cracking, damage, and tooth wear. Replace it as necessary.
2. Measure the runout of the rack.

   Runout
   Near point A: 0.15 mm {0.006 in} max.
   Near point B: 0.20 mm {0.008 in} max.

3. If not within the specification, replace the rack.



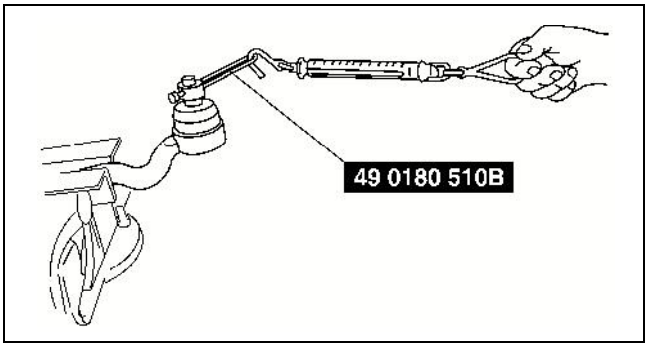
A6E0612W041

Tie-rod End Inspection

1. Inspect the tie-rod end for damage and boot cracks. Replace it as necessary.
2. Inspect the ball joint for looseness. Replace the tie-rod end as necessary.
3. Rotate the ball joint five times.
4. Measure the rotation torque of the ball joint using the **SST** and a pull scale.

   Rotation torque
   0.4—2.7 N·m {3.5—27.5 kgf·cm, 3.1—23.8 in·lbf}
   Pull scale reading
   3.4—25.5 N {0.35—2.60 kgf, 0.8—5.7 lbf}

5. If not within the specification, replace the tie-rod end.



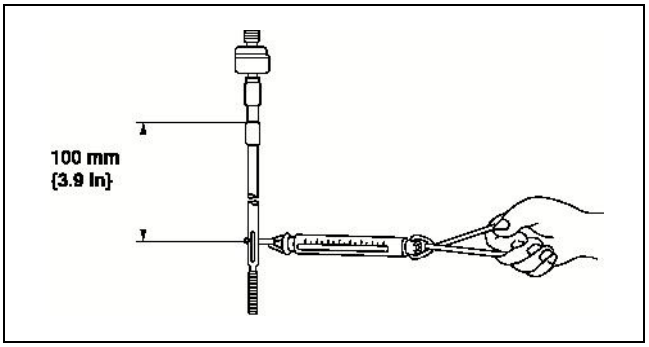
A6E6316W100

Tie rod Inspection

1. Inspect the tie rod for bending and damage. Replace it as necessary.
2. Inspect the ball joint for looseness. Replace the tie rod as necessary.
3. Swing the tie rod five times.
4. Measure the swinging torque using a pull scale.

   Swinging torque
   0.1—4.0 N·m {1—40.7 kgf·cm, 0.9—35.3 in·lbf}
   Pull scale reading
   0.6—24.5 N {0.06—2.49 kgf, 0.2—5.50 lbf}

