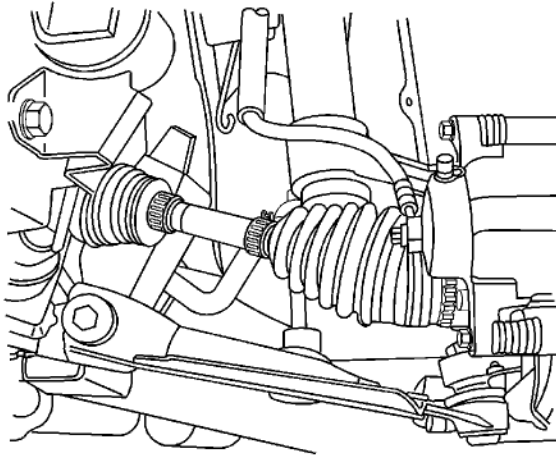


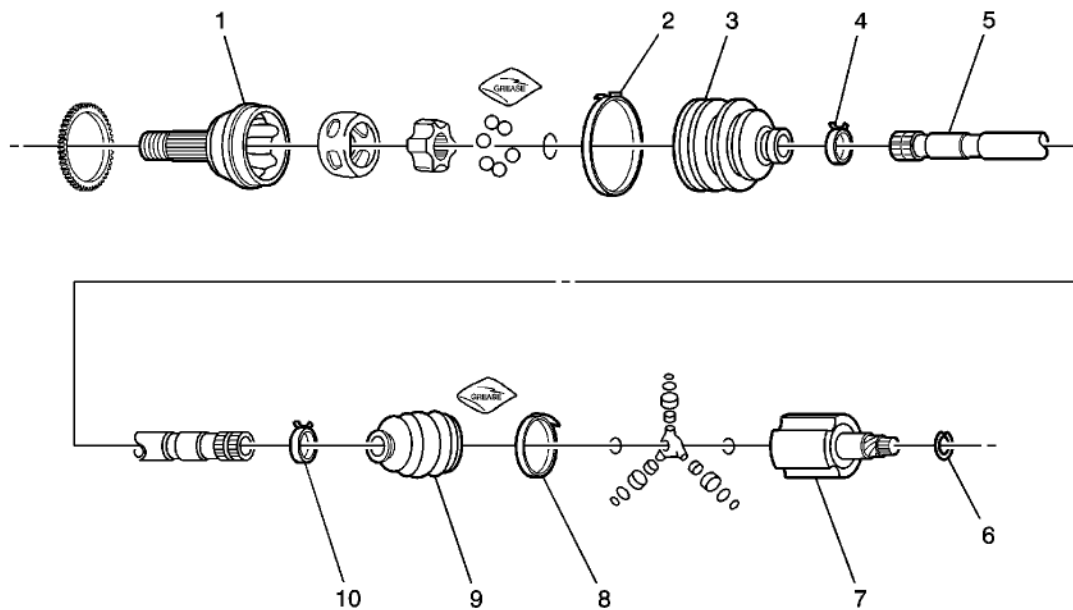
Fastener Tightening Specifications

Application	Specification	
	Metric	English
Axle Shaft Caulking Nut	300 N·m	221 lb ft
Damping Block Connection Nut and Bolt	80 N·m	59 lb ft
Lower Ball Joint Nut	50 N·m	37 lb ft
Rear Mounting Bracket Bolts	60 N·m	44 lb ft
Tie Rod Nut	45 N·m	33 lb ft
Wheel Nuts	120 N·m	88 lb ft

Front Drive Axle Disassembled Views (Automatic)

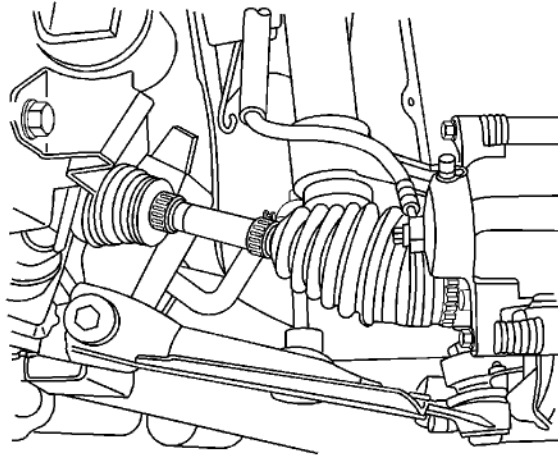


Automatic

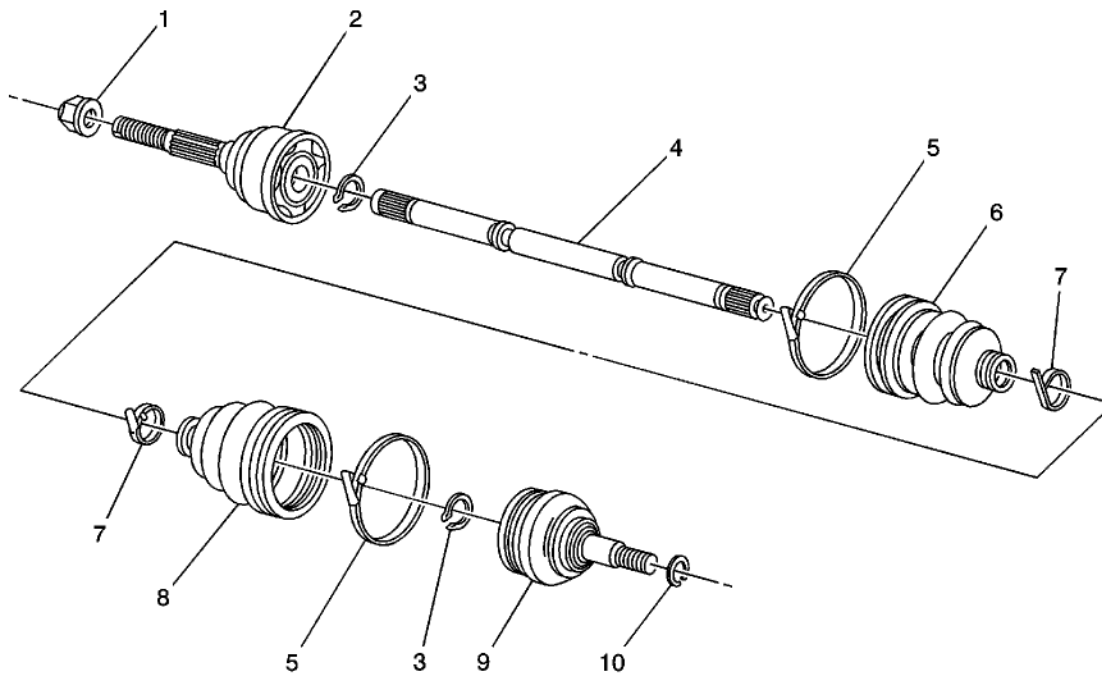


- (1) C/V Joint
- (2) Seal Retaining Clamp
- (3) Drive Axle Outboard Seal
- (4) Seal Retaining Clamp
- (5) Axle Shaft
- (6) Snap Ring
- (7) Tripot Housing
- (8) Seal Retaining Clamp
- (9) Drive Axle Inboard Seal
- (10) Seal Retaining Clamp

