

DRIVELINE/AXLE

Wheel Drive Shafts - Corvette

SPECIFICATIONS

FASTENER TIGHTENING SPECIFICATIONS

Fastener Tightening Specifications

Application	Specification	
	Metric	English
Rear Wheel Drive Universal Joint Shaft Nut	250 N.m	184 lb ft

ADHESIVES, FLUIDS, LUBRICANTS AND SEALERS

Adhesives, Fluids, Lubricants and Sealers

Application	Type of Material	GM Part Number	
		United States	Canada
Wheel Drive Shaft	Anti-seize	12371386	89021945

DIAGNOSTIC INFORMATION AND PROCEDURES

SYMPTOMS - WHEEL DRIVE SHAFTS

IMPORTANT: Complete the following steps prior to beginning the wheel drive shaft diagnosis.

1. Review the **Vibration Diagnosis, Starting Point and Correction** .
2. Perform the **Vibration Analysis - Road Testing** in order to effectively diagnose the concern.
3. Review the system operation in order to become familiar with the system function. Refer to **Wheel Drive Shafts Description and Operation**.

Visual Inspection

- Inspect for aftermarket equipment and modifications which could affect the operation of the wheel drive shafts or other rotating components.
- Inspect the easily accessible or visible system components for obvious damage or conditions which could cause the symptom.
- Thoroughly inspect the entire wheel drive shaft for visible damage, leaking joint seals and missing seal clamps.
- Inspect the wheel drive shaft seals for cuts, tears or other damage which may allow the loss of lubricant and the entry of contaminants.

Physical Inspection

After performing the Visual/Inspection and no visual signs of damage or other interference impairing the wheel drive shaft function is apparent, it may be necessary to remove the wheel drive shaft from the vehicle and manipulate the joints manually. Any binding or otherwise impeded movement of the joints may indicate damage which could contribute to the concern.

CLUNK WHEN ACCELERATING FROM COAST

A clunk noise when accelerating from coast or a standing start may be caused by a worn or damaged constant velocity joint. The common cause of constant velocity joint damage is the loss of lubricating grease and/or the presence of foreign material and contaminants in the constant velocity joint. This usually occurs as a result of a torn or damaged constant velocity joint boot.

Carefully inspect the constant velocity joint boot for cuts, tears or other signs of damage that may allow the loss of the lubricating grease and/or the entry of contaminants. If there is no damage to the constant velocity joint boots, remove the wheel drive shaft from the vehicle and inspect the constant velocity joints. Rotate the constant velocity joints in a circular motion. Do not allow the constant velocity joint inner races to become disengaged from the outer race housings or damage to the constant velocity joints will occur. The movement of the constant velocity joints should be smooth and even. If any binding or impeded motion is felt, the constant joint requires replacement.

SHUDDER OR VIBRATION DURING ACCELERATION

A shudder/vibration or a groan/scraping noise during acceleration may be caused by a worn or damaged constant velocity joint. The common cause of constant velocity joint damage is the loss of lubricating grease and/or the presence of foreign material and contaminants in the constant velocity joint. This usually occurs as a result of a torn or damaged constant velocity joint boot.

Carefully inspect the joint boot for cuts, tears or other signs of damage that may allow the loss of the lubricating grease and/or the entry of contaminants. If the boot is torn check for contact with foreign matter or other parts in the surrounding area. If there is no damage to the joint boots, remove the wheel drive shaft from the vehicle and inspect the constant velocity joints. Rotate the constant velocity joints in a circular motion. Do not allow the constant velocity joint inner races to become disengaged from the outer race housings or damage to the constant velocity joints will occur. The movement of the constant velocity joints should be smooth and even. If any binding or impeded motion is felt, the constant velocity joint requires replacement.

REPAIR INSTRUCTIONS

REAR WHEEL DRIVE SHAFT REPLACEMENT

Special Tools

- **CH 42129** Wheel Hub Remover
- **J-2619-01** Slide Hammer
- **J-29794** Extension
- **J-42943** Axle Shaft Remover

For equivalent regional tools, refer to **Special Tools** .

Removal Procedure

1. Raise and support the vehicle. Refer to **Lifting and Jacking the Vehicle** .
2. Remove the tire and wheel assembly. Refer to **Tire and Wheel Removal and Installation** .

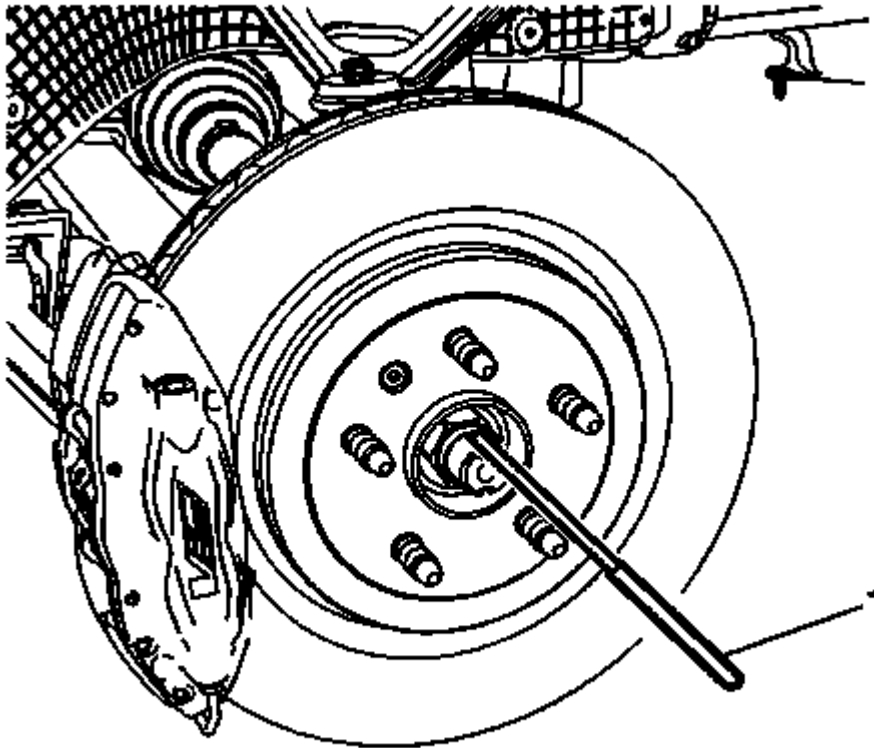


Fig. 1: Locating punch

Courtesy of GENERAL MOTORS COMPANY

3. Using a punch (1), remove the stake from the wheel drive shaft nut.

NOTE: Do Not use air tools to remove the wheel drive shaft nut. Use hand tools only.

4. Set the parking brake.
5. Using a breaker bar and the proper size socket, loosen the wheel drive shaft nut.

CAUTION: Support the brake caliper with heavy mechanic wire or equivalent, whenever it is separated from its mount and the hydraulic flexible

manner will cause the flexible brake hose to bear the weight of the caliper, which may cause damage to the brake hose and in turn may cause a brake fluid leak.

6. Remove the rear brake caliper and set it aside. Refer to **Rear Brake Caliper Replacement** .

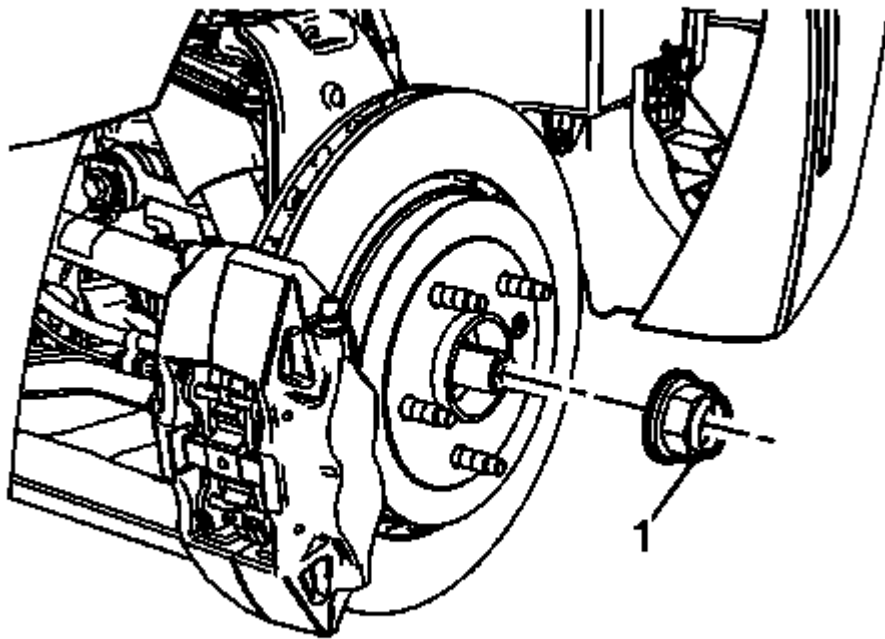


Fig. 2: Wheel Drive Shaft Nut
Courtesy of GENERAL MOTORS COMPANY

7. Remove and discard the wheel drive shaft nut (1). DO NOT re-use, replace with new only.

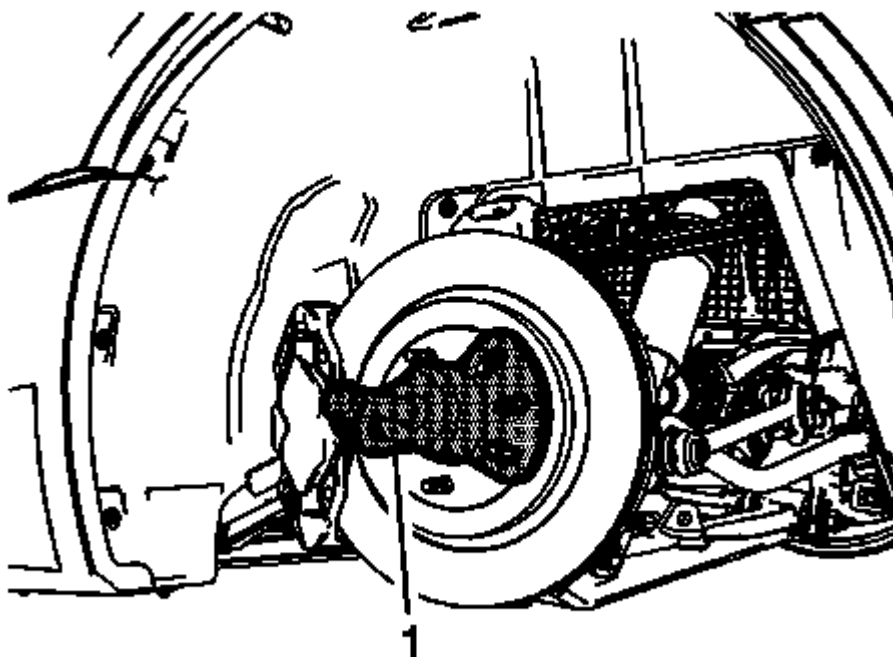


Fig. 3: Removing Rear Wheel Drive Shaft From Knuckle Using CH 42129
Courtesy of GENERAL MOTORS COMPANY

8. Using the **CH 42129** remover (1), remove the rear wheel drive shaft from the knuckle.
9. Disconnect the adjust link from the knuckle. Refer to **Adjust Link Replacement** .

NOTE: When removing or installing the wheel drive shaft do not over extend the inner joint due to the possibility of separation. Pull on the inner tripot housing during removal.

10. Disconnect the upper control arm ball joint from the knuckle. Refer to **Upper Control Arm Replacement** .
11. Move the rear knuckle assembly aside leaving the lower ball joint attached. Refer to **Knuckle Replacement (without J55)** , **Knuckle Replacement (with J55)** .

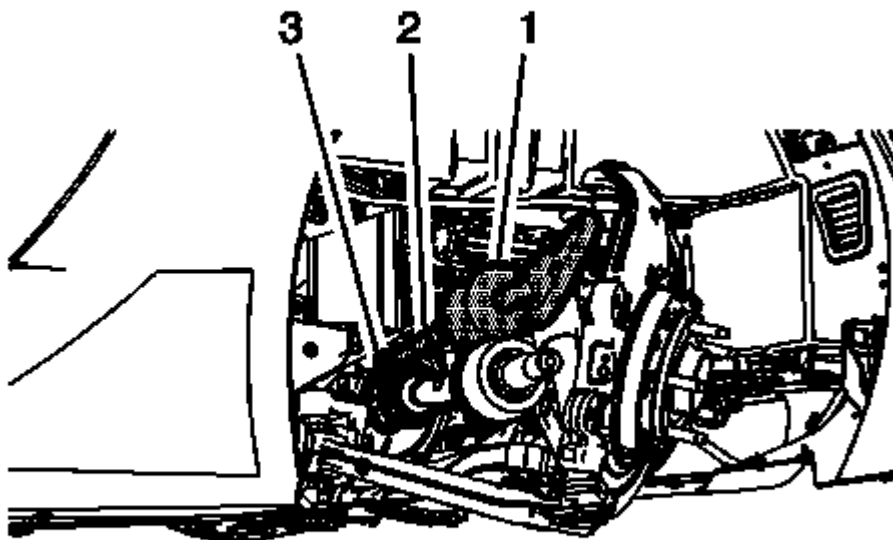


Fig. 4: Removing Wheel Drive Shaft From Rear Drive Axle Assembly
Courtesy of GENERAL MOTORS COMPANY

12. Using the **J-2619-01** hammer (1), **J-29794** extension (2) and the **J-42943** remover (3) or equivalent tool, remove the wheel drive shaft from the rear drive axle assembly.

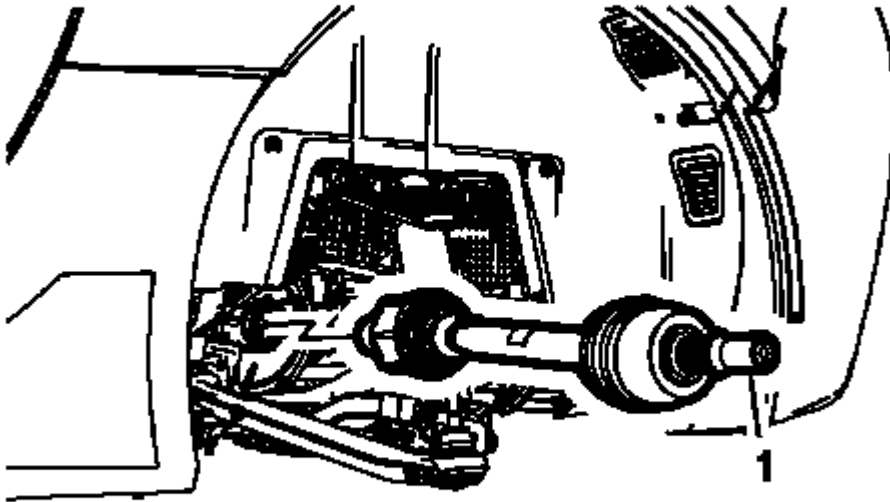


Fig. 5: Wheel Drive Shaft

Courtesy of GENERAL MOTORS COMPANY

NOTE: When removing or installing the wheel drive shaft do not over extend the inner joint due to the possibility of separation. Pull on the inner tripot housing during removal.

