

# REAR SUSPENSION

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## GENERAL SPECIFICATIONS

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Suspension system 3-link, torsion axle with coil spring

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### Coil spring

Free height and identification color

| Model                    | Free height mm (in.) | Identification color |
|--------------------------|----------------------|----------------------|
| 1.6 GL ALL    1.8 GL ALL | 339.0(13.34)         | Yellow 1 line        |
| 1.8 GLS ALL              | 346.5(13.64)         | White 1 line         |

GL, GLS : Trim level

### Shock absorber

|             |  |
|-------------|--|
| Type        | Hydraulic, cylindrical, double acting type |
| Max. length | 619 mm (24.37 in.)                         |
| Min. length | 432 mm (17.01 in.)                         |
| Stroke      | 187 mm (7.36 in.)                          |

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## SERVICE STANDARD

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|        |              |
|--------|--------------|
| Toe    | 0 mm (0 in.) |
| Camber | -40'         |

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### NOTE

The rear wheel alignment is set at the factory and cannot be adjusted. If toe or camber is not within the specification, replace the damaged parts.

## TIGHTENING TORQUE

|                                   | Nm      | kg.cm     | lb.ft   |
|-----------------------------------|---------|-----------|---------|
| Wheel bearing self locking nut    | 150-200 | 1500-2000 | 108-145 |
| Shock absorber upper mounting nut | 40-50   | 400-500   | 29-36   |
| Shock absorber lower mounting nut | 80-100  | 800-1000  | 58-72   |
| Lateral rod to body               | 80-100  | 800-1000  | 58-72   |
| Lateral rod to axle beam          | 80-100  | 800-1000  | 58-72   |
| Trailing arm mounting bolt        | 130-150 | 1300-1500 | 94-108  |
| Brake assembly mounting bolt      | 50-60   | 500-600   | 36-43   |

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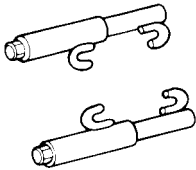
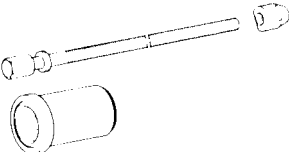
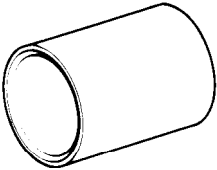
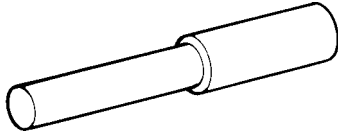
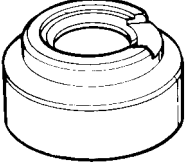
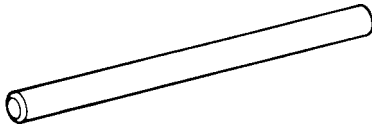
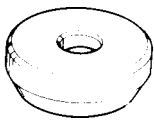

**LUBRICANT**

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|   | Recommended lubricant                                      | Quantity    |
|---|--|-------------|
| Wheel bearings, oil seal lip, inside surface of the hub and hub cap | SAE J310a,<br>Multi-purpose grease<br>NLGI-2 or equivalent | As required |

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**SPECIAL TOOLS**

| Tool<br>(Number and Name)                                     | Illustration  | Use   |
|---|---|---|
| 09546-11000<br>Spring compressor<br>or J-38402                |    | Compression of the front coil spring.   |
| 09555-28000<br>Torsion arm bushing<br>remover and installer   |    | Removal and installation of the torsion arm bushing (use with 09216-21100).                           |
| 09216-21100<br>Mounting bushing remover<br>and installer base |    | Removal and installation of the lateral rod bushing (use with 09545-21400, 09556-31000, 09555-28000). |
| 09545-21400<br>Lateral rod bushing arbor                      |   | Removal and installation of the lateral rod bushing (use with 09216-21100, 09556-31000).              |
| 09556-31000<br>Bushing remover and<br>installer               |  | Removal and installation of the lateral rod bushing (use with 09216-21100, 09545-21400).              |
| 09517-21400<br>Drift  |  | Removal of rear wheel bearing outer race.   |
| 09432-21700<br>Bearing outer race installer                   |  | Installation of rear hub bearing outer race (use with 09500-21000).                                   |
| 09500-21000<br>Bar  |  | Removal and installation of oil seal and bearing (use with 09432-21700).                              |

**TROUBLESHOOTING**

| Symptom                        | Probable cause   | Remedy   |
|--------------------------------|--|--|
| Abnormal sound                 | Loose installation parts<br>Damaged or worn wheel bearings<br>Faulty shock absorber<br>Defective tire                                    | Retighten<br>Replace<br>Replace damaged parts<br>Replace                                   |
| Poor ride control              | Excessive tire pressure<br>Faulty shock absorber<br>Loose wheel nuts<br>Sagging or broken coil spring<br>Defective tire<br>Worn bushings | Adjust pressure<br>Replace<br>Tighten to specified torque<br>Replace<br>Replace<br>Replace |
| Vehicle body tilts to one side | Deformation of torsional axle and arm assembly<br>Worn bushings<br>Sagging or broken coil spring   | Replace<br><br>Replace<br>Replace  |

## SERVICE ADJUSTMENT PROCEDURE

### REAR WHEEL ALIGNMENT

The rear suspension assembly must be free of worn, loose or damaged parts prior to measurement of rear wheel alignment.