5. If not within the specification, replace the tie-rod.



A6E0612W043

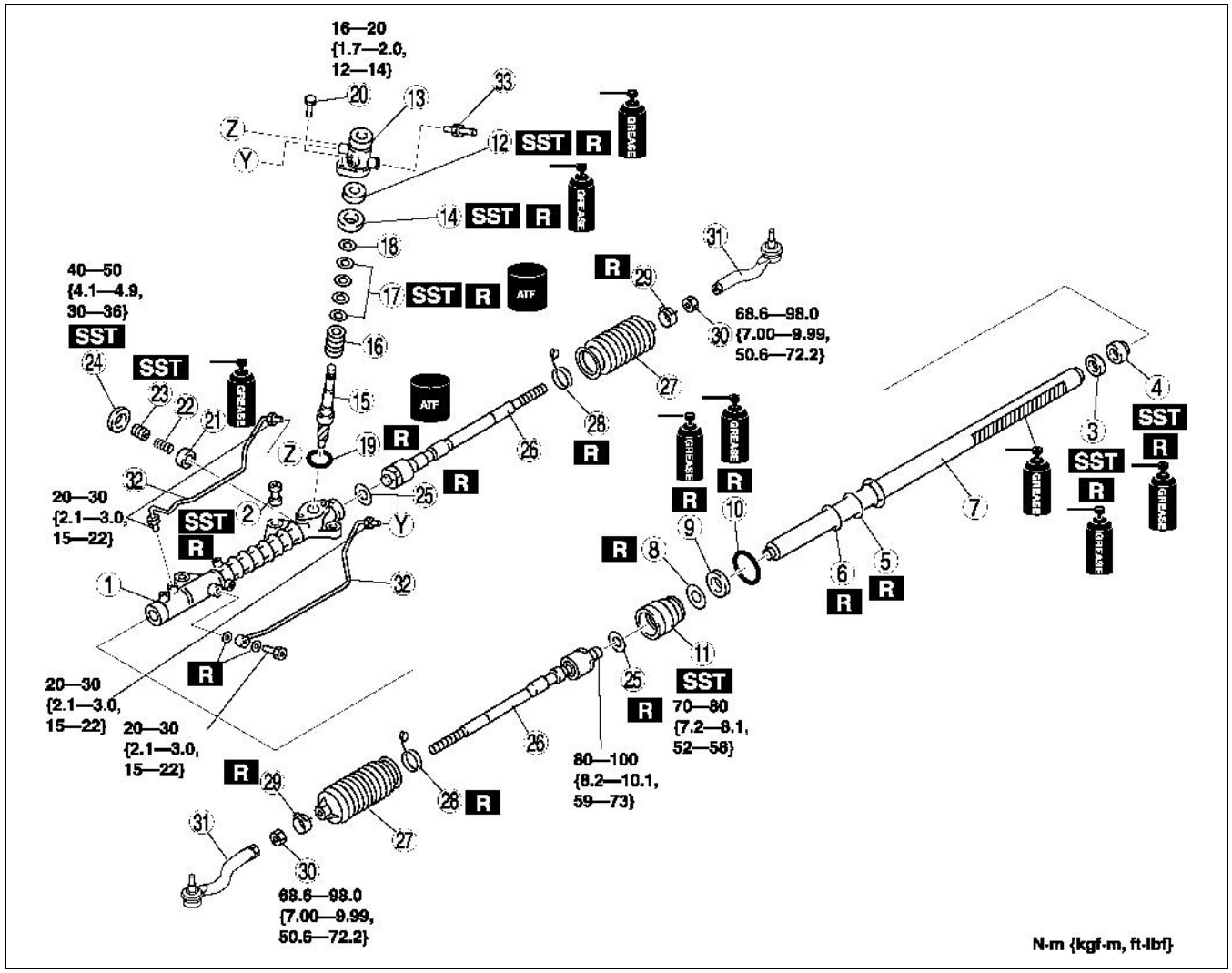
STEERING GEAR AND LINKAGE ASSEMBLY

A6E661432960W04

Caution

- **Place copper plates, rag, or similar material in a vise, when secure the mounting bracket portion of the steering gear.**

1. Assemble in the order indicated in the table.



A6E0612W044

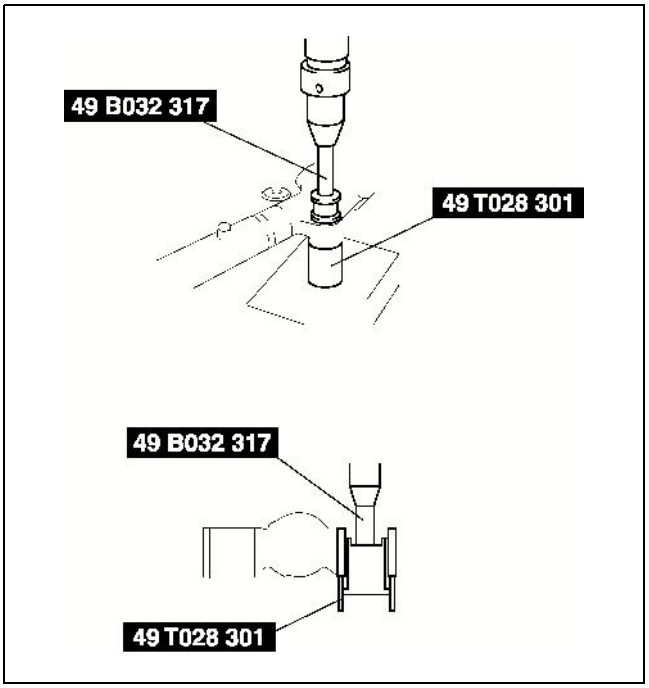
1	Gear housing
2	Mounting rubber (See N–18 Mounting Rubber Assembly Note)
3	Oil seal (See N–18 Oil Seal, Inner Guide Assembly Note)
4	Inner guide (See N–18 Oil Seal, Inner Guide Assembly Note)
5	O-ring
6	Seal ring
7	Steering rack
8	Backup ring
9	U-gasket
10	O-ring
11	Holder (See N–19 Holder Assembly Note)
12	Oil seal (See N–20 Oil Seal Assembly Note)
13	Valve housing
14	Upper bearing (See N–20 Upper Bearing Assembly Note)
15	Pinion shaft

16	Control valve
17	Seal ring (See N–20 Seal Ring Assembly Note)
18	Snap ring
19	O-ring
20	Bolt
21	Support yoke
22	Yoke spring
23	Adjusting cover (See N–20 Adjusting Cover Assembly Note)
24	Locknut (adjusting cover)
25	Washer
26	Tie rod
27	Boot
28	Boot band
29	Boot clamp
30	Locknut
31	Tie-rod end
32	Oil pipe
33	Return pipe