Front Drive Axle Disassembled Views (Manual)



Manual



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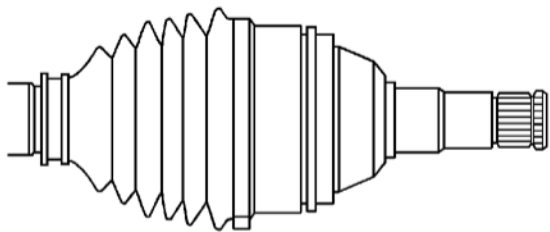
- (1) Caulking Nut
- (2) C/V Joint
- (3) Race Retaining Ring
- (4) Axle Shaft
- (5) Seal Retaining Clamp
- (6) Drive Axle Outboard Seal
- (7) Seal Retaining Clamp
- (8) Drive Axle Inboard Seal
- (9) Cross Groove Joint
- (10) Retaining Ring

Wheel Drive Shaft Inner Joint and Boot Replacement (Manual)

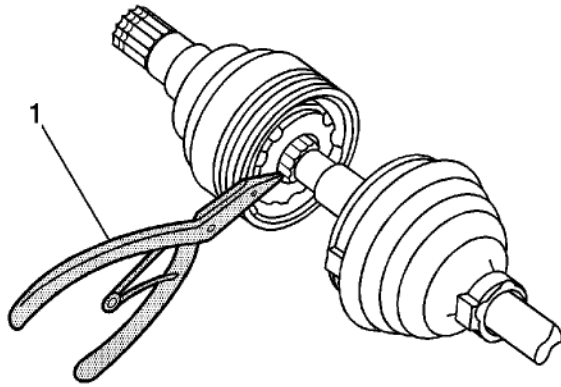
Special Tools

- [J 8059](#) Snap Ring Pliers
- [J 35566](#) Seal Clamp Pliers

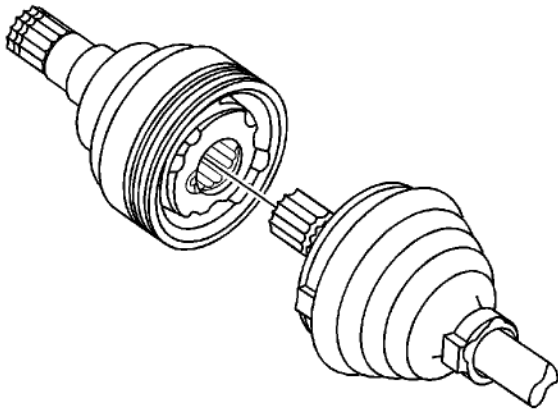
Removal Procedure



1. Remove the large seal retaining clamp. Discard the clamp.
2. Remove the small seal retaining clamp. Discard the clamp.



3. Clean and degrease the joint.
4. Remove the shaft retaining ring using [J 8059](#) (1).

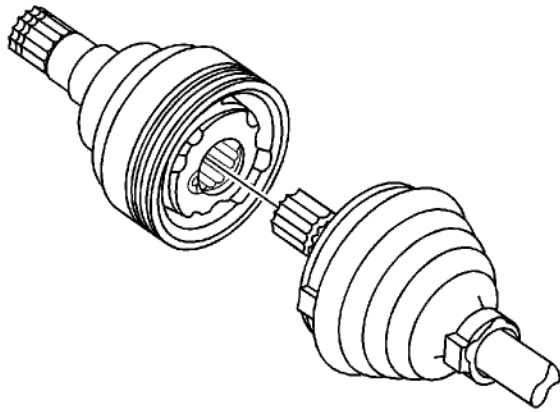


5. Remove the axle shaft from the joint assembly.

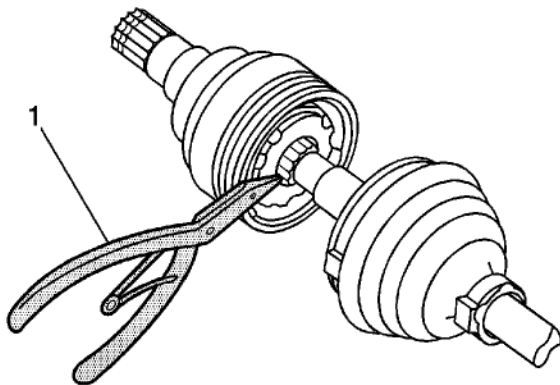
Warning: The ball retainer is stacked in position and is not serviceable. Attempting to service the ball retainer could result in reduced vehicle performance and possible personal injury.

6. Remove the seal from the joint assembly.

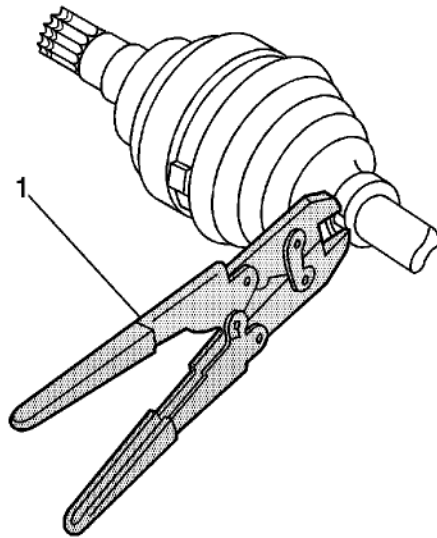
Installation Procedure



1. Install a new small seal retaining clamp onto the seal. Do not crimp.
2. Install the seal onto the axle shaft.
3. Install the joint assembly onto the axle shaft.



4. Install the shaft retaining ring using the [J 8059](#) (1).



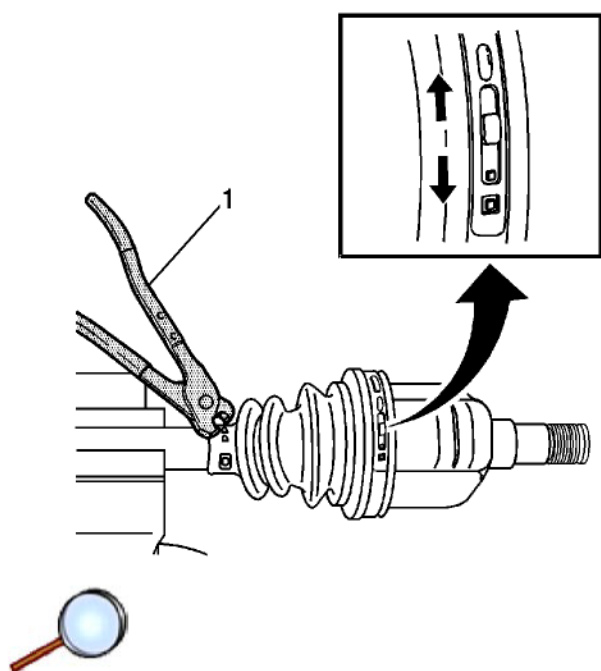
5. Fill the joint assembly with 120-140 grams (4.2-4.9 ounces) of the recommended grease. Repack the tripot with 120-140 grams (4.2-4.9 ounces) of the recommended grease.
6. Install the new large seal retaining clamp.
7. Crimp the new large seal retaining clamp using [J 35566](#) (1).
8. Crimp the new small retaining clamp using [J 35566](#) (1).