#### Standard value

|             |      |
|-------------|------|
| Toe .....   | 0 mm |
| Camber..... | -40  |

#### NOTE

The rear wheel alignment is set at the factory and cannot be adjusted. If toe or camber is not within the standard value, replace the bent or damaged parts.

## WHEEL BEARING STARTING FORCE INSPECTION

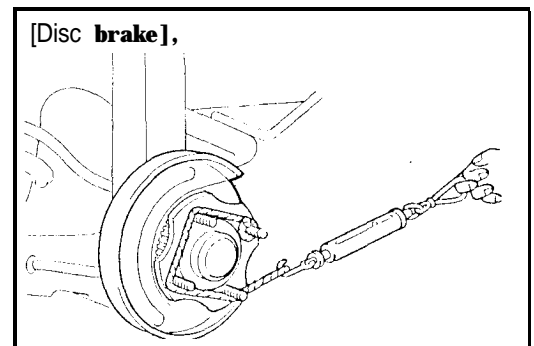
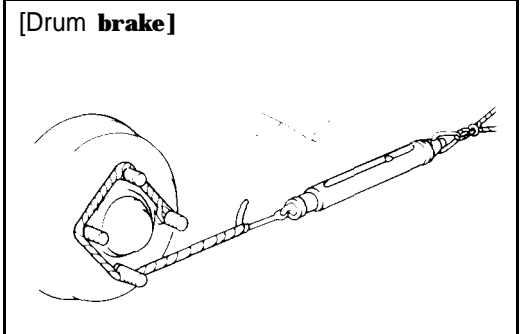
1. Remove the rear wheels.
2. Release the parking brake.
3. Measure the hub and drum starting force.

Service limit ..... 22 N (2.2 kg, 4.9 lbs.) or less

4. If the hub and drum starting force exceeds the limit, remove the hub cap, loosen the wheel bearing nut and retighten it, and recheck the hub and drum starting force.
5. If the hub starting force is still beyond the limit, replace the bearings.