N

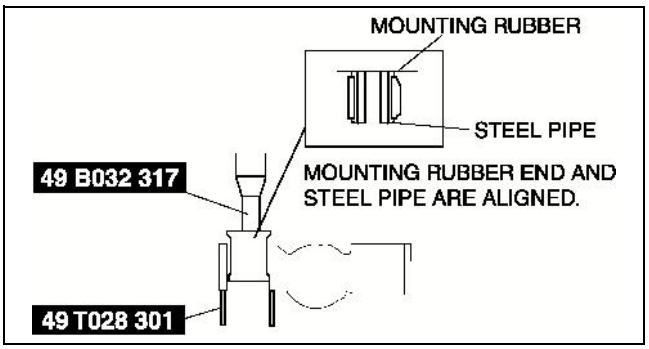
Mounting Rubber Assembly Note

1. Apply soapy water to the rubber part of the mounting rubber.
2. Press the mounting rubber until the mounting rubber end comes out completely from the gear housing using the **SSTs** and a press.



A6E0612W087

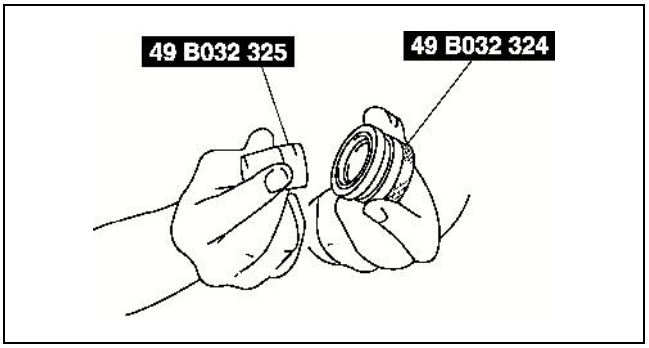
3. Reverse the gear housing, then press the mounting rubber until the mounting rubber end comes out completely from the other side. At this time, mounting rubber end and steel pipe are aligned.



A6E0612W088

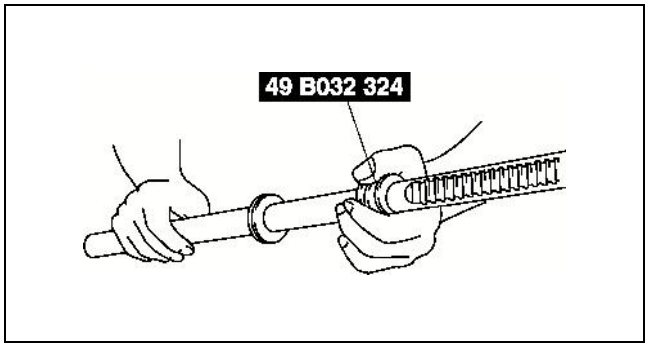
Oil Seal, Inner Guide Assembly Note

1. Install a new O-ring and a new seal ring to the rack's piston.
2. After installing the seal ring, seat it properly at the piston circumference.
3. Apply grease to a new oil seal and inner guide.
4. Install the oil seal to the **SST**.



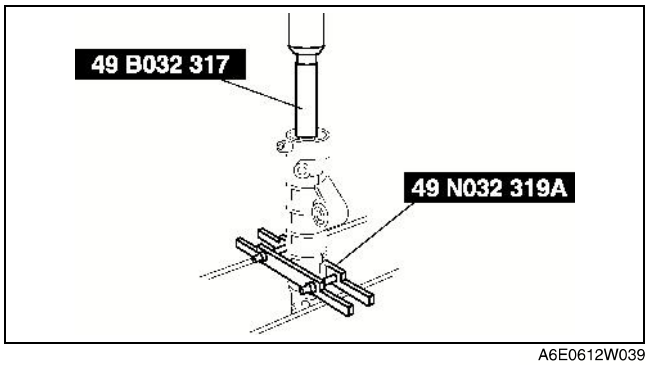
A6E0612W048

5. Using the **SST**, place the oil seal and inner guide at the edge of the steering rack's pinion, and remove the **SST**.



A6E0612W049

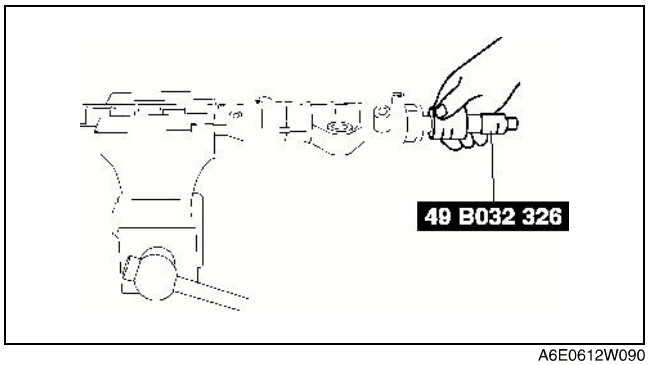
6. After installing the steering rack to the gear housing, press the oil seal and inner guide using the **SSTs** until the force required suddenly increases.



