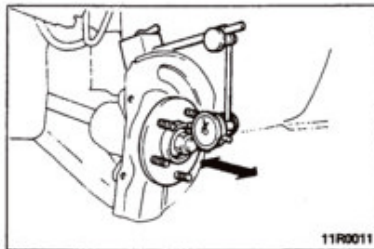


MB990925 A Installer adapter		 C Brass bar B Bar (snap-in type)		 Tool box A11WD113	
Type	Tool number	O.D. mm	Type	Tool number	O.D. mm
A	MB990926	39	A	MB990933	63.5
	MB990927	45		MB990934	67.5
	MB990928	49.5		MB990935	71.5
	MB990929	51		MB990936	75.5
	MB990930	54		MB990937	79
	MB990931	57	B	MB990938	–
	MB990932	61	C	MB990939	–



ON-VEHICLE SERVICE

HUB AXIAL PLAY CHECK

1. Remove the disc brake caliper and suspend it with a wire.
2. Remove the brake disc from the front hub.
3. Attach a dial gauge as shown in the illustration, and then measure the axial play while moving the hub in the axial direction.

Limit: 0.05 mm

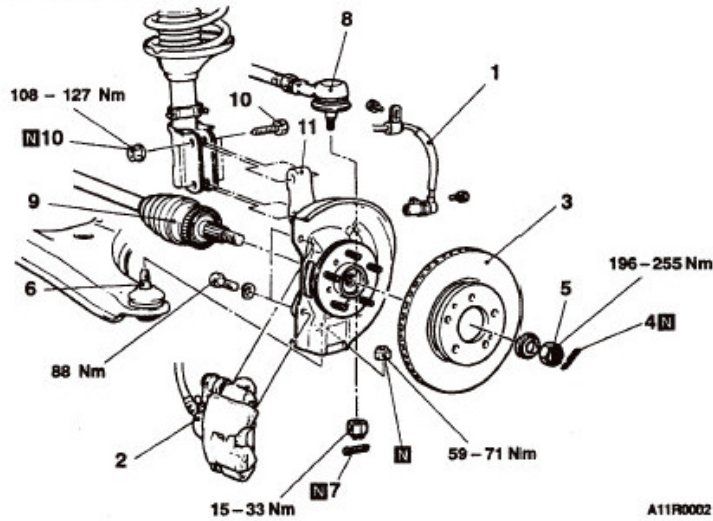
4. If axial play exceeds the limit, disassemble and check parts.

AXLE HUB

REMOVAL AND INSTALLATION

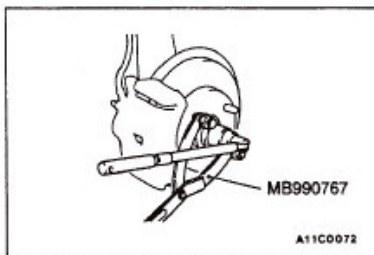
Caution

1. Be careful when handling the pole piece at the tip of the speed sensor so as not to damage it by striking against other parts.
2. Be careful not to damage the ABS rotors installed to the B.J. outer race during removal and installation of the drive shaft.



Removal steps

- | | | | |
|--------------------------------------|---|-----------------------|---|
| <p>◀A▶</p> <p>◀B▶ ▶A▶</p> <p>◀C▶</p> | <ol style="list-style-type: none"> 1. Front speed sensor 2. Caliper assembly 3. Brake disc 4. Split pin 5. Drive shaft nut 6. Connection for lower arm ball joint | <p>◀C▶</p> <p>◀D▶</p> | <ol style="list-style-type: none"> 7. Split pin 8. Connection for tie rod end 9. Drive shaft 10. Front strut mounting bolt and nut 11. Hub and knuckle |
|--------------------------------------|---|-----------------------|---|



REMOVAL SERVICE POINTS

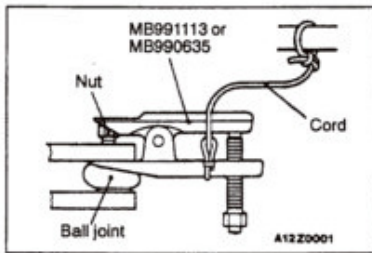
◀A▶ **CALIPER ASSEMBLY REMOVAL**

Secure the removed caliper assembly with wire, etc.