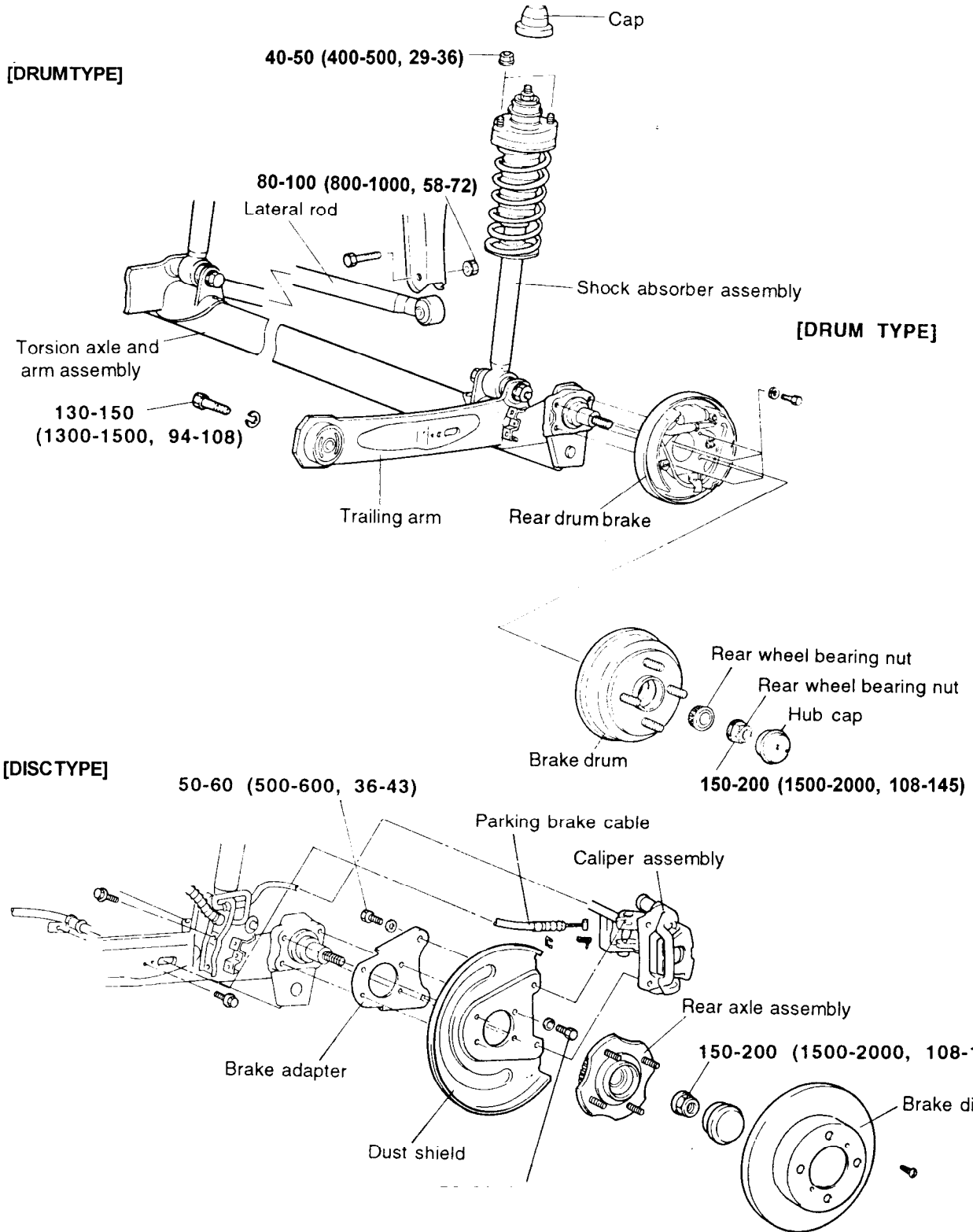
#### NOTE

There should be no axial clearance for hub and bearing.



REAR SUSPENSION

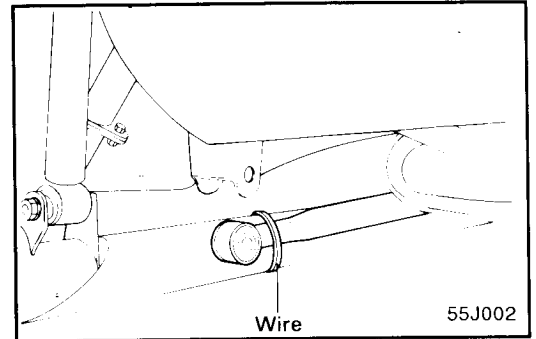
COMPONENTS



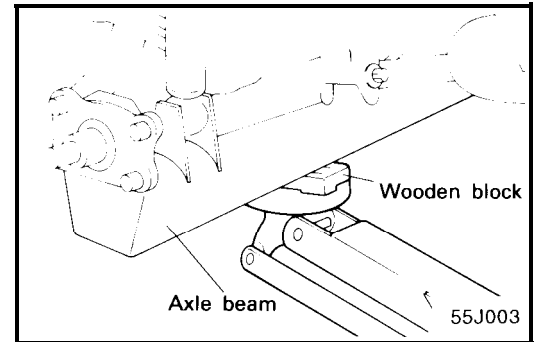
TORQUE : Nm (kg.cm, lb.ft)

## REMOVAL

1. Remove the lateral rod assembly.
2. Hold the lateral rod to the axle beam with wire, etc.



3. Jack up the torsion axle and arm assembly.
4. Remove the shock absorber mounting nuts and trailing arm mounting bolts.

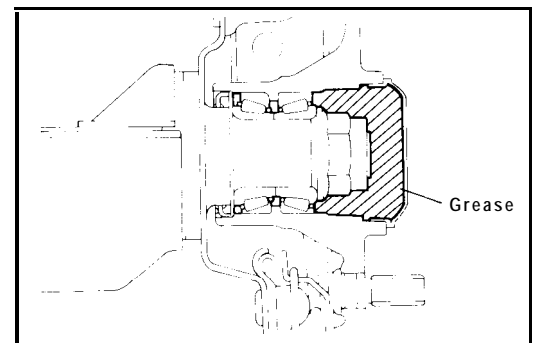


## INSPECTION

1. Check the trailing arm and axle beam for deformation or damage.
2. Check the torsion bar for damage.
3. Check the lateral rod for damage or deformation.
4. Check the bushings for crack, deterioration, or unusual wear.