13. Remove the wheel drive shaft (1) from the vehicle.

Installation Procedure

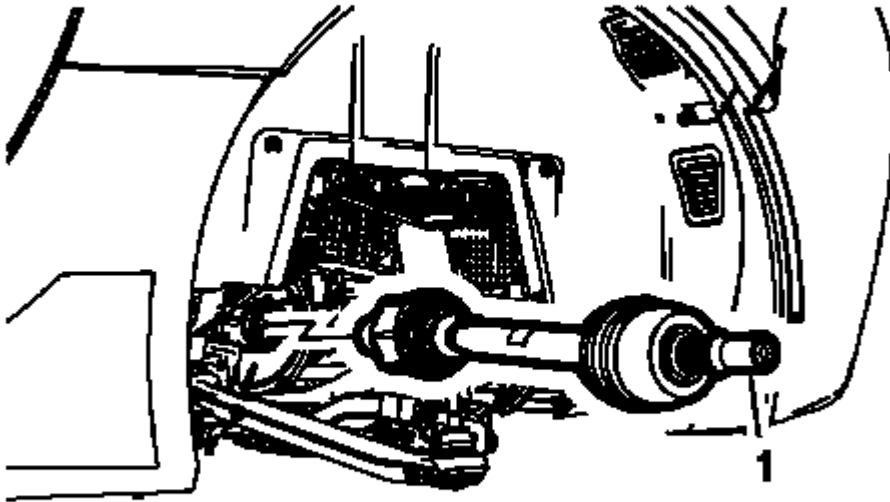


Fig. 6: Wheel Drive Shaft

Courtesy of GENERAL MOTORS COMPANY

NOTE: When removing or installing the wheel drive shaft, do not over extend the inner joint, due to the possibility of separation.

1. Install the rear wheel drive shaft (1) into the rear drive axle.

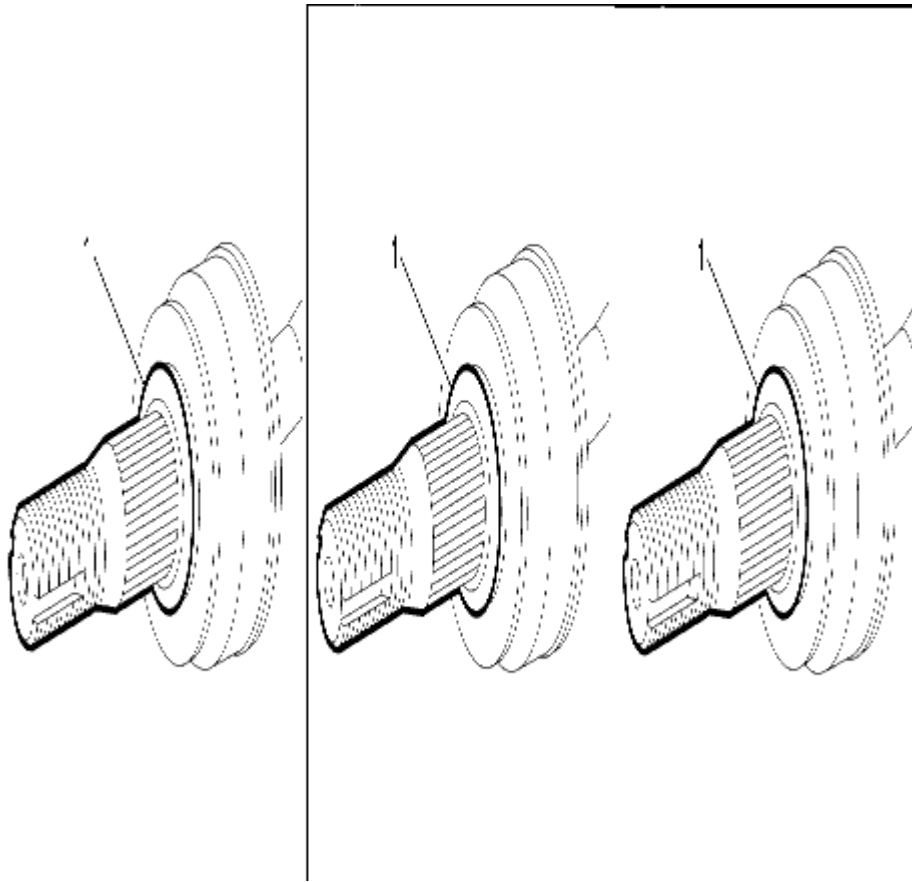


Fig. 7: Surface Area
Courtesy of GENERAL MOTORS COMPANY

2. Clean the surface area (1) that rests against the wheel bearing and then apply a thin layer of anti-seize. Refer to **Adhesives, Fluids, Lubricants and Sealers**.
3. Install the wheel drive shaft into the rear wheel bearing hub assembly.
4. Reattach rear knuckle assembly to the upper control arm. Refer to **Knuckle Replacement (without J55)** , **Knuckle Replacement (with J55)** .
5. Reattach the adjust link to the knuckle assembly. Refer to **Adjust Link Replacement** .
6. Reinstall the rear brake caliper. Refer to **Rear Brake Caliper Replacement** .

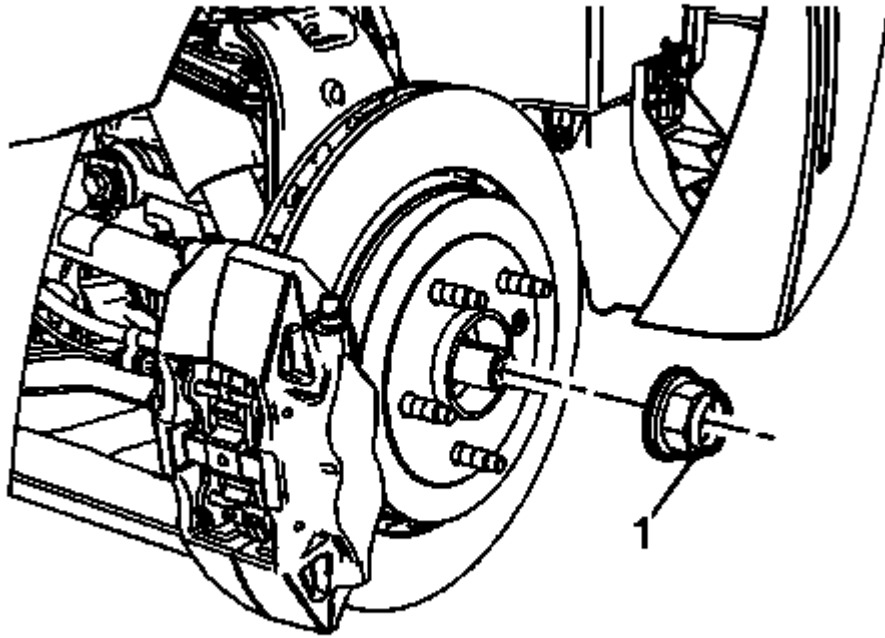


Fig. 8: Wheel Drive Shaft Nut

Courtesy of GENERAL MOTORS COMPANY

7. Loosely install the wheel drive shaft nut (1).
8. Set the parking brake.

CAUTION: Refer to Fastener Caution .

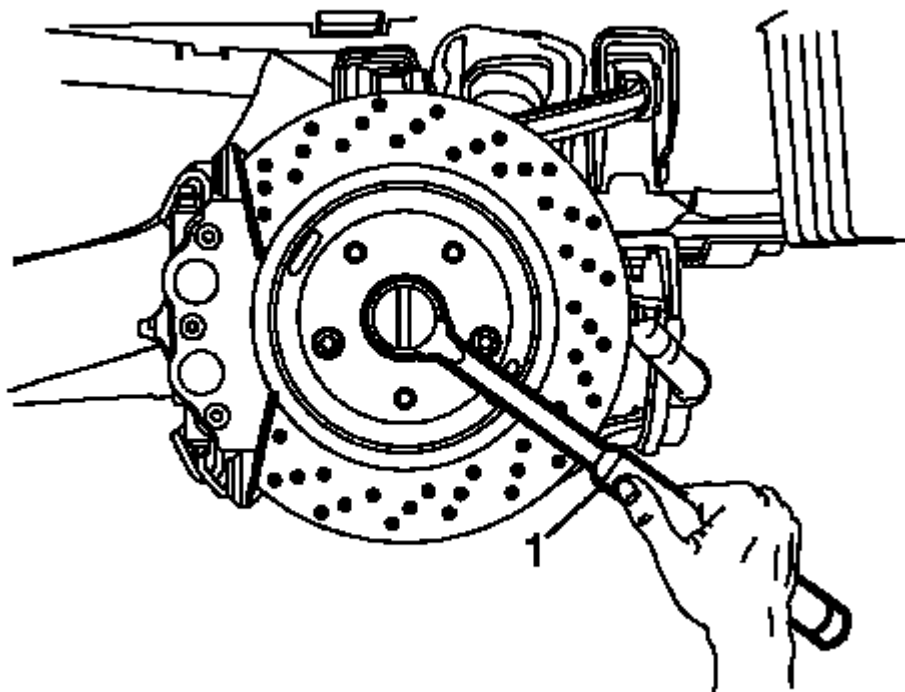


Fig. 9: Tightening Wheel Drive Shaft Nut
Courtesy of GENERAL MOTORS COMPANY

9. Using a torque wrench and the proper size socket (1), tighten the wheel drive shaft nut to 250 N.m (184 lb ft).

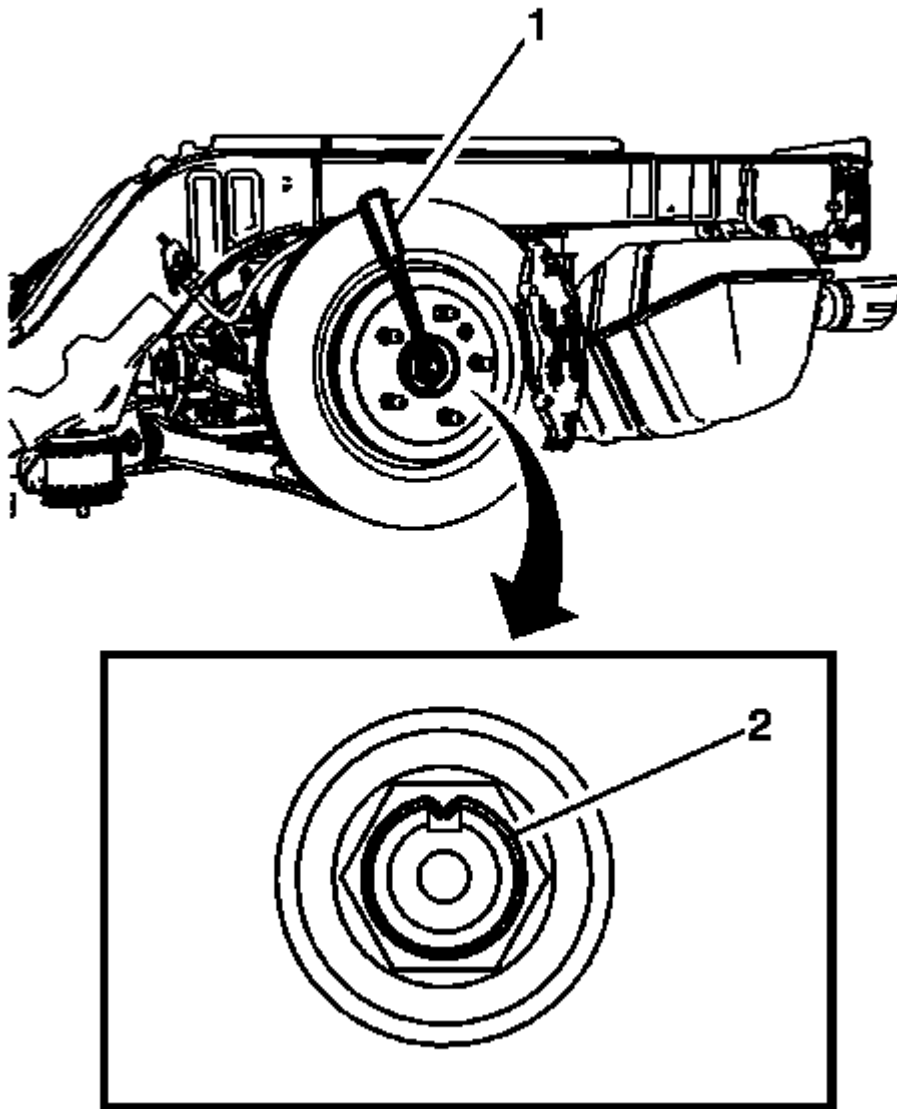


Fig. 10: Drive Shaft Nut Collar & Chisel Tool
Courtesy of GENERAL MOTORS COMPANY

NOTE: The following service procedure apply's to those vehicles with the staked wheel drive shaft nut.

10. Using a hammer and a punch (1), stake the wheel drive shaft nut (2).

12. Check the rear drive axle lubricant level. Refer to **Rear Axle Lubricant Level Inspection** .
13. Lower the vehicle.

REAR WHEEL DRIVE SHAFT INNER JOINT AND BOOT REPLACEMENT

Special Tools

DT 35910 Drive Axle Seal Clamp Pliers

For equivalent regional tools, refer to **Special Tools**

Disassemble Procedure

1. Remove the wheel drive shaft from the vehicle. Refer to **Rear Wheel Drive Shaft Replacement**.

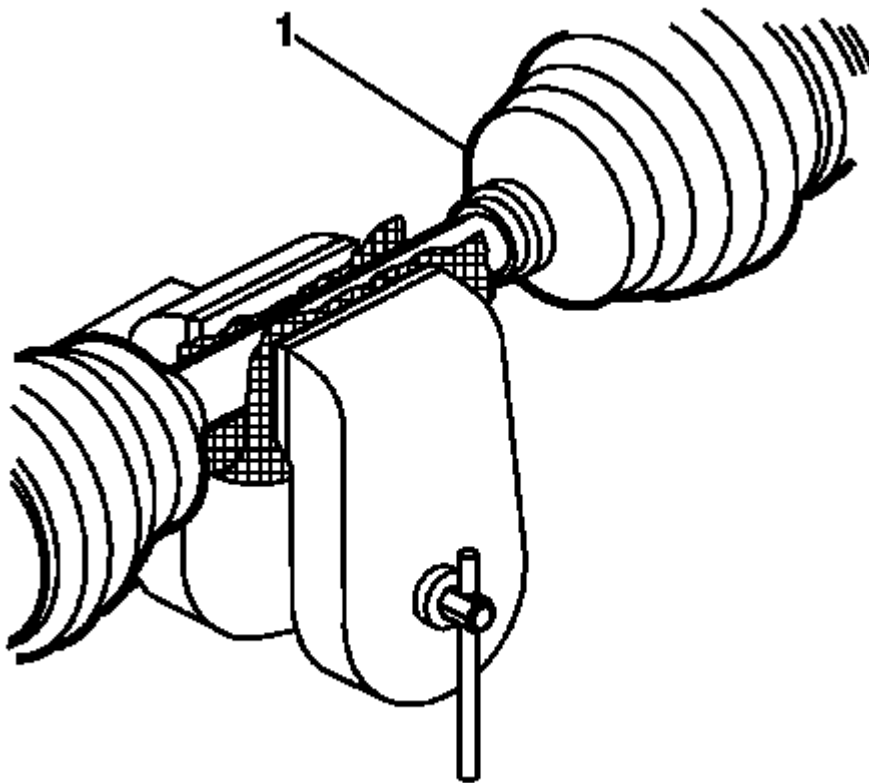


Fig. 11: View Of Front Wheel Drive Shaft Inner Joint
Courtesy of GENERAL MOTORS COMPANY