◀B▶ **DRIVE SHAFT NUT REMOVAL**

Caution

When the drive shaft is loosened, do not apply the vehicle weight on the wheel bearing.

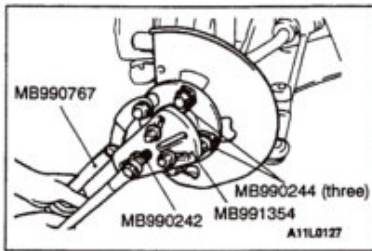


◀C▶ LOWER ARM BALL JOINT/TIE ROD END DISCONNECTION

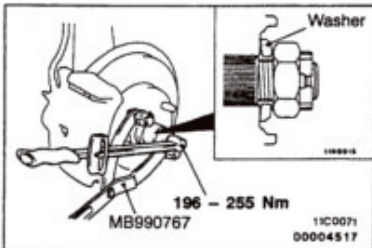
Use the special tool to disconnect the ball joint connection.

Caution

1. Only loosen the nut; do not remove it from the ball joint.
2. Support the special tool with a cord, etc. to prevent it from coming off.



◀D▶ DRIVE SHAFT REMOVAL



INSTALLATION SERVICE POINT

▶A◀ DRIVE SHAFT NUT INSTALLATION

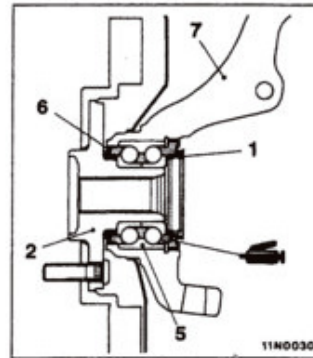
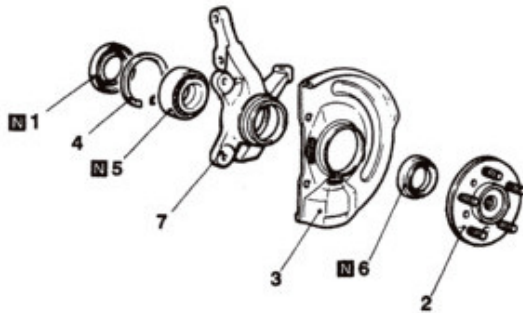
- (1) Be sure to install the drive shaft washer in the specified direction.
- (2) Using the special tool, tighten the drive shaft nut.

Caution

Before securely tightening the drive shaft nuts, make sure there is no load on the wheel bearings.

- (3) If the split pin is not aligned with the bolt pin hole, tighten the nut further. Then when the nearest bolt pin hole is aligned, insert the split pin into the hole and secure it.

DISASSEMBLY AND REASSEMBLY



11R0004
00008091

Disassembly steps

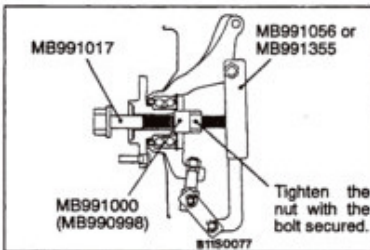


1. Inner oil seal
2. Hub
3. Dust cover
4. Snap ring
5. Wheel bearing
6. Outer oil seal
7. Knuckle

Reassembly steps



7. Knuckle
5. Wheel bearing
4. Snap ring
6. Outer oil seal
3. Dust cover
2. Hub
- Wheel bearing starting torque check
- Hub axial play check
1. Inner oil seal

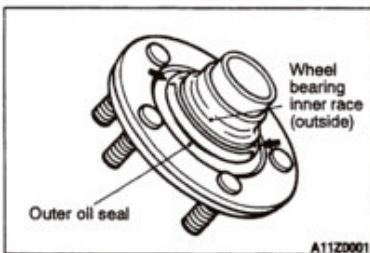


DISASSEMBLY SERVICE POINTS

◀A▶ HUB REMOVAL

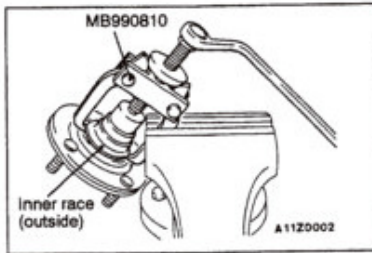
Caution

When removing the hub, always replace the wheel bearing with a new part.