## INSTALLATION

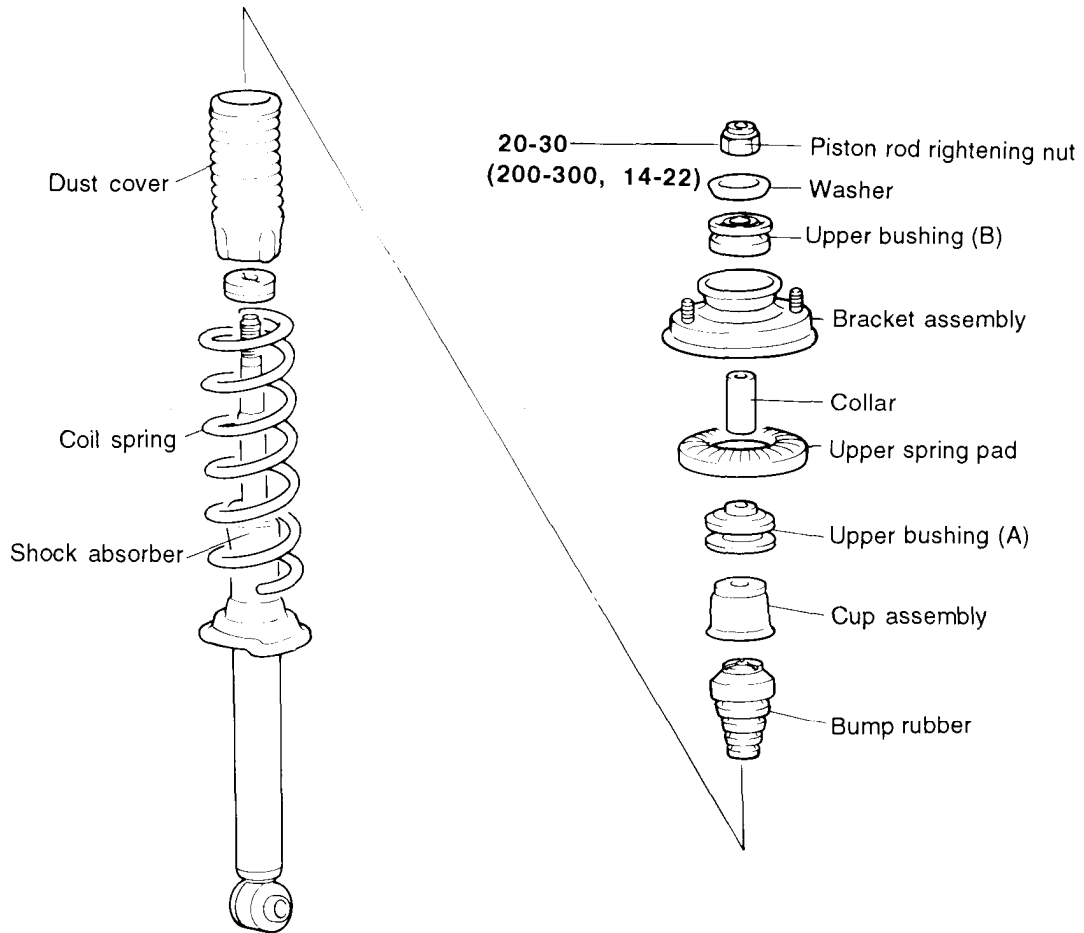
1. Install and tighten the rear wheel bearing nut to the specified torque. Check the wheel bearing for end play and starting force. (Refer to Page 55-6).
2. After filling the hub cap with multipurpose grease, install the hub cap.





SHOCK ABSORBER

COMPONENTS



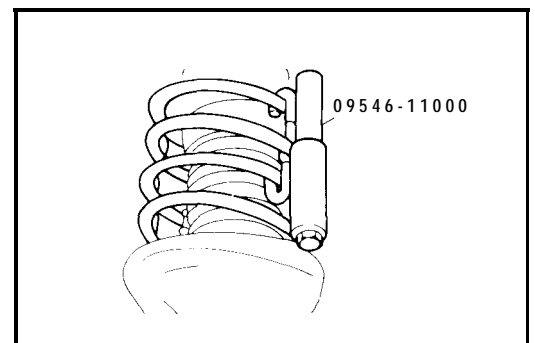
**TORQUE : Nm (kg.cm, lb.ft)**

**DISASSEMBLY**

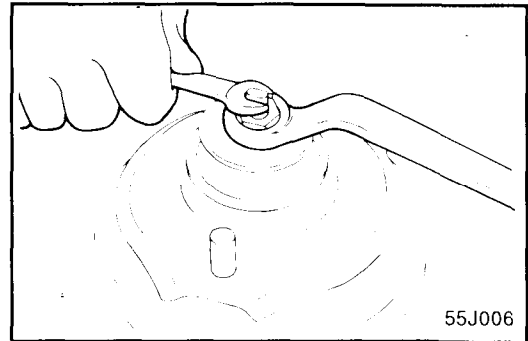
1. Before removing the piston rod tightening nut, compress the coil spring using the special tool.