2. Install the wheel drive shaft in a soft jawed vise.

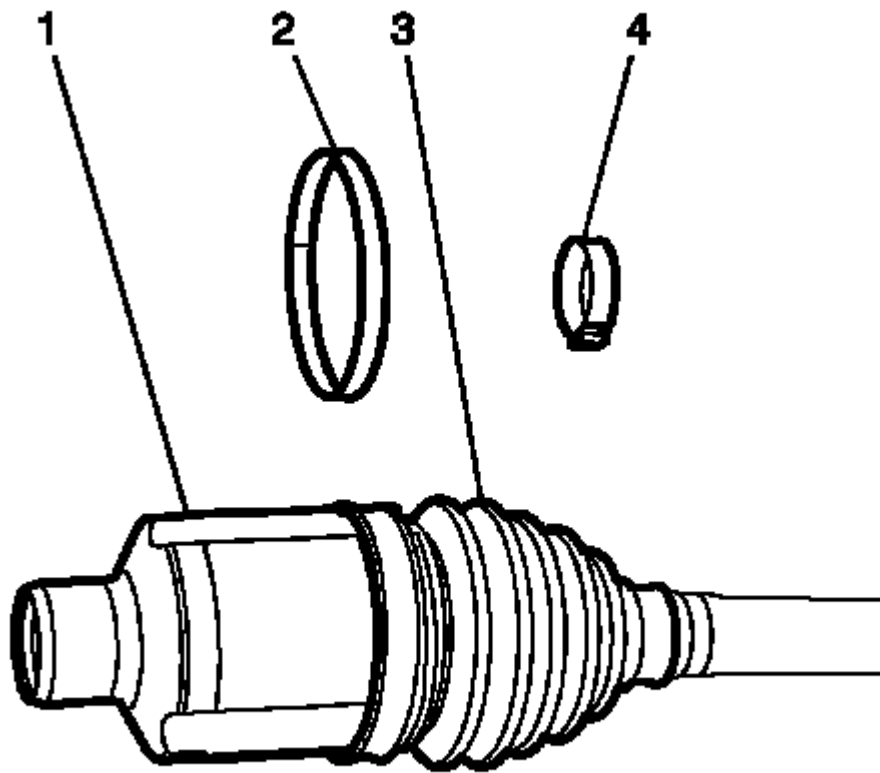


Fig. 12: Axle Shaft Boot And Clamps
Courtesy of GENERAL MOTORS COMPANY

3. Using a pair of side cutters, remove and discard the small boot clamp (4) from the boot (3).

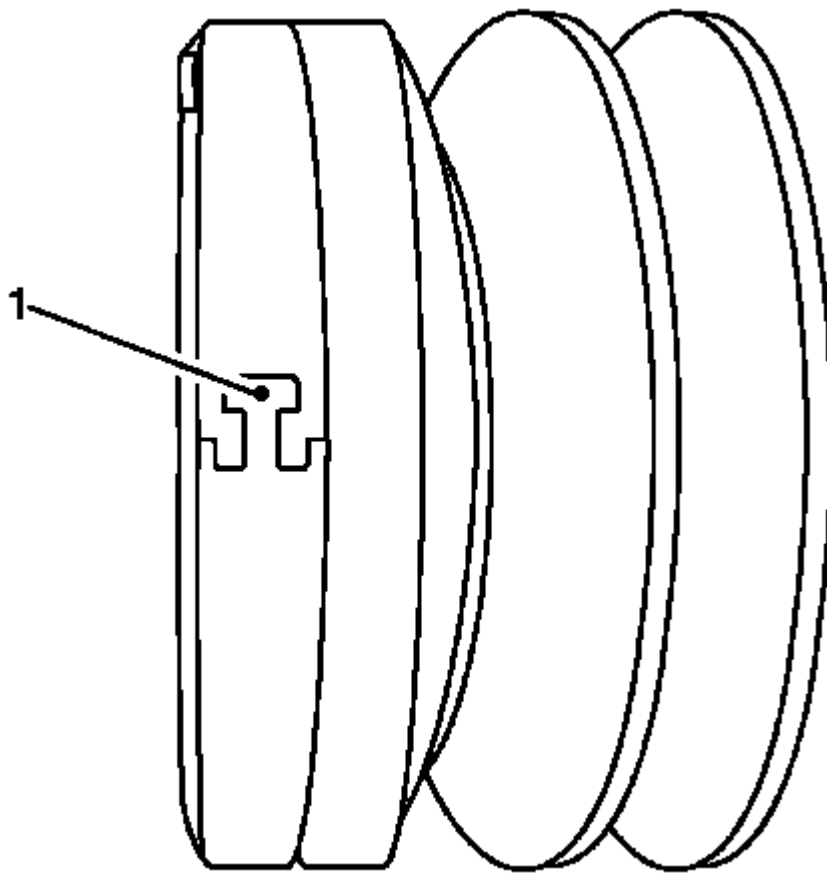


Fig. 13: Aligning Center Punch To Top Center Of "T"
Courtesy of GENERAL MOTORS COMPANY

4. Using a hammer and center punch, align the center punch to the top center of "T" (1) portion of the large boot clamp and apply impact.

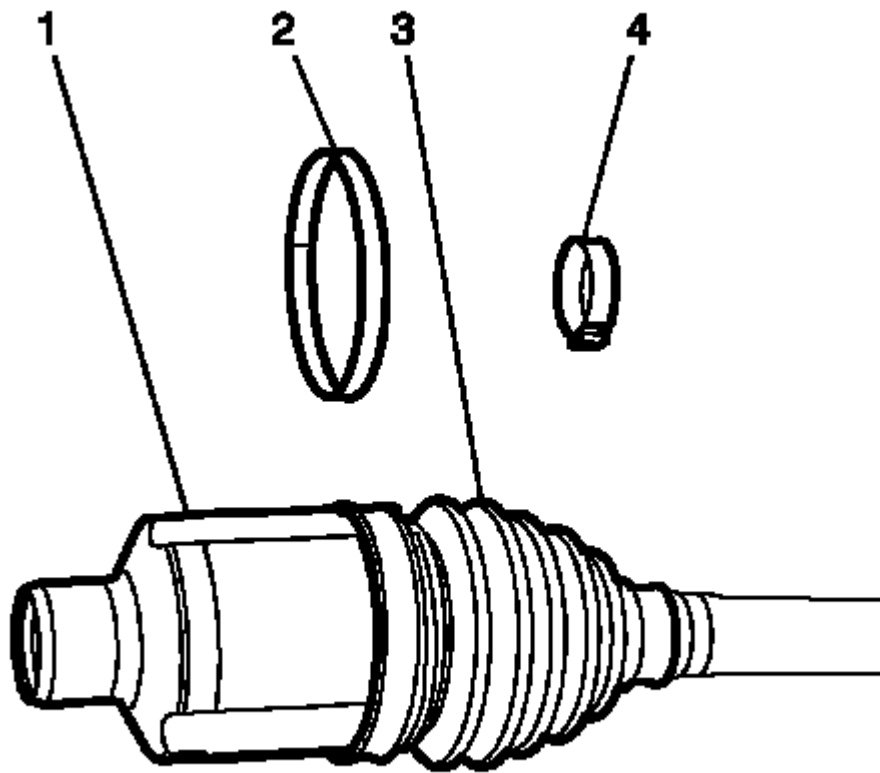


Fig. 14: Axle Shaft Boot And Clamps
Courtesy of GENERAL MOTORS COMPANY

5. Remove and discard the large boot clamp (2) from the boot (3).

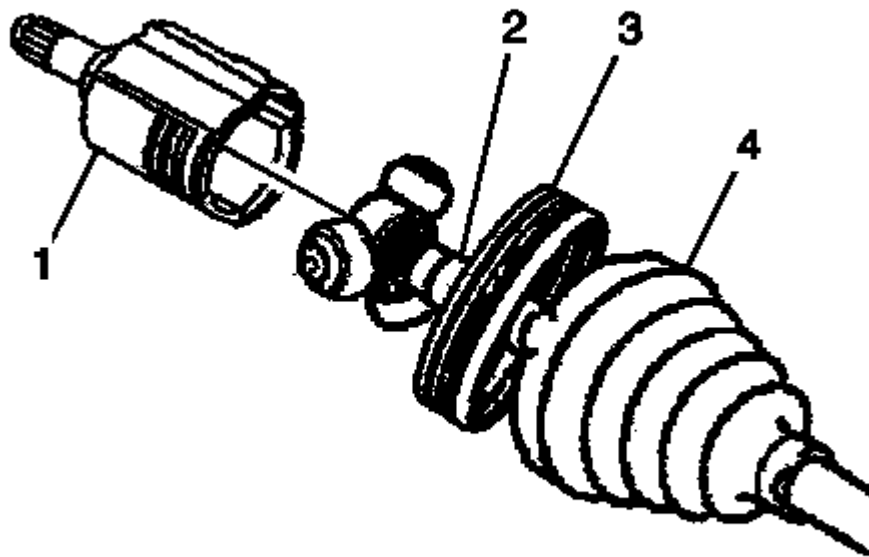


Fig. 15: Boot Adapter And Boot
Courtesy of GENERAL MOTORS COMPANY

6. Remove the bushing (3) and the boot (4) from the tripot housing (1).
7. Remove the inner tripot housing (1) from the wheel drive shaft (2) and the tripot.

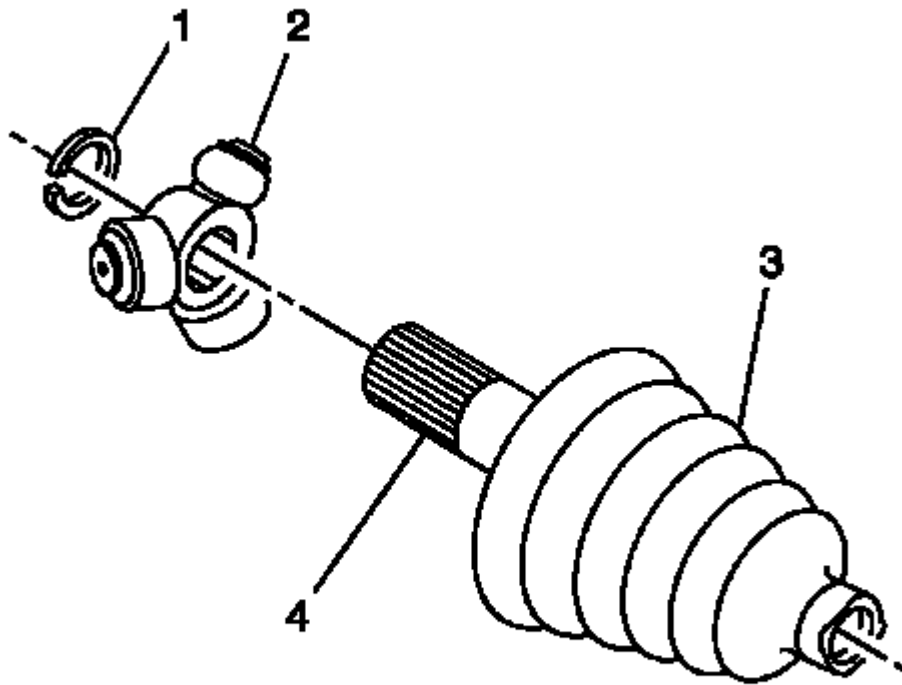


Fig. 16: Tripot Spider Retaining Ring And Wheel Drive Shaft
Courtesy of GENERAL MOTORS COMPANY

8. Using the appropriate tool, remove the tripot spider retaining ring (1) from the wheel drive shaft (4).
9. Remove the tripot spider (2) from the wheel drive shaft (4).
10. Remove the wheel drive shaft boot (3) from the wheel drive shaft (4).

NOTE: If any sign of damage or excessive wear, replace the wheel drive shaft as an assembly. There are no service parts available for the inner joint assembly.

11. Inspect the wheel drive shaft inner joint. Refer to [Wheel Drive Shaft Inner Joint Inspection](#).

Assemble Procedure

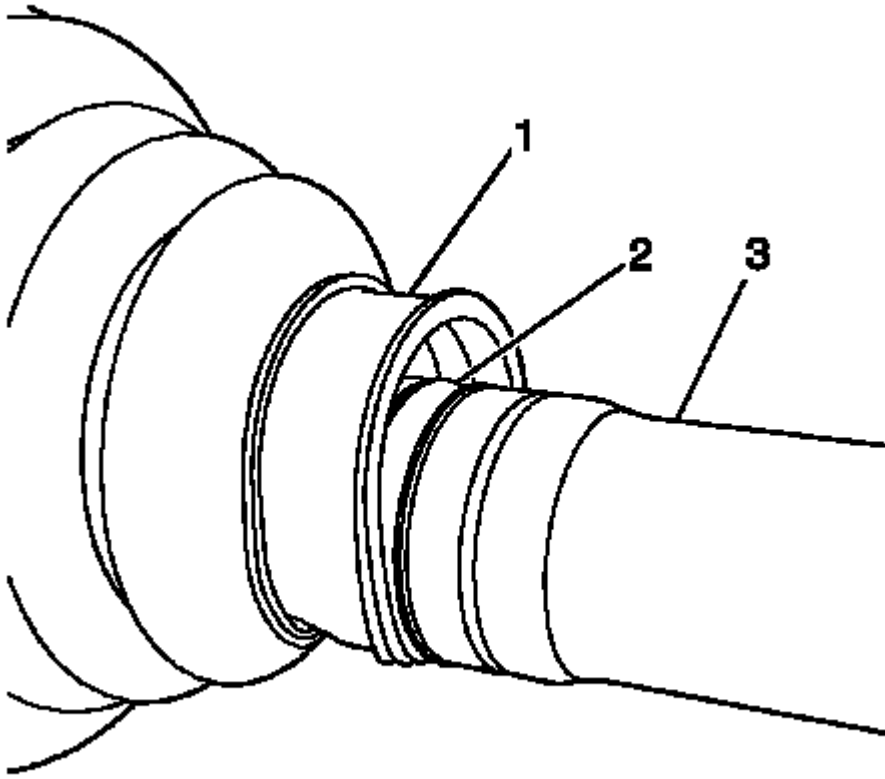


Fig. 17: Identifying Groove In Wheel Drive Shaft
Courtesy of GENERAL MOTORS COMPANY

1. Install the boot and the boot clamp (1) on the wheel drive shaft (3).
2. Ensure that the boot (1) is properly seated in the groove (2) in the wheel drive shaft.

