

Component Procedures: Constant Velocity Joint

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Component Procedures: Constant Velocity Joint

Parts and Labor (itype_189)

Parts

Qualifier	Part #	Name	Price	Note
Rear Axle > Outer CV Joint >?	92228293	2 - Outer Cv Joint	0.00	
Rear Axle > Outer CV Joint >?	92228306	2 - Outer Cv Joint	165.13	

Labor

Operation	Qualifier Path	Skill	Std Hrs	Wty Hrs
Replace	Rear Axle > One Side	B	2.4	0.0
Replace	Rear Axle > One Side > NOTE > To R&R Axle Sha?	B	0.2	0.0
Replace	Rear Axle > Both Sides	B	4.5	0.0
Replace	Rear Axle > Both Sides > NOTE > To R&R Axle S?	B	0.2	0.0

Rear Wheel Drive Shaft Inner Joint and Boot Replacement (Article 10907)

Special Tools

- CH 48894 - Drive Axle Seal Clamp Pliers
- J 35910 - Drive Axle Boot Clamp Pliers

For equivalent regional tools, refer to Special Tools .

Disassemble Procedure

- Remove the wheel drive shaft. Refer to Rear Wheel Drive Shaft Replacement .
- Remove the outer CV joint and boot. Refer to Rear Wheel Drive Shaft Outer Joint and Boot Replacement .
- Using the appropriate tool, remove and discard the outer boot clamp (3) and the inner boot clamp (2) from the CV joint (4). Click for full-size image
- Remove the CV joint boot (2) from the CV joint (3) and the wheel drive shaft (1). Click for full-size image
- Using the appropriate cleaner, remove the lubricant from the CV joint and the wheel drive shaft.

Assemble Procedure

- Install the CV joint boot and clamp (1) on the wheel drive shaft and CV joint housing (2). Click for full-size image
- Ensure that the CV joint boot (1) is properly seated in the groove (2) in the wheel drive shaft (3). Click for full-size image
- Using the J 35910 - pliers , breaker bar, torque wrench and or ratchet (1), close the clamp (2) until the gap (3) measures 1.8 mm (0.07 in) . Click for full-size image
- Place approximately half of the lubricant (1) in the CV joint boot (2) and the other half in the CV joint (3). Click for full-size image
- Install the CV joint boot and clamp (2) CV joint housing (1).
- The following service procedure is for those vehicles equipped with the ear type boot clamp (2). For those vehicles equipped with the earless type (low profile) (1), proceed to step 8 Click for full-size image
- Using the J 35910 - pliers (3), breaker bar (5) and a torque or racket wrench (4), close the clamp until the gap measures 1.9 mm (0.07 in). Click for full-size image
- Using the CH 48894 - pliers (1), close the boot clamp (3). Click for full-size image
- Move the CV joint in a circular motion to distribute the lubricant inside the cv joint housing.
- Clean any remaining lubricant from the outside of the CV joint.
- Install the outer CV joint and boot. Refer to Rear Wheel Drive Shaft Outer Joint and Boot Replacement .
- Install the wheel drive shaft. Refer to Rear Wheel Drive Shaft Replacement .

Rear Wheel Drive Shaft Outer Joint and Boot Replacement (Article 10909)

Special Tools

- CH 48894 - Drive Axle Boot Clamp Pliers
- J 8059 - Snap Ring Pliers
- J 35910 - Drive Axle Boot Clamp Pliers

For equivalent regional tools, refer to Special Tools .

Disassemble Procedure

- Remove the wheel drive shaft from the vehicle. Refer to Rear Wheel Drive Shaft Replacement .
- Install the wheel drive axle shaft in a soft jawed vice. Click for full-size image
- Using the appropriate tool, remove and discard the outer boot clamp (2) from the CV joint boot (3). Click

for full-size image

- Using a pair of side cutters, remove and discard the inner boot clamp (4) from the CV joint boot (3).
- Remove the CV joint boot (3) from the CV joint housing (1).
- Using a pair of side cutters, remove and discard the outer boot clamp (3) and the inner boot clamp (1).

Click for full-size image

- Remove the CV joint boot (2) from the CV joint housing (4).
- Using a hammer and a block of wood, remove the CV joint (2) from the wheel drive shaft (1). Click for full-size image
- Using the J 8059 - pliers , remove the retaining ring (2) from the wheel drive shaft. Click for full-size image
- Remove the CV joint boot (1) from the wheel drive shaft (2). Click for full-size image
- Inspect the wheel drive shaft CV joint. Refer to Wheel Drive Shaft Outer Joint Inspection .