**CAUTION**

**Do not use an air tool to compress the special tool.**



2. While holding the piston rod, remove the piston rod tightening nut.

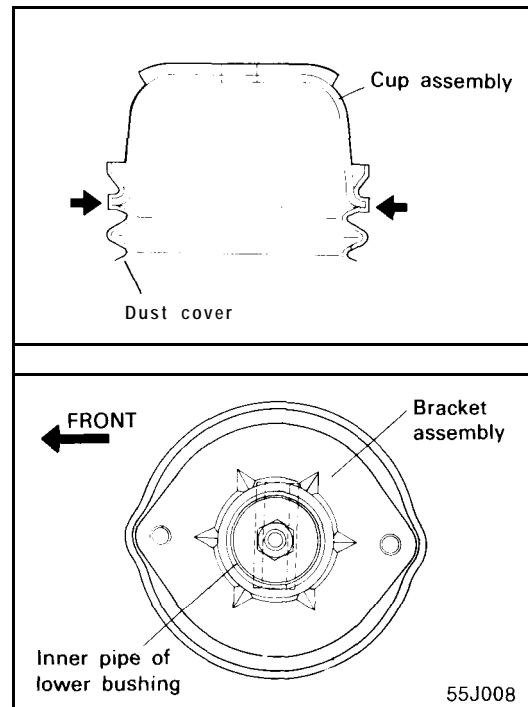


## INSPECTION

1. Check the rubber parts for damage.
2. Check the coil springs for damage or deterioration.

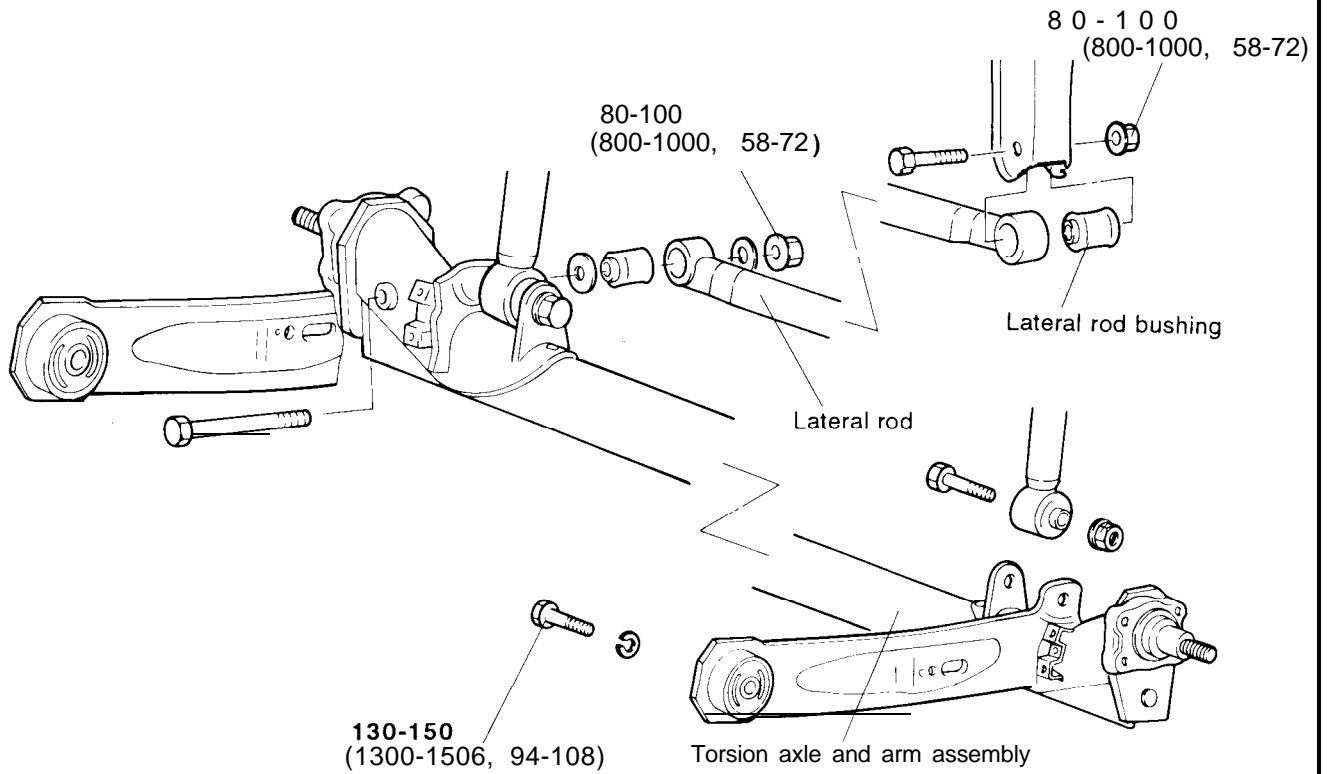
## ASSEMBLY

1. As shown in the illustration, fit the dust cover to the cup assembly.
2. With the position of the bracket assembly as shown in the figure, tighten the tightening nut according to the specified torque.



TORSION AXLE, ARM ASSEMBLY AND LATERAL ROD

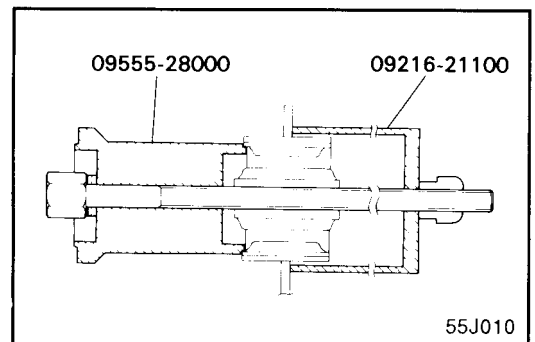
COMPONENTS



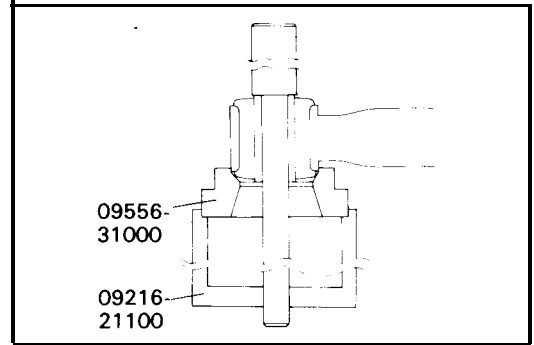
TORQUE : Nm (kg-cm, lb.ft)