Wheel Drive Shaft Inner Joint and Boot Replacement (Automatic)

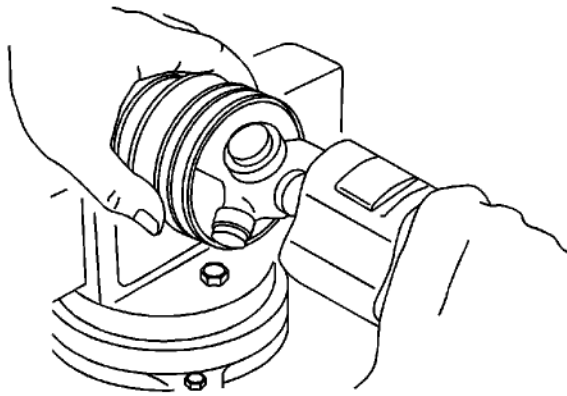
Tools Required

- [J 35566](#) Seal Clamp Pliers
- [J 8059](#) Snap Ring Pliers

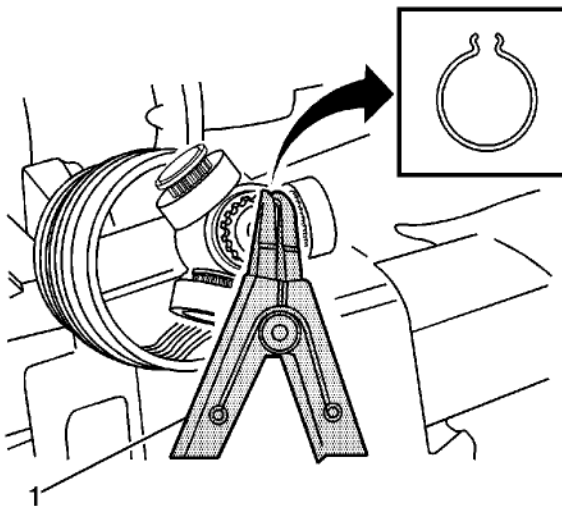
Removal Procedure



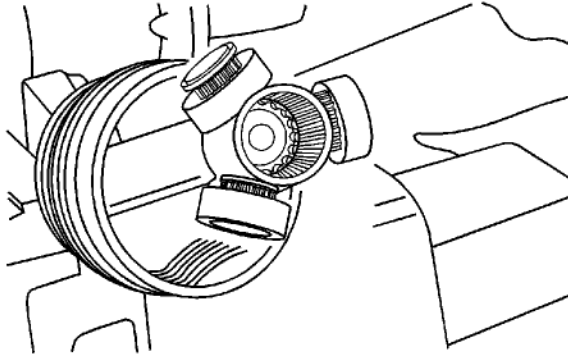
1. Remove the drive axle from the vehicle. Refer to [Front Drive Axle Inner Shaft and Inner Shaft Housing Replacement](#).
2. Using [J 35566](#) (1) remove the large seal retaining clamp. Discard the clamp.
3. Using [J 35566](#) (1) remove the small seal retaining clamp. Discard the clamp.



4. Separate the joint housing from the boot.

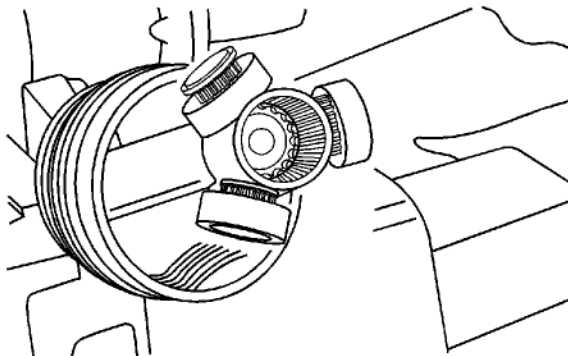


5. Clean and degrease the tripot assembly.
6. Remove the shaft retaining ring using [J 8059](#).

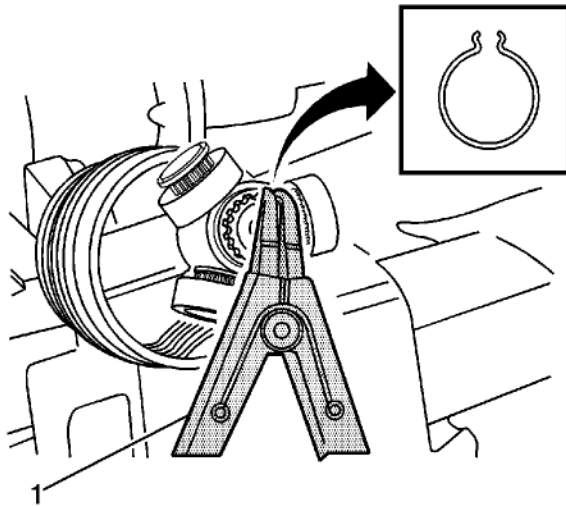


7. Remove the tripot and the tripot joint retaining ring from the axle shaft.
8. Remove the tripot joint seal from the axle shaft.

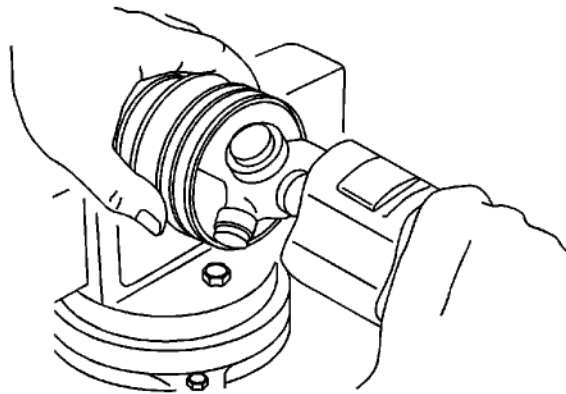
Installation Procedure



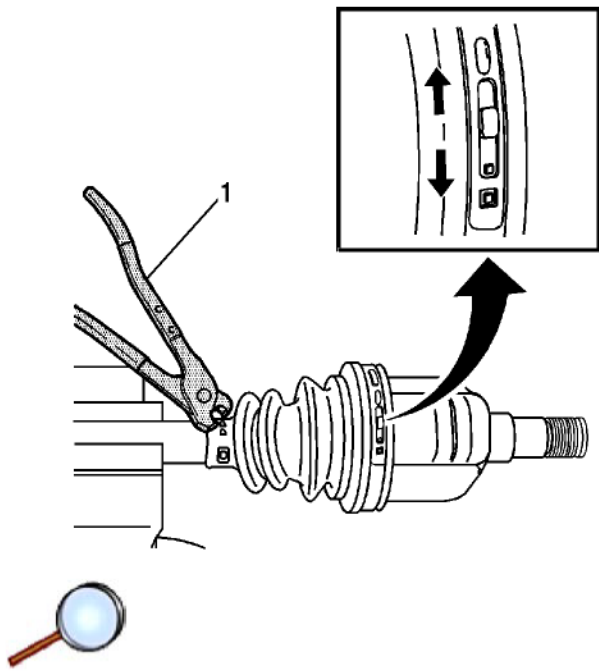
1. Install a new small seal retaining clamp onto the seal.
2. Install the seal onto the axle shaft.