◀B▶ WHEEL BEARING REMOVAL

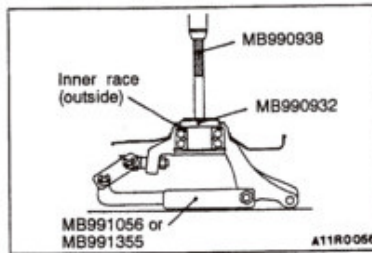
- (1) Crush the oil seal in two places so that the tabs of the special tool will be caught on the wheel bearing inner race (outside).



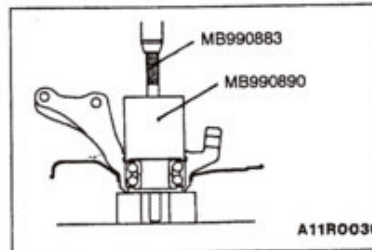
- (2) Remove the wheel bearing inner race (outside) from the hub by using the special tool.

Caution

When removing the inner race (outside) from the hub, be careful not to let the hub drop.



- (3) Install the inner race (outside) that was removed from the hub to the wheel bearing, and then use the special tool to remove the wheel bearing.



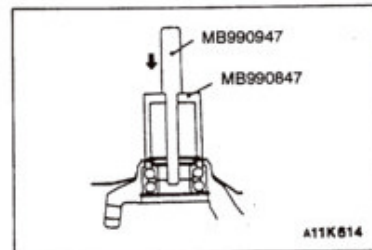
REASSEMBLY SERVICE POINTS

▶A◀ **WHEEL BEARING INSTALLATION**

- (1) Fill the wheel bearing with multipurpose grease.
- (2) Apply a thin coating of multipurpose grease to the knuckle and bearing contact surfaces.
- (3) Press-in the bearing by using the special tools.

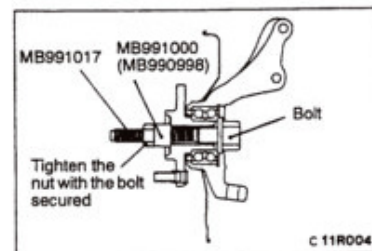
Caution

Always press the outer race when pressing-in the wheel bearing, otherwise wheel bearing may be damaged.



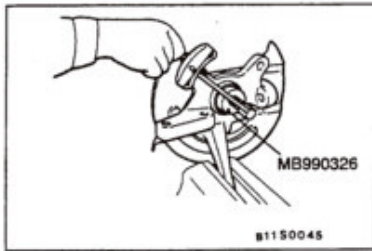
▶B◀ **OUTER OIL SEAL INSTALLATION**

- (1) Fill the oil seal rear part with multipurpose grease. Drive the oil seal (hub side) into the knuckle by using the special tools until it is flush with the knuckle end surface.
- (2) Apply multipurpose grease to the lip of the oil seal and to the surfaces of the oil seal which contact the front hub.



▶C◀ **WHEEL BEARING STARTING TORQUE CHECK**

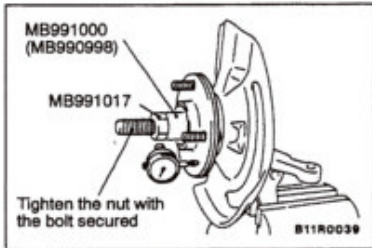
- (1) Use the special tools to mount the hub onto the knuckle.
- (2) Tighten the nut of the special tool to 196–255 Nm.
- (3) Rotate the hub in order to seat the bearing.