A6E0612W039

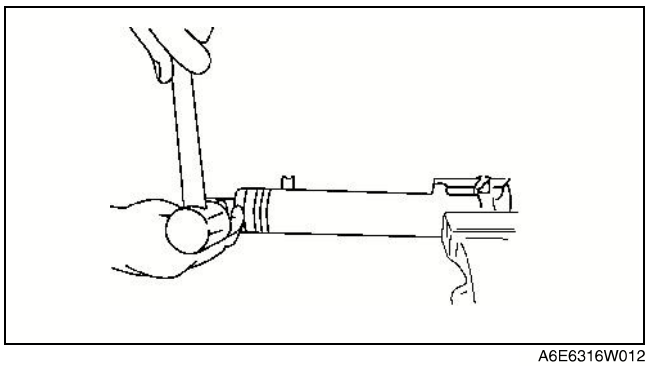
Holder Assembly Note

1. Apply grease to the U-gasket and O-ring.
2. Assemble the U-gasket, backup ring and O-ring into the holder.
3. Assemble the **SST** to the steering rack.



A6E0612W090

4. Stake the holder to the cylinder using a punch.

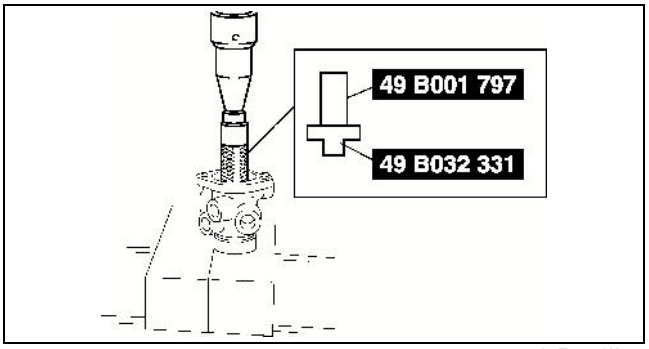


A6E6316W012

N

Oil Seal Assembly Note

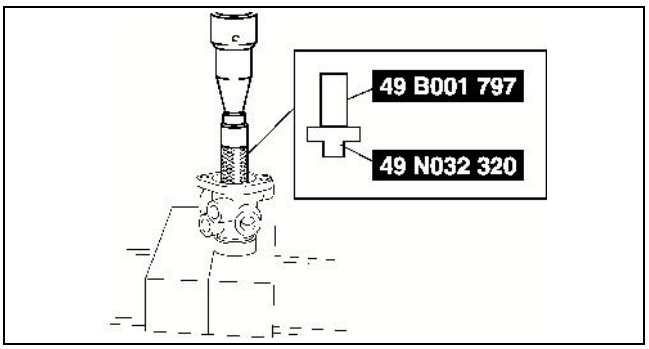
1. Apply grease to a new oil seal.
2. Press in the new oil seal using the **SSTs**.



A6E0612W036

Upper Bearing Assembly Note

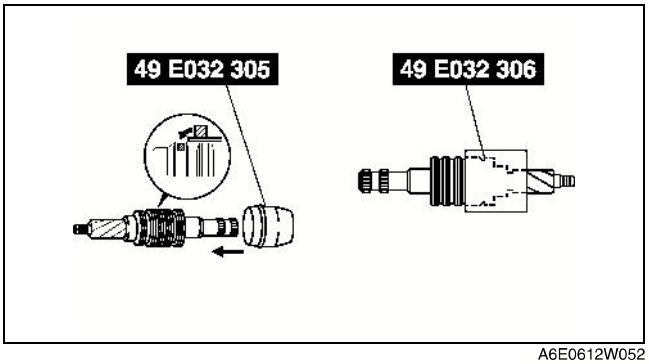
1. Apply grease to a new upper bearing.
2. Press in the upper bearing using the **SST**.



A6E0612W051

Seal Ring Assembly Note

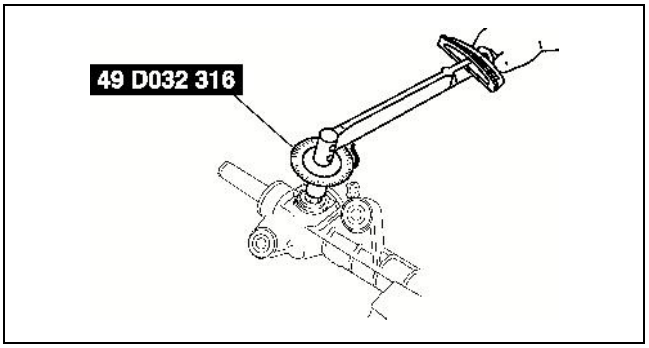
1. Install a new seal ring to the valve part of the pinion shaft using the **SST**.
2. After installing it, seat it properly using the **SST**.
3. Install the snap ring.