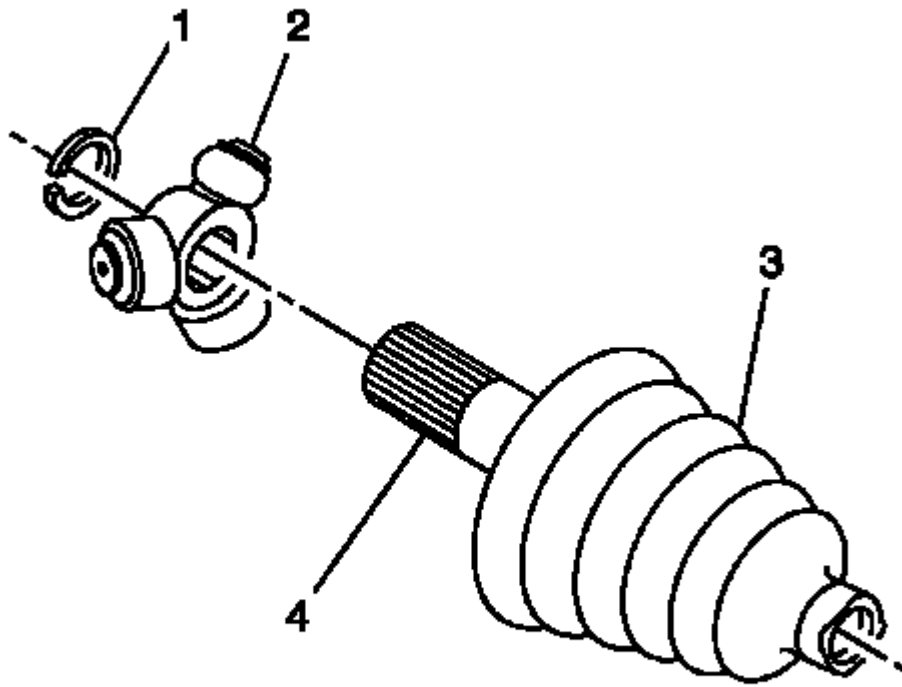


Fig. 18: Tripot Spider Retaining Ring And Wheel Drive Shaft
Courtesy of GENERAL MOTORS COMPANY

3. Install the tripot spider (2) until just touches the shoulder on the wheel drive shaft (4).
4. Using the appropriate tool, install the outer tripot spider retaining ring (1).

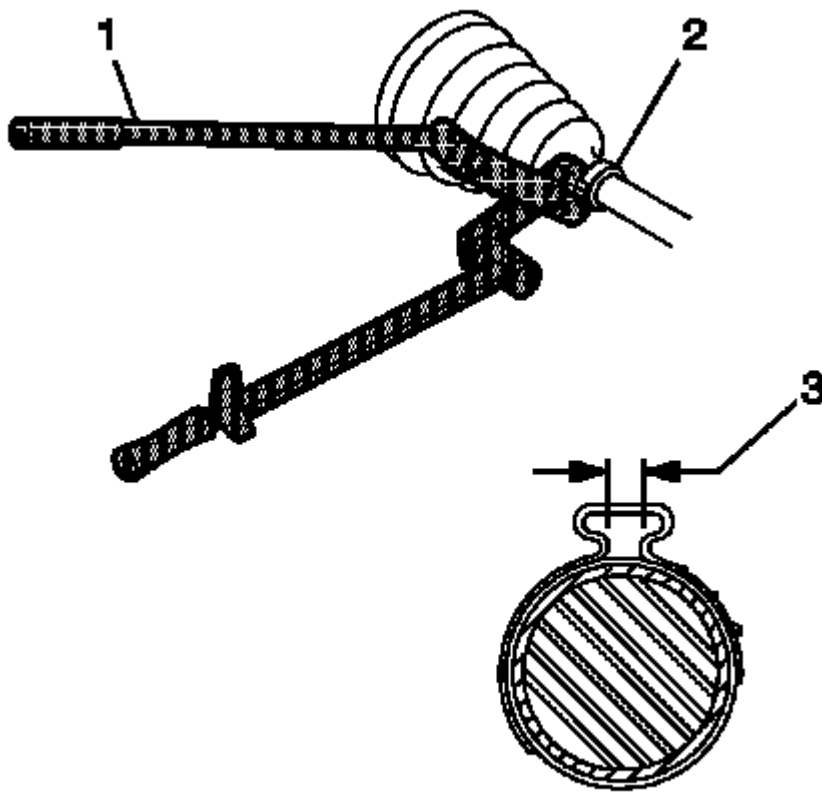


Fig. 19: Identifying Pliers Breaker Bar, Torque Wrench, Ratchet & Gap Measurement
Courtesy of GENERAL MOTORS COMPANY

5. Using the **DT 35910** pliers (1), close the boot clamp (2) until the gap (3) measures 1.6 mm (0.06 in).

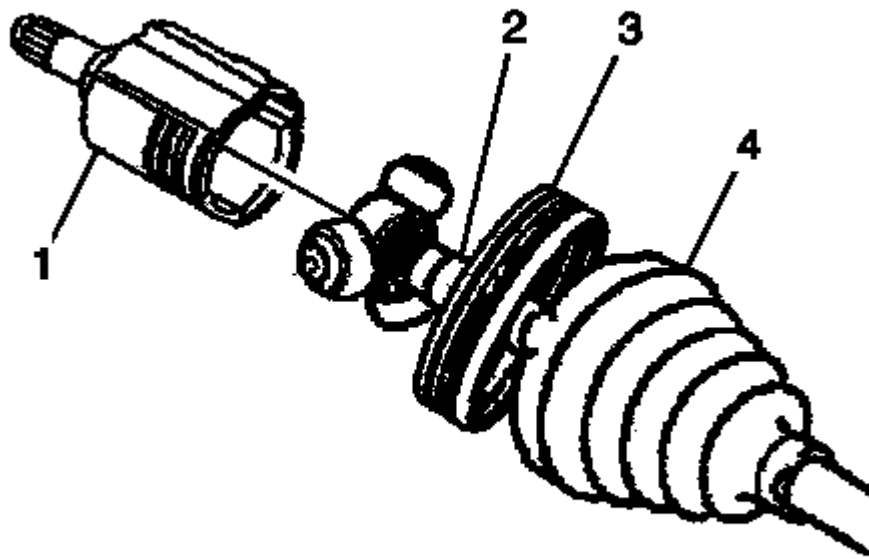


Fig. 20: Boot Adapter And Boot
Courtesy of GENERAL MOTORS COMPANY

6. Install the bushing (3) into the boot (4).

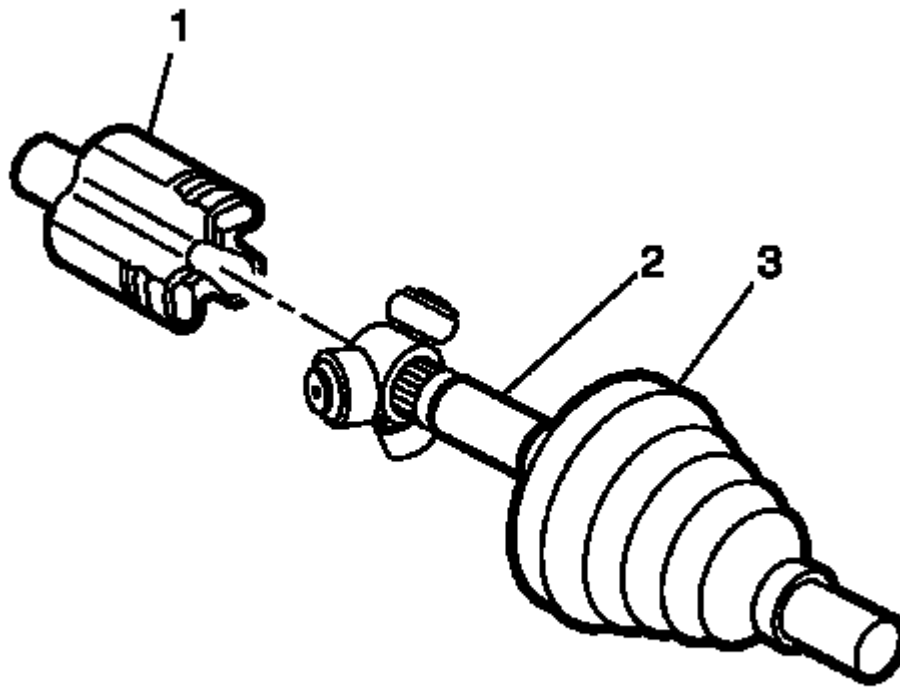


Fig. 21: Inner Tripot Housing And Wheel Drive Shaft
Courtesy of GENERAL MOTORS COMPANY

7. Install the tripot housing (1) on the wheel drive shaft (2).
8. Install the wheel drive shaft boot (3) and bushing on the tripot housing (1).

NOTE: May have to burp the air from the boot to achieve measurement.

9. Check that the end to end shaft measurement is 761-766 mm (29.96-30.15 in).

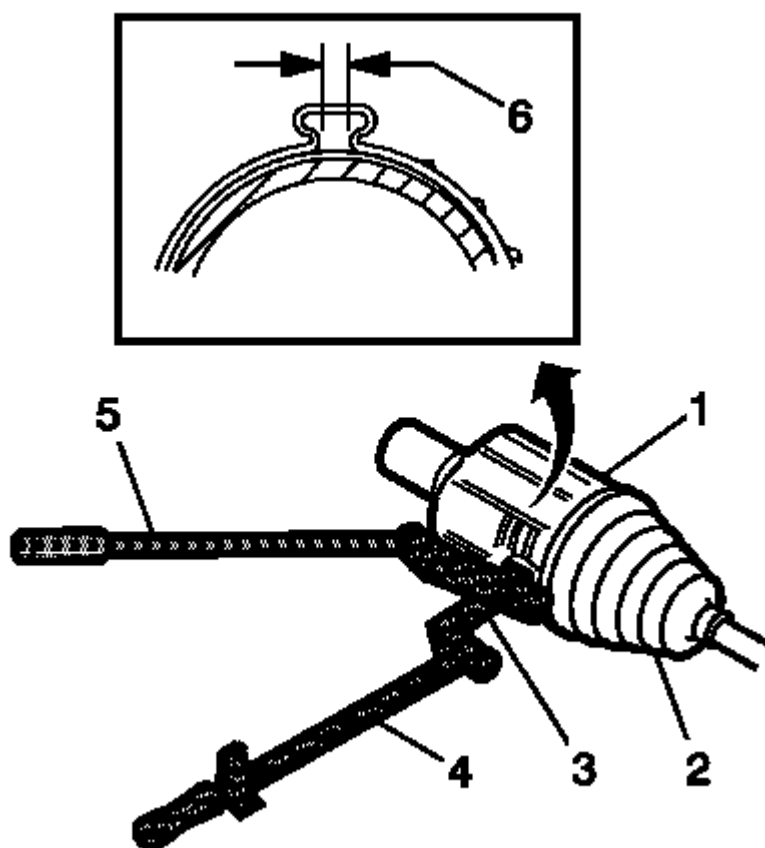


Fig. 22: Closing Boot Clamp Using Special Tools
Courtesy of GENERAL MOTORS COMPANY

10. Using the **J 35910** pliers (3), ratchet wrench (4) and a breaker bar (5), close the boot clamp (1) until the gap (6) measures 2.0 mm (0.07 in).
11. Remove any of the excess lubricant from the tripot housing and wheel drive shaft.
12. Move the tripot joint housing in a circular motion to distribute the lubricant in the tripot housing.
13. Remove the wheel drive shaft from the vise.
14. Install the wheel drive shaft in the vehicle. Refer to **Rear Wheel Drive Shaft Replacement**.

REAR WHEEL DRIVE SHAFT OUTER JOINT AND BOOT REPLACEMENT

Special Tools

DT 35910 Drive Axle Seal Clamp Pliers

For equivalent regional tool, refer to **Special Tools**.

Disassemble Procedure

Replacement.

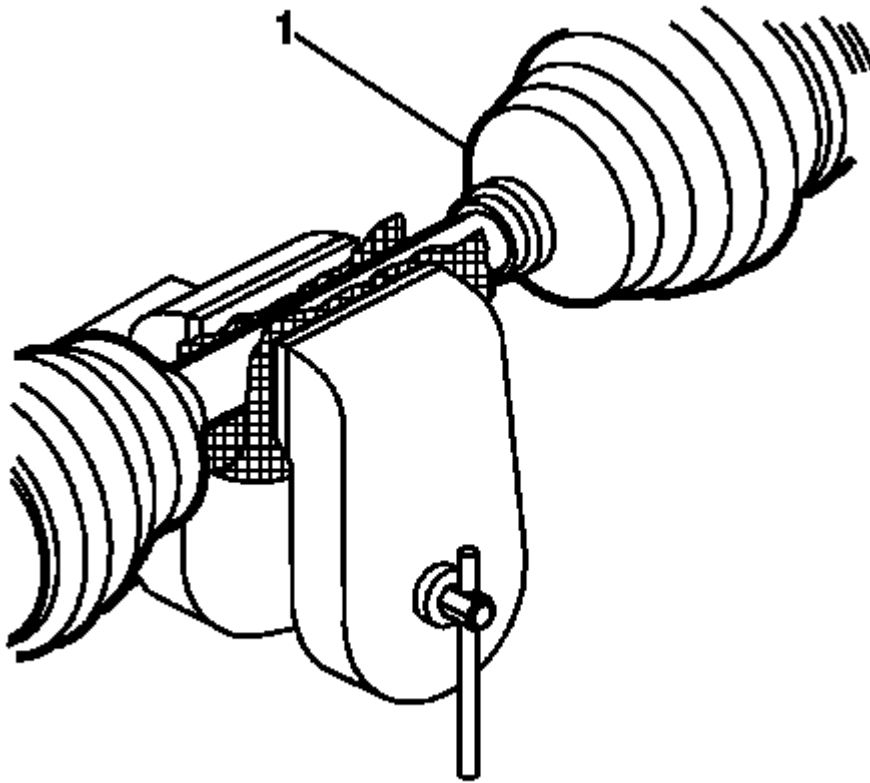


Fig. 23: View Of Front Wheel Drive Shaft Inner Joint
Courtesy of GENERAL MOTORS COMPANY

2. Install the drive axle shaft in a soft jawed vice.

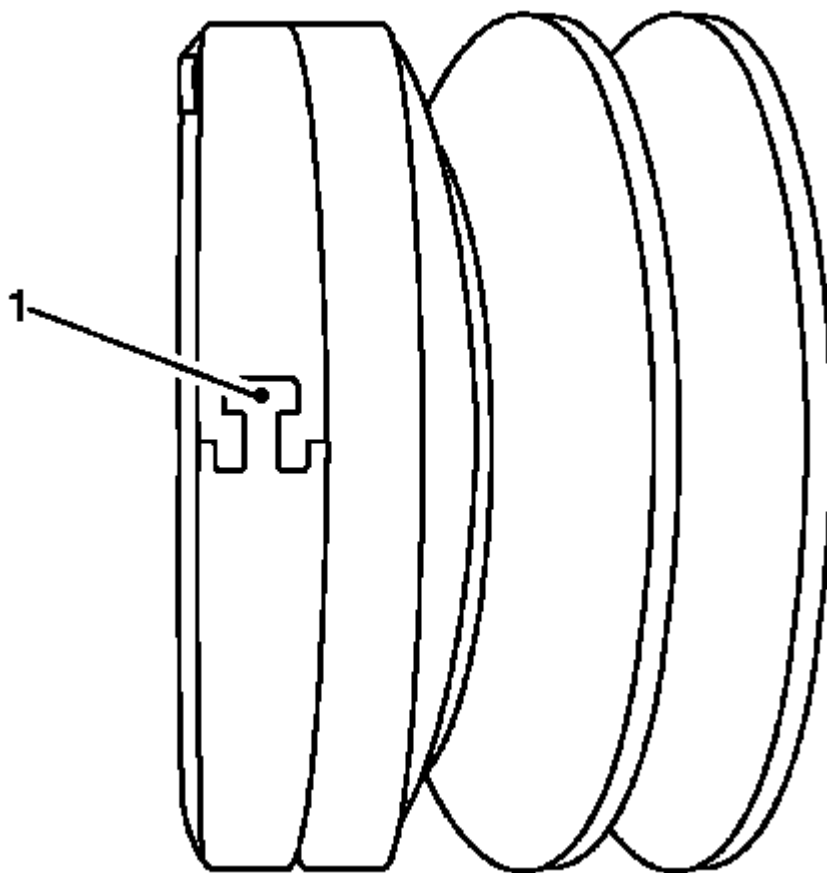


Fig. 24: Aligning Center Punch To Top Center Of "T"
Courtesy of GENERAL MOTORS COMPANY

CAUTION: Do not cut through the wheel drive shaft inboard or outboard boot during service. Cutting through the boot may damage the sealing surface of the housing and the tripot or the constant velocity joint bushing. Damage to the sealing surface may lead to water and dirt intrusion and premature wear of the constant velocity joint.