3. Install the shaft retaining ring onto the axle shaft using [J 8059](#) (1).



4. Fill the tripot housing with 195-215 g (6.9-7.6 ounces) of the recommended grease. Repack the tripot with 195-215 g (6.9-7.6 ounces) of the recommended grease.
5. Install the boot to the joint housing.



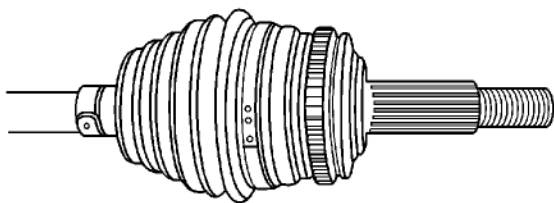
6. Install a new large seal retaining clamp. Crimp the large seal retaining clamp using [J 35566](#) (1).
7. Crimp the new small seal retaining clamp using [J 35566](#) (1).
8. Install the drive axle shaft to the vehicle. Refer to [Front Drive Axle Inner Shaft and Inner Shaft Housing Replacement](#).

Wheel Drive Shaft Outer Joint and Boot Replacement (Manual)

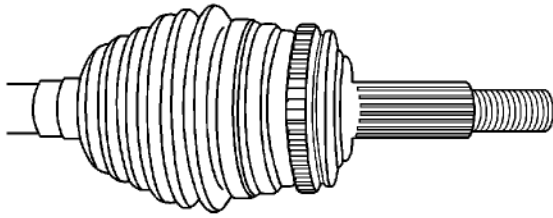
Special Tools

- [J 8059](#) Snap Ring Pliers
- [J 35566](#) Seal Clamp Pliers

Removal Procedure



1. Remove the cross groove joint seal assembly. Refer to [Wheel Drive Shaft Inner Joint and Boot Replacement](#).
2. Remove the large seal retaining clip. Discard the clamp.
3. Remove the small seal retaining clamp. Discard the clamp.

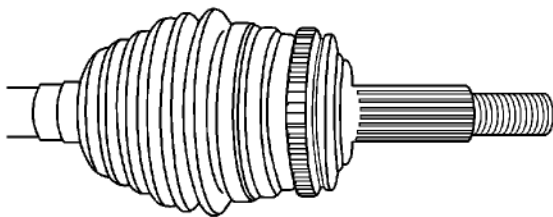


4. Clean and degrease the joint.

Warning: The outer joint is designed to be replaced as a one piece unit. Do not attempt to disassemble or service the outer joint. Improper service will affect both performance of the vehicle and could cause personal injury or vehicle damage.

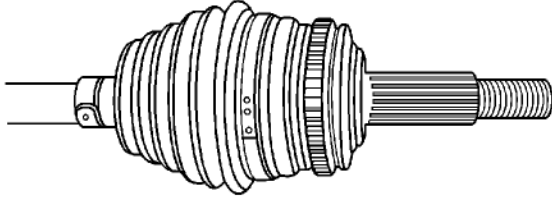
5. Remove the seal from the joint assembly.

Installation Procedure

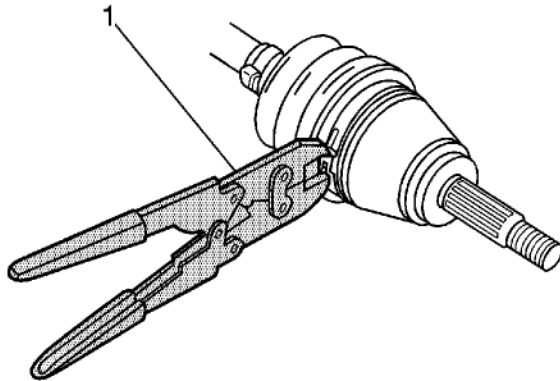


1. Install the seal onto the axle shaft.
2. Fill the joint seal with 110-130 grams (3.9-4.6 ounces) of the recommended grease. Repack

the joint with 110-130 grams (3.9-4.6 ounces) of the recommended grease.



3. Install a new large seal retaining clamp and a new small seal retaining clamp.



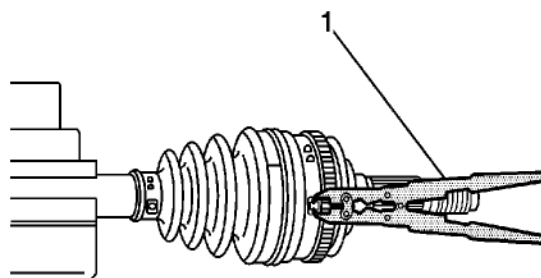
4. Crimp the new small seal retaining clamp and the new large seal retaining clamp using [J 35566](#) (1).
5. Install the cross groove joint seal assembly. Refer to [Wheel Drive Shaft Inner Joint and Boot Replacement](#).

Wheel Drive Shaft Outer Joint and Boot Replacement (Automatic)

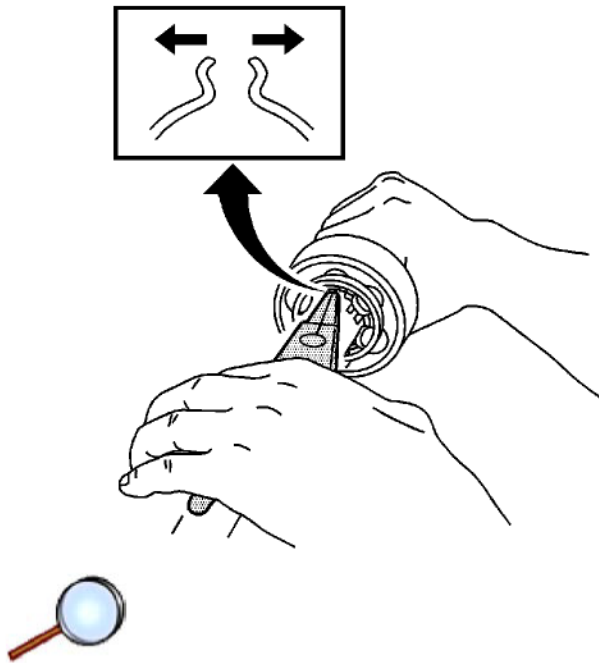
Special Tools

- [J 8059](#) Snap Ring Pliers
- [J 35566](#) Seal Clamp Pliers

Removal Procedure



1. Remove the drive axle from the vehicle. Refer to [Front Drive Axle Inner Shaft and Inner Shaft Housing Replacement](#).
2. Remove the large seal retaining clamp using [J 35566](#) (1). Discard the clamp.
3. Remove the small seal retaining clamp. Discard the clamp.