A6E0612W052

Adjusting Cover Assembly Note

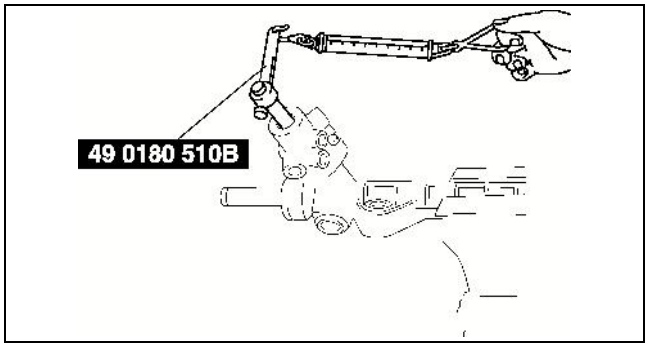
1. Set the rack to the center position.
2. Tighten the adjusting cover to **4.9 N·m {50 kgf·cm, 36 in·lbf}** three times, then return it **25°** using the **SST**.
3. Apply sealant to the threads of the locknut.
4. Attach the locknut.



A6E0612W062

5. Measure the pinion torque using the **SST** and a pull scale.

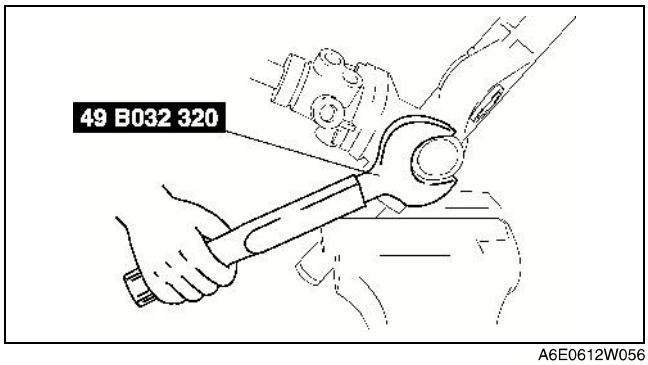
   Standard
   Center of rack ±90°
   0.8—1.2 N·m
   {8.2—12.2 kgf·cm, 5.8—8.8 in·lbf}
   [Pull scale reading
   8—12 N {0.9—1.2 kgf, 1.8—2.6 lbf}]
   Except center of rack ±90°
   Less than 1.6 N·m
   {16.3 kgf·cm, 11.8 in·lbf}
   [Pull scale reading
   Less than 16.7 N {1.7 kgf, 3.8 lbf}]



A6E0612W042

6. If not as specified, repeat steps 2 through 5.
7. Install the locknut using the **SST** (49 B032 320).

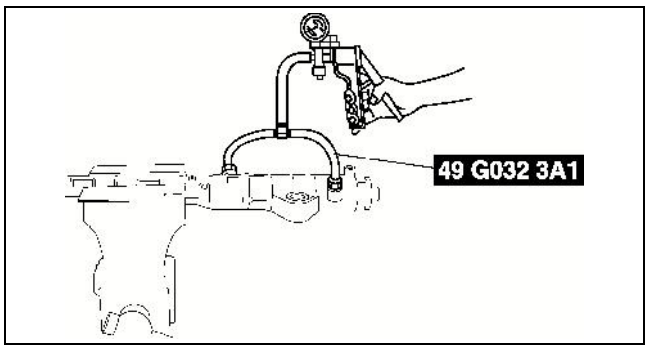
   Tightening torque
   40—49 N·m {4.1—4.9 kgf·m, 30—36 ft·lbf}



A6E0612W056

Hermetic sealing inspection

1. Connect the **SSTs** to the power cylinder section of the gear housing.
2. Apply **53.3 kPa {400 mmHg, 15.7 inHg}** vacuum with a vacuum pump and verify that it is held for at least **30 seconds**.
3. If the vacuum is not held, replace the oil seal.