3. Use a hammer and center punch, align the center punch to the top of the "T" (1) portion of the large clamp and apply impact.

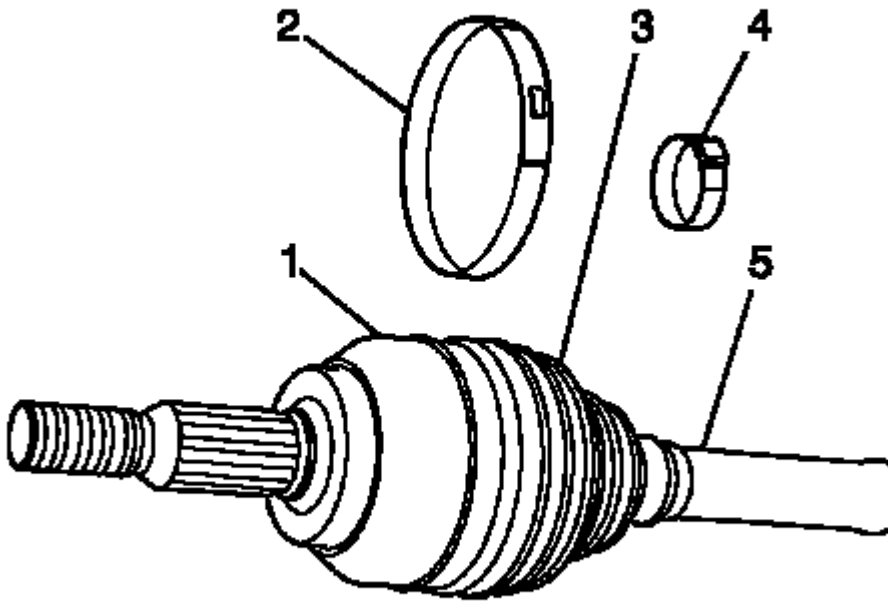


Fig. 25: Identifying Boot Clamps
Courtesy of GENERAL MOTORS COMPANY

4. Remove the large boot clamp (2). Using a pair of side cutters, remove the boot clamp (4) from the boot (3) and the wheel drive shaft (5).
5. Discard the boot clamps (2) and (4). Use NEW clamps only.

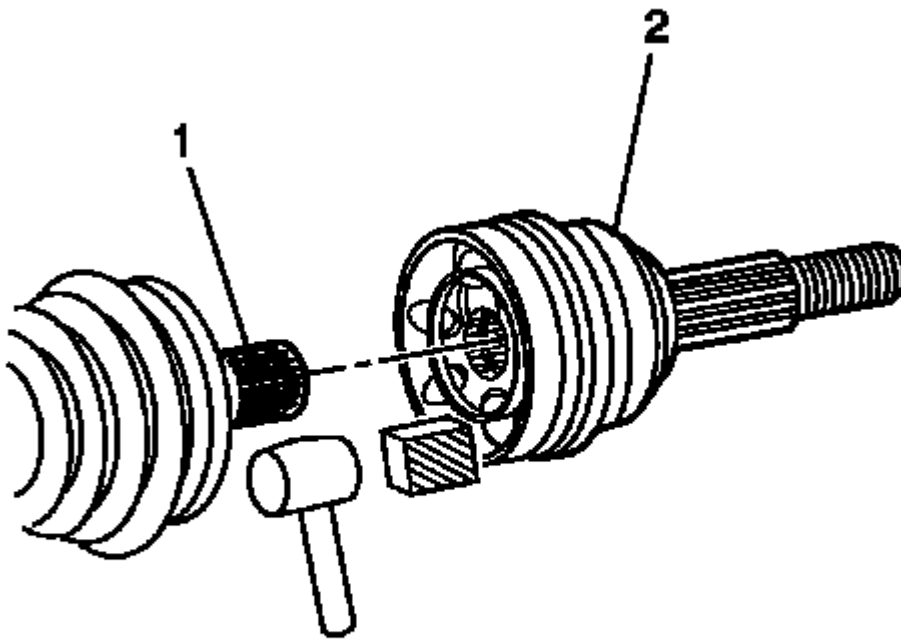


Fig. 26: Separating CV Joint From Axle Shaft
Courtesy of GENERAL MOTORS COMPANY

6. Using a block of wood and a hammer, remove the CV joint (2) from the wheel drive shaft (1).

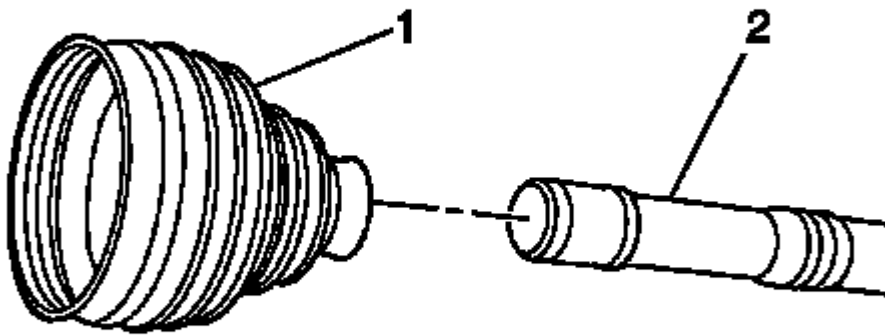


Fig. 27: Identifying Clamp & Wheel Drive Shaft
Courtesy of GENERAL MOTORS COMPANY

7. Remove the boot (1) from the wheel drive shaft (2).

NOTE: If any sign of damage or excessive wear, replace the wheel drive shaft as any assembly. There are no service parts available for the outer joint assembly.

8. Inspect the outer CV joint for damage and wear. Refer to **Wheel Drive Shaft Outer Joint Inspection**.

Assemble Procedure

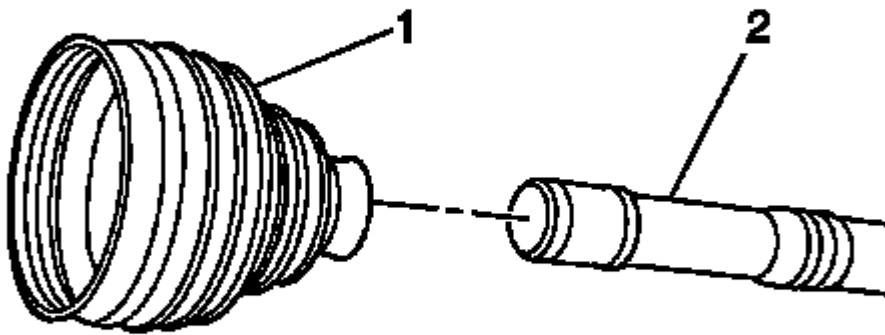


Fig. 28: Identifying Clamp & Wheel Drive Shaft
Courtesy of GENERAL MOTORS COMPANY

1. Position the boot and the clamp (1) on the wheel drive shaft (2).

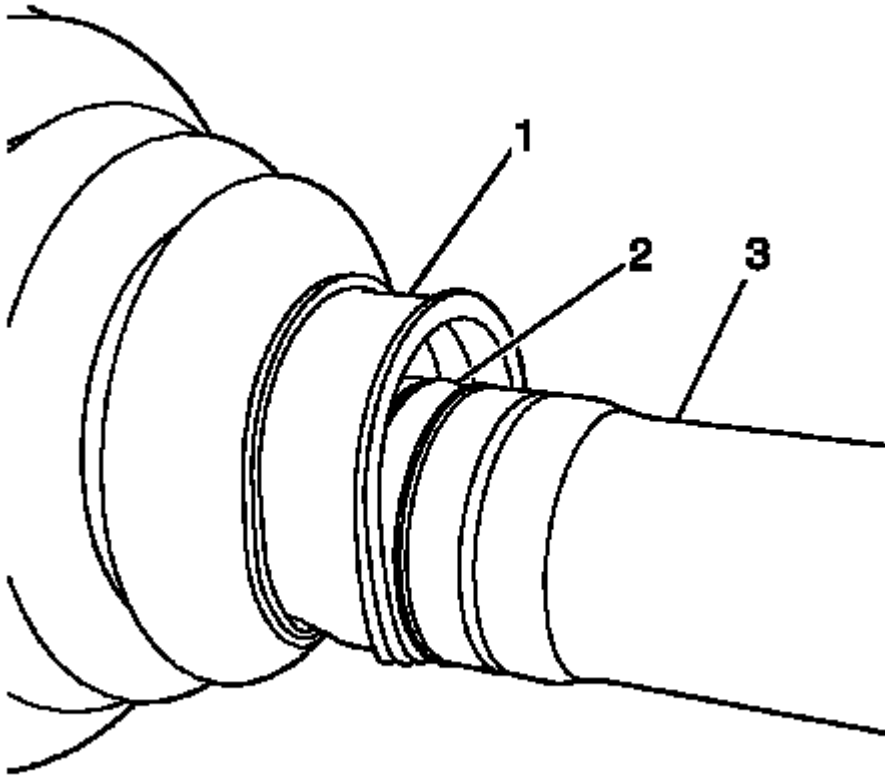


Fig. 29: Identifying Groove In Wheel Drive Shaft
Courtesy of GENERAL MOTORS COMPANY

2. Ensure that the boot (1) is properly seated in the grooved (2) wheel drive shaft (3).

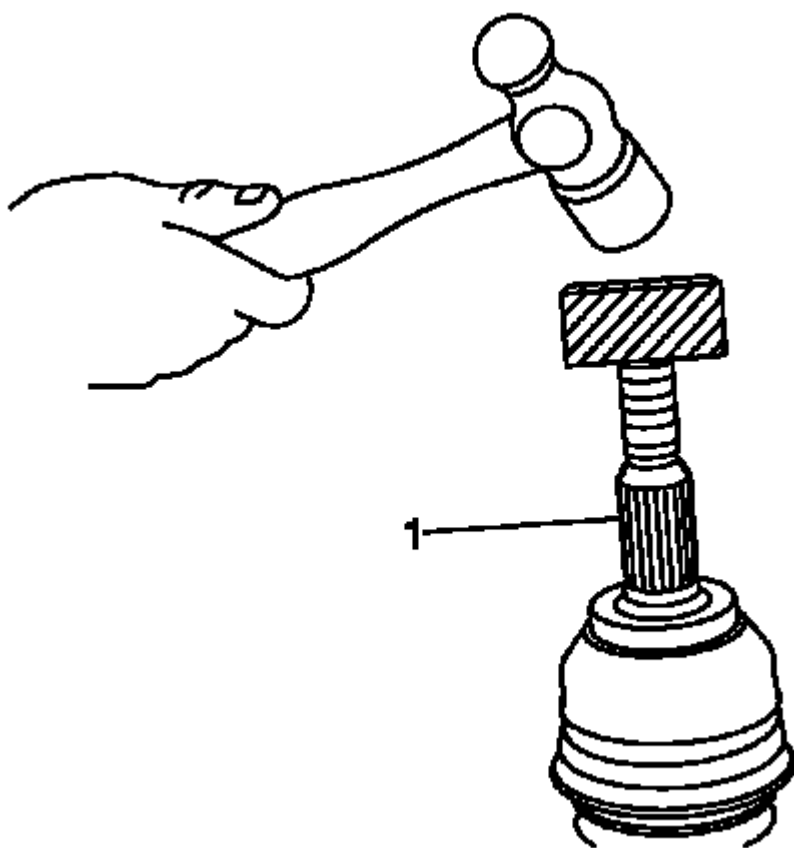


Fig. 30: Installing CV Joint

Courtesy of GENERAL MOTORS COMPANY

3. Using a block of wood and a hammer, install the CV joint (1) on the wheel drive shaft.

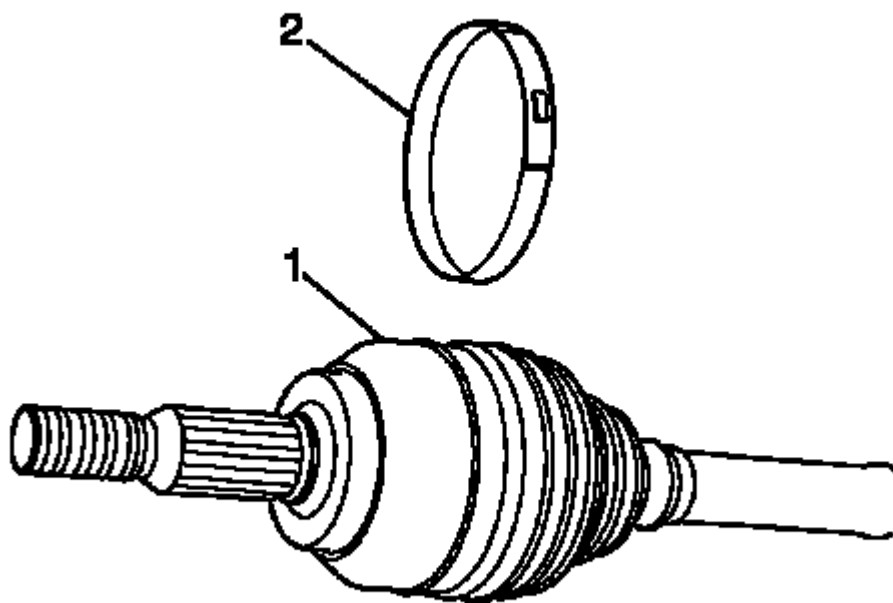


Fig. 31: Boot Clamp

Courtesy of GENERAL MOTORS COMPANY

4. Install the boot clamp (2) on the CV joint housing (1).

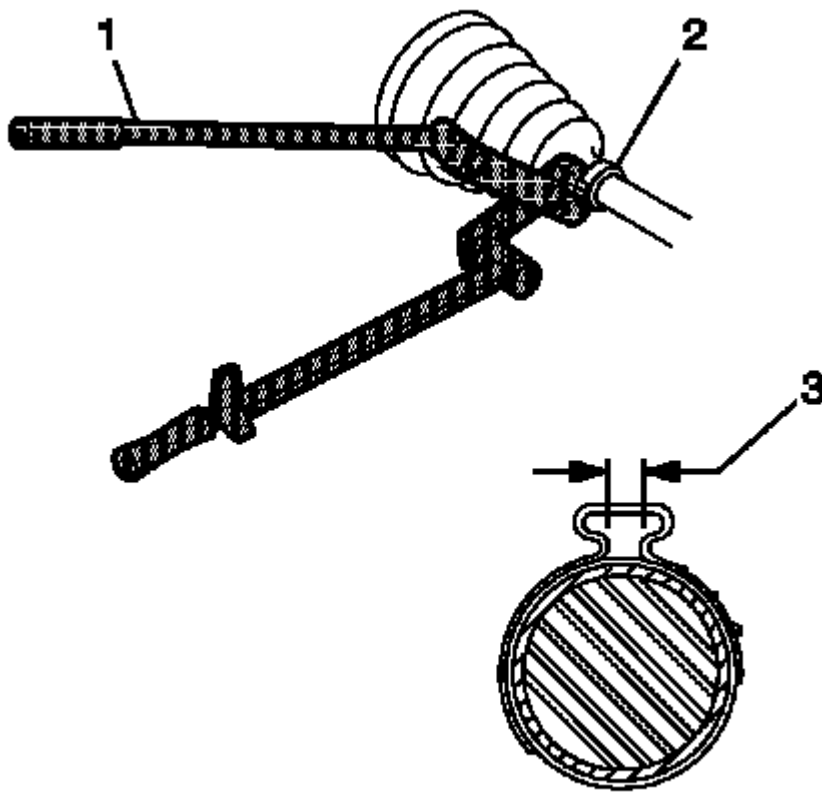


Fig. 32: Identifying Pliers Breaker Bar, Torque Wrench, Ratchet & Gap Measurement
Courtesy of GENERAL MOTORS COMPANY

NOTE: Ensure that the boot clamp is properly positioned around the entire circumference of the boot.