DISASSEMBLY

1. Drive out and press in the arm bushing using the special tool.

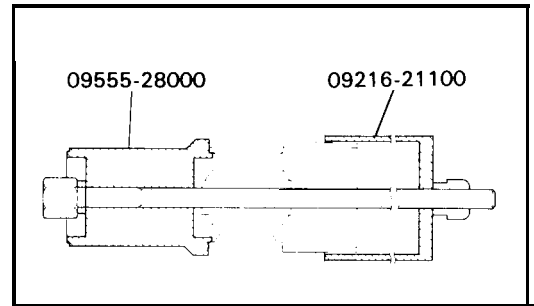


2. Drive out and press in the lateral rod bushing using the special tool.

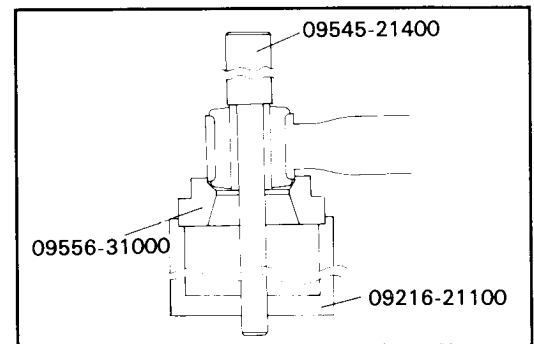


## ASSEMBLY

1. Install the trailing arm bushing with the special tool.



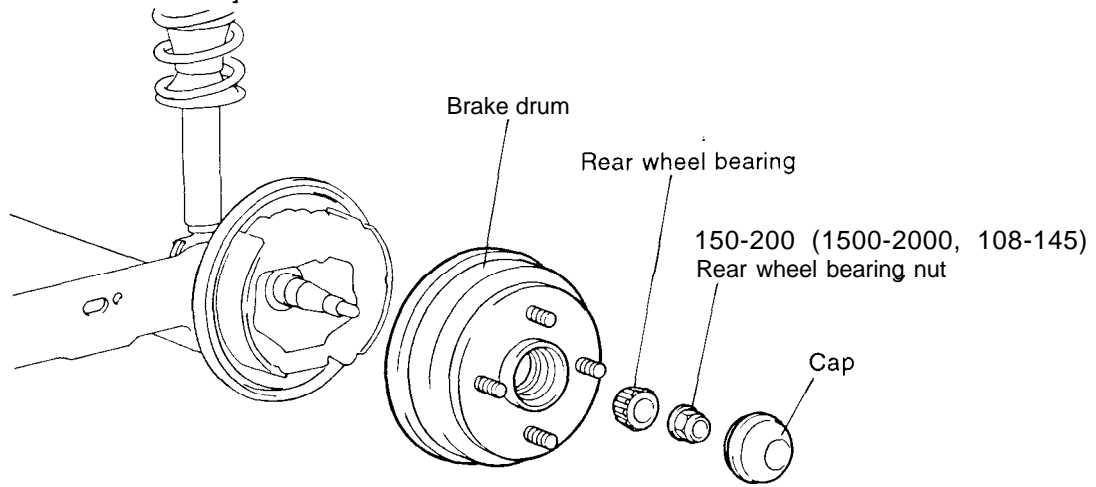
2. Press in the lateral rod bushing with the special tool.  
Press in the bushing so that the amount of projection is equal on either side.



