

What will I need to...  
Replace the Ball Joints and  
Tie Rod Ends

- A quality branded ball joint and tie rod end
- Suitable spanners and allen keys
- A suitable lever - Thread locker
- A hammer - Cleaning solvent
- Hand cleaner - Mutton cloth

# Hints & Tips

REPLACING THE BALL JOINTS AND TIE ROD ENDS



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AND TIE ROD ENDS



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# Replacing The Ball Joints and Tie Rod Ends



Exclusive Brands only available at AutoZone

Inspect the ball joints and tie rod ends regularly, and check for any excessive clearance between the relevant ball and mating socket. If any form of movement is evident then a ball joint and tie rod end replacement is due. A worn or damaged ball joint or tie rod end will result in tyre wear, poor braking and uncontrollable road holding.

**STEP 1:** Apply the hand brake to secure the vehicle. This will prevent the vehicle from moving forwards or backwards while supported by the safety trestles.

**STEP 2:** Loosen the front wheel securing nuts and jack the front wheels of the vehicle off the ground. Install a trestle on each side of the vehicle as safety supports underneath the vehicle. Remove the securing nuts and the front wheels.

## To Replace the Ball Joints:

**STEP 3:** Loosen the ball joint locating nut, but do not remove the nut completely. Using a suitable bar, carefully lever the lower suspension arm down to release the ball joint from the hub assembly. Once the assembly has been pried free, remove the nut and lower the control arm completely. Take extra care not to damage the ball joint rubber.

**STEP 4:** Remove the three nuts and bolts securing the ball joint to the lower control arm. Install the new ball joint and apply “lock tight” to the three bolts on the threaded surface and tighten according to the manufacturer’s specifications.

**STEP 5:** Refit all of the above components in the reverse order of removal, ensuring that all of the relevant components are cleaned prior to installation. Double check all securing bolts.

## To Replace the Tie Rod Ends:

**STEP 3:** Loosen the tie rod end location and adjusting nuts, but do not remove the securing nut completely. Using a suitable bar, carefully lever the tie rod end in an upwards direction in order to release the tie rod end from the strut assembly.

**STEP 4:** Once the assembly has been pried free, remove the nut and tie rod end completely. While removing the tie rod end, count the amount of turns until the tie rod end dislodges. Install the new tie rod end and adjusting nut. Use the same amount of thread turns as used to remove the old tie rod end. This will ensure that the new tie rod is in the correct position.

**STEP 5:** Tighten the adjusting nut and re-install the tie rod end into the strut assembly. Tighten the securing nut to the required manufacturer’s specification.

## To Complete both replacements:

**STEP 6:** Repeat the above procedures on the corresponding wheels. Refit the wheels of the vehicle. Remove the trestles and lower the vehicle to the ground. Tighten all securing bolts for the wheels.

**USEFUL TIP 1:** Remember to clean all the relevant components and surrounding areas to remove all road debris.

**USEFUL TIP 2:** While removing and re-installing the ball joints and tie rod ends, inspect the suspension and steering mechanisms for excessive wear and possible defects. Replace where necessary.

**USEFUL TIP 3:** It is advised that all the relative ball joints and tie rod ends be replaced at the same time, as all of these components have been subjected to the same degree of wear and road dirt.

**USEFUL TIP 4:** Once the new ball joints and tie rod ends have been installed, it is recommended that the wheel alignment be checked and corrected. This will give all of the components involved a longer life and will allow all the relevant components to operate in equilibrium.