5. Using the **DT 35910** pliers with a breaker bar and a ratchet wrench (1), tighten the boot clamp (2) until the gap (3) in the boot clamp measure 1.6 mm (0.06 in).

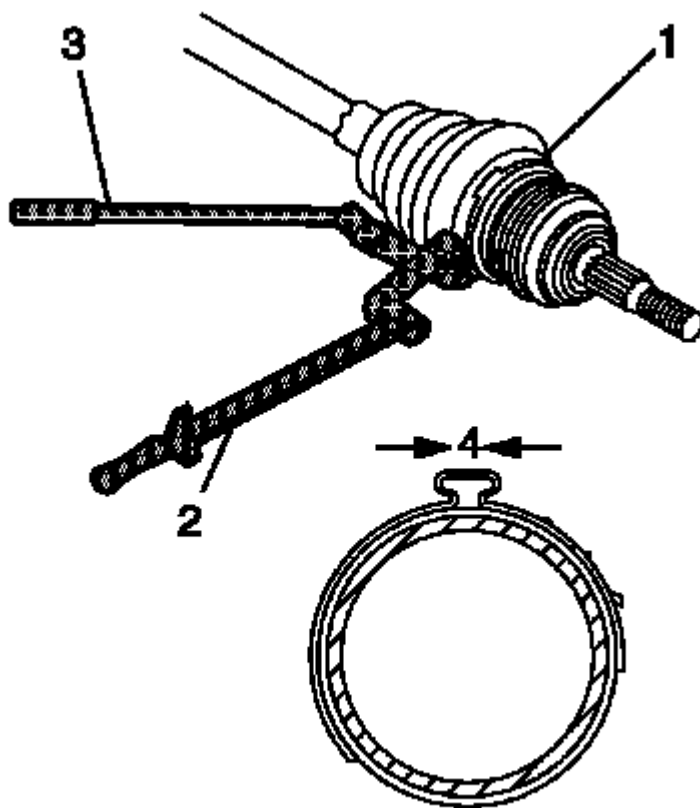


Fig. 33: View Of Outboard Seal, Large Seal Retaining Clamp & CV Joint Outer Race
 Courtesy of GENERAL MOTORS COMPANY

6. Using the **DT 35910** pliers breaker bar (3) and the torque wrench or ratchet wrench (2), tighten the boot clamp (1) until the gap (4) in the boot clamp measure 2.0 mm (0.08 in).
7. Distribute the lubricant within the outer CV joint by moving it in a circular motion at least four to five times.
8. Remove the wheel drive shaft from the bench vise.
9. Install the rear wheel drive shaft assembly. Refer to **Rear Wheel Drive Shaft Replacement**.

WHEEL DRIVE SHAFT OUTER JOINT INSPECTION

Special Tools

J-8059 Snap Ring Pliers - Parallel Jaw

Disassembly Procedure

1. Remove the outer constant velocity (CV) joint and boot from the wheel drive shaft. Refer to **Rear Wheel Drive Shaft Replacement**.

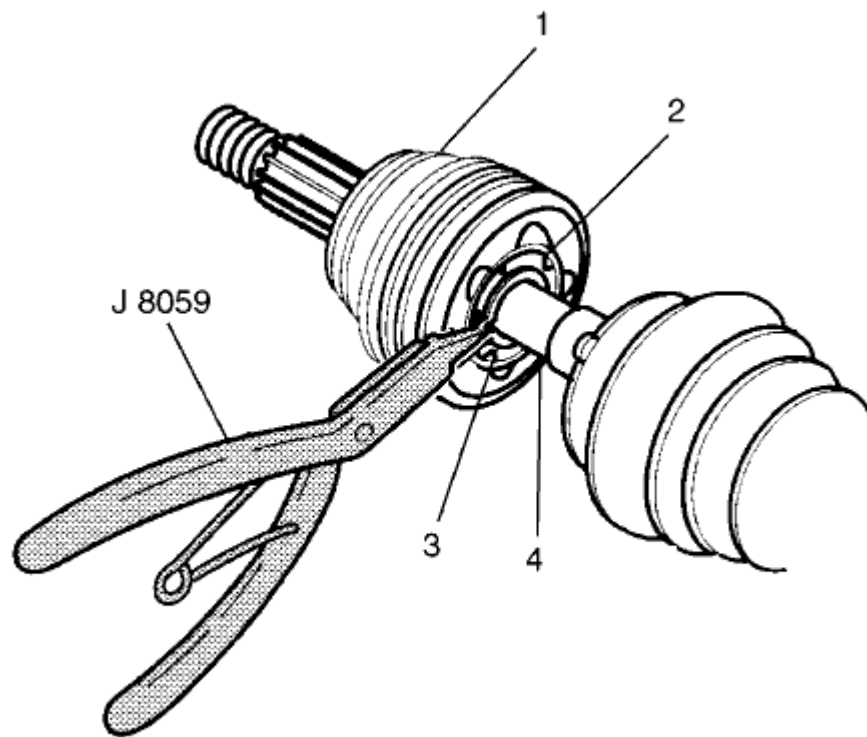


Fig. 34: Identifying J 8059

Courtesy of GENERAL MOTORS COMPANY

3. Using the **J-8059** pliers, remove the retaining ring (3) from the wheel drive shaft (4).

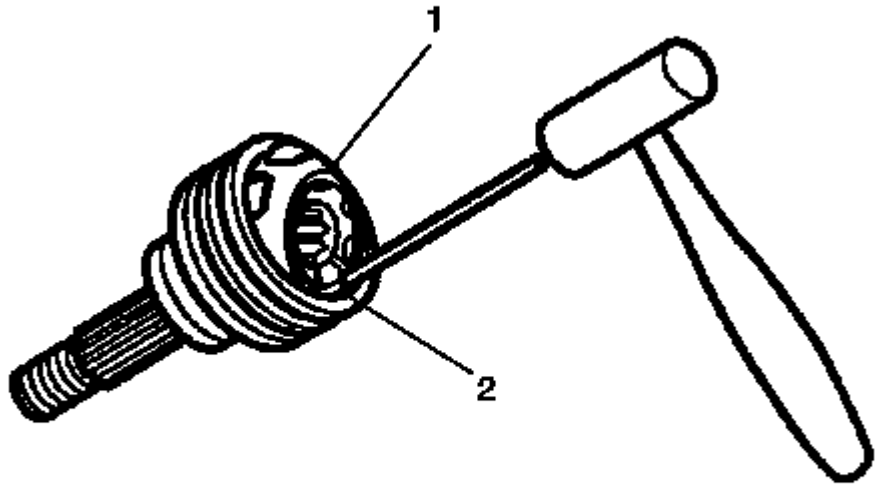


Fig. 35: Taping Gently On Brass Drift With A Hammer In Order To Tilt Cage
Courtesy of GENERAL MOTORS COMPANY

4. Install the outer CV joint assembly in a vise.

NOTE: **The following procedure will have to be repeated until all the ball bearing are removed form the cage.**

5. Using a brass drift (1), gentle tap the cage until the ball bearing can be removed from the cage.

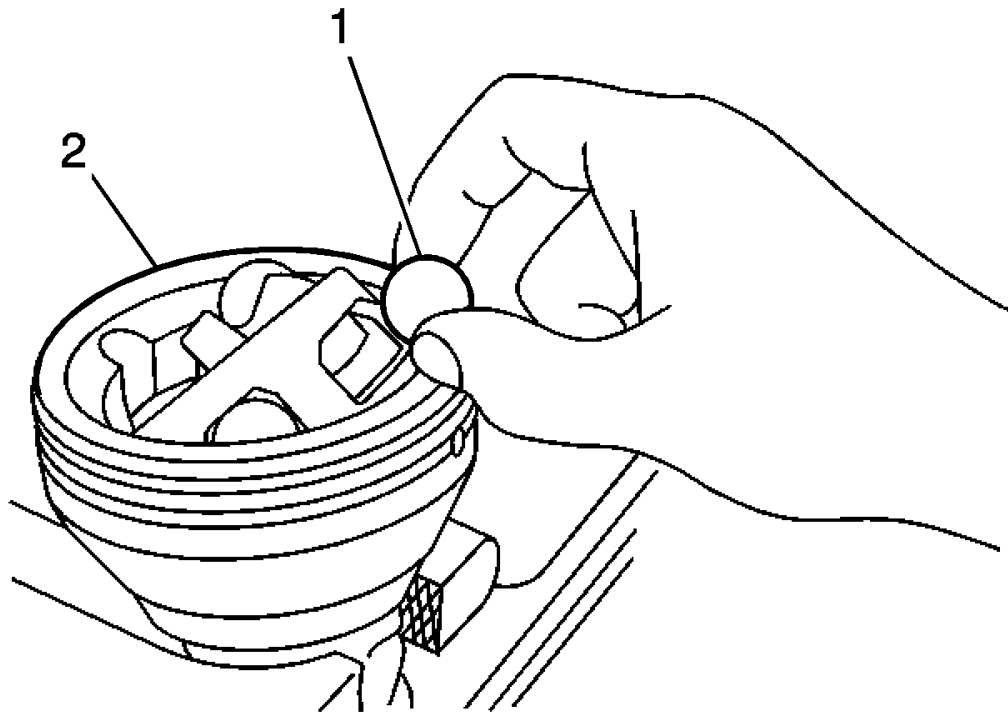


Fig. 36: Removing/Install Ball From Cage & Inner Race
Courtesy of GENERAL MOTORS COMPANY

NOTE: **Position the cage and the inner race so they are level.**

6. Using a small screwdriver, remove the ball bearings (1) from the CV joint (2).

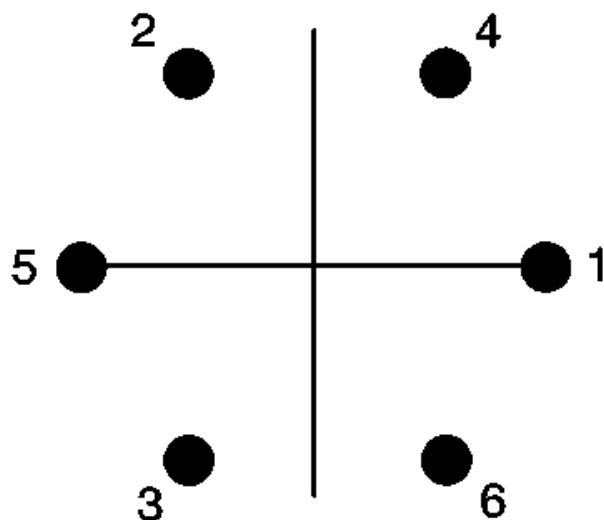


Fig. 37: View Of Ball Removal/Installation Sequence
Courtesy of GENERAL MOTORS COMPANY

7. Remove the ball bearings from the CV joint in sequence.

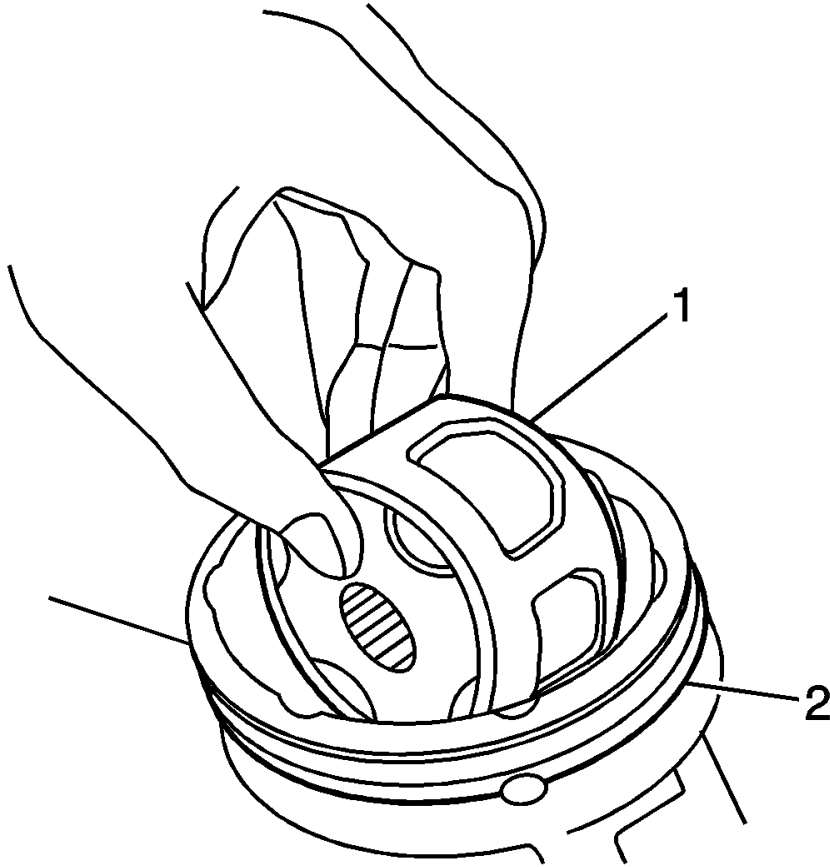


Fig. 38: Positioning Cage & Inner Race 90 Degrees To Centerline Of Outer Race
Courtesy of GENERAL MOTORS COMPANY

NOTE: Position the cage so that the larger radius corners of the cage windows are facing up.