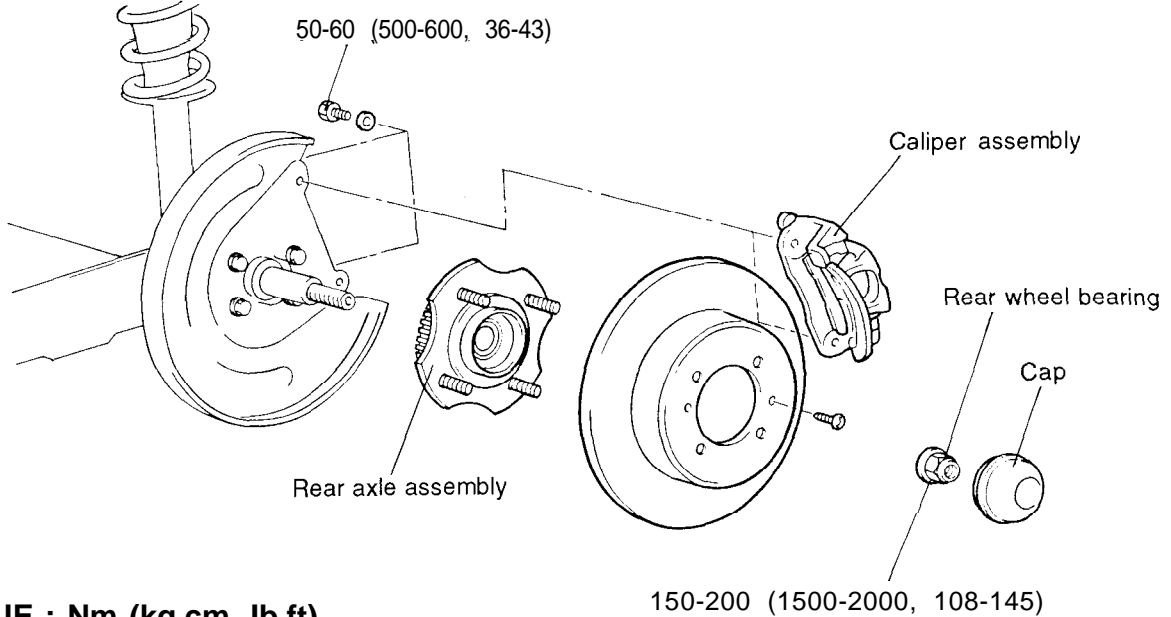
REAR AXLE HUB

COMPONENTS

[Vehicles with drum brakes]



[Vehicles with disc brakes]



**TORQUE : Nm (kg.cm, lb.ft)**

REMOVAL

1. Remove the caliper assembly (Rear disc brake)
2. Remove the disc (Rear disc brake)
3. Remove the hub cap and self-locking nut
4. Remove the outer wheel bearing
5. Remove the rear hub assembly (Rear drum brake)
6. Remove the rear axle assembly (Rear disc brake)

## INSTALLATION

1. Check the surface of bearings for seizure, discoloration or roughened raceway.
2. Check the rear hub for wear or damage.

### NOTE

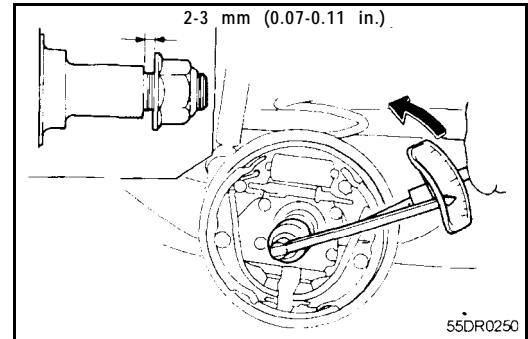
The unit ball bearing must be replaced as an assembly.

## INSTALLATION

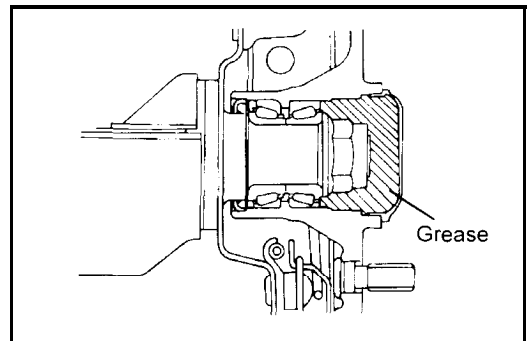
1. Before installing the rear hub assembly, inspect the rear wheel bearing nut using the following method to determine whether it is reusable or not.
  - 1) Screw in the rear wheel bearing nut on the spindle until the gap shown in the illustration is achieved.
  - 2) Measure the torque required to rotate the rear wheel bearing nut while backing it off (turning it counterclockwise).

**Limit : 5.5 Nm (4.1 lb.ft)**

- 3) If the measured torque is less than the limit, replace the rear wheel bearing nut with a new one.

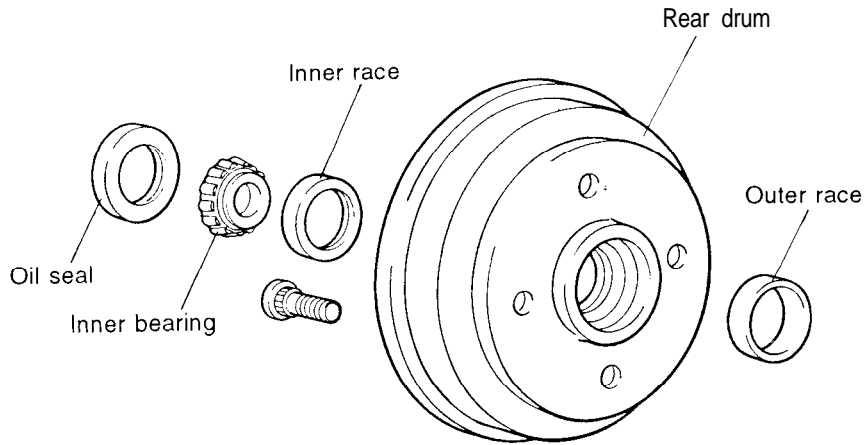


2. Install and tighten the rear wheel bearing nut to the specified torque. Check the wheel bearing for end play and starting force. (Refer to Page 55-6)
3. After filling the hub cap with multipurpose grease, install the hub cap.