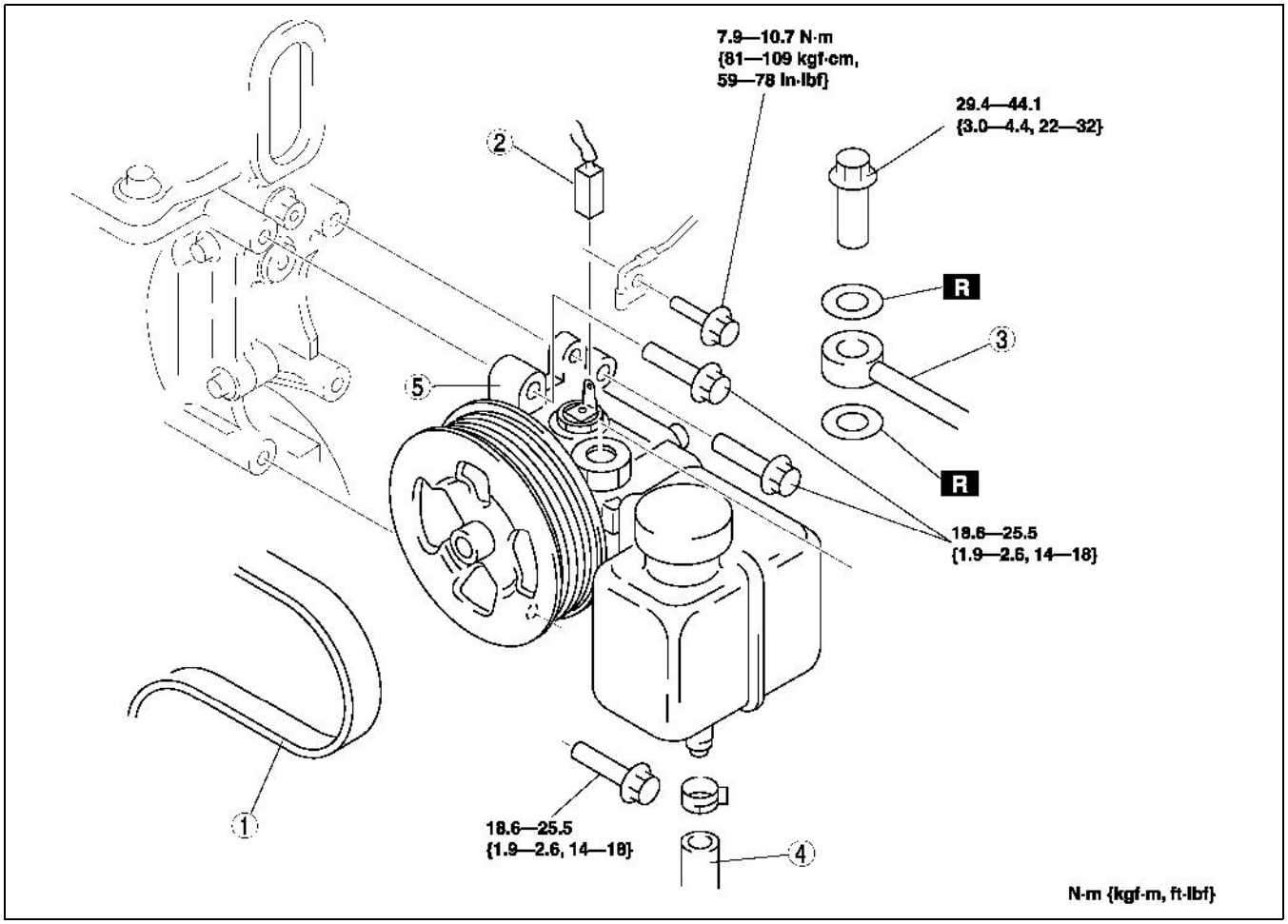
A6E0612W054

N

POWER STEERING OIL PUMP REMOVAL/INSTALLATION

A6E661432650W01

1. Remove in the order indicated in the table.
2. Install in the reverse order of removal.



A6E0612W092

1	Drive belt
2	Pressure switch connector
3	Pressure pipe

4	Suction hose
5	Power steering oil pump

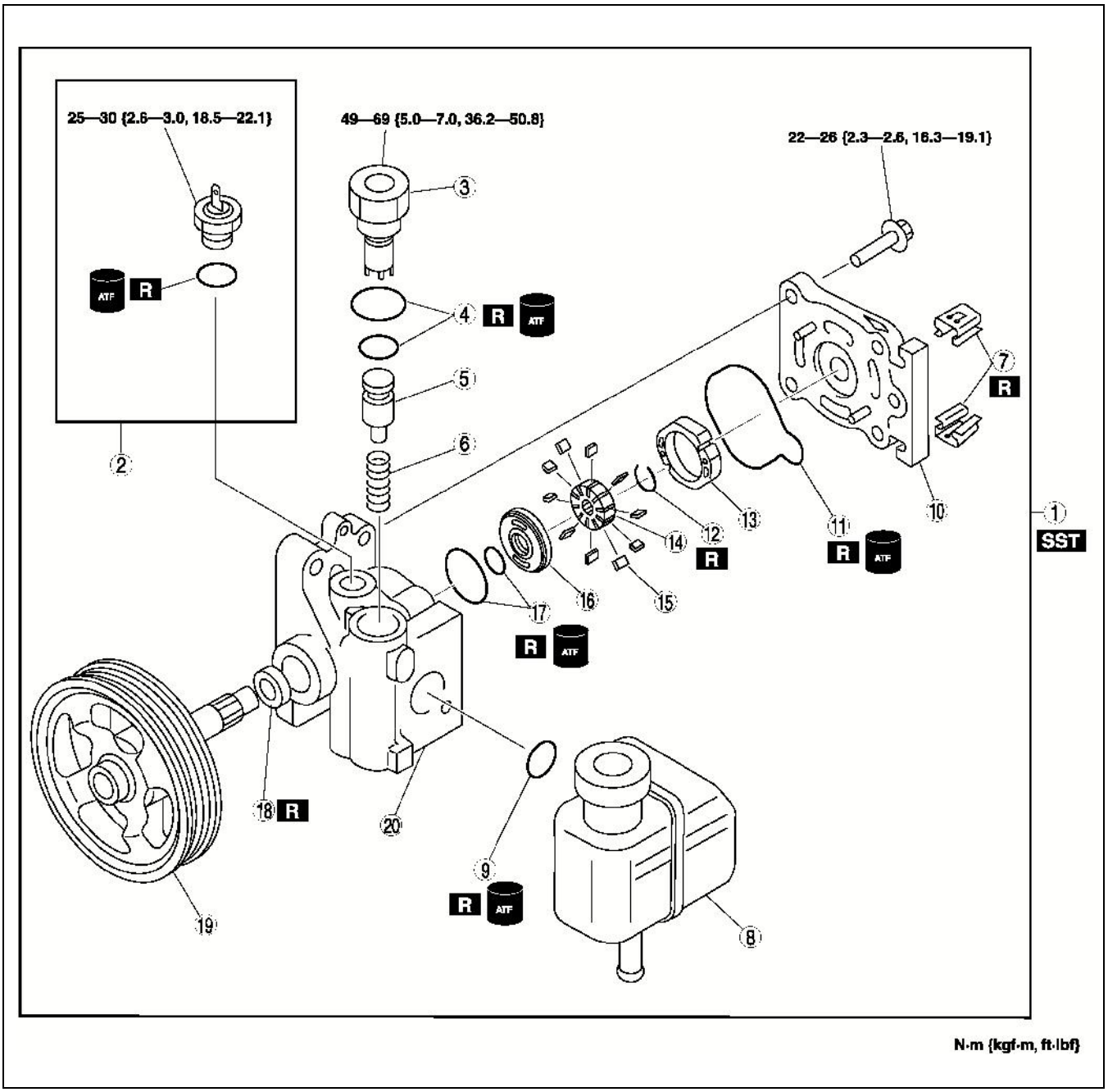
POWER STEERING OIL PUMP DISASSEMBLY/ASSEMBLY

