Ball Joints, Lower Arm and Stabilizer Bar

COMPONENTS

- Stabilizer Bar
- Stabilizer Bar Cushion
- Stabilizer Bar Bracket
- Disc Brake Caliper
- Lower Suspension Arm Shaft
- Lower Arm Damper Plate
- Lower Suspension Arm
- Washer
- Lower Arm Rear Bracket

N-m (kgf-cm, ft-lbf) - Specified torque

- Gasket
- Cotter Pin
- Lock Nut Cap
- Dust Deflector
- Tie Rod End
- Speed Sensor (w/ABS)

212 (2,160, 156)
226 (2,300, 166)
127 (1,300, 94)
103 (1,050, 76)
304 (3,100, 224)
18 (1,090, 79)
19 (195, 14)
43 (440, 32)
35 (360, 26)
35 (360, 26)

- Non-reusable part
(Ball Joints)

INSPECTION OF BALL JOINT

1. INSPECT BALL JOINT FOR EXCESSIVE LOOSENESS
   (a) Jack up the front of the vehicle and place a wooden
       block with a height of 180–200 mm (7.09–7.87 in.)
       under one front tire.
   (b) Lower the jack until there is about half a load on one
       front coil spring. Place stands under the vehicle for
       safety.
   (c) Make sure the front wheels are in a straightforward
       position and block the wheel with chocks.
   (d) Move the lower arm up and down, and check that
       the ball joint has no excessive play.
       Ball joint vertical play: 0 mm (0 in.)

2. INSPECT BALL JOINT FOR Rotation CONDITION
   (a) Remove the ball joint. (See page SA–8)
   (b) Flip the ball joint stud back and forth 5 times as
       shown in the illustration, before installing the nut.
   (c) Using a torque gauge, turn the nut continuously one
       turn every 2–4 seconds and take the torque reading
       on the fifth turn.
       Torque (turning): 1.0 – 2.9 N–m
       (10 – 30 kgf–am, 9 – 26 in.–lbf)
       If not within specification, replace the ball joint.
   (d) Install the ball joint.

(Lower Arm)

REMOVAL OF LOWER SUSPENSION ARM

1. DISCONNECT LOWER ARM FROM STEERING KNUCKLE
   Remove the bolt and two nuts holding the steering
   knuckle to the lower suspension arm.

2. DISCONNECT STABILIZER LINK FROM LOWER SUSPENSION ARM
   Remove the nut and disconnect the stabilizer link from the
   lower suspension arm.
   Hint: If the ball joint stud turns together with the nut,
   use a hexagon wrench 5 mm (0.197 in.) to hold the stud.
3. REMOVE LOWER SUSPENSION ARM FRONT SETTING NUT
Remove the lower suspension arm front setting nut and washer.

4. REMOVE LOWER SUSPENSION ARM
(Except LH Arm w/ A/T)
(a) Remove the two bolts and remove the lower arm damper plate.

(b) Remove the lower suspension arm rear bracket bolts.
(c) Remove the lower suspension arm.

(LH Arm w/ A/T)
(a) Remove the four bolts and two nuts, then remove the suspension lower crossmember

(b) Remove the two bolts and remove the lower arm damper plate.
5. (EXCEPT LH ARM w/ A/T)
IF NECESSARY, REMOVE LOWER SUSPENSION ARM SHAFT
(a) Remove the four bolts and two nuts, then remove the suspension lower crossmember.
(b) Remove the nut and remove the lower suspension arm shaft.

REPLACEMENT OF LOWER SUSPENSION ARM REAR BUSHING
1. REMOVE NUT AND BUSHING
Remove the nut, then remove the bushing and washer.

2. INSTALL NEW BUSHING
(a) Install the washer with the tapered side towards the lower suspension arm body as shown in the illustration.
(b) Install the new bushing to the lower suspension arm as shown in the illustration.

3. TEMPORARILY INSTALL NUT
INSTALLATION OF LOWER SUSPENSION ARM

(See page SA–51)

1. (EXCEPT LH ARM w/ A/T)

   IF NECESSARY, INSTALL LOWER SUSPENSION ARM SHAFT

   (a) Install the lower suspension arm shaft in place, then install and torque the front side nut.
       Torque: 152 N–m (1,550 kgf–cm, 112 ft–lbf)

   (b) Install the suspension lower crossmember in place, then install and torque the four bolts and two nuts.
       Torque: 152 N–m (1,550 kgf–cm, 112 ft–lbf)

   (c) Install the lower suspension arm in place, then temporarily install the rear bracket bolts, front washer and nut.