8. Position the cage (1) at 90 degrees to the centerline of the outer race (2).
9. Align the cage windows with the lands of the outer race.
10. Lift and remove the cage and the inner race from the outer race.

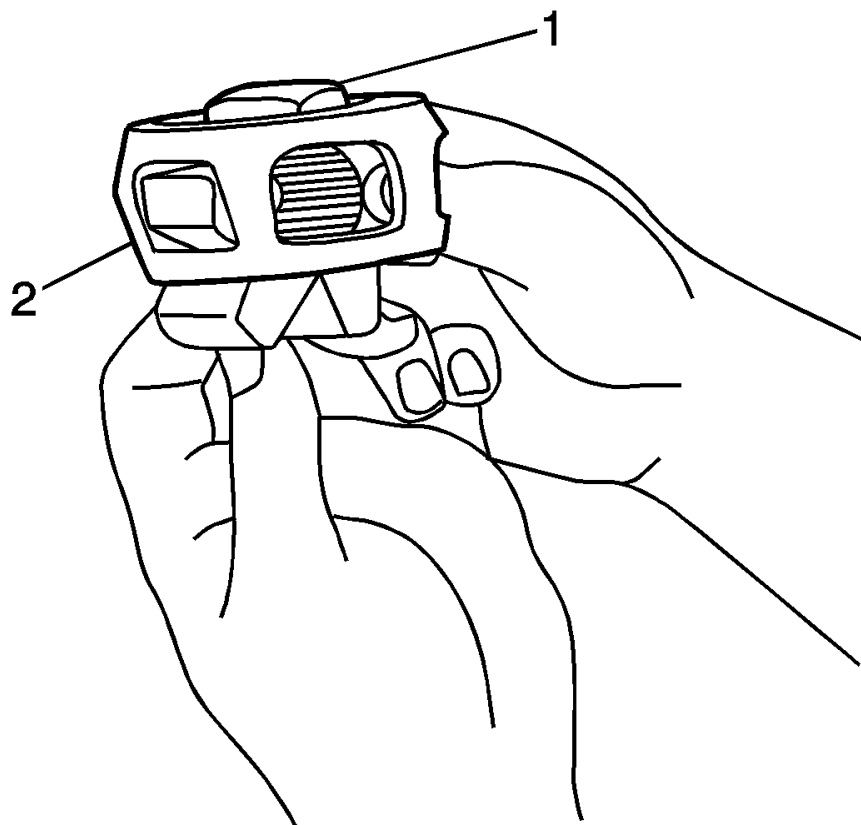


Fig. 39: Positioning Cage So Larger Radius Corners Of Cage Windows Are Up
Courtesy of GENERAL MOTORS COMPANY

11. Position the cage (2) and the inner race (1) so that the larger radius corners of the cage windows are up.
12. Rotate the inner race 90 degrees to the center line of the cage.
13. Align the lands of the inner race with the windows of the cage.
14. Move the inner race land into the cage window.
15. Rotate the inner race down and remove it from the cage.
16. Clean the following items thoroughly with the proper cleaning solvent:
 - The inner race
 - The outer race
 - The cage
 - The ball bearings
 - The exposed end of the wheel drive shaft

NOTE: The internal parts of the CV joint are **NOT SERVICED** separately. The outer CV joint is serviced as an assembly.

17. If any of the above items are found to have excessive wear or are damaged, replace the outer CV joint as an assembly.

Assembly Procedure

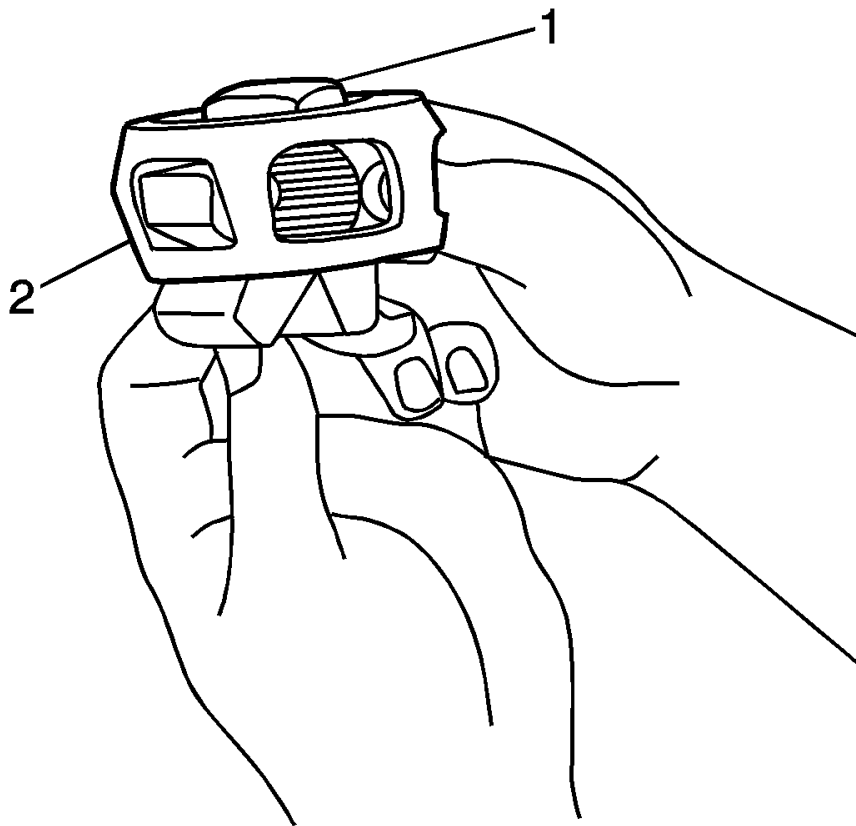


Fig. 40: Positioning Cage So Larger Radius Corners Of Cage Windows Are Up
Courtesy of GENERAL MOTORS COMPANY

1. Position the cage (2) so that the larger radius corners of the cage windows are up.
2. Position the inner race 90 degrees to the centerline of the cage.
3. Insert the inner race through the bottom of the cage.
4. Align the lands of the inner race with the windows of the cage.
5. Move the inner race land into the cage window.
6. Rotate the inner race down and remove it from the cage.

7. Rotate the inner race within the cage so that the grooved surface of the inner race is facing up.
8. Align the inner race ball bearing tracks with the cage windows.

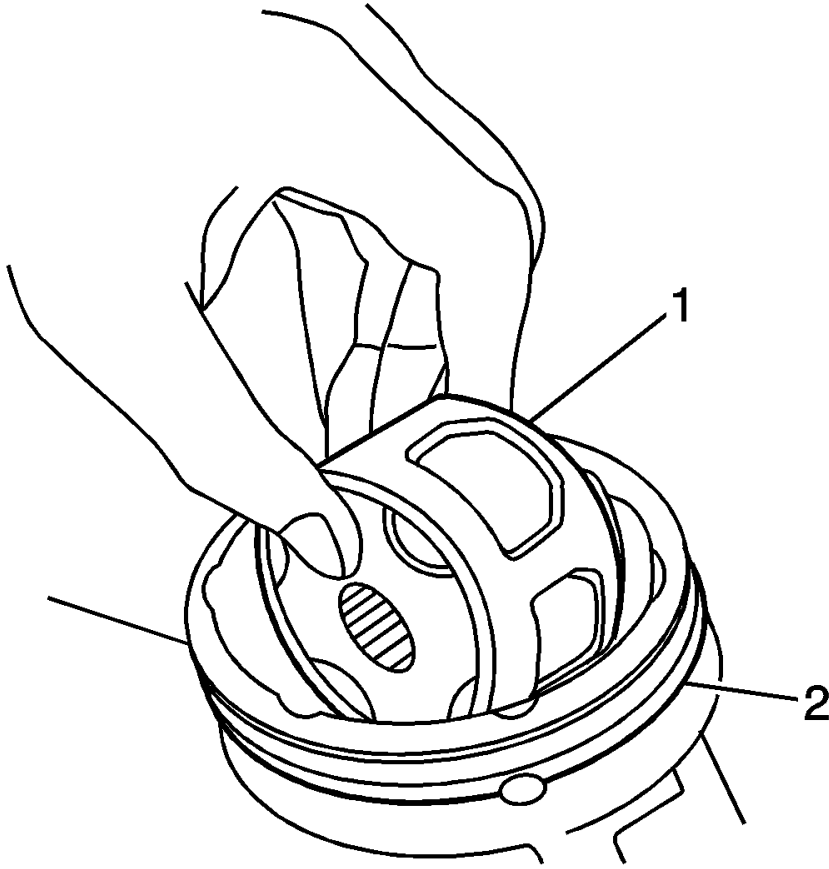


Fig. 41: Positioning Cage & Inner Race 90 Degrees To Centerline Of Outer Race
Courtesy of GENERAL MOTORS COMPANY

9. Wrap a clean shop towel around the CV joint outer race splined shaft.
10. Place the outer race vertically in a bench vise.
11. Position the cage and the inner race (1) at 90 degrees to the centerline of the outer race (2).
12. With the inner race and the cage assembly in a vertical position, insert the cage and the inner race into the outer race.

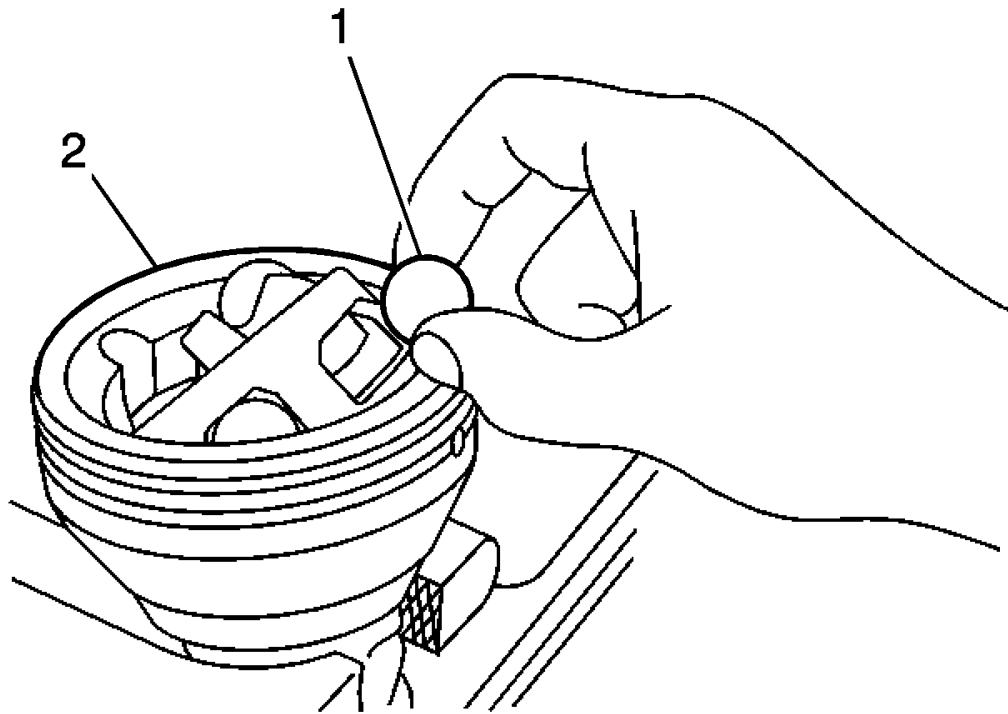


Fig. 42: Removing/Install Ball From Cage & Inner Race
Courtesy of GENERAL MOTORS COMPANY

NOTE: The larger radius corners of the cage windows should be positioned up and the grooved surface of the inner race should be visible.

13. Position the cage and the inner race so that they are level in the vise.
14. Rotate the appropriate component (s) and align the cage windows and the inner race ball bearing tracks with the outer race ball bearing tracks.
15. Position a cage window and the inner race ball bearing track for the ball bearing installation.

NOTE: When performing the following procedure, the opposing cage window and the inner ball bearing track will be accessible for the ball bearing installation.

16. Press down on the cage following one of the outer race ball bearing tracks.
17. Install the ball bearing (1) through the cage window onto the inner race ball bearing track.

NOTE: The following service procedure will have to be performed after each ball bearing has been installed.

18. After the first ball bearing has been installed, use a brass drift and a hammer and gently tap the cage in order to drive the cage and the inner race down completely in the outer race.

NOTE: After the ball bearing has been installed, there should be **NO GAP** between the ball bearing and the inner race.

19. Position the cage and the inner race so that they are level.
20. Using a plastic hammer, lightly tap the ball bearing into place.

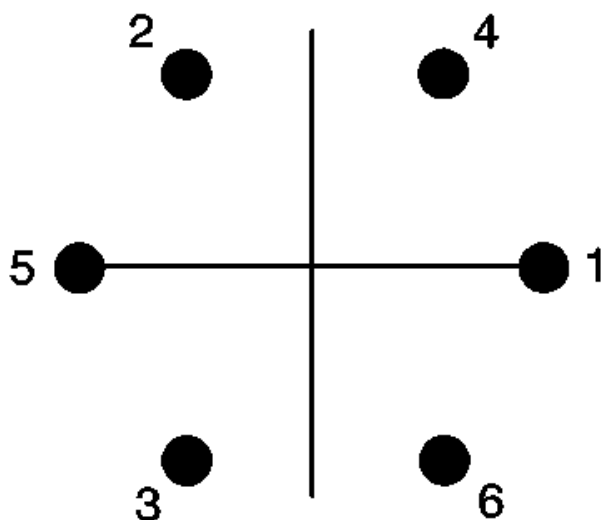


Fig. 43: View Of Ball Removal/Installation Sequence
Courtesy of GENERAL MOTORS COMPANY

21. Install the ball bearings in sequence.

23. Install the outer CV joint and boot on the wheel drive shaft. Refer to **Rear Wheel Drive Shaft Replacement**.

WHEEL DRIVE SHAFT INNER JOINT INSPECTION

Inspection Procedure

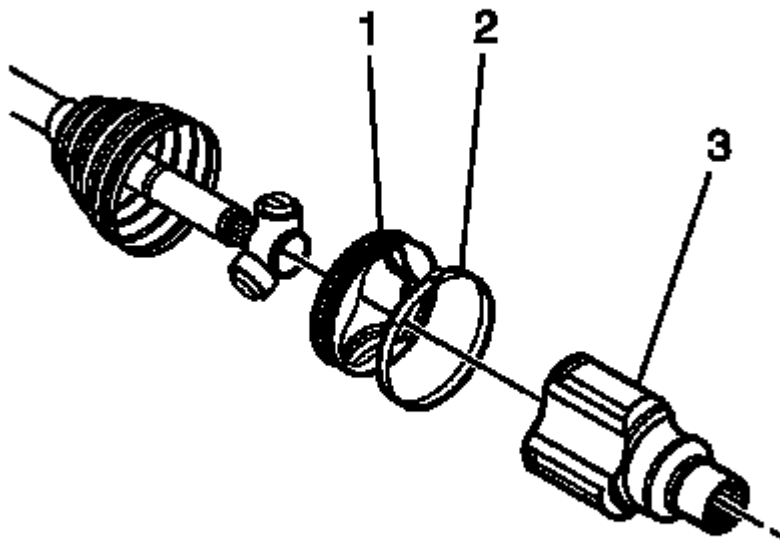


Fig. 44: Identifying Wheel Drive Shaft Inner Joint Inspection Areas
Courtesy of GENERAL MOTORS COMPANY

1. Remove the wheel drive shaft boot clamp (2) from the boot.
2. Remove the wheel drive shaft tripod housing (3) from the wheel drive shaft.
3. Remove the wheel drive shaft tripod joint boot bushing (1).
4. Using a suitable cleaner, remove the excess grease from the tripod assembly.
5. Inspect the following items for damage or excessive wear:
 - The wheel drive shaft tripod boot
 - The wheel drive shaft tripod assembly
 - The wheel drive shaft tripod joint housing
 - The wheel drive shaft tripod joint bushing

- The wheel drive shaft
6. If any of the items in step 5 are found to be defective, replace those items that are serviceable. Refer to **Rear Wheel Drive Shaft Replacement**.