Assemble Procedure

- Position the boot and the clamp (1) on the wheel drive shaft (2). Click for full-size image
- Ensure that the boot (1) is properly seated in the groove (2) in the wheel drive shaft (3). Click for full-size image
- Using the J 8059 - pliers , install the retaining ring (2) on the wheel drive shaft (1). Click for full-size image
- Using the J 35910 - drive axle boot clamp pliers (1), close the boot clamp (2) until the gap (3) measures 2.15 mm (0.85 in) .
- Using a block of wood and a hammer, install the CV joint (1) on the wheel drive shaft. Click for full-size image
- Place approximately half of the lubricant (2) inside the CV boot (1) and other half in the CV joint (3). Click for full-size image
- Remove any excess lubricant on the CV joint housing or the boot.
- If working with a wheel drive that has the ear type clamp (2), proceed to step 9. If the wheel drive shaft has the low profile clamp (1), skip step 9 and proceed to step 10. Click for full-size image
- Using the J 35910 - pliers (1), torque or ratchet wrench and breaker bar, close the boot clamp until the gap (3) measures 2.15 mm (0.85 in) . Click for full-size image
- Using the CH 48894 - pliers (1), close the boot clamp (3). Click for full-size image
- Move the CV joint in a circular motion 4 to 5 times to distribute the lubricant.
- Remove the wheel drive shaft from the vise.
- Install the wheel drive shaft. Refer to Rear Wheel Drive Shaft Replacement .

Wheel Drive Shaft Outer Joint Inspection (Article 10912)

Disassembly Procedure

- Remove the outer constant velocity (CV) joint and boot from the wheel drive shaft . Refer to Rear Wheel Drive Shaft Outer Joint and Boot Replacement .
- Remove any lubricant from the CV joint.
- Install the outer CV joint assembly in a soft jawed vise. Click for full-size image
- Using a brass drift (2), gentle tap the cage until the ball bearing can be removed from the cage.
- Using a small screwdriver, remove the ball bearings (1) from the CV joint (2). Click for full-size image
- Remove the ball bearings from the CV joint in sequence. Click for full-size image
- Position the cage (1) at a 90 degrees to the centerline of the outer race (2). Click for full-size image
- Align the cage windows with the lands of the outer race (2).
- Lift and remove the cage (1) and the inner race from the outer race (2).
- Position the cage (2) and the inner race (1) so that the larger radius corners of the cage windows are up. Click for full-size image
- Rotate the inner race (1) 90 degrees to the center line of the cage (2).
- Align the lands of the inner race (1) with the windows of the cage (2).
- Move the inner race (1) land into the cage window (2).
- Rotate the inner race (1) down and remove it from the cage (2).
- 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
- 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

- Position the cage (2) so that the larger radius corners of the cage windows are up. Click for full-size image
- Position the inner race (1) 90 degrees to the centerline of the cage (2).
- Insert the inner race (1) through the bottom of the cage (2).
- Rotate the inner race (1) within the cage (2) so that the grooved surface of the inner race (1) is facing up.
- Align the inner race (1) ball bearing tracks with the cage (2) windows.
- Wrap a clean shop towel around the CV joint outer race splined shaft. Click for full-size image
- Place the outer race (2) vertically in a bench vise.
- Position the cage (1) and the inner race at a 90 degrees to the centerline of the outer race (2).
- With the inner race and the cage (1) assembly in a vertical position, insert the cage and the inner race into the outer race (2).
- Position the cage (2) and the inner race so that they are level in the vise. Click for full-size image
- Rotate the appropriate component(s), and align the cage windows and the inner race ball bearing (1) tracks with the outer race ball bearing tracks.
- Position a cage window and the inner race ball bearing track for the ball bearing installation.
- Press down on the cage following one of the outer race ball bearing (1) tracks.
- Install the ball bearing through the cage window onto the inner race ball bearing (1) track.
- After the first ball bearing (1) 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.
- Position the cage and the inner race so that they are level.
- Using a plastic hammer, lightly tap the ball bearing (1) into place.
- Install the ball bearings in sequence. Click for full-size image
- Repeat steps 18 through 20 until all the ball bearings are installed.
- Install the outer CV joint and boot on the wheel drive shaft. Refer to Rear Wheel Drive Shaft Outer Joint and Boot Replacement .