A6E661432650W02

Note

- The following procedure is for replacement of the O-ring and oil seal only. Replace the pump component if other repairs are necessary.

1. Disassemble in the order indicated in the table.
2. Assemble in the reverse order of disassembly.



A6E0612W068

1	Power steering oil pump component (See N–24 Power Steering Oil Pump Component Disassembly Note)
2	Pressure switch component
3	Connector
4	O-rings
5	Control valve
6	Spring
7	Clip (See N–24 Clip Disassembly Note) (See N–24 Clip Assembly Note)
8	Power steering reservoir tank
9	O-ring
10	Rear pump body (See N–25 Rear Pump Body Assembly Note)

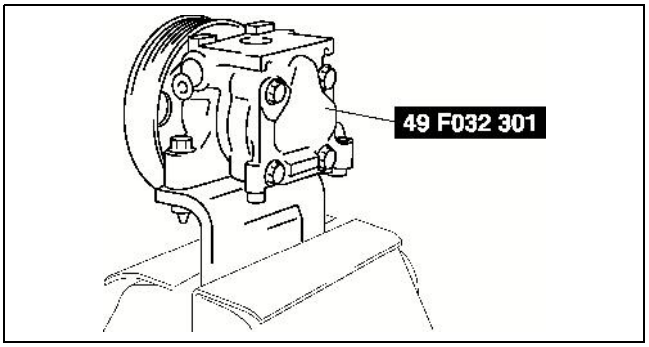
11	O-ring
12	Clip
13	Cam ring (See N–25 Cam Ring Assembly Note)
14	Rotor
15	Vane (See N–25 Vane Assembly Note)
16	Side plate
17	O-ring
18	Oil seal (See N–25 Oil Seal Assembly Note)
19	Shaft component
20	Front pump body

Power Steering Oil Pump Component Disassembly Note

1. Secure the power pressure oil pump using the **SST**.

Caution

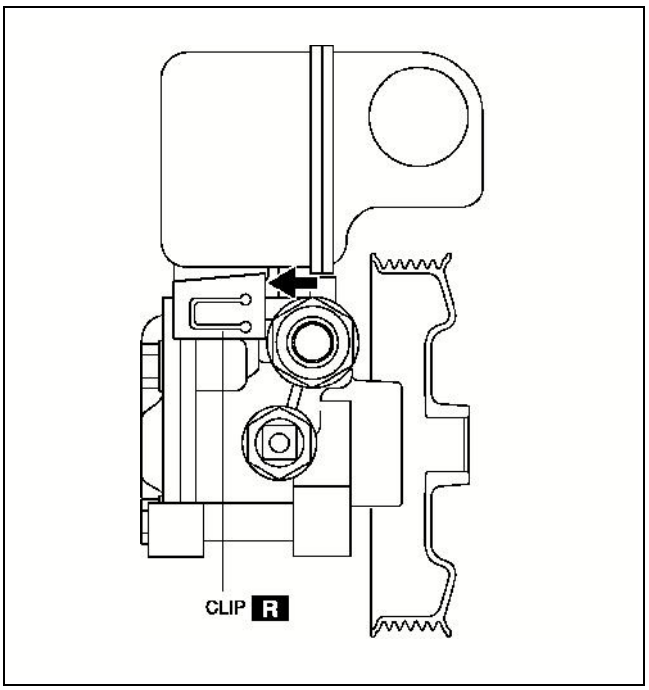
- **Use the SST to prevent damage to the pump when securing it in a vise.**