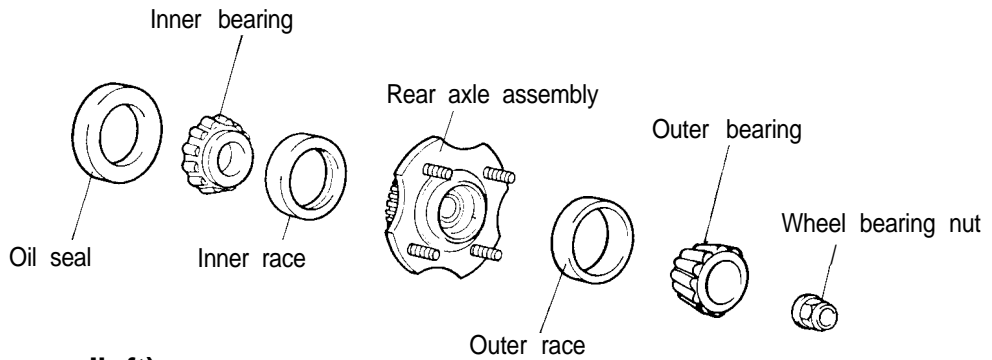


**COMPONENTS**

[Drum brake]



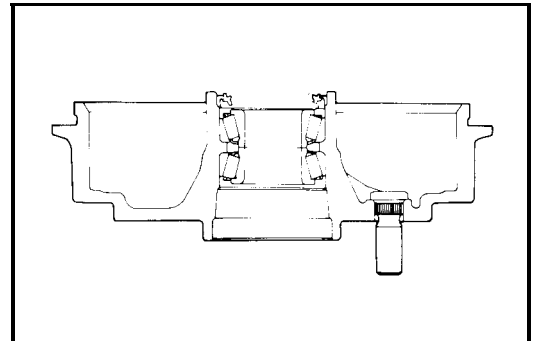
[Disc brake]



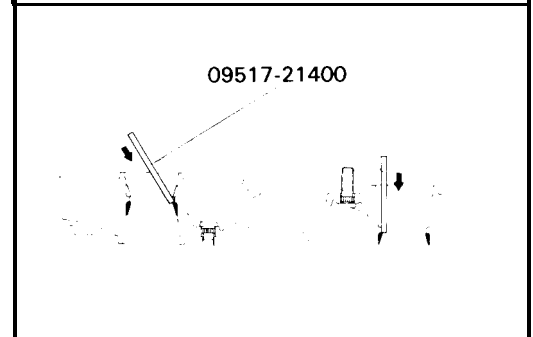
**TORQUE : Nm (kg.cm, lb.ft)**

**DISASSEMBLY**

1. Using a flat-blade screwdriver, remove the grease seal from the drum.

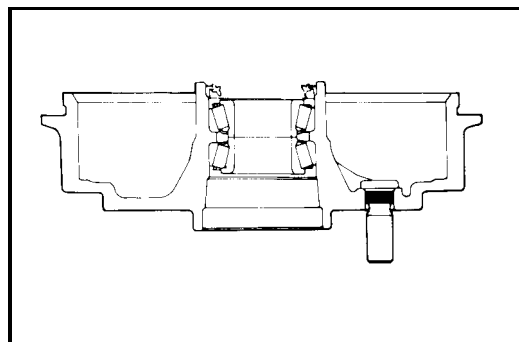


2. After removing grease from inside the hub, remove the bearing outer races, using a hammer and drift.



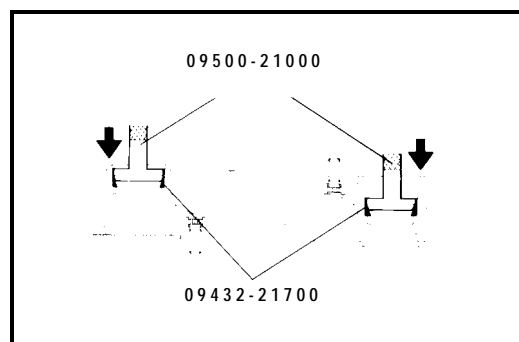
## INSPECTION

1. Check for a damaged or worn bearing.
2. Check for a worn or damaged brake drum inside surface.
3. Check oil seal for crack or damage.



## ASSEMBLY

1. After applying the specified grease to the bearing surface, drive the bearing outer races into position.



2. Install the inside bearing inner race.
3. Install the grease seal and apply grease to the seal lips.

### NOTE

**Be sure to use a new grease seal.**

4. Install the outside bearing inner race.