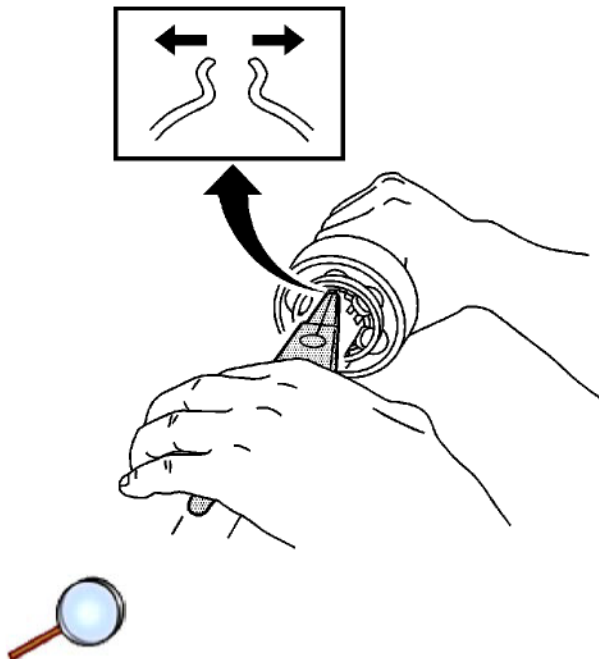


4. Clean and degrease the joint.
5. Spread the snap ring using [J 8059](#) and remove the outer joint and the axle shaft.

Warning: The outer joint is designed to be replaced as a one piece unit. Do not attempt to disassemble or service the outer joint. Improper service will affect both performance of the vehicle and could cause personal injury or vehicle damage.

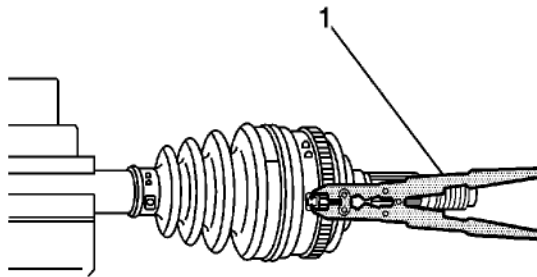
6. Remove the seal from the joint assembly.

Installation Procedure



1. Install the seal onto the axle shaft.

2. Spread the snap ring using [J 8059](#) and remove the outer joint and the axle shaft.
3. Fill the joint seal with 110-130 g (3.9-4.6 ounces) of the recommended grease. Repack the joint with 110-130 g (3.9-4.6 ounces) of the recommended grease.



4. Install a new large seal retaining clamp and a new small seal retaining clamp.
5. Crimp the new small seal retaining clamp and the new large seal retaining clamp using [J 35566](#) (1).
6. Install the drive axle shaft to the vehicle. Refer to [Front Drive Axle Inner Shaft and Inner Shaft Housing Replacement](#).

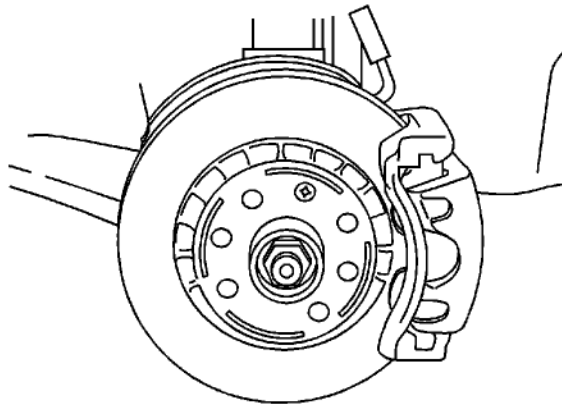
Front Drive Axle Inner Shaft Replacement

Special Tools

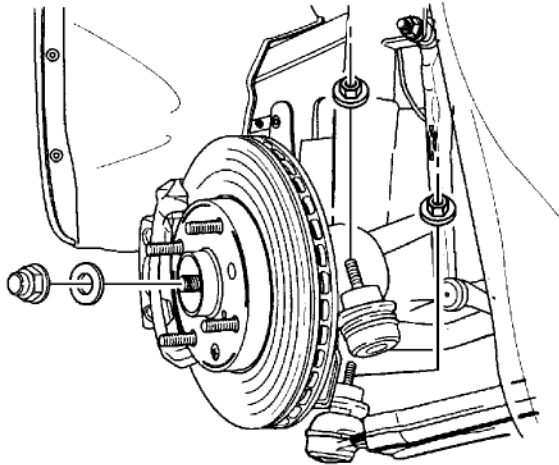
- [KM-460-B](#) Axle Shaft Remover
- [KM-507-C](#) Ball Joint Remover

Removal Procedure

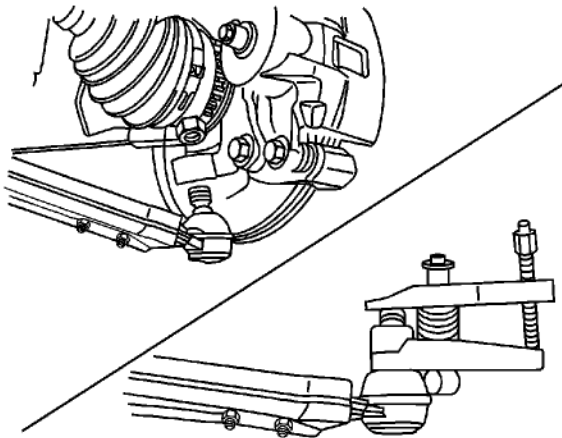
Caution: Refer to [Vehicle Lifting and Jacking Caution](#) in the Preface section.



1. Raise and suitably support the vehicle.
2. Remove the wheels. Refer to [Tire and Wheel Removal and Installation](#).
3. Remove the engine splash shield, if necessary.