A6E0612W070

Clip Disassembly Note

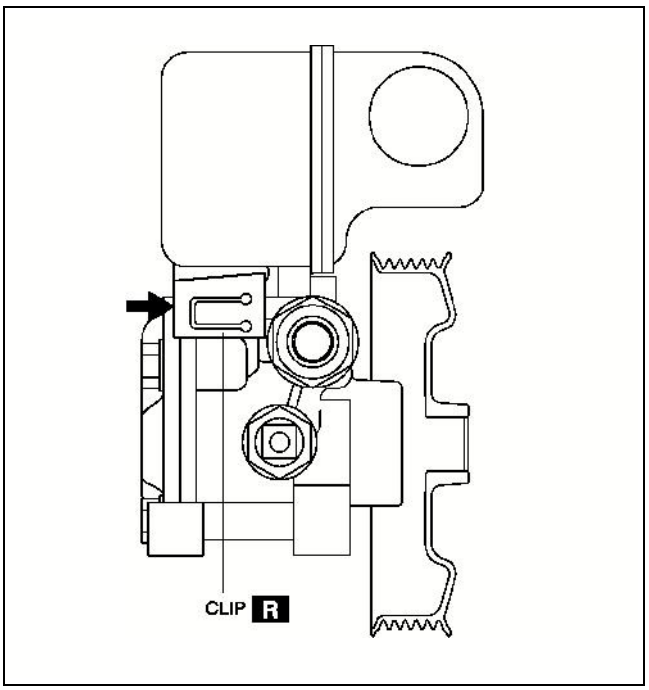
1. Lift up the clip tab using a flathead screwdriver.
2. Remove the clip pushing with a flathead screwdriver and a hammer as shown in the figure.



A6E0612W098

Clip Assembly Note

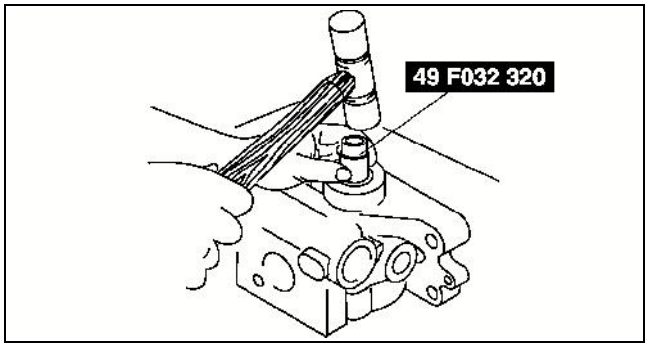
1. Push the clip slowly to the direction shown in the figure.
2. Confirm that the clip tab is caught correctly.



A6E0612W100

Oil Seal Assembly Note

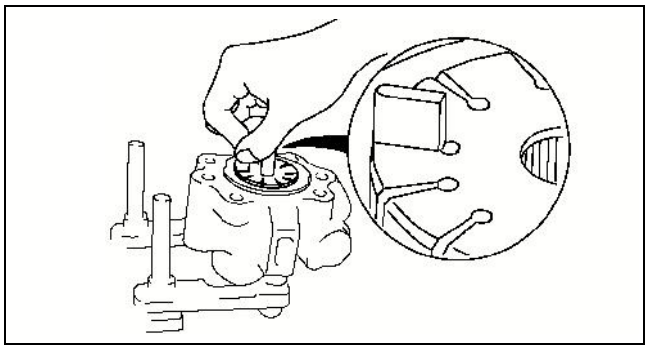
1. Install the oil seal in the front pump body using the **SST** and plastic hammer.



A6J6612W100

Vane Assembly Note

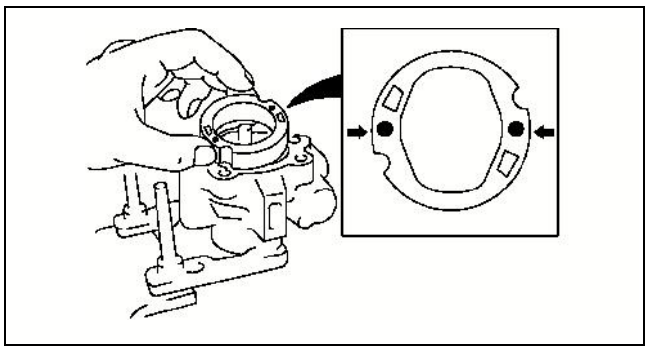
1. Place the vanes in the rotor with the rounded edges contacting the cam.



A6E6316W013

Cam Ring Assembly Note

1. Install the cam ring in the front pump body with the mark facing upward.



A6E6316W014

Rear Pump Body Assembly Note

1. After installing the rear body, manually turn the shaft to verify that it rotates smoothly.