   (LH Arm w/ A/T)

   (a) Install the washer to the lower suspension arm shaft with the tapered side towards the shaft body.

2. INSTALL LOWER SUSPENSION ARM
   (Except LH Arm w/ A/T)

   (a) Install the washer to the lower suspension arm shaft with the tapered side towards the body.

   (b) Install the lower suspension arm in place, then temporarily install the rear bracket bolts, front washer and nut.

   (c) Torque the rear bracket bolts.
       Torque: 98 N–m (1,000 kgf–cm, 72 ft–lbf)

   (LH Arm w/ A/T)

   (a) Install the washer to the lower suspension arm shaft with the tapered side towards the shaft body.

   (b) Install the lower suspension arm shaft with washer to the lower suspension arm, then temporarily install the front washer and nut.
(c) Install the lower suspension arm to the body in place, then install and torque the front side arm shaft installation nut.

Torque: 152 N–m (1,550 kgf–cm, 112 ft–lbf)

(d) Install and torque the rear bracket bolts.

Torque: 98 N–m (1,000 kgf–cm, 72 ft–lbf)

(e) Install the suspension lower crossmember in place, then install and torque the four bolts and two nuts.

Torque: 152 N–m (1,550 kgf–cm, 112 ft–lbf)

3. INSTALL LOWER ARM DAMPER PLATE
Install the lower arm damper plate with the two bolts.

Torque: 65 N–m (660 kgf–cm, 48 ft–lbf)

4. CONNECT LOWER SUSPENSION ARM TO STEERING KNUCKLE
Connect the lower suspension arm to the steering knuckle, then install and torque the bolt and two nuts.

Torque: 127 N–m (1,300 kgf–cm, 94 ft–lbf)

5. CONNECT STABILIZER LINK
Connect the stabilizer link to the lower suspension arm and torque the nut.

Torque: 35 N–m (360 kgf–cm, 26 ft–lbf)
REMOVAL OF STABILIZER BAR

1. REMOVE STABILIZER BAR LINK
   HINT: If the ball joint stud turns together with the nut, use a hexagon wrench 5 mm (0.197 in.) to hold the stud.

2. DISCONNECT FRONT EXHAUST PIPE FROM REAR EXHAUST PIPE

3. DISCONNECT FRONT EXHAUST PIPE FROM BODY
   Remove the two bolts and disconnect the exhaust pipe from the body.

4. REMOVE BOTH STABILIZER BAR BRACKETS AND CUSHION FROM BODY

5. REMOVE STABILIZER BAR

6. INSTALL WHEEL AND LOWER VEHICLE
   (a) Install the wheel and lower the vehicle.
   (b) Bounce the vehicle up and down to stabilize the suspension.

7. TORQUE FRONT SETTING NUT AND REAR NUT
   Torque:
   Front setting nut
   212 N–m (2,160 kgf–cm, 156 ft–lbf)
   Rear nut
   137 N–m (1,400 kgf–cm, 101 ft–lbf)

8. CHECK FRONT WHEEL ALIGNMENT
   (See page SA–4)
INSTALLATION OF STABILIZER BAR

1. INSTALL STABILIZER BAR
   (a) Install the cushions on the painted portions of the stabilizer bar.
   (b) Install the stabilizer bar in place, then install the both stabilizer brackets with the bolts and nuts.
   Torque: 18 N–m (180 kgf–cm, 13 ft–lbf)

2. INSTALL STABILIZER BAR LINK
   Install the stabilizer bar link with the nuts.
   Torque: 35 N–m (360 kgf–cm, 26 ft–lbf)
   HINT: If the ball joint stud turns together with the nut, use a hexagon wrench 5 mm (0.197 in.) to hold the stud.

3. CONNECT FRONT EXHAUST PIPE TO BODY
   Torque: 19 N–m (195 kgf–cm, 14 ft–lbf)

4. CONNECT FRONT EXHAUST PIPE TO REAR EXHAUST PIPE
   Torque: 43 N–m (440 kgf–cm, 32 ft–lbf)

INSPECTION OF STABILIZER LINK

INSPECT STABILIZER LINK
Rotate ball joint arm in all direction. If the movement is not smooth and free, replace the stabilizer link.