DESCRIPTION AND OPERATION

WHEEL DRIVE SHAFTS DESCRIPTION AND OPERATION

Rear wheel drive axles are flexible assemblies.

Rear wheel drive axles consist of the following components:

- A rear wheel drive shaft tripot joint (inner joint)
- A rear wheel drive shaft constant velocity joint (outer joint)
- A rear wheel drive shaft

The rear wheel drive shaft connects the rear wheel drive shaft tripot joint and the rear wheel drive shaft constant velocity joint.

The rear wheel drive shaft tripot joint is completely flexible. The rear wheel drive shaft tripot joint can move in and out.

The rear wheel drive shaft constant velocity joint is flexible, but the rear wheel drive shaft constant velocity joint cannot move in and out.

Boots And Clamps

The rear wheel drive shaft constant velocity joint and the rear wheel drive shaft tripot joint boots in the rear wheel drive axle are made of a thermoplastic material.

The clamps in the rear wheel drive axle are made of stainless steel.

The boot provides the following functions:

- Protection of the internal parts of the rear wheel drive shaft constant velocity joint and the rear wheel drive shaft tripot joint

The boot protects the grease from the following sources of damage:

- Harmful atmospheric conditions, such as extreme temperatures or ozone gas
- Foreign material, such as dirt or water
- Allows angular movement and the axial movement of the rear wheel drive shaft tripot joint
- Allows angular movement of the rear wheel drive shaft constant velocity joint

components. Any damage to the boots or the clamps will result in leakage. Leakage will allow water to leak into the rear wheel drive shaft tripot joint and the rear wheel drive shaft constant velocity joints. Leakage will also allow grease to leak out of the rear wheel drive shaft tripot joints and the rear wheel drive shaft constant velocity joints. Leakage may cause noisy rear wheel drive axle operation and eventual failure of the internal components.

The clamps provide a leak proof connection for the rear wheel drive shaft tripot joint and the rear wheel drive shaft constant velocity joint at the following locations:

- The housing
- The rear wheel drive shaft

The thermoplastic material performs well under normal conditions and normal operation. However, the material is not strong enough to withstand the following conditions:

- Abusive handling
- Damage from sharp objects, such as sharp tools or any sharp edges of the surrounding components in the vehicle

Rear Wheel Drive Shaft Tripot Joint (Inner Joint)

The rear wheel drive shaft tripot joint is made with the tripot design without an over-extension limitation retainer.

The joint is constructed as follows:

- The rear wheel drive axle has a female spline. The female spline installs over a stub shaft that protrudes from the transaxle.

Rear Wheel Drive Shaft Constant Velocity Joint (Outer Joint)

The rear wheel drive shaft constant velocity joint is made with the Rzeppa joint design.

The shaft end (which mates with the knuckle/hub) has a helical spline. The helical spline ensures a tight, press-type fit.

This design prevents end play between the hub bearing and the rear wheel drive axle.

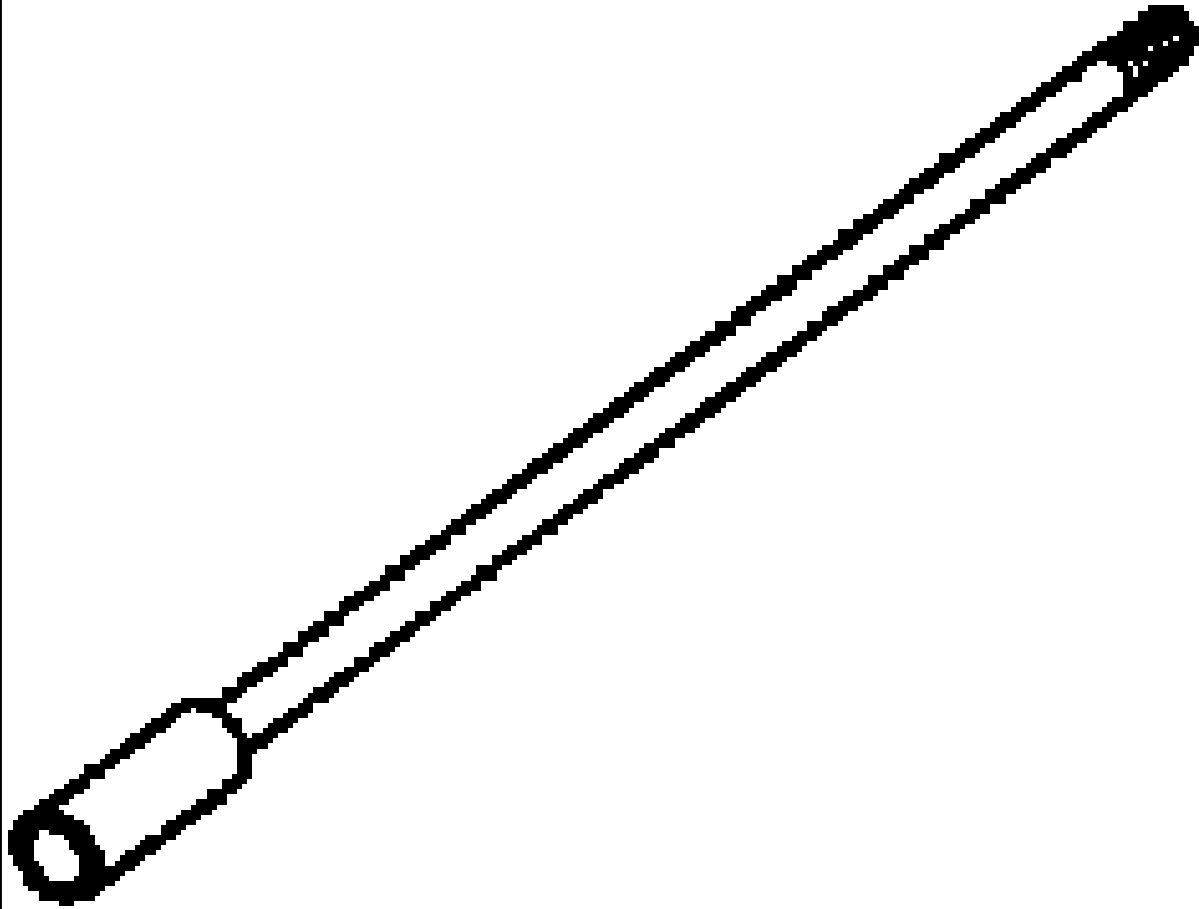
SPECIAL TOOLS AND EQUIPMENT

SPECIAL TOOLS

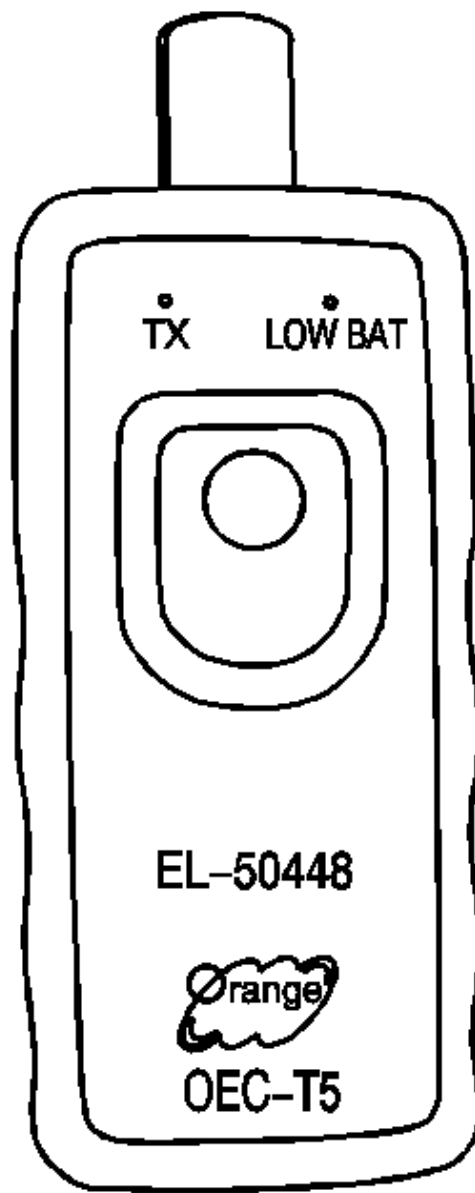
Illustration		Tool Number/ Description



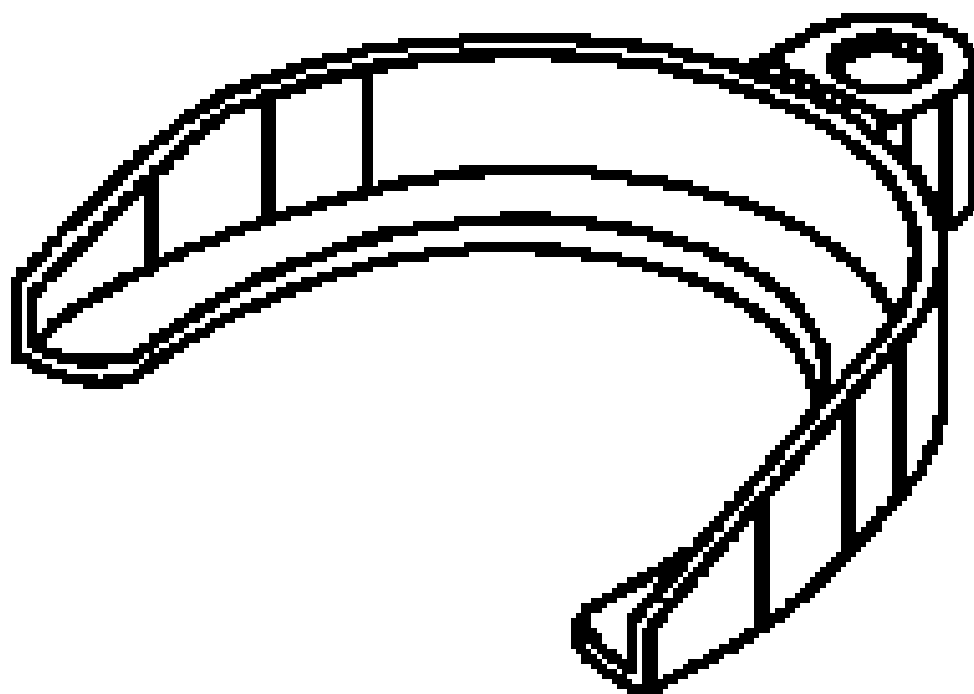
J-2619-01
Slide
Hammer



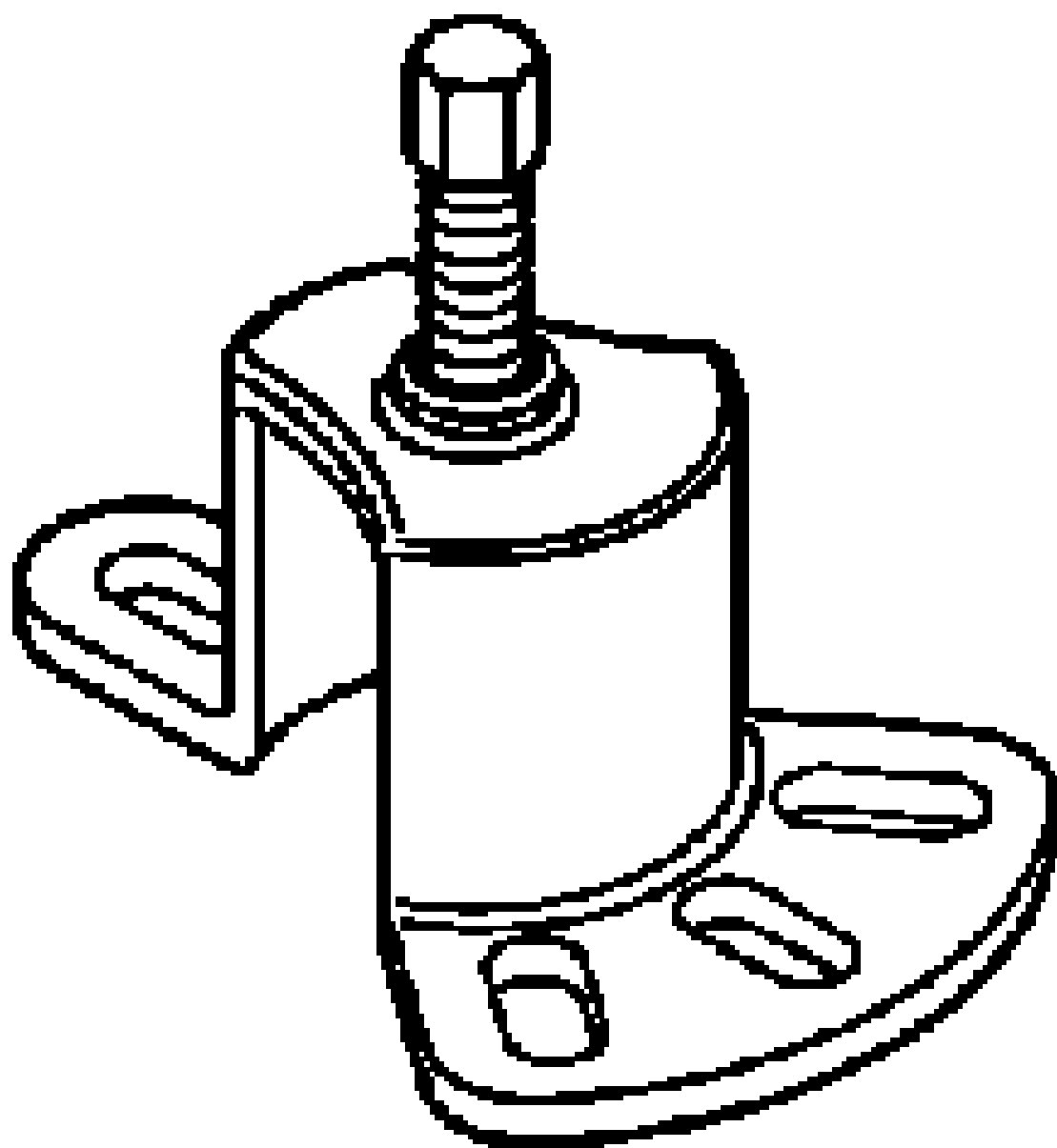
J-29794
Extension



J-35910
Driveline
Seal Clamp
Pliers



J-42128
Axle Shaft
Remover



J-42129
Rear Hub
Spindle
Remover