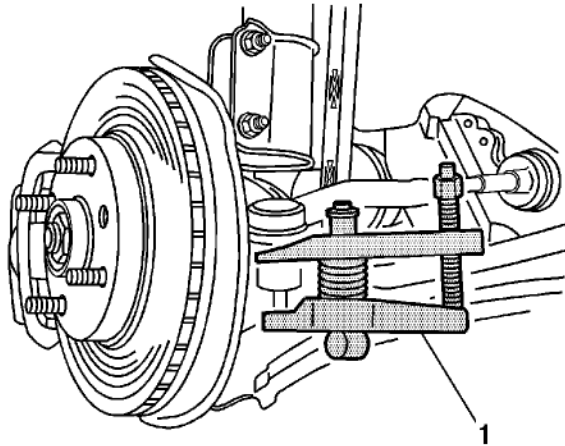


4. Remove the axle shaft stake nut (1). Discard the nut.
5. Remove the lower ball joint nut (2).



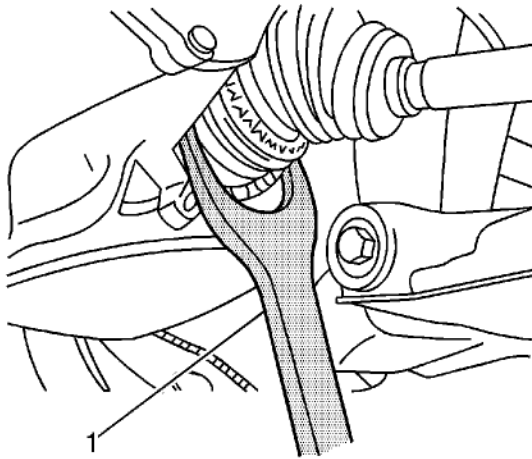
Caution: Use only the recommended tools for separating the ball joint from the knuckle. Failure to use the recommended tools may cause damage to the ball joint and seal.

6. Separate the steering knuckle from the lower ball joint using [KM-507-C](#) .
7. Remove the tie rod nut.



Caution: Use only the recommended tools for separating the ball joint from the knuckle. Failure to use the recommended tools may cause damage to the ball joint and seal.

8. Separate the tie rod end using [KM-507-C](#) (1).



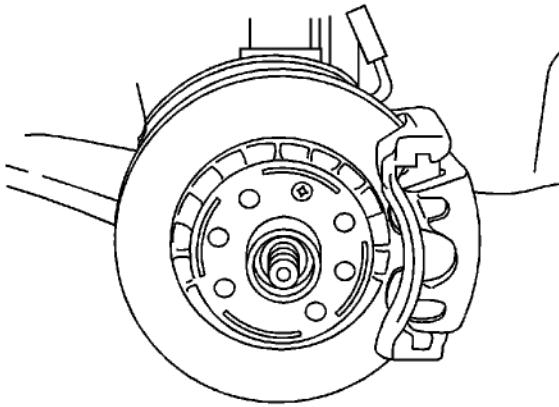
9. Push the drive axle shaft from the wheel hub.

Caution: Refer to [Drive Axle Caution](#) in the Preface section.

Note: Place a drain pan below the transaxle to catch the escaping fluid. Cap the transaxle drive opening after the drive axle has been removed to keep the fluid in and any contamination out.

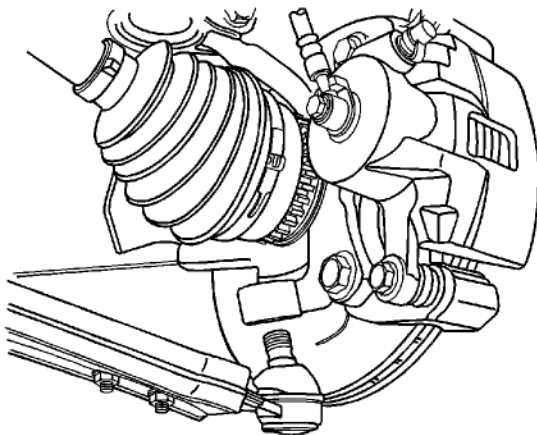
10. Remove the drive axle from the transaxle using [KM-460-B](#) (1).

Installation Procedure



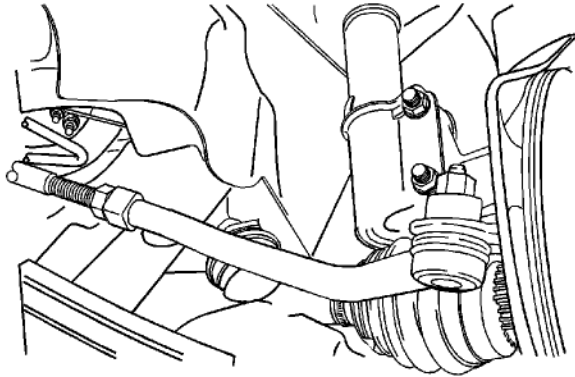
Note: Do not damage the seals.

1. Clean the hub seal and the transaxle seal.
2. Install the drive axle into the transaxle.
3. Install the wheel hub onto the axle shaft.

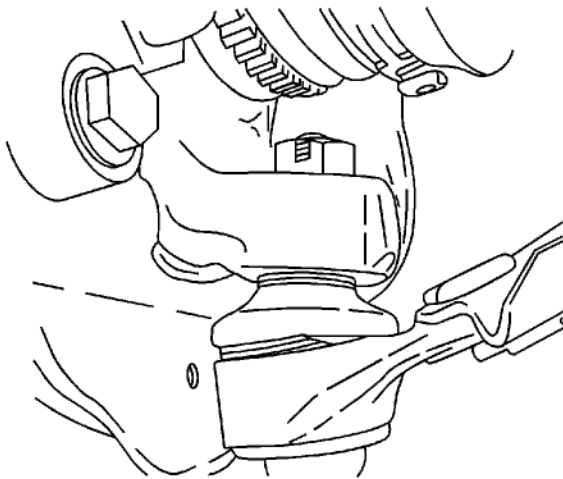


4. Mount the steering knuckle onto the lower ball joint.

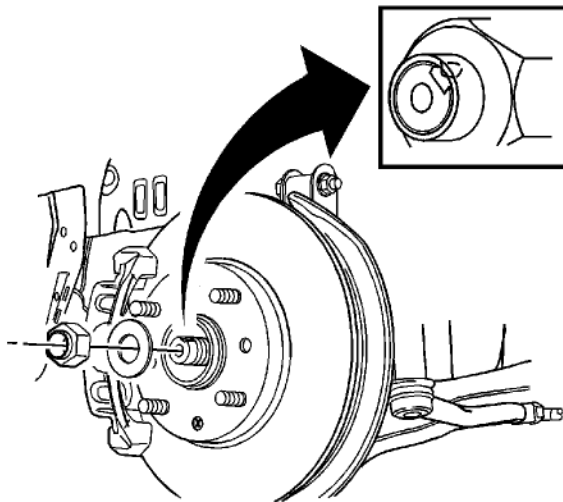
Caution: Refer to [Fastener Caution](#) in the Preface section.



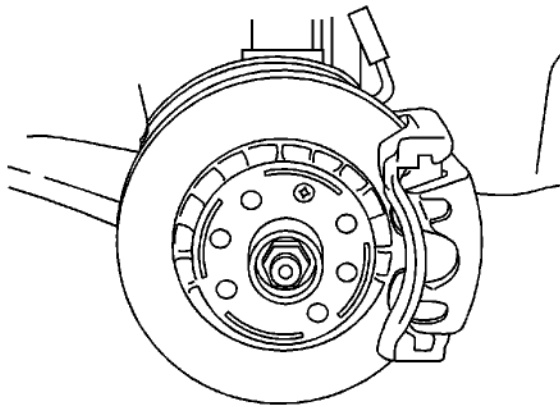
5. Install the tie rod into the knuckle/strut.
6. Install the tie rod nut and tighten to **45 N·m (33 lb ft)**.