- (4) Measure the wheel bearing starting torque (hub starting torque) by using the special tool.

Limit: 1.8 Nm or less

- (5) The starting torque must be within the limit and, in addition, the bearing must not feel rough when rotated.

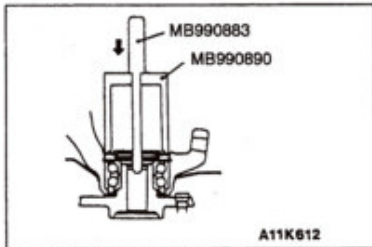


►D◄ HUB AXIAL PLAY CHECK

- (1) Use a vice to hold the knuckle and measure to determine whether the axial play of the hub is within the specified limit or not.

Limit: 0.05 mm

- (2) If the hub axial play is not within the limit range while the nut is tightened to 196–255 Nm, the bearing, hub and/or knuckle have probably not been installed correctly. Replace the bearing and re-install.



►E◄ INNER OIL SEAL INSTALLATION

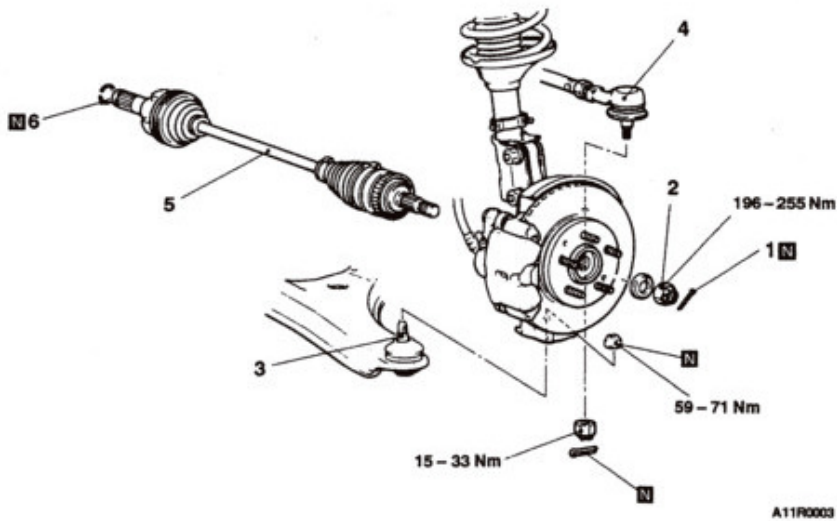
- (1) Apply multipurpose grease to the reverse side of the inner oil seal.
- (2) Drive the inner oil seal into the knuckle until it contacts the snap ring.
- (3) Apply multipurpose grease to the lip of the inner oil seal.

DRIVE SHAFT**REMOVAL AND INSTALLATION****Caution**

Be careful not to damage the ABS rotors installed to the B.J. outer race during removal and installation of the drive shaft.

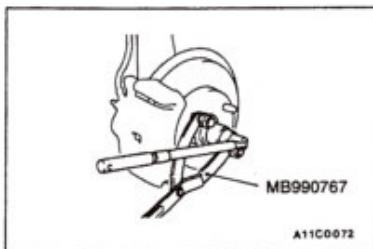
Pre-removal and Post-installation Operation

- Check the dust cover for cracks or damage by pushing it with a finger.
- Brake Hose Clamp, Front Speed Sensor Bracket and Stabilizer Link Connection Removal and Installation (Refer to GROUP 33A – Strut Assembly.)

**Removal steps**

- ◀A▶ ▶A◀ 1. Split pin
 ◀B▶ ▶B◀ 2. Drive shaft nut
 ▶C◀ 3. Connection for lower arm ball joint

- ▶B◀ ▶C◀ 4. Connection for tie rod end
 ▶A◀ ▶B◀ 5. Drive shaft
 ▶C◀ 6. Circlip

**REMOVAL SERVICE POINTS****◀A▶ DRIVE SHAFT NUT REMOVAL****Caution**

Do not apply the vehicle weight to the wheel bearing while loosening the drive shaft nut.