7. Install the lower ball joint nut and tighten to **50 N·m (37 lb ft)**.



8. Loosely install a new axle shaft staking nut. Always use a new nut.



9. Install the wheels. Install the nuts. Refer to [Tire and Wheel Removal and Installation](#).
10. Lower the vehicle to the floor.
11. Tighten the wheel nuts to **120 N·m (88 lb ft)**.
12. Tighten the axle shaft staking nut to **300 N·m (221 lb ft)**.
13. Peen the staking nut with a punch and a hammer until the nut is locked into place on the axle shaft hub.
14. Install the engine splash shields.
15. Refill the transaxle fluid to the proper level. Refer to [Transmission Fluid Level Inspection](#).

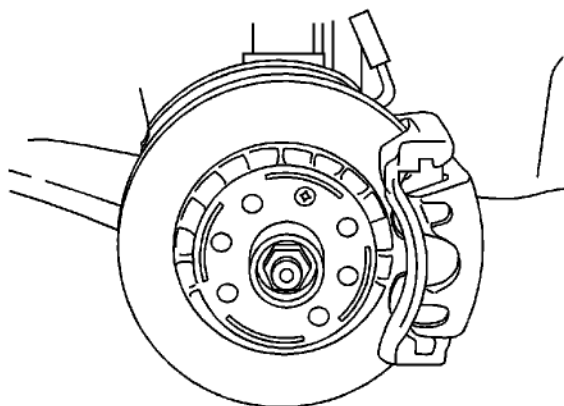
Front Drive Axle Inner Shaft and Inner Shaft Housing Replacement

Special Tools

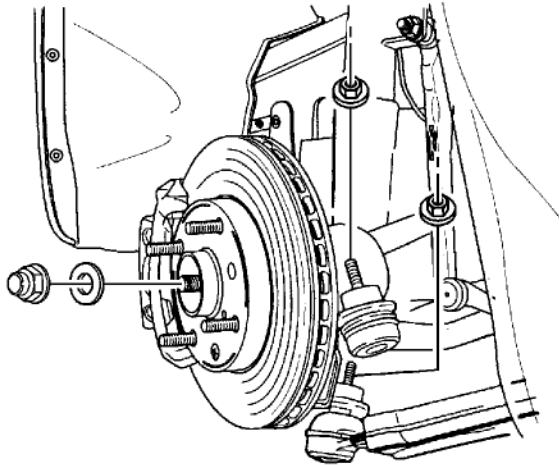
[KM-507-C](#) Ball Joint Remover

Removal Procedure

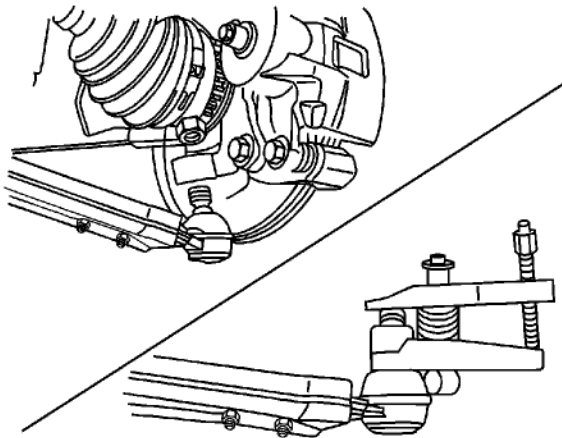
Caution: Refer to [Vehicle Lifting and Jacking Caution](#) in the Preface section.



1. Raise and suitably support the vehicle.
2. Remove the wheels. Refer to [Tire and Wheel Removal and Installation](#).
3. Remove the engine splash shields.

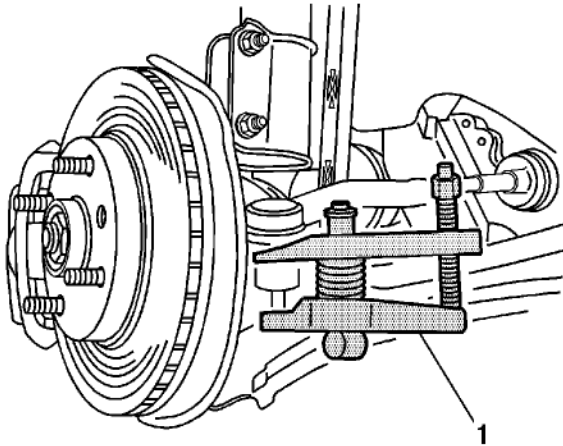


4. Remove the axle shaft staking nut (1). Discard the nut.
5. Remove the lower ball joint nut (2).



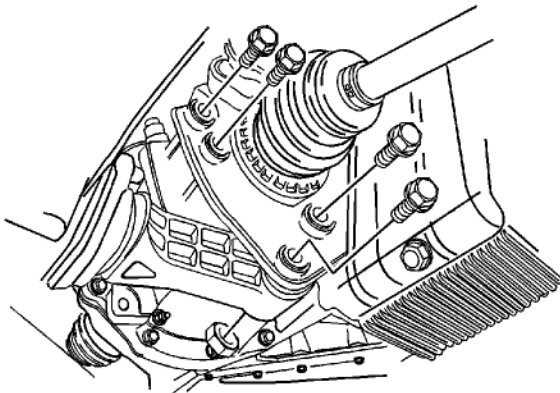
Caution: Use only the recommended tools for separating the ball joint from the knuckle. Failure to use the recommended tools may cause damage to the ball joint and seal.

6. Separate the steering knuckle from the lower ball joint using the [KM-507-C](#).
7. Remove the tie rod nut.

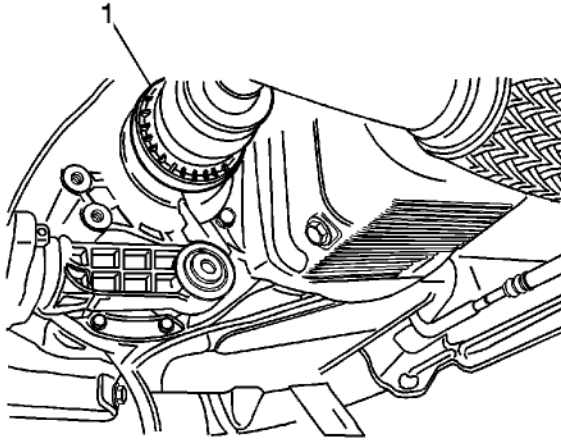


Caution: Use only the recommended tools for separating the ball joint from the knuckle. Failure to use the recommended tools may cause damage to the ball joint and seal.

8. Separate the tie rod end using the [KM-507-C](#) (1).



9. Remove the damping block connection nut and bolt.
10. Remove the rear mounting bracket bolts and the bracket.



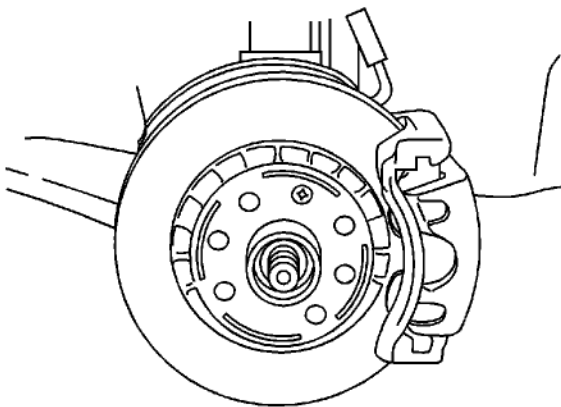
11. Push the drive axle shaft from the wheel hub.

Caution: Refer to [Drive Axle Caution](#) in the Preface section.

Note: Place a drain pan below the transaxle to catch the escaping fluid. Cap the transaxle drive opening after the drive axle has been removed to keep the fluid in and any contamination out.

12. Remove the drive axle from the transaxle using a suitable tool.

Installation Procedure

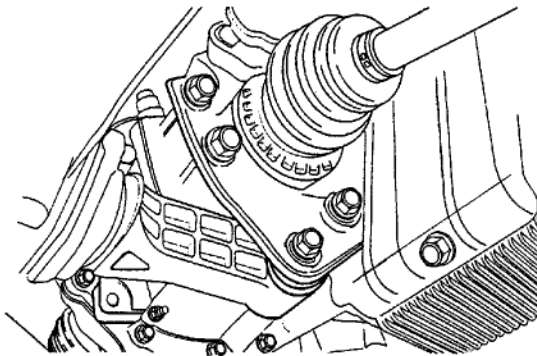




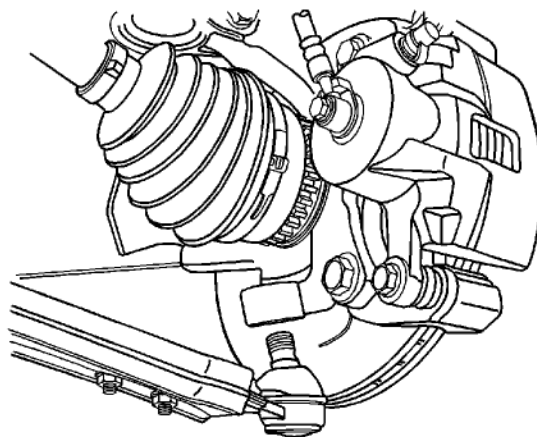
Note: Do not damage the seals.

1. Clean the hub seal and the transaxle seal.
2. Install the drive axle into the transaxle.
3. Install the wheel hub onto the axle shaft.

Caution: Refer to [Fastener Caution](#) in the Preface section.

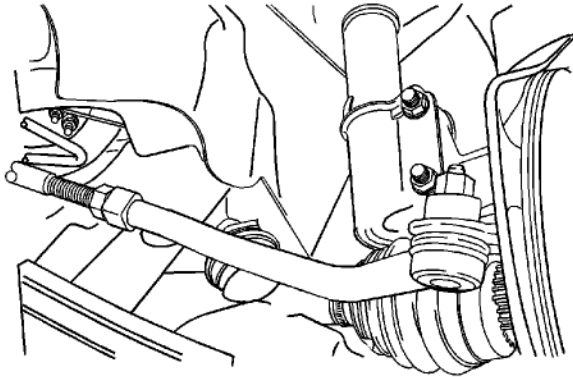


4. Install the rear mounting bracket bolts and the bracket and tighten to 60 N·m (44 lb ft).
5. Install the damping block connection nut and bolt and tighten to 80 N·m (59 lb ft).

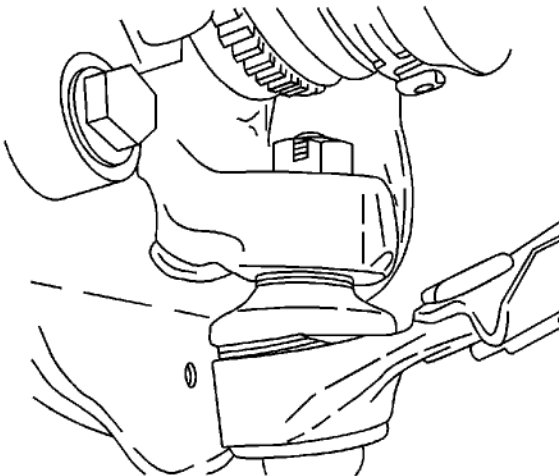




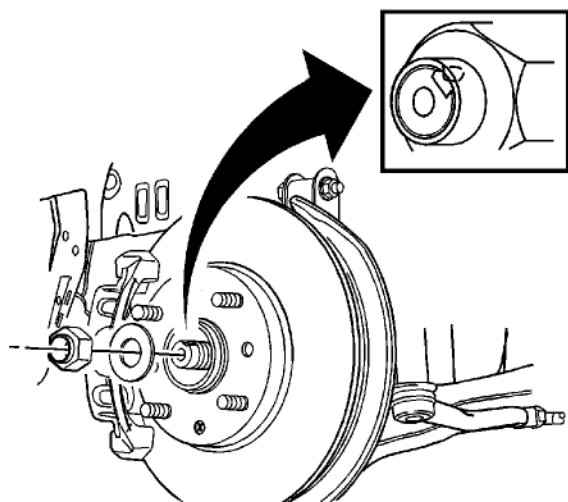
6. Mount the steering knuckle onto the lower ball joint.



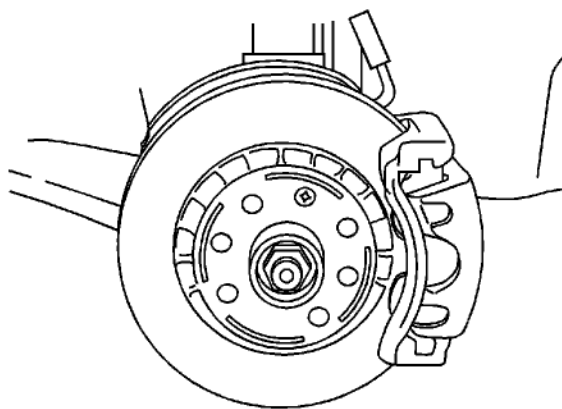
7. Install the tie rod into the knuckle/strut and install the tie rod nut and tighten to **45 N·m (33 lb ft)**.



8. Install the lower ball joint nut and tighten to **50 N·m (37 lb ft)**.



9. Loosely install a new axle shaft staking nut. Always use a new nut.



10. Install the wheels. Install the nuts. Refer to [Tire and Wheel Removal and Installation](#).
11. Lower the vehicle to the floor and tighten the wheel nuts to **120 N·m (88 lb ft)**.
12. Tighten the axle shaft staking nut to **300 N·m (221 lb ft)**
13. Peen the staking nut with a punch and a hammer until the nut is locked into place on the axle shaft hub.
14. Install the engine splash shields.
15. Refill the transaxle fluid to the proper level. Refer to [Transmission Fluid